Genesys Info Mart Private Edition Guide

Architecture

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Contents

Learn about Genesys Info Mart architecture

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Introduction

Genesys Info Mart is the historical reporting back-end service that performs extract, transform, and load (ETL) processing of data generated by contact center activity. Genesys Info Mart comprises the following services:

- GIM Config Adapter (GCA) — Reads configuration data from the contact center Configuration Server database and stores the data into Kafka topics for consumption during transformation processing. There is a separate GCA service for each tenant.

- GIM Stream Processor (GSP) — Processes GCA-sourced configuration data as well as raw event data streamed to Kafka from upstream services handling interaction and agent activity on Voice and Digital channels. GSP transforms the data into data structures suitable for a data mart for contact center historical reporting.

- GIM — Pulls the transformed data from Kafka and loads this data into the Info Mart database. The GIM service also performs other database-related tasks, such as a regular maintenance job and an export job to export Info Mart data. There is a separate GIM service and Info Mart database for each tenant.

All the Genesys Info Mart services are stateful. This has implications for high availability (HA) and disaster recovery (DR) (see High availability and disaster recovery) as well as for upgrade methods, because you cannot deploy mirrored services in parallel.

For information about the overall architecture of Genesys Multicloud CX private edition, see the high-level Architecture page.

The following diagrams show the Genesys Info Mart architecture.

- Architecture diagram — Data flows is from the point of view of data.

- Architecture diagram — Connections is from the point of view of network connections.

See also High availability and disaster recovery for information about high availability/disaster recovery architecture.

Architecture diagram — Data flows

The numbers on the connection lines refer to the connection numbers in the table that follows the diagrams. The direction of the arrows indicates the direction of data flows.
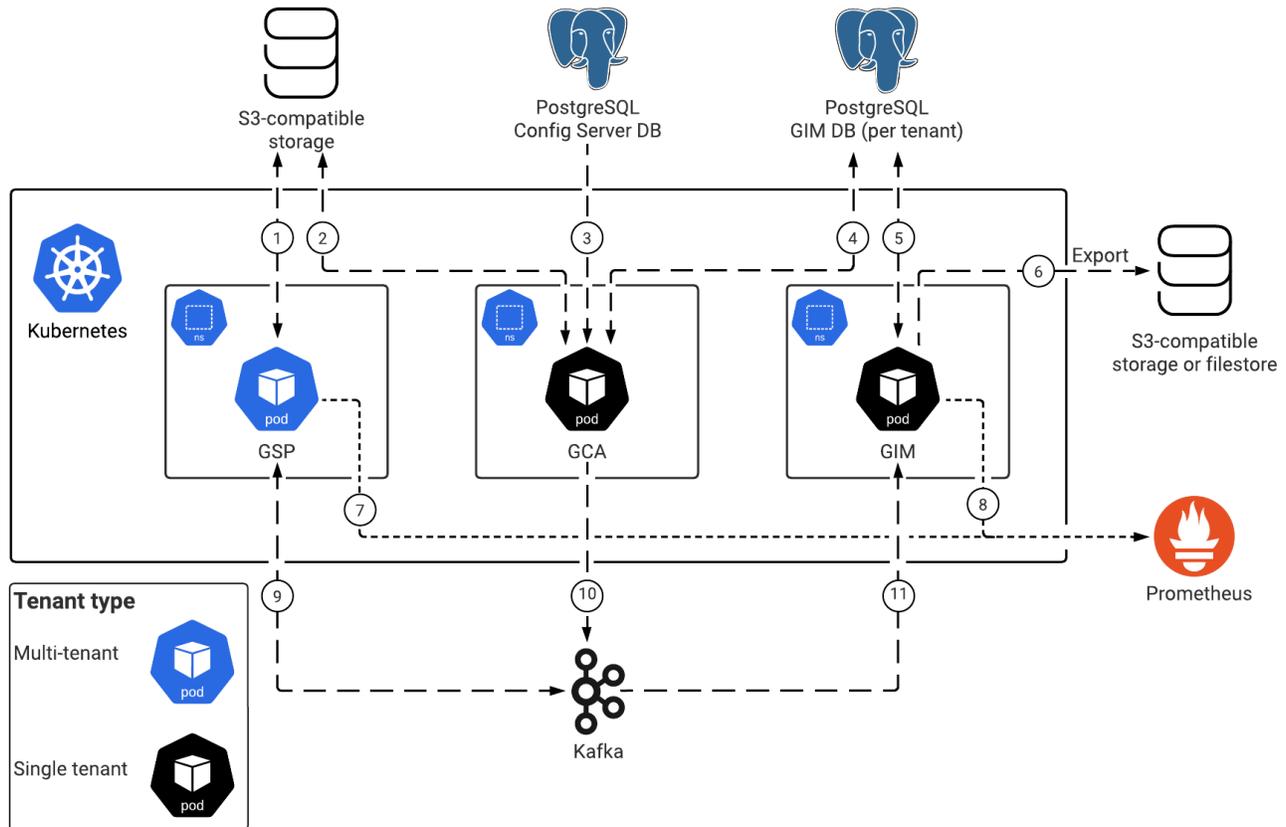
Architecture diagram — Connections

The numbers on the connection lines refer to the connection numbers in the table that follows the diagrams. The direction of the arrows indicates where the connection is initiated (the source) and where an initiated connection connects to (the destination), from the point of view of Genesys Info Mart as a service in the network.
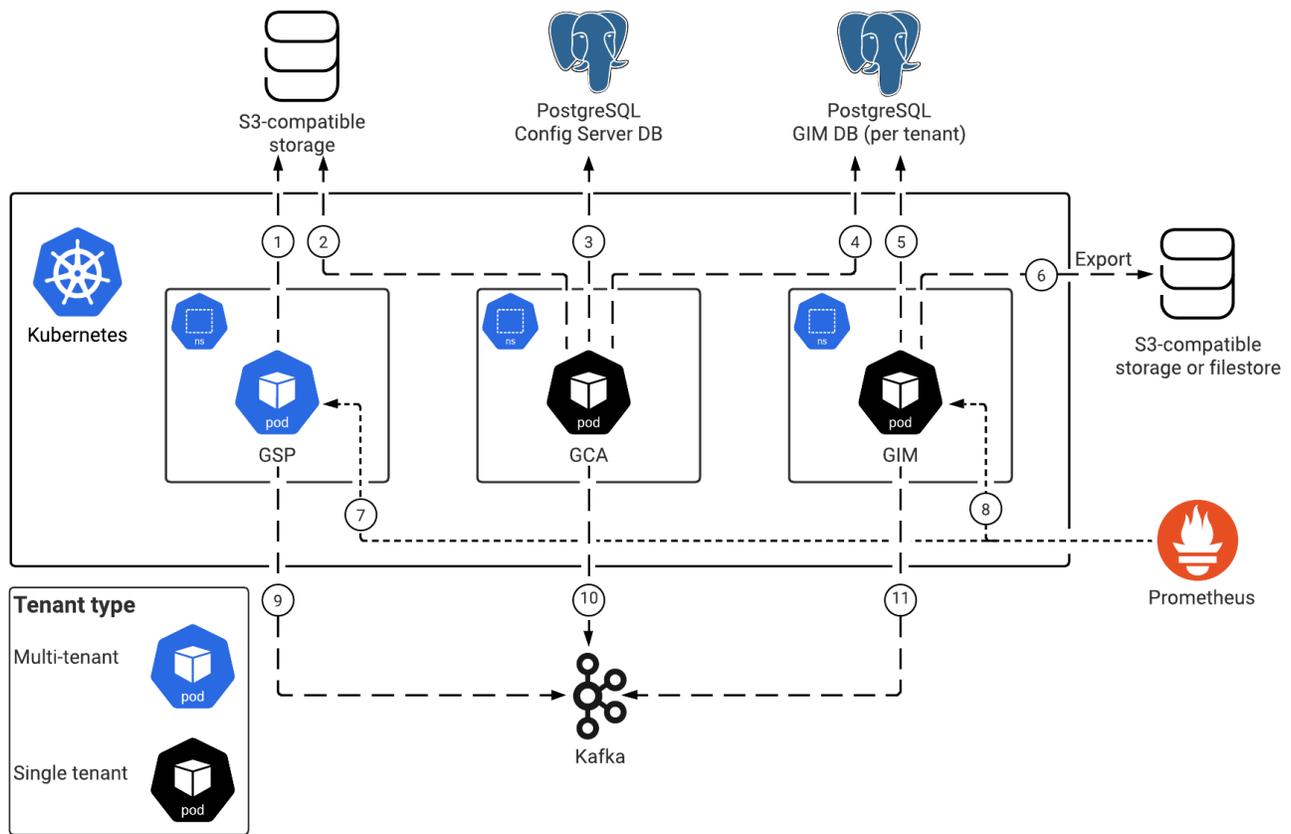
Connections table

The connection numbers refer to the numbers on the connection lines in the diagrams. The **Source**, **Destination**, and **Connection Classification** columns in the table relate to the direction of the arrows in the Connections diagram above: The source is where the connection is initiated, and the destination is where an initiated connection connects to, from the point of view of Genesys Info Mart as a service in the network. *Egress* means the Genesys Info Mart service is the source, and *Ingress* means the Genesys Info Mart service is the destination. *Intra-cluster* means the connection is between services in the cluster.

Connection	Source	Destination	Protocol	Port	Classification	Data that travels on this connection
1	GIM Stream Processor	Object storage	HTTPS	443	Egress	GSP state information, checkpoints, and other data used during processing

Connection	Source	Destination	Protocol	Port	Classification	Data that travels on this connection
2	GIM Config Adapter	Object storage	HTTPS	443	Egress	Configuration data stored as a GCA snapshot used during processing
3	GIM Config Adapter	Configuration Database	TCP	5432	Egress	Contact center configuration data, which GCA uses to construct the GCA snapshot used during processing
4	GIM Config Adapter	Info Mart database	TCP	5432	Egress	Configuration data to synchronize the GCA snapshot with configuration data stored in the Info Mart database
5	GIM	Info Mart database	SSL	5432	Egress	Transformed reporting data to be stored in the Info Mart database. GIM also uses this connection to perform database maintenance.
6	GIM	Object storage	HTTP	443	Egress	Reporting data exported from the Info Mart database
7	Prometheus	GIM Stream Processor	HTTP	9249	Ingress	Metrics for monitoring and alerting
8	Prometheus	GIM	HTTP	8249	Ingress	Metrics for monitoring

Connection	Source	Destination	Protocol	Port	Classification	Data that travels on this connection
						and alerting
9	GIM Stream Processor	Kafka	Kafka	9092	Egress	Message bus for receiving and sending reporting data
10	GIM Config Adapter	Kafka	Kafka	9092	Egress	Message bus for sending configuration data
11	GIM	Kafka	Kafka	9092	Egress	Message bus for receiving transformed reporting data

Ports used for internal purposes

GSP uses the following ports for internal connections with Flink.

Port	Protocol
Task manager	
6122	RPC
Job manager	
6123	RPC
6124	Blob
8081	REST