Genesys Info Mart Business Continuity Deployment Guide

Operation Modes

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Operation Modes

A deployment that supports Business Continuity goes through the following operational and transitional phases:

1. Normal operation
2. Disaster Recovery
3. Emergency operation
4. Return to normal operation

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Active-Active=

Operations with Active-Active Genesys Info Mart Instances

Normal (Two-Site) Operation

During normal operation, both sites are available to handle contact center activity. Interaction Concentrators at both sites collect the reporting data, while one of the active Genesys Info Mart instances provides the processed data that is suitable for reports. The normal operation phase continues until one of the sites fails, causing all Genesys components at this site to become unavailable.

Note on Connectivity Loss

In the scenario when network connectivity is lost between two sites, ICON at each site continues to collect data from the data sources that it monitors at the local site. The HA ICON that has its IDB at the same site continues writing data to the IDB. The HA ICON that has its IDB located at a remote site, writes data into a persistent queue until the connection to the IDB is restored.

While Genesys Info Mart at Site 1 cannot access IDBs at Site 2, and Genesys Info Mart at Site 2 cannot access IDBs at Site 1, data transformation is delayed and new data is not available for report generation. This results in one of the following two scenarios:

- If the network outage time is less than the `extract-data-stuck-threshold` value (which, by default, is set to 8 hours), Genesys Info Mart instances access IDBs at the other site when the network connection is restored and resume reporting without data loss.
- If the network outage time becomes greater than the `extract-data-stuck-threshold` value, the reporting data from the other site for this time difference is lost. Once the network outage time exceeds the `extract-data-stuck-threshold` value, Genesys Info Mart continues to operate by extracting only the data at the site where it operates, until the network connection is restored. When the connection to

the IDBs at the other site is restored, Genesys Info Mart extracts that site's data as far back from the reconnection time as the `extract-data-stuck-threshold` value specifies.

Disaster Recovery

In the event of a catastrophic failure of one of the sites—in other words, a failure in which all Genesys components on that site become unavailable, including locally paired HA servers—operations switch over to the surviving site to provide ongoing support for all logged in agents, as well as ongoing reporting on contact-center activity. The Disaster Recovery procedure results in all required components being brought into service at the surviving site and the remaining active Genesys Info Mart instance providing data for contact center reports. For information about Disaster Recovery steps required for Genesys Info Mart in an active-active deployment, refer to Disaster Recovery Procedure.

Some loss of customer interactions may occur at the failed site. The loss of reporting data during Disaster Recovery is minimized in the active-active Genesys Info Mart deployment.

Emergency (One-Site) Operation

During emergency operation following a site failure, the components at a surviving site handle all contact-center activity and reporting. The emergency operation phase continues until the failed site or its replacement is brought back into service.

Return to Normal Operation

When the failed site or its replacement is brought back into service, normal operation can resume at the two sites.

When setting up the replacement site, you have to decide:

- Which site will host the active Genesys Info Mart that provides reporting data for the contact center.
- How you will transfer a copy of the Info Mart database to the replacement site, and whether Genesys Info Mart must be operational while the transfer is in progress.

Choice of Active Site

With the active-active Genesys Info Mart deployment, it is not essential which Info Mart database serves as a source for reports as long as all reports are based on the data from the same database. It is advisable to run GI2 at the same site where Genesys Info Mart is located.

Database Transfer

You may choose to populate the new Genesys Info Mart database with previously collected data by transferring a copy of the Info Mart database from the surviving site to the new site. The Info Mart database in a large environment grows over time to a significant size, and it may take a significant amount of time to transfer a copy to a different location. The time required for transfer depends on the size of the Info Mart database and the channel speed that is to be used for the database transfer. Genesys recommends that you stop purging IDBs until the Genesys Info Mart Server at Site 2 has processed the IDB data that is collected during the transfer.

|-| Active-Standby=

Operations with Active-Standby Genesys Info Mart Instances

Normal (Two-Site) Operation

During normal operation, both sites are available to handle contact center activity. Interaction Concentrators at both sites collect the reporting data, while the active Genesys Info Mart at one site provides the processed data that is suitable for reports. The normal operation phase continues until one of the sites fails, causing all Genesys components at this site to become unavailable.

Note on Connectivity Loss

In the scenario when network connectivity is lost between two sites, ICON at each site continues to collect data from the data sources that it monitors at the local site. The HA ICON that has its IDB at the same site continues writing data to the IDB. The HA ICON that has its IDB located at a remote site, writes data into a persistent queue until the connection to the IDB is restored.

While Genesys Info Mart at Site 1 cannot access IDBs at Site 2, data transformation is delayed and new data is not available for report generation. This results in one of the following two scenarios:

- If the network outage time is less than the `extract-data-stuck-threshold` value (which, by default, is set to 8 hours), Genesys Info Mart accesses IDBs at Site 2 when the network connection is restored and resumes reporting without data loss.
- If the network outage time becomes greater than the `extract-data-stuck-threshold` value, the Site 2 reporting data for this time difference is lost. Once the network outage time exceeds the `extract-data-stuck-threshold` value, Genesys Info Mart continues to operate by extracting only Site 1 data, until the network connection is restored. When the connection to the IDBs at Site 2 is restored, Genesys Info Mart extracts Site 2 data as far back from the reconnection time as the `extract-data-stuck-threshold` value specifies.

Warning! Do not bring Genesys Info Mart at Site 2 into service during network outages. Doing so would result in de-synchronization of the Info Mart databases at the two sites.

Disaster Recovery

In the event of a catastrophic failure of one of the sites—in other words, a failure in which all Genesys components on that site become unavailable, including locally paired HA servers—operations switch over to the surviving site to provide ongoing support for all logged in agents, as well as ongoing reporting on contact-center activity. The Disaster Recovery procedure results in all required components being brought into service at the surviving site. For information about Disaster Recovery steps required for Genesys Info Mart in a deployment with Oracle GoldenGate, refer to Disaster Recovery Procedure.

Some loss of customer interactions may occur at the failed site. Certain reporting data may be lost during Disaster Recovery. See Potential Data Loss.

Emergency (One-Site) Operation

During emergency operation following a site failure, the components at a surviving site handle all contact-center activity and reporting. The emergency operation phase continues until the failed site or its replacement is brought back into service.

Return to Normal Operation

When the failed site or its replacement is brought back into service, normal operation can resume at the two sites.

When setting up the replacement site, you have to decide:

- Which site will host the active Genesys Info Mart and, thus, store all the data about the entire contact center.
- How you will transfer a copy of the Info Mart database to the replacement site, and whether Genesys Info Mart must be operational while the transfer is in progress.

Choice of Active Site

The two options for hosting the active Genesys Info Mart are as follows:

1. A new site, Site 3 or recovered Site 1, hosts the active Genesys Info Mart, while Genesys Info Mart at Site 2 (the surviving site) returns to standby mode.
2. The surviving site, Site 2, hosts the active Genesys Info Mart while the new site, Site 3 or recovered

Site 1, hosts the standby Genesys Info Mart.

For details on the required configuration, see Procedure to Return to Normal Operation.

Database Transfer

To establish database replication between the new active and standby sites, with either of the above options, you must transfer a copy of the Info Mart database from the surviving site to the new site. The Info Mart database in a large environment grows over time to a significant size and it may take a significant amount of time to transfer a copy to a different location. Depending on the size of the Info Mart database and the channel speed that is to be used for the database transfer, you must evaluate whether it is acceptable to have Genesys Info Mart server shut down while the database transfer takes place. If you choose Option 1, and if Genesys Info Mart at Site 2 continues to operate during the transfer of the database copy, you must also plan for additional synchronization of the data that is collected during the transfer.