Genesys Info Mart Deployment Guide

Genesys Info Mart Components

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Genesys Info Mart Components

This page provides a high-level overview of Genesys Info Mart functioning. Configuration options enable you to customize almost every aspect of Genesys Info Mart functioning. However, the default configuration settings provide a Genesys Info Mart application that is suitable for a wide range of standard deployments.

Genesys Info Mart consists of the following components:

- Genesys Info Mart Server
- Genesys Info Mart Manager
- Info Mart Database

Genesys Info Mart Server

The Genesys Info Mart Server, a Java-based component, is the main executable process in Genesys Info Mart 8.x. 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 also processes requests from applications outside of the Genesys Info Mart Server, such as requests from the management GUI to launch a specific job.

The Genesys Info Mart Server interfaces with:

- Solution Control Server (through Local Control Agent), 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 management GUI (Genesys Info Mart Manager), 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.

Genesys Info Mart Jobs

Genesys Info Mart jobs, which run under the Genesys Info Mart Server, perform the following tasks:

- Initialize the Info Mart database — Set up your database and modify the IDB component of Interaction Concentrator for Info Mart use.
- During each ETL cycle, extract raw configuration, interaction, and agent activity data.
  - Extract ICON details, namely:
    - Contact center configuration history details from one IDB.

- Voice interaction, user data (including call-based attached data and UserEvent-based KVP data), virtual queue, and agent activity details from one or more IDBs.

- Outbound Contact details from one or more IDBs.

- Multimedia interaction, attached data, virtual queue, and agent activity details from one or more IDBs. For more information about the types of interactions that Genesys Info Mart considers to be multimedia, see Multimedia Interactions.

- In an HA configuration, evaluate all redundant IDBs by comparing ICON-provided session information for each set of redundant IDBs (that store Configuration, Voice, Outbound Contact, or Multimedia details), prior to extracting the data in a particular extraction cycle.

- Merge voice call segments — As part of the extraction process for Voice details, run a merge procedure to establish associations between related voice interactions that were extracted from the same or multiple IDBs; for example, to resolve intersite call linkages between related calls in a multi-site environment.

- During each ETL cycle, transform and load available data, both data that has been extracted from IDB(s) and data from other data streams, such as Elasticsearch databases or Apache Kafka.

  - Transform the raw data so that it becomes suitable for end-user reports and is available in a set of tables that are referred to as the dimensional model.

  - Load the transformed data into the Info Mart database. (Transform and load are performed by a single job.)

- Perform database maintenance.

  - Purge old data from the Info Mart database.

  - In partitioned databases, update partitioning as necessary.

  - Maintain calendar data by prepopulating calendar dimensions for use in reports.

- Migrate Genesys Info Mart — Run the necessary scripts to update your Info Mart database schema and IDB schema and also perform any other steps that are necessary to move from an earlier 8.x release to the current one.

- Aggregate Info Mart data — In deployments that include the Genesys reporting presentation layer (GCXI or the separately installed RAA package, Genesys Info Mart also hosts the aggregation process. An aggregation job, which is implemented as a plug-in, runs the aggregation engine inside the Genesys Info Mart Server process, to calculate or recalculate the historical Aggregate tables in the Info Mart database.

    For a high-level description of how the aggregation job works in Genesys Info Mart release 8.x, see Job_AggregateGIM in the *Genesys Info Mart Operations Guide.* For more information about the aggregation package and running the aggregation process, see the *Reporting and Analytics Aggregates Deployment Guide* for your release.

- Export Info Mart data, so that the data is available for further import into a data warehouse for the purpose of archiving or custom reporting.

Genesys Info Mart Manager

Genesys Info Mart Manager is a GUI that enables monitoring and real-time administration of some aspects of the Genesys Info Mart processes. Genesys Info Mart Manager is included on the Genesys

Info Mart CD as a separate installation package (IP).

Genesys Info Mart Manager provides the following functionality:

- Displays the current job execution status.
- Displays a history of job execution, including start time, stop time, duration, and final status.
- Filters the job execution history that is displayed, based on time and/or status.
- Executes a single job on an ad hoc basis.
- Issues re-aggregation requests in deployments that include RAA.
- Shuts down a running job.

Genesys Info Mart Manager interfaces directly with the Genesys Info Mart Server to start and stop jobs on an ad hoc basis and to obtain job status and history from the Info Mart database.

Genesys Info Mart Manager, which is implemented as a plug-in for GAX, works with any operating system and is easy to deploy. No installation or configuration is required on client hosts. For information about deploying Genesys Info Mart Manager, see Installing Genesys Info Mart Manager.

Genesys Info Mart Manager can be localized. For links to information about installing language packs, see Next Steps in the procedure to install Genesys Info Mart Manager.

For more information about how to use Genesys Info Mart Manager to manage your Genesys Info Mart operations, see Managing Jobs with Genesys Info Mart Manager in the *Genesys Info Mart Operations Guide.*

Important

Genesys Info Mart Manager displays timestamps in the time zone selected in the GAX preferences for locale.

Genesys Info Mart Administration Console

In Genesys Info Mart releases earlier than 8.1.4, Genesys Info Mart provided the Genesys Info Mart Administration Console as the GUI for managing Genesys Info Mart jobs. While the Genesys Info Mart Administration Console is included in the Genesys Info Mart 8.5.x CD and you can continue to use it to manage Genesys Info Mart 8.5, Genesys recommends that you use Genesys Info Mart Manager instead of the Administration Console in Genesys Info Mart 8.5 deployments, particularly if your deployment already includes GAX. Therefore, the Genesys Info Mart 8.5 documentation does not provide information about installing and using the Genesys Info Mart Administration Console.

Tip

You can use both management GUIs in your deployment at the same time, if you want to enable additional administration resources but do not want to decommission an existing Administration Console.

For full information about installing the Administration Console and providing an Administration Console DAP, see the *Genesys Info Mart 8.1 Deployment Guide*. For information about using the Administration Console to manage Genesys Info Mart jobs, see the *Genesys Info Mart 8.1 Operations Guide*.

Info Mart Database

The Info Mart database contains all of the data that is populated by the ETL jobs. Info Mart data includes the low-level interaction data that is consolidated from one or more IDBs, as well as the processed data that is suitable for end-user reports.

Info Mart Tables

The Genesys Info Mart data resides in a database schema that includes the following tables:

- Global Interaction Database (GIDB) tables — Store the low-level interaction data that is consolidated from one or more IDBs.

  There are separate sets of interaction-related GIDB tables for voice and multimedia interactions, to accommodate different requirements for transformation logic, indexes, data-retention periods, and so on.

  The low-level reporting data in GIDB supports the possibility of custom detailed reporting to drill down from the dimensional model.

- Merge tables — Used for merge of voice interactions. After the merge, voice interactions are moved into GIDB tables.

- Staging tables — Store information that is required in the transformation process. Staging tables contain data that has not yet been transformed or cannot be transformed because of incompleteness or inconsistency of source data and other auxiliary data that are necessary for the ETL process.

- Temporary tables — Store data that is used only during the lifetime of one instance of a job.

- Fact and dimension tables (collectively referred to as *dimensional model*) — Contain transformed data that downstream reporting applications can query and combine in meaningful reports.

- Control tables — Store information that controls ETL execution, such as the status of running jobs, job schedules, execution history, audit logs, and similar bookkeeping information.

- In deployments that use RAA, the Info Mart database also includes aggregate tables and views that are used by GCXI. For more information, see the *Reporting and Analytics Aggregates Reference Manual* for your release.

Info Mart Views

In addition to the previously mentioned tables that are used by Genesys Info Mart jobs, the following views are intended to simplify data retrieval for reports:

- Predefined views — Read-only views of certain configuration dimensions and facts that are contained in GIDB tables. These views are created in the Info Mart database schema.

- Tenant-specific, read-only views of the dimensions, facts, and predefined views in the dimensional

model of the Info Mart schema. These views are created in a Genesys Info Mart schema.

- Tenant-specific sets of views, which are created in a separate database schema for each tenant, so that each tenant user can access only its own data. In addition, these views shield business users from changes to the underlying database schema and prevent users from accidentally changing the contents of the underlying database. Customers should use these views to query Genesys Info Mart data.

For an illustration of the relationship between the tenant views and the Info Mart database schema, see Creating Genesys Info Mart Read-Only Tenant Views.

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

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

RDBMS-Specific SQL Scripts

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

- Create the Info Mart database objects.

- Create the single-tenant and multi-tenant read-only views.

- Update source databases for efficient data extraction.