



Genesys Info Mart 7.6

Deployment Guide

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Preface

Welcome to the *Genesys Info Mart 7.6 Deployment Guide*. Genesys Info Mart produces a data mart that contains several star schemas that you can use for contact center historical reporting.

Genesys Info Mart includes a server component that runs a set of predefined jobs. You configure these jobs to extract and transform data from several Genesys relational databases. The transformed data is loaded into dimension and fact database tables in Genesys Info Mart, and you can then use Structured Query Language (SQL) to query this data. These queries enable you to display detailed data, reveal patterns, and predict trends.

This document describes the procedures that you must complete in order to configure and install Genesys Info Mart 7.6 and the Genesys Info Mart Administration Console. It is intended for system and database administrators.

In brief, you will find the following information in this guide:

- Pre-installation considerations
- Installation instructions

This document is valid only for the 7.6 release of this product.

Note: For releases of this document that have been created for other releases of this product, please visit the Genesys Technical Support website, or request the Documentation Library DVD, which you can order by e-mail from Genesys Order Management at orderman@genesyslab.com.

This preface provides an overview of this document, identifies the primary audience, introduces document conventions, and lists related reference information. It contains the following sections:

- [Intended Audience, page 14](#)
- [Recommended Reading, page 14](#)
- [Chapter Summaries, page 14](#)
- [Document Conventions, page 16](#)
- [Related Resources, page 17](#)
- [Making Comments on This Document, page 18](#)
- [Document Change History, page 19](#)

Intended Audience

This *Deployment Guide* is intended for database administrators and system administrators. It assumes that you have a basic understanding of:

- Relational database management systems (RDBMSs).
- Network design and operation.
- Your own network and database configurations.
- Computer-telephony integration (CTI) concepts, processes, terminology, and applications.

Recommended Reading

Genesys Info Mart is designed to run with other Genesys products. Because of this integration, Genesys strongly recommends that you read the following documentation before you install and configure Genesys Info Mart:

- *Framework 7.6 Management Layer User's Guide*
- *Framework 7.6 Configuration Manager Help*
- *Framework 7.6 Deployment Guide*
- *Genesys Voice Platform 7.6 Voice Application Reporter Deployment and Reference Manual*
- Interaction Concentrator documentation set, including the *Deployment Guide*, *User's Guide*, and *Physical Data Model* for your RDBMS type.
- *Genesys Info Mart 7.6 Database Size Estimator*
- *Genesys Info Mart 7.6 Operations Guide*
- *Genesys Info Mart 7.6 User's Guide*
- The *Genesys Info Mart Reference* for your RDBMS.
- The *Genesys Hardware Sizing Guide*

Chapter Summaries

In addition to this preface, this *Deployment Guide* contains the following chapters and appendixes:

- Chapter 1, “Genesys Info Mart Deployment Overview,” on [page 29](#), describes the Genesys Info Mart 7.6 architecture, components, and new features and functionality.

- Chapter 2, “Deployment Planning,” on [page 47](#), provides the recommended deployment order, describes the tasks that you must complete, and describes the information that you must gather before you install Genesys Info Mart.
- Chapter 3, “Preparing Data Sources,” on [page 121](#), describes how to prepare the data sources that provide data to Genesys Info Mart.
- Chapter 4, “Preparing Genesys Info Mart Databases,” on [page 173](#), describes how to prepare the target Genesys Info Mart databases and views, and how to tune your RDBMS Server for optimal performance.
- Chapter 5, “Configuring DAPs,” on [page 195](#), describes how to configure the Database Access Points (DAPs) that Genesys Info Mart uses to access source and target databases.
- Chapter 6, “Configuring the Genesys Info Mart Application,” on [page 225](#), describes how to configure the Genesys Info Mart application.
- Chapter 7, “Installing Genesys Info Mart Components,” on [page 341](#), describes how to prepare the Genesys Info Mart Server host for installation. It also describes how to install Genesys Info Mart and the Genesys Info Mart Administration Console.
- Chapter 8, “Post-Installation Activities,” on [page 359](#), describes the tasks that you must perform after completing the configuration and installation of Genesys Info Mart and the Genesys Info Mart Administration Console.
- Chapter 9, “UserEvent-Based KVP Data in Existing Deployments,” on [page 371](#), summarizes the tasks that you must perform to configure and enable extraction of UserEvent-based key-value pair (KVP) data.
- Chapter 10, “Activating High Availability Data Extraction,” on [page 375](#), summarizes the tasks that you must perform to configure and enable the type of high availability (HA) data extraction that you want for your Genesys Info Mart deployment.
- Appendix A, “Installation Worksheets,” on [page 401](#), contains pre-installation worksheets that you can use to plan your database connection information.
- Appendix B, “Sample Data Extraction Topologies,” on [page 417](#), contains a variety of sample single-site and multi-site data extraction topologies.
- Appendix C, “Example ICON Attached Data Specification,” on [page 431](#), contains a copy of the `ccon_adata_spec_GIM_example.xml` file that is included in the Genesys Info Mart 7.6 installation package.
- Appendix D, “Data Source Tables Accessed by Genesys Info Mart,” on [page 437](#), lists the data source tables that Genesys Info Mart accesses.
- Appendix E, “Using Stat Server in Legacy Environments,” on [page 441](#), provides information for using the Stat Server database as a data source for the customers whose legacy reports continue to use Stat Server voice agent data.

Document Conventions

This document uses certain stylistic and typographical conventions—introduced here—that serve as shorthands for particular kinds of information.

Document Version Number

A version number appears at the bottom of the inside front cover of this document. Version numbers change as new information is added to this document.

76gim_dep_03-2011_v7.6.006.00

You will need this number when you are talking with Genesys Technical Support about this product.

Type Styles

Italic

In this document, italic is used for emphasis, for documents' titles, for definitions of (or first references to) unfamiliar terms, and for mathematical variables.

- Examples:**
- Please consult the *Genesys Migration Guide* for more information.
 - *A customary and usual practice* is one that is widely accepted and used within a particular industry or profession.
 - Do *not* use this value for this option.
 - The formula, $x + 1 = 7$ where x stands for . . .

Monospace Font

A monospace font, which looks like teletype or typewriter text, is used for all programming identifiers and GUI elements.

This convention includes the *names* of directories, files, folders, configuration objects, paths, scripts, dialog boxes, options, fields, text and list boxes, operational modes, all buttons (including radio buttons), check boxes, commands, tabs, CTI events, and error messages; the values of options; logical arguments and command syntax; and code samples.

- Examples:**
- Select the Show variables on screen check box.
 - Click the Summation button.
 - In the Properties dialog box, enter the value for the host server in your environment.
 - In the Operand text box, enter your formula.

- Click OK to exit the Properties dialog box.
- The following table presents the complete set of error messages T-Server[®] distributes in EventError events.
- If you select true for the inbound-bsns-calls option, all established inbound calls on a local agent are considered business calls.

Monospace is also used for any text that users must manually enter during a configuration or installation procedure, or on a command line:

- Example:**
- Enter exit on the command line.

Screen Captures Used in This Document

Screen captures from the product GUI (graphical user interface), as used in this document, may sometimes contain a minor spelling, capitalization, or grammatical error. The text accompanying and explaining the screen captures corrects such errors *except* when such a correction would prevent you from installing, configuring, or successfully using the product. For example, if the name of an option contains a usage error, the name would be presented exactly as it appears in the product GUI; the error would not be corrected in any accompanying text.

Square Brackets

Square brackets indicate that a particular parameter or value is optional within a logical argument, a command, or some programming syntax. That is, the parameter's or value's presence is not required to resolve the argument, command, or block of code. The user decides whether to include this optional information. Here is a sample:

```
smcp_server -host [/flags]
```

Angle Brackets

Angle brackets indicate a placeholder for a value that the user must specify. This might be a DN or port number specific to your enterprise. Here is a sample:

```
smcp_server -host <confighost>
```

Related Resources

In addition to the documents listed in “Recommended Reading” on [page 14](#), consult the following additional resources as necessary:

- *Genesys Info Mart 7.6 SQL Queries* which provides sample SQL queries to retrieve data from the Genesys Info Mart database.

- *Framework 7.6 Stat Server Deployment Guide* which provides information about Stat Server and the configuration options necessary for Stat Server to operate.
- The *Genesys Master Glossary*, which ships on the Genesys Documentation Library DVD, provides a list of Genesys and CTI terms and acronyms.
- The *Genesys Migration Guide*, also on the Genesys Documentation Library DVD, contains a documented migration strategy for each software release. Please refer to the applicable portion or contact Genesys Technical Support for more information.
- The Release Notes and Product Advisories for this product, which are available on the Genesys Technical Support website.

Information about supported hardware and third-party software is available on the Genesys Technical Support website in the following document:

- [*Genesys Supported Operating Environment Reference Manual*](#)

Genesys product documentation is available on the:

- Genesys Technical Support website at <http://genesyslab.com/support>.
- Genesys Documentation Library DVD, which you can order by e-mail from Genesys Order Management at orderman@genesyslab.com.

Making Comments on This Document

If you especially like or dislike anything about this document, please feel free to e-mail your comments to Techpubs.webadmin@genesyslab.com.

You can comment on what you regard as specific errors or omissions, and on the accuracy, organization, subject matter, or completeness of this document. Please limit your comments to the information in this document only and to the way in which the information is presented. Speak to Genesys Technical Support if you have suggestions about the product itself.

When you send us comments, you grant Genesys a nonexclusive right to use or distribute your comments in any way it believes appropriate, without incurring any obligation to you.

Document Change History

This section lists topics that are new in the current release *of this document*, or that have changed significantly from the preceding release.

New in Document Version v7.6.007.00

The document has been updated to support Genesys Info Mart release 7.6.012. The following topics have been added or have changed significantly since the previous 7.6 release of this document:

- Information about the following new configuration option has been included:
 - `populate-ixn-agent-out-aggregates` is described on [page 268](#) and also has been added to [Table 38](#) (see [page 240](#)).
- The example provided on [page 255](#) for the `last-day-identifies-year` configuration option has been corrected. In previous releases of this document, some words were missing from the example and it did not make sense.
- Starting with release 7.6.012, Genesys Info Mart provides native support for the Windows Server 2008 64-bit and Red Hat Enterprise Linux AS 64-bit operating systems. Updates have been made on the following pages to include Windows 2008 and Red Hat Enterprise AS Linux 5.0:
 - “RDBMS Clients” on [page 50](#).
 - “Java Development Kit” on [page 51](#).
 - “gim-tuning Section” on [page 308](#).
 - “Preparing the Genesys Info Mart Server Host” on [page 342](#) and [page 343](#).
 - “Solaris, Linux, AIX” on [page 345](#).
- The new disposition-based aggregates, `AG2_OUT_V_IXN_AGENT_*` and `AG2_OUT_V_IXN_AGENT_GRP_*` have been added to the following configuration option descriptions:
 - `days-to-keep-day-level-disposition-level-aggregates` on [page 260](#).
 - `days-to-keep-hour-level-disposition-level-aggregates` on [page 261](#).
 - `days-to-keep-month-level-disposition-level-aggregates` on [page 262](#).
 - `short-talk-threshold` on [page 271](#).
- For certain configuration options, changing the option setting from FALSE to TRUE could result in very long execution times for aggregation in `Job_LoadRecent` or `Job_AggregateGIM`. A note has been added to the following configuration options, indicating that in order to avoid this

situation, you should refer to “Job_LoadRecent” and “Job_AggregateGIM” under the “Understanding Genesys Info Mart ETL Jobs” section in the *Genesys Info Mart 7.6 Operations Guide*:

- “populate-agent-state-interval-aggregates” on [page 266](#).
- “populate-ixn-agent-aggregates” on [page 266](#).
- “populate-ixn-agent-interval-aggregates” on [page 267](#).
- “populate-ixn-agent-out-aggregates” on [page 268](#).
- “populate-ixn-service-type-aggregates” on [page 268](#).
- “populate-queue-aggregates” on [page 269](#).
- A note has been added to the “Overview” section of Chapter 5, “Configuring DAPs,” on [page 195](#) indicating for information about moving a data source from one database or schema to another that you need to see the *Genesys Info Mart 7.6 Operations Guide*.

New in Document Version v7.6.006.00

The document has been updated to support Genesys Info Mart releases 7.6.009, 7.6.010 and 7.6.011. The following topics have been added or have changed significantly since the previous 7.6 release of this document:

- “New in Release 7.6.009” on [page 42](#)—A new subsection in the “New in This Release” section describes the feature enhancements that are introduced in Genesys Info Mart release 7.6.009.
- “New in Release 7.6.010” on [page 43](#)—A new subsection in the “New in This Release” section describes the feature enhancements that are introduced in Genesys Info Mart release 7.6.010.
- “New in Release 7.6.011” on [page 44](#)—A new subsection in the “New in This Release” section describes the feature enhancements that are introduced in Genesys Info Mart release 7.6.011.
- Information about the following new configuration options has been included:
 - `days-to-keep-stg-ha-login-sessions` is described on [page 284](#) and also has been added to [Table 39](#) (see [page 244](#)).
 - `oracle-stats-estimate-percent` is described on [page 313](#) and also has been added to [Table 39](#) (see [page 247](#)).
 - `run-intraday-fact-table-stats` is described on [page 314](#) and also has been added to [Table 39](#) (see [page 247](#)).
 - `run-historical-fact-table-stats` is described on [page 314](#) and also has been added to [Table 39](#) (see [page 247](#)).
 - `update-historical-gvp-facts-intraday` is described on [page 314](#) and also has been added to [Table 38](#) (see [page 240](#)).
- A note has been added to indicate that Oracle 11g requires a minimum installation of Java 1.6 to the following:
 - “Software and Database Requirements” on [page 49](#)

- “Java Development Kit” on [page 51](#)
- “Preparing the Genesys Info Mart Server Host” on [page 342](#)
- “Installing Java 1.5 (or Higher) JDK” on [page 343](#).
- “JDBC Driver for Oracle” on [page 347](#)
- “Oracle Real Application Clusters (RAC) Considerations” on [page 77](#)—A new subsection under “[Database Considerations](#)” describes how to deploy Genesys Info Mart for Oracle 10g R2 RAC.
- [Table 4](#), Required User Account Privileges, on [page 82](#) for IDB, and on [page 83](#) for the Staging Area, Merge Staging Area, and Info Mart databases, have been updated to include RDBMS-specific privileges that are required to truncate table data and compute statistics on tables.
- Starting with Genesys Info Mart 7.6.010, more than one `Field` object can map to the same table and column in the Info Mart database. A new paragraph has been added to “Nonmandatory (Custom) Record Field Data” on [page 117](#) to describe this capability. The notes on [page 147](#) have also been updated under “[Configuring the Mapping of Outbound Contact Record Fields](#)”.
- [Table 11](#), “ICON Voice Details—Application Options—callconcentrator Section,” on [page 130](#)—The `extended-route-result` option has been updated to include information about how to set the `report_targets` and `report_reasons` URS configuration options.
- [Table 13](#), “ICON Voice Details—Switch Options—gts Section,” on [page 135](#)—The `gls-max-inactivity` and `gls-max-duration` option descriptions have been updated with a note to indicate that ICON ignores these options in deployments that use T-Server release 7.6 or later.
- In previous releases of this document the `ivr` option was located incorrectly in [Table 23](#), “ICON Storage—Application Options—filter-data Section,” on [page 157](#). This has been corrected and the `ivr` option has been moved to [Table 14](#), “ICON Voice Details—DN Options—gts Section,” on [page 140](#).
- In order for Genesys Info Mart to provide reliable reporting data, the system clocks on hosts on which Genesys applications are running must be synchronized. Information has been added in the following locations:
 - A note has been added to the “[Interoperability Requirements](#)” section on [page 49](#).
 - A new task has been added to [Table 42](#), “Task Flow: Installing Genesys Info Mart Components,” on [page 342](#) which verifies that the system times are synchronized on all hosts on which Genesys applications are running.
- The following Interaction Concentrator application options have been updated in [Table 19](#), “ICON Multimedia Details—Application Options—callconcentrator Section,” on [page 150](#):
 - The `calls-in-the-past` option recommended value has been changed to `true`.

- The `om-force-adata` option and corresponding information has been added.
- A new [Step d on page 231](#) has been added to the “[Connections Tab](#)” section of “[Configuring the Genesys Info Mart Application](#)” on [page 228](#). This new step describes how to configure Advanced Disconnect Detection Protocol (ADDP).
- A note has been added to the configuration option “`run-gim-config-before-starting-job`” on [page 313](#) that recommends setting `run-gim-config-before-starting-job` to `true` if you configure Genesys Info Mart-specific configuration options in supporting objects, such as DNs, Switches, Tenants, and DAPs.
- The “[JDBC Driver for Oracle](#)” section on [page 347](#) has been updated to include support for Oracle 11g R1 and a new `ojdbc6.jar` file.
- A note has been added to “[Installing the Genesys Info Mart Administration Console](#)” on [page 353](#) to indicate that this release of Genesys Info Mart provides support for installing Genesys Info Mart Administration Console under Configuration Manager 8.0 on the Microsoft Windows 7 operating system.

New in Document Version v7.6.005.00

The document has been updated to support Genesys Info Mart releases 7.6.007 and 7.6.008. The following topics have been added or have changed significantly since the previous 7.6 release of this document:

- “[New in Release 7.6.007](#)” on [page 41](#)—A new subsection in the “[New in This Release](#)” section describes the feature enhancements that are introduced in Genesys Info Mart release 7.6.007.
- “[New in Release 7.6.008](#)” on [page 42](#)—A new subsection in the “[New in This Release](#)” section describes the feature enhancements that are introduced in Genesys Info Mart release 7.6.008.
- Information about the following new configuration options has been included:
 - `days-to-keep-stg-history` is described on [page 285](#) and also has been added to [Table 39](#) (see [page 245](#)).
 - `interval-aggregates-fact-time-window` is described on [page 263](#) and also has been added to [Table 38](#) (see [page 240](#)).
 - `job-retry-count` is described on [page 328](#) and also has been added to [Table 39](#) (see [page 245](#)).
 - `job-retry-wait` is described on [page 328](#) and also has been added to [Table 39](#) (see [page 245](#)).
 - `extract-partially-merged-interactions` is described on [page 287](#) and also has been added to [Table 38](#) (see [page 235](#)).

- `transformation-buffer-size`—The maximum value has been increased from 5 to 50. Information about valid values has been updated in the option descriptions on [page 307](#).
- `gls-max-duration`—The default value has been changed from 24 to 0 on [page 135](#). This option has moved from Table 11, “ICON Voice Details—Application Options—callconcentrator Section,” on [page 130](#) to the correct section in Table 13, “ICON Voice Details—Switch Options—gts Section,” on [page 135](#).
- `gls-max-inactivity`—The default value has been changed from 8 to 0 on [page 136](#). This option has moved from Table 11, “ICON Voice Details—Application Options—callconcentrator Section,” on [page 130](#) to the correct section in Table 13, “ICON Voice Details—Switch Options—gts Section,” on [page 135](#).
- `aggregate-time-range-units`—The valid value can now be specified in both HOURS and DAYS. Information about valid values has been updated in the option descriptions on [page 283](#).
- High availability of Outbound Contact details—The following sections have been updated with information that describes how Genesys Info Mart now provides high availability (HA) data extraction for Outbound Contact details via switchover:
 - Throughout the document sections have been updated to indicate that HA data extraction of Outbound Contact details via switchover is now supported and this functionality requires Interaction Concentrator 8.0. See the *Genesys Info Mart 7.6.x Release Notes* for the minimum release of Interaction Concentrator 8.0 that is required to support this functionality.
 - “ETL Jobs” on [page 31](#)—Information has been added to the Outbound Contact details section that explain HA for Outbound Contact details.
 - Two new sections on ICON topologies have been added:
 - “ICON Outbound Contact Details—HA Pair of ICONs and IDBs” on [page 69](#)
 - “ICON Outbound Contact Details—Multiple HA ICONs, Multiple IDBs” on [page 70](#)
 - “High Availability Data Extraction” on [page 84](#)—Starting on [page 84](#), a new section describes how HA data extraction of Outbound Contact details via switchover works and how it differs from the method of HA deduplication that is used for Voice and Configuration details.
 - “Processing HA Data Extraction of ICON Outbound Contact Details” on [page 92](#)—This new section describes how HA of Outbound Contact details is processed and how the time based switch over extraction process works.
 - “Task Flow: Configuring for High Availability Data Extraction” on [page 162](#)—A new row has been added that describes how to enable redundancy of Outbound Contact details.

- “Configuring ICON Applications for Outbound Contact Details HA” on [page 166](#)—A new procedure has been added that demonstrates how to configure your ICON application to store Outbound Contact details in an HA pair of IDBs.
- “Preparing IDBs” on [page 167](#)—In the procedure to prepare IDBs for HA data extraction of Outbound Contact details, the SQL script in [Step c on page 169](#) has been added to optimize the indexes of the IDBs.
- “Enable access to data that supports detailed reporting of outbound voice interactions.” on [page 198](#)—Information has been added that describes how to enable access to the secondary ICON Outbound Contact IDB in the HA pair.
- “Configuring DAPs for ICON Outbound Contact Details HA” on [page 222](#)—This new procedure allows Genesys Info Mart to access the HA pair of IDBs that store Outbound Contact details.
- “Task Flow: Activating HA Data Extraction in a New Deployment” on [page 376](#)—A new row has been added to this task table that tells you which procedures implement HA of Outbound Contact details in a new deployment.
- “Task Flow: Activating HA Data Extraction in an Existing Non- HA Deployment” on [page 378](#)—A new row has been added to this task table that tells you which procedures implement HA of Outbound Contact details in an existing Non-HA environment.
- “Task Flow: Activating HA Data Extraction in an Existing Deployment with Voice HA” on [page 379](#)—A new row has been added to this task table that tells you which procedures implement HA of Outbound Contact details in an existing environment with Voice HA.
- “Configuring HA Data Extraction of Outbound Contact Details in a New Deployment” on [page 384](#)—This new procedure describes how to configure and enable HA of Outbound Contact details in a new Genesys Info Mart deployment.
- “Configuring HA Data Extraction of Outbound Contact Details in an Existing Deployment” on [page 393](#)—This new procedure describes how HA of Outbound Contact details is handled by Genesys Info Mart.
- “Configuring HA Data Extraction of Outbound Contact Details in an Existing Deployment” on [page 393](#)—This new procedure describes how to configure and enable HA of Outbound Contact details in an existing deployment.
- Figure 37 on [page 430](#)—This image has been updated to include HA of Configuration and Outbound Contact details in a multi-site HA topology.
- Table 47, “Data Source Tables Extracted by Genesys Info Mart,” on [page 438](#)—A row has been added that indicates that Genesys Info Mart extracts from the `G_DSS_GOS_PROVIDER` table for HA of Outbound Contact details.

- “Using UserEvent-Based KVP Data” on [page 107](#)—A note has been added to the “[Planning Considerations](#)” section that indicates that enabling this feature in certain environments can impose long delays in data extraction. The Genesys recommendation regarding this issue is also included.

New in Document Version v7.6.004.00

The document has been updated to support Genesys Info Mart release 7.6.006. The following topics have been added or significantly changed since the previous 7.6 release of this document:

- “New in Release 7.6.006” on [page 39](#)—A new subsection in the “[New in This Release](#)” section describes the feature enhancements introduced in Genesys Info Mart release 7.6.006.
- Performance-related configuration options—A new configuration section, [gim-tuning], contains a number of new options to improve Genesys Info Mart performance in large-scale deployments. The [gim-tuning] section and new performance-related options are described starting on [page 308](#), and have also been added to [Table 39](#) (see [page 247](#)).
- Throughout the document, statements about, and requirements for, supported operating systems and database clients have been modified to include support for native 64-bit Solaris 10 and Windows 2003, and for the 64-bit Oracle 10 Client.
- Information about how Genesys Info Mart finds the paths to the Java executable and to RDBMS clients has been modified in various places in the document.
- Throughout the document, references to Java Development Kit (JDK) have been modified to indicate that Genesys Info Mart requires JDK 1.5 *or higher*.

Information about installing JDK 1.5 or higher on Windows ([page 343](#)) has been modified to clarify where the Genesys Info Mart Server gets the path to the Java executable.

- Information about the following new configuration options has been included:
 - `ignore-missing-config-objs` is described on [page 306](#) and has also been added to [Table 39](#) (see [page 247](#)).
 - `populate-voice-ixn-seg-facts` is described on [page 299](#) and has also been added to [Table 38](#) (see [page 235](#)) and [Table 41](#) (see [page 252](#)).
 - `populate-voice-init-consult-in-irf` is described on [page 298](#) and has also been added to [Table 38](#) (see [page 237](#)) and [Table 41](#) (see [page 252](#)).
 - `max-late-arriving-fact-time-limit` is described on [page 264](#) and has also been added to [Table 38](#) (see [page 240](#)).

- `days-to-keep-gim-facts` and `days-to-keep-dt-resource-activity-facts`—The minimum valid values of these options have been changed from 30 to 3 (days). Information about valid values has been updated in the option descriptions on [pages 304](#) and [pages 303](#).
- When you prepare the Merge Staging Area database schema, a script now modifies the Interaction Concentrator–derived schema to optimize data extraction. In the procedure to prepare the database schema, [Step 4](#) on [page 187](#) has been changed.
- The overview of the Genesys Info Mart–provided scripts (“RDBMS-Specific SQL Scripts” on [page 35](#)) has been updated to include the scripts to upgrade database schemas from a previous maintenance release of Genesys Info Mart 7.6.
- Information has been clarified in the section “Source Data Retention and Purging” on [page 78](#).
- Information about preparing the Interaction Concentrator data source to enable reporting on Outbound Contact data has been clarified. [Table 6](#) on [page 116](#) and the procedure “Configuring the Storage of Outbound Contact Record Field Data” on [page 143](#), including [Table 17](#) on [page 145](#), have been modified.
- The section “JDBC Driver for Microsoft SQL Server” on [page 349](#) has been updated to include JDBC driver 1.2.
- The procedures “Enabling HA Deduplication of Voice Agent Activity” on [page 397](#) and “Removing ICON Voice Agent Activity from the Secondary IDB” on [page 398](#) have been modified.

New in Document Version v7.6.003.00

The document has been updated to support Genesys Info Mart release 7.6.005. The following topics have been added or significantly changed since the previous 7.6 release of this document:

- “New in Release 7.6.005” on [page 38](#)—A new subsection in the “[New in This Release](#)” section describes the feature enhancements introduced in Genesys Info Mart release 7.6.005.
- Information in the “[Database Object Owners and User IDs](#)” section (starting on [page 78](#)) has been added or modified as required for Microsoft SQL Server 2005.
- `short-talk-threshold`—A new configuration option, in the `gim-aggregates-tenant` section, enables reporting on short calls. The option is described on [page 271](#), and has also been added to [Table 38](#) (see [page 240](#)) and [Table 40](#) (see [page 249](#)).

- `intraday-aggregates-frequency`—A new configuration option, in the `schedule` section, improves ETL performance by enabling you to run the intraday aggregation portion of `Job_LoadRecent` less frequently than the rest of the job. The option is described on [page 328](#), and has also been added to [Table 39](#) (see [page 245](#)).
- `days-to-keep-stg-hair-ids`—The default value of this option has been changed from 3 days to 5 days. Default value information has been updated in the option description on [page 284](#) and in [Table 39](#) (see [page 244](#)).
- `data-migration-time-range-units`—The default value of this option has been changed from `HOURS` to `DAYS`. Default value information has been updated in the option description on [page 284](#) and in [Table 39](#) (see [page 247](#)).
- In the procedure to prepare the Merge Staging Area database schema, the SQL command in [Step 4](#) on [page 187](#) has been modified.

New in Document Version v7.6.002.00

The following topics have been added or significantly changed since the previous 7.6 release of this document. The majority of changes are associated with new functionality implemented in Genesys Info Mart release 7.6.004:

- “New in This Release” on [page 35](#)
 - The ability to extract UserEvent-based key-value pair (KVP) data that is sent within a configurable timeout after the associated voice interaction ends.
 - An option to include the last five minutes of extracted voice agent activity data when transforming data in a simple contact center environment.
- “Compatibility with Genesys Software” on [page 51](#)
 - Added a new section and table listing the various Genesys software components that may coexist in an environment with Genesys Info Mart.
- “Database Object Owners and User IDs” on [page 78](#)
 - Added a note regarding DB2 database server name and schema owner.
- “Genesys Info Mart and Attached Data” on [page 94](#)
 - Reorganized the section to distinguish between call-based attached data and UserEvent-based KVP data.
- “Using UserEvent-Based KVP Data” on [page 107](#)
 - Added a new section to introduce the use of UserEvent-based KVP data.
- “IVR and GVP VAR Applications” on [page 109](#)
 - Added a note regarding IVR applications and UserEvent-based KVP data.
- “Agent Desktop Applications” on [page 114](#)

- Added a note regarding Agent desktop and UserEvent-based KVP data.
- Table 12, “ICON Voice Details—Application Options—custom-states Section,” on [page 134](#)
 - Added a new table to introduce EventData and store-event-data options.
- “Preparing IDBs” on [page 167](#)
 - Added a note to *uncomment* statements in the G_CUSTOM_DATA_S table so that the indexes get created if you intend to extract UserEvent-based KVP data.
- Table 33, “Data Source DAP Configuration Options,” on [page 201](#)
 - Added user-event-data option to the table.
- “Configuring JDBC DAPs” on [page 213](#)
 - Added a note regarding configuration of multiple DB2 DAPs with the same role.
- “Configuring DAPs for ICON Voice Details HA” on [page 220](#)
 - Added information related to UserEvent-based KVP data.
- Table 38, “Genesys Info Mart Data-Related Options,” on [page 234](#)
 - Added user-event-data, extract-user-event-data, and user-event-data-timeout options to this table.
- “Genesys Info Mart Application Option Descriptions” on [page 252](#)
 - Added a new custom-data section with new configuration options: extract-user-event-data and user-event-data-timeout.
 - Changed days-to-keep-stg-icon-call-info option.
 - Changed ir-merge-interval option.
 - Changed the default value for populate-sm-voice-resource-activity option.
 - Added a new configuration option and detailed description in gim-transformation section: complex-voice-agent-env.
 - Changed the default value for populate-sm-resource-session-facts and populate-sm-resource-state-facts options.
- “Installing the Genesys Info Mart Application” on [page 350](#)
 - Added a new section called “Modifying the gim_etl.properties File” on [page 353](#).
- Chapter 9, “UserEvent-Based KVP Data in Existing Deployments,” on [page 371](#)
 - Added a new chapter to describe how to configure and activate extraction of UserEvent-based KVP data in an environment where Genesys Info Mart 7.6 is already deployed.



Chapter

1

Genesys Info Mart Deployment Overview

This chapter describes the basic Genesys Info Mart architecture, the main Genesys Info Mart components and their functions, and features and functionality that are new in release 7.6. It also includes a discussion of Genesys Info Mart database schemas, as well as a roadmap of the steps that are required to deploy Genesys Info Mart.

This chapter contains the following sections:

- [Architecture, page 29](#)
- [Components and Functions, page 31](#)
- [New in This Release, page 35](#)

Architecture

Genesys Info Mart 7.6 extracts data from multiple Genesys data sources—such as Interaction Concentrator (ICON), Genesys Voice Platform (GVP) Voice Application Reporter (VAR), and Stat Server (in legacy environments)—and produces a data mart for contact center historical reporting.

Note: Genesys Info Mart continues to provide data extraction of voice agent state details and state reason details from the Stat Server database, for backward compatibility with deployments of prior Genesys Info Mart releases only. As a courtesy to the customers whose legacy reports continue to use Stat Server data, this guide provides information about using the Stat Server database as a data source. New Genesys Info Mart deployments must extract data that is related to voice agent activity from Interaction Concentrator 7.5 or later.

Genesys Info Mart consists of a server component that runs a set of predefined extraction, transformation, and loading (ETL) jobs, based on a schedule that is configured in the Genesys Info Mart ETL application. The Genesys Info Mart Administration Console provides a graphical user interface (GUI) for managing some of the ETL processes.

Figure 1 illustrates the Genesys Info Mart 7.6 architecture and the primary data flow between the Genesys Info Mart components and other Genesys components. (The diagram does not depict high availability architecture for any components.)

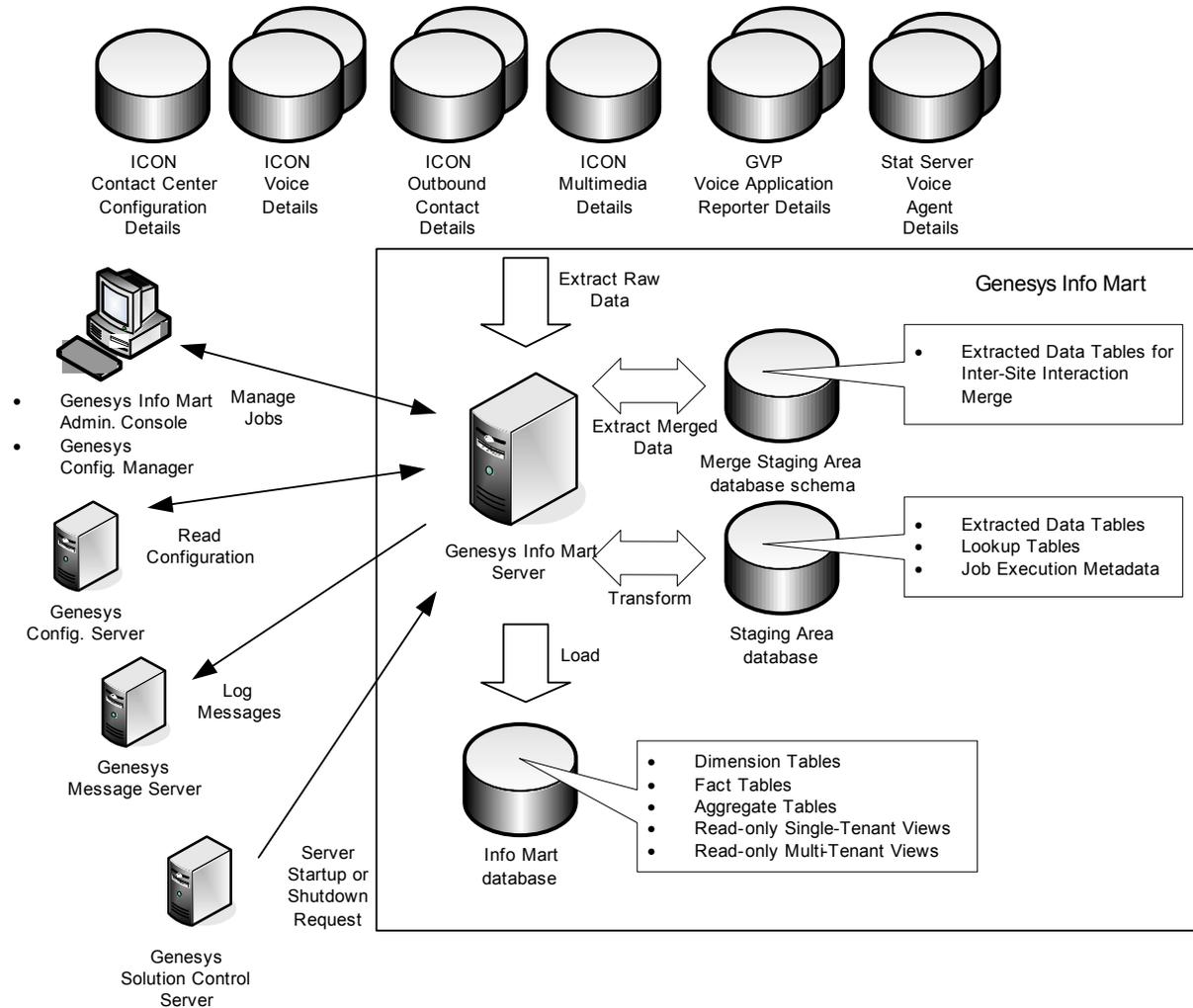


Figure 1: Genesys Info Mart Architecture and Data Flow Diagram

Components and Functions

Genesys Info Mart consists of the following components:

- Genesys Info Mart Server
- Genesys Info Mart Administration Console
- Info Mart database
- Staging Area database
- Merge Staging Area database schema
- Relational database management system (RDBMS)–specific SQL scripts

These components are described in the following subsections.

Genesys Info Mart Server

The Genesys Info Mart Server, a Java-based component, is the main executable process in Genesys Info Mart 7.6. Its main function is to run various functional jobs, including but not limited to ETL jobs. These jobs run according to the schedule that is configured in the Genesys Info Mart ETL application in Genesys Configuration Layer.

The Genesys Info Mart Server interfaces with:

- Solution Control Server (through Local Control Agent [LCA]), to control when the Genesys Info Mart Server starts and stops.
- Configuration Server, to read Genesys Info Mart application configuration options, as well as other configuration objects and options that affect Genesys Info Mart functionality.
- The Genesys Info Mart Administration Console, to start and stop jobs, and to provide the status of ETL jobs.
- Message Server, to log messages to the Centralized Log Database.
- The log4j Java client, to log messages to the local log.
- The Staging Area database, to manage job interdependencies.

ETL Jobs

ETL jobs, which run under the Genesys Info Mart Server, do the following:

- Extracting** • Extract contact center configuration history details from the Interaction Concentrator (ICON) Interaction Database (IDB). In a high availability (HA) data extraction configuration, two IDBs act as a redundant pair, in order for each to store a complete set of configuration history details; the data extraction job removes duplicate Configuration details from the redundant pair of IDBs. In a non-HA configuration, a single IDB must contain all configuration history details.

- Extract voice interaction, attached data, UserEvent-based key-value pair (KVP) data, virtual queue, and agent activity details from one or more IDBs. The data extraction job merges multi-site voice interactions that are stored in the same or multiple IDBs. In an HA data extraction configuration, the data extraction job removes, from redundant pairs of IDBs, the following duplicate details: voice interaction, attached data, UserEvent-based KVP data, virtual queue, and agent activity details.
- Extract Outbound Contact (OC) details from one or more IDBs. In an HA data extraction configuration, Outbound Contact details can be extracted from one or more pairs of redundant IDBs. Instead of deduplicating source data, the extraction job extracts from one IDB in the pair until it detects a gap in the source data and switches to the other IDB, as required, to extract Outbound Contact data for particular time periods.
- Extract Multimedia solution interaction, attached data, virtual queue, and agent activity details from one IDB.
- Extract voice agent state and agent state reason details from one or more Stat Server databases (for backward compatibility with legacy reporting environments only).
- Extract GVP VAR details from one or more GVP VAR databases.

Merging

- Perform intra-IDB interaction merges to resolve intersite call linkages between related calls that are captured within a single IDB. These merges are performed in each IDB that contains voice interaction data.
- Perform multi-IDB interaction merges to resolve intersite call linkages between related calls that are captured in distributed IDBs. These merges are performed on data in the Merge Staging Area database schema that was extracted from individual IDBs in which the intra-IDB merge procedure was performed.
- Perform a second-level extraction of data from the Merge Staging Area database schema to the main Staging Area database.

Loading and Other Actions

1. Transform the extracted data within the Staging Area database.
2. Load the transformed data into the Info Mart database dimension and intraday fact tables, and calculate the intraday aggregates.
3. Move data from the intraday fact tables to the more permanent historical fact tables.
4. Aggregate historical fact information in the Info Mart database historical aggregate tables.
5. Purge old information from the Info Mart database.
6. Migrate table data from the previous release of Genesys Info Mart.

Genesys Info Mart Administration Console

The Genesys Info Mart Administration Console is a GUI that enables monitoring and real-time administration of some aspects of the Genesys Info Mart ETL processes. It is included on the Genesys Info Mart CD as a separate installation package, and you install it on the same host as your Genesys Configuration Manager.

The Genesys Info Mart Administration Console implementation uses the existing Genesys Framework. It interfaces with Genesys Info Mart Server to start, schedule and stop ETL jobs on an ad hoc basis.

The Genesys Info Mart Administration Console also interfaces with the Staging Area database, through a DB Server and a dedicated Database Access Point, to query job status, job history and job schedules.

The Genesys Info Mart Administration Console provides the following functionality:

- Displays the current ETL job execution status.
- Displays a history of ETL job execution, including start time, stop time, duration, and final status.
- Filters the ETL job execution history that is displayed based on time and or status.
- Executes a single job on an ad hoc basis, either immediately, or at a specified future time and date.
- Cancels a scheduled job.
- Shuts down a running ETL job.

The Genesys Info Mart Administration Console interfaces with the following components:

- The Genesys Info Mart Server; to start, schedule, and stop jobs.
- The RDBMS, to query job status and job history from the Staging Area database. The Genesys Info Mart Administration Console connects to the Staging Area database by using a DB Server and a dedicated Database Access Point (DAP).

Info Mart Database

This is the main Info Mart database where transformed data from the Staging Area database is loaded. It contains the fact, dimension, and aggregate tables that the ETL jobs load one or more times a day, depending on whether you enable intraday loading.

Genesys Info Mart Database Schemas

The Genesys Info Mart data resides in several database schemas:

- Genesys Info Mart—Contains the dimensions, facts, and aggregates that the ETL jobs load.
- Genesys Info Mart Views—Contains read-only views of the dimensions, facts, and aggregates. Single-tenant deployment applications and multi-tenant deployment service-provider applications should use these views to query Genesys Info Mart data.
- Genesys Info Mart Tenant Views—Contains tenant-specific read-only views of the dimensions, facts, and aggregates. Genesys Info Mart supplies a separate database schema for each tenant (including the Environment tenant), so that each tenant can only access its own data. Multi-tenant deployment applications should use these views to query Genesys Info Mart data.

Genesys Info Mart provides SQL scripts that you execute to create database views that your reporting application can query. These views are created in the Genesys Info Mart Views and Genesys Info Mart Tenant Views schemas.

For more information about the database schemas, see the Genesys Info Mart overview section in the *Reference Manual* for your relational database management system (RDBMS):

- *Genesys Info Mart 7.6 DB2 Reference Manual*
- *Genesys Info Mart 7.6 MS SQL Reference Manual*
- *Genesys Info Mart 7.6 Oracle Reference Manual*

Staging Area Database

The Staging Area database is used to stage and transform data that is extracted from multiple sources.

The tables in the Staging Area database do the following:

- Temporarily store source data that is extracted from ICON, Stat Server (in legacy environments), and GVP VAR databases.
- Permanently store the information that is required by the transformation process to create and lookup dimension table data.
- Temporarily store transformed data until it is ready to be loaded.
- Permanently store information used to track the ETL history and ETL job status.

The database also contains the optional Merge Staging Area database schema tables, if your deployment requires inter-IDB merge of voice interactions.

Merge Staging Area Database Schema

This optional component is a database schema within the Staging Area database. The Merge Staging Area database schema stores related voice interaction data that has been extracted from multiple IDBs, and that must be merged.

The voice interaction details for multi-site interactions that span multiple IDBs are extracted from those IDBs and are stored in this database schema, where the ICON stored procedure `gysIRMerge` is invoked to merge intersite voice interactions. The merge procedure is invoked on the Merge Staging Area database schema to merge any interactions that span IDBs—for example, when a voice interaction is transferred between sites that capture only site-specific interaction data. (Refer to the section “[Multi-IDB Merge](#)” on page 94 for more details.) A second extraction process then extracts data from this schema into the Staging Area database for further cleansing and transformation.

- Data Storage** The Merge Staging Area database schema stores data only for the tables that contain:
- The data that needs to be merged (such as data from the `G_IR` or `G_CALL` IDB tables). This data is deleted from the Merge Staging Area database after it is successfully moved to the Staging Area database.
 - The data that is used for the purpose of the merge (such as data from the `G_IS_LINK_HISTORY` IDB table). This data is deleted from the Merge Staging Area database after the merge completes; the data is not moved to the Staging Area database.

Data for other tables is extracted directly to the Staging Area database.

RDBMS-Specific SQL Scripts

A set of SQL scripts is provided for each supported RDBMS type. The scripts perform a variety of tasks, including the following:

- Create the Staging Area and Info Mart database objects.
- Create the single-tenant and multi-tenant read-only views.
- Load aggregation metadata into the Staging Area database.
- Add indexes to source databases to improve the performance of data extraction.
- Migrate the Staging Area and Info Mart database schemas from a previous release.
- Upgrade the Info Mart, Staging Area, and Merge Staging Area database schemas from a previous maintenance release of Genesys Info Mart 7.6.

New in This Release

This section describes new or changed functionality that was introduced in the initial 7.6 release of Genesys Info Mart or in subsequent maintenance releases.

Note: If you choose to enable some of the new functionality that requires you to upgrade Interaction Concentrator, and if your deployment includes an earlier release of Interaction Concentrator, do not create a new `ICON Application` object in the Configuration Layer when you upgrade Interaction Concentrator. Instead, use the existing `Application` object in the Configuration Layer when you install the Interaction Concentrator upgrade. Refer to “Recommendations on ICON Deployment and Upgrade” on [page 126](#) for details.

The 7.6 release of Genesys Info Mart provides the following new or changed functionality:

- Extracts voice agent state and reason details from IDB, instead of from Stat Server. New Info Mart fact tables store details about the states, reasons, and do-not-disturb (DND) modes for voice and Multimedia.

Note: For backward compatibility with deployments of earlier Genesys Info Mart releases only, Genesys Info Mart continues to provide data extraction of voice agent state and reason details from the Stat Server database. See Appendix E, “Using Stat Server in Legacy Environments,” on [page 441](#), for more information.

- Provides HA data extraction for voice agent login session, state, state reason, and DND mode details, which are extracted from an IDB that is populated by ICON release 7.6 that has been configured appropriately. (T-Server release 7.6 is required.)
- Loads Open Media interaction and agent activity details from an IDB into the Info Mart database, in an environment with release 7.6 of Interaction Concentrator and Interaction Server. (*Open Media* refers to a custom media channel that is supported on top of Genesys Multimedia. The `Workitem` media type is an example of Open Media.)
- Loads active Multimedia virtual queue details into the Info Mart database and links virtual queue details to their corresponding target Multimedia interaction segment details.
- Loads active Multimedia chat interactions into the Info Mart database. Previously, only completed chat interactions were loaded into the Info Mart database.
- Provides HA data extraction for contact center configuration history details, which are extracted from IDBs that are populated by ICON release 7.6.
- Extracts data from IDB following the use of the Interaction Concentrator feature for resynchronization of configuration data.
- Provides data-quality improvements in HA data extraction of voice interaction details by comparing voice interaction data between the IDBs that constitute the HA pair.

- Provides detailed reasons for interactions that are cleared from a virtual queue, such as:
 - Target is cleared by routing strategy.
 - Interaction is routed by another, parallel virtual queue.
 - Interaction is default-routed by strategy.
 - Multimedia interaction is pulled back from strategy due to timeout.

Note: The support for all four clearance scenarios requires an environment with 7.6 releases of both Universal Routing Server and Interaction Concentrator that has been configured appropriately.

In addition, the fourth clearance scenario requires Interaction Server 7.6 to report when a Multimedia interaction is cleared from a virtual queue or pulled from a routing strategy because it was not routed within the timeout that was configured for routing in Interaction Server.

-
- Provides uninterrupted durations for *After Call Work (ACW)* (for voice only) and *Not Ready* states, when voice interactions are initiated or received while in these states, in an environment with Interaction Concentrator release 7.6 that has been configured appropriately.

Note: For voice, the newly introduced fact tables in release 7.6 contain the data for this feature; the data is not available in the legacy fact tables that are implemented in previous releases.

-
- Provides data to calculate the number of voice interactions that are initiated or received while the agent is in *ACW* (voice only) or *Not Ready* states, in an environment with Interaction Concentrator release 7.6 that has been configured appropriately.

Note: For voice, the newly introduced fact tables in release 7.6 contain the data for this feature; the data is not available in the legacy fact tables that are implemented in previous releases.

-
- Associates *ACW* with the ACD or routed call, instead of with a consultation call, for the case in which the consultation call outlasts the original inbound customer call, in an environment with Interaction Concentrator release 7.6 that has been configured appropriately.
 - Provides data to measure agent-to-agent consult talk duration, even if the consultation included an Interactive Voice Response (IVR) application or voice treatment port before the target agent answered the consultation.

Note: The newly introduced fact tables in release 7.6 contain the data for this feature; the data is not available in the legacy fact tables implemented in previous releases.

- Provides a set of new agent and interaction summary tables that facilitate aggregation for agent state and inbound voice interaction reporting.
- Provides several new interval-based and disposition-based aggregates, for use with either Genesys Interactive Insights (GI2) or your own custom reports.
- Provides configurable control of transaction sizes for loading, aggregating, and purging data in the Info Mart database. This functionality provides improved capability for customers to control the database resources required to run the ETL jobs.
- Provides a new ETL job, `Job_MigrateGIM`, to migrate the data from the Staging Area and Genesys Info Mart databases of release 7.5 to release 7.6.

New in Release 7.6.004

Starting with Genesys Info Mart release 7.6.004, Genesys Info Mart provides the following new or changed functionality:

- Provides the ability to extract UserEvent-based key-value pair (KVP) data that is sent within a configurable timeout after the associated voice interaction ends.
- Provides the ability, at your option, to include the last five minutes of extracted voice agent activity data when transforming data in a simple contact center environment. This functionality improves the accuracy of agent reports for a given business day in a contact center that operates fewer than 24 hours a day. (A simple contact center is one in which an agent only logs in to a single switch, DN, or queue at a time, and where reporting requirements do not include the factoring of Do-Not-Disturb [DND] mode into summarized resource states and resource state reasons.)

New in Release 7.6.005

Starting with Genesys Info Mart release 7.6.005, Genesys Info Mart provides the following new or changed functionality:

- Provides enhanced support for reporting tools such as GI2 to report on:
 - Additional categories of calls:
 - Calls that were too short for any useful customer interaction to have occurred. A new configuration option, `short-talk-threshold`, enables you to specify the maximum duration of a call that is considered *short*. For links to more information about the new configuration option, see the “Document Change History” on [page 19](#).

- Calls that rang at an agent, were not answered, and were subsequently redirected or routed to another resource (route on no answer [RONA]).
- Calls that were abandoned while ringing.
- The business attribute, if any, assigned to interactions that were distributed from Automatic Call Distribution (ACD) or Virtual Queues.
- Inbound interactions that had a defined Baseline Service Objective and were offered to a resource.
- The number of times inbound interactions were answered.

For information about the Info Mart database schema changes that support this functionality, see the *Genesys Info Mart 7.6 Reference* for your RDBMS.

- Improves ETL performance by enabling you to specify the frequency with which the intraday aggregation portion of Job_LoadRecent will run. In high-volume deployments, a short ETL cycle improves performance by keeping data sizes reasonable. However, the short cycle can result in repeated re-aggregation of overlapping time ranges, and this degrades the performance of intraday aggregation. Running intraday aggregation less frequently than Job_LoadRecent enables you to achieve a better balance between the two processes.

A new configuration option, `intraday-aggregates-frequency`, supports this optional functionality. For links to more information about the new configuration option, see the “Document Change History” on [page 19](#).

- Supports a new Technical Descriptor combination that enables Genesys Info Mart to recognize and properly report the scenario when an agent pulls a multimedia interaction from a strategy. For links to more information, see the “Document Change History” section of the *Genesys Info Mart 7.6 User’s Guide*.

New in Release 7.6.006

Starting with Genesys Info Mart release 7.6.006, Genesys Info Mart provides the following new or changed functionality:

- Improves ETL performance for large-scale inbound voice contact centers, primarily by running several steps in parallel, rather than sequentially. Improvement in ETL performance was observed during testing in large-scale deployments using Oracle 10 and running the ETL on either Solaris 10 or Windows 2003.

Several new configuration options in a new configuration section, `[gim-tuning]`, enable these performance improvements. You should implement these improvements only if the servers and databases that the ETL uses have sufficient processing power and resources.

For more information about the new configuration options, see “gim-tuning Section” on [page 308](#).

- Provides support for native 64-bit Solaris 10. Previously, Genesys Info Mart supported 64-bit Solaris 10 only in 32-bit compatibility mode, and this limited Genesys Info Mart scalability because it could use only 3.5 GB of memory. Operating in native 64-bit mode removes this constraint.
- Provides support for native 64-bit Windows 2003. Previously, Genesys Info Mart supported 64-bit Windows 2003 only in 32-bit compatibility mode, and this limited Genesys Info Mart scalability because it could use only 1.4 GB of memory. Operating in native 64-bit mode removes this constraint.
- Provides the option to allow the ETL to automatically ignore unresolved references to configuration objects, rather than require the user to manually run the failed ETL job from the Administration Console with the `-ignoreMissingConfigObjs` parameter.

A new configuration option, `ignore-missing-config-objs`, supports this optional functionality. For more information about the `ignore-missing-config-objs` configuration option, see [page 306](#).

- Provides the option not to store Interaction Segment Fact data for voice media. This feature is for deployments where reports can be created from Interaction Resource Fact data for voice media. Disabling the storage of Interaction Segment Fact data can improve ETL performance.

A new configuration option, `populate-voice-ixn-seg-facts`, supports this optional functionality. For more information about the `populate-voice-ixn-seg-facts` configuration option, see [page 299](#).

- Provides the option to create a separate Interaction Resource Fact row to represent voice agents and self-service IVR ports that initiate consultations. A new configuration option, `populate-voice-init-consult-in-irf`, supports this optional functionality. If this option is not enabled, information about initiated consultations continues to be embedded within the Interaction Resource Fact row that represents the original interaction that was offered to the agent or self-service IVR port.

For more information about the `populate-voice-init-consult-in-irf` configuration option, see [page 298](#).

- Modifies existing functionality to enable the purging of fact data from Info Mart that is only three days old. Previously, fact data had to be at least 30 days old before it was eligible to be purged. The minimum valid value for the `days-to-keep-gim-facts` and `days-to-keep-dt-resource-activity` configuration options is now 3 (days).
- Provides the option to limit how far back in time the aggregation processing in `Job_LoadRecent` and `Job_AggregateGIM` will go when considering newly loaded, late-arriving facts. Previously, it was not possible to set a limit, and all late-arriving facts would be reaggregated. Extensive reaggregation can result in excessive run times for

Job_LoadRecent and Job_AggregateGIM, particularly when contact center agents forget to log off, and therefore stay in the same state for many days, or when Interaction Concentrator (ICON) restarts and creates login sessions for agents that have been logged in for many days.

A new configuration option, `max-late-arriving-fact-time-limit`, enables this functionality. For more information about the `max-late-arriving-fact-time-limit` configuration option, see [page 264](#).

- Modifies a number of aggregation log event messages to include tenant information.

For example, information message 55-32002 has been changed from "Aggregation - aggregation complete for table [name]" to "Aggregation - aggregation complete for table [name] and tenant [name]."

- Provides SQL scripts to facilitate upgrade of the Info Mart, Staging Area, and Merge Staging Area schemas from a previous maintenance release of Genesys Info Mart 7.6.

New in Release 7.6.007

Starting with Genesys Info Mart release 7.6.007, Genesys Info Mart provides the following new or changed functionality:

- Provides support to improve ETL and Administration Console performance by providing an optional mechanism for purging the historical information about steps that the ETL has performed related to job execution, source data extraction, target table loading, table purging, and data aggregation from the Staging Area database.

A new configuration option, `days-to-keep-stg-history`, enables this functionality. For more information about the `days-to-keep-stg-history` configuration option, see [page 285](#).

- For the `transformation-buffer-size` configuration option, the maximum value has been increased from 5 to 50. For more information about the `transformation-buffer-size` configuration option, see [page 307](#).
- Provides support to improve the performance of the interval-based aggregation queries that are used to populate data for the Interaction-Agent Interval and Agent-State Interval aggregates.

A new configuration option, `interval-aggregates-fact-time-window`, enables this functionality. For more information about the `interval-aggregates-fact-time-window` configuration option, see [page 263](#).

- Modifies the time range of data that is aggregated in a single database transaction by Job_LoadRecent and Job_AggregateGIM aggregation queries. The value can now be specified in HOURS in the `aggregate-time-range-units` configuration option on the `gim-etl` section of the Genesys Info Mart Application object's Options tab.

For more information about the `aggregate-time-range-units` configuration option, see [page 283](#).

New in Release 7.6.008

Starting with Genesys Info Mart release 7.6.008, Genesys Info Mart provides the following new or changed functionality:

- Provides high availability (HA) data extraction of Outbound Contact details, which are extracted from an IDB that is populated by Interaction Concentrator release 8.0 and has been configured appropriately. See the *Genesys Info Mart 7.6.x Release Notes* for the minimum release of Interaction Concentrator 8.0 that is required to support this functionality.
- Enables automatic retry of any failed job or Genesys Info Mart Server exception by using a configured number of retries with a configurable delay between retries.

Two new configuration options, `job-retry-count` and `job-retry-wait` enable this functionality. For more information about the `job-retry-count` and `job-retry-wait` configuration options, see [page 328](#).

- Provides support for the automated re-run of `Job_ExtractICON` for `ICON_CFG` role and `Job_TransformGIM` when `Job_TransformGIM` fails after encountering an unresolved reference to a configuration object.
- Provides support for extracting voice interaction data from topologies in which not all T-Servers or IVR Servers that are involved in the call flow are monitored by ICON.

This feature enables Info Mart to provide reporting data in the following types of environments:

- Network routing or network parking are used, but you want Genesys Info Mart to store data for only the premise-portions of the interactions.
- There are multiple sites or multiple tenants, but you want Genesys Info Mart to store data for only some of the sites or tenants.

A new configuration option, `extract-partially-merged-interactions`, enables this functionality. For more information about the `extract-partially-merged-interactions` configuration option, see [page 287](#).

New in Release 7.6.009

Starting with Genesys Info Mart release 7.6.009, Genesys Info Mart provides the following new or changed functionality:

- Provides new `AG2_INB_V_QUEUE_*` and `AG2_INB_V_QUEUE_GRP_*` aggregates to enable reporting tools to report on:
 - Total time to distribute interactions from an ACD or virtual queue.

- Maximum time to distribute interactions from an ACD or virtual queue.
- Total time to divert (clear) an interaction from a virtual queue.
- Maximum time to divert (clear) an interaction from a virtual queue.

For more information about these aggregate reporting capabilities, see [page 269](#).

- Provides the option to maintain database table statistics for fact tables in the Info Mart database on your own, or to continue letting Genesys Info Mart maintain them as needed by the ETL.

Two new Genesys Info Mart application options have been added to support this new capability, `run-intraday-fact-table-stats`, and `run-historical-fact-table-stats`. For more information about these options, see [page 314](#).

- Provides the option to specify the value for the `estimate_percent` parameter when updating table statistics on an Oracle database. A new Genesys Info Mart application option, `oracle-stats-estimate-percent`, has been added to support this new functionality. For more information about the `oracle-stats-estimate-percent` configuration option, see [page 313](#).
- Provides the option to specify how long Genesys Info Mart stores information about login sessions that have been extracted from one side of an High Availability (HA) pair of Interaction Concentrator Databases (IDBs), but not the other; this allows the duplicate session to be ignored when it does eventually appear in the second side of the HA pair.

A new Genesys Info Mart application option, `days-to-keep-stg-ha-login-sessions`, has been added to support this new functionality. For more information about the `days-to-keep-stg-ha-login-sessions` configuration option, see [page 284](#).

New in Release 7.6.010

Starting with Genesys Info Mart release 7.6.010, Genesys Info Mart provides the following new or changed functionality:

- Provides the capability to map more than one Outbound Contact Record Field to each `RECORD_FIELD_*` column in `CONTACT_ATTEMPT_FACT`, `RECORD_FIELD_GROUP_1` or `RECORD_FIELD_GROUP_2`. Previously, only one Outbound Contact Record Field could be mapped to each `RECORD_FIELD_*` column. This capability is useful for deployments that have many calling lists with different record fields. Reports can use the `CALLING_LIST` dimension to determine which Outbound Contact Record Fields are stored in each `RECORD_FIELD_*` column. For more information, see “Genesys Info Mart and Outbound Contact Record Field Data” on [page 115](#).

- Provides the capability, when deployed on an Oracle database, to store the full range of NUMBER(10) values in USER_DATA_6 through USER_DATA_10 in INTERACTION_SEGMENT_FACT and INTERACTION_RESOURCE_FACT. Previously, only values less than or equal to 2147483647 could be stored.

New in Release 7.6.011

Starting with Genesys Info Mart release 7.6.011, Genesys Info Mart provides the following new or changed functionality:

- Provides support for the Interaction Concentrator 8.0 capability for voice interactions to associate call-based key-value pair (KVP) data with the Routing Point or Agent party that attached or updated the KVP data when they are no longer an active call party. For more information about this capability, see the *Interaction Concentrator 8.0 User's Guide*.
- Provides support for the Interaction Concentrator 7.6.1 and 8.0 capability to continue storing information about Multimedia interactions that were active when the Interaction Concentrator application is stopped and subsequently restarted.

Two Interaction Concentrator options, `calls-in-the-past` and `om-force-adata` enable this functionality. For more information about configuring these options, see Table 19 on [page 150](#).

For information about how to minimize data loss or data quality issues, and the proper procedures to follow when restarting a Multimedia Interaction Concentrator, see the *Genesys Info Mart 7.6 Operations Guide*.

- Provides support for Oracle 11g R1. For more information about “[Preparing the Genesys Info Mart Server Host](#)” to use Oracle 11g R1, see “[Installing JDBC Drivers](#)” on [page 347](#).
- Provides support for Oracle 10g R2 RAC. For more information about how to deploy Genesys Info Mart for Oracle 10g R2 RAC, see “[Oracle Real Application Clusters \(RAC\) Considerations](#)” on [page 77](#).
- Provides support for installing Genesys Info Mart Administration Console under Configuration Manager 8.0 on the Microsoft Windows 7 operating system.

New in Release 7.6.012

Starting with Genesys Info Mart release 7.6.012, Genesys Info Mart provides the following new or changed functionality:

- Provides new disposition-based aggregates, `AG2_OUT_V_IXN_AGENT_*` and `AG2_OUT_V_IXN_AGENT_GRP_*`, from which you can build your own custom reports to measure agent and agent group handling of outbound and internal voice interactions based on key business attributes, such as customer segment, service type, and service subtype.

A new configuration option, `populate-ixn-agent-out-aggregates`, enables this functionality. For more information about the `populate-ixn-agent-out-aggregates` configuration option, see [page 268](#).

- Provides native support for the Windows Server 2008 64-bit and Red Hat Enterprise Linux AS 64-bit operating systems.



Chapter

2

Deployment Planning

Proper planning is necessary in order to ensure the successful deployment of Genesys Info Mart. This chapter describes the planning that you must complete before you install Genesys Info Mart. It includes a recommended order for deployment, a discussion of system requirements, database issues, supported database topologies, and configuration requirements for supported features.

This chapter contains the following sections:

- [Recommended Deployment Order, page 47](#)
- [System Requirements, page 48](#)
- [Data Source Topologies, page 55](#)
- [Database Considerations, page 74](#)
- [High Availability Data Extraction, page 84](#)
- [IDB Merge, page 94](#)
- [Genesys Info Mart and Attached Data, page 94](#)
- [Genesys Info Mart and Outbound Contact Record Field Data, page 115](#)
- [Reporting Application, page 119](#)

Recommended Deployment Order

The deployment of Genesys Info Mart is a complex task because it involves a setup of and interaction with various server, graphical user interface (GUI), and database components. Review the recommended deployment task flow carefully and make sure you understand all involved activities before you start the deployment.

Task Flow for Genesys Info Mart Deployment

[Table 1](#) summarizes, at a high level, the task flow for activities that are required to plan and execute the Genesys Info Mart deployment.

Table 1: Task Flow: Genesys Info Mart Deployment

Objective	Related Procedures and Actions
Plan and perform the deployment of the server and databases to support detailed reporting for various media types.	<ol style="list-style-type: none"> 1. Plan the deployment. For issues that you must consider, review the sections in this chapter carefully. 2. Prepare the Interaction Concentrator, Stat Server (if applicable), and Genesys Voice Platform (GVP) Voice Application Reporter (VAR) data sources that will provide data to Genesys Info Mart. For more information, see Chapter 3 on page 121. 3. Prepare the target Genesys Info Mart databases and views. Appendix A provides sample worksheets to help you with this task. For more information, see Chapter 4 on page 173. 4. Configure the Database Access Points (DAPs) that Genesys Info Mart uses to access source and target databases. For more information, see Chapter 5 on page 195. 5. Configure the Genesys Info Mart application. Your configuration will depend directly on your choice of an end-user reporting tool, such as Genesys Interactive Insights. For more information, see Chapter 6 on page 225. 6. Prepare the Genesys Info Mart host, and install the Genesys Info Mart components. For more information, see Chapter 7 on page 341. 7. Perform critical post-installation activities, including initializing Genesys Info Mart and running the extraction, transformation, and loading (ETL) jobs for the first time. For more information, see Chapter 8 on page 359.

System Requirements

This section lists the system requirements for Genesys Info Mart, including:

- Supported operating systems and databases.
- Interoperability requirements.
- Software and database requirements.
- Compatibility with Genesys software.

Supported Operating Systems and Databases

For information about operating systems and the relational database management systems (RDBMSs) that Genesys Info Mart and Genesys Info Mart Administration Console support, see the *Genesys Supported Operating Environment Reference Manual*. This document is available on the Genesys Technical Support website at <http://genesyslab.com/support>.

Interoperability Requirements

Genesys Info Mart can operate with various Genesys 7.5 components, but full functionality and optimal performance require 7.6 components.

Genesys recommends that you install both the Genesys Info Mart Administration Console 7.6 and Genesys Configuration Manager 7.6 on the machine on which an administrator will perform the Genesys Info Mart ETL administration.

Notes:

- There is *no* requirement that the Genesys Info Mart Server and the Genesys Info Mart Administration Console reside on the same machine.
- For Genesys Info Mart to provide accurate and reliable reporting data, the system clocks must be synchronized on hosts on which Genesys applications (for example, T-Servers, Interaction Servers, Outbound Contact Servers, Configuration Servers, and ICONs) are running.

For specific interoperability requirements, see the *Genesys 7 Interoperability Guide*.

Software and Database Requirements

The following software must be installed on the Genesys Info Mart Server host in order to support Genesys Info Mart 7.6:

- RDBMS client for Oracle or DB2 (see [page 50](#))

Note: The RDBMS client is not required for Microsoft SQL Server.

- Java Database Connectivity (JDBC) driver (see [page 51](#))
- Java 1.5 or higher Java Development Kit (JDK) (see [page 51](#))

Note: If you are using Oracle 11g, the JDBC driver for Oracle requires that you install a minimum release of Java 1.6.

System Resources

The Genesys Info Mart Administration Console requires approximately 10 MB of hard disk space in order to accommodate the installed program. It does not require any additional RAM beyond what Genesys Configuration Manager and Wizard Framework require.

The Genesys Info Mart Server requires approximately 10 MB of hard disk space, plus a minimum of 50 MB for local log files. It requires between 1 and 5 GB of additional RAM, depending on the configuration and the volume of data to be processed. In order to supply enough RAM to the Genesys Info Mart Server process, large-scale deployments may need to install on the 64-bit version of the operating system. For information about which 64-bit operating systems Genesys Info Mart supports, see the *Genesys Supported Operating Environment Reference Manual*.

RDBMS Clients

Genesys Info Mart:

- Requires that you install the native RDBMS client for Oracle or DB2. This is not required for Microsoft SQL Server.
- Operates with 32-bit versions of database clients. Alternatively, Genesys Info Mart operates with 64-bit versions of the Oracle 10 and Oracle 11 client on Windows 2003, Windows 2008, Red Hat Enterprise AS Linux 5.0, and Solaris 10.

Notes:

- Genesys recommends using the RDBMS client and server of the same version.
- Genesys Info Mart is installed as a Windows Service and uses the system environment variables defined for the SYSTEM account, including the PATH environment variable. When you install Genesys Info Mart Server as a native 64-bit application, it will use the PATH system environment variable to find the 64-bit database client. This means that any 32-bit application that uses the PATH system environment variable to find the database client cannot be started under the SYSTEM account. For example, if a 32-bit Genesys Local Control Agent (LCA) is started as a Windows Service, it can start the 64-bit Genesys Info Mart Server; however, because the PATH will point to the 64-bit Oracle Client, the LCA cannot start a 32-bit Genesys DB Server application that relies on 32-bit Oracle Client, including the DB Server that the Genesys Info Mart Administration Console uses.

RDBMS Client for Oracle

When installing the Oracle RDBMS client, you must modify your PATH environment variable so that Genesys Info Mart can locate it. The PATH environment variable that you modify depends on the operating system and user account under which the Genesys Info Mart Server runs. For specific information on installing the Oracle client, see “Preparing the Genesys Info Mart Server Host” on [page 342](#).

RDBMS Client for DB2

All environment variables that are needed by DB2 and Genesys Info Mart, are created by running the DB2 environment setup script. For specific information on installing the DB2 client, see “Preparing the Genesys Info Mart Server Host” on [page 342](#).

Java Development Kit

Genesys Info Mart uses the Server Java Virtual Machine (JVM) that ships with the JDK. (The Java Runtime Environment [JRE] packaging of Java does not include the Server JVM.) You must install the JDK, version 1.5 or later, on the server on which you plan to install the Genesys Info Mart Server. Several Genesys Info Mart software components use the Java 1.5 or higher JDK.

Note: If you are using Oracle 11g, the JDBC driver for Oracle requires that you install a minimum release of Java 1.6.

Genesys Info Mart operates with 32-bit versions of Java JDK. Alternatively, Genesys Info Mart operates with 64-bit versions of Java JDK on Windows 2003, Windows 2008, Red Hat Enterprise AS Linux 5.0, and Solaris 10.

Note: If your deployment is affected by the 2007 changes in daylight saving time definitions, make sure that you install the JDK version that contains these changes.

You must also modify your PATH environment variable so that Genesys Info Mart can locate the Server JVM. The PATH environment variable that you modify depends on the operating system and user account under which the Genesys Info Mart Server runs.

For specific information about installing JDK and modifying the PATH environment variable, see “Preparing the Genesys Info Mart Server Host” on [page 342](#).

JDBC Drivers

Genesys Info Mart Server and the ETL jobs use JDBC to access all databases. For specific information about installing the appropriate JDBC driver for your environment, see “Preparing the Genesys Info Mart Server Host” on [page 342](#).

Compatibility with Genesys Software

For general requirements on interoperability with Genesys Configuration Layer, see the *Genesys Interoperability Guide*.

Table 2 lists the various Genesys software components that you may have in an environment with Genesys Info Mart. For each component, the table provides the *minimum* release number with which Genesys Info Mart release 7.6 is compatible. Later releases of certain components are required in order to:

- Enable full functionality available with Genesys Info Mart release 7.6.
- Achieve better performance and data quality.

Refer to the *Genesys Info Mart 7.6 Release Notes* and *Release Advisory* for any updates to the release requirements for the various components.

Table 2: Genesys Info Mart Compatibility

Area of Functionality	Component/Product Release	Comments
Configuration Layer	<ul style="list-style-type: none"> • Configuration Server release 7.5 • DB Server release 7.2 	<p>Configuration Server release 7.5 or higher provides improved support for the configuration history log. With Configuration Server release 7.2, the data quality in Genesys Info Mart is compromised for the following reasons:</p> <ul style="list-style-type: none"> • The configuration changes have unreliable start times when reported to Interaction Concentrator after an Interaction Concentrator outage. • More frequent data resynchronization may be required between the Interaction Database (IDB) and the Configuration Database.
Management Layer	<ul style="list-style-type: none"> • Local Control Agent (LCA) release 7.2 • Message Server release 7.2 • Solution Control Interface (SCI) release 7.2 • Solution Control Server (SCS) release 7.2 	

Table 2: Genesys Info Mart Compatibility (Continued)

Area of Functionality	Component/Product Release	Comments
Interaction Concentrator	<ul style="list-style-type: none"> Interaction Concentrator (ICON) release 7.5 	<p>To support new features introduced in Genesys Info Mart 7.6, Genesys Info Mart requires Interaction Concentrator release 7.6 or 8.0. In particular, to support high availability (HA) of Outbound Contact details, Genesys Info Mart (release 7.6.008 or later) requires Interaction Concentrator 8.0. See the <i>Genesys Info Mart 7.6.x Release Notes</i> for the minimum release of Interaction Concentrator 8.0 that is required to support this functionality.</p>
T-Server	<ul style="list-style-type: none"> T-Server release 7.2 	<p>T-Server is required if you need Genesys Info Mart to store reporting data for voice interactions and agent activity.</p> <p>Keep in mind the following performance considerations:</p> <ul style="list-style-type: none"> Under certain preconditions, IDB can experience significant performance degradation when data is collected from T-Server applications of release 7.2. Refer to the <i>Interaction Concentrator 7.5 Release Notes</i> for details. Genesys Info Mart data extraction performance degrades when data that is being extracted was collected from T-Server applications of release 7.2. Use of T-Server release 7.5 or higher improves the Interaction Concentrator performance while writing data to IDB, in an environment with a high call volume or lower grade hardware.
IVR	<ul style="list-style-type: none"> IVR Server release 7.2 	<p>IVR Server is required if you need Genesys Info Mart to store reporting data for voice interactions and agent activity.</p>

Table 2: Genesys Info Mart Compatibility (Continued)

Area of Functionality	Component/Product Release	Comments
Multimedia	<ul style="list-style-type: none"> Interaction Server release 7.5 	Interaction Server is required if you need Genesys Info Mart to store reporting data for multimedia interactions and agent activity.
Routing	<ul style="list-style-type: none"> Universal Routing Server (URS) release 7.2 	Interaction Concentrator requires URS release 7.2.001.11 or higher for virtual queue reporting. Refer to the <i>Interaction Concentrator 7.5 Deployment Guide</i> for more information.
Outbound Contact	<ul style="list-style-type: none"> Outbound Contact release 7.2 	<p>Outbound Contact is required if you need Genesys Info Mart to store reporting data for outbound campaign activity.</p> <p>If you use Outbound Contact 7.2 as the data source, outbound-specific data is not automatically linked to the call record. You must specially configure attached data to link call data to Outbound Contact data. See “Genesys Info Mart and Outbound Contact Record Field Data” on page 115 for more information.</p>
Genesys Voice Platform (GVP)	<ul style="list-style-type: none"> GVP Voice Application Reporter (VAR) release 7.5 	GVP VAR is required if you need Genesys Info Mart to store reporting data for GVP VAR applications.
Stat Server	<ul style="list-style-type: none"> Stat Server release 7.2 	Stat Server is only required if you have legacy reports (pre-GIM 7.6) based on Stat Server voice agent activity data.

Data Source Topologies

This section describes and illustrates the various data source *topologies* that Genesys Info Mart 7.6 supports.

Genesys Info Mart extracts data from three main sources:

1. **Interaction Concentrator**—Genesys Info Mart extracts data from one or more Interaction Databases (IDBs), according to the configuration. Genesys Info Mart extracts each of the following data domains separately, regardless of whether the data resides in the same or multiple IDBs:
 - *ICON Configuration details*—Contains contact center configuration details. There must be one data source for configuration data—either a single IDB or a single pair of redundant IDBs.
 - *ICON Voice details*—Contains interaction, attached data, UserEvent-based key-value pair (KVP) data, virtual queue, and agent activity for voice media. There can be zero, one, or multiple data sources for voice data. However, you must have *at least* one ICON Voice details data source or ICON Multimedia details data source.

Note: Starting with release 7.6, voice agent activity details that Genesys Info Mart extracts from the ICON tables includes agent state, reason, and DND (do-not-disturb) details in addition to login session data that was extracted previously.

- *ICON Multimedia details*—Contains interaction, attached data, virtual queue and agent activity for Genesys Multimedia e-mail, chat, and Open Media. There can be zero or one data source for Multimedia data; however, you must have *at least* one ICON Voice details data source or ICON Multimedia details data source.

Note: *Open Media* refers to a custom media channel that is supported on top of Genesys Multimedia. The `WorkItem` media type is an example of Open Media.

Because Genesys Info Mart supports Open Media interactions to the same extent as the e-mail and chat interactions available with Genesys Multimedia, in this guide, the term Multimedia interactions includes the Open Media interactions, unless otherwise noted.

- *ICON Outbound Contact details*—Contains Outbound Contact details. There can be zero, one, or multiple data sources for Outbound Contact data.
2. **GVP VAR**—Genesys Info Mart extracts data from zero, one, or multiple GVP VAR databases. This domain includes GVP voice application activity.

3. Stat Server—Genesys Info Mart 7.6 continues to extract voice agent details from Stat Server databases, for backward compatibility purposes only. Refer to Appendix E, “Using Stat Server in Legacy Environments” on [page 441](#) for details.

Note: Genesys Info Mart 7.5+ can extract voice interaction data and/or Genesys Multimedia interaction data. For Genesys Multimedia interactions, only data sources for ICON Configuration details and ICON Multimedia details are required. Data sources for ICON Voice, ICON Outbound Contact, GVP VAR, and Stat Server details are not required.

Topology Considerations

To enable the greatest deployment flexibility for multi-site or very large contact centers, the three Genesys Info Mart data sources are supported in a variety of topologies. The topology that you choose for each data source depends on several deployment-specific factors, including the number of sites, the data network capacity between sites, the interaction volume, and the required level of data source redundancy or HA.

Review the topologies on the following pages to determine which ones meet your contact center’s needs for performance and high availability data extraction.

Note: In the figures that accompany each topology description, the term *T-Server* is used generically to refer to all T-Server types (premise and network TDM Voice, SIP Server, IVR Server, and Virtual T-Server). For network deployments with load balancing architecture, note that each ICON application can connect to only one network T-Server out of the multiple network T-Servers that service the same network switch.

Sample Extraction Topologies

Appendix B on [page 417](#) contains several samples of single-site and multi-site data extraction topologies that include ICON, Stat Server, and GVP VAR as the data sources. During your planning process, review these samples carefully while you are selecting the topology that is appropriate for your environment.

Interaction Concentrator Topologies

ICON Roles

In a contact center that has a large Genesys configuration environment and/or that processes high call volumes, possibly with large amounts of attached data and/or UserEvent-based KVP data, you can improve Interaction Concentrator performance by deploying multiple ICON instances, each of which collects data only of a certain type.

The `ICON role` option specifies the type of data that each ICON instance processes and stores in the IDB. For a thorough discussion of ICON roles, see the *Interaction Concentrator Deployment Guide*.

This section describes each of the following ICON topologies in turn:

- ICON Configuration Details—One ICON, One IDB (see [page 57](#))
- ICON Configuration Details—HA Pair of ICONs and IDBs (see [page 57](#))
- ICON Voice Details—One ICON, One IDB (see [page 60](#))
- ICON Voice Details—HA Pair of ICONs and IDBs (see [page 61](#))
- ICON Voice Details—Multiple ICONs, One IDB (see [page 63](#))
- ICON Voice Details—Multiple ICONs, Multiple IDBs (see [page 64](#))
- ICON Voice Details—Multiple HA ICONs, Multiple IDBs (see [page 66](#))
- ICON Outbound Contact Details—One ICON, One IDB, (see [page 67](#))
- ICON Outbound Contact Details—Multiple ICONs, One IDB (see [page 68](#))
- ICON Outbound Contact Details—Multiple ICONs, Multiple IDBs (see [page 68](#))
- ICON Outbound Contact Details—HA Pair of ICONs and IDBs (see [page 69](#))
- ICON Outbound Contact Details—Multiple HA ICONs, Multiple IDBs (see [page 70](#))
- ICON Multimedia Details—One ICON, One IDB (see [page 71](#))
- ICON Details Split by Role—One ICON, Multiple IDBs (see [page 72](#))

Genesys Info Mart Requirements to ICON Details Storage

The following requirements apply when you are using Interaction Concentrator in conjunction with Genesys Info Mart:

- For ICON Voice details topologies, a single ICON application (or a single HA pair of ICON applications) must record *all* activity for a particular agent. If, for example, a particular agent in your contact center logs in to two switches, the same ICON application (or the same ICON HA pair) must monitor both switches.
- The ICON application that is used to store Multimedia data *cannot* also be used to store voice data. Moreover, the IDB that stores Multimedia data cannot also be used to store voice data.

If your deployment has both voice and Multimedia data:

- You must use separate ICON applications to process each type of data.
- You must store Voice details and Multimedia details in separate IDBs.
- The pair of redundant ICON applications and their IDBs that store HA Outbound Contact details cannot be used to also store Configuration, Voice or Multimedia details.

ICON Configuration Details—One ICON, One IDB

Genesys Info Mart extracts contact center Configuration details from *only* one IDB. [Figure 2](#) illustrates a single ICON application as the data source for contact center Configuration details. In this topology, the ICON application

must be configured to store contact center Configuration details. In other words, the `role` option of the ICON application must be set to `cfg`.

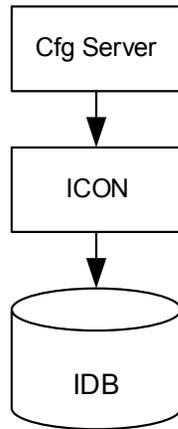


Figure 2: ICON Configuration Details—One ICON, One IDB

Genesys Info Mart has a strong dependency on the availability of the contact center configuration information that is stored in this IDB. To maximize the availability of the data, Genesys strongly recommends that you:

- Use a separate ICON application instance to store the contact center configuration history.
- Install this ICON application on the same host as the Genesys Configuration Server that provides the source event stream.
- Configure this ICON application to share the same Genesys DB Server that the Genesys Configuration Server uses. If this is not possible, then install the DB Server that ICON will use on the same host as the Configuration Server's DB Server.
- Create the IDB in the same database server instance as the Configuration Server database.
- Use the resynchronization of configuration data feature of ICON as soon as data inconsistency is suspected between the Configuration Database and IDB.

ICON Configuration Details—HA Pair of ICONs and IDBs

You can improve the availability of the configuration data in IDB by deploying an HA pair of ICON instances, each storing data in its own IDB.

[Figure 3](#) illustrates two ICON applications each of which receives configuration information from the primary server in the HA pair of Configuration Servers. In this topology, both ICON applications must be configured to store contact center Configuration details, by setting their `role` options to `cfg`. Genesys also recommends that these ICON applications are

dedicated to handling Configuration details and do not process other types of data. You can also co-locate one of the IDBs in the same RDBMS instance with Configuration Database.

Note: ICON does not support the deployment of two ICON applications that monitor the same Configuration Server (pair) and populate the same IDB.

The Genesys Info Mart extraction jobs remove duplicate data when processing data about configuration objects and *configuration object relationships* (associations between configuration objects) from the HA pair of data sources.

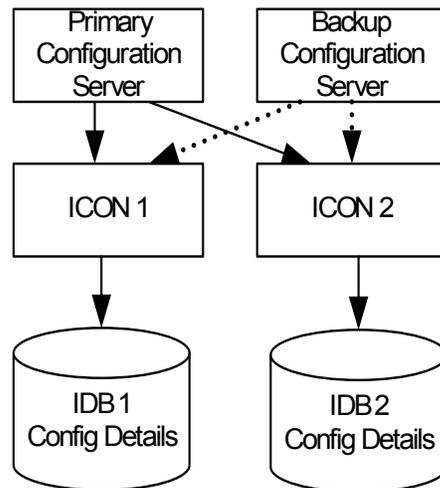


Figure 3: ICON Configuration Details—HA Pair of ICONs and IDBs

Recommendations on Hosting

To achieve a high level of data availability, Genesys recommends that you co-locate certain components on the same host computers, as follows:

- **Host A**
 - Primary Configuration Server
 - Primary ICON
- **Host B**
 - Backup Configuration Server
 - Secondary ICON

Host B provides backup support in case Host A fails.
- **Host C**
 - Configuration Database
 - DB Server that provides access to Configuration Database

Note: Genesys recommends that a DB Server that provides access to IDB be located on the same host as IDB. For this reason, and to prevent a situation when Configuration Server continues writing to Configuration Database while ICON cannot write to IDB, you might consider using the same DB Server to access both databases. On the other hand, to avoid the heavy load on the DB Server that provides access to Configuration Database, you might consider deploying a separate DB Server instance, either on this or another host.

- IDB populated by the primary ICON

A failure of Host C results in Configuration Server being unable to write to its database. Running on a separate host, Configuration Server can continue to write a maximum configurable amount of configuration changes to its history log while Host C is recovered. (Set the `max-record` configuration option in Configuration Server to the maximum valid value.)

- **Host D**

- DB Server that provides access to the secondary IDB
- IDB populated by the secondary ICON

Host D provides backup support in case the IDB on Host C is no longer being populated.

- **Host E**

- Genesys Info Mart Server application
- Host E presents a single point of failure.

- **Host F**

- Staging Area database

Host F presents a single point of failure.

Note: You can deploy an HA pair of DB Servers to access Configuration Database. If you do, install the primary DB Server on Host C (recommended). You can install the backup DB Server either in a separate directory on Host C, or on a different computer, such as Host B.

ICON Voice Details—One ICON, One IDB

Figure 4 illustrates an ICON application as a data source for voice interaction, attached data, UserEvent-based KVP data, agent activity, and virtual queue details. Agent activity includes information about login sessions, agent states, agent state reasons, and use of the DND mode. This deployment topology is suitable for single-site contact centers, or for multi-site contact centers that have a relatively low interaction volume. In this topology, the ICON application must be configured to store voice interactions, attached data,

virtual queue, resource login, as well as agent state and work mode details. Optionally, the ICON application may also be configured to store UserEvent-based KVP data. In other words, the `role` option of the ICON application must contain the values `gcc`, `gud`, and `gls`.

Warning! This topology is prone to data loss in a multi-site environment when temporary outages in network connectivity affect the connection between T-Server and ICON.

Note: This topology requires the ETL to perform an intra-IDB interaction merge before it extracts the data from the IDB, in order to consolidate voice interactions properly.

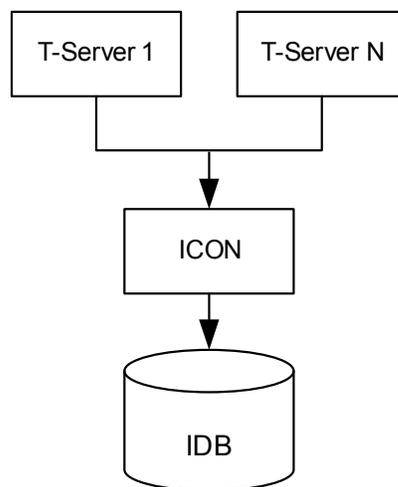


Figure 4: ICON Voice Details—One ICON, One IDB

ICON Voice Details—HA Pair of ICONs and IDBs

[Figure 5](#) depicts a pair of ICON applications as HA data sources for voice interaction, attached data, UserEvent-based KVP data, agent activity, and virtual queue details. Agent activity includes information about login sessions, agent states, agent state reasons, and use of the DND mode. In this deployment topology, ICON processes that constitute an HA pair receive events from the same T-Servers, and they have the same configuration option settings. The only difference is that each stores data in its own IDB.

Warning! This topology is prone to data loss in a multi-site environment when temporary outages in network connectivity simultaneously affect the connection between T-Server and both ICON applications.

Note: In the HA topology, each ICON must store data into its own IDB.

The Genesys Info Mart extraction jobs remove duplicate voice interactions, attached data, UserEvent-based KVP data, and virtual queue details from the HA pair of data sources. Voice agent activity data—such as login sessions, agent states, agent state reasons, and DND mode details—is also extracted from both IDBs that constitute the HA pair and is de-duplicated.

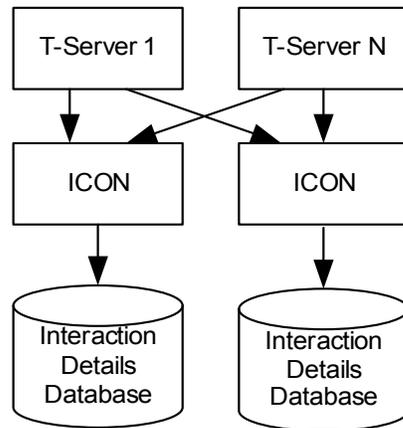


Figure 5: ICON Voice Details—HA Pair of ICONs and IDBs

Note: A single ICON application (or a single HA pair of ICON applications) must record *all* activity for a particular agent. If, for example, a particular agent in your contact center logs in to two switches, the same ICON application (or the same ICON HA pair) must monitor both switches.

Recommendations on Hosting

To achieve a high level of data availability, Genesys recommends that you co-locate certain components on the same host computers, as suggested in this section.

As a general recommendation, select a network location for an ICON server to be the same host or to be close to a T-Server host.

- If ICON is located away from T-Server, the connection between the two servers is more likely to break. A loss of connection results in missing notifications about interaction or agent activity; this data cannot be restored.
- If ICON is located away from IDB:
 - You need to account for data latency.

- A loss of connection between ICON and its IDB does not necessarily result in a loss of data because ICON continues writing data to the persistent storage until the database connection is restored.

As recommended in the *Interaction Concentrator Deployment Guide*, install DB Server on the same host that has the IDB to which this DB Server provides access.

The following is a sample hosting solution for an environment with two T-Servers and an HA pair of Interaction Concentrators:

- **Host A**
 - One of T-Servers
 - Primary ICON
- **Host B**
 - Second T-Server
 - Secondary ICON
- **Host C**
 - DB Server that provides access to primary IDB
 - IDB populated by the primary ICON
- **Host D**
 - DB Server that provides access to secondary IDB
 - IDB populated by the secondary ICON

Host D provides backup support in case the IDB on Host C is no longer being populated.

- **Host E**
 - Genesys Info Mart Server application

Host E presents a single point of failure.

- **Host F**
 - Staging Area database

Host F presents a single point of failure.

ICON Voice Details—Multiple ICONs, One IDB

[Figure 6](#) depicts multiple ICON applications as a data source for voice interactions, attached data, UserEvent-based KVP data, agent activity, and virtual queue details. Agent activity includes information about login sessions, agent states, agent state reasons, and use of the DND mode.

In this topology, each ICON application must be configured to store voice interaction, attached data, virtual queue and agent activity details. Optionally, the ICON application can be configured to store UserEvent-based KVP data. In other words, the role option for each ICON application must contain the values `gcc`, `gud`, and `gts`, and must *not* contain the value `cfg`.

Each ICON application must also be configured to record data from distinct, non-overlapping T-Servers. No two ICON applications can record data from the same T-Server.

Notes:

- When this topology is deployed in a multi-site environment, temporary outages in network connectivity are less likely to result in a loss of data as long as the ICON application resides on the same site as its T-Server.
 - This topology requires the ETL to perform an intra-IDB interaction merge before it extracts the data from the IDB, in order to consolidate voice interactions properly.
-

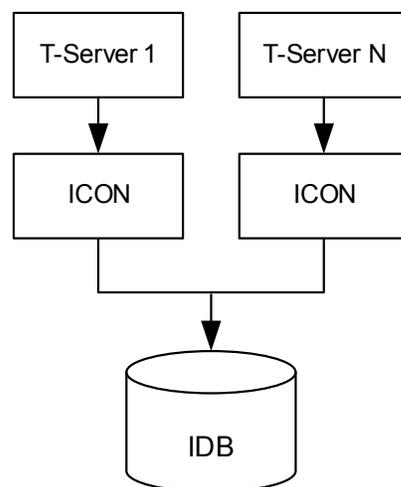


Figure 6: ICON Voice Details—Multiple ICONS, One IDB

Notes:

- A single ICON application (or a single HA pair of ICON applications) must record *all* activity for a particular agent. If, for example, a particular agent in your contact center logs in to two switches, the same ICON application (or the same ICON HA pair) must monitor both switches.
 - Genesys Info Mart does not support an HA configuration for this (multiple ICONS, one IDB) topology.
-

ICON Voice Details—Multiple ICONS, Multiple IDBs

Figure 7 depicts multiple ICON applications as a data source for voice interaction, attached data, UserEvent-based KVP data, agent activity, and virtual queue details. Agent activity includes information about login sessions,

agent states, agent state reasons, and use of the DND mode. In this topology, each ICON application must be configured to store voice interaction, attached data, virtual queue, and agent activity details. Optionally, the ICON application may also be configured to store UserEvent-based KVP data. In other words, the `role` option for each ICON application must contain the values `gcc`, `gud`, and `gls`.

Each ICON application must also be configured to record data from distinct, non-overlapping T-Servers. No two ICON applications can record data from the same T-Server.

Notes:

- When this topology is deployed in a multi-site environment, temporary outages in network connectivity are less likely to result in a loss of data as long as the ICON application resides on the same site as its T-Server.
- In order to consolidate voice interactions properly, this topology requires the ETL, before it extracts the data from the IDB, to perform the following merges:
 - An intra-IDB interaction merge
 - An inter-IDB interaction merge in the Merge Staging Area database schema

Extracting and transforming Voice details from multiple IDBs requires significantly more ETL processing time than extracting and transforming Voice details from a single IDB. For this reason, Genesys strongly recommends that you consider deploying a single IDB for Voice details.

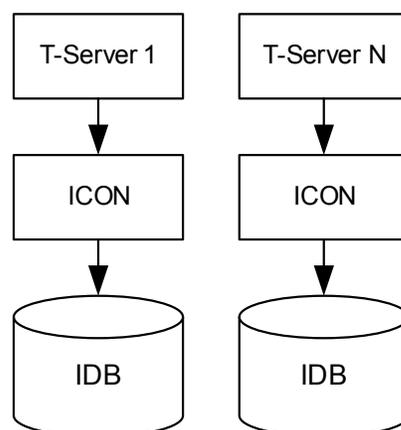


Figure 7: ICON Voice Details—Multiple ICONS, Multiple IDBs

Note: A single ICON application (or a single HA pair of ICON applications) must record *all* activity for a particular agent. If, for example, a particular agent in your contact center logs in to two switches, the same ICON application (or the same ICON HA pair) must monitor both switches.

ICON Voice Details—Multiple HA ICONs, Multiple IDBs

Figure 8 depicts multiple ICON applications as HA data sources for voice interaction, attached data, UserEvent-based KVP data, agent activity, and virtual queue details. Agent activity includes information about login sessions, agent states, agent state reasons, and use of the DND mode. In this deployment topology, the ICON processes that constitute each HA pair receive events from the same T-Servers, and they have the same configuration option settings. The only difference is that each stores data in its own IDB.

Note: When this topology is deployed in a multi-site environment, temporary outages in network connectivity are less likely to result in a loss of data as long as the ICON application resides on the same site as its T-Server(s).

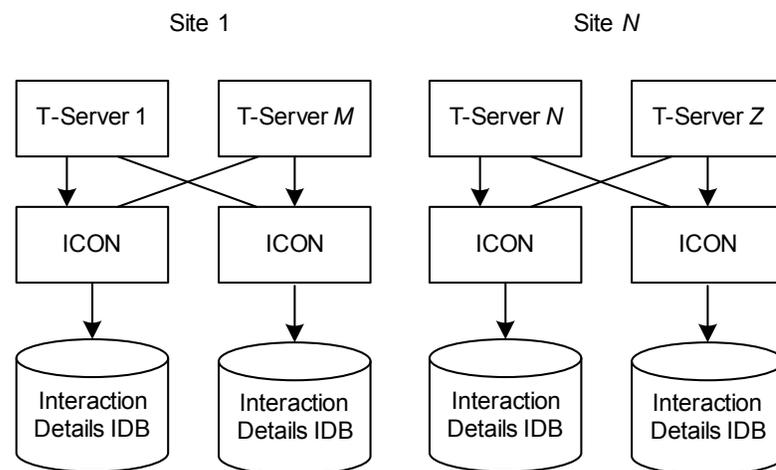


Figure 8: ICON Voice Details—Multiple HA ICONs, Multiple IDBs

Note: A single ICON application (or a single HA pair of ICON applications) must record *all* activity for a particular agent. If, for example, a particular agent in your contact center logs in to two switches, the same ICON application (or the same ICON HA pair) must monitor both switches.

The Genesys Info Mart extraction jobs remove duplicate voice interactions, attached data, UserEvent-based KVP data, agent activity, and virtual queue details from each HA pair of data sources.

Note: Extracting and transforming ICON Voice details from multiple HA pairs of IDBs requires significantly more ETL processing time than extracting and transforming Voice details from a single HA pair of IDBs. For this reason, if your deployment requires HA data sources, Genesys strongly recommends that you consider deploying a single HA pair of IDBs for Voice details.

ICON Outbound Contact Details—One ICON, One IDB

Figure 9 depicts an ICON application as a data source for Outbound Contact details. This deployment topology is suitable for single-site contact centers, or for multi-site contact centers that have a relatively low outbound call volume. In this topology, the ICON application must be configured to store Outbound Contact data. In other words, the `role` option of the ICON application must contain the value `gos`.

Warning! This topology is prone to data loss in a multi-site environment when temporary outages in network connectivity affect a connection between Outbound Contact Server (OCS) and the ICON application.

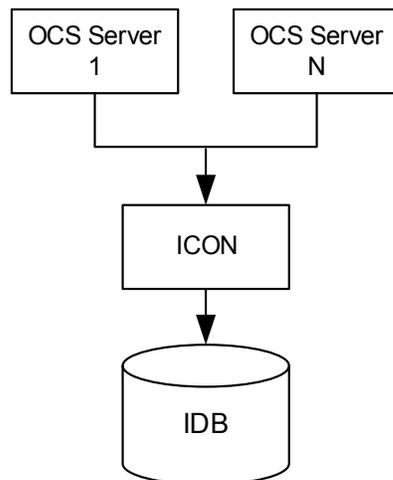


Figure 9: ICON Outbound Contact Details—One ICON, One IDB

ICON Outbound Contact Details—Multiple ICONs, One IDB

Figure 10 depicts multiple ICON applications as a data source for Outbound Contact details. This deployment topology is suitable for multi-site contact centers with a relatively high outbound interaction volume. In this topology, each ICON application must be configured to store Outbound Contact data. In other words, the `role` option of each ICON application must contain the value `gos`, and must *not* contain the value `cfg`. Each ICON application must also be configured to record data from distinct, non-overlapping Outbound Contact Servers. No two ICON applications can record information from the same Outbound Contact Server.

Note: When this topology is deployed in a multi-site environment, temporary outages in network connectivity are less likely to result in a loss of data as long as the ICON application resides on the same site as its Outbound Contact Server.

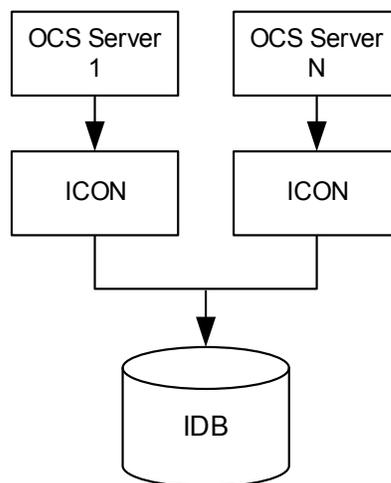


Figure 10: ICON Outbound Contact Details—Multiple ICONs, One IDB

ICON Outbound Contact Details—Multiple ICONs, Multiple IDBs

Figure 11 depicts multiple ICON applications as the data source for Outbound Contact details. This deployment topology is suitable for multi-site contact centers with a relatively high outbound interaction volume. In this topology, each ICON application must be configured to store Outbound Contact data. In other words, the `role` option of each ICON application must contain the value `gos`. Each ICON application must also be configured to record data from one or more distinct, non-overlapping Outbound Contact Servers. No two ICON applications can record information from the same Outbound Contact Server.

Note: When this topology is deployed in a multi-site environment, temporary outages in network connectivity are less likely to result in a loss of data as long as the ICON application resides on the same site as its Outbound Contact Server.

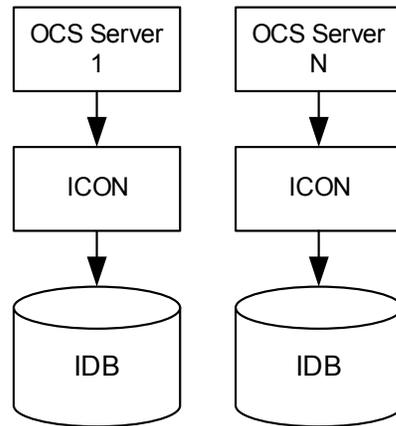


Figure 11: ICON Outbound Contact Details—Multiple ICONs, Multiple IDBs

ICON Outbound Contact Details—HA Pair of ICONs and IDBs

[Figure 12](#) depicts a pair of ICON applications as HA data sources for Outbound Contact details. This deployment topology is suitable for single-site contact centers or for multi-site contact centers that have a relatively low outbound call volume. In this topology, the ICON processes that constitute an HA pair receive events from the same Outbound Contact Server (or an HA pair of primary and backup Outbound Contact Servers) and have the same configuration option settings. The only difference is that each stores data in its own IDB. The ICONs and IDBs in this deployment topology must be dedicated to storing Outbound Contact details only, and must not store other types of data, such as Configuration details, Voice details, or Multimedia details.

Note: In the HA topology, each ICON must receive events from only one Outbound Contact Server (or one HA pair of primary and backup Outbound Contact Servers) and must store data in its own IDB. The Genesys Info Mart extraction job uses ICON data connection reliability information in the IDB to determine whether there is reliable data for a given time span. When an IDB indicates that there is a gap in the source data, the data extraction job switches over to the other IDB.

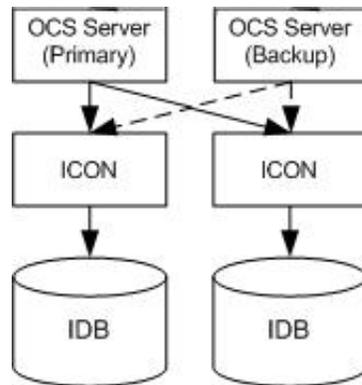


Figure 12: ICON Outbound Contact Details—HA Pair of ICONS and IDBs

ICON Outbound Contact Details—Multiple HA ICONS, Multiple IDBs

[Figure 13](#) depicts multiple ICON applications as HA data sources for Outbound Contact details. This deployment topology is suitable for multi-site contact centers with a relatively high outbound interaction volume. In this topology, the ICON processes that constitute an HA pair receive events from the same Outbound Contact Server (or an HA pair of primary and backup Outbound Contact Servers) and have the same configuration option settings. The only difference is that each stores data in its own IDB. The ICONS and IDBs in this deployment topology must be dedicated to storing Outbound Contact details only, and must not store other types of data, such as Configuration details, Voice details, or Multimedia details.

Note: In the HA topology, each ICON must receive events from only one Outbound Contact Server (or one HA pair of primary and backup Outbound Contact Servers) and must store data in its own IDB. The Genesys Info Mart extraction job uses ICON connection reliability information in the IDB to determine if there is reliable data for a given time span. When an IDB indicates that there is a gap in the source data, the data extraction job switches over to the other IDB.

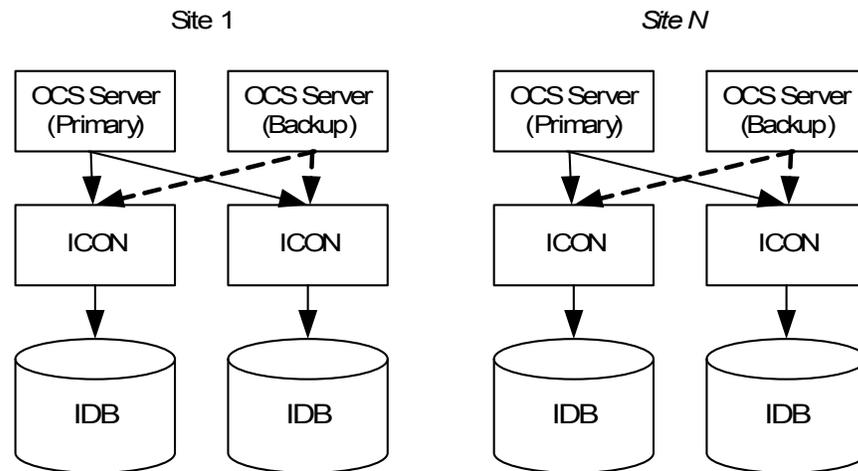


Figure 13: ICON Outbound Contact Details—Multiple HA ICONs, Multiple IDBs

ICON Multimedia Details—One ICON, One IDB

[Figure 14](#) depicts an ICON application as a data source for Multimedia details. Genesys Info Mart 7.6 extracts Multimedia details from *only one* IDB. In this topology, the ICON application must be configured to store Multimedia interaction, attached data, virtual queue, and agent activity details. In other words, the `role` option of the ICON application must contain the values `gcc`, `gud`, and `gls`.

Notes:

- When this topology is deployed in a multi-site environment, temporary outages in network connectivity are less likely to result in a loss of data as long as the ICON application resides on the same site as its Interaction Server.
- You *cannot* use the same ICON application to store Multimedia data as you use to store voice data. Moreover, you cannot use the IDB that stores Multimedia data to also store voice data.

If your deployment has both voice and Multimedia data:

- You must use separate ICON applications to process each type of data.
 - You must store Voice details and Multimedia details in separate IDBs.
-

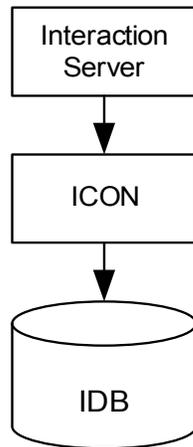


Figure 14: ICON Multimedia Details—Once ICON, One IDB

ICON Details Split by Role—One ICON, Multiple IDBs

[Figure 15](#) depicts one ICON application as a data source for voice interaction, attached data, virtual queue, voice login, contact center configuration, and Outbound Contact details. In this topology, you configure a single ICON application to process data for the gcc, gud, gls, cfg, and gos roles, and to write the resulting data to separate IDBs, depending on the role. This topology is possible with any ICON application.

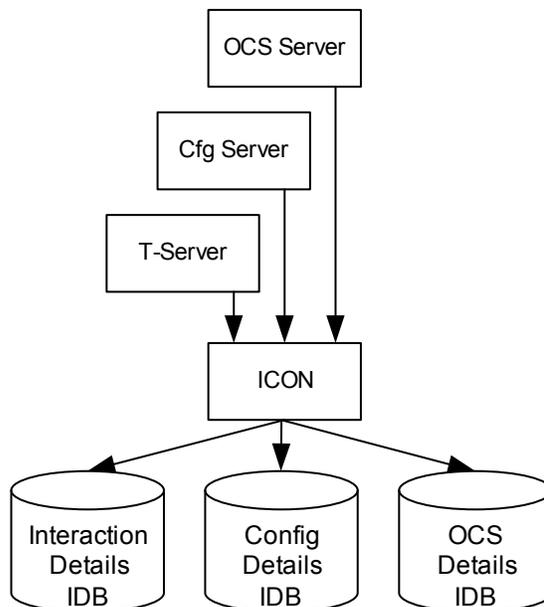


Figure 15: ICON Details Split by Role—One ICON, Multiple IDBs

Genesys Voice Platform VAR Topologies

This section describes each of the following Genesys Voice Platform VAR topologies are discussed in this section:

- GVP Voice Application Reporter Details —One VAR Server, One VAR Database
- GVP Voice Application Reporter Details—Multiple VAR Servers, Multiple VAR Databases (see [page 73](#))

GVP Voice Application Reporter Details—One VAR Server, One VAR Database

Genesys Info Mart 7.6 extracts GVP VAR details from zero, one, or multiple GVP VAR database(s). [Figure 16](#) depicts Voice Application Reporter as a data source for GVP voice application details. This deployment topology is suitable for single-site contact centers, or for multi-site contact centers that have a relatively low interaction volume. In this topology, multiple GVP voice applications first send to the VAR Server the information that is to be stored in the VAR database.

You can also use this data source topology for single-tenant or multi-tenant deployments in which only one of the tenants wants GVP VAR reporting. In this case, you must indicate, through the DAP configuration, the tenant to which that data belongs.

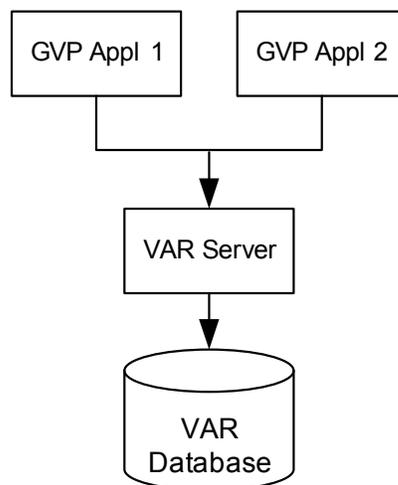


Figure 16: GVP Voice Application Reporter Details—One VAR Server, One VAR DB

GVP VAR Details—Multiple VAR Servers, Multiple VAR Databases

Genesys Info Mart 7.6 extracts GVP VAR details from zero, one, or multiple GCP VAR database(s). [Figure 17](#) depicts VAR as a data source for GVP voice application details. This deployment topology is suitable for multi-site contact

centers or for contact centers that have a relatively high interaction volume. In this topology, multiple GVP voice applications first send to the VAR Server information that is to be stored in the VAR database. Each VAR Server must be configured to store information from distinct, non-overlapping GVP applications in its VAR database. No two VAR Servers can record data from the same GVP VAR application.

For multi-tenant deployments, each GVP VAR “customer” must have its own VAR database, and it must indicate, through the DAP configuration, the framework tenant to which that data belongs.

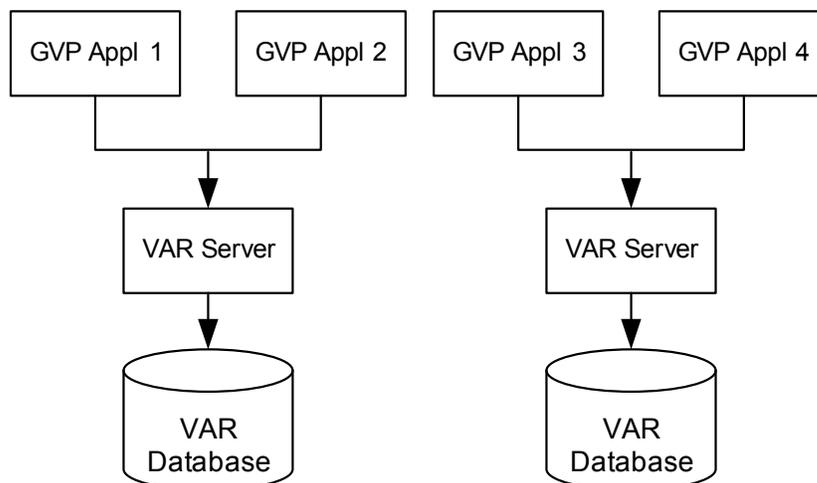


Figure 17: GVP Voice Application Reporter Details—Multiple VAR Servers, Multiple VAR DBs

Database Considerations

Genesys Info Mart ships predefined ETL jobs that run on the Genesys Info Mart Server. These ETL jobs access several databases, as described in Chapter 1 on [page 29](#). There are also several supported database schemas (Genesys Info Mart, Genesys Info Mart Views, and Genesys Info Mart Tenant Views), as described in “Genesys Info Mart Database Schemas” on [page 33](#).

The following subsections describe database issues that you must consider before you deploy Genesys Info Mart. These issues include:

- Database capacity (see [page 75](#)).
- Historical data from existing data sources (see [page 77](#)).
- Source Data Retention and Purging (see [page 78](#)).
- Database object owners and user IDs (see [page 78](#)).
- Database user authentication (see [page 84](#)).

In addition, there are several deployment-specific Genesys Info Mart database design considerations that are outside the scope of this *Deployment Guide*, including partitioning, indexing, and storage. To develop a suitable physical

database design and implementation for your environment, consult your database administrator or data warehousing specialist.

Note: When you install Genesys Info Mart, you select a single RDBMS type: Microsoft SQL Server, DB2, or Oracle. All data source databases (for example, IDB, GVP VAR, and Stat Server) and all target databases (Info Mart, Staging Area, and Merge Staging Area) must reside in databases of this same RDBMS type. The only exception is the IDB from which Genesys Info Mart extracts configuration history.

Be sure to consult the Genesys Info Mart Release Advisory for important information about known RDBMS issues and potential solutions to those issues.

Database Capacity

As discussed in [Chapter 1](#), Genesys Info Mart reads from, and writes, to the Merge Staging Area database schema, and the Staging Area and Info Mart databases. To determine the database capacity requirements for these databases in your environment, answer the following questions.

- How much space does each database require?
- How much space is needed for future growth?
- How powerful should each database be?
- How do you plan to use the Genesys Info Mart database?
- How do you plan to manage the Genesys Info Mart indexes?

Use the following information to help answer these questions.

Staging Area Database Capacity

The Staging Area database must have the capacity to store the initial contact center configuration history, the dictionary of dimension surrogate keys, and some bookkeeping information. It also must have the capacity to store several days' worth of extracted data, because there may be network outages or other problems that prevent extracted data from being transformed and loaded into the Genesys Info Mart database. Except for configuration data, extracted data is removed from the Staging Area database after transformation, and this transformed data is removed from the Staging Area database after loading. The Staging Area database will grow over time in order to store changes to the contact center configuration and new dimension surrogate keys.

Merge Staging Area Schema Database Capacity

The Merge Staging Area database schema must have the capacity to store several days' worth of data extracted from the G_IR, G_IS_LINK, and G_CALL IDB

tables, because there may be network outages or other problems that prevent extracted data from being transformed and loaded into the Genesys Info Mart database. The ETL jobs automatically purge data from the Merge Staging Area database schema after it has been successfully stored in the Staging Area database. This ensures that the Merge Staging Area database schema will not grow continually over time.

Genesys Info Mart Database Capacity

The Genesys Info Mart database must have the capacity to store the facts and dimensions that the ETL jobs load. The Genesys Info Mart database grows over time, because the ETL jobs load new facts and dimension values each day.

If you intend to use the Genesys Info Mart database as the database that your business applications query, provide additional capacity so that many users can query the data. You will also need to provide storage for the aggregates and indexes that you create in order to improve query performance, and to provide storage for at least one year's worth of data.

If you intend to upload Genesys Info Mart data to a data warehouse, rather than have users query the data directly, you do not need to have the capacity to support many users who query the data. You will probably require fewer indexes, and will probably store the data for less than a year.

Note: Adding multiple indexes to those fact tables in the Info Mart database that contain data relating to interactions or resources can have a significant negative effect on the performance of Job_LoadGIM. Genesys recommends that you first test the impact of additional indexes in a non-production environment.

The ETL jobs perform many intensive SQL operations against extracted data in the Staging Area database, including SELECT, INSERT, and UPDATE. These operations require significant resources, such as disk (for tables, indexes, and logs), memory, and CPU capacity.

The ETL jobs load and aggregate data in the Info Mart database one or more times a day, depending on whether you enable intraday loading. The amount of time that the ETL jobs run varies, depending on how often you schedule them, and on the volume of data that they process. The ETL jobs do not create or update statistics on the Genesys Info Mart fact tables.

Genesys provides an interactive tool, the *Genesys Info Mart 7.6 Database Size Estimator*, to help you estimate the size of your Staging Area and Info Mart databases. For more information that will help you determine the size of your databases, also see the *Genesys Hardware Sizing Guide*.

Oracle Real Application Clusters (RAC) Considerations

Starting with Genesys Info Mart release 7.6.011, source databases (such as IDBs) and target databases (such as Staging Area and Info Mart) can be deployed on Oracle RAC. When you are configuring the Oracle client that Genesys Info Mart uses to connect those databases, do not enable Transparent Application Failover (TAF). Set the `FAILOVER_MODE TYPE` to `NONE` in the Oracle client configuration (`tnsnames.ora`). Do not specify other settings, such as `SESSION` or `SELECT`. Genesys Info Mart uses its own general error recovery procedure to handle any database exception; it does not have special handling of Oracle RAC-specific exceptions. See the “Automatically Retrying Failed ETL Jobs with Genesys Info Mart Server” section in the *Genesys Info Mart 7.6 Operations Guide* for more information about the error recovery procedure.

Historical Data from Existing Data Sources

If you are deploying Genesys Info Mart in an environment with existing data sources, you must carefully consider how much historical data you want Genesys Info Mart to extract, transform, and load from Interaction Concentrator, Stat Server (in legacy environments), or GVP VAR. Consider the following:

- Genesys Info Mart requires you to set certain ICON and Stat Server application option values (see [Chapter 3](#)). Genesys Info Mart will not be able to extract and transform Interaction Concentrator or Stat Server data that was stored using application option values that differ from those required by Genesys Info Mart.
- Interaction Concentrator, Stat Server, and GVP VAR databases use IDs from the Configuration Server database to identify contact center objects, such as tenants, queues, routing points, agents, and places. Typically, contact center objects in the Configuration Server database are deleted as the contact center configuration changes over time.

Genesys Info Mart cannot accurately transform historical source data that contains configuration object IDs that it cannot find in the Interaction Concentrator database that stores the contact center configuration history details. Therefore, the quality of the historical data that you extract, transform, and load may be limited.

- Genesys Info Mart was designed to extract, transform, and load data on a daily basis. If you previously collected Interaction Concentrator, Stat Server, or GVP VAR data, you might need to configure Genesys Info Mart to limit the amount of data extracted during each ETL cycle, for the period

during which you are processing the historical source data. For more information, see “Scheduling” on [page 245](#) for a list of options that affect the amount of data extracted during a run.

Appropriate values for these options greatly depend on how much historical data you have collected, as well as on the capabilities of the hardware on which you deploy Genesys Info Mart and its source and target databases. It might take many ETL cycles to process the source data.

Source Data Retention and Purging

The amount of data that you should retain in your source databases depends on both the database server’s hardware resources—such as memory and disk space—and on the performance of its disk subsystems. Generally, you should retain as much data as you require in your Stat Server and Interaction Concentrator databases (IDBs) to allow ongoing interactions to complete and as a hedge against operational problems.

Genesys Info Mart does not automatically purge older source data. However, Interaction Concentrator (ICON) provides several stored procedures that purge old IDB data. You must write your own program or stored procedure to invoke the ICON mechanisms to purge IDB data in a way that:

- Avoids deleting data that has not yet been extracted.
- Retains enough data to allow for error recovery and problem determination.

Genesys provides specific recommendations regarding source data retention and purging frequency. For more information, see the section about purging data sources in the *Genesys Info Mart 7.6 Operations Guide*.

Database Object Owners and User IDs

Genesys Info Mart requires access to source and target databases to perform a variety of operations. Logically, there are two types of users:

- Owner—The owner’s account is used by a database administrator to run the scripts that create the database objects. Each owner ID must have the necessary privileges to perform the required operations against the applicable database (see “Database Privileges” on [page 80](#)).
- User—The user’s account is used by the ETL jobs to connect to the database. Each user ID must have the necessary privileges to perform the required operations against the applicable database (see “Database Privileges” on [page 80](#)).

Note: In Microsoft SQL Server 2005, all database objects are contained in *schemas*, instead of being owned by a database *owner*. The SQL Server logins are mapped to database users, who can own objects in the

various schemas. In addition, a *default schema* is configured for each database user, to contain unqualified database objects.

In this document, for Microsoft SQL Server 2005, the term *Owner ID* refers to the database user who owns the object (for example, the database user who created a view).

Identifying the owner and user accounts that you will use in your Genesys deployment is an important step in your deployment and installation planning. After you have identified the accounts you will use, record the IDs and passwords on the applicable worksheet provided in “Installation Worksheets” on [page 401](#). You will need this information in order to create the database schemas and to specify connection parameters when you configure the Database Access Points (DAPs).

In general, the User ID that you specify to connect to each database does not need to be the same as the Owner ID:

- For Oracle, Microsoft SQL Server 2005, and DB2 (see the Note below), you can create the database objects in a schema that is different from the User ID that accesses them, provided that the User ID has the required privileges.

Note: For DB2 databases, Genesys Info Mart uses the combination of database server name and schema owner to identify each data source from which it should extract data. Therefore, if you plan to store multiple instances of any of the following types of data in the same DB2 database server, you must store the data under a unique schema owner; it is not sufficient to store the data under different DB2 databases in the same server:

- Configuration details
- Voice details
- Outbound Contact details
- Multimedia details
- GVP VAR details

- For Microsoft SQL Server 2000, the User ID does not need to be the same as the database object’s owner ID in order to access the database objects. For specific exceptions in your Genesys Info Mart deployment, see [Table 4](#).

The Owner ID is one of the following:

- The login that created the database tables.
- dbo, if the login that created the tables also created the database that contains the tables, or if that login is a member of the System Administrator’s server role.

Use the Microsoft SQL Server Enterprise Manager to verify the owner of the tables.

Note: Do not create database objects that have an `Owner ID` that begins with a number. The ETL jobs encounter SQL errors from the database server when the server tries to qualify database objects that have a number as the first digit in the `Owner ID`.

Database Privileges

Table 3 summarizes the owner account privileges that are required for the respective source and target database schemas.

Table 3: Required Owner Account Privileges

Database	Required Privileges ^a	Comments
Data Source Database Schemas		
IDB	<ul style="list-style-type: none"> • CREATE tables and indexes. • INSERT, UPDATE, and DELETE on <code>GSYS_DNPREMOTELLOCATION</code>. • EXECUTE on all stored procedures in IDB. 	<p>Required only for IDBs from which Genesys Info Mart will extract Voice or Multimedia details.</p> <p>Required only in multi-site deployments for IDBs from which Genesys Info Mart will extract Voice details.</p>
GVP VAR	<ul style="list-style-type: none"> • None. 	
Genesys Info Mart Database Schemas		
Staging Area	<ul style="list-style-type: none"> • CREATE tables, views, sequences,^b and indexes. 	Genesys recommends that you use different <code>Owner IDs</code> for the Staging Area database schema and the Merge Staging Area schema (which is created within the Staging Area database).
Merge Staging Area ^c	<ul style="list-style-type: none"> • CREATE tables, indexes, sequences,^d and stored procedures. 	
Info Mart	<ul style="list-style-type: none"> • CREATE tables, views, synonyms,^e and indexes. 	

Table 3: Required Owner Account Privileges (Continued)

Database	Required Privileges ^a	Comments
Info Mart Views	<ul style="list-style-type: none"> • CREATE views and synonyms.^e 	For Microsoft SQL Server 2005, Genesys recommends that the database user who creates the views has the same name as the default schema.
Info Mart Tenant Views	<ul style="list-style-type: none"> • CREATE views and synonyms.^e 	For Microsoft SQL Server 2005: <ul style="list-style-type: none"> • Genesys recommends that the database user who creates the views has the same name as the default schema. • Separate database users and schemas are required for each tenant.

- a. Privileges are called *permissions* in Microsoft SQL Server.
- b. Sequences are created only for Oracle and DB2 databases.
- c. Applicable only to deployments requiring multi-IDB merge.
- d. Sequences are created only for Oracle databases.
- e. Synonyms are created only for Oracle databases.

[Table 4](#) summarizes the user account privileges required for the respective source and target database schemas.

Table 4: Required User Account Privileges

Database	Required Privileges ^a	Additional Requirements
Data Source Database Schemas		
IDB	<ul style="list-style-type: none"> • SELECT on <tables in the IDB>. See Table 47 on page 438 for a list of the IDB tables from which the ETL jobs extract data. • INSERT, UPDATE, and DELETE on GIM_IR_LIST, GIM_VQ_LIST and GIM_IR_HA_TMP.^b • RDBMS-specific privileges are required to truncate table data and compute statistics on tables GIM_IR_LIST, GIM_VQ_LIST, and GIM_IR_HA_TMP.^{b,e} • INSERT, UPDATE and DELETE on GSYS_SYSPROCINFO, GSYS_PENDING_IR, and GSYS_PENDING_LINK.^c • EXECUTE on all stored procedures in IDB.^c 	
GVP VAR	<ul style="list-style-type: none"> • SELECT on APP_CALLS, APP_CALL_SUBCFS, APPLICATIONS, SUB_CALL_FLOWS. 	

Table 4: Required User Account Privileges (Continued)

Database	Required Privileges ^a	Additional Requirements
Genesys Info Mart Database Schemas		
Staging Area	<ul style="list-style-type: none"> • SELECT, INSERT, UPDATE and DELETE on all tables. • SELECT on all sequences.^d • RDBMS-specific privileges are required to truncate table data and compute statistics on tables.^e 	<p>For Microsoft SQL Server 2000, the User ID must be the same as the Owner ID, unless the User ID is one of the following:</p> <ul style="list-style-type: none"> • A member of the db_owner database role • A member of the System Administrator's server security role <p>Note: For deployments that require multi- IDB merge, if the Merge Staging Area and the Staging Area database objects are owned by different database access accounts (as Genesys recommends), then the Staging Area User ID must be a member of the db_owner role or the System Administrator role.</p>
Merge Staging Area ^f	<ul style="list-style-type: none"> • SELECT, INSERT, UPDATE, and DELETE on all tables. • SELECT on all sequences.^d • EXECUTE on all stored procedures. • RDBMS-specific privileges are required to truncate table data and compute statistics on tables.^e 	The User ID must be the same as the User ID for the Staging Area database schema.
Info Mart	<ul style="list-style-type: none"> • SELECT on all tables and views. • INSERT, UPDATE, and DELETE on all tables. • RDBMS-specific privileges are required to truncate table data and compute statistics on tables.^e 	<p>For Microsoft SQL Server 2000, the User ID must be the same as the Owner ID, unless the User ID is one of the following:</p> <ul style="list-style-type: none"> • A member of the db_owner database role • A member of the System Administrator's server security role
Info Mart Views	<ul style="list-style-type: none"> • SELECT on all views. 	
Info Mart Tenant View ^g	<ul style="list-style-type: none"> • SELECT on all views in the applicable, tenant-specific Genesys Info Mart Tenant View schema. 	

a. Privileges are called *permissions* in Microsoft SQL Server.

- b. Required only for HA IDBs from which Genesys Info Mart will extract Voice details.
- c. Required only for IDBs from which Genesys Info Mart will extract Voice details.
- d. For Oracle and DB2 only.
- e. For Oracle: `ANALYZE ANY` and, if the database user is not the same as the ID that created the tables, the `DROP ANY TABLE` system privileges.
For DB2: If the database user is not the same as the ID that created the tables, `CONTROL` table privilege on the database tables.
For Microsoft SQL Server 2000: The User ID must be the owner of the tables, a member of the `db_owner` database role, or a member of the System Administrator's server security role.
For Microsoft SQL Server 2005: The User ID must have `ALTER` permission on all tables.
- f. Applicable only to deployments that require multi-IDB merge.
- g. Applicable only to multi-tenant deployments.

Database User Authentication

The ETL jobs make many database connections as they extract, transform, and load data. To ensure that connections are authenticated quickly, review the authentication policy that is configured in your database client's software. Authentication timeouts can greatly increase the amount of time that it takes for the ETL jobs to run to completion.

Oracle For Oracle, there are several methods of authenticating the User ID during the connection to the database server. When you install an Oracle client on a Windows operating system, the authentication method may default to the Windows native authentication mode. In this mode, when the application connects from the Oracle client to the Oracle server, the User ID is first checked against the valid Windows users on the server. If this check fails, which indicates that the User ID is not a Windows User ID, Oracle checks the User ID. If the User ID is defined, and the Password is correct on that Oracle server, the connection succeeds. However, the additional overhead that is involved in the failed verification of Windows users can negatively affect the performance of an ETL job.

For more information, see the *Oracle Net Services Reference Guide*.

High Availability Data Extraction

Genesys Info Mart extracts data from redundant data sources in two different ways to protect against a loss of source data:

- **Deduplication**—Refers to the elimination of redundant data. When extracting data from the redundant data sources for ICON Configuration details and Voice details, Genesys Info Mart reconciles the duplicate data (*deduplicates data*) to ensure that only one copy of the data is transformed and loaded.

- **Switchover**—When extracting data from the redundant data sources for ICON Outbound Contact details, Genesys Info Mart monitors the metadata in the IDBs and when a gap is found in the source data, a switchover is made from one IDB to the other to ensure that complete data is transformed and loaded.

Deduplication Genesys Info Mart 7.6 provides HA data extraction via deduplication for the following types of source data:

- ICON Configuration details.
- ICON Voice details, which include the following:
 - Voice interaction data.
 - Voice agent login data.
 - Voice agent state and agent reason details, including the ability to associate after-call-work with voice interactions.
 - Voice DND mode details.
 - Virtual queue data.

To configure Genesys Info Mart to extract and deduplicate ICON data from an HA pair of IDBs, see “Preparing Data Sources” on [page 121](#) and “Configuring DAPs” on [page 195](#), to set the appropriate ICON Application and DAP Application configuration options.

Switchover Genesys Info Mart 7.6 provides HA data extraction of ICON Outbound Contact details via switchover.

To configure Genesys Info Mart to extract Outbound Contact data from an HA pair of IDBs, see “Configuring HA Data Extraction of Outbound Contact Details in a New Deployment” on [page 384](#) or “Configuring HA Data Extraction of Outbound Contact Details in an Existing Deployment” on [page 393](#).

Non-HA Data Genesys Info Mart 7.6 does not provide HA data extraction for the following types of source data:

- Multimedia interaction, attached data, virtual queue, agent login, agent state and agent state reason details
- Voice agent state and agent reason details that are sourced from the Stat Server database
- GVP VAR details

Processing HA Data Extraction of ICON Configuration Details

The HA data extraction process ensures that if a component or network outage prevents one of the ICON processes from storing any updates to contact center configuration in its IDB, data is not lost as long as the other ICON process is able to store those updates in its IDB. The data extraction job provides HA data extraction via deduplication for ICON Configuration details.

Genesys Info Mart extracts both configuration objects (such as a DN, Person, Skill, and Place) and configuration object *relationships* (that is, associations between configuration objects, such as a Person assignment to a Group) from both primary and secondary IDBs, as outlined in this section.

Configuration Notes

For HA data extraction of ICON Configuration details:

- You must configure two DAPs, each providing access to one IDB in the HA pair.
- Only one of the two DAP objects must be configured as primary.
- If one of the IDBs is temporarily unavailable, you can decide if the extraction from one source is acceptable until the issue is resolved.
- No more than two DAPs that store Configuration details can exist in a configuration environment; you must configure these two as an HA pair.

Recommendations on HA Data Extraction and ICON Resynchronization Feature

Genesys recommends that you set up an HA data extraction architecture for configuration data instead of relying solely on the configuration data being up-to-date in a deployment with a single ICON application that provides the on-demand resynchronization of configuration data. Because every object in your contact center is mirrored as a configuration object in the Genesys environment, the correctness and completeness of configuration data is vital to reporting on contact center activity. Without HA data extraction, some configuration data might be lost—affecting Genesys Info Mart operation and, thus, your reporting data.

When you request the resynchronization of configuration data in a non-HA environment, the resynchronization may not retrieve a missing configuration object or relationship. Because there is no redundant IDB with Configuration details from which Genesys Info Mart could extract data about this missing object or relationship, any references to the involvement of this particular configuration object in contact center activities would remain unresolved. This would cause ETL to stop running. Moreover, Genesys Info Mart cannot detect if any configuration object relationships:

- Are missing from the source IDB.
- Have unreliable start and end times after the relationships have been recovered during the ICON resynchronization of configuration data.

Missing relationships or relationships with unreliable timestamps result in data quality issues, such as incorrect aggregations for agent groups or queue groups, or incorrect indications of whether requested skills matched the handling agent's skills.

An HA data extraction architecture greatly reduces the likelihood of these issues because two ICON processes are actively processing the source events from Configuration Server and storing the data in their separate IDBs. If one IDB is missing a configuration object or relationship, Genesys Info Mart is likely to extract the necessary data from the other IDB.

At the same time, an HA data extraction architecture for configuration data does not remove the need for the on-demand resynchronization of IDB

configuration data. This functionality helps to maintain data consistency between each IDB in the HA pair and Configuration Database when the data is suspected to be out of sync.

Configuration Objects

First, Genesys Info Mart extracts configuration objects from the primary IDB and compares them against the objects in the Staging Area database, based on the DBID (a database identifier that Configuration Server assigns to configuration objects and that is unique among objects of a given type) and on the timestamps that reflect the time when an object was created, updated, and deleted, if applicable.

The timestamps reflect either the actual time when the object was created, updated, or deleted (a *reliable* timestamp) or the time when the data about the object's creation, update, or deletion was retrieved by ICON during re-initialization or resynchronization of IDB (an *unreliable* timestamp). Genesys Info Mart uses the timestamp reliability indication in the extracted configuration object to determine which object data to keep: the newly extracted one or the one existing in the Staging Area.

If the comparison process determines it necessary, Genesys Info Mart updates the object's data in the Staging Area database.

Second, Genesys Info Mart extracts configuration objects from the secondary IDB and compares them against the objects currently in the Staging Area database, based on the same criteria. If necessary, Genesys Info Mart updates the object's data in the Staging Area database.

As a result of these steps, the Staging Area database reflects all active and terminated configuration objects in Configuration Database, providing a higher availability to data about all configuration objects, before attempting to extract the configuration object relationships that are dependent on the configuration objects.

Configuration Object Relationships

After processing all configuration objects, Genesys Info Mart is ready to process configuration object relationships. First, Genesys Info Mart extracts configuration object relationships from the primary IDB and compares them with the objects in the Staging Area database.

Unlike configuration objects that are identified in both IDBs by the object's DBID, configuration object relationships have no unique identifiers: they only have timestamps from when a relationship between two configuration objects is created and, if applicable, terminated. Genesys Info Mart uses the time span between the created and terminated times to identify the configuration object relationships. When a relationship has a created time, but not a terminated time, the relationship is considered active; its time span is from the created time to the present. When a relationship has both a created time and a

terminated time, it is considered terminated; its time span is from the created time to the terminated time.

Because no unique identifiers are available for configuration object relationships, Genesys Info Mart compares the time span of the relationships extracted from the primary IDB with the time spans of those same relationships that exists in the Staging Area. The process adds new relationships to the Staging Area database or updates the existing relationships that ended. When determining which configuration object relationships to add or update, the HA deduplication process takes into account the timestamp reliability indications in the extracted configuration object relationships.

Finally, Genesys Info Mart extracts the configuration object relationships from the secondary IDB and compares them with the objects in the Staging Area database. If necessary, the configuration object relationships in the Staging Area are updated again.

Processing HA Data Extraction of ICON Voice Details

The HA data extraction process ensures that, if a component or network outage prevents one of the ICON processes from storing any new voice interactions or agent activity updates in its IDB, data is not lost as long as the other ICON process is able to store the information in its IDB. This processing is required in HA data extraction deployments in which a pair of ICON processes and IDBs store the same set of ICON Voice details. The data extraction job provides HA data extraction of Voice details via deduplication.

Note: For HA data extraction of ICON Voice details, the configuration of a corresponding DAP object determines the primary IDB.

Using a different deduplication algorithm for each type, the HA deduplication process in Genesys Info Mart extracts, from an HA pair of IDBs, the following types of voice-related data:

- Interaction data (including interaction's attached data and UserEvent-based KVP data).
- Agent activity data.
- Virtual queue data.

Voice Interactions

This section describes the algorithm Genesys Info Mart uses to select which IDB in the HA pair has the better representation of each voice interaction.

First, Genesys Info Mart evaluates the data quality for each interaction in both IDBs based on the following numbers, listed in the order of priority:

- The number of stuck calls associated with the interaction. The interaction with no stuck calls is selected over the one with at least one stuck call.

- The number of calls associated with the interaction. The interaction with the greater number of calls is selected.
- The number of parties for all the calls associated with the interaction. The interaction with the greater number of parties is selected.

Note: Data comparison does not include examination of attached data or UserEvent-based KVP data that is associated with the interaction.

Based on the results of the data quality evaluation, Genesys Info Mart creates a list of interactions to extract from each IDB. When both IDBs represent an interaction equally well, Genesys Info Mart uses the IDB that is configured as primary.

Finally, Genesys Info Mart extracts all the data for the interactions that are ready for extraction, according to the list created for each IDB:

- From the primary IDB, Genesys Info Mart extracts all interactions it determined to be better represented in this IDB.
- From the secondary IDB, Genesys Info Mart extracts all interactions it determined to be better represented in this IDB.

An entire voice interaction is extracted from only one IDB in the HA pair; Genesys Info Mart does not combine information from both IDBs for a given voice interaction.

Data latency, connectivity problems, or software failures can result in a certain interaction being available in one IDB but not the other. In this case, Genesys Info Mart waits for a configurable period of time for the interaction to appear in the second IDB. If the interaction data appears in the second IDB before the timeout expires, the interactions are compared for data quality; otherwise, Genesys Info Mart extracts the interaction from the first IDB.

As a result of the successful extraction, the Staging Area database contains the most complete data about all voice interactions that is available in either IDB.

Note: The HA deduplication process applies to both intra-site and multi-site merge deployments (see [page 94](#)). Genesys Info Mart determines from which IDB to extract the interaction, independently of whether the interaction is extracted to the Merge Staging Area database or directly to the target Staging Area database.

Agent Activity

The HA deduplication process extracts agent activity data from two IDBs configured as an HA pair and stores the data in the Staging Area until the same data is extracted from both IDBs. The HA agent activity data includes the following details for voice-handling agents:

- Login sessions

- Agent states
- Agent state reasons
- DND mode details

Genesys Info Mart 7.6 does not support HA deduplication of agent activities for Multimedia.

To identify the same agent activity data in both IDBs and synchronize the data extraction, the HA deduplication process relies on certain information, such as login session identifiers and event sequence numbers from T-Server.

Note: Genesys Info Mart requires release 7.6 of T-Server and Interaction Concentrator to support HA deduplication of agent activity data. Enabling HA deduplication of agent activity for the data coming from an earlier release of T-Server and/or Interaction Concentrator will result in duplication of data.

The algorithm consists of the following high-level steps:

1. Genesys Info Mart performs the following two actions:
 - a. Extracts agent activity data from the primary IDB and the secondary IDB.
 - b. Stores the data in a special (*pending*) table in the Staging Area database.
2. Genesys Info Mart verifies if any of the new records match records from the pending table that have the unmatched status (identified at Step 5 during the previous run):
 - If no such records are found (for example, during the first run), Genesys Info Mart proceeds to [Step 3](#).
 - If such records exist, Genesys Info Mart deletes the matching newly extracted records. This prevents duplicates because this data is already present in the final table.
3. Genesys Info Mart finds matching records among the records newly extracted from the primary IDB and the secondary IDB.
4. If a match is found, Genesys Info Mart:
 - a. Moves the records from the primary IDB to the final Staging Area table.
 - b. Deletes the records from the secondary IDB.
5. If a certain piece of data is available in one IDB but not the other, Genesys Info Mart:
 - a. Copies this record to the proper final table in the Staging Area database.
 - b. Sets the status to `unmatched` for this data in the pending table.

During the next extract, Genesys Info Mart uses this record to identify duplicates.

As a result of [Steps 4 and 5](#), the final table contains the data that is ready for transformation.

6. Genesys Info Mart removes records with the unmatched status from the pending table after a certain timeout.

If one of the IDBs is temporarily unavailable, you can decide if the extraction from one source is acceptable. In this case, change the configuration to exclude the second data source until the issue is resolved. The extraction process bypasses the pending table, sending the data from the remaining IDB directly to the final table in the Staging Area database.

Recommendations for Migrating Environments

Genesys Info Mart, when configured with HA deduplication for ICON Voice details will not be able to extract to the Staging Area tables the agent activity data that was populated to the IDB from ICON 7.5 and/or T-Server 7.5.

Genesys Info Mart must run without HA deduplication for ICON voice agent activity details until it extracts and transforms all data from T-Server 7.5 or 7.6 that was populated by ICON 7.5. This is the default configuration in Genesys Info Mart release 7.6.

Warning! Enabling HA deduplication of agent activity for the data that is coming from a T-Server release prior to 7.6 will result in duplication of data.

For instructions on how to determine whether all previous data is processed, see [Enabling HA Deduplication of Voice Agent Activity, page 397](#).

To enable an HA deduplication configuration for ICON voice agent activity details, set the `extract-ha-voice-agent-activity` option to TRUE (see the option description on [page 287](#)).

Virtual Queues

The HA deduplication process extracts a single representation of each virtual queue segment from an HA pair of IDBs.

The algorithm that Genesys Info Mart uses to extract redundant data for virtual queue activity depends on whether you are extracting data from a single HA pair of IDBs or multiple HA pairs:

- If Genesys Info Mart is extracting data from a single HA pair of IDBs, it takes the virtual queue details from the same IDB as the associated voice interaction.
- If Genesys Info Mart is extracting data from multiple HA pairs of IDBs, the following occurs:

- 1 The ETL job extracts data from the IDB that has the larger set of virtual queue rows that Info Mart has not already extracted in the previous cycle.
- 2 The ETL job extracts data from the other IDB for the virtual queue rows that it did not already extract from the IDB in [Step 1](#).

Processing HA Data Extraction of ICON Outbound Contact Details

The HA data extraction of Outbound Contact details from redundant IDBs operates differently from the HA data extraction of Configuration and Voice details. Instead of using deduplication, the Genesys Info Mart extraction job, `Job_ExtractICON`, performs a switchover from one IDB to the other when database connection reliability information in the IDB indicates that there is a gap in the source data.

Note: Interaction Concentrator 8.0, dedicated ICONs, and dedicated IDBs are required for HA of Outbound Contact details. See the *Genesys Info Mart 7.6.x Release Notes* for the minimum release of Interaction Concentrator 8.0 that is required to support this functionality.

Data connection reliability information in the IDB indicates the span of time that ICON has been connected to Outbound Contact Server. This information is used by the data extraction job to determine the time span for which complete Outbound Contact details have been stored in the IDB and are ready to be extracted. When the data connection reliability information in the IDB that was most recently used for data extraction indicates that there has been some sort of disruption in the storage of Outbound Contact details, the data extraction job switches over to the other IDB in the HA pair and begins extracting data that has occurred after the most recently extracted data.

Disruptions in the storage of IDB details can be caused by:

- Shutting down or restarting ICON.
- A loss in network connectivity between Outbound Contact Server and ICON.
- A loss in connectivity between ICON and DB Server.
- A loss in connectivity between DB Server and the IDB.

A switchover will also occur if the data extraction job is unable to establish a connection to the IDB.

When choosing which IDB in the HA pair to extract data from, the data extraction job examines all data connection reliability information in both IDBs, in a way that minimizes switchovers from one IDB to another and minimizes data loss, such as when there are gaps in source data in both IDBs.

Even when configured in an HA data extraction topology, there are situations where some Outbound Contact reporting data will be lost. Keep in mind that, by design, ICON stores reporting data in its IDB for a given Outbound Contact chain, only if it receives from Outbound Contact Server the expected events in the proper order. Otherwise, ICON logs a finite state machine exception and discards the events for that particular Outbound Contact chain, including individual contact attempts for records in that chain. Consequently, ICON will not store in its IDB information about individual contact attempts for records in any chain that Outbound Contact Server loads before ICON connects to Outbound Contact Server.

Consider the following situation:

1. Genesys Info Mart is currently extracting from the primary ICON's IDB.
2. Prior to the moment in time that Outbound Contact Server loads the next batch of chains, the primary ICON is connected to Outbound Contact Server, but the secondary ICON is not connected.
3. While Outbound Contact Server is performing outbound contact attempts on those chains, the secondary ICON reconnects to Outbound Contact Server, and some time later the primary ICON application loses its connection to Outbound Contact Server.
4. During a subsequent ETL cycle, Genesys Info Mart switches over from the primary to the secondary IDB.

Since the chains were loaded before the secondary ICON connects to Outbound Contact Server, the secondary ICON discards events about the processing of those Outbound Contact chains. In such a situation, Genesys Info Mart cannot transform and load facts about the contact attempts for those chains because even though the primary IDB has information about the beginning of the chain processing, neither IDB has information about the completion of the chain processing.

Warning! Because HA extraction of Outbound Contact details relies on event and data connection timestamp information provided by Outbound Contact Server and ICON, you must provide and enable third-party host time clock synchronization software for the Outbound Contact and ICON servers. You must configure the time clock synchronization software to avoid the clocks stepping backward in time. Otherwise, the data extraction job might miss extracting the data that occurred around the time the clock moved backward. This would result in incorrect or missing reporting data in the Info Mart database. If the clocks occasionally need to be adjusted backward, you must do so during a time when there are no actively running Outbound Contact campaigns.

IDB Merge

The IDB Merge process is the process of merging related inter-switch voice calls that are stored in one or more Interaction Concentrator IDBs.

Intra-IDB Merge Genesys Info Mart automatically merges calls from a single IDB, at a configurable interval. The IDB is populated with voice data from one or more ICON applications, with each ICON application monitoring one or more switches. For this one IDB, there may be calls involving parties from different monitored switches. Such calls appear in the IDB as separate calls. Before extracting any voice data from the IDB, the Genesys Info Mart Server runs the ICON stored procedure `gsysIRMerge` on the IDB to merge these related inter-switch calls. This process is called intra-IDB merge.

Multi-IDB Merge In a configuration with multiple IDBs, there can be calls involving parties from different monitored switches that are stored in different IDBs. Multi-IDB merge is a two-stage process:

1. The Genesys Info Mart Server runs the `gsysIRMerge` stored procedure on each IDB to merge the intra-IDB calls.
2. For voice interactions that span IDBs, the Genesys Info Mart Server does the following:
 - a. Takes the voice interactions that have been intra-IDB merged from each IDB and copies them to the Merge Staging Area database schema.
 - b. Runs the Merge Staging Area database schema's `gsysIRMerge` stored procedure to merge those multi-IDB voice interactions.

Unlike an intra-IDB merge that runs with configurable frequency, Genesys Info Mart runs the multi-IDB merge only during the extraction of voice interactions.

The actual multi-IDB merging process occurs in the separate Merge Staging Area database schema.

Configuring for IDB Merge To configure Genesys Info Mart for intra-IDB merge, you must store the appropriate merge procedure parameters in IDB tables (see [Configuring for IDB Merge, page 170](#)).

To configure Genesys Info Mart for multi-IDB merge, you must store the appropriate merge procedure parameters in Merge Staging Area tables (see [Configuring for Multi-IDB Merge, page 188](#)) in addition to IDB tables. You must also set the appropriate DAP configuration options (see [Configuring DAPs for multi-IDB merge, page 218](#)).

Genesys Info Mart and Attached Data

Genesys Info Mart uses attached data key-value pairs (KVPs) to populate several of its fact and dimension tables. Interactive Voice Response (IVR) and

GVP VAR applications, Enterprise Routing Solution, Network Routing Solution, Outbound Contact, Genesys Multimedia solution, and Agent Desktop applications all attach KVPs to interactions. The KVPs that these applications attach depend on the following factors:

- Your deployment's interaction flows.
- The information required by the resources that handle the interactions.
- The information that you want to report.

Genesys recommends that you attach KVPs as early in the interaction flow as possible. In this way, key interaction attributes are captured even if the interaction is abandoned.

Note: To ensure that applications use certain attributes consistently (for example, `CustomerSegment`, `ServiceType`, and `ServiceObjective`), use Configuration Manager to configure values for them. For more information about configuring these attributes, see *Framework 7.6 Configuration Manager Help*.

There are two sources of KVP data:

- *call-based* attached data.
- *UserEvent-based* KVP data, which allows the agent to associate key-value-pair data with a voice interaction after the voice interaction has terminated (that is, after the call is released).

Mapping Call-Based Attached Key-Value Pairs

Genesys Info Mart extracts attached data KVPs from the ICON Voice details and ICON Multimedia details data sources—specifically, from the following IDB tables:

- G_ROUTE_RESULT
- G_USERDATA_HISTORY
- G_SECURE_USERDATA_HISTORY
- GM_F_USERDATA
- GM_L_USERDATA

ICON automatically stores predefined router-specific KVPs in the G_ROUTE_RESULT table, provided that you configure Universal Routing Server (URS) to attach the KVPs to interactions. For more information, see “Universal Routing” on [page 111](#).

ICON stores voice and Multimedia attached KVPs in the G_USERDATA_HISTORY and G_SECURE_USERDATA_HISTORY tables, based on the options that you configure in the ICON application and in ICON's attached data specification (adata spec) XML file.

ICON stores Multimedia-specific attached data in the GM_F_USERDATA and GM_L_USERDATA tables, based on ICON's attached data specification XML file.

Because the KVP names that your applications use might not match the default names that are listed in Table 5 on page 97, Genesys Info Mart assigns a numeric ID to each attached data item. Genesys Info Mart then extracts the attached data details on the basis of the numeric ID instead of the KVP name. For information about how to customize the attached data specification file for your environment, see [Customizing Your ICON Attached Data Specification File, page 161](#). A copy of this file is also provided in Appendix C on page 431.

Table 5 describes the attached data KVPs that Genesys Info Mart recognizes. It includes the name and data type, of each KVP, the name of the Genesys Info Mart table to which the KVP will be mapped, and the required mapping ID.

Some of the KVPs are Genesys-defined and populate predefined facts and dimensions. Others are user-defined and populate deployment-specific facts and dimensions.

Use the worksheet provided in Appendix A on page 401 to map the KVP names in your contact center to the target Info Mart tables and column names.

Note: Your applications do not need to attach all of the KVPs that are listed in Table 5.

Low Cardinality

In Table 5, USER_DATA and USER_DATA_2 dimensions should not grow to have too many rows, or ETL job performance and your report queries will be adversely impacted. These two dimensions have 10 columns each; a row is created in these tables every time a unique combination of all 10 string fields occurs in the source data. Typically, attached data mapped to columns in these tables should have fewer than 10 possible values (“low cardinality”). The maximum number of column values and table rows that can be loaded, and still maintain acceptable ETL job and report query performance, depends greatly on your specific Staging Area and Info Mart database hardware and disk subsystems.

Note the following information about Table 5:

- A single asterisk (*) next to a name indicates that it is the recommended name for the KVP. You can use a different name, provided that the data type and meaning remain the same.
- A double asterisk (**) indicates that the KVP name is user-defined.
- The absence of an asterisk indicates that the name is predefined for data attached by Genesys solutions (for example, Enterprise Routing Solution, Network Routing Solution, and Outbound Contact), and it should *not* be changed.

Table 5: Key-Value Pair Mapping

Key-Value Pair Names	Data Type		GIM ID #	Target Genesys Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
ServiceObjective *	string	Integer	10041	INTERACTION_FACT. BASELINE_SERVICE_OBJECTIVE INTERACTION_RESOURCE_FACT. BASELINE_SERVICE_OBJECTIVE	The time objective (in seconds) to service the interaction, based on the customer segment, service type, and media type.
ISpeechRecognition *	integer	smallint	10042	VOICE_SEG_FACT_EXT. SPEECH_RECOGNITION_COUNT VOICE_RES_FACT_EXT. SPEECH_RECOGNITION_COUNT	Indicates whether IVR speech recognition was used. 0 = No, 1 = Yes.
ITextToSpeech *	integer	smallint	10043	VOICE_SEG_FACT_EXT. TEXT_TO_SPEECH_COUNT VOICE_RES_FACT_EXT. TEXT_TO_SPEECH_COUNT	Indicates whether IVR text-to-speech was used. 0 = No, 1 = Yes.
IApplication *	string	varchar (255)	10044	STRATEGY.STRATEGY_NAME	The IVR application servicing the interaction, up to 255 characters.
IResult *	integer	varchar (255)	10045	STRATEGY.STRATEGY_RESULT	The technical result of the IVR application, 1 = Completed, 2 = Abandoned, 3 = Transferred.
IResultReason *	string	varchar (255)	10046	STRATEGY.RESULT_REASON	The reason for the IVR technical result. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesys Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
GSW_CALL_ATTEMPT_GUID	string	varchar (128)	10047	This KVP is not stored directly in the Info Mart database, but is used to correlate interaction details with Outbound Contact details.	The unique outbound call attempt ID. Without this KVP, GIM cannot populate important information about the contact attempt that it obtains from the voice interaction representing that contact attempt.
CaseID *	varchar (255)	string	10048	INTERACTION_SEGMENT_FACT.CASE_ID INTERACTION_RESOURCE_FACT.CASE_ID	The case identifier in an external case management application. Can contain up to 255 characters.
CustomerSegment *	varchar (255)	string	10049	INTERACTION_DESCRIPTOR.CUSTOMER_SEGMENT	The value of the customer based on its revenue potential to the enterprise relative to a business line. Can contain up to 255 characters.
ServiceType *	varchar (255)	string	10050	INTERACTION_DESCRIPTOR.SERVICE_TYPE	The type of service the customer is requesting. Can contain up to 255 characters.
ServiceSubtype *	string	varchar (255)	10051	INTERACTION_DESCRIPTOR.SERVICE_SUBTYPE	The detailed type of service the customer is requesting. Can contain up to 255 characters.
BusinessResult *	string	varchar (255)	10052	INTERACTION_DESCRIPTOR.BUSINESS_RESULT	The business result of the interaction. Can contain up to 255 characters.

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesys Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
CustomerID *	varchar (255)	string	10053	CUSTOMER.EXTERNAL_CUSTOMER_ID	The customer identifier in an external customer relationship management application. Can contain up to 255 characters.
IPurpose	string		10054	This KVP is not stored directly in the Info Mart database.	The presence and value of this KVP affects how the ETL populates the INTERACTION_RESOURCE_FACT table. With the value 1 (Self Service), Genesys Info Mart treats an IVR application as a handling resource and creates a record in the INTERACTION_RESOURCE_FACT table. For further information, see page 110 .
RStrategyName	string	varchar (255)	N/A	STRATEGY.STRATEGY_NAME	The routing strategy servicing the interaction. Can contain up to 255 characters.
RRequestedSkill Combination	string	varchar (255)	N/A	REQUESTED_SKILL (all columns), REQUESTED_SKILL_COMBINATION.SKILL_COMBINATION_STRING	The agent skills required to service the interaction. Can contain up to 255 character.
RTargetTypeSelected	string	varchar (255)	N/A	ROUTING_TARGET.ROUTING_TARGET_TYPE	The type of routing target the router selects; for example, 0 = Agent, 1 = Place, 2 = Agent Group, 3 = Place Group, 100 = Default Route.

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesys Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
RTargetObject Selected	string	varchar (255)	N/A	ROUTING_TARGET.AGENT_GROUP_NAME, ROUTING_TARGET.PLACE_GROUP_NAME, ROUTING_TARGET.SKILL_EXPRESSION, ROUTING_TARGET.TARGET_OBJECT_SELECTED	The name of the target object the router selects. Can contain up to 255 characters.
Subject	varchar (255)	varchar (255)	N/A	MMEDIA_I_XN_FACT_EXT.SUBJECT	The subject of the Multimedia interaction.
Origination_Source	varchar (128)	number (1)	N/A	MMEDIA_I_XN_FACT_EXT.WEBFORM_FLAG	Indicates whether the e-mail originated as a web form.
FromAddress	varchar (255)	varchar (255)	N/A	INTERACTION_FACT.SOURCE_ADDRESS MMEDIA_I_XN_FACT_EXT.FROM_DOMAIN	The “from” address of the Multimedia interaction.
AutoResponseID	varchar (255)	varchar (255)	N/A	MMEDIA_I_XN_FACT_EXT.AUTO_RESPONSE_NAME	The name of the Standard Response used in an AutoResponse.
AutoACKID	varchar (255)	varchar (255)	N/A	MMEDIA_I_XN_FACT_EXT.AUTO_ACK_NAME	The name of the Standard Response used in an Acknowledgement.
ContactId	varchar (255)	varchar (255)	N/A	MMEDIA_I_XN_FACT_EXT.CONTACT_ID MMEDIA_SEG_FACT_EXT.CONTACT_ID	The customer identifier in the UCS database.
_attr_is_online	integer (value is 0 or 1)	number (1)	N/A	MMEDIA_I_XN_FACT_EXT.MEDIA_SERVER_I_XN_ONLINE_FLAG MMEDIA_SEG_FACT_EXT.MEDIA_SERVER_I_XN_ONLINE_FLAG	An indication if this Multimedia interaction involved an online session with the customer. Additionally, the time that an interaction transitioned from being online to being offline is used to report if the customer abandoned the interaction.

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesys Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
_attr_itx_received_at	date	date	N/A	MMEDIA_I_XN_FACT_EXT . GMT_EMAILSERVER_START_TIME	The time the E-mail Server received the e-mail.
_attr_itx_subtype	varchar (255)	N/A	N/A	MMEDIA_SEG_FACT_EXT . SEG_INTERACTION_TYPE_KEY INTERACTION_FACT . INTERACTION_TYPE_KEY INTERACTION_SEGMENT_FACT . INTERACTION_TYPE_KEY	The interaction subtype of the Multimedia interaction. The populate-detailed-ixn-subtype configuration option controls the population of the INTERACTION_TYPE_KEY fields.
_attr_reason_system_name	varchar (128)	N/A	N/A	STOP_ACTION.STOP_REASON (dimension table)	This KVP is used to record the reason to stop a Multimedia interaction; for example, normal, autoresponse, sent, forwarded, or redirected.
(User-Defined Dim 1) **	string	varchar (255)	10001	USER_DATA.USER_DATA_STRING_1	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 2) **	string	varchar (255)	10002	USER_DATA.USER_DATA_STRING_2	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesys Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
(User-Defined Dim 3) **	string	varchar (255)	10003	USER_DATA.USER_DATA_STRING_3	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 4) **	string	varchar (255)	10004	USER_DATA.USER_DATA_STRING_4	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 5) **	string	varchar (255)	10005	USER_DATA.USER_DATA_STRING_5	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 6) **	string	varchar (255)	10006	USER_DATA.USER_DATA_STRING_6	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 7) **	string	varchar (255)	10007	USER_DATA.USER_DATA_STRING_7	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesys Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
(User-Defined Dim 8)**	string	varchar (255)	10008	USER_DATA.USER_DATA_STRING_8	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 9)**	string	varchar (255)	10009	USER_DATA.USER_DATA_STRING_9	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 10)**	string	varchar (255)	10010	USER_DATA.USER_DATA_STRING_10	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 11)**	string	varchar (128)	10011	USER_DATA_2.USER_DATA_2_STRING_1	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 12)**	string	varchar (128)	10012	USER_DATA_2.USER_DATA_2_STRING_2	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesys Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
(User-Defined Dim 13) **	string	varchar (128)	10013	USER_DATA_2.USER_DATA_2_STRING_3	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 14) **	string	varchar (128)	10014	USER_DATA_2.USER_DATA_2_STRING_4	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 15) **	string	varchar (128)	10015	USER_DATA_2.USER_DATA_2_STRING_5	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 16) **	string	varchar (128)	10016	USER_DATA_2.USER_DATA_2_STRING_6	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 17) **	string	varchar (128)	10017	USER_DATA_2.USER_DATA_2_STRING_7	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesis Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
(User-Defined Dim 18) **	string	varchar (128)	10018	USER_DATA_2.USER_DATA_2_STRING_8	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 19) **	string	varchar (128)	10019	USER_DATA_2.USER_DATA_2_STRING_9	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Dim 20) **	string	varchar (128)	10020	USER_DATA_2.USER_DATA_2_STRING_10	A user-defined string dimensional attribute. Can contain up to 255 characters. Values should be of Low Cardinality . For further information, see page 96 .
(User-Defined Fact 1) **	string	number (14,4)	10021	INTERACTION_SEGMENT_FACT.USER_DATA_1 INTERACTION_RESOURCE_FACT.USER_DATA_1	A user-defined float fact, up to 14 digits total digits, with 4 decimal digits (for example, 9999999999.9999).
(User-Defined Fact 2) **	string	number (14,4)	10022	INTERACTION_SEGMENT_FACT.USER_DATA_2 INTERACTION_RESOURCE_FACT.USER_DATA_2	A user-defined float fact, up to 14 digits total digits, with 4 decimal digits (for example, 9999999999.9999).
(User-Defined Fact 3) **	string	number (14,4)	10023	INTERACTION_SEGMENT_FACT.USER_DATA_3 INTERACTION_RESOURCE_FACT.USER_DATA_3	A user-defined float fact, up to 14 digits total digits, with 4 decimal digits (for example, 9999999999.9999).

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesis Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
(User-Defined Fact 4)**	string	number (14,4)	10024	INTERACTION_SEGMENT_FACT.USER_DATA_4 INTERACTION_RESOURCE_FACT.USER_DATA_4	A user-defined float fact, up to 14 digits total digits, with 4 decimal digits (for example,.9999999999.9999).
(User-Defined Fact 5)**	string	number (14,4)	10025	INTERACTION_SEGMENT_FACT.USER_DATA_5 INTERACTION_RESOURCE_FACT.USER_DATA_5	A user-defined float fact, up to 14 digits total digits, with 4 decimal digits (for example,.9999999999.9999).
(User-Defined Fact 6)**	integer	integer	10026	INTERACTION_SEGMENT_FACT.USER_DATA_6 INTERACTION_RESOURCE_FACT.USER_DATA_6	A user-defined integer fact, up to 10 digits (to a maximum of 2147483647).
(User-Defined Fact 7)**	integer	integer	10027	INTERACTION_SEGMENT_FACT.USER_DATA_7 INTERACTION_RESOURCE_FACT.USER_DATA_7	A user-defined integer fact, up to 10 digits (to a maximum of 2147483647).
(User-Defined Fact 8)**	integer	integer	10028	INTERACTION_SEGMENT_FACT.USER_DATA_8 INTERACTION_RESOURCE_FACT.USER_DATA_8	A user-defined integer fact, up to 10 digits (to a maximum of 2147483647).
(User-Defined Fact 9)**	integer	integer	10029	INTERACTION_SEGMENT_FACT.USER_DATA_9 INTERACTION_RESOURCE_FACT.USER_DATA_9	A user-defined integer fact, up to 10 digits (to a maximum of 2147483647).
(User-Defined Fact 10)**	integer	integer	10030	INTERACTION_SEGMENT_FACT.USER_DATA_10 INTERACTION_RESOURCE_FACT.USER_DATA_10	A user-defined integer fact, up to 10 digits (to a maximum of 2147483647).
(User-Defined Fact 11)**	string	varchar (255)	10031	INTERACTION_SEGMENT_FACT.USER_DATA_11 INTERACTION_RESOURCE_FACT.USER_DATA_11	A user-defined string fact, up to 255 characters.
(User-Defined Fact 12)**	string	varchar (255)	10032	INTERACTION_SEGMENT_FACT.USER_DATA_12 INTERACTION_RESOURCE_FACT.USER_DATA_12	A user-defined string fact, up to 255 characters.

Table 5: Key-Value Pair Mapping (Continued)

Key-Value Pair Names	Data Type		GIM ID #	Target Genesis Info Mart Table and Column Name	Key-Value Pair Description
	KVP	GIM			
(User-Defined Fact 13) **	string	varchar (255)	10033	INTERACTION_SEGMENT_FACT. USER_DATA_13 INTERACTION_RESOURCE_FACT. USER_DATA_13	A user-defined string fact, up to 255 characters.
(User-Defined Fact 14) **	string	varchar (255)	10034	INTERACTION_SEGMENT_FACT. USER_DATA_14 INTERACTION_RESOURCE_FACT. USER_DATA_14	A user-defined string fact, up to 255 characters.
(User-Defined Fact 15) **	string	varchar (255)	10035	INTERACTION_SEGMENT_FACT. USER_DATA_15 INTERACTION_RESOURCE_FACT. USER_DATA_15	A user-defined string fact, up to 255 characters.
(User-Defined Fact 16) **	string	varchar (128)	10036	INTERACTION_SEGMENT_FACT. USER_DATA_16 INTERACTION_RESOURCE_FACT. USER_DATA_16	A user-defined string fact, up to 128 characters.
(User-Defined Fact 17) **	string	varchar (128)	10037	INTERACTION_SEGMENT_FACT. USER_DATA_17 INTERACTION_RESOURCE_FACT. USER_DATA_17	A user-defined string fact, up to 128 characters.
(User-Defined Fact 18) **	string	varchar (128)	10038	INTERACTION_SEGMENT_FACT. USER_DATA_18 INTERACTION_RESOURCE_FACT. USER_DATA_18	A user-defined string fact, up to 128 characters.
(User-Defined Fact 19) **	string	varchar (128)	10039	INTERACTION_SEGMENT_FACT. USER_DATA_19 INTERACTION_RESOURCE_FACT. USER_DATA_19	A user-defined string fact, up to 128 characters.
(User-Defined Fact 20) **	string	varchar (128)	10040	INTERACTION_SEGMENT_FACT. USER_DATA_20 INTERACTION_RESOURCE_FACT. USER_DATA_20	A user-defined string fact, up to 128 characters.

Using UserEvent-Based KVP Data

Some agent desktop applications issue UserEvents to set key-value pair data after the agent's participation in the voice interaction has completed (that is, after the call is released). You can configure an ICON application that captures Voice details to store UserEvent-based KVP data in its IDB. When you

configure the ICON application, you use ICON application configuration options, rather than the attached data specification XML file, to specify which key-value pairs ICON should store. Then you can configure Genesys Info Mart to extract this data from the IDB's `G_CUSTOM_DATA_S` table, provided that the agent desktop application issues the `UserEvent` within the Genesys Info Mart-configured timeout after the call is released.

Planning Considerations

Note the following about Genesys Info Mart's ability to process `UserEvent`-based KVP data:

- Activating this feature delays the extraction of voice interactions until the configured timeout has expired.

Note: Enabling the extraction of `UserEvent`-based KVP data in a data source topology in which multiple ICON applications store Voice details in the same IDB can impose long delays in data extraction, especially when some, but not all contact center locations operate 24 hours a day, seven days a week. To avoid such long delays, Genesys recommends choosing a deployment topology where each ICON stores Voice details in its own IDB.

- This functionality is supported for voice interactions only.
- This functionality is supported for logged-in agents and IVR applications that emulate logged-in agents.
- Only data from the IDB's `G_CUSTOM_DATA_S` table is extracted. `UserEvent`-based KVP data is *not* extracted from `G_CUSTOM_DATA_P`, nor are custom agent states extracted from the IDB's `G_CUSTOM_STATES` table.
- Applications that issue `UserEvents` must be sure to properly set the fields inside the `UserEvent`. Unlike with call-based attached data, T-Server does not validate the contents of the `UserEvents`, nor does it propagate their KVP data values among related calls, such as consultations, transfers, or conferences.

Rather than storing the extracted data in a separate Genesys Info Mart database table, Genesys Info Mart stores the data in the same facts and dimensions as those that are sourced from call-based attached data. During deployment planning, you decide which Info Mart fact or dimension column should receive data from each `UserEvent`-based KVP that is of interest for reporting. During deployment configuration, you need to configure ICON application options to specify which KVPs should be stored in `G_CUSTOM_DATA_S`. You also need to configure Genesys Info Mart application options to specify the mapping between those KVPs and the Info Mart facts and dimensions. For the mapping, use the same `GIM ID` values from Table 5, “Key-Value Pair Mapping,” on [page 97](#) that you used for mapping call-based attached data KVPs to Info Mart facts and dimensions. The only rows of Table 5 that are relevant are those with a numerical value in the `GIM ID` column.

There is one exception: 10047 for GSW_CALL_ATTEMPT_GUID. You should *not* configure ICON to store UserEvent-based KVP data for this KVP name; doing so could interfere with transformation of outbound calls.

You may choose to store UserEvent-based KVP data in the same facts and dimensions as those that come from call-based attached data, or you may choose to store them in separate facts and dimensions, particularly if you are concerned that the UserEvents issued by your desktop or IVR applications might be unreliable. For a given KVP name:

- If you choose to store UserEvent-based KVP values and call-based attached data values in *different* Info Mart columns, your report queries have to specify which column to use.
- If you choose to store UserEvent-based KVP values and call-based attached data values in the *same* Info Mart column (because you do not want to distinguish which event type set the KVP data), the UserEvent-based KVP values will override the call-based attached data values.

For more information about how Genesys Info Mart populates its facts and dimensions from UserEvent-based KVP data and call-based attached data, see the sections in the *Genesys Info Mart 7.6 User's Guide* about populating interaction segments and populating interaction resource data.

IVR and GVP VAR Applications

The KVPs that your IVR or GVP VAR applications attach depend on the following factors:

- The technologies that your IVR application supports.
- Whether the applications are self-service-oriented.
- Whether the applications work in conjunction with Enterprise Routing Solution.

Based on these factors, you may choose to modify your IVR and GVP VAR applications so that they attach the following KVPs:

- IApplication
- IPurpose
- IResult
- IResultReason
- ITextToSpeech
- ISpeechRecognition
- CustomerID
- CaseID
- CustomerSegment
- ServiceType
- ServiceSubtype

- `BusinessResult`

You may also decide to attach some of the user-defined KVPs.

Note: If the IVR Ports act as agents by logging into a queue, IVR applications can associate KVP data with a voice interaction by sending `UserEvents` after the voice interaction is terminated (that is, after the call is released). The `UserEvent` has to be sent within the timeout specified in the Genesys Info Mart application configuration. `IPurpose` cannot be sent using `UserEvents`.

IPurpose IVR KVP

Genesys Info Mart does not store the `IPurpose` KVP in its database; rather, the presence and value of this KVP affects the data population decisions for the `INTERACTION_RESOURCE_FACT` table. In particular, Genesys Info Mart uses this KVP to determine whether an IVR application represents a self-service application or only a part of the mediation process:

- For a self-service IVR, Genesys Info Mart creates a separate row in the `INTERACTION_RESOURCE_FACT` table that represents the IVR activity as interaction handling, not as mediation. In other words, the `INTERACTION_RESOURCE_FACT` table is populated with facts for this self-service IVR port in the same manner as for an agent.
- For a non-self-service IVR, no separate `INTERACTION_RESOURCE_FACT` row is created; the IVR activity is represented as mediation (not as interaction handling) as part of another row in the `INTERACTION_RESOURCE_FACT` table.

The presence of the `IPurpose` key with the value of 1 (Self Service) forces Genesys Info Mart to treat an IVR port as a handling resource. Otherwise, Genesys Info Mart treats the IVR port as a mediation resource.

Note: If you do not modify your self-service IVR applications or routing strategies (see [page 112](#)) to attach `IPurpose` KVP, you will see a high number of customer abandoned interactions. To mitigate this, configure the ETL to treat all IVR applications as self-service.

Do this by setting the `default-ivr-to-self-service` configuration option to `TRUE` in the `gim_etl` section; this way, you can configure Genesys Info Mart to treat all IVR port resources as self-service IVRs.

An IVR application can attach the `IPurpose` key with the value of 1 (Self Service) to indicate to the reporting system that the corresponding IVR port is a self-service resource, in the following deployments:

- IVR In Front of the Switch
- IVR Behind the Switch

Note: In an environment in which IVR applications rely on Universal Routing to select a target, you can modify your URS routing strategies to attach the IPurpose KVP on behalf of the self-service IVR application. See [page 112](#) for more information.

IVR In Front of the Switch

In this deployment, an IVR and IVR ports exist as configuration objects in the Configuration Database, and IVR ports are associated with DN objects configured under the IVR Server's virtual switch. When it arrives at your IVR port, the call is associated with a corresponding DN object in Genesys environment; this association clearly indicates to the ETL that the call is at an IVR port.

Note: This configuration includes a Network GVP deployed in conjunction with the IVR In Front of the Switch architecture.

The IVR application can set the IPurpose key to the Self Service value and attach this data to the original call (as opposed to the call created for the purposes of transfer, if applicable) while the original call is at the IVR port.

As a result, Genesys Info Mart creates a record, in the INTERACTION_RESOURCE_FACT table for the IVR port, to represent the self service IVR application handling the customer interaction.

IVR Behind the Switch

In this deployment, an IVR and IVR ports exist as configuration objects in the Configuration Database, and IVR ports are associated with DN objects configured under the premise switch. When it arrives at your IVR port, the call is associated with a corresponding DN object in Genesys environment; this association clearly indicates to the ETL that the call is at an IVR port.

The IVR application can set the IPurpose key to the Self Service value and attach this data to the original call (as opposed to the call created for the purposes of transfer, is applicable) while the original call is at the IVR port.

As a result, Genesys Info Mart creates a record in the INTERACTION_RESOURCE_FACT table for the IVR port, to represent the self service IVR application handling the customer interaction.

Universal Routing

The KVPs that Universal Routing attaches depend on the following factors:

- The type of routing strategies that you deploy.
- Whether routing strategies work in conjunction with IVR or GVP VAR applications.

You can configure Universal Routing Server to automatically attach the following strategy name and routing target KVPs, by setting Universal Routing Server's `report_targets` configuration option to `true`:

- `RTenant`
- `RStrategyName`
- `RTargetTypeSelected`
- `RTargetObjectSelected`
- `RTargetAgentSelected`
- `RTargetPlaceSelected`

Note: By default, ICON stores values for these keys in the IDB `G_ROUTE_RESULT` table.

Your routing strategies can use Interaction Routing Designer's `Multi Attach` object and `FindServiceObjective` function to attach the following KVPs that represent requested skills, business attributes, and service objectives:

- `RRequestedSkillCombination`
- `CustomerSegment`
- `ServiceType`
- `ServiceObjective`

You may also decide to attach the following KVPs or some of the user-defined KVPs:

- `CustomerID`
- `CaseID`
- `ServiceSubtype`

Attached Data for Self-Service IVRs

When used in conjunction with self-service IVR applications, your routing strategies might also choose to attach the `IPurpose` KVP on behalf of the IVR application. (The `IPurpose` KVP attached by the IVR application takes priority.) The `Self Service` value for the `IPurpose` key indicates to the reporting system that the corresponding IVR port is a self-service resource, in the following deployments:

- IVR In Front of the Switch
- IVR Behind the Switch

IVR In Front of the Switch

In this deployment (as defined on [page 111](#)), a call also involves a routing point, which is configured as a DN of the `Routing Point` type under the IVR Server's virtual switch.

Either the IVR application or the routing strategy associated with the routing point (or both) can set the `IPurpose` key to the `Self Service` value while the

call is at the IVR port. As a result, Genesys Info Mart creates a record in the `INTERACTION_RESOURCE_FACT` table for the IVR port.

IVR Behind the Switch

In this deployment (as defined on [page 111](#)), a call might involve a routing point and virtual routing point, which are configured as DN objects of the Routing Point and Virtual Routing Point types, respectively, under the premise switch.

The `IPurpose` key with the `Self Service` value is set as follows, in any combination:

- The routing strategy associated with the routing point at the premise switch attaches the KVP before routing the call to the IVR port.
- The IVR application attaches the KVP while the call is at the IVR port.
- The routing strategy associated with the virtual routing point attaches the KVP while the call is at the IVR port.

As a result, Genesys Info Mart creates a record in the `INTERACTION_RESOURCE_FACT` table for the IVR port.

Multimedia-Specific Attached Data

The extent to which Multimedia-specific interaction attributes are present depends on the media server and your routing strategies.

For Multimedia interactions, the media server or Interaction Server automatically attaches some or all of the following attributes, as applicable to your media type:

- `FromAddress`
- `FromPersonal`
- `Subject` (if specified by the submitting application)
- `OriginationSource`
- `ContactID`

`AutoResponseID` is attached by Universal Routing Server when your routing strategy uses the Acknowledgement object. `AutoAckID` is not automatically attached.

ICON automatically stores the following Multimedia-specific attributes in the `GM_F_USERDATA` and `GM_L_USERDATA` tables:

- `_attr_itx_received_at`
- `_attr_itx_subtype`
- `_attr_reason_system_name` (limited to Stop Reason)

In addition, ICON will store the following attributes in the `GM_F_USERDATA` and `GM_L_USERDATA` tables only if you configure ICON to do so in the attached data specification:

- `ContactID`
- `SuggestedReponseID`

- AutoResponseID
- AutoACKID
- FromAddress
- FromPersonal
- IsCalledBack
- Subject
- Origination_Source

If you do not require Multimedia attached data, remove these KVPs from the attached data specification file.

Note: Genesys Info Mart does not use SuggestedResponse and IsCalledBack.

Outbound Contact

Outbound Contact Server automatically attaches the GSW_CALL_ATTEMPT_GUID call attempt ID for progressive and predictive dialing modes. For preview dialing mode, Outbound Contact provides the GSW_CALL_ATTEMPT_GUID KVP in the UserEvent with record information. You must ensure that your desktop application attaches this KVP.

Genesys Info Mart ETL uses this information to integrate call details, such as talk time, hold time, after-call-work time, and the first agent or IVR port with the outbound contact attempt details.

Agent Desktop Applications

Agent desktop applications may attach various KVPs that depend on your configuration of business attributes in Configuration Manager. For example, desktop applications can attach the following KVPs if they have not already been attached by some other application (such as IVR or GVP VAR applications, or Enterprise Routing Solution):

- CaseID
- CustomerID
- BusinessResult

You may also decide to attach some of the user-defined KVPs.

Note: Agent desktop can associate KVP data with a voice interaction by sending UserEvents after the voice interaction is terminated (that is, after the call is released). The UserEvent has to be sent within the timeout specified in the Genesys Info Mart application configuration.

Outbound Contact Server automatically attaches the GSW_CALL_ATTEMPT_GUID call attempt ID for progressive and predictive dialing modes. For preview

dialing mode, you must ensure that your desktop application attaches the GSW_CALL_ATTEMPT_GUID KVP, provided by Outbound Contact in the UserEvent with record information, to the actual interaction. For voice interactions, the KVP must be attached before the voice call is released. Genesys Info Mart ETL uses this information to integrate call details such as talk time, hold time, after-call-work time, and the first agent or IVR port with the outbound contact attempt details.

For Multimedia, Interaction Concentrator automatically stores information about the reason why an interaction processing stopped. If you want to track the reasons for agents stopping Multimedia interactions, ensure that the Stop Reason key with relevant values is available to your agents through their desktop applications. Interaction Concentrator 7.6 also stores information about the party that issued the request to stop processing an interaction, when the party is known.

Genesys Info Mart and Outbound Contact Record Field Data

Genesys Info Mart stores Record Field data that is defined in Outbound Contact calling lists in several places in the Info Mart database:

- Pre-defined dimensions, such as Record Type, Record Status, and Contact Info Type. These are mandatory record fields.
- Pre-defined facts, such as Record ID, Chain ID, Chain N, Dialing From, Dialing Until, and Contact Info. These are mandatory record fields.
- User-defined dimensions, such as the columns in the RECORD_FIELD_GROUP_1 and RECORD_FIELD_GROUP_2 tables. These are non-mandatory record fields.
- User-defined facts, such as Record Field 1–40 in the CONTACT_ATTEMPT_FACT table. These are non-mandatory record fields.

The source of the data is the Outbound Contact extension IDB tables—for example, GO_ChainRec_Hist, GO_FieldHist, and GO_Sec_FieldHist.

Mandatory Record Field Data

[Table 6](#) shows how Genesys Info Mart uses the data from each mandatory Field object. Some fields map directly to Info Mart table columns, whereas others are used indirectly in calculations. The Genesys Info Mart ETL automatically uses the mandatory field data as indicated in [Table 6](#). No special Genesys Info Mart configuration is required; however, you *must* configure ICON to store mandatory field data in its database.

For information on configuring ICON to store record field data, see [Configuring the Storage of Outbound Contact Record Field Data, page 143](#).

Table 6: Mandatory Record Field Data

OCS Mandatory Field Name	Genesys Info Mart Table Name	Genesys Info Mart Column Name
agent_id ^a	CONTACT_ATTEMPT_FACT	DIAL_SCHED_TIME
app_id ^{a,b}	No direct mapping	No direct mapping
attempt ^c	CONTACT_ATTEMPT_FACT	ATTEMPT_ORDINAL
call_result ^{b,c}	No direct mapping	No direct mapping
call_time ^{a,b}	No direct mapping	No direct mapping
campaign_id ^{a,b}	No direct mapping	No direct mapping
chain_id ^c	CONTACT_ATTEMPT_FACT	CHAIN_ID
chain_n ^a	CONTACT_ATTEMPT_FACT	CHAIN_N
contact_info ^c	CONTACT_ATTEMPT_FACT	CONTACT_INFO
contact_info_type ^a	CONTACT_ATTEMPT_FACT	CONTACT_INFO_TYPE_KEY
daily_from ^a	CONTACT_ATTEMPT_FACT	DAILY_FROM_SECONDS CONTACT_DAILY_FROM_TIME CONTACT_WITHIN_DAILY_RANGE
daily_till ^a	CONTACT_ATTEMPT_FACT	DAILY_UNTIL_SECONDS CONTACT_DAILY_UNTIL_TIME CONTACT_WITHIN_DAILY_RANGE
dial_sched_time ^a	CONTACT_ATTEMPT_FACT	DIAL_SCHED_TIME CONTACT_DIAL_SCHED_TIME Although agent_id is not directly mapped to DIAL_SCHED_TIME, it is used to determine which particular record in a calling list chain is used for a scheduled call.
group_id ^{a,b}	No direct mapping	No direct mapping
record_id ^a	CONTACT_ATTEMPT_FACT	RECORD_ID
record_status ^a	CONTACT_ATTEMPT_FACT	RECORD_STATUS_KEY
record_type ^a	CONTACT_ATTEMPT_FACT	RECORD_TYPE_KEY
switch_id ^{a,b}	No direct mapping	No direct mapping

Table 6: Mandatory Record Field Data (Continued)

OCS Mandatory Field Name	Genesys Info Mart Table Name	Genesys Info Mart Column Name
treatments ^{a,b}	No direct mapping	No direct mapping
tz_dbid ^a	CONTACT_ATTEMPT_FACT	TIME_ZONE_KEY CONTACT_DAILY_FROM_TIME CONTACT_DAILY_UNTIL_TIME CONTACT_DIAL_SCHED_TIME CONTACT_WITHIN_DAILY_RANGE CONTACT_I_XN_START_TIME The ICON call time is used together with tz_dbid to fill in CONTACT_I_XN_START_TIME and to determine CONTACT_WITHIN_DAILY_RANGE.

- You must configure the `send_attribute` for this field so that Outbound Contact will attach the value of the field in outbound calls and user events. For more information, see the procedure [Configuring the Storage of Outbound Contact Record Field Data](#), page 143.
- This mandatory record field is not stored directly in the Info Mart database, but is extracted and used during the transformation process. You must configure ICON to store mandatory field data in its database regardless of whether or not the field maps directly to an Info Mart table column.
- Outbound Contact automatically attaches the value of this field to outbound calls and in user events, in a KVP with a key name that starts with `GSW_`.

Nonmandatory (Custom) Record Field Data

Genesys Info Mart can optionally store a fixed number of non-mandatory record fields in the following tables.

- CONTACT_ATTEMPT_FACT
- RECORD_FIELD_GROUP_1
- RECORD_FIELD_GROUP_2

If you want to report on non-mandatory record fields, you must configure options in each `Field` object to indicate the Genesys Info Mart table and column into which the data should be loaded.

You can use any field name you choose; the field name does not have to match the generic custom record field name in the Info Mart schema. The data type of the `Field` object must match that of the target Info Mart database table and column. Interaction Concentrator stores all custom field data as strings. The Genesys Info Mart ETL performs all necessary data conversions between strings and other target data types.

Each `Field` object maps to one and only one table and column in the Info Mart database. Starting with Genesys Info Mart 7.6.010, more than one `Field` object can map to the same table and column in the Info Mart database. Nulls are loaded for any unmapped columns in Info Mart's `CONTACT_ATTEMPT_FACT` table.

The value `Unspecified` is loaded for any unmapped columns in Info Mart's `RECORD_FIELD_GROUP_1` and `RECORD_FIELD_GROUP_2` tables.

`RECORD_FIELD_GROUP_1` and `RECORD_FIELD_GROUP_2` column values should be of low cardinality, similar to `USER_DATA` and `USER_DATA_2`. Storing record fields with high cardinality will cause a decrease in the performance for both the ETL and your report queries.

For information about non mandatory fields that have special meaning for Genesys Info Mart, see [“Right Person Contacted Record Field”](#) and [“Conversion Record Field”](#) on this page. You can also use the worksheet in [Appendix A](#) to plan your mapping of Outbound Contact Record Fields to the Info Mart table columns.

Note: If you want to report on non mandatory record field data, you *must* configure ICON to store non mandatory field data in its database. See [Configuring the Storage of Outbound Contact Record Field Data, page 143](#) for more information.

Right Person Contacted Record Field

Although `Right Person Contacted` is not a mandatory field, it has significance to Genesys Info Mart. It can be any `Field` object that you designate by adding the `right_person` option to the `default` section of the `Field` object's `Annex` tab. The option value specifies the value of the field when the right person is contacted—for example, `TRUE`, `YES`, or `1`. If the value of this field matches the configured option value (which is case-insensitive), Genesys Info Mart sets the `RPC_FLAG` in its `CONTACT_ATTEMPT_FACT` table to `1`. For more information, see [Configuring the Mapping of Outbound Contact Record Fields, page 146](#).

If you want to report on right person contacted, you must configure ICON to store non-mandatory field data in its database. For information about how to configure ICON to store field data, see [Configuring the Mapping of Outbound Contact Record Fields, page 146](#).

Conversion Record Field

Although `Conversion` is not a mandatory field, it has significance to Genesys Info Mart. It can be any `Field` object that you designate by adding the `conversion` option to the `default` section of the `Field` object's `Annex` tab. The option value specifies the value of the field when the purpose of the outbound contact has been achieved—for example, `TRUE`, `YES`, or `1`. If the value of this field matches the configured option value (which is case-insensitive), Genesys Info Mart sets the `CONVERSION_FLAG` in its `CONTACT_ATTEMPT_FACT` table to `1`.

If you want to report on conversion, you must configure ICON to store non-mandatory field data in its database. For information about how to store field data, see [Configuring the Mapping of Outbound Contact Record Fields, page 146](#).

Reporting Application

Your choice of end-user reporting application affects your deployment of Genesys Info Mart:

- Starting with release 7.6, Genesys offers Genesys Interactive Insights (GI2), a reporting application that provides reports based on Genesys Info Mart data. If you are planning to use GI2 reports, you need to deploy a special application template for Genesys Info Mart Server and configure the options that enable the population of GI2 reports.
- You can develop a custom reporting application to use with Genesys Info Mart 7.6, or continue using the reporting application you developed for a previous release of Genesys Info Mart. In this case, evaluate which application template and configuration options would work best for your environment.



Chapter

3

Preparing Data Sources

This chapter describes how to prepare the data sources that will provide data to Genesys Info Mart; including:

- Configuration of the data source applications, including how to configure your Interaction Concentrator (ICON) data sources to implement the Interaction Database (IDB) merge and the high availability (HA) data extraction features.
- Required modifications to source database schemas.

Refer to this chapter before installing your Genesys Info Mart 7.6 application.

This chapter contains the following sections:

- [Overview, page 121](#)
- [Preparing Interaction Concentrator, page 125](#)
- [Preparing GVP VAR, page 171](#)

For information about the various data source topologies that are supported by Genesys Info Mart 7.6, see “Data Source Topologies” on [page 55](#). For examples on how to use various data sources in combination, see Appendix B, “Sample Data Extraction Topologies,” on [page 417](#).

For information about database access accounts and privileges, see “Database Object Owners and User IDs” on [page 78](#).

For information about preparing Stat Server and its database(s), see Appendix E on [page 441](#).

Overview

Genesys Info Mart extracts data from three main sources:

- Interaction Database (IDB)—For Interaction Concentrator (ICON) Configuration details, ICON Voice details, ICON Multimedia details, and ICON Outbound Contact details.

- Stat Server Database—For voice agent details (in a legacy reporting environment).
- Genesys Voice Platform (GVP) Voice Application Reporter (VAR) Database—For VAR details.

An IDB with ICON Configuration details and an IDB with either ICON Voice or ICON Multimedia details are the only two data sources mandatory for any environment. Deploying other data sources depends on your contact center and the deployment topology you have decided on during your planning (see “Data Source Topologies” on [page 55](#)).

Task Flow for Preparing Genesys Info Mart Data Sources

[Table 7](#) summarizes the task flow to prepare data sources for Genesys Info Mart.

Table 7: Task Flow: Preparing Genesys Info Mart Data Sources

Objective	Related Procedures and Actions
Capture configuration information to support detailed reporting for interactions of any type and related agent activity.	Set up the ICON application to store Configuration details in IDB. For details, see Configuring ICON Application to Capture Configuration Details, page 128 . Optionally, set up redundant ICON applications to store Configuration details in a highly available (HA) pair of IDBs: <ol style="list-style-type: none"> 1. Create a secondary ICON application that stores Configuration details. In the ICON Application object, set the <code>role</code> option to contain the <code>cfg</code> value. For more information, see Configuring ICON Application to Capture Configuration Details, page 128. For the procedures on how to create an ICON Application object, see the <i>Interaction Concentrator Deployment Guide</i>. 2. Modify the configuration settings of the two ICON applications to process the data in the same manner. See Configuring ICON Applications for Configuration Details HA, page 163.

Table 7: Task Flow: Preparing Genesys Info Mart Data Sources (Continued)

Objective	Related Procedures and Actions
<p>Capture information to support detailed reporting of voice interactions and related agent activity.</p>	<p>If your contact center processes voice interactions (calls), set up the configuration objects required for ICON to store voice interaction, attached data, UserEvent-based key-value pair (KVP) data, and related agent activity details in IDB. Follow these procedures:</p> <ul style="list-style-type: none"> • Configuring ICON Application to Capture Voice Details, page 129. • Configuring Switch to Capture ICON Voice Details, page 134. • Configuring DN to Capture ICON Voice Details, page 139. <p>Optionally, set up redundant ICON applications to store Voice details, including the related agent activity details, in an HA pair of IDBs as follows:</p> <ol style="list-style-type: none"> 1. Create a secondary ICON application that stores Voice details. In the ICON Application object, set the role option to contain the gcc, gud, and gls values. For more information, see Configuring ICON Application to Capture Voice Details, page 129. For the procedures on how to create an ICON Application object, see the <i>Interaction Concentrator Deployment Guide</i>. 2. Modify the configuration settings of the two ICON applications to process the data in the same manner. See Configuring ICON Applications for Voice Details HA, page 164.

Table 7: Task Flow: Preparing Genesys Info Mart Data Sources (Continued)

Objective	Related Procedures and Actions
<p>Capture information to support detailed reporting of outbound voice interactions.</p>	<p>If you have the Genesys Outbound Contact in your contact center, and if you would like to capture outbound-specific data in your reports, set up the configuration objects required for ICON to store Outbound Contact details in IDB. Follow these procedures:</p> <ul style="list-style-type: none"> • Configuring ICON Application to Capture Outbound Contact Details, page 141. • Configuring the Storage of Outbound Contact Record Field Data, page 143. • Configuring the Mapping of Outbound Contact Record Fields, page 146. <p>Optionally, set up redundant ICON applications to store Outbound Contact details in an HA pair of IDBs as follows:</p> <ol style="list-style-type: none"> 1. Create a secondary ICON application that stores Outbound Contact details. In the ICON Application object, set the role option to contain the gos value. For more information, see Configuring ICON Application to Capture Outbound Contact Details, page 141. For the procedures on how to create an ICON Application object, see the <i>Interaction Concentrator Deployment Guide</i>. 2. Modify the configuration settings of the two ICON applications in the HA pair to process the data in the same manner. See Configuring ICON Applications for Outbound Contact Details HA, page 166.
<p>Capture information to support detailed reporting of Multimedia interactions and related agent activity.</p>	<p>If your contact center processes Multimedia interactions, set up the configuration objects required for ICON to store Multimedia interactions and related agent activity details in IDB. Follow these procedures:</p> <ul style="list-style-type: none"> • Configuring ICON Application to Capture Multimedia Details, page 149. • Configuring Switch to Capture ICON Multimedia Details, page 153. • Configuring DN to Capture ICON Multimedia Details, page 155.
<p>Minimize the required database storage space while supporting detailed reporting of interactions of any type and related agent activity.</p>	<p>Optionally, set up the ICON application to exclude extra details from being stored in IDB. For more information, see Controlling IDB Storage, page 156.</p>

Table 7: Task Flow: Preparing Genesys Info Mart Data Sources (Continued)

Objective	Related Procedures and Actions
Capture attached data to support detailed reporting of interactions of any type.	Optionally, indicate what attached data ICON should store in IDB. For more information, see Customizing Your ICON Attached Data Specification File, page 161 .
Enable extraction of interactions and agent activity details for reporting purposes.	Modify IDB so that extraction, transformation, and loading (ETL) jobs extract relevant reporting data. For more information, see Preparing IDBs, page 167 . In a multi-site contact center that processes voice interactions, also enable the merge of voice interactions that cross sites. For more information, see Configuring for IDB Merge, page 170 .
Enable access to Genesys Voice Platform (GVP) data.	If you have the GVP deployed in your contact center, and you would like to capture GVP-specific data in your reports, set the access parameters necessary for ETL jobs to extract relevant reporting data. For more information, see Preparing GVP VAR, page 172 .

Note: For information about preparing Stat Server and its database(s), see Appendix E on [page 441](#).

Preparing Interaction Concentrator

Interaction Concentrator serves as the Genesys Info Mart data source for the following types of information:

- ICON Configuration Details
 - Contact center configuration
- ICON Voice Details
 - Voice interactions, attached data, and UserEvent-based KVP data
 - Voice resource login, states, and reason codes
 - Virtual queue activity for voice interactions
 - Network Routing solution activity
- ICON Outbound Contact Details
 - Outbound Contact details
- ICON Multimedia Details
 - Multimedia interactions and attached data
 - Multimedia resource login, states, and reason codes
 - Virtual queue activity for Multimedia interactions

Your Genesys Info Mart deployment requires at least one ICON application and one IDB. However, depending on your chosen topology, you may have additional ICON applications or additional IDBs for separate storage of Configuration details, Voice details, Outbound Contact details, and Multimedia details.

Preparing Interaction Concentrator as a Data Source for Genesys Info Mart

Within Configuration Manager, you must configure each ICON Application object and related objects in the deployment, in accordance with the Genesys Info Mart deployment requirements described in this section.

The type of data Genesys Info Mart will extract from a particular ICON and IDB depends on your topology and reporting requirements. The required configuration settings, therefore, also depend on your topology and reporting requirements. In some cases, you must configure settings on other configuration objects (DN, Field, Switch) as well as on the ICON Application object.

Note: The valid values listed for ICON application options in this chapter do not necessarily represent the entire set of values available in ICON; rather, these are the values that make sense in a reporting environment based on Genesys Info Mart.

Recommendations on ICON Deployment and Upgrade

- If you are deploying Interaction Concentrator at the same time as Genesys Info Mart, follow the installation and configuration instructions in the *Interaction Concentrator Deployment Guide*, while observing the Genesys Info Mart deployment requirements that are documented in this chapter.
- If you are deploying Genesys Info Mart into an environment in which Interaction Concentrator has already been deployed, modify the ICON application as required to conform to the Genesys Info Mart deployment requirements documented in this chapter.
- If you are upgrading Interaction Concentrator (for example, to enable new features available in Genesys Info Mart release 7.6), and Genesys Info Mart has already been extracting data from the IDB into which the existing release of ICON application stores data, do not create a new ICON Application object in the Configuration Layer. Instead, use the existing Application object in the Configuration Layer when you install the Interaction Concentrator upgrade. Upgrading the existing ICON Application object ensures consistent data in the IDB, if the new ICON application subsequently updates data that was inserted by the existing release of ICON application. If you do not use the same ICON Application object, Genesys Info Mart will not be able to extract IDB data that was

inserted by the existing ICON application and updated by the new ICON application. Refer to the *Genesys Info Mart 7.6 Operation Guide* for more information.

Recommendations on Outbound Contact Upgrade

The following applies if you are upgrading Outbound Contact Server (for example, during migration from a previous release, or when installing a newer version of the same release) and your Genesys Info Mart deployment extracts Outbound Contact details in an HA data extraction topology. If Genesys Info Mart has already extracted Outbound Contact details from the HA pair of IDBs based on events ICON received from the existing Outbound Contact Server application, do not create a new Outbound Contact Server Application object in the Configuration Layer. Instead, use the existing Outbound Contact Server Application object in the Configuration Layer when you install the Outbound Contact Server upgrade. If for any reason, you must create a new Outbound Contact Server Application object in the Configuration Layer, then you must also create a new pair of ICON Application objects, and a new HA pair of Outbound Contact details IDBs for Genesys Info Mart to extract. See the “Configuring HA Data Extraction of Outbound Contact Details in a New Deployment” section of the *Genesys Info Mart 7.6 Deployment Guide* for information about how to configure HA data extraction of Outbound Contact details.

Capturing Configuration Details

[Table 8](#) summarizes the task flow to enable ICON to store Configuration details in IDB.

[Table 9](#) on [page 128](#) describes the required settings for the `role` option of the ICON application that stores Configuration details.

Table 8: Task Flow: Capturing Configuration Details

Objective	Related Procedures and Actions
Capture configuration information to support detailed reporting for interactions of any type and related agent activity.	Set up the ICON application to store Configuration details in IDB by: <ul style="list-style-type: none"> • Configuring ICON Application to Capture Configuration Details. Optionally, set up redundant ICON applications to store Configuration details in an HA pair of IDBs by: <ul style="list-style-type: none"> • Configuring ICON Applications for Configuration Details HA, page 163.

Procedure: Configuring ICON Application to Capture Configuration Details

Purpose: Enable ICON to gather Configuration details.

Start of procedure

1. To capture configuration data, set the `role` option of the `ICON Application` object, as described in [Table 9](#). The `role` option is set in the `callconcentrator` section of the `ICON Application` object that handles Configuration details.

For more information, see the chapter about configuration options in the *Interaction Concentrator Deployment Guide*.

Table 9: ICON Configuration Details—Application Options—callconcentrator Section

Area of Functionality	Option Name	Recommended Value(s)	Description
ICON role	<code>role</code>	Value of <code>cfg</code> , or a comma-separated list that contains <code>cfg</code> —Stores the initial configuration state and a history of configuration changes retrieved from Configuration Server Examples: <ul style="list-style-type: none"> • <code>role = cfg</code> • <code>role = cfg, gcc, gud, gls</code> 	Specifies that this ICON instance processes Configuration details and stores them in an IDB. If the <code>role</code> does not contain <code>cfg</code> , Genesys Info Mart cannot populate many of its dimension and fact tables. Note: Ensure that the value of the <code>role</code> option on the <code>ICON Application</code> is consistent with the value of the <code>role</code> option on the applicable Database Access Point (DAP) that handles the connection between the ICON instance and IDB.

End of procedure

Next Steps

- If you are interested in setting HA for Configuration details, see [Configuring ICON Applications for Configuration Details HA, page 163](#).
- If you are interested in reporting on voice interactions, see [Capturing Voice Details, page 129](#).

- If you are interested in reporting on Multimedia interactions, see [Capturing Multimedia Details](#), page 148.

Capturing Voice Details

[Table 10](#) summarizes the task flow to enable ICON to store Voice details in IDB.

Table 10: Task Flow: Capturing Voice Details

Objective	Related Procedures and Actions
<p>Capture information to support detailed reporting of voice interactions and related agent activity.</p>	<p>If your contact center processes voice interactions (calls), set up the configuration objects required for ICON to store Voice details, including the related agent activity details, in IDB. Follow these procedures:</p> <ol style="list-style-type: none"> 1. Configuring ICON Application to Capture Voice Details, page 129. 2. Configuring Switch to Capture ICON Voice Details, page 134. 3. Configuring DN to Capture ICON Voice Details, page 139. <p>Optionally, set up redundant ICON applications to store Voice details, including the related agent activity details, in an HA pair of IDBs. See:</p> <ul style="list-style-type: none"> • Configuring ICON Applications for Voice Details HA, page 164.

Procedure:

Configuring ICON Application to Capture Voice Details

Purpose: To enable ICON to gather reporting data on voice calls, including interaction, attached data, UserEvent-based KVP data, resource, and agent activity details.

Prerequisites

- [Configuring ICON Application to Capture Configuration Details](#), page 128.

Start of procedure

1. Review the options from the `callconcentrator` section, described in [Table 11](#), for configuring ICON Voice details.
2. Open the `callconcentrator` section on the `Options` tab of the `ICON Application` object that handles Voice details.

3. Configure the ICON options that are required for Voice details.
For more information, see the chapter about configuration options in the *Interaction Concentrator Deployment Guide*.
4. Review the options from the custom-data section, described in Table 12 on page 134, if configuring for UserEvent-based KVP data is of interest.
5. Open the custom-states section on the Options tab of the ICON Application object that handles Voice details.
6. Configure the ICON options that are required for UserEvent-based KVP data.

Table 11: ICON Voice Details—Application Options—callconcentrator Section

Area of Functionality	Option Name	Recommended Value(s)	Description
ICON role	role	<p>A comma-separated list that contains all of the following:</p> <ul style="list-style-type: none"> • gcc—Stores call-related and party-related information. (Required for Interaction and Virtual Queue activity.) • gud—Stores T-Server data about the attached data associated with calls. (Required for attached data.) • gls—Stores T-Server data about agent states and agent login sessions. (Required for resource login, state and reasons data, and to associate After-Call-Work [ACW] with voice interactions.) <p>Examples:</p> <ul style="list-style-type: none"> • role = gcc, gud, gls • role = cfg, gcc, gud, gls 	<p>Specifies what type of data this ICON instance processes and stores in an IDB.</p> <p>Note: Ensure that the value of the role option on the ICON Application is consistent with the value of the role option on the DAP that handles the connection between the ICON instance and IDB.</p>

Table 11: ICON Voice Details—Application Options—callconcentrator Section (Continued)

Area of Functionality	Option Name	Recommended Value(s)	Description
High Availability	use-dss-monitor	This option value must be set to OFF, regardless of whether this IDB is part of an HA pair.	Specifies whether ICON synchronizes user data and call termination timestamps, how it is stored in IDB and when data is updated. If this option set to <i>off</i> , ICON does not write data to the G_DSS_GOS_PROVIDER tables.
Agent State and Login Session	gls-acw-first	The true value—ICON associates ACW metrics with the voice interaction that immediately precedes the <i>start</i> of the ACW (the first voice interaction). Subsequent voice interactions are considered as related to ACW processing and should not interrupt measurement of ACW-related metrics.	Specifies which interaction ICON associates with ACW. When the agent logs out, changes his or her state to Ready, or goes NotReady for any reason other than to perform ACW, ICON reports the end of the current ACW state. Note: This option applies to all switches that ICON is configured to monitor, but the value does not override the value of the gls-acw-first configuration option (described on page 137) if configured within the Switch configuration object.
Agent metrics	gls-store-event-seq	Set the option value to 1 if you deploy HA for agent activity data from ICON Voice details.	Specifies whether ICON stores event sequence numbers when events related to an agent login session trigger creation of new records in the following IDB tables: <ul style="list-style-type: none"> • G_AGENT_STATE_HISTORY • G_AGENT_STATE_RC • G_DND_HISTORY Note: To provide event sequence numbers with Multimedia events, Interaction Server release 7.6 is required.

Table 11: ICON Voice Details—Application Options—callconcentrator Section (Continued)

Area of Functionality	Option Name	Recommended Value(s)	Description
Virtual queue	extended-route-result	<ul style="list-style-type: none"> • 0 (default)—ICON stores route results. • 1—ICON stores extended routing results. (Required if detailed dispositions on routing from virtual queues is required for reporting.) 	<p>Specifies whether ICON stores extended routing results—the status of interactions distributed by Universal Routing Server (URS) 7.6—in the G_VIRTUAL_QUEUE and G_ROUTE_RESULT tables in IDB.</p> <p>To implement this feature, you must use the 7.6 releases of URS, Interaction Concentrator, and Genesys Info Mart. You must also set the report_targets and report_reasons URS configuration options to true.</p>
Virtual queue	vq-write-mode	<p>0—ICON creates a complete IDB record at the time that the association terminates, as indicated by either EventDiverted or EventAbandoned.</p> <p>Note: There are other valid values for this option; however, 0 is the only value valid for Genesys Info Mart when working with ICON Voice details.</p>	<p>Specifies how ICON writes information to IDB about a particular association between an interaction and a virtual queue.</p>
Attached data	adata-extensions-history	<p>none</p> <p>Note: There are other valid values for this option; however, none is the only value valid for Genesys Info Mart.</p>	<p>Specifies what changes to a key's value must be recorded to IDB, for a key that originates from the Extensions TEvent attribute, but that is not included in the XML specification file specified by the adata-spec-name option value.</p>
Attached data	adata-reasons-history	<p>none</p> <p>Note: There are other valid values for this option; however, none is the only value valid for Genesys Info Mart.</p>	<p>Specifies what changes to a key's value must be recorded to IDB, for a key that originates from the Reasons TEvent attribute, but that is not included in the XML specification file specified by the adata-spec-name option value.</p>

Table 11: ICON Voice Details—Application Options—callconcentrator Section (Continued)

Area of Functionality	Option Name	Recommended Value(s)	Description
Attached data	adata-userdata-history	none Note: There are other valid values for this option; however, none is the only value valid for Genesys Info Mart.	Specifies what changes to a key's value must be recorded to IDB, for a key that originates from the UserData TEvent attribute, but that is not included in the XML specification file specified by the adata-spec-name option value.
Attached data	adata-spec-name	Any valid XML file name. Default Value: ccon_adata_spec.xml	Specifies the name of the XML file that contains the attached data specification. For information about how to customize the attached data specification XML file, see Customizing Your ICON Attached Data Specification File, page 161 , in conjunction with Table 5 on page 97 . For a copy of the specification, refer to Appendix C on page 431 .

Table 12: ICON Voice Details—Application Options—custom-states Section

Area of Functionality	Option Name	Recommended Value(s)	Description
UserEvent-based KVP data	EventData	A comma-separated list of the data types and key names in the format <Type>, <KeyName>	This configuration option is set in ICON, and specifies the content of the UserEvent-based KVP data. Configure only those KVPs that you want Genesys Info Mart to extract.
UserEvent-based KVP data	store-event-data	conf—ICON stores the values of the keys that are configured in the EventData option. Note: There are other valid values for this option; however, conf is the recommended value rather than all, to conserve memory.	Specifies what, if any, KVP data (provided in the UserData section of EventUserEvent) ICON will store in the G_CUSTOM_DATA_S table.

End of procedure

Next Steps

- [Configuring Switch to Capture ICON Voice Details, page 134.](#)

Procedure: Configuring Switch to Capture ICON Voice Details

Purpose: To enable Switch object settings required for ICON to gather reporting data on voice calls, including interaction, attached data, UserEvent-based KVP data, resource, and agent activity details.

Prerequisites:

- The Annex tab must be displayed for configuration objects in Configuration Manager.
- [Configuring ICON Application to Capture Voice Details, page 129.](#)

Start of procedure

1. Review the `Switch` object's options described in [Table 13](#).
2. Open the `Annex` tab of the `Switch` object that handles Voice details.
3. Create a new section named `gts` if it does not exist already on the `Annex` tab.
4. Open the `gts` section.
5. Configure the ICON-related options that are required for voice interactions reporting.

For more information, see the chapter about configuration options in the *Interaction Concentrator Deployment Guide*.

Table 13: ICON Voice Details—Switch Options—gts Section

Area of Functionality	Option Name	Recommended Value(s)	Description
Agent State and Login Session	<code>gls-associations-rule</code>	<p>0—ICON creates a single login session for two DNs that belong to the same place when an agent logs in at one of these DNs. For example, when an agent logs in at a position DN and an extension DN exists on the same phone set, ICON maintains a single login session for these two DNs.</p> <p>Note: There are other valid values for this option; however, 0 is the only valid value for Genesys Info Mart.</p>	Controls, for this switch, how ICON associates DNs with a given agent login session.
Agent State and Login Session	<code>gls-max-duration</code>	<p>Any integer that is less than the value of the Genesys Info Mart configuration option: <code>max-session-duration-in-hours</code>. See page 292 for a description of the <code>max-session-duration-in-hours</code> option.</p> <p>Default Value: 0</p>	<p>Specifies the maximum amount of time, in hours, that an agent login session can last on a DN that belongs to this switch. Setting the option value to 0 (zero) prevents ICON from checking session durations.</p> <p>Note: ICON ignores <code>gls-max-duration</code> in deployments that use T-Server release 7.6 or later.</p>

Table 13: ICON Voice Details—Switch Options—gts Section (Continued)

Area of Functionality	Option Name	Recommended Value(s)	Description
Agent State and Login Session	gls-max-inactivity	Any integer that is less than the value of the Genesys Info Mart configuration option: <code>max-session-duration-in-hours</code> . See page 292 for a description of the <code>max-session-duration-in-hours</code> option. Default Value: 0	Specifies the maximum allowed inactivity period, in hours, during a single login session. ICON closes any agent login session for which it detects no agent-related activity during the specified interval. Setting the option value to 0 (zero) prevents ICON from checking inactivity durations. Note: ICON ignores <code>gls-max-inactivity</code> in deployments that use T-Server release 7.6 or later.
Agent State and Login Session	gls-flag-on-disconnect	Retain the default value of 0.	Specifies how ICON handles agent states when disconnecting from, and reconnecting to, T-Server. The valid value for Genesys Info Mart is: <ul style="list-style-type: none"> 0—When reconnecting to T-Server, ICON compares the agent state from its memory with the state from <code>EventRegistered</code>. If the in-memory state does not match the currently reported agent state, ICON updates the agent state in both its internal memory and IDB. When disconnecting from T-Server, ICON performs no actions specific to agent states.

Table 13: ICON Voice Details—Switch Options—gts Section (Continued)

Area of Functionality	Option Name	Recommended Value(s)	Description
Agent State and Login Session	gls-use-ts-id	Retain the default value of 1.	<p>Specifies whether ICON uses the login session ID generated by T-Server (GUID) or by itself when connecting to, or disconnecting from, T-Server.</p> <p>The valid value for Genesys Info Mart is:</p> <ul style="list-style-type: none"> • 1—ICON uses the login session ID (GUID) generated by T-Server. If you use a version of T-Server that does not provide the session ID, ICON will generate one.
Agent metrics	gls-acw-first	<p>To ensure that ICON associates ACW with the first voice interaction, do one of the following:</p> <ul style="list-style-type: none"> • At the switch level, set this option value to 1. • Retain the default value of -1 at the switch level, and set the gls-acw-first option to true at the ICON application level (see page 131). 	<p>Specifies, for this switch, which interaction ICON associates with ACW.</p> <p>For accurate measurement of ACW-related metrics, Genesys Info Mart requires ICON to associate ACW metrics with the voice interaction that immediately precedes the <i>start</i> of the ACW (the first voice interaction). Subsequent voice interactions are considered as related to ACW processing.</p> <p>When the agent logs out, changes his or her state to Ready, or goes NotReady for any reason other than to perform ACW, ICON reports the end of the current ACW state.</p> <p>This option overrides an explicit setting of the gls-acw-first configuration option (described on page 131) at the ICON application level.</p>

Table 13: ICON Voice Details—Switch Options—gts Section (Continued)

Area of Functionality	Option Name	Recommended Value(s)	Description
Agent metrics	gls-enable-acw-busy	Because Genesys Info Mart logic relies on uninterrupted durations of ACW and NotReady agent states, set this option value to 0—ICON continues ACW and NotReady agent states while an agent is handling another call.	Specifies, for this switch, whether ICON should continue ACW and NotReady agent states when agents place or receive calls during the period of time that ACW or NotReady agent states were invoked. Note: This option is not valid for Session Initiation Protocol (SIP)-compliant switches that handle interactions other than voice interactions.
Virtual Queue	support-dn-type-5	<ul style="list-style-type: none"> 0—ICON does not handle any virtual queue-related events for DNs that belong to this switch. 1 (default)—ICON processes virtual queue-related events for DNs that belong to this switch. 	Enables the processing of events regarding DNs of the Virtual Queue type that belong to this switch.

End of procedure

Next Steps

- [Configuring DN to Capture ICON Voice Details, page 139.](#)

Procedure:

Configuring DN to Capture ICON Voice Details

Purpose: To enable DN object settings required for ICON to gather reporting data on voice calls, including interaction, attached data, UserEvent-based KVP data, resource, and agent activity details.

Prerequisites:

- The **Annex** tab must be displayed for configuration objects in Configuration Manager.
- [Configuring Switch to Capture ICON Voice Details, page 134.](#)

Start of procedure

1. If you are deploying Genesys Info Mart to report on both ICON Voice details and ICON Multimedia details, make sure that any DN objects for virtual queues dedicated to voice calls are configured under the **Switch** object configured for your traditional telephony switch. Otherwise, the ICON application dedicated to handling Voice details cannot track activity on virtual queues.
2. Review the DN object's options described in [Table 14](#).
3. Open the **Annex** tab of a DN object that handles voice interactions.
4. Create a new section named **gts** if it does not exist already on the **Annex** tab.
5. Open the **gts** section.
6. Configure the ICON-related options required for Voice details.
For more information, see the chapter about configuration options in the *Interaction Concentrator Deployment Guide*.

Table 14: ICON Voice Details—DN Options—gts Section

Area of Functionality	Option Name	Recommended Value(s)	Description
Network Routing Solution	emulate-event-queued	<ul style="list-style-type: none"> 0—EventQueued is not emulated. 1—EventQueued is emulated. <p>Note: Network Routing Solution uses Service Number DNs. There is no EventQueued-related option at the switch level for Service Numbers. If the Network T-Server does not generate EventQueued, set this option to 1 on the Service Number DNs.</p>	<p>Enables the emulation of EventQueued for this particular DN. This option supersedes the value set in an emulate-event-queued-related option at the Switch level.</p> <p>Note: Generation of EventQueued for a Routing Point, Routing Queue, and External Routing Point depends on the particular T-Server and its switch. ICON requires this event for correct party representation in any environment.</p>
Scenario recognition	ivr	<p>0 (default)—ICON does not recognize this DN as an IVR port unless the DN configuration satisfies one of the following criteria:</p> <ul style="list-style-type: none"> DN has a type of Voice Treatment Port in Configuration Database. DN has a type of ACD Position or Extension, and it is specified as an Associated DN in the properties of the IVR port at ICON startup time. 	<p>Specifies whether ICON treats this DN as an IVR port.</p> <p>Note: See the gts-ivr option description on page 158 to exclude data about agent activity that is associated with this IVR device from IDB storage.</p>
Virtual Queue	monitor	<ul style="list-style-type: none"> 0—ICON does not handle any virtual queue-related events for this DN. 1—ICON processes virtual queue-related events for this DN. 	<p>Applicable to DNs of the Virtual Queue type, this option enables the processing of virtual queue-related events for this particular DN. This option is meaningful only when the support-dn-type-5 configuration option is set to 1 (default) in the corresponding Switch object.</p>

End of procedure

Next Steps

- If you are interested in HA for either voice interaction details or voice agent activity (or both), see [Configuring ICON Applications for Voice Details HA, page 164](#).
- If you are interested in reporting on Outbound Contact, see [Capturing Outbound Contact Details, page 141](#).
- If you are interested in reporting on Multimedia interactions, see [Capturing Multimedia Details, page 148](#).
- To reduce the IDB size and optimize the Genesys Info Mart ETL performance, see [Controlling IDB Storage, page 156](#).

Capturing Outbound Contact Details

[Table 15](#) summarizes the task flow to enable ICON to store Outbound Contact details in IDB.

Table 15: Task Flow: Capturing Outbound Contact Details

Objective	Related Procedures and Actions
Capture information to support detailed reporting of outbound voice interactions.	<p>If you have the Genesys Outbound Contact in your contact center, and if you would like to capture outbound-specific data in your reports, set up the configuration objects required for ICON to store Outbound Contact details in IDB. Follow these procedures:</p> <ol style="list-style-type: none"> 1. Configuring ICON Application to Capture Outbound Contact Details. 2. Configuring the Storage of Outbound Contact Record Field Data, page 143. 3. Configuring the Mapping of Outbound Contact Record Fields, page 146. <p>Optionally, set up redundant ICON applications to store Outbound Contact details in an HA pair of IDBs, follow this procedure:</p> <ul style="list-style-type: none"> • Configuring ICON Applications for Outbound Contact Details HA, page 166.

Procedure: Configuring ICON Application to Capture Outbound Contact Details

Purpose: To enable ICON to gather Outbound Contact data.

Start of procedure

1. Review the options from the `callconcentrator` section, described in [Table 16](#), for configuring ICON Outbound Contact details.
2. Open the `callconcentrator` section on the `Options` tab of the `ICON Application` object that handles Outbound Contact details.
3. Configure the ICON options that are required for Outbound Contact details.

For more information, see the chapter about configuration options in the *Interaction Concentrator Deployment Guide*.

Table 16: ICON OC Details—Application Options—callconcentrator Section

Area of Functionality	Option Name	Recommended Value(s)	Description
ICON role	<code>role</code>	The value <code>gos</code> , or a comma-separated list that contains <code>gos</code> .	Specifies what type of data this ICON instance processes and stores in an IDB. Note: Ensure that the value of the <code>role</code> option on the <code>ICON Application</code> object is consistent with the value of the <code>role</code> option on the <code>DAP</code> that handles the connection between the ICON instance and IDB. If configuring for HA data extraction, the value should be <code>gos</code> only.
High Availability	<code>use-dss-monitor</code>	Set the option value to <code>ON</code> if you deploy HA for ICON Outbound Contact details. For a non-HA deployment, set the option value to <code>OFF</code> .	Specifies whether ICON synchronizes user data and call termination timestamps, how it is stored in IDB and when data is updated. If this option set to <code>off</code> , ICON does not write data to the <code>G_DSS_GOS_PROVIDER</code> table.
High Availability	<code>dss-no-data-tout</code>	Set the option value to <code>60</code> (seconds) if you deploy HA for ICON Outbound Contact details.	Specifies the time interval after which, if no new data has been written to the persistent queue, ICON creates the “no data” record for the <code>gos</code> provider and updates the <code>NODATA_IUTC</code> field in the <code>G_DSS_GOS_PROVIDER</code> table.

Table 16: ICON OC Details—Application Options—callconcentrator Section (Continued)

Area of Functionality	Option Name	Recommended Value(s)	Description
Outbound metrics	gos-write-metrics	1—ICON stores precalculated metrics that Outbound Contact provides.	Specifies whether ICON writes any precalculated Outbound Contact metrics to IDB.
Outbound metrics	gos-write-metrics-only	0—ICON stores both Outbound Contact data and precalculated Outbound Contact metrics, regardless of the <code>gos-write-metrics</code> option setting.	Specifies whether ICON excludes from database storage all outbound data except precalculated metrics.
Outbound metrics	gos-write-duplicate-metrics	1—ICON writes all metrics related to active objects, exactly as Outbound Contact provides them, without filtering out possible duplicate metrics. Note: There are other valid values for this option; however, 1 is the only value valid for Genesys Info Mart.	Specifies whether ICON writes to IDB all metrics that are related to active outbound objects, exactly as Outbound Contact provides them, or whether it filters out duplicate metrics. ICON identifies active outbound objects by CampaignGUID, ChainGUID, and CallAttemptGUID.

End of procedure

Next Steps

- [Configuring the Storage of Outbound Contact Record Field Data, page 143.](#)

Procedure: Configuring the Storage of Outbound Contact Record Field Data

Purpose: To enable the `Field` object settings required for ICON in order to store mandatory field data in IDB.

Note: Genesys Info Mart automatically uses the data from mandatory `Field` objects in Outbound Contact.

Prerequisites

- The Annex tab must be displayed for configuration objects in Configuration Manager.
- [Configuring ICON Application to Capture Outbound Contact Details, page 141.](#)

Note: In a multi-tenant environment, make sure that the tenant (including the Environment tenant) under which Field objects are configured is later added to the Tenants tab of the Genesys Info Mart Application object.

Start of procedure

1. Review the configuration options in Table 17 on [page 145](#) that you should configure in the default section on the Annex tab of the Record Field object.
2. For each of the field names listed in Table 6 on [page 116](#) and annotated with footnote a, add the send_attribute option to the default section on the Annex tab of the Field object. For information about recommended values and restrictions, see [Table 17](#).

Do not add the send_attribute option for those field names that are annotated with footnote c in [Table 6](#), because they are automatically processed by Outbound Contact.

3. For each of the field names listed in Table 6 on [page 116](#), add the icon_attribute option to the default section on the Annex tab of the Field object. Set the option value to 1.
4. For each non-mandatory (custom) field that you want Genesys Info Mart to store in its database, add the icon_attribute and send_attribute options to the default section of the Annex tab on the Field object.
 - For non-sensitive data, set the icon_attribute option value to 1, in order to store the data in the GO_CUSTOM_FIELDS and GO_FIELDHIST IDB tables.
 - For sensitive data, set the icon_attribute option value to 2, to store the data in the GO_SECURE_FIELDS and GO_SEC_FIELDHIST IDB tables.
 - For the send_attribute option, specify a value that Outbound Contact will use as the key in the key-value pair (KVP) that is sent in user data. Typically, the value will be the same as the name of the Field configuration object. For information about recommended values and restrictions, see [Table 17](#).

Table 17: ICON OC Details—Field Options—default Section

Area of Functionality	Option Name	Recommended Value(s)	Description
Outbound	send_attribute	Specify a value that Outbound Contact will use as the key in the KVP that is sent in user data. You can use any non-empty string that consists of letters, numbers, and underscores. Do not use the GSW_ prefix. Genesys recommends that you establish a naming convention that uses a consistent user-defined prefix (for example, CUSTOM_) for all send_attribute values.	Specifies what key name is used for this record field when it is attached as user data. For more information about the send_attribute option, see the section of the <i>Outbound Contact 7.6 Deployment Guide</i> that describes the field-level options. See also the information in the <i>Outbound Contact 7.6 Reference Manual</i> about attaching record information to desktop and Outbound Contact user events.
Outbound	icon_attribute	For each of the record field names listed in Table 6 on page 116 : <ul style="list-style-type: none"> • For non-sensitive data, set this option to 1 to store the data in the IDB GO_CUSTOM_FIELDS and GO_FIELDHIST tables. • For sensitive data, set this option value to 2 to store the data in the IDB GO_SECURE_FIELDS and GO_SEC_FIELDHIST tables. 	Instructs ICON as to whether or not to report on this field and which tables ICON should use. See Configuring the Mapping of Outbound Contact Record Fields, page 146 for more information.

Table 17: ICON OC Details—Field Options—default Section (Continued)

Area of Functionality	Option Name	Recommended Value(s)	Description
Outbound	right_person	(Optional) Any value that can be stored in the field for which this option is configured. Examples: <ul style="list-style-type: none"> • TRUE • YES • 1 	Specifies the value of the record field when the right person is contacted. If the value of the Right Person Contacted field matches this value (case-insensitive), Genesys Info Mart sets the RPC_FLAG in its CONTACT_ATTEMPT_FACT table to 1.
Outbound	conversion	(Optional) Any value that can be stored in the field for which this option is configured.	Marks the field that indicates the answered call was a successful transaction. If the field is updated with a value that equals the value configured for this option, Genesys Info Mart recognizes it as a conversion indicator.

End of procedure

Next Steps

- [Configuring the Mapping of Outbound Contact Record Fields, page 146.](#)

Procedure: **Configuring the Mapping of Outbound Contact Record Fields**

Purpose: To enable the Field object settings required for mapping to the Genesys Info Mart database.

Note: Although configuring the mapping of Outbound Contact Record Fields is not a ICON configuration activity, it is recommended to do it now because you will need to access the Field objects.

Genesys Info Mart can store up to 40 non-mandatory fields in the CONTACT_ATTEMPT_FACT table in the following formats:

- 20 integers: NUMBER(10)
- 10 floating point numbers: NUMBER(14.4)
- 10 strings: VARCHAR(255)

Genesys Info Mart also stores up to 10 non-mandatory fields (strings) in `RECORD_FIELD_GROUP_1` and up to 10 non-mandatory fields (strings) in `RECORD_FIELD_GROUP_2`.

To determine what fields you need to map, see “Worksheet for Mapping Outbound Contact Record Fields” on [page 413](#). For each `Field` object specified, configure the Annex tab of the corresponding `Field` object to indicate the Info Mart table name and column name to which it will be mapped.

Prerequisites

- The Annex tab must be displayed for configuration objects in Configuration Manager.
- [Configuring the Storage of Outbound Contact Record Field Data, page 143](#).

Start of procedure

1. On the Annex tab of the `Field` object, add a section named `gim-etl-mapping`.
2. In the `gim-etl-mapping` section, add an option named `table-name`, and set its value to the name of the Info Mart table in which you want the ETL to store this field (`CONTACT_ATTEMPT_FACT`, `RECORD_FIELD_GROUP_1`, or `RECORD_FIELD_GROUP_2`). The option value is not case sensitive.
3. In the `gim-etl-mapping` section, add an option named `column-name`, and set its value to the name of the column in the Info Mart table in which you want the ETL to store this field. The option value is not case sensitive.

Notes:

- If you are using Genesys Info Mart 7.6.009, or an earlier release, do not map more than one field to the same Info Mart table and column. If you are using Genesys Info Mart 7.6.010 or a later release, you may map more than one field to the same Info Mart table and column.
 - Configure options only for the non-mandatory `Field` objects that you want to store in the Info Mart database.
 - Do not configure options for extra Info Mart table columns that will not store `Field` object data.
-
4. In addition, Genesys Info Mart supports the designation of non-mandatory fields to indicate right party contacted and conversion:

- In order for a field to indicate right party contacted, add the `right_person` option (see [page 146](#)) to the `default` section on the Annex tab of the `Field` object, and set its value to the field value that you want to indicate that the right party has been contacted (for example, `TRUE`).
- In order for a field to indicate conversion, add the `conversion` option (see [page 146](#)) to the `default` section on the Annex tab of the `Field` object, and set its value to the field value that you want to indicate that a conversion has taken place (for example, `TRUE`).

End of procedure

Next Steps

- If you are interested in HA for Outbound Contact details, see [Configuring ICON Applications for Outbound Contact Details HA, page 166](#).
- If you are interested in reporting on Multimedia interactions, see [Capturing Multimedia Details, page 148](#).
- To reduce the IDB size and optimize the Genesys Info Mart ETL performance, see [Controlling IDB Storage, page 156](#).

Capturing Multimedia Details

[Table 18](#) summarizes the task flow to enable ICON to store Multimedia details in IDB.

Table 18: Task Flow: Capturing Multimedia Details

Objective	Related Procedures and Actions
Capture information to support detailed reporting of multimedia interactions and related agent activity.	<p>If your contact center processes Multimedia interactions, set up the configuration objects required for ICON to store Multimedia details and related agent activity details in IDB. Follow these procedures:</p> <ol style="list-style-type: none"> 1. Configuring ICON Application to Capture Multimedia Details, page 149. 2. Configuring Switch to Capture ICON Multimedia Details, page 153. 3. Configuring DN to Capture ICON Multimedia Details, page 155.

Procedure: **Configuring ICON Application to Capture Multimedia Details**

Purpose: To enable the ICON application settings required in order for ICON to gather Multimedia detailed data to report on Multimedia interactions.

Prerequisites

- [Configuring ICON Application to Capture Configuration Details, page 128.](#)

Start of procedure

1. Review the options from the `callconcentrator` section, described in [Table 19](#), for configuring ICON Multimedia details.
2. Open the `callconcentrator` section of the `ICON Application` object.
3. Configure the ICON-related options that are required for Multimedia details.

For more information, see the chapter about configuration options in the *Interaction Concentrator Deployment Guide*.

Table 19: ICON Multimedia Details—Application Options—callconcentrator Section

Area of Functionality	Option Name	Recommended Value(s)	Description
ICON role	role	<p>A comma-separated list that contains all of the following:</p> <ul style="list-style-type: none"> • gcc—Stores call-related and party-related information. (Required for Interaction and Virtual Queue activity.) • gud—Stores Interaction Server data about the attached data that is associated with calls. (Required for attached data.) • gls—Stores Interaction Server data about agent states and agent login sessions. (Required for resource login, state, and reasons data.) <p>Examples:</p> <ul style="list-style-type: none"> • role = gcc, gud, gls • role = cfg, gcc, gud, gls 	<p>Specifies what type of data this ICON instance processes and stores in an IDB.</p> <p>Note: Ensure that the value of the role option on the ICON Application is consistent with the value of the role option on the DAP that handles the connection between the ICON instance and IDB.</p>
High Availability	use-dss-monitor	This option value must be set to OFF, regardless of whether this IDB is part of an HA pair.	Specifies whether ICON synchronizes user data and call termination timestamps, how it is stored in IDB and when data is updated. If this option set to off, ICON does not write data to the G_DSS_GOS_PROVIDER tables.
Interaction Processing	calls-in-the-past	The true value—ICON records data for Multimedia interactions that begin before ICON is restarted, while ICON is down, or while ICON has no connection to Interaction Server.	Enables reporting for Multimedia interactions that have started in the past.

**Table 19: ICON Multimedia Details—Application Options—callconcentrator
Section (Continued)**

Area of Functionality	Option Name	Recommended Value(s)	Description
Interaction Processing	om-force-adata	The true value—ICON provides a snapshot of the attributes, usually collected only at the start of an interaction, even for an interaction that started in the past.	Specifies that ICON will store a UserData snapshot in the GM_F_USERDATA table for interactions that started in the past (meaningful only if calls-in-the-past is set to true). Note: The om-force-adata option requires Interaction Concentrator release 7.6.100.23 or higher.
Open Media	mcr-om-processing	<ul style="list-style-type: none"> • 0—ICON does not process interactions or agent data for Open Media, and does not store data in IDB about interactions other than chat, e-mail, or voice. • 1 (default)—Use if you want ICON to store Open Media–related data in the IDB from which Genesys Info Mart extracts Multimedia details. 	Specifies whether ICON stores information about Open Media interactions in IDB.
Virtual queue	extended-route-result	<ul style="list-style-type: none"> • 0 (default)—ICON stores route results. • 1—ICON stores extended routing results. (Required if detailed dispositions on routing from virtual queues is required for reporting.) 	Specifies whether ICON stores extended routing results—the status of interactions distributed by URS 7.6—in the G_VIRTUAL_QUEUE and G_ROUTE_RESULT tables in IDB. To implement this feature, you must use the 7.6 releases of URS, and Interaction Concentrator, and Genesys Info Mart.

**Table 19: ICON Multimedia Details—Application Options—callconcentrator
Section (Continued)**

Area of Functionality	Option Name	Recommended Value(s)	Description
Virtual queue	vq-write-mode	1—ICON initially creates an IDB record when the association starts, as indicated by the <code>EventQueued</code> <code>TEvent</code> ; after the association is terminated, as indicated by either <code>EventDiverted</code> or <code>EventAbandoned</code> , ICON updates the existing record. Note: There are other valid values for this option; however, 1 is the only value valid for Genesys Info Mart release 7.6 to handle Multimedia details.	Specifies how ICON writes information to IDB about a particular association between an interaction and a virtual queue. If you are using virtual queues in Multimedia interaction processing, it is very important to configure a DN object for this virtual queue under the <code>Switch</code> object for your Multimedia switch in Configuration Manager. Otherwise the ICON application that reports on Multimedia details is unable to monitor activity on this virtual queue.
Attached data	adata_userdata_history	The none value Note: There are other valid values for this option; however, none is the only value valid for Genesys Info Mart.	Specifies what changes to a key's value must be recorded to IDB, for a key that originates from <code>UserData</code> of Multimedia reporting event, but that is not included in the XML specification file specified by the <code>adata_spec_name</code> option value.
Attached data	adata_spec_name	Any valid XML file name. Default Value: <code>ccon_adata_spec.xml</code>	Specifies the name of the XML file that contains the attached data specification. For a copy of the specification, refer to Appendix C on page 431. For information about how to customize the attached data specification XML file, see Customizing Your ICON Attached Data Specification File, page 161 , in conjunction with Table 5 on page 97.

End of procedure

Next Steps

- [Configuring Switch to Capture ICON Multimedia Details, page 153.](#)

Procedure:
Configuring Switch to Capture ICON Multimedia Details

Purpose: To enable Switch object settings required for ICON to capture Multimedia details.

Prerequisites

- The Annex tab must be displayed for configuration objects in Configuration Manager.
- [Configuring ICON Application to Capture Multimedia Details, page 149.](#)

Start of procedure

1. Review the Switch object's option described in [Table 20](#).
2. Open the Annex tab of the Switch object that handles Multimedia details.
3. Create a new section named gts if it does not exist already on the Annex tab.
4. Open the gts section.
5. Configure the ICON-related option that is required for Multimedia interactions reporting.

For more information, see the chapter about configuration options in the *Interaction Concentrator Deployment Guide*.

Table 20: ICON Multimedia Details—Switch Options—gts Section

Area of Functionality	Option Name	Recommended Value(s)	Description
Virtual queue	support-dn-type-5	<ul style="list-style-type: none"> • 0—ICON does not handle any virtual queue–related events for DNs that belong to this switch. • 1 (default)—ICON processes virtual queue–related events for DNs that belong to this switch. 	Enables the processing of events that relate to DNs of the <code>Virtual Queue</code> type that belong to this switch.
Agent State and Login Session	gls-max-duration	<p>Any integer that is less than the value of the Genesys Info Mart configuration option: <code>max-session-duration-in-hours</code>. See page 292 for a description of the <code>max-session-duration-in-hours</code> option.</p> <p>Default Value: 0</p>	Specifies the maximum amount of time, in hours, that an agent login session can last on a DN that belongs to this switch. Setting the option value to 0 (zero) prevents ICON from checking session durations.
Agent State and Login Session	gls-max-inactivity	<p>Any integer that is less than the value of the Genesys Info Mart configuration option: <code>max-session-duration-in-hours</code>. See page 292 for a description of the <code>max-session-duration-in-hours</code> option.</p> <p>Default Value: 0</p>	Specifies the maximum allowed inactivity period, in hours, during a single login session. ICON closes any agent login session for which it detects no agent-related activity during the specified interval. Setting the option value to 0 (zero) prevents ICON from checking inactivity durations.

End of procedure**Next Steps**

- [Configuring DN to Capture ICON Multimedia Details, page 155.](#)

Procedure: Configuring DN to Capture ICON Multimedia Details

Purpose: To enable DN object setting required for ICON to capture Multimedia details.

Prerequisites

- The Annex tab must be displayed for configuration objects in Configuration Manager.
- [Configuring Switch to Capture ICON Multimedia Details, page 153.](#)

Start of procedure

1. If you are deploying Genesys Info Mart to report on both ICON Voice details and ICON Multimedia details, make sure that any DN objects for virtual queues dedicated to Multimedia interactions are configured under the Switch object configured for your Multimedia switch. Otherwise, the ICON application dedicated to handling Multimedia details cannot track activity on virtual queues.
2. Review the DN object's options described in [Table 21](#).
3. Open the Annex tab of a DN object.
4. Create a new section named gts if it does not exist already on the Annex tab.
5. Open the gts section.
6. Configure the ICON-related options required for Multimedia details.
For more information, see the chapter about configuration options in the *Interaction Concentrator Deployment Guide*.

Table 21: ICON Multimedia Details—DN Options—gts Section

Area of Functionality	Option Name	Recommended Value(s)	Description
Virtual Queue	monitor	<ul style="list-style-type: none"> • 0—ICON does not handle any virtual queue-related events for this DN. • 1—ICON processes virtual queue-related events for this DN. 	Applicable to DN's of the Virtual Queue type, this option enables the processing of virtual queue-related events for this particular DN. This option is meaningful only when the support-dn-type-5 configuration option is set to 1 (default) in the corresponding Switch object.

End of procedure**Next Steps**

- [Controlling IDB Storage, page 156.](#)

Controlling IDB Storage

[Table 22](#) summarizes the task flow to minimize the required IDB storage space.

Table 22: Task Flow: Controlling IDB Storage

Objective	Related Procedures and Actions
Minimize the required database storage space while supporting detailed reporting of interactions of any type and related agent activity.	Optionally, set up the ICON application to exclude extra details from being stored in IDB by: <ul style="list-style-type: none"> • Controlling IDB Storage, page 156.

Procedure:
Controlling IDB Storage

Purpose: To exclude the data not required for Genesys Info Mart from being stored in IDB.

To customize ICON as a data source for Genesys Info Mart, you can enable certain filtering through ICON configuration options. If you do not store in IDB the details that Genesys Info Mart does not extract, you can save the IDB storage space and improve ETL data extraction performance. [Table 23](#) describes the options in the `filter-data` section of the `ICON Application` object that stores either Voice or Multimedia details.

Prerequisites

- [Configuring ICON Application to Capture Configuration Details.](#)
- Either [Capturing Voice Details, page 129](#) or [Capturing Multimedia Details, page 148.](#)

Start of procedure

1. Review the options from the `filter-data` section, described in [Table 23](#), for configuring ICON storage.
2. Open the `ICON Application` object.

3. Create a new section named `filter-data` if it does not already exist on the `options` tab
4. Open the `filter-data` section.
5. Configure the ICON options that control data storage as recommended in [Table 23](#).

For more information, see the chapter about configuration options in the *Interaction Concentrator Deployment Guide*.

6. Repeat this procedure for every IDB in your environment that stores either Voice details or Multimedia details.

Table 23: ICON Storage—Application Options—filter-data Section

Option Name	Recommended Value(s)	Description
<code>acd-party-history</code>	<ul style="list-style-type: none"> • 0 (default)—ICON collects party history information about distribution devices and stores this information in the <code>G_PARTY_HISTORY</code> IDB table. • 1—ICON does not store party history information about distribution devices in the <code>G_PARTY_HISTORY</code> table. <p>To decrease the size of IDB, set the option value to 1.</p>	<p>Specifies whether ICON should exclude, from IDB storage, party history information about distribution devices—such as ACD queues, Routing Points, and Virtual Routing Points.</p> <p>Note: The <code>acd-party-history</code> option applies to SIP and voice interactions only.</p>
<code>acd-party-metrics</code>	<ul style="list-style-type: none"> • 0 (default)—ICON collects precalculated party metrics for distribution devices and stores this information in the <code>G_PARTY_STAT</code> IDB table. • 1—ICON does not store data for distribution devices in the <code>G_PARTY_STAT</code> table. <p>To decrease the size of IDB, set the option value to 1.</p>	<p>Specifies whether ICON should exclude, from IDB storage, party metrics for distribution devices—such as ACD queues, Routing Points, and virtual routing points.</p> <p>Note: The <code>acd-party-metrics</code> option applies to SIP and voice interactions only.</p>
<code>call-history</code>	<p>1—ICON does not store call history data in the <code>G_CALL_HISTORY</code> IDB table. This option value decreases the size of IDB.</p>	<p>Specifies whether ICON should exclude call-history information from IDB storage.</p>
<code>call-metrics</code>	<p>1—ICON does not store call metrics in the <code>G_CALL_STAT</code> IDB table. This option value decreases the size of IDB.</p>	<p>Specifies whether ICON should exclude call metrics from IDB storage.</p>

Table 23: ICON Storage—Application Options—filter-data Section (Continued)

Option Name	Recommended Value(s)	Description
external-party	0—ICON collects information about external parties (for example, interaction participants outside a given switch domain) and stores this information in the following IDB tables: <ul style="list-style-type: none"> • G_PARTY • G_PARTY_HISTORY • G_PARTY_STAT 	Specifies whether ICON should exclude external-party data from IDB storage.
gls-all	0 (default)—ICON collects and stores information about agent activity (such as login sessions and agent state) for all types of data except those that are configured to be excluded by setting one or more of the following options to 1: <ul style="list-style-type: none"> • gls-ivr (see page 158) • gls-no-person (see page 159) • gls-queue (see page 159) • gls-wm (see page 159) 	Specifies whether ICON should exclude all information about agent activity from IDB storage. ICON stores this information in the following IDB tables: <ul style="list-style-type: none"> • G_LOGIN_SESSION • GX_SESSION_ENDPOINT • G_AGENT_STATE_HISTORY • G_AGENT_STATE_RC • G_DND_HISTORY • GS_AGENT_STAT • GS_AGENT_STAT_WM
gls-ivr	1—ICON verifies whether the DN at which an agent logs in is an Interactive Voice Response (IVR) device. If it is, ICON does not store information about this agent's activity in the following IDB tables: <ul style="list-style-type: none"> • G_LOGIN_SESSION • GX_SESSION_ENDPOINT • G_AGENT_STATE_HISTORY • G_AGENT_STATE_RC • G_DND_HISTORY • GS_AGENT_STAT • GS_AGENT_STAT_WM Furthermore, for parties associated with an IVR device, ICON does not record the agent's ID in the G_PARTY IDB table.	Specifies whether ICON should exclude, from IDB storage, data about agent activity at IVR endpoints. <p>Note: See page 140 for more information about setting the <code>ivr</code> option to configure a DN as an IVR port. For a description of how ICON identifies an IVR, see the <i>Interaction Concentrator User's Guide</i>.</p>

Table 23: ICON Storage—Application Options—filter-data Section (Continued)

Option Name	Recommended Value(s)	Description
gls-metrics	1—ICON does not store information about agent states in the following IDB tables: <ul style="list-style-type: none"> GS_AGENT_STAT GS_AGENT_STAT_WM 	Specifies whether ICON should exclude agent states from IDB storage.
gls-no-person	0 (default)—ICON collects data about all agent activity and stores this information in the following IDB tables: <ul style="list-style-type: none"> G_LOGIN_SESSION GX_SESSION_ENDPOINT G_AGENT_STATE_HISTORY G_AGENT_STATE_RC G_DND_HISTORY GS_AGENT_STAT GS_AGENT_STAT_WM 	Specifies whether ICON should exclude, from IDB storage, data about agent activity for agents whose login ID is not associated with any Person configuration object.
gls-queue	0 (default)—ICON collects information about agents' queue(s) and stores this information in the following IDB tables: <ul style="list-style-type: none"> G_AGENT_STATE_HISTORY G_AGENT_STATE_RC GS_AGENT_STAT GS_AGENT_STAT_WM GX_SESSION_ENDPOINT 	Specifies whether ICON should filter out information, from IDB storage, about the queues to which agents are logged in.
gls-wm	0 (default)—ICON collects and stores data about agents' work modes and changes in agents' work modes in the following IDB tables: <ul style="list-style-type: none"> G_AGENT_STATE_HISTORY G_AGENT_STATE_RC GS_AGENT_STAT_WM 	Specifies whether ICON should exclude, from IDB storage, data about changes in agent work mode that do not coincide with changes in agent state.
ir-history	1—ICON does not store information about the interaction record history in the G_IR_HISTORY IDB table.	Specifies whether ICON should exclude data about the interaction record history from IDB storage.

Table 23: ICON Storage—Application Options—filter-data Section (Continued)

Option Name	Recommended Value(s)	Description
observer-party	<p>1—ICON does not store data about a party with the role of <code>observer</code> in a call. ICON collects data about every other party involved with the call, and stores this information in the following IDB tables:</p> <ul style="list-style-type: none"> • <code>G_PARTY</code> • <code>G_PARTY_HISTORY</code> • <code>GS_PARTY_STAT</code> 	Specifies whether ICON should exclude, from IDB storage, data that is related to a service observer on a call.
udata-history-terminated	<p>1—ICON does not insert new records in the following IDB tables, at interaction termination time:</p> <ul style="list-style-type: none"> • <code>G_USERDATA_HISTORY</code> • <code>G_SECURE_USERDATA_HISTORY</code> <p>ICON does, however, continue to write information about the creation, addition, and removal of KVPs to these tables.</p>	Specifies whether ICON should exclude, from IDB storage, information about changes in <code>UserData</code> values for certain keys.

End of procedure**Next Steps**

- [Customizing Your ICON Attached Data Specification File, page 160.](#)

Customizing Your ICON Attached Data Specification File

When applications attach KVPs to interactions, ICON records them in the appropriate Interaction Database table. When you deploy the ICON application, you create an XML-based specification file to indicate which KVPs ICON should store and in which IDB table and column they should be stored. Genesys Info Mart uses this same specification file to specify the mapping between:

- ICON's column names and data types.
- The column names and expected data types that Genesys Info Mart extracts.

Genesys Info Mart ships an attached data specification file (`ccon_adata_spec_GIM_example.xml`) that you modify to specify this mapping.

When you install Genesys Info Mart, an attached data specification file (`ccon_adata_spec_GIM_example.xml`) is copied to the `sql_scripts` folder in the installation directory. It overwrites any file with the same name.

The `ccon_adata_spec_GIM_example.xml` file is also available in the `sql_scripts` folder on the Genesys Info Mart CD. You must edit the file to customize it for your deployment. Use the following general procedure.

[Table 24](#) summarizes the task flow to customize the attached data specification file.

Table 24: Task Flow: Customizing Your ICON Attached Data Specification File

Objective	Related Procedures and Actions
Capture attached data to support detailed reporting of interactions of any type.	Optionally, indicate what attached data ICON should store in IDB by: <ul style="list-style-type: none"> • Customizing Your ICON Attached Data Specification File, page 161.

Procedure: Customizing Your ICON Attached Data Specification File

Purpose: To customize your ICON Attached Data Specification file by indicating which KVPs ICON should store and in which IDB table and column they should be stored.

Prerequisites

- Install Genesys Info Mart and locate the `ccon_adata_spec_GIM_example.xml` file in the `sql_scripts` folder in the installation directory.

OR

- Locate the `ccon_adata_spec_GIM_example.xml` file in the `sql_scripts` folder on the Genesys Info Mart CD.

Start of procedure

1. Provide KVP names for the attached data elements you want the ETL to extract.
2. Comment out the attached data elements you do not want the ETL to extract.
3. Copy this file to your ICON installation directory on the ICON host that stores attached data (that is, where the ICON role contains `gud`).
4. Update the ICON application's `adata-spec-name` option to point to this file.

5. Re-start the ICON application in order for the configuration changes to take effect.
6. Repeat these steps for each ICON application from which Genesys Info Mart will extract Voice or Multimedia details (that is, where the `ICON role` contains `gud`).

For a detailed description of the attached data KVPs that Genesys Info Mart recognizes, see Table 5, “Key-Value Pair Mapping,” on page 97 or “Worksheet for Mapping Attached Data” on [page 408](#).

End of procedure

Next Steps

- [Configuring ICON for High Availability Data Extraction, page 162](#).

Configuring ICON for High Availability Data Extraction

To protect your reporting system against a loss of source data, Genesys Info Mart can extract data from redundant data sources that you can set up for ICON Configuration details, ICON Voice details and ICON Outbound Contact details.

Table 25 on [page 162](#) summarizes the task flow to configure ICON application for HA.

Table 25: Task Flow: Configuring for High Availability Data Extraction

Objective	Related Procedures and Actions
<p>Enable redundancy of configuration details that support reporting of interactions of any type and related agent activity.</p>	<p>Optionally, set up redundant ICON applications to store Configuration details in an HA pair of IDBs:</p> <ol style="list-style-type: none"> 1. Create a secondary ICON application that stores Configuration details. In the secondary <code>ICON Application</code> object, set the <code>role</code> option to contain the <code>cfg</code> value: <ul style="list-style-type: none"> • Refer to the <i>Interaction Concentrator Deployment Guide</i> for procedures to create the <code>ICON Application</code> object. • Refer to Configuring ICON Application to Capture Configuration Details, page 128 as necessary. 2. Modify the configuration settings of the two ICON applications to process the data in the same manner. See Configuring ICON Applications for Configuration Details HA, page 163.

Table 25: Task Flow: Configuring for High Availability Data Extraction (Continued)

Objective	Related Procedures and Actions
<p>Enable redundancy of voice interaction details and related agent activity.</p>	<p>If your contact center processes voice interactions (calls), you can, at your option, set up redundant ICON applications to store Voice details, including the related agent activity details, in an HA pair of IDBs:</p> <ol style="list-style-type: none"> 1. Create a secondary ICON application that stores Voice details. In the secondary ICON Application object, set the role option to contains gcc, gud, and gls values: <ul style="list-style-type: none"> • Refer to the <i>Interaction Concentrator Deployment Guide</i> for procedures to create ICON Application object. • Refer to procedures in “Capturing Voice Details” on page 129 to modify the ICON application so that it stores Voice details and modify any affected Switch and DN objects. 2. Modify the configuration settings of the two ICON applications to process the data in the same manner. See Configuring ICON Applications for Voice Details HA, page 164.
<p>Enable redundancy of outbound contact server details.</p>	<p>If your contact center processes outbound contact server details, you can, at your option, set up redundant ICON applications to store Outbound Contact details in an HA pair of IDBs:</p> <ol style="list-style-type: none"> 1. Create a secondary ICON application that stores Outbound Contact details. In the secondary ICON Application object, set the role option to gos: <ul style="list-style-type: none"> • Refer to the <i>Interaction Concentrator Deployment Guide</i> for procedures to create ICON Application object. • Refer to procedures in “Capturing Outbound Contact Details” on page 141 to modify the ICON application so that it stores Outbound Contact details. 2. Modify the configuration settings of the two ICON applications to process the data in the same manner. See Configuring ICON Applications for Outbound Contact Details HA, page 166.

Procedure:
Configuring ICON Applications for Configuration Details HA

Purpose: To configure redundant ICON applications to store Configuration details in an HA pair of IDBs, either in a new Genesys Info Mart deployment or in a migrating environment.

Prerequisites

- Release 7.5+ of Configuration Server.
- Both the primary and secondary ICON applications must be configured to store contact center Configuration details. (See [Configuring ICON Application to Capture Configuration Details](#), page 128.)

Start of procedure

1. In both ICON Application objects, make sure the `role` option contains `cfg`. This enables both ICON applications to store configuration data.
For more information about settings for the ICON `role` configuration options, see Table 9, “ICON Configuration Details—Application Options—callconcentrator Section,” on [page 128](#).

End of procedure**Next Steps**

- If you have not configured ICON to capture any data other than Configuration details, return to the section(s) in this chapter appropriate to your deployment:
 - [Capturing Voice Details](#), page 129.
 - [Capturing Outbound Contact Details](#), page 141.
 - [Capturing Multimedia Details](#), page 148.
- (Optional) [Configuring ICON Applications for Voice Details HA](#), page 164.
- (Optional) [Configuring ICON Applications for Outbound Contact Details HA](#), page 166.
- Otherwise, proceed to [Preparing IDBs](#), page 167.

Procedure:**Configuring ICON Applications for Voice Details HA**

Purpose: To configure redundant ICON applications to store Voice details, including voice interaction and agent activity details, in an HA pair of IDBs. The procedure applies to both a new Genesys Info Mart deployment and either an existing 7.6 or a migrating 7.5 environment in which ICON Voice details HA has not been enabled.

Prerequisites

- Release 7.6 of T-Server and Interaction Concentrator.

- Complete procedures in “Capturing Voice Details” on [page 129](#) for both the primary and secondary ICON applications configured to store Voice details as well as for any affected Switch and DN objects.

Start of procedure

1. Set the same option values in both ICON Application objects for:
 - Any configuration options that affect the data populated by those roles. For example, use the same setting for ICON configuration options that affect virtual queue monitoring, storage of attached data, UserEvent-based KVP data, and so on. See Table 11 on [page 130](#) and Table 12 on [page 134](#) for the list of options and recommended values.
 - Any configuration options that control IDB storage of the data populated by those roles. For example, use the same setting for ICON configuration options that affect the storage of agent login session information. See Table 23 on [page 157](#) for the list of options and recommended values.
 - The `adata-spec-name` configuration option to point to the same attached data specification file. See [Customizing Your ICON Attached Data Specification File, page 161](#) for the instructions.

For more information about setting ICON configuration options, see Table 11, “ICON Voice Details—Application Options—callconcentrator Section,” on [page 130](#) and Table 12, “ICON Voice Details—Application Options—custom-states Section,” on [page 134](#).

2. On the **Connections** tab, verify that the two applications are configured to connect to the same list of T-Servers and other servers from which ICON receives data. (The exact list will depend on your environment).

End of procedure

Next Steps

- If you need to configure ICON to capture Outbound Contact details or Multimedia details, return to the section(s) in this chapter appropriate to your deployment:
 - [Capturing Outbound Contact Details, page 141](#) or [Configuring ICON Applications for Outbound Contact Details HA, page 166](#).
 - [Capturing Multimedia Details, page 148](#).
- Otherwise, proceed to [Preparing IDBs, page 167](#) to create and modify a primary IDB and secondary IDB.

Procedure: Configuring ICON Applications for Outbound Contact Details HA

Purpose: To configure redundant ICON applications to store Outbound Contact details in an HA pair of IDBs.

Prerequisites

- High availability of Outbound Contact details requires Interaction Concentrator 8.0. See the *Genesys Info Mart 7.6.x Release Notes* for the minimum release of Interaction Concentrator 8.0 that is required to support this functionality.
- Complete procedures in [Capturing Outbound Contact Details, page 141](#) for both the primary and secondary ICON applications configured to store Outbound Contact details.

Note: For HA, you must create new ICON applications in Configuration Manager, you cannot upgrade or install 8.0 over an existing 7.6 ICON application.

Start of procedure

1. For the two newly created ICON Application objects, verify the following:
 - Role = gos (and no other).
 - Any configuration options that affect the gos role are configured properly and are the same for both ICON application objects.
 - The value for the [callconcentrator] use-dss-monitor option is set to ON.
 - The value for the [callconcentrator] dss-no-data-tout option is set to 60 (seconds).

For more information about setting ICON configuration options, see Table 16, “ICON OC Details—Application Options—callconcentrator Section,” on [page 142](#).

2. On the Connections tab, verify that the two applications are configured to connect to the same Outbound Contact Server from which ICON receives data.

End of procedure

Next Steps

- Proceed to [Preparing IDBs, page 167](#) to create and modify a primary IDB and secondary IDB.

Preparing IDBs

For each IDB in the deployment, you must run the ICON-provided SQL scripts to create the IDB after you have configured and installed ICON. Refer to the *Interaction Concentrator Deployment Guide* for the Interaction Concentrator release you are installing, for the list of initialization scripts, their location, and the order in which to execute them.

After an IDB is created, complete the following Genesys Info Mart–specific activities to enable the ETL jobs to use the IDB.

[Table 26](#) summarizes the task flow to prepare your IDBs.

Table 26: Task Flow: Preparing IDBs

Objective	Related Procedures and Actions
Enable extraction of interaction and agent activity details for reporting purposes.	<p>In any contact center, modify each IDB so that ETL jobs extract relevant reporting data. Perform the steps that apply to your environment in:</p> <ul style="list-style-type: none"> • Preparing IDBs, page 167. <p>Note: If two IDBs comprise an HA pair, perform the same steps for both IDBs.</p> <p>In a multi-site contact center that processes voice interactions, also enable the merge of voice interactions that cross sites by:</p> <ul style="list-style-type: none"> • Configuring for IDB Merge, page 170. <p>Note: If two IDBs comprise an HA pair for Voice details, set the same values for the merge-related parameters in both IDBs.</p>

Procedure: Preparing IDBs

Purpose: To prepare the IDB so the ETL jobs are able to use it.

Prerequisites

- Create all IDB instances required for your deployment using ICON-provided SQL scripts. (Refer to the *Interaction Concentrator Deployment Guide* for the list of initialization scripts, their location, and the order in which to execute them.)

Start of procedure

1. For each IDB from which Genesys Info Mart will extract Configuration details, run the Genesys Info Mart–provided SQL script to add to IDB the tables and indexes that Genesys Info Mart requires:
 - a. Ensure that the database access account that you used to create IDB is available and has the required owner account privileges (see Table 3 on [page 80](#)).
 - b. Log in to IDB using the IDB owner ID (that is, the database access account that you used to create the IDB). Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.
 - c. Run the following script:

```
make_icon_cfg_indexes_for_gim.sql
```
2. For each IDB from which Genesys Info Mart will extract Voice details, run the Genesys Info Mart–provided SQL script to add to IDB the tables and indexes that Genesys Info Mart requires:
 - a. Ensure that the database access account that you used to create IDB is available and has the required owner account privileges (see Table 3 on [page 80](#)).
 - b. Log in to IDB using the IDB owner ID (that is, the database access account that you used to create the IDB). Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.
 - c. Run the following script:

```
make_icon_indexes_for_gim.sql
```

Notes:

Execution of this script is required for the following reasons:

- For HA pair configuration—If you do not run this script, Job_ExtractICON configured with the role ICON_CORE will log an exception and the job will fail.
 - For Single IDB configuration—If you do not run this script, the data extraction performance of Genesys Info Mart will be severely degraded.
 - There are indexes on tables G_CUSTOM_DATA_S, G_USERDATA_HISTORY, and G_SECURE_USERDATA_HISTORY that are commented out. If you intend to extract UserEvent-based KVP data from G_CUSTOM_DATA_S, you need to make sure to *uncomment* those statements so that the indexes get created. These indexes improve performance of data extraction for environments in which UserEvent-based KVP data is extracted.
-

3. For each IDB from which Genesys Info Mart will extract Multimedia details, run the Genesys Info Mart–provided SQL scripts to add to IDB the indexes that Genesys Info Mart requires:
 - a. Ensure that the database access account that you used to create IDB is available and has the required owner account privileges (see [Table 3 on page 80](#)).
 - b. Log in to IDB using the IDB owner ID (that is, the database access account that you used to create the IDB). Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.
 - c. Run the following scripts:

```
make_icon_indexes_for_gim.sql
make_iconmm_indexes_for_gim.sql
```

If you do not run these scripts, the data extraction performance of Genesys Info Mart can be severely degraded.
4. For each IDB from which Genesys Info Mart will extract Outbound Contact details, run the Genesys Info Mart–provided SQL script to add to IDB the indexes that Genesys Info Mart requires:
 - a. Ensure that the database access account that you used to create IDB is available and has the required owner account privileges (see [Table 3 on page 80](#)).
 - b. Log in to IDB using the IDB owner ID (that is, the database access account that you used to create the IDB). Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.
 - c. If the IDB is part of an HA pair, run the following script:

```
make_icon_ocs_ha_indexes_for_gim.sql
```

If the IDB is not part of an HA pair, run the following script:

```
make_icon_ocs_indexes_for_gim.sql
```

If you do not run the appropriate script, the data extraction performance of Genesys Info Mart will be severely degraded.
5. Ensure that the database access account that the ETL jobs will use to access IDB data is available and has the required user account privileges (see [Table 4 on page 82](#)).

The user account does not have to be the same as the owner account. For more information about the rules and recommendations pertaining to database access accounts for Genesys Info Mart, see “[Database Object Owners and User IDs](#)” on [page 78](#).
6. In a multi-site deployment, for each IDB from which Genesys Info Mart will extract Voice details, ensure that parameters for the appropriate merge procedure are stored in the applicable IDB tables (see [Configuring for IDB Merge, page 170](#)).

End of procedure

Next Steps

- (Required for multi-site environments) [Configuring for IDB Merge, page 170](#).
- (Optional) [Preparing GVP VAR, page 171](#).
- Continue on to [Preparing Genesys Info Mart Databases, page 173](#).

Configuring for IDB Merge

For optimal performance when `Job_ExtractICON` invokes the Interaction Concentrator `gsysIRMerge` stored procedure, ensure that the merge procedure parameters in the applicable database schemas are appropriate for your environment. If you modify any of the settings, ensure that you store the required information in each IDB in your deployment.

Procedure: Configuring for IDB Merge

Purpose: To set the merge procedure parameters for your database schemas to allow for optimal performance when the Interaction Concentrator `gsysIRMerge` stored procedure is invoked.

This procedure applies only to the IDBs that store ICON Voice details.

If two IDBs comprise an HA pair for Voice details, set the same values for the merge-related parameters in both IDBs.

Start of procedure

1. Unmonitored Switches—When you carry out a merge operation on an IDB, check that all ICON applications that store voice interactions in that IDB are monitoring all switches.
2. If any switches are unmonitored, store those `Switch` object names in the `GSYS_DNPREMOTELLOCATION` table of the applicable IDB schema. Otherwise, merging of some voice interactions must wait until the configured IS-Link Timeout occurs, and this delays the extraction of those voice interactions by `Job_ExtractICON`.

For example, suppose that you have three switches and two ICON instances, each writing to its own IDB:

- ICON1 monitors switch `SITE1_sw1` and writes to IDB1.
- ICON2 monitors switch `SITE2_sw2` and writes to IDB2.
- `SITE3_sw3` is not monitored by either ICON instance.

3. For optimal performance of the merge stored procedure, add the following records to the respective IDBs:
 - a. In IDB1, set `GSYS_DNPREMOTELLOCATION.REMOTELLOCATION='SITE2_sw2', 'SITE3_sw3'`
 - b. In IDB2, set `GSYS_DNPREMOTELLOCATION.REMOTELLOCATION='SITE1_sw1', 'SITE3_sw3'`
4. Other Merge Procedure Parameters—The `G_DB_PARAMETERS` table in IDB stores additional parameters that control the operation of the merge procedure. These settings can have a significant impact on merge procedure performance. For more information, see the chapter about special stored procedures in the *Interaction Concentrator User's Guide*.

Note: Genesys recommends that you not store any value for the IS-Link Timeout parameter (`stuckthreshold`) in the `G_DB_PARAMETERS` table, but rather leave the `gsysIRMerge` stored procedure to use the default value (8 hours, 1 minute).

End of procedure

Next Steps

- (Optional) [Preparing GVP VAR, page 171](#).
- Continue on to [Preparing Genesys Info Mart Databases, page 173](#).

Preparing GVP VAR

Genesys Info Mart has no specific configuration requirements for the GVP VAR application and does not require you to modify the GVP VAR database schema.

[Table 27](#) summarizes the task flow to prepare GVP VAR as a data source for Genesys Info Mart.

Table 27: Task Flow: Preparing GVP VAR

Objective	Related Procedures and Actions
Enable access to GVP data.	If you have the GVP deployed in your contact center, and you would like to capture GVP-specific data in your reports, set the access parameters necessary for ETL jobs to extract relevant reporting data from VAR. See: <ul style="list-style-type: none"> • Preparing GVP VAR, page 172.

Procedure: Preparing GVP VAR

Purpose: To prepare the GVP VAR as a data source for Genesys Info Mart.

Prerequisites

- [Preparing IDBs, page 167](#).
- If you are deploying GVP VAR at the same time as Genesys Info Mart, configure and install the GVP VAR Application in accordance with the instructions in the *Genesys Voice Platform 7.6 Voice Application Reporter Deployment and Reference Manual*.
- If you are deploying Genesys Info Mart into an environment in which GVP VAR has already been deployed, go straight to [Step 1](#).

Start of procedure

1. For each GVP VAR database in the deployment, ensure that the database access account that the ETL jobs will use to access GVP VAR data is available and has the required user account privileges (see Table 4 on [page 82](#)).

The user account does not have to be the same as the owner account. For more information about the rules and recommendations pertaining to database access accounts for Genesys Info Mart, see “Database Object Owners and User IDs” on [page 78](#).

End of procedure

Next Steps

- Continue on to [Preparing Genesys Info Mart Databases, page 173](#).



Chapter

4

Preparing Genesys Info Mart Databases

This chapter describes how to prepare the target Genesys Info Mart databases and views. It describes how to modify and run the SQL scripts needed to create the Staging Area database, the Merge Staging Area database schema, and the Info Mart database and views. This chapter also describes how to tune your relational database management system (RDBMS) server for optimal performance.

This chapter includes the following sections:

- [Overview, page 174](#)
- [Database Tuning, page 175](#)
- [Preparing the Staging Area Database, page 184](#)
- [Preparing the Merge Staging Area Database Schema, page 186](#)
- [Preparing the Info Mart Database, page 190](#)
- [Preparing the Info Mart Database Read-Only Views, page 191](#)

The Genesys-supplied SQL scripts are provided in the `sql-scripts` folder in your Genesys Info Mart 7.6 installation package. They are also available as a separate SQL Scripts installation package. Use your database-specific tool (for example, SQL *Plus) to run the supplied SQL scripts.

Note: The Genesys Info Mart-provided SQL scripts do not qualify database objects by their schema or owner. When you run the SQL scripts, make sure that you log into the database using the ID of the schema or owner. You noted the schema or owner ID and password of each database in the appropriate section of the “Installation Worksheets” on [page 401](#).

Overview

Genesys Info Mart extracts source data and transforms and loads this data in to the target Genesys Info Mart databases. The following sections describe how to prepare each target Genesys Info Mart database, including:

- Staging Area database.
- Merge Staging Area database schema (optional, required only if your deployment includes multi-Interaction Database [IDB] merge).
- Info Mart database.
- Info Mart database read-only views.

Perform the following steps for each of the target databases:

1. Set up database access accounts and privileges.
2. Create the database schema.

The performance of the extraction, transformation, and loading (ETL) jobs is greatly affected by the performance of the RDBMS Server. Before you create the target databases, tune your RDBMS Server for optimal performance (see [“Database Tuning”](#)).

Note: The Genesys-provided SQL scripts create objects without specifying tablespaces, partitions, or storage parameters. Work with your database administrator or data warehousing specialist to develop a database implementation optimal for your environment and make the necessary changes to the SQL scripts. See [“Database Considerations”](#) on [page 74](#) for more information.

Task Flow for Preparing Genesys Info Mart Databases

[Table 28](#) summarizes the task flow to prepare Genesys Info Mart databases.

Table 28: Task Flow: Preparing Genesys Info Mart Databases

Objective	Related Procedures and Actions
Set up and tune RDBMS resources to support reporting databases.	<p>To improve ETL execution time, adjust the settings for the target databases, as applicable to your RDBMS environment:</p> <ul style="list-style-type: none"> • On DB2: <ol style="list-style-type: none"> a. Tuning the Staging Area Database on DB2, page 176. b. Tuning the Info Mart Database on DB2, page 182. • On Microsoft SQL Server: <ol style="list-style-type: none"> a. Tuning the Staging Area Database on Microsoft SQL Server, page 179. b. Use the same procedure for tuning the Info Mart database • On Oracle: <ol style="list-style-type: none"> a. Tuning the Staging Area Database on Oracle, page 181. b. Use the same procedure for tuning the Info Mart database.
Create and configure database schemas to process and store detailed reporting data.	<p>Prepare the databases by running Genesys-provided scripts, as instructed in:</p> <ol style="list-style-type: none"> 1. Preparing the Staging Area Database, page 184. 2. For multi-site environments that require multi-IDB merge: <ol style="list-style-type: none"> a. Preparing the Merge Staging Area Database Schema, page 187. b. Configuring for Multi-IDB Merge, page 188. 3. Preparing the Info Mart Database, page 190. 4. Preparing the Info Mart Database Read-Only Views, page 192.

Database Tuning

This section provides recommended parameter settings and tuning guidelines you can use to improve ETL execution time for the following target databases:

- Staging Area (see [page 176](#))
- Info Mart (see [page 182](#))

It also includes suggestions for your database administrator for managing the target databases after they are deployed (see “Additional Considerations” on [page 184](#)).

Staging Area Database

There are several RDBMS parameters that you must set for the ETL jobs to load the Staging Area database successfully. This section provides the recommended parameter settings for each supported RDBMS type:

- [Tuning the Staging Area Database on DB2, page 176](#).
- [Tuning the Staging Area Database on Microsoft SQL Server, page 179](#).
- [Tuning the Staging Area Database on Oracle, page 181](#).

Procedure:

Tuning the Staging Area Database on DB2

Purpose: To set DB2 RDBMS parameters so that the ETL jobs successfully load the Staging Area database.

Prerequisites

- Create a database instance for the Staging Area database in your RDBMS.

Start of procedure

1. Define tablespaces.

The `make_gim_staging_area.sql` script that Genesys Info Mart provides to create the Staging Area database (see [Preparing the Staging Area Database, page 184](#)) does not specify any tablespaces for the tables that it creates.

- For optimal performance, place the Staging Area database tables into database-managed (DMS) tablespaces. Genesys recommends that you use this high performance option (database-managed tablespaces) when you create all regular tablespaces for the database.
- For the following Staging Area tables, you must create a DMS tablespace with a 8K page size:
 - STG_ACTIVEMM_PARTY
 - STG_RECFIELDHIST_EXT

These Staging Area tables have row lengths that do not fit in DB2's default 4K page size.

- You must create a system temporary SMS tablespace and two buffer pools with 8K page sizes to handle the data for these two tables.

2. Use the following Genesys recommendations when providing responses to the prompts in the DB2 Control Center's Create Database wizard:
 - User Tables:
 - Select High performance (Database-Managed Space).
 - Add containers of the appropriate size for the Staging Area tables that fit within DB2's default 4K page size. For information that will help you determine the size of the Staging Area data, see the *Genesys Hardware Sizing Guide*.
 - System Tables:
 - Select Low maintenance (System-Managed Space).
 - Add the appropriate containers.
 - Temporary Tables:
 - Select Low maintenance (System-Managed Space).
 - Add the appropriate containers.
3. After you create the database, use DB2's Control Center to set Configuration Advisor database parameters in order to optimize performance.
 - Server—Allocate as much memory as possible to DB2 without causing paging. The optimal settings for your environment depend on the hardware and data volumes. As a quick approximation:
 - Start with the total real memory on the database server.
 - Subtract the amount of memory required by the operating system and any other applications.
 - Set Target memory to the result.
 - Workload—Optimize for the Transactions workload type.
 - Transactions:
 - Set Average number of statements per unit of work to more than 10.
 - Set Transactions per minute to 150.
 - Priority—Optimize for Faster transaction performance.
 - Connections:
 - Set Average number of connected local apps to 0.
 - Set Average number of connected remote apps to 100.
 - Isolation—Set the Isolation level to cursor stability.
4. After setting the database parameters, create a regular tablespace for the tables that require the 8K page size.

Use the following responses to DB2 Control Center's Create tablespace wizard to create the regular tablespace:

 - Tablespace Type—Choose Regular.
 - Specify 8 KB as the table space page size.

- Buffer Pool:
 - Create a buffer pool.
 - Set the Page size to 8. Enter the buffer pool size as the number of 8K pages.
The buffer pool size depends on the amount of memory available for DB2. Use a value that is 5 percent of the server target memory that is used in the Configuration Advisor.
 - Choose `Create buffer pool immediately`.
 - Space Management—Choose `Database-Managed (high performance)`.
 - Containers—Add the containers.
The container size depends on the amount of data for the tables stored in this tablespace. See the *Genesys Hardware Sizing Guide* for information that will help you determine the size of the Staging Area data. Use a value that is 10 percent of the total Staging Area data.
 - Read/Write—Choose an average table size of `Between 100MB and 1GB`.
 - Recovery—Do *not* choose `Enable dropped table recovery`.
5. Create a system temporary tablespace for the tables that require the 8K page size.
- Use the following responses to DB2 Control Center's Create Tablespace wizard to create the system temporary tablespace:
- Tablespace Type—Choose `System temporary`.
 - Specify 8 KB as the table space page size.
 - Buffer pool:
 - Create a new buffer pool.
Having a separate buffer pool for a system temporary tablespace increases the performance of sort-intensive queries.
 - Set the Page size to 8. Enter the buffer pool size as the number of 8K pages.
The buffer pool size depends on the amount of memory that is available for DB2. Use a value that is 5 percent of the total that is used in the Configuration Advisor.
 - Choose `Create buffer pool immediately`.
 - Space Management—Choose `System-Managed (low maintenance)`.
 - Containers—Add the appropriate containers.
 - Read/Write—Choose an average table size of `Between 100MB and 1GB`.
 - Recovery—Do *not* choose `Enable dropped table recovery`.
6. Use DB2's Control Center to configure database logging:
- Logging Type—Select `Circular Logging`.
 - Logging Size:
 - Set `Number of Primary Log Files` to 5.
 - Set `Number of Secondary Log Files` to 25.
 - Set `Size of Each Log File` to `20480 4K pages`.

- Logging Location—Set the directory path. Do *not* choose Mirror Log Files.
 - Schedule—Select Run now without saving task history.
7. Use DB2's Control Center to configure the following applications parameters.
 - Set LOCKTIMEOUT to 600.
 - Set MAXAPPLS to Set automatically by DB2
 8. Use DB2's Control Center to configure the following performance parameters:
 - Set DBHEAP to at least 4096.
 - Set LOCKLIST to at least 4096.
 - Set LOGBUFSZ to at least 2048.
 - Set STMHEAP to at least 8192.

Note: The ETL jobs make many serial connections to the Staging Area database. Make sure to issue the `ACTIVATE DATABASE` command to the Staging Area database before you run ETL jobs. This prevents DB2 from de-allocating database resources when there are no active database connections. See the DB2 Command Reference for details about the `ACTIVATE DATABASE` command.

9. The default buffer pool might not have been sized during the previous steps. Verify that the default buffer pool is set to at least 80 percent of the server target memory that is used in the Configuration Advisor.
10. Consult with your database administrator to further fine tune these and other parameters if you find the ETL job performance unacceptable for your environment.

End of procedure

Next Steps

- [Tuning the Info Mart Database on DB2, page 182.](#)

Procedure: **Tuning the Staging Area Database on Microsoft SQL Server**

Purpose: To set Microsoft SQL Server RDBMS parameters so that the ETL jobs successfully load the Staging Area database.

Prerequisites

- Create a database instance for the Staging Area database in your RDBMS.
- Use Microsoft SQL Server Enterprise Manager to review the settings of the Microsoft SQL Server properties.

Start of procedure

1. Allocate sufficient memory.

The ETL jobs issue many complex SQL queries against several Staging Area database tables. The amount of memory allocated to the database server is critical to the performance of these SQL queries. Allocate as much memory as possible to Microsoft SQL Server without causing paging. Optimal settings for your environment depend on hardware and data volumes. As a quick approximation:

- a. Start with the total real memory on the database server.
- b. Subtract the memory required by the operating system and any other applications.
- c. Set the maximum memory allocated to Microsoft SQL Server to the result.

2. Select relevant server settings.

Some of the SQL commands issued by the ETL jobs are long running. Disable `Use query governor` to prevent queries exceeding specified cost to ensure that their cost is not limited by Microsoft SQL Server.

3. Configure connections.

The ETL jobs use many concurrent database connections. Set `Maximum concurrent user connections` to 0 (unlimited).

Note: Consult with your database administrator to further fine tune these and other parameters if you find the ETL job performance unacceptable for your environment.

4. After using SQL Server Enterprise Manager to create the Staging Area database, review the settings of the following database properties:

- `Data Files`: Select `Automatically grow file` and `Unrestricted file growth`.
- `Transaction Log`: Select `Automatically grow file` and `Unrestricted file growth`.
- `Options—Settings`: Select `Auto update statistics` and `Auto create statistics`.

- Options—Recovery Model: Take into account the following considerations.

The ETL jobs generate large amounts of database activity, with a correspondingly large database log space. The amount of log space that is needed depends on the recovery mode, and on the frequency of log file backups. Full recovery mode provides the most protection against data loss due to failures, but it requires the most log space. Performing daily log file backups can help limit the size of the transaction logs.

In general, you control the size of a transaction log in one of the following ways:

- If you are maintaining a log backup sequence for full or bulk-logged recovery modes, schedule `BACKUP LOG` statements to occur at intervals that will keep the transaction log from growing past the desired size.
- If you are not maintaining a log backup sequence, specify the simple recovery model.

For a more complete description of the recovery modes, and for information about managing transaction logs, see your Microsoft SQL Server documentation.

End of procedure

Next Steps

- Use the same procedure to tune up the Info Mart database.

Procedure:

Tuning the Staging Area Database on Oracle

Purpose: To set Oracle RDBMS parameters so that the ETL jobs successfully load the Staging Area database.

Prerequisites

- Create a database instance for the Staging Area database in your RDBMS.

Start of procedure

1. Set the Oracle initialization parameters, by parameter name and value:
 - `filesystemio_options = ASYNCH`
 - `processes = at least 250`
 - `sessions = at least 300`
 - `open_cursors = at least 400`

2. Allocate sufficient memory.

The ETL jobs issue many complex SQL queries against several Staging Area database tables. The amount of memory that you allocate to the database server buffers is critical to the performance of these SQL queries. The optimal settings for your environment depend on the hardware and data volumes.

As a quick approximation:

- a. Start with the total real memory on the database server.
 - b. Subtract the amount of memory required by the operating system and any other applications.
 - c. Split the result between the buffer cache and the PGA aggregate target.
3. Consult your database administrator to further fine-tune these and other parameters if you find the performance of the ETL jobs in your environment unacceptable.

End of procedure

Next Steps

- Use the same procedure to tune up the Info Mart database.

Info Mart Database

There are several database parameters that enable the ETL jobs to load the Info Mart database successfully. This section provides the recommended parameter settings:

- On DB2, you must set certain parameters. Follow the steps in [Tuning the Info Mart Database on DB2, page 182](#).
- On Oracle, no specific parameters are required; however, the Info Mart database performance will benefit from tuning the Info Mart database in the manner similar to tuning the Staging Area database. See [Tuning the Staging Area Database on Oracle, page 181](#).
- On Microsoft, no specific parameters are required; however, the Info Mart database performance will benefit from tuning the Info Mart database in the manner similar to tuning the Staging Area database. See [Tuning the Staging Area Database on Microsoft SQL Server, page 179](#).

Procedure:

Tuning the Info Mart Database on DB2

Purpose: To set DB2 RDBMS parameters required for the ETL jobs to load the Info Mart database successfully.

Prerequisites

- [Tuning the Staging Area Database on DB2, page 176.](#)
- Create a database instance for the Info Mart database in your RDBMS.
- Use DB2's Control Center to set database parameters.

Start of procedure

1. Configure database logging:
 - Logging Type—Select Circular Logging.
 - Logging Size:
 - Set Number of Primary Log Files to 5.
 - Set Number of Secondary Log Files to 25.
 - Set Size of Each Log File to 20480 4K pages.
 - Logging Location—Set the directory path. Do *not* select Mirror Log Files.
 - Schedule—Select Run now without saving task history.
2. Configure the performance-related parameters:
 - Set DBHEAP to at least 4096.
 - Set LOGBUFSZ to at least 2048.
3. Consult with your database administrator to further fine-tune these and other parameters if you find the performance of the ETL jobs in your environment unacceptable.

Note: The ETL jobs make many serial connections to the Info Mart database. Make sure that you issue the `ACTIVATE DATABASE` command to the Info Mart database before you run ETL jobs. This prevents DB2 from de-allocating database resources when there are no active database connections. For more information about the `ACTIVATE DATABASE` command, see the *DB2 Command Reference*.

End of procedure

Next Steps

- [Preparing the Staging Area Database, page 184.](#)

Additional Considerations

In addition to the previously listed database tuning requirements, you may also need to do the following:

- Periodically update statistics on the Info Mart fact tables. Failure to update them periodically can negatively affect the performance of end-user queries. Enable the automatic gathering of statistics on Info Mart tables if your RDBMS supports this feature.
- Use database administrators to actively manage Genesys Info Mart, after it is deployed.

Preparing the Staging Area Database

Procedure: Preparing the Staging Area Database

Purpose: To create the Staging Area database schema and load metadata into it.

Prerequisites

- Tune up your Staging Area database as appropriate for your RDBMS environment.

Start of procedure

1. Ensure that the database access account that you use to create the Staging Area database is available and has the required owner account privileges (see Table 3 on [page 80](#)).

Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.

2. Log in to the Staging Area database using the Staging Area Owner ID.
3. Run `make_gim_staging_area.sql`.

This script creates the Genesys Info Mart Staging Area database tables.

Note: For Microsoft SQL Server 2000, several tables might produce an error that is similar to the following:

Warning: The table 'STG_ACTIVEMM_PARTY' has been created but its maximum row size (8826) exceeds the maximum number of

bytes per row (8060). INSERT or UPDATE of a row in this table will fail if the resulting row length exceeds 8060 bytes.

This warning is expected. These tables contain the attached data fields and are expected to never reach the maximum row length. To hit the maximum row length, all possible attached data fields would have to be used at their full 255 character size.

4. Run `load_gim_staging_area.sql`.

This script loads metadata used by the aggregation job (JOB_AggregateGIM) into the Staging Area database.

5. Select the level of granularity that you require for subhour aggregates:

- If you want Genesys Info Mart to produce subhour aggregates with 30-minute granularity, skip this step. The `load_gim_staging_area.sql` script has loaded the necessary metadata.

You must use 30-minute granularity if you are using Genesys Interactive Insights out-of-box reports to access Genesys Info Mart data.

- If you want Genesys Info Mart to produce subhour aggregates with 15-minute granularity, run `load_gim_staging_area_15.sql`.

You can use 15-minute granularity in an environment with Genesys Interactive Insights as long as you customize the reports. Refer to the Genesys Interactive Insights 7.6 User's Guide for customization instructions.

Note: Make sure that the level of granularity that you select is also configured consistently in the `sub-hour-level-aggregation` option in the `gim-etl` section of the Genesys Info Mart Application object.

6. Run `make_configuration_verification_views.sql`.

This script creates a view that is named `CV_MISSING_CFG_OBJECTS` (and several other supporting views) in the Staging Area database that you can query to identify unresolved references in all the extracted source data. You can use this information to determine which configuration objects are missing in the source IDB from which Genesys Info Mart extracts Configuration details. The view returns each missing object's type and configuration database identifier (DBID).

Refer to the *Genesys Info Mart 7.6 Operations Guide* for more information about identifying unresolved references.

7. Ensure that the database access account that the ETL jobs will use to access the Staging Area database is available and has the required user account privileges (see Table 4 on [page 82](#)).

Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.

The user account does not have to be the same as the owner account. For more information about the rules and recommendations that pertain to database access accounts for Genesys Info Mart, see “Database Object Owners and User IDs” on [page 78](#).

Note: For multi-site deployments that require multi-IDB merge, the same user account will be used to access both the Staging Area schema and the Merge Staging Area database schema. This means that the user account must have privileges for the objects in both database schemas.

End of procedure

Next Steps

- If your deployment requires multi-IDB merge, follow procedures in [Preparing the Merge Staging Area Database Schema, page 186](#).
- Otherwise, continue with [Preparing the Info Mart Database, page 190](#).

Preparing the Merge Staging Area Database Schema

The Merge Staging Area database schema is required only in distributed deployments that require multi-IDB merge.

The Merge Staging Area database schema replicates the IDB schema within the Staging Area database, and is created from Interaction Concentrator–provided scripts. Genesys Info Mart provides an SQL script to modify that schema to optimize data extraction.

[Table 29](#) summarizes the task flow to prepare the Merge Staging Area database schema.

Table 29: Task Flow: Preparing Merge Staging Area

Objective	Related Procedures and Actions
Enable processing of details for voice interactions that span multiple IDBs.	Create the Merge Staging Area database schema. See: <ol style="list-style-type: none"> 1. Preparing the Merge Staging Area Database Schema, page 187. 2. Configuring for Multi-IDB Merge, page 188.

Procedure: Preparing the Merge Staging Area Database Schema

Purpose: To create the Merge Staging Area database schema.

Prerequisites

- [Preparing the Staging Area Database, page 184.](#)

Start of procedure

1. Ensure that the database access account that you use to create the Merge Staging Area database schema is available and has the required owner account privileges (see Table 3 on [page 80](#)).

To keep the Genesys Info Mart database objects separate from those that are created by the Interaction Concentrator–provided scripts, Genesys recommends that you run these scripts from a different owner account than the one that accesses the regular Staging Area database. In this way, you create the Merge Staging Area database schema in a different schema from the Staging Area database but in the same database instance.

Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.

2. Log in to the Merge Staging Area database using the Merge Staging Area Owner ID.
3. Run all the Interaction Concentrator–provided database scripts against the Merge Staging Area database schema.
4. Run the database script that is provided by Genesys Info Mart to modify the Merge Staging Area schema to optimize data extraction:
 - a. Navigate to the `genesys_info_mart\db_scripts` subdirectory of the Genesys Info Mart 7.6 product CD.
 - b. Navigate to the `unix` or `windows` subdirectory that corresponds to the operating system on which you will be running the database scripts.
 - c. Navigate to the `sql_scripts` subdirectory.

- d. Navigate to the RDBMS-specific directory that corresponds to the Staging Area database type (db2, mssql, or oracle).
 - e. Run the `upgrade_merging_to_76006.sql` script.
5. Update the `GSYS_DNPREMOTELOCATION` and `G_DB_PARAMETERS` tables as required, to optimize merge procedure performance. For more information, see [Configuring for Multi-IDB Merge, page 188](#).
 6. Ensure that the database access account that the ETL jobs will use to access the Merge Staging Area database is available and has the required user account privileges (see Table 4 on [page 82](#)).

The same user account will be used to access both the Staging Area schema and the Merge Staging Area database schema. This means that the user account must have privileges for the objects in both database schemas. Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.

End of procedure

Next Steps

- [Configuring for Multi-IDB Merge, page 188](#).

Configuring for Multi-IDB Merge

After you have configured each IDB in the deployment for intra-IDB merge (see [Configuring for IDB Merge, page 170](#)), you must similarly ensure that the merge procedure parameters in the Merge Staging Area database schema are appropriate for your environment, to optimize performance of `gsysIRMerge` in the Merge Staging Area database schema.

Procedure:

Configuring for Multi-IDB Merge

Purpose: To set the merge procedure parameters in the Merge Staging Area database schema appropriately for your environment, in order to optimize performance of `gsysIRMerge` in the Merge Staging Area database schema.

Prerequisites

- [Configuring for IDB Merge, page 170](#).

Start of procedure

1. Check for unmonitored switches.

When you carry out a merge operation on an IDB, check that all ICON applications that store voice interactions in that IDB are monitoring all switches.

2. If any switches are unmonitored, store those `Switch` object names in the `GSYS_DNPREMOTELOCATION` table of the applicable IDB schema. Otherwise, merging of some voice interactions must wait until the configured IS-Link Timeout occurs, and this delays Genesys Info Mart transformation and loading of those voice interactions.

Note: Store information only for `Switch` objects that are not monitored by *any* of your ICON processes that produce IDB data that Genesys Info Mart extracts. Otherwise, when `Job_ExtractICON` invokes the `gsysIRMerge` stored procedure in the Merge Staging Area database schema, some voice interactions that span IDBs will be prematurely merged. This causes Genesys Info Mart to take what should be one voice interaction, and store it as multiple voice interactions.

For example, suppose that you have three switches and two ICON instances, each writing to its own IDB:

- ICON1 monitors switch `SITE1_sw1` and writes to IDB1.
 - ICON2 monitors switch `SITE2_sw2` and writes to IDB2.
 - `SITE3_sw3` is not monitored by either ICON instance.
3. For optimal performance of the merge stored procedure, add the following records to the respective database schemas:
 - a. In IDB1, set `GSYS_DNPREMOTELOCATION.REMOTELOCATION='SITE2_sw2', 'SITE3_sw3'` (for the preliminary, intra-IDB merge)
 - b. In IDB2, set `GSYS_DNPREMOTELOCATION.REMOTELOCATION='SITE1_sw1', 'SITE3_sw3'` (for the preliminary, intra-IDB merge)
 - c. In the Merge Staging Area database schema, set `GSYS_DNPREMOTELOCATION.REMOTELOCATION='SITE3_sw3'` (for the secondary, multi-IDB merge)
 4. Adjust other merge procedure parameters.

The `G_DB_PARAMETERS` table in the Merge Staging Area database schema stores additional parameters that control the operation of the merge procedure. These settings can have a significant impact on merge procedure performance. For more information, see the chapter about special stored procedures in the *Interaction Concentrator Deployment Guide*.

Note: Genesys recommends that you not store any value for the IS-Link Timeout parameter (`stuckthreshold`) in the `G_DB_PARAMETERS` table, but rather leave the `gsysIRMerge` stored procedure to use the default value (8 hours, 1 minute).

End of procedure

Next Steps

- [Preparing the Info Mart Database, page 190.](#)

Preparing the Info Mart Database

Procedure: Preparing the Info Mart Database

Purpose: To create the data schema for the Info Mart database.

Prerequisites

- Tune up your Info Mart database as appropriate for your RDBMS environment.

Start of procedure

1. Ensure that the database access account that you use to create the Info Mart database schema is available and has the required owner account privileges (see Table 3 on [page 80](#)).

Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.

2. Log in to the Info Mart database using the Info Mart Owner ID.
3. Run the `make_gim.sql` SQL script to create the Info Mart database schema. This script creates the Genesys Info Mart dimension, fact, and aggregate tables.
4. (Optional) Create the views in the Genesys Info Mart schema necessary for 15-minute subhour aggregates.

By default, the `make_gim.sql` script creates the views required to support 30-minute subhour aggregates. You must use 30-minute granularity if you are using Genesys Interactive Insights out-of-box reports to access Genesys Info Mart data.

- If you do not require Genesys Info Mart to produce subhour aggregates with 15-minute level, continue with [Step 5](#).
- If you require Genesys Info Mart to produce subhour aggregates at 15-minute level, run the `make_gim_agg_views_15.sql` script.

You can use 15-minute granularity in an environment with Genesys Interactive Insights as long as you customize the reports. Refer to the Genesys Interactive Insights 7.6 User's Guide for customization instructions.

Note: Make sure that the level of granularity that you select is also configured consistently in the `sub-hour-level-aggregation` option in the `gim-etl` section of the Genesys Info Mart Application object.

5. Ensure that the database access account that the ETL jobs will use to access the Info Mart database is available and has the required user account privileges (see Table 4 on [page 82](#)).

Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.

The user account does not have to be the same as the owner account. For more information about the rules and recommendations that pertain to database access accounts for Genesys Info Mart, see “Database Object Owners and User IDs” on [page 78](#).

End of procedure

Next Steps

- [Preparing the Info Mart Database Read-Only Views, page 192.](#)

Preparing the Info Mart Database Read-Only Views

Read-only views allow you to control end-user access to Info Mart data. For an illustration of read-only views, see [Figure 18](#). The diagram illustrates the relationship between the Genesys Info Mart database schema and the read-only Genesys Info Mart Views schema.

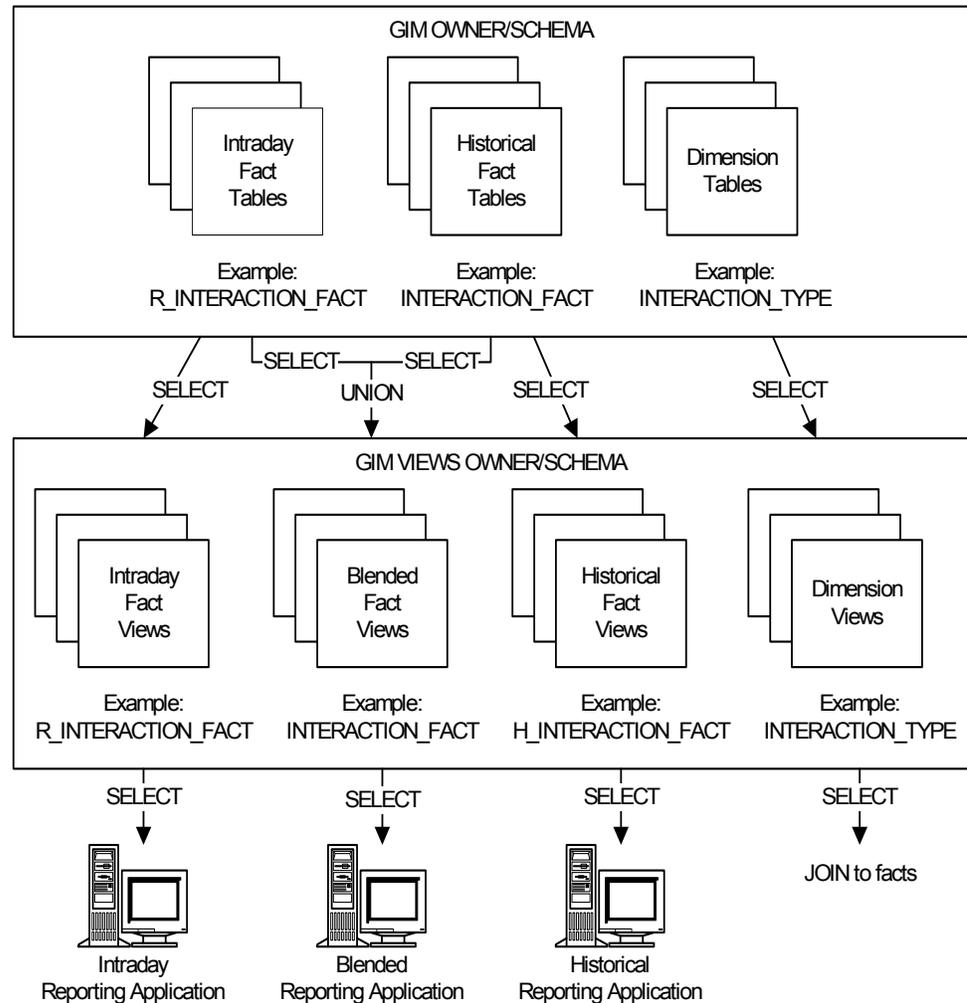


Figure 18: Single-Tenant or Multi-Tenant Service Provider Views

Procedure: Preparing the Info Mart Database Read-Only Views

Purpose: To create the Info Mart views.

Start of procedure

1. Ensure that the database access account that you use to create the Info Mart Views schema is available and has the required owner account privileges (see Table 3 on page 80).
Refer to the “[Installation Worksheets](#)” beginning on page 401 to determine the ID to use.
2. Log in to the Info Mart Views database using the Info Mart Owner ID.

3. Run the following SQL script to create the Info Mart Views schema:

```
make_gim_view.sql.
```

This script creates read-only views on the Genesys Info Mart tables.

To run this script, specify the following parameters:

- Genesys Info Mart owner ID.
- Genesys Info Mart Views owner ID in which to create the read-only views.

Note: You must edit the scripts for Microsoft SQL Server and DB2 to provide these parameters.

4. Ensure that the database access account that end-users will use to access the Info Mart Views database is available and has the required user account privileges (see Table 4 on [page 82](#)).

Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.

The user account does not have to be the same as the owner account. For more information about the rules and recommendations that pertain to database access accounts for Genesys Info Mart, see “Database Object Owners and User IDs” on [page 78](#).

End of procedure

Next Steps

- [Configuring DAPs, page 195](#).



Chapter

5

Configuring DAPs

This chapter describes how to configure the Database Access Points (DAPs) that Genesys Info Mart uses to access source and target databases. It contains the following sections:

- [Overview, page 195](#)
- [Configuring Required DAPs, page 200](#)
- [DAP Configuration Supporting Procedures, page 213](#)
- [Advanced DAP Configuration Procedures, page 218](#)

Overview

Genesys Info Mart uses Database Access Points (DAPs) to access databases. You configure DAPs to specify the connection parameters and other options. In Genesys Info Mart 7.6, a majority of DAPs are configured using Java Database Connectivity (JDBC) DAP options.

Note: For information about moving a data source from one database or schema to another, see the *Genesys Info Mart 7.6 Operations Guide*.

You must configure DAPs to access the applicable source and target databases in your environment in order to extract, transform, and load the following data:

- ICON Configuration details.
- ICON Voice details and Network Routing Solution data.
- ICON Outbound Contact details.
- ICON Multimedia details.
- Stat Server voice agent details (in legacy environments).
- Genesys Voice Platform (GVP) Voice Application Reporter (VAR) Details.

For information about configuring Stat Server DAP(s), see Appendix E, “Using Stat Server in Legacy Environments,” on [page 441](#).

Required DAPs

The number and type of DAPs that you need depends on your particular deployment topology. For a description of Genesys Info Mart-supported topologies, see Chapter 2, “Deployment Planning,” on [page 47](#).

At a minimum, you must configure the following Database Access Points:

- One or more data source DAPs.
- Genesys Info Mart DAPs.
- Genesys Info Mart Administration Console DAP.

Note: As you configure the DAPs, refer to the applicable worksheets (see Appendix A on [page 401](#)) that you completed earlier.

Additional DAPs

If your deployment topology involves multi-Interaction Database (IDB) merge, high availability (HA) data extraction, or CCPulse+ reporting on top of the Genesys Info Mart database, you also need to modify your DAPs for your respective environment, as appropriate:

- For multi-IDB Merge.
- For HA deduplication of ICON Configuration details.
- For HA deduplication of ICON Voice details.
- For HA data extraction of ICON Outbound Contact details.

In addition, if you use CCPulse+ reports that are based on Genesys Info Mart data, you need to create and configure a DAP for CCPulse+ reports data.

The section “Advanced DAP Configuration Procedures” on [page 218](#) includes detailed instructions.

Task Flow for Enabling Database Access

The task flow tables in this section highlight the actions required to enable access to both data source databases and target databases.

Enabling Access to Data Source Databases

[Table 30](#) summarizes the task flow to enable access to various data source databases from which Genesys Info Mart needs to extract data. The table lists the activities required for each type of reporting data. To extract Interaction

Concentrator data, you need to configure a DAP for each IDB and set the DAP's `role` option to include all types of data that this IDB stores.

Table 30: Task Flow: Enabling Access to Data Source Databases

Objective	Related Procedures and Actions
<p>Enable access to configuration details that support detailed reporting of interactions of any type and related agent activity.</p>	<p>Enable access to the IDB that stores Configuration details. See:</p> <ul style="list-style-type: none"> • Configuring Interaction Concentrator DAPs, page 205. Set the <code>role</code> option to <code>ICON_CFG</code>. <p>If you have configured redundant ICON applications to store Configuration details in an HA pair of IDBs, enable access to the secondary IDB in the HA pair. See:</p> <ol style="list-style-type: none"> 1. Create a secondary JDBC DAP with <code>role</code> option of <code>ICON_CFG</code> that provides access to the secondary IDB that stores Configuration details. (Use the generic procedure for Configuring JDBC DAPs, page 213.) 2. Modify the configuration settings of the primary and secondary DAPs. See Configuring DAPs for ICON Configuration Details HA, page 219.
<p>Enable access to data that supports detailed reporting of voice interactions and related agent activity.</p>	<p>If your contact center processes voice interactions (calls), enable access to the IDB(s) that stores voice interaction and related agent activity details. Perform the following activities as appropriate to your environment:</p> <p>Note: You must store ICON Voice details and ICON Multimedia details in separate IDBs.</p> <ul style="list-style-type: none"> • If you store ICON Voice details in the separate IDB from other ICON details, create a new DAP. See Configuring Interaction Concentrator DAPs, page 205. Set the <code>role</code> option to <code>ICON_CORE</code>. • If you store ICON Voice details in the same IDB with any other ICON details, add the <code>ICON_CORE</code> value to the <code>role</code> option of the DAP that provides access to this IDB. See Step 2 on page 206. <p>If you have configured redundant ICON applications to store Voice details in an HA pair of IDBs, enable access to the secondary IDB in the HA pair. See:</p> <ol style="list-style-type: none"> 1. Create a secondary JDBC DAP with <code>role</code> option of <code>ICON_CORE</code> that provides access to the secondary IDB that stores Voice details. (Use the generic procedure for Configuring JDBC DAPs, page 213.) 2. Modify the configuration settings of the primary and secondary DAPs. See Configuring DAPs for ICON Voice Details HA, page 220.

Table 30: Task Flow: Enabling Access to Data Source Databases (Continued)

Objective	Related Procedures and Actions
<p>Enable access to data that supports detailed reporting of outbound voice interactions.</p>	<p>If you are capturing outbound-specific data for your reports, enable access to the IDB(s) that store Outbound Contact details. Perform the following activities as appropriate to your environment:</p> <ul style="list-style-type: none"> • If you store ICON Outbound Contact details in the IDB separate from other ICON details, create a new DAP. See Configuring Interaction Concentrator DAPs, page 205. Set the <code>role</code> option to <code>ICON_OCS</code>. • If you store ICON Outbound Contact details in the same IDB with any other ICON details, add the <code>ICON_OCS</code> value to the <code>role</code> option of the DAP that provides access to this IDB. See Step 2 on page 206. <p>Note: You cannot store Outbound Contact details in the same IDB with other ICON details if this IDB is part of an HA pair of Outbound Contact details IDBs.</p> <p>If you have configured redundant ICON applications to store ICON Outbound Contact details in an HA pair of IDBs, enable access to the secondary IDB in the HA pair, as follows:</p> <ul style="list-style-type: none"> • Create a new DAP, with the <code>role</code> option of <code>ICON_OCS</code>, that provides access to the secondary IDB that stores Outbound Contact details. (Use the generic procedure for Configuring Non-JDBC DAPs, page 216.) <p>Note: Do not configure any other roles for this DAP.</p> <ul style="list-style-type: none"> • Modify the configuration settings of the primary and secondary DAPs. See Configuring DAPs for ICON Outbound Contact Details HA, page 222.
<p>Enable access to data that supports detailed reporting of multimedia interactions and related agent activity.</p>	<p>If your contact center processes Multimedia interactions, enable access to the IDB that stores Multimedia interactions and related agent activity details. Perform the following activities as appropriate to your environment:</p> <p>Note: You must store ICON Voice details and ICON Multimedia details in separate IDBs.</p> <ul style="list-style-type: none"> • If you store ICON Multimedia details in the IDB separate from other ICON details, create a new DAP. See Configuring Interaction Concentrator DAPs, page 205. Set the <code>role</code> option to <code>ICON_MM</code>. • If you store ICON Multimedia details in the same IDB with any other ICON details, add the <code>ICON_MM</code> value to the <code>role</code> option of the DAP that provides access to this IDB. See Step 2 on page 206.

Table 30: Task Flow: Enabling Access to Data Source Databases (Continued)

Objective	Related Procedures and Actions
Enable access to data that supports GVP reports.	If you are capturing GVP-specific data for your reports, enable access to the GVP VAR database(s). See: Configuring GVP VAR DAPs, page 207 . Set the <code>role</code> option to <code>GVP_VAR</code> .

Enabling Access to Target Databases

[Table 31](#) summarizes the task flow to enable access to the databases that Genesys Info Mart uses to process and store the extracted data.

Table 31: Task Flow: Enabling Access to Target Databases

Objective	Related Procedures and Actions
Enable access to the databases that are used for data processing and storage.	<p>Enable the Genesys Info Mart access to its target databases:</p> <ol style="list-style-type: none"> 1. Create a new DAP for Genesys Info Mart to access its Staging Area database. See Configuring the Staging Area DAP, page 210. Set the <code>role</code> option to <code>STAGING</code>. 2. Create a new DAP for Genesys Info Mart to access its Info Mart database. See Configuring the Info Mart DAP, page 210. Set the <code>role</code> option to <code>INFO_MART</code>. 3. In an environment with voice interactions that require multi-IDB merge, add the <code>MERGING</code> value to the <code>role</code> option of the Staging Area DAP. See Configuring DAPs for multi-IDB merge, page 218, for details.
Enable monitoring and real-time administration of data processing.	<p>Enable the Genesys Info Mart Administration Console access to the Staging Area database in order to monitor ETL jobs:</p> <ol style="list-style-type: none"> 1. Install DB Server to handle database requests from the Genesys Info Mart Administration Console. Refer to <i>Framework 7.6 DB Server User's Guide</i> for details. 2. Create a new DAP for Genesys Info Mart Administration Console to access the Staging Area database. See Configuring the Genesys Info Mart Administration Console DAP, page 212. Set the <code>role</code> option to <code>ADMIN_CONSOLE</code>.

Enabling CCPulse+ Access to Stored Info Mart Data

[Table 32](#) summarizes the task flow to enable CCPulse+ access to the Genesys Info Mart database for detailed reports based on Genesys Info Mart data.

Table 32: Task Flow: Enabling Access to Stored Info Mart Data

Objective	Related Procedures and Actions
Enable access to data that was processed and stored	<p>If you use CCPulse+ reports that are based on Genesys Info Mart data, enable CCPulse+ access to the Info Mart database:</p> <ol style="list-style-type: none"> 1. Install DB Server to handle database requests from Genesys CCPulse+; refer to <i>Framework 7.6 DB Server User's Guide</i> for details. 2. Create a new DAP for CCPulse+ to access the Info Mart database. Configuring a DAP for CCPulse+ reports, page 224. Set the <code>role</code> option to <code>INFO_MART_READ_ONLY</code>.

Configuring Required DAPs

Use the procedures in this section to create and configure the required Database Access Points:

- [Data Source DAPs](#), page 200.
- [Genesys Info Mart DAPs](#), page 207.
- [Genesys Info Mart Administration Console DAP](#), page 211.

Use “DAP Configuration Supporting Procedures” on [page 213](#) when you are referred to them during the configuration.

Data Source DAPs

For each data source database from which Genesys Info Mart will extract data, you have to create and configure a separate JDBC DAP. Use the following procedures as applicable to enable access to your data sources:

- [Configuring Interaction Concentrator DAPs](#), page 205.
- [Configuring GVP VAR DAPs](#), page 207.

For an illustration of DAP roles in various deployment topologies, see the sample extraction topology diagrams in Appendix B on [page 417](#).

[Table 33](#) lists and describes the required configuration options that you can configure on the `Options` tab of each data source's DAP `Application` object.

Note: Refer to Appendix E, “Using Stat Server in Legacy Environments” on [page 441](#), for information on configuring a Stat Server DAP.

Data Source DAP Options

Table 33 lists and describes the required configuration options that you can configure in the specified section on the Options tab of each data source's DAP Application object.

Note: Changes to data source DAP configuration options take effect at the next run of the extract ETL job for that particular data source; no restart of Genesys Info Mart Server is required.

Table 33: Data Source DAP Configuration Options

Option	Section	Description
connection-pool-max-size	gim-etl	Specifies the maximum number of connections a pool will maintain at any given time. Type: Optional Default Value: 50 Valid Values: Any valid integer Supported DAP Roles: All
connection-pool-min-size	gim-etl	Specifies the minimum number of connections a pool will maintain at any given time. Type: Optional Default Value: 2 Valid Values: Any valid integer Supported DAP Roles: All
connection-pool-timeout	gim-etl	Specifies the number of seconds a connection can remain pooled but unused before it is discarded. Type: Optional Default Value: 1200 Valid Values: Any valid integer Supported DAP Roles: All
connection-pool-idle-test-period	gim-etl	Specifies the number of seconds all idle and pooled—but not checked-out—connections will be tested. If set to 0, no testing will occur. Type: Optional Default Value: 300 Valid Values: Any valid integer Supported DAP Roles: All

Table 33: Data Source DAP Configuration Options (Continued)

Option	Section	Description
connection-pool-acquire-increment	gim-etl	Specifies how many connections can be acquired at one time when the pool is exhausted. Type: Optional Default Value: 2 Valid Values: Any valid integer Supported DAP Roles: All
default-schema	gim-etl	Specifies the database schema or owner name if it is different from the database user ID. If you do not specify this option, the database tables and other database objects are assumed to be owned by the user name you specify on the DB Info tab. Type: Optional Default Value: None Valid Values: Any valid database owner or schema name Supported DAP Roles: ICON_CFG, ICON_CORE, ICON_MM, ICON_OCS, STAT_SERVER, GVP_VAR
ha-pair-id	gim-etl	Specifies which DAPs constitute an HA pair of ICON details. In an HA data extraction environment, the configuration must contain two DAPs that have a <code>role</code> value that contains <code>ICON_CORE</code> or <code>ICON_OCS</code> , and that have the same <code>ha-pair-id</code> value. Type: Optional Default Value: None Valid Value: Any alphanumeric character string (case-insensitive) Supported DAP Roles: ICON_CORE, ICON_OCS

Table 33: Data Source DAP Configuration Options (Continued)

Option	Section	Description
ha-pair-primary	gim-etl	<p>For an HA pair of DAPs, specifies the primary DAP from which Genesys Info Mart extracts ICON details (either Configuration, Voice, or Outbound Contact). For Configuration and Voice agent details, data is extracted from the primary DAP first. For Voice interaction details, data from the primary DAP is preferred if the data quality in both IDBs is the same. For Outbound Contact details, this option has no real significance, but must be configured. This option with a value of TRUE must be specified in one of the two DAPs that constitute an HA pair.</p> <p>Type: Optional Default Value: None Valid Values: TRUE, FALSE Dependencies: ha-pair-id (for the ICON_CORE and ICON_OCS roles) Supported DAP Roles: ICON_CFG, ICON_CORE, ICON_OCS</p>
role	gim-etl	<p>Specifies what type of data is stored in the database that Genesys Info Mart accesses through this DAP.</p> <p>Default Value: None Valid Value: Any of the following:</p> <p>Note: You can specify more than one role for each IDB DAP. In this case, include all of the roles in a comma-separated list (with or without spaces)—for example: <code>role = ICON_CORE, ICON_OCS</code></p> <p>ICON_CFG Specifies the connection information for an IDB from which Genesys Info Mart will extract ICON Configuration details. This role is required and it can be associated with only one DAP, or with two DAPs that constitute an HA pair.</p> <p>ICON_CORE Specifies the connection information for an IDB from which Genesys Info Mart will extract ICON Voice details, including agent activity details. This role is optional, but you need at least one DAP with a <code>role</code> option of <code>ICON_CORE</code> or <code>ICON_MM</code>.</p>

Table 33: Data Source DAP Configuration Options (Continued)

Option	Section	Description
role (continued)		<p data-bbox="656 317 1419 516"> ICON_MM Specifies the connection information for an IDB from which Genesys Info Mart will extract ICON Multimedia Solution Details, including agent activity details. This role is optional, but you need at least one DAP with a <code>role</code> option of <code>ICON_CORE</code> or <code>ICON_MM</code>. </p> <p data-bbox="656 552 1390 611"> Note: You cannot reconfigure the DAP role from <code>ICON_CORE</code> to <code>ICON_MM</code> or vice versa, once data extraction occurs. </p> <p data-bbox="656 646 1412 741"> ICON_OCS Specifies the connection information for an IDB from which Genesys Info Mart will extract ICON Outbound Contact details. </p> <p data-bbox="656 777 1425 871"> STAT_SERVER Specifies the connection information for a database from which Genesys Info Mart will extract Stat Server voice agent details. </p> <p data-bbox="656 907 1425 1001"> GVP_VAR Specifies the connection information for a database from which Genesys Info Mart will extract GVP VAR Details. </p> <p data-bbox="656 1037 1380 1066"> Changes Take Effect: The next time extract jobs are launched. </p>

Table 33: Data Source DAP Configuration Options (Continued)

Option	Section	Description
user-event-data	custom-data	<p>Defines the mapping of UserEvent-based KVPs to Info Mart table columns.</p> <p>Type: Optional</p> <p>Default Value: None</p> <p>Valid Values: A comma-separated list of IDs and key names in the format <id>, <KeyName>. ID must be selected from the list of valid GIM IDs described in Table 5, “Key-Value Pair Mapping,” on page 97.</p> <p>Dependencies: <code>extract-user-event-data</code> must be set to TRUE</p> <p>Changes Take Effect: On the next intraday ETL cycle</p> <p>The limit for option specifications in Configuration Manager is 255 characters. If your desired <code>user-event-data</code> option specification exceeds this limit, you can specify additional options in the format <code>user-event-data-χ</code>, where χ is an integer, starting from 1. Genesys Info Mart recognizes all the event-data specifications as one option, and it concatenates the content of the options in sequence.</p> <p>The <code>id</code> and <code>KeyName</code> pair must map exactly to the following configuration:</p> <p><code>id</code> is a valid value that maps UserEvent-based KVP data to a table column in the Info Mart database. These values can be found in Table 5, “Key-Value Pair Mapping,” on page 97.</p> <p><code>KeyName</code> is the value configured in the <code>EventData</code> option under the section <code>custom-states</code> in the ICON application.</p> <p>Incorrect mapping of these settings will result in UserEvent-based KVP data not being populated in the Info Mart database.</p> <p>Setting this configuration option on the individual data source DAPs allows multi-IDB deployments the ability to map their own set of UserEvent-based KVPs to a single Info Mart database.</p>

Procedure: Configuring Interaction Concentrator DAPs

Purpose: To enable Genesys Info Mart access to Interaction Database(s) by configuring Database Access Point(s).

A separate DAP is required for each IDB from which Genesys Info Mart will extract data. Each IDB can have one or more data source domains (for

example, ICON Configuration, ICON Voice, ICON Multimedia, and ICON Outbound Contact) from which Genesys Info Mart will extract data.

Note: If you configure a DAP with a `role` value that contains `ICON_MM`, you must later add the associated ICON application that stores the Multimedia solution data to the `Connections` tab of the `Genesys Info Mart Application` object. The ETL uses this connection to determine the system ID of the ICON application that stored the Multimedia solution data, in order to properly extract that data.

Prerequisites

- [Preparing IDBs, page 167.](#)

Start of procedure

1. Create a JDBC DAP for each IDB from which Genesys Info Mart will extract data. To do so, use the procedure [Configuring JDBC DAPs, page 213.](#)
2. Use the `role` option within each DAP to specify which data source domains Genesys Info Mart should extract through that DAP:
 - If you have only one IDB in your deployment, the `role` option in the DAP will specify all the types of source data that are stored in the IDB (for example, `ICON_CFG`, `ICON_CORE`, and `ICON_OCS`).
 - If you have more than one IDB in your deployment:
 - Only one DAP (or at most two DAPs configured as an HA pair) can have a `role` option of `ICON_CFG`.
 - Configure at least one DAP to have a `role` option of either `ICON_CORE` (to extract voice data) or `ICON_MM` (to extract Multimedia data). You can specify zero, one, or more `role` options of `ICON_OCS` (to extract ICON Outbound Contact data).
3. Review the configuration options described in Table 33 on [page 201](#), and set them as appropriate to this DAP.

End of procedure

Next Steps

- If you use a GVP data source in addition to Interaction Concentrator, continue with [Configuring GVP VAR DAPs, page 207.](#)
- Otherwise, see [Genesys Info Mart DAPs, page 207.](#)

Procedure: Configuring GVP VAR DAPs

Purpose: To enable Genesys Info Mart access to GVP VAR database(s) by configuring Database Access Point(s).

Start of procedure

1. Create a JDBC DAP for each GVP VAR database from which Genesys Info Mart will extract data. To do so, use the procedure [Configuring JDBC DAPs, page 213](#).
2. Specify a role value of GVP_VAR on the GVP VAR DAP.
3. If necessary, specify the tenant:
 - For multi-tenant deployments, you must also add the tenant that is associated with this GVP VAR data on the Tenants tab of the DAP.

Note: Each GVP VAR DAP can be associated with only one tenant.

- For single-tenant deployments, the data is automatically associated with the default Resources tenant.
4. Review the configuration options described in Table 33 on [page 201](#) and set them as appropriate to this DAP.

End of procedure

Next Steps

- See [Genesys Info Mart DAPs, page 207](#).

Genesys Info Mart DAPs

Genesys Info Mart requires access to its target databases, the Staging Area database and the Info Mart database, in order to process and store data. Use the following procedures to create and configure the following two JDBC DAPs that provide access to the target databases:

- [Configuring the Staging Area DAP, page 210](#).
- [Configuring the Info Mart DAP, page 210](#).

For an illustration of DAP roles in various deployment topologies, see the sample extraction topology diagrams in Appendix B on [page 417](#).

The following section lists and describes the required options that you must configure on the Options tab of the Staging Area and Info Mart DAP Application objects.

Genesys Info Mart DAP Options

Table 34 lists and describes the required options that you must configure in the `gim-etl` section on the Options tab of the Staging Area and Info Mart DAP Application objects.

Note: Changes to DAP configuration options for the Staging Area and Info Mart take effect on restart of Genesys Info Mart Server.

Table 34: Genesys Info Mart DAP Configuration Options

Option	Description
default-schema	Specifies the database schema or owner name if it is different from the database user ID. Type: Optional Default Value: None Valid Values: Any valid database schema or owner name. Supported DAP Roles: STAGING, INFO_MART
connection-pool-max-size	Specifies the maximum number of connections a pool will maintain at any given time. Type: Optional Default Value: 50 Valid Values: Any valid integer Supported DAP Roles: All
connection-pool-min-size	Specifies the minimum number of connections a pool will maintain at any given time. Type: Optional Default Value: 2 Valid Values: Any valid integer Supported DAP Roles: All
connection-pool-timeout	Specifies the number of seconds a connection can remain pooled but unused before it is discarded. Type: Optional Default Value: 1200 Valid Values: Any valid integer Supported DAP Roles: All

Table 34: Genesys Info Mart DAP Configuration Options (Continued)

Option	Description
connection-pool-idle-test-period	<p>Specifies the frequency, in seconds, with which all idle and pooled—but not checked-out—connections are tested. If set to 0, no testing occurs.</p> <p>Type: Optional Default Value: 300 Valid Value: Any valid integer Supported DAP Roles: All</p>
connection-pool-acquire-increment	<p>Specifies how many connections can be acquired at one time when the pool is exhausted.</p> <p>Type: Optional Default Value: 2 Valid Value: Any valid integer Supported DAP Roles: All</p>
merging-schema	<p>Specifies the name of the database schema or owner that contains the Merge Staging Area tables that are used to merge calls from different IDBs. If you do not specify this option, the Merge Staging Area database tables and other objects are assumed to be owned by the user name you specify on the DB Info tab.</p> <p>Type: Optional Default Value: None Valid Value: Any valid database schema or owner name. Supported DAP Roles: MERGING</p>
role	<p>Specifies what type of data is stored in the target database that Genesys Info Mart Server accesses through this DAP.</p> <p>Default Value: None Valid Value: Any of the following:</p> <p>MERGING Specifies the connection information for the Merge Staging Area database schema. This role is optional; it is required only when interactions that span ICON_CORE IDBs must be merged. This role is associated with only the Staging Area database DAP and must be used in combination with the STAGING role.</p> <p>STAGING Specifies the connection information for the Staging Area database. This role is required; it can be associated with only one DAP.</p> <p>INFO_MART Specifies the connection information for the Info Mart database. This role is required; it can be associated with only one DAP.</p>

Procedure: Configuring the Staging Area DAP

Purpose: To enable Genesys Info Mart access to the Staging Area database by configuring an appropriate DAP.

If your deployment has multiple ICON Voice details IDBs containing interactions that need to be merged, Genesys recommends that you create the Merge Staging Area database schema objects in a separate schema within the Staging Area database. Use the `merging-schema` option to specify the schema or owner name.

Note: The optional Merge Staging Area database schema does not require a separate DAP. The Merging database tables must reside in a separate schema in the Staging Area database.

Prerequisites

- [Preparing the Staging Area Database, page 184.](#)

Start of procedure

1. Create a JDBC DAP for the Staging Area database. To do so, use the procedure [Configuring JDBC DAPs, page 213.](#)
2. Review the configuration options described in Table 34 on [page 208](#) and set them as appropriate to this DAP.

End of procedure

Next Steps

- [Configuring the Info Mart DAP, page 210.](#)

Procedure: Configuring the Info Mart DAP

Purpose: To enable Genesys Info Mart access to the Info Mart database by configuring an appropriate DAP.

Prerequisites

- [Preparing the Info Mart Database, page 190.](#)

Start of procedure

1. Create a JDBC DAP for the Genesys Info Mart database. To do so, use the procedure [Configuring JDBC DAPs, page 213](#).
2. Review the configuration options described in Table 34 on [page 208](#) and set them as appropriate to this DAP.

End of procedure**Next Steps**

- See [Genesys Info Mart Administration Console DAP, page 211](#).

Genesys Info Mart Administration Console DAP

The Genesys Info Mart Administration Console connects to the Staging Area database through a non-JDBC DAP associated with a DB Server, and it does not use any of the JDBC options. Use the following procedure:

- [Configuring the Genesys Info Mart Administration Console DAP, page 212](#).

The following section lists and describes the required `role` option that you must configure on the `options` tab of the Genesys Info Mart Administration Console DAP Application object.

Genesys Info Mart Administration Console DAP Options

[Table 35](#) lists and describes the required `role` option that you must configure in the `gim-etl` section on the `options` tab of the Genesys Info Mart Administration Console DAP Application object.

Table 35: Configuration Options for the Genesys Info Mart Administration Console DAP

Option	Description
role	<p>Specifies what type of data is stored in the database that Genesys Info Mart accesses through this DAP.</p> <p>Default Value: None</p> <p>Valid Value:</p> <p>ADMIN_CONSOLE Specifies the read-only connection information to the Staging Area database from which the Genesys Info Mart Administration Console will retrieve ETL job status, job execution history, and job schedule data.</p> <p>Changes Take Effect: Upon restart of the Genesys Info Mart Administration Console.</p> <p>Note: This DAP must have a DB Server associated with it.</p>

Procedure: Configuring the Genesys Info Mart Administration Console DAP

Purpose: To enable Genesys Info Mart Administration Console access to the Staging Area database by configuring an appropriate DAP.

Prerequisites

- [Preparing the Staging Area Database, page 184.](#)
- Install DB Server to handle database requests submitted through this DAP.

Start of procedure

1. Create a non-JDBC DAP for the Staging Area database. To do so, use the procedure [Configuring Non-JDBC DAPs, page 216.](#)
2. Review the configuration options described in Table 35 on [page 212](#) and set them as appropriate to this DAP.

End of procedure

Next Steps

- If your deployment topology involves multi-IDB merge, HA deduplication, or CCPulse+ reporting on top of the Genesys Info Mart database, configure one or more of the additional DAPs. See “Additional DAPs” on [page 196](#).
- Otherwise, continue with Chapter 6, “Configuring the Genesys Info Mart Application,” on [page 225](#).

DAP Configuration Supporting Procedures

This section describes how to configure the two standard types of DAPs. JDBC DAPs are configured using JDBC DAP options, while non-JDBC DAPs do not use Java Database Connectivity.

Configuring JDBC DAPs

Procedure: Configuring JDBC DAPs

Purpose: To configure a JDBC DAP to use for access to Genesys Info Mart sources and target databases.

This is a supporting procedure for any DAP configuration that involves a JDBC DAP.

**Note for DB2
RDBMS Users**

If you configure multiple DB2 DAPs with the same role, Genesys Info Mart Server will log the following error during startup if each DAP also has the same schema owner and server name (even if the catalog alias names are different):

```
2008-10-20 16:48:39,595 WARN Thread-25 55-20062 "Configuration
error: DAPs 'DAP_0001' and 'DAP_0002' for role 'ICON_CORE' are
configured to access the same data-source: 'owner@server'."
```

For such a configuration, you must make the DB2 DAP connection information unique by making the schema owner unique. This requires you to store data for the same role under separate schema owners in the DB2 database.

For DB2 DAPs, the key identifiers are specified in the following locations:

- catalog alias: field Database Name in tab DB Info
- server: field Host in tab Server Info

- schema owner: option default-schema under the section gim-etl. If the schema owner is not specified, the owner defaults to field User Name.

Prerequisites

- Before you can configure the DAPs required for your topology, you must import the 7.6 DAP template into your environment. For information on creating new Application objects, refer to the *Framework 7.6 Deployment Guide*.

Start of procedure

1. From the Applications folder, right-click, and then select New > Application. The Browse dialog box appears.
 2. From the list, select the Database_Access_Point_760 template, and then click OK. The New Application Properties dialog box appears.
- General Tab**
3. On the General tab:
 - a. In the Name text box, enter the name of this DAP (for example, GIM76_StagingArea_DAP or GIM76_InfoMart_DAP).
 - b. Select the JDBC Connection check box.
 - c. Select the State Enabled check box, if it is not already selected.
- Tenants Tab**
4. For multi-tenant deployments, click the Tenants tab, and then click Add to add a tenant to the list. Repeat this step to add additional tenants.

Note: If you do not have a multi-tenant environment, the Tenants tab does not appear.

- DB Info Tab**
5. On the DB Info tab:
 - a. Verify that the DBMS Name text box is disabled. If it is not, return to the General tab and select the JDBC Connection check box.
 - b. From the DBMS type drop-down list, select the DBMS type. This will correspond to the DBMS type of the database to which this DAP will connect.
 - c. In the Database Name text box, enter the exact name of the database to which this DAP will connect. For example, on Oracle, this is the Transparent Network Substrate (TNS) name. For DB2, this is the alias cataloged in the Genesys Info Mart Server.
 - d. In the User Name and Password text boxes, enter the user name and password of the user who has read and/or write access to the database tables.
- JDBC Info Tab**
6. On the JDBC Info tab:
 - From the Role drop-down list, select Role Main.

Note: Genesys Info Mart ignores all other fields on the JDBC Info tab.

- Server Info Tab** 7. On the Server Info tab:
- a. From the Host drop-down list, select the host name of the database server. If the host name does not appear in the list, you must add it.
 - b. In the Communication Port text box, enter the port number for the database server. For Microsoft SQL, the default port is 1433; for Oracle, it is 1521; for DB2 it is 50000.

- Options Tab** 8. On the Options tab:
- a. Click the Create New Section/Option icon. The Add Section dialog box appears.
 - b. In the Section Name text box, enter gim-etl, and then click OK.
 - c. Double-click the gim-etl section name.
 - d. Click the Create New Section/Option icon. The Edit Option dialog box appears.

Note: If the schema or owner is different from the user ID, you must specify the default-schema option. If you do not specify this option, the schema that is used is the user ID that you specified on the DB Info tab of the DAP.

- e. In the Option Name text box, enter default-schema.
- f. In the Option Value text box, enter the name of the schema owner, and then click OK.
This option specifies an owner that is different from the one associated with the specified user ID.
- g. Click the Create New Section/Option icon again to add another option. The Edit Option dialog box appears.
- h. In the Option Name text box, enter role.
- i. In the Option Value text box, enter the role that corresponds to the particular database. For information about which role you should specify, see Table 33 on [page 201](#).

Note: You can configure one or more roles for a single DAP by specifying all of the roles, separated by commas—for example: ICON_CFG, ICON_CORE, ICON_OCS.

- j. If you are creating a Staging Area DAP to connect to a Staging Area database that contains a Merge Staging Area schema, click the Create New Section/Option icon again to add another option. The Edit Option dialog box appears.
 - In the Option Name text box, enter merging-schema. For a list of the valid option values, see Table 34 on [page 208](#).

Note: If you do not specify a value for the `merging-schema` option, the user name that you specified on the `DB Info` tab will own the Merge Staging Area database tables and other objects.

- If this DAP will be used to connect to an IDB in an HA environment, you must also configure the HA options listed in Table 33 on page 201.
9. Click `Apply` to save your changes, and then click `OK` to close the `New Application Properties` dialog box.
 10. Repeat [Step 1](#) through [9](#) for each JDBC DAP that you require.

End of procedure

Next Steps

- Return to the main procedure for the DAP you have been creating.

Configuring Non-JDBC DAPs

Procedure: Configuring Non-JDBC DAPs

Purpose: To configure a non-JDBC DAP so that Genesys Info Mart clients can access target databases.

This is a supporting procedure for any DAP configuration that involves a Non-JDBC DAP.

Prerequisites

- Before you can configure the DAPs required for your topology, you must first import the 7.6 DAP template into your environment. For information on creating new `Application` objects, refer to the *Framework 7.6 Deployment Guide*.
- Before you can configure a non-JDBC DAP, you must install the DB Server that handles database requests submitted through this DAP.

Start of procedure

1. From the `Applications` folder, right-click, and then select `New > Application`. The `Browse` dialog box appears.
2. From the list, select the `Database_Access_Point_760` template, and then click `OK`. The `New Application Properties` dialog box appears.

- General Tab** 3. On the **General** tab:
- In the **Name** text box, enter the name of this DAP (for example, GIM76_AdminConsole_DAP, or GIM76_CCPulse_DAP).
 - Click the **Browse** button next to the **DB Server** text box, and then navigate to the DB Server that is running on the Genesys Info Mart Server machine, or on any machine that has the proper RDBMS Client installed for your Staging Area database.
 - Do *not* select the **JDBC Connection** check box.
 - Select the **State Enabled** check box, if it is not already selected.

- Tenants Tab** 4. For multi-tenant deployments, click the **Tenants** tab, and then click **Add** to add a tenant to the list. Repeat this step to add additional tenants.

Note: If you do not have a multi-tenant environment, the **Tenants** tab does not appear.

- DB Info Tab** 5. On the **DB Info** tab:
- In the **DBMS Name** text box, enter the name that is particular to the DBMS type:
 - Oracle— Enter the TNS name that the database client uses to connect to the database.
 - Microsoft SQL—Enter the name of the SQL Server where the database resides.
 - DB2—Enter the name of the catalogued database alias that the database client uses to connect to the database.
 - From the **DBMS type** drop-down list, select the DBMS type. This will correspond to the DBMS type of the database to which this DAP will connect.
 - In the **Database Name** text box, enter the exact name of the database to which this DAP will connect. For Oracle, this is the TNS name.
 - In the **User Name** and **Password** text boxes, enter the user name and password of the user who has read and/or write access to the database tables.

- JDBC Info Tab** 6. On the **JDBC Info** tab, verify that all the fields are disabled. If they are not disabled, return to the **General** tab, and clear the **JDBC Connection** check box.

- Options Tab** 7. On the **Options** tab:
- Click the **Create New Section/Option** icon. The **Add Section** dialog box appears.
 - In the **Section Name** text box, enter `gim-etl`, and then click **OK**.
 - Double-click the `gim-etl` section name.
 - Click the **Create New Section/Option** icon. The **Edit Option** dialog box appears.

- e. In the Option Name text box, enter role.
- f. In the Option Value text box:
 - For the Genesys Info Mart Administration Console DAP, enter ADMIN_CONSOLE. See Table 35 on [page 212](#).
 - For the CCPulse+ DAP, enter INFO_MART_READ_ONLY. See Table 36 on [page 223](#).
8. Click Apply to save your changes, and then click OK to close the New Application Properties dialog box.

End of procedure

Next Steps

- Return to the main procedure for the DAP you have been creating.

Advanced DAP Configuration Procedures

Depending on your deployment and down-stream reporting applications, use the procedures in this section to create and configure additional DAPs as appropriate for your environment.

Configuring DAPs for Multi-IDB Merge

Procedure: Configuring DAPs for multi-IDB merge

Purpose: To enable a merge of call-related records that span multiple IDBs.

Prerequisites

- [Configuring for Multi-IDB Merge, page 188](#).
- [Configuring Interaction Concentrator DAPs, page 205](#).
- [Configuring the Staging Area DAP, page 210](#).

Start of procedure

1. Open the Properties dialog box of the Staging Area DAP.
2. On the Options tab, add the MERGING value to the role option in the gim-etl section. For more information, see Table 34 on [page 208](#).

End of procedure

Next Steps

- If necessary, continue with advanced DAP configuration procedures in this section.
- Otherwise, continue with Chapter 6, “Configuring the Genesys Info Mart Application,” on [page 225](#).

Configuring DAPs for High Availability Data Extraction

Procedure:**Configuring DAPs for ICON Configuration Details HA**

Purpose: To enable Genesys Info Mart access to an HA pair of IDBs that store configuration data. This procedure applies to both new and migrating Genesys Info Mart deployments as well as to existing 7.6 environments in which ICON Configuration details HA has not been enabled.

Prerequisites

- Two ICON applications configured to store the same Configuration details must exist in the configuration. See [Configuring ICON Applications for Configuration Details HA, page 163](#).
- Two IDBs must be created and modified to store the same Configuration details as described in [Preparing IDBs, page 167](#).
- Two JDBC DAPs must be configured to provide access to the primary and secondary IDBs in the HA pair that store Configuration details, as described in [Configuring JDBC DAPs, page 213](#).

Start of procedure

1. Verify that a value of `ICON_CFG` is specified for the `role` option in the `gim-etl` section on the `Options` tab of both DAP Application objects in the HA pair. For more information, see [Table 33 on page 201](#).
2. For one of the DAPs in the pair, configure the `ha-pair-primary` option in the `gim-etl` section to specify the IDB from which the ETL should extract Configuration details first. If this option is added to the other DAP in the pair, you must set it to `FALSE`.

The ICON applications can store data for other roles (such as `gos`) in the same IDBs, and you can choose whether this data is redundant. However, Genesys Info Mart will extract data from only one of the IDBs, depending on the additional roles that you configure in one of the DAPs in the HA pair (for example, `ICON_OCS`).

Note: If you choose to store redundant data for the other roles, do not move a role from one IDB in the pair to the other. If you do, the Info Mart database will have duplicate data or missing data.

End of procedure

Next Steps

- If necessary, continue with the advanced DAP configuration procedures in this section.
- Otherwise, continue with Chapter 6, “Configuring the Genesys Info Mart Application,” on [page 225](#).

Procedure: Configuring DAPs for ICON Voice Details HA

Purpose: To enable Genesys Info Mart access to an HA pair of IDBs that store Voice details, including voice interaction and agent activity details. This procedure applies to new Genesys Info Mart deployments, as well as to both existing and migrating environments in which ICON Voice details HA has not been enabled.

Note: No special DAP configuration is required to enable agent activity data HA in an environment in which redundancy of ICON call-related and attached data has already been enabled (for example, when migrating from Genesys Info Mart release 7.5).

Prerequisites

- Two ICON applications configured to store the same Voice details must exist in the configuration. See [Configuring ICON Applications for Voice Details HA, page 164](#).
- Two IDBs must be created and modified to store the same Voice details as described in [Preparing IDBs, page 167](#).
- Two JDBC DAP must be configured to provide access to the primary and secondary IDBs in the HA pair that store Voice details, as described in [Configuring JDBC DAPs, page 213](#).

Start of procedure

1. Verify that the value of `ICON_CORE` is specified for the `role` option in the `gim-etl` section on the `Options` tab of both DAP `Application` objects in the HA pair. For more information, see Table 33 on [page 201](#).
2. For each DAP in the pair, configure the `ha-pair-id` option in the `gim-etl` section to specify the two DAPs that constitute the pair. This can be any value, provided that the same value is used for both DAPs.
3. For one of the DAPs in the pair, configure the `ha-pair-primary` option in the `gim-etl` section to specify the IDB from which the ETL should extract Voice details when data quality in both IDBs is the same. If this option is added to the other DAP in the pair, you must set it to `FALSE`.

Note: You cannot move the `ha-pair-primary` option from one IDB to the other. If you do, the Info Mart database will have duplicate data or missing data. For more information about the HA configuration options, see Table 33 on [page 201](#).

The ICON applications can store data for other roles (such as `gos`) in the same IDBs, and you can choose whether this data is redundant. However, Genesys Info Mart will extract data from only one of the IDBs, depending on the additional roles that you configure in one of the DAPs in the HA pair (for example, `ICON_OCS`).

Note: If you choose to store redundant data for the other roles, do not move a role from one IDB in the pair to the other. If you do, the Info Mart database will have duplicate data or missing data.

4. If you are extracting UserEvent-based KVP data, make sure both DAPs in the HA pair have the same option values configured for all `[custom-data]` `user-event-data` options.

End of procedure

Next Steps

- If necessary, continue with the advanced DAP configuration procedures in this section.
- Otherwise, continue with Chapter 6, “Configuring the Genesys Info Mart Application,” on [page 225](#).
- After you deploy the Genesys Info Mart application and perform post-installation activities, you need to complete the HA part of deployment with [Enabling HA Deduplication of Voice Agent Activity, page 397](#).

Procedure: Configuring DAPs for ICON Outbound Contact Details HA

Purpose: To enable Genesys Info Mart access to an HA pair of IDBs that store Outbound Contact details. This procedure applies to new Genesys Info Mart deployments, as well as to both existing and migrating environments in which ICON Outbound Contact details HA has not been enabled.

Note: HA of Outbound Contact requires two dedicated IDBs, each of which has an associated DAP with the `role` option of `ICON_OCS`. No other roles can be extracted from this pair of IDBs.

Prerequisites

- Two ICON applications that are configured to store the same Outbound Contact details must exist in the configuration. See [Configuring ICON Applications for Outbound Contact Details HA](#), page 166.
- Two IDBs must be created and modified to store the same Outbound Contact details as described in [Preparing IDBs](#), page 167.
- Two JDBC DAPs must be configured to provide access to both IDBs in the HA pair that store Outbound Contact details, as described in [Configuring JDBC DAPs](#), page 213.

Start of procedure

1. Verify that the value of `ICON_OCS` is specified for the `role` option in the `gim-etl` section on the `Options` tab of both `DAP Application` objects in the HA pair. For more information, see Table 33 on [page 201](#).
2. For each DAP in the pair, configure the `ha-pair-id` option in the `gim-etl` section to specify the two DAPs that constitute the pair. This can be any value, provided that the same value is used for both DAPs.
3. For one of the DAPs in the pair, configure the `ha-pair-primary` option in the `gim-etl` section to specify one of the IDBs in the HA pair. Unlike HA deduplication of Configuration or Voice details, setting this option does not affect which IDB the ETL will extract first when the data quality in both IDBs is the same. However, the `ha-pair-primary` configuration option still must be configured. If this option is added to the other DAP in the pair, you must set it to `FALSE`.

Note: You cannot move the `ha-pair-primary` option from one IDB to the other. If you do, the Info Mart database will have duplicate data or missing data. For more information about the HA configuration options, see Table 33 on [page 201](#).

End of procedure

Next Steps

- If necessary, continue with advanced DAP configuration procedures in this section.
- Otherwise, continue with Chapter 6, “Configuring the Genesys Info Mart Application,” on [page 225](#).

Configuring a DAP for CCPulse+ Reports

If you use CCPulse+ reports that are based on Genesys Info Mart data, you need to enable CCPulse+ access to the Info Mart database. Configure a separate Database Access Point object to specify the database access parameters.

[Table 36](#) provides the value for the `role` option that you must configure for the DAP dedicated to CCPulse+.

Table 36: Configuration Options for the CCPulse+ DAP

Option	Description
role	<p>Specifies what type of data is stored in the database that Genesys Info Mart accesses through this DAP.</p> <p>Default Value: None</p> <p>Valid Values:</p> <p><code>INFO_MART_READ_ONLY</code> Specifies the read-only connection information to the Genesys Info Mart Views database schema from which CCPulse+ will retrieve Genesys Info Mart Inbound Voice reporting data.</p> <p>Changes Take Effect: Upon restart of the CCPulse+ application</p> <p>Note: This DAP must have a DB Server associated with it.</p>

Procedure: Configuring a DAP for CCPulse+ reports

Purpose: To enable CCPulse+ to connect to the Info Mart database by configuring a non-JDBC DAP that is associated with a DB Server.

Prerequisites

- [Preparing the Info Mart Database, page 190.](#)
- Install DB Server to handle database requests that are submitted through this DAP.

Start of procedure

1. Create a non-JDBC DAP that is associated with a DB Server application. Use the generic procedure [Configuring Non-JDBC DAPs, page 216.](#)
You must associate this non-JDBC DAP with a DB Server application that is connected to the Info Mart database.
2. Set the INFO_MART_READ_ONLY value for the role options. See [Table 36](#) for more information.

End of procedure

Next Steps

- See Chapter 6, “Configuring the Genesys Info Mart Application,” on [page 225.](#)



Chapter

6

Configuring the Genesys Info Mart Application

This chapter describes how to configure Genesys Info Mart, which you must do before you install it. It contains the following sections:

- [Overview, page 225](#)
- [Importing the Application Template, page 226](#)
- [Configuring the Genesys Info Mart Application, page 228](#)
- [Configuring Options for Genesys Info Mart, page 231](#)
- [Configuring Supporting Objects, page 334](#)

Overview

Before You Proceed

Before you can configure Genesys Info Mart, make sure that you have:

- Prepared your data source applications and their databases.
- Prepared your Genesys Info Mart target databases.
- Configured the Database Access Points (DAPs) that are required to access the source and target databases in your topology.

If you have not already done so, review the preceding chapters before you continue.

Task Flow for Configuring Genesys Info Mart

[Table 37](#) summarizes the task flow to configure an `Application` object and related configuration objects for Genesys Info Mart.

Table 37: Task Flow: Configuring Genesys Info Mart

Objective	Related Procedures and Actions
Configure a server application to support detailed reporting about interactions of various media types.	Create and configure an <code>Application</code> object for Genesys Info Mart Server: <ol style="list-style-type: none"> 1. See Importing the Application Template. 2. See Configuring the Genesys Info Mart Application, page 229. 3. Review the configuration options and decide on the settings appropriate to your environment. See “Options Summary Charts” on page 233 and “Genesys Info Mart Application Option Descriptions” on page 252. 4. See Setting the Genesys Info Mart Application Options, page 232.
Configure the other objects required to support detailed reporting about interactions of various media types.	Configure necessary options in individual configuration objects, for use by Genesys Info Mart Server: <ol style="list-style-type: none"> 1. See Setting the Annex Tab to Display, page 335. 2. If you have a multi-tenant environment, see Setting Tenant Object Options, page 335. 3. See Setting Switch Object Options, page 337. 4. See Setting DN Object Options, page 339.

Refer to Chapter 10, “Activating High Availability Data Extraction,” on [page 375](#) if you need to enable high availability (HA) data extraction in either a new or an existing Genesys Info Mart environment.

Importing the Application Template

Before you can configure an `Application` object for Genesys Info Mart, you must import its application template. The application template provides a majority of the configuration options, as well as the default values for them.

The Genesys Info Mart installation package includes two application templates for your needs:

- The template that is named `Genesys_Info_Mart_ETL_760.apd` targets the needs of the customers who create their own reports that are based on Genesys Info Mart data.

- The template that is named `Genesys_Info_Mart_ETL_GI2_760.apd` targets the needs of the customers who use Genesys Interactive Insights (GI2) reports that are based on Genesys Info Mart data.

The two templates differ in the default settings of GI2-related options.

Procedure: Importing the Application Template

Purpose: To import an application template that you can use to create as many `Application` objects of the same type as you need.

Note: You must import the application template only once, no matter how many `Genesys Info Mart Application` objects you create.

Prerequisites

- Review “Before You Proceed” on [page 225](#).

Start of procedure

1. Insert the Genesys Info Mart CD into your CD-ROM drive.
2. Start Genesys Configuration Manager.
3. Navigate to `Configuration > Environment`.
4. Right-click the `Application Templates` folder, and then select `Import application template`.
5. Navigate to the `Templates` directory on the Genesys Info Mart CD, and decide which template you have to import:
 - `Genesys_Info_Mart_ETL_760.apd`
 - `Genesys_Info_Mart_ETL_GI2_760.apd`

Note: You must select `Genesys_Info_Mart_ETL_GI2_760.apd` if you will use Genesys Info Mart in conjunction with GI2.

6. Select the template that is appropriate to your environment, and then click `Open`.

The `New Application Template Properties` dialog box appears ([Figure 19](#)).

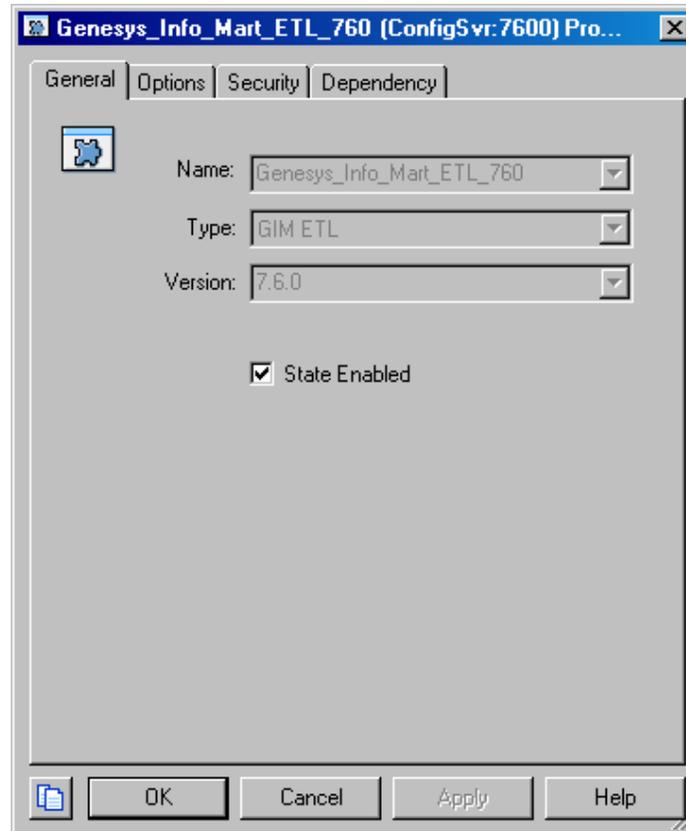


Figure 19: New Application Template Properties Dialog Box

7. Either enter a new name for the Genesys Info Mart template in the Name text box, or accept the default name.
8. Click OK.

End of procedure

Next Steps

- [Configuring the Genesys Info Mart Application, page 228.](#)

Configuring the Genesys Info Mart Application

After you import the application template, you can create and configure an Application object for Genesys Info Mart by using Configuration Manager.

Procedure: Configuring the Genesys Info Mart Application

Purpose: To configure the application for your environment, using the Genesys Info Mart 7.6 application template that you just imported.

Prerequisites

- [Importing the Application Template, page 226.](#)

Start of procedure

1. In the Genesys Configuration Manager, right-click the Applications folder, and then select New > Application.

The Application Templates Browse dialog box appears.

2. Select the Genesys Info Mart 7.6 template that you just created, and then click OK.

The New Application Properties dialog box appears ([Figure 20](#)).

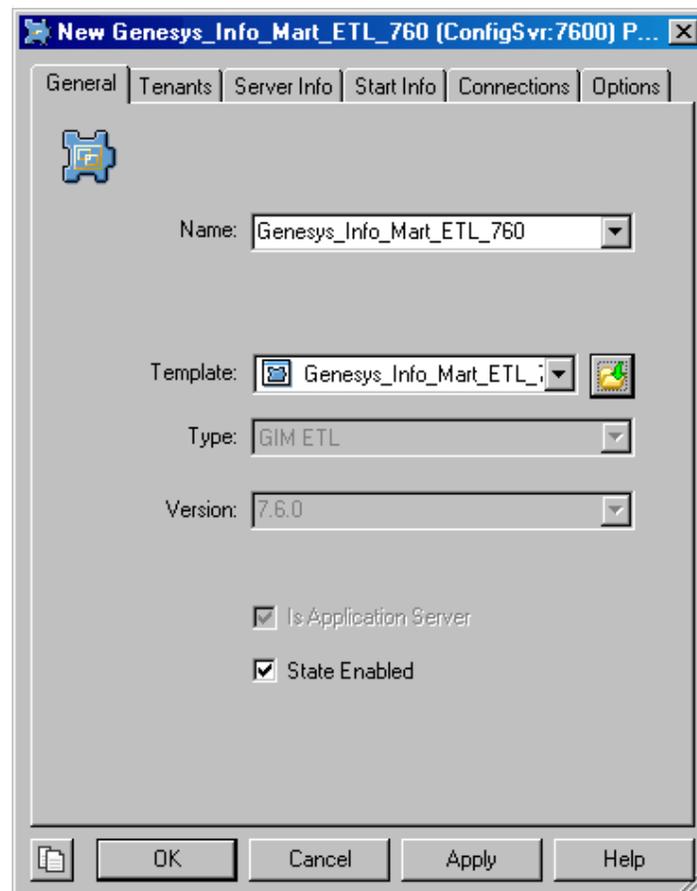


Figure 20: New Application Properties Dialog Box

- General Tab** 3. On the **General** tab:
- In the **Name** text box, enter a name for your Genesys Info Mart application, or select one from the drop-down list.
 - Make sure that the **State Enabled** check box is selected.

- Tenants Tab** 4. For multi-tenant deployments, click the **Tenants** tab, and then click **Add** to add a tenant to the list.

Tenants specify the separate client businesses with the managed services deployment that you want Genesys Info Mart to serve.

Repeat this step to add additional tenants.

Note: If you do not have a multi-tenant environment, the **Tenants** tab does not appear.

- Server Info Tab** 5. On the **Server Info** tab:
- In the **Host** text box, select the host on which you will install the Genesys Info Mart Server, or click **Browse** to navigate to the host location. If the host does not appear in the list, you must add it.
 - In the **Communications Port** text box, enter the port number that corresponds to your host. The Genesys Info Mart Administration Console uses this port to communicate with the Genesys Info Mart Server.

- Start Info Tab** 6. On the **Start Info** tab, enter *any* value in the following text boxes:
- Working Directory**
 - Command Line**
 - Command Line Arguments**

Note: The values that you enter are merely placeholders; they are updated with actual values during the Genesys Info Mart installation process.

- Connections Tab** 7. On the **Connections** tab, add a connection to:
- Each of the DAPs that you configured in “Configuring DAPs” on [page 195](#).

Note: Be sure to add a connection to the Genesys Info Mart Administration Console DAP

- The **Message Server Application** object—Genesys Info Mart uses Message Server to send log messages to the Genesys Central Logger.
- The **ICON** application that stores the **Multimedia** details—if you want to extract **Multimedia** details (DAP role is **ICON_MM**). This **ICON** application must be different than the **ICON** application that stores **Voice** details.

- d. (Optional) The Configuration Server application (named `confserv`)— You must configure an overt connection to Configuration Server only if you want to use Advanced Disconnect Detection Protocol (ADDP) for the connection.

To enable ADDP for the connection, specify `addp` as the Connection Protocol, and set the values for the `Local Timeout`, `Remote Timeout`, and `Trace Mode` properties. For more information, see the *Framework 8.0 Deployment Guide*.

8. Click `Apply` to save your changes, and then click `OK` to close the `New Applications Properties` dialog box.

End of procedure

Next Steps

- Verify that customized and required options are set correctly. See the information and instructions in [Configuring Options for Genesys Info Mart, page 231](#).

Configuring Options for Genesys Info Mart

This section describes how to customize your Genesys Info Mart configuration settings to best suit your environment. Refer to this section while you install your Genesys Info Mart 7.6 application, or refer to it after the initial configuration to perform additional customization.

This section includes the following information:

- [Setting the Genesys Info Mart Application Options, page 232](#)—A procedure that describes how to set configuration options in the `Genesys Info Mart Application` object.
- “Options Summary Charts” on [page 233](#)—Tables that summarize the `Genesys Info Mart Application` options, by area of functionality:
 - “Data-Processing Configuration Options” on [page 234](#).
 - “Operations-Related Configuration Options” on [page 244](#).

For deployments that use GI2 reports that are based on Genesys Info Mart data, tables that summarize the relevant `Genesys Info Mart Application` options:

- “GI2-Related Configuration Options” on [page 248](#).
- “GI2 Performance Configuration Options” on [page 251](#).
- “Genesys Info Mart Application Option Descriptions” on [page 252](#)—Descriptions of required and optional configuration options that you set in the `Genesys Info Mart Application` object.

In addition, to customize data processing for certain configuration objects in your environment, you must set certain options in the following objects:

- Tenant (see “Tenant Object Options” on [page 335](#))
- Switch (see “Switch Object Options” on [page 337](#))
- DN (see “DN Object Options” on [page 339](#))
- Field (see “Capturing Outbound Contact Details” on [page 141](#))

Procedure:

Setting the Genesys Info Mart Application Options

Purpose: To configure the settings for the Genesys Info Mart 7.6 application to better fit your environment.

You specify configuration options on the `Options` tab of the Genesys Info Mart `Application` object.

Options are specific to your application and release. They appear on the `Options` tab in sections that are devoted to specific functions. Refer to the following sections:

- “Options Summary Charts” on [page 233](#) for information on general functional grouping.
- “Genesys Info Mart Application Option Descriptions” on [page 252](#) for a complete listing and explanation of all the configuration options.

Prerequisites

- [Configuring the Genesys Info Mart Application, page 228](#).

Start of procedure

1. In the Genesys Configuration Manager, open the `Application` object that you configured for your Genesys Info Mart.
The `Application Properties` dialog box appears.
2. Select the `Options` tab.
3. If you plan to use Genesys Interactive Insights (GI2) as your end-user reporting application, configure the options that enable data population for GI2 reports.

Refer to Table 40 on [page 248](#) for the list of relevant options and their default values.

4. If you plan to use GI2, disable certain options that do not contribute to GI2 data population.
Refer to Table 41 on [page 251](#) for the list of relevant options and their default values. Disabling these options improves Genesys Info Mart performance in a deployment with GI2 as the end-user reporting system.
5. If you do not plan to use GI2, configure the options that define how Genesys Info Mart populates data.
Refer to Table 38 on [page 234](#) for the list of relevant options and their default values.
6. Configure the options that control the extraction, transformation, and loading (ETL) process.
Refer to Table 39 on [page 244](#) for the list of relevant options and their default values.
7. If you are deploying an HA architecture for ICON Configuration details, ICON Voice details, or ICON Outbound Contact details in a new Genesys Info Mart environment, configure Genesys Info Mart to process and deduplicate HA data.
Refer to the “[High Availability](#)” section in Table 39 on [page 244](#) for the list of relevant options and their default values.
8. After you set all the desired options for your environment, click **Apply** to save your changes, and then click **OK** to close the **Applications Properties** dialog box.

End of procedure

Next Steps

- In a multi-tenant configuration environment, configure the **Tenant** object options. See [Tenant Object Options, page 335](#).
- Otherwise, proceed to configuring the **Switch** object options. See [Switch Object Options, page 337](#).

Options Summary Charts

This section groups the Genesys Info Mart configuration option as follows:

- [Data-Processing Configuration Options, page 234](#).
- [Operations-Related Configuration Options, page 244](#).
- [GI2-Related Configuration Options, page 248](#).
- [GI2 Performance Configuration Options, page 251](#).

Note: If you are planning to use GI2 as your end-user reporting interface, start with the GI2-related sections first.

Data-Processing Configuration Options

Table 38 lists the configuration options that affect the content and quality of data stored in the Genesys Info Mart database. The table groups the options by functional area and, within functional area, by type of data. For each functional area, the options that apply in any environment are listed first.

Review the options to identify the ones that are relevant to the reports you are required to provide on the data types that are relevant to your environment.

For example, suppose that you would like to report on interactions and agent activity at the DN and ACD queue levels, using Genesys Info Mart pre-aggregated data, in a contact center that processes inbound voice interactions. In this case, select the necessary options from the following sections in **Table 38**:

- “Contact Center Configuration History” on [page 234](#).
- “Interactions Data Not Specific to Media Type” on [page 234](#).
- “Voice Media Interactions Data” on [page 235](#).
- “Agent Activity Data Not Specific to Media Type” on [page 237](#).
- “Voice Agent Activity Data” on [page 237](#).
- “ACD Queue or Virtual Queue Activity Data” on [page 238](#).
- “Data Aggregation” on [page 240](#).
- “Time Zones and Calendars” on [page 242](#).

Refer to “Genesys Info Mart Application Option Descriptions” on [page 252](#) as required, to understand how a particular configuration option works and what functionality it enables. Finally, review the valid values documented as part of the option descriptions, and determine the values appropriate to your environment.

Table 38: Genesys Info Mart Data-Related Options

Configuration Object	Section Name	Option Name and Default Value	Comments
Contact Center Configuration History			
Genesys Info Mart Application	[optional-tables]	populate-resource-skill-facts=TRUE populate-resource-group-facts=TRUE populate-place-group-facts=TRUE	In the Application object, configure the options on the Options tab.
Interactions Data Not Specific to Media Type			
Genesys Info Mart Application	[gim-etl]	short-abandon-threshold=10	In the Application object, configure the options on the Options tab.
	[gim-transformation]	show-abandoned-detail=FALSE	

Table 38: Genesys Info Mart Data-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Genesys Info Mart Application (continued)	[ixn-user-data-facts]	user-data-1=LAST user-data-2=LAST user-data-3=LAST user-data-4=LAST user-data-5=LAST user-data-6=LAST user-data-7=LAST user-data-8=LAST user-data-9=LAST user-data-10=LAST user-data-11=LAST user-data-12=LAST user-data-13=LAST user-data-14=LAST user-data-15=LAST user-data-16=LAST user-data-17=LAST user-data-18=LAST user-data-19=LAST user-data-20=LAST	
Voice Media Interactions Data			
Genesys Info Mart Application	[optional-tables]	populate-interaction-resource-facts=FALSE populate-interaction-resource-state-facts=FALSE	In the Application object, configure the options on the Options tab.
	[gim-etl]	max-wrap-delay=0 default-ivr-to-self-service=FALSE populate-voice-ixn-seg-facts=TRUE extract-partially-merged-interactions=FALSE	
	[gim-transformation]	show-conference-detail=FALSE voice-init-resp-duration=TIME_TO_FIRST_AGENT	
	[custom-data]	extract-user-event-data=FALSE user-event-data-timeout=300	
(Network) Switch	[gim-etl]	network-switch	In the Switch object, configure the option on the Annex tab.

Table 38: Genesys Info Mart Data-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Database Access Point (DAP)	[custom-data]	user-event-data	In the DAP object for data extraction <code>role=ICON_CORE</code> , configure the option on the Options tab. The only rows of Table 5, “Key-Value Pair Mapping,” on page 97 that are relevant here are those with a <i>numerical value</i> in the GIM-ID column. There is <i>one</i> exception: <code>10047</code> for <code>GSW_CALL_ATTEMPT_GUID</code> . The <code>user-event-data</code> cannot override that GIM-ID; doing so could interfere with processing of outbound calls.
Multimedia Interactions Data			
Genesys Info Mart Application	[gim-etl]	populate-email-ixns=FALSE populate-chat-ixns=FALSE populate-open-media-ixns=FALSE populate-detailed-ixn-subtype=FALSE	In the Application object, configure the options on the Options tab.

Table 38: Genesys Info Mart Data-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Agent Activity Data Not Specific to Media Type			
Genesys Info Mart Application	[optional-tables]	populate-resource-session-facts=TRUE populate-resource-state-facts=TRUE populate-resource-state-reason-facts=TRUE populate-dt-resource-state-facts=FALSE populate-dt-resource-state-reason-facts=FALSE populate-dt-dnd-facts=FALSE populate-sm-resource-session-facts=FALSE populate-sm-resource-state-facts=FALSE populate-sm-resource-state-reason-facts=FALSE	In the Application object, configure the options on the Options tab.
	[gim-etl]	max-session-duration-in-hours=24 sm-resource-state-priority=ACW, NOT_READY, BUSY, READY	
Switch	[gim-etl]	factor-dnd-into-sm-resource-states=FALSE (for voice-handling switches) factor-dnd-into-sm-resource-states=TRUE (for multimedia-handling switches)	In the Switch object, configure the option on the Annex tab.
Voice Agent Activity Data			
Genesys Info Mart Application	[gim-etl]	populate-dt-voice-resource-activity=FALSE populate-sm-voice-resource-activity=FALSE populate-voice-resource-states-for-queues=TRUE populate-voice-init-consult-in-irf=FALSE	In the Application object, configure the options on the Options tab.
	[gim-transformation]	complex-voice-agent-env=TRUE	

Table 38: Genesys Info Mart Data-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Multimedia Agent Activity Data			
Genesys Info Mart Application	[gim-etl]	populate-email-resource-activity=FALSE populate-chat-resource-activity=FALSE populate-open-media-resource-activity=FALSE populate-dt-email-resource-activity=FALSE populate-dt-chat-resource-activity=FALSE populate-dt-open-media-resource-activity=FALSE populate-sm-email-resource-activity=FALSE populate-sm-chat-resource-activity=FALSE populate-sm-open-media-resource-activity=FALSE	In the Application object, configure the options on the Options tab.
ACD Queue or Virtual Queue Activity Data			
Genesys Info Mart Application	[gim-etl]	q-answer-threshold-voice=60 q-short-abandoned-threshold-voice=10 q-answer-threshold-mm=60	The q-answer-threshold-voice and q-answer-threshold-mm settings can be overridden on the Switch or DN object level. In the Application object, configure the options on the Options tab.
	[optional-tables]	populate-virtual-queue-facts=FALSE populate-acd-queue-facts=FALSE	The populate-acd-queue-facts setting can be overridden on the Switch or DN object level. In the Application object, configure the options on the Options tab.

Table 38: Genesys Info Mart Data-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Switch	[gim-etl]	populate-acd-queue-facts	Overrides the same option configured at the application level. In the <code>Switch</code> object, configure the options on the <code>Annex</code> tab.
DN (ACD Queue)	[gim-etl]	populate-acd-queue-facts	Overrides the same option configured either at the switch or application level. In the <code>DN</code> object, configure the option on the <code>Annex</code> tab.
DN (Virtual Queue or ACD Queue)	[gim-etl]	q-answer-threshold-voice	Overrides the same option configured at the application level. In the <code>DN</code> object, configure the option on the <code>Annex</code> tab.
DN (Virtual Queue)	[gim-etl]	q-answer-threshold-mm	Overrides the same option configured at the application level. In the <code>DN</code> object, configure the option on the <code>Annex</code> tab.
Outbound Contact Data			
Genesys Info Mart Application	[gim-etl]	populate-ocs-ixns=TRUE max-camp-group-session-duration-in-hours=168 max-camp-group-state-duration-in-hours=168 days-to-keep-stg-icon-call-info=5	In the <code>Application</code> object, configure the options on the <code>Options</code> tab.

Table 38: Genesys Info Mart Data-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
GVP VAR Data			
Genesys Info Mart Application	[gim-tuning]	update-historical-gvp-facts-intraday=FALSE	In the <code>Application</code> object, configure the options on the <code>Options</code> tab.
	[optional-tables]	populate-gvp-var-facts=FALSE	
Data Aggregation			
Genesys Info Mart Application or Tenant	[gim-aggregates-tenant]	populate-agent-state-aggregates=FALSE populate-skill-demand-aggregates=FALSE populate-skill-combination-aggregates=FALSE maximum-aggregation-level=MONTH populate-queue-aggregates=FALSE populate-ixn-service-type-aggregates=FALSE populate-ixn-agent-aggregates=FALSE populate-ixn-agent-interval-aggregates=FALSE populate-ixn-agent-out-aggregates=FALSE populate-agent-state-interval-aggregates=FALSE short-talk-threshold=5 max-late-arriving-fact-time-limit=0 interval-aggregates-fact-time-window=7	An option configured in the <code>Tenant</code> object overrides the same option configured at the application level. In the <code>Application</code> object, configure the options on the <code>Options</code> tab. In the <code>Tenant</code> object, configure the options on the <code>Annex</code> tab.
	[gim-agg-skill-inb-ixn-tenant]	init-resp-duration-range-1-thold=15 init-resp-duration-range-2-thold=30 init-resp-duration-range-3-thold=60	
	[gim-agg-skill-abandon-tenant]	abandon-duration-range-1-thold=15 abandon-duration-range-2-thold=30 abandon-duration-range-3-thold=60	

Table 38: Genesys Info Mart Data-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Genesys Info Mart Application or Tenant (Continued)	[gim-agg-voice-init-resp-tenant]	init-resp-duration-range-01-thold=5 init-resp-duration-range-02-thold=15 init-resp-duration-range-03-thold=30 init-resp-duration-range-04-thold=45 init-resp-duration-range-05-thold=60 init-resp-duration-range-06-thold=90 init-resp-duration-range-07-thold=120 init-resp-duration-range-08-thold=180 init-resp-duration-range-09-thold=240 init-resp-duration-range-10-thold=0 init-resp-duration-range-11-thold=0 init-resp-duration-range-12-thold=0 init-resp-duration-range-13-thold=0 init-resp-duration-range-14-thold=0 init-resp-duration-range-15-thold=0 init-resp-duration-range-16-thold=0 init-resp-duration-range-17-thold=0 init-resp-duration-range-18-thold=0 init-resp-duration-range-19-thold=0	An option configured in the Tenant object overrides the same option configured at the application level. In the Application object, configure the options on the Options tab. In the Tenant object, configure the options on the Annex tab.
	[gim-agg-voice-abandon-tenant]	abandon-duration-range-01-thold=5 abandon-duration-range-02-thold=15 abandon-duration-range-03-thold=30 abandon-duration-range-04-thold=45 abandon-duration-range-05-thold=60 abandon-duration-range-06-thold=90 abandon-duration-range-07-thold=120 abandon-duration-range-08-thold=180 abandon-duration-range-09-thold=240 abandon-duration-range-10-thold=0 abandon-duration-range-11-thold=0 abandon-duration-range-12-thold=0 abandon-duration-range-13-thold=0 abandon-duration-range-14-thold=0 abandon-duration-range-15-thold=0 abandon-duration-range-16-thold=0 abandon-duration-range-17-thold=0 abandon-duration-range-18-thold=0 abandon-duration-range-19-thold=0	An option configured in the Tenant object overrides the same option configured at the application level. In the Application object, configure the options on the Options tab. In the Tenant object, configure the options on the Annex tab.

Table 38: Genesys Info Mart Data-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Genesys Info Mart Application	[gim-etl]	sub-hour-level-aggregation=30	<p>Warning! Carefully decide on the option value during the initial deployment. Once Genesys Info Mart produces subhour aggregates, you cannot change the option value.</p> <p>In the Application object, configure the options on the Options tab.</p>
<p>Time Zones and Calendars</p> <p>Note: If you cannot decide on the value for some of these options, return to their configuration after you run the List Time Zone IDs utility following the installation. See “Starting the List Time Zone IDs Utility” on page 362 for more information.</p>			
Genesys Info Mart Application	[gim-etl]	std-enterprise-time-zone=GMT	<p>Warning! Carefully decide on the option value during the initial deployment. Changing the option value after deployment will impact data quality.</p> <p>In the Application object, configure the options on the Options tab.</p>
	[enterprise-fiscal-periods]	last-month-of-year=DECEMBER last-day-of-last-month=31 first-day-of-week=MONDAY last-day-identifies-year=TRUE week-pattern-in-quarter=544	In the Application object, configure the options on the Options tab.

Table 38: Genesys Info Mart Data-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Genesys Info Mart Application or Tenant	[gim-etl-tenant]	std-tenant-time-zone=GMT	<p>Warning! Carefully decide on the option value during the initial deployment. Changing the option value after deployment will impact data quality.</p> <p>An option configured in the Tenant object overrides the same option configured at the application level.</p> <p>In the Application object, configure the options on the Options tab. In the Tenant object, configure the options on the Annex tab.</p>
	[tenant-fiscal-periods]	last-month-of-year=DECEMBER last-day-of-last-month=31 first-day-of-week=MONDAY last-day-identifies-year=TRUE week-pattern-in-quarter=544	<p>An option configured in the Tenant object overrides the same option configured at the application level.</p> <p>In the Application object, configure the options on the Options tab. In the Tenant object, configure the options on the Annex tab.</p>

Operations-Related Configuration Options

Table 39 lists the configuration options, grouped by functional area, that affect the operations of the Genesys Info Mart components. These options control the ETL process, and most of them apply in any environment.

Review the options to identify the ones that are relevant to the Genesys Info Mart operation in your environment. In particular, decide:

- Whether ETL is to extract data from HA data sources (see “[High Availability](#)”).
- How to schedule launching of ETL jobs (see “[Scheduling](#)”).
- How to purge outdated data (see “[Purging](#)” on [page 245](#)).
- What logging level is sufficient for Genesys Info Mart Server (see “[Logging](#)” on [page 246](#)).
- How to optimize Genesys Info Mart Server performance (see “[Performance Tuning](#)” on [page 247](#)).

Refer to “[Genesys Info Mart Application Option Descriptions](#)” on [page 252](#) as required to understand how a particular configuration option works, and what functionality it enables. Finally, review the valid values documented as part of the option descriptions, and determine the values appropriate to your environment.

Table 39: Genesys Info Mart Operations-Related Options

Configuration Object	Section Name	Option Name and Default Value	Comments
High Availability			
Genesys Info Mart Application	[gim-etl]	days-to-keep-stg-ha-ir-ids=5 ha-cfg-all-connections-required=TRUE ha-agent-all-connections-required=TRUE extract-ha-voice-agent-activity=FALSE ha-ir-extract-comparison-timeout=60 days-to-keep-stg-ha-login-sessions=3	Certain DAP options affect the HA configuration. In the Application object, configure the options on the Options tab.

Table 39: Genesys Info Mart Operations-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Scheduling			
Genesys Info Mart Application	[schedule]	run-scheduler=FALSE etl-frequency=60 etl-start-time=06:00 etl-end-time=22:00 run-load-recent-with-extract-and-transform=TRUE load-recent-start-time=22:15 load-start-time=23:15 run-aggregates=FALSE aggregate-start-time=01:00 intraday-aggregates-frequency=0 run-maintain=TRUE maintain-start-time=03:00 max-concurrent-extract-jobs=10 populate-intraday-aggregates=FALSE run-migration=FALSE migration-start-time=04:00 migration-duration-in-hours=1 job-retry-count=3 job-retry-wait=5	In the Application object, configure the options on the Options tab.
Purging			
Genesys Info Mart Application	[gim-etl]	days-to-keep-deleted-tenant-facts=0 purge-action-is-delete=TRUE days-to-keep-stg-history=0	In the Application object, configure the options on the Options tab.

Table 39: Genesys Info Mart Operations-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Genesys Info Mart Application or Tenant	[gim-etl-tenant]	days-to-keep-gim-facts=0 days-to-keep-dt-resource-activity-facts=0	An option configured in the Tenant object overrides the same option configured at the application level. In the Application object, configure the options on the Options tab. In the Tenant object, configure the options on the Annex tab.
	[gim-aggregates-tenant]	days-to-keep-hour-level-disposition-aggregates=180 days-to-keep-day-level-disposition-aggregates=720 days-to-keep-month-level-disposition-aggregates=1825 days-to-keep-subhour-level-interval-aggregates=90 days-to-keep-hour-level-interval-aggregates=180 days-to-keep-day-level-interval-aggregates=365	
Logging			
Genesys Info Mart Application	[log4j]	logging-level=info log-file-name=gim_etl.log max-log-file-size=5MB max-backup-index=10	In the Application object, configure the options on the Options tab.
	[log]	standard=network verbose=standard	

Table 39: Genesys Info Mart Operations-Related Options (Continued)

Configuration Object	Section Name	Option Name and Default Value	Comments
Performance Tuning			
Genesys Info Mart Application	[gim-etl]	limit-extract-data=TRUE extract-data-after-date (no default value) extract-data-time-range-limit=1 extract-data-time-range-units=DAYS ir-merge-interval=5 memory-threshold=0 data-migration-time-range-limit=1 data-migration-time-range-units=DAYS aggregate-time-range-limit=1 aggregate-time-range-units=DAYS maintain-time-range-limit=1 maintain-time-range-units=DAYS load-transaction-size=1000	Warning! Carefully decide on the <code>extract-data-after-date</code> option value because it affects the starting point for data extraction. You cannot change the value to indicate an earlier date once the ETL has performed the initial data extraction from a given data source. In the <code>Application</code> object, configure the options on the <code>Options</code> tab.
	[gim-transformation]	transformation-buffer-size=3 ignore-missing-config-objs=FALSE	
	[gim-tuning]	aggregate-tenants-in-parallel=FALSE extract-agent-activity-data-in-parallel=FALSE extract-ha-deduplicate-in-parallel=FALSE extract-merging-in-parallel=FALSE load-historical-tables-in-parallel=FALSE load-intraday-tables-in-parallel=FALSE lookup-caching-factor=1 maintain-tables-in-parallel=FALSE maintain-tenants-in-parallel=FALSE max-tenants-in-parallel=0 oracle-stats-degree-of-parallelism=2 run-gim-config-before-starting-job=TRUE run-intraday-fact-table-stats=TRUE run-historical-fact-table-stats=TRUE oracle-stats-estimate-percent=20	Note: The options in the <code>[gim-tuning]</code> section that implement parallel processing are designed for large-scale deployments. These options consume considerable resources and should be enabled only if there are sufficient CPU and memory resources on the Genesys Info Mart Server and all applicable database servers.

GI2-Related Configuration Options

[Table 40](#) lists the configuration options that are required to produce data for the entire set of GI2 reports. You must configure these options, with the specified values, on the `Options` tab in the `Genesys Info Mart Application` object. If you use the `Genesys Info Mart Application Template for GI2 customers (Genesys_Info_Mart_ETL_GI2_760.apd)` to create your `Genesys Info Mart Application`, the required values are set by default.

The table groups the options by configuration section. For each section, the options that are required are listed with the value required for out-of-box GI2 reports.

Review the options to understand what area of functionality they affect—for example, population of data in the Genesys Info Mart database, scheduling the launch of ETL jobs, or aggregation of data at the tenant level and by interval. Refer to “Genesys Info Mart Application Option Descriptions” on [page 252](#) as required to understand how a particular configuration option works, and what functionality it enables.

Finally, note the required values documented in [Table 40](#), and set these values in your environment.

Table 40: Genesys Info Mart GI2-Related Options

Section Name	Option Name and Required Value	Comments
[optional-tables]	populate-acd-queue-facts=TRUE populate-virtual-queue-facts=TRUE populate-interaction-resource-facts=TRUE populate-interaction-resource-state-facts=TRUE populate-sm-resource-session-facts=TRUE populate-sm-resource-state-facts=TRUE populate-sm-resource-state-reason-facts=TRUE	

Table 40: Genesys Info Mart GI2-Related Options (Continued)

Section Name	Option Name and Required Value	Comments
[gim-etl]	populate-sm-voice-resource-activity=TRUE sm-resource-state-priority =ACW,NOT_READY,BUSY,READY sub-hour-level-aggregation=30	<p>Warning! Carefully decide on the sub-hour-level-aggregation option value during the initial deployment. Once Genesys Info Mart produces subhour aggregates, you cannot change the option value.</p> <p>You can set the sub-hour-level-aggregation option to 15 in an environment with GI2 provided that you customize the reports. Refer to the <i>Genesys Interactive Insights 7.6 User's Guide</i> for customization instructions.</p>
[schedule]	run-load-recent-with-extract-and-transform =TRUE run-aggregates=TRUE populate-intraday-aggregates=TRUE	
[gim-aggregates-tenant]	populate-queue-aggregates=TRUE populate-ixn-service-type-aggregates=TRUE populate-ixn-agent-aggregates=TRUE populate-ixn-agent-interval-aggregates=TRUE populate-agent-state-interval-aggregates =TRUE short-talk-threshold=5	

Table 40: Genesys Info Mart GI2-Related Options (Continued)

Section Name	Option Name and Required Value	Comments
[gim-agg-voice-init- resp-tenant]	init-resp-duration-range-01-thold=5 init-resp-duration-range-02-thold=15 init-resp-duration-range-03-thold=30 init-resp-duration-range-04-thold=45 init-resp-duration-range-05-thold=60 init-resp-duration-range-06-thold=90 init-resp-duration-range-07-thold=120 init-resp-duration-range-08-thold=180 init-resp-duration-range-09-thold=240 init-resp-duration-range-10-thold=0 init-resp-duration-range-11-thold=0 init-resp-duration-range-12-thold=0 init-resp-duration-range-13-thold=0 init-resp-duration-range-14-thold=0 init-resp-duration-range-15-thold=0 init-resp-duration-range-16-thold=0 init-resp-duration-range-17-thold=0 init-resp-duration-range-18-thold=0 init-resp-duration-range-19-thold=0	
[gim-agg-voice- abandon-tenant]	abandon-duration-range-01-thold=5 abandon-duration-range-02-thold=15 abandon-duration-range-03-thold=30 abandon-duration-range-04-thold=45 abandon-duration-range-05-thold=60 abandon-duration-range-06-thold=90 abandon-duration-range-07-thold=120 abandon-duration-range-08-thold=180 abandon-duration-range-09-thold=240 abandon-duration-range-10-thold=0 abandon-duration-range-11-thold=0 abandon-duration-range-12-thold=0 abandon-duration-range-13-thold=0 abandon-duration-range-14-thold=0 abandon-duration-range-15-thold=0 abandon-duration-range-16-thold=0 abandon-duration-range-17-thold=0 abandon-duration-range-18-thold=0 abandon-duration-range-19-thold=0	
[gim-transformation]	show-conference-detail=TRUE	

GI2 Performance Configuration Options

[Table 41](#) lists the configuration option values that are recommended to improve Genesys Info Mart performance in an environment with GI2 reports. These settings disable the population of data that GI2 reports do not require.

The table groups the options by configuration section. For each section, the options that are not required for out-of-box GI2 reports are listed with values that reduce the load on Genesys Info Mart and, thus, improve the performance of your reporting system.

If you are planning to use GI2 reports, set the suggested values for these options on the `Options` tab in the Genesys Info Mart Application object.

If you are not planning to use GI2 reports, review the options to determine if your downstream reporting applications need all of the data that these options control. Review the options to understand what area of functionality they affect—for example, population of data in the Genesys Info Mart database, scheduling the launch of ETL jobs, or aggregation of data at the tenant level. Refer to “Genesys Info Mart Application Option Descriptions” on [page 252](#) as required to understand how a particular configuration option works, and what functionality it enables. After evaluation, set the suggested values for all or some of these options on the `Options` tab in the Genesys Info Mart Application object.

Table 41: Genesys Info Mart GI2 Performance Options

Section Name	Option Name and Recommended Value	Comments
[optional-tables]	populate-resource-skill-facts=FALSE populate-resource-group-facts=FALSE populate-place-group-facts=FALSE populate-resource-session-facts=FALSE populate-resource-state-facts=FALSE populate-resource-state-reason-facts=FALSE populate-gvp-var-facts=FALSE populate-dt-resource-state-facts=FALSE populate-dt-resource-state-reason-facts=FALSE populate-dt-dnd-facts=FALSE	

Table 41: Genesys Info Mart GI2 Performance Options (Continued)

Section Name	Option Name and Recommended Value	Comments
[gim-etl]	populate-ocs-ixns=FALSE populate-email-ixns=FALSE populate-chat-ixns=FALSE populate-open-media-ixns=FALSE populate-email-resource-activity=FALSE populate-chat-resource-activity=FALSE populate-open-media-resource-activity=FALSE populate-dt-voice-resource-activity=FALSE populate-dt-email-resource-activity=FALSE populate-dt-chat-resource-activity=FALSE populate-dt-open-media-resource-activity=FALSE populate-sm-email-resource-activity=FALSE populate-sm-chat-resource-activity=FALSE populate-sm-open-media-resource-activity=FALSE populate-voice-ixn-seg-facts=FALSE populate-voice-init-consult-in-irf=FALSE	
[gim-aggregates-tenant]	populate-agent-state-aggregates=FALSE populate-skill-demand-aggregates=FALSE populate-skill-combination-aggregates=FALSE	

Genesys Info Mart Application Option Descriptions

For ease of reference, the Genesys Info Mart Application object configuration options are listed in alphabetical order by configuration section:

- custom-data, on [page 253](#)
- enterprise-fiscal-periods, on [page 254](#)
- gim-agg-skill-abandon-tenant, on [page 256](#)
- gim-agg-skill-inb-ixn-tenant, on [page 258](#)
- gim-aggregates-tenant, on [page 260](#)
- gim-agg-voice-abandon-tenant, on [page 272](#)
- gim-agg-voice-init-resp-tenant, on [page 277](#)
- gim-etl, on [page 283](#)
- gim-etl-tenant, on [page 303](#)
- gim-transformation, on [page 305](#)
- gim-tuning, on [page 308](#)
- ixn-user-data-facts, on [page 314](#)
- log, on [page 320](#)

- `log4j`, on [page 320](#)
- `optional-tables`, on [page 321](#)
- `schedule`, on [page 327](#)
- `tenant-fiscal-periods`, on [page 332](#)

custom-data Section

Use this configuration section to set configuration options pertaining to UserEvent-based KVP data.

extract-user-event-data

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the extraction of data from the `G_CUSTOM_DATA_S` IDB table, which is a table in which ICON stores KVP data that was delivered in UserEvents associated with voice calls.

user-event-data-timeout

Default Value: 300

Valid Values: 0–3600

Dependencies: `extract-user-event-data` must be set to TRUE

Changes Take Effect: On the next intraday ETL cycle

Specifies, in general terms, the maximum time, *in seconds*, after the end of a call, during which an agent who handled that same call can send UserEvent-based KVP data. The ETL is expected to recognize and process the UserEvent-based KVP data that is sent within this timeout.

If the UserEvent-based KVP data is sent *after* this timeout, the ETL does not process the UserEvent-based KVP data.

The ETL measures this timeout for a call based on the difference between the terminated time from the `G_IR` record associated with the call and the most recent piece of user data written to the same IDB.

In normal operations, a call is not extracted from ICON until the call has ended, all call-related data (not including UserEvent-based KVP data) has been written, and the call has been successfully locally merged. The timeout may impose an additional delay on extracting a successfully merged call if there is no additional user data written that is further ahead in time by the timeout from the call's termination time.

A value of 0 indicates that any successfully locally merged call can be extracted without any additional delay.

Example

```
user-event-data-timeout=300
```

enterprise-fiscal-periods Section

Use this configuration section to define the fiscal periods in the Enterprise Date dimension. The following basic rules define fiscal periods:

- **Fiscal Week**—Contains seven days, and it always begins on the same day of the week.
- **Fiscal Month**—Contains either four or five fiscal weeks.
- **Fiscal Quarter**—Contains 13 fiscal weeks, consisting of two 4-week fiscal months and one 5-week fiscal month in a consistent pattern (4, 4, 5; 4, 5, 4; or 5, 4, 4).
- **Fiscal Half-Year**—Contains two fiscal quarters, 26 fiscal weeks, or six fiscal months.
- **Fiscal Year**—Contains 52 fiscal weeks, 12 fiscal months, four fiscal quarters, or two fiscal half-years; it ends on the same day of the same month each year (for example, December 31). The designation of the year may be defined by the first or last day of the fiscal year.

There are three exceptions to these rules:

- In general, the first and last week of the fiscal year do not contain seven days.
- In general, the first week of the fiscal year does not start on the same day as the other weeks.
- Most fiscal years have 53 weeks, where week 53 is part of the last fiscal month of the last fiscal quarter in the second fiscal half-year.

Note: Fiscal period definitions contain many variations. Each enterprise has its own rules for defining fiscal periods. These rules change from year to year, and they contain anomalies to account for calendar-year variations, such as leap year and the day of the week that begins the year. The `enterprise-fiscal-periods` options that you select, and the Enterprise Date fiscal-period column values that Genesys Info Mart populates, are only suggested values.

If you want to use fiscal periods for reporting, Genesys strongly recommends that you carefully analyze the Enterprise Date column values and customize them to suit your environment. Be sure to customize only the fiscal period columns—that is, columns that begin with FISCAL.

first-day-of-week

Default Value: MONDAY

Valid Values: SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY

Dependencies: None

Changes Take Effect: At the next run of Job_InitializeGIM

Specifies the first day of a fiscal week.

last-day-identifies-year

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_InitializeGIM

Specifies whether the fiscal year is identified by the last day of the fiscal year or the first day of the fiscal year. For example, for a fiscal year that ends on July 31, 2003, setting this parameter to TRUE results in a fiscal year of 2003; setting the parameter to FALSE results in a fiscal year of 2002.

last-day-of-last-month

Default Value: 31

Valid Values: 1–31

Dependencies: None

Changes Take Effect: At the next run of Job_InitializeGIM

Specifies the last day of the last month of the fiscal year.

last-month-of-year

Default Value: DECEMBER

Valid Values: JANUARY, FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY, AUGUST, SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER

Dependencies: None

Changes Take Effect: At the next run of Job_InitializeGIM

Specifies the last month of the fiscal year.

week-pattern-in-quarter

Default Value: 544

Valid Values: 544, 454, 445

Dependencies: None

Changes Take Effect: At the next run of Job_InitializeGIM

Specifies the pattern of weeks that make up a fiscal quarter. For example, setting this option to 544 results in a fiscal quarter made up of three fiscal months, where the first fiscal month contains five weeks and each of the remaining fiscal months contains four weeks.

gim-agg-skill-abandon-tenant Section

Use this configuration section to specify options that are related to the population of columns in the following aggregate tables in the Info Mart database:

- AG_SKILL_RESOURCE_ABN_HOUR
- AG_SKILL_RESOURCE_ABN_DAY
- AG_SKILL_RESOURCE_ABN_MONTH
- AG_SKILL_GROUP_ABN_HOUR
- AG_SKILL_GROUP_ABN_DAY
- AG_SKILL_GROUP_ABN_MONTH
- R_AG_SKILL_RESOURCE_ABN_HOUR
- R_AG_SKILL_GROUP_ABN_HOUR

For single-tenant deployments, use this section to specify configuration values that apply to the default Resources tenant.

For multi-tenant deployments, use this section to specify default configuration values that apply to all tenants for which you have not configured tenant-specific values.

To configure tenant-specific values, see “Tenant Object Options” on [page 335](#). Be sure to consider whether you have to configure tenant-specific values for the Environment tenant.

abandon-duration-range-1-thold

Default Value: 15

Valid Values: 5–1000

Dependencies: populate-skill-combination-aggregates

Changes Take Effect: At the next run of Job_LoadRecent (for intraday aggregates) or Job_AggregateGIM (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Affects how Genesys Info Mart populates the TOTAL_ABN_RANGE_1_COUNT column in the Info Mart database tables listed on [page 256](#).

The TOTAL_ABN_RANGE_1_COUNT shows the number of interactions that had durations within the first of four time ranges before they were abandoned. The first time range, in seconds, is defined as greater than or equal to 0, and less than or equal to the value of abandon-duration-range-1-thold.

abandon-duration-range-2-thold

Default Value: 30

Valid Values: 10–1000

Dependencies: populate-skill-combination-aggregates, abandon-duration-range-1-thold

Changes Take Effect: At the next run of Job_LoadRecent (for intraday aggregates) or Job_AggregateGIM (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Affects how Genesys Info Mart populates the TOTAL_ABN_RANGE_2_COUNT column in the Info Mart database tables listed on [page 256](#).

The TOTAL_ABN_RANGE_2_COUNT column shows the number of interactions that had durations within the second of four time ranges before they were abandoned. The second time range, in seconds, is defined as greater than the value of abandon-duration-range-1-thold, and less than or equal to the value of abandon-resp-duration-range-2-thold.

abandon-duration-range-3-thold

Default Value: 60

Valid Values: 15–1000

Dependencies: populate-skill-combination-aggregates, abandon-duration-range-2-thold

Changes Take Effect: At the next run of Job_LoadRecent (for intraday aggregates) or Job_AggregateGIM (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Affects how Genesys Info Mart populates the TOTAL_ABN_RANGE_3_COUNT column in the Info Mart database tables listed on [page 256](#).

The TOTAL_ABN_RANGE_3_COUNT column shows the number of interactions that had durations within the third of four time ranges before they were abandoned. The third time range, in seconds, is defined as greater than the value of abandon-duration-range-2-thold, and less than or equal to the value of abandon-duration-range-3-thold.

Note: The TOTAL_ABN_RANGE_4_COUNT column shows the number of interactions that had durations greater than the value of abandon-resp-duration-range-3-thold before they were abandoned.

gim-agg-skill-inb-ixn-tenant Section

Use this configuration section to specify options that are related to the population of columns in the following aggregate tables in the Info Mart database:

- AG_SKILL_VOICE_INB_IXN_HOUR
- AG_SKILL_VOICE_INB_IXN_DAY
- AG_SKILL_VOICE_INB_IXN_MONTH
- R_AG_SKILL_VOICE_INB_IXN_HOUR

For single-tenant deployments, use this section to specify configuration values that apply to the default Resources tenant.

For multi-tenant deployments, use this section to specify default configuration values that apply to all tenants for which you have not configured tenant-specific values.

To configure tenant-specific values, see “Tenant Object Options” on [page 335](#). Be sure to consider whether you have to configure tenant-specific values for the Environment tenant.

init-resp-duration-range-1-thold

Default Value: 15

Valid Values: 5–1000

Dependencies: populate-skill-combination-aggregates

Changes Take Effect: At the next run of Job_LoadRecent (for intraday aggregates) or Job_AggregateGIM (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Affects how Genesys Info Mart populates the following columns in the preceding Info Mart database tables:

- TOTAL_ANS_RANGE_1_COUNT
- TOTAL_ANS_MATCH_RANGE_1_COUNT

These columns show the number of interactions that had an initial response durations within the first of four time ranges. The first time range, in seconds, is defined as greater than or equal to 0 and less than or equal to the value of `init-resp-duration-range-1-thold`.

init-resp-duration-range-2-thold

Default Value: 30

Valid Values: 10–1000

Dependencies: populate-skill-combination-aggregates, `init-resp-duration-range-1-thold`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates).

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Affects how Genesys Info Mart populates the following columns in the preceding Info Mart database tables:

- `TOTAL_ANS_RANGE_2_COUNT`
- `TOTAL_ANS_MATCH_RANGE_2_COUNT`

These columns show the number of interactions that had an initial response duration within the second of four time ranges. The second time range, in seconds, is defined as greater than the value of `init-resp-duration-range-1-thold` and less than or equal to the value of `init-resp-duration-range-2-thold`.

init-resp-duration-range-3-thold

Default Value: 60

Valid Values: 15–1000

Dependencies: `populate-skill-combination-aggregates`, `init-resp-duration-range-2-thold`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Affects how Genesys Info Mart populates the following columns in the preceding Info Mart database tables:

- `TOTAL_ANS_RANGE_3_COUNT`
- `TOTAL_ANS_MATCH_RANGE_3_COUNT`

These columns show the number of interactions that had an initial response duration within the third of four time ranges. The third time range, in seconds, is defined as greater than the value of `init-resp-duration-range-2-thold` and less than or equal to the value of `init-resp-duration-range-3-thold`.

Note: The `TOTAL_ANS_RANGE_4_COUNT` and `TOTAL_ANS_MATCH_RANGE_4_COUNT` columns show the number of interactions that had an initial response duration greater than the value of `init-resp-duration-range-3-thold`.

gim-aggregates-tenant Section

Use this configuration section to specify options that are related to aggregation. For single-tenant deployments, use this section to specify configuration values that apply to the `Resources` tenant.

For multi-tenant deployments, use this section to specify default configuration values that apply to all tenants for which you have not configured tenant-specific values.

To configure tenant-specific values, see “Tenant Object Options” on [page 335](#). Be sure to consider whether you have to create tenant-specific configuration values for the `Environment` tenant.

If you plan to use the CCPulse+ reports that access Genesys Info Mart data, you must enable some or all of these options.

days-to-keep-day-level-disposition-aggregates

Default Value: 720

Valid Values: 0–2000

Dependencies: None

Changes Take Effect: At the next run of `Job_MaintainGIM`

Determines the retention period, in days, for the aggregates of the day time level in the following tables:

- `AG_AGENT_VOICE_IXN_DAY`
- `AG_SKILL_GROUP_ABN_DAY`
- `AG_SKILL_GROUP_DAY`
- `AG_SKILL_RESOURCE_ABN_DAY`
- `AG_SKILL_RESOURCE_DAY`
- `AG_SKILL_VOICE_INB_IXN_DAY`
- `AG_STATE_REASON_VOICE_DAY`
- `AG2_INB_V_AGENT_QUEUE_DAY`
- `AG2_INB_V_IXN_AGENT_GRP_DAY`
- `AG2_INB_V_IXN_AGENT_DAY`
- `AG2_INB_V_IXN_ID_DAY`
- `AG2_INB_V_QUEUE_ABN_DAY`
- `AG2_INB_V_QUEUE_ANS_DAY`
- `AG2_INB_V_QUEUE_GRP_DAY`
- `AG2_INB_V_QUEUE_DAY`
- `AG2_OUT_V_IXN_AGENT_DAY`
- `AG2_OUT_V_IXN_AGENT_GRP_DAY`

A value of 0 indicates that the aggregates are kept forever. The default value is 720 days or about 2 years.

days-to-keep-day-level-interval-aggregates

Default Value: 365

Valid Values: 0–2000

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Determines the retention period, in days, for the aggregates of the day time level in the following tables:

- AG2_INB_V_I_IXN_AGENT_DAY
- AG2_INB_V_I_SESS_STATE_DAY
- AG2_INB_V_I_STATE_RSN_DAY

A value of 0 indicates that the aggregates are kept forever. The default value is 365 days or about 1 year.

days-to-keep-hour-level-disposition-aggregates

Default Value: 180

Valid Values: 0–2000

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Determines the retention period, in days, for the aggregates of the hour time level in the following tables:

- AG_AGENT_VOICE_IXN_HOUR
- AG_SKILL_GROUP_ABN_HOUR
- AG_SKILL_GROUP_HOUR
- AG_SKILL_RESOURCE_ABN_HOUR
- AG_SKILL_RESOURCE_HOUR
- AG_SKILL_VOICE_INB_IXN_HOUR
- AG_STATE_REASON_VOICE_HOUR
- AG2_INB_V_AGENT_QUEUE_HOUR
- AG2_INB_V_IXN_AGENT_GRP_HOUR
- AG2_INB_V_IXN_AGENT_HOUR
- AG2_INB_V_IXN_ID_HOUR
- AG2_INB_V_QUEUE_ABN_HOUR
- AG2_INB_V_QUEUE_ANS_HOUR
- AG2_INB_V_QUEUE_GRP_HOUR
- AG2_INB_V_QUEUE_HOUR
- AG2_OUT_V_IXN_AGENT_HOUR

- AG2_OUT_V_I_XN_AGENT_GRP_HOUR

A value of 0 indicates that the aggregates are kept forever. The default value is 180 days or about 6 months.

days-to-keep-hour-level-interval-aggregates

Default Value: 180

Valid Values: 0–2000

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Determines the retention period, in days, for the aggregates of the hour time level in the following tables:

- AG2_INB_V_I_I_XN_AGENT_HOUR
- AG2_INB_V_I_I_SESS_STATE_HOUR
- AG2_INB_V_I_I_STATE_RSN_HOUR

A value of 0 indicates that the aggregates are kept forever. The default value is 180 days or about 6 months.

days-to-keep-month-level-disposition-aggregates

Default Value: 1825

Valid Values: 0–2000

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Determines the retention period, in days, for the aggregates of the month time level in the following tables:

- AG_AGENT_VOICE_I_XN_MONTH
- AG_SKILL_GROUP_ABN_MONTH
- AG_SKILL_GROUP_MONTH
- AG_SKILL_RESOURCE_ABN_MONTH
- AG_SKILL_RESOURCE_MONTH
- AG_SKILL_VOICE_INB_I_XN_MONTH
- AG_STATE_REASON_VOICE_MONTH
- AG2_INB_V_AGENT_QUEUE_MONTH
- AG2_INB_V_I_XN_AGENT_GRP_MONTH
- AG2_INB_V_I_XN_AGENT_MONTH
- AG2_INB_V_I_XN_ID_MONTH
- AG2_INB_V_QUEUE_ABN_MONTH
- AG2_INB_V_QUEUE_ANS_MONTH
- AG2_INB_V_QUEUE_GRP_MONTH
- AG2_INB_V_QUEUE_MONTH

- AG2_OUT_V_I_XN_AGENT_MONTH
- AG2_OUT_V_I_XN_AGENT_GRP_MONTH

A value of 0 indicates that the aggregates are kept forever. The default value is 1825 days or about five years.

days-to-keep-subhour-level-interval-aggregates

Default Value: 90

Valid Values: 0–2000

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Determines the retention period, in days, for the aggregates of the subhour time level in the following tables:

- AG2_INB_V_I_I_XN_AGENT_SUBHOUR
- AG2_INB_V_I_SESS_STATE_SUBHOUR
- AG2_INB_V_I_STATE_RSN_SUBHOUR

A value of 0 indicates that the aggregates are kept forever. The default value is 90 days or about 3 months.

interval-aggregates-fact-time-window

Default Value: 7

Valid Values: 1–7

Dependencies: None

Changes Take Effect: The next time that the aggregation process starts and at least one aggregate is enabled in the [gim-aggregates-tenant] section

Specifies the time-span to consider when matching facts between fact tables in an interval-based aggregation query. This improves the performance of the interval-based aggregation queries that are used to populate data for the Interaction-Agent Interval and Agent-State Interval aggregates.

Example

An example in which this value would be used is in finding the agent state before accepting an inbound voice interaction. The aggregate SQL looks for an agent state that was active before the call. The SQL will qualify a state that started less than the value of `interval-aggregates-fact-time-window` before the call. If the value is set to seven days, the matching agent state would be found as long as that state did not start more than seven days ago. In practice, agents are not typically in a single continuous state for more than seven days before taking a call. Consideration of a seven day range of agent states can cause performance problems in the interval aggregation queries. Depending on the customer environment, a value of less than 7 can still produce correct aggregates while lessening the performance impact.

max-late-arriving-fact-time-limit

Default Value: 0

Valid Values: 0–30

Dependencies: None

Changes Take Effect: At least one aggregate is enabled in the [gim-aggregates-tenant] section

Specifies how far back in time (in number of days) the aggregation processing in `Job_LoadRecent` and `Job_AggregateGIM` will re-aggregate when they encounter newly loaded, late-arriving facts. To limit how far back in time the aggregation will go, set this option to a nonzero value. A value of 0 means there is no limit to how far back in time the aggregation will go. This can result in very long execution times for the aggregation jobs, if they have to perform re-aggregation for newly loaded facts that occurred a long time ago. To avoid excessive execution times for the aggregation jobs, Genesys recommends that you specify a time limit for re-aggregation.

The limit is measured by subtracting the configured number of days from the most recent time in the aggregate data for each tenant, at the start of the job. The maximum time range that the jobs will aggregate is the value configured for this option plus the time range for new data that has not yet been aggregated.

Example

If `max-late-arriving-fact-time-limit=7`, the last run of the aggregation job for the tenant produced aggregates up to two days ago, and an agent state arrives that began a week before that, the aggregation job will re-aggregate from nine days ago up to the time of the most current fact data, and the late-arriving agent state will be factored into the aggregates. However, if the last run of the aggregation job for the tenant produced aggregates up to yesterday, the aggregation job will not re-aggregate to include the late-arriving agent state.

Note: When you run `Job_AggregateGIM` manually from the Administration Console, the time range that you specify overrides any value that you might have set for the `max-late-arriving-fact-time-limit` option.

maximum-aggregation-level

Default Value: MONTH

Valid Values: HOUR, DAY, MONTH

Dependencies: None

Changes Take Effect: At the next run of `Job_AggregateGIM`

Note: If you set the level to a higher value (for example, from DAY to MONTH), aggregates will be produced for all higher time intervals that have been newly enabled.

This option specifies the maximum aggregation level Genesys Info Mart will output to the Info Mart database aggregate tables. If you set the value to HOUR, Genesys Info Mart only outputs data to the hour aggregates. If you set the value to DAY, Genesys Info Mart outputs data to the hour and day aggregates. If you set the value to MONTH, Genesys Info Mart outputs data to the hour, day and month aggregates.

Note: The `maximum-aggregation-level` option only affects the following aggregates:

- `agent-state-aggregates`
 - `skill-combination-aggregates`
 - `skill-demand-aggregates`
-

populate-agent-state-aggregates

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: `maximum-aggregation-level`, `populate-resource-state-reason-facts`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: If you are setting the option to TRUE for the first time, the earliest date for which data is aggregated is determined by the earliest date for data stored in the `INTERACTION_RESOURCE_FACT` table. If Interaction Resource Facts are not configured to be populated, but CCPulse+ out-of-box aggregates are, (including the aggregates controlled by `populate-agent-state-aggregates`), the default start time of the CCPulse+ out-of-box aggregation is one week before the time that the aggregation job is first run.

If you had temporarily set the option to FALSE and are now setting it to TRUE, aggregates are produced for all data that was loaded during the time that the option was set to FALSE.

Enables or disables Genesys Info Mart output to the following Info Mart database tables:

- `AG_STATE_REASON_VOICE_HOUR`
- `AG_STATE_REASON_VOICE_DAY`
- `AG_STATE_REASON_VOICE_MONTH`
- `AG_AGENT_VOICE_IXN_HOUR`

- AG_AGENT_VOICE_IXN_DAY
- AG_AGENT_VOICE_IXN_MONTH
- R_AG_STATE_REASON_VOICE_HOUR
- R_AG_AGENT_VOICE_IXN_HOUR

Note: If you set this option to TRUE, make sure that you also set `populate-resource-state-reasons-facts` to TRUE.

populate-agent-state-interval-aggregates

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: `populate-sm-resource-session-facts` = TRUE

`populate-sm-resource-state-facts` = TRUE

`populate-sm-resource-state-reason-facts` = TRUE

`populate-interaction-resource-facts` = TRUE

`populate-interaction-resource-state-facts`

`populate-sm-voice-resource-activity` = TRUE

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: If you are setting the option to TRUE for the first time, the earliest date for which data is aggregated is determined by the earliest date for data stored in the `INTERACTION_RESOURCE_FACT` table.

If you had temporarily set the option to FALSE and are now setting it to TRUE, aggregates are produced for all data that was loaded during the time that the option was set to FALSE. Either case could result in very long execution times for aggregation in `Job_LoadRecent` or `Job_AggregateGIM`. For information about how to avoid this, see “`Job_LoadRecent`” and “`Job_AggregateGIM`” under the “Understanding Genesys Info Mart ETL Jobs” section in the *Genesys Info Mart 7.6 Operations Guide*.

Enables or disables the population of any aggregate tables with agent state data. With the value of FALSE, Genesys Info Mart does not populate agent state aggregates. With the value of TRUE, the following aggregate tables are populated and can be used to produce agent state reports in GI2:

- AG2_INB_V_I_SESS_STATE_*
- AG2_INB_V_I_STATE_RSN_*

populate-ixn-agent-aggregates

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: `populate-interaction-resource-facts` = TRUE

```

populate-interaction-resource-state-facts = TRUE
populate-sm-resource-session-facts = TRUE
populate-sm-resource-state-facts = TRUE
populate-sm-voice-resource-activity = TRUE

```

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: If you are setting the option to `TRUE` for the first time, the earliest date for which data is aggregated is determined by the earliest date for data stored in the `INTERACTION_RESOURCE_FACT` table.

If you had temporarily set the option to `FALSE` and are now setting it to `TRUE`, aggregates are produced for all data that was loaded during the time that the option was set to `FALSE`. Either case could result in very long execution times for aggregation in `Job_LoadRecent` or `Job_AggregateGIM`. For information about how to avoid this, see “`Job_LoadRecent`” and “`Job_AggregateGIM`” under the “Understanding Genesys Info Mart ETL Jobs” section in the *Genesys Info Mart 7.6 Operations Guide*.

Enables or disables the population of any aggregate tables with agent interaction data. With the value of `FALSE`, Genesys Info Mart does not populate agent interaction aggregates. With the value of `TRUE`, the following aggregate tables are populated and can be used to produce Interaction Agent reports in GI2:

- `AG2_INB_V_IXN_AGENT_*`
- `AG2_INB_V_IXN_AGENT_GRP_*`
- `AG2_INB_V_I_SESS_STATE_*`

populate-ixn-agent-interval-aggregates

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: `populate-interaction-resource-facts = TRUE`

```
populate-interaction-resource-state-facts = TRUE
```

```
populate-sm-resource-session-facts = TRUE
```

```
populate-sm-resource-state-facts = TRUE
```

```
populate-sm-voice-resource-activity = TRUE
```

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: If you are setting the option to `TRUE` for the first time, the earliest date for which data is aggregated is determined by the earliest date for data stored in the `INTERACTION_RESOURCE_FACT` table.

If you had temporarily set the option to `FALSE` and are now setting it to `TRUE`, aggregates are produced for all data that was loaded during the time that the option was set to `FALSE`. Either case could result in very

long execution times for aggregation in Job_LoadRecent or Job_AggregateGIM. For information about how to avoid this, see “Job_LoadRecent” and “Job_AggregateGIM” under the “Understanding Genesys Info Mart ETL Jobs” section in the *Genesys Info Mart 7.6 Operations Guide*.

Enables or disables the population of any aggregate tables with agent interval data. With the value of FALSE, Genesys Info Mart does not populate agent interval aggregates. With the value of TRUE, the following aggregate tables are populated and can be used to produce Agent Interval reports in GI2:

- AG2_INB_V_I_IXN_AGENT_*
- AG2_INB_V_I_SESS_STATE_*

populate-ixn-agent-out-aggregates

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: populate-interaction-resource-facts = TRUE

populate-interaction-resource-state-facts = TRUE

Changes Take Effect: At the next run of Job_LoadRecent (for intraday aggregates) or Job_AggregateGIM (for historical aggregates)

Note: If you are setting the option to TRUE for the first time, the earliest date for which data is aggregated is determined by the earliest date for data stored in the INTERACTION_RESOURCE_FACT table.

If you had temporarily set the option to FALSE and are now setting it to TRUE, aggregates are produced for all data that was loaded during the time that the option was set to FALSE. Either case could result in very long execution times for aggregation in Job_LoadRecent or Job_AggregateGIM. For information about how to avoid this, see “Job_LoadRecent” and “Job_AggregateGIM” under the “Understanding Genesys Info Mart ETL Jobs” section in the *Genesys Info Mart 7.6 Operations Guide*.

Enables or disables the population of any aggregate tables with outbound or internal agent interaction data. With the value of FALSE, Genesys Info Mart does not populate outbound or internal agent interaction aggregates. With the value of TRUE, the following aggregate tables are populated:

- AG2_OUT_V_IXN_AGENT_*
- AG2_OUT_V_IXN_AGENT_GRP_*

populate-ixn-service-type-aggregates

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: populate-interaction-resource-facts = TRUE

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: If you are setting the option to `TRUE` for the first time, the earliest date for which data is aggregated is determined by the earliest date for data stored in the `INTERACTION_RESOURCE_FACT` table.

If you had temporarily set the option to `FALSE` and are now setting it to `TRUE`, aggregates are produced for all data that was loaded during the time that the option was set to `FALSE`. Either case could result in very long execution times for aggregation in `Job_LoadRecent` or `Job_AggregateGIM`. For information about how to avoid this, see “`Job_LoadRecent`” and “`Job_AggregateGIM`” under the “Understanding Genesys Info Mart ETL Jobs” section in the *Genesys Info Mart 7.6 Operations Guide*.

Enables or disables the population of any aggregate tables with service type data. With the value of `FALSE`, Genesys Info Mart does not populate service type aggregates. With the value of `TRUE`, the following aggregate table is populated and can be used to produce Service Type reports in GI2:

- `AG2_INB_V_IXN_ID_*`

populate-queue-aggregates

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: `populate-interaction-resource-facts = TRUE`

`populate-virtual-queue-facts = TRUE`

`populate-acd-queue-facts = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: If you are setting the option to `TRUE` for the first time, the earliest date for which data is aggregated is determined by the earliest date for data stored in the `INTERACTION_RESOURCE_FACT` table.

If you had temporarily set the option to `FALSE` and are now setting it to `TRUE`, aggregates are produced for all data that was loaded during the time that the option was set to `FALSE`. Either case could result in very long execution times for aggregation in `Job_LoadRecent` or `Job_AggregateGIM`. For information about how to avoid this, see “`Job_LoadRecent`” and “`Job_AggregateGIM`” under the “Understanding Genesys Info Mart ETL Jobs” section in the *Genesys Info Mart 7.6 Operations Guide*.

Enables or disables the population of any aggregate tables with queue data. With the value of `FALSE`, Genesys Info Mart does not populate queue

aggregates. With the value of `TRUE`, the following aggregate tables are populated and can be used to produce a variety of queue-based reports in GI2:

- `AG2_INB_V_QUEUE_ANS_*`
- `AG2_INB_V_QUEUE_ABN_*`
- `AG2_INB_V_AGENT_QUEUE_*`
- `AG2_INB_V_QUEUE_*`
- `AG2_INB_V_QUEUE_GRP_*`

populate-skill-combination-aggregates

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: `maximum-aggregation-level`, `populate-resource-group-facts`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: If you are setting the option to `TRUE` for the first time, the earliest date for which data is aggregated is determined by the earliest date for data stored in the `INTERACTION_RESOURCE_FACT` table. If Interaction Resource Facts are not configured to be populated, but CCPulse+ out-of-box aggregates are, (including the aggregates controlled by `populate-skill-combination-aggregates`), the default start time of the CCPulse+ out-of-box aggregation is one week before the time that the aggregation job is first run.

If you had temporarily set the option to `FALSE` and are now setting it to `TRUE`, aggregates are produced for all data that was loaded during the time that the option was set to `FALSE`.

Enables or disables Genesys Info Mart output to the following Info Mart database tables:

- `AG_SKILL_VOICE_INB_IXN_HOUR`
- `AG_SKILL_VOICE_INB_IXN_DAY`
- `AG_SKILL_VOICE_INB_IXN_MONTH`
- `AG_SKILL_RESOURCE_ABN_HOUR`
- `AG_SKILL_RESOURCE_ABN_DAY`
- `AG_SKILL_RESOURCE_ABN_MONTH`
- `AG_SKILL_GROUP_ABN_HOUR`
- `AG_SKILL_GROUP_ABN_DAY`
- `AG_SKILL_GROUP_ABN_MONTH`
- `R_AG_SKILL_VOICE_INB_IXN_HOUR`
- `R_AG_SKILL_RESOURCE_ABN_HOUR`

- R_AG_SKILL_GROUP_ABN_HOUR

Note: If you set this option to TRUE, make sure that you also set `populate-resource-group-facts` to TRUE.

populate-skill-demand-aggregates

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: `maximum-aggregation-level`, `show-abandoned-detail`, `populate-resource-skill-facts`, `populate-resource-group-facts`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: If you are setting the option to TRUE for the first time, the earliest date for which data is aggregated is determined by the earliest date for data stored in the `INTERACTION_RESOURCE_FACT` table. If Interaction Resource Facts are not configured to be populated, but CCPulse+ out-of-box aggregates are, (including the aggregates controlled by `populate-skill-demand-aggregates`), the default start time of the CCPulse+ out-of-box aggregation is one week before the time that the aggregation job is first run.

If you had temporarily set the option to FALSE and are now setting it to TRUE, aggregates are produced for all data that was loaded during the time that the option was set to FALSE.

Enables or disables Genesys Info Mart output to the following Info Mart database tables:

- AG_SKILL_RESOURCE_HOUR
- AG_SKILL_RESOURCE_DAY
- AG_SKILL_RESOURCE_MONTH
- AG_SKILL_GROUP_HOUR
- AG_SKILL_GROUP_DAY
- AG_SKILL_GROUP_MONTH
- R_AG_SKILL_RESOURCE_HOUR
- R_AG_SKILL_GROUP_HOUR

Note: If you set this option to TRUE, make sure that you also set `show-abandoned-detail`, `populate-resource-skill-facts` and `populate-resource-group-facts` to TRUE.

short-talk-threshold

Default Value: 5

Valid Values: 0–60

Dependencies: populate-ixn-agent-aggregates

Changes Take Effect: At the next run of Job_LoadRecent or Job_MaintainGIM

For an interaction that is answered by an agent, specifies the maximum talk duration, in seconds, for that interaction to be considered a *short* talk. The option enables you to create a category for calls that were answered by an agent, but that did not last long enough for any useful customer interaction.

This setting determines which inbound interactions will be included in the TOTAL_SHORT_TALK_COUNT column of the AG2_INB_V_IXN_AGENT_* and AG2_INB_V_IXN_AGENT_GRP_* aggregate tables and views, and which outbound and internal interactions will be included in the TOTAL_SHORT_TALK_COUNT column of the AG2_OUT_V_IXN_AGENT_* and AG2_OUT_V_IXN_AGENT_GRP_* aggregate tables and views.

gim-agg-voice-abandon-tenant Section

Use this configuration section to specify options that are related to aggregation time ranges for the AG2_INB_V_QUEUE_ABN_* aggregate tables.

You can configure up to 20 time ranges by setting up to 19 threshold definitions. If your reports do not require as many time ranges, configure only those options that you require, and set the values for the rest of the options to 0. Setting an option value to 0 indicates that the time range is not used.

The value of the first option must be greater than 0; the value for each subsequent option must be greater than the last, unless the value is 0 to indicate this range is not used. If any options are set to a 0 value (time range definitions are not used), you must group them together at the end of the option range.

The thresholds cannot overlap, and this pattern will be enforced by the Genesys Info Mart Configuration Checker.

For single-tenant deployments, use this section to specify configuration values that apply to the Resources tenant.

For multi-tenant deployments, use this section to specify default configuration values that apply to all tenants for which you have not configured tenant-specific values.

To configure tenant-specific values, which override these default values, see “Tenant Object Options” on [page 335](#).

Be sure to consider whether you have to create tenant-specific configuration values for the Environment tenant.

If you plan to use the GI2 reports, you must enable the first nine of these options.

Example

The default values for the 19 options in this section are the following:

```

abandon-duration-range-01-thold = 5
abandon-duration-range-02-thold = 15
abandon-duration-range-03-thold = 30
abandon-duration-range-04-thold = 45
abandon-duration-range-05-thold = 60
abandon-duration-range-06-thold = 90
abandon-duration-range-07-thold = 120
abandon-duration-range-08-thold = 180
abandon-duration-range-09-thold = 240
abandon-duration-range-10-thold = 0
abandon-duration-range-11-thold = 0
abandon-duration-range-12-thold = 0
abandon-duration-range-13-thold = 0
abandon-duration-range-14-thold = 0
abandon-duration-range-15-thold = 0
abandon-duration-range-16-thold = 0
abandon-duration-range-17-thold = 0
abandon-duration-range-18-thold = 0
abandon-duration-range-19-thold = 0

```

This indicates that only 10 time ranges are defined. The last nonzero value of 240 defines two time ranges, one where $180 < x \leq 240$, and the other where $240 < x$. The remaining ten options are set to 0 to indicate they are not used.

abandon-duration-range-01-thold

Default Value: 5

Valid Values: 1–1000

Dependencies: populate-queue-aggregates = TRUE

Changes Take Effect: At the next run of Job_LoadRecent (for intraday aggregates) or Job_AggregateGIM (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the TOTAL_ABANDONED_R1_COUNT column in the AG2_INB_V_QUEUE_ABN_* aggregate tables.

Interactions are counted in this range if the interaction's "time to abandon" value, x , is within this interval:

$0 < x \leq$ abandon-duration-range-01-thold

abandon-duration-range-02-thold

Default Value: 15

Valid Values: 1–1000

Dependencies: populate-queue-aggregates = TRUE

Changes Take Effect: At the next run of Job_LoadRecent (for intraday aggregates) or Job_AggregateGIM (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ABANDONED_R2_COUNT` column in the `AG2_INB_V_QUEUE_ABN_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to abandon" value, x , is within this interval:

`abandon-duration-range-01-thold < x <= abandon-duration-range-02-thold`

abandon-duration-range-03-thold

Default Value: 30

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ABANDONED_R3_COUNT` column in the `AG2_INB_V_QUEUE_ABN_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to abandon" value, x , is within this interval:

`abandon-duration-range-02-thold < x <= abandon-duration-range-03-thold`

abandon-duration-range-04-thold

Default Value: 45

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ABANDONED_R4_COUNT` column in the `AG2_INB_V_QUEUE_ABN_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to abandon" value, x , is within this interval:

`abandon-duration-range-03-thold < x <= abandon-duration-range-04-thold`

abandon-duration-range-05-thold

Default Value: 60

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ABANDONED_R5_COUNT` column in the `AG2_INB_V_QUEUE_ABN_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to abandon" value, `x`, is within this interval:

`abandon-duration-range-04-thold < x <= abandon-duration-range-05-thold`

abandon-duration-range-06-thold

Default Value: 90

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ABANDONED_R6_COUNT` column in the `AG2_INB_V_QUEUE_ABN_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to abandon" value, `x`, is within this interval:

`abandon-duration-range-05-thold < x <= abandon-duration-range-06-thold`

abandon-duration-range-07-thold

Default Value: 120

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ABANDONED_R7_COUNT` column in the `AG2_INB_V_QUEUE_ABN_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to abandon" value, x , is within this interval:

`abandon-duration-range-06-thold < x <= abandon-duration-range-07-thold`

abandon-duration-range-08-thold

Default Value: 180

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ABANDONED_R8_COUNT` column in the `AG2_INB_V_QUEUE_ABN_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to abandon" value, x , is within this interval:

`abandon-duration-range-07-thold < x <= abandon-duration-range-08-thold`

abandon-duration-range-09-thold

Default Value: 240

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

`abandon-duration-range-10-thold`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

By default, controls how Genesys Info Mart populates the `TOTAL_ABANDONED_R9_COUNT` and `TOTAL_ABANDONED_R10_COUNT` columns in the `AG2_INB_V_QUEUE_ABN_*` aggregate tables.

Interactions are counted in the R9 range if the interaction's "time to abandon" value, x , is within this interval:

`abandon-duration-range-08-thold < x <= abandon-duration-range-09-thold`

Interactions are counted in the R10 range if the interaction's "time to abandon" value, x , is within this interval:

`abandon-duration-range-09-thold < x`

If you set the `abandon-duration-range-10-thold` option to a nonzero value, the `abandon-duration-range-09-thold` option controls the population of the `TOTAL_ABANDONED_R9_COUNT` column only.

abandon-duration-range- $\langle N \rangle$ -thold

Default Value: 0

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

N in the option name is a digit from 10 to 19. If configured, these 10 options control how Genesys Info Mart populates the `TOTAL_ABANDONED_R10_COUNT` through `TOTAL_ABANDONED_R20_COUNT` columns in the `AG2_INB_V_QUEUE_ABN_*` aggregate tables.

Interactions are counted in a certain range if the interaction's "time to abandon" value, x , is within this interval:

$$\text{abandon-duration-range-}(n-1)\text{-thold} < x \leq \text{abandon-duration-range-}n\text{-thold}$$

Interactions are counted in the last configured range if the interaction's "time to abandon" value, x , is within this interval:

$$\text{abandon-duration-range-}\langle N \rangle\text{-thold} < x$$

gim-agg-voice-init-resp-tenant Section

Use this configuration section to specify options that are related to aggregation time ranges for the `AG2_INB_V_QUEUE_ANS_*` aggregate tables.

You can configure up to 20 time ranges by setting up to 19 threshold definitions. If your reports do not require as many time ranges, configure only those options that you require, and set the values for the rest of the options to 0. Setting an option value to 0 indicates that the time range is not used.

The value of the first option must be greater than 0; the value for each subsequent option must be greater than the last, unless the value is 0 to indicate this range is not used. If any options are set to a 0 value (time range definitions are not used), you must group them together at the end of the option range.

The thresholds cannot overlap, and this pattern will be enforced by the Genesys Info Mart Configuration Checker.

For single-tenant deployments, use this section to specify configuration values that apply to the `Resources` tenant.

For multi-tenant deployments, use this section to specify default configuration values that apply to all tenants for which you have not configured tenant-specific values.

To configure tenant-specific values, which override these default values, see “Tenant Object Options” on [page 335](#).

Be sure to consider whether you have to create tenant-specific configuration values for the Environment tenant.

If you plan to use the GI2 reports, you must enable the first nine of these options.

Example

The default values for the 19 options in this section are the following:

```

init-resp-duration-range-01-thold = 5
init-resp-duration-range-02-thold = 15
init-resp-duration-range-03-thold = 30
init-resp-duration-range-04-thold = 45
init-resp-duration-range-05-thold = 60
init-resp-duration-range-06-thold = 90
init-resp-duration-range-07-thold = 120
init-resp-duration-range-08-thold = 180
init-resp-duration-range-09-thold = 240
init-resp-duration-range-10-thold = 0
init-resp-duration-range-11-thold = 0
init-resp-duration-range-12-thold = 0
init-resp-duration-range-13-thold = 0
init-resp-duration-range-14-thold = 0
init-resp-duration-range-15-thold = 0
init-resp-duration-range-16-thold = 0
init-resp-duration-range-17-thold = 0
init-resp-duration-range-18-thold = 0
init-resp-duration-range-19-thold = 0

```

This indicates that only 10 time ranges are defined. The last nonzero value of 240 defines two time ranges, one where $180 < x \leq 240$, and the other where $240 < x$. The remaining 10 options are set to 0 to indicate they are not used.

init-resp-duration-range-01-thold

Default Value: 5

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ANSWERED_R1_COUNT` column in the `AG2_INB_V_QUEUE_ANS_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to answer" value, `x`, is within this interval:

$$0 \leq x \leq \text{init-resp-duration-range-01-thold}$$

init-resp-duration-range-02-thold

Default Value: 15

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

This option controls how Genesys Info Mart populates the column `TOTAL_ANSWERED_R2_COUNT` in the `AG2_INB_V_QUEUE_ANS_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to answer" value `x` is within this interval:

$$\text{init-resp-duration-range-01-thold} < x \leq \text{init-resp-duration-range-02-thold}$$

init-resp-duration-range-03-thold

Default Value: 30

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ANSWERED_R3_COUNT` column in the `AG2_INB_V_QUEUE_ANS_*` aggregate tables.

Interactions are counted in this range if the interaction's "time to answer" value, `x`, is within this interval:

$$\text{init-resp-duration-range-02-thold} < x \leq \text{init-resp-duration-range-03-thold}$$

init-resp-duration-range-04-thold

Default Value: 45

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ANSWERED_R4_COUNT` column in the `AG2_INB_V_QUEUE_ANS_*` aggregate tables.

Interactions are counted in this range if the interaction’s “time to answer” value, `x`, is within this interval:

`init-resp-duration-range-03-thold < x <= init-resp-duration-range-04-thold`

init-resp-duration-range-05-thold

Default Value: 60

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the `TOTAL_ANSWERED_R5_COUNT` column in the `AG2_INB_V_QUEUE_ANS_*` aggregate tables.

Interactions are counted in this range if the interaction’s “time to answer” value, `x`, is within this interval:

`init-resp-duration-range-04-thold < x <= init-resp-duration-range-05-thold`

init-resp-duration-range-06-thold

Default Value: 90

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the TOTAL_ANSWERED_R6_COUNT column in the AG2_INB_V_QUEUE_ANS_* aggregate tables.

Interactions are counted in this range if the interaction's "time to answer" value, x , is within this interval:

$$\text{init-resp-duration-range-05-thold} < x \leq \text{init-resp-duration-range-06-thold}$$

init-resp-duration-range-07-thold

Default Value: 120

Valid Values: 1–1000

Dependencies: populate-queue-aggregates = TRUE

Changes Take Effect: At the next run of Job_LoadRecent (for intraday aggregates) or Job_AggregateGIM (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the TOTAL_ANSWERED_R7_COUNT column in the AG2_INB_V_QUEUE_ANS_* aggregate tables.

Interactions are counted in this range if the interaction's "time to answer" value, x , is within this interval:

$$\text{init-resp-duration-range-06-thold} < x \leq \text{init-resp-duration-range-07-thold}$$

init-resp-duration-range-08-thold

Default Value: 180

Valid Values: 1–1000

Dependencies: populate-queue-aggregates = TRUE

Changes Take Effect: At the next run of Job_LoadRecent (for intraday aggregates) or Job_AggregateGIM (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

Controls how Genesys Info Mart populates the TOTAL_ANSWERED_R8_COUNT column in the AG2_INB_V_QUEUE_ANS_* aggregate tables.

Interactions are counted in this range if the interaction's "time to answer" value, x , is within this interval:

$$\text{init-resp-duration-range-07-thold} < x \leq \text{init-resp-duration-range-08-thold}$$

init-resp-duration-range-09-thold

Default Value: 240

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

By default, controls how Genesys Info Mart populates the `TOTAL_ANSWERED_R9_COUNT` and `TOTAL_ANSWERED_R10_COUNT` columns in the `AG2_INB_V_QUEUE_ANS_*` aggregate tables.

Interactions are counted in the R9 range if the interaction’s “time to answer” value, x , is within this interval:

$$\text{init-resp-duration-range-08-thold} < x \leq \text{init-resp-duration-range-09-thold}$$

Interactions are counted in the R10 range if the interaction’s “time to answer” value, x , is within this interval:

$$\text{init-resp-duration-range-09-thold} < x$$

If you set the `init-resp-duration-range-10-thold` option to a nonzero value, the `init-resp-duration-range-09-thold` option controls the population of the `TOTAL_ANSWERED_R9_COUNT` column only.

init-resp-duration-range-<N>-thold

Default Value: 0

Valid Values: 1–1000

Dependencies: `populate-queue-aggregates = TRUE`Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Note: The new option value is not applied to previously calculated aggregates, unless re-aggregation is required because of newly arriving facts or manual re-aggregation.

N in the option name is a digit from 10 to 19. If configured, these 10 options control how Genesys Info Mart populates the `TOTAL_ANSWERED_R10_COUNT` through `TOTAL_ANSWERED_R20_COUNT` columns in the `AG2_INB_V_QUEUE_ANS_*` aggregate tables.

Interactions are counted in a certain range if the interaction’s “time to answer” value, x , is within this interval:

$$\text{init-resp-duration-range-(n-1)-thold} < x \leq \text{init-resp-duration-range-n-thold}$$

Interactions are counted in the last configured range if the interaction's "time to answer" value, x , is within this interval:

`init-resp-duration-range-<N>-thold < x`

gim-etl Section

Use this configuration section to set general options.

aggregate-time-range-limit

Default Value: 1

Valid Values: 0-30

Dependencies: `aggregate-time-range-units`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Specifies the time range of data that is aggregated by aggregation queries in a single transaction when `Job_AggregateGIM` runs. A value of 0 indicates no limit, meaning that all eligible rows are aggregated in a single transaction for a given aggregation query. A nonzero value limits the detail data to the configured time span; in this case, `Job_AggregateGIM` uses multiple executions of the aggregation queries to aggregate all eligible rows for that execution of the job.

aggregate-time-range-units

Default Value: DAYS

Valid Values: HOURS, DAYS

Dependencies: None

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregates) or `Job_AggregateGIM` (for historical aggregates)

Specifies days or hours as the time units that are used for the `aggregate-time-range-limit` option.

data-migration-time-range-limit

Default Value: 1

Valid Values: 0-60

Dependencies: `data-migration-time-range-units`

Changes Take Effect: At the next run of `Job_MigrateGIM`

Specifies the time range of data that is migrated by data migration queries in a single transaction when `Job_MigrateGIM` runs. A value of 0 indicates no limit, meaning that all eligible rows are migrated in a single transaction for a given data migration query. A nonzero value limits the detail data to the configured time span; in this case, `Job_MigrateGIM` uses multiple executions of the data migration queries to migrate all eligible rows for that execution of the job.

data-migration-time-range-units

Default Value: DAYS

Valid Values: HOURS, DAYS

Dependencies: None

Changes Take Effect: At the next run of Job_MigrateGIM

Specifies the time units, either hours or days, used for the `data-migration-time-range-limit` option.

You can change the value of this option while the Genesys Info Mart Server is running. The new value will take effect at the next start of the migration job.

days-to-keep-deleted-tenant-facts

Default Value: 0

Valid Values: 0, 30–3700

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Specifies the number of days to keep data in the Info Mart database for any tenant that is removed from the Genesys Info Mart Application configuration.

Genesys Info Mart uses the same rules to determine which facts are eligible for purging, regardless of whether the tenant is included in, or has been removed from, the Genesys Info Mart configuration. For more information, see the description of the `days-to-keep-gim-facts` option ([page 304](#)). A value of 0 means that the data should be kept indefinitely.

days-to-keep-stg-ha-ir-ids

Default Value: 5

Valid Values: 3–7

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Specifies the number of days that the ETL retains in the Staging Area database information about `G_IR` rows that it has extracted from one (and only one) of the IDBs that constitute an HA pair. The ETL retains this information in order to prevent the loading of duplicate interactions into Info Mart when it cannot extract data from one of the IDBs for some period of time due to a network or RDBMS outage.

days-to-keep-stg-ha-login-sessions

Default Value: 3

Valid Values: 1–7

Dependencies: None

Changes Take Effect: At the next run of Job_ExtractICON.

Specifies the number of days that the ETL retains information in the Staging Area database about `G_LOGIN_SESSION` or `GX_SESSION_ENDPOINT` rows that have been extracted from one (and only one) of the IDBs that constitute an HA pair. If terminated session data is not extracted from one of the IDBs because ICON

did not receive notification that the session had ended, the ETL uses this retained information to prevent the loading of duplicate sessions into the Info Mart schema.

days-to-keep-stg-history

Default Value: 0

Valid Values: 0, 60–3700

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Specifies the number of days to keep historical information in the Staging Area database about steps that the ETL has performed that are related to job execution, source data extraction, target table loading, table purging, and data aggregation. A value of 0 means that the data should be kept indefinitely.

days-to-keep-stg-icon-call-info

Default Value: 5

Valid Values: 3–14

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Specifies the minimum number of days that the ETL retains information used to blend interaction information with other fact tables. The ETL retains this information to allow data from interaction related fact tables to be used to populate data in other fact tables, such as when voice interaction-related data is used to populate fields in CONTACT_ATTEMPT_FACT (like INTERACTION_ID, TALK_DURATION, HOLD_DURATION, ACW_DURATION, RESOURCE_KEY).

In this particular example, a network or RDBMS outage could cause the Outbound Contact data used to populate CONTACT_ATTEMPT_FACT to be unavailable to extract from an IDB at the same time when the voice interaction data was available to extract from an IDB. Data is kept in this Staging Area table to allow interaction-related data to be populated in non-interaction-related fact tables that may have been processed in different ETL cycles. If the data that is saved for a later transformation cycle is not used, this option affects how long it will be remembered, which in turn can affect the size of the table.

default-ivr-to-self-service

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies whether Genesys Info Mart creates an INTERACTION_RESOURCE_FACT row when the IPurpose attached data key-value-pair (KVP) is not present, or when it is not set to indicate self-service. By default, (with the value of FALSE)

Genesys Info Mart does not create an `INTERACTION_RESOURCE_FACT` row unless the call ends in the IVR. All other IVR time is reported as mediation time. The value `TRUE` causes Genesys Info Mart to create an `INTERACTION_RESOURCE_FACT` row for all IVR ports, regardless of whether `IPurpose` is either being present or set to indicate self-service; that is, Genesys Info Mart treats all IVR ports as handling resources instead of mediation resources.

extract-data-after-date

Default Value: None

Valid Values: A date string in the format `YYYY-MM-DD`

Dependencies: `limit-extract-data` option must be set to `TRUE`, `extract-data-time-range-units`

Changes Take Effect: On the next intraday ETL cycle

Specifies the starting data for extracted data. The ETL will not extract data that was created before this date in the first extract from a data source. If no date is specified, extraction will begin with the oldest data that is available in the source. The option value applies to the initial data extract from a new data source; it does not propagate to the data sources from which the data has been extracted previously.

extract-data-time-range-limit

Default Value: 1

Valid Values: 1–100

Dependencies: `limit-extract-data` option must be set to `TRUE`, `extract-data-time-range-units`

Changes Take Effect: On the next intraday ETL cycle

Specifies the approximate time range of data that the ETL will extract in a single cycle. Because this time range must be mapped to a range of keys in the data source, it might not correspond exactly to the actual time range of the data.

Note: The value of this option has important implications for the amount of database log and redo space required by the ETL jobs. The more data that a single data extract cycle handles, the more database log and redo space is needed.

In general, set this option to the time that your contact center requires to produce 100,000 interactions. For example, if your contact center generates 200,000 interactions per 24-hour day, set `extract-data-time-range-limit` to 12, and set `extract-data-time-range-units` to `HOURS`.

extract-data-time-range-units

Default Value: `DAYS`

Valid Values: `DAYS`, `HOURS`

Dependencies: `limit-extract-data` option must be set to `TRUE`

Changes Take Effect: On the next intraday ETL cycle

Specifies the unit that is used for the `extract-data-time-range-limit` option.

extract-ha-voice-agent-activity

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: `ha-pair-id` and `ha-pair-primary` DAP configuration options (for DAPs with the `role` of `ICON_CORE`)

Changes Take Effect: On the next intraday ETL cycle

Specifies how Genesys Info Mart extracts voice agent details from an HA pair of IDBs. When set to `FALSE`, `Job_ExtractICON` extracts voice agent details from the primary IDB in the configured HA Pair (see the `ha-pair-primary` DAP option description on [page 203](#)). When set to `TRUE`, `Job_ExtractICON` extracts and deduplicates voice agent activity from both IDBs in the configured HA pair.

Before setting the option to `TRUE`, you must ensure that voice agent details were stored in the IDB by ICON 7.6, based on events that are received from T-Server 7.6; otherwise, the ETL cannot deduplicate the agent details. In particular, verify that:

- Both ICONs in the HA pair are of release 7.6.
- Neither ICON in the HA pair has any connections to T-Server 7.5 or earlier.
- An ETL cycle (including the `Job_ExtractICON`, `Job_TransformGIM`, and `Job_LoadRecent` jobs) has completed the extraction and processing of all the data stored by prior releases of ICON and/or T-Server.

To check that the ETL extracted all the data that was stored by earlier releases of ICON and/or T-Server, see [Enabling HA Deduplication of Voice Agent Activity, page 397](#).

extract-partially-merged-interactions

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Specifies whether Genesys Info Mart will extract or ignore partially merged voice interactions.

This configuration option is applicable for all Voice details IDBs. If you set this option to `TRUE`:

- In a single IDB deployment (with or without HA), you must store the unmonitored `Switch` object names in the `GSYS_DNPREM0TELOCATION` table of the applicable IDB schema.

- In a multi-IDB deployment (with or without HA), you must store the unmonitored `Switch` object names in the `GSYS_DNPREMOTELLOCATION` table of each applicable IDB schema and the Merge Staging Area schema.

Otherwise, the partially merged interactions must wait until the configured IS-Link Timeout occurs (eight hours by default) to be extracted by `Job_ExtractICON`.

ha-agent-all-connections-required

Default Value: `TRUE`

Valid Values: `TRUE`, `FALSE`

Changes Take Effect: On the next ETL cycle

Dependencies:

- `extract-ha-voice-agent-activity`
- `ha-pair-id` and `ha-pair-primary` DAP configuration options (for DAPs with the `role` of `ICON_CORE`)

Changes Take Effect: On the next intraday ETL cycle

Specifies whether Genesys Info Mart requires a connection to both IDBs in an HA pair in order to extract voice agent details. With the value of `TRUE` (recommended), Genesys Info Mart extracts voice agent details only if `Job_ExtractICON` for `role` of `ICON_CORE` connects successfully to both IDBs that constitute the HA pair. With the value of `FALSE`, Genesys Info Mart extracts voice agent details as long as `Job_ExtractICON` is able to connect to at least one of the two IDBs that constitute the HA pair.

If Genesys Info Mart server is unable to establish the correct number of connections, `Job_ExtractICON` exits with a failure. This prevents `Job_TransformGIM` for the `role` of `ICON_CORE` from running because this job depends on a successful extraction of all data types (including voice agent details).

If the highest degree of data integrity is critical in your reporting environment, set the `ha-agent-all-connections-required` option to `TRUE` to ensure that Genesys Info Mart extracts agent activity data from both data sources. If you detect a problem with agent activity data population to one of the data sources, decide whether running the extraction from the remaining data source is acceptable. In this case, change the option value to `FALSE` before the next extract cycle, and Genesys Info Mart will extract from only one source. If one of the IDBs is unavailable for a long time, consider changing the configuration to exclude (disable) the configuration objects for the second data source until the issue is resolved. As soon as the other data source becomes available, set this option back to `TRUE` to ensure data integrity.

ha-cfg-all-connections-required

Default Value: `TRUE`

Valid Values: `TRUE`, `FALSE`

Changes Take Effect: On the next ETL cycle

Dependencies: `ha-pair-primary` DAP configuration option (for DAPs with the `role` of `ICON_CFG`)

Changes Take Effect: On the next intraday ETL cycle

Specifies whether Genesys Info Mart Server requires a connection to both IDBs in an HA pair in order to extract Configuration details. The value of `FALSE` indicates that a simultaneous connection to both DAPs is not required; configuration data is extracted if Genesys Info Mart Server connects to at least one of the DAPs in an HA pair. The value of `TRUE` (recommended) enforces a simultaneous connection to both DAPs in an HA pair in order for Genesys Info Mart to extract configuration data.

If Genesys Info Mart Server is unable to establish the required number of connections, `Job_ExtractICON` exits with a failure. This prevents `Job_TransformGIM` for the `role` of `ICON_CFG` from running, because this job depends on a successful extraction of configuration data.

If the highest degree of data integrity is critical in your reporting environment, set the `ha-cfg-all-connections-required` option to `TRUE` to ensure that Genesys Info Mart extracts configuration data from both data sources. If you detect a problem with configuration data population in one of the data sources, decide whether running the extraction from the remaining data source is acceptable; in this case, change the option value to `FALSE` before the next extract cycle. As soon as the other data source becomes available, set this option back to `TRUE` to ensure data integrity.

ha-ir-extract-comparison-timeout

Default Value: 60

Valid Values: 0–86400 minutes

Dependencies:

- `days-to-keep-stg-ha-ir-ids`
- `ha-pair-id` and `ha-pair-primary` DAP configuration options (for DAPs with the `role` of `ICON_CORE`)

Changes Take Effect: On the next intraday ETL cycle

Specifies the number of minutes Genesys Info Mart waits before it extracts an interaction from an HA pair of IDBs without seeing it in both IDBs. The time span defined by this option's value should be less than the time span defined by the value of the `days-to-keep-stg-ha-ir-ids` option.

When extracting voice interactions from an HA pair of IDBs, Genesys Info Mart compares the same interaction from both IDBs, to determine which IDB has the better data representation. If only one IDB has the interaction, Genesys Info Mart waits the amount of time configured by this option; if the data does not arrive within this interval, Genesys Info Mart extracts the interaction from the IDB without any comparisons.

The following situations result in interaction data not being available in the other IDB:

- A network outage is temporarily preventing ICON from storing the interaction. As soon as the network is restored, ICON will store the interaction in the IDB. Genesys Info Mart can then extract the best representation of the interaction from the HA pair.
- ICON was not running while the interaction occurred. In this situation, the interaction will never be stored in the IDB. After the configured timeout, Genesys Info Mart will extract the interaction without performing the data comparison for this interaction.

ir-merge-interval

Default Value: 5

Valid Values: -1, 0–1440 minutes

Dependencies: None

Changes Take Effect: Immediately

Specifies the time interval, in minutes, that the Genesys Info Mart Server is to periodically run the IR Merge stored procedure on all configured DAPs with the role of `ICON_CORE`. The stored procedure merges the calls between switches monitored by the same ICON application. If the value of this option is 0, the Genesys Info Mart Server does not call the IR Merge stored procedure; instead, the stored procedure is called by the `Job_ExtractICON` job before extracting tables from the DAP.

If the value of this option is set to -1, Genesys Info Mart Server and `JobExtractICON` (to extract voice data) do not call `gsysIRMerge`. Use this value if you want other means outside of Genesys Info Mart to invoke `gsysIRMerge`.

limit-extract-data

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Specifies the amount of data that Genesys Info Mart extracts and processes. If set to TRUE, Genesys Info Mart limits the amount of data that is extracted and processed based on the other throttling options. If set to FALSE, all available data will be extracted and processed. This option affects all data sources equally with the exception of configuration data.

load-transaction-size

Default Value: 1000

Valid Values: 0, 10·000

Dependencies: None

Changes Take Effect: At the next run of `Job_LoadGIM`

Specifies the approximate number of rows that `Job_LoadGIM` loads in a single transaction. The value is in units of thousands of rows. The default value (1000)

indicates 1,000,000 rows per transaction. A value of 0 indicates no limit, meaning that all available rows are loaded in a single transaction.

A value of 0 leads to the best performance, but it may require large Oracle Undo space or transaction log space in the case when millions of rows of data are loaded in a single execution of Job_LoadGIM. A small value of load-transaction-size would negatively impact performance because of the overhead of multiple commit statements and index recalculations.

maintain-time-range-limit

Default Value: 1

Valid Values: 0–30

Dependencies: maintain-time-range-units

Changes Take Effect: At the next run of Job_MaintainGIM

Specifies the time range of data that Job_MaintainGIM either updates in or deletes from a given table in a single transaction. A value of 0 indicates no limit, meaning that all eligible rows are either updated or deleted in a single transaction for a given purging query. A nonzero value indicates that Job_MaintainGIM limits the detail data to the time span configured by this option, using multiple executions of the purging queries to either update or delete all eligible rows.

maintain-time-range-units

Default Value: DAYS

Valid Values: HOURS, DAYS

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Specifies the units, either hours or days, used for the maintain-time-range-limit option.

max-camp-group-session-duration-in-hours

Default Value: 168

Valid Values: 1–10000

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies the amount of time, in hours, after which Genesys Info Mart ends active campaign group sessions if the transformation process encounters a campaign session row in IDB's G0_Campaign table that has no terminated time.

max-camp-group-state-duration-in-hours

Default Value: 168

Valid Values: 1–10000

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies the amount of time, in hours, after which Genesys Info Mart ends campaign group states if the transformation process has not extracted a stopped row that brackets a previously extracted started row from IDB's `GO_CampaignHistory` table.

max-session-duration-in-hours

Default Value: 24

Valid Values: 0–10000

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies the amount of time, in hours, after which Genesys Info Mart ends resource sessions if the extraction process never finds a row in IDB's `GX_SESSION_ENDPOINT` table that has an end time for a previously extracted and transformed active resource session. For migration purposes, a value of 0 will default to 24.

max-wrap-delay

Default Value: 0

Valid Values: 0–60

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies the number in seconds within which the agent must enter after-call-work (ACW) after the call ends, in order for ACW to be recorded in the `WRAP_COUNT` and `WRAP_DURATION` columns of the `Interaction Segment Fact` table (and in the `ACW_COUNT` and `ACW_DURATION` columns of the corresponding `VOICE_SEG_FACT_EXT`).

memory-threshold

Default Value: 0

Valid Values: 0–99

Dependencies: None

Changes Take Effect: Immediately

Specifies the percentage of available memory that must be exceeded before Genesys Info Mart logs a message (55-30016) indicating that the memory

threshold has been exceeded. If the value of this option is set to 0, the feature will be disabled.

populate-chat-ixns

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output of Genesys Multimedia chat interactions to the INTERACTION_SEGMENT_FACT and INTERACTION_FACT tables, their corresponding R_* intraday tables, and also the Multimedia-specific extension tables.

populate-chat-resource-activity

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: populate-resource-session-facts

populate-resource-state-facts

populate-resource-state-reason-facts

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output of Genesys Multimedia chat resource activity facts to the RESOURCE_SESSION_FACT, RESOURCE_STATE_FACT, and RESOURCE_STATE_REASON_FACT tables, as well as their corresponding intraday tables (R_RESOURCE_SESSION_FACT, R_RESOURCE_STATE_FACT, and R_RESOURCE_STATE_REASON_FACT). With the value of FALSE, Genesys Info Mart does not populate these tables with activity data for a chat resource. With the value of TRUE, these tables are populated with the activity data for a Genesys Multimedia chat resource.

populate-detailed-ixn-subtype

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: populate-chat-ixns

populate-email-ixns

populate-open-media-ixns

Changes Take Effect: On the next intraday ETL cycle

Specifies whether the InteractionType data in InteractionFact and SegmentFact indicates detailed interaction subtype values. This data only applies to Multimedia interactions (not to voice interactions).

With the value of FALSE, InteractionType does not contain detailed information about interaction subtype. Genesys Info Mart uses the InteractionType values corresponding to a subtype of Unspecified, to be consistent with Genesys Info Mart 7.5. With the value of TRUE, Genesys Info

Mart populates detailed information about interaction subtype. For example, an `InteractionType` indicating `Inbound/InboundNew` may be used.

Change to this option takes effect the next time `Job_TransformGIM` is run.

populate-dt-chat-resource-activity

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: Only has an effect on the tables that are populated when the following options are set to TRUE: `populate-resource-session-facts`, `populate-dt-resource-state-facts`, `populate-dt-resource-state-reason-facts`, and `populate-dt-dnd-facts`.

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of Genesys Multimedia chat resource activity in the `RESOURCE_SESSION_FACT`, `DT_RES_STATE_FACT`, `DT_RES_STATE_REASON_FACT`, and `DT_DND_FACT` tables, as well as their corresponding `R_*` intraday fact tables. With the value of FALSE, Genesys Info Mart does not populate these tables with activity data for a Genesys Multimedia chat resource. With the value of TRUE, these tables are populated with the activity data for a chat resource.

populate-dt-email-resource-activity

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: Only has an effect on the tables that are populated when the following options are set to TRUE: `populate-resource-session-facts`, `populate-dt-resource-state-facts`, `populate-dt-resource-state-reason-facts`, and `populate-dt-dnd-facts`.

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of Genesys Multimedia e-mail resource activity in the `RESOURCE_SESSION_FACT`, `DT_RES_STATE_FACT`, `DT_RES_STATE_REASON_FACT`, and `DT_DND_FACT` tables as well as their corresponding `R_*` intraday fact tables. With the value of FALSE, Genesys Info Mart does not populate these tables with activity data for a Genesys Multimedia e-mail resource. With the value of TRUE, these tables are populated with the activity data for a Genesys Multimedia e-mail resource.

populate-dt-open-media-resource-activity

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: Only has an effect on the tables that are populated when the following options are set to TRUE: `populate-resource-session-facts`, `populate-dt-resource-state-facts`, `populate-dt-resource-state-reason-facts`, and `populate-dt-dnd-facts`.

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of Open Media resource activity in the `RESOURCE_SESSION_FACT`, `DT_RES_STATE_FACT`, `DT_RES_STATE_REASON_FACT`, and `DT_DND_FACT` tables, as well as their corresponding `R_*` intraday fact tables. With the value of `FALSE`, Genesys Info Mart does not populate these tables with activity data for an Open Media resource. With the value of `TRUE`, these tables are populated with the activity data for an Open Media resource.

populate-dt-voice-resource-activity

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: Only has an effect on the tables that are populated when the following options are set to `TRUE`: `populate-resource-session-facts`, `populate-dt-resource-state-facts`, `populate-dt-resource-state-reason-facts`, and `populate-dt-dnd-facts`.

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of voice resource activity in the `RESOURCE_SESSION_FACT`, `DT_RES_STATE_FACT`, `DT_RES_STATE_REASON_FACT`, and `DT_DND_FACT` tables, as well as their corresponding `R_*` intraday fact tables. With the value of `FALSE`, Genesys Info Mart does not populate these tables with activity data for a voice resource. With the value of `TRUE`, these tables are populated with the activity data for a voice resource.

populate-email-ixns

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output of Multimedia e-mail interactions to the `INTERACTION_SEGMENT_FACT` and `INTERACTION_FACT` tables, and to the Multimedia-specific extension tables.

populate-email-resource-activity

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: Only has an effect on the tables that are populated when the following options are set to `TRUE`: `populate-resource-session-facts`, `populate-resource-state-facts`, and `populate-resource-state-reason-facts`

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output of Genesys Multimedia e-mail resource activity facts to the `RESOURCE_SESSION_FACT`, `RESOURCE_STATE_FACT`, and `RESOURCE_STATE_REASON_FACT` tables, as well as their corresponding `R_*` intraday fact tables. With the value of `FALSE`, Genesys Info Mart does not populate these tables with activity data for a Genesys Multimedia e-mail resource. With the value of `TRUE`, these tables are populated with the activity data for a Genesys Multimedia e-mail resource.

populate-ocs-ixns

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Enables or disables Genesys Info Mart output of Outbound Contact-related calls to the Info Mart database's INTERACTION_SEGMENT_FACT and INTERACTION_FACT tables. If set to FALSE, Outbound Contact-related calls are not output. If set to TRUE, Outbound Contact-related calls are output.

Due to limitations in the Interaction Concentrator and Genesys Info Mart call recognition models, the Info Mart database does not always contain accurate information about Outbound Contact-related interactions. This is especially true if your Outbound Contact uses switch-based dialing or ASM mode dialing. You might want to set this option to FALSE if the resulting Info Mart database data for your deployment is not useful. Genesys Info Mart will not store information to the INTERACTION_SEGMENT_FACT and INTERACTION_FACT tables for interactions that attach the GSW_CALL_ATTEMPT_GUID KVP. For more information, see “Genesys Info Mart and Attached Data” on [page 94](#). If you set this option to FALSE, several interaction-based facts in the CONTACT_ATTEMPT_FACT table cannot be populated—for example, Resource, Media Resource, Place, Interaction ID, Contact Interaction Start Time, and Counts and Durations for Preview, Dial, Talk, Hold, and ACW.

populate-open-media-ixns

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output of Open Media interactions to the INTERACTION_SEGMENT_FACT and INTERACTION_FACT tables, their corresponding R_* intraday fact tables, and also the Multimedia-specific extension tables.

Changes to this option take effect the next time Job_TransformGIM is run.

populate-open-media-resource-activity

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: Only has an effect on the tables that are populated when the following options are set to TRUE: populate-resource-session-facts, populate-resource-state-facts, and populate-resource-state-reason-facts

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of Open Media resource activity in the RESOURCE_SESSION_FACT, RESOURCE_STATE_FACT, and RESOURCE_STATE_REASON_FACT tables, as well as their corresponding R_* intraday fact tables. With the value of FALSE, Genesys Info Mart does not populate these tables with activity data for an Open Media resource. With the value of TRUE, these tables are populated with the activity data for an Open Media resource.

populate-sm-chat-resource-activity

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: Only has an effect on the tables that are populated when the following options are set to TRUE: populate-sm-resource-session-facts, populate-sm-resource-state-facts, and populate-sm-resource-state-reason-facts.

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of Genesys Multimedia chat resource activity in the SM_RES_SESSION_FACT, SM_RES_STATE_FACT and SM_RES_STATE_REASON_FACT tables. With the value of FALSE, Genesys Info Mart does not populate these tables with activity data for a Genesys Multimedia chat resource. With the value of TRUE, these tables are populated with the activity data for a Genesys Multimedia chat resource.

populate-sm-email-resource-activity

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: Only has an effect on the tables that are populated when the following options are set to TRUE: populate-sm-resource-session-facts, populate-sm-resource-state-facts, and populate-sm-resource-state-reason-facts.

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of Genesys Multimedia e-mail resource activity in the SM_RES_SESSION_FACT, SM_RES_STATE_FACT, and SM_RES_STATE_REASON_FACT tables, as well as their corresponding R_* intraday fact tables. With the value of FALSE, Genesys Info Mart does not populate these tables with activity data for a Genesys Multimedia e-mail resource. With the value of TRUE, these tables are populated with the activity data for a Genesys Multimedia e-mail resource.

populate-sm-open-media-resource-activity

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: Only has an effect on the tables that are populated when the following options are set to TRUE: populate-sm-resource-session-facts,

`populate-sm-resource-state-facts`, and `populate-sm-resource-state-reason-facts`.

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of Open Media resource activity in the `SM_RES_SESSION_FACT`, `SM_RES_STATE_FACT`, and `SM_RES_STATE_REASON_FACT` tables, as well as their corresponding `R_*` intraday fact tables. With the value of `FALSE`, Genesys Info Mart does not populate these tables with activity data for an Open Media resource. With the value of `TRUE`, these tables are populated with the activity data for an Open Media resource.

populate-sm-voice-resource-activity

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: Only has an effect on the tables that are populated when the following options are set to `TRUE`: `populate-sm-resource-session-facts`, `populate-sm-resource-state-facts`, and `populate-sm-resource-state-reason-facts`.

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of voice resource activity in the `SM_RES_SESSION_FACT`, `SM_RES_STATE_FACT`, and `SM_RES_STATE_REASON_FACT` tables, as well as their corresponding `R_*` intraday fact tables. With the value of `FALSE`, Genesys Info Mart does not populate these tables with activity data for a voice resource. With the value of `TRUE`, these tables are populated with the activity data for a voice resource.

populate-voice-init-consult-in-irf

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: `populate-interaction-resource-facts=TRUE`

Changes Take Effect: On the next transformation cycle

Enables or disables population of a separate row in the `INTERACTION_RESOURCE_FACT` and `VOICE_RES_FACT_EXT` tables to represent voice agents, IVR ports, or DNs that initiate consultation calls. With the value of `FALSE`, information about initiated consultations is embedded in the Interaction Resource Fact row that represents the original interaction that was offered to the agent or self-service IVR port. With the value of `TRUE`, information and metrics about the initiated consultation are stored in a separate row that has a technical descriptor key value with a resource role code of `INITIATEDCONSULT`.

For more information about the effects of this option on data population in the `INTERACTION_RESOURCE_FACT` and `VOICE_RES_FACT_EXT` tables, see the section in the *Genesys Info Mart 7.6 User's Guide* about populating interaction resource data.

Note: Changing the value of this option, which was introduced in Genesys Info Mart release 7.6.006, might affect existing report queries or the interpretation of report data. The aggregation queries used by GI2 have been adjusted to yield the same report results regardless of whether this option is enabled or disabled. If your deployment uses custom reports and you enable this option, ensure that the reports queries use the correct rows in the Info Mart resource fact tables to provide consult initiator metrics.

populate-voice-ixn-seg-facts

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: `populate-interaction-resource-facts` (If `populate-interaction-resource-facts` is FALSE, `populate-voice-ixn-seg-facts` is treated as TRUE, regardless of its configured value.)

Changes Take Effect: Immediately

Enables or disables population of voice interaction details in the `R_INTERACTION_SEGMENT_FACT`, `INTERACTION_SEGMENT_FACT`, `R_VOICE_SEG_FACT_EXT`, and `VOICE_SEG_FACT_EXT` tables. With the value of FALSE, Genesys Info Mart does not store voice interaction details in these tables. If your deployment can use Interaction Resource Facts as the source for reporting on voice interaction details, you can release significant processing and database storage resources by disabling the storage of Interaction Segment Fact data for voice interactions.

Setting the value of this option to FALSE affects the population of other Info Mart fact tables as follows:

- `MEDIATION_SEGMENT_FACT` table:
 - Column `TARGET_IXN_SEGMENT_ID=NULL`
 - Column `TARGET_SEG_FACT_EXT_KEY=NULL`
- `INTERACTION_RESOURCE_FACT` table:
 - Column `PRIMARY_IXN_SEGMENT_ID=0`
 - Column `INTERACTION_SEGMENT_COUNT=0`

populate-voice-resource-states-for-queues

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: `populate-dt-voice-resource-activity`

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how voice resource states sourced from ICON are populated in the `DT_RES_STATE_FACT` table and its corresponding `R_DT_RES_STATE_FACT` intraday

fact table: at the DN and queue levels, or only at the DN level. With the value of FALSE, Genesys Info Mart populates the states for a voice resource to these tables at the DN level only. With the value of TRUE, these tables are populated with the state for a voice resource at both the DN and queue levels.

Note: The state that Genesys Info Mart stores for a DN is the same as the state of that DN for all queues it is logged in to. Genesys Info Mart performs no rollup for the state.

purge-action-is-delete

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

If set to TRUE, Job_MaintainGIM deletes facts that are eligible for purging. If set to false, Job_MaintainGIM merely sets the PURGE_FLAG to 1 for facts that are eligible for purging. Setting PURGE_FLAG enables you to choose when and how to most efficiently delete the facts.

q-answer-threshold-mm

Default Value: 60

Valid Values: 1–600000

Dependencies: populate-virtual-queue-facts must be set to TRUE.

Changes Take Effect: At the next run of Job_TransformGIM

Note: The new option value is not applied to previously loaded facts.

Specifies the default duration, in seconds, that is used on all configured virtual queues as a target time to answer a Multimedia interaction that entered a virtual queue. Genesys Info Mart uses this value unless you configure an option with the same name on an individual Virtual Queue DN object in Configuration Manager.

Change to this option takes effect the next time Job_TransformGIM is run.

To set an answer threshold on a specific Virtual Queue DN object, see “DN Object Options” on [page 339](#).

q-answer-threshold-voice

Default Value: 60

Valid Values: 1 - 10000

Dependencies:

- populate-virtual-queue-facts must be set to TRUE for virtual queue reporting.
- populate-acd-queue-facts must be set to TRUE for ACD queue reporting.

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies the default duration, in seconds, that is used on all configured queues as a target time to answer voice interactions that were distributed by virtual queues or ACD queues. Genesys Info Mart uses this value unless you configure an option with the same name on an individual Virtual Queue or ACD Queue DN object in Configuration Manager.

To set an answer threshold on a specific Virtual Queue or ACD Queue DN object, see “DN Object Options” on [page 339](#).

q-short-abandoned-threshold-voice

Default Value: 10

Valid Values: 1 - 1000

Dependencies:

- `populate-virtual-queue-facts` must be set to TRUE for virtual queue reporting
- `populate-acd-queue-facts` must be set to TRUE for ACD queue reporting

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies the duration, in seconds, that is used on all configured queues to indicate that a voice interaction that was abandoned while in a virtual queue or ACD queue, should be considered a “short” abandon. Genesys Info Mart uses this value to determine the state of `SHORT_ABANDONED_FLAG` in the `MEDIATION_SEGMENT_FACT` row. You cannot set this value on an individual virtual queue or ACD Queue DN object.

short-abandon-threshold

Default Value: 10

Valid Values: 0–60

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies the minimum duration, in seconds, of an abandoned interaction in order for it to be considered truly abandoned. Although all abandoned interactions are identified as such in Genesys Info Mart, those that have short durations are flagged, so that they can be excluded from abandoned interaction queries.

sm-resource-state-priority

Default Value: ACW, NOT_READY, BUSY, READY

Valid Values: ACW, BUSY, NOT_READY, READY, in any order

Dependencies: populate-sm-resource-activity

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies a list of the state names, BUSY, ACW, NOT_READY, or READY, in order of decreasing priority. When an agent simultaneously has different states on different DNs for a given media type, Genesys Info Mart uses this list to determine which state has the highest priority when determining a summarized state to store in the SM_RES_STATE_FACT or SM_RES_STATE_REASON_FACT table, and their corresponding intraday fact tables, R_SM_RES_STATE_FACT or R_SM_RES_STATE_REASON_FACT, respectively.

Note: The list does not include the LOGGED_IN state, which always has the lowest priority.

std-enterprise-time-zone

Default Value: GMT

Valid Values: Any valid time zone ID

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies the standard time zone from the perspective of the enterprise or service provider.

Use this option to define standard time zones for the enterprise. A standard time zone represents a single time zone that is used for reporting from the perspective of a business user, regardless of the time zones in which the recorded events actually occurred.

The value this option affects the population of Standard Enterprise Date, Standard Enterprise Time Of Day, Standard Enterprise Start Time, and Standard Enterprise End Time in the fact tables.

Time Zone IDs

Genesys Info Mart uses Java time zone definitions to convert between Greenwich Mean Time (GMT) and the configured standard time zones. Genesys Info Mart provides a utility that you can run, after you install Genesys Info Mart, in order to obtain a full list of Java time zones. See “Starting the List Time Zone IDs Utility” on [page 362](#) of this guide.

sub-hour-level-aggregation

Default Value: 30

Valid Values: 15, 30

Dependencies: None

Changes Take Effect: Do *not* change the option value after the installation

Specifies the lowest time level of aggregation, in minutes, for the AG2_INB_V_*_SUBHOUR tables. You must choose the value for this option at deployment time and avoid changing it afterwards. Your choice depends on the end-user reporting system:

- If you plan on using GI2 out-of-box reports, keep the default of 30 minutes. Out of the box, GI2 supports only a lowest aggregation level of 30 minutes.
With the value of 30, Genesys Info Mart performs aggregation at 30-minute intervals.
- If you either intend to customize GI2 reports, or do not use GI2 reports, but you intend to use the AG2_INB_V_* aggregate tables for your custom reporting, you can set this value to 15.

Genesys Info Mart builds the AG2_INB_V_*_SUBHOUR aggregate tables using 15-minute intervals.

Warnings! If you select the value of 15, and later install GI2, you must either change this option value to 30 or customize the reports by following the instructions in the *Genesys Interactive Insights 7.6 User's Guide*.

If you change the value, GI2 reports will only use data built from that point forward. You will have to re-aggregate the older data manually in order for it to be used by GI2 reports.

gim-etl-tenant Section

For single-tenant deployments, use this section to specify configuration values that apply to the default Resources tenant.

For multi-tenant deployments, use this section to specify default configuration values that apply to all tenants for which you have not configured tenant-specific values. (To configure tenant-specific values, see “Tenant Object Options” on [page 335](#). Be sure to consider whether you have to configure tenant-specific configuration values for the Environment tenant.)

days-to-keep-dt-resource-activity-facts

Default Value: 0

Valid Values: 0, 3–3700

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Specifies the number of days to retain detail fact data in the DT_RES_STATE_FACT, DT_RES_STATE_REASON_FACT, and DT_DND_FACT tables. A value of 0 specifies that the detail fact data will be kept indefinitely. For other values, facts that occur before the specified retention period are purged from the Genesys Info Mart database.

When you select a value, make sure that it is large enough to allow for the calculation of aggregates, archiving of data, or uploading of data to a data warehouse. For example, if you want to retain data for one month, consider setting the value to 45. This value allows for two extra weeks for any additional calculation of aggregates, archiving of data, or uploading of data to a data warehouse.

In high-volume deployments, it is important to keep the value of this option as low as possible, for performance reasons. Aggressively purging fact table data prevents the performance of Job_LoadGIM and Job_MaintainGIM from degrading as the Info Mart database grows. However, lowering the purging eligibility threshold to fewer than 30 days is suitable only for environments where the Info Mart database provides only intraday reporting, and data does not have to be persisted for longer-term historical reporting purposes.

For more information about purging, see the section about purging eligibility in the *Genesys Info Mart Operations Guide*.

days-to-keep-gim-facts

Default Value: 0

Valid Values: 0, 3–3700

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Specifies the number of days to retain fact data in the Genesys Info Mart database. A value of 0 specifies that data will be kept indefinitely. For other values, facts that occur before the specified retention period are purged from the Genesys Info Mart database.

When you select a value, make sure that it is large enough to allow for the calculation of aggregates, data archival, or uploading of data to a data warehouse. For example, if you want to retain data for one year, consider setting the value to 380. This value allows for the extra day in a leap year, plus two extra weeks for any additional calculation of aggregates, data archival, or uploading data to a data warehouse.

In high-volume deployments, it is important to keep the value of this option as low as possible, for performance reasons. Aggressively purging fact table data prevents the performance of Job_LoadRecent (intraday aggregation), Job_LoadGIM, Job_AggregateGIM, and Job_MaintainGIM from degrading as the Info Mart database grows. However, lowering the purging eligibility threshold to fewer than 30 days is suitable only for environments where the Info Mart database provides only intraday reporting, and data does not have to be persisted for longer-term historical reporting purposes.

For more information about purging, see the section about purging eligibility in the *Genesys Info Mart Operations Guide*.

std-tenant-time-zone

Default Value: GMT

Valid Values: Any valid time zone ID

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies the standard time zone from the perspective of the tenant.

A standard time zone represents a single time zone that is used for reporting from the perspective of a business user, regardless of the time zones in which the recorded events actually occurred. The value of this option affects the population of Standard Tenant Date, Standard Tenant Time Of Day, Standard Tenant Start Time, and Standard Tenant End Time in the fact tables.

For multi-tenant deployments, you might want to set the Environment tenant's `std-tenant-time-zone` value to the same value that you configure for the `std-enterprise-time-zone` option in the `gim-etl` section, because the Environment tenant usually represents the enterprise or service provider.

gim-transformation Section

Use this configuration section to specify options that are related to transformation.

complex-voice-agent-env

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: `populate-sm-voice-resource-activity`, `factor-dnd-into-sm-resource-states`

Changes Take Effect: On the next intraday ETL cycle

Specifies whether a voice contact center environment is complex, meaning that an agent who is handling voice interactions logs on to more than one switch, DN, or queue at a time.

Note: Setting this option to FALSE if the voice contact center environment is complex can result in inaccurate summarization of voice agent activity data.

With the value of TRUE, and if `populate-sm-voice-resource-activity` is also set to TRUE, the last five minutes of voice agent activity data that is extracted from a given Interaction Concentrator application instance (which includes login sessions, resource states, resource state reasons, and do-not-disturb (DND)

modes) is not processed by Genesys Info Mart until newer agent activity data is later extracted from that same ICON instance; this is to facilitate summarization of a given agent's activity across switches, DN's, or queues.

This option should only be set to FALSE if the voice contact center environment is simple instead of complex, meaning that each agent handling voice interactions logs in to only a single switch, DN, or queue at a time. If this option is set to FALSE, the accuracy of agent reports for a given business day in a contact center that operates less than 24 hours a day will be improved, because data for the last five minutes of the day will be reflected in these reports.

Note: This option is ignored and defaults to TRUE if there are any voice switches configured with `factor-dnd-into-sm-resource-states` set to TRUE.

ignore-missing-config-objs

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: Immediately

Specifies whether `Job_TransformGIM` will ignore missing configuration objects when it encounters unresolved references to configuration objects in the extracted data. When this option is set to TRUE, `Job_TransformGIM` will not fail when it encounters unresolved references to configuration objects.

From the point of view of an individual instance of `Job_TransformGIM`, configuring the application to ignore missing configuration objects automatically is the equivalent of manually running `Job_TransformGIM` with the `-ignoreMissingConfigObjs` command-line parameter. However, `Job_TransformGIM` does not log any message about the error; there is no possibility of resynchronizing ICON and Configuration Server; and there is no possibility of correcting the data before transforming this set of extracted data. Accordingly, Genesys recommends that you do not enable this option unless your environment is:

- A lab, in which it is acceptable to discard or improperly transform some source data.
- A high-volume deployment, in which a separate intraday ETL is installed and it is preferable to discard or improperly transform some source data, instead of having the ETL stop running until the problem is corrected manually. In very high-volume contact centers, an extended outage can cause the ETL to fall too far behind to be able to catch up to the current intraday reporting interval.

show-abandoned-detail

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_TransformGIM

Note: The new option value is not applied to previously loaded facts.

Controls how Genesys Info Mart populates the Technical Descriptor dimension and Result Reason column for interactions in the INTERACTION_FACT and INTERACTION_SEGMENT_FACT tables. INTERACTION_RESOURCE_FACT is populated as if show-abandoned-detail is always set to TRUE. If set to TRUE, Genesys Info Mart populates a new technical result value of CustomerAbandoned and a result reason value of AbandonedWhileRinging, AbandonedWhileQueued, or AbandonedFromHold. If set to FALSE, Genesys Info Mart continues to populate a technical result value of Abandoned.

show-conference-detail

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_TransformGIM

Note: The new option value is not applied to previously loaded facts.

Controls how Genesys Info Mart populates the Technical Descriptor dimension for voice interactions in the INTERACTION_SEGMENT_FACT table. If set to TRUE, Genesys Info Mart populates the Resource Role column with InConference. It also impacts the Role Reason column (ConferenceInitiator and ConferenceJoined values).

transformation-buffer-size

Default Value: 3

Valid Values: 1-50

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

In each run of Job_TransformGIM, the job will make multiple passes through the extracted source data. This option specifies the relative size of the buffer used to hold a group of objects to be processed in a single pass of Job_TransformGIM. A higher number will give better performance but cause the ETL to use more memory. A lower number will use less memory but reduce performance. If your environment has a large amount of attached data per call, you might have to decrease this value to avoid ETL failures due to a Java Out of Memory exception.

Performance testing may be required to determine the best value for your environment.

You can also adjust the amount of memory the ETL uses to allow the best mix of memory and performance for your environment. For more information, see [“Modifying the Genesys Info Mart Default Arguments” on page 352](#).

voice-init-resp-duration

Default Value: TIME_TO_FIRST_AGENT

Valid Values: TIME_TO_FIRST_AGENT, TIME_FROM_IVR_TO_AGENT, TIME_TO_FIRST_SERVICE

Dependencies: None

Changes Take Effect: At the next run of Job_TransformGIM

Note: The new option value is not applied to previously loaded facts.

Indicates the algorithm Genesys Info Mart uses when calculating the interaction's initial response duration. Set the option to one of the following values:

- TIME_TO_FIRST_AGENT - the initial response duration represents the time it takes a voice interaction to be answered by the first agent involved in the interaction. The duration includes all routing, queue and IVR port time that occurred before the first agent answered.
- TIME_FROM_IVR_TO_AGENT - the initial response duration represents the time that it takes the last IVR port segment to connect a caller to an agent (or place). The duration includes all routing and queue time that occurred between the initiation of the IVR transfer and the time the agent answered.
- TIME_TO_FIRST_SERVICE - The initial response duration represents the time it takes a voice interaction to be answered by the first IVR port or agent (or place). The duration includes all routing and queue time that occurred before the first IVR port or agent answered.

gim-tuning Section

Use this configuration section to tune the ETL to improve performance in large-scale deployments—for example, by enabling parallel processing (multi-threading).

The options in this section consume considerable resources and should be enabled only if there are sufficient CPU and memory resources on the Genesys Info Mart Server and all applicable database servers. Factors that influence resource consumption include the number of data sources from which the ETL extracts data, the volume of data, and the number of configured tenants.

From the point of view of the Genesys Info Mart Server, Genesys recommends that you not change the values of these options from their default values unless you are running Genesys Info Mart Server as a native 64-bit Windows 2003,

Windows 2008, Red Hat Enterprise AS Linux 5.0, or Solaris 10 application, with a Java heap size of 5 GB. Because database server requirements depend on diverse and deployment-specific factors, guidance on database server capacity requirements is beyond the scope of this guide.

aggregate-tenants-in-parallel

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: At least one aggregate is enabled in the section [gim-aggregates-tenant], `max-tenants-in-parallel`

Changes Take Effect: At the next run of `Job_LoadRecent` (for intraday aggregation) or `Job_AggregateGIM` (for historical aggregation)

Specifies whether `Job_LoadRecent` and `Job_AggregateGIM` will perform aggregation for multiple tenants in parallel, to improve performance. When this option is set to TRUE, `Job_LoadRecent` and `Job_AggregateGIM` perform aggregation for multiple tenants in parallel. The number of tenants that will be processed in parallel is controlled by `max-tenants-in-parallel` (see [page 312](#)). When `aggregate-tenants-in-parallel` is set to FALSE, `Job_LoadRecent` and `Job_AggregateGIM` perform aggregation for tenants sequentially.

extract-agent-activity-data-in-parallel

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of `Job_ExtractICON` for the `ICON_CORE` or `ICON_MM` roles

Specifies whether `Job_ExtractICON` for `role=ICON_CORE` or `role=ICON_MM` will extract the following types of data in parallel, to improve performance:

- Interaction details, such as calls and parties
- Agent activity details, such as login sessions, states, and reasons

When this option is set to TRUE, `Job_ExtractICON` extracts these types of data in parallel. When the option is set to FALSE, `Job_ExtractICON` extracts these types of data sequentially.

extract-ha-deduplicate-in-parallel

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of `Job_ExtractICON` for the `ICON_CORE` role

Specifies whether `Job_ExtractICON` will calculate and store temporary information from each IDB in an HA pair in parallel, to improve performance. When `Job_ExtractICON` extracts voice interactions from HA pairs of IDBs, it stores some information in temporary IDB tables to facilitate HA

deduplication. When this option is set to TRUE, Job_ExtractICON calculates and stores the information for each IDB in parallel. When the option is set to FALSE, Job_ExtractICON calculates and stores the information for each IDB sequentially.

extract-merging-in-parallel

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_ExtractICON for ICON_CORE

In a multi-IDB merge environment, specifies whether Job_ExtractICON will extract the following types of voice details in parallel, to improve performance:

- Interaction data that is extracted to the Merge Staging Area for multi-IDB merge processing
- Interaction data that is extracted to the Staging Area, because it is not affected by multi-IDB merge processing

When this option is set to TRUE, Job_ExtractICON extracts these types of data in parallel. When the option is set to FALSE, Job_ExtractICON extracts these types of data sequentially.

load-historical-tables-in-parallel

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_LoadGIM

Specifies whether Job_LoadGIM will load data into certain Info Mart tables in parallel, to improve performance. Job_LoadGIM loads fact data into the historical fact tables in several groups: configuration facts, interaction facts, resource (agent) facts, Outbound Contact facts, and GVP facts. Job_LoadGIM processes the groups sequentially. When this option is set to TRUE, Job_LoadGIM processes the tables within each group in parallel. When the option is set to FALSE, Job_LoadGIM processes the tables within each group sequentially.

load-intraday-tables-in-parallel

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_LoadRecent

Specifies whether Job_LoadRecent will process certain subgroups of Info Mart tables in parallel, to improve performance. Job_LoadRecent loads fact data into the intraday fact tables in several groups: configuration facts, interaction facts, resource (agent) facts, Outbound Contact facts, and GVP facts. Job_LoadRecent

processes the groups sequentially. In the interaction group, there are three subgroups:

- Interaction facts
 - R_INTERACTION_FACT
 - R_VOICE_IXN_FACT_EXT
 - R_MM_IXN_FACT_EXT
- Interaction segment facts
 - R_INTERACTION_SEGMENT_FACT
 - R_VOICE_SEG_FACT_EXT, R_MM_SEG_FACT_EXT
 - R_MEDIATION_SEGMENT_FACT
- Interaction resource facts
 - R_INTERACTION_RESOURCE_FACT
 - R_VOICE_RES_FACT_EXT
 - R_IXN_RESOURCE_STATE_FACT

When `load-intraday-tables-in-parallel` is set to `TRUE`, `Job_LoadRecent` processes the interaction subgroups in parallel. When the option is set to `FALSE`, `Job_LoadRecent` processes the interaction subgroups sequentially.

In all cases, `Job_LoadRecent` processes the tables within each group or subgroup in parallel.

lookup-caching-factor

Default Value: 1

Valid Values: 1–1000

Dependencies: None

Changes Take Effect: At the next run of `Job_TransformGIM`

Controls the number of user data dimension rows that are initially loaded into the in-memory lookup for `Job_TransformGIM`. Preloading user data dimensions improves job performance by reducing the number of database lookups that are required during processing. The number of rows that are preloaded is:

$1500 * \langle \text{the value of this option} \rangle$.

The default value, 1, preserves behavior from releases prior to Genesys Info Mart release 7.6.006. If the performance of `Job_TransformGIM` is critical, set this option to a higher value.

If there are fewer than 50,000 rows in the user data dimension tables (`USER_DATA` and `USER_DATA_2`), you can achieve optimal performance of `Job_TransformGIM` if the entire user data table is preloaded into the in-memory lookup, so that all database lookups can be avoided. However, you must have sufficient JVM memory available to preload the user data tables.

Setting this option to a value that will cause more than 50,000 rows to be preloaded might actually degrade, instead of improve, performance: The cost to preload the user data tables might exceed the cost of performing any necessary database lookups during processing.

If you change the value of this option, ensure that you test the new setting in a representative non-production environment, and evaluate the performance effects carefully before you deploy the new setting in any production system.

maintain-tables-in-parallel

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_MaintainGIM

Specifies whether Job_MaintainGIM will purge old data from fact tables for a given tenant in several parallel steps, to improve performance. When this option is set to TRUE, Job_MaintainGIM performs several steps in parallel when it purges fact data for a tenant. When the option is set to FALSE, Job_MaintainGIM purges old data from fact tables in sequential steps.

maintain-tenants-in-parallel

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: max-tenants-in-parallel

Changes Take Effect: At the next run of Job_MaintainGIM

In a multi-tenant environment, specifies whether Job_MaintainGIM will purge old data from fact tables for multiple tenants in parallel, to improve performance. When this option is set to TRUE, Job_MaintainGIM purges fact data for multiple tenants in parallel. The number of tenants whose data will be purged in parallel is controlled by [max-tenants-in-parallel](#). When [maintain-tenants-in-parallel](#) is set to FALSE, Job_MaintainGIM purges old fact data sequentially for each tenant.

max-tenants-in-parallel

Default Value: 0

Valid Values: 0–99

Dependencies: [aggregate-tenants-in-parallel=TRUE](#) or [maintain-tenants-in-parallel=TRUE](#)

Changes Take Effect: At the next run of Job_LoadRecent, Job_AggregateGIM, or Job_MaintainGIM

In a multi-tenant environment, controls the number of tenants that will be processed in parallel, to improve performance:

- If [aggregate-tenants-in-parallel=TRUE](#), the number of tenants that will have their facts aggregated in parallel by Job_LoadRecent or Job_LoadGIM.
- If [maintain-tenants-in-parallel=TRUE](#), the number of tenants that will have their old facts purged in parallel by Job_MaintainGIM.

A value of 0 (the default value) means that all tenants will be processed in parallel. A value of 1 means that all tenants will be processed sequentially.

oracle-stats-degree-of-parallelism

Default Value: 2

Valid Values: 1–12

Dependencies: None

Changes Take Effect: Immediately

Controls the degree of parallelism that is used when you are calculating table statistics for IDB, Staging Area, or Info Mart databases on Oracle. This option does not apply to other database platforms.

oracle-stats-estimate-percent

Default Value: 20

Valid Values: 1–100

Dependencies: None

Changes Take Effect: Immediately

Specifies the value that you should supply for the estimate percent parameter of the Oracle `DBMS_STATS.GATHER_TABLE_STATS` call when you are updating table statistics on an Oracle database. This parameter has no effect when you are using RDBMS platforms other than Oracle.

run-gim-config-before-starting-job

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: Immediately

Specifies whether the Genesys Info Mart Server will read its latest configuration data from Configuration Server before the start of each ETL job. Regardless of the value that is set for this option, the Genesys Info Mart Server reads its configuration data from Configuration Server whenever it detects a configuration change. When this option is set to TRUE, the Genesys Info Mart Server will also reread its configuration before it starts every ETL job. When this option is set to FALSE, the Genesys Info Mart Server will not reread its configuration every time that it is about to start an ETL job.

Note: Genesys Info Mart Server receives notifications about configuration changes that are made to its application object only. It does not receive notifications about configuration changes that are made to other supporting objects, such as Tenants, Switches, DNs, Fields and DAPs. If you configure Genesys Info Mart specific configuration options in those supporting objects, Genesys recommends that you set the `run-gim-config-before-starting-job` configuration option to TRUE. Otherwise, you must restart Genesys Info Mart Server for the configuration changes to take effect.

run-historical-fact-table-stats

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: Immediately

Controls whether the ETL will attempt to update database table statistics for historical fact tables. When this option is set to TRUE, the ETL attempts to update statistics. When this option is set to FALSE, the ETL is prevented from updating statistics, and you must maintain database table statistics on your own.

run-intraday-fact-table-stats

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: Immediately

Controls whether the ETL will attempt to update database table statistics for intraday fact tables. When this option is set to TRUE, the ETL attempts to update statistics. When this option is set to FALSE, the ETL is prevented from updating statistics, and you must maintain database table statistics on your own.

update-historical-gvp-facts-intraday

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_LoadRecent.

Controls whether the ETL will attempt to update the INTERACTION_ID column of GVP_CALL_FACT by using the contents of R_INTERACTION_SEGMENT_FACT during each execution of Job_LoadRecent. When this option is set to FALSE, GVP_CALL_FACT will be updated only during Job_LoadGIM. When this option is set to TRUE, the ETL will attempt to update GVP_CALL_FACT on each execution of Job_LoadRecent.

ixn-user-data-facts Section

Use this configuration section to specify how interaction user-data facts are populated in the INTERACTION_FACT table, based on the specified value from the corresponding facts in its interaction segments. If you set an option in this section to FIRST, the first non-null value of an interaction segment is used. If you set this option to LAST, causes the last non-null value of an interaction segment is used.

user-data-1

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 1 is populated based on the specified value of the corresponding facts in the interaction segments.

user-data-2

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 2 is populated, based on the specified value of the corresponding facts in the interaction segments.

user-data-3

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 3 is populated, based on the specified value of the corresponding facts in the interaction segments.

user-data-4

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 4 is populated, based on the specified value of the corresponding facts in the interaction segments.

user-data-5

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 5 is populated, based on the specified value of the corresponding facts in the interaction segments.

user-data-6

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 6 is populated, based on the specified value of the corresponding facts in the interaction segments.

user-data-7

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 7 is populated, based on the specified value of the corresponding facts in the interaction segments.

user-data-8

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 8 is populated, based on the specified value of the corresponding facts in the interaction segments.

user-data-9

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 9 is populated, based on the specified value of the corresponding facts in the interaction segments.

user-data-10

Default Value: LAST

Valid Values: FIRST, LAST, MINIMUM, MAXIMUM

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 10 is populated, based on the specified value of the corresponding facts in the interaction segments.

user-data-11

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 11 is populated, based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

user-data-12

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 12 is populated, based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

user-data-13

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 13 is populated based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

user-data-14

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 14 is populated, based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

user-data-15

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 15 is populated, based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

user-data-16

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 16 is populated, based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

user-data-17

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 17 is populated, based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

user-data-18

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 18 is populated, based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

user-data-19

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 19 is populated, based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

user-data-20

Default Value: LAST

Valid Values: FIRST, LAST

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies how User Data 20 is populated, based on the specified value of the corresponding facts in the interaction segments. Because this field is a character string, FIRST and LAST are the only valid values.

log Section

Use this configuration section to specify the Genesys Info Mart logging options. You can use the following options to enable centralized logging.

standard

Default Value: network

Valid Values: network

Dependencies: verbose

Changes Take Effect: Immediately

Specifies the location of the log output.

Note: Network is the only supported value.

verbose

Default Value: standard

Valid Values: none, standard, trace

Dependencies: standard

Changes Take Effect: Immediately

Specifies the minimum level of logging.

Note: These two options and their recommended values are the only supported common log options.

log4j Section

Use this configuration section to specify the Genesys Info Mart ETL options for logging events to a local file and to STDOUT. These options are separate from, and independent of, the Genesys Central Logger options that you specify in the log section.

Note: Do not change the options in this section unless Genesys Technical Support directs you to do so.

log-file-name

Default Value: `gim_etl.log`

Valid Values: `filespec`

Dependencies: None

Changes Take Effect: Immediately

Specifies the path and file name of the log file. If you do not specify a path, the log files will be created in the installation directory.

logging-level

Default Value: `INFO`

Valid Values: `DEBUG`, `INFO`, `WARN`, `NONE`

Dependencies: None

Changes Take Effect: Immediately

Determines whether local logging is enabled, and specifies the minimum level of events to log. Values `DEBUG`, `INFO` and `WARN` correspond to the Genesys Management Layer logging values `DEBUG`, `TRACE`, and `STANDARD`, respectively.

max-backup-index

Default Value: `10`

Valid Values: `0` to `99`

Dependencies: None

Changes Take Effect: Immediately

Specifies the maximum number of backup log files that are kept in addition to the active log file.

max-log-file-size

Default Value: `5MB`

Valid Values: Any number, followed by a scale (`KB` for kilobytes, `MB` for megabytes, or `GB` for gigabytes).

Dependencies: None

Changes Take Effect: Immediately

Specifies the maximum size of the active log file before it is considered full and renamed as a backup file.

optional-tables Section

Use this configuration section to specify which optional Data Mart tables are populated.

Genesys Info Mart applies the following order of precedence when evaluating the configuration options in this section: A specific value that is configured for an ACD Queue DN object overrides a specific value that you configured for a Switch object; a specific value that is configured for a Switch object overrides the value that you configured for the Genesys Info Mart Application object.

To enable or disable the population of certain activity to the corresponding tables in a specific ACD Queue DN object, see [“DN Object Options” on page 339](#).

To enable or disable the population of the certain activity to the corresponding tables on a specific Switch object, see [“Switch Object Options” on page 337](#).

populate-acd-queue-facts

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of the ACD queue activity to the MEDIATION_SEGMENT_FACT and R_MEDIATION_SEGMENT_FACT tables. Genesys Info Mart uses this value for all configured ACD queues, unless you configure an option with the same name on an individual Switch object or ACD Queue DN object in Configuration Manager.

populate-dt-dnd-facts

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: populate-resource-session-facts

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of the DT_DND_FACT and R_DT_DND_FACT tables for those media types for which you set the populate-dt-<media type>-resource-activity option to TRUE. Because DND facts cannot be populated without corresponding session facts, you must set the populate-resource-session-facts option to TRUE in order for the populate-dt-dnd-facts option to have an effect for a given media type for which populate-dt-[media type]-resource-activity is set to TRUE.

populate-dt-resource-state-facts

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: populate-resource-session-facts

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of the DT_RES_STATE_FACT and R_DT_RES_STATE_FACT tables for those media types for which you set the populate-dt-<media type>-resource-activity option to TRUE. Because state facts cannot be populated without corresponding session facts, you must set the

`populate-resource-session-facts` option to `TRUE` in order for `populate-dt-resource-state-facts` to have an effect for a given media type for which `populate-dt-[media type]-resource-activity` is set to `TRUE`.

populate-dt-resource-state-reason-facts

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: `populate-resource-session-facts`, `populate-dt-resource-state-facts`

Changes Take Effect: On the next intraday ETL cycle

Enables or disables the population of the `DT_RES_STATE_REASON_FACT` and `R_DT_RES_STATE_REASON_FACT` tables for those media types for which you set the `populate-dt-<media type>-resource-activity` option to `TRUE`. Because reason facts cannot be populated without corresponding session and state facts, you must set `populate-resource-session-facts` and `populate-dt-resource-state-facts` to `TRUE` in order for `populate-dt-resource-state-reason-facts` to have an effect for a given media type where `populate-dt-<media type>-resource-activity` is set to `TRUE`.

populate-gvp-var-facts

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output to the GVP VAR fact and dimension tables.

populate-interaction-resource-facts

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output to the `INTERACTION_RESOURCE_FACT` and `R_INTERACTION_RESOURCE_FACT` tables.

populate-interaction-resource-state-facts

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: `populate-interaction-resource-facts`

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output to the `IXN_RESOURCE_STATE_FACT` and `R_IXN_RESOURCE_STATE_FACT` tables. Because interaction resource state facts cannot be populated without corresponding interaction resource facts,

you must set `populate-interaction-resource-facts` to `TRUE` in order for `populate-interaction-resource-state-facts` to have an effect.

populate-place-group-facts

Default Value: `TRUE`

Valid Values: `TRUE`, `FALSE`

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output to the `PLACE_GROUP_FACT` and `R_PLACE_GROUP_FACT` tables.

populate-resource-group-facts

Default Value: `TRUE`

Valid Values: `TRUE`, `FALSE`

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output to the `RESOURCE_GROUP_FACT` and `R_RESOURCE_GROUP_FACT` tables.

populate-resource-session-facts

Default Value: `TRUE`

Valid Values: `TRUE`, `FALSE`

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output to the `RESOURCE_SESSION_FACT` and `R_RESOURCE_SESSION_FACT` tables for those media types for which you set the `populate-<media type>-resource-activity` or `populate-dt-<media type>-resource-activity` options to `TRUE`.

Note: Genesys Info Mart populates voice resource activity in the legacy tables by default. Settings for the corresponding configuration options in the `optional-tables` section control the population of voice resource activity only.

populate-resource-state-facts

Default Value: `TRUE`

Valid Values: `TRUE`, `FALSE`

Dependencies: `populate-resource-session-facts`

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output to the `RESOURCE_STATE_FACT` and `R_RESOURCE_STATE_FACT` tables for those media types for which you set the `populate-<media type>-resource-activity` option to `TRUE`. Because state facts cannot be populated without corresponding session facts, you must set the `populate-resource-session-facts` option to `TRUE` in order for the `populate-`

`resource-state-facts` option to have an effect for a given media type for which `populate-<media type>-resource-activity` is set to `TRUE`.

Note: Genesys Info Mart populates voice resource activity in the legacy tables by default. Settings for the corresponding configuration options in the `optional-tables` section control the population of voice resource activity only.

populate-resource-state-reason-facts

Default Value: `TRUE`

Valid Values: `TRUE`, `FALSE`

Dependencies: `populate-resource-session-facts`, `populate-resource-state-facts`

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output to the `RESOURCE_STATE_REASON_FACT` and `R_RESOURCE_STATE_REASON_FACT` tables for those media types for which you set the `populate-<media type>-resource-activity` option to `TRUE`. Because reason facts cannot be populated without corresponding session and state facts, you must set the `populate-resource-session-facts` and `populate-resource-state-facts` options to `TRUE` in order for the `populate-resource-state-reason-facts` option to have an effect for a given media type for which `populate-[media type]-resource-activity` is set to `TRUE`.

Note: Genesys Info Mart populates voice resource activity in the legacy tables by default. Settings for the corresponding configuration options in the `optional-tables` section control the population of voice resource activity only.

populate-resource-skill-facts

Default Value: `TRUE`

Valid Values: `TRUE`, `FALSE`

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output to the `RESOURCE_SKILL_FACT` and `R_RESOURCE_SKILL_FACT` tables.

populate-sm-resource-session-facts

Default Value: `FALSE`

Valid Values: `TRUE`, `FALSE`

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables population of the SM_RES_SESSION_FACT and R_SM_RES_SESSION_FACT tables for those media types for which you set the populate-sm-`<media type>-resource-activity` option to TRUE.

populate-sm-resource-state-facts

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: populate-sm-resource-session-facts

Changes Take Effect: On the next intraday ETL cycle

Enables or disables population of the SM_RES_STATE_FACT and R_SM_RES_STATE_FACT tables for those media types for which you set the populate-sm-`<media type>-resource-activity` option to TRUE. Because state facts cannot be populated without corresponding session facts, you must set populate-sm-resource-session-facts to TRUE in order for populate-sm-resource-state-facts to have an effect for a given media type where populate-sm-`<media type>-resource-activity` is set to TRUE.

populate-sm-resource-state-reason-facts

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: populate-sm-resource-session-facts, populate-sm-resource-state-facts

Changes Take Effect: On the next intraday ETL cycle

Enables or disables population of the SM_RES_STATE_REASON_FACT and R_SM_RES_STATE_REASON_FACT tables for those media types for which you set the populate-sm-`<media type>-resource-activity` option to TRUE. Because reason facts cannot be populated without corresponding session and state facts, you must set populate-sm-resource-session-facts and populate-sm-resource-state-facts to TRUE in order for populate-sm-resource-state-facts to have an effect for a given media type where populate-sm-`<media type>-resource-activity` is set to TRUE.

populate-virtual-queue-facts

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Enables or disables Genesys Info Mart output regarding virtual queue activity to the MEDIATION_SEGMENT_FACT and R_MEDIATION_SEGMENT_FACT tables. With the value of FALSE, Genesys Info Mart does not populate these tables with virtual queue activity. With the value of TRUE, these tables are populated with the virtual queue activity.

schedule Section

This configuration section specifies the schedule that Genesys Info Mart Server uses to launch the ETL jobs. The Genesys Info Mart Server enables options to be modified while it is running. The time format for these options is HH:mm, where HH represent the number of hours (00–23), and mm represents the number of minutes (00–59).

aggregate-start-time

Default Value: 01:00

Valid Values: 00:00–23:59

Dependencies: run-scheduler, run-aggregates

Changes Take Effect: Immediately

Note: If the time of day that is represented by the new value has already passed, the new value is applied to the following day.

Specifies the time of day, in 24-hour format, when Job_AggregateGIM is started. This job is scheduled to start at this time when Job_LoadGIM is completed, and when the run-aggregates option is set to TRUE. The value that you specify must be outside the range that is specified by etl-start-time and etl-end-time.

etl-end-time

Default Value: 22:00

Valid Values: 00:00–23:59

Dependencies: run-scheduler, etl-start-time

Changes Take Effect: Immediately

Specifies the time of day, in 24-hour format, when the last intraday ETL cycle can start running. If the value that you specify is before the ETL start time, the end time is for the next day (past mid-night).

etl-frequency

Default Value: 60

Valid Values: 0–1440

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: If you have set the sub-hour-level-aggregation options to 30 minutes and have set the populate-intraday-aggregates option to TRUE, do not set the etl-frequency option to a value less than 30.

Specifies the number of minutes that pass between the start times of each intraday ETL cycle. If the amount of time that it takes to complete a cycle is shorter than the specified value, the next cycle is delayed until the time elapses.

If the amount of time that it takes to complete a cycle is longer than the specified value, the next cycle is started immediately.

etl-start-time

Default Value: 06:00

Valid Values: 00:00–23:59

Dependencies: run-scheduler

Changes Take Effect: Immediately

Note: If the time of day that is represented by the new value has already passed, the new value is applied to the following day.

Specifies the time of day, in 24-hour format, when the first intraday ETL cycle starts running.

intraday-aggregates-frequency

Default Value: 0

Valid Values: 0–1440

Dependencies: populate-intraday-aggregates

Changes Take Effect: At the next run of Job_LoadRecent

Specifies how frequently Job_LoadRecent performs intraday aggregation.

In high-volume deployments, a short ETL cycle improves performance by keeping data sizes reasonable. However, the short cycle can result in repeated re-aggregation of overlapping time ranges, and this degrades the performance of intraday aggregation. Running intraday aggregation less frequently than Job_LoadRecent enables you to achieve a better balance between the two processes.

Intraday aggregation is an optional step of Job_LoadRecent. The Genesys Info Mart Server considers the value of the intraday-aggregates-frequency option only if the populate-intraday-aggregates option is set to TRUE.

- If the intraday-aggregates-frequency option is not set or is set to a value equal to or less than the etl-frequency option, intraday aggregation will be performed every time Job_LoadRecent runs.
- If the intraday-aggregates-frequency option is set to a value greater than the etl-frequency option, intraday aggregation will be performed only if the amount of time that has elapsed since the start of the last successful intraday aggregation exceeds the value of this option.

This option does not affect the historical aggregation performed in Job_AggregateGIM.

job-retry-count

Default Value: 3

Valid Values: 0–100

Dependencies: ignore-missing-config-objs

Changes Take Effect: Immediately

Specifies the number of attempts to retry a failed job started by GIM Server job scheduler. If `Job_TransformGIM` fails with an `GimIconMissingConfigDataException` exception and `ignore-missing-config-objs` is set to `TRUE`, this option is ignored and no retry is attempted. For more information on how `job-retry-count` works, see the “Automatic Retry of Failed ETL Jobs Using Genesys Info Mart Server” section of the *Genesys Info Mart 7.6 Operations Guide*.

job-retry-wait

Default Value: 5

Valid Values: 1-1440

Dependencies: `job-retry-count`

Changes Take Effect: Immediately

Specifies the number of minutes to wait before retrying a failed job that was started by GIM Server job scheduler. If `job-retry-count` is 0, this option is ignored. For more information on how `job-retry-wait` works, see the “Automatic Retry of Failed ETL Jobs Using Genesys Info Mart Server” section of the *Genesys Info Mart 7.6 Operations Guide*.

load-recent-start-time

Default Value: 22:15

Valid Values: 00:00–23:59

Dependencies: `run-scheduler`, `run-load-recent-with-extract-and-transform`, `etl-start-time`, `etl-end-time`

Changes Take Effect: Immediately

Note: If the time of day that is represented by the new value has already passed, the new value is applied to the following day.

Specifies the time of day, in 24-hour format, when `Job_LoadRecent` is started. This job is scheduled to start at this time when:

- `Job_TransformGIM` is completed.
- The current time is outside the range that is specified by `etl-start-time` and `etl-end-time`.
- The `run-load-recent-with-extract-and-transform` option is set to `FALSE`.

The value that you specify must be outside the range that is specified by `etl-start-time` and `etl-end-time`.

load-start-time

Default Value: 23:15

Valid Values: 00:00–23:59

Dependencies: `run-scheduler`

Changes Take Effect: Immediately

Note: If the time of day that is represented by the new value has already passed, the new value is applied to the following day.

Specifies the time of day, in 24-hour format, when `Job_LoadGIM` is started. This job is scheduled to start at this time when `Job_LoadRecent` is completed. The value specified must be outside range that is specified by `etl-start-time` and `etl-end-time`.

maintain-start-time

Default Value: 03:00

Valid Values: 00:00–23:59

Dependencies: `run-scheduler`, `run-maintain`

Changes Take Effect: Immediately

Note: If the time of day that is represented by the new value has already passed, the new value is applied to the following day.

Specifies the time of day, in 24-hour format, when `Job_MaintainGIM` is started. This job is scheduled to start at this time when `Job_AggregateGIM` is completed, and when the `run-maintain` option is set to `TRUE`. The value that you specify must be outside the range that is specified by `etl-start-time` and `etl-end-time`.

max-concurrent-extract-jobs

Default Value: 10

Valid Values: 1–1024

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Specifies the number of concurrently running Interaction Concentrator, GVP VAR, and Stat Server extraction jobs. You can increase the value to accommodate more data source extractions that are running in parallel.

migration-duration-in-hours

Default Value: 1

Valid Values: 0–24

Dependencies: `run-scheduler`, `run-migration`

Changes Take Effect: At the next run of `Job_MigrateGIM`

Specifies the number of hours for `Job_MigrateGIM` to spend migrating data during a single run. With the value of 0, the migration job stops when all data has been migrated. With a value other than 0, the migration job runs until its duration time has been reached, at which point the migration job completes all table updates for the current data time-range and stops.

You can change the value of this option while the Genesys Info Mart Server is running. The new value will take effect on the next start of the migration job.

migration-start-time

Default Value: None

Valid Values: 00:00–23:59

Dependencies: run-scheduler

Changes Take Effect: Immediately

Note: If the time of day that is represented by the new value has already passed, the new value is applied to the following day.

Specifies the time when the Genesys Info Mart Server starts Job_MigrateGIM for the day if the run-migration option is TRUE. The specified time must be outside the ETL time as defined by the etl-start-time and etl-end-time options. The Genesys Info Mart Server schedules the migration job for the current day if the migration start time is equal to or after the current time; otherwise, the server schedules the migration job for the next day.

This option does not affect a request to run the migration job from the Genesys Info Mart Administration Console.

You can change the value of this option while the Genesys Info Mart Server is running. The new value takes effect immediately.

populate-intraday-aggregates

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: run-load-recent-with-extract-and-transform

Changes Take Effect: At the next run of Job_LoadRecent

Specifies whether intraday aggregation is performed and the intraday aggregate tables are populated. Intraday aggregation is an optional step of Job_LoadRecent. The value of this option is considered only if the run-load-recent-with-extract-and-transform option is set to TRUE. This option does not affect the historical aggregation performed in Job_AggregateGIM.

Warning! Enabling this option can negatively impact the performance of Job_LoadRecent. If you have high volumes of data and a small ETL cycle time, you will need adequate database tuning and hardware for the Info Mart database server to maintain consistent performance throughout the day.

run-aggregates

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: run-scheduler

Changes Take Effect: Immediately

Specifies whether to run Job_AggregateGIM at the scheduled time.

run-load-recent-with-extract-and-transform

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: run-scheduler

Changes Take Effect: On the next intraday ETL cycle

Specifies whether Job_LoadRecent is included as part of the intraday ETL cycle.

run-maintain

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: run-scheduler

Changes Take Effect: Immediately

Specifies whether to run Job_MaintainGIM at the scheduled time.

run-migration

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: run-scheduler

Changes Take Effect: Immediately

Specifies whether the Genesys Info Mart Server schedules the migration job to run at the scheduled time defined by the migration-start-time option. The run-migration option does not affect a request to run the migration job from the Genesys Info Mart Administration Console.

You can change the value of this option while the Genesys Info Mart Server is running. The new value takes effect immediately.

run-scheduler

Default Value: FALSE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: Immediately

Specifies whether to stop or start the scheduler. If the scheduler is currently scheduling jobs, and this option is set to FALSE, the scheduler pauses. If set to TRUE, the scheduler resumes at the point where it stopped.

tenant-fiscal-periods Section

For single-tenant deployments, use this section to specify configuration values that apply to the default Resources tenant.

For multi-tenant deployments, use this section to specify default configuration values that apply to all tenants for which you have not configured tenant-specific values.

To configure tenant-specific values, see “Tenant Object Options” on [page 335](#). Be sure to consider whether you have to configure tenant-specific configuration values for the `Environment` tenant.

The following basic rules define fiscal periods:

- `Fiscal Week`—Contains seven days and always begins on the same day of the week.
- `Fiscal Month`—Contains either four or five fiscal weeks.
- `Fiscal Quarter`—Contains 13 fiscal weeks, consisting of two 4-week fiscal months, and one 5-week fiscal month in a consistent pattern (4, 4, 5; 4, 5, 4; or 5, 4, 4).
- `Fiscal Half-Year`—Contains two fiscal quarters, 26 fiscal weeks, or six fiscal months. `Fiscal Year` contains 52 fiscal weeks, 12 fiscal months, four fiscal quarters, or two fiscal half-years; it ends on the same day of the same month each year (for example, December 31). The designation of the year may be defined by the first or last day of the fiscal year.

There are three exceptions to these rules:

- In general, the first and last week of the fiscal year do not contain seven days.
- In general, the first week of the fiscal year does not start on the same day as the other weeks.
- Most fiscal years have 53 weeks, where week 53 is part of the last fiscal month of the last fiscal quarter in the second fiscal half-year.

Note: Fiscal period definitions contain many variations. Each tenant has its own rules for defining fiscal periods. These rules change from year to year, and contain anomalies to account for calendar-year variations, such as leap year and the day of the week that begins the year. The `tenant-fiscal-periods` options that you select, and the `Tenant Date` fiscal-period column values that Genesys Info Mart populates, are only suggested values.

If you want to use fiscal periods for reporting, Genesys strongly recommends that you carefully analyze the `Tenant Date` column values and customize them to suit your environment. Be sure to customize only the fiscal period columns—that is, columns that begin with `FISCAL`.

first-day-of-week

Default Value: `MONDAY`

Valid Values: `SUNDAY`, `MONDAY`, `TUESDAY`, `WEDNESDAY`, `THURSDAY`, `FRIDAY`, `SATURDAY`

Dependencies: None

Changes Take Effect: At the next run of `Job_InitializeGIM`

Specifies the first day of a fiscal week.

last-day-identifies-year

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: At the next run of Job_InitializeGIM

Specifies whether the fiscal year is identified by the last day of the fiscal year or the first day of the fiscal year. For example, for a fiscal year that ends on July 31, 2003, setting this option to TRUE results in a fiscal year of 2003; setting it to FALSE results in a fiscal year of 2002.

last-day-of-last-month

Default Value: 31

Valid Values: 1–31

Dependencies: None

Changes Take Effect: At the next run of Job_InitializeGIM

Specifies the last day of the last month of the fiscal year.

last-month-of-year

Default Value: DECEMBER

Valid Values: JANUARY, FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY, AUGUST, SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER

Dependencies: None

Changes Take Effect: At the next run of Job_InitializeGIM

Specifies the last month of the fiscal year.

week-pattern-in-quarter

Default Value: 544

Valid Values: 544, 454, 445

Dependencies: None

Changes Take Effect: At the next run of Job_InitializeGIM

Specifies the pattern of weeks that make up a fiscal quarter. For example, setting this option to 544 results in a fiscal quarter made up of three fiscal months, where the first fiscal month contains five weeks and each of the remaining fiscal months contains four weeks.

Configuring Supporting Objects

Configuration settings on the following configuration objects affect Genesys Info Mart data processing:

- Tenant
- Switch
- DN

- `Field`

Use the instructions in this section to select the appropriate settings for your environment.

For `Field` object configuration instructions, refer to:

- [Configuring the Storage of Outbound Contact Record Field Data, page 143.](#)
- [Configuring the Mapping of Outbound Contact Record Fields, page 146.](#)

Procedure: **Setting the Annex Tab to Display**

Purpose: To display the `Annex` tab in object's `Properties` dialog boxes in Configuration Manager.

By default, the `Annex` tab for any configuration object is not displayed in Configuration Manager.

Start of procedure

1. Select `View > Options`.
2. Select the `Show Annex tab in Object Properties` check box.
3. Click `OK`.

End of procedure

Tenant Object Options

For multi-tenant deployments, you can configure tenant-specific option values on the `Annex` tab of each tenant, including the `Environment` tenant.

Procedure: **Setting Tenant Object Options**

Purpose: To set the options for the `Tenant` configuration object.

Prerequisites

- [Setting the Genesys Info Mart Application Options, page 232.](#)
- [Setting the Annex Tab to Display, page 335.](#)

Start of procedure

1. You can add and configure the following Genesys Info Mart configuration sections under Tenant Annex:
 - `gim-etl-tenant`—Use to configure tenant-specific option values that supersede the default values that are configured in the Genesys Info Mart application's `gim-etl-tenant` configuration section. Make sure that you add all of the options. (See [page 303](#).)
 - `gim-tenant-fiscal-period`—Use to configure tenant-specific option values that supersede the default values configured in the Genesys Info Mart application's `tenant-fiscal-periods` configuration section. Make sure that you add all of the options. (See [page 332](#).)
 - `gim-aggregates-tenant`—Use to configure tenant-specific option values that supersede the default values that are configured in the Genesys Info Mart application's `gim-aggregates-tenant` configuration section. Make sure that you add all of the options. (See [page 260](#).)
 - `gim-agg-skill-inb-ixn-tenant`—Use to configure tenant-specific option values that supersede the default values that are configured in the Genesys Info Mart application's `gim-agg-skill-inb-ixn-tenant` configuration section. Make sure that you add all of the options. (See [page 258](#).)
 - `gim-agg-skill-abandon-tenant`—Use to configure tenant-specific option values that supersede the default values that are configured in the Genesys Info Mart application's `gim-agg-skill-abandon-tenant` configuration section. Make sure that you add all of the options. (See [page 256](#).)
 - `gim-agg-voice-abandon-tenant`—Use to configure tenant-specific option values that supersede the default values that are configured in the Genesys Info Mart application's `gim-agg-voice-abandon-tenant` configuration section. Make sure that you add all of the options. (See [page 272](#).)
 - `gim-agg-voice-init-resp-tenant`—Use to configure tenant-specific option values that supersede the default values that are configured in the Genesys Info Mart application's `gim-agg-voice-abandon-tenant` configuration section. Make sure that you add all of the options. (See [page 277](#).)
2. You must add an additional option to each of these sections, to specify the name of the Genesys Info Mart application to which the options apply. The option name must be `gim-etl-name`, and its value must be the name of the Genesys Info Mart application.

3. If you have multiple Genesys Info Mart application instances that use the same tenant, add additional sections on the tenant's Annex tab and add a suffix to the names of these sections (for example, `gim-etl-tenant-2` or `gim-tenant-fiscal-periods-2`). Make sure that you specify the correct value for `gim-etl-name` in each section.

End of procedure

Next Steps

- [Setting Switch Object Options, page 337.](#)

Switch Object Options

Procedure: Setting Switch Object Options

Purpose: To set the options of the Switch configuration object.

Prerequisites

- [Setting the Genesys Info Mart Application Options, page 232.](#)
- [Setting the Annex Tab to Display, page 335.](#)

Start of procedure

1. Set the following options in the `gim-etl` section on the Annex tab of the Switch configuration object:
 - `network-switch`, if required (see [page 338](#)).
 - `factor-dnd-into-sm-resource-states` (see [page 338](#)).
 - Any applicable options that are required to supersede the values that you configured in the `optional-tables` section of the Genesys Info Mart Application object, with the desired values (see [page 321](#)).
For instance, configure the `populate-acc-queue-facts` option (see [page 339](#)).

Note: The value that is set for options in a specific Switch object will override a value that is set for the corresponding options in the `optional-tables` section of the Genesys Info Mart Application object.

End of procedure

Next Steps

- [Setting DN Object Options, page 339.](#)

Switch Object Options Descriptions**network-switch**

Default Value: FALSE

Valid Values: TRUE, FALSE

Changes Take Effect: At the next run of Job_ExtractICON

Note: When you set a new option value on a switch whose data is already in the Genesys Info Mart database, Genesys Info Mart will update the data on the next run of Job_ExtractICON.

Specifies whether the switch is a network switch. If this option is set to TRUE, all Genesys Info Mart resources that are subordinate to this switch will have their NETWORK_RESOURCE_FLAG set to TRUE.

Note: As you deploy Genesys Info Mart or add a new network switch to your configuration, it is critical that you set the network-switch option correctly to indicate whether the new switch is a network switch.

If you do not specify it correctly, the Interaction data in the Info Mart database cannot calculate separate counts and durations for network and premise Interaction Segments.

If you change the value of the network-switch option after you have already run the ETL, the new Interaction data will be summarized correctly at the next ETL run; however, the existing Interaction data will be incorrect, because it will not be resummarized based on the new option setting.

factor-dnd-into-sm-resource-states

Default Value: FALSE for non-Multimedia switches, TRUE for Multimedia switches

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Specifies whether do-not-disturb (DND) status for a resource on a given switch is factored into resource states and reasons in SM_RES_STATE_FACT and SM_RES_STATE_REASON_FACT, as well as their corresponding R_* intraday fact tables. When the option is set to FALSE, Genesys Info Mart does not factor

DND into summarized resource states and reasons. When the option is set to TRUE, DND is factored into summarized resource states and reasons.

populate-acd-queue-facts

Default Value: TRUE

Valid Values: TRUE, FALSE

Dependencies: None

Changes Take Effect: On the next intraday ETL cycle

Note: The new option value is not applied to previously loaded facts.

Enables or disables the population of the ACD queue activity to the `MEDIATION_SEGMENT_FACT` and `R_MEDIATION_SEGMENT_FACT` tables. Genesys Info Mart uses this value for all configured ACD queues, unless you configure an option with the same name on an individual `Switch` object or `ACD Queue DN` object in Configuration Manager. Genesys Info Mart applies the following order of precedence when it evaluates the configuration options: A specific value that is configured for an `ACD Queue DN` object overrides a specific value that you configured for a `Switch` object; a specific value that is configured for a `Switch` object overrides the value that you configured for the `Genesys Info Mart Application` object.

To enable or disable the population of the ACD queue activity to these tables on a specific `ACD Queue DN` object, see [“DN Object Options”](#).

DN Object Options

Procedure: **Setting DN Object Options**

Purpose: To override certain application option settings in a specific `DN` object, as appropriate.

Note: For the options that you configure in a `DN` object, changes take effect on the next intraday ETL cycle. The new option value is not applied to previously loaded facts.

Prerequisites

- [Setting the Genesys Info Mart Application Options, page 232.](#)
- [Setting the Annex Tab to Display, page 335.](#)

Start of procedure

1. Display the properties for the VQ object in Configuration Manager.
2. Add a new section called `gim-etl` on the Annex tab.
3. Open the new section, and add the `q-answer-threshold-voice` option with the desired value (see [page 300](#)).
4. Add the `q-answer-threshold-mm` option with the desired value (see [page 300](#)).

Note: The value that is set for this option in a specific DN object of the `Virtual Queue` type will override a value that is set in the Genesys Info Mart Application object.

5. Add any applicable options that are required to supersede either the options that you configured in the `optional-tables` section of the Genesys Info Mart Application object or the options that you configured in the `gim-etl` section of the `Switch` object. Set the desired values (see [page 321](#)).

For instance, configure the `populate-acd-queue-facts` option for a DN object of the `ACD Queue` type (see [page 322](#)). If you add this option without any value to a DN object, Genesys Info Mart applies `TRUE` as a default option value.

Note: The value that is set for options in a specific DN object of the `ACD Queue` type will override a value that is set for corresponding options in the `optional-tables` section of the Genesys Info Mart Application object, or in the `Switch` object.

End of procedure**Next Steps**

- [Preparing the Genesys Info Mart Server Host, page 342.](#)



Chapter

7

Installing Genesys Info Mart Components

This chapter includes all the information that you need in order to prepare the Genesys Info Mart Server host for installation. It also describes how to install the Genesys Info Mart application and the Genesys Info Mart Administration Console.

This chapter contains the following sections:

- [Overview, page 341](#)
- [Preparing the Genesys Info Mart Server Host, page 342](#)
- [Installing the Genesys Info Mart Application, page 350](#)
- [Installing the Genesys Info Mart Administration Console, page 353](#)
- [Accessing the Genesys Info Mart Administration Console, page 355](#)

Overview

Before You Proceed

Before you can install Genesys Info Mart components, make sure that you have:

- Configured the `Application` object for Genesys Info Mart Server.
- Set any Genesys Info Mart–related options in the `Tenant`, `Switch`, and `DN` configuration objects.

If you have not already done so, follow instructions in Chapter 6 on [page 225](#) before you continue.

Task Flow for Installing Genesys Info Mart Components

Table 42 summarizes the task flow to install Genesys Info Mart Server and the Genesys Info Mart Administration Console.

Table 42: Task Flow: Installing Genesys Info Mart Components

Objective	Related Procedures and Actions
Install a server application to support detailed reporting about interactions of various media types.	<p>Install the Genesys Info Mart Server application as follows:</p> <ol style="list-style-type: none"> 1. Review and follow recommendations in “Preparing the Genesys Info Mart Server Host” on page 342. 2. Install Genesys Info Mart Server, by using the instructions that are appropriate to your environment: <ul style="list-style-type: none"> • Installing the Genesys Info Mart Application on Windows, page 350. • Installing the Genesys Info Mart Application on UNIX, page 351. 3. If necessary, follow recommendations in “Modifying the Genesys Info Mart Default Arguments” on page 352.
Install a graphical user interface (GUI) application for monitoring and real-time administration of the ETL that supports detailed reporting.	<p>Install the Genesys Info Mart Administration Console and open it as instructed in:</p> <ol style="list-style-type: none"> 1. Installing the Genesys Info Mart Administration Console on Windows, page 354. 2. Accessing the Genesys Info Mart Administration Console, page 355.
Ensure time synchronization in the deployment.	<p>Verify that the system times are synchronized on all hosts on which Genesys applications are running. Otherwise, Genesys Info Mart might report inaccurate data.</p>

Preparing the Genesys Info Mart Server Host

To prepare the Genesys Info Mart Server host for the Genesys Info Mart installation, perform the following tasks which are described in detail in this chapter:

- Install, or verify the installation of, Genesys Local Control Agent (LCA) if you want to use the Genesys Solution Control Interface (SCI) to control the operation of the Genesys Info Mart Server.
- Install Java 1.5 or higher Java Development Kit (JDK), and modify—or verify the content of—the PATH environment variable.

If you are installing Oracle 11g, the JDBC driver for Oracle requires that you install a minimum release of Java 1.6.

Genesys Info Mart supports 32-bit Java JDK. Alternatively, starting with release 7.6.006, Genesys Info Mart supports 64-bit Java JDK on Windows 2003 and Solaris 10, and starting with release 7.6.012, Genesys Info Mart supports 64-bit Java JDK on Windows 2008 and Red Hat Enterprise AS Linux 5.0.

- Install, or verify the installation of, the relational database management system (RDBMS) client for deployments that use Oracle and/or DB2. Modify, or verify the content of, the PATH environment variable.
Genesys Info Mart supports 32-bit RDBMS clients. Alternatively, starting with release 7.6.006, Genesys Info Mart supports 64-bit Oracle client on Windows 2003 and Solaris 10 and starting with release 7.6.012, Genesys Info Mart supports 64-bit Oracle client on Windows 2008 and Red Hat Enterprise AS Linux 5.0.
- Install, or verify the installation of, a Java Database Connectivity (JDBC) driver for each RDBMS that Genesys Info Mart Server will access (Oracle, DB2, and Microsoft SQL Server). Modify, or verify the content of, the CLASSPATH environment variable.

Installing LCA

If you plan to monitor or control Genesys Info Mart through the Management Layer, you must also configure and install Management Layer components—in particular, LCA.

To monitor the status of Genesys Info Mart components through the Management Layer, you must load an LCA instance on every host that is running Info Mart 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.

You will need a Genesys Management Framework product CD in order to install the components of the Management Layer. For information about, and deployment instructions for, these Framework components, see the *Framework Deployment Guide* and the *Framework Management Layer User's Guide*.

Installing Java 1.5 (or Higher) JDK

Note: If you are using Oracle 11g, the JDBC driver for Oracle requires that you install a minimum release of Java 1.6.

The Genesys Info Mart Server obtains the path to the Java executable in different ways, depending on how you start and run Genesys Info Mart.

Windows If you plan to run Genesys Info Mart Server on Windows, note the following setup requirements:

- If you use Genesys Solution Control (SCI) to start and stop Genesys Info Mart Server, Genesys Info Mart obtains the Java path from the `-Djava.home` argument in the command line. You must ensure that the command-line arguments point to the server version of Java (for example, `-Djava.home="C:\Program Files\Java\jdk1.6.0_07\jre"`). You can view and edit the command-line arguments on the `Start Info` tab of the Genesys Info Mart Application object.
- If you run the Genesys Info Mart Server as a Windows service, Genesys Info Mart obtains the Java path from the `-Djava.home` parameter in the service options. You must ensure that this service option points to the server version of Java (for example, `-Djava.home="C:\Program Files\Java\jdk1.6.0_07\jre"`).
- If you run the Genesys Info Mart Server from the command line or by using the `Start > Programs` menu, Genesys Info Mart obtains the Java path from the `PATH` environment variable. If necessary, modify the `PATH` environment variable for the user account under which you plan to start the Genesys Info Mart Server, so that it points to the server version of Java.

To modify the `PATH` environment variable, add `<JDK-install-dir>\bin` so that it appears earlier in the path than any other reference to Java (where `<JDK-install-dir>` is the path where you installed the JDK).

Note: The Genesys Info Mart software will fail if the Server JVM is not the first JVM found on the `PATH`.

UNIX Note the following setup requirements if you plan to run Genesys Info Mart Server on UNIX:

- If you will use LCA to start and stop Genesys Info Mart Server, you must modify the `PATH` environment variable for the user account under which you plan to start the LCA service.
- If you will not use LCA, you must modify the `PATH` environment variable for the user account under which you plan to start Genesys Info Mart Server.

To modify the `PATH` environment variable, add `<JDK-install-dir>/bin` so that it appears earlier in the path than any other reference to Java (where `<JDK-install-dir>` is the path where you installed the JDK).

Notes:

- The Genesys Info Mart software will fail if the Server JVM is not the first JVM found on the `PATH`.

- Installing the Sun JDK may enable the Java update feature for the included JRE. If enabled, this auto-update feature might automatically install new versions of Java and change the PATH environment variable. Therefore, Genesys recommends that you disable this automatic update feature. Refer to the Sun JDK documentation for specific instructions on the Java control panel and the Java update feature.

**gim_etl_paths.bat
file**

After the installation, verify that the path in the `gim_etl_paths.bat` file is correctly pointing to the Java executable—for example:

```
set JAVACMD=java.exe
```

Update the path in the `gim_etl_paths.bat` file if necessary.

Installing RDBMS Clients

RDBMS Client for Oracle

When installing the Oracle RDBMS client, you must modify the PATH environment variable so that Genesys Info Mart can locate the RDBMS client. The specific PATH environment variable that you modify depends on the operating system and user account under which the Genesys Info Mart Server runs.

Windows The Oracle client installation program for Windows automatically updates the PATH system environment variable.

Note: If you plan to run Genesys Info Mart Server in native 64-bit mode, you must install the 64-bit Oracle client. Because the 64-bit Oracle client will be added to the PATH system environment variable, other applications must also be able to use the 64-bit Oracle client. This imposes a limitation that 32-bit applications that connect to Oracle databases (for example, Genesys DB Server) cannot run on the same host as a 64-bit Genesys Info Mart Server (Genesys does not ship a 64-bit DB Server for Windows).

**Solaris, Linux,
AIX**

If you plan to run Genesys Info Mart Server on Solaris, [Linux](#), or AIX:

- If you will use Genesys Solution Control (LCA) to start and stop Genesys Info Mart Server, you must modify the LD_LIBRARY_PATH environment variable for the user account under which you plan to start the LCA.
- If you will not use Genesys Solution Control (LCA), you must modify the LD_LIBRARY_PATH environment variable for the user account under which you plan to start Genesys Info Mart Server.

Modify the LD_LIBRARY_PATH environment variable by adding one of the following, so that it appears earlier in the path than any other reference to an

Oracle client (where `<oracle-install-dir>` is the path where you installed the Oracle client):

- `<oracle-install-dir>`—If you plan to run Genesys Info Mart Server in native 64-bit mode on Solaris 10 or Linux 5.
- `<oracle-install-dir>/lib32`—If you plan to run Genesys Info Mart Server on 32-bit Solaris, Linux, or AIX, or not in native 64-bit mode on Solaris 10 or Linux 5.

HP-UX If you plan to run Genesys Info Mart Server on HP-UX:

- If you will use Genesys Solution Control to start and stop Genesys Info Mart Server, you must modify the `SHLIB_PATH` environment variable for the user account under which you plan to start the LCA.
- If you will not use Genesys Solution Control, you must modify the `SHLIB_PATH` environment variable for the user account under which you plan to start Genesys Info Mart Server.

To modify the `SHLIB_PATH` environment variable, add `<oracle-install-dir>/lib32` so that it appears earlier in the path than any other reference to an Oracle client (where `<oracle-install-dir>` is the path where you installed the Oracle client).

RDBMS Client for DB2

UNIX If you plan to run Genesys Info Mart Server on UNIX:

- If you will use Genesys Solution Control to start and stop Genesys Info Mart Server, you must execute the DB2 environment setup script for the user account under which you plan to start the LCA.
- If you will not use Genesys Solution Control, you must execute the DB2 environment setup script for the user account under which you plan to start Genesys Info Mart Server.

The shell script environment that is used by the UNIX user determines which DB2 setup script to execute. For example, to execute the DB2 environment setup script for a Bourne or Korn shell, type `<DB2-InstanceHome>/sql/lib/db2profile` (where `<DB2-InstanceHome>` is the path to the DB2 instance).

RDBMS Client for Microsoft SQL Server

Not Required Genesys Info Mart does not require a database client in order to communicate with a Microsoft SQL Server database, because the installed JDBC driver for Microsoft SQL Server is of Type 4.

Installing JDBC Drivers

JDBC Driver for Oracle

The Oracle client ships with the required Type 2 JDBC driver that Genesys Info Mart requires. Make sure that you install this JDBC driver when you install the Oracle client. The class name of the driver that Genesys Info Mart uses for Oracle is `oracle.jdbc.driver.OracleDriver`. If you are using Oracle 11g, this class is from the `ojdbc6.jar` file that ships with the Oracle client. For all previous versions of Oracle, this class is from the `ojdbc14.jar` file that ships with the Oracle client.

Note: The Oracle 11g Type 2 JDBC driver requires a minimum release of Java 1.6.

You must also modify your `CLASSPATH` environment variable so that Genesys Info Mart can locate the JDBC driver. The specific `CLASSPATH` environment variable that you modify depends on the operating system and user account under which the Genesys Info Mart Server runs.

Windows If you plan to run Genesys Info Mart Server on Windows:

- If you will use Genesys Solution Control to start and stop Genesys Info Mart Server, you must modify the `CLASSPATH` environment variable for either the system account, or the user account under which you plan to start the LCA service.
- If you will run Genesys Info Mart Server as a Windows service, you must modify the `CLASSPATH` environment variable for either the System account, or the user account under which you plan to start the Genesys Info Mart Server Windows service.

Modify the `CLASSPATH` environment variable as follows:

- Oracle 11g—Add `<oracle-install-dir>\jdbc\lib\ojdbc6.jar` so that it appears earlier in the class path than any other reference to Oracle JDBC driver (where `<oracle-install-dir>` is the path where you installed the Oracle client).
- All other versions of Oracle—Add `<oracle-install-dir>\jdbc\lib\ojdbc14.jar` so that it appears earlier in the class path than any other reference to Oracle JDBC driver (where `<oracle-install-dir>` is the path where you installed the Oracle client).

UNIX If you plan to run Genesys Info Mart Server on UNIX:

- If you will use Genesys Solution Control to start and stop Genesys Info Mart Server, you must modify the `CLASSPATH` environment variable for the user account under which you plan to start LCA.

- If you will not use Genesys Solution Control, you must modify the CLASSPATH environment variable for the user account under which you plan to start Genesys Info Mart Server.

Modify the CLASSPATH environment variable as follows:

- Oracle 11g—Add `<oracle-install-dir>/jdbc/lib/odbc6.jar` so that it appears earlier in the class path than any other reference to an Oracle JDBC driver (where `<oracle-install-dir>` is the path where you installed the Oracle client).
- All other versions of Oracle—Add `<oracle-install-dir>/jdbc/lib/odbc14.jar` so that it appears earlier in the class path than any other reference to an Oracle JDBC driver (where `<oracle-install-dir>` is the path where you installed the Oracle client).

JDBC Driver for DB2

The DB2 client ships with the Type 2 JDBC driver that Genesys Info Mart requires. Make sure that you install this JDBC driver when you install the DB2 client. The class name of the driver Genesys Info Mart uses for DB2 is `com.ibm.db2.jcc.DB2Driver`.

You must also modify the CLASSPATH environment variable so that Genesys Info Mart can locate the JDBC driver. The specific CLASSPATH environment variable that you modify depends on the operating system and user account under which the Genesys Info Mart Server runs.

By default, the DB2 client installation program adds the JDBC driver to the CLASSPATH environment variable as follows:

- On Windows operating systems, the installation program adds the JDBC driver to the System CLASSPATH environment variable.
- On UNIX operating systems, the installation program adds the JDBC driver to the CLASSPATH environment variable of the user account under which you installed the DB2 client.

If the default behavior of the installation program is acceptable for your environment, no further action is required. Otherwise, use the information in this section to determine which CLASSPATH environment variable you need to modify.

Windows If you plan to run Genesys Info Mart Server on Windows:

- If you will use Genesys Solution Control to start and stop Genesys Info Mart Server, you must modify the CLASSPATH environment variable for either the system account, or the user account under which you plan to start the LCA service.
- If you will run Genesys Info Mart Server as a Windows service, you must modify the CLASSPATH environment variable for either the system account, or the user account under which you plan to start the Genesys Info Mart Server Windows service.

To modify the CLASSPATH environment variable, add the following files so that they appear earlier in the class path than any other reference to an DB2 JDBC driver (where `<db2-install-dir>` is the path where you installed the DB2 client):

- `<db2-install-dir>\sqllib\java\db2java.zip`
- `<db2-install-dir>\sqllib\java\db2jcc.jar`
- `<db2-install-dir>\sqllib\java\db2jcc_license_cu.jar`

UNIX If you plan to run Genesys Info Mart Server on UNIX:

- If you will use Genesys Solution Control to start and stop Genesys Info Mart Server, you must modify the CLASSPATH environment variable for the user account under which you plan to start LCA.
- If you will not use Genesys Solution Control, you must modify the CLASSPATH environment variable for the user account under which you plan to start Genesys Info Mart Server.

To modify the CLASSPATH environment variable, add the following files so that they appear earlier in the class path than any other reference to an DB2 JDBC driver (where `<db2-install-dir>` is the path where you installed the DB2 client):

- `<db2-install-dir>/sqllib/java/db2java.zip`
- `<db2-install-dir>/sqllib/java/db2jcc.jar`
- `<db2-install-dir>/sqllib/java/db2jcc_license_cu.jar`

JDBC Driver for Microsoft SQL Server

The Microsoft SQL Server JDBC driver is of Type 4, and therefore does not require the Microsoft SQL Server client to be installed. You must download and install the JDBC driver separately. Genesys Info Mart requires a JDBC driver version 1.1 or 1.2. The required driver is available from the Microsoft Download Center website, under the title “Microsoft SQL Server 2005 JDBC Driver 1.1” or “Microsoft SQL Server 2005 JDBC Driver 1.2.”

Install the driver by following the installation instructions supplied with it. Although you can install the JDBC driver on a UNIX operating system, Genesys Info Mart supports accessing Microsoft SQL Server databases only from Windows operating systems.

The name of the `.jar` file that contains the driver is `sqljdbc.jar`. After the installation, you must update the CLASSPATH environment variable to include the path to the folder that contains this `.jar` file.

The class name of the driver that Genesys Info Mart uses for Microsoft SQL Server is `com.microsoft.sqlserver.jdbc.SQLServerDriver`.

Installing the Genesys Info Mart Application

You can install the Genesys Info Mart application on either a Windows or a UNIX operating system.

Windows Installation

Procedure: Installing the Genesys Info Mart Application on Windows

Purpose: To install the Genesys Info Mart 7.6 application on a host that is running a Windows operating system.

When you install Genesys Info Mart on a Windows operating system, Genesys Info Mart is also installed as a Windows service with a startup type of *Automatic*. This means that if the host computer is restarted, the Windows service will start Genesys Info Mart automatically.

Note: You can install more than one Genesys Info Mart application in Configuration Manager.

Prerequisites

- Before you proceed, ensure that all the prerequisites have been met. See “Preparing the Genesys Info Mart Server Host” on [page 342](#).

Start of procedure

1. Insert the Genesys Info Mart CD into the CD-ROM drive of the computer on which you want to install Genesys Info Mart.
2. Navigate to, and open, the `genesys-info-mart\windows` directory.
3. Double click `setup.exe`, and then follow the directions in the installation wizard.

Warning! If you are installing on a 64-bit operating system, Genesys recommends that you specify an installation folder under `/gcti/gim_etl/`. There must not be any parentheses in the path name. If you specify an installation folder under `/Program Files (x86)/`, the installation will fail.

Note: The following error message may appear. If it does, it should be ignored:

Unable to find configuration information. Either you have not used configuration wizards and the GCTISetup.ini file was not created or the file is corrupted.

End of procedure

Next Steps

- Verify the Genesys Info Mart installation. See “Running the ETL Configuration Check” on [page 360](#) for details.

UNIX Installation

Procedure: Installing the Genesys Info Mart Application on UNIX

Purpose: To install the Genesys Info Mart 7.6 application on a host that is running a UNIX operating system.

Prerequisites

- To complete this procedure, use the UNIX user ID that has access to the RDBMS client that you installed earlier.

Start of procedure

1. Insert the Genesys Info Mart CD into the CD-ROM drive of the computer on which you want to install Genesys Info Mart.
2. Locate the correct installation directory for your platform—for example, `genesys_info_mart/gim_etl/solaris`.
3. Save the contents of this directory to a local folder.
4. Locate and run the `install.sh` shell script. When prompted, enter the requested information.

End of procedure

Next Steps

- Verify the Genesys Info Mart installation. See “Running the ETL Configuration Check” on [page 360](#) for details.

Modifying the Genesys Info Mart Default Arguments

You might want to change the Genesys Info Mart application's default arguments—for example, to change the default location in which the Java 1.5 JDK is installed.

To modify the Genesys Info Mart default arguments:

From Configuration Manager

- If you will run Genesys Info Mart Server on Windows, and use Genesys Solution Control to start and stop Genesys Info Mart Server, you can edit the default command-line arguments directly on the `Start Info` tab of the Genesys Info Mart `Application` object in the Configuration Manager. These changes will take effect when the `Application` is started using Genesys Solution Control.

The following example (provided for a Windows operating system) shows the command-line arguments that are created under the `Start Info` tab of the Genesys Info Mart `Application` object in Configuration Manager after the installation has been completed:

```
-Xmx900m -Xms32m -Xss512k
-XX:GCTimeRatio=9 -Duser.country=US
-Duser.language=en -Djava.home=C:\Java\JDK1.5.0_07\jre
com.genesyslab.gim.etl.manager.GIMServer -service InfoMart
```

Windows Service

- If you will run Genesys Info Mart Server as a Windows service, you cannot make changes directly to any of the default command-line arguments. Instead, you must modify and run the `gim_etl_update_service_arguments.bat` file that is included in your `gim-etl` home folder. This `.bat` file will update the arguments in the Windows service for the specific Genesys Info Mart application service.

Genesys recommends that you first copy the current arguments from the Windows service `Path to executable: text box` to this `gim_etl_update_service_arguments.bat` file, and then update the arguments. Once updated, run the `.bat` file in order for the changes to take effect. Genesys recommends that you make the same changes to the Genesys Info Mart `Application` object in the Configuration Manager. Refer to Figure 21 on [page 353](#).

Note: The Windows service name of the Genesys Info Mart application is identified by the `-service` parameter. If Genesys Info Mart is installed multiple times, there will be a Windows service for each installation in which the value of the parameter `-service` will be the service name of the corresponding Genesys Info Mart application in the Windows service. Genesys recommends that you do *not* change the value of this parameter.

.bat File

```

@echo off

REM: The command below updates the arguments for a specific service.
REM: The service is identified by the option -service. It is recommended
REM: to copy the current
REM: service arguments to the command line below and make the
REM: necessary modifications to it. Note, the service arguments includes
REM: the "Path to the executable"
REM: followed by the actual service arguments.
REM:
REM: For example
REM:
REM: gimServer.exe -serviceConf C:\Program
Files\GCTI\GIM_ETL\MyGimAppl\gimServer.exe -Xmx900m -Xms32m -Xss512k
-XX:GCTimeRatio=9 -Duser.country=US -Duser.language=en -
Djava.home=C:\Java\JDK1.5.0_07\jre
com.genesyslab.gim.etl.manager.GIMServer -host MainCME -port 2020 -
app MyGimAppl -service InfoMart

gimServer.exe -serviceConf <enter service arguments here!> %*

```

Figure 21: gim_etl_update_service_arguments.bat File

Modifying the gim_etl.properties File

If the installation program is unable to connect to Configuration Server during the installation, you have to update the `gim_etl.properties` file after the installation. The file can be found in the installation directory for Genesys Info Mart—for example, `C:\Program Files\GCTI\Genesys Info Mart\<applicationname>`.

Open the file in a text editor and update the following parameters:

- `CfgServer.Host`—Enter the host name or IP address of the Configuration Server host.
- `CfgServer.Port`—Enter the port that is used to connect to Configuration Server.
- `CfgServer.AppName`—Enter the exact name of the Genesys Info Mart Application object, as it appears in Configuration Manager.

Installing the Genesys Info Mart Administration Console

The Genesys Info Mart Administration Console is a graphical user interface (GUI) that enables the monitoring and real-time administration of some aspects of the Genesys Info Mart extraction, transformation and loading (ETL)

jobs. It is included as a separate installation package on the Genesys Info Mart CD, and you install it on the same host as your Genesys Configuration Manager.

The Genesys Info Mart Administration Console is implemented by using the existing Genesys Framework. It interfaces with Genesys Info Mart Server in order to start, schedule, and stop ETL jobs on an ad-hoc basis.

Note: You can install and execute Genesys Info Mart Administration Console release 7.6 under Configuration Manager 8.0 on the Microsoft Windows 7 operating system.

Before You Proceed

Before you install the Genesys Info Mart Administration Console, you must complete the following tasks:

1. Install and configure a DB Server to enable the Genesys Info Mart Administration Console to access the Staging Area database.
For complete instructions, see Appendix A, “Standard Configuration Procedure” of the *Framework 7.6 Deployment Guide*.
2. Create and configure a Genesys Info Mart Administration Console DAP.
For complete instructions, see [Configuring the Genesys Info Mart Administration Console DAP](#), page 212.
3. Add the Genesys Info Mart Administration Console DAP to the Connections tab of the Genesys Info Mart Application object. See [Step 7](#) on [page 230](#).

Windows Installation

Procedure:

Installing the Genesys Info Mart Administration Console on Windows

Purpose: To install the Genesys Info Mart Administration Console on a host that is running a Windows operating system.

Note: The Genesys Info Mart Administration Console is not supported on the UNIX operating system.

Prerequisites

- Genesys recommends that you close Configuration Manager before you install the Genesys Info Mart Administration Console.

Start of procedure

1. Insert the Genesys Info Mart CD into the CD-ROM drive of the computer on which you want to install the Genesys Info Mart Administration Console.
2. Navigate to, and open, the `genesys-info-mart\Admin-Console\windows` directory.
3. Double click `setup.exe`, and then follow the directions in the installation wizard.

End of procedure**Next Steps**

- [Accessing the Genesys Info Mart Administration Console, page 355.](#)

Accessing the Genesys Info Mart Administration Console

In Genesys Info Mart 7.6, the Genesys Info Mart Administration Console is implemented as an extension to Genesys Configuration Manager using the existing Wizard Framework.

More than one instance of the Genesys Info Mart Administration Console can be running at the same time—each of which is associated with a different Genesys Info Mart `Application` object. In addition, different instances of the Genesys Info Mart Administration Console can be running on different client computers—all of which are associated with the same Genesys Info Mart `Application` object. In this case, any of the connected clients can issue commands to the Genesys Info Mart Server. All instances of the Genesys Info Mart Administration Console display the current status the next time that they are refreshed.

Procedure:**Accessing the Genesys Info Mart Administration Console**

Purpose: To access the Genesys Info Mart Administration Console.

Prerequisites

- You must start the Genesys Info Mart Server application before the Genesys Info Mart Administration Console.

Start of procedure

1. Open Configuration Manager.
2. Select the Application object for the Genesys Info Mart ETL that you want to manage.
3. Right-click the Genesys Info Mart ETL Application, and then select Wizard > Configure (see [Figure 22](#)).

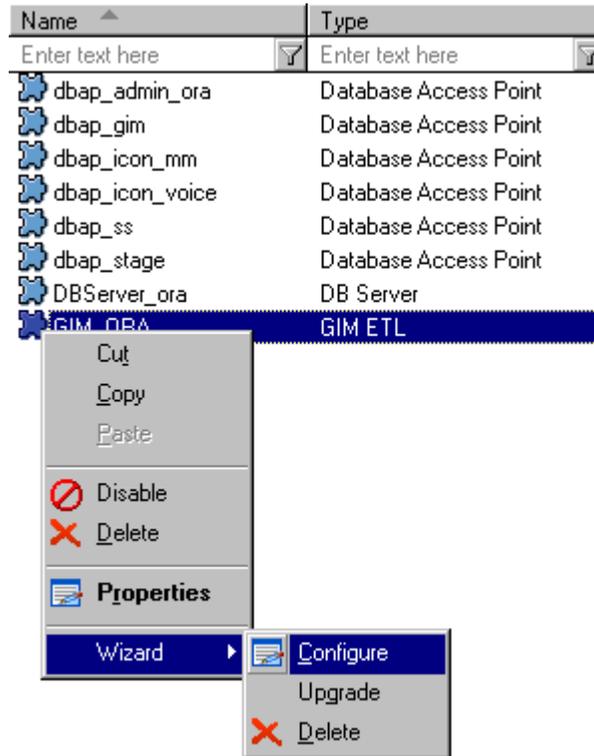


Figure 22: Accessing the Genesys Info Mart Administration Console from the Configuration Manager

- The GIM Admin Console dialog box appears, displaying the status of the Genesys Info Mart ETL jobs (see [Figure 23](#)).

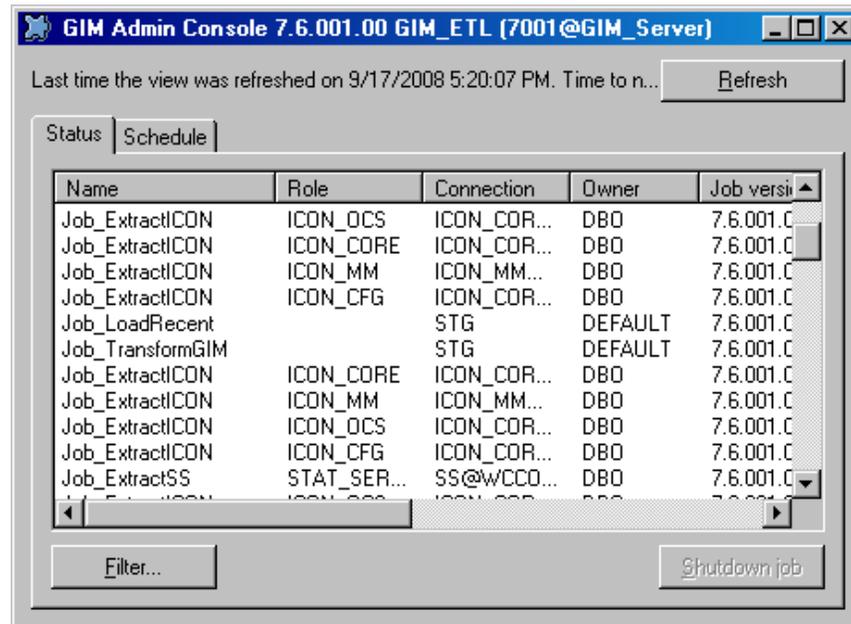


Figure 23: Genesys Info Mart Administration Console Dialog Box

End of procedure

Next Steps

- For more information about using the Genesys Info Mart Administration Console to start and stop jobs, and to view job status, see the *Genesys Info Mart 7.6 Operations Guide*.
- Perform the actions described in Chapter 8, “Post-Installation Activities,” on [page 359](#).



Chapter

8

Post-Installation Activities

This chapter describes the tasks that you must complete after you finish configuring and installing Genesys Info Mart and the Genesys Info Mart Administration Console. It contains the following sections:

- [Overview, page 359](#)
- [Running the ETL Configuration Check, page 360](#)
- [Starting the List Time Zone IDs Utility, page 362](#)
- [Initializing Genesys Info Mart, page 363](#)
- [Running the ETL Jobs for the First Time, page 366](#)
- [Enabling the Genesys Info Mart Server Scheduler, page 367](#)
- [Creating Genesys Info Mart Tenant Views, page 368](#)

Overview

This chapter describes the post-installation activities that you must complete before you start using Genesys Info Mart.

Task Flow for Post-Installation Activities

[Table 43](#) summarizes the task flow for activities that are required to complete the Genesys Info Mart deployment.

Table 43: Task Flow: Post-Installation Activities

Objective	Related Procedures and Actions
Complete the deployment of the server and databases to support detailed reporting for various media types	<ol style="list-style-type: none"> 1. Run the ETL (extraction, transformation, and loading) Configuration Check utility, to verify configuration and database access. See Running the ETL Configuration Check. 2. Run the List Times Zone IDs utility, and update any Genesys Info Mart time zone configuration options. See Starting the List Time Zone IDs Utility, page 362. 3. From the Genesys Info Mart Administration Console, initialize the Staging Area and Info Mart databases. See Initializing Genesys Info Mart, page 364. 4. From the Genesys Info Mart Administration Console, run all of the Genesys Info Mart ETL jobs once. See Running the ETL Jobs, page 366. 5. Enable the Genesys Info Mart Server Scheduler. See Enabling the Genesys Info Mart Server Scheduler, page 367. 6. Using your prepared RDBMS user accounts configured with the proper privileges, run the scripts to create Genesys Info Mart Tenant Views. This procedure is required only if you have a multi-tenant deployment. See Creating Genesys Info Mart Tenant Views, page 370.

Running the ETL Configuration Check

Procedure:

Running the ETL Configuration Check

Purpose: To verify the Genesys Info Mart installation by running the ETL Configuration Check utility.

The ETL Configuration Check utility also tests the database connection of any Database Access Points (DAPs) that you added to the Genesys Info Mart application in order to define the Interaction, Stat Server, GVP VAR, Staging Area, and Info Mart databases. The utility tests your configuration and displays the results in a separate window for easy troubleshooting, and it also writes them to a log file for future reference.

Prerequisites

- Install the Genesys Info Mart application, either on UNIX or Windows. See “Installing the Genesys Info Mart Application” on [page 350](#).

- [Installing the Genesys Info Mart Administration Console on Windows, page 354.](#)

Start of procedure

1. Depending on your operating system, do one of the following:
 - On a Windows operating system, select Start > Programs > Genesys Solutions > Genesys Info Mart > ETL Configuration Check. See [Figure 24](#).

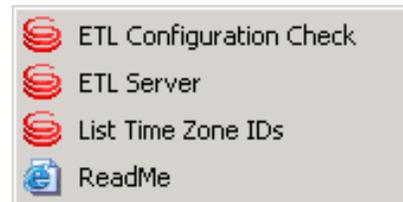


Figure 24: Running the ETL Configuration Check on Windows

- On a UNIX operating system, navigate to the installation directory, and run `gim_etl_config_check`.
2. After the ETL Configuration Check tests your configuration, review the results, which are displayed in a separate window.

[Figure 25](#) shows sample results for a deployment that is properly configured.

```

GIM76 - gim_etl_config_check
G:\Program Files\GCTI\GIM_ETL\GIM76_App>gim_etl_config_check
10:41:46.514 INFO main 55-30013 "Genesys Info Mart version is '7.6.005.00'."
10:41:46.514 INFO main 55-30014 "Connected to Config Server 'redhook:7272' for application 'GIM76_Min'."
10:41:46.624 INFO main 55-30022 "High Availability configuration. HA Pair ID 'b' is configured for DAPs
CONB1_DAP, ICONB2_DAP"
10:41:46.624 INFO main 55-30022 "High Availability configuration. HA Pair ID 'a' is configured for DAPs
CONA1_DAP, ICONA2_DAP"
10:41:46.624 INFO main 55-30023 "High Availability configuration. DAP ICONB1_DAP is configured as primary
for HA Pair ID 'b'"
10:41:46.624 INFO main 55-30023 "High Availability configuration. DAP ICONA1_DAP is configured as primary
for HA Pair ID 'a'"
10:41:46.639 INFO main 55-30028 "Using JDBC Driver: oracle.jdbc.driver.OracleDriver version: 10.2 for the
following DAP(s): GIMDAP"
10:41:46.733 INFO main 55-30028 "Using JDBC Driver: com.microsoft.sqlserver.jdbc.SQLServerDriver version:
1.1 for the following DAP(s): ICONA1_DAP, ICONB1_DAP, ICONA2_DAP, ICONB2_DAP"
10:41:46.733 INFO main 55-30032 "Testing connection to Dap 'GIMDAP' for role(s) 'MERGING'"
10:41:53.983 INFO main 55-30032 "Testing connection to Dap 'ICONA1_DAP' for role(s) 'ICON_CFG, ICON_CORE'"
10:41:55.311 INFO main 55-30032 "Testing connection to Dap 'ICONB2_DAP' for role(s) 'ICON_CORE'"
10:41:56.061 INFO main 55-30032 "Testing connection to Dap 'ICONA2_DAP' for role(s) 'ICON_CORE, ICON_CFG'"
10:41:57.279 INFO main 55-30032 "Testing connection to Dap 'ICONB1_DAP' for role(s) 'ICON_CORE'"
10:41:57.982 INFO main 55-30032 "Testing connection to Dap 'ICONA1_DAP' for role(s) 'ICON_CORE'"
10:41:57.982 INFO main 55-30032 "Testing connection to Dap 'ICONA2_DAP' for role(s) 'ICON_CFG'"
10:41:58.717 INFO main 55-30032 "Testing connection to Dap 'GIMDAP' for role(s) 'STAGING'"
10:42:01.717 INFO main 55-30032 "Testing connection to Dap 'GIMDAP' for role(s) 'INFO_MART'"
10:42:03.982 INFO main Configuration Check detected no errors
Press any key to continue . . .
  
```

Figure 25: Sample of ETL Configuration Check Results

Note: After the ETL Configuration Check, the console and the `gim_etl` log may report results for configuration options that you cannot modify. The `gim_etl` log may also report similar options when the Genesys Info Mart Server starts up. Any options that are not documented in Chapter 6 on [page 225](#) are not configurable.

End of procedure

Next Steps

- [Starting the List Time Zone IDs Utility, page 362.](#)

Starting the List Time Zone IDs Utility

Genesys Info Mart uses Java time zone definitions to convert between Greenwich Mean Time (GMT, also called Universal Time Coordinated [UTC]) and the configured standard time zones. Genesys Info Mart provides a utility (List Time Zone IDs) that you can run to obtain a full list of Java time zones and their corresponding time zone IDs.

Procedure: Starting the List Time Zone IDs Utility

Purpose: To retrieve time zone information by running the List Time Zone IDs utility, to customize the time zone configuration.

Prerequisites

- [Running the ETL Configuration Check, page 360.](#)

Start of procedure

1. Depending on your operating system, do one of the following:
 - On a Windows operating system, select Start > Programs > Genesys Solutions > Genesys Info Mart > List TimeZoneIDs.
A list of standard time zones is opened in your default text editor (see [Figure 26](#)).

GMT Offset	Time Zone ID	DST	Time Zone Name
00:00	Eire	DST	Greenwich Mean Time
00:00	GB	DST	Greenwich Mean Time
00:00	GB-Eire	DST	Greenwich Mean Time
00:00	GMT	-	Greenwich Mean Time
00:00	GMT0	-	GMT+00:00
00:00	Greenwich	-	Greenwich Mean Time
00:00	Iceland	-	Greenwich Mean Time
00:00	Portugal	DST	Western European Time
00:00	UCT	-	Coordinated Universal Time
00:00	UTC	-	Coordinated Universal Time
00:00	Universal	-	Coordinated Universal Time
00:00	WET	DST	Western European Time
00:00	Zulu	-	Coordinated Universal Time
00:00	Africa/Abidjan	-	Greenwich Mean Time
00:00	Africa/Accra	-	Greenwich Mean Time
00:00	Africa/Bamako	-	Greenwich Mean Time
00:00	Africa/Banjul	-	Greenwich Mean Time
00:00	Africa/Bissau	-	Greenwich Mean Time
00:00	Africa/Casablanca	-	Western European Time
00:00	Africa/Conakry	-	Greenwich Mean Time
00:00	Africa/Dakar	-	Greenwich Mean Time
00:00	Africa/El_Aaiun	-	Western European Time
00:00	Africa/Freetown	-	Greenwich Mean Time
00:00	Africa/Lome	-	Greenwich Mean Time
00:00	Africa/Monrovia	-	Greenwich Mean Time
00:00	Africa/Nouakchott	-	Greenwich Mean Time
00:00	Africa/Ouagadougou	-	Greenwich Mean Time

Figure 26: Sample time_zone_ids.txt File on Windows

- On a UNIX operating system, navigate to the installation directory, and run `list_time_zone_ids`.
2. Update your `std-enterprise-time-zone` (see [page 302](#)) and `std-tenant-time-zone` (see [page 305](#)) configuration options by using the time zone ID that corresponds to your time zone.

End of procedure

Next Steps

- [Initializing Genesys Info Mart, page 363](#).

Initializing Genesys Info Mart

During normal operation, the Genesys Info Mart Server automatically launches ETL jobs. However, you must manually run the ETL job that initializes the Staging Area and Info Mart databases (`Job_InitializeGIM`) from the Genesys Info Mart Administration Console.

Before You Proceed

Before you run the ETL initialization job, or launch any jobs from the Genesys Info Mart Administration Console, do the following:

1. Set the `run-scheduler` configuration option (in the `schedule` section on the Genesys Info Mart `Options` tab) to `FALSE`.
2. Start the Genesys Info Mart Server using Genesys Solution Control or Windows Services.

Accessing the Genesys Info Mart Administration Console

Access the Genesys Info Mart Administration Console from the `Application` object that was configured for the Genesys Info Mart server application in Configuration Manager. For complete instructions, see [Accessing the Genesys Info Mart Administration Console](#), page 355.

Initializing Genesys Info Mart

Procedure: Initializing Genesys Info Mart

Purpose: To initialize Genesys Info Mart.

Prerequisites

- Make sure you that have completed all post-installation activities, as described in preceding sections.

Start of procedure

1. Open the Genesys Info Mart Administration Console.
2. Click the `Schedule` tab.
The windows displays any scheduled jobs that have not yet started.
3. Click the `Run Job` button at the bottom of the window.
The `Run Job` dialog box appears (see [Figure 27](#)).

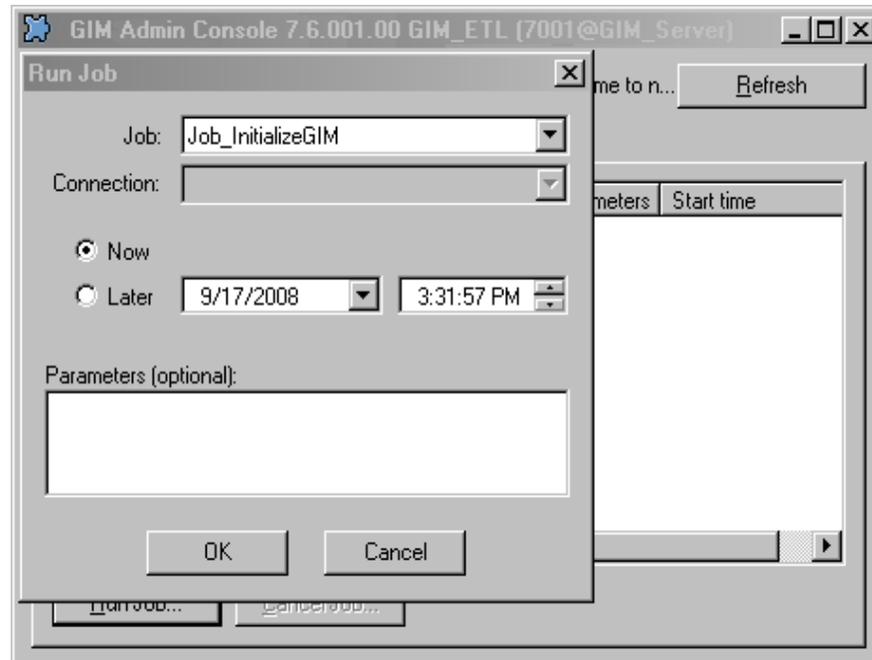


Figure 27: Run Job Dialog Box—Running Job_InitializeGIM

4. From the Job drop-down list, select Job_InitializeGIM.
5. Select the Now option to run the job immediately, and then click OK.
6. Click the Status tab to check the progress of the initialization.
When the initialization is complete, the Status column will display COMPLETE to the right of Job_InitializeGIM (see Figure 28).

Note: If Job_InitializeGIM fails, the Status column will display FAILED to the right of the job. To determine the nature of the error, refer to the log file.

Status Schedule						
Name	R...	Co...	Owner	S...	Durati...	Status
Job_AggregateGIM		STG	DEF...		0	INSTALLED
Job_InitializeGIM		STG	DEF...	9...	65	COMPLETE

Figure 28: Status Tab—Job_InitializeGIM Status Complete

End of procedure

Next Steps

- [Running the ETL Jobs for the First Time, page 366.](#)

Running the ETL Jobs for the First Time

After successful initialization of the Staging Area and Info Mart databases, you must run all of other ETL jobs *once*, from the Genesys Info Mart Administration Console.

Initial Extraction of Configuration Details

The initial data extraction from the IDB (or an HA pair of IDBs) that stores the contact center Configuration details might take up to several hours, depending on the amount of data that needs to be extracted. To help you track the extraction progress:

- The Staging Area database provides a view that shows data extraction history. Refer to the “Staging Area Administrative Views” section of the *Genesys Info Mart 7.6 Operations Guide* for information about the view.
- Genesys Info Mart Server logs the progress of the extract job, including the information on the tables currently being extracted. Check the log file as necessary.

Procedure: Running the ETL Jobs

Purpose: To run the ETL jobs one-by-one.

Note: Run the extraction job for each source database from which you want to extract data, or specify ALL SOURCES. For Job_ExtractICON, you must select ALL SOURCES. In general, each DAP represents a source database.

Prerequisites

- [Initializing Genesys Info Mart, page 364](#).

Start of procedure

1. Set the run-scheduler configuration option (see [page 332](#)) to FALSE. This option is located in the schedule section on the Options tab of the Genesys Info Mart Application object.
2. Set the ir-merge-interval configuration option (see [page 290](#)) to 0. This option is located in the gim-etl section on the Options tab of the Genesys Info Mart Application object. This setting disables the asynchronous scheduling of intra-IDB merge, causing intra-IDB merge to occur as part of Job_ExtractICON.
3. Start the Genesys Info Mart Server (using Genesys Solution Control or Windows Services).

4. Run the jobs in the following order:
 - a. Job_ExtractICON (see “Initial Extraction of Configuration Details” and the [Note](#) on [page 366](#))
 - b. Job_ExtractGVP, if GVP VAR is one of your data sources for Genesys Info Mart (see the [Note](#) on [page 366](#))
 - c. Job_TransformGIM
 - d. Job_LoadRecent
 - e. Job_LoadGIM
 - f. Job_AggregateGIM
 - g. Job_MaintainGIM

End of procedure

Next Steps

- [Enabling the Genesys Info Mart Server Scheduler, page 367.](#)

Enabling the Genesys Info Mart Server Scheduler

After the initial run of the ETL jobs from the Genesys Info Mart Administration Console, you can enable the Genesys Info Mart Scheduler. For more information about scheduling jobs, see the section about using Genesys Info Mart Server to launch ETL jobs in the *Genesys Info Mart 7.6 Operations Guide*.

Procedure: Enabling the Genesys Info Mart Server Scheduler

Purpose: To configure the Genesys Info Mart Server Scheduler.

Prerequisites

- [Running the ETL Jobs, page 366.](#)

Start of procedure

1. Set the `ir-merge-interval` configuration option (see [page 290](#)) to a nonzero value.

This option is located in the `gim-etl` section on the `Options` tab of the Genesys Info Mart Application object. The default value is 5. This setting enables the intra-IDB merge to occur asynchronously from `Job_ExtractICON`.

2. Set the `run-scheduler` configuration option (see [page 332](#)) to `TRUE`.

This option is located in the `schedule` section on the `Options` tab of the Genesys Info Mart Application object. This setting enables the Genesys Info Mart Server to launch ETL jobs according to the schedule that you configured in the Genesys Info Mart application.

End of procedure

Next Steps

- If your Genesys Info Mart deployment is part of a multi-tenant configuration environment, see [Creating Genesys Info Mart Tenant Views, page 368](#).
- If you have configured high availability (HA) deduplication of ICON Voice agent details, you must activate it now. Refer to [Enabling HA Deduplication of Voice Agent Activity, page 397](#).
- Otherwise, your Genesys Info Mart deployment is complete.

Creating Genesys Info Mart Tenant Views

This activity is required only for multi-tenant deployments.

The Genesys Info Mart 7.6 installation package includes a script, `make_gim_view_for_tenant.sql`, that you run in order to create tenant-specific, read-only views on the Genesys Info Mart tables.

Note: The Genesys Info Mart Views owner ID must have privileges to drop and create views and synonyms.

For Microsoft SQL Server, tenant-specific, read-only Genesys Info Mart Views are provided by means of `View` objects rather than synonyms.

[Figure 29](#) illustrates tenant-specific, read-only Genesys Info Mart Views.

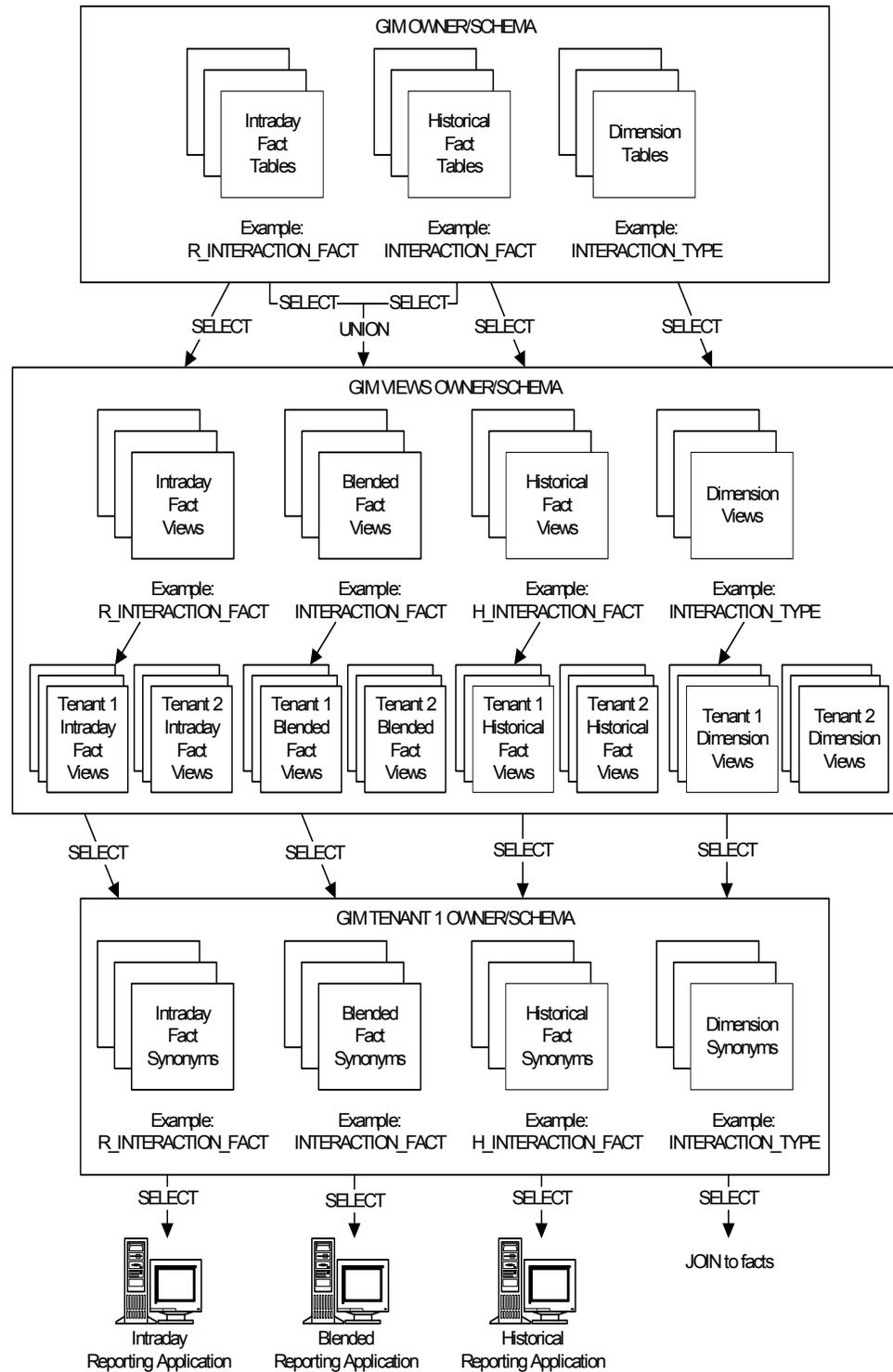


Figure 29: Multi-Tenant Filtered Views

Procedure: Creating Genesys Info Mart Tenant Views

Purpose: To create tenant-specific, read-only views on the Genesys Info Mart database tables.

Prerequisites

- Be sure to log in to the database by using the Genesys Info Mart Views owner ID.
- Use the “[Installation Worksheets](#)” beginning on [page 401](#), for the RDBMS-specific database connection parameters for each database.

Note: Use the following script for multi-tenant deployments only.

You cannot run this script until you successfully run the first ETL cycle which will populate the TENANT dimension.

Start of procedure

1. Run `make_gim_view_for_tenant.sql`.

To run this script, specify the following parameters:

- Genesys Info Mart Views owner ID.
- The owner ID of the Genesys Info Mart tenant in which you want to create the tenant specific, read-only views.
- Number of the tenant that corresponds to the value of TENANT_KEY in the TENANT dimension table.

Note: You must edit the scripts in order for Microsoft SQL Server and DB2 to provide these parameters.

2. Repeat [Step 1](#) for each tenant in your Genesys Info Mart configuration.

End of procedure

Next Steps

- If you have configured HA deduplication of ICON Voice agent details, you must activate it now. Refer to [Enabling HA Deduplication of Voice Agent Activity, page 397](#).
- Otherwise, your Genesys Info Mart deployment process is complete.



Chapter

9

UserEvent-Based KVP Data in Existing Deployments

This chapter describes how to configure and activate extraction of UserEvent-based key-value pair (KVP) data in an environment in which Genesys Info Mart 7.6 is already deployed. It contains the following sections:

- [Overview, page 371](#)
- [Activating UserEvent-Based KVP Data Extraction, page 372](#)

Overview

Starting with release 7.6.004, Genesys Info Mart provides the ability to extract UserEvent-based KVP data that is sent within a configurable timeout after the associated voice interaction ends.

In order to use UserEvent-based KVP data in your reports, you need to configure Interaction Concentrator to store this data in the IDB, adjust the Info Mart database to be able to store this data, and configure Genesys Info Mart to extract and process this data. The section “Activating UserEvent-Based KVP Data Extraction” on [page 372](#) describes the necessary steps for a deployment in which Genesys Info Mart already operates.

Activating UserEvent-Based KVP Data Extraction

Procedure: Activating UserEvent-based KVP Data Extraction in Existing Deployments

Purpose: To highlight all activities required to enable extraction of UserEvent-based KVP data in an existing Genesys Info Mart deployment. You can also use this procedure as a checklist for enabling UserEvent-based KVP data extraction in a new Genesys Info Mart environment.

Prerequisites

- Genesys Info Mart 7.6 operating without extraction of UserEvent-based KVP data.

Start of procedure

1. If not already present, create the following indexes in each IDB that stores Voice details.
 - GIM_IDX_CUST_CALLID
 - GIM_IDX_CDS_SYS_SEQ
 - GIM_IDX_UH_SYS_SEQ
 - GIM_IDX_SUH_SYS_SEQ

You can locate the SQL statements to create these indexes for your RDBMS in the `make_icon_indexes_for_gim.sql` file located the `genesys_info_mart\db_scripts` subdirectory of the Genesys Info Mart 7.6 product CD.

Note: The SQL statements that are used to create these scripts are commented out in the SQL script because these indexes are necessary only if you are activating extraction of UserEvent-based KVP data. You can remove the commenting symbols and run the `make_icon_indexes_for_gim.sql` script when you are deploying Genesys Info Mart in a new environment.

2. In order to improve data extraction performance, use your RDBMS tools to gather table statistics on `G_CUSTOM_DATA_S` in each IDB that stores Voice details.

3. If your Voice details IDB(s) have already collected UserEvent-based KVP data in `G_CUSTOM_DATA_S`, truncate that table data to prevent the ETL from extracting old rows for which corresponding voice interactions have already been extracted.
4. In each ICON application that stores Voice details, review and configure options that affect UserEvent-based KVP data collection:
 - `EventData` in the `[custom-states]` section
 - `store-event-data` in the `[custom-states]` section

Refer to Table 12, “ICON Voice Details—Application Options—custom-states Section,” on [page 134](#) for information about configuring these options for use with Genesys Info Mart. Refer to the *Interaction Concentrator Deployment Guide* for information about how to activate these options.

Note: If you configure HA data extraction of Voice details, make sure that you configure the same values for the preceding options in both ICON applications that constitute the HA pair.

5. After a successful ETL cycle, when no ETL jobs are running, stop the Genesys Info Mart Server.
6. In each DAP that Genesys Info Mart uses to extract Voice details (where `role=ICON_CORE`), review and configure option(s) that map UserEvent-based KVPs to Info Mart database table columns:
 - `user-event-data` in the `[custom-data]` section

Refer to the `user-event-data` option in Table 33, “Data Source DAP Configuration Options,” on [page 201](#).

Note: If you configure HA data extraction of Voice details, make sure that you configure the same values for the preceding options in both DAPs that constitute the HA pair.

7. In the Genesys Info Mart ETL application, review and configure options that affect UserEvent-based KVP data extraction:
 - `extract-user-event-data` in the `[custom-data]` section
 - `user-event-data-timeout` in the `[custom-data]` section

Refer to the `extract-user-event-data` and `user-event-data-timeout` options in “Genesys Info Mart Application Option Descriptions” on [page 252](#).

8. Restart the Genesys Info Mart Server.

End of procedure



Chapter

10

Activating High Availability Data Extraction

This chapter describes how to configure and activate high availability (HA) data extraction of ICON Configuration details, ICON Voice details and ICON Outbound Contact details when your deployment requires this. It contains the following sections:

- [Overview, page 375](#)
- [Activating HA Data Extraction in a New Deployment, page 380](#)
- [Activating HA Data Extraction in an Existing Deployment, page 385](#)
- [Safely Enabling HA Deduplication of Voice Agent Activity, page 396](#)

Overview

Genesys Info Mart 7.6 provides high availability (HA) data extraction for the following types of data:

- ICON Configuration details
- ICON Voice details, which include the following:
 - Voice interaction data
 - Voice agent login dataVoice agent state and agent reason details, including the ability to associate after-call-work with voice interactions
 - Voice do-not-disturb (DND) mode details
 - Virtual queue data
- ICON Outbound Contact details

Note: High availability of voice agent activity data requires a supported release of Interaction Concentrator 7.6 and T-Server 7.6.

High availability of Outbound Contact details requires Interaction Concentrator 8.0. See the *Genesys Info Mart 7.6.x Release Notes* for

the minimum release of Interaction Concentrator 8.0 that is required to support this functionality.

You can activate HA data extraction of ICON Configuration details or ICON Outbound Contact details independently from HA of ICON Voice details (including HA of agent activity details) or you can activate them all at the same time. You can do so:

- During an initial deployment of Genesys Info Mart release 7.6.
- After your Genesys Info Mart release 7.6 has been operating in non-HA mode for a period of time.
- After you have migrated your Genesys Info Mart environment from release 7.5 to release 7.6. You can also add HA deduplication of voice agent activity with release 7.6 if you had HA deduplication of ICON Voice details enabled with release 7.5.

The sections in this chapter provide guidelines and procedures for these cases.

Warning! If your Genesys environment has contained T-Server or Interaction Concentrator of a release prior to 7.6, you must verify that the details that Genesys Info Mart 7.6 extracts from IDB are populated by Interaction Concentrator release 7.6 and are based on the data that is coming from T-Server release 7.6 *before* you enable the HA deduplication of voice agent activity details.

Task Flows for Activating HA Data Extraction

HA Data Extraction Task Flow for a New Deployment

[Table 44](#) summarizes the task flow to configure and enable HA data extraction in a new Genesys Info Mart deployment. The task flow assumes that you followed the instructions in the preceding chapters during your deployment process, and it highlights the activities in this process that pertain to achieving HA data extraction. Select all objectives that apply to the type of HA data extraction that you want for your deployment.

Table 44: Task Flow: Activating HA Data Extraction in a New Deployment

Objective	Related Procedures and Actions
Provide redundancy for configuration information that supports detailed reporting for interactions of any type and related agent activity in a new deployment.	<p>If you decide to implement an HA topology for ICON Configuration details in a new Genesys Info Mart deployment, you must perform <i>all</i> activities in the following high-level procedure:</p> <ul style="list-style-type: none"> • Configuring HA Data Extraction of Configuration Details in a New Deployment, page 381.

Table 44: Task Flow: Activating HA Data Extraction in a New Deployment (Continued)

Objective	Related Procedures and Actions
Provide redundancy for voice interaction and agent activity data in a new deployment.	<p>If you decide to implement an HA topology for ICON Voice details in a new Genesys Info Mart deployment, you must perform <i>all</i> activities in the following high-level procedure:</p> <ul style="list-style-type: none"> • Configuring HA Data Extraction of Voice Interaction and Agent Activity Details in a New Deployment, page 382.
Activate HA deduplication of voice agent activity details after completing the necessary configuration.	<p>If you have never used any release of T-Server or Interaction Concentrator prior to 7.6 in the Genesys environment to which you are deploying Genesys Info Mart 7.6, you can activate HA deduplication of voice agent activity immediately:</p> <ul style="list-style-type: none"> • When you configure options for the Genesys Info Mart Application object, set the <code>extract-ha-voice-agent-activity</code> option to TRUE. See Step 8 in Enabling HA Deduplication of Voice Agent Activity, page 397. <p>Otherwise:</p> <ol style="list-style-type: none"> 1. Install Genesys Info Mart components. Refer to Chapter 7, “Installing Genesys Info Mart Components,” on page 341. 2. Complete post-installation activities. Refer to Chapter 8, “Post-Installation Activities,” on page 359. 3. Verify that the details that Genesys Info Mart 7.6 extracts from IDB are populated by Interaction Concentrator release 7.6 and are based on the data that is coming from T-Server release 7.6. After that, set the <code>extract-ha-voice-agent-activity</code> option to TRUE. Refer to Enabling HA Deduplication of Voice Agent Activity, page 397 for instructions.
Provide redundancy for Outbound Contact data in a new deployment.	<p>If you decide to implement an HA topology for ICON Outbound Contact details in a new Genesys Info Mart deployment, you must perform <i>all</i> activities in the following high-level procedure:</p> <ul style="list-style-type: none"> • Configuring HA Data Extraction of Outbound Contact Details in a New Deployment, page 384.

HA Data Extraction Task Flow for an Existing Non-HA Deployment

[Table 45](#) summarizes the task flow to configure and enable HA data extraction in an existing Genesys Info Mart deployment in which HA for a given type of data has never been enabled. Select any objectives that apply to the type of HA data extraction that you want for your deployment. Also, review the options that are listed in [Table 39](#), section “High Availability” on [page 244](#).

Table 45: Task Flow: Activating HA Data Extraction in an Existing Non- HA Deployment

Objective	Related Procedures and Actions
Provide redundancy for configuration information that supports detailed reporting for interactions of any type and related agent activity in an existing deployment.	<p>If you decide to implement an HA topology for ICON Configuration details in an existing Genesys Info Mart deployment, you must perform <i>all</i> activities in the following high-level procedure:</p> <ul style="list-style-type: none"> • Configuring HA Data Extraction of Configuration Details in an Existing Deployment, page 387.
Provide redundancy for voice interaction and agent activity data in an existing non-HA deployment.	<p>If you decide to implement an HA topology for ICON Voice details in an existing Genesys Info Mart deployment in which Voice details HA data extraction has never been enabled, you must perform <i>all</i> activities in the following high-level procedure:</p> <ul style="list-style-type: none"> • Configuring HA Data Extraction of Voice Interaction and Agent Activity Details in an Existing Non-HA Deployment, page 389.
Activate HA deduplication of Voice agent activity details after completing the necessary configuration.	<p>If you have never used any release of T-Server or Interaction Concentrator prior to 7.6 in the Genesys environment in which your Genesys Info Mart 7.6 operates, you can activate HA deduplication of voice agent activity immediately:</p> <ul style="list-style-type: none"> • In the Genesys Info Mart Application object, set the <code>extract-ha-voice-agent-activity</code> option to TRUE. See Step 8 in Enabling HA Deduplication of Voice Agent Activity, page 397. <p>Otherwise:</p> <ul style="list-style-type: none"> • Verify that the details that Genesys Info Mart 7.6 extracts from the primary IDB are populated by Interaction Concentrator release 7.6 and are based on the data that is coming from T-Server release 7.6. After that, set the <code>extract-ha-voice-agent-activity</code> option to TRUE. Refer to Enabling HA Deduplication of Voice Agent Activity, page 397 for instructions.
Provide redundancy for Outbound Contact data in an existing non-HA deployment.	<p>If you decide to implement an HA topology for ICON Outbound Contact details in an existing Genesys Info Mart deployment in which Outbound Contact details HA data extraction has never been enabled, you must perform <i>all</i> activities in the following high-level procedure:</p> <ul style="list-style-type: none"> • Configuring HA Data Extraction of Outbound Contact Details in an Existing Deployment, page 393.

HA Data Extraction Task Flow for an Existing Deployment with Voice HA

[Table 46](#) summarizes the task flow to configure and enable HA data extraction of Configuration details, HA deduplication of voice agent activity details and HA data extraction of Outbound Contact details, in an existing Genesys Info Mart deployment in which HA data extraction of Voice details has already been enabled. Select any objectives that apply to the type of HA data extraction that you want for your deployment. Also, review the options that are listed in [Table 39](#), section “High Availability” on [page 244](#).

Table 46: Task Flow: Activating HA Data Extraction in an Existing Deployment with Voice HA

Objective	Related Procedures and Actions
Provide redundancy for configuration information that supports detailed reporting for interactions of any type and related agent activity in an existing deployment.	<p>If you decide to implement an HA topology for ICON Configuration details in an existing Genesys Info Mart deployment, you must perform <i>all</i> activities in the following high-level procedure:</p> <ul style="list-style-type: none"> • Configuring HA Data Extraction of Configuration Details in an Existing Deployment, page 387.
Provide redundancy for voice agent activity data in an existing deployment in which redundancy of voice interaction data is already implemented.	<p>If you decide to add ICON agent activity details to your existing Genesys Info Mart topology with HA data extraction of Voice details, the following procedure includes <i>all</i> activities that you must perform:</p> <ul style="list-style-type: none"> • Configuring HA Deduplication of Voice Agent Activity Details in an Existing Voice HA Deployment, page 392.
Activate HA deduplication of Voice agent activity details after completing the necessary configuration.	<p>Because you have redundant voice agent activity details that have been gathered by ICON but not processed by Genesys Info Mart, if you would like to activate HA deduplication of voice agent activity now, you must:</p> <ol style="list-style-type: none"> 1. Make sure that redundant 7.5 voice agent activity data is not extracted into Genesys Info Mart 7.6. Refer to Removing ICON Voice Agent Activity from the Secondary IDB, page 398 for instructions. 2. Verify that the details that Genesys Info Mart 7.6 extracts from the primary IDB are populated by Interaction Concentrator release 7.6 and are based on the data that is coming from T-Server release 7.6. After that, set the <code>extract-ha-voice-agent-activity</code> option to TRUE. Refer to Enabling HA Deduplication of Voice Agent Activity, page 397 for instructions.

Table 46: Task Flow: Activating HA Data Extraction in an Existing Deployment with Voice HA (Continued)

Objective	Related Procedures and Actions
Provide redundancy for Outbound Contact in an existing deployment in which redundancy of voice interaction data is already implemented.	<p>If you decide to implement an HA topology for ICON Outbound Contact details in an existing Genesys Info Mart deployment, you must perform all activities in the following high-level procedure:</p> <ul style="list-style-type: none"> • Configuring HA Data Extraction of Outbound Contact Details in an Existing Deployment, page 393.

Activating HA Data Extraction in a New Deployment

This section describes the task flow and procedures for new deployments to activate:

- HA data extraction of Configuration details.
- HA data extraction of Voice details, including both voice interaction details and voice agent activity details.
- HA data extraction of Outbound Contact details.

If you followed the deployment procedures that were set out in the previous chapters, you should have completed all the required configuration activities by now. In this case, check your configuration against the instructions in this section and follow the instructions in “Safely Enabling HA Deduplication of Voice Agent Activity” on [page 396](#), if they apply to your deployment.

Configuring HA Data Extraction of Configuration Details in a New Deployment

This section provides a high-level procedure to configure and enable HA data extraction of configuration data in a new Genesys Info Mart deployment. The procedure assumes that you followed the instructions in the preceding chapters during your deployment process, and it summarizes all activities in this process that you must perform to implement HA data extraction of Configuration details.

Procedure:

Configuring HA Data Extraction of Configuration Details in a New Deployment

Purpose: To highlight all activities that are required to implement an HA topology for ICON Configuration details in a new Genesys Info Mart deployment.

Prerequisites

- Complete your deployment planning.

Start of procedure

1. Set up a primary ICON application to store Configuration details. Refer to [Configuring ICON Application to Capture Configuration Details, page 128](#).
2. Set up a secondary ICON application to store Configuration details. Refer to [Configuring ICON Applications for Configuration Details HA, page 163](#).
3. Create and initialize the primary IDB to store Configuration details. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
4. Create and initialize the secondary IDB to store the same Configuration details. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
5. For both the primary and secondary IDBs, perform procedure [Preparing IDBs on page 167](#) as it applies to IDBs that store Configuration details.
6. Start the primary and secondary ICON applications.
7. Verify that the primary and secondary ICON applications finish populating the configuration history in their respective IDBs.
8. Set up a Database Access Point (DAP) Application object, with the role of ICON_CFG, that provides access to the primary IDB. Refer to [Configuring Interaction Concentrator DAPs, page 205](#).
9. Set up a DAP Application object, with the role of ICON_CFG, that provides access to the secondary IDB. Refer to [Configuring Interaction Concentrator DAPs, page 205](#).
10. Modify the configuration settings of the primary and secondary DAPs as instructed in [Configuring DAPs for ICON Configuration Details HA, page 219](#).
11. When you create the Genesys Info Mart Application object, add connections to the primary and secondary IDB DAPs. See [Step 7 in Configuring the Genesys Info Mart Application, page 229](#).

12. When you configure options for the Genesys Info Mart Application object, set the `ha-cfg-all-connections-required` configuration option to TRUE. See [Step 7 in Setting the Genesys Info Mart Application Options, page 232](#).

Note: Depending on the amount of Configuration details that are to be extracted from the secondary IDB and compared against the Staging Area data, the initial data extraction from this new, secondary IDB might take several hours. See also “Initial Extraction of Configuration Details” on [page 366](#).

End of procedure

Next Steps

- Depending on where you are with your deployment process, proceed with your configuration, installation, or post-installation activities.
- Optionally, set up HA data extraction for ICON voice interaction and agent activity details. See [Configuring HA Data Extraction of Voice Interaction and Agent Activity Details in a New Deployment, page 382](#).
- Optionally, set up HA data extraction for ICON Outbound Contact details. See [Configuring HA Data Extraction of Outbound Contact Details in a New Deployment, page 384](#).

Configuring HA Data Extraction of Voice Interaction and Agent Activity Details in a New Deployment

This section provides a high-level procedure to configure and enable HA data extraction of Voice details, including both voice interactions and agent activity details, in a new Genesys Info Mart deployment. The procedure assumes that you followed the instructions in the preceding chapters during your deployment process and it summarizes all activities in this process that you must perform to implement HA data extraction of Voice details.

Procedure:

Configuring HA Data Extraction of Voice Interaction and Agent Activity Details in a New Deployment

Purpose: To highlight all activities that are required to implement an HA topology for ICON Voice details (including both voice interactions and agent activity details) in a new Genesys Info Mart deployment.

Start of procedure

1. Set up a primary ICON application to store voice interaction and agent activity details and modify any affected Switch and DN objects. Refer to [Capturing Voice Details, page 129](#).
2. Set up a secondary ICON application to store voice interaction and agent activity details and modify the configuration settings of the two ICON applications to process the data in the same manner. Refer to [Configuring ICON Applications for Voice Details HA, page 164](#).
3. Create and initialize the primary IDB to store Voice details. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
4. Create and initialize the secondary IDB to store the same Voice details. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
5. For both the primary and secondary IDBs, perform procedure [Preparing IDBs on page 167](#) as it applies to IDBs that store Voice details.
6. In a multi-site contact center, also enable the merge of voice interactions that cross sites, in both IDBs in the HA pair. Refer to [Configuring for IDB Merge, page 170](#).
7. Set up a DAP Application object, with the role of ICON_CORE, that provides access to the primary IDB. Refer to [Configuring Interaction Concentrator DAPs, page 205](#).
8. Set up a DAP Application object, with the role of ICON_CORE, that provides access to the secondary IDB. Refer to [Configuring Interaction Concentrator DAPs, page 205](#).
9. Modify the configuration settings of the primary and secondary DAPs as instructed in [Configuring DAPs for ICON Voice Details HA, page 220](#).
10. When you create the Genesys Info Mart Application object, add connections to the primary and secondary IDB DAPs. See [Step 7 in Configuring the Genesys Info Mart Application, page 229](#).
11. When you configure options for the Genesys Info Mart Application object, select values for the days-to-keep-stg-ha-ir-ids and ha-ir-extract-comparison-timeout options.

End of procedure

Next Steps

- Depending on where you are with your deployment process, proceed with your configuration, installation, or post-installation activities.
- Enable HA deduplication of voice agent activity details:

- If your Genesys environment has contained a release of T-Server or Interaction Concentrator prior to 7.6, see [Enabling HA Deduplication of Voice Agent Activity, page 397](#).
- If your Genesys environment has never contained a release of T-Server or Interaction Concentrator prior to 7.6, see [Step 8 of Enabling HA Deduplication of Voice Agent Activity, page 397](#).
- Optionally, set up HA data extraction of Outbound Contact details. See [Configuring HA Data Extraction of Outbound Contact Details in a New Deployment, page 384](#).

Configuring HA Data Extraction of Outbound Contact Details in a New Deployment

This section provides a high-level procedure to configure and enable HA data extraction of Outbound Contact details in a new Genesys Info Mart deployment. The procedure assumes that you followed the instructions in the preceding chapters during your deployment process and it summarizes all activities in this process that you must perform to implement HA data extraction of Outbound Contact details.

Procedure: Configuring HA Data Extraction of Outbound Contact Details in a New Deployment

Purpose: To highlight all activities that are required to implement an HA topology for ICON Outbound Contact details in a new Genesys Info Mart deployment.

Note: Interaction Concentrator 8.0 is required to configure HA data extraction of Outbound Contact details. See the *Genesys Info Mart 7.6.x Release Notes* for the minimum release of Interaction Concentrator 8.0 that is required to support this functionality.

Start of procedure

1. Set up a primary Interaction Concentrator 8.0 application to store Outbound Contact details. Refer to [Capturing Outbound Contact Details, page 141](#).
2. Set up a secondary Interaction Concentrator 8.0 application to store Outbound Contact details and modify the configuration settings of the two ICON applications to process the data in the same manner. Refer to [Configuring ICON Applications for Outbound Contact Details HA, page 166](#).

3. When you configure the Interaction Concentrator applications, in addition to other Outbound Contact-related options (see Table 16 on [page 142](#)), configure the following options in the [callconcentrator] section:
 - Set the value of the `use-dss-monitor` option to `ON`.
If you retain the default value (`OFF`), the `G_DSS_GOS_PROVIDER` table in the applicable IDB will not be populated.
 - Set the value of the `dss-no-data-tout` option to `60` (seconds).
4. Create and initialize the primary IDB to store Outbound Contact details. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
5. Create and initialize the secondary IDB to store the same Outbound Contact details. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
6. For both the primary and secondary IDBs, perform the procedure [Preparing IDBs](#) on [page 167](#) as it applies to IDBs that store Outbound Contact details. In particular, ensure that you run the following script:

```
make_icon_ocs_ha_indexes_for_gim.sql
```
7. Set up a DAP Application object, with the role of `ICON_OCS`, that provides access to the primary IDB. Refer to [Configuring Interaction Concentrator DAPs](#), [page 205](#).
8. Set up a DAP Application object, with the role of `ICON_OCS`, that provides access to the secondary IDB. Refer to [Configuring Interaction Concentrator DAPs](#), [page 205](#).
9. Modify the configuration settings of the primary and secondary DAPs as instructed in [Configuring DAPs for ICON Outbound Contact Details HA](#), [page 222](#).
10. When you create the Genesys Info Mart Application object, add connections to the primary and secondary IDB DAPs. See [Step 7](#) in [Configuring the Genesys Info Mart Application](#), [page 229](#).

End of procedure

Activating HA Data Extraction in an Existing Deployment

You might decide to implement HA data extraction after your Genesys Info Mart 7.6 deployment has been operating in non-HA mode for a period of time. For example, the availability of additional RDBMS resources to host redundant IDBs or an upgrade to T-Server release 7.6 might influence you to implement HA data extraction or to add HA deduplication of voice agent activity to your existing ICON Voice details HA topology.

Similarly, you might decide to implement HA data extraction after migrating your Genesys Info Mart deployment from release 7.5 to release 7.6. With Genesys Info Mart release 7.5, you could have had HA data extraction of ICON Voice details or no HA data extraction at all. In release 7.6, HA data extraction of ICON Voice details includes HA deduplication of voice agent activity.

For this reason, if you had HA data extraction of ICON Voice details enabled with release 7.5 and if you now want to activate HA deduplication of voice agent activity, you must take extra care not to extract redundant 7.5 voice agent activity data.

HA data extraction of Outbound Contact details requires Interaction Concentrator 8.0. See the *Genesys Info Mart 7.6.x Release Notes* for the minimum release of Interaction Concentrator 8.0 that is required to support this functionality. HA data extraction of Outbound Contact details also requires installation and configuration of its own separate IDBs and DAPs. For more information, see [Configuring HA Data Extraction of Outbound Contact Details in an Existing Deployment, page 393](#).

For the sake of simplicity, both deployments—existing 7.6 and migrating to 7.6—are referred to as *existing deployments* when the information in this chapter applies to both.

Use the procedures in this section and refer to procedures in other chapters, as directed, to implement redundancy for the types of data that are most critical for your contact center.

Configuring HA Data Extraction of Configuration Details in an Existing Deployment

This section provides a high-level procedure to configure HA data extraction of Configuration details in an existing Genesys Info Mart deployment. The procedure:

- Assumes that your non-HA deployment of Genesys Info Mart 7.6 includes one ICON application that successfully stores Configuration details in an IDB through a DAP that is dedicated to this IDB.
- Guides you through the process of adding the components to your deployment that provide HA data extraction of Configuration details.
- Refers you to procedures, in this or preceding chapters of this guide, for detailed instructions.

Procedure:

Configuring HA Data Extraction of Configuration Details in an Existing Deployment

Purpose: To highlight all activities that are required to implement an HA topology for ICON Configuration details in an existing Genesys Info Mart deployment.

Prerequisites

- Genesys Info Mart 7.6 extracting Configuration details in a non-HA topology.

Start of procedure

1. Set up a secondary ICON application to store Configuration details. Refer to [Configuring ICON Applications for Configuration Details HA, page 163](#).
2. Create and initialize the secondary IDB to store Configuration details. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
3. For the secondary IDB, perform procedure [Preparing IDBs, page 167](#) as it applies to IDBs that store Configuration details. In particular, ensure that you run the following script:

```
make_icon_cfg_indexes_for_gim.sql
```
4. Start the secondary ICON application.

Note: Allow enough time for the new ICON application to populate its IDB before Genesys Info Mart starts extracting data from this IDB.

5. Set the `run-scheduler` configuration option to `FALSE` in the `schedule` section of the Genesys Info Mart `Application` object, to stop Genesys Info Mart Server temporarily from launching ETL jobs.
6. Use the Genesys Info Mart Administration Console to monitor completion of any running jobs.
7. Set up a DAP `Application` object, with the `role` of `ICON_CFG`, that provides access to the secondary IDB. See [Configuring Interaction Concentrator DAPs, page 205](#).
8. Modify the configuration settings of your current (primary) DAP and secondary DAP as instructed in [Configuring DAPs for ICON Configuration Details HA, page 219](#).

9. In the Genesys Info Mart `Application` object, add a connection to the secondary IDB DAP that you just created. See [Adding a Connection in the Genesys Info Mart Application, page 388](#).
10. In the Genesys Info Mart `Application` object, set the `ha-cfg-all-connections-required` configuration option to `TRUE`. Refer to [Step 7 in Setting the Genesys Info Mart Application Options, page 232](#), if necessary.
11. Use the Genesys Info Mart Administration Console to run one complete ETL cycle manually.
12. When you have verified proper operation, set the `run-scheduler` option to `TRUE` in the `schedule` section of the Genesys Info Mart `Application` object.

Note: Depending on the amount of Configuration details that are to be extracted from the secondary IDB and compared against the Staging Area data, the initial data extraction from this new, secondary IDB might take several hours. See also “Initial Extraction of Configuration Details” on [page 366](#).

End of procedure

Next Steps

- Optionally, set up HA data extraction of ICON voice interaction and agent activity details. See [Configuring HA Data Extraction of Voice Interaction and Agent Activity Details in an Existing Non-HA Deployment, page 389](#).
- Optionally, set up HA data extraction for ICON Outbound Contact details. See [Configuring HA Data Extraction of Outbound Contact Details in an Existing Deployment, page 393](#).

Procedure:

Adding a Connection in the Genesys Info Mart Application

Purpose: To add a DAP connection to the Genesys Info Mart `Application` object.

Use this procedure:

- After you add a new data source and configure a corresponding DAP object.
- To enable Genesys Info Mart Administration Console access to the Info Mart database.

Prerequisites

- [Configuring the Genesys Info Mart Application, page 229.](#)

Start of procedure

1. Open Configuration Manager.
2. In the `Applications` folder, right-click your Genesys Info Mart Application object, and then select `Properties`.
The `Properties` dialog box appears.

Connections Tab

3. Click the `Connections` tab, and then click `Add` to add a connection to the new DAP.
The `New Properties` dialog box appears.
4. Click the folder icon that is next to the `Server` box, navigate to your new DAP, select it, and then click `OK`.
The DAP now appears on the `Connections` tab of the Genesys Info Mart `Properties` dialog box.

End of procedure

Configuring HA Data Extraction of Voice Interaction and Agent Activity Details in an Existing Non-HA Deployment

This section provides a high-level procedure to configure HA data extraction of Voice details, including both voice interaction and agent activity details, in an existing Genesys Info Mart deployment. The procedure:

- Assumes that your non-HA deployment of Genesys Info Mart 7.6 includes one ICON application that successfully stores Voice details in an IDB through a DAP that is dedicated to this IDB.
- Guides you through the process of adding the components to your deployment that provide HA data extraction of Voice details.
- Refers you to procedures, in this or preceding chapters of this guide, for detailed instructions.

Procedure:

Configuring HA Data Extraction of Voice Interaction and Agent Activity Details in an Existing Non-HA Deployment

Purpose: To highlight all activities that are required to implement an HA topology for ICON Voice details (including both voice interaction and agent activity details) in an existing non-HA deployment of Genesys Info Mart.

Note: Genesys recommends that you perform this procedure when your contact center activity is at a minimum. Failure to follow through with the steps in this procedure will result in duplication of data.

If more than one Interaction Concentrator process Voice details in your existing topology, repeat [Steps 1](#) through [13](#) as required.

Prerequisites

- Genesys Info Mart 7.6 extracting ICON Voice details in a non-HA data extraction topology.

Start of procedure

1. Set up a secondary ICON application to store voice interaction and agent activity details. Refer to “Capturing Voice Details” on [page 129](#).
2. Modify any affected `Switch` and `DN` objects as necessary for your new topology. (Refer to “Capturing Voice Details” on [page 129](#))
For example, set the value for the `gls-flag-on-disconnect` option to `0` and the `gls-use-ts-id` option to `1` on the `Annex` tab of related `Switch` object(s). Refer to [Table 13](#) on [page 135](#) for option descriptions.
3. Configure the primary and secondary ICON applications as an HA pair:
 - a. Modify the configuration settings of your existing (now primary) and secondary ICON applications to process the data in the same manner. Refer to [Configuring ICON Applications for Voice Details HA](#), [page 164](#).
 - b. After you make the changes, review them, and then verify that:
 - The necessary HA changes have been made to both the primary and secondary ICON applications.
 - Both ICON applications monitor exactly the same set of T-Servers.
4. Create and initialize the secondary IDB to store the same Voice details as the primary IDB. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
5. For the secondary IDBs, perform procedure [Preparing IDBs](#) on [page 167](#) as it applies to IDBs that store Voice details.
6. In a multi-site contact center, also enable the merge of voice interactions that cross sites, in the secondary IDBs in the HA pair. Refer to [Configuring for IDB Merge](#), [page 170](#).
7. If you made changes to the primary ICON application in [Step 3](#) that require a restart, you may restart the primary ICON application now.
8. Set the `run-scheduler` configuration option to `FALSE` in the `schedule` section of the Genesys Info Mart `Application` object to stop Genesys Info Mart Server temporarily from launching ETL jobs.

9. Use the Genesys Info Mart Administration Console to monitor completion of any running jobs. When these jobs are finished, manually run `Job_TransformGIM`, `Job_LoadRecent`, and `Job_LoadGIM` a final time.
10. Stop the Genesys Info Mart Server.
11. Set up a DAP `Application` object, with the `role` of `ICON_CORE`, that provides access to the secondary IDB. Refer to [Configuring Interaction Concentrator DAPs](#), page 205.
12. Configure the primary and secondary DAPs as an HA pair. Refer to [Configuring DAPs for ICON Voice Details HA](#), page 220.
13. Modify the Genesys Info Mart `Application` object to add connections to the secondary IDB DAP that you just created. See [Adding a Connection in the Genesys Info Mart Application](#), page 388.
14. Configure the following HA options in the Genesys Info Mart `Application` object:
 - `days-to-keep-stg-ha-ir-ids`
 - `ha-ir-extract-comparison-timeout`
 - `extract-ha-voice-agent-activity`

Warning! If you intend to enable HA deduplication of voice agent activity, and if your Genesys environment has ever contained either T-Server or Interaction Server of a release prior to 7.6, do not enable the `extract-ha-voice-agent-activity` option in the `gim-etl` section at this time. Do so after you have completed this procedure. (Refer to “Safely Enabling HA Deduplication of Voice Agent Activity” on [page 396](#) for instructions.)

15. Start the secondary ICON application.
16. Run `gim_etl_config_check`. Refer to [Running the ETL Configuration Check](#), page 360.

Verify that an HA configuration is detected, and that no configuration errors are reported.
17. Restart Genesys Info Mart Server.
18. Use the Genesys Info Mart Administration Console to run one complete ETL cycle manually.
19. When you have verified proper operation, set the `run-scheduler` option to `TRUE` in the `schedule` section of the Genesys Info Mart `Application` object.

End of procedure

Next Steps

- Enable HA deduplication of voice agent activity:
 - If your Genesys environment has contained a release of T-Server or Interaction Concentrator prior to 7.6, see [Enabling HA Deduplication of Voice Agent Activity, page 397](#).
 - If your Genesys environment has never contained a release of T-Server or Interaction Concentrator prior to 7.6, see [Step 8 of Enabling HA Deduplication of Voice Agent Activity, page 397](#).

Configuring HA Deduplication of Agent Activity Details in an Existing Voice HA Deployment

This section provides a high-level procedure to add HA deduplication of agent activity details to an existing Voice details HA data extraction topology. The procedure:

- Assumes that:
 - Your Genesys Info Mart deployment had HA data extraction of Voice details enabled, either in Genesys Info Mart release 7.5 or in Genesys Info Mart release 7.6 based on release 7.5 of data sources.
 - Your current Genesys Info Mart 7.6 deployment includes an HA pair of ICON applications that store Voice details in an HA pair of IDBs through dedicated DAPs.
- Guides you through additional configuration to provide HA deduplication of agent activity data as part of your HA data extraction of Voice details.
- Refers you to procedures, in this or preceding chapters of this guide, for detailed instructions.

Procedure:

Configuring HA Deduplication of Voice Agent Activity Details in an Existing Voice HA Deployment

Purpose: To highlight all activities that are required to add HA deduplication of agent activity details to an HA topology for ICON Voice details that already includes voice interaction details.

Note: Genesys recommends that you perform this procedure when your contact center activity is at a minimum. Failure to follow through with the steps in this procedure will result in duplication of data.

Start of procedure

1. Modify any affected `Switch` and `DN` objects as necessary for your new topology. (Refer to “Capturing Voice Details” on [page 129](#))

For example, set the value for the `gls-flag-on-disconnect` option to `0` and the `gls-use-ts-id` option to `1` on the `Annex` tab of related `Switch` object(s). Refer to Table 13 on [page 135](#) for option descriptions.

End of procedure**Next Steps**

- To enable HA deduplication of Agent Activity, perform the procedures in [Safely Enabling HA Deduplication of Voice Agent Activity, page 396](#).

Configuring HA Data Extraction of Outbound Contact Details in an Existing Deployment

This section provides a high-level procedure to configure HA data extraction of Outbound Contact details in an existing Genesys Info Mart deployment. Genesys Info Mart implements Outbound Contact HA data extraction differently from the way it processes other types of data. Instead of deduplicating source data, the extraction job performs a time based extraction—extracting from one IDB in the pair, until it detects a gap in the source data and switches to the other IDB. Genesys Info Mart cannot use the time-based method to extract data from an IDB from which it has previously used the non-HA sequence-based method to extract data. Therefore, you have to create two new ICONs and IDBs.

The procedure:

- Guides you through the process of adding the components to your deployment that provide HA data extraction of Outbound Contact details.
- Refers you to procedures, in this or preceding chapters of this guide, for detailed instructions.

Procedure:**Configuring HA Data Extraction of Outbound Contact Details in an Existing Deployment**

Purpose: To highlight all activities that are required to implement an HA topology for ICON Outbound Contact details in an existing Genesys Info Mart deployment.

Prerequisites

- Genesys Info Mart 7.6 extracting Outbound Contact details in a non-HA data extraction topology.
- Interaction Concentrator 8.0. See the *Genesys Info Mart 7.6.x Release Notes* for the minimum release of Interaction Concentrator 8.0 that is required to support this functionality.
- Plan for this installation to occur during a maintenance window, when it is possible to stop all running Outbound Contact campaigns.

Note: It is possible to have Interaction Concentrator 7.6 and Interaction Concentrator 8.0 running in the same environment. Therefore, you can add support for Outbound Contact HA data extraction to a Genesys Info Mart deployment that uses Interaction Concentrator 7.6 as the data source for other, non-Outbound Contact data. However, you cannot use an Interaction Concentrator 7.6 application and IDB to provide HA support for Outbound Contact details.

Start of procedure

1. Set up a primary Interaction Concentrator 8.0 application to store Outbound Contact details. Refer to [Capturing Outbound Contact Details, page 141](#).
2. Set up a secondary Interaction Concentrator 8.0 application to store Outbound Contact details and modify the configuration settings of the two ICON applications to process the data in the same manner. Refer to [Configuring ICON Applications for Outbound Contact Details HA, page 166](#).
3. Configure the newly created Interaction Concentrator applications to store Outbound Contact details.

When you configure the Interaction Concentrator applications, set the following option values in the [callconcentrator] section:

- Set the `role` option to `gos`.
This is the only allowable setting for ICON HA pairs dedicated to recording Outbound Contact HA details.
- Set the `use-dss-monitor` option to `ON`.
If you retain the default value (`OFF`), the `G_DSS_GOS_PROVIDER` table in the applicable IDB will not be populated.
- Set the `dss-no-data-tout` option to `60` (seconds).

Refer to [Configuring ICON Applications for Outbound Contact Details HA, page 166](#).

Warning! Do not start the newly created ICONs.

4. Create and initialize the primary IDB to store Outbound Contact details. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
5. Create and initialize the secondary IDB to store the same Outbound Contact details. Refer to the *Interaction Concentrator Deployment Guide* for instructions on initializing an IDB.
6. For both the primary and secondary IDBs, perform the procedure [Preparing IDBs](#) on [page 167](#) as it applies to IDBs that store Outbound Contact details. In particular, ensure that you run the following script:

```
make_icon_ocs_ha_indexes_for_gim.sql.
```
7. Set up a DAP Application object, with the role of ICON_OCS, that provides access to the primary IDB. Refer to [Configuring DAPs for ICON Outbound Contact Details HA](#), [page 222](#).
8. Set up a DAP Application object, with the role of ICON_OCS, that provides access to the secondary IDB. Refer to [Configuring DAPs for ICON Outbound Contact Details HA](#), [page 222](#).

Note: Do not to add these two new DAPs to the Genesys Info Mart application's Connections tab at this point. You will be directed to do so later in this procedure.

9. Stop any running Outbound Contact campaigns. You need to plan for this step to occur during a maintenance window when it is possible to stop all running Outbound Contact campaigns.
10. If you have an existing Interaction Concentrator application that stores Outbound Contact details, shut it down now.
11. If the existing Interaction Concentrator application has multiple roles, do the following:
 - Remove the role option gos from the application.
 - Remove the connection to the Outbound Contact Server.
 - Restart Interaction Concentrator for its remaining roles.
12. Start the HA pair of Interaction Concentrator 8.0 applications that you created to store Outbound Contact details.
13. Start any Outbound Contact campaign group sessions.

Note: Allow enough time for the new ICON applications to populate their IDBs before Genesys Info Mart starts extracting data from the new IDBs.

14. Set the run-scheduler configuration option to FALSE in the schedule section of the Genesys Info Mart Application object in order to stop Genesys Info Mart Server temporarily from launching ETL jobs.

15. Use the Genesys Info Mart Administration Console to monitor completion of any running jobs.
16. Use Genesys Management Framework (Solution Control) to stop the Genesys Info Mart Server.
17. In the Genesys Info Mart `Application` object, add the connections to the IDB DAPs that you just created. See [Adding a Connection in the Genesys Info Mart Application, page 388](#).
18. Use Genesys Management Framework (Solution Control) to start the Genesys Info Mart Server.
19. Use the Genesys Info Mart Administration Console to run several complete ETL cycles manually. It might take several ETL cycles to finish extracting the data from the old, non-HA IDB. Be sure to look in the Staging Area database between each ETL cycle that you run, until the `ADMIN_EXTRACT_HISTORY` view shows more than one cycle of 0 rows extracted from all IDB tables that store Outbound Contact details (table names that begin with `GO_`). When the extraction of the old data is complete, Genesys Info Mart will start extracting from the new Outbound Contact DAPs.
20. If the data extraction DAP for the old, non-HA IDB contained multiple roles, modify the role option to remove `ICON_OCS`; otherwise, remove the DAP from the Genesys Info Mart application's `Connections` tab.
21. When you have verified proper operation, set the `run-scheduler` option to `TRUE` in the `schedule` section of the Genesys Info Mart `Application` object.

End of procedure

Safely Enabling HA Deduplication of Voice Agent Activity

If your Genesys environment has contained a T-Server or Interaction Concentrator of a release prior to 7.6, both new and existing Genesys Info Mart deployments are likely to extract the voice agent activity details that were sourced from these earlier releases. You should verify that the details that Genesys Info Mart 7.6 extracts from IDB are populated by Interaction Concentrator release 7.6 and are based on the data that is coming from T-Server release 7.6 *before* you enable the HA deduplication of voice agent activity details.

You also need to delete all agent activity data from the secondary IDB before you can safely enable the HA deduplication for voice agent activity:

- After you migrated your Genesys Info Mart 7.5 deployment to release 7.6.

- After you upgraded T-Server to release 7.6. in an environment with Genesys Info Mart 7.6.
- After you upgraded Interaction Concentrator to release 7.6 in an environment with Genesys Info Mart 7.6.

Procedure:

Enabling HA Deduplication of Voice Agent Activity

Purpose: To activate the HA deduplication of voice agent activity details without duplication of data that was gathered previously in an environment with releases 7.5 or earlier of T-Server and Interaction Concentrator.

Prerequisites

- Release 7.6 of Interaction Concentrator and T-Server.
- You must have completed the steps for configuring HA data extraction of Voice details, including agent activity details. See the procedures that are appropriate to your environment earlier in this chapter.

Start of procedure

1. Make sure that the `extract-ha-voice-agent-activity` option is set to `FALSE`.
Refer to the option description on [page 287](#).
2. Determine whether it is safe to enable HA deduplication of voice agent activity in your environment. To do so, check that the ETL has extracted all the data that was stored by prior releases of ICON and/or T-Server, as follows:
 - a. Inspect the primary IDB to determine the point at which the newly extracted data is generated by release 7.6 of both ICON and T-Server.
For data that belongs to earlier releases of ICON and/or T-Server:
 - The `LoginSessionID` column in the `G_LOGIN_SESSION` table has values in the following format:
`XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX-X`
where `x` is an alphanumeric symbol.
 - The `GSYS_EXT_VCH2` column has `NULL` values in the `G_DND_HISTORY`, `G_AGENT_STATE_HISTORY`, and `G_AGENT_STATE_RC` tables.
 - b. Note the values of the `GSYS_SEQ` and `GSYS_USEQ` fields beyond this point for each of the following tables:
 - `G_AGENT_STATE_HISTORY`
 - `G_AGENT_STATE_RC`
 - `G_DND_HISTORY`
 - `G_LOGIN_SESSION`

- GX_SESSION_ENDPOINT
- c. Run one ETL cycle.
 - d. Query the ADMIN_EXTRACT_HISTORY view of the Info Mart Staging Area to determine the LAST_INSERT_SEQUENCE and LAST_UPDATE_SEQUENCE values that were written by the last Job_ExtractICON into agent activity tables (such as STG_GX_SESSION_ENDPOINT, STG_G_AGENT_STATE_HISTORY, STG_G_AGENT_STATE_RC, STG_G_LOGIN_SESSION, and STG_G_DND_HISTORY).
 - e. Make sure that the newly extracted data is from ICON and T-Server of release 7.6 only.

To do so, verify that the values that are found in [Step 2d](#) are greater than the values that were returned in [Step 2b](#). The LAST_INSERT_SEQUENCE in the Staging Area database corresponds to the GSYS_SEQ value in IDB, and the LAST_UPDATE_SEQUENCE in the Staging Area corresponds to the GSYS_USEQ value in IDB. When the values that are found in [Step 2d](#) are greater than the values that were returned in [Step 2b](#), the data is from ICON and T-Server release 7.6.
3. Repeat [Steps 2c](#) through [2e](#) until you receive data from ICON and T-Server release 7.6 only.

End of procedure

Next Steps

- [Removing ICON Voice Agent Activity from the Secondary IDB, page 398.](#)

Procedure: Removing ICON Voice Agent Activity from the Secondary IDB

Purpose: To activate HA deduplication of voice agent activity details without duplication of data that was gathered previously in an existing environment with HA data extraction of voice interaction details.

Prerequisites

- Release 7.6 of Interaction Concentrator and T-Server.

Start of procedure

1. In the secondary ICON Application object, add or modify the `gls-all` configuration option in the `filter-data` section and set its value to 1. See the *Interaction Concentrator Deployment Guide* for more information about configuring this option.
2. Restart the secondary ICON application, for the configuration change to take effect.
3. Allow Genesys Info Mart to extract the data from both IDBs for a period of time that is at least twice as long as the time that is specified by the `max-session-duration-in-hours` option in the `gim-etl` section of the Genesys Info Mart Application object.
4. To prevent duplication of data, you must remove any agent activity data that is redundant to the data that Genesys Info Mart might have previously extracted from the primary IDB. To do so, truncate the following tables in the secondary IDB *only*:
 - `G_AGENT_STATE_HISTORY`
 - `G_AGENT_STATE_RC`
 - `G_DND_HISTORY`
 - `G_LOGIN_SESSION`
 - `GX_SESSION_ENDPOINT`

Consult your database administrator for the most efficient way to do this for your particular environment and RDBMS type.

5. Inspect the agent activity tables in the secondary IDB to verify that all agent activity data has been deleted.
6. Set the `run-scheduler` configuration option to `FALSE` in the `schedule` section of the Genesys Info Mart Application object in order to stop Genesys Info Mart Server temporarily from launching ETL jobs.
7. Use the Genesys Info Mart Administration Console to monitor completion of any running jobs.
8. When all the active jobs are finished, set the `extract-ha-voice-agent-activity` option to `TRUE` in the `gim-etl` section of the Genesys Info Mart Application object.
9. Modify the `gls-all` option of the secondary ICON Application object by setting its value to 0.
10. Restart the secondary ICON application for the configuration change to take effect.
11. Set the `run-scheduler` configuration option to `TRUE` in the `schedule` section of the Genesys Info Mart Application object.
Genesys Info Mart Server will resume launching ETL jobs.

End of procedure



Appendix

A

Installation Worksheets

This appendix contains worksheets that you can use to note configuration information for your environment, including relational database management system (RDBMS)-specific database connection parameters for each database that Genesys Info Mart accesses, and the mapping of Outbound Contact record fields to Info Mart tables. Keep this information, so that you can refer to it during deployment and when you need to re-install or upgrade Genesys Info Mart.

This appendix contains the following worksheets:

- [Worksheet for Oracle Databases, page 401](#)
- [Worksheet for Microsoft SQL Databases, page 404](#)
- [Worksheet for DB2 Databases, page 406](#)
- [Worksheet for Mapping Attached Data, page 408](#)
- [Worksheet for Mapping Outbound Contact Record Fields, page 413](#)

Worksheet for Oracle Databases

Oracle Databases
For Oracle, the Database Name is the name that the database client software uses to connect to the database—for example TNS name or Oracle Name Server name. Owner ID and owner password specify the schema in which the database tables reside. User ID and user password are used to connect to the database.
Interaction Concentrator Database
Use to run SQL scripts during deployment of the Interaction Database (IDB), and to configure a DAP to extract Interaction Concentrator data. If you have multiple Interaction Concentrator databases, note the connection information for each database.
Database Name

Host Name	_____
Communication Port	_____
Owner ID	_____
Owner Password	_____
User ID	_____
User Password	_____
Stat Server Database	
Use to run SQL scripts during deployment of the Stat Server database, and to configure a DAP to extract Stat Server data. If you have multiple Stat Server databases, note the connection information for each database.	
Database Name	_____
Host Name	_____
Communication Port	_____
Owner ID	_____
Owner Password	_____
User ID	_____
User Password	_____
GVP VAR Database	
Use to extract GVP VAR data. If you have multiple GVP VAR databases, note the connection information for each database.	
Database Name	_____
Host Name	_____
Communication Port	_____
Owner ID	_____
Owner Password	_____
User ID	_____
User Password	_____
Genesys Info Mart Staging Area Database	
Use to run SQL scripts during deployment of the Staging Area database, and to configure a DAP to connect to the Genesys Info Mart Staging Area database.	
Database Name	_____
Host Name	_____
Communication Port	_____

Owner ID	_____
Owner Password	_____
Merge Staging Area Owner ID	_____
Merge Staging Area Owner Password	_____
User ID	_____
User Password	_____
Genesys Info Mart Database	
Use to run SQL scripts during deployment of the Info Mart database, and to configure a DAP to connect to the Genesys Info Mart database.	
Database Name	_____
Host Name	_____
Communication Port	_____
Owner ID	_____
Owner Password	_____
User ID	_____
User Password	_____
Genesys Info Mart View	
Use to run SQL scripts during deployment of the Info Mart database, in order to create read-only views of Genesys Info Mart tables.	
Database Name	_____
Owner ID	_____
Owner Password	_____
Genesys Info Mart Tenant 1 View	
Use to run SQL scripts during deployment of the Info Mart database, in order to create read-only tenant views of Genesys Info Mart tables. If you have multiple tenants, note the connection information separately for each tenant.	
Database Name	_____
Owner ID	_____
Owner Password	_____

Worksheet for Microsoft SQL Databases

Microsoft SQL Databases

For Microsoft SQL databases, the Database Name is the name of the Microsoft SQL Server database. The Owner ID and the Owner Password specify the owner of the tables in the database. The Owner ID is either the login that created the database tables, or dbo if the login that created the tables created the database that contains the tables, or if it is a member of the System Administrators server role. When in doubt, use the SQL Server Enterprise Manager to verify the owner of the tables. The User ID and User Password are used to connect to the database server.

Interaction Concentrator Database

Use to run SQL scripts during deployment of the Interaction Database (IDB), and to configure a DAP to extract Interaction Concentrator data. If you have multiple Interaction Concentrator databases, note the connection information for each database.

Database Name _____

Host Name _____

Communication Port _____

Owner ID _____

Owner Password _____

User ID _____

User Password _____

Stat Server Database

Use to run SQL scripts during deployment of the Stat Server database, and to configure a DAP to extract Stat Server data. If you have multiple Stat Server databases, note the connection information for each database.

Database Name _____

Host Name _____

Communication Port _____

Owner ID _____

Owner Password _____

User ID _____

User Password _____

Genesys Info Mart Staging Area Database

Use to run SQL scripts during deployment of the Staging Area database, and to configure a DAP to connect to the Genesys Info Mart Staging Area database.

Database Name _____

Host Name	_____
Communication Port	_____
Owner ID	_____
Owner Password	_____
Merge Staging Area Owner ID	_____
Merge Staging Area Owner Password	_____
User ID	_____
User Password	_____
Genesys Info Mart Database	
Use to run SQL scripts during deployment of the Info Mart database, and to configure a DAP to connect to the Genesys Info Mart database.	
Database Name	_____
Host Name	_____
Communication Port	_____
Owner ID	_____
Owner Password	_____
User ID	_____
User Password	_____
Genesys Info Mart View	
Use to run SQL scripts during deployment of the Info Mart database, in order to create read-only views of Genesys Info Mart tables.	
Database Name	_____
Owner ID	_____
Owner Password	_____
Genesys Info Mart Tenant 1 view	
Use to run SQL scripts during deployment of the Info Mart database, in order to create read-only tenant views of Genesys Info Mart tables. If you have multiple tenants, note the connection information separately for each tenant.	
Database Name	_____
Owner ID	_____
Owner Password	_____

Worksheet for DB2 Databases

DB2 Databases	
For DB2 databases, the Database Name is the catalogued database alias that the database client software uses to connect to the database. Owner ID and Owner Password specify the schema in which the database tables reside. User ID and User Password are used to connect to the database.	
Interaction Concentrator database	
Use to run SQL scripts during deployment of the Interaction Database (IDB), and to configure a DAP to extract Interaction Concentrator data. If you have multiple Interaction Concentrator databases, note the connection information for each database.	
Database Name	_____
Host Name	_____
Communication Port	_____
Owner ID	_____
Owner Password	_____
User ID	_____
User Password	_____
Stat Server database	
Use to run SQL scripts during deployment of the Stat Server database, and to configure a DAP to extract Stat Server data. If you have multiple Stat Server databases, note the connection information for each database.	
Database Name	_____
Host Name	_____
Communication Port	_____
Owner ID	_____
Owner Password	_____
User ID	_____
User Password	_____
Genesys Info Mart Staging Area database	
Use to run SQL scripts during deployment of the Staging Area database, and to configure a DAP to connect to the Genesys Info Mart Staging Area database.	
Database Name	_____
Host Name	_____
Communication Port	_____
Owner ID	_____

Merge Staging Area Owner ID	_____
Merge Staging Area Owner Password	_____
Owner Password	_____
User ID	_____
User Password	_____
Genesys Info Mart database	
Use to run SQL scripts during deployment of the Info Mart database, and to configure a DAP to connect to the Genesys Info Mart database.	
Database Name	_____
Host Name	_____
Communication Port	_____
Owner ID	_____
Owner Password	_____
User ID	_____
User Password	_____
Genesys Info Mart view	
Use to run SQL scripts during deployment of the Info Mart database, in order to create read-only views of Genesys Info Mart tables.	
Database Name	_____
Owner ID	_____
Owner Password	_____
Genesys Info Mart Tenant 1 view	
Use to run SQL scripts during deployment of the Info Mart database, in order to create read-only tenant views of Genesys Info Mart tables. If you have multiple tenants, note the connection information separately for each tenant.	
Database Name	_____
Owner ID	_____
Owner Password	_____

Worksheet for Mapping Attached Data

In the following worksheet:

- The key-value pair (KVP) names that have no asterisk (*) beside them are predefined names for data attached by Genesys solutions, such as Enterprise Routing Solution and Outbound Contact, and should *not* be changed.
- A single asterisk (*) next to a name indicates that it is the recommended name for the KVP. You can use a different name, provided that the data type and meaning remain the same.
- A double asterisk (**) indicates that the KVP name is user-defined.

Your KVP Name	Default KVP Name	GIM ID#	Target Genesys Info Mart table and Column Name
	ServiceObjective *	10041	INTERACTION_FACT. BASELINE_SERVICE_OBJECTIVE
	ISpeechRecognition *	10042	VOICE_SEG_FACT_EXT. SPEECH_RECOGNITION_COUNT
	ITextToSpeech *	10043	VOICE_SEG_FACT_EXT. TEXT_TO_SPEECH_COUNT
	IApplication *	10044	STRATEGY.STRATEGY_NAME
	IResult *	10045	STRATEGY.STRATEGY_RESULT
	IResultReason *	10046	STRATEGY.RESULT_REASON
GSW_CALL_ATT MPT_GUID	GSW_CALL_ATT MPT_GUID	10047	This KVP is not stored directly in the Info Mart database, but is used to correlate interaction details with Outbound Contact details.
	CaseID *	10048	INTERACTION_SEGMENT_FACT. CASE_ID
	CustomerSegment *	10049	INTERACTION_DESCRIPTOR. CUSTOMER_SEGMENT
	ServiceType *	10050	INTERACTION_DESCRIPTOR. SERVICE_TYPE
	ServiceSubtype *	10051	INTERACTION_DESCRIPTOR. SERVICE_SUBTYPE
	BusinessResult *	10052	INTERACTION_DESCRIPTOR. BUSINESS_RESULT

Your KVP Name	Default KVP Name	GIM ID#	Target Genesys Info Mart table and Column Name
	CustomerID *	10053	CUSTOMER.EXTERNAL_CUSTOMER_ID
	IPurpose	10054	This KVP is not stored directly in the Info Mart database, but it affects population of the INTERACTION_RESOURCE_FACT table.
RStrategyName	RStrategyName	N/A	STRATEGY.STRATEGY_NAME
RRequestedSkillCombination	RRequestedSkillCombination	N/A	REQUESTED_SKILL_COMBINATION.SKILL_COMBINATION_STRING
RTargetTypeSelected	RTargetTypeSelected	N/A	ROUTING_TARGET.ROUTING_TARGET_TYPE
RTargetObject-Selected	RTargetObject-Selected	N/A	ROUTING_TARGET.AGENT_GROUP_NAME, ROUTING_TARGET.PLACE_GROUP_NAME, ROUTING_TARGET.SKILL_EXPRESSION, ROUTING_TARGET.TARGET_OBJECT_SELECTED ROUTING_TARGET
Subject	Subject	N/A	MMEDIA_I_XN_FACT_EXT.SUBJECT
Origination_Source	Origination_Source	N/A	MMEDIA_I_XN_FACT_EXT.WEBFORM_FLAG
FromAddress	FromAddress	N/A	INTERACTION_FACT.SOURCE_ADDRESS MMEDIA_I_XN_FACT_EXT.FROM_DOMAIN
AutoResponseID	AutoResponseID	N/A	MMEDIA_I_XN_FACT_EXT.AUTO_RESPONSE_NAME
AutoACKID	AutoACKID	N/A	MMEDIA_I_XN_FACT_EXT.AUTO_ACK_NAME
ContactId	ContactId	N/A	MMEDIA_I_XN_FACT_EXT.CONTACT_ID MMEDIA_SEG_FACT_EXT.CONTACT_ID
_attr_is_online	_attr_is_online	N/A	MMEDIA_I_XN_FACT_EXT.MEDIA_SERVER_I_XN_ONLINE_FLAG MMEDIA_SEG_FACT_EXT.MEDIA_SERVER_I_XN_ONLINE_FLAG
_attr_itx_received_at	_attr_itx_received_at	N/A	MMEDIA_I_XN_FACT_EXT.MEDIA_SERVER_GMT_START_TIME

Your KVP Name	Default KVP Name	GIM ID#	Target Genesys Info Mart table and Column Name
_attr_itx_subtype	_attr_itx_subtype	N/A	MMEDIA_SEG_FACT_EXT . SEG_INTERACTION_TYPE_KEY INTERACTION_FACT . INTERACTION_TYPE_KEY INTERACTION_SEGMENT_FACT . INTERACTION_TYPE_KEY
_attr_reason_system_name	_attr_reason_system_name	N/A	STOP_ACTION.STOP_REASON (dimension table)
	User-Defined Dim 1) **	10001	USER_DATA.USER_DATA_ STRING_1
	(User-Defined Dim 2) **	10002	USER_DATA.USER_DATA_ STRING_2
	(User-Defined Dim 3) **	10003	USER_DATA.USER_DATA_ STRING_3
	(User-Defined Dim 4) **	10004	USER_DATA.USER_DATA_ STRING_4
	(User-Defined Dim 5) **	10005	USER_DATA.USER_DATA_ STRING_5
	(User-Defined Dim 6) **	10006	USER_DATA.USER_DATA_ STRING_6
	(User-Defined Dim 7) **	10007	USER_DATA.USER_DATA_ STRING_7
	(User-Defined Dim 8) **	10008	USER_DATA.USER_DATA_ STRING_8
	(User-Defined Dim 9) **	10009	USER_DATA.USER_DATA_ STRING_9
	(User-Defined Dim 10) **	10010	USER_DATA.USER_DATA_ STRING_10
	(User-Defined Dim 11) **	10011	USER_DATA_2.USER_DATA_ 2_STRING_1
	(User-Defined Dim 12) **	10012	USER_DATA_2.USER_DATA_ 2_STRING_2
	(User-Defined Dim 13) **	10013	USER_DATA_2.USER_DATA_ 2_STRING_3

Your KVP Name	Default KVP Name	GIM ID#	Target Genesys Info Mart table and Column Name
	(User-Defined Dim 14) **	10014	USER_DATA_2.USER_DATA_2_STRING_4
	(User-Defined Dim 15) **	10015	USER_DATA_2.USER_DATA_2_STRING_5
	(User-Defined Dim 16) **	10016	USER_DATA_2.USER_DATA_2_STRING_6
	(User-Defined Dim 17) **	10017	USER_DATA_2.USER_DATA_2_STRING_7
	(User-Defined Dim 18) **	10018	USER_DATA_2.USER_DATA_2_STRING_8
	(User-Defined Dim 19) **	10019	USER_DATA_2.USER_DATA_2_STRING_9
	(User-Defined Dim 20) **	10020	USER_DATA_2.USER_DATA_2_STRING_10
	(User-Defined Fact 1) **	10021	INTERACTION_SEGMENT_FACT.USER_DATA_1
	(User-Defined Fact 2) **	10022	INTERACTION_SEGMENT_FACT.USER_DATA_2
	(User-Defined Fact 3) **	10023	INTERACTION_SEGMENT_FACT.USER_DATA_3
	(User-Defined Fact 4) **	10024	INTERACTION_SEGMENT_FACT.USER_DATA_4
	(User-Defined Fact 5) **	10025	INTERACTION_SEGMENT_FACT.USER_DATA_5
	(User-Defined Fact 6) **	10026	INTERACTION_SEGMENT_FACT.USER_DATA_6
	(User-Defined Fact 7) **	10027	INTERACTION_SEGMENT_FACT.USER_DATA_7
	(User-Defined Fact 8) **	10028	INTERACTION_SEGMENT_FACT.USER_DATA_8
	(User-Defined Fact 9) **	10029	INTERACTION_SEGMENT_FACT.USER_DATA_9

Your KVP Name	Default KVP Name	GIM ID#	Target Genesys Info Mart table and Column Name
	(User-Defined Fact 10)**	10030	INTERACTION_SEGMENT_FACT.USER_DATA_10
	(User-Defined Fact 11)**	10031	INTERACTION_SEGMENT_FACT.USER_DATA_11
	(User-Defined Fact 12)**	10032	INTERACTION_SEGMENT_FACT.USER_DATA_12
	(User-Defined Fact 13)**	10033	INTERACTION_SEGMENT_FACT.USER_DATA_13
	(User-Defined Fact 14)**	10034	INTERACTION_SEGMENT_FACT.USER_DATA_14
	(User-Defined Fact 15)**	10035	INTERACTION_SEGMENT_FACT.USER_DATA_15
	(User-Defined Fact 16)**	10036	INTERACTION_SEGMENT_FACT.USER_DATA_16
	(User-Defined Fact 17)**	10037	INTERACTION_SEGMENT_FACT.USER_DATA_17
	(User-Defined Fact 18)**	10038	INTERACTION_SEGMENT_FACT.USER_DATA_18
	(User-Defined Fact 19)**	10039	INTERACTION_SEGMENT_FACT.USER_DATA_19
	(User-Defined Fact 20)**	10040	INTERACTION_SEGMENT_FACT.USER_DATA_20

Worksheet for Mapping Outbound Contact Record Fields

Use the three checklists in this section to plan how to map Outbound Contact record fields to the following Info Mart database tables:

- CONTACT_ATTEMPT_FACT
- RECORD_FIELD_GROUP_1
- RECORD_FIELD_GROUP_2

Outbound Contact Record Fields to CONTACT_ATTEMPT_FACT Table Mapping	
<p>Genesys Info Mart stores non-mandatory record field data that is defined in Outbound Contact calling lists in the RECORD_FIELD_1 through RECORD_FIELD_40 columns in the CONTACT_ATTEMPT_FACT table.</p> <p>Use the following rows to list the non-mandatory fields that you need to map from Outbound Contact to the CONTACT_ATTEMPT_FACT table.</p> <p>The first row contains an example for RECORD_FIELD_40. In the Outbound Contact calling list the name of the record field is <i>Region</i>. This field maps to a column named RECORD_FIELD_40 in the CONTACT_ATTEMPT_FACT table.</p> <p>Note: Make sure that the data type of the field matches the data type of the target CONTACT_ATTEMPT_FACT column.</p>	
Genesys Info Mart Column Name	Field Object Name
Example: RECORD_FIELD_40	<i>Region</i>
RECORD_FIELD_1	
RECORD_FIELD_2	
RECORD_FIELD_3	
RECORD_FIELD_4	
RECORD_FIELD_5	
RECORD_FIELD_6	
RECORD_FIELD_7	
RECORD_FIELD_8	
RECORD_FIELD_9	
RECORD_FIELD_10	
RECORD_FIELD_11	
RECORD_FIELD_12	
RECORD_FIELD_13	
RECORD_FIELD_14	

Outbound Contact Record Fields to CONTACT_ATTEMPT_FACT Table Mapping	
RECORD_FIELD_15	
RECORD_FIELD_16	
RECORD_FIELD_17	
RECORD_FIELD_18	
RECORD_FIELD_19	
RECORD_FIELD_20	
RECORD_FIELD_21	
RECORD_FIELD_22	
RECORD_FIELD_23	
RECORD_FIELD_24	
RECORD_FIELD_25	
RECORD_FIELD_26	
RECORD_FIELD_27	
RECORD_FIELD_28	
RECORD_FIELD_29	
RECORD_FIELD_30	
RECORD_FIELD_31	
RECORD_FIELD_32	
RECORD_FIELD_33	
RECORD_FIELD_34	
RECORD_FIELD_35	
RECORD_FIELD_36	
RECORD_FIELD_37	
RECORD_FIELD_38	
RECORD_FIELD_39	
RECORD_FIELD_40	

Outbound Contact Record Fields to RECORD_FIELD_GROUP_1 Table Mapping

Genesys Info Mart stores non-mandatory record field data defined in Outbound Contact calling lists in the RECORD_FIELD_1_STRING_1 through RECORD_FIELD_1_STRING_10 columns in the RECORD_FIELD_GROUP_1 table.

Use the following rows to list the non-mandatory fields that you need to map from Outbound Contact to the RECORD_FIELD_GROUP_1 table.

Note: Make sure that the data type of the field matches the data type of the target RECORD_FIELD_GROUP_1 column.

Genesys Info Mart Column Name	Field Object Name
RECORD_FIELD_1_STRING_1	
RECORD_FIELD_1_STRING_2	
RECORD_FIELD_1_STRING_3	
RECORD_FIELD_1_STRING_4	
RECORD_FIELD_1_STRING_5	
RECORD_FIELD_1_STRING_6	
RECORD_FIELD_1_STRING_7	
RECORD_FIELD_1_STRING_8	
RECORD_FIELD_1_STRING_9	
RECORD_FIELD_1_STRING_10	

Outbound Contact Record Fields to RECORD_FIELD_GROUP_2 Table Mapping

Genesys Info Mart stores non-mandatory record field data defined in Outbound Contact calling lists in the RECORD_FIELD_2_STRING_1 through RECORD_FIELD_2_STRING_10 columns in the RECORD_FIELD_GROUP_2 table.

Use the following rows to list the non-mandatory fields that you need to map from Outbound Contact to the RECORD_FIELD_GROUP_2 table.

Note: Make sure that the data type of the field matches the data type of the target RECORD_FIELD_GROUP_2 column.

Genesys Info Mart Column Name	Field Object Name
RECORD_FIELD_2_STRING_1	
RECORD_FIELD_2_STRING_2	
RECORD_FIELD_2_STRING_3	
RECORD_FIELD_2_STRING_4	
RECORD_FIELD_2_STRING_5	
RECORD_FIELD_2_STRING_6	

RECORD_FIELD_2_STRING_7	
RECORD_FIELD_2_STRING_8	
RECORD_FIELD_2_STRING_9	
RECORD_FIELD_2_STRING_10	



Appendix

B

Sample Data Extraction Topologies

This appendix describes and illustrates a variety of sample single-site and multi-site data extraction topologies that include Interaction Concentrator, Stat Server (for legacy environments only), and Genesys Voice Platform (GVP) Voice Application Reporter (VAR) data sources.

This appendix contains the following sections:

- [Overview, page 417](#)
- [Single-Site Topology, page 418](#)
- [Multi-Site Topologies, page 420](#)

Refer to “Data Source Topologies” on [page 55](#) for descriptions of topologies that are available for each data source.

Overview

Each of the sample topologies that is presented in this appendix has advantages and disadvantages with regard to:

- Cost of deployment and administration.
- Performance and scalability.
- Protection against data loss.

Note the following about the figures in this appendix:

- The figures show only the Genesys Info Mart Database Access Points (DAPs); they do not show Interaction Concentrator and Stat Server DAPs.
- The dashed blue lines represent the intermediate extraction of voice interaction data for which multi-site calls need to be merged.

Note: Extracting and transforming Voice details from multiple IDBs requires significantly more ETL processing time than extracting and transforming Voice details from a single IDB. For this reason, Genesys strongly recommends that you consider deploying a single IDB for Voice details.

- Although large scale or multi-site deployments may have multiple Genesys Voice Platform (GVP) Voice Application Reporter (VAR) Servers and databases from which Genesys Info Mart extracts data, the figures show only one. Deploying multiple GVP VAR Servers and databases promotes scalability, and it also limits data loss if one of the GVP VAR Servers or databases become unavailable. In addition, multiple GVP VAR databases are required for multi-tenant deployments because multiple GVP “customers” cannot share a single GVP VAR database.

Single-Site Topology

This section provides an example of a single-site deployment that includes two ICONs and two IDBs.

Single Site—Two ICONs, Two IDBs

Figure 30 shows a single-site deployment topology, in which:

- One Interaction Concentrator (ICON) process writes to a single Interaction Database (IDB). This ICON process receives events from all source servers except Interaction Server.
- An additional ICON process captures the Multimedia activity and records it in a second IDB.

Note: You must store Voice details and Multimedia details in separate IDBs.

Although this topology is relatively easy to set up and administer, it has several points of possible failure that can result in data loss. In all domains, data will be lost while ICON is unavailable or while the IDB is unavailable for an extended period of time.

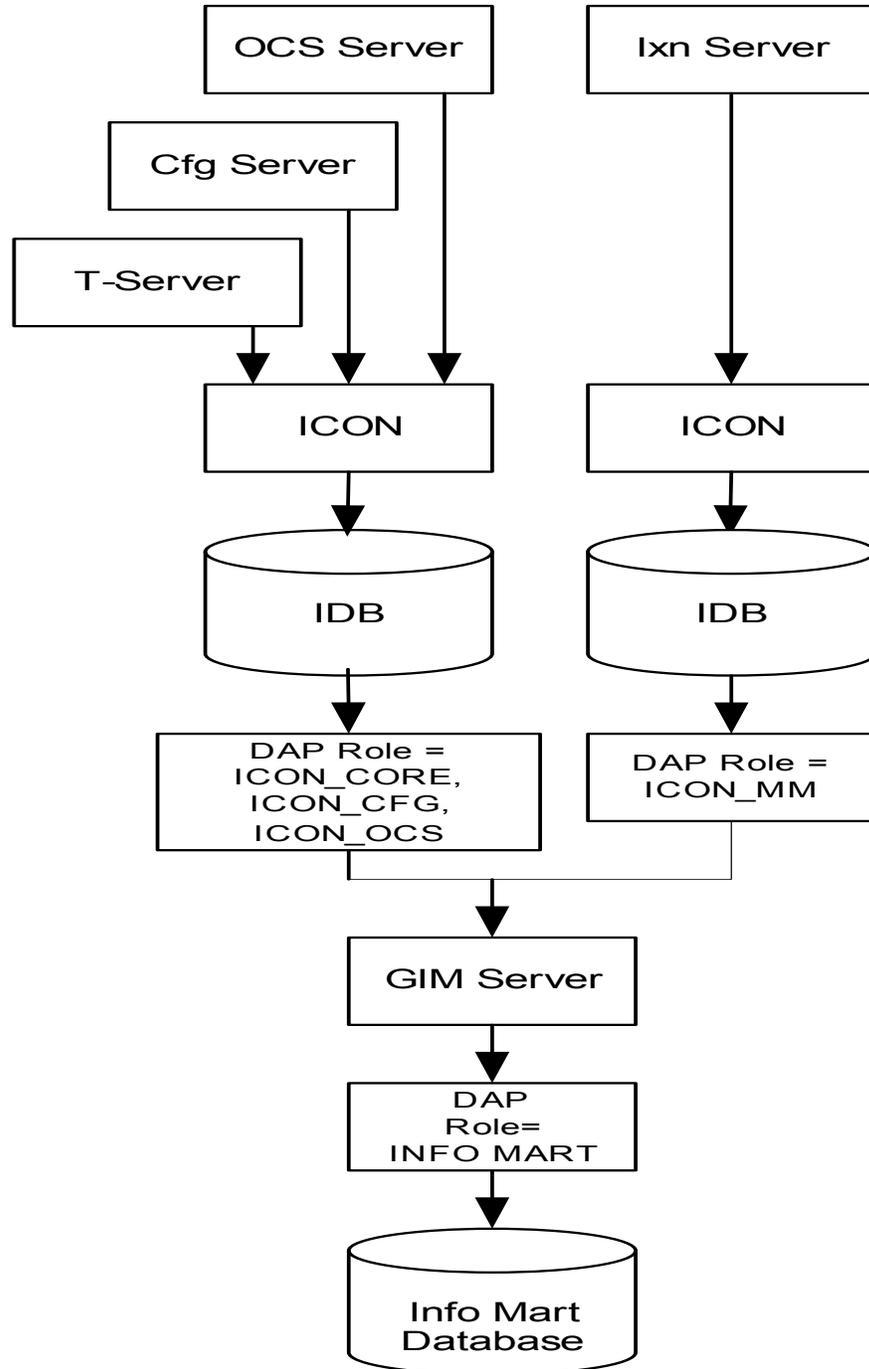


Figure 30: Single-Site Topology—Two ICONs, Two IDBs

Multi-Site Topologies

This section provides examples of the following multi-site topologies:

- [Multi-Site—Two ICONs, Two IDBs, page 420](#)
- [Multi-Site—One ICON per Site, One Central IDB, One Multimedia ICON/IDB, page 421](#)
- [Multi-Site—One ICON per Site, One IDB per Site, One Multimedia ICON/IDB, page 423](#)
- [Multi-Site—One ICON per Domain, One Central IDB, One Multimedia ICON/IDB, page 424](#)
- [Multi-Site—One ICON per Domain, One IDB per Site, One Multimedia ICON/IDB, page 426](#)
- [Multi-Site—One ICON per Domain, One IDB per Domain per Site, page 427](#)
- [Multi-Site Topology with Highly Available Data Sources, page 429](#)

Multi-Site—Two ICONs, Two IDBs

[Figure 31](#) shows a multi-site topology in which:

- One ICON process writes to a single IDB. This ICON process receives events from all source servers except Interaction Server.
- An additional ICON process captures the Multimedia activity and records it in a second IDB.

Note: You must store Voice details and Multimedia details in separate IDBs.

This topology is suitable for multi-site deployments with a relatively low call volume or relatively high wide-area network (WAN) bandwidth.

Although this topology is relatively easy to set up and administer, it has several points of possible failure that can result in data loss. In all domains and sites, data will be lost while ICON is unavailable or while the IDB is unavailable for an extended time period. Data for Sites 2 through N will also be lost if the network connection to Site 1 is unavailable.

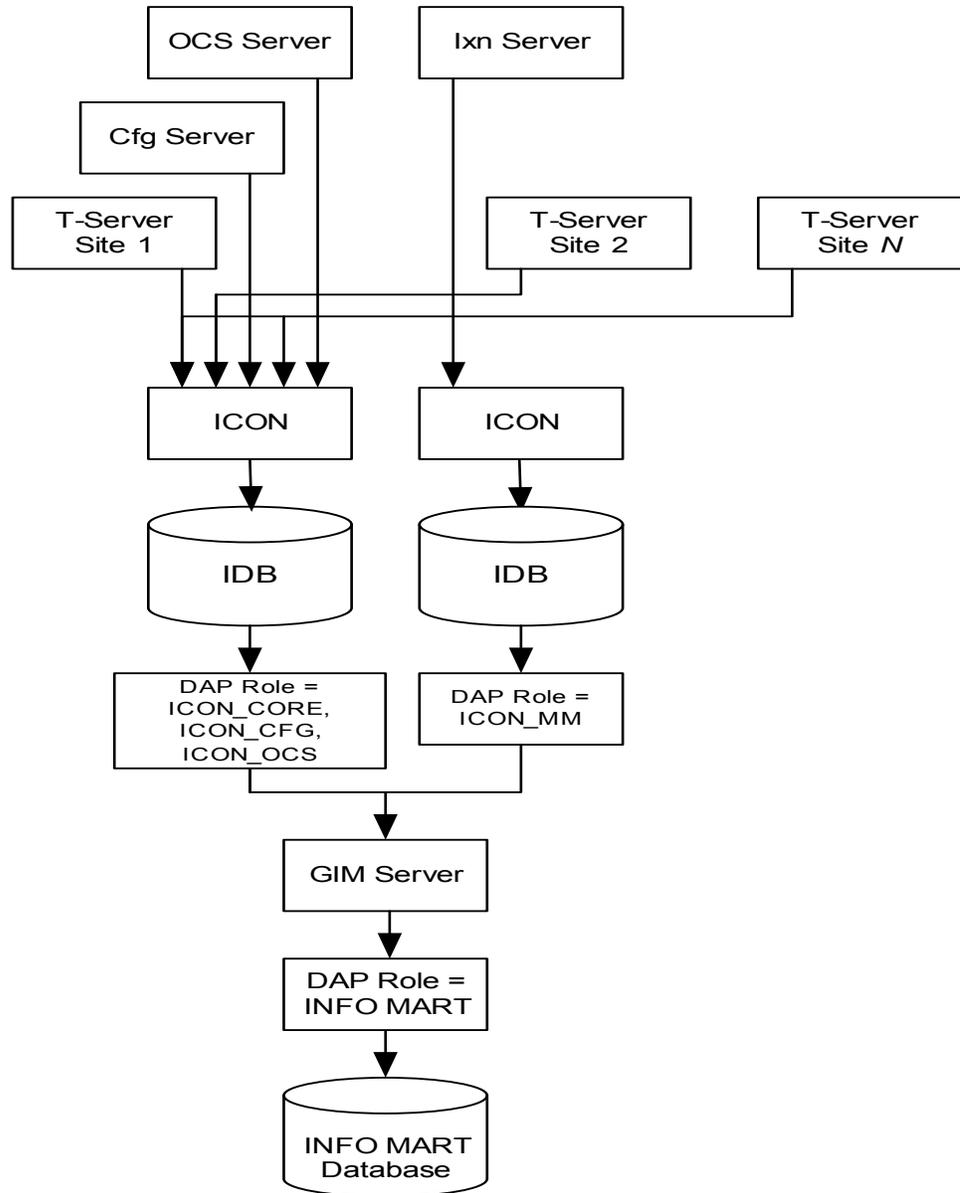


Figure 31: Multi-Site Topology—Two ICONs, Two IDBs

Multi-Site—One ICON per Site, One Central IDB, One Multimedia ICON/IDB

Figure 32 shows a multi-site topology in which a single ICON process at each site writes data to a single IDB at the central site. Each ICON process receives events from the T-Server at its site. (See “Genesys Info Mart Requirements to ICON Details Storage” on page 57.)

If the Multimedia solution is deployed, an additional ICON process per deployment is required in order to capture the Multimedia activity, as shown in Figure 32.

Note: You must store Voice details and Multimedia details in separate IDBs.

This topology is suitable for multi-site deployments with a relatively high call volume or relatively high wide-area network (WAN) bandwidth.

Although this topology is relatively easy to set up and administer, it has several points of possible failure that can result in data loss. Data will be lost if:

- For Sites 2 through *N*, if the connection to Site 1 is unavailable.
- For all domains at a given site, while the ICON at that site is unavailable.
- For all domains at all sites, while the IDB is unavailable for an extended period of time.

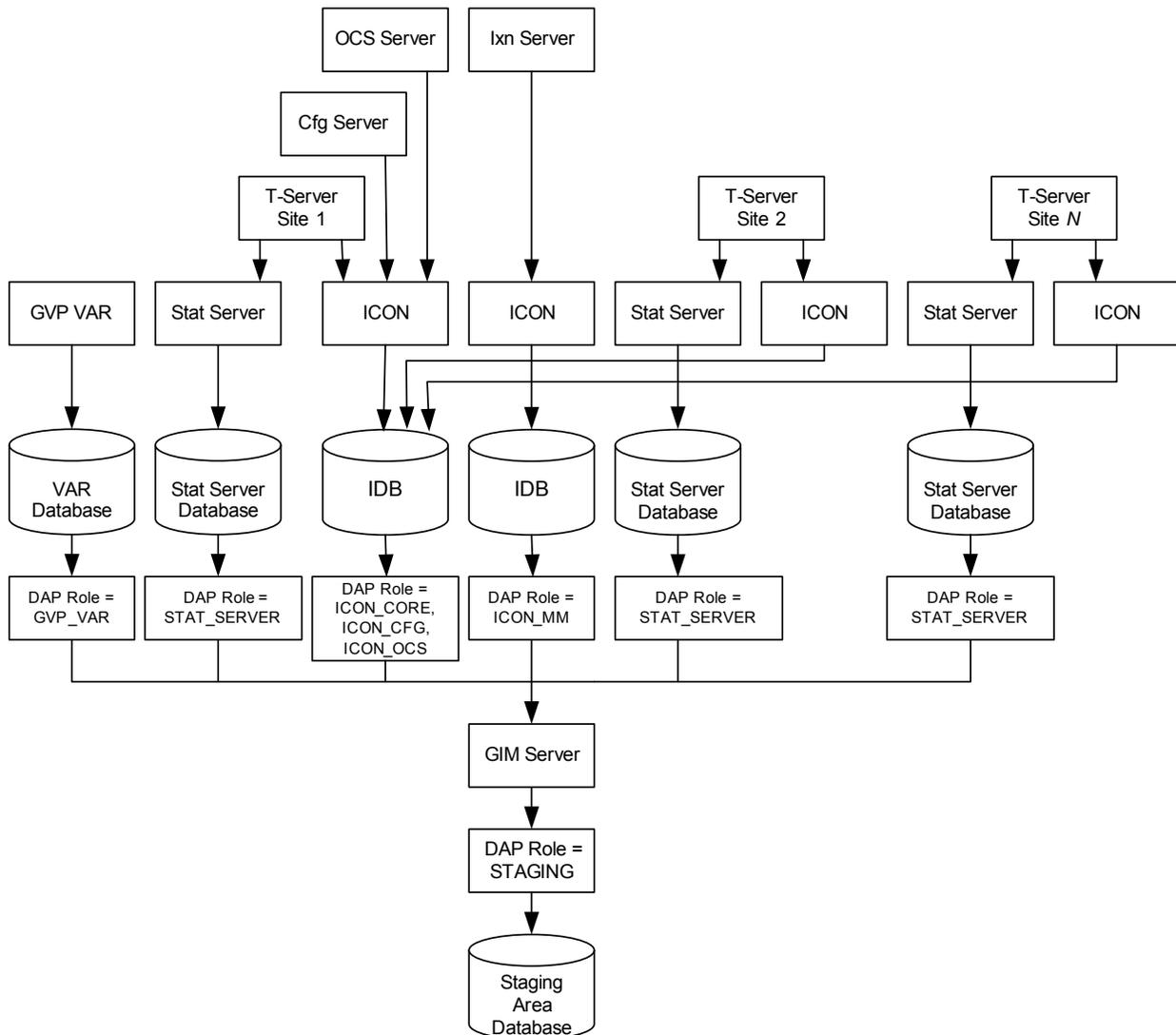


Figure 32: Multi-Site Topology—One ICON per Site, One Central IDB, One Multimedia ICON/IDB

Multi-Site—One ICON per Site, One IDB per Site, One Multimedia ICON/IDB

[Figure 33](#) shows a multi-site topology in which a single ICON process at each site writes data to the IDB at its site. Each ICON process receives events from the T-Server at its site. (See “Genesys Info Mart Requirements to ICON Details Storage” on [page 57](#).)

If the Multimedia solution is deployed, an additional ICON process per deployment is required in order to capture the Multimedia activity as shown in [Figure 33](#).

Note: You must store Voice details and Multimedia details in separate IDBs.

This topology is suitable for multi-site deployments with a relatively high call volume or relatively low WAN bandwidth, where the cost of deploying multiple IDBs is not prohibitively high.

Although this topology is more costly to set up and administer, it has fewer points of failure that can result in data loss. However, for all domains at a given site, data will be lost while ICON is unavailable, or while the IDB is unavailable for an extended period of time.

Data extraction is more costly because it requires an inter-IDB interaction merge.

Note: Extracting and transforming Voice details from multiple IDBs requires significantly more ETL processing time than extracting and transforming Voice details from a single IDB. For this reason, Genesys strongly recommends that you consider deploying a single IDB for Voice details.

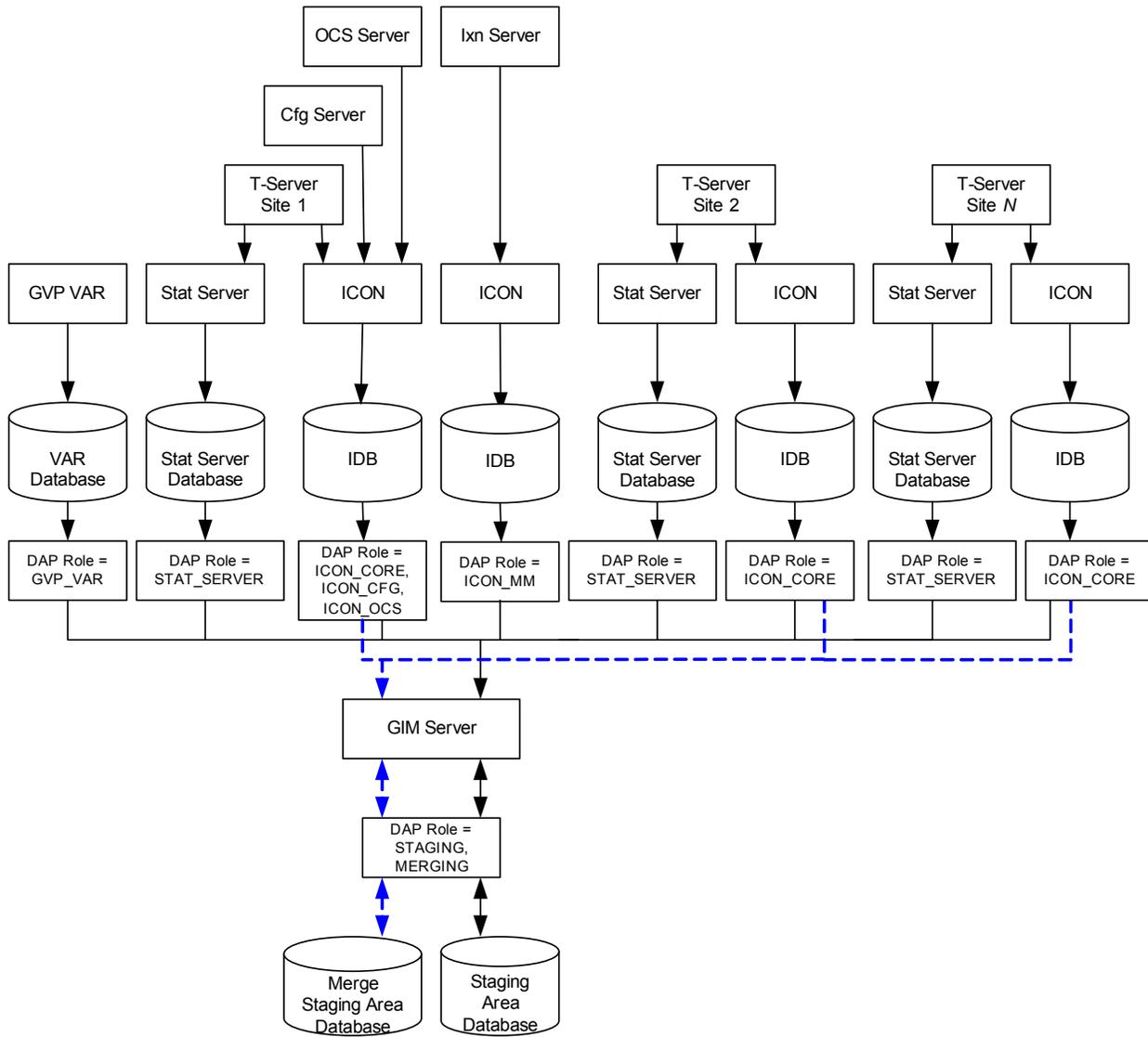


Figure 33: Multi-Site Topology—One ICON per Site, One IDB per Site, One Multimedia ICON/IDB

Multi-Site—One ICON per Domain, One Central IDB, One Multimedia ICON/IDB

Figure 34 shows a multi-site topology in which a single ICON process per domain (Voice, Configuration, Outbound Contact) at each site writes data to a single IDB at the central site. (See “Genesys Info Mart Requirements to ICON Details Storage” on page 57.)

If the Multimedia solution is deployed, an additional ICON process is required in order to capture the Multimedia activity as shown in Figure 34.

Note: You must store Voice details and Multimedia details in separate IDBs.

This topology is suitable for multi-site deployments with a relatively high call volume and relatively high WAN bandwidth, where the cost of deploying multiple IDBs is prohibitively high.

This topology has several points of possible failure that can result in data loss. Data will be lost:

- For a given domain at a given site, while the ICON at that site is unavailable.
- For Sites 2 through *N*, if the network connection to Site 1 is unavailable.
- For all domains at a given site, while the IDB at that site is unavailable for an extended period of time.

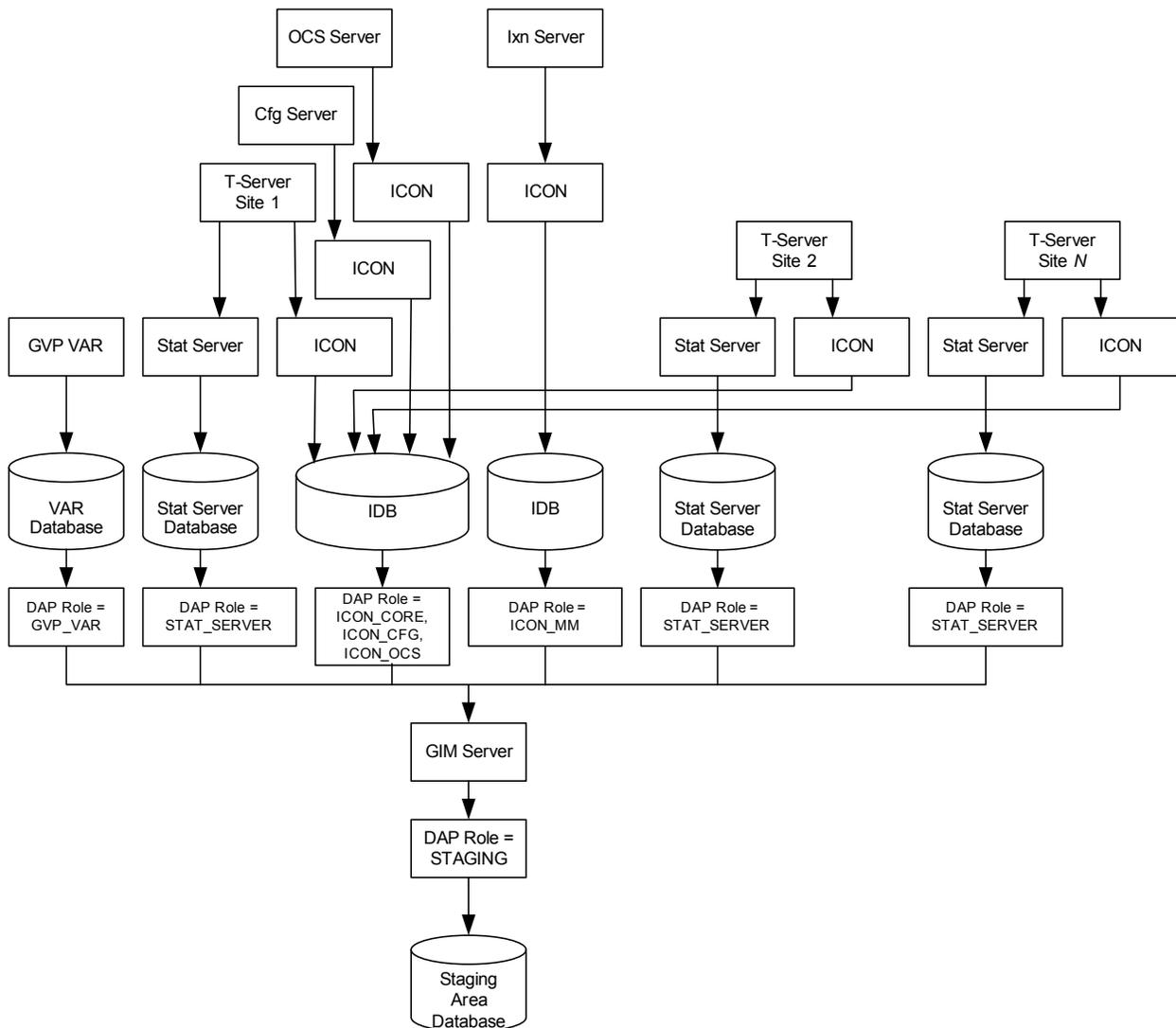


Figure 34: Multi-Site Topology—One ICON per Domain, One Central IDB, One Multimedia ICON/IDB

Multi-Site—One ICON per Domain, One IDB per Site, One Multimedia ICON/IDB

Figure 35 shows a multi-site topology in which a single ICON process per data domain (Voice, Configuration, and Outbound Contact) at each site writes data to the site IDB. (See “Genesys Info Mart Requirements to ICON Details Storage” on page 57.)

If the Multimedia solution is deployed, an additional ICON process per deployment is required in order to capture the Multimedia activity as shown in Figure 35.

Note: You must store Voice details and Multimedia details in separate IDBs.

This topology is suitable for multi-site deployments with a relatively high call volume or relatively low WAN bandwidth, where the cost of deploying multiple IDBs is not prohibitively high.

This topology has several points of possible failure that can result in data loss. Data will be lost:

- For a given domain at a given site, while the ICON at that site is unavailable.
- For all domains at a given site, while the IDB at that site is unavailable for an extended period of time.

Data extraction is more costly because it requires an inter-IDB interaction merge.

Note: Extracting and transforming Voice details from multiple IDBs requires significantly more ETL processing time than extracting and transforming Voice details from a single IDB. For this reason, Genesys strongly recommends that you consider deploying a single IDB for Voice details.

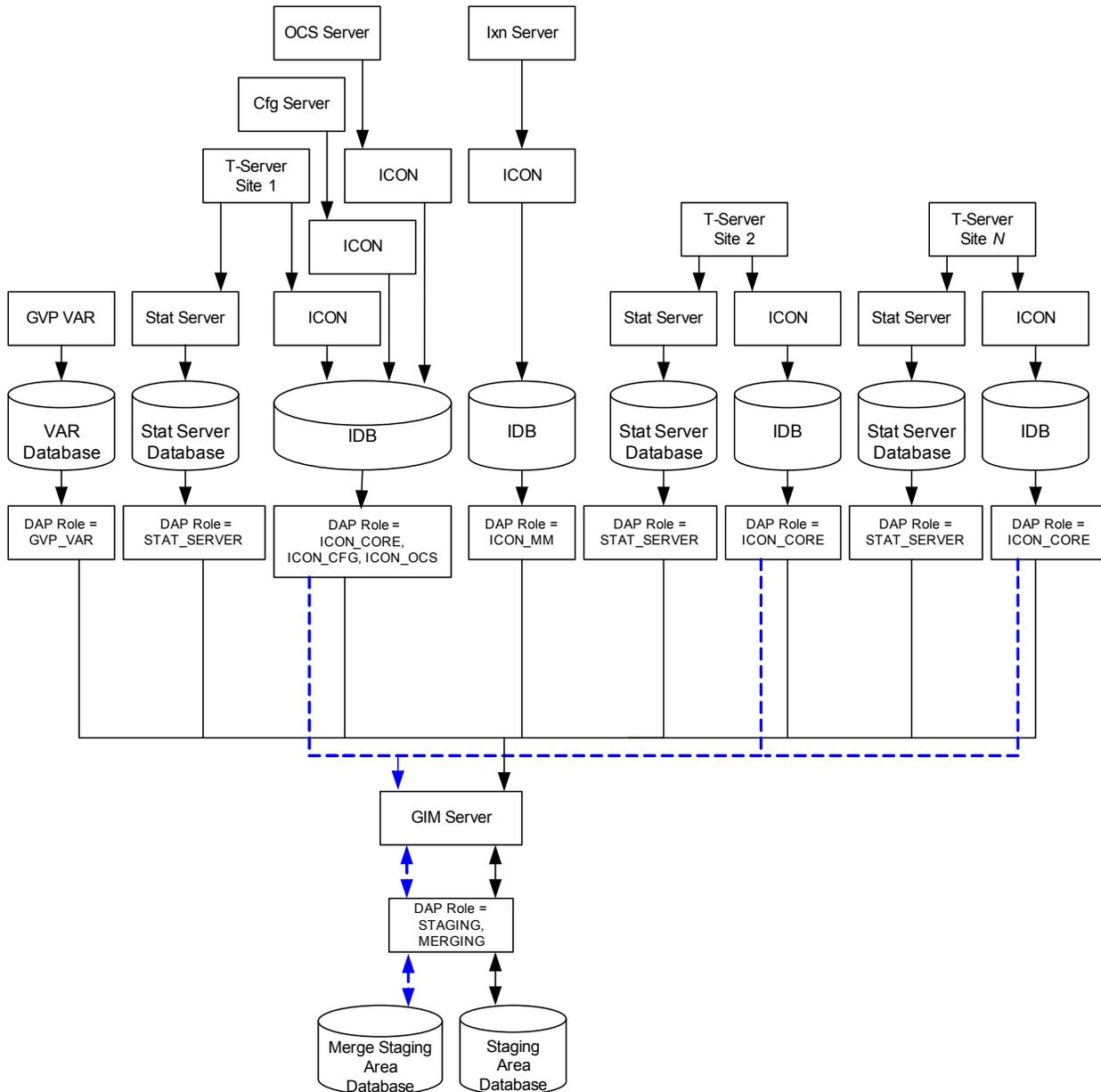


Figure 35: Multi-Site Topology—One ICON per Domain, One IDB per Site, One Multimedia ICON/IDB

Multi-Site—One ICON per Domain, One IDB per Domain per Site

Figure 36 shows a multi-site deployment in which a single ICON process per data domain (Voice, Multimedia, Configuration, and Outbound Contact) at each site writes data to the domain IDB at its site. (See “Genesys Info Mart Requirements to ICON Details Storage” on page 57.)

If the Multimedia solution is deployed, an additional ICON process per deployment is required in order to capture the Multimedia activity as shown in [Figure 36](#).

Note: You must store Voice details and Multimedia details in separate IDBs.

This topology is suitable for multi-site deployments with a relatively high call volume and relatively high WAN bandwidth, where the cost of deploying multiple IDBs is not prohibitively high.

Although this topology is the most costly to deploy and administer, it has fewer points of failure that can result in data loss. For a given domain at a given site, data will be lost while the ICON at that site is unavailable or while the IDB at that site is unavailable for an extended period of time. Data extraction is more costly because it requires an inter-IDB interaction merge.

Note: Extracting and transforming Voice details from multiple IDBs requires significantly more ETL processing time than extracting and transforming Voice details from a single IDB. For this reason, Genesys strongly recommends that you consider deploying a single IDB for Voice details.

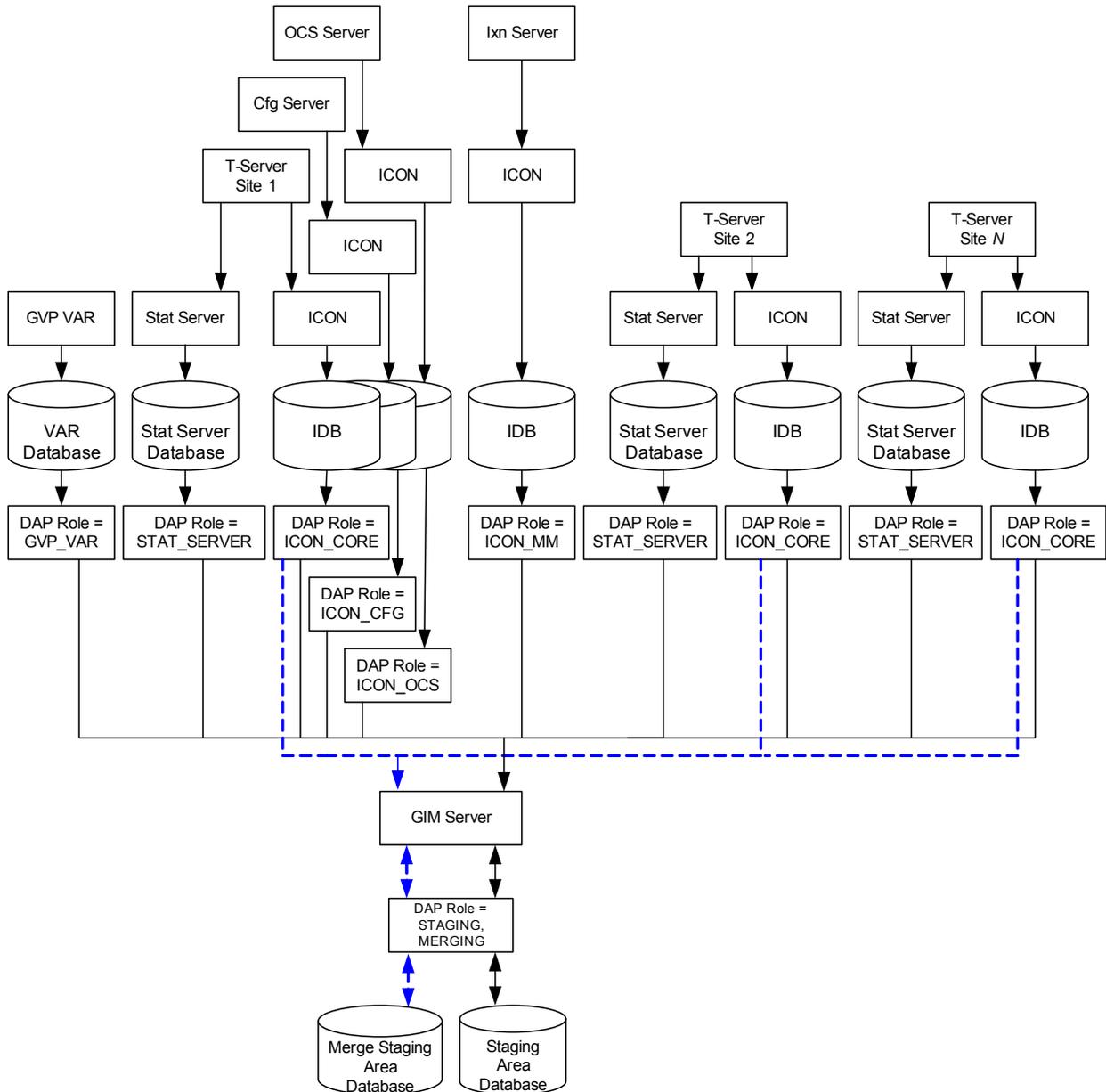


Figure 36: Multi-Site Topology—One ICON per Domain, One IDB per Domain per Site

Multi-Site Topology with Highly Available Data Sources

Figure 37 shows a multi-site topology in which the data sources have high availability (HA) data extraction:

- The ICON processes that store Configuration details can receive events from a primary or backup Configuration Server.
- The ICON processes that store Voice details can receive events from a primary or backup T-Server.

- The ICON processes that store Outbound Contact details can receive events from a primary or backup Outbound Contact Server.

Note: Figure 37 does not show data sources for ICON Multimedia details and GVP VAR Details because there is no HA support for these data sources. These data sources, however, can co-exist with the HA data sources.

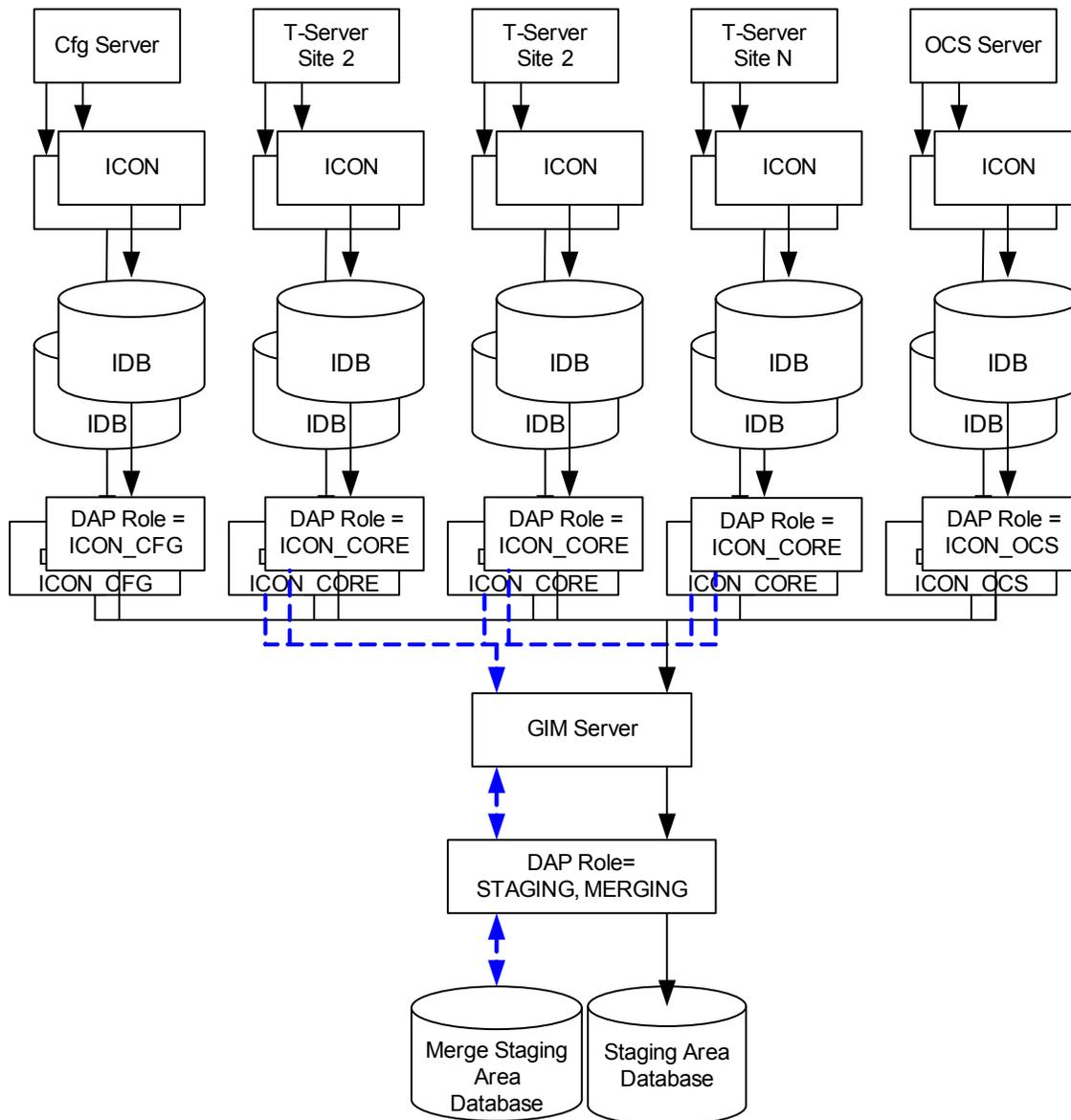


Figure 37: Multi-Site HA Topology—One HA pair of ICONs and IDBs per Domain and Site



Appendix

C

Example ICON Attached Data Specification

This appendix provides an example of the `ccon_adata_spec_GIM_example.xml` file that is included in the `sql_scripts` folder in your Genesys Info Mart 7.6 installation package. This file is also available in the `sql_scripts` folder on the Genesys Info Mart CD-ROM.

Note: When you are customizing the XML file for an ICON application that will serve as a data source for Genesys Info Mart, you must specify a value of `all` for the history attribute.

```
<?xml version="1.0" encoding="utf-8" ?>
```

```
- <!--
```

This xml contains the customizable mapping of Attached User Data for use in Genesys Info Mart. Any user data attached to a call can be mapped by key name to an id as specified in the "id" field. For example, the data attached to a call with the user specified key of "userdefined1" will be mapped to the GIM item corresponding to id "10001". Please refer to the following entries to determine the id to GIM item relationship.

The id field must not be altered, as these are used as a means to retrieve the data correctly for GIM purposes. The only sections which GIM will use are "public" and "secure". A "key name" and "id" pair can only be specified once, either in the "public" section or the "secure" section, if duplicated the second and subsequent entries will be ignored by ICON.

```
-->
```

```
- <adata_spec>
```

```
- <public>
```

```
- <!--           id's 10001 to 10010 will be mapped to GIM Table.columns  
USER_DATA.USER_DATA_STRING_1 to USER_DATA.USER_DATA_STRING_10 which are  
varchar(255). The last non null occurrence of the "key name" in the call  
will be retained. The values for these key names should have small sets of  
possible values (low cardinality). High cardinality fields should be mapped  
to the INTERACTION_SEGMENT_FACT user data fields.
```

Appendix C: Example ICON Attached Data Specification

```
-->
<key name="userdefined1" source="userdata" history="all" id="10001" />
<key name="userdefined2" source="userdata" history="all" id="10002" />
<key name="userdefined3" source="userdata" history="all" id="10003" />
<key name="userdefined4" source="userdata" history="all" id="10004" />
<key name="userdefined5" source="userdata" history="all" id="10005" />
<key name="userdefined6" source="userdata" history="all" id="10006" />
<key name="userdefined7" source="userdata" history="all" id="10007" />
<key name="userdefined8" source="userdata" history="all" id="10008" />
<key name="userdefined9" source="userdata" history="all" id="10009" />
<key name="userdefined10" source="userdata" history="all" id="10010" />
- <!-- id's 10011 to 10020 will be mapped to GIM Table.columns -
  USER_DATA_2.USER_DATA_2_STRING_1 to USER_DATA_2.USER_DATA_2_STRING_10 which
  are varchar(128). The last non null occurrence of the "key name" in the
  call will be retained. The values for these key names should have small
  sets of possible values (low cardinality). High cardinality fields should
  be mapped to the INTERACTION_SEGMENT_FACT user data fields.

-->
<key name="userdefined11" source="userdata" history="all" id="10011" />
<key name="userdefined12" source="userdata" history="all" id="10012" />
<key name="userdefined13" source="userdata" history="all" id="10013" />
<key name="userdefined14" source="userdata" history="all" id="10014" />
<key name="userdefined15" source="userdata" history="all" id="10015" />
<key name="userdefined16" source="userdata" history="all" id="10016" />
<key name="userdefined17" source="userdata" history="all" id="10017" />
<key name="userdefined18" source="userdata" history="all" id="10018" />
<key name="userdefined19" source="userdata" history="all" id="10019" />
<key name="userdefined20" source="userdata" history="all" id="10020" />
- <!-- id's 10021 to 10025 will be mapped to GIM Table.columns -
  INTERACTION_SEGMENT_FACT.USER_DATA_1 to
  INTERACTION_SEGMENT_FACT.USER_DATA_5 which are number(14,4), which means
  that there are ten places to the left of the decimal and four to the right
  for numeric data. The values for the attached user data must be in float
  form, ie "234.44" or "234." or "234".

-->
<key name="userdefined21" source="userdata" history="all" id="10021" />
<key name="userdefined22" source="userdata" history="all" id="10022" />
<key name="userdefined23" source="userdata" history="all" id="10023" />
<key name="userdefined24" source="userdata" history="all" id="10024" />
<key name="userdefined25" source="userdata" history="all" id="10025" />
- <!-- id's 10026 to 10030 will be mapped to GIM Table.columns -
  INTERACTION_SEGMENT_FACT.USER_DATA_6 to
  INTERACTION_SEGMENT_FACT.USER_DATA_10 which are int. The values for the
  attached user data must be in integer form, ie "234".

-->
<key name="userdefined26" source="userdata" history="all" id="10026" />
<key name="userdefined27" source="userdata" history="all" id="10027" />
<key name="userdefined28" source="userdata" history="all" id="10028" />
<key name="userdefined29" source="userdata" history="all" id="10029" />
```

Appendix C: Example ICON Attached Data Specification

```
<key name="userdefined30" source="userdata" history="all" id="10030" />
- <!--          id's 10031 to 10035 will be mapped to GIM Table.columns -
  INTERACTION_SEGMENT_FACT.USER_DATA_11 to
  INTERACTION_SEGMENT_FACT.USER_DATA_15 which are varchar(255).

-->
<key name="userdefined31" source="userdata" history="all" id="10031" />
<key name="userdefined32" source="userdata" history="all" id="10032" />
<key name="userdefined33" source="userdata" history="all" id="10033" />
<key name="userdefined34" source="userdata" history="all" id="10034" />
<key name="userdefined35" source="userdata" history="all" id="10035" />
- <!--          id's 10036 to 10040 will be mapped to GIM Table.columns -
  INTERACTION_SEGMENT_FACT.USER_DATA_16 to
  INTERACTION_SEGMENT_FACT.USER_DATA_20 which are varchar(128).

-->
<key name="userdefined36" source="userdata" history="all" id="10036" />
<key name="userdefined37" source="userdata" history="all" id="10037" />
<key name="userdefined38" source="userdata" history="all" id="10038" />
<key name="userdefined39" source="userdata" history="all" id="10039" />
<key name="userdefined40" source="userdata" history="all" id="10040" />
- <!--          id 10041 will be mapped to GIM Table.column -
  INTERACTION_FACT.BASELINE_SERVICE_OBJECTIVE which is int. The values for
  the attached user data must in integer form, ie "234".

-->
<key name="ServiceObjective" source="userdata" history="all" id="10041" />
- <!--          id 10042 will be mapped to GIM Table.column -
  VOICE_SEG_FACT_EXT.SPEECH_RECOGNITION_COUNT which is smallint. The values
  for the attached user data must be in integer form, ie "234".

-->
<key name="ISpeechRecognition" source="userdata" history="all" id="10042" />
- <!--          id 10043 will be mapped to GIM Table.column -
  VOICE_SEG_FACT_EXT.TEXT_TO_SPEECH_COUNT which is smallint. The values for
  the attached user data must be must be in integer form, ie "234".

-->
<key name="ITextToSpeech" source="userdata" history="all" id="10043" />
- <!--          id 10044 will be mapped to GIM Table.column -
  STRATEGY.STRATEGY_NAME which is varchar(255).

-->
<key name="IApplication" source="userdata" history="all" id="10044" />
- <!--          id 10045 will be mapped to GIM Table.column -
  STRATEGY.STRATEGY_RESULT which is varchar(255).

-->
<key name="IResult" source="userdata" history="all" id="10045" />
- <!--          id 10046 will be mapped to GIM Table.column -
  STRATEGY.RESULT_REASON which is varchar(255).

-->
```

Appendix C: Example ICON Attached Data Specification

```
<key name="IResultReason" source="userdata" history="all" id="10046" />
- <!--          id 10047 will not be mapped. It is used internally by GIM to
  process OCS data. This field is varchar(128).

-->
<key name="GSW_CALL_ATTEMPT_GUID" source="userdata" history="all" id="10047"
 />
- <!--          id 10048 will be mapped to GIM Table.column -
  INTERACTION_FACT.CASE_ID which is varchar(255). The last non null
  occurrence of the "key name" in the call will be retained.

-->
<key name="CaseID" source="userdata" history="all" id="10048" />
- <!--          id's 10049 to 10052 will be mapped to GIM Table.columns -
  INTERACTION_DESCRIPTOR. CUSTOMER_SEGMENT, SERVICE_TYPE, SERVICE_SUBTYPE,
  and BUSINESS_RESULT respectively. All are varchar(255). The last non null
  occurrence of the "key name" in the call will be retained.

-->
<key name="CustomerSegment" source="userdata" history="all" id="10049" />
<key name="ServiceType" source="userdata" history="all" id="10050" />
<key name="ServiceSubType" source="userdata" history="all" id="10051" />
<key name="BusinessResult" source="userdata" history="all" id="10052" />
- <!--          id 10053 will be mapped to GIM Table.column -
  CUSTOMER.EXTERNAL_CUSTOMER_ID, which is varchar(255). The last non null
  occurrence of the "key name" in the call will be retained.

-->
<key name="CustomerID" source="userdata" history="all" id="10053" />
- <!--          id 10054 is for the IPurpose setting attached by a routing
  strategy or IVR application. IPurpose is set to a value of 1 to indicate
  that the associated IVR port is a self-service IVR. The IVR port is then
  considered a handling resource and a row is added to the
  INTERACTION_RESOURCE_FACT table to represent the IVR port's participation
  in an interaction.

-->
  <key name="IPurpose" source="userdata" history="all" id="10054"/>
</public>
  <secure />
  <call />
  <call-cust />
  <call-cust1 />
  <call-cust2 />
- <!--          The following are only required by ICON to record multi
  media userdata in the ICON db, and are included here for completeness only.
  If multi media is not required, these may be removed. For detail please
  refer to the ICON documentation.

-->
- <mcr-1>
  <key name="ContactId" source="userdata" history="last" field="mcr-ucs-
  contact-id" />
```

Appendix C: Example ICON Attached Data Specification

```
<key name="SuggestedResponseID" source="userdata" history="last" field="mcr-
suggested-response" />
<key name="AutoResponseID" source="userdata" history="last" field="mcr-auto-
response" />
<key name="AutoACKID" source="userdata" history="last" field="mcr-auto-ack"
/>
</mcr-l>
- <mcr-f>
<key name="FromAddress" source="userdata" history="first" field="mcr-from-
address" />
<key name="FromPersonal" source="userdata" history="first" field="mcr-from-
name" />
<key name="IsCalledBack" source="userdata" history="first" field="mcr-
called-back" />
<key name="Subject" source="userdata" history="first" field="mcr-subject" />
<key name="Origination_Source" source="userdata" history="first" field="mcr-
origin-source" />
</mcr-f>
</adata_spec>
```




Appendix

D

Data Source Tables Accessed by Genesys Info Mart

[Table 47](#) lists the data source tables that the Genesys Info Mart extraction jobs access. The source database and type of data that is extracted depend on the role that is configured for the Database Access Point (DAP).

Table 47: Data Source Tables Extracted by Genesys Info Mart

DAP Role	Type of Data	Source Database	Tables Extracted
ICON_CFG	Configuration details	IDB	GCX_AGENT_PLACE GCX_CAMPGROUP_INFO GCX_ENDPOINT_PLACE GCX_GROUP_AGENT GCX_GROUP_PLACE GCX_GROUP_ROUTEDN GCX_LOGIN_INFO GCX_SKILL_LEVEL GC_AGENT GC_CALLING_LIST GC_CAMPAIGN GC_ENDPOINT GC_GROUP GC_IVR GC_IVRPORT GC_LOGIN GC_PLACE GC_SCRIPT GC_SKILL GC_SWITCH GC_TENANT GC_TIME_ZONE G_PROV_CONTROL
ICON_CORE	Voice details (including voice interaction, voice agent activity, attached data, UserEvent-based KVP data, and virtual queue activity)	IDB	G_PROV_CONTROL GSYS_SYSPROCINFO G_IR G_IS_LINK_HISTORY G_CALL G_PARTY G_PARTY_HISTORY G_PARTY_STAT GX_SESSION_ENDPOINT G_VIRTUAL_QUEUE G_ROUTE_RESULT G_USERDATA_HISTORY G_SECURE_USERDATA_HISTORY G_LOGIN_SESSION G_AGENT_STATE_HISTORY G_AGENT_STATE_RC G_DND_HISTORY G_CUSTOM_DATA_S

Table 47: Data Source Tables Extracted by Genesys Info Mart (Continued)

DAP Role	Type of Data	Source Database	Tables Extracted
ICON_OCS	Outbound campaign details	IDB	GO_CHAIN GO_CHAINREC_HIST GO_FIELDHIST GO_SEC_FIELDHIST GO_METRICS GO_CAMPAIGN GO_CAMPAIGNHISTORY G_PROV_CONTROL G_DSS_GOS_PROVIDER ^a
ICON_MM	Multimedia details (including Multimedia interactions, attached data, virtual queue and agent login, and state and reasons activity)	IDB	G_PROV_CONTROL G_IR G_CALL G_PARTY G_PARTY_HISTORY GX_SESSION_ENDPOINT G_AGENT_STATE_HISTORY G_AGENT_STATE_RC G_VIRTUAL_QUEUE G_ROUTE_RESULT G_USERDATA_HISTORY G_SECURE_USERDATA_HISTORY GM_F_USERDATA GM_L_USERDATA G_LOGIN_SESSION G_DND_HISTORY
STAT_SERVER	Voice resource state and reason codes details (in legacy reporting environments)	Stat Server	STATUS_TABLE VOICE_REASONS
GVP_VAR	GVP VAR details	GVP VAR	APP_CALLS APP_CALL_SUBCFS APPLICATIONS SUB_CALL_FLOWS

a. For HA data extraction only.



Appendix

E

Using Stat Server in Legacy Environments

For the customers whose legacy reports continue to use Stat Server data, this appendix provides information for using Stat Server database as a data source.

This chapter contains the following sections:

- [Overview, page 441](#)
- [Deployment Considerations, page 442](#)
- [Preparing Stat Server, page 447](#)
- [Configuring Stat Server DAP, page 455](#)

Overview

Starting with release 7.6, Genesys Info Mart extracts voice agent state and reason details from Interaction Concentrator. For the benefit of the customers who have invested in Stat Server–based reports with a previous release, Genesys Info Mart continues to provide data extraction of voice agent state and reason details from Stat Server database. The agent models used by Stat Server and Interaction Concentrator differ significantly. For this reason, it might take you some time to adjust your reports for voice-handling agents to the data that Genesys Info Mart provides from Interaction Concentrator.

This appendix provides information for using Stat Server database as a data source as a courtesy to the customers whose legacy reports continue to use Stat Server data. New Genesys Info Mart deployments must extract agent-related data of voice agent activity-related data from Interaction Concentrator of:

- Release 7.6+ if high availability (HA) data extraction of resource sessions, states, and reasons, is desired.
- Release 7.5 otherwise.

Deployment Considerations

Stat Server Topologies

In release 7.6, Stat Server continues to remain a source of voice agent data in legacy reporting environments.

Genesys Info Mart 7.6 continues to extract voice agent details from zero, one, or multiple Stat Server databases, for backward compatibility purposes only. This domain includes voice agent states and reason codes as reported by Stat Server for existing Genesys Info Mart deployments. Because Genesys Info Mart 7.6 can extract voice agent states and reason codes from Interaction Concentrator, Stat Server data source is no longer required for new deployments.

The following Stat Server topologies are discussed in this section:

- Stat Server voice agent details—One Stat Server, one Stat Server database
- Stat Server voice agent details—Multiple Stat Servers, multiple Stat Server databases (see [page 444](#))

Stat Server Voice Agent Details—One Stat Server, One Stat Server Database

Genesys Info Mart 7.6 continues to extract voice resource state and reason code details from Stat Server, in legacy reporting environments. (In new deployments with release 7.6, this data comes from Interaction Concentrator.) The data is extracted from zero, one, or multiple Stat Server database(s). Starting with release 7.5, Genesys Info Mart no longer extracts login and logout details from Stat Server; it now extracts them from ICON 7.5+.

[Figure 38](#) depicts Stat Server as a data source for voice agent details. This deployment topology is suitable for single-site contact centers, or for multi-site contact centers with a relatively small number of agents. Genesys Info Mart can extract data from a Stat Server database that is populated either by one Stat Server, or by a pair of primary and backup Stat Servers.

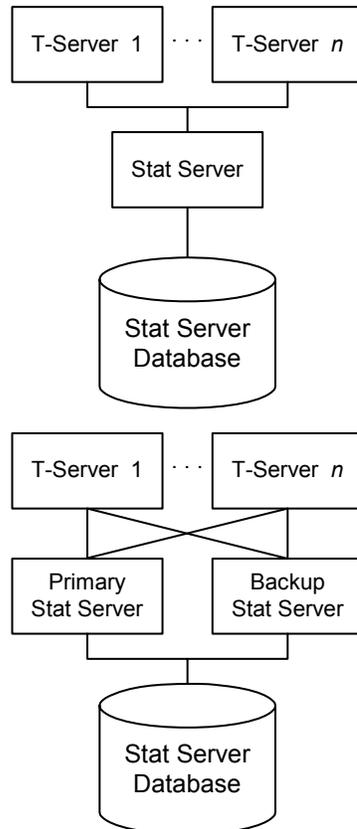


Figure 38: Stat Server Voice Agent Details—One Stat Server, One Stat Server DB

Genesys Info Mart 7.6 continues to extract voice resource state details from Stat Server to preserve customer investments in reports based on Stat Server data.

At the same time, Genesys Info Mart extracts resource state and reason codes, from Interaction Database (IDB), for Multimedia e-mail, chat, and custom media.

If the Stat Server database from which Genesys Info Mart 7.6 extracts voice resource states and reason codes also contains non-voice resource states and reason codes, the resulting data in the Info Mart database will not be reliable. Genesys Info Mart cannot separate voice resource states and reasons from non-voice states and reasons. As a result, Genesys Info Mart will populate the summarized Place state and DN (Directory Number) reason codes as Stat Server reports them. You can avoid this situation by doing either of the following:

- Configure Stat Server to connect only to voice T-Servers. Stat Servers should *not* connect to Interaction Server or to Session Initiation Protocol (SIP) T-Servers that support SIP Chat.
- Configure Stat Server to ignore SIP instant messaging (IM) activity on a Multimedia SIP DN.

Note: If your deployment contains a Multimedia solution, you must install a separate Stat Server application from which Genesys Info Mart can extract voice-only data. This Stat Server application must not connect to Multimedia's Interaction Server.

Stat Server Voice Agent Details—Multiple Stat Servers, Multiple Stat Server Databases

Genesys Info Mart 7.6 continues to extract voice resource state and reason code details from Stat Server, in legacy reporting environments. (In new deployments with release 7.6, this data comes from Interaction Concentrator.) The data is extracted from zero, one, or multiple Stat Server database(s). Starting with release 7.5, Genesys Info Mart no longer extracts login and logout details from Stat Server; it now extracts them from ICON 7.5+.

Figure 39 depicts Stat Server as a data source for voice agent details. This topology is suitable for multi-site contact centers, or for contact centers that have a relatively large number of agents. Genesys Info Mart can extract data from multiple Stat Server databases, each of which is populated either by one Stat Server, or by a pair of primary and backup Stat Servers.

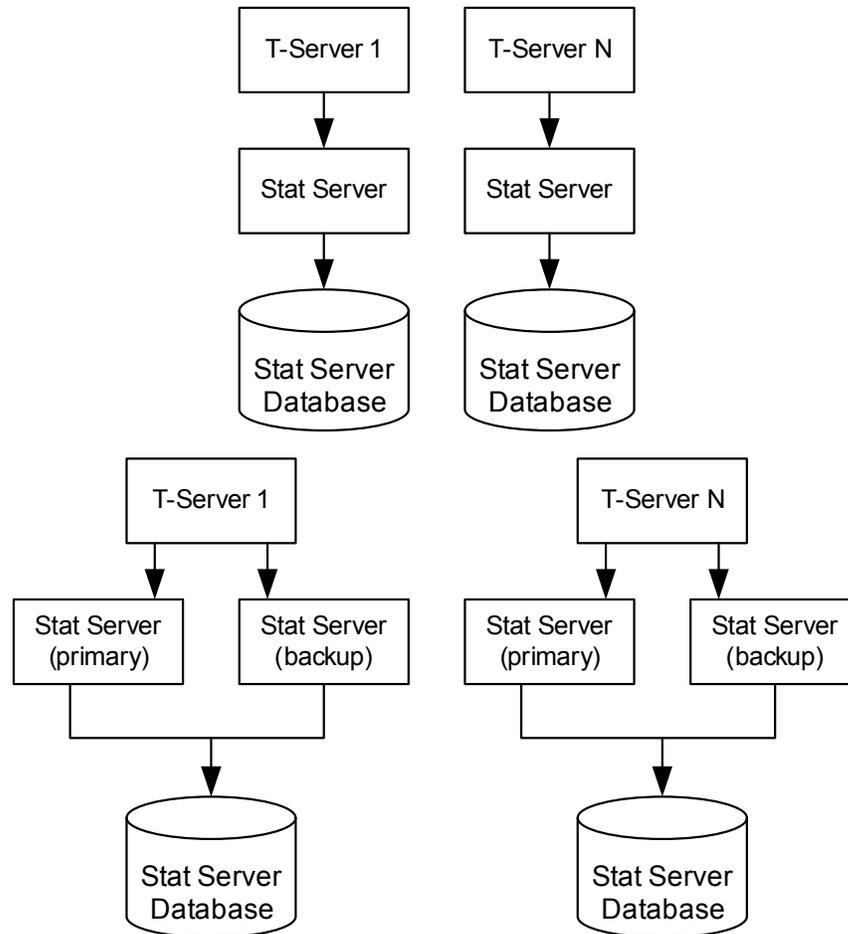


Figure 39: Stat Server Voice Agent Details—Multiple Stat Servers, Multiple Stat Server Databases

Although there are multiple Stat Server databases, there are no duplicate records between databases. That is, no two Stat Servers are recording the same event in their databases. Each Stat Server, or a pair of primary and backup Stat Servers, must be connected to a distinct set of T-Servers.

Genesys Info Mart 7.6 continues to extract voice resource state details from Stat Server to preserve customer investments in reports based on Stat Server data.

At the same time, Genesys Info Mart extracts resource state and reason codes for Multimedia e-mail, chat, and custom media, from ICON.

If the Stat Server database from which Genesys Info Mart 7.6 extracts voice resource states and reason codes also contains non-voice resource states and reason codes, the resulting data in the Info Mart database will not be reliable. Genesys Info Mart cannot separate voice resource states and reasons from non-voice states and reasons. As a result, Genesys Info Mart will populate the summarized Place state and DN reason codes as Stat Server reports them. You can avoid this situation by doing either of the following:

- Configure Stat Server to connect only to voice T-Servers. Stat Servers should not connect to Interaction Server or to SIP T-Servers that support SIP Chat.
- Configure Stat Server to ignore SIP IM activity on a Multimedia SIP DN.

Note: If your deployment contains a Multimedia solution, you must install a separate Stat Server application from which Genesys Info Mart can extract voice-only data. This Stat Server application must not connect to Multimedia’s Interaction Server.

Database Considerations

Database Privileges

Table 48 summarizes the owner and user account privileges required for the Stat Server database.

Table 48: Required Account Privileges for Stat Server Database

Database	Required Privileges ^a	Comments
Owner Account		
Stat Server	<ul style="list-style-type: none"> • CREATE tables, views, indexes, triggers, and sequences.^b • CREATE and EXECUTE on all stored procedures. 	Stored procedures are created and executed only in cases where existing Stat Server data is migrated.
User Account		
Stat Server	<ul style="list-style-type: none"> • SELECT on VOICE_REASONS and STATUS_TABLE. 	

a. Privileges are called *permissions* in Microsoft SQL Server.

b. Sequences are created only for Oracle and DB2 databases.

Data Population

Decide if you need to disable population of new fact tables that are available with Genesys Info Mart release 7.6 and that store agent activity data that is extracted from ICON. Review the Genesys Info Mart configuration options described in “Configuring Options for Genesys Info Mart” on [page 231](#) and set the data-population option values as necessary.

Preparing Stat Server

In order to populate resource state and state reason information for voice agents in a legacy environment, Genesys Info Mart extracts agent activity directly from the Genesys Stat Server database. Starting with release 7.6, new Genesys Info Mart deployments should use Interaction Concentrator as the data source for voice agents activity. The information in this section is provided as a courtesy to customers who decide to continue using their voice agents reports based on Stat Server data.

[Table 49](#) summarizes the task flow to prepare Stat Server as a data source for Genesys Info Mart.

Table 49: Task Flow: Capturing Stat Server Agent Data

Objective	Related Procedures and Actions
Capture information to support detailed reporting of agent activity data.	<p>If your contact center processes voice interactions, follow the procedures for capturing voice details described in:</p> <ul style="list-style-type: none"> • “Capturing Voice Details” on page 129. <p>If your contact center processes Multimedia interactions, follow the procedures for capturing Multimedia details described in:</p> <ul style="list-style-type: none"> • “Capturing Multimedia Details” on page 148.
Capture agent activity data.	<ol style="list-style-type: none"> 1. Within Configuration Manager, configure each Stat Server Application object and related objects in the deployment, in accordance with the Genesys Info Mart deployment requirements described in Preparing the Stat Server Application. 2. For each Stat Server database in the deployment, set database access accounts and either create or migrate the Stat Server schema (see Preparing the Stat Server Database, page 450).

Preparing the Stat Server Application

[Table 50](#) describes the options you must configure in order to prepare Stat Server as a data source for voice agent state details.

Table 50: Stat Server Options

Option	Description
multimedia-activity-in-status-table	<p>Specifies whether Stat Server includes non-voice actions on Multimedia DNs (associated with a place) when calculating the place or agent status to be written into the STATUS table.</p> <p>With the option value set to no, Stat Server ignores Multimedia actions in its computation of the place or agent status to be written into STATUS table.</p> <p>Default Value: yes</p> <p>Valid Values: yes, no</p> <p>Note: The value no is the only valid value for Genesys Info Mart in Stat Server deployments with SIP Multimedia DNs that support both voice and IM interactions.</p> <p>Changes Take Effect: Upon Stat Server restart</p>
status-table	<p>Specifies whether Stat Server writes records about agent statuses directly into a database table called STATUS.</p> <p>If this option is set to off, Genesys Info Mart can not populate the RESOURCE_STATE_FACT table for voice media.</p> <p>Default Value: off</p> <p>Valid Values: on, off</p> <p>Changes Take Effect: Immediately upon notification</p>
status-table-update-end-time-at-end-only	<p>Enables Stat Server to set the EndTime and EndLocalTime fields of the STATUS table to 0 (zero) during updates provided that the corresponding status has not ended.</p> <p>If this option is set to No, Genesys Info Mart cannot populate the RESOURCE_STATE_FACT table for voice media.</p> <p>This option first became available with Stat Server 7.1</p> <p>Default Value: no</p> <p>Valid Values: yes, no</p> <p>Note: Yes is the only valid value for Genesys Info Mart.</p> <p>Changes Take Effect: Upon Stat Server restart</p>

Table 50: Stat Server Options (Continued)

Option	Description
voice-reasons-table	<p>Specifies whether Stat Server stores the reasons why agents change or continue the Ready and NotReady states, and AfterCallWork work mode directly into a database table called VOICE_REASONS.</p> <p>If this option is set to No, Genesys Info Mart can not populate the RESOURCE_STATE_REASON_FACT table for voice media.</p> <p>This option first became available with Stat Server 7.2.</p> <p>Default Value: no</p> <p>Valid Values: yes, no</p> <p>Changes Take Effect: Upon Stat Server restart</p>

Procedure:**Preparing the Stat Server Application**

Purpose: To configure the Stat Server application to store voice agent activity data for Genesys Info Mart.

Note: Keep in mind the following:

If you are deploying Stat Server at the same time as Genesys Info Mart, follow the installation and configuration instructions in the *Framework 7.6 Stat Server Deployment Guide*, while observing the Genesys Info Mart deployment requirements.

If you are deploying Genesys Info Mart into an environment in which Stat Server has already been deployed, modify the Stat Server Application object as required to conform to the Genesys Info Mart deployment requirements.

Prerequisites

- “Preparing IDBs” on [page 167](#)

Start of procedure

1. Review [Table 50](#), which describes the options you must configure in order to prepare Stat Server as a data source for voice agent state details.
2. Configure the options required to prepare Stat Server as a data source for your voice agent state details.

End of procedure

Next Steps

- [Preparing the Stat Server Database](#)

Preparing the Stat Server Database

Genesys Info Mart requires modified Stat Server database tables that provide primary keys. Genesys Info Mart uses the primary keys to determine which rows Stat Server has inserted or updated, and therefore need to be extracted. Genesys Info Mart ships with relational database management system (RDBMS)–specific SQL scripts that make the necessary changes to add primary keys. The SQL scripts also add a default partition key column to the tables.

Procedure:
Preparing the Stat Server Database

Purpose: To prepare the Stat Server Database so that ETL jobs can use it.

Prerequisites

- [Preparing the Stat Server Application, page 449](#)

Start of procedure

For each Stat Server database from which Genesys Info Mart will extract voice resource state and reason details, complete the following Genesys Info Mart–specific activities to enable the extraction, transformation, and loading (ETL) jobs to use the Stat Server database:

1. Ensure that the database access account that you use to create the Stat Server database is available and has the required owner account privileges (see Table 3 on [page 80](#)).
2. Run the Genesys Info Mart–provided SQL scripts to create database tables, indexes, and other database objects, and, in existing Stat Server deployments, to migrate existing Stat Server data. Genesys provides different SQL scripts to create a properly-configured Stat Server database (new deployment) and to modify an existing Stat Server database (existing deployment):
 - For a new Stat Server deployment, see [Creating a New Stat Server Database](#).
 - For an existing Stat Server deployment, see [Modifying an Existing Stat Server Database, page 452](#).

Note: The Genesys-provided SQL scripts create objects without specifying tablespaces, partitions, or storage parameters. Work with your database administrator or data warehousing specialist to develop a database implementation that is optimal for your environment, and make the necessary changes to the SQL scripts. See “Database Considerations” on [page 74](#) for more information.

End of procedure

Next Steps

- If you don’t have a database to which Stat Server writes its data, see [Creating a New Stat Server Database](#).
- If you already have a database to which Stat Server writes its data, see [Modifying an Existing Stat Server Database, page 452](#).

Creating a New Stat Server Database

Procedure: Creating a New Stat Server Database

Purpose: To create a new Stat Server database to use with your Genesys Info Mart application.

Prerequisites

- [Preparing the Stat Server Database, page 450](#)

Start of procedure

1. Log in to the Stat Server database using the Stat Server Database Owner ID (that is, the database access account that you will use to create the Stat Server database). Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.
2. Optional, for Microsoft SQL:

In some Microsoft SQL Server deployments, the triggers created by the `make_statserver_primary_keys.sql` script can degrade the insert and update performance of the Stat Server database. To avoid this situation, delete the following triggers from the SQL script before you run it:

- TIB_LOGIN_TABLE
- TIB_QINFO_TABLE
- TIB_STATUS_TABLE

Warning! You must not delete the update trigger on the STATUS TABLE (TUB_STATUS_TABLE).

3. Run `make_statserver_primary_keys.sql`.

This script creates Stat Server tables with added primary keys and partition keys.

4. Run the `voice_reasons_<db_type>.sql` script to create the Stat Server VOICE_REASONS table, where `<db_type>` is a placeholder for the specific RDBMS type—`db2`, `mssql`, or `oracle`.

Note: If your Stat Server database does not already have a VOICE_REASONS table, you must perform this step, even if your Stat Server does not populate voice reasons.

5. Ensure that the database access account that the ETL jobs will use to access Stat Server data is available and that it has the required user account privileges (see Table 4 on [page 82](#)).

The user account does not have to be the same as the owner account. For more information about the rules and recommendations pertaining to database access accounts for Genesys Info Mart, see “Database Object Owners and User IDs” on [page 78](#).

End of procedure

Next Steps

- “Preparing Genesys Info Mart Databases” on [page 173](#)

Modifying an Existing Stat Server Database

Procedure:

Modifying an Existing Stat Server Database

Purpose: To modify your Stat Server database to use with your Genesys Info Mart application.

Prerequisites

- [Preparing the Stat Server Database, page 450](#)

Start of procedure

1. Log in to the Stat Server database using the Stat Server Database Owner ID (that is, the database access account that you used to create the Stat Server database). Refer to the “[Installation Worksheets](#)” beginning on [page 401](#) to determine the ID to use.

2. Optional, for Microsoft SQL:

The `migrate_to_statserver_primary_keys.sql` script creates the following triggers:

- TIB_LOGIN_TABLE
- TIB_QINFO_TABLE
- TIB_STATUS_TABLE

In some Microsoft SQL deployments, these triggers can degrade the insert and update performance of the Stat Server database. To avoid this situation, before you run the script, delete the SQL statements that create TIB_ triggers.

Warning! You must not delete the update trigger on the STATUS TABLE (TUB_STATUS_TABLE).

3. Run `migrate_statserver_primary_keys.sql`.

This script creates Stat Server tables with added primary keys and partition keys. The script also migrates existing data.

4. If your Stat Server database does not already have a VOICE_REASONS table, run the `voice_reasons_<db_type>.sql` script to create the table, where `<db_type>` is a placeholder for the specific RDBMS type—`db2`, `mssql`, or `oracle`. The script deletes any existing VOICE_REASONS table before creating it. Therefore, do not run the script if your Stat Server database already has a VOICE_REASONS table, because you will lose data

Note: If your Stat Server database does not already have a VOICE_REASONS table, you must perform this step, even if your Stat Server does not populate voice reasons.

5. Ensure that the database access account that the ETL jobs will use to access Stat Server data is available and that it has the required user account privileges (see [Table 4 on page 82](#)).

The user account does not have to be the same as the owner account. For more information about the rules and recommendations pertaining to database access accounts for Genesys Info Mart, see “Database Object Owners and User IDs” on [page 78](#).

End of procedure

Next Steps

- “Preparing Genesys Info Mart Databases” on [page 173](#)

Data Flow for a Prepared Stat Server Database

[Figure 40](#) depicts the data flow for a Stat Server database that supports the primary key and partition key columns.

The diagram represents the flow of data as follows:

1. Rather than inserting data directly into the STATUS and LOGIN tables, Stat Server inserts data through views that have the same name. Stat Server inserts data directly into the VOICE_REASONS table because this new table already has a primary key.
2. The database detects that data is to be inserted into LOGIN_TABLE or STATUS_TABLE.
3. The database invokes the trigger.
4. For Oracle and DB2, the trigger uses the sequence to generate the primary key column for LOGIN_TABLE or the extract key column for STATUS_TABLE, and uses the current system date to generate the partition key column.

For Microsoft SQL, the primary key column for LOGIN_TABLE and the extract key column for STATUS_TABLE are identity columns, so they are not generated by the trigger. The trigger does use the current system time to generate the partition key column.

5. The ETL selects data from STATUS_TABLE, or VOICE_REASONS. The ETL does not select data from the LOGIN_TABLE.

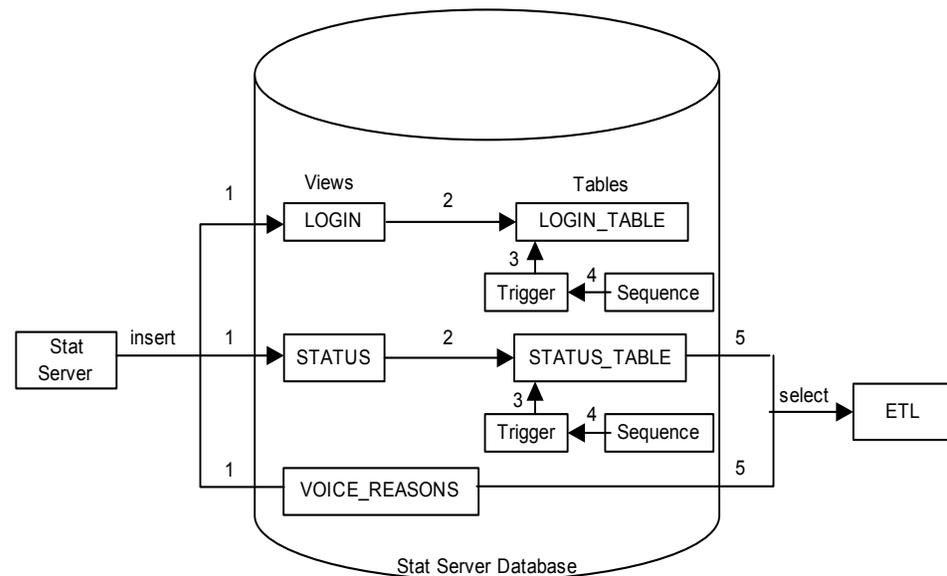


Figure 40: Stat Server Database After Running Scripts

Configuring Stat Server DAP

You must configure Database Access Points (DAPs) to access the Stat Server database(s) in your environment in order to run ETL on Stat Server voice agent details.

Procedure: Configuring Stat Server DAP

Purpose: To enable Genesys Info Mart access to Stat Server database(s) by configuring DAP(s).

Start of procedure

1. Create a Java Database Connectivity (JDBC) DAP for each Stat Server database from which Genesys Info Mart will extract data. To do so, use the procedure [Configuring JDBC DAPs, page 213](#).
2. Specify a `role` option of `STAT_SERVER` within the Stat Server DAP that will extract the voice agent data.
3. Review the configuration options described in Table 33, “Data Source DAP Configuration Options,” on [page 201](#), and set them as applicable to this DAP.

End of procedure

Next Steps

- See “Genesys Info Mart DAPs” on [page 207](#).



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