Genesys Info Mart User's Guide

Populating Mediation Segments

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Genesys Info Mart stores mediation segment facts in the MEDIATION_SEGMENT_FACT (MSF) table. For detailed information about the columns in the MEDIATION_SEGMENT_FACT table, see the *Genesys Info Mart Physical Data Model* for your RDBMS (for Microsoft SQL Server, Oracle, or PostgreSQL, respectively). This page describes how Genesys Info Mart arrives at the data that goes into MSF records.

What do MSFs represent?

Genesys Info Mart creates MSFs to describe interaction activity that involves mediation DNs, such as virtual and ACD queues, or multimedia interaction queues and workbins.

The grain spans the time from when the interaction entered the mediation DN to the time that the interaction was abandoned in the mediation DN, cleared from the mediation DN (virtual queue only), or distributed from the mediation DN, including the time that it takes the interaction to be answered by the target resource or to be abandoned while alerting at the target resource.

For voice, only completed ACD and virtual queue activity is populated; for multimedia interactions, both active and completed interaction queue, workbin, and virtual queue activity is populated.

Each MSF represents:

- The particular role played by the queue resource. For information about the resource roles that apply to queues, see Resource Roles.
- The result of the association from the perspective of the queue resource to the target resource, as chosen during routing. For information about the technical results and technical result reasons that apply to MSFs for voice (ACD and virtual queues) and multimedia (interaction queue, workbin, or virtual queue), see Technical Results.

An MSF also includes links to the associated IRF, which is the IRF during which time the mediation that is represented by the MSF occurred.

How are MSFs populated?

An MSF record (or MSF) is created each time that an ACD or a virtual queue is used during interaction processing. An MSF might also be created each time that a multimedia interaction queue or a workbin is used during interaction processing, depending on configuration. For voice, mediation segments are populated in Genesys Info Mart only when the mediation segment is completed. For multimedia, both active and completed mediation segments are populated.

Genesys Info Mart populates mediation segments in the following ways:

- The start time facts represent the start time of the mediation segment (when the interaction enters the

queue).

- End time facts represent the end time of the mediation segment, which is one of the following:
  - The moment at which the interaction is abandoned while in the queue.
  - The moment at which the interaction is distributed from the queue to some target resource.
  - The moment at which the interaction is cleared from the queue, such as when a routing strategy routes the interaction from a parallel queue, or when it removes the interaction from the queue as it clears the routing targets for which it was waiting.

    In releases 8.5.002 through 8.5.006, in eServices deployments where expand-mediation-time-for-gapless=true, adjustments might be made to the end times of Interaction Queue MSFs, or to the start or end times of virtual queue MSFs, to eliminate gaps in the reporting of mediation time for multimedia interactions. For more information, see the discussion of MEDIATION_DURATION, below.

    For more information about how start and end times are represented, see Representing Dates and Times of Day.
- The TENANT dimension identifies the tenant to which the queue resource belongs.
- The RESOURCE_ dimension identifies the mediation DN resource that is associated with the mediation segment.
- The TECHNICAL_DESCRIPTOR dimension identifies the resource role and technical result of the mediation segment. For information about the resource roles and technical results that apply to mediation segments, see Technical Descriptors.
- The SHORT_ABANDONED_FLAG indicates that, while waiting to be routed from the queue, the customer abandoned the interaction before the configured threshold expired. This flag enables these types of interactions to be filtered from the reports.
- The MET_THRESHOLD_FLAG indicates that the amount of time an interaction waited to be handled by a contact center resource was within a configurable threshold from the perspective of the queue. Waiting time is measured from the time that the interaction entered the queue to the time that it was answered by a contact center resource.
- The ANSWER_THRESHOLD contains the configured value used to calculate the MET_THRESHOLD_FLAG indicator.
- The PLACE dimension identifies the place that is associated with the target of the routing process.
- In addition to the mediation DN resource that is associated with the mediation segment, the RESOURCE_ dimension identifies the contact center resource that was the routing target from the mediation DN.
- MEDIATION_DURATION is the length of time that the interaction was in the ACD queue, virtual queue, or interaction queue or workbin, based on timestamps from T-Server or Interaction Server.
  - In scenarios in which an interaction is bounced between a mediation resource and a strategy as the strategy repeatedly retries busy agents, all the time that the interaction spends in a particular mediation resource is combined into a single MSF record, and the mediation duration includes all the interim strategy time — in other words, all strategy time except the time of the last strategy before the IRF.
  - In the case of an MSF for a virtual queue, the adjust-vq-time-by-strategy-time configuration option enables you to control whether the mediation duration includes or excludes time that the interaction spent in the strategy but outside the virtual queue.
  - In releases 8.5.002 through 8.5.006, the expand-mediation-time-for-gapless configuration option enables you to control whether the mediation durations of MSFs in eServices deployments include or exclude time that multimedia interactions spend outside an MSF for a queue. In eServices deployments in which routing activities are performed without the use of virtual queues, there will

likely be gaps in the reporting if strategy time is excluded. For gapless mediation reporting up to the first handling of the interaction in the absence of virtual queues, enable **expand-mediation-time-for-gapless**. For gapless mediation reporting for mediations following the first handling, also configure populate-mm-ixnqueue-facts so that the Interaction Queues you want to include are represented in Genesys Info Mart.

When **expand-mediation-time-for-gapless** is enabled, Genesys Info Mart adjusts the MSFs for Interaction Queues or virtual queues, if present, to eliminate mediation gaps. In releases 8.5.003 through 8.5.006, **expand-mediation-time-for-gapless** is enabled by default. If your eServices deployment uses virtual queues, you must overtly disable **expand-mediation-time-for-gapless** if you do not want virtual-queue MSFs to be adjusted to cover mediation gaps.

Starting with release 8.5.007, when **expand-mediation-time-for-gapless** was discontinued, Genesys Info Mart no longer adjusts the durations of Interaction Queue or virtual-queue MSFs. Instead, if you enable the **show-non-queue-mediation-mm** configuration option, Genesys Info Mart provides additional, non-queue MSFs for multimedia interactions to represent mediation time that occurs outside an Interaction Queue MSF. For more details, see the extended description of the **show-non-queue-mediation-mm** option.

- ONLINE_DURATION is the period of time that the interaction was in the ACD, virtual queue, interaction queue, or workbin before the interaction went offline.
- The INTERACTION_TYPE and MEDIA_TYPE dimensions are inherited from the underlying IRF that has the lowest ordinal. This is the first resource fact that was created for the interaction and it generally has the earliest start time. In a network routing solution, all underlying network and premise resource facts are considered.
- The RESOURCE_GROUP_COMBINATION dimension records the virtual queue or queue membership in one or more groups.
- The WORKBIN dimension, if populated, indicates the workbin instance that is associated with the workbin mediation. This dimension enables downstream reporting applications to identify the type of resource and the specific resource that is associated with the workbin mediation.
- Provided that ICON provides the required information in the G_ROUTE_RES_VQ_HIST table, IXN_RESOURCE_ID links the MSF to an IRF that is considered to be the primary record. In addition, ENTRY_ORDINAL indicates the order of entrance of this mediation segment relative to other mediation segments of the same IRF. These fields enable downstream reporting applications to provide detailed reports on mediation activity that was associated with a particular interaction or resource, even for interactions that were abandoned or cleared in virtual queues.
  These fields are populated for all MSF records, unlike TARGET_IXN_RESOURCE_ID (see below), which is populated in MSF records only for the devices that eventually distribute the interaction to a handling resource.
- TARGET_IXN_RESOURCE_ID provides a link between the MSF and the IRF that was the target of the routing process that is associated with the queue. This provides the means to associate the queue with the target of the routing strategy for virtual queue reporting.
  For voice interactions, a configuration option, msf-target-route-thru-queue, enables you to specify whether Genesys Info Mart considers the next handling resource or the party immediately following the Routing Point to be the routing target, in scenarios in which a call is routed from a Routing Point through a virtual queue and then ACD queue to an agent (“route-thru-queue” scenarios).
  - If the target is considered to be the next handling resource, the TARGET_IXN_RESOURCE_ID field in the MSFs for both the virtual queue and the ACD queue indicates the agent who ultimately answered the call. Furthermore, the technical result in the MSF for the virtual queue is AnsweredByAgent, and the MEDIATION_SEGMENT_ID and MEDIATION_RESOURCE_KEY fields of the associated IRF are set to the MEDIATION_SEGMENT_ID and RESOURCE_KEY of the MSF for the virtual queue.

- If the target is considered to be the party immediately following the Routing Point, `TARGET_IXN_RESOURCE_ID` is not populated in the MSF for the virtual queue, and the technical result is `Diverted/Unspecified`.

Hunt groups

Starting with release 8.5.003, Genesys Info Mart supports the SIP Server feature that enables ACD queues to be configured as hunt groups that use either a parallel or sequential call distribution strategy.

> **Important**
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> For accurate data representation, Interaction Concentrator release 8.1.504.04 or later is required.

Parallel hunt groups

When a call reaches a parallel hunt group, all of the available hunt group members ring in parallel, but only one member of the hunt group potentially handles the call in the end. Genesys Info Mart filters out all the members of the hunt group that do not answer the call (the ring-only members) and reports the hunt group activity as if it occurred in any other ACD queue during mediation towards a single handling resource. In other words:

- An IRF record is created for the hunt group member that answers the call. No IRF records are created for the ring-only members.
- If the customer abandons the call before a hunt group member has a chance to answer, Genesys Info Mart reports the call as abandoned while queued and creates an IRF record for the hunt group.
- If a timeout occurs prior to a hunt group member answering the call, or if no hunt group members are available, Genesys Info Mart reports on whatever occurs as a result of the hunt group configuration in SIP Server. For example, if the configuration specifies a default extension DN to which unanswered calls are diverted, and the default extension answers the call, Genesys Info Mart creates an IRF record for the extension.
- The target of the MSF record for the hunt group is the IRF record that results from the mediation (for example, the IRF record for the hunt group member that answered).

Sequential hunt groups

When a call reaches a sequential hunt group, the available hunt group members ring serially until one of them answers. Genesys Info Mart represents sequential hunt group scenarios as follows:

- IRF records are created for all hunt group members, even the ring-only members. The IRF records for intermediate ring-only members will have a technical result of `Redirected/RouteOnNoAnswer`. The IRF records are populated and linked together similarly to how they would be for any other RONA (route on no answer) scenario.
- If the customer abandons the call before a hunt group member has a chance to answer, IRF records will be created for all ring-only members but not for the hunt group itself.

- If a timeout occurs prior to a hunt group member answering the call, or if no hunt group members are available, Genesys Info Mart reports on whatever occurs as a result of the hunt group configuration in SIP Server. For example, if the configuration specifies a default extension DN to which unanswered calls are diverted, and the default extension answers the call, Genesys Info Mart creates an IRF record for the extension as well as for the ring-only members, and the IRF records are linked together as they would be for any other RONA scenario.
- The target of the MSF record for the hunt group is the IRF record representing the last hunt group member that rang, regardless of whether it answered.

User data

Genesys Info Mart can be configured to store associated user data in MSFs for interactions that are in mediation. Setup, processing, and storage of user data associated with MSFs closely parallels user data in IRFs. The information about user data on the Populating Interaction Resource Data page applies to MSF user data as well.

By default, Genesys Info Mart does not store associated user data in MSFs. See below for information about the configuration options that enable this functionality.

Configuration options that control population of queue activity

The `[gim-etl-populate]` section of the Genesys Info Mart Application object contains options that enable or disable population of certain types of multimedia interaction activity in the MSF table. Some options can also be configured at Script level, to override the application-level settings.

> **Important**
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> ACD queue and virtual queue activity is always populated.

Starting with release 8.5.007, the show-non-queue-mediation-mm option controls whether non-queue MSFs will be created for multimedia interactions to cover mediation time that is not represented in MSFs for Interaction Queues.

The link-msf-userdata option on individual DN or Script objects controls whether associated user data will be included in MSFs for those queues. Starting with release 8.5.003, you can use the application-level link-msf-userdata-voice and link-msf-userdata-mm options to enable storage of user data in MSFs for all queues for voice and multimedia interactions, respectively. The DN- and Script-level options, if configured, override the application-level settings.