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Genesys Pulse Private Edition Guide

Architecture

Contents

- [1 Introduction](#)
- [2 Architecture diagram — Connections](#)
- [3 Connections table](#)

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Introduction

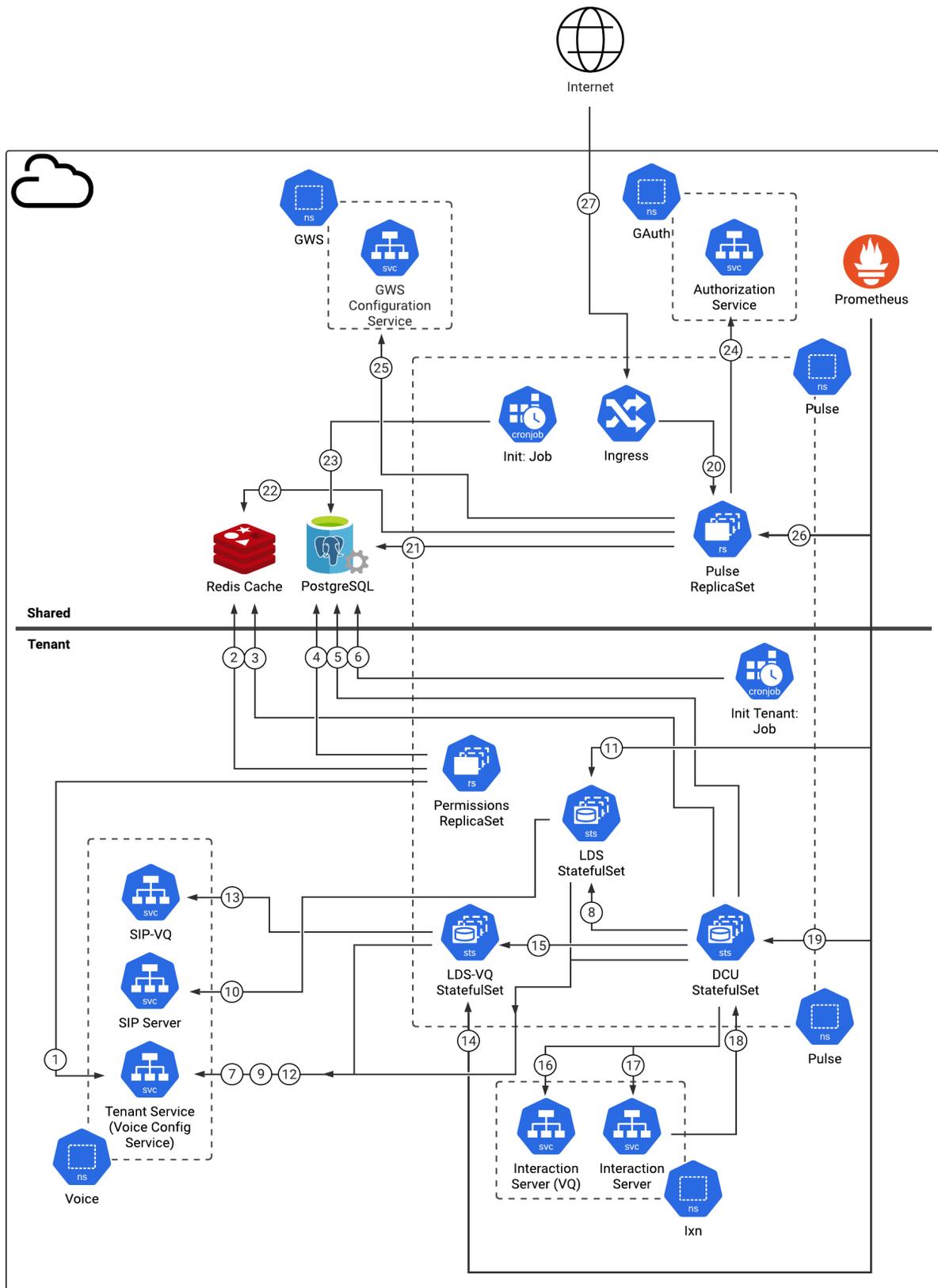
The Connections table, which follows the architecture diagram, provides information about the objects and connections shown in the diagram.

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 Genesys Pulse 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 Genesys Pulse as a service in the network. *Egress* means the Genesys Pulse service is the source, and *Ingress* means the Genesys Pulse 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 | Permissions ReplicaSet | Tenant Service (Voice Config Service) | TCP | 8888 | Ingress | Permissions Service retrieves configuration data (such as Agents, Queues), in order to check user access permissions. |
| 2 | Permissions ReplicaSet | Redis | TCP | 6380 | Intra-cluster | Permissions Service stores information about user permissions to access configuration objects. |
| 3 | DCU StatefulSet | Redis | TCP | 6380 | Intra-cluster | Pulse Data Collection Unit (DCU) stores current and historical statistic values. |
| 4 | Permissions ReplicaSet | PostgreSQL | TCP | 5432 | Intra-cluster | Permissions Service reads Pulse metadata to check access permissions. |
| 5 | DCU StatefulSet | PostgreSQL | TCP | 5432 | Intra-cluster | Pulse DCU reads Pulse metadata required for |

| Connection | Source | Destination | Protocol | Port | Classification | Data that travels on this connection |
|------------|--------------------|---------------------------------------|----------|------|----------------|---|
| | | | | | | collecting statistic values. |
| 6 | DCU StatefulSet | PostgreSQL | TCP | 5432 | Intra-cluster | Init Tenant job uses this connection to initialize OOB Widget Templates. |
| 7 | DCU StatefulSet | Tenant Service (Voice Config Service) | TCP | 8888 | Intra-cluster | Pulse DCU retrieves configuration data. |
| 8 | DCU StatefulSet | LDS StatefulSet | TCP | 8000 | Intra-cluster | Pulse DCU subscribes for events from Voice SIP Service. |
| 9 | DCU StatefulSet | Tenant Service (Voice Config Service) | TCP | 8888 | Intra-cluster | Pulse Load Distribution Server (LDS) retrieves configuration data. |
| 10 | LDS StatefulSet | SIP Server | TCP | 8000 | Intra-cluster | Pulse LDS broadcasts events from Voice SIP Service to connected clients. |
| 11 | Prometheus | LDS StatefulSet | HTTP | 9091 | Intra-cluster | Metrics for monitoring and alerting with Prometheus. |
| 12 | LDS-VQ StatefulSet | Tenant Service (Voice Config Service) | TCP | 8888 | Intra-cluster | Pulse LDS VQ retrieves configuration data. |
| 13 | LDS-VQ StatefulSet | SIP-VQ | TCP | 8000 | Intra-cluster | Pulse LDS broadcasts events from Voice SIP VQ Service to connected clients. |

| Connection | Source | Destination | Protocol | Port | Classification | Data that travels on this connection |
|------------|--------------------|-------------------------|----------|------|----------------|--|
| 14 | Prometheus | LDS-VQ StatefulSet | HTTP | 9091 | Intra-cluster | Metrics for monitoring and alerting with Prometheus. |
| 15 | DCU StatefulSet | LDS-VQ StatefulSet | TCP | 8000 | Intra-cluster | Pulse DCU subscribes for events from Voice SIP VQ Service. |
| 16 | DCU StatefulSet | Interaction Server (VQ) | TCP | 7122 | Intra-cluster | Pulse DCU subscribes for events from the Interaction VQ Server. |
| 17 | DCU StatefulSet | Interaction Server | TCP | 7120 | Intra-cluster | Pulse DCU subscribes for events from the Interaction Server. |
| 18 | Interaction Server | DCU StatefulSet | TCP | 2060 | Intra-cluster | Interaction Server connection to Pulse DCU. |
| 19 | Prometheus | DCU StatefulSet | HTTP | 9091 | Intra-cluster | Metrics for monitoring and alerting with Prometheus. |
| 20 | Ingress controller | Pulse ReplicaSet | HTTP | 8080 | Intra-cluster | Application Gateway connection to Pulse. |
| 21 | Pulse ReplicaSet | PostgreSQL | TCP | 5432 | Intra-cluster | Pulse reads and writes metadata (Dashboards, Widgets, and Widget Templates). |
| 22 | Pulse ReplicaSet | Redis | TCP | 6380 | Intra-cluster | Pulse reads current and historical statistic values, and |

| Connection | Source | Destination | Protocol | Port | Classification | Data that travels on this connection |
|------------|------------------|---------------------------|----------|------|----------------|---|
| | | | | | | reads information about user permissions to access configuration objects. |
| 23 | Init Job | PostgreSQL | TCP | 5432 | Intra-cluster | Init job uses this connection to initialize or update the database schema. |
| 24 | Pulse ReplicaSet | Authorization Service | HTTP | 80 | Intra-cluster | Pulse queries the Genesys Authentication Service to validate user identity and obtain privilege information for the authenticated user. |
| 25 | Pulse ReplicaSet | GWS Configuration Service | HTTP | 80 | Intra-cluster | Pulse queries the GWS Configuration Service to read configuration data (such as Agents, Queues). |
| 26 | Prometheus | Pulse ReplicaSet | HTTP | 8090 | Intra-cluster | Metrics for monitoring and alerting with Prometheus. |
| 27 | Public Internet | Ingress | HTTPS | 443 | Intra-cluster | Inbound web traffic. |