Intelligent Workload Distribution Private Edition Guide

Architecture

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Contents

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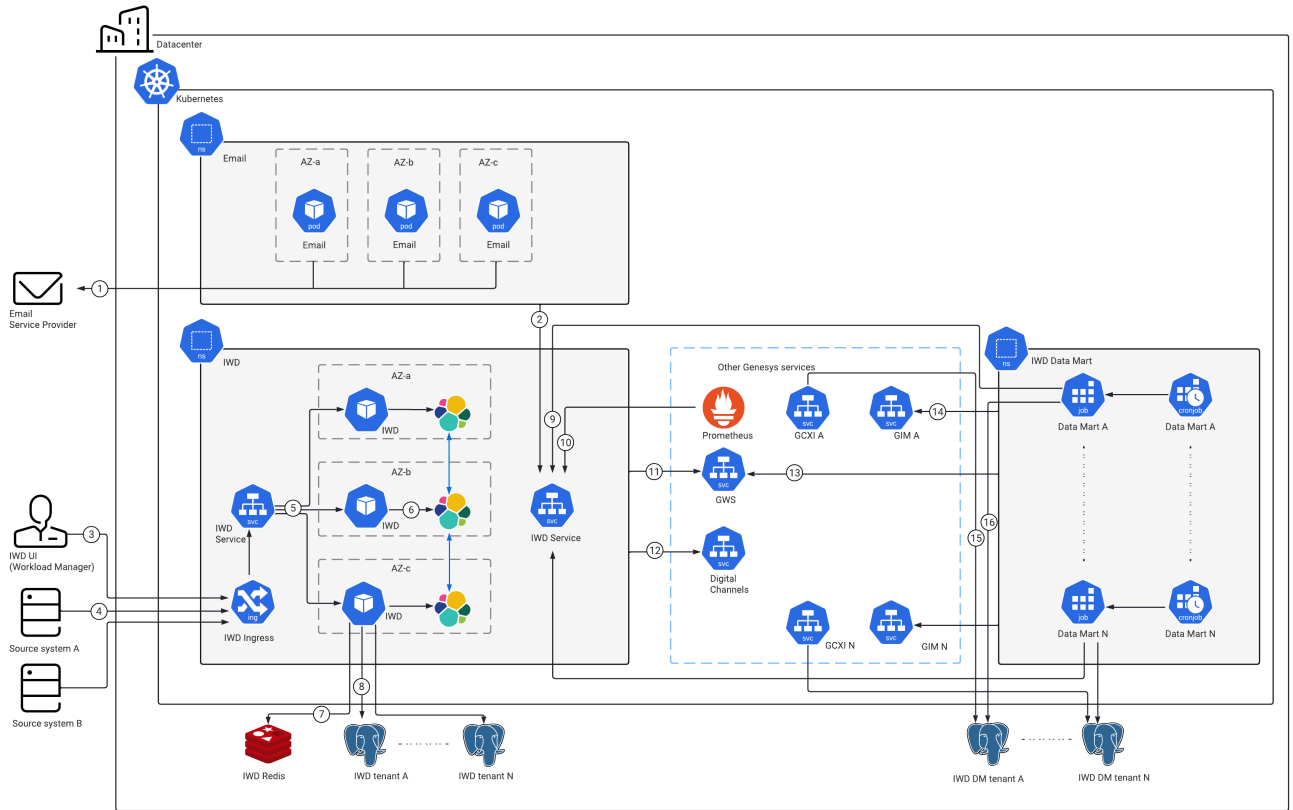- For private edition

Introduction

The architecture diagram in this topic illustrates a sample deployment of IWD, IWD Data Mart, and Email.

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

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

Architecture diagram — Connections

The numbers on the connection lines refer to the connection numbers in the table that follows the diagram. 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 Intelligent Workload Distribution as a service in the network.

Connections table

The connection numbers refer to the numbers on the connection lines in the diagram. 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 Intelligent Workload Distribution as a service in the network. *Egress* means the Intelligent Workload Distribution service is the source, and *Ingress* means the Intelligent Workload Distribution 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	Email	Email Service Provider	HTTPS	25, 443, 587, 993	Egress	Email pulls email items from IMAP, Gmail, or Graph mailboxes. Pushes email items

Connection	Source	Destination	Protocol	Port	Classification	Data that travels on this connection
						over SMTP, Graph, or Gmail.
2	Email	Intelligent Workload Distribution	TCP	4024	Egress	Email saves the following data in IWD: • Email items • Mailbox status • Mailbox configuration The port is configurable.
3	Source system	Application Gateway	HTTPS	443	Ingress	Data sync on work items.
4	Application Gateway	Intelligent Workload Distribution	TCP	4024	Ingress	Data sync on UI management, work items, configuration details, and reports.
5	IWD Service (Cluster IP)	IWD Pod	TCP	4024	Ingress	Data sync on UI management, work items, configuration details, and reports.
6	Intelligent Workload Distribution	Elasticsearch	TCP	9200	Egress	Data sync on work items.
7	Intelligent Workload Distribution	Redis	TCP	6379	Egress	Runtime cache. The port is configurable.
8	Intelligent Workload Distribution	PostgreSQL	TCP	5432	Egress	Data sync on work items, emails, and configuration details.
9	IWD Data Mart	Intelligent Workload	TCP	4024	Intra-cluster	Retrieves reporting

Connection	Source	Destination	Protocol	Port	Classification	Data that travels on this connection
		Distribution				events from IWD.
10	Prometheus	Intelligent Workload Distribution	TCP	10052	Intra-cluster	Metrics for monitoring and alerting with Prometheus.
11	Intelligent Workload Distribution	Genesys Web Services and Applications	TCP	80	Intra-cluster	Task submission (for distribution), task retrieval, task stopping, and task status synchronization are done through GWS (pull).
12	Intelligent Workload Distribution	Digital Channels	TCP	80	Egress	IWD retrieves configuration data such as Tenant service configuration and API keys from Digital Channels.
13	IWD Data Mart	Genesys Web Services and Applications	HTTP	80	Intra-cluster	IWD Data Mart queries GWS to authorize and get token for requests to Digital Channels.
14	IWD Data Mart	Genesys Info Mart Postgres DB	TCP	5432	Egress	Agent details such as name are copied from GIM table to IWD DM table.
15	Genesys Customer Experience	IWD Datamart Tenant	TCP	5432	Intra-cluster	GCXI retrieves data

Connection	Source	Destination	Protocol	Port	Classification	Data that travels on this connection
	Insights	Postgres DB				aggregated by IWD Data Mart to present it on the IWD related reports.
16	IWD Data Mart	IWD Datamart Tenant Postgres DB	TCP	5432	Egress	IWD Data Mart job saves the aggregated events.