Genesys Info Mart 7.6

User's Guide

About Genesys

Alcatel-Lucent's Genesys solutions feature leading software that manages customer interactions over phone, Web, and mobile devices. The Genesys software suite handles customer conversations across multiple channels and resources—self-service, assisted-service, and proactive outreach—fulfilling customer requests and optimizing customer care goals while efficiently using resources. Genesys software directs more than 100 million customer interactions every day for 4000 companies and government agencies in 80 countries. These companies and agencies leverage their entire organization, from the contact center to the back office, while dynamically engaging their customers. Go to www.genesyslab.com for more information.

Each product has its own documentation for online viewing at the Genesys Technical Support website or on the Documentation Library DVD, which is available from Genesys upon request. For more information, contact your sales representative.

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Your Responsibility for Your System's Security

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If you have purchased support directly from Genesys, please contact Genesys Technical Support at the following regional numbers. For complete contact information and procedures, refer to the ***Genesys Technical Support Guide***.

Region	Telephone	E-Mail
North and Latin America	+888-369-5555 or +506-674-6767	support@genesyslab.com
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Asia Pacific	+61-7-3368-6868	support@genesyslab.com.au
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Table of Contents

Preface

Welcome to the *Genesys Info Mart 7.6 User's Guide*. Genesys Info Mart produces a data mart containing several star schemas that you can use for contact center historical reporting.

Genesys Info Mart includes a software platform and a set of extraction, transformation, and loading (ETL) jobs. You configure the ETL jobs to extract and transform data from several Genesys relational databases. The transformed data is loaded into dimension, fact, and aggregate database tables in Genesys Info Mart. You query the data in these tables by using Structured Query Language (SQL). The query results enable you to examine the data in detail, helping you to reveal patterns and to predict trends for your organization.

This guide shows which dimension tables are associated with each fact and aggregate table, describes validated interaction flows used by Genesys Info Mart, and explains how these interactions are represented in the Genesys Info Mart database tables. The information is intended for end-users of Genesys Info Mart and is valid only for the Genesys 7.6 version of the software release.

Note: To obtain versions of this document created for other releases of Genesys Info Mart, go to the Genesys Technical Support website or request the Documentation Library DVD, which you can order by e-mail from Genesys Order Management at `orderman@genesyslab.com`.

This preface contains these sections:

In brief, you will find the following information in this manual:

- Overview of table data
- Descriptions of how data related to interaction segments, interaction resources, interactions, mediation segments, Genesys Voice Platform (GVP) Voice Application Reporter (VAR) interactions, and outbound campaign contact attempts is populated
- Validated voice interaction flows
- Validated Multimedia interaction flows
- Representation of dates and times of day

Intended Audience

This guide is primarily intended for business users who want to query the data and for business application developers who want to develop business intelligence applications that query the data. The guide assumes that you have a solid understanding of database management systems and structured query languages (such as SQL). Familiarity with CTI (computer-telephony integration) concepts, processes, terminology, and applications would also be helpful as would a basic understanding of the Genesys Framework—its architecture and functions.

Recommended Reading

Genesys Info Mart uses source data from several Genesys products. Because source data is extracted from several sources, Genesys strongly recommends that you read the following documentation in order to understand the data presented in the Genesys Info Mart:

- *Framework 7.6 Configuration Options Reference Manual*
- *Framework 7.6 Configuration Manager Help*
- *Framework 7.6 Stat Server User's Guide*
- Interaction Concentrator documentation set, including the *Deployment Guide*, *User's Guide*, and *Physical Data Model* for your RDBMS type.
- *Genesys Voice Platform 7.6 Voice Application Reporter Deployment and Reference Manual*

Chapter Summaries

In addition to this preface, this document contains the following chapters:

- Chapter 1, "Genesys Info Mart Overview," on page 17, describes the tables that make up the Genesys Info Mart star schemas. These star schemas create a database for storing contact center data that can be retrieved using queries.
- Chapter 2, "Populating Genesys Info Mart Data," on page 31, describes the process that Genesys Info Mart uses to populate interaction segments, interaction resources, interactions, mediation segments, GVP VAR interactions, outbound campaign contact attempts, and agent activity data.
- Chapter 3, "Validated Voice Interaction Flows," on page 97, describes the voice interactions that constitute the validated call flows that can be recognized by Genesys Info Mart.
- Chapter 4, "Validated Multimedia Interaction Flows," on page 183, describes the Multimedia e-mail and chat interactions that constitute the validated Multimedia flows that can be recognized by Genesys Info Mart.
- Chapter 5, "Representing Dates and Times of Day," on page 207, describes how Genesys Info Mart represents dates and times of day.
- Chapter 6, "Unpopulated Genesys Info Mart Columns," on page 211, describes the fields, attributes, and tables that are not populated by Genesys Info Mart or that have limited values.

Document Conventions

This document uses certain stylistic and typographical conventions—introduced here—that serve as shorthands for particular kinds of information.

Document Version Number

A version number appears at the bottom of the inside front cover of this document. Version numbers change as new information is added to this document. Here is a sample version number:

76gim_user_06-2011_v7.6.001.00

You will need this number when you are talking with Genesys Technical Support about this product.

Type Styles

Italic

In this document, italic is used for emphasis, for documents' titles, for definitions of (or first references to) unfamiliar terms, and for mathematical variables.

Examples:

- Please consult the *Genesys Migration Guide* for more information.
- *A customary and usual practice* is one that is widely accepted and used within a particular industry or profession.
- Do *not* use this value for this option.
- The formula, $x + 1 = 7$ where x stands for . . .

Monospace Font

A monospace font, which looks like `teletype or typewriter text`, is used for all programming identifiers and graphical user interface (GUI) elements.

This convention includes the *names* of directories, files, folders, configuration objects, paths, scripts, dialog boxes, options, fields, text and list boxes, operational modes, all buttons (including radio buttons), check boxes, commands, tabs, CTI events, and error messages; the values of options; logical arguments and command syntax; and code samples.

Examples:

- Select the `Show variables on screen` check box.
- Click the `Summation` button.
- In the `Properties` dialog box, enter the value for the host server in your environment.
- In the `Operand` text box, enter your formula.
- Click `OK` to exit the `Properties` dialog box.
- The following table presents the complete set of error messages T-Server® distributes in `EventError` events.
- If you select `true` for the `inbound-bsns-calls` option, all established inbound calls on a local agent are considered business calls.

Monospace is also used for any text that users must manually enter during a configuration or installation procedure, or on a command line:

Example:

- Enter `exit` on the command line.

Screen Captures Used in This Document

Screen captures from the product GUI, as used in this document, may sometimes contain a minor spelling, capitalization, or grammatical error. The text accompanying and explaining the screen captures corrects such errors *except* when such a correction would prevent you from installing, configuring,

or successfully using the product. For example, if the name of an option contains a usage error, the name would be presented exactly as it appears in the product GUI; the error would not be corrected in any accompanying text.

Square Brackets

Square brackets indicate that a particular parameter or value is optional within a logical argument, a command, or some programming syntax. That is, the parameter's or value's presence is not required to resolve the argument, command, or block of code. The user decides whether to include this optional information. Here is a sample:

```
smcp_server -host [/flags]
```

Angle Brackets

Angle brackets indicate a placeholder for a value that the user must specify. This might be a DN or port number specific to your enterprise. Here is a sample:

```
smcp_server -host <confighost>
```

Related Resources

Consult these additional resources as necessary:

- The *Genesys Info Mart Operations Guide.*
- The *Genesys Info Mart Reference Manual* for your relational database management system (RDBMS).
- The *Genesys Info Mart 7.6 SQL Queries Guide*, which is a revised and expanded version of information that, in prior releases, was located in the *Genesys Info Mart User's Guide*.
- The *Genesys Voice Platform 7.6 Voice Application Reporter Deployment and Reference Manual*.
- The *Genesys Technical Publications Glossary,* which ships on the Genesys Documentation Library DVD and which provides a comprehensive list of the Genesys and CTI terminology and acronyms used in this document.
- The *Genesys Migration Guide*, also on the Genesys Documentation Library DVD, which provides a documented migration strategy from Genesys product releases 5.1 and later to all Genesys 7.x releases. Contact Genesys Technical Support for additional information.
- The Release Notes and Product Advisories for this product, which are available on the Genesys Technical Support website at http://genesyslab.com/support.

Information on supported hardware and third-party software is available on the Genesys Technical Support website in the following documents:

- *Genesys Supported Operating Environment Reference Manual*
- *Genesys Supported Media Interfaces*

Making Comments on This Document

If you especially like or dislike anything about this document, please feel free to e-mail your comments to Techpubs.webadmin@genesyslab.com.

You can comment on what you regard as specific errors or omissions, and on the accuracy, organization, subject matter, or completeness of this document. Please limit your comments to the information in this document only and to the way in which the information is presented. Speak to Genesys Technical Support if you have suggestions about the product itself.

When you send us comments, you grant Genesys a nonexclusive right to use or distribute your comments in any way it believes appropriate, without incurring any obligation to you.

Document Change History

This section lists topics that are new in the current release *of this document*, or that have changed significantly from the preceding release.

New in Document Version v7.6.007.00

The document has been updated to support Genesys Info Mart release 7.6.013. The following topics have been added or significantly changed since the previous 7.6 release of this document:

- "Populating KVP-Based Dimensions in the Interaction Segment Fact Table" on page 34—This section now clarifies that, for multimedia interaction segment facts, unchanged KVP-based dimension values are not inherited from the previous interaction segment.
- "Populating KVP-Based Facts in the Interaction Segment Fact Table" on page 35—This section now clarifies that, for multimedia interaction segment facts, KVP-based user data fact values are not propagated from one interaction segment to the next.

New in Document Version v7.6.006.00

The document has been updated to support Genesys Info Mart releases 7.6.011 and 7.6.012. The following topics have been added or significantly changed since the previous 7.6 release of this document:

- "New in Release 7.6.011" on page 29—A new subsection in the "New in This Release" section describes the feature enhancements introduced in release 7.6.011.
- "New in Release 7.6.012" on page 29—A new subsection in the "New in This Release" section describes the feature enhancements introduced in release 7.6.012.
- Figure 3, "Bus Matrix of Aggregation and Dimension Tables," on page 24 has been updated to demonstrate the relationship between the following aggregate and dimension tables:
  - Aggregate tables `AG2_OUT_V_IXN_AGENT_H, D, M` and dimension tables `DATE_TIME, TENANT, RESOURCE_, RESOURCE_GROUP_COMBINATION, INTERACTION_TYPE,` and `INTERACTION_DESCRIPTOR.`
  - Aggregate tables `AG2_OUT_V_IXN_AGENT_GRP_H, D, M` and dimension tables `DATE_TIME, TENANT, GROUP_, INTERACTION_TYPE,` and `INTERACTION_DESCRIPTOR.`
- "Populating Contact Attempt Facts and Dimensions" on page 83—Outbound campaign activity has been updated to include a list of contact attempt facts and dimensions that depend on the corresponding voice interaction extracted from the Voice details IDB.
- "Dates and Times of Day"on page 208—The list of aggregate tables that support the `DATE_TIME` dimension has been updated to include the new `AG2_OUT_V_IXN_AGENT_*` and `AG2_OUT_V_IXN_AGENT_GRP_*` aggregates.

New in Document Version v7.6.005.00

The document has been updated to support Genesys Info Mart release 7.6.008. The following topics have been added or significantly changed since the previous 7.6 release of this document:

- "New in Release 7.6.008" on page 29—A new subsection in the "New in This Release" section describes the feature enhancements introduced in release 7.6.008.
- A new section,"Populating Partially Monitored Interactions" has been added to page 76. This new section describes how configuring Genesys Info Mart to allow the extraction of partially monitored voice interactions can result in data quality issues. General data inconsistencies and problems with specific fact tables are examined.

New in Document Version v7.6.004.00

The document has been updated to support Genesys Info Mart release 7.6.006. The following topics have been added or significantly changed since the previous 7.6 release of this document:

- "New in Release 7.6.006" on page 28—A new subsection in the "New in This Release" section describes the feature enhancements introduced in release 7.6.006.
- For the new feature that makes storage of voice Interaction Segment Fact data optional:
  - Notes on pages 32, 53, and 64 clarify that the Genesys Info Mart server always processes interaction segment fact data, and that Interaction Resource Fact and Interaction Fact data continue to be based on Interaction Segment Facts even if the Genesys Info Mart application has been configured not to store voice Interaction Segment Fact data.
  - A note about optional storage has been added to the section identifying the tables in which Interaction Segment Fact data is stored (page 36).
  - In various places throughout the document, formatting of the term *Interaction Segment Fact data* has been changed to indicate that it does not necessarily mean data in the `INTERACTION_SEGMENT_FACT` table.
- For the new feature that optionally enables the creation of a separate Initiate Consult row in the Interaction Resource Fact table:
  - The description of the IRF table on page 52 has been modified.
  - The section "Populating Interaction Resource Facts and Dimensions" starting on page 53 has been modified or expanded to include information about the separate Initiate Consult row.
  - The table of supported combinations of resource roles, technical results, and result reasons in interaction resource data (Table 6 on page 59) has been updated to include `InitiatedConsult`.
  - In Chapter 3, variants of the diagrams for selected interaction flows have been added to illustrate the separate Initiate Consult row: Figure 17 on page 111, Figure 26 on page 118, Figure 31 on page 122, and Figure 36 on page 126.

New in Document Version v7.6.003.00

The document has been updated to support Genesys Info Mart release 7.6.005. The following topics have been added or significantly changed since the previous 7.6 release of this document:

- "New in Release 7.6.005" on page 27—A new subsection in the "New in This Release" section describes the feature enhancements introduced in release 7.6.005.

- Throughout the document, references to the preceding release no longer use a maintenance release numbering scheme; the preceding release is referred to as Genesys Info Mart release 7.6.004.
- The bus matrix in Figure 3 on page 24 has been modified to indicate the relationship between the `INTERACTION_DESCRIPTOR` dimension and the `AG2_INB_V_AGENT_QUEUE_*` aggregate tables. This relationship enables reporting on the business attribute assigned to interactions that were distributed from queues.
- The tables in "Resource Roles and Technical Results for Multimedia Interactions" on page 42 have been updated to include the new Genesys Info Mart capability to recognize and properly report the scenario when an agent pulls a multimedia interaction from a strategy:
  - Table 4 has been updated to indicate that, for the resource role of `puller`, an Agent can pull the interaction from a strategy, as well as from an interaction queue or interaction workbin (see page 45).
  - Table 5 has been updated to indicate that the technical result of `pulled` (with technical result reason unspecified) is valid for a Routing Strategy (see page 49).

  A new validated interaction flow, "Agent Pulls E-Mail from Strategy" on page 197, illustrates the scenario.
- The description of how the `PLACE`, `RESOURCE_`, and `TECHNICAL_DESCRIPTOR` dimensions are populated for interactions (page 65) has been modified to clarify how abandoned interactions are handled.

New in Document Version v7.6.002.00

The following topics have been added or significantly changed since the previous 7.6 release of this document:

- "New in This Release" on page 25
  - Ability to extract UserEvent-based key-value pair (KVP) data that is sent within a configurable timeout after the associated voice interaction ends.
  - Option to include the last five minutes of extracted voice agent activity data when transforming data in a simple contact center environment.
- "Populating KVP-Based Dimensions in the Interaction Segment Fact Table" on page 34 contains a new section for UserEvent-based KVP data.
- "Populating KVP-Based Facts in the Interaction Segment Fact Table" on page 35contains a new section for UserEvent-based KVP data.
- "Populating KVP-Based Dimensions in the Interaction Resource Fact Table" on page 56 contains a new section for UserEvent-based KVP data.
- "Populating KVP-Based Facts in the Interaction Resource Fact Table" on page 57 contains a new section for UserEvent-based KVP data.

- "How Summarized Data Is Processed" on page 93
  - Added a paragraph to explain the option to include the last five minutes of extracted voice agent activity data when transforming data in a simple contact center environment.

Chapter

1 Genesys Info Mart Overview

Genesys Info Mart uses multidimensional modeling to create a constellation of star schemas. These star schemas create a database for storing contact center data that can be retrieved using queries. Star schemas support queries that speed the retrieval of the stored data. Querying the data helps you uncover trends, chart heavy usage times, and reveal patterns in your contact center. In this way, Genesys Info Mart can help you:

- Determine how to measure the efficiency of your contact center in comparison with targeted service goals.
- Determine how best to staff your contact center.
- Understand customer preferences and problem trends.

This chapter contains the following sections:

Genesys Info Mart Data

Genesys Info Mart yields data that is read-only and historical (representing some period of time).

There are three types of tables that make up the Genesys Info Mart star schemas: *fact* tables, *aggregate* tables, and *dimension* tables.

Fact Tables

Fact tables are the large tables in the middle of a star schema. They represent business measures—for example, how long customers waited in a queue, how long and how often agents put customers on hold, or how long agents talked to customers. Fact tables are surrounded by a set of slowly changing dimension tables. Fact tables represent a many-to-many relationship between dimensions—that is, there are many facts in a single fact table, and they are

related to many dimensions in various dimension tables. Fact tables reference dimensions by using surrogate key columns.

Dimension Tables Dimension tables describe the attributes of the associated fact table. For example, the dimensions that are related to interactions might include the date and time when each interaction started, the required skills for various service types requested by customers, and the value of various customers to the business.

Aggregate Tables In addition to fact and dimension tables, Genesys Info Mart provides two sets of aggregate tables. CCPulse+ inbound voice reporting templates use predefined skill-based interaction and resource aggregate tables. Genesys Interactive Insights (GI2) reports are supported by service type, queue, and agent-based aggregates. Custom reporting applications can also use any of these aggregates.

Note: This *User's Guide* does not provide information about how to query the aggregate tables. For detailed information about the aggregate tables, see the *Genesys Info Mart Reference Manual* for your relational database management system (RDBMS).

Subject Areas

Table 1 describes the Genesys Info Mart subject areas. Each subject area is a star schema. For more information about the fact, aggregate, and dimension tables contained in each subject area, refer to the *Genesys Info Mart Reference Manual* for your RDBMS.

Table 1: Genesys Info Mart Subject Areas

Subject Area	Description
Interaction	Represents interactions from a customer experience perspective.
Interaction Segment	Represents interaction activity from the perspective of contact center resources.
Mediation Segment	Represents ACD and virtual queue interaction activity from the perspective of contact center resources.
Place Group	Represents the membership of places among place groups.
Resource Group	Represents the membership of contact center resources among resource groups.
Resource Session	Represents an agent resource login session relative to a given media type (and DN-queue combination for voice media).
Resource Skill	Represents the skill resumes of agent resources.

Table 1: Genesys Info Mart Subject Areas (Continued)

Subject Area	Description
Resource State	Represents an agent resource state relative to a given media type (and Place for voice media).
Resource State Reason	Represents an agent resource state reason relative to a given media type (and DN for voice media).
Campaign Group Session	Represents campaign group sessions being loaded and unloaded.
Campaign Group State	Represents campaign group sessions going through states, such as `Loaded`, `Started`, and `Unloading`.
Calling List Metric	Represents snapshots of outbound campaign calling list metrics.
Campaign Group to Campaign	Represents the associations between agent groups or place groups and outbound campaigns.
Calling List to Campaign	Represents the associations between outbound campaign calling lists and campaigns.
Contact Attempt	Represents outbound campaign contact record attempts.
GVP Call	Represents calls processed by Genesys Voice Platform (GVP).
GVP Subcall	Represents subcalls processed by GVP.
Interaction Resource	Represents all stages of interaction handling.
Interaction Resource State	Represents the states a resource was in during interaction handling.
Detailed Do-Not-Disturb	Represents detailed information about Do-Not-Disturb (DND) being turned on and off, relative to either a DN for voice, or to place and media type for Multimedia.
Detailed Resource State	Represents an agent resource state relative to a given media type (and DN and queue for voice).
Detailed Resource State Reason	Represents an agent resource state reason relative to a given media type (and DN and queue for voice).
Summarized Resource Session	Represents a contiguous period of time that an agent is logged onto any entity (switch, DN, or queue) relative to a given media type.
Summarized Resource State	Represents a summarized agent resource state relative to a given media type.
Summarized Resource State Reason	Represents a summarized agent resource state reason relative to a given media type.

Subject Area Example

As an example of a subject area, Figure 1 depicts the INTERACTION_SEGMENT_FACT table with its related dimension tables. There are many data fields in each fact and dimension table; however, for the sake of simplicity, Figure 1 shows only a few of the fields in the INTERACTION_SEGMENT_FACT table, and it omits the fields that make up the dimension tables. For information about all the fields that make up the facts and dimensions, refer to the *Genesys Info Mart Reference Manual* for your RDBMS.

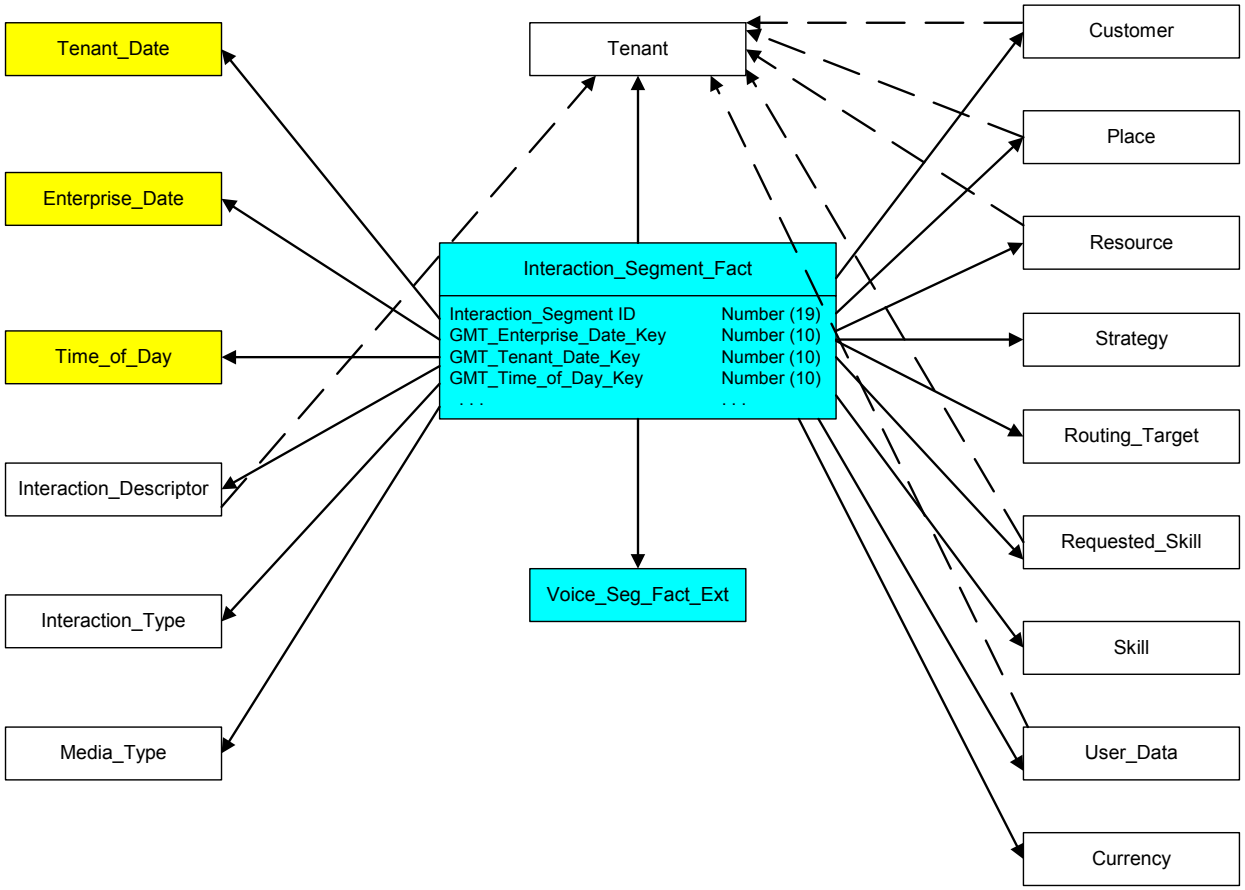

Figure 1: Sample Subject Area—Interaction Segment

Bus Matrices

Figure 2 on page 22 maps the relationships between Genesys Info Mart fact and dimension tables in a *bus matrix*, while Figure 3 on page 24 does the same for Genesys Info Mart aggregate and dimension tables.

The bus matrices represent dimensionality of fact and aggregation tables in Genesys Info Mart as consolidated tabular views. They enable you to easily see the full dimensionality of each fact and aggregation table. They also enable you to easily identify which facts or aggregates share the same dimension(s) and therefore can be combined in one report, using the shared dimension(s).

Fact and aggregation table names are listed in columns in the matrices; dimension table names are listed in rows. The matrices exclude the AUDIT_, TENANT, and TENANT_DATE dimensions, which map to all fact and aggregate

tables. Figure 2 on page 22 also excludes the media-specific interaction, interaction segment, and interaction resource fact extension tables (MMEDIA_IXN_FACT_EXT, MMEDIA_SEG_FACT_ EXT, VOICE_IXN_FACT_EXT, VOICE_SEG_FACT_EXT, VOICE_RES_FACT_EXT).

For information about all the fields that make up the facts, aggregates, and dimensions, refer to the *Genesys Info Mart Reference Manual* for your RDBMS.

DIMENSION TABLES / FACT TABLES	CALLING_LIST_METRIC_FACT	CALLING_LIST_TO_CAMP_FACT	CAMPAIGN_GROUP_SESSION_FACT	CAMPAIGN_GROUP_STATE_FACT	GROUP_TO_CAMPAIGN_FACT	CONTACT_ATTEMPT_FACT	DT_DND_FACT	DT_RES_STATE_FACT	DT_RES_STATE_REASON_FACT	GVP_CALL_FACT, GVP_SUBCALL_FACT	INTERACTION_FACT	INTERACTION_RESOURCE_FACT	INTERACTION_SEGMENT_FACT	IXN_RESOURCE_STATE_FACT	MEDIATION_SEGMENT_FACT	PLACE_GROUP_FACT	RESOURCE_SESSION_FACT	RESOURCE_SKILL_FACT	RESOURCE_STATE_FACT	RESOURCE_STATE_REASON_FACT	SM_RES_SESSION_FACT	SM_RES_STATE_FACT	SM_RES_STATE_REASON_FACT
CALL_RESULT						X																	
CALLING_LIST	X	X				X																	
CAMPAIGN	X	X	X	X	X	X																	
CAMPAIGN_GROUP_STATE				X																			
CONTACT_INFO TYPE						X																	
CURRENCY											X		X										
CUSTOMER											X	X	X										
DATE_TIME												X		X	X						X	X	X
DIALING MODE						X																	
ENTERPRISE_DATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ENTERPRISE_MONTH																							
GROUP_			X	X	X	X										X							
GVP_APPLICATION										X													
GVP_SUBCALL_FLOW										X													
GVP_VOICE_MEDIA_SERVER										X													
GVP_WEB_APPL_SERVER										X													
INTERACTION_DESCRIPTOR											X	X	X										
INTERACTION_RESOURCE_STATE														X									
INTERACTION_TYPE											X	X	X		X								
MEDIA_TYPE						X	X	X	X		X	X	X	X	X		X		X	X	X	X	X
PLACE						X	X	X	X		X	X	X	X	X	X	X		X	X			
RECORD_STATUS						X																	
RECORD_TYPE						X																	
RECORD_FIELD_GROUP1						X																	
RECORD_FIELD_GROUP2						X																	
REQUESTED_SKILL											X	X	X										
REQUESTED_SKILL_COMBINATION											X	X	X										
RESOURCE_						X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X
RESOURCE_GROUP_COMBINATIO												X			X						X	X	X
RESOURCE_STATE								X	X			X							X	X		X	X
RESOURCE_STATE_REASON									X											X			X
ROUTING_TARGET												X	X										
SKILL																		X					
STOP_ACTION																							
STRATEGY										X		X	X										
TECHNICAL_DESCRIPTOR											X	X	X		X								
TIME_OF_DAY	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TIME_RANGE																							
TIME ZONE						X																	
USER_DATA, USER_DATA_2											X	X	X										

Figure 2: Bus Matrix of Fact and Dimension Tables

In Figure 3 on page 24, the hour, day, month, and subhour time buckets indicated in the names of some aggregates tables are abbreviated *H, D, M,* and *SubH* to simplify the diagram. To simplify further, the names of two or more tables are combined onto one line if they share the same relationship with the relevant dimension tables.

AGGREGATION TABLES / DIMENSION TABLES	AG2_INB_V_AGENT_QUEUE_H, D, M	AG2_INB_V_I_IXN_AGENT_D, H, SubH	AG2_INB_V_I_SESS_STATE_D, H, SubH	AG2_INB_V_I_STATE_RSN_D, H, SubH	AG2_INB_V_IXN_AGENT_D, H, M	AG2_INB_V_IXN_AGENT_GRP_H, D, M	AG2_INB_V_IXN_ID_H, D, M	AG2_INB_V_QUEUE_ABN_D, H, M	AG2_INB_V_QUEUE_ANS_D, H, M	AG2_INB_V_QUEUE_GRP_D, H, M	AG2_INB_V_QUEUE_H, D, M	AG_AGENT_VOICE_IXN_H, D, M	AG_SKILL_RESOURCE_ABN_H, D, M	AG_SKILL_RESOURCE_H, D, M	AG_SKILL_GROUP_ABN_H, D, M	AG_SKILL_VOICE_INB_IXN_H, D	AG_SKILL_VOICE_INB_IXN_MONTH	AG_SKILL_GROUP_H, D, M	AG_STATE_REASON_VOICE_H, D, M	AG2_OUT_V_IXN_AGENT_H, D, M	AG2_OUT_V_IXN_AGENT_GRP_H, D, M
CALL_RESULT																					
CALLING_LIST																					
CAMPAIGN																					
CAMPAIGN_GROUP_STATE																					
CONTACT_INFO TYPE																					
CURRENCY																					
CUSTOMER																					
DATE_TIME	X	X	X	X	X	X	X	X	X	X	X									X	X
DIALING MODE																					
ENTERPRISE_DATE																X					
ENTERPRISE_MONTH												X	X	X	X		X	X	X		
GROUP_						X				X					X			X			X
GVP_APPLICATION																					
GVP_SUBCALL_FLOW																					
GVP_VOICE_MEDIA_SERVER																					
GVP_WEB_APPL_SERVER																					
INTERACTION_DESCRIPTOR					X	X	X													X	X
INTERACTION_RESOURCE_STATE																					
INTERACTION_TYPE														X				X		X	X
MEDIA_TYPE														X				X			
PLACE																					
RECORD_STATUS																					
RECORD_TYPE																					
RECORD_FIELD_GROUP1																					
RECORD_FIELD_GROUP2																					
REQUESTED_SKILL																					
REQUESTED_SKILL_COMBINATION													X	X	X	X	X	X			
RESOURCE_	X	X	X	X	X			X	X		X	X	X	X					X	X	
RESOURCE_GROUP_COMBINATION	X	X	X	X	X			X	X		X									X	
RESOURCE_STATE				X															X		
RESOURCE_STATE_REASON				X															X		
ROUTING_TARGET																					
SKILL																					
STOP_ACTION																					
STRATEGY																					
TECHNICAL_DESCRIPTOR																					
TIME_OF_DAY																					
TIME_RANGE								X	X				X		X	X	X				
TIME ZONE																					
USER_DATA, USER_DATA_2																					

Figure 3: Bus Matrix of Aggregation and Dimension Tables

New in This Release

Genesys Info Mart 7.6 provides the following new or changed functionality:

- Extracts voice agent state and reason details from Interaction Database (IDB), instead of from Stat Server. New Info Mart fact tables store details about states, reasons, and do-not-disturb (DND) modes for voice and Multimedia.

  Note: For backward compatibility with deployments of earlier Genesys Info Mart releases only, Genesys Info Mart continues to provide data extraction of voice agent state and reason details from Stat Server database.

- Provides high availability (HA) data extraction for voice agent login session, state, state reason, and DND mode details, which are extracted from an IDB that is populated by Interaction Concentrator (ICON) release 7.6 that has been appropriately configured. (T-Server release 7.6 is required.)
- Loads Open Media interaction and agent activity details from an IDB into the Info Mart database, in an environment with release 7.6 of Interaction Concentrator and Interaction Server. (*Open Media* refers to a custom media channel that is supported on top of Genesys Multimedia. The `Workitem` media type is an example of Open Media.)
- Loads active Multimedia virtual queue details into the Info Mart database and links virtual queue details to their corresponding target Multimedia interaction segment details.
- Loads active Multimedia chat interactions into the Info Mart database. Previously, only completed chat interactions were loaded into the Info Mart database.
- Provides HA data extraction for contact center configuration history details, which are extracted from IDBs that are populated by ICON release 7.6.
- Extracts data from IDB following the use of the Interaction Concentrator feature for resynchronization of configuration data.
- Provides data-quality improvements in HA data extraction for voice interaction details by comparing voice interaction data between the IDBs that constitute the HA pair.
- Provides detailed reasons for interactions that are cleared from a virtual queue, such as:
  - Target is cleared by routing strategy.
  - Interaction is routed by another, parallel virtual queue.
  - Interaction is default-routed by strategy.
  - Multimedia interaction is pulled back from strategy due to timeout.

Notes: The support for all four clearance scenarios requires an environment with 7.6 releases of both Universal Routing Server and Interaction Concentrator that has been configured appropriately.

In addition, the fourth clearance scenario requires Interaction Server 7.6 to report when a multimedia interaction is cleared from a virtual queue or pulled from a routing strategy because it was not routed within the timeout that was configured for routing in Interaction Server.

- Provides uninterrupted durations for `After Call Work` (ACW) (for voice only) and `Not Ready` states, when interactions are initiated or received while in these states, in an environment with Interaction Concentrator release 7.6 that has been configured appropriately.

Note: For voice, the newly introduced fact tables in release 7.6 contain the data for this feature; the data is not available in the legacy fact tables that are implemented in previous releases.

- Provides data to calculate the number of voice interactions that are initiated or received while the agent is in ACW (voice only) or `Not Ready` states, in an environment with Interaction Concentrator release 7.6 that has been configured appropriately.

Note: For voice, the newly introduced fact tables in release 7.6 contain the data for this feature; the data is not available in the legacy fact tables that are implemented in previous releases.

- Associates ACW with the ACD or routed call, instead of with a consultation call, for the case in which the consultation call outlasts the original inbound customer call, in an environment with Interaction Concentrator release 7.6 that has been configured appropriately.
- Provides data to measure agent-to-agent consult talk duration, even if the consultation included an Interactive Voice Response (IVR) application or voice treatment port before the target agent answered the consultation.

Note: The newly introduced fact tables in release 7.6 contain the data for this feature; the data is not available in the legacy fact tables implemented in previous releases.

- Provides a set of new agent and interaction summary tables which facilitate aggregation for agent state and inbound voice interaction reporting.
- Provides several new interval-based and disposition-based aggregates, for use with either Genesys Interactive Insights (GI2) or your own custom reports.

- Provides configurable control of transaction sizes for data that is loaded in, aggregated in, and purged from the Info Mart database. This functionality provides improved capability for customers to control the database resources required to run the ETL jobs.
- Provides a new ETL job, `Job_MigrateGIM`, to migrate the data from the Staging Area and Genesys Info Mart databases of release 7.5 to release 7.6.

New in Release 7.6.004

Starting with Genesys Info Mart release 7.6.004, Genesys Info Mart provides the following new or changed functionality:

- Provides the ability to extract UserEvent-based key-value pair (KVP) data that is sent within a configurable timeout after the associated voice interaction ends.
- Provides the ability, at your option, to include the last five minutes of extracted voice agent activity data when transforming data in a simple contact center environment. This functionality improves the accuracy of agent reports for a given business day in a contact center that operates less than 24 hours a day. (A simple contact center is the one where an agent only logs in to a single switch, DN, or queue at a time, and where reporting requirements do not include the factoring of Do-Not-Disturb [DND] mode into summarized resource states and resource state reasons.)

New in Release 7.6.005

Starting with Genesys Info Mart release 7.6.005, Genesys Info Mart provides the following new or changed functionality that is relevant to the topics discussed in this *User's Guide*:

- Provides enhanced support for reporting tools such as GI2 to report on:
  - Additional categories of calls—Calls that were too short for any useful customer interaction to have occurred; calls that rang at an agent, were not answered, and were subsequently transferred to another resource (Route on no answer [RONA]); calls that were abandoned while ringing.
  - The business attribute, if any, assigned to interactions that were distributed from Automatic Call Distribution (ACD) or Virtual Queues.
  - Inbound interactions that had a defined Baseline Service Objective and were offered to a resource.
  - The number of times inbound interactions were answered.

  For information about the Info Mart database schema changes that support this functionality, see the *Genesys Info Mart 7.6 Reference Manual* for your RDBMS.

- Supports a new Technical Descriptor combination that enables Genesys Info Mart to recognize and properly report the scenario when an agent pulls a multimedia interaction from a strategy:
  - Agent segment—RESOURCE_ROLE is Puller (ROLE_REASON is Unspecified)
  - Strategy segment—TECHNICAL_RESULT is Pulled (RESULT_REASON is Unspecified)

  Prior to release 7.6.005, in this scenario, Genesys Info Mart assigned the Agent a resource role of RoutedTo, and assigned a technical result of Routed for routing strategies.

For information about additional functionality introduced in release 7.6.005, see the *Genesys Info Mart 7.6 Deployment Guide* for this release.

New in Release 7.6.006

In general, Genesys Info Mart release 7.6.006 introduces a number of internal improvements to ETL algorithms and processes and to the database schemas to improve Genesys Info Mart performance in large-scale, inbound voice contact centers. New configuration options control those performance enhancements that are not relevant for smaller-scale contact centers or that modify existing functionality. The default settings of the new options maintain compatibility with existing deployments.

In addition to the performance enhancements that are intended for large-scale deployments, Genesys Info Mart release 7.6.006 provides the following new or changed functionality that is relevant to the topics discussed in this *User's Guide*:

- Provides the option not to store Interaction Segment Fact data for voice media. This feature is for deployments where reports can be created from Interaction Resource Fact data for voice media. Disabling the storage of Interaction Segment Fact data can improve ETL performance.

  A new configuration option, populate-voice-ixn-seg-facts in the [gim-etl] section, supports this optional functionality. For more information about the populate-voice-ixn-seg-facts configuration option, see the chapter about configuring the Genesys Info Mart Application in the *Genesys Info Mart 7.6 Deployment Guide* for this release.
- Provides the option to create a separate Interaction Resource Fact row to represent voice agents and self-service IVR ports that initiate consultations. A new configuration option, populate-voice-init-consult-in-irf in the [gim-etl] section, supports this optional functionality. If this option is not enabled, information about initiated consultations continues to be embedded within the Interaction Resource Fact row that represents the original interaction that was offered to the agent or self-service IVR port.

  For more information about the populate-voice-init-consult-in-irf configuration option, see the chapter about configuring the Genesys Info

Mart `Application` in the *Genesys Info Mart 7.6 Deployment Guide* for this release.

For information about additional functionality introduced in release 7.6.006, see the *Genesys Info Mart 7.6 Deployment Guide* for this release.

New in Release 7.6.008

Starting with Genesys Info Mart release 7.6.008, Genesys Info Mart provides the following new or changed functionality that is relevant to the topics discussed in this *User's Guide*:

- Provides support for extracting voice interaction data from topologies where not all T-Servers or IVR Servers involved in the call flow are monitored by ICON.

  This feature enables Info Mart to provide reporting data in the following types of environments:

  - Network routing or network parking are used, but you want Genesys Info Mart to store data for only the premise-portions of the interactions.
  - There are multiple sites or multiple tenants, but you want Genesys Info Mart to store data for only some of the sites or tenants.

  A new configuration option, `extract-partially-merged-interactions`, enables this functionality. For more information about the `extract-partially-merged-interactions` configuration option, see the *Genesys Info Mart 7.6 Deployment Guide.*

New in Release 7.6.011

Starting with Genesys Info Mart release 7.6.011, Genesys Info Mart provides the following new or changed functionality that is relevant to the topics discussed in this *User's Guide*:

- Provides support for the Interaction Concentrator 8.0 capability for voice interactions to associate call-based key-value pair (KVP) data with the Routing Point or Agent party that attached or updated the KVP data when they are no longer an active call party. For more information about this capability, see the *Interaction Concentrator 8.0 User's Guide*.

New in Release 7.6.012

Starting with Genesys Info Mart release 7.6.012, Genesys Info Mart provides the following new or changed functionality that is relevant to the topics discussed in this *User's Guide*:

- Provides new disposition-based aggregates, `AG2_OUT_V_IXN_AGENT_*` and `AG2_OUT_V_IXN_AGENT_GRP_*`, from which you can build your own custom reports to measure agent and agent group handling of outbound and internal voice interactions based on key business attributes, such as customer segment, service type, and service subtype.

  A new configuration option, `populate-ixn-agent-out-aggregates`, enables this functionality. For more information about the `populate-ixn-agent-out-aggregates` configuration option, see the *Genesys Info Mart 7.6 Deployment Guide*.

Chapter

2 Populating Genesys Info Mart Data

This chapter describes how Genesys Info Mart populates the data in the Genesys Info Mart database. You need this information in order to create meaningful queries for business purposes, and in order to interpret query results correctly.

This chapter contains the following sections:

For more information about specific columns in Genesys Info Mart tables, see the *Genesys Info Mart Reference Manual* for your particular relational database management system (RDBMS).

For descriptions of the sample queries provided with Genesys Info Mart, and for information about how you can customize the queries for your use, see *Genesys Info Mart 7.6 SQL Queries Guide*.

Populating Interaction Segment Data

Genesys Info Mart creates interaction segment facts to represent the associations between contact center resources (queues, routing points, IVR ports, and agents) and voice interactions, as well as the associations between

contact center Multimedia resources (interaction queues, interaction workbins, routing strategies, and agents) and multimedia interactions.

Each interaction segment fact represents:

- The contiguous time span of the association between the resource and the interaction.
- The particular role played by the resource (the *resource role*).
- The result of the association from the perspective of the voice or Multimedia resource (the *technical result*).

Multimedia Media Types

In addition to e-mail and chat, all Multimedia media types are supported when you use Open Media. Because multimedia interaction segments can be long-lasting, they can be populated in the Genesys Info Mart database before the entire interaction is completed. Incomplete multimedia interaction segments that have been populated in Genesys Info Mart are updated as changes occur.

In contrast, voice interaction segments are populated in Genesys Info Mart only when the entire interaction is completed.

Note: Starting with Genesys Info Mart release 7.6.006, storing voice Interaction Segment Facts in the Info Mart database is optional. However, the Genesys Info Mart server still transforms voice interaction segment facts and uses them as the basis for further processing, regardless of whether the Genesys Info Mart application has been configured to store them.

Populating Interaction Segment Facts and Dimensions

Genesys Info Mart populates voice and Multimedia interaction segments in the following ways:

- For voice interactions, the first interaction segment that is created determines the interaction type and media type dimensions for all interaction segments for a given interaction.
- For multimedia interactions, the underlying interaction segment facts that compose an interaction fact can include multiple media interactions. The interaction segments might be associated with media interactions of different media types and interaction types.

  So for multimedia solution-based interaction segments, there are two representations for interaction type:
  - One is based on the first interaction segment and does not change.
  - The other reflects the interaction type that is associated with the specific interaction segment. The media type reflects the media type of the specific interaction segment, and is not fixed based on the first interaction segment's media type.

- The ENTERPRISE_DATE dimension, TENANT_DATE dimension, TIME_OF_DAY dimension, and start time facts represent the start time of the interaction segment.

  End time facts represent the end time of the interaction segment. For active multimedia interaction segments, the ACTIVE_FLAG field in the INTERACTION_SEGMENT_FACT table is set to 1 and the end time facts are set to a date far in the future, so that applications do not have to test for null. For complete interaction segments, ACTIVE_FLAG is set to 0 and the end time facts are set to the end time of the interaction segment.

  Note: Genesys Info Mart records the time that a multimedia interaction is active on the agent's desktop as the agent's handle time for that interaction, even if the window used for handling the multimedia interaction is minimized or out of focus. An agent's handling of a multimedia interaction may be interrupted by other activities (for example, a voice call has been routed to the agent). If the agent is engaging in other activities, he or she must save the multimedia interaction content (the in-progress e-mail, for example) as a draft instead of leaving it active on the desktop. Otherwise, Genesys Info Mart will not record multimedia handling time reliably.

  For more information about how Genesys Info Mart represents dates and times of day, see Chapter 5 on page 207.
- The RESOURCE_ dimension identifies the resource that is associated with the interaction segment.

  Note: The RESOURCE_ dimension actually has two references, RESOURCE_KEY and MEDIA_RESOURCE_KEY, which typically refer to the same resource. The following are exceptions:

  - For IVR Ports, RESOURCE_KEY is for IVR Port and MEDIA_RESOURCE_KEY for the associated DN.
  - For Agents, RESOURCE_KEY is for the Agent, and MEDIA_RESOURCE_KEY for the associated DN.

- The PLACE dimension identifies the place where the interaction segment activity is occurring.
- The TENANT dimension identifies the tenant of the resource.
- The TECHNICAL_DESCRIPTOR dimension identifies the resource role and technical result of the interaction segment. For information about the resource roles and technical results for interaction segments, see Table 2 on page 38 and Table 3 on page 40.
- For IVR port and Routing Point interaction segments, the STRATEGY dimension identifies the IVR application or routing strategy that is working on the interaction.

- For Routing Point, ACD queue, and agent interaction segments, the ROUTING_TARGET dimension indicates the routing target that is selected by the Genesys Universal Routing Server (URS).
- For Multimedia routing strategy interaction segments, the STRATEGY dimension identifies the specific strategy responsible for a routing decision.
- The CASE_ID, CURRENCY, CUSTOMER, INTERACTION_DESCRIPTOR, REQUESTED_SKILL, REQUESTED_SKILL_COMBINATION, USER_DATA, and USER_DATA_2 dimensions are populated with KVP data from call-based events. For voice interactions, some of these dimensions can also be populated with KVP data from UserEvents. See "Populating KVP-Based Dimensions in the Interaction Segment Fact Table" for more information.
- State counts and durations (for example, QUEUE_COUNT and QUEUE_DURATION) summarize the amount of time spent on various activities.
- USER_DATA facts, provided for custom measurements, are populated with KVP data from call-based events. For voice interactions, they can also be populated with KVP data from UserEvents. See "Populating KVP-Based Facts in the Interaction Segment Fact Table" on page 35 for more information.

Populating KVP-Based Dimensions in the Interaction Segment Fact Table

The following dimensions can be populated with KVP data from call-based events, and/or from UserEvents issued by an agent desktop application after the agent's participation in the call has ended:

- CASE_ID
- CUSTOMER
- INTERACTION_DESCRIPTOR
- REQUESTED_SKILL
- REQUESTED_SKILL_COMBINATION
- USER_DATA
- USER_DATA_2

Note the following:

- The KVP data that is used to populate REQUESTED_SKILL and REQUESTED_SKILL_COMBINATION dimensions is set in call-based events by routing strategies, and cannot be set by agent desktop applications through UserEvents.
- Populating data based on UserEvent KVPs is not supported for multimedia interactions.

For voice interactions that are populated with KVP data from call-based events, the above-listed dimensions are snapshots of the current values of these

interaction attributes at each interaction segment. Because they are snapshots, unchanged values are inherited from the previous interaction segment. For multimedia interactions, KVP values for the above-listed dimensions apply only to the interaction segment fact in which the KVP values were attached or updated; they are not inherited from the previous interaction segment.

When populated with KVP data from UserEvents issued by an agent's desktop application, the KVP data values *overwrite* those values that would have been assigned from call-based events. The KVP data from UserEvents, unlike KVP data from call-based events, is not inherited from previous interaction segments. Rather, the KVP data from UserEvents contributes only to the interaction segment that represents the agent's contiguous participation in the voice interaction (those represented by the UserEvent's Agent ID, Endpoint ID, and Connection ID or Call ID). The following exceptions apply:

- If an agent receives a consultation which results in a post-consultation transfer or conference, the KVP data contributes to the interaction segment that represents the receiving agent's post-consultation transfer or conference, rather than to the interaction segment that represents the agent's received consultation.
- If an agent initiates a consultation, the interaction segments that the KVP data contributes to depend on whether the UserEvent contains the original Connection ID or Call ID, or the consultation Connection ID or Call ID. If the UserEvent contains the consultation Connection ID or Call ID, the KVP data contributes to the interaction segment that represents the agent's initiated consultation. If the UserEvent contains the original Connection ID or Call ID, the KVP data contributes to the interaction segment that represents the agent's participation in the original call and any post-consultation conference.

Note: Populating data based on KVP data from UserEvents is not supported for multimedia interactions.

Populating KVP-Based Facts in the Interaction Segment Fact Table

The `USER_DATA` fact columns in interaction segments can be populated with KVP data from call-based events, and/or from UserEvents issued by an agent desktop application after the agent's participation in the call has ended. These columns are treated as discrete measurements, rather than interaction attributes.

For voice interactions that are populated with KVP data from call-based events, `USER_DATA` facts, unlike `USER_DATA` and `USER_DATA_2` dimensions, are *not* propagated from one interaction segment to the next. Instead, the KVP data from call-based events contributes only to the interaction segment(s) that represent(s) the call party that attached or updated the KVP data. For

multimedia interactions, KVP values that contribute to USER_DATA facts apply only to the interaction segment fact in which the KVP values were attached or updated; they are not propagated from one interaction segment to the next.

When populated with KVP data from UserEvents issued by an agent's desktop application, the KVP data values *overwrite* those values that would have been assigned from call-based events. The KVP data from UserEvents contributes only to the interaction segment(s) that represent(s) the agent's contiguous participation in the voice interaction (those represented by the UserEvent's Agent ID, Endpoint ID and Connection ID or Call ID). The following exceptions apply:

- If an agent receives a consultation which results in a post-consultation transfer or conference, the KVP data contributes to the interaction segment that represents the receiving agent's post-consultation transfer or conference, rather than the interaction segment that represents the agent's received consultation.
- If an agent initiates a consultation, the interaction segments that the KVP data contributes to depend on whether the User Event contains the original Connection ID or Call ID, or the consultation Connection ID or Call ID. If the UserEvent contains the consultation Connection ID or Call ID, the KVP data contributes to the interaction segment that represents the agent's initiated consultation. If the UserEvent contains the original Connection ID or Call ID, the KVP data contributes to the interaction segment that represents the agent's participation in the original call and any post-consultation conference.

Note: Populating data based on KVP data from UserEvents is not supported for multimedia interactions.

Interaction Segment Fact Tables

Genesys Info Mart stores interaction segment facts in the following tables:

- Voice interactions:
  - INTERACTION_SEGMENT_FACT
  - VOICE_SEG_FACT_EXT

  Note: Starting with Genesys Info Mart release 7.6.006, storage of interaction segment facts for voice interactions is optional.

- Multimedia interactions:
  - INTERACTION_SEGMENT_FACT
  - MMEDIA_SEG_FACT_EXT

For detailed information about the columns in the INTERACTION_SEGMENT_FACT tables, see the *Genesys Info Mart Reference Manual* for your RDBMS.

Serial and Parallel Interaction Segments

Interaction segment facts for a particular voice or multimedia interaction and its associated resources occur either serially or in parallel.

- For voice interactions:
  - Multiple serial interaction segments for a queue occur if a voice interaction arrives at the queue, is diverted to another resource, and is then transferred back to the same queue.
  - Parallel interaction segments for an agent occur if the voice interaction arrives at an agent, and the agent places the connected party on hold and then initiates a consultation to another resource.
- For multimedia interactions:
  - Multiple serial interaction segments for an interaction queue occur if a multimedia interaction arrives at the interaction queue, is pulled from the interaction queue by another resource, and is then transferred back to the original interaction queue.
  - Parallel interaction segments for an agent occur if a multimedia interaction is accepted by an agent, and the agent then initiates a consultation to another resource.

Populating Resource Roles and Technical Results

Understanding when interaction segment facts are created can help you to determine which types of interaction segments to include in, or exclude from, your queries. You also need to understand the types of resources and the resource roles, role reasons, technical results, and technical result reasons for each resource.

The following subsections describe the resource roles and technical results applicable for the following supported media types:

- Voice interactions (calls)
- Multimedia interactions (see page 42)

Resource Roles and Technical Results for Voice Interactions

This section describes the resource roles and technical results for the following types of voice interaction resources:

- Queue—Genesys Info Mart creates an interaction segment for each ACD queue on which the voice interaction is queued. Genesys Info Mart does not create interaction segments for virtual queues. Virtual queue activity is represented in the `MEDIATION_SEGMENT_FACT` table.

- Routing Point—Genesys Info Mart creates an interaction segment for each routing point, routing queue, service number, and virtual routing point on which the voice interaction requests routing instructions.

  Note: An External Routing Point is not considered a reportable resource, and therefore is not represented by an interaction segment.

- IVR Port—Genesys Info Mart creates an interaction segment each time an IVR port is associated with the voice interaction.
- Agent—Genesys Info Mart creates an interaction segment each time an agent is associated with the voice interaction.
- Other—Genesys Info Mart creates an interaction segment each time a DN that is not considered a queue, Routing Point, IVR port, or agent (such as a voice treatment port DN) is associated with a voice interaction. The resource role and technical result for these interaction segments are similar to those for agent segments.

After you understand these resources and their roles, see Chapter 3 on page 97 for diagrams that depict the interaction segments that result from typical voice interaction flows.

Resource Roles for Voice Interactions

The resource role of the interaction segment depends on how the voice interaction arrives at the resource, as shown in Table 2.

Table 2: Resource Roles—Voice Interactions

Resource Role	How Interaction Arrived at Resource			
	ACD Queue	Routing Point	IVR Port	Agent
Received	The interaction reached the queue directly.	The interaction reached the Routing Point directly.	The interaction reached the IVR port directly.	The interaction reached the agent directly.
Received Transfer	Another resource mute-transferred or two-step transferred the interaction to the queue.	Another resource mute transferred or two-step transferred the interaction to the Routing Point.	Another resource mute transferred or two-step transferred the interaction to the IVR port (either directly or through a queue or Routing Point).	Another resource mute transferred or two-step transferred the interaction to the agent (either directly or through a queue or Routing Point).

Table 2: Resource Roles—Voice Interactions (Continued)

Resource Role	How Interaction Arrived at Resource			
	ACD Queue	Routing Point	IVR Port	Agent
Received Consult	Another resource initiated a consultation to the queue.	Another resource initiated a consultation to the Routing Point.	Another resource initiated a consultation to the IVR port (either directly or through a queue or Routing Point).	Another resource initiated a consultation to the agent (either directly or through a queue or Routing Point).
Routed To	A Routing Point routed the interaction to the queue.	Another Routing Point routed the interaction to the Routing Point.	A Routing Point routed the interaction to the IVR port.	A Routing Point routed the interaction to agent.
Diverted To	Another queue distributed the interaction to the queue.	A queue diverted the interaction to the Routing Point.	A queue diverted the interaction to the IVR port.	A queue diverted the interaction to the agent.
Initiated Consult	Not applicable.	Not applicable.	The IVR port initiated a mute transfer or two-step transfer of the interaction to another resource.	The agent initiated a consultation, mute transfer, or two-step transfer of the interaction to another resource.
In Conference	Not applicable.	Not applicable.	Not applicable.	The agent joined a conference associated with the interaction.[a]
Initiated	Not applicable.	Not applicable.	Not applicable.	The agent initiated a new interaction.
Received Request	Not applicable.	Another resource, such as an IVR port, requested routing instructions from the virtual Routing Point.	Not applicable.	Not applicable.

a. The role reason indicates additional details, depending on the value configured for the `show-conference-detail` option.
When `show-conference-detail` is set to `FALSE`, the role reason is `Unspecified` (applies to both the conference initiator and the conference joiner).
When `show-conference-detail` is set to `TRUE`, the role reason is either `ConferenceInitiator` (for the resource that initiated the conference) or `ConferenceJoined` (for the resource that joined the conference).
Note: The `show-conference-detail` option applies only to interaction segment facts. It does not apply to interaction resource facts, which always show abandoned and conference detail.

Technical Results and Technical Result Reasons for Voice Interactions

The technical result and technical result reason of the interaction segment depend on how the voice interaction leaves the resource, as shown in Table 3.

Table 3: Technical Results—Voice Interactions

Technical Result	Technical Result Reason	How Interaction Exited Resource			
		ACD Queue	Routing Point	IVR Port	Agent
Completed	Unspecified	Not applicable.	Not applicable.	The IVR port completed the interaction.	The agent completed the interaction.
Abandoned	Unspecified	While in the queue, the interaction was abandoned or a consultation was retrieved.	While in the Routing Point, the interaction was abandoned or a consultation was retrieved.	The interaction was abandoned while ringing at the IVR port.	The interaction was abandoned while ringing at the agent.
Transferred	Unspecified	Not applicable.	Not applicable.	The IVR port completed a transfer of the interaction to another resource.	The agent completed a transfer of the interaction to another resource.
Routed	Unspecified	Not applicable.	The Routing Point routed the interaction to another resource.	Not applicable.	Not applicable.
Diverted	Unspecified	The queue diverted the interaction to another resource.	Not applicable.	Not applicable.	Not applicable.

Table 3: Technical Results—Voice Interactions (Continued)

Technical Result	Technical Result Reason	How Interaction Exited Resource			
		ACD Queue	Routing Point	IVR Port	Agent
Redirected	Unspecified	Not applicable.	Not applicable.	Not applicable.	The interaction was diverted from the agent when forwarded to another resource such as voice mail.
	RouteOnNoAnswer	Not applicable.	Not applicable.	The interaction was diverted from the IVR port to another contact center resource as the result of a ring no answer.	The interaction was diverted from the agent to another contact center resource as the result of a ring no answer.
Conferenced	Unspecified	Not applicable.	Not applicable.	Not applicable.	The agent created a conference with another agent.
Customer_Abandoned	From_Queue	The customer abandoned the interaction while waiting in the queue.	The customer abandoned the interaction while waiting in the Routing Point.	Not applicable.	Not applicable.
	From_Hold	Not applicable.	Not applicable.	The customer abandoned the interaction while it was being held by the IVR port.	The customer abandoned the interaction while it was being held by the agent.
	While_Ringing	Not applicable.	Not applicable.	The customer abandoned the interaction before the IVR port could answer it.	The customer abandoned the interaction before the agent could answer it.

Resource Roles and Technical Results for Multimedia Interactions

This section describes the resource roles and technical results for the following types of multimedia interaction resources:

- Interaction queue—Genesys Info Mart creates an interaction segment each time a multimedia interaction is queued to an interaction queue.
- Interaction workbin—An *interaction workbin* is a holding place for interactions. Genesys Info Mart creates an interaction segment each time a multimedia interaction is put into, or retrieved from, an interaction workbin.
- Routing strategy—Genesys Info Mart creates an interaction segment for each routing strategy on which the multimedia interaction requests routing instructions.
- Agent—Genesys Info Mart creates an interaction segment each time an agent is associated with the multimedia interaction.

Equivalency of Multimedia and Voice Resource Types

The resource types for multimedia and voice interactions correspond as follows:

- Interaction queue and interaction workbin are the equivalent of queue.
- Routing strategy is the equivalent of Routing Point.
- Agent is the equivalent of agent.

After you understand these resources and their roles, see Chapter 4 on page 183 for diagrams that depict the interaction segments that result from typical Multimedia interaction flows.

Resource Roles for Multimedia Interactions

The resource role of the interaction segment depends on how the Multimedia interaction arrives at the resource, as shown in Table 4.

Table 4: Resource Roles—Multimedia Interactions

Resource Role	How Interaction Arrived at Resource			
	Interaction Queue	Interaction Workbin	Routing Strategy	Agent
Received	The interaction was placed in the interaction queue upon entry into the contact center.	Not applicable.	Not applicable.	Not applicable.

Table 4: Resource Roles—Multimedia Interactions (Continued)

Resource Role	How Interaction Arrived at Resource			
	Interaction Queue	Interaction Workbin	Routing Strategy	Agent
Received Transfer	Another resource transferred the interaction to the interaction queue (inbound or outbound).	Another resource transferred the interaction to the interaction workbin.	Not applicable.	Another agent transferred, or attempted to transfer, the interaction to the agent.
Received Consult	An agent initiated a consultation to the interaction queue.	Not applicable.	Not applicable.	Another agent initiated a consultation to the agent, either directly or through a queue. **Note:** *E-mail collaboration,* available in Genesys Agent Desktop, is an example of a consultation scenario.
Routed To	A routing strategy routed the interaction to the interaction queue.	A routing strategy routed the interaction to the interaction workbin.	Not applicable.	A routing strategy routed the interaction to the agent.
Initiated Consult	Not applicable.	Not applicable.	Not applicable.	The agent initiated a consultation to another agent, either directly or through a queue (for example, using e-mail collaboration).

Table 4: Resource Roles—Multimedia Interactions (Continued)

Resource Role	How Interaction Arrived at Resource			
	Interaction Queue	Interaction Workbin	Routing Strategy	Agent
Received Transfer	Another resource transferred the interaction to the interaction queue (inbound or outbound).	Another resource transferred the interaction to the interaction workbin.	Not applicable.	Another agent transferred, or attempted to transfer, the interaction to the agent.
Received Consult	An agent initiated a consultation to the interaction queue.	Not applicable.	Not applicable.	Another agent initiated a consultation to the agent, either directly or through a queue. **Note:** *E-mail collaboration,* available in Genesys Agent Desktop, is an example of a consultation scenario.
Routed To	A routing strategy routed the interaction to the interaction queue.	A routing strategy routed the interaction to the interaction workbin.	Not applicable.	A routing strategy routed the interaction to the agent.
Initiated Consult	Not applicable.	Not applicable.	Not applicable.	The agent initiated a consultation to another agent, either directly or through a queue (for example, using e-mail collaboration).

Table 4: Resource Roles—Multimedia Interactions (Continued)

Resource Role	How Interaction Arrived at Resource			
	Interaction Queue	Interaction Workbin	Routing Strategy	Agent
In Conference	Not applicable.	Not applicable.	Not applicable.	The agent accepted an invitation to join an interaction in which another agent was already engaged. **Note:** This role is typically used only in online interactions, such as when multiple agents conferenced in a chat with a customer.
Initiated	A new acknowledgement or autoresponse interaction was generated and placed in the interaction queue (outgoing).	Not applicable.	Not applicable.	The agent initiated a new interaction.
Puller	Not applicable.	Not applicable.	The routing strategy pulled the interaction from an interaction queue or interaction workbin.	The agent pulled the interaction from an interaction queue, interaction workbin, or strategy.

Table 4: Resource Roles—Multimedia Interactions (Continued)

Resource Role	How Interaction Arrived at Resource			
	Interaction Queue	Interaction Workbin	Routing Strategy	Agent
Redirected To	An interaction has been returned to the queue from which it was pulled. An interaction is redirected back to a queue if: • A routing strategy pulled the interaction from the queue and offered it to an agent, but the agent did not accept the invitation into the interaction. • The interaction has been assigned to an agent for longer than the `handling-timeout` that is configured in Interaction Server. • The interaction has been assigned to a routing strategy for longer than the `routing-timeout` that is configured in Interaction Server. In this situation, the role reason indicates `PulledBackTimeout`.	Not applicable.	Not applicable.	Not applicable.

Technical Results and Technical Result Reasons for Multimedia Interactions

The technical result and technical result reason of the interaction segment depend on how the Multimedia interaction leaves the resource, as shown in Table 5.

Note: The Genesys Info Mart `show-abandoned-detail` configuration option enables the population of the `Customer_Abandoned` Technical Result and the associated Technical Result Reasons, which makes it possible to report on customer abandon scenarios. If the `show-abandoned-detail` configuration option is set to `False`, Genesys Info Mart uses the Technical Result of `Abandoned` with a Technical Result Reason of `Unspecified` for customer abandon scenarios.

Table 5: Technical Results—Multimedia Interactions

Technical Result	Technical Result Reason	How Interaction Exited Resource			
		Interaction Queue	Interaction Workbin	Routing Strategy	Agent
Completed	Unspecified	Not applicable.	Not applicable.	The routing strategy completed the interaction.	The agent handled the interaction.
Abandoned	Revoked	Not applicable.	Not applicable.	Not applicable.	The agent did not accept the invitation into the interaction that was offered by another agent before the `delivering-timeout` that is configured in Interaction Server. As a result, the invited agent is removed from the interaction, but the inviting agent continues to work on the interaction.

Table 5: Technical Results—Multimedia Interactions (Continued)

Technical Result	Technical Result Reason	How Interaction Exited Resource			
		Interaction Queue	Interaction Workbin	Routing Strategy	Agent
Abandoned	Rejected	Not applicable.	Not applicable.	Not applicable.	The agent rejected the invitation into the interaction that was offered by another agent. As a result, the invited agent is removed from the interaction, but the inviting agent continues to work on the interaction.
Transferred	Unspecified	Not applicable.	Not applicable.	The routing strategy completed a transfer of the interaction to another resource.	The agent completed a transfer of the interaction to another resource.
Routed	Unspecified	Not applicable.	Not applicable.	The routing strategy routed the interaction to another resource.	Not applicable.
Customer_ Abandoned	From_ Queue	The customer abandoned the interaction while waiting in the interaction queue.[a, b]	Not applicable.	The customer abandoned the interaction while the routing strategy was routing it.[a, b]	Not applicable.

Table 5: Technical Results—Multimedia Interactions (Continued)

Technical Result	Technical Result Reason	How Interaction Exited Resource			
		Interaction Queue	Interaction Workbin	Routing Strategy	Agent
Customer_ Abandoned (cont.)	While_ Ringing	Not applicable.	Not applicable.	Not applicable.	The customer abandoned the interaction before the agent accepted it.[a, b]
Pulled	Unspecified	A routing strategy or agent pulled the interaction from the interaction queue (inbound or outbound).	A routing strategy or agent pulled the interaction from the interaction workbin.	An agent pulled the interaction from the strategy.	Not applicable.
Redirected	Revoked	Not applicable.	Not applicable.	Not applicable.	A routing strategy invited the agent into the interaction, but the agent did not accept the invitation before the `delivering-timeout` that is configured in Interaction Server. As a result, the interaction is placed back into the queue from which it came.

Table 5: Technical Results—Multimedia Interactions (Continued)

Technical Result	Technical Result Reason	How Interaction Exited Resource			
		Interaction Queue	Interaction Workbin	Routing Strategy	Agent
Redirected (cont.)	Rejected	Not applicable.	Not applicable.	Not applicable.	A routing strategy invited the agent into the interaction, but the agent rejected the invitation. As a result, the interaction is placed back into the queue from which it came.
	PulledBack Timeout	Not applicable.	Not applicable.	The routing strategy has been working on the interaction for longer than the `routing-timeout` that is configured in Interaction Server. As a result, the routing is considered a failure and the interaction is placed back into the queue from which it came.	Not applicable.

Table 5: Technical Results—Multimedia Interactions (Continued)

Technical Result	Technical Result Reason	How Interaction Exited Resource			
		Interaction Queue	Interaction Workbin	Routing Strategy	Agent
Redirected (cont.)	Unspecified	Not applicable.	Not applicable.	Not applicable.	The agent has been working on the interaction for longer than the `handling-timeout` that is configured in Interaction Server without making any other requests to Interaction Server. As a result, the agent is considered inactive and the interaction is placed back into the queue from which it came.

[a] This technical result is used only when the interaction is stopped because it was abandoned by the customer. In Media Server compatibility mode (for example, see the Chat Server configuration option, `stop-abandoned-interaction`), the interaction is stopped when it is abandoned by the customer. If the interaction is not stopped, a `Customer Abandoned` technical result is not used because the interaction will live on past the point of the `Customer Abandoned` and other technical results are more appropriate. In that case, the `ABANDONED_BY_CUSTOMER_FLAG` in the `MMEDIA_SEG_FACT_EXT` table can be used to determine that the customer abandoned the interaction during the interaction segment, even though the interaction was not stopped, and processing of the interaction continued.

[b] This technical result is used only for online interactions, such as when a customer abandons a chat interaction.

Populating Interaction Resource Data

The `INTERACTION_RESOURCE_FACT` (IRF) table is the root table supplied in Genesys Info Mart for use by Interactive Insights. It is a rollup of the lower level interaction-segment fact rows for a resource that participated in an interaction.

This table facilitates the creation of reports and serves as one of the primary tables from which AG2_* aggregation tables are populated.

Genesys Info Mart creates interaction resource facts to represent the involvement of a contact center handling resource in an interaction. *Handling resources* are those having the greatest interest for reporting—agents, self-service IVRs, and DNs without an agent.

IRF resources also include mediation resources where the IRF ends in mediation (such as queues, routing points, and non-self-service IVRs).

Note: Genesys Info Mart 7.6 supports Interaction Resource Fact data for voice interactions only.

The IRF table supplies a single row within the Genesys Info Mart schema, which simplifies the SQL needed to generate reports on the resources that handle interactions within the contact center.

The IRF table:

- Simplifies report queries by integrating conference and consult durations into the original handling resource row.

  Starting with Genesys Info Mart release 7.6.006, the Genesys Info Mart application can be configured to create a separate row for data pertaining to the initiator of a consultation, for customers who need to represent separately each consultation initiated by a resource during processing.
- Condenses Interaction Segment Fact data to show only the involvement of resources having the greatest interest for reporting—agents, self-service IVRs, and DNs without an agent.
- Aggregates the total queue, route point, and IVR wait times prior to the handling resource and stores them with the handling resource row in separate columns (similar to corresponding columns in the INTERACTION_FACT table).
- Stores response duration per routing attempt, in addition to the initial routing sequence.
- Records the state of the resource immediately prior to involvement in the interaction, which can be used to determine calls in or out during AfterCallWork or NotReady states.

Genesys Info Mart uses the following additional tables to support the IRF table:

VOICE_RES_FACT_EXT is a fact table that rolls up the VOICE_SEG_FACT_EXT table rows that match the interaction segment facts used to populate the IRF row. These are the voice states that the resource was in during the life of the interaction and they include time spent in after call work. The rollup to this table is specific to the resource represented in the IRF row.

Note: Starting with Genesys Info Mart release 7.6.006, storage of voice Interaction Segment Facts in the INTERACTION_SEGMENT_FACT and VOICE_RES_FACT_EXT tables is optional. However, even if the Genesys Info Mart application has been configured not to store Interaction Segment Fact data for voice interactions, the Genesys Info Mart server continues to transform voice Interaction Segment Fact data as part of its processing, and it continues to base the transformation of Interaction Resource Facts on Interaction Segment Fact data.

The IXN_RESOURCE_STATE_FACT table contains all the individual states, durations and interval clips for each state the interaction fact resource was in during the interaction.

The INTERACTION_RESOURCE_STATE dimension table contains the states defined for a resource handling the interaction.

The major factor used to determine whether or not to create a row in the table is whether the resource type in the interaction segment fact rows is a handling resource, or *resource of interest*.

Resources of interest in the context of interaction resource fact rows include:

- Agents
- IVR Ports (indicated as self-service IVR applications via attached data)
- Others (extensions, ACD positions, and so on)
- DNs with no Person object associated.

Each interaction resource fact represents:

- The contiguous time span of the association between the resource and the interaction.
- The particular role played by the resource (the *resource role*).
- The result of the association from the perspective of the resource (the *technical result*).

Interaction resource facts are populated in Genesys Info Mart only when the entire interaction is completed.

Populating Interaction Resource Facts and Dimensions

Genesys Info Mart populates interaction resource facts in the following ways.

An IRF row is created for all interaction segment fact rows that have a resource type that is a resource of interest and a technical descriptor key that has any of the following resource_role values:

- Initiated
- Received
- Routed_To
- Diverted_To

- Received_Consult (in two-step consult transfer/conference cases)
- Received_Transfer (in blind and immediate transfer/conference cases)
- InConference (reason = conf_joined in blind and immediate conference cases)
- InitiatedConsult (only if you configure Genesys Info Mart to store a separate IRF row for initiated consultations by setting [gim-etl] populate-voice-init-consult-in-irf=TRUE)

Along with InitiatedConsult, the other resource role values are either overlaps of a previous interaction segment row or a continuation of another interaction segment fact, and thus a continuation of a previously created interaction resource fact as well.

These types of interaction segments are combined with the previously created interaction resource fact row to show a contiguous participation in the interaction. These resource_roles include:

- InitiatedConsult (except where separate Initiated Consult rows are being populated)
- Received_Transfer (in two-step consult transfer cases)
- InConference (reason = conf_joined in two-step consult conference cases)
- InConference (reason = conf_initiator)

Each interaction resource fact row also includes all prior queue, routing point, and IVR Port (non-self-service) counts and durations that were part of the distribution of the interaction to the resource.

When the application has been configured to create separate rows for the InitiatedConsult resource role, the actual values of counts and durations related to the initiated consultation (for example, CONS_INIT_DIAL_COUNT, CONS_INIT_DIAL_DURATION, AGENT_TO_AGENT_CONS_COUNT, and AGENT_TO_AGENT_CONS_DURATION) are populated in the separate Initiated Consult row; in the original IRF row, these values are populated as zeroes (0).

Dimensions Associated with the IRF Table

- Interaction resource fact (IRF) start and end dates and times are stored as facts in two time zones (GMT and standard). Multiple references to the ENTERPRISE_DATE, TENANT_DATE, and TIME_OF_DAY dimensions indicate the start date and time of the interaction segment in two time zones (GMT and standard).

  For the separate Initiated Consult row, the start time is the time that the IRF resource initiated the consultation, and the end time is the time that the IRF resource abandoned, completed, transferred, or conferenced the consultation call.

  Media-neutral counts and durations are provided. These categorize the time spent on various activities, such as time spent in a queue, time spent handling the interaction, and time spent wrapping up the interaction. Since

all IRFs do not directly involve a customer, separate counts and durations are included to reflect the time that the customer spent waiting versus being helped.

Note: For more information about how Genesys Info Mart represents dates and times of day, see Chapter 5 on page 207.

- The RESOURCE_ dimension indicates the routing point, queue, IVR port, or agent that processed the underlying interaction segment.

Note: The RESOURCE_ dimension actually has two references, RESOURCE_KEY and MEDIA_RESOURCE_KEY, which typically refer to the same resource. The following are exceptions:

- For IVR Ports, RESOURCE_KEY is for IVR Port and MEDIA_RESOURCE_KEY for the associated DN.
- For Agents, RESOURCE_KEY is for the Agent, and MEDIA_RESOURCE_KEY for the associated DN.

- The PLACE dimension indicates the place where the IRF was processed.
- The TENANT dimension identifies the tenant of the resource.
- The TECHNICAL_DESCRIPTOR dimension identifies the resource role and technical result of the IRF. For information about the resource roles and technical results for interaction resources, see Table 6 on page 59.
- The INTERACTION_DESCRIPTOR dimension identifies the customer segment (indicating the value of the customer), the type of service being requested, and the business result of the IRF.
- The STRATEGY dimension identifies the Genesys routing strategy or IVR application that processed the IRF.
- The ROUTING_TARGET, REQUESTED_SKILL, and REQUESTED_SKILL_COMBINATION dimensions indicate the Genesys Universal Routing Server's activities by identifying the target that was selected and the list of skills that were required to process the IRF.
- As indicated above, many interaction attributes are formally modeled. However, deployment-specific attributes, in the form of user-defined attached data, are represented in the model. Low cardinality string user data associated with the interaction resource are represented using the USER_DATA and USER_DATA_2 dimensions. Numeric user data and high cardinality string user data associated with the interaction resource are represented as facts.
- The CUSTOMER dimension represents the ID of the customer that is involved in the interaction.

Populating KVP-Based Dimensions in the Interaction Resource Fact Table

As described in section "Populating KVP-Based Dimensions in the Interaction Segment Fact Table" on page 34, the following interaction segment dimensions can be populated with KVP data from call-based events, and/or from UserEvents issued by an agent desktop application after the agent's participation in the call has ended:

- CASE_ID
- CUSTOMER
- INTERACTION_DESCRIPTOR
- REQUESTED_SKILL
- REQUESTED_SKILL_COMBINATION
- USER_DATA
- USER_DATA_2

Note the following:

- The KVP data that is used to populate REQUESTED_SKILL and REQUESTED_SKILL_COMBINATION dimensions is set in call-based events by routing strategies, and cannot be set by agent desktop applications through UserEvents.
- Populating data based on UserEvent KVPs is not supported for multimedia interactions.

When populating Interaction Resource Facts as a summary of a set of underlying interaction segment facts:

- Values for the above-listed dimensions come from the interaction segment fact that represents the start of the resource's contiguous involvement in the interaction. If you configure Genesys Info Mart to store a separate IRF row for initiated consultations (which overlap with the IRF that represents the start of the resource's contiguous involvement), the values for the above-listed dimensions come from the interaction segment fact that represents the initiated consultation.
- KVP values associated with an initiated consultation that is encapsulated within the Interaction Resource Fact are not presented. However, if the Genesys Info Mart application has been configured to create separate rows for initiated consultations, then the Initiated Consult row is populated with the KVP values associated with the interaction segment fact on which the IRF row is based.
- KVP values that are associated with a post-consultation transfer or conference that is encapsulated within the Interaction Resource Fact come from the interaction segment that represents the received consultation, but are overwritten by values associated with any subsequent post-consultation transfer or conference.

Populating KVP-Based Facts in the Interaction Resource Fact Table

As described in section "Populating KVP-Based Facts in the Interaction Segment Fact Table" on page 35, the USER_DATA interaction segment facts can be populated with KVP data from call-based events, and/or from UserEvents issued by an agent desktop application after the agent's participation in the call has ended.

When populating Interaction Resource Facts as a summary of a set of underlying interaction segment facts:

- Values for the USER_DATA facts come from the interaction segment fact that represents the start of the resource's contiguous involvement in the interaction.
- KVP values associated with an initiated consultation that is encapsulated within the Interaction Resource Fact are not presented. However, if the Genesys Info Mart application has been configured to create separate rows for initiated consultations, then the Initiated Consult row is populated with the KVP values associated with the interaction segment fact on which the IRF row is based.
- KVP values that are associated with a post-consultation transfer or conference that is encapsulated within the Interaction Resource Fact come from the interaction segment that represents the received consultation, but are overwritten by values associated with any subsequent post-consultation transfer or conference.

Abandoned and Terminated Interactions

In order to represent every interaction in the IRF table, rows are created to represent attempts to reach a resource of interest. These rows contain data about queues, routing points, and routing queues where the interaction segment fact has been abandoned in the distribution device by the customer, during a consultation, or during an internal call initiated by a resource of interest.

Abandoned Interactions

Rows relating to abandoned interactions are identified in the interaction segment fact data where the resource type is not a handling resource and the segment has a technical result value in the technical descriptor key of CUSTOMER_ABANDONED or ABANDONED.

In these cases a row is created to represent an attempt to reach another handling resource. This interaction resource fact row contains data from all prior related mediation device segments that were involved with the attempt to reach another handling resource.

Interactions Terminated in a Mediation IVR Port or DN (No IVR or Agent Resource Association)

A *mediation IVR port* in the context of the Interaction Resource Fact table is an IVR port resource that is not considered to be self-service because the IVR application (or a URS strategy on its behalf) did not set attached data to indicate self service.

In the case where a call is in a mediation IVR port or DN with no associated resource and terminates there, a row is created from the segment to represent that segment handling the interaction.

This row also contains data about any mediation devices used to distribute the call to the terminating segment.

Interaction Resource Fact Tables

Genesys Info Mart stores interaction resource facts in the following tables:

- `INTERACTION_RESOURCE_FACT`
- `VOICE_RES_FACT_EXT`

For detailed information about the columns in the `INTERACTION_RESOURCE_FACT` tables, see the *Genesys Info Mart Reference Manual* for your RDBMS.

Populating Resource Roles and Technical Results

Understanding when interaction resource facts are created can help you to determine which types of interaction resources to include in, or exclude from, your queries. It is important to understand the types of resources and the resource roles, role reasons, technical results, and technical result reasons for each resource.

The following subsections describe the resource roles and technical results applicable for voice which is the only supported media type in Genesys Info Mart 7.6.

Resource Roles and Technical Results

This section describes the resource roles and technical results for the following types of interaction resources:

- IVR Port—Genesys Info Mart creates interaction resource facts each time a self-service IVR port is associated with the voice interaction.
- Agent—Genesys Info Mart creates interaction resource data each time an agent is associated with the voice interaction.
- DNs with no Person Object associated.

- Other—Genesys Info Mart creates interaction resource data each time an extension, ACD position, or other resource is associated with a voice interaction. The resource role and technical result for these interaction resource data are similar to those for agent interaction resource data.

After you understand these resources and their roles, see Chapter 3 on page 97 for diagrams that depict the interaction segments that result from typical voice interaction flows.

Resource Roles, Technical Results, and Technical Result Reasons

The resource role of the interaction resource depends on how the voice interaction arrives at the resource. The technical result and technical result reason of the interaction resource depend on how the voice interaction leaves the resource. See Table 6 for the roles, results, and reasons used for the IRF table.

Table 6: Resource Roles, Technical Results, and Reasons

Resource Role	Role Reason	Technical Result	Result Reason	Comment
Received	Unspecified	Customer Abandoned	Abandoned from Hold	Denotes that the resource received an inbound interaction without the benefit of prior distribution devices moving the call to it. This is typical for internal call types dialed directly to the resource. `Received/Conferenced` in the IRF context indicates the initiator of a conference call. Interactions that end in a non-self-service IVR have the value `CustomerAbandoned/AnsweredByOther` to indicate that the customer abandoned the call before service could be given.
	Unspecified	Customer Abandoned	Abandoned while Queued	
	Unspecified	Customer Abandoned	Abandoned while Ringing	
	Unspecified	Redirected	Route on no Answer (RONA)	
	Unspecified	Transferred	Unspecified	
	Unspecified	Conferenced	Unspecified	

Table 6: Resource Roles, Technical Results, and Reasons (Continued)

Resource Role	Role Reason	Technical Result	Result Reason	Comment
Received Transfer	Unspecified	Customer Abandoned	Abandoned from Hold	Denotes that the IRF was created as a result of the resource being transferred to the interaction by a resource other than a non-self-service IVR port. `ReceivedTransfer/Conferenced` in the IRF context indicates the initiator of a conference call. Interactions that end in a non-self-service IVR have the value `CustomerAbandoned/AnsweredByOther` to indicate that the customer abandoned the call before service could be given.
	Unspecified	Customer Abandoned	Abandoned while Queued	
	Unspecified	Customer Abandoned	Abandoned while Ringing	
	Unspecified	Redirected	Route on no Answer (RONA)	
	Unspecified	Redirected	Unspecified	
	Unspecified	Abandoned	Unspecified	
	Unspecified	Completed	Unspecified	
	Unspecified	Transferred	Unspecified	
	Unspecified	Conferenced	Unspecified	

Table 6: Resource Roles, Technical Results, and Reasons (Continued)

Resource Role	Role Reason	Technical Result	Result Reason	Comment
Received Consult	Unspecified	Redirected	Route on no Answer (RONA)	Denotes that the IRF was created for a resource as the result of a consultation only (the resource did not receive a transfer, or was not joined into a conference). This enables counting of consultations received by a resource. The `ReceivedConsult/Conferenced` row represents the unlikely event that a resource receives a consultation, consults another resource then creates a conference call between the resources. This combination in the IRF context indicates the initiator of a conference call.
	Unspecified	Redirected	Unspecified	
	Unspecified	Completed	Unspecified	
	Unspecified	Transferred	Unspecified	
	Unspecified	Abandoned	Unspecified	
	Unspecified	Conferenced	Unspecified	

Table 6: Resource Roles, Technical Results, and Reasons (Continued)

Resource Role	Role Reason	Technical Result	Result Reason	Comment
Routed To	Unspecified	Customer Abandoned	Abandoned from Hold	Denotes an interaction that was delivered to the resource via a routing point. `RoutedTo/Conferenced` in the IRF context indicates the initiator of a conference call. Interactions that end in a non-self-service IVR have the value `CustomerAbandoned/AnsweredByOther` to indicate that the customer abandoned the call before service could be given.
	Unspecified	Customer Abandoned	Abandoned while Queued	
	Unspecified	Customer Abandoned	Abandoned while Ringing	
	Unspecified	Redirected	Route on no Answer (RONA)	
	Unspecified	Redirected	Unspecified	
	Unspecified	Abandoned	Unspecified	
	Unspecified	Completed	Unspecified	
	Unspecified	Transferred	Unspecified	
	Unspecified	Conferenced	Unspecified	
Diverted To	Unspecified	Customer Abandoned	Abandoned from Hold	Denotes an interaction that was delivered to the resource via an ACD queue. `DivertedTo/Conferenced` in the IRF context indicates the initiator of a conference call. Interactions that end in a non-self-service IVR have the value `CustomerAbandoned/AnsweredByOther` to indicate that the customer abandoned the call before service could be given.
	Unspecified	Customer Abandoned	Abandoned while Queued	
	Unspecified	Customer Abandoned	Abandoned while Ringing	
	Unspecified	Redirected	Route on no Answer (RONA)	
	Unspecified	Redirected	Unspecified	
	Unspecified	Abandoned	Unspecified	
	Unspecified	Completed	Unspecified	
	Unspecified	Transferred	Unspecified	
	Unspecified	Conferenced	Unspecified	

Table 6: Resource Roles, Technical Results, and Reasons (Continued)

Resource Role	Role Reason	Technical Result	Result Reason	Comment
In Conference	Unspecified	Customer Abandoned	Abandoned while Ringing	Denotes that the IRF was created for a resource as the result of a conference call in which the resource joined the conference. `InConference/Conferenced` in the IRF context indicates that after joining the conference, the joining resource was the initiator of a subsequent conference.
	Conference Joined	Customer Abandoned	Abandoned while Ringing	
	Unspecified	Redirected	Route on no Answer (RONA)	
	Unspecified	Redirected	Unspecified	
	Unspecified	Transferred	Unspecified	
	Unspecified	Abandoned	Unspecified	
	Conference Joined	Abandoned	Unspecified	
	Conference Joined	Completed	Unspecified	
	Unspecified	Completed	Unspecified	
	Unspecified	Conferenced	Unspecified	
Initiated	Unspecified	Conferenced	Unspecified	Denotes that the resource in the IRF row initiated either an internal interaction or an outbound interaction. `Initiated/Conferenced` in the IRF context indicates the resource initiated a call and was the initiator of a conference call.
	Unspecified	Transferred	Unspecified	
	Unspecified	Completed	Unspecified	
	Unspecified	Abandoned	Unspecified	
	Unspecified	DestinationBusy	Unspecified	

Table 6: Resource Roles, Technical Results, and Reasons (Continued)

Resource Role	Role Reason	Technical Result	Result Reason	Comment
Initiated Consult (if the application has been configured to create a separate row for this role)	Unspecified	Abandoned	Unspecified	Denotes that the IRF was created for a resource that initiated a consultation. The technical result applies specifically to the result of the consultation initiation segment.
	Unspecified	Completed	Unspecified	
	Unspecified	Transferred	Unspecified	
	Unspecified	Conferenced	Unspecified	

Populating Interaction Data

Genesys Info Mart creates interaction facts as a summary of the underlying interaction segment facts. Whereas interaction segment facts represent interactions from the perspective of contact center resources, interaction facts represent interactions from the perspective of the customer experience.

Note: Starting with Genesys Info Mart release 7.6.006, storage of voice Interaction Segment Facts in the `INTERACTION_SEGMENT_FACT` and `VOICE_RES_FACT_EXT` tables is optional. However, even if the Genesys Info Mart application has been configured not to store Interaction Segment Fact data for voice interactions, the Genesys Info Mart server continues to transform voice Interaction Segment Fact data as part of its processing, and it continues to base the transformation of voice Interaction Facts on Interaction Segment Fact data.

Each interaction fact represents:

- The time span of the overall interaction, which encompasses the time spans of its individual, contiguous interaction segments.
- Information that identifies the interaction parties.
- Counts and durations of the interaction segments, by types of resources, activities, and customer interactions.
- Service indicators.
- User data that is attached to the interaction.

Populating Interaction Facts and Dimensions

Genesys Info Mart populates voice and Multimedia interactions in the following ways:

- The ENTERPRISE_DATE dimension, TENANT_DATE dimension, DATE_TIME dimension, TIME_OF_DAY dimension, and start time facts are inherited from the earliest start time of the underlying interaction segments. End time facts represent the latest end time of the underlying interaction segments. In a network routing solution, all underlying network and premise segments are considered.

  For active Multimedia interactions, the ACTIVE_FLAG field is set to 1, and end time facts are set to a date far in the future, so that applications do not have to test for null. For completed interactions, ACTIVE_FLAG is set to 0 and end time facts are set to the latest end time of the underlying interaction segments.

  For more information about how Genesys Info Mart represents dates and times of day, see Chapter 5 on page 207.
- The TENANT dimension is inherited from the underlying interaction segment with the lowest ordinal. This is the first interaction segment that was created for the interaction, and it generally has the earliest start time. In a network routing solution, all underlying network and premise segments are considered. If premise segments exist, the TENANT dimension is the tenant of the first premise segment. Otherwise, the TENANT dimension is the tenant of the first network segment.
- The INTERACTION_TYPE and MEDIA_TYPE dimensions are inherited from the underlying interaction segment with the lowest ordinal. This is the first interaction segment that was created for the interaction, and it generally has the earliest start time. In a network routing solution, all underlying network and premise segments are considered.
- The CURRENCY, CUSTOMER, INTERACTION_DESCRIPTOR, REQUESTED_SKILL, REQUESTED_SKILL_COMBINATION, USER_DATA, and USER_DATA_2 dimensions are inherited from the underlying interaction segment with the highest ordinal. This is the last interaction segment that was created for the interaction, and it generally has the latest start time. In a network routing solution, all underlying network and premise segments are considered.
- The PLACE, RESOURCE_, and TECHNICAL_DESCRIPTOR dimensions are inherited from (a) the underlying interaction segment in which the call was abandoned or (b) if the call was not abandoned, the underlying interaction segment with the latest end time. This reflects the last place, resource, resource role, and technical result that were associated with the interaction. In a network routing solution, all underlying network and premise segments are considered.
- State counts and durations (for example, ALERT_COUNT and ALERT_DURATION) summarize the amount of time spent on various activities. Segment counts and durations (for example, QUEUE_SEGMENT_COUNT and QUEUE_SEGMENT_

DURATION) summarize the amount of time different types of resources spent processing the interaction (for voice interactions, the resource types are: queue, Routing Point, IVR port, and agent; for Multimedia interactions, they are interaction queue, interaction workbin, routing strategy, and agent). All counts and durations are simple sums of the values of the underlying interaction segments. As such, they contain overlaps, because there can be parallel interaction segments (see "Serial and Parallel Interaction Segments" on page 37). In a network routing solution, counts and durations exclude network resource segments.

- TOTAL_DURATION is the time interval, in seconds, from the beginning of the first interaction segment to the end of the last interaction segment. In a network routing solution, this includes all underlying network and premise segments.
- USER_DATA facts are aggregated from the underlying interaction segments on the basis of the configured method (first, last, minimum, or maximum).

Interaction Fact Tables

Genesys Info Mart stores interaction facts in the following tables:

- Voice interactions:
  - INTERACTION_FACT
  - VOICE_IXN_FACT_EXT
- Multimedia interactions:
  - INTERACTION_FACT
  - MMEDIA_IXN_FACT_EXT

For detailed information about the columns in the interaction fact tables, see the *Genesys Info Mart Reference Manual* for your RDBMS.

Populating Mediation Segments

Note: The MEDIATION_SEGMENT_FACT table was formerly called the VQ_SEGMENT_FACT table. Genesys Info Mart 7.6 supplies a view for VQ_SEGMENT_FACT to preserve existing report queries.

The mediation segment fact table describes interaction activity that involves mediation DNs, such as virtual and ACD queues. The *grain* spans the time that 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 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, both active and completed virtual queue activity is populated.

Mediation Segments and Queues

A mediation segment fact is created each time an ACD or virtual queue is used during interaction processing. 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. Additional data is provided to describe the association between the mediation segment fact and the target interaction segment fact row that received the interaction via the ACD or virtual queue.

For voice only, there are also links to the associated interaction resource fact, during which time the mediation represented by the mediation segment fact occurred.

Note: The Genesys Info Mart `populate-virtual-queue-facts` configuration option, in the `optional-tables` section of the Genesys Info Mart Application object, enables population of the mediation segment facts. This option specifies whether virtual queue activity should be populated. The `populate-acd-queue-facts` option, also in the `optional-tables` section of the Genesys Info Mart Application object, specifies whether ACD queue activity should be populated.

Each mediation segment fact represents:

- The particular role played by the ACD or virtual queue resource. For information about the resource roles that apply to queues, see “Resource Roles for Queues” on page 70.
- The contiguous time span of the association between the resource and the interaction segment that was the target of the routing process from an ACD or virtual queue perspective.
- The result of the association from the perspective of the queue resource to the target resource is chosen during routing. For information about the technical results and technical result reasons that apply to ACD and virtual queues, refer to Table 7 on page 70.

Note: The mediation segment fact describes virtual queue usage within your routing strategies. Virtual queue activity occurs within the context of a voice or Multimedia interaction. As such, a mediation segment fact may span several interaction segment facts. The voice or Multimedia interaction activity itself is captured in the interaction fact and in its underlying interaction segment facts.

For voice, the activity is also captured in the associated interaction resource fact, for which there will be only one row (not multiple rows like interaction segment fact).

Populating Mediation Segment Facts and Dimensions

Genesys Info Mart populates mediation segments in the following ways:

- The ENTERPRISE_DATE, TENANT_DATE, DATE_TIME, and TIME_OF_DAY dimensions, and 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 the interaction is abandoned while in the queue.
  - The moment the interaction is distributed from the queue to some target resource.
  - The moment the interaction is cleared from the queue, such as when a routing strategy routes the interaction from a parallel queue, or removes the interaction from the queue as it clears the routing targets for which it was waiting.

  For more information about how Genesys Info Mart represents dates and times of day, see Chapter 5 on page 207.
- The TENANT dimension identifies the tenant to which the queue resource belongs.
- The RESOURCE_ dimension identifies the queue resource 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 applicable to ACD and virtual queues, see "Populating ACD and Virtual Queue Resource Roles and Technical Results" on page 69.
- The TARGET_IXN_SEGMENT_ID provides a link between the mediation segment fact and the interaction segment fact that was the target of the routing process associated with the queue. This provides the means to associate the queue with the target of the routing strategy for virtual queue reporting. If you configured Genesys Info Mart not to store voice interaction segment facts, this column is set to 0 for voice media.
- The TARGET_SEG_FACT_EXT_KEY provides a link between the queue and the related media-specific statistics associated with the target interaction segment fact row. If you configured Genesys Info Mart not to store voice interaction segment facts, this column is set to 0 for voice media.
- 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 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 queue perspective. It is measured from the time the interactions entered the queue, to the time it was answered by a contact center resource.
- The ANSWER_THRESHOLD contains the configured value used to calculate the met threshold flag indicator (MET_THRESHOLD_FLAG).
- The PLACE dimension identifies the place associated with the target of the routing process.
- In addition to the queue resource associated with the mediation segment, the RESOURCE_ dimension identifies the contact center resource that was the routing target from the queue.
- QUEUE_DURATION is the length of time that the interaction was in the ACD queue or virtual queue (as indicated by URS).
- TOTAL_DURATION is the length of time that the interaction was in the ACD or virtual queue plus any alerting time that occurred at the target resource before the interaction was answered or abandoned.
- The INTERACTION_TYPE and MEDIA_TYPE dimensions are inherited from the underlying interaction segment with the lowest ordinal. This is the first interaction segment that was created for the interaction, and it generally has the earliest start time. In a network routing solution, all underlying network and premise segments are considered.
- The RESOURCE_GROUP_COMBINATION dimension records the virtual queue or queue membership in one or more groups, while the TARGET_RESOURCE_GROUP_COMBO dimension records the target membership in one or more groups.

For voice only:

- TARGET_IXN_RESOURCE_ID provides a link between the mediation segment fact and the interaction resource fact that was the target of the routing process associated with the queue. This provides the means to associate the queue with the target of the routing strategy for virtual queue reporting.
- TARGET_RES_FACT_EXT_KEY provides a link between the queue and the related media-specific statistics that are associated with the target interaction resource fact row.

Populating ACD and Virtual Queue Resource Roles and Technical Results

Understanding when mediation segment facts are created can help you to determine which types of mediation segments to include in, or exclude from, your queries. It is important to understand the resource roles, technical results, and technical result reasons for each resource.

Resource Roles for Queues

The resource role of the mediation segment depends on how the voice or Multimedia interaction arrives at the resource.

Each ACD or virtual queue row in the mediation segment fact table has a `resource_role` of `Received` or `Received_Consult`.

For ACD queues, `Received_Consult` indicates that the interaction arrived in the ACD queue as the result of an active consultation between contact center resources and was still in consultation when the interaction was diverted by the ACD queue row.

Technical Results and Technical Result Reasons for ACD and Virtual Queues for Voice Interactions

The technical result and technical result reason of the mediation segment depend on how the voice or Multimedia interaction leaves the resource, as shown in Table 7 (voice) and Table 8 on page 73 (Multimedia).

Table 7: Technical Results for ACD and Virtual Queues (Voice)

Technical Result	Technical Result Reason	How the Interaction Exited the Queue
Abandoned	Unspecified	For virtual queues, while in the virtual queue, the interaction was abandoned or a consultation was retrieved. For ACD queues, the mediation attempt through this ACD queue was abandoned while waiting for service.

Table 7: Technical Results for ACD and Virtual Queues (Voice) (Continued)

Technical Result	Technical Result Reason	How the Interaction Exited the Queue
Diverted	Unspecified	For virtual queues, the virtual queue diverted the interaction to a Routing Point, ACD queue, or a target resource that is unknown. For ACD queues, the interaction was diverted by the ACD queue and the target ISF row was another mediation device (RP, ACD queue).
	AnsweredByAgent	For virtual queues, the virtual queue diverted the interaction to a target resource which was an agent, and the agent answered the interaction. For ACD queues, the interaction was diverted by the ACD queue and the target ISF was an agent with a talk count > 0.
	AnsweredByOther	For virtual queues, the virtual queue diverted the interaction to a target resource that was not an agent, but that could answer the interaction. For ACD queues, the interaction was diverted by the ACD queue and the target ISF was a resource other than an agent that had a talk count > 0 (typically an IVR Port or ACD Position DN).
	AbandonedWhile Ringing	For virtual queues, the virtual queue diverted the interaction to a target resource, but the interaction was abandoned before the target could answer it. For ACD queues, the interaction was diverted by the ACD queue and the target ISF was a handling resource (Agent, IVR Port or ACD position DN) with a talk count = 0 and route on no answer (RONA) did not occur.
	Redirected	For virtual queues, the virtual queue diverted the interaction to a target resource that did not answer it, and as a result, the interaction was routed to another resource. For ACD queues, the interaction was diverted by the ACD queue and the target ISF was a resource that was routed on no answer (ROMA'd) or forwarded the interaction somewhere else.

Table 7: Technical Results for ACD and Virtual Queues (Voice) (Continued)

Technical Result	Technical Result Reason	How the Interaction Exited the Queue
Cleared	Unspecified	For virtual queues, indicates that the interaction was cleared from the virtual queue because no target was found. For ACD queues, indicates that the interaction was parallel queued and was not diverted from this ACD queue to another call center resource.
	StuckCall	An interaction that Interaction Concentrator (ICON) identified as a stuck call was cleared from the virtual queue. (ICON determines that an interaction is stuck in a virtual queue if ICON received an event indicating that the interaction entered the virtual queue, but it did not receive the event indicating that the interaction exited the virtual queue, and URS has stopped sending status updates for that interaction.) **Note:** To accurately calculate durations from virtual queue data, Genesys recommends that rows with this technical result and reason not be used.
	RoutedFromAnotherVQ	Applies only to virtual queues. Indicates that, while the interaction was simultaneously in virtual queues, the interaction was cleared from the specified virtual queue because it was routed by another virtual queue.
	DefaultRoutedBy Strategy	Applies only to virtual queues. Indicates that the interaction was cleared from the virtual queue when URS default-routed the interaction.
	DefaultRoutedBySwitch	Applies only to virtual queues. Indicates that the interaction was cleared from the virtual queue when the switch default-routed the interaction.
	Targets Cleared	Applies only to virtual queues. Indicates that the interaction was cleared from the virtual queue as the result of the URS Clear Targets function.

Technical Results and Technical Result Reasons for Virtual Queues for Multimedia Interactions

The technical result and technical result reason of the mediation segment depend on how the Multimedia interaction leaves the resource, as shown in Table 8 on page 73.

Table 8: Technical Results for Virtual Queues (Multimedia)

Technical Result	Technical Result Reason	How the Interaction Exited the Virtual Queue
Abandoned	Unspecified	While in the virtual queue, the interaction was abandoned by the customer. **Note:** There is a special case where the `Abandoned` Technical Result is used that applies only to Multimedia interactions: • In Media Server compatibility mode (for example, see the Chat Server configuration option, `stop-abandoned-interaction`), the interaction is stopped when it is abandoned by the customer. In that case, the `Abandoned` Technical Result is used. • If not running in Media Server compatibility mode, the interaction is not stopped. Instead the interaction lives on past the point of Customer Abandon. It is even possible that enough information was available before the customer abandoned for an agent to provide a complete reply to the customer through another medium (for example, an e-mail reply to a customer who abandoned a chat interaction, where the agent was able to see the contents of the customer's chat dialog prior to the abandon). The Interaction Segment Fact table shows the complete life of the interaction, including any activity that followed the Customer Abandon (while also noting that the customer abandoned through the use of the `ABANDONED_BY_CUSTOMER_FLAG` in the `MMEDIA_SEG_FACT_EXT` table). However, the Mediation Segment Fact uses the `Abandoned` Technical Result in this scenario. The primary result reported for the virtual queue activity is that the customer abandoned the interaction, not including any activity that followed the customer abandon.

Table 8: Technical Results for Virtual Queues (Multimedia) (Continued)

Technical Result	Technical Result Reason	How the Interaction Exited the Virtual Queue
Diverted	AnsweredByAgent	The virtual queue diverted the interaction to a target resource which was an agent, and the agent answered the interaction.
	AnsweredByOther	The virtual queue diverted the interaction to a target resource which was a place, and the place answered the interaction, but no agent was logged in to that place.
	AbandonedWhile Ringing	The virtual queue diverted the interaction to a target resource, but the interaction was abandoned before the target could answer it. **Note:** There is a special case in which the `AbandonedWhileRinging` Technical Result Reason is used. It is similar to the special case described above for the `Abandoned` Technical Result. If the Media Server is not running in compatibility mode and the customer abandons the interaction, then the interaction is not stopped. It continues to live on past the customer abandon. In that case, if the customer abandons before the target resource could answer the interaction, this Technical Result Reason is used. The primary result reported for the virtual queue activity is that the customer abandoned the interaction before the target of the virtual queue could answer it. Since the interaction was not stopped, it is possible that the interaction was answered by the target after the customer abandoned the interaction, which is reported in the Interaction Segment Fact, but the Mediation Segment Fact will report that the interaction was `AbandonedWhileRinging`.
	Revoked	The virtual queue diverted the interaction to a target resource which was an agent (or a place). The agent (or place) was invited into the interaction, but the invitation was not accepted before the `delivering-timeout` that was configured in Interaction Server. As a result, the interaction is placed back into the interaction queue from which it came.
	Rejected	The virtual queue diverted the interaction to a target resource which was an agent (or a place). The agent (or place) was invited into the interaction, but the invitation was rejected. As a result, the interaction is placed back into the interaction queue from which it came.
	RoutedToOther	The virtual queue diverted the interaction to a target resource which was an interaction queue or an interaction workbin.

Table 8: Technical Results for Virtual Queues (Multimedia) (Continued)

Technical Result	Technical Result Reason	How the Interaction Exited the Virtual Queue
Cleared	StuckCall	An interaction that Interaction Concentrator (ICON) identified as a stuck call was cleared from the virtual queue. (ICON determines that an interaction is stuck in a virtual queue if ICON received an event indicating that the interaction entered the virtual queue, but it did not receive the event indicating that the interaction exited the virtual queue, and URS has stopped sending status updates for that interaction.) **Note:** To accurately calculate durations from virtual queue data, Genesys recommends that rows with this technical result and reason not be used.
	RoutedFrom AnotherVQ	The interaction was added to this virtual queue and also to a parallel virtual queue. It was routed from the parallel virtual queue to the target destination, and so it was cleared from this virtual queue.
	DefaultRoutedBy Strategy	The interaction was routed by URS to the default destination as defined by the URS configuration options.
	Targets Cleared	The interaction was cleared from the virtual queue by the URS strategy `ClearTarget` function.
	PulledBackTimeout	The routing strategy was unable to route the interaction successfully before the expiration of the `routing-timeout` configured in Interaction Server. As a result, the routing was considered a failure and the interaction was taken from the routing strategy and placed back into the interaction queue from which it came.
	Stopped	The interaction was stopped while it was being handled by the routing strategy. **Note:** An example of the use of this Technical Result is if the interaction was stopped by the Media Server while it was in the virtual queue. However, if the interaction was stopped because it was abandoned by the customer with the Media Server running in compatibility mode, this Technical Result is not used. Instead, the `Abandoned` Technical Result is used.

Mediation Segment Fact Table

Genesys Info Mart stores mediation segment facts in the `MEDIATION_SEGMENT_FACT` table. For detailed information about the columns in this table, refer to the *Genesys Info Mart Reference Manual* for your RDBMS.

Populating Partially Monitored Interactions

Genesys Info Mart can extract voice interaction data from topologies where not all T-Servers or IVR Servers involved in the call flow are monitored by Interaction Concentrator. You can configure Interaction Concentrator to not receive events from some T-Server applications, so the participation of the T-Server is not recorded in the source reporting data. This allows Genesys Info Mart to provide reporting data in the following types of environments:

- Network routing or network parking are used, but you want Genesys Info Mart to store data for only the premise-portions of the interactions.
- There are multiple sites or multiple tenants, but you want Genesys Info Mart to store data for only some of the sites or tenants.

The `extract-partially-merged-interactions` configuration option enables this functionality. Setting the `extract-partially-merged-interactions` configuration option to `TRUE` allows the interactions to be partially merged and extracted without having to wait for the IS Link timeout to occur. For more information about the `extract-partially-merged-interactions` configuration option, see the *Genesys Info Mart 7.6 Deployment Guide*.

Populating Fact Tables—Data Quality Issues

Configuring Genesys Info Mart to allow the extraction of partially monitored voice interactions can result in data quality issues caused by extracting, transforming and loading interactions that do not have complete source data due to Interaction Concentrator monitoring only some of the T-Servers and IVR Servers.

Data Inconsistencies

If you configure Genesys Info Mart to extract voice interaction data from topologies where not all T-Servers or IVR Servers involved in the call flow are monitored by Interaction Concentrator, data inconsistencies can occur, such as incomplete and missing data.

A single interaction that moves from a monitored T-Server to an unmonitored T-Server and back to a monitored T-Server will be represented in the Info Mart data as multiple interactions. When this type of interaction scenario occurs, the

IS Link information available to the Interaction Concentrator merge procedure is incomplete and Interaction Concentrator cannot associate the multiple calls into a single interaction.

A partially monitored environment can also result in missing data at the start of an interaction, the middle of an interaction, or the end of an interaction. The following interaction scenarios can affect interaction data population within Genesys Info Mart, resulting in data inconsistencies:

- The interaction originates in an unmonitored T-Server.
- The interaction terminates in an unmonitored T-Server.
- There is an unmonitored T-Server between monitored T-Servers.

Note: Any combination of the above deployments will have an effect on voice interaction data population.

Fact Table Data Issues

A partially monitored deployment can result in data that is populated differently than a fully monitored deployment. The following examples illustrate some of the differences for each interaction-related fact table:

- Interaction Fact—Some Interaction Facts might have different or missing values for the following because the underlying Interaction Segment Facts were not created for unmonitored T-Server resources:
  - `INTERACTION_TYPE` dimension—When the interaction started at an unmonitored T-Server.
  - `TECHNICAL_DESCRIPTOR`, `PLACE` and `RESOURCE_` dimensions—When the interaction ended at an unmonitored T-Server.
  - User Data-based facts, such as `USER_DATA_1` through `USER_DATA_20`—When the KVP value was set at an unmonitored T-Server.
  - User Data-based dimensions, such as `USER_DATA`, `USER_DATA_2`, `INTERACTION_DESCRIPTOR` and `CUSTOMER`—When the KVP value was set at an unmonitored T-Server.
  - Summary counts and durations—When Interaction Segment Facts could not be created for the portion of the interaction that occurred in an unmonitored T-Server.
  - Service objective metrics—When some initial duration occurred in an unmonitored T-Server.
- Interaction Segment Fact—Some Interaction Segment Facts will be missing where entire calls or parties are missing in the source data. Some Interaction Segment Facts might contain different or missing values for the following because some resource at an unmonitored T-Server participated in the interaction prior to, or after the monitored resource represented by the Interaction Segment Fact:

- INTERACTION_TYPE dimension—When the interaction started at an unmonitored T-Server.
- TECHNICAL_DESCRIPTOR dimension.
- ROUTING_TARGET and STRATEGY dimensions—When the interaction was routed by a resource at a prior, unmonitored T-Server.
- User Data-based dimensions, such as USER_DATA, USER_DATA_2, INTERACTION_DESCRIPTOR and CUSTOMER—When the KVP value was set by a resource at a prior, unmonitored T-Server.
- Customer wait and customer handle metrics—The setting of these values sometimes depends on what occurred at an unmonitored T-Server.

- Interaction Resource Fact—Some Interaction Resource Facts will be missing where entire calls or parties are missing in the source data. Some Interaction Resource Facts might contain different or missing values for the following because some resource at an unmonitored T-Server participated in the interaction prior to, or after the monitored resources represented by the Interaction Resource Fact:
  - INTERACTION_TYPE dimension—When the interaction started at an unmonitored T-Server.
  - TECHNICAL_DESCRIPTOR dimension—When the interaction started or ended at an unmonitored T-Server.
  - ROUTING_TARGET and STRATEGY dimensions—When the interaction was routed by a resource at a prior, unmonitored T-Server.
  - User Data-based dimensions, such as USER_DATA, USER_DATA_2, INTERACTION_DESCRIPTOR and CUSTOMER—When the KVP value was set by a resource at a prior, unmonitored T-Server.
  - Summary counts and durations for the Interaction Resource Fact's primary resource and its preceding mediation resources.
  - MEDIATION_SEGMENT_ID—When the mediation resource belongs to an unmonitored T-Server.
  - Service objective metrics—The setting of these values sometimes depends on what occurred at an unmonitored resource.
- Ixn Resource State Fact—Some Ixn Resource State Facts might have different values for STATE_DESCRIPTOR_CODE and STATE_ROLE_CODE because these depend on the interaction type which might not be accurate, particularly when some resource at an unmonitored T-Server participated in the interaction prior to the monitored resource represented by this Ixn Resource State Fact.
- Mediation Segment Fact—Some Mediation Segment Facts will be missing or have different values for the following because some resource that belongs to an unmonitored T-Server participated in the interaction prior to, or after the monitored resources represented by the Mediation Segment Fact:

- TECHNICAL_DESCRIPTOR dimension—When the portion of the interaction preceding the mediation resource occurred in an unmonitored T-Server, or the target resource belongs to an unmonitored T-Server. For the former case, the ETL cannot determine why the interaction was placed in the mediation resource. For the latter case, the ETL cannot determine if the interaction was answered or abandoned after it was distributed from the mediation resource.
- Target facts—Such as the Target Resource, Target Interaction Segment Fact, Target Interaction Resource Fact, when the target resource belongs to an unmonitored T-Server.

Populating GVP VAR Interactions

Genesys Info Mart creates two types of facts to capture information about Genesys Voice Platform (GVP) Voice Application Reporter (VAR) interactions:

- GVP call facts—Represent calls processed by a GVP application.
- GVP subcall facts—Represent subcallflows processed by a GVP application. The term *subcallflow* refers to the processing that occurs on a menu option that the GVP application offers.

The following subsections describe these facts and how they are populated.

Note: The Genesys Info Mart `populate-gvp-var-facts` configuration option enables population of the GVP facts.

GVP Call Facts

A GVP call fact is created for each call that is reported in the GVP VAR database. GVP calls (and their subcallflows) are populated in Genesys Info Mart only when the records are completed in the GVP VAR database.

Each GVP call fact represents the contiguous time span of the association between the GVP application and the interaction.

Note: The GVP call fact describes those aspects of interaction segment activity that relate to the GVP application. The interaction activity itself is captured in the interaction segment facts.

Populating GVP Call Facts and Dimensions

Genesys Info Mart populates GVP call facts as follows:

- The ENTERPRISE_DATE dimension, TENANT_DATE dimension, TIME_OF_DAY dimension, and start time facts represent the start time of the GVP call. End time facts represent the end time of the GVP call.

  For more information about how Genesys Info Mart represents dates and times of day, see Chapter 5 on page 207.
- The TENANT dimension identifies the Framework tenant for which the GVP VAR database has been configured. The association between a Framework tenant and all information in the VAR database is configured in the Genesys Info Mart database access point from which GVP VAR data is extracted.
- The GVP_WEB_APPLICATION_SERVER dimension identifies the web application server that served the GVP call.
- The GVP_VOICE_MEDIA_SERVER dimension identifies the Voice Communication Server (VCS) or IP Communication Server (IPCS) that handled the GVP call.
- The GVP_APPLICATION dimension identifies the GVP application that processed the GVP call.
- The STRATEGY dimension identifies the IVR application that operated on the GVP call. The end action, IVR result, and IVR reason that are reported in the GVP VAR database (APP_CALLS table) map to columns in the Genesys Info Mart STRATEGY dimension table.
- The last GVP_SUBCALL_FLOW dimension identifies the last subcallflow that occurred in the GVP call.
- Various ID facts identify the GVP call in different contexts and from different sources:
  - INTERACTION_ID is the Genesys Info Mart–generated identifier for the interaction fact within which the GVP call occurred. It can be used to join the GVP call fact to the associated interaction fact.
  - MEDIA_SERVER_IXN_ID is the connection ID that T-Server assigns to the GVP call. It can be used to cross-reference the GVP call fact to one or more interaction segment facts. This value is populated only if MEDIA_SERVER_IXN_GUID is not present.
  - The MEDIA_SERVER_IXN_GUID is the call UUID that T-Server assigns to the GVP call. It can be used to cross-reference the GVP call fact to one or more interaction segment facts. This value is populated only if the MEDIA_SERVER_IXN_ID is not present.
  - GVP_CALL_GUID is the call GUID that the GVP system assigns, as recorded in the GVP VAR source database.
- The TOTAL_DURATION and TOTAL_SUBCALL_FLOW_COUNT fields summarize the amount of time spent processing subcallflows within the GVP call.

- The ANI fact is the automatic number identification (ANI) of the incoming call.
- The GVP_APPLICATION_SELECTOR fact represents the dialed digits of the incoming call, as reported by GVP.
- Because Genesys Info Mart loads only completed calls from the GVP VAR source database, the ACTIVE_FLAG field is always set to 0.

Populating GVP Subcall Facts and Dimensions

Genesys Info Mart populates GVP subcall facts as follows:

- The ENTERPRISE_DATE dimension, TENANT_DATE dimension, TIME_OF_DAY dimension, and start time facts represent the start time of the subcallflow. End time facts represent the end time of the subcallflow.

  For more information about how Genesys Info Mart represents dates and times of day, see Chapter 5 on page 207.
- The TENANT dimension identifies the Framework tenant for which the GVP VAR database has been configured. The association between a Framework tenant and all the information in the VAR database is configured in the Genesys Info Mart database access point from which GVP VAR data is extracted.
- The GVP_WEB_APPLICATION_SERVER dimension identifies the web application server that served the subcallflow.
- The GVP_VOICE_MEDIA_SERVER dimension identifies the VCS or IPCS that handled the subcallflow.
- The GVP_APPLICATION dimension identifies the GVP application that processed the subcallflow.
- The STRATEGY dimension identifies the IVR application that operated on the subcallflow. The subcallflow result and subcallflow reason reported in the GVP VAR database (APP_CALL_SUBCFS table) map to columns in the Genesys Info Mart STRATEGY dimension table.
- The GVP_SUBCALL_FLOW dimension identifies the subcallflow. The PREV_GVP_SUBCALL_FLOW_KEY column identifies the subcallflow that immediately preceded the subject subcallflow in the GVP call, if applicable.
- The TOTAL_DURATION is the amount of time spent processing the subcallflow.
- The ORDINAL fact and the LAST_ORDINAL flag indicate the position of the subcallflow within the GVP call. ORDINAL is mapped from the GVP VAR database (APP_CALL_SUBCFS table, SUBCF_SEQ column). LAST_ORDINAL is generated by Genesys Info Mart.
- NESTING_LEVEL indicates the depth of the subcallflow within the subcallflow menu hierarchy.
- ACTIVE_FLAG is always set to 0.

GVP Fact Tables

Genesys Info Mart stores facts about GVP interactions in the following tables:

- GVP_CALL_FACT
- GVP_SUBCALL_FACT

For detailed information about the columns in the GVP fact tables, see the *Genesys Info Mart Reference Manual* for your RDBMS.

Populating Outbound Campaign Activity

The Genesys Info Mart schema contains a number of subject areas related to outbound campaign activity (see Table 1 on page 18). This section provides information about the Contact_Attempt subject area, which is the area that is focused on actual outbound campaign interactions.

Genesys Info Mart creates contact attempt facts in order to represent the attempts to reach the customer records of a calling list during the course of an outbound campaign.

Populating Contact Attempt Facts and Dimensions

Genesys Info Mart populates contact attempt facts as follows:

- The ENTERPRISE_DATE dimension, TENANT_DATE dimension, TIME_OF_DAY dimension, and start time facts represent the start time of the outbound contact attempt. End time facts represent the end time of the outbound contact attempt.

  For more information about how Genesys Info Mart represents dates and times of day, see Chapter 5 on page 207.
- The CAMPAIGN dimension identifies the outbound campaign that launched the attempt.
- The TENANT dimension identifies the tenant of the campaign.
- The GROUP_ dimension identifies the campaign group (agent group or place group) that is responsible for making this contact attempt.
- The CALLING_LIST dimension identifies the calling list that contains the target record of the attempt.
- The RECORD_TYPE dimension identifies the type of the target record—for example, General or CampaignRescheduled.
- The RECORD_STATUS dimension identifies the status of the target record at the end of the contact attempt—for example, Updated or Cancelled.
- The CONTACT_INFO_TYPE dimension identifies the type of contact information provided in the target calling list record—for example, HomePhone or Mobile.

- The CALL_RESULT dimension is used to identify the final call result of the contact attempt (for example, Answer, Busy, or Wrong Party) as well as the dialer result (for example, Answer or Busy) if a dialer was used.
- The RESOURCE_ dimension identifies the resource that is associated with the first IVR port or agent interaction segment that corresponds to the outbound attempt.
- The PLACE dimension identifies the place that is associated with the first IVR port or agent interaction segment that corresponds to the outbound attempt.
- The DIALING_MODE dimension identifies the dialing mode that was used for the contact attempt—for example, Predictive, Progressive, or Preview. For GVP, these dialing modes are PROGRESSIVE_GVP, PREDICTIVE_GVP, and POWER_GVP.
- The MEDIA_TYPE dimension identifies the media type of the interaction that is associated with the outbound attempt—for example, Voice.
- The RECORD_FIELD_GROUP_1 and RECORD_FIELD_GROUP_2 dimensions contain custom fields from the calling list record. The values represent a snapshot that was taken at the end of the contact attempt.
- Record field facts in the CONTACT_ATTEMPT_FACT table hold custom field values from the target calling list record. The values represent the snapshot that was taken at the end of the contact attempt.
- State counts and durations summarize the amount of time spent on various activities.
- Outbound campaign activity details are the primary source of the contact attempt facts and dimensions, however voice interaction details are also used. Voice interaction details associated with the contact attempt, and extracted from the Voice details IDB, are the only source for the following contact attempt facts and dimensions:
  - INTERACTION_ID
  - TALK_COUNT
  - TALK_DURATION
  - HOLD_COUNT
  - HOLD_DURATION
  - ACW_COUNT
  - ACW_DURATION
  - MEDIA_RESOURCE_KEY
  - PLACE_KEY

  Additionally, voice interaction details extracted from the Voice details IDB are used in conjunction with Outbound Contact details, for the following contact attempt facts and dimensions:
  - RESOURCE_KEY
  - PREVIEW_DURATION
  - CONTACT_DAILY_FROM_TIME
  - CONTACT_DAILY_UNTIL_TIME
  - CONTACT_IXN_START_TIME

- CONTACT_WITHIN_DAILY_RANGE
- CONTACT_DIAL_SCHED_TIME

Outbound Campaign Activity Fact Tables

Genesys Info Mart stores facts about outbound campaigns and activity in the following tables:

- Contact attempts:
  - CONTACT_ATTEMPT_FACT
- Calling lists:
  - CALLING_LIST_METRIC_FACT
  - CALLING_LIST_TO_CAMP_FACT
- Campaigns and campaign groups:
  - CALLING_LIST_TO_CAMP_FACT
  - GROUP_TO_CAMPAIGN_FACT
  - CAMPAIGN_GROUP_SESSION_FACT
  - CAMPAIGN_GROUP_STATE_FACT

For detailed information about the columns in the Outbound campaign fact tables, refer to the *Genesys Info Mart Reference Manual* for your RDBMS.

Populating Agent Activity Data

Genesys Agent Activity Transformation is stored in the following tables:

- Detailed resource sessions are sourced from ICON for all media types and populated in RESOURCE_SESSION_FACT.
- Detailed resource states and reasons are sourced from ICON for all media types and populated in the following tables:
  - DT_RES_STATE_FACT
  - DT_RES_STATE_REASON_FACT.

  Existing customers can optionally continue to source voice states and reasons from Stat Server and populate them in the existing RESOURCE_STATE_FACT and RESOURCE_STATE_REASON_FACT tables.
- Detailed information about Do-Not-Disturb being turned on and off (at a DN for voice, at a place and media type for Multimedia or Open Media) is provided in the DT_DND_FACT table.
- Summary Tables for Resource Sessions, States, and Reasons store summarized data, drawn from ICON, for all media types. The tables are:
  - SM_RES_SESSION_FACT
  - SM_RES_STATE_FACT
  - SM_RES_STATE_REASON_FACT

Do-Not-Disturb status for each DN (or place and media type in the case of Multimedia or Open Media) can optionally be factored into the SM_RES_STATE_FACT and SM_RES_STATE_REASON_FACT tables, configurable by switch.

Notes: You can choose not to have detailed or summarized resource states and reasons for the NotReady and AfterCallWork states interrupted by incalls and outcalls.

High availability is provided for voice sessions, states, reasons, and Do-Not-Disturb modes sourced from ICON.

Legacy Tables Preserved for Backwards Compatibility

Two fact tables existing in previous releases of Genesys Info Mart, RESOURCE_STATE_FACT and RESOURCE_STATE_REASON_FACT, have been preserved for backward compatibility.

RESOURCE_STATE_FACT Table

For voice media, this table is sourced from Stat Server, and the states that are recorded are:

- Unknown
- WaitForNextCall
- OffHook
- CallDialing
- CallRinging
- NotReadyForNextCall
- AfterCallWork
- CallOnHold
- CallUnknown
- CallConsult
- CallInternal
- CallOutbound
- CallInbound

For voice media, the NotReadyForNextCall and AfterCallWork states are interrupted by interactions that the agent initiates or receives while in these states.

For non-voice media, this table is sourced from Interaction Concentrator, and the states that are recorded are:

- Unknown
- Busy
- Ready
- NotReady

- `LoggedOnOnly`

For non-voice media, whether the `NotReady` state can be interrupted by interactions that the agent initiates or receives while in this state is dependent on the configuration of the underlying ICON application.

Note: Do-Not-Disturb is not factored into resource states in this table for non-voice media.

RESOURCE_STATE_REASON_FACT Table

For voice media, this table is sourced from Stat Server, and the states for which reasons are recorded are:

- `WaitForNextCall`
- `NotReadyForNextCall`
- `AfterCallWork`

For voice media, reasons for the `NotReadyForNextCall` and `AfterCallWork` states are interrupted by interactions that the agent initiates or receives while in these states.

For non-voice media, this table is sourced from Interaction Concentrator, and the states for which reasons are recorded are:

- `Ready`
- `NotReady`

For non-voice media, whether `NotReady` state reasons can be interrupted by interactions that the agent initiates or receives while in this state is dependent on the configuration of the underlying ICON application.

Note: Do-Not-Disturb is not factored into resource state reasons in this table for non-voice media.

Determining Which Tables to Use

This section helps you to decide which tables are best suited for your environment and reporting needs.

Note: The detailed, summary, and legacy agent-activity fact tables store information at different levels of granularity and dimensionality. In addition, for voice media, the legacy fact tables are sourced from Stat Server, while the detailed and summary fact tables are sourced from ICON. These two data sources have different agent models and use different timestamp references. For these reasons, do not attempt to combine information from the detailed, summary, and legacy fact tables. Doing so will produce duplicate and/or inconsistent results.

Detailed Resource State Tables

Detailed resource state tables are best used by:

- Customers who need uninterrupted `AfterCallWork` and `NotReady` states.
- New customers who do not have reports built on the existing Stat Server-based tables.
- Existing customers who want low-level DN and queue-based states instead of rolled-up place-level states.
- Customers who do not need Do-Not-Disturb factored into states and reasons.

Summary Resource State Tables

- Customers who are using Genesys Interactive Insights (GI2).
- Customers who need uninterrupted `AfterCallWork` and `NotReady` states.
- Customers who have agents logging onto more than one DN and/or switch at a time and want to report on a summarized agent state.
- Customers who want Do-Not-Disturb optionally factored into states and reasons for all media types.

Note: For current customers, the existing `RESOURCE_STATE_FACT` and `RESOURCE_STATE_REASON_FACT` may continue to be used to populate Stat Server-based voice states and reasons. In addition, these two existing fact tables can optionally be populated with Multimedia agent activity (including Open Media) to preserve existing reports that customers may have developed.

Legacy (Stat Server-based) Resource State Tables

Legacy resource state tables are best used by:

- Existing customers who wish to continue using data populated by Stat Server because they need the low-level call-based states (instead of just a `Busy` state), and have existing reports built on top of these tables.
- Customers who do not need uninterrupted `AfterCallWork` and `NotReady` states.

Configuration Options that Control Table Use

Various configuration options control whether Genesys Info Mart populates specific tables.

Note: For a list of the new configuration options that control data population into the agent activity tables, see the *Genesys Migration Guide*. For a full list of configuration options and their settings, see the *Genesys Info Mart 7.6 Reference Manual*.

Obtaining Uninterrupted Voice AfterCallWork and NotReady Data

Genesys Info Mart can represent voice `AfterCallWork` and `NotReady` states and reasons sourced from ICON and have them not be interrupted by incalls or outcalls that an agent makes while in these states.

These uninterrupted states and reasons are populated in the detailed ICON-based fact tables (`DT_RES_STATE_FACT, DT_RES_STATE_REASON_FACT`) as well as in the media-type-level, ICON-based fact tables (`SM_RES_STATE_FACT, SM_RES_STATE_REASON_FACT`).

To obtain this data, set the `gls-enable-acw-busy` configuration option, located in the `gts` section on the Annex tab of the Switch configuration object, to `1` (the default setting is `0`).

Populating Detailed Resource Sessions, States, and Reasons

The following tables store detailed session, state, and reason data:

- `RESOURCE_SESSION_FACT` stores detailed resource sessions.
- `DT_RES_STATE_FACT` and `DT_RES_STATE_REASON_FACT` store detailed resource states and reasons. (`DT_` indicates detailed data sourced from ICON).

Voice States Recorded in Detailed Tables

- In `DT_RES_STATE_FACT`—`LoggedOnOnly, NotReady, Ready, AfterCallWork`, and `Busy`.
- In `DT_RES_STATE_REASON_FACT`—`LoggedOnOnly, Ready, NotReady`, and `AfterCallWork`.

Multimedia and Open Media States Recorded in Detailed Tables

- In `DT_RES_STATE_FACT`—`NotReady, Ready,` and `Busy`.
- In `DT_RES_STATE_REASON_FACT`— `NotReady,` and `Ready`.

The RESOURCE_SESSION_FACT Table

`RESOURCE_SESSION_FACT` is a detailed table in which each row describes an agent resource login session relative to a given media type (and, for voice media, the DN-queue combination).

The grain of the fact is an accumulating snapshot, representing the duration of the session. The start and end dates and times are stored as facts in three time zones (GMT, standard, and local). The start date and time are also stored as dimension references for ENTERPRISE_DATE/TIME_OF_DAY and TENANT_DATE/TIME_OF_DAY and in three time zones (GMT, standard, and local).

The place associated with the resource session is also included as a dimensional reference. Both active and completed resource sessions are written to this table.

This table is sourced from IDB.

The DT_RES_STATE_FACT Table

Each row describes an agent resource state relative to a given media type (plus DN and queue for voice). The grain of the fact is an accumulating snapshot, representing the duration of the detailed state.

A detailed state represents the duration for which an agent resource holds a particular state for a given media type on one particular media channel or on one particular DN or DN/queue combination for voice devices.

This table is sourced from IDB, and the states that are recorded are:

- Unknown
- Busy
- Ready
- NotReady
- AfterCallWork (voice media only)
- LoggedOnOnly (voice media only)

Whether the NotReady or AfterCallWork (voice media only) states can be interrupted by interactions that the agent initiates or receives while in these states is dependent on the configuration of the underlying ICON application.

Because this table is sourced from IDB, it contains fewer voice interaction–related resource states than RESOURCE_STATE_FACT which is sourced from Stat Server. (Stat Server provides a more detailed breakdown of voice interaction–related resource states.)

For Multimedia, there is no difference in the data populated between the DT_RES_STATE_FACT and RESOURCE_STATE_FACT tables.

The start and end dates and times are stored as facts in two time zones (GMT and standard). The start date and time are also stored as dimension references for ENTERPRISE_DATE/TIME_OF_DAY and TENANT_DATE/TIME_OF_DAY and in two time zones (GMT and standard). The place associated with the resource state is also included as a dimensional reference. Only completed resource states are written to this table.

Note: Do-Not-Disturb is not factored into resource states in this table.

The DT_RES_STATE_REASON_FACT Table

Each row describes an agent resource state reason relative to a given media type (and DN and queue for voice). The grain of the fact is an accumulating snapshot, representing the duration of the detailed state reason.

A detailed resource state reason represents the duration for which an agent resource holds a particular resource state-reason combination for a given media type on one particular media channel or on one particular DN or, for voice devices, DN/queue combination.

Reason codes stemming from voice-related interactions are classified as `HARDWARE` or `SOFTWARE` in this table. Multimedia-related reasons are all stored as `SOFTWARE`.

This table is sourced from IDB, and the states for which reasons are recorded are:

- `Ready`
- `NotReady`
- `AfterCallWork` (voice media only)
- `LoggedOnOnly` (voice media only)

Whether `NotReady` or `AfterCallWork` (voice media only) state reasons can be interrupted by interactions that the agent initiates or receives while in these states is dependent on the configuration of the underlying ICON application.

The start and end dates and times are stored as facts in two time zones (GMT and standard). The start date and time are also stored as dimension references for `ENTERPRISE_DATE/TIME_OF_DAY` and `TENANT_DATE/TIME_OF_DAY` and in two time zones (GMT and standard). Only completed reasons are written to this table.

Note: Do-Not-Disturb is not factored into resource state reasons in this table.

Populating Summarized Resource Sessions, States, and Reasons

The `SM_RES_SESSION_FACT`, `SM_RES_STATE_FACT`, and `SM_RES_STATE_REASON_FACT` tables incorporate all data during the period when an agent is logged on to a particular media type, regardless of the number of DNs or queues the agent logs onto.

The SM_RES_SESSION_FACT Table

This table provides a summary of resource sessions by agent and media type.

Note: Genesys Interactive Insights reports require you to populate this table.

The Genesys Info Mart `populate-sm-resource-session-facts` configuration option, in the `optional-tables` section, controls whether the `SM_RES_SESSION_FACT` table is populated. The `populate-sm-[media type]-resource-activity` configuration options control which media types this table is populated with if it is enabled.

Each row of this table summarizes the login session(s) of all DNs associated with an agent relative to a given media type. The grain of the fact is an accumulating snapshot that represents the duration of the summary session.

A summary session represents the contiguous duration that an agent resource is logged in for a given media type, irrespective of the number of DNs and/or queues that the agent resource logs in to. For voice, a summary session starts when an agent resource first logs in to any voice DN-queue combination. The session continues, irrespective of how many other voice DNs and/or queues the agent logs in to. The session ends when the agent resource logs off all voice DNs and queues. By contrast, `RESOURCE_SESSION_FACT` contains records for each DN-queue combination. For Multimedia, a session is first created when the agent resource adds a media type to their login session. The login session continues until the agent resource removes the media type from their login session. For Multimedia, there is no difference in the data populated for `RESOURCE_SESSION_FACT` and `SM_RES_ SESSION_FACT`.

Start and end dates and times are stored as facts in two time zones (GMT and standard). Start and end date and times are also stored as a dimension reference for `DATE_TIME` in the standard tenant time zone. Both active and completed sessions are populated.

This table does not depend on data from the detailed version of this table, `RESOURCE_SESSION_FACT`. Instead, Genesys Info Mart references staging area tables for this information.

The SM_RES_STATE_FACT Table

Each row describes a summarized agent resource state relative to a given media type. The grain of the fact is an accumulating snapshot, representing the duration of the summarized state.

A summary state represents the contiguous duration that an agent resource is logged in with a particular state for a given media type, irrespective of the number of DNs and/or queues that the agent resource logs into. For voice, the summary state is chosen from among the concurrent states of all voice DNs to which the agent is logged on, based on the configured state priority list. For Multimedia, there are no DNs, so the summarized state represents the state of the agent relative to the media type.

Only completed resource states are written to this table.

Do-Not-Disturb can optionally be factored into resource states in this table. This functionality is configurable by switch.

Note: Genesys Interactive Insights reports require you to populate this table.

This table is sourced from Interaction Concentrator. The states that are recorded are:

- Unknown
- Busy
- Ready
- NotReady
- AfterCallWork (voice media only)
- LoggedOnOnly (voice media only)

Whether the NotReady or AfterCallWork (voice media only) states can be interrupted by interactions that the agent initiates or receives while in these states is dependent on the configuration of the underlying ICON application.

Because this table is sourced from IDB, it contains fewer voice media states than RESOURCE_STATE_FACT which is sourced from Stat Server for voice. (Stat Server provides a more detailed breakdown of voice interaction–based resource states than IDB.)

The start and end dates and times are stored as facts in two time zones (GMT and standard). The start date and time are also stored as dimension references for ENTERPRISE_DATE, TENANT_DATE, and TIME_OF_DAY in two time zones (GMT and standard). Start and end dates and the time of day interval are represented by a calendar date and 15-minute interval from the DATE_TIME dimension in the standard tenant time zone.

This table is not dependent on data from DT_DND_FACT or the detailed version of this table, DT_RES_STATE_FACT. Instead, Genesys Info Mart references staging area tables for this information.

The SM_RES_STATE_REASON_FACT Table

Each row describes a summarized agent resource state reason and workmode relative to a given media type. The grain of the fact is an accumulating snapshot that represents the duration of the summarized state reason.

A summary state reason represents the contiguous duration for which an agent resource is in logged in with a particular state reason for a given media type, irrespective of the number of DNs and/or queues that the agent resource logs into.

Do-Not-Disturb is optionally factored into summary state reasons based on the configuration of the underlying Switch object. All reasons associated with the current highest priority state of the agent are recorded.

Only completed resource state reasons are written to this table.

Note: Genesys Interactive Insights reports require you to populate this table.

This table is sourced from IDB. The states for which reasons are recorded are:

- Ready
- NotReady
- AfterCallWork (voice media only)
- LoggedOnOnly (voice media only)

Whether the NotReady or AfterCallWork (voice media only) state can be interrupted by interactions that the agent initiates or receives while in these states is dependent on the configuration of the underlying ICON application.

The start and end dates and times are stored as facts in two time zones (GMT and standard). The start date and time are also stored as dimension references for both ENTERPRISE_DATE/TIME_OF_DAY and TENANT_DATE/TIME_OF_DAY in two time zones (GMT and standard). Start and end dates and the time of day interval are represented by a calendar date and 15-minute interval from the DATE_TIME dimension in the standard tenant time zone.

This table, sourced from IDB, is not dependent on data from DT_DND_FACT or the detailed version of this table, DT_RES_STATE_REASON_FACT. Instead, Genesys Info Mart references staging area tables for this information.

How Summarized Data Is Processed

Summarized agent data, which must be recorded by a single ICON instance for a given agent, is processed in the following ways:

- Genesys Info Mart combines information for the same agent and media type from the ICON GX_SESSION_ENDPOINT table to form summarized media type sessions.
  - For voice, Genesys Info Mart combines information for the same agent and media type from the ICON G_AGENT_STATE_HISTORY, G_AGENT_STATE_RC, G_DND_HISTORY tables to create summarized states and reasons that optionally have Do-Not-Disturb status factored into them. In addition, if the agent is logged on to more than one voice DN at a time, a configurable state priority list is used to determine which DN's state is considered to be the winning state.
  - For Multimedia, Genesys Info Mart combines information for the same agent and media type from the ICON G_AGENT_STATE_HISTORY, G_AGENT_STATE_RC, G_DND_HISTORY, and GX_SESSION_ENDPOINT tables to form summarized states and reasons that optionally have Do-Not-Disturb status factored into them.

A windowing mechanism ensures that all information for a given agent has been extracted from the ICON instance for a particular point in time. This is accomplished by processing only data extracted from each ICON instance that is at least 5 minutes older than the newest information recorded in that same ICON instance. Data that falls outside of this window is saved in the Staging Area database for processing during the next transformation.

Genesys Info Mart release 7.6.004 provides the ability, at your option, to bypass the 5-minute windowing mechanism described above for voice agent activity in a simple contact center environment. A simple contact center is one where an agent only logs in to a single switch, DN, or queue at a time, and where reporting requirements do not include the factoring of Do-Not-Disturb [DND] mode into summarized resource states and resource state reasons. In this simple environment, summarization of voice agent data can be accurately performed without windowing. Being able to bypass windowing if your voice contact center environment is simple improves the accuracy of agent reports for a given business day in a contact center that operates less than 24 hours a day, since these reports now contain information for the entire business day, including the last 5 minutes.

Populating Do-Not-Disturb Data

Do-Not-Disturb data is recorded in a detailed table, DT_DND_FACT, and optionally can be factored into states and reasons in the summarized SM_RES_STATE_FACT and SM_RES_STATE_REASON_FACT tables for all media types.

The Detailed Do-Not-Disturb Fact Table

Genesys Info Mart shows DND being turned on or off at the DN-level for voice and at the place-level (including Media Type) for Multimedia.

Each row in this table describes a state of the Do-Not-Disturb (DND) feature (DND being turned on or off), relative to a given DN for voice, or relative to a given place, including media type, for Multimedia.

The grain of the fact is an accumulating snapshot that represents the duration of DND. The start and end dates and times are stored as facts in two time zones (GMT and standard). The start date and time are also stored as dimension references for ENTERPRISE_DATE, TENANT_DATE, and TIME_OF_DAY in two time zones (GMT and standard). The place associated with the DND state is also included as a dimensional reference.

Both active and completed DND states are written to this table. Data in this table is sourced exclusively from IDB.

The populate-dt-dnd-facts configuration option in the optional-tables section of the Genesys Info Mart application object, along with the populate-dt-[media type]-resource-activity configuration options, determine whether Genesys Info Mart records detailed information about DND being turned on and off for a particular DN (voice) or place including media type (Multimedia).

Including Do-Not-Disturb Data in Summary Tables

Inclusion of Do-Not-Disturb data in the summarized SM_RES_STATE_FACT and SM_RES_STATE_REASON_FACT tables is controlled by the factor-dnd-into-sm-resource-states configuration option, located in the gim-etl section under the

annex tab of each switch. The default setting is TRUE for Multimedia switches and FALSE for voice switches.

Note: The detailed states and reasons in DT_RES_STATE_FACT and DT_RES_STATE_REASON_FACT do not have DND factored into them.

For Multimedia, Do-Not-Disturb is treated as a global NotReady for all media types that an agent is logged onto at a given Place.

Table 9 explains the logic that determines how DND status is factored into states and reasons, either at the DN level for voice or the place level (including media type) for Multimedia.

Table 9: Calculating DND Status

Conditions	Resulting DND Status
DND is turned *on* and the declared state is currently Ready or LoggedOnOnly.	The resource is considered to be in a NotReady state with a reason indicating DND On.
DND is turned *off* and the declared state was previously Ready.	The resource returns to Ready with whatever reasons were originally attached to the Ready request. If the Ready state had no reasons originally, the reason is given as DND Off.
DND is turned *off* and the declared state was previously LoggedOnOnly.	The resource returns to LoggedOnOnly with whatever reasons were originally attached to the login request. If the LoggedOn state had no reasons originally, the reason is given as DND Off.
DND is turned *on* and the declared state is currently AfterCallWork.	The resource stays in AfterCallWork. If AfterCallWork ends before DND is turned back off, the resource becomes NotReady and the reason is DND On. If DND is turned on and off during AfterCallWork, the resource state is never shown as NotReady. **Note:** AfterCallWork only applies to non-Multimedia media types.
The resource is in NotReady state and DND is turned *on* or *off*.	Any NotReady reasons that are currently in effect are not interrupted.
The resource is in Busy state and DND is turned *on*.	When the Busy state ends, the resource enters the NotReady state with DND On as the reason.

Chapter

3 Validated Voice Interaction Flows

This chapter describes the recognized, validated voice interactions that have been tested and that are supported by Genesys Info Mart. The validated interactions are premise-based flows that involve one or more of the deployed Genesys solutions.

The call flows described in this chapter are intended as examples that you can modify for your environment. However, Genesys does not guarantee results for modified interaction flows.

This chapter contains the following sections:

Note: Voice interactions that are generated by other supported Genesys solutions may yield call flows in Genesys Info Mart that do not directly translate to the call flows described in this chapter. Voice interactions involving Genesys solutions that are not supported by Genesys Info Mart may yield unpredictable results.

Overview

The validated call flows described in this chapter are organized according to the types of solutions that might be deployed in your contact center. Table 10 provides an overview of the validated call flows.

Table 10: Validated Call Flows

Solution	Description
Framework only	Based on the dialed number, voice interactions arriving at the switch are queued to an ACD queue that represents a requested skill, service type, or customer segment. Agents who are logged into the ACD queues handle the interactions. **Note:** Flows that start in a diagram under one of the other solutions may resume in another diagram under this solution (for example, if a voice interaction in Universal Routing is routed to an agent, and the agent performs a two-step transfer to another agent).
IVR in front of switch	Voice interactions arrive at an IVR port that is visible to the IVR Server's virtual T-Server. The focus of the IVR application may be either self-service or simple front-end identification and segmentation. If the IVR application cannot completely handle the voice interaction, the interaction can be transferred to an ACD queue behind the switch that represents a requested skill, service type, or customer segment. Agents logged in to the ACD queues handle the interactions.
IVR behind switch	Voice interactions arriving at the switch are queued to an ACD queue, where the ACD positions are actually IVR ports. The focus of the IVR application may be either self-service or simple front-end identification and segmentation. If the IVR application cannot completely handle the voice interaction, the interaction can be transferred to an ACD queue that represents a requested skill, service type, or customer segment. Agents logged in to the ACD queues handle the interactions.
Universal Routing	Voice interactions arriving at the switch are delivered to a Routing Point. Universal Routing Server (URS) uses criteria such as ANI, DNIS, or the date and time of day to collect information and select an appropriate routing target. Basic targets are ACD queues or individual DNs; more advanced targets are agent groups, place groups, or skill expressions.
Universal Routing assisted by IVR behind switch	Voice interactions arriving at the switch are queued to an ACD queue, where the ACD positions are actually IVR ports. The IVR application collects digits and information about the caller, and transfers the call to a Routing Point. Universal Routing uses the collected information to select an appropriate routing target. Basic targets are ACD queues or individual DNs; more advanced targets are agent groups, place groups, or skill expressions.

Table 10: Validated Call Flows (Continued)

Solution	Description
IVR in front of switch assisted by Universal Routing	Voice interactions arrive at an IVR port that is visible to the IVR Server's virtual T-Server. Through a Routing Point in the IVR Server's virtual T-Server, the IVR application invokes a Universal Routing strategy. Universal Routing instructs the IVR application to play applications or collect information. Universal Routing uses the collected information to return an appropriate target. The IVR application hook-flash transfers the call to that target.
IVR behind switch assisted by Universal Routing	Voice interactions arriving at the switch are queued to an ACD queue, where the ACD positions are actually IVR ports. Through a virtual routing point in the premise T-Server, the IVR application invokes a Universal Routing strategy. Universal Routing instructs the IVR application to play applications or collect information. Universal Routing uses the collected information to return an appropriate target. The IVR application mute transfers the call to that target.

Diagram Conventions

The call flow diagrams in this chapter use the following conventions:

- The call state is indicated in both a media-specific and a media-neutral way: the media-specific state appears in regular text, followed by its media-neutral counterpart in parentheses—for example, `Talk (Handle)`.
- Dotted shading indicates customer wait time.
- Diagonal shading indicates customer handle time.
- The following abbreviations are used for simplicity:
  - ISF—Interaction Segment Fact
  - IRF—Interaction Resource Fact
  - SS IVR—Self-service IVR (considered to be a *handling resource* or *resource of interest* with regard to IRF data collection)
  - nonSS IVR—Non-self-service IVR (considered *not* to be a *handling resource* or *resource of interest* with regard to IRF data collection)

Figure 4 shows a legend for the call flow diagrams.

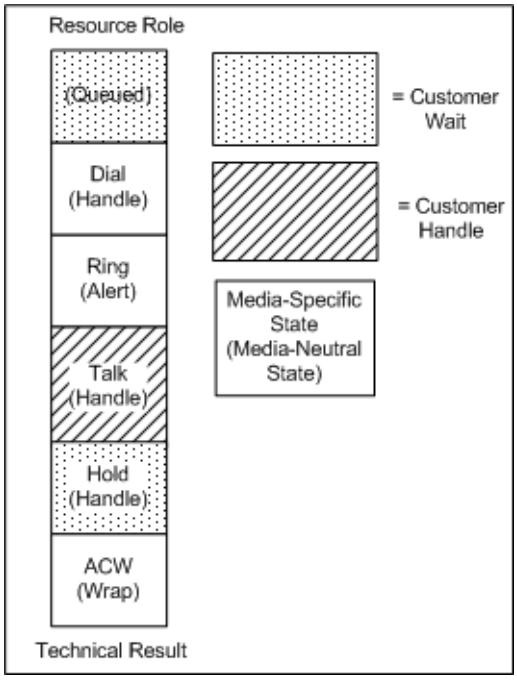

Figure 4: Call Flow Legend

In order to show the voice interaction flow, the diagrams in this chapter depict the media-specific states in sequence.

Notes on the Interaction Segment Fact Diagrams

The information in the interaction segment is a summary of the media-specific states, represented by a count and total duration for each state. For example, if the interaction segment is in the `Talk` state for 40 seconds and later is in the `Talk` state for an additional 60 seconds, the interaction segment has a talk count of 2 and a `Talk` state duration of 100 seconds.

Example

Figure 5 is an example of an Interaction Segment Fact (ISF) call flow diagram. Note the following:

- Each segment is represented as a column.
- The resource name is the column heading.
- The resource role appears at the top of the segment.
- The technical result appears at the bottom of the segment.
- Within the body of the segment (between the resource role and the technical result), the call states appear in sequence.

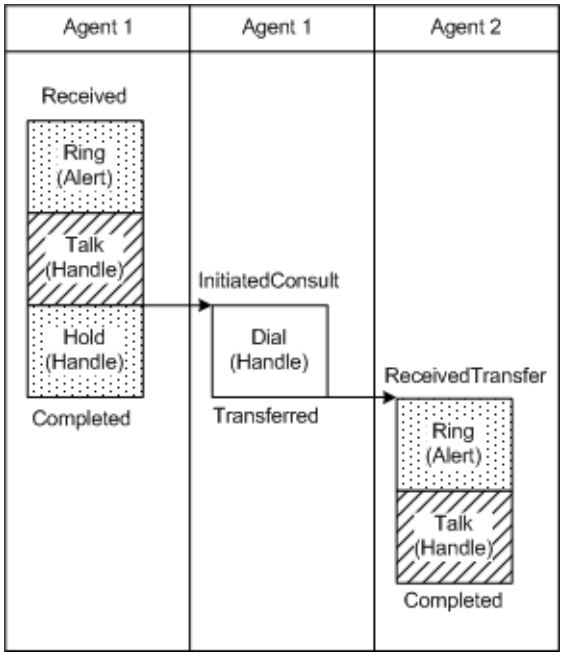

Figure 5: Sample ISF Call Flow

Note: Figure 5 shows an example of a call flow with parallel interaction segments: `Agent 1` has two concurrent interaction segments. To avoid double-counting parallel interaction segments, constrain your queries to interaction segments that have specific resource roles.

Notes on the Interaction Resource Fact Diagrams

Interaction Segment Fact (ISF) and Interaction Resource Fact (IRF) diagrams can appear similar. However, they differ in their focus:

- ISF call flows represent the circumstances of the interactions segments that comprise an interaction.
- IRF call flows represent the resources that handle the interaction and their states.

The following list points out features specific to the IRF diagrams:

- The circled resource in the IRF diagram represents the IRF resource.
- The IRF rows are separated by vertical lines.
- The resources of interest for IRF are *handling resources*, which are those having the greatest interest for reporting—agents, self-service IVRs, and DNs without an agent. *Non-handling resources* include mediation resources such as queues, routing points, and non-self-service IVRs.

- IRF diagrams also show with which portion of the call each resource's state is associated (such as received consult, post-consult transfer, and post-consult conference).

Figure 6 shows the IRF call flow for the same interaction that is shown as an ISF call flow in Figure 5:

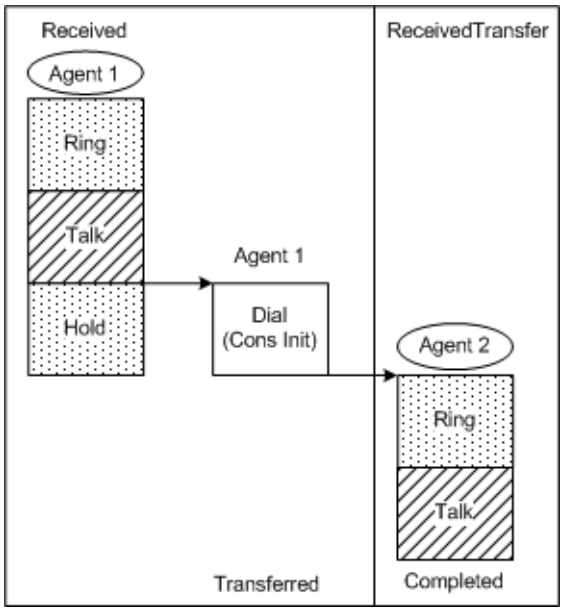

Figure 6: Sample IRF Call Flow

Separate Initiated Consult Row in IRF

Starting with Genesys Info Mart release 7.6.006, the application can be configured to create a separate IRF row to represent voice agents and self-service IVR ports that initiate consultations. To illustrate the separate IRF row for an initiated consultation, two variants of selected call flows have been shown—one without a separate Initiated Consult row and one with a separate Initiated Consult row. The separate Initiated Consult row is shown for the following scenarios:

- Transfer completed (Figure 17 on page 111)
- Consultation completed (Figure 26 on page 118)
- Call transferred after a consultation (Figure 31 on page 122)
- Call conferenced after a consultation (Figure 36 on page 126)

The remaining IRF diagrams for call flows that include consultations do not show the separate Initiated Consult row.

Framework-Only Call Flows

Based on the dialed number, voice interactions that arrive at the switch are queued to an ACD queue that represents a requested skill, service type, or customer segment. Agents who are logged in to the ACD queues handle the interactions.

Note: Flows that start under a diagram in one of the other solutions may resume in another diagram under this solution (such as when a voice interaction in Universal Routing routes to an agent, and the agent performs a two-step transfer to another agent).

This section describes call flows for the following types of interactions:

- Inbound call flow examples
- Outbound call flow example (see page 128)
- Internal call flow examples (see page 128)

Inbound Call Flow Examples

This subsection contains several examples of inbound call flows. Each example represents a different outcome:

- An ACD queue directs the inbound call to an agent.
- The inbound call is answered directly by an agent (see page 104).
- An agent mute transfers the call to an ACD queue (see page 105).
- An agent mute transfers the call to another agent (see page 111).
- An agent consults to an ACD queue, and then retrieves the call (see page 113).
- An agent consults to another agent, and then retrieves the call (see page 118).
- An agent consults to an ACD queue, and then transfers the call (see page 120).
- An agent consults to another agent, and then transfers the call (see page 122).
- An agent consults to an ACD queue, and then conferences the call (see page 124).
- An agent consults to another agent, and then conferences the call (see page 126).

Inbound to Agent via ACD Queue

In this call topology, an inbound call is delivered to an agent via an ACD queue. The interaction arrives at the ACD queue, and the ACD queue diverts it to an agent.

- Figure 7 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 8 depicts the Interaction Resource Fact (IRF) representation of the call topology.

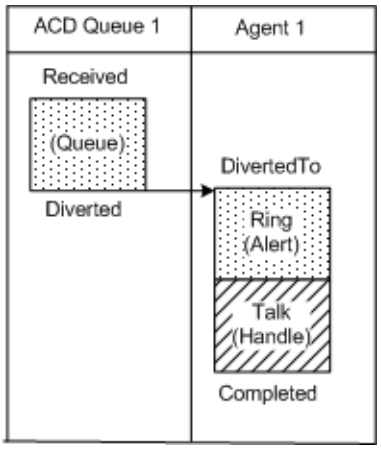

Figure 7: Inbound to Agent via ACD Queue—ISF

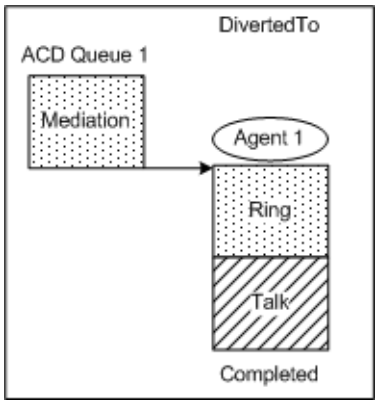

Figure 8: Inbound to Agent via ACD Queue—IRF

Inbound to Agent Directly

In this call topology, an inbound call is answered directly by an agent.

- Figure 9 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 10 depicts the Interaction Resource Fact (IRF) representation of the call topology.

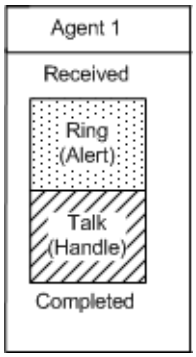

Figure 9: Inbound to Agent Directly—ISF

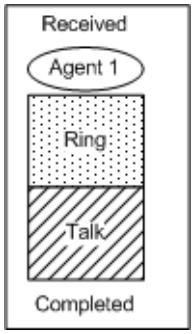

Figure 10: Inbound to Agent Directly—IRF

Mute Transfer to ACD Queue

In this call topology, an inbound call arrives at the ACD queue and is diverted to an agent. The agent then mute transfers the call to another ACD queue.

This section shows three possible outcomes of a call that is mute transferred to an ACD queue:

- The call is abandoned while it is in the second ACD queue (see "Mute Transfer to ACD Queue—Abandoned in Queue" on page 105).
- The call is abandoned while it is ringing at the second agent (see "Mute Transfer to ACD Queue—Abandoned While Ringing" on page 107).
- The call is successfully transferred to the second agent (see "Mute Transfer to ACD Queue—Completed" on page 108).

Mute Transfer to ACD Queue—Abandoned in Queue

For this outcome, the call is abandoned while it is in the second ACD queue.

- Figure 11 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 12 depicts the Interaction Resource Fact (IRF) representation of the call topology.

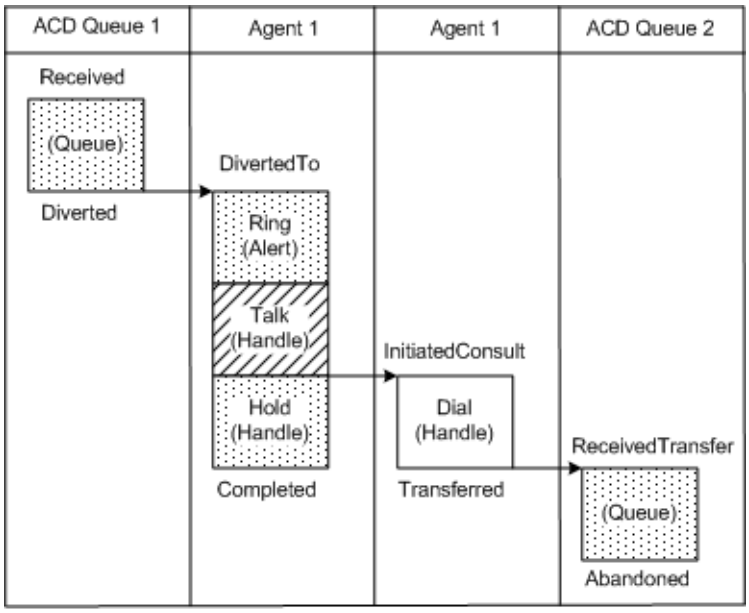

Figure 11: Transfer Abandoned While in ACD Queue—ISF

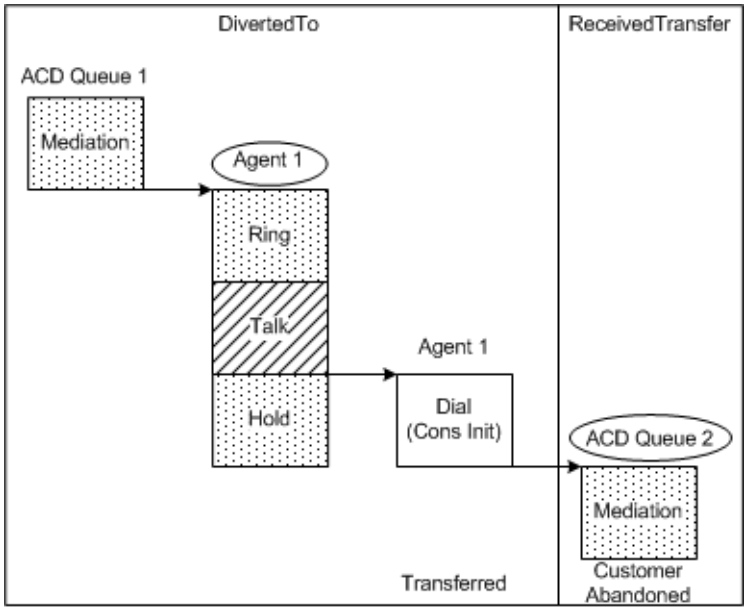

Figure 12: Transfer Abandoned While in ACD Queue—IRF

Mute Transfer to ACD Queue—Abandoned While Ringing

For this outcome, the call is diverted to the second agent, but it is abandoned while ringing.

- Figure 13 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 14 depicts the Interaction Resource Fact (IRF) representation of the call topology.

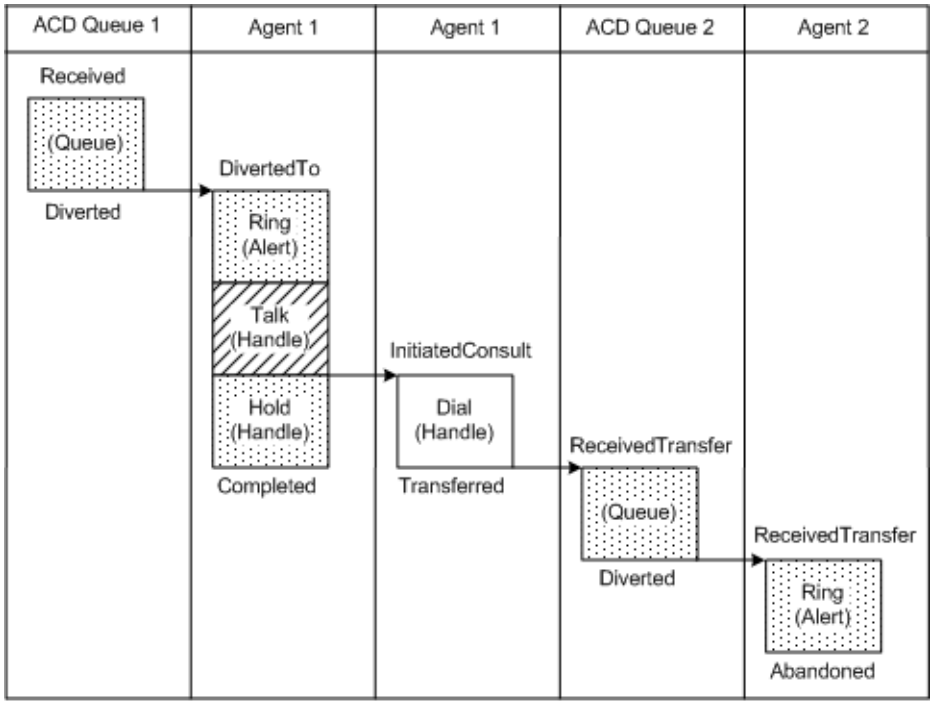

Figure 13: Transfer Abandoned While Ringing at Agent—ISF

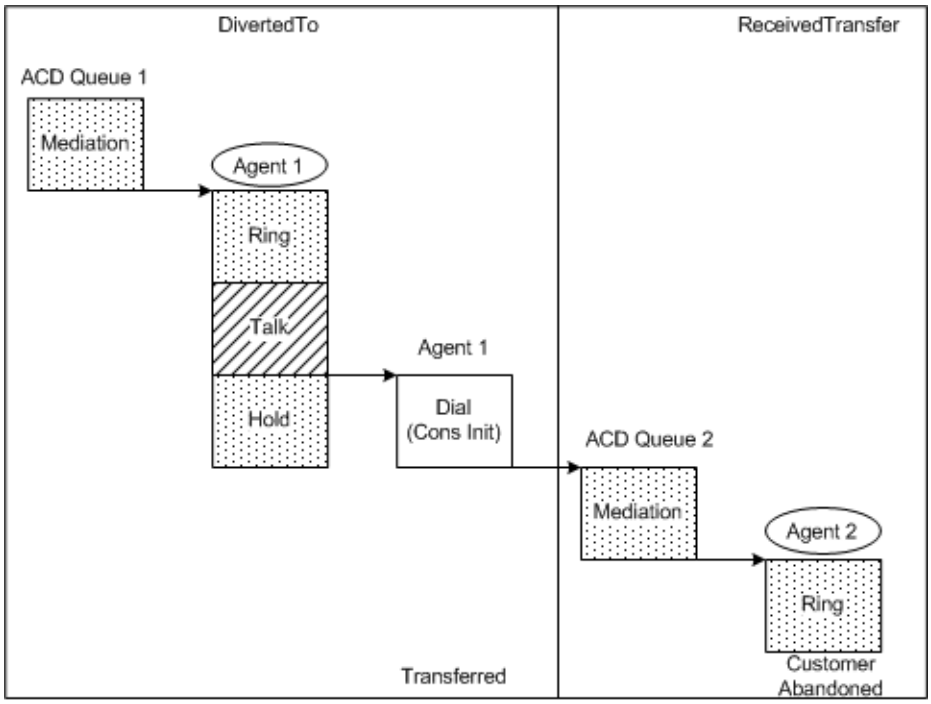

Figure 14: Transfer Abandoned While Ringing at Agent—IRF

Mute Transfer to ACD Queue—Completed

For this outcome, the call is successfully diverted to another agent.

- Figure 15 on page 109 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 16 on page 110 depicts the Interaction Resource Fact (IRF) representation of the call topology.
- Figure 17 on page 111 depicts the IRF representation of the call topology, for the case where Genesys Info Mart has been configured to create a separate Initiated Consult row.

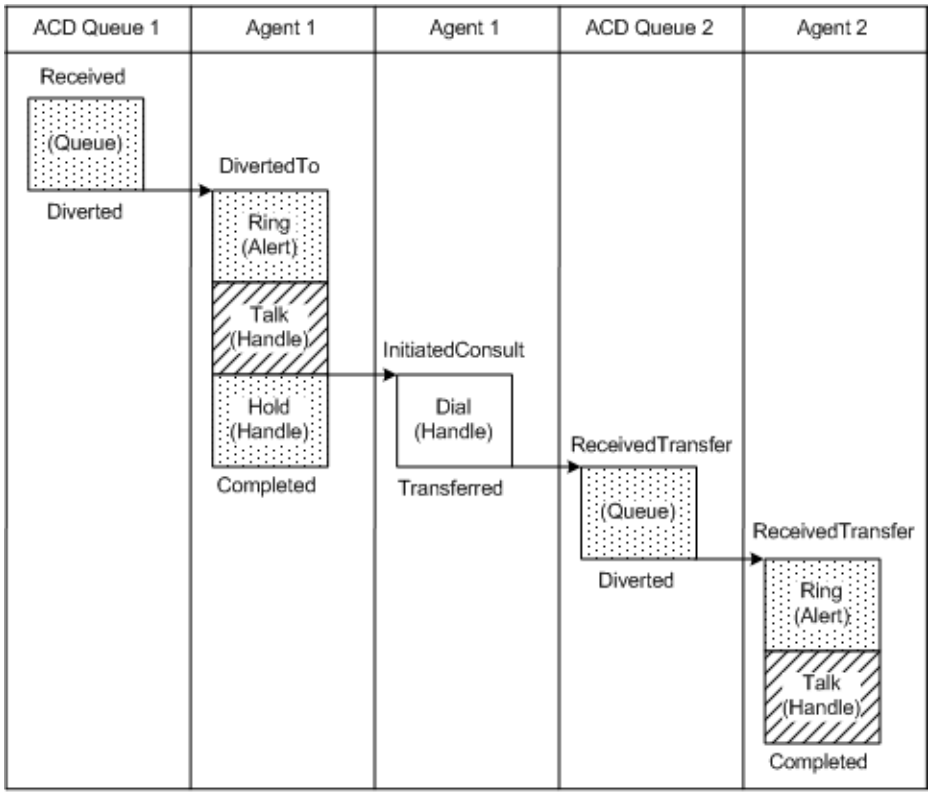

Figure 15: Transfer Completed—ISF

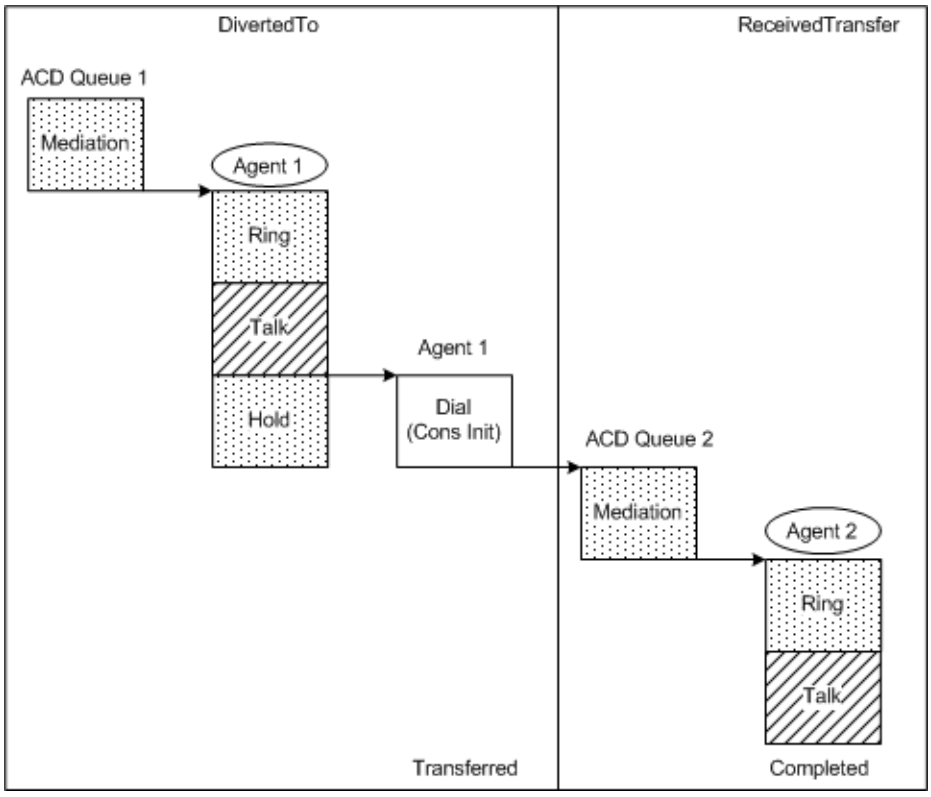

Figure 16: Transfer Completed—IRF

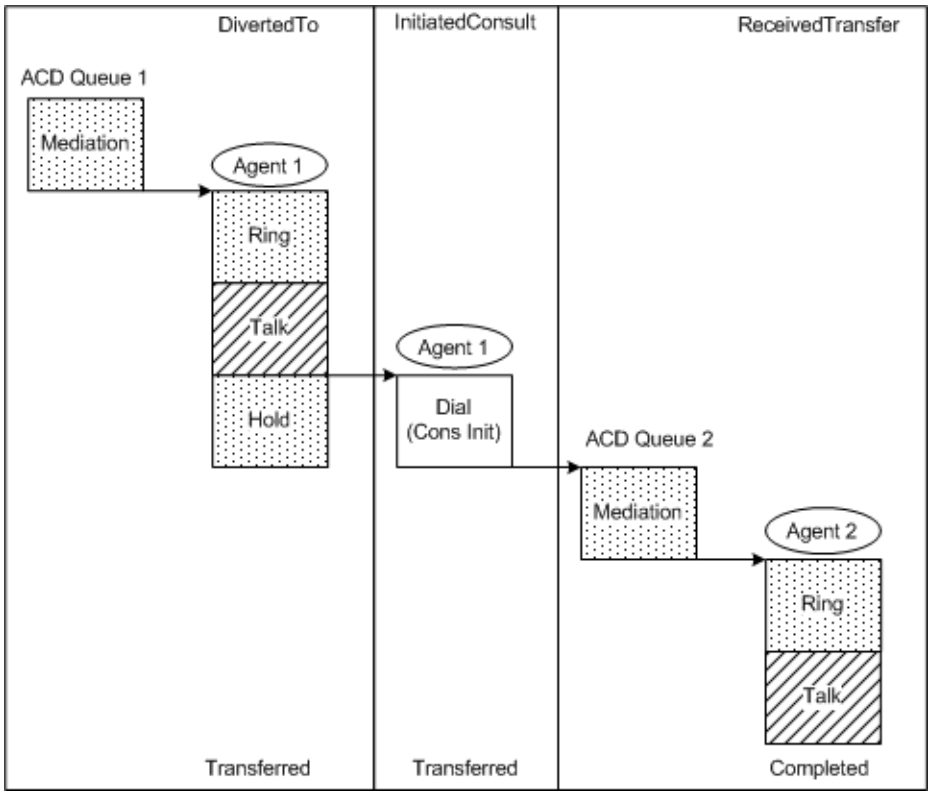

Figure 17: Transfer Completed—Separate IRF Row for InitiatedConsult

Mute Transfer to Agent

This call topology shows the outcome of a call that arrives at an agent, who answers the call, and then mute transfers it to another agent.

- Figure 18 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 19 depicts the Interaction Resource Fact (IRF) representation of the call topology.

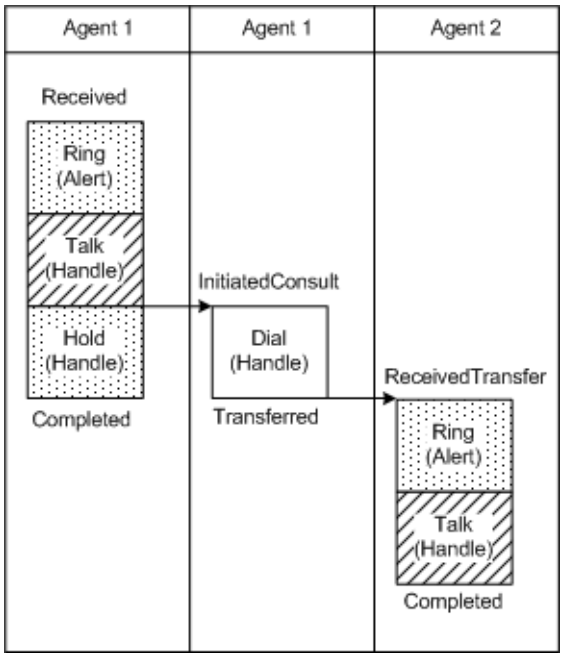

Figure 18: Agent Mute Transfers to Another Agent—ISF

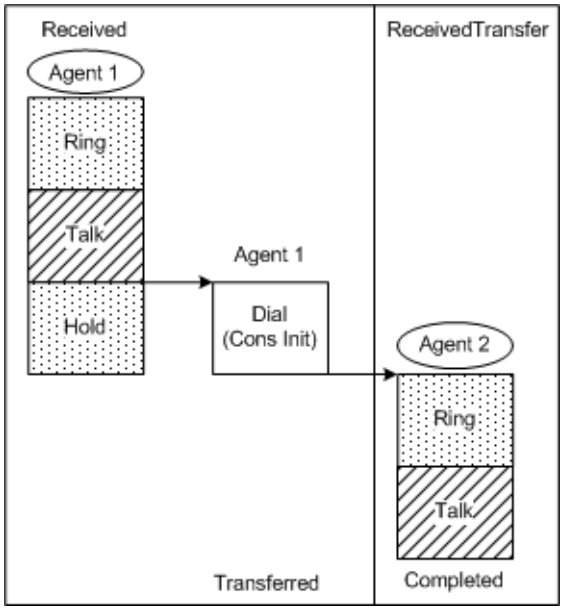

Figure 19: Agent Mute Transfers to Another Agent—IRF

Consult to Agent via ACD Queue, and Then Retrieve

In this call topology, an inbound call arrives at the ACD queue and is diverted to an agent. The agent consults to another ACD queue, and the call is diverted to another agent. The consultation ends when the first agent retrieves the call.

This section shows three possible outcomes of a call that is retrieved after a consultation has been initiated:

- The call is retrieved while it is in the second queue (see "Consult to ACD Queue—Abandoned in Queue").
- The call is retrieved while it is ringing at the second agent (see "Consult to ACD Queue—Abandoned While Ringing" on page 114).
- The call is retrieved after the consultation is completed (see "Consult to ACD Queue—Completed" on page 116).

Consult to ACD Queue—Abandoned in Queue

For this outcome, the call is retrieved while it is in the second ACD queue.

- Figure 20 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 21 depicts the Interaction Resource Fact (IRF) representation of the call topology. Note that from the IRF perspective, the call is abandoned from the queue because no new handling resource receives the call from the queue.

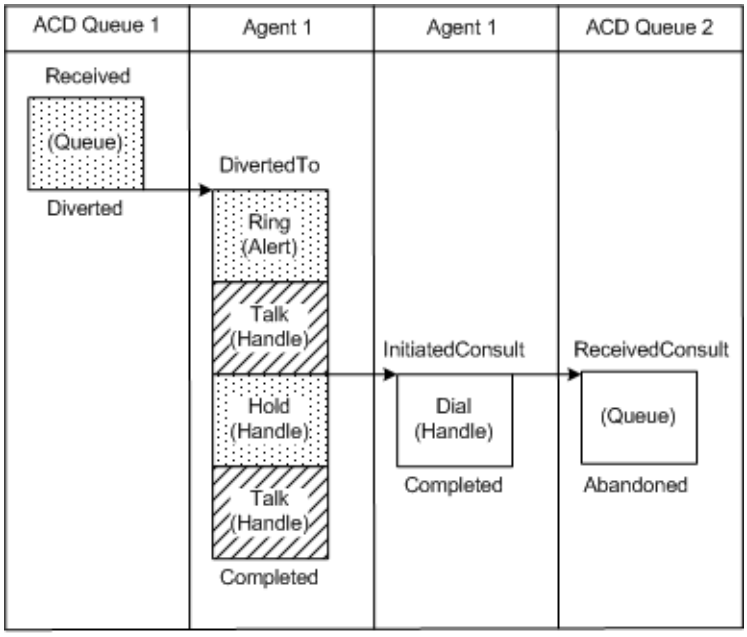

Figure 20: Call Retrieved While in ACD Queue—ISF

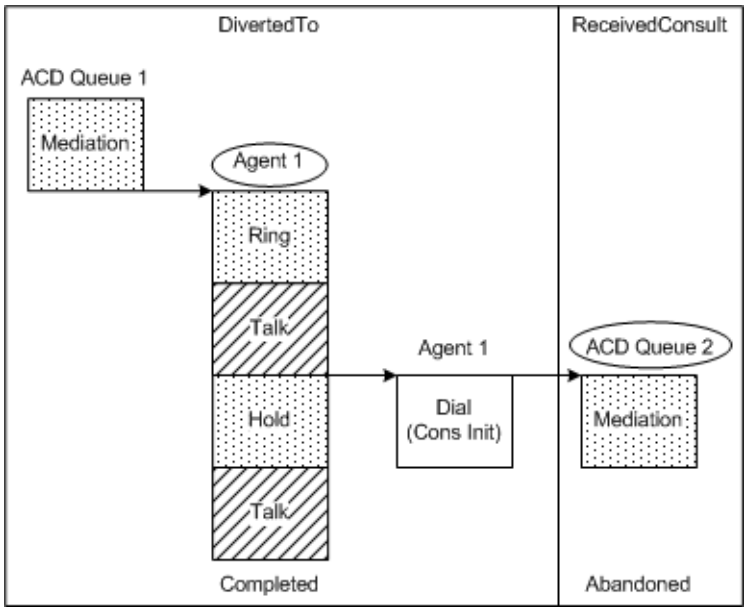

Figure 21: Call Retrieved While in ACD Queue—IRF

Consult to ACD Queue—Abandoned While Ringing

For this outcome, the call is retrieved while it is ringing at the second agent.

- Figure 22 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 23 depicts the Interaction Resource Fact (IRF) representation of the call topology. Note that from the IRF perspective, the call is abandoned from the queue because the new handling resource, Agent 2, never receives the call.

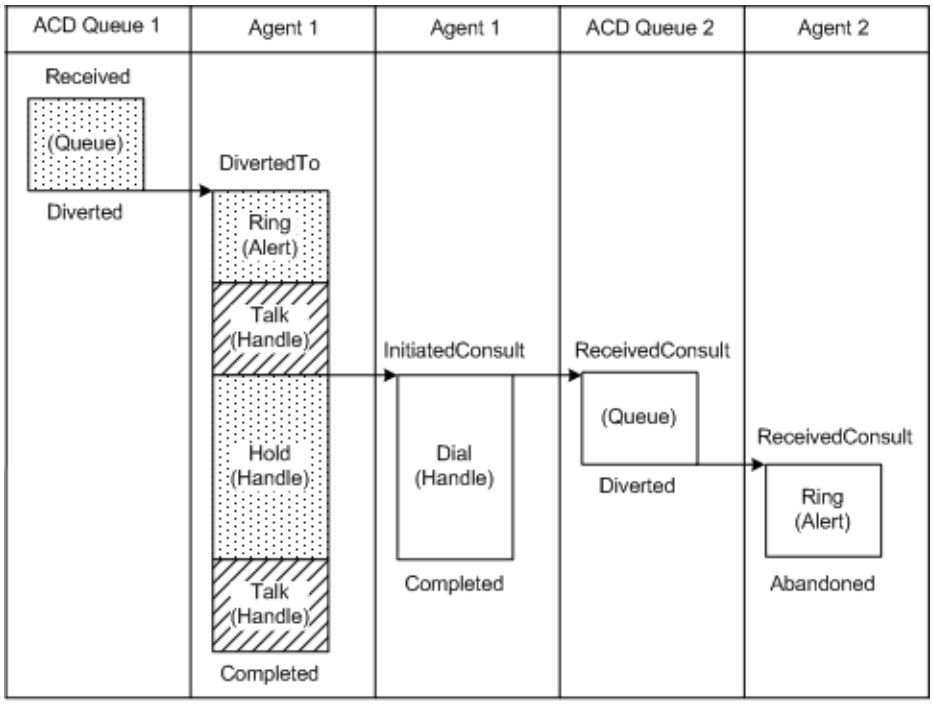

Figure 22: Call Retrieved While Ringing at Agent—ISF

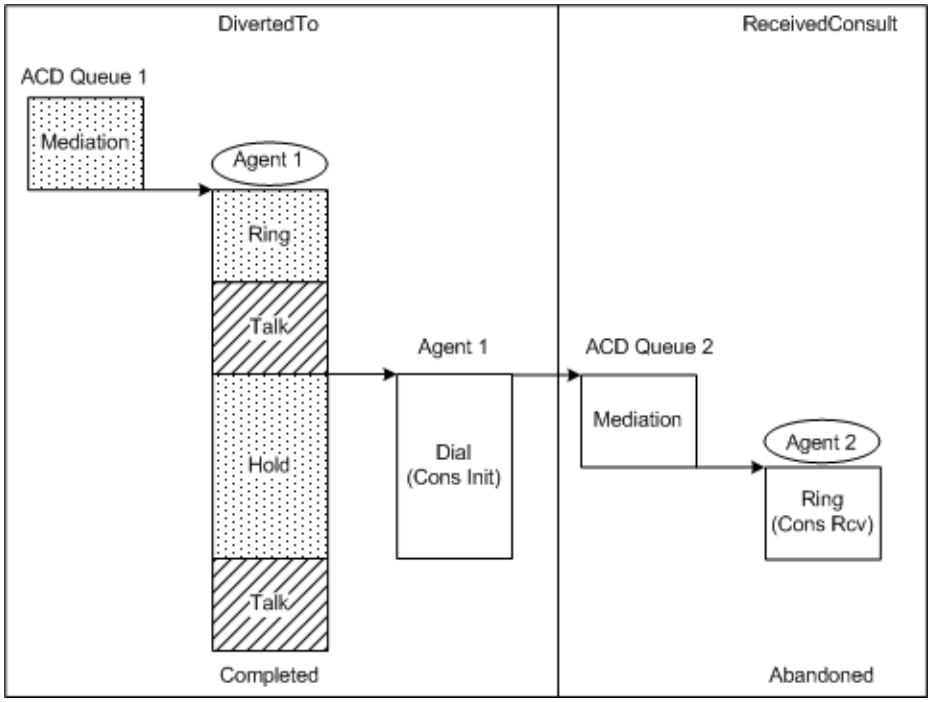

Figure 23: Call Retrieved While Ringing at Agent—IRF

Consult to ACD Queue—Completed

For this outcome, the call is retrieved after the consultation is completed.

- Figure 24 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 25 depicts the Interaction Resource Fact (IRF) representation of the call topology.
- Figure 26 on page 118 depicts the IRF representation of the call topology, for the case where Genesys Info Mart has been configured to create a separate Initiated Consult row.

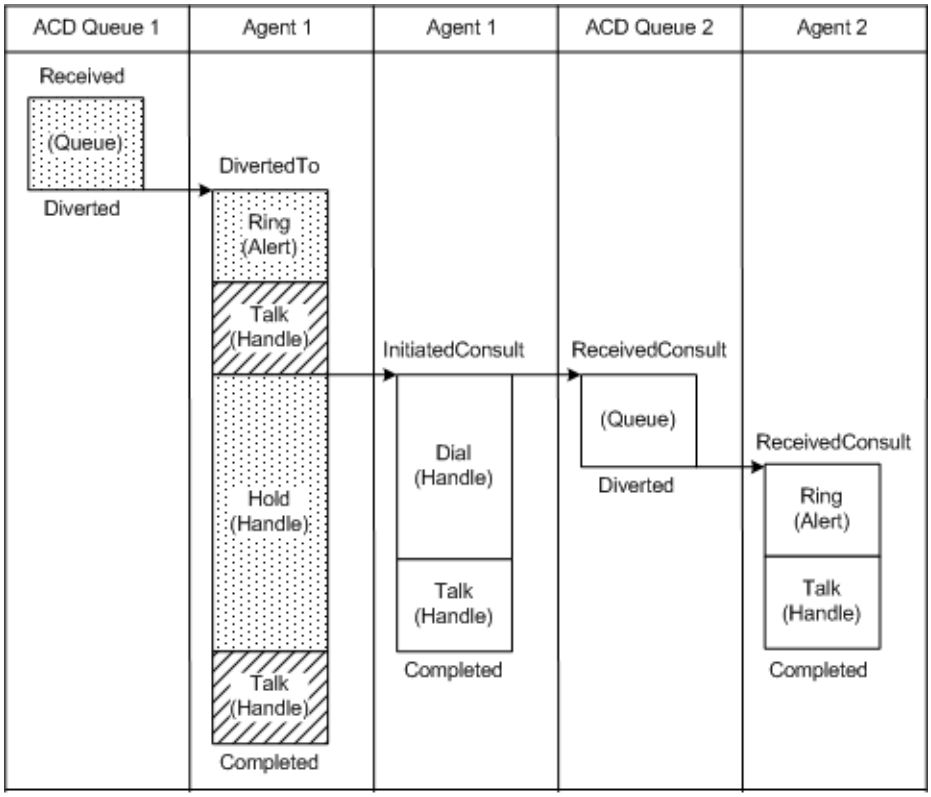

Figure 24: Consultation Completed—ISF

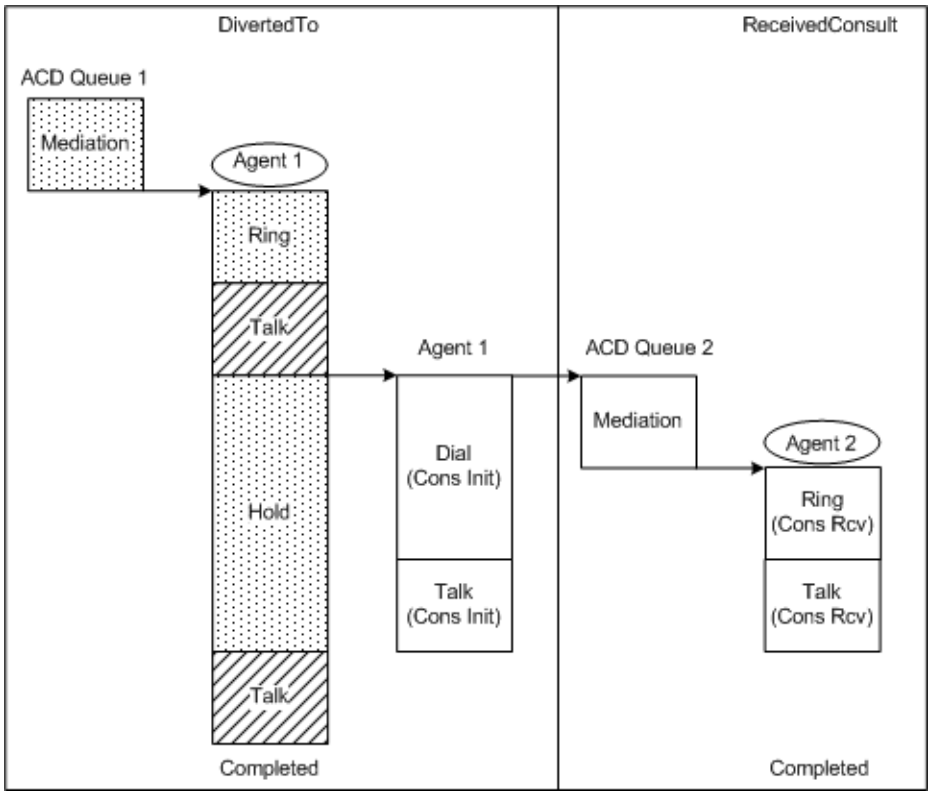

Figure 25: Consultation Completed—IRF

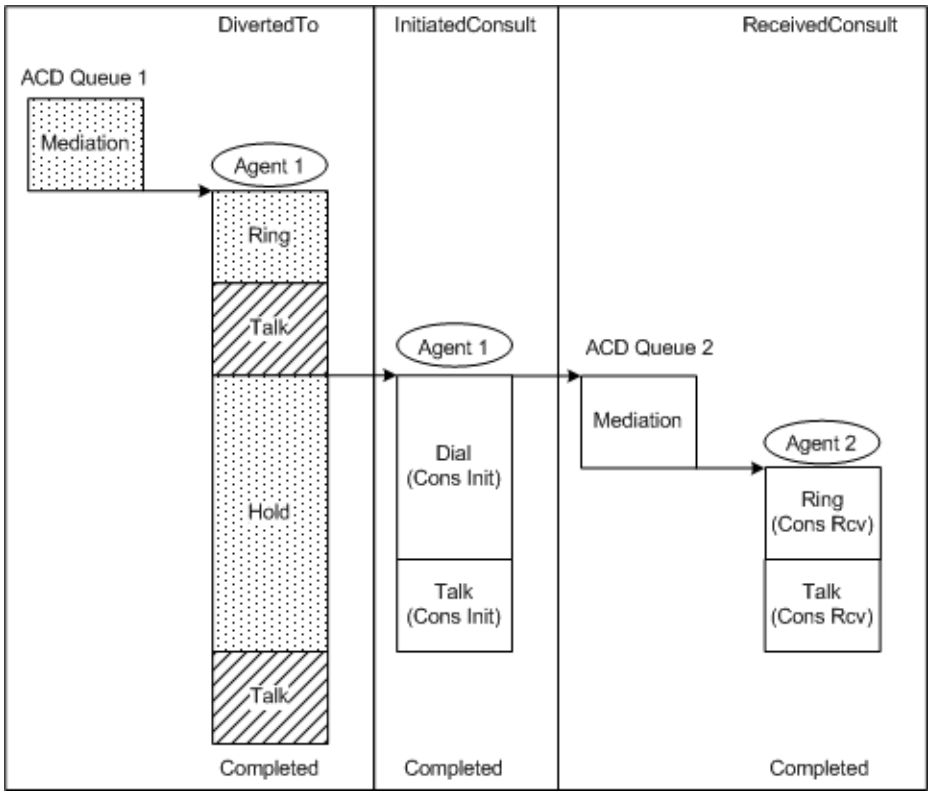

Figure 26: Consultation Completed—Separate IRF Row for InitiatedConsult

Consult to Agent, and Then Retrieve

This call topology shows the outcome of a call that arrives at an agent, who consults to another agent. The consultation ends when the first agent retrieves the call.

- Figure 27 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 28 depicts the Interaction Resource Fact (IRF) representation of the call topology.

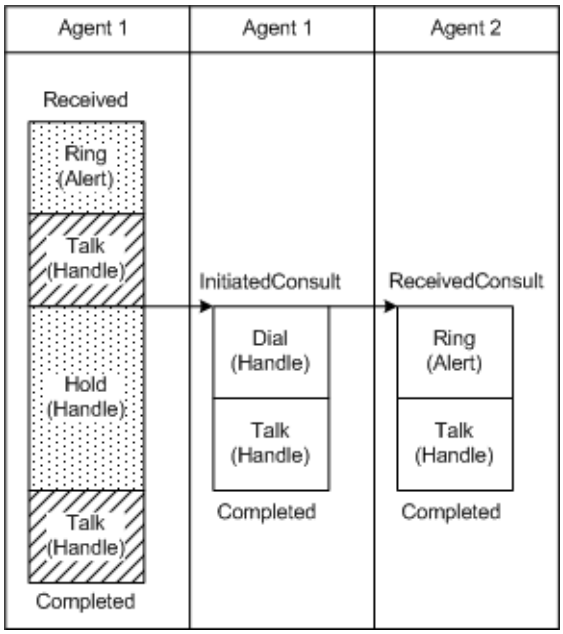

Figure 27: Consult to Agent, and Then Retrieve—ISF

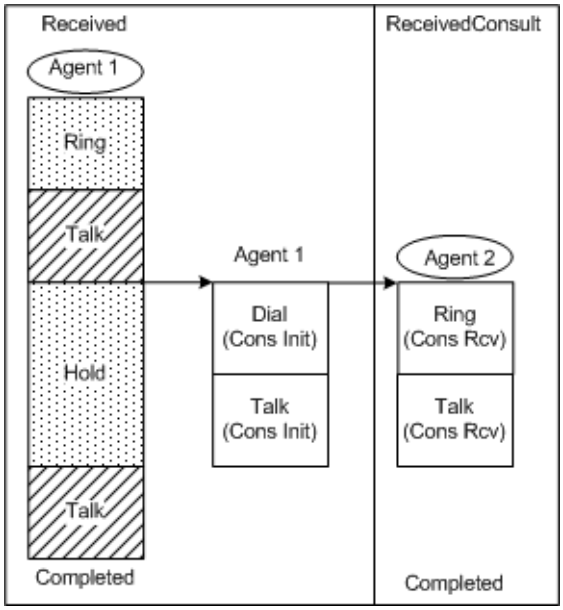

Figure 28: Consult to Agent, and Then Retrieve—IRF

Consult to Agent via ACD Queue, and Then Transfer

This call topology shows that outcome of a call that is transferred after a consultation. The call arrives at the ACD queue and is diverted to an agent. The agent consults to another ACD queue, and the call is diverted to another agent. The consultation ends when the first agent transfers the call.

- Figure 29 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 30 depicts the Interaction Resource Fact (IRF) representation of the call topology.
- Figure 31 on page 122 depicts the IRF representation of the call topology, for the case where Genesys Info Mart has been configured to create a separate Initiated Consult row.

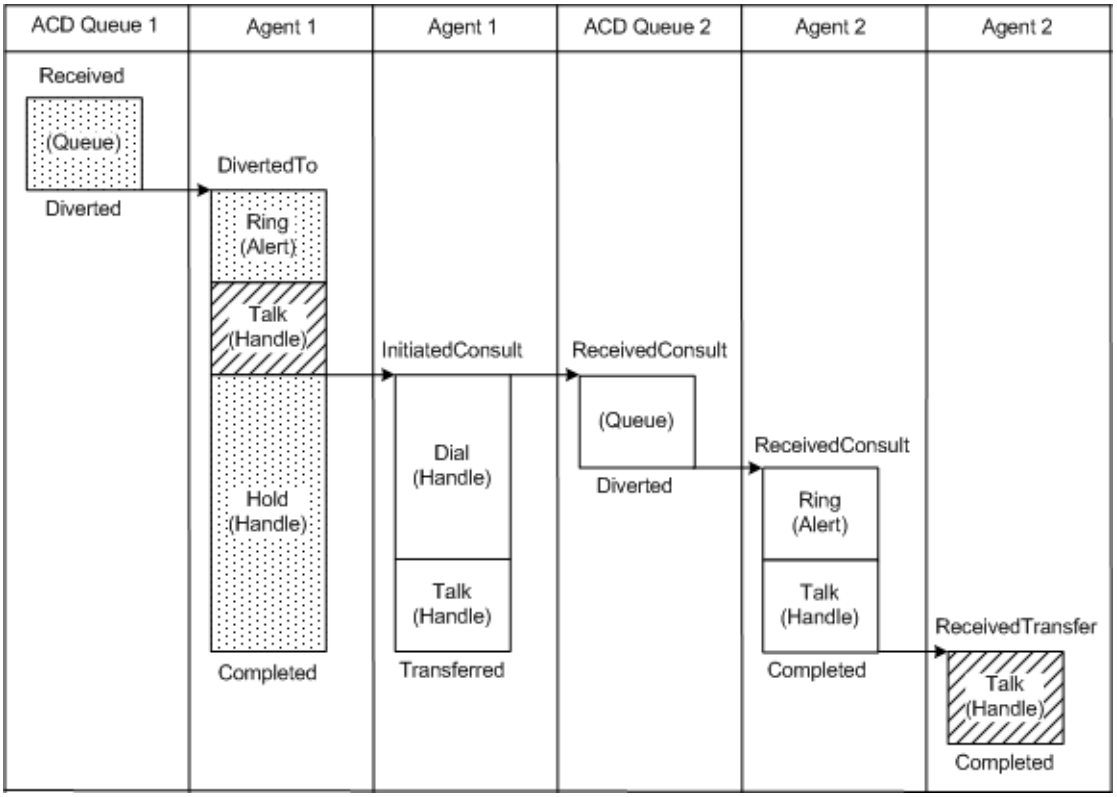

Figure 29: Consult to Agent via ACD Queue, and Then Transfer—ISF

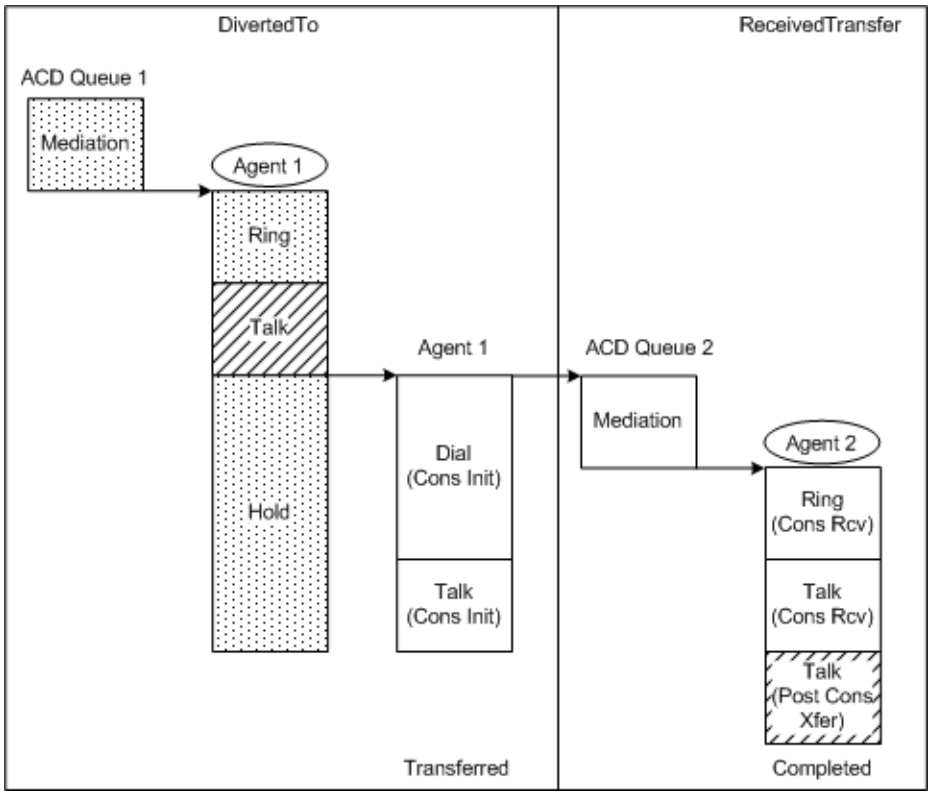

Figure 30: Consult to Agent via ACD Queue, and Then Transfer—IRF

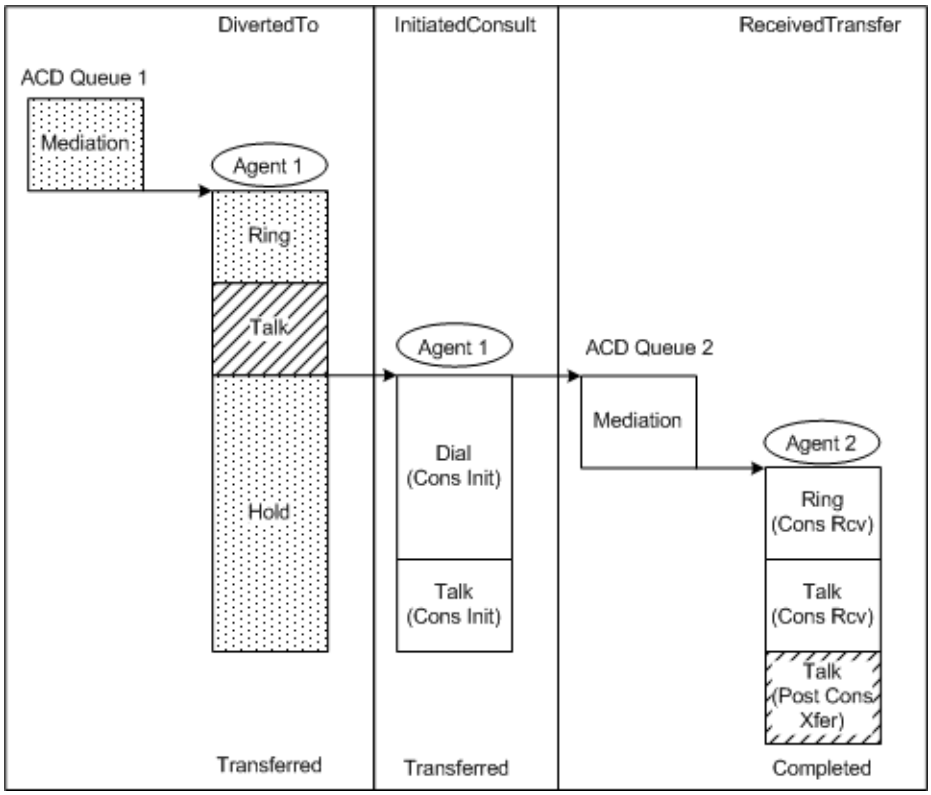

Figure 31: Consult to Agent via ACD Queue, and Then Transfer—Separate IRF Row for InitiatedConsult

Consult to Agent Directly, and Then Transfer

This call topology shows the outcome of a call that is transferred after a consultation. The call arrives at an agent, who consults to another agent, and then transfers the call. The consultation ends when the first agent transfers the call.

- Figure 32 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 33 depicts the Interaction Resource Fact (IRF) representation of the call topology.

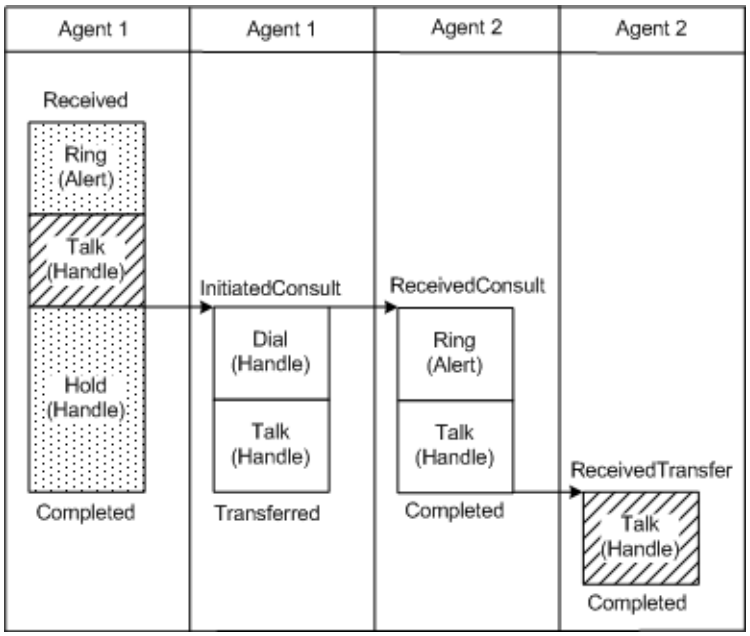

Figure 32: Consult to Agent Directly, and Then Transfer—ISF

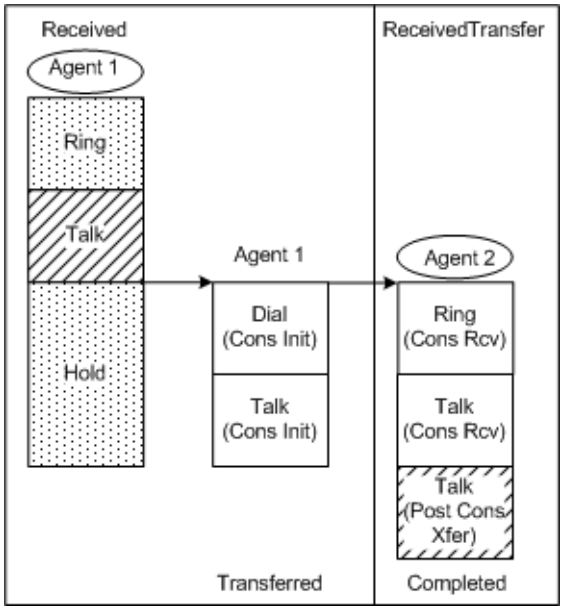

Figure 33: Consult to Agent Directly, and Then Transfer—IRF

Consult to Agent via ACD Queue, and Then Conference

This call topology shows the outcome of a call that is conferenced after a consultation. The call arrives at the ACD queue and is diverted to an agent. The agent consults to another ACD queue, and the call is diverted to another agent. The consultation ends when the first agent conferences the call.

- Figure 34 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 35 depicts the Interaction Resource Fact (IRF) representation of the call topology.
- Figure 36 on page 126 depicts the IRF representation of the call topology, for the case where Genesys Info Mart has been configured to create a separate Initiated Consult row.

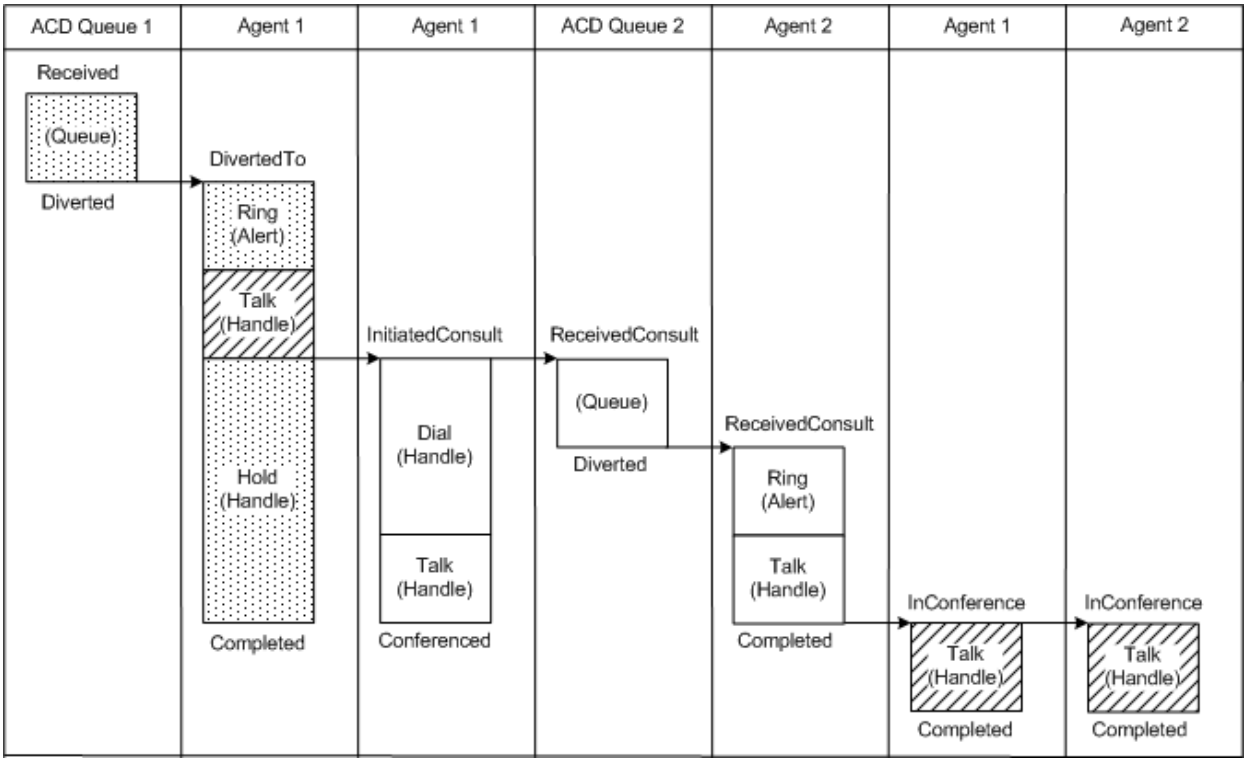

Figure 34: Consult to Agent via ACD Queue, and Then Conference—ISF

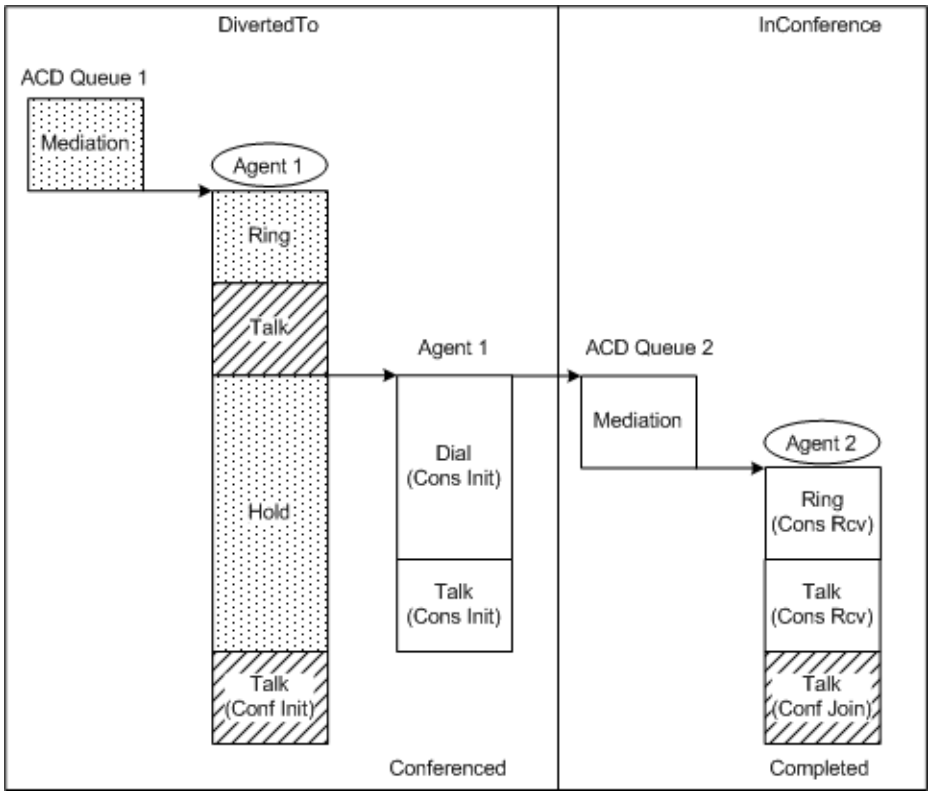

Figure 35: Consult to Agent via ACD Queue, and Then Conference—IRF

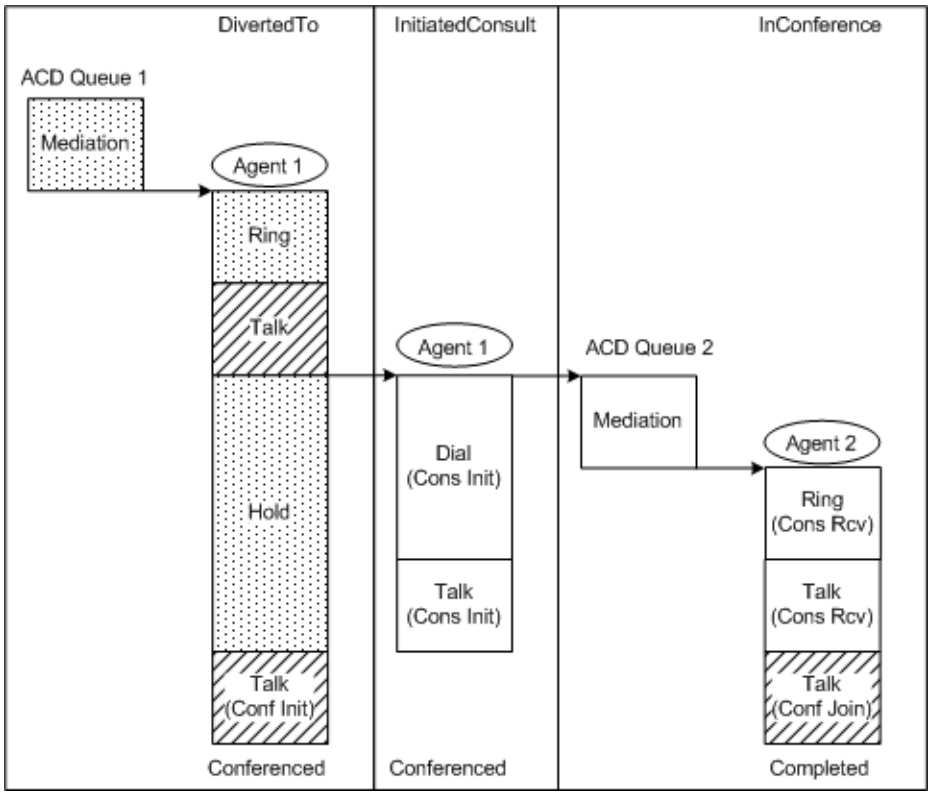

Figure 36: Consult to Agent via ACD Queue, and Then Conference—Separate IRF Row for InitiatedConsult

Consult to Agent Directly, and Then Conference

This call topology shows the outcome of a call that is conferenced after a consultation. The call arrives at an agent, who consults to another agent. The consultation ends when the first agent conferences the call.

- Figure 37 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 38 depicts the Interaction Resource Fact (IRF) representation of the call topology.

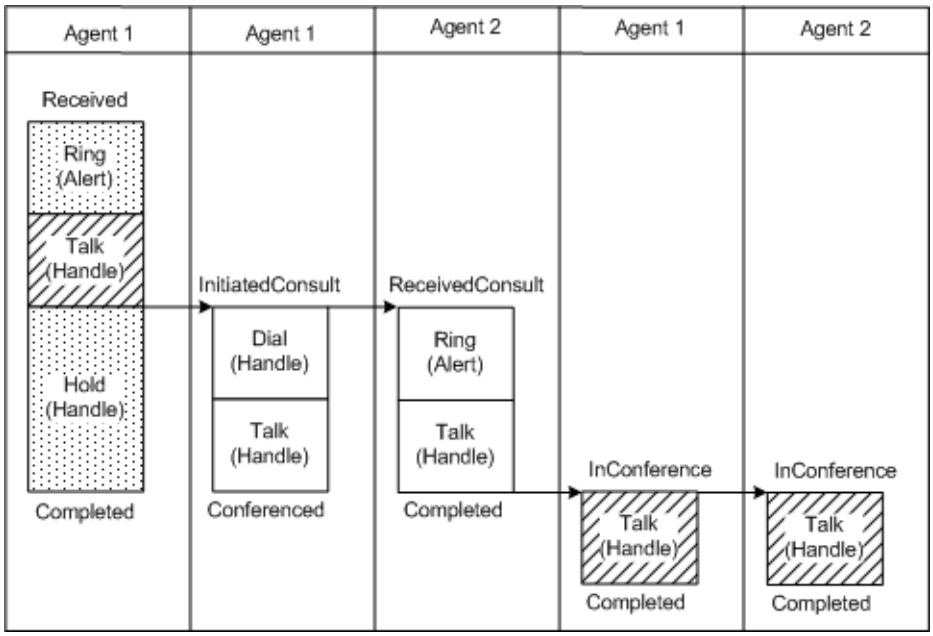

Figure 37: Consult to Agent Directly, and Then Conference—ISF

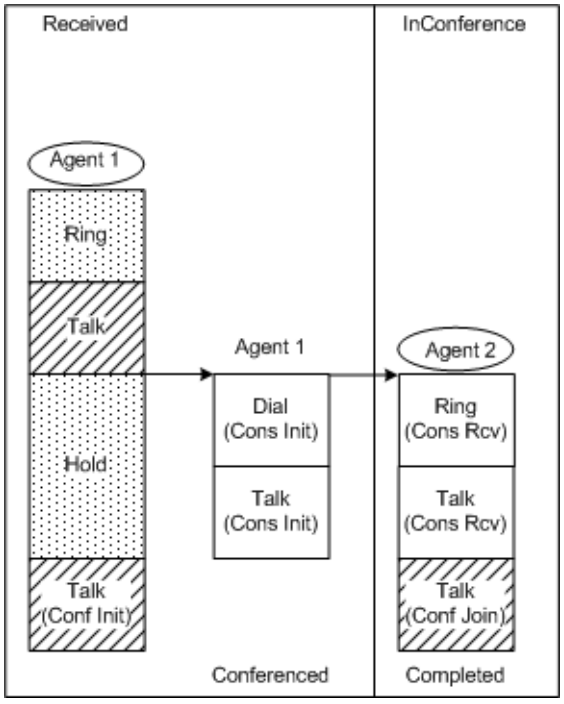

Figure 38: Consult to Agent Directly, and Then Conference—IRF

Outbound Call Flow Example

This call topology shows a call flow example of a direct outbound call. An agent dials an off-switch number. After talking with an external party, the agent hangs up.

- Figure 39 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 40 depicts the Interaction Resource Fact (IRF) representation of the call topology.

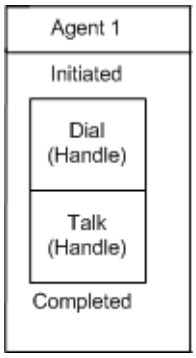

Figure 39: Agent Dials External Party—ISF

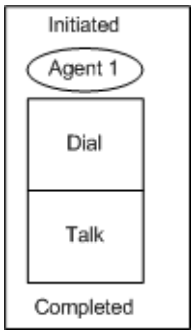

Figure 40: Agent Dials External Party—IRF

Internal Call Flow Examples

This subsection contains several examples of internal call flows. Each example represents a different outcome:

- An ACD queue directs the internal call to another agent.
- The internal call is answered directly by another agent (see page 130).
- An agent mute transfers the call to an ACD queue (see page 131).
- An agent mute transfers the call to another agent (see page 134).
- An agent consults to an ACD queue, and then retrieves the call (see page 137).

- An agent consults to another agent, and then retrieves the call (see page 140).
- An agent consults to an ACD queue, and then transfers the call (see page 142).
- An agent consults to another agent, and then transfers the call (see page 145).
- An agent consults to an ACD queue, and then conferences the call (see page 148).
- An agent consults to another agent, and then conferences the call (see page 151).

Internal to Agent via ACD Queue

This call topology shows the outcome of an internal call to an agent via an ACD queue. An agent initiates a call to the ACD queue, and the interaction is diverted to another agent.

- Figure 41 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 42 depicts the Interaction Resource Fact (IRF) representation of the call topology.

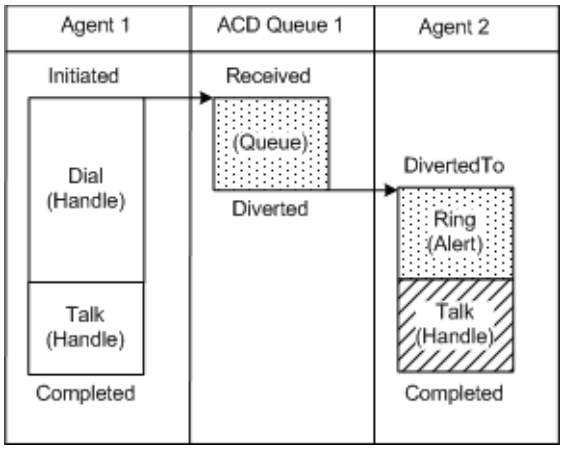

Figure 41: Internal Call to Another Agent via ACD Queue—ISF

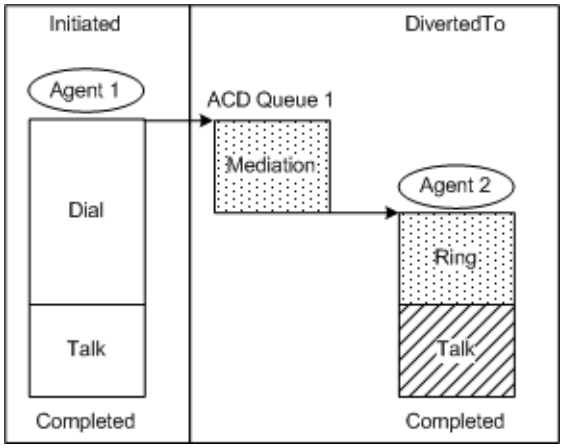

Figure 42: Internal Call to Another Agent via ACD Queue—IRF

Internal to Agent Directly

This call topology shows the outcome of a call that an agent initiates directly to another agent.

- Figure 43 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 44 depicts the Interaction Resource Fact (IRF) representation of the call topology.

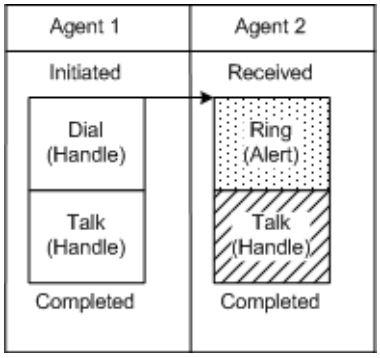

Figure 43: Internal Call from One Agent to Another—ISF

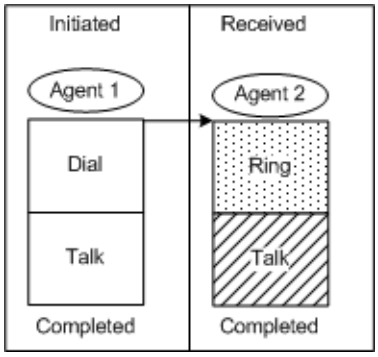

Figure 44: Internal Call from One Agent to Another—IRF

Mute Transfer to ACD Queue

In this call topology, an agent initiates a call to another agent. One of the agents then mute transfers the call to an ACD queue, and the interaction is diverted to another agent.

This section shows two possible outcomes of a call that is mute transferred to an ACD queue:

- The receiver (`Agent 2`) initiates the transfer (see "Mute Transfer to ACD Queue—Call Receiver Initiates Transfer").
- The initiator (`Agent 1`) initiates the transfer (see "Mute Transfer to ACD Queue—Call Initiator Initiates Transfer" on page 133).

Mute Transfer to ACD Queue—Call Receiver Initiates Transfer

For this outcome, the receiving agent initiates a mute transfer to the ACD queue.

- Figure 45 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 46 depicts the Interaction Resource Fact (IRF) representation of the call topology.

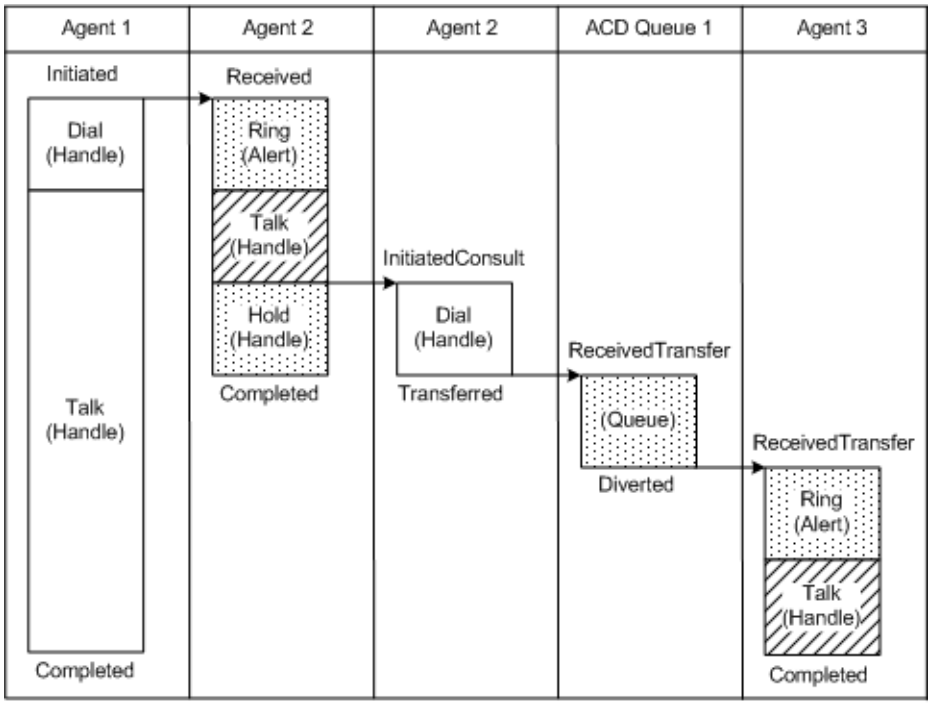

Figure 45: Receiving Agent Initiates Transfer to ACD Queue—ISF

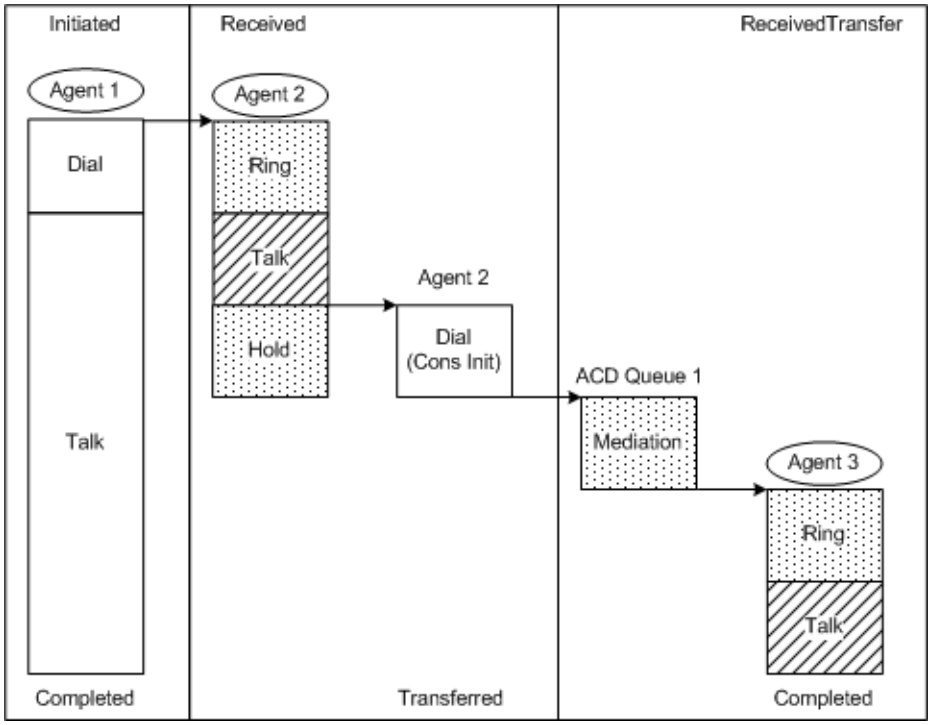

Figure 46: Receiving Agent Initiates Transfer to ACD Queue—IRF

Mute Transfer to ACD Queue—Call Initiator Initiates Transfer

For this outcome, the initiating agent initiates a mute transfer to the ACD queue.

- Figure 47 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 48 depicts the Interaction Resource Fact (IRF) representation of the call topology.

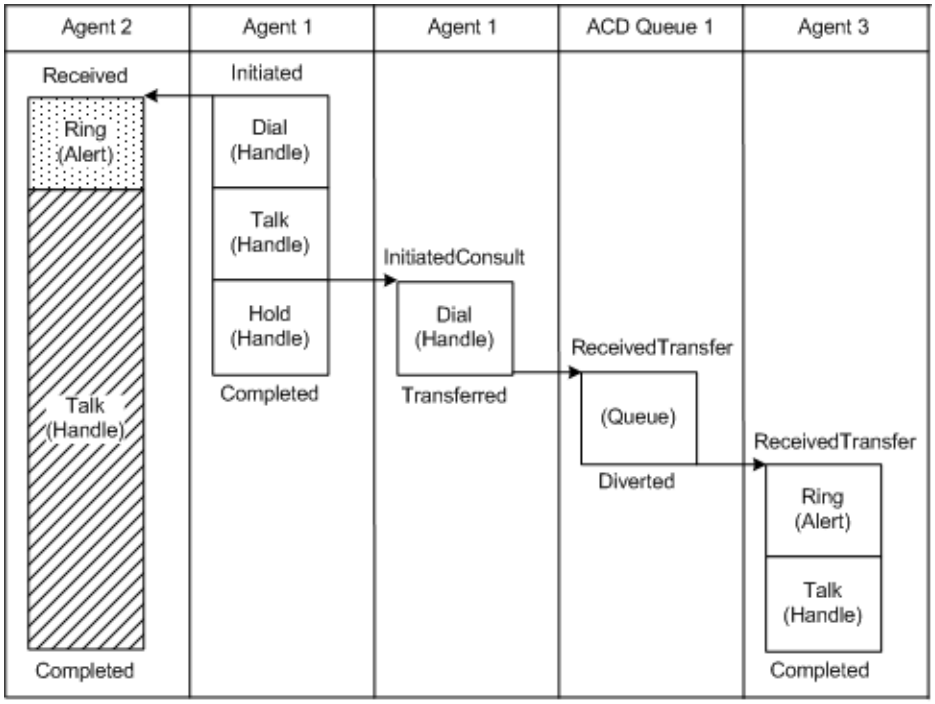

Figure 47: Initiating Agent Initiates Transfer to ACD Queue—ISF

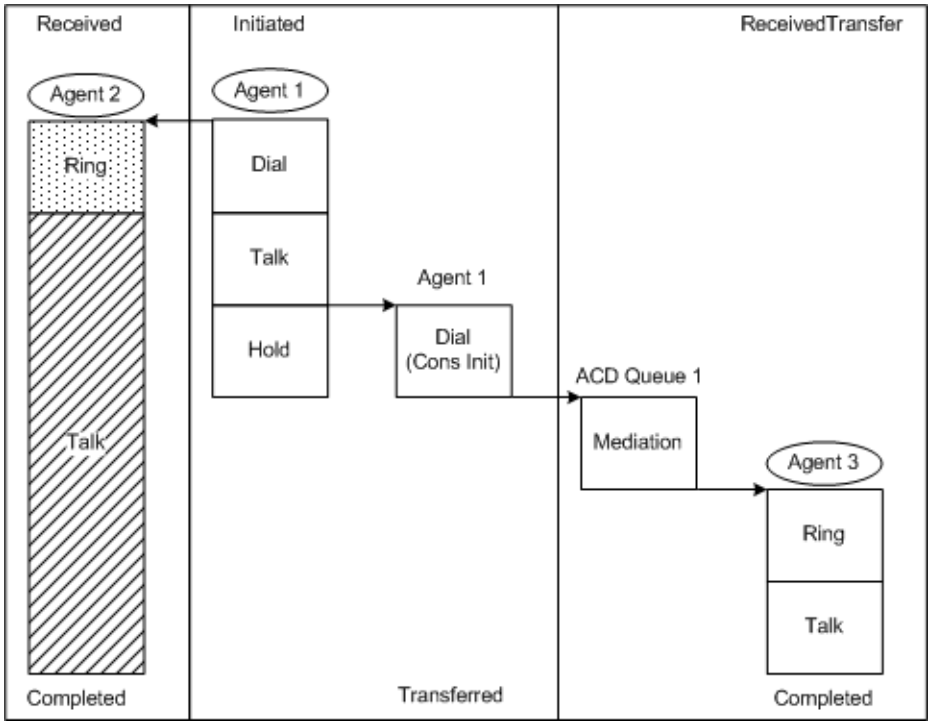

Figure 48: Initiating Agent Initiates Transfer to ACD Queue—IRF

Mute Transfer to Agent

In this call topology, an agent initiates a call to another agent. One of the agents then mute transfers the call to another agent.

This section shows two possible outcomes of a call that is mute transferred directly to an agent:

- The receiver (`Agent 2`) initiates the transfer (see "Mute Transfer to Agent—Call Receiver Initiates Transfer").
- The initiator (`Agent 1`) initiates the transfer (see "Mute Transfer to Agent—Call Initiator Initiates Transfer" on page 136).

Mute Transfer to Agent—Call Receiver Initiates Transfer

For this outcome, the receiving agent initiates a mute transfer to another agent.

- Figure 49 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 50 depicts the Interaction Resource Fact (IRF) representation of the call topology.

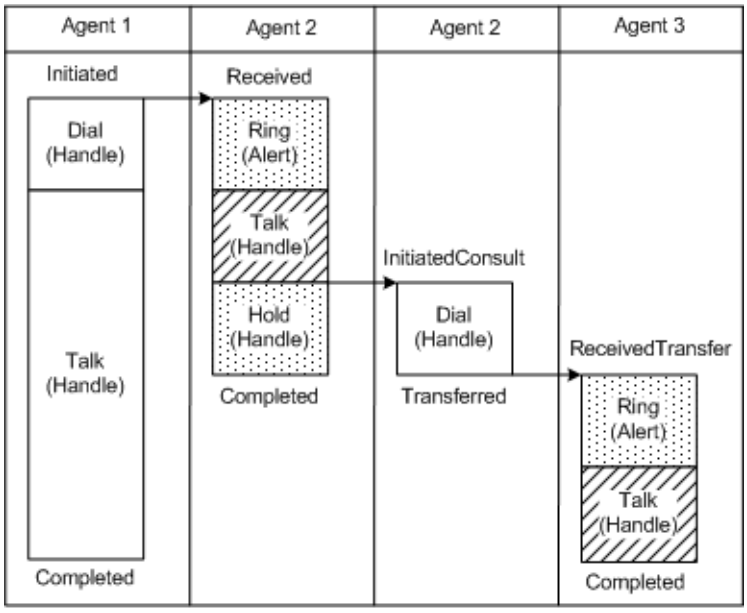

Figure 49: Receiving Agent Initiates Transfer to Another Agent—ISF

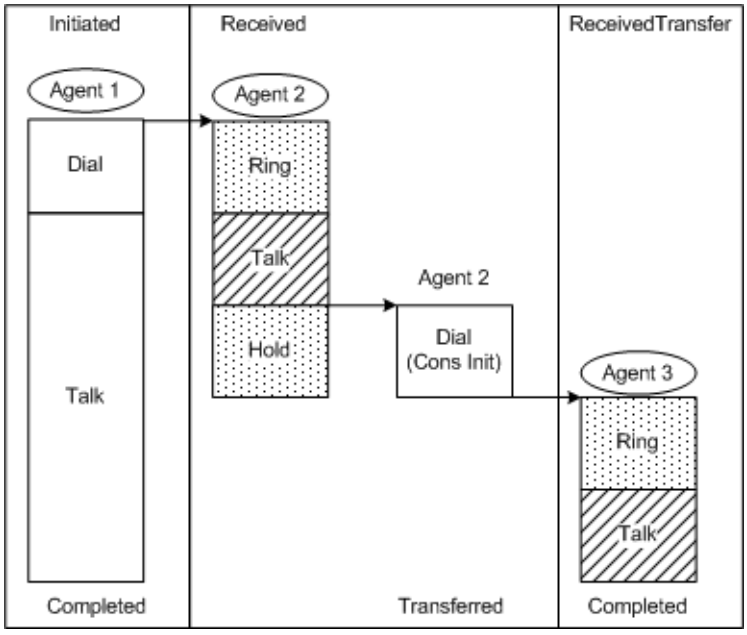

Figure 50: Receiving Agent Initiates Transfer to Another Agent—IRF

Mute Transfer to Agent—Call Initiator Initiates Transfer

For this outcome, the initiating agent initiates a mute transfer to another agent.

- Figure 51 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 52 depicts the Interaction Resource Fact (IRF) representation of the call topology.

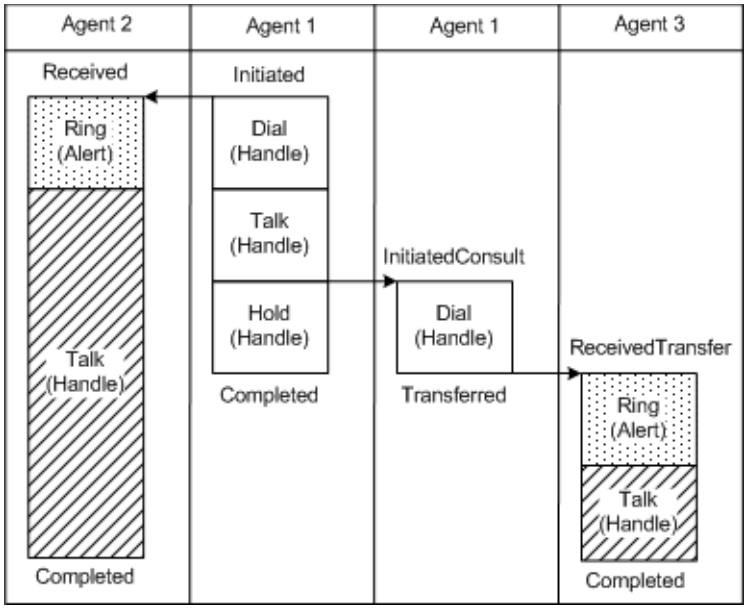

Figure 51: Initiating Agent Initiates Transfer to Another Agent—ISF

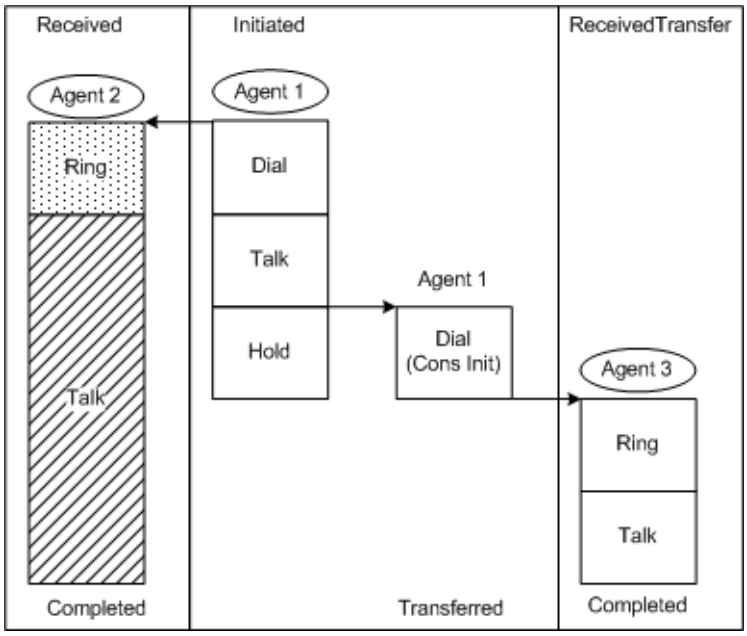

Figure 52: Initiating Agent Initiates Transfer to Another Agent—IRF

Consult to Agent via ACD Queue, and Then Retrieve

In this call topology, an agent initiates a call to another agent. One of the agents then initiates a consultation to an ACD queue, and the interaction is diverted to another agent. The consultation ends when the consulting agent retrieves the interaction.

This section shows two possible outcomes of a call that is retrieved after a consultation has been initiated:

- The receiver (`Agent 2`) initiates the consultation (see "Receiving Agent Consults to ACD Queue, and Then Retrieves").
- The initiator (`Agent 1`) initiates the consultation (see "Initiating Agent Consults to ACD Queue, and Then Retrieves" on page 138).

Receiving Agent Consults to ACD Queue, and Then Retrieves

For this outcome, the receiving agent initiates a consultation to the ACD queue.

- Figure 53 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 54 depicts the Interaction Resource Fact (IRF) representation of the call topology.

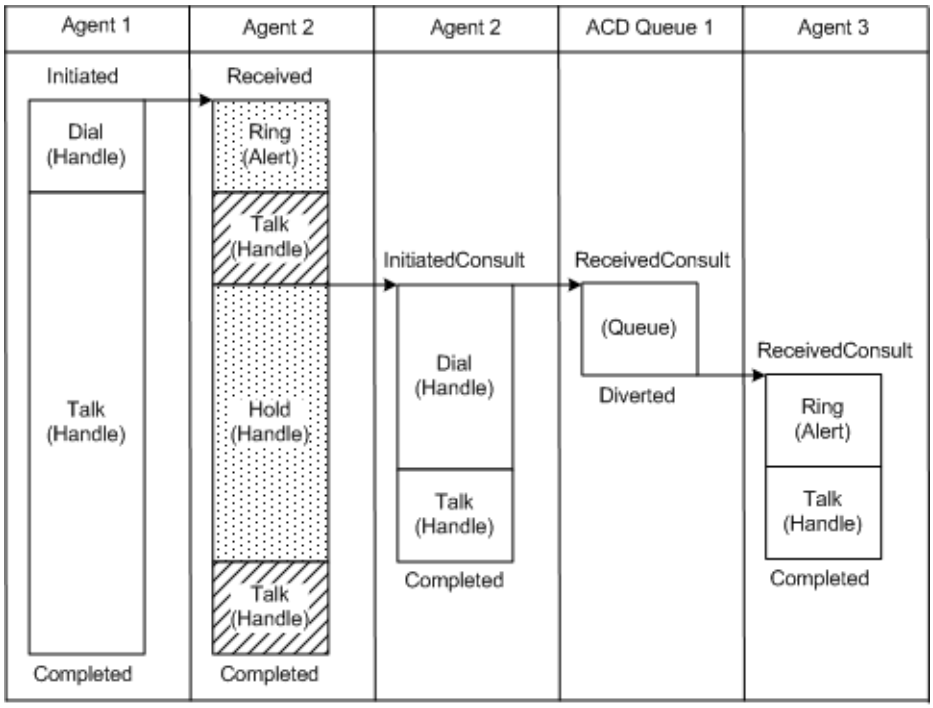

Figure 53: Receiving Agent Consults to ACD Queue Then Retrieves—ISF

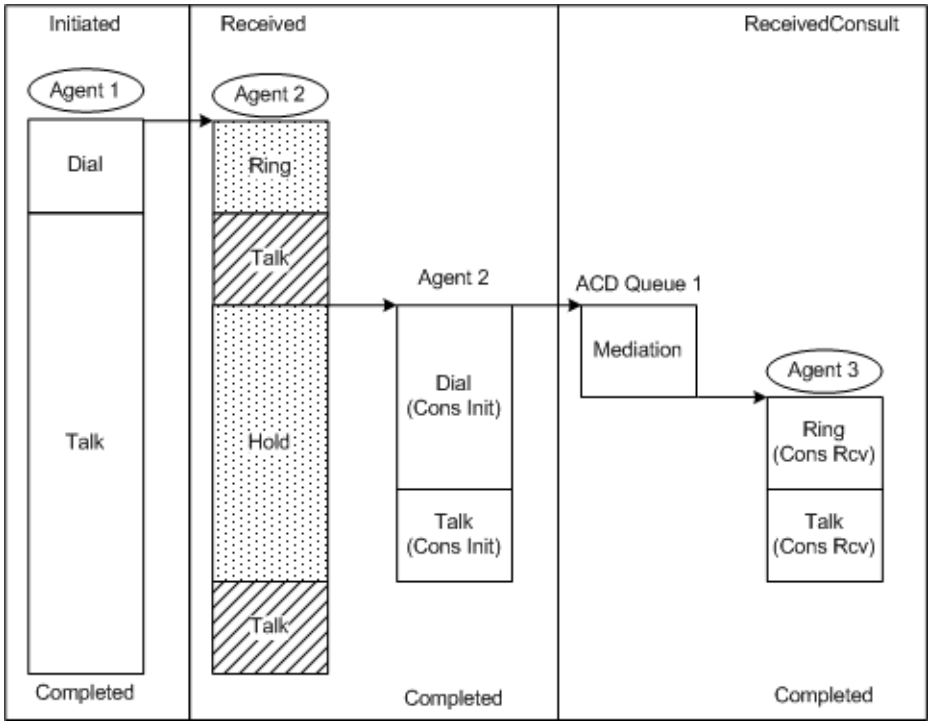

Figure 54: Receiving Agent Consults to ACD Queue Then Retrieves—IRF

Initiating Agent Consults to ACD Queue, and Then Retrieves

For this outcome, the initiating agent initiates a consultation to the ACD queue.

- Figure 55 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 56 depicts the Interaction Resource Fact (IRF) representation of the call topology.

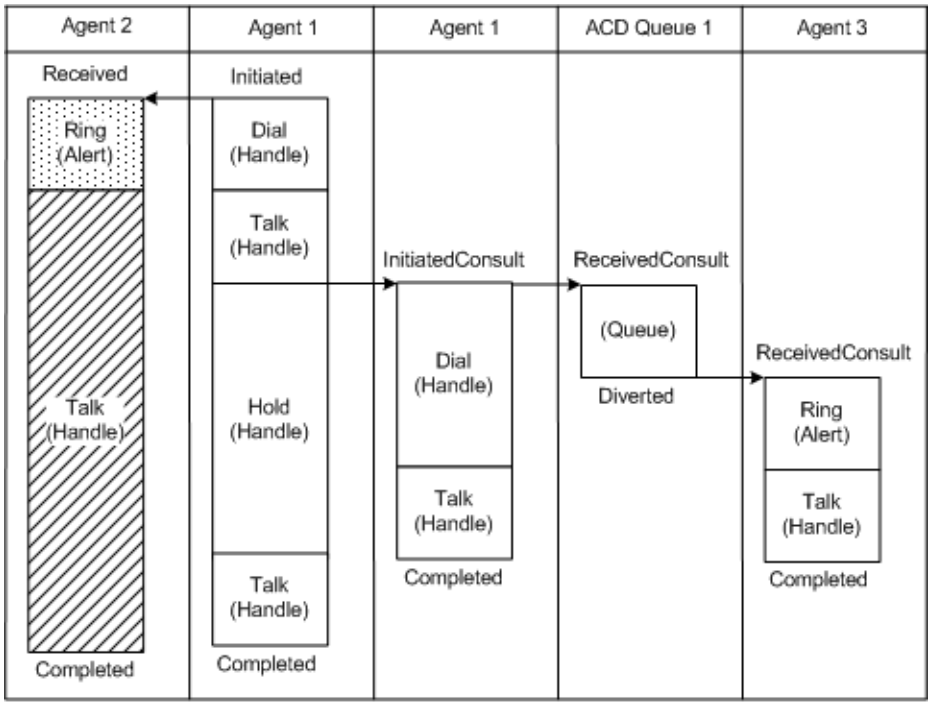

Figure 55: Initiating Agent Consults to ACD Queue Then Retrieves—ISF

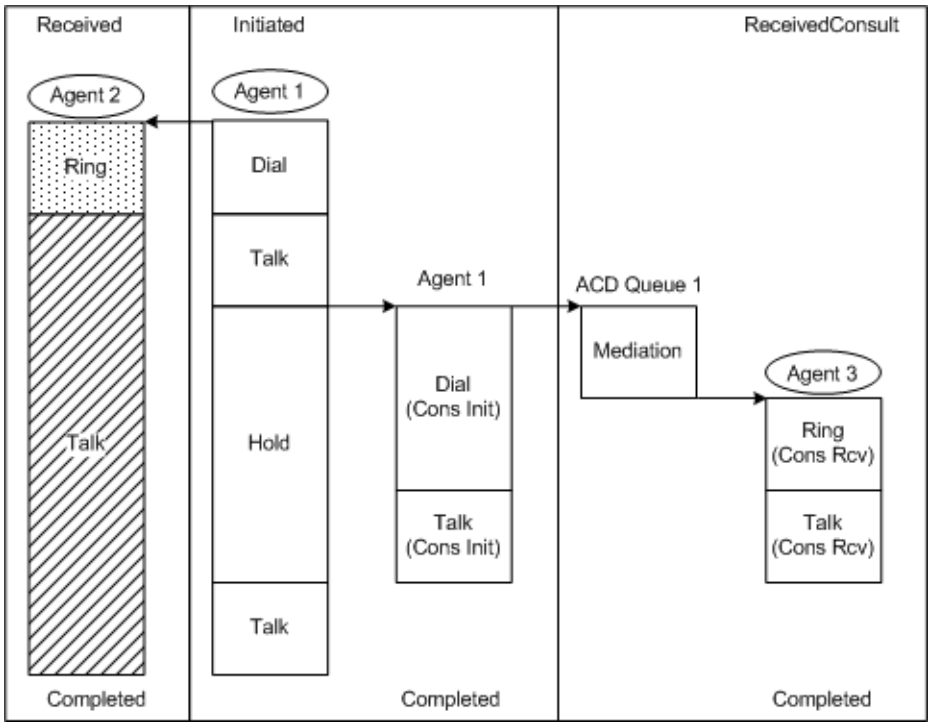

Figure 56: Initiating Agent Consults to ACD Queue Then Retrieves—IRF

Consult to Agent, and Then Retrieve

In this call topology, an agent initiates a call to another agent. One of the agents then initiates a consultation to a third agent. The consultation ends when the consulting agent retrieves the interaction.

This section shows two possible outcomes of a call that is retrieved after a consultation has been initiated:

- The receiver (`Agent 2`) initiates the consultation (see "Receiving Agent Consults to Another Agent, and Then Retrieves").
- The initiator (`Agent 1`) initiates the consultation (see "Initiating Agent Consults to Another Agent, and Then Retrieves" on page 141).

Receiving Agent Consults to Another Agent, and Then Retrieves

For this outcome, the receiving agent initiates a consultation to another agent.

- Figure 57 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 58 depicts the Interaction Resource Fact (IRF) representation of the call topology.

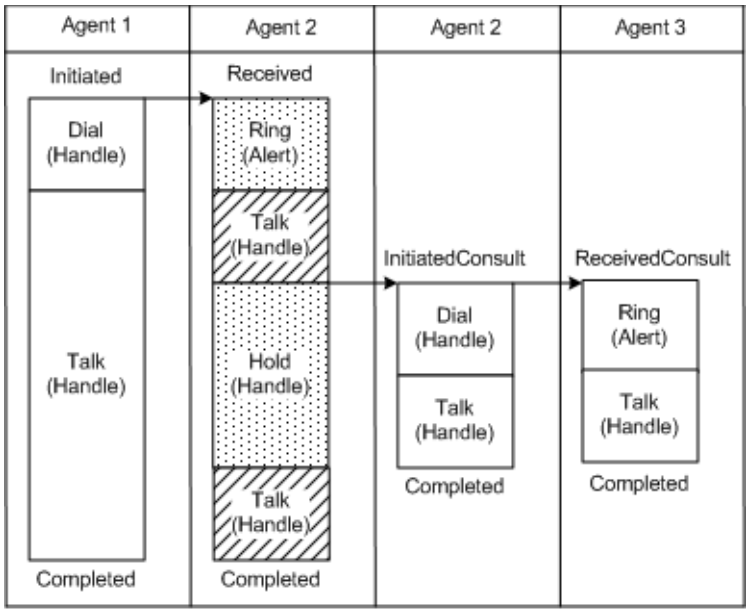

Figure 57: Receiving Agent Consults to Another Agent Then Retrieves—ISF

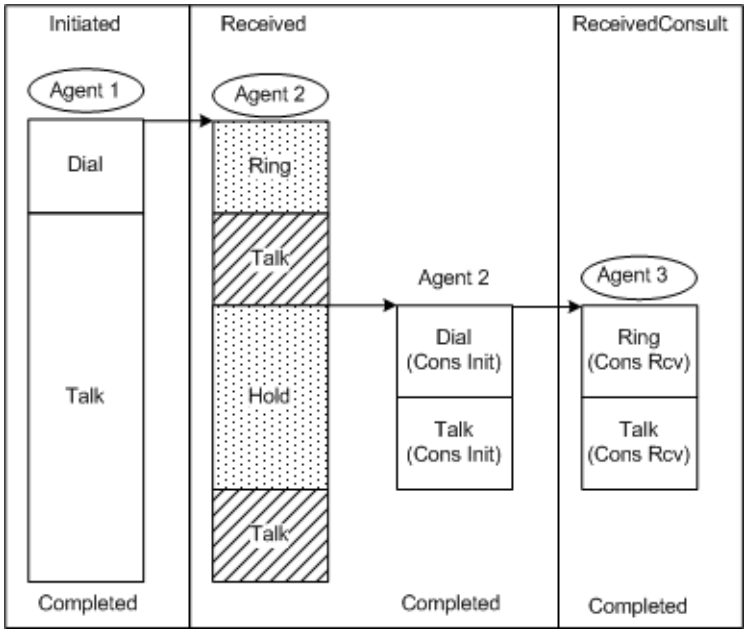

Figure 58: Receiving Agent Consults to Another Agent Then Retrieves—IRF

Initiating Agent Consults to Another Agent, and Then Retrieves

For this outcome, the initiating agent initiates a consultation to another agent.

- Figure 59 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 60 depicts the Interaction Resource Fact (IRF) representation of the call topology.

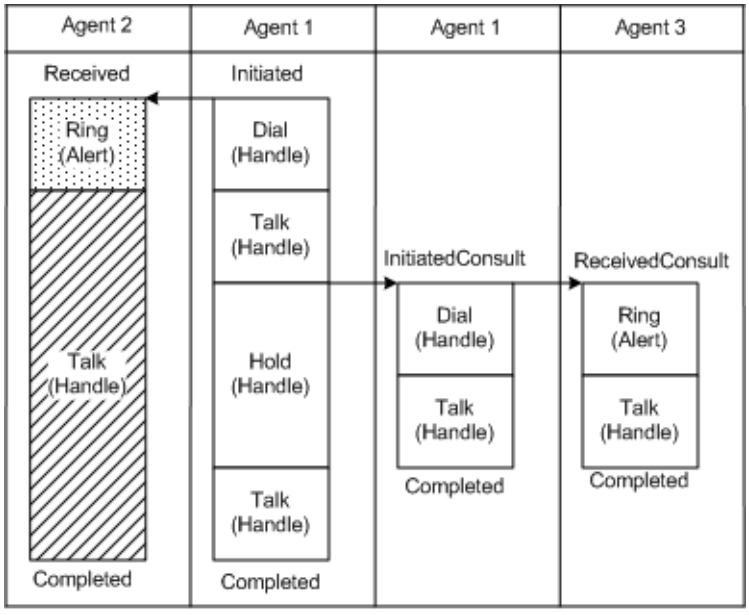

Figure 59: Initiating Agent Consults to Another Agent Then Retrieves—ISF

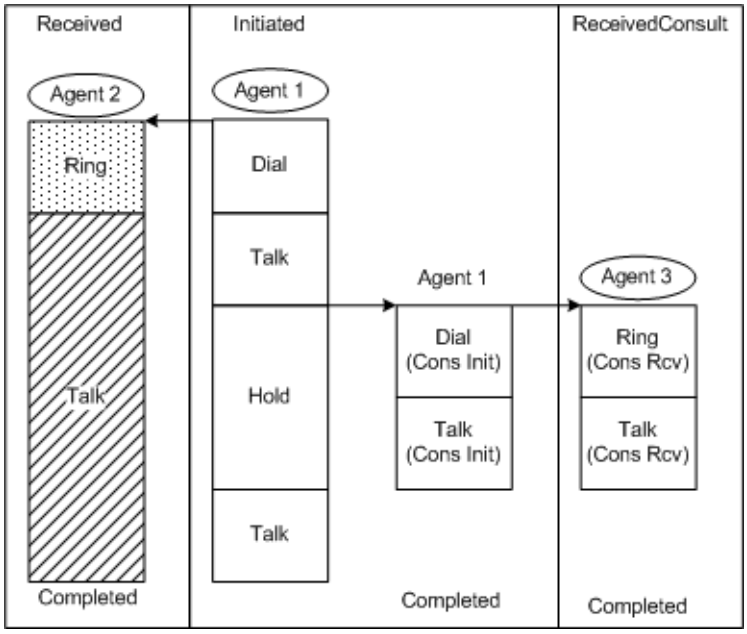

Figure 60: Initiating Agent Consults to Another Agent Then Retrieves—IRF

Consult to Agent via ACD Queue, and Then Transfer

In this call topology, an agent initiates a call to another agent. One of the agents then initiates a consultation to an ACD queue, and the interaction is diverted to another agent. The consultation ends when the consulting agent transfers the interaction.

This section shows two possible outcomes of a call that is transferred after a consultation:

- The receiver (`Agent 2`) initiates the consultation (see "Receiving Agent Consults to ACD Queue, and Then Transfers").
- The initiator (`Agent 1`) initiates the consultation (see "Initiating Agent Consults to ACD Queue, and Then Transfers" on page 144).

Receiving Agent Consults to ACD Queue, and Then Transfers

For this outcome, the receiving agent initiates a consultation to the ACD queue.

- Figure 61 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 62 depicts the Interaction Resource Fact (IRF) representation of the call topology.

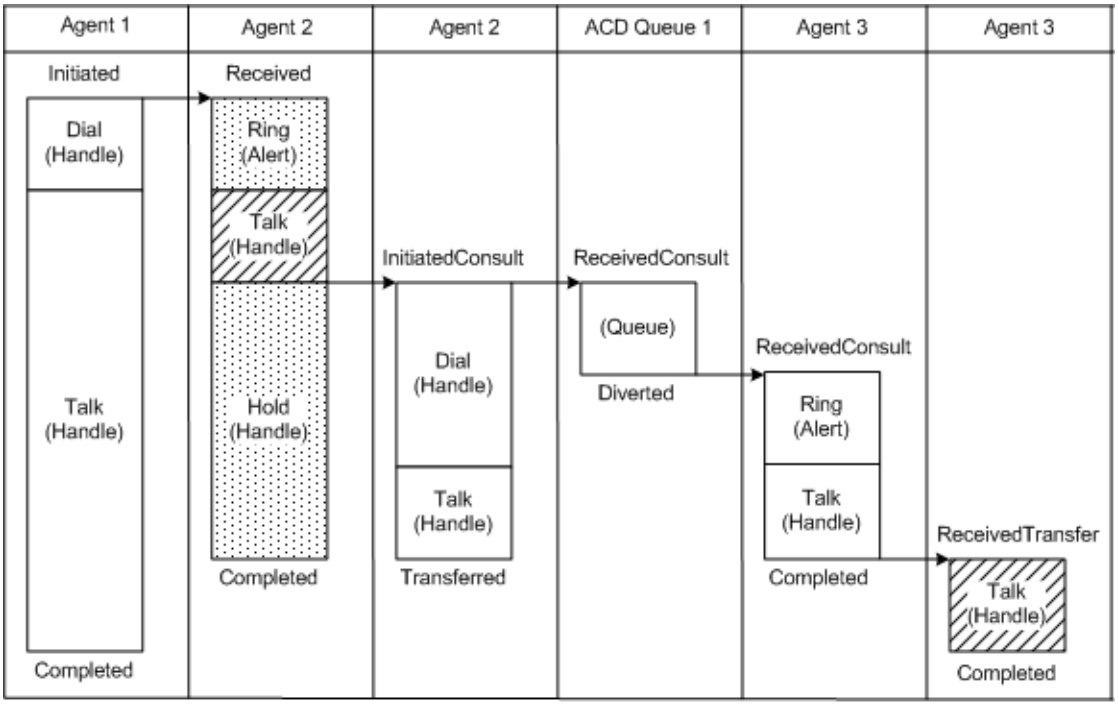

Figure 61: Receiving Agent Consults to ACD Queue Then Transfers—ISF

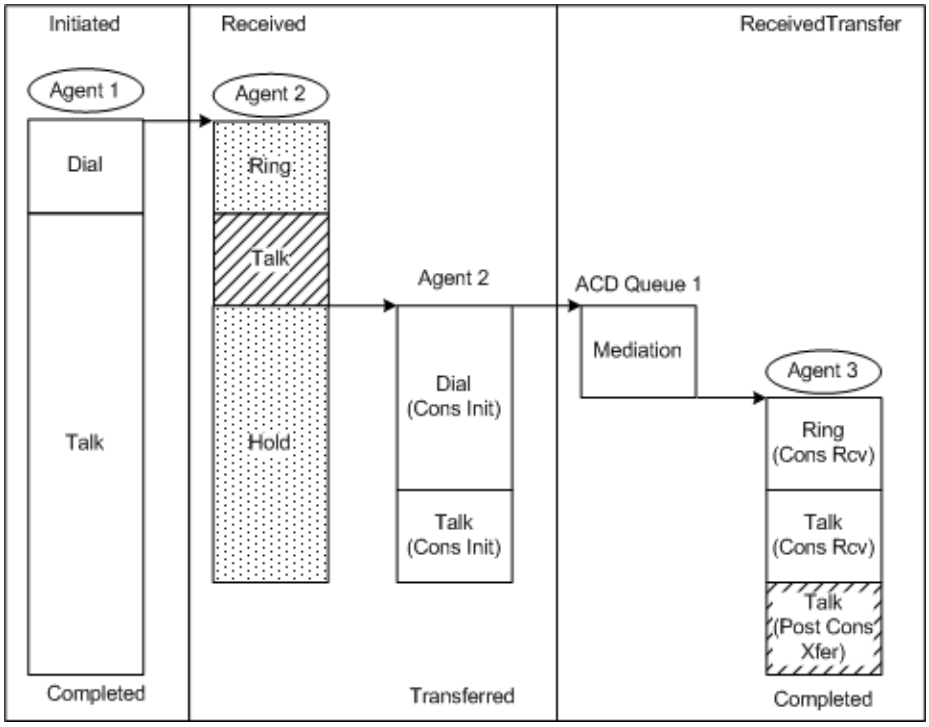

Figure 62: Receiving Agent Consults to ACD Queue Then Transfers—IRF

Initiating Agent Consults to ACD Queue, and Then Transfers

For this outcome, the initiating agent initiates a consultation to the ACD queue.

- Figure 63 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 64 depicts the Interaction Resource Fact (IRF) representation of the call topology.

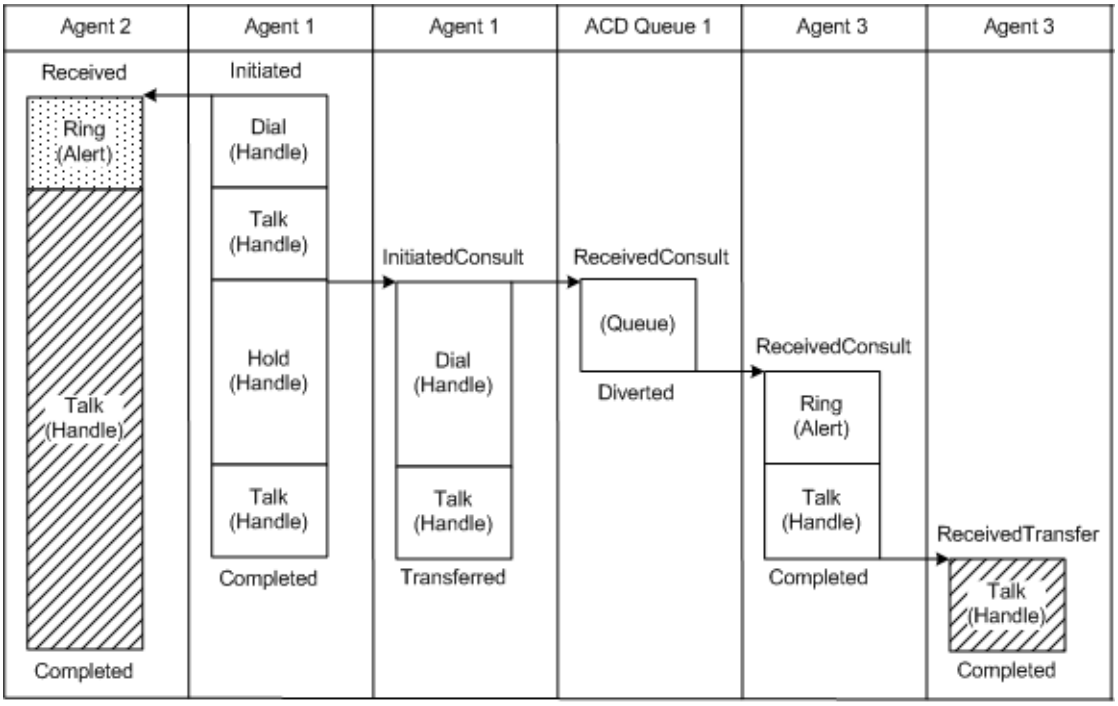

Figure 63: Initiating Agent Consults to ACD Queue Then Transfers—ISF

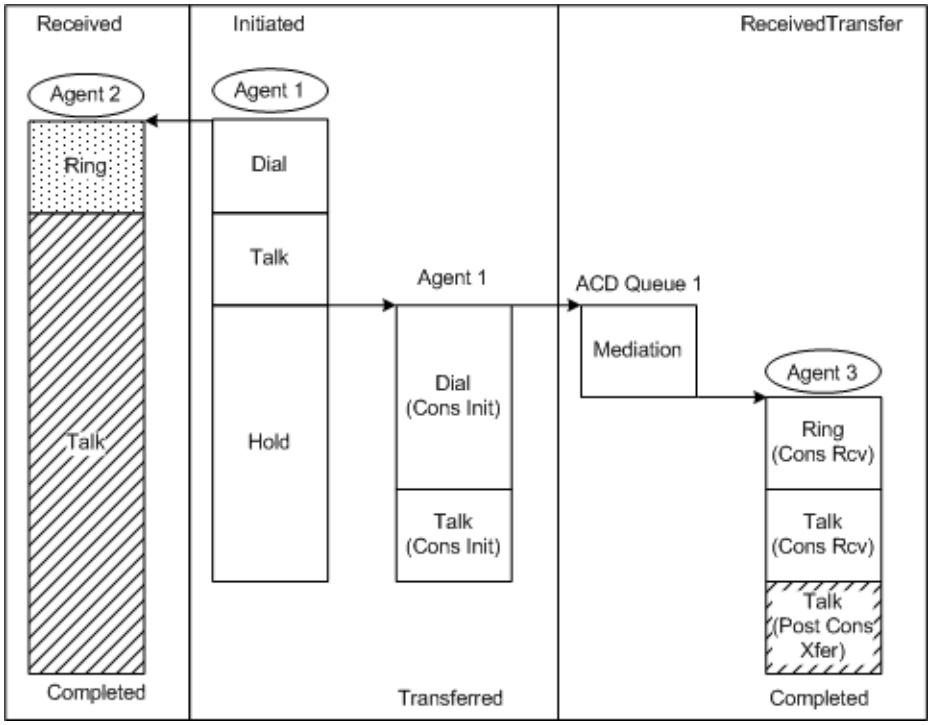

Figure 64: Initiating Agent Consults to ACD Queue Then Transfers—IRF

Consult to Agent, and Then Transfer

In this call topology, an agent initiates a call to another agent. One of the agents then initiates a consultation to a third agent. The consultation ends when the consulting agent transfers the interaction.

This section shows two possible outcomes of a call that is transferred after a consultation has been initiated:

- The receiver (`Agent 2`) initiates the consultation (see "Receiving Agent Consults to Another Agent, and Then Transfers").
- The initiator (`Agent 1`) initiates the consultation (see "Initiating Agent Consults to Another Agent, and Then Transfers" on page 147).

Receiving Agent Consults to Another Agent, and Then Transfers

For this outcome, the receiving agent initiates a consultation to another agent.

- Figure 65 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 66 depicts the Interaction Resource Fact (IRF) representation of the call topology.

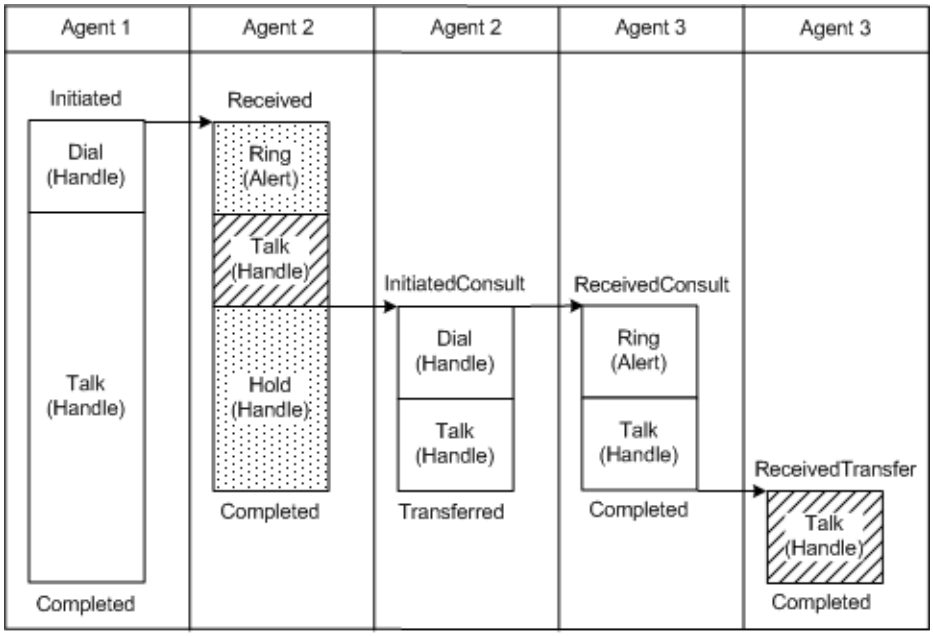

Figure 65: Receiving Agent Consults to Another Agent Then Transfers—ISF

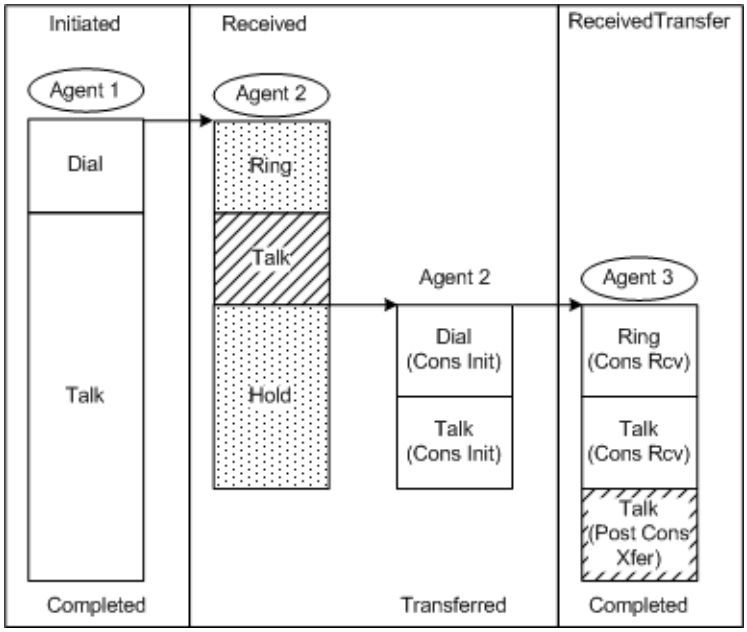

Figure 66: Receiving Agent Consults to Another Agent Then Transfers—IRF

Initiating Agent Consults to Another Agent, and Then Transfers

For this outcome, the initiating agent initiates a consultation to another agent.

- Figure 67 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 68 depicts the Interaction Resource Fact (IRF) representation of the call topology.

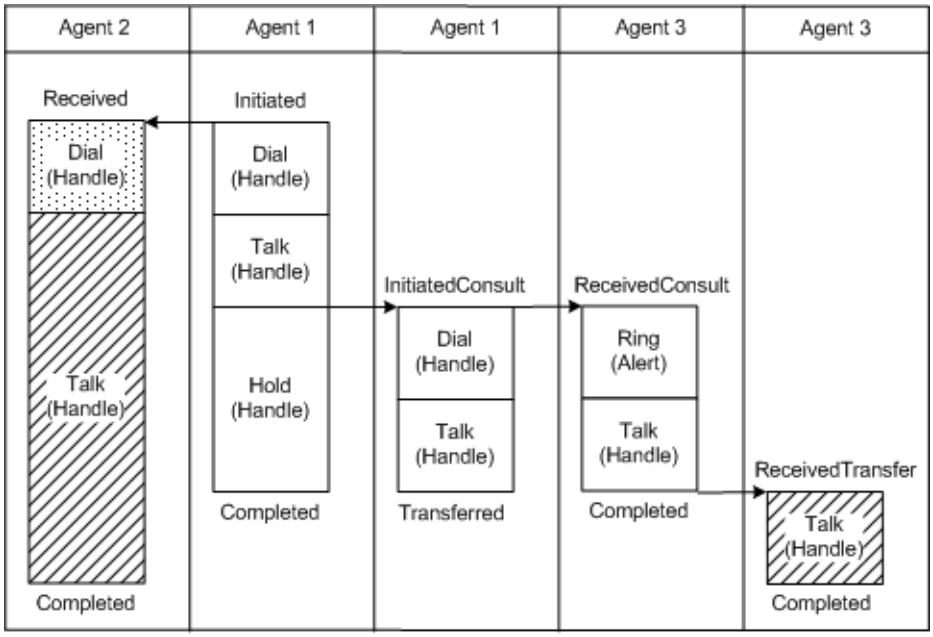

Figure 67: Initiating Agent Consults to Another Agent Then Transfers—ISF

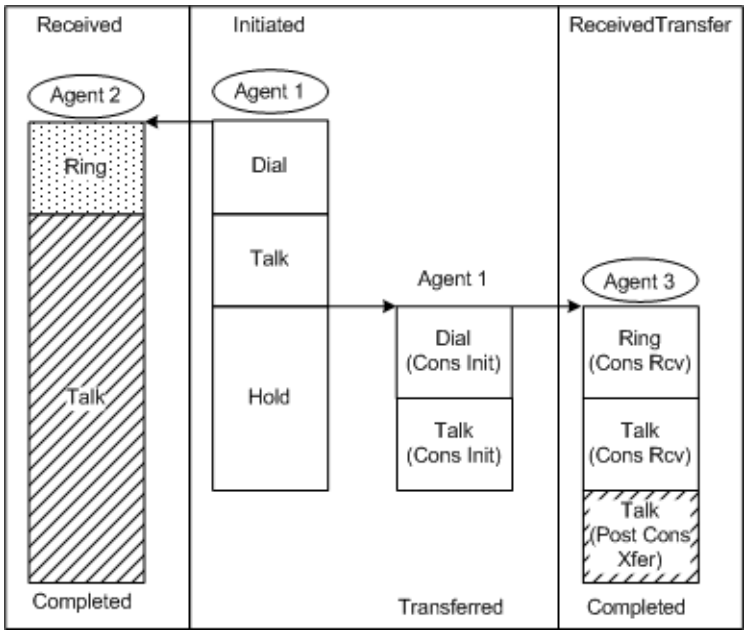

Figure 68: Initiating Agent Consults to Another Agent Then Transfers—IRF

Consult to Agent via ACD Queue, and Then Conference

In this call topology, an agent initiates a call to another agent. One agent then initiates a consultation to an ACD queue, and the interaction is diverted to a third agent. The consultation ends when the consulting agent conferences the interaction.

This section shows two possible outcomes of a call that is conferenced after a consultation:

- The receiver (`Agent 2`) initiates the consultation (see "Receiving Agent Consults to ACD Queue, and Then Conferences").
- The initiator (`Agent 1`) initiates the consultation (see "Initiating Agent Consults to ACD Queue, and Then Conferences" on page 149).

Receiving Agent Consults to ACD Queue, and Then Conferences

For this outcome, the receiving agent initiates a consultation to the ACD queue.

- Figure 69 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 70 depicts the Interaction Resource Fact (IRF) representation of the call topology.

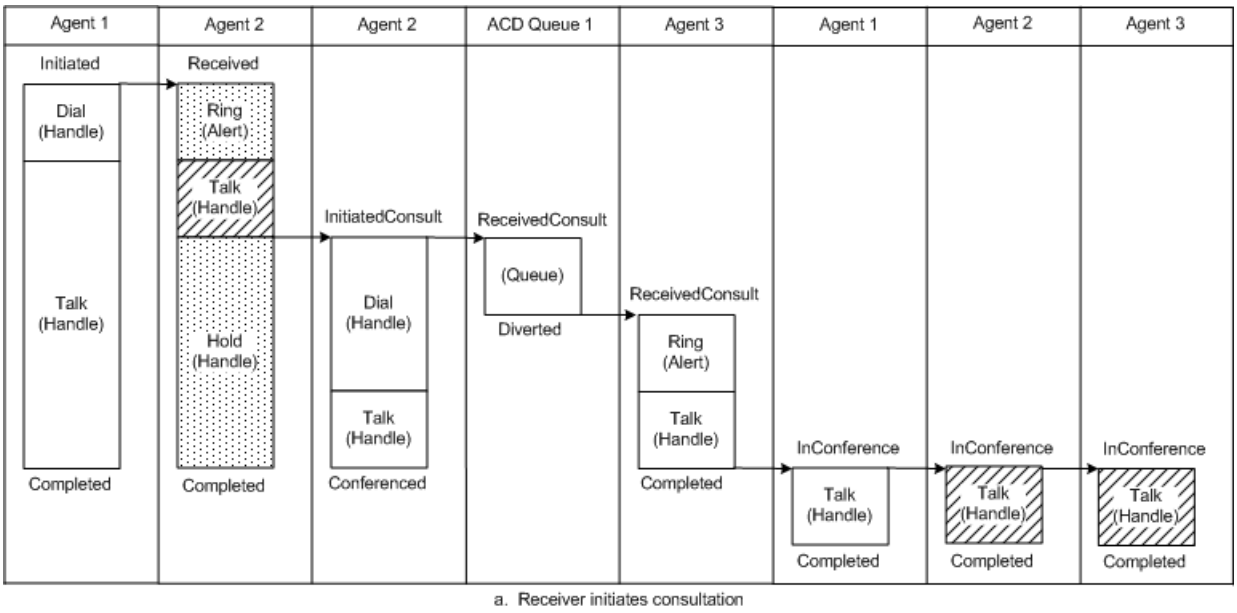

Figure 69: Receiving Agent Consults to ACD Queue Then Conferences—ISF

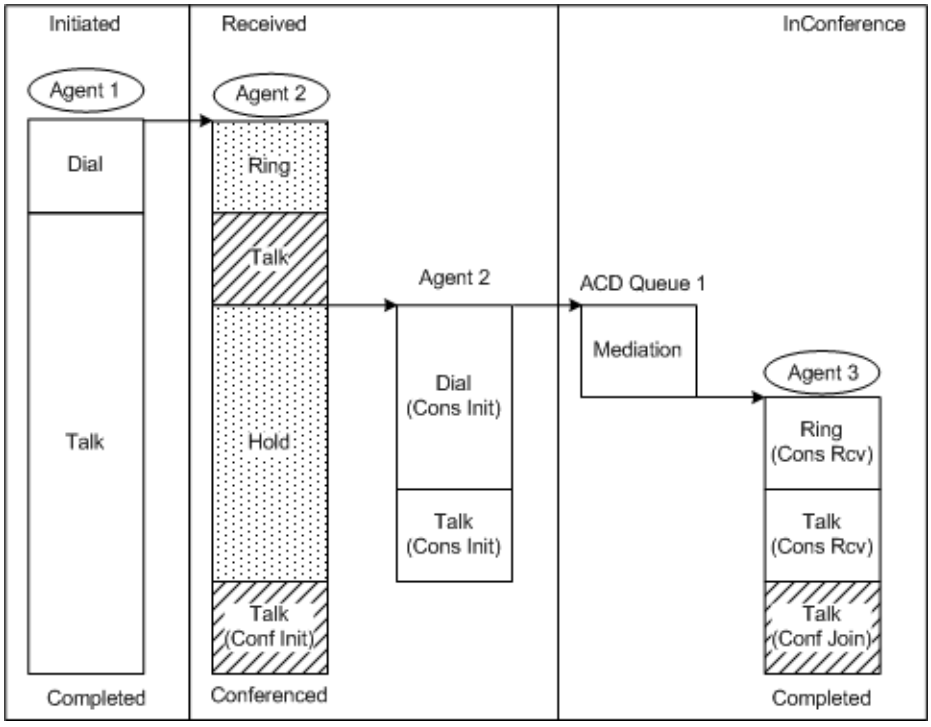

Figure 70: Receiving Agent Consults to ACD Queue Then Conferences—IRF

Initiating Agent Consults to ACD Queue, and Then Conferences

For this outcome, the initiating agent initiates a consultation to the ACD queue.

- Figure 71 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 72 depicts the Interaction Resource Fact (IRF) representation of the call topology.

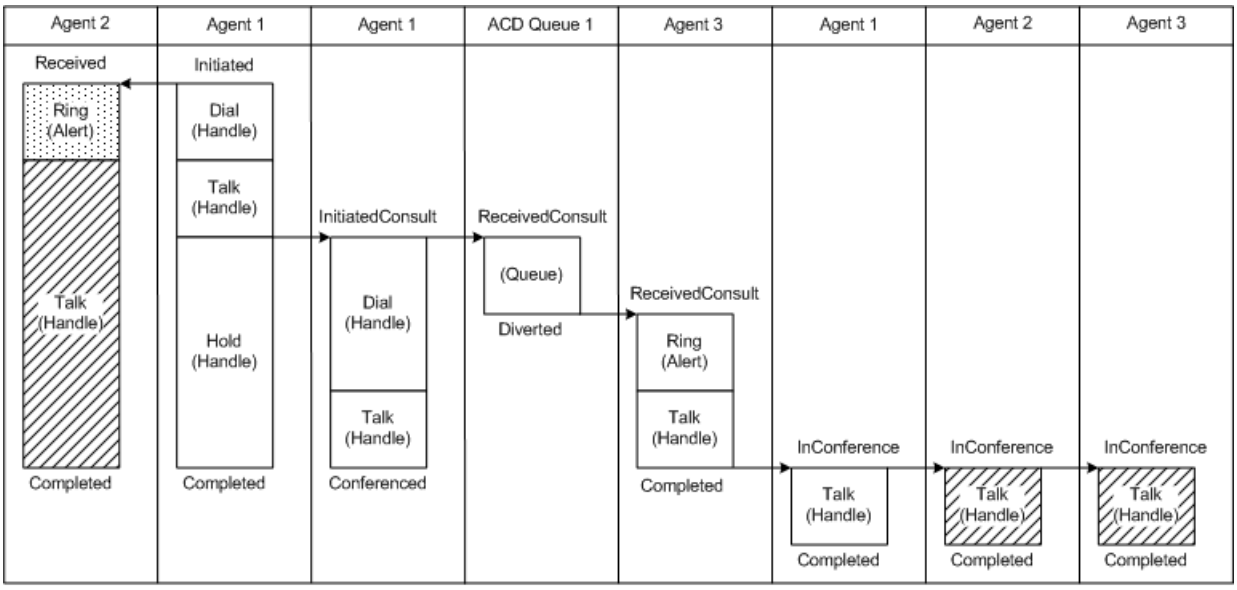

Figure 71: Initiating Agent Consults to ACD Queue Then Conferences—ISF

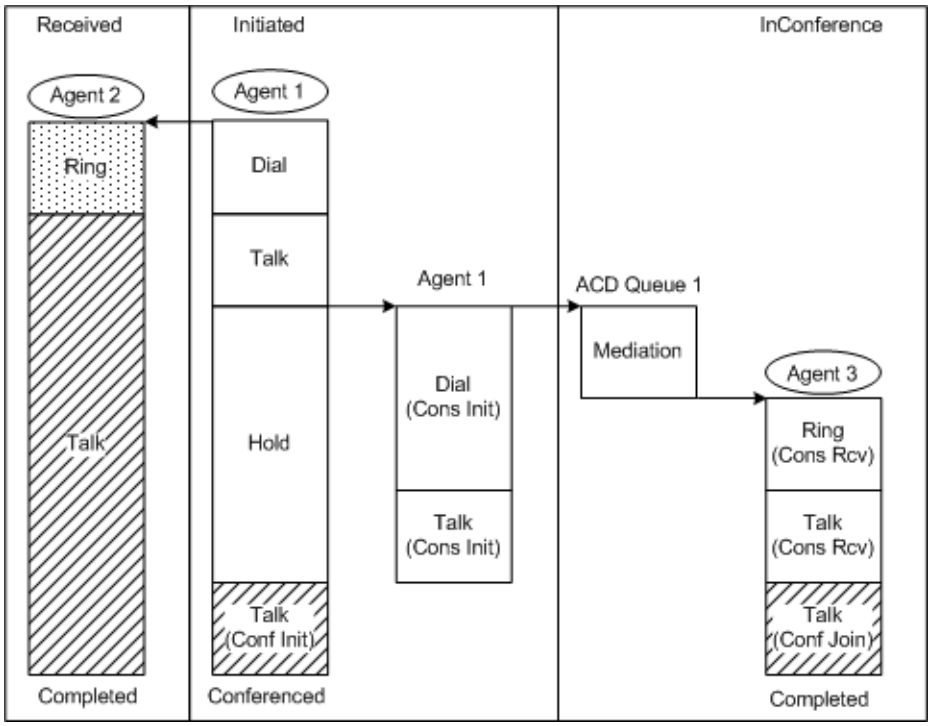

Figure 72: Initiating Agent Consults to ACD Queue Then Conferences—IRF

Consult to Agent, and Then Conference

In this call topology, an agent initiates a call to another agent. One agent then initiates a consultation to another agent. The consultation ends when the consulting agent conferences the interaction.

This section shows two possible outcomes of a call that is conferenced after a consultation:

- The receiver (`Agent 2`) initiates the consultation (see "Receiving Agent Consults to Another Agent, and Then Conferences").
- The initiator (`Agent 1`) initiates the consultation (see "Initiating Agent Consults to Another Agent, and Then Conferences" on page 152).

Receiving Agent Consults to Another Agent, and Then Conferences

For this outcome, the receiving agent initiates a consultation to another agent.

- Figure 73 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 74 depicts the Interaction Resource Fact (IRF) representation of the call topology.

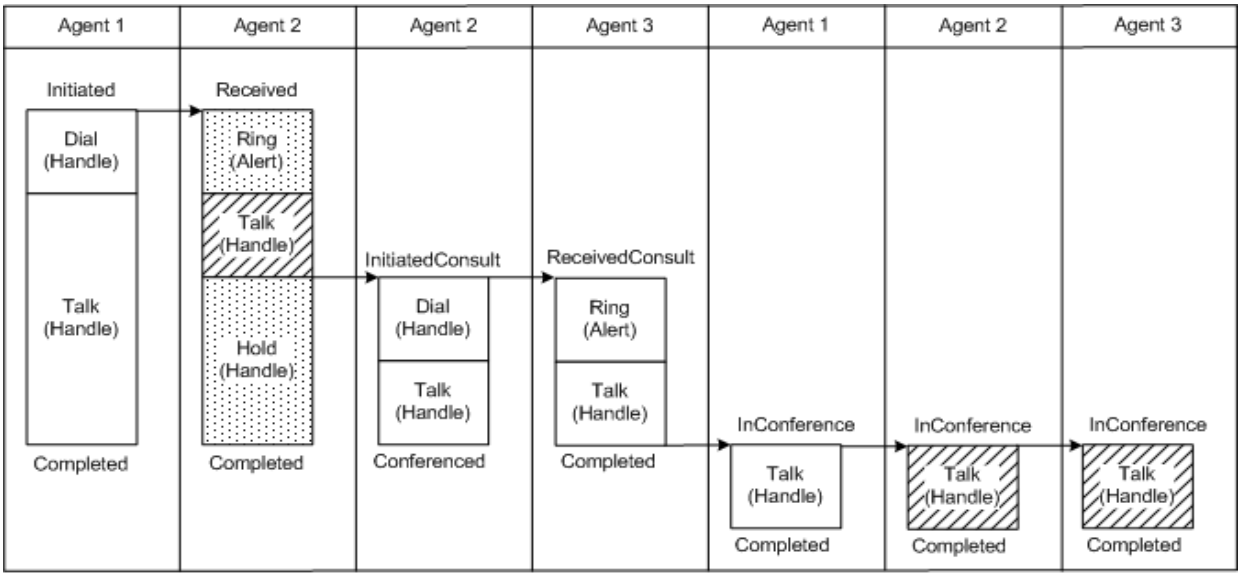

Figure 73: Receiving Agent Consults to Another Agent Then Conferences—ISF

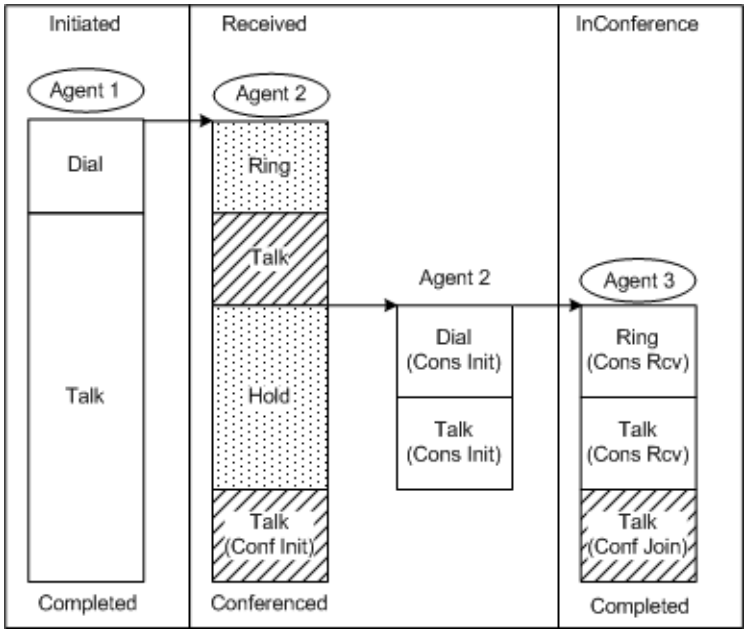

Figure 74: Receiving Agent Consults to Another Agent Then Conferences—IRF

Initiating Agent Consults to Another Agent, and Then Conferences

For this outcome, the initiating agent initiates a consultation to another agent.

- Figure 75 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 76 depicts the Interaction Resource Fact (IRF) representation of the call topology.

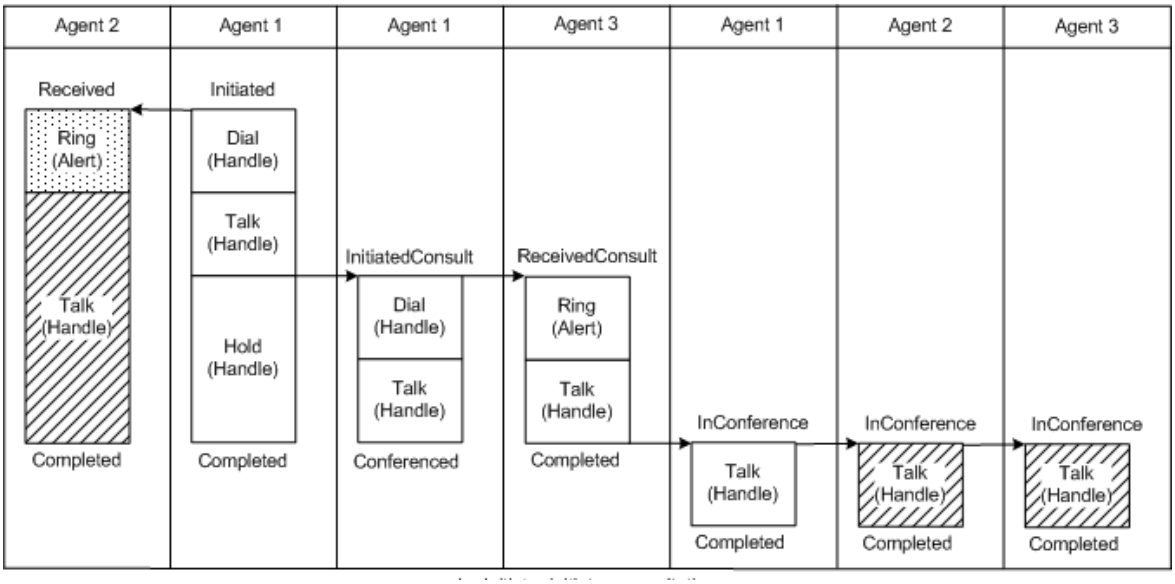

Figure 75: Initiating Agent Consults to Another Agent Then Conferences—ISF

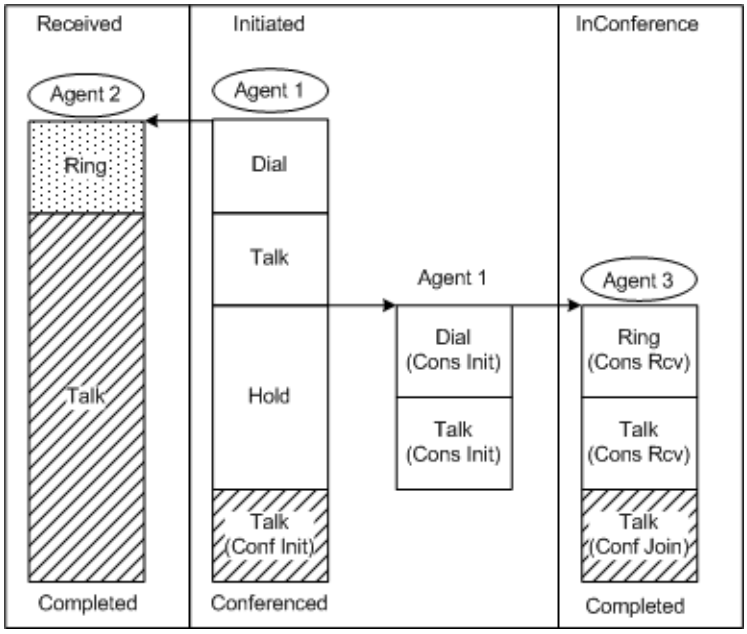

Figure 76: Initiating Agent Consults to Another Agent Then Conferences—IRF

IVR-in-Front-of-Switch Call Flows

Voice interactions arrive at an IVR port that is visible to the IVR Server's virtual T-Server. Either self-service, or just front-end identification and segmentation, may be the focus of the IVR application. If the IVR application cannot completely handle the voice interaction, the interaction can be transferred to an ACD queue behind the switch that represents a requested skill, service type, or customer segment. Agents logged in to the ACD queues handle the interactions.

Inbound Call Flow Examples

This subsection contains several examples of inbound call flows. Each example represents a different outcome:

- An inbound call arrives at an IVR port.
- The IVR port transfers the call to an ACD queue (see page 155).
- The IVR port transfers the call to an agent (see page 157).

Inbound to IVR Port

This call topology shows the outcomes of a call that arrives at an IVR port.

- Figure 77 depicts the Interaction Segment Fact (ISF) representation of the call topology when the call completes normally.
- Figure 78 depicts the Interaction Resource Fact (IRF) representation of the call topology when the call completes normally in the case of a *self-service* (SS) IVR (when the IVR port is in its own box).
- Figure 79 depicts the Interaction Resource Fact (IRF) representation of the call topology when the call is abandoned by the customer. This is the *non-self-service* (nonSS) IVR case.

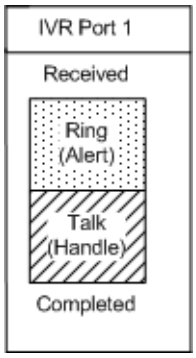

Figure 77: Inbound Interaction to IVR Port—ISF, Completed

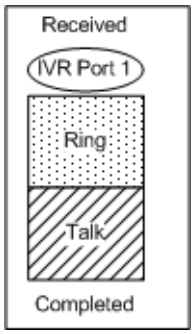

Figure 78: Inbound Interaction to IVR Port—IRF, Completed

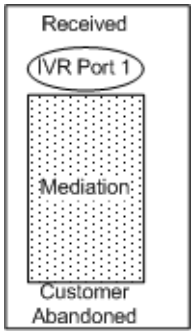

Figure 79: Inbound Interaction to IVR Port—IRF, Abandoned

IVR Transfer to ACD Queue

This call topology shows the outcome of an interaction that arrives at an IVR port, which hook-flash transfers the interaction to an ACD queue.

- Figure 80 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 81 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of an SS IVR (when the IVR port is in its own box).
- Figure 82 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a nonSS IVR.

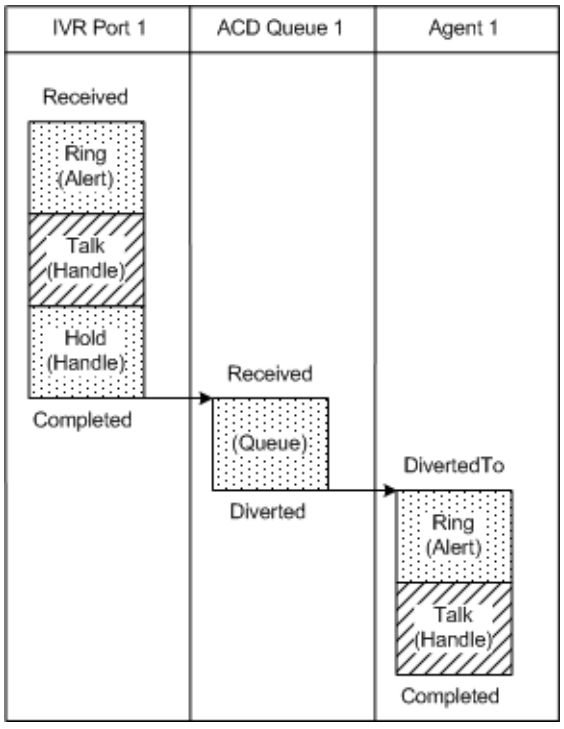

Figure 80: IVR Port Hook-Flash Transfer to ACD Queue—ISF

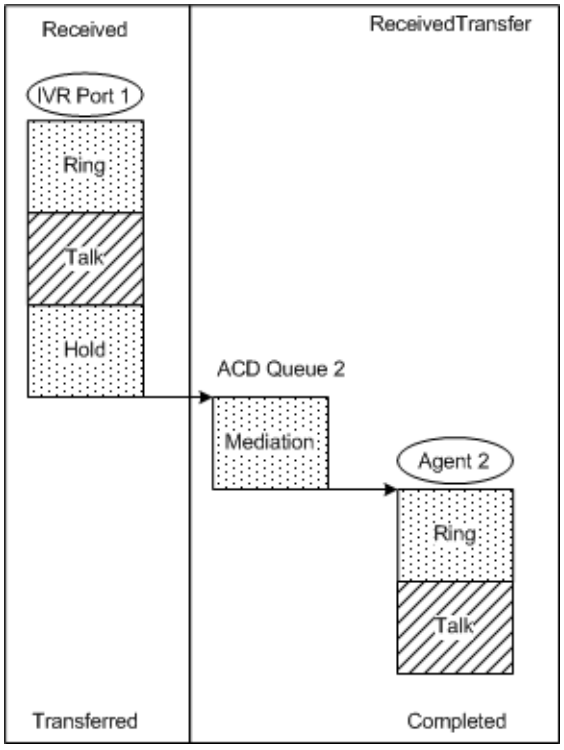

Figure 81: IVR Port Hook-Flash Transfer to ACD Queue—IRF (SS IVR)

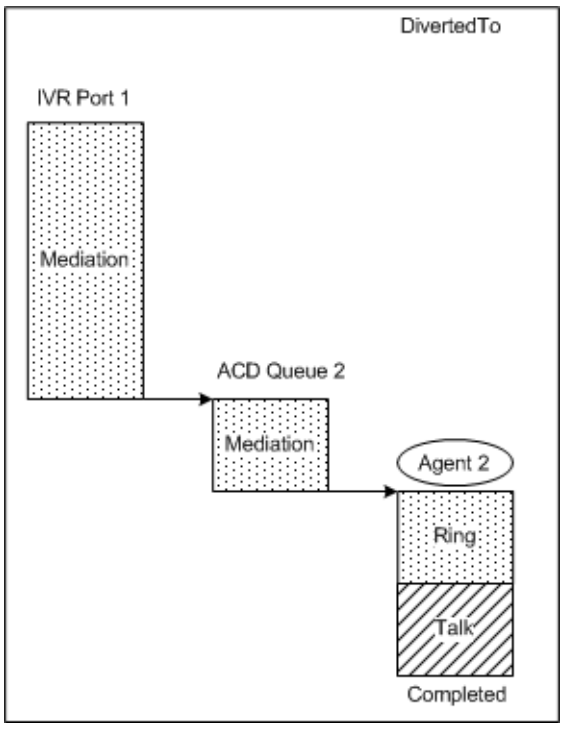

Figure 82: IVR Port Hook-Flash Transfer to ACD Queue—IRF (nonSS IVR)

IVR Transfer to Agent

This call topology shows the outcome of an interaction that arrives at an IVR port, which hook-flash transfers the interaction to an agent.

- Figure 83 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 84 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of an SS IVR.
- Figure 85 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a nonSS IVR.

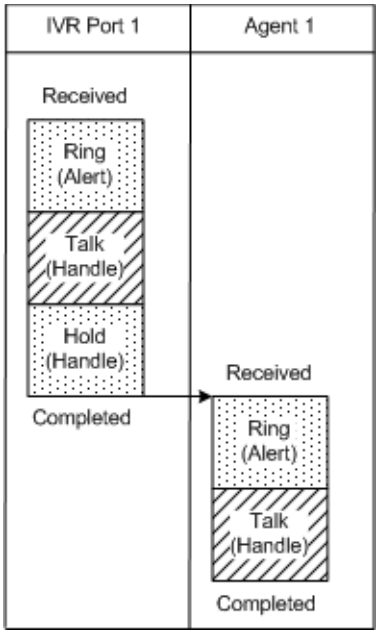

Figure 83: IVR Port Hook-Flash Transfer to Agent—ISF

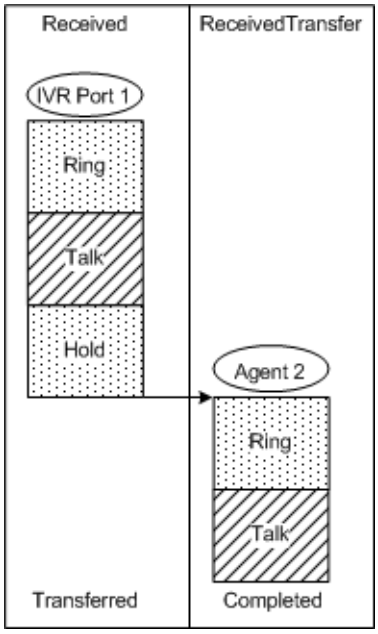

Figure 84: IVR Port Hook-Flash Transfer to Agent—IRF (SS IVR)

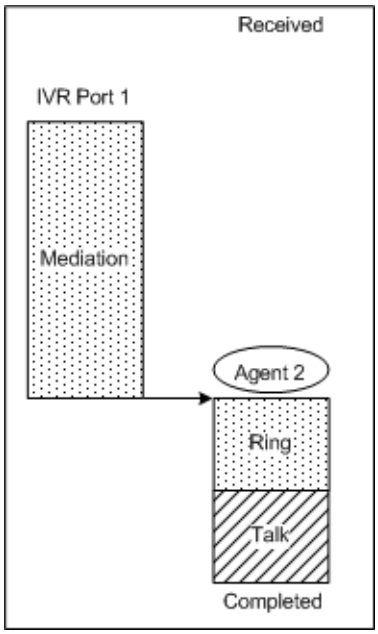

Figure 85: IVR Port Hook-Flash Transfer to Agent—IRF (nonSS IVR)

IVR-Behind-Switch Call Flows

Voice interactions arriving at the switch are queued to an ACD queue, where the ACD positions are actually IVR ports. Either self-service, or just front-end

identification and segmentation, may be the focus of the IVR application. If the IVR application cannot completely handle the voice interaction, the interaction can be transferred to an ACD queue that represents a requested skill, service type, or customer segment. Agents logged in to the ACD queues handle the interactions.

Inbound Call Flow Examples

This subsection contains several examples of inbound call flows. Each example represents a different outcome.

- An inbound call arrives at an IVR port via an ACD queue.
- An inbound call arrives directly at an IVR port (see page 160).
- An IVR port mute transfers the call to another ACD queue (see page 161).
- An IVR port mute transfers the call to an agent (see page 164).

Inbound to IVR Port via ACD Queue

This call topology shows the outcome of an inbound call to an IVR port via an ACD queue. The interaction arrives at the ACD queue and is diverted to an IVR port.

- Figure 86 depicts the Interaction Segment Fact (ISF) representation of the call topology when the call completes normally.
- Figure 87 depicts the Interaction Resource Fact (IRF) representation of the call topology when the call completes normally in the case of a *self-service* (SS) IVR (when the IVR port is in its own box).
- Figure 88 depicts the Interaction Resource Fact (IRF) representation of the call topology when the call is abandoned by the customer. This is the *non-self-service* (nonSS) IVR case.

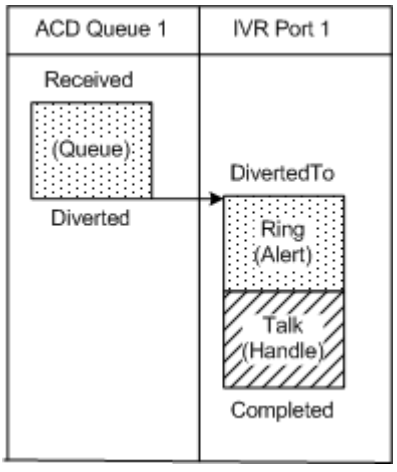

Figure 86: Inbound to IVR Port via ACD Queue—ISF, Completed

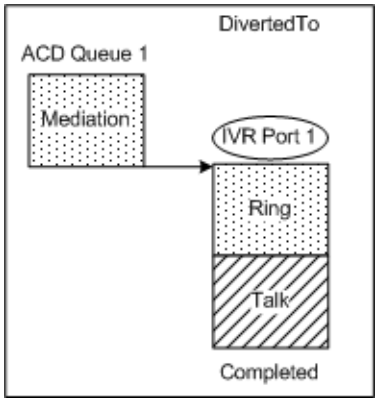

Figure 87: Inbound to IVR Port via ACD Queue—IRF, Completed

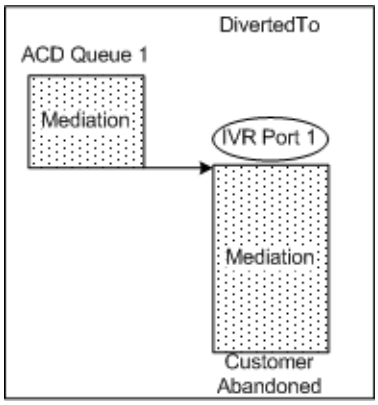

Figure 88: Inbound to IVR Port via ACD Queue—IRF, Abandoned

Inbound to IVR Port Directly

This call topology shows the outcome of a call that arrives directly at an IVR port.

- Figure 89 depicts the Interaction Segment Fact (ISF) representation of the call topology when the call completes normally.
- Figure 90 depicts the Interaction Resource Fact (IRF) representation of the call topology when the call completes normally. This is the SS IVR case (when the IVR port is in its own box).
- Figure 91 depicts the Interaction Resource Fact (IRF) representation of the call topology when the call is abandoned by the customer. This is the nonSS IVR case.

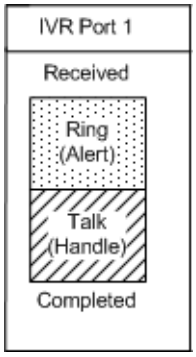

Figure 89: Inbound to IVR Port Directly—ISF, Completed

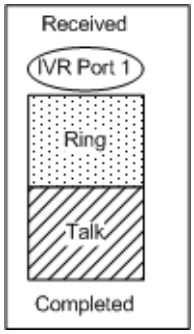

Figure 90: Inbound to IVR Port Directly—IRF, Completed

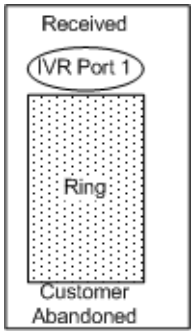

Figure 91: Inbound to IVR Port Directly—IRF, Abandoned

Mute Transfer to ACD Queue

This call topology shows the outcome of a call that is mute transferred to an agent via an ACD queue. The interaction arrives at an ACD queue and is diverted to an IVR port. The IVR port then mute transfers the call to another ACD queue.

- Figure 92 depicts the Interaction Segment Fact (ISF) representation of the call topology.

- Figure 93 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of an SS IVR (when the IVR port is in its own box).
- Figure 94 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a nonSS IVR.

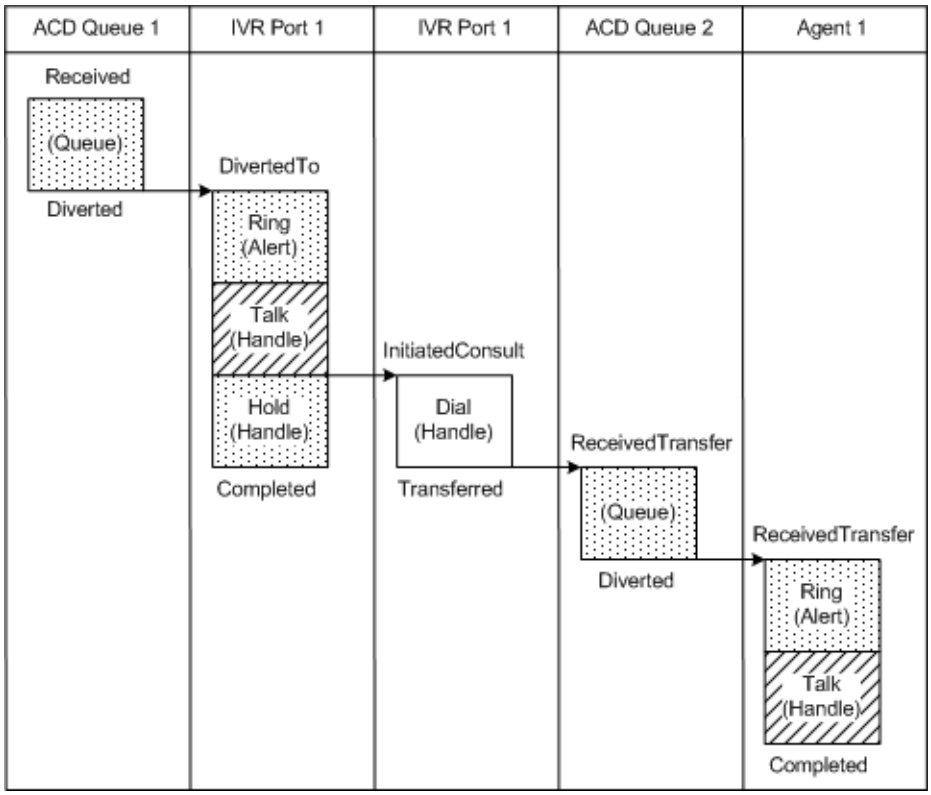

Figure 92: IVR Port Mute Transfers to ACD Queue—ISF

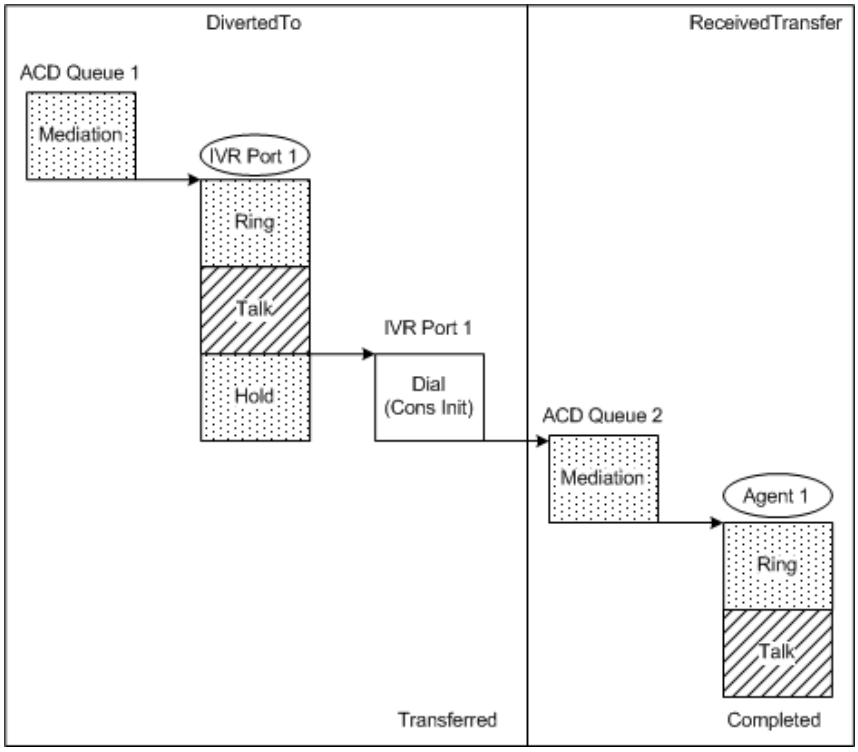

Figure 93: IVR Port Mute Transfers to ACD Queue—IRF (SS IVR)

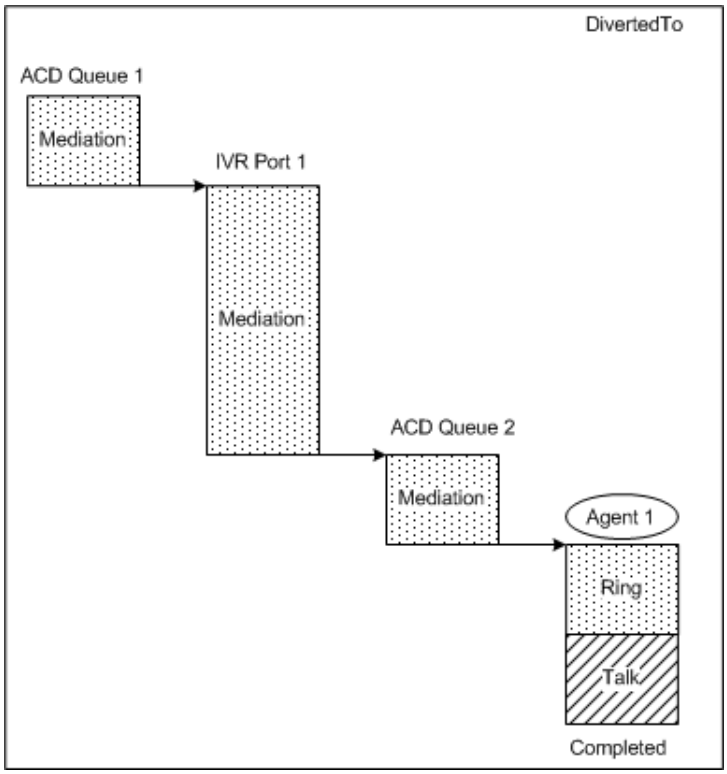

Figure 94: IVR Port Mute Transfers to ACD Queue—IRF (nonSS IVR)

Mute Transfer to Agent

This call topology shows the outcome of a call that is mute transferred to an agent. The interaction arrives at an ACD queue and is diverted to an IVR port. The IVR port then mute transfers the call to an agent.

- Figure 95 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 96 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of an SS IVR (when the IVR port is in its own box).
- Figure 97 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a nonSS IVR.

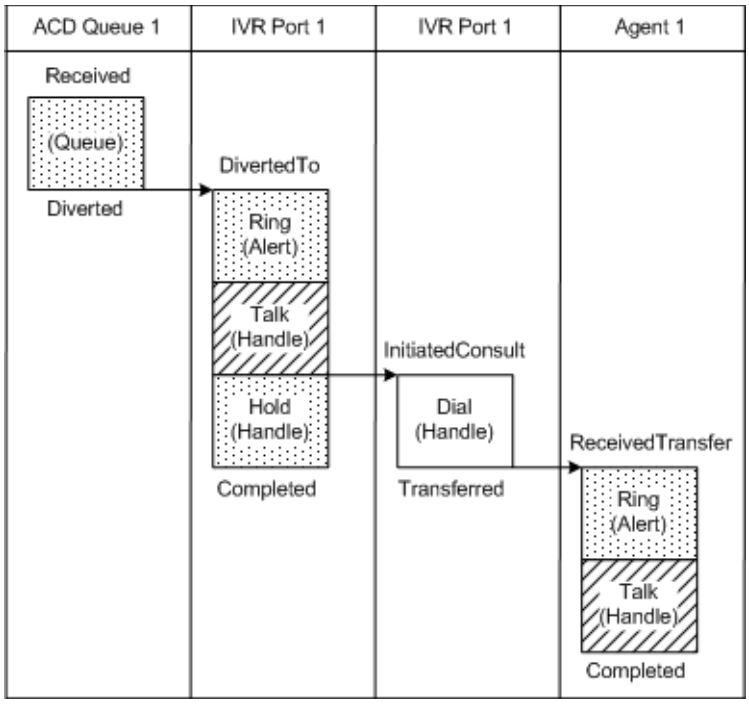

Figure 95: IVR Port Mute Transfers to Agent—ISF

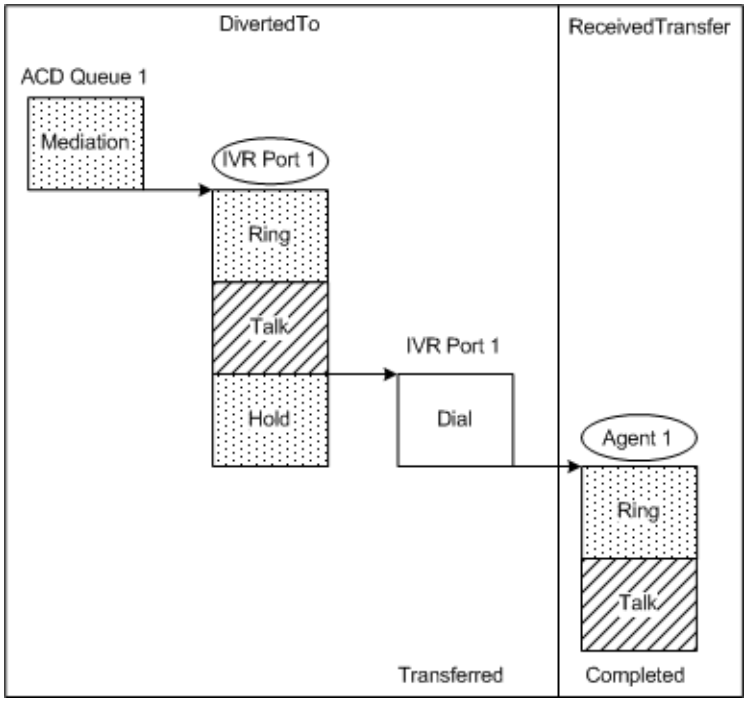

Figure 96: IVR Port Mute Transfers to Agent—IRF (SS IVR)

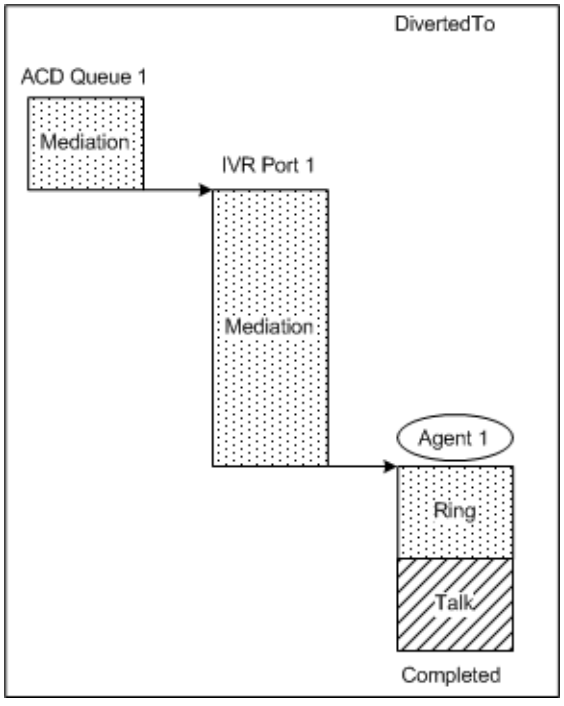

Figure 97: IVR Port Mute Transfers to Agent—IRF (nonSS IVR)

Universal Routing Call Flows

Voice interactions arriving at the switch are delivered to a Routing Point. Universal Routing Server uses ANI, DNIS, or the date and time of day to collect information and select an appropriate routing target. Basic targets are ACD queues and individual DNs. More advanced targets are agent groups, place groups, and skill expressions.

Inbound Interactions

This subsection contains the following examples of routed call flows. Each examples represents a different outcome:

- A Routing Point routes the call to an ACD queue.
- A Routing Point routes the call to an agent (see page 167).

Routing Point Routes to ACD Queue

This call topology shows the outcome of a call that is routed to an agent via an ACD queue. The call arrives at the Routing Point. The Routing Point then routes the call to an ACD queue, and the interaction is diverted to an agent.

- Figure 98 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 99 depicts the Interaction Resource Fact (IRF) representation of the call topology.

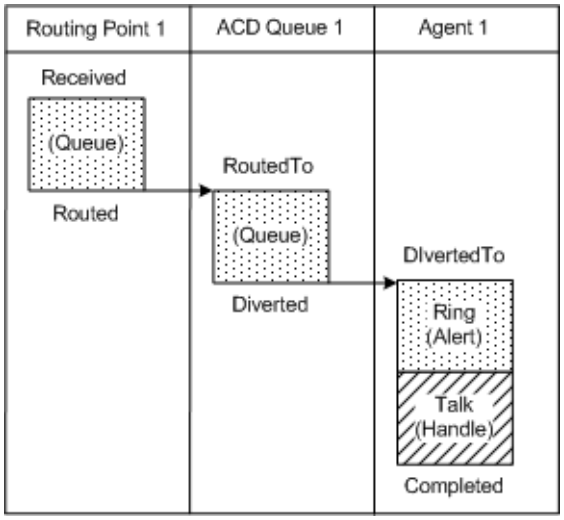

Figure 98: Routing Point Routes to ACD Queue—ISF

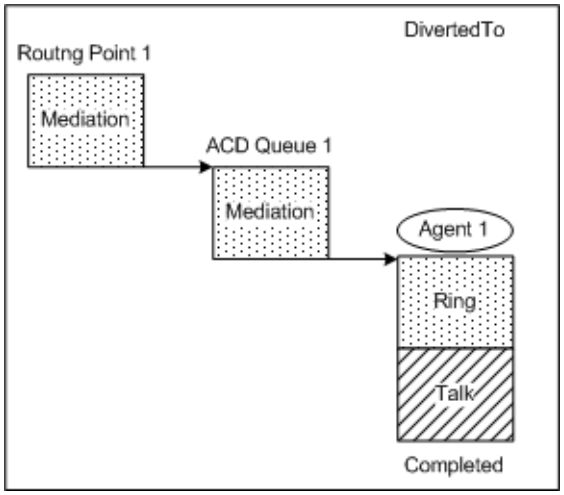

Figure 99: Routing Point Routes to ACD Queue—IRF

Note: Figure 98 and Figure 99 apply to both network routing and enterprise routing. For network routing, `Routing Point 1` could be a service number on a network T-Server that routes the voice interaction to `ACD Queue 1` on a premise T-Server.

Routing Point Routes to Agent

This call topology shows the outcome of a call that is routed directly to an agent. The call arrives at the Routing Point. The Routing Point then routes the call to an agent.

- Figure 100 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 101 depicts the Interaction Resource Fact (IRF) representation of the call topology.

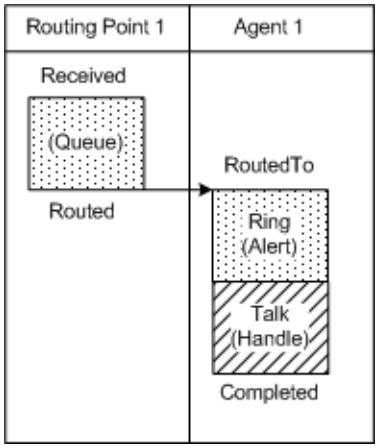

Figure 100: Routing Point Routes to Agent—ISF

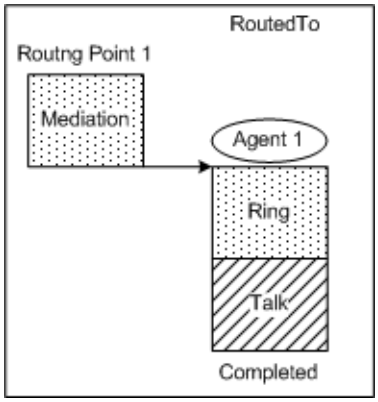

Figure 101: Routing Point Routes to Agent—IRF

Note: Figure 100 and Figure 101 apply to both network routing and enterprise routing. For network routing, `Routing Point 1` could be a service number on a network T-Server that routes the voice interaction to `Agent 1` on a premise T-Server.

Universal Routing Assisted by IVR-Behind-Switch Call Flows

Voice interactions arriving at the switch are queued to an ACD queue, where the ACD positions are actually IVR ports. The IVR collects digits and information about the caller and transfers the call to a Routing Point. Universal Routing uses the collected information to select an appropriate routing target. Basic targets are ACD queues and individual DNs. More advanced targets are agent groups, place groups, and skill expressions.

Inbound Call Flow Examples

This subsection contains several examples of routed call flows. Each example represents a different outcome:

- A Routing Point routes the call to an ACD queue.
- A Routing Point routes the call to an agent (see page 171).

Routing Point Routes to ACD Queue

This call topology shows the outcome of a call that is routed to an agent via an ACD queue. The call arrives at an ACD queue and is diverted to an IVR port. The IVR port then transfers the call to a Routing Point, which routes the call to an ACD queue.

- Figure 102 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 103 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a *self-service* (SS) IVR (when the IVR port is in its own box).
- Figure 104 on page 171 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a *non-self-service* (nonSS) IVR.

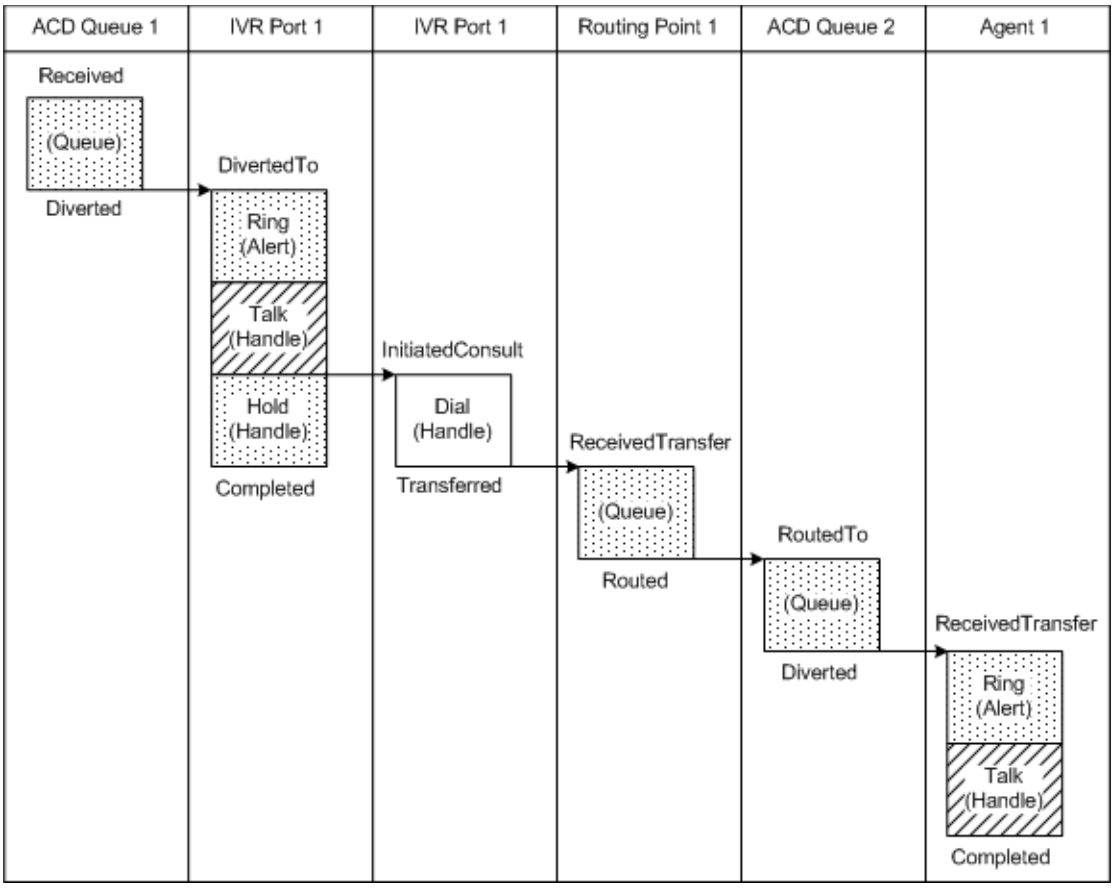

Figure 102: Routing Point Routes to ACD Queue—ISF

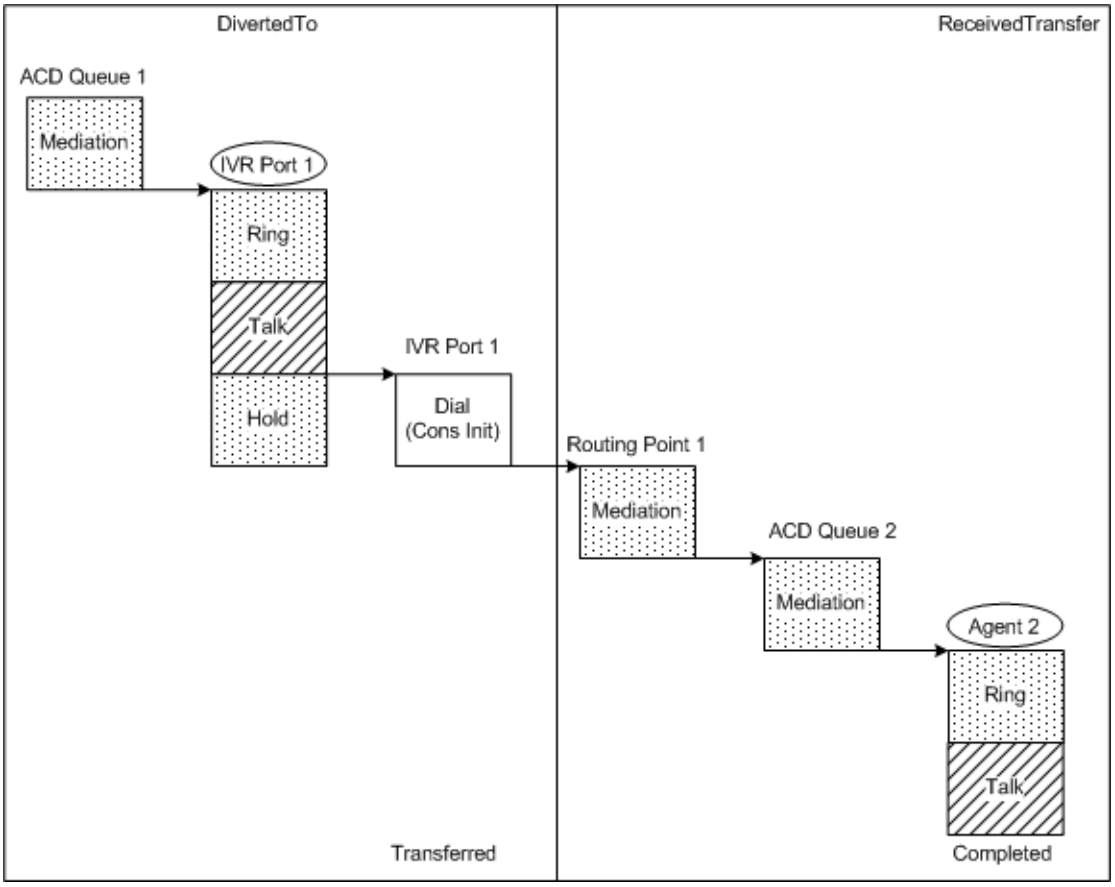

Figure 103: Routing Point Routes to ACD Queue—IRF (SS IVR)

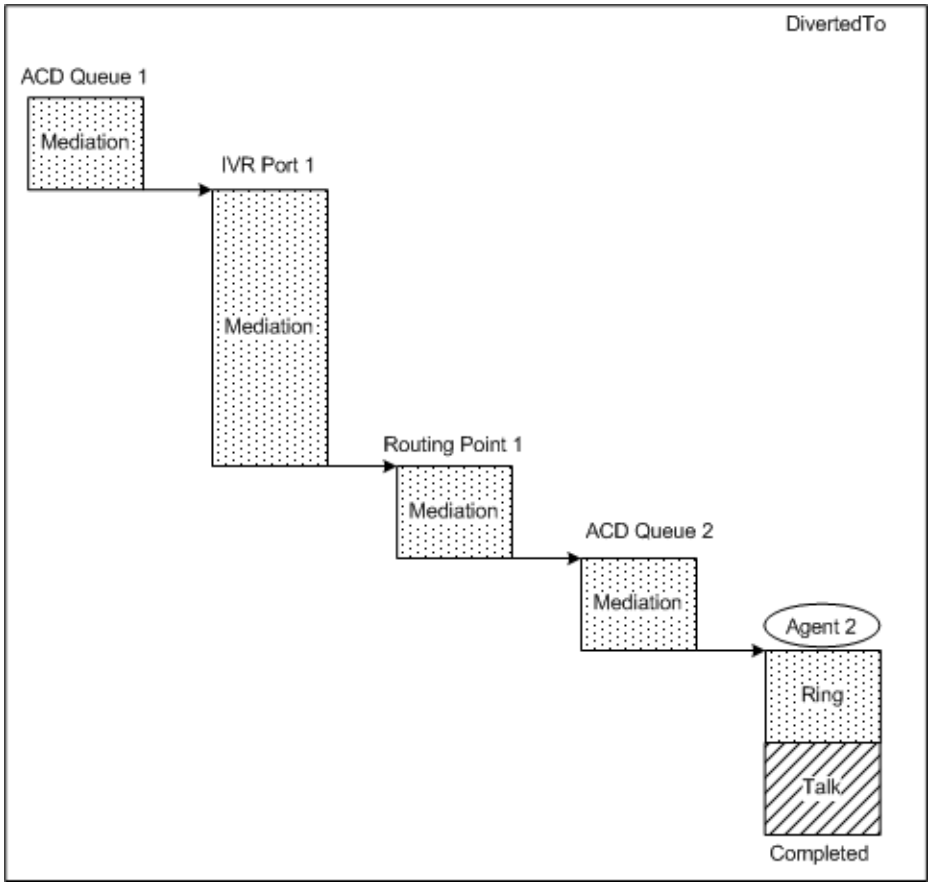

Figure 104: Routing Point Routes to ACD Queue—IRF (nonSS IVR)

Routing Point Routes to Agent

This call topology shows the outcome of a call that is routed directly to an agent. The call arrives at an ACD queue and is diverted to an IVR port. The IVR port then transfers the call to a Routing Point, which routes the call to an agent.

- Figure 105 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 106 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of an SS IVR (when the IVR port is in its own box).
- Figure 107 on page 173 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a nonSS IVR.

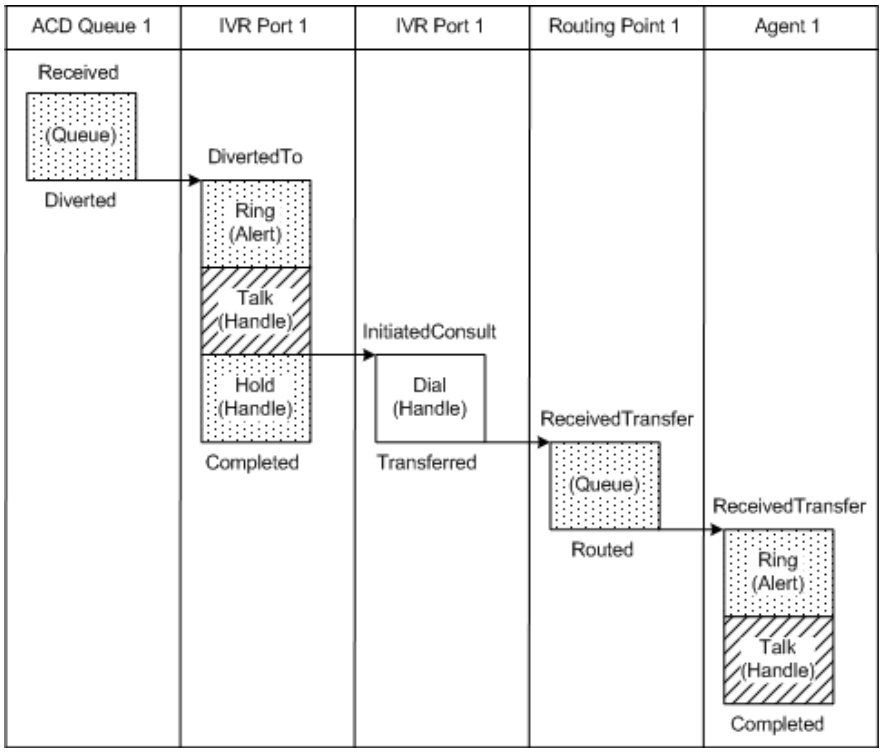

Figure 105: Routing Point Routes to Agent—ISF

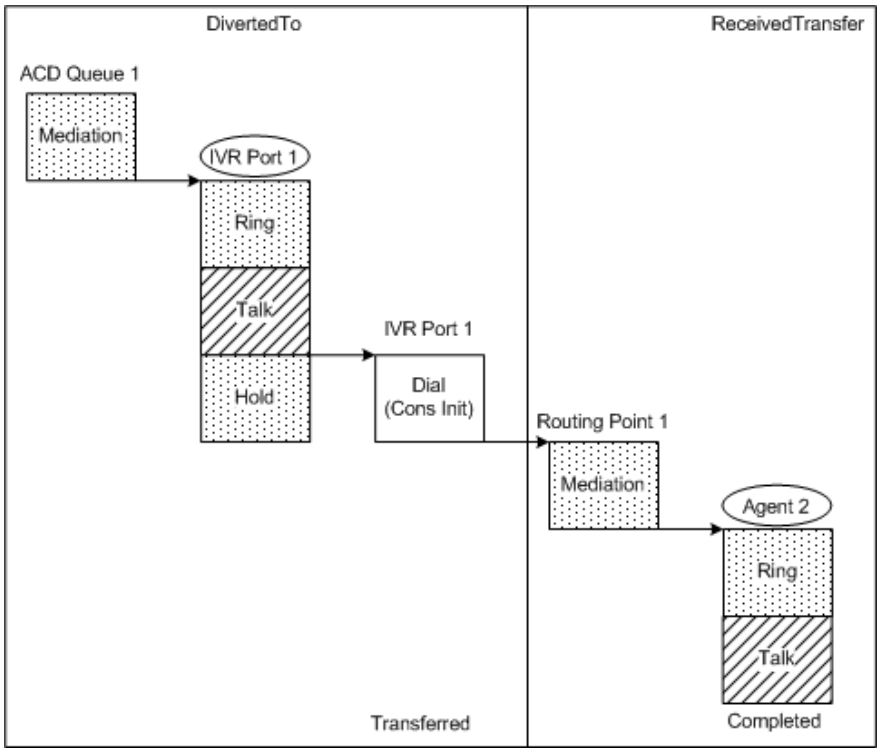

Figure 106: Routing Point Routes to Agent—IRF (SS IVR)

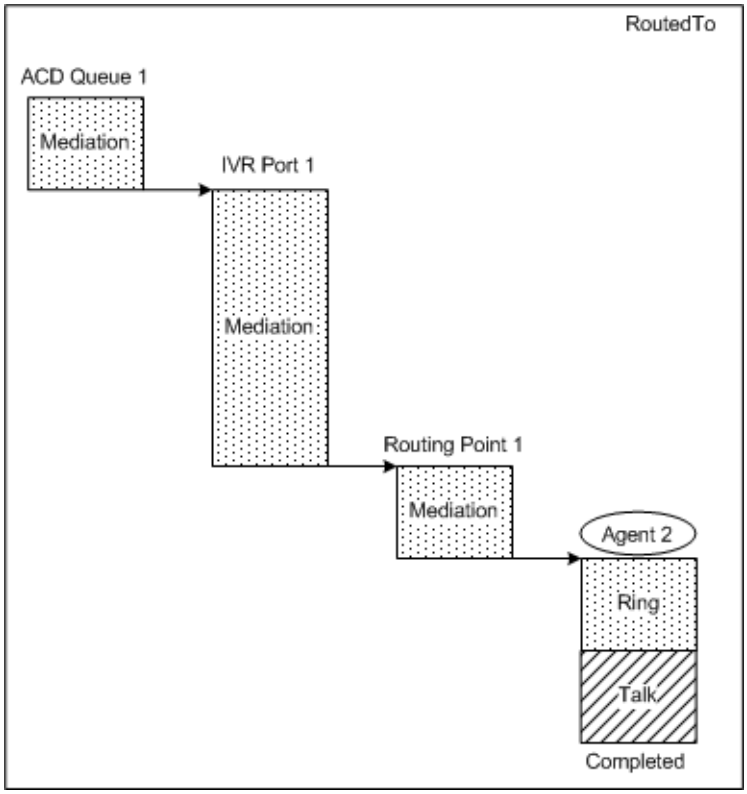

Figure 107: Routing Point Routes to Agent—IRF (nonSS IVR)

IVR-in-Front-of-Switch Assisted by Universal Routing Call Flows

Voice interactions arrive at an IVR port that is visible to the IVR Server's virtual T-Server. Through a Routing Point in the IVR Server's virtual T-Server, the IVR application invokes an Universal Routing strategy. Universal Routing instructs the IVR application to play applications or collect information. Universal Routing uses the collected information to return an appropriate target. The IVR application hook-flash transfers the call to that target.

Inbound Interactions

This subsection contains several examples of inbound call flows. Each example represents a different outcome:

- The IVR port transfers the call to an ACD queue.
- The IVR port transfers the call to an agent (see page 175).

IVR Port Transfers to ACD Queue

The following diagrams show the outcome of a call that an IVR port transfers to an ACD queue, in accordance with routing instructions. The call arrives at an IVR port. The IVR port requests routing instructions from a Routing Point, and then hook-flash transfers the call to an ACD queue.

- Figure 108 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 109 depicts the Interaction Resource Fact (IRF) representation of the call topology.

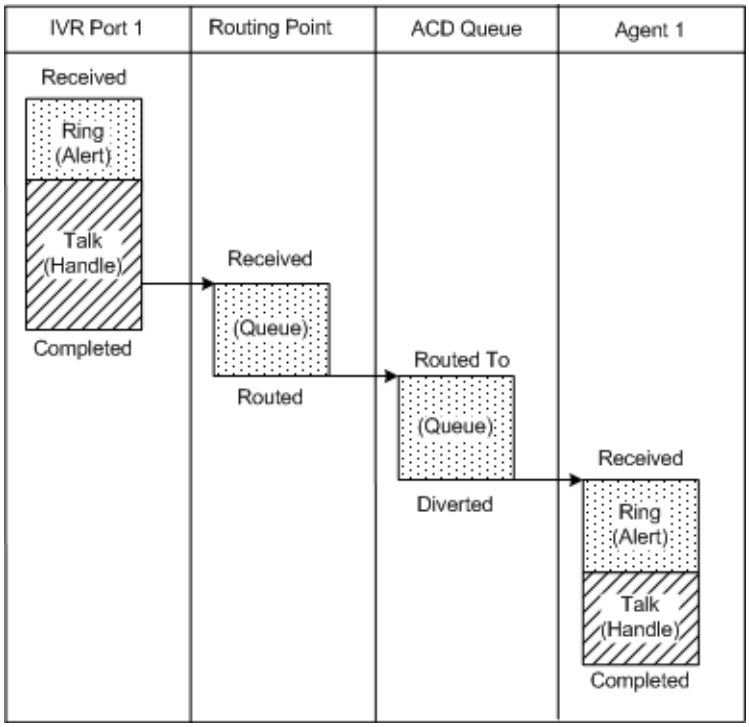

Figure 108: IVR Port Transfers to ACD Queue—ISF

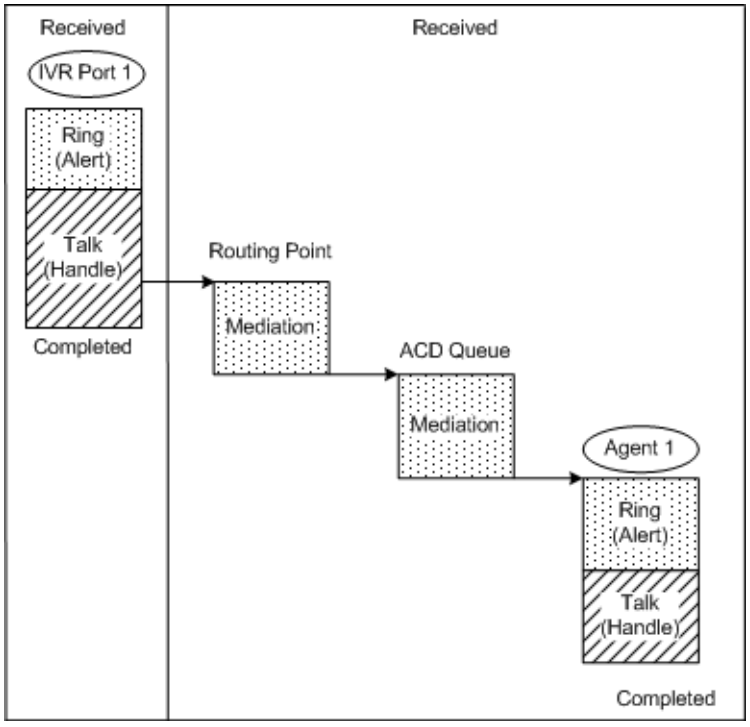

Figure 109: IVR Port Transfers to ACD Queue—IRF

IVR Port Transfers to Agent

The following figures show the outcome of a call that an IVR port transfers directly to an agent, in accordance with routing instructions. The call arrives at an IVR port. The IVR port requests routing instructions from a Routing Point, and then hook-flash transfers the call to an agent.

- Figure 110 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 111 depicts the Interaction Resource Fact (IRF) representation of the call topology.

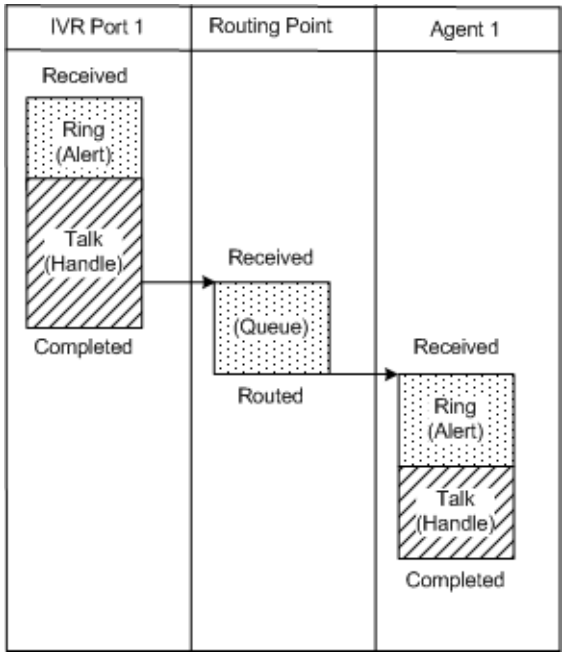

Figure 110: IVR Port Transfers to Agent—ISF

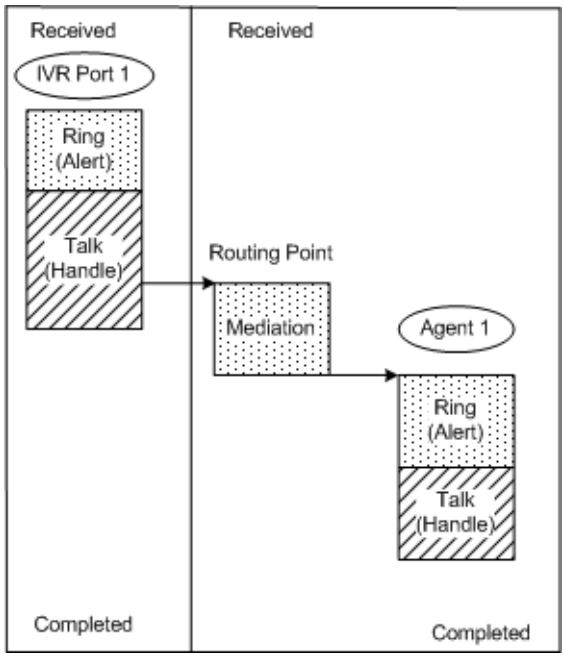

Figure 111: IVR Port Transfers to Agent—IRF

IVR-Behind-Switch Assisted by Universal Routing Call Flows

Voice interactions arriving at the switch are queued to an ACD queue, where the ACD positions are actually IVR ports. Through a virtual routing point in the premise T-Server, the IVR application invokes an Universal Routing strategy. Universal Routing instructs the IVR application to play applications or collect information. Universal Routing uses the collected information to return an appropriate target. The IVR application mute transfers the call to that target.

Inbound Call Flow Examples

This subsection contains the following examples of inbound call flows. Each example represents a different outcome:

- The IVR port transfers the call to an ACD queue.
- The IVR port transfers the call to an agent (see page 180).

IVR Port Transfers to ACD Queue

This call topology shows the outcome of a call that an IVR port transfers to an ACD queue, in accordance with routing instructions. The call arrives at an ACD queue and is diverted to an IVR port. The IVR port requests routing instructions from a virtual routing point, and then mute transfers the call to another ACD queue.

- Figure 112 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 113 on page 179 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a *self-service* (SS) IVR (when the IVR port is in its own box).
- Figure 114 on page 180 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a *non-self-service* (nonSS) IVR.

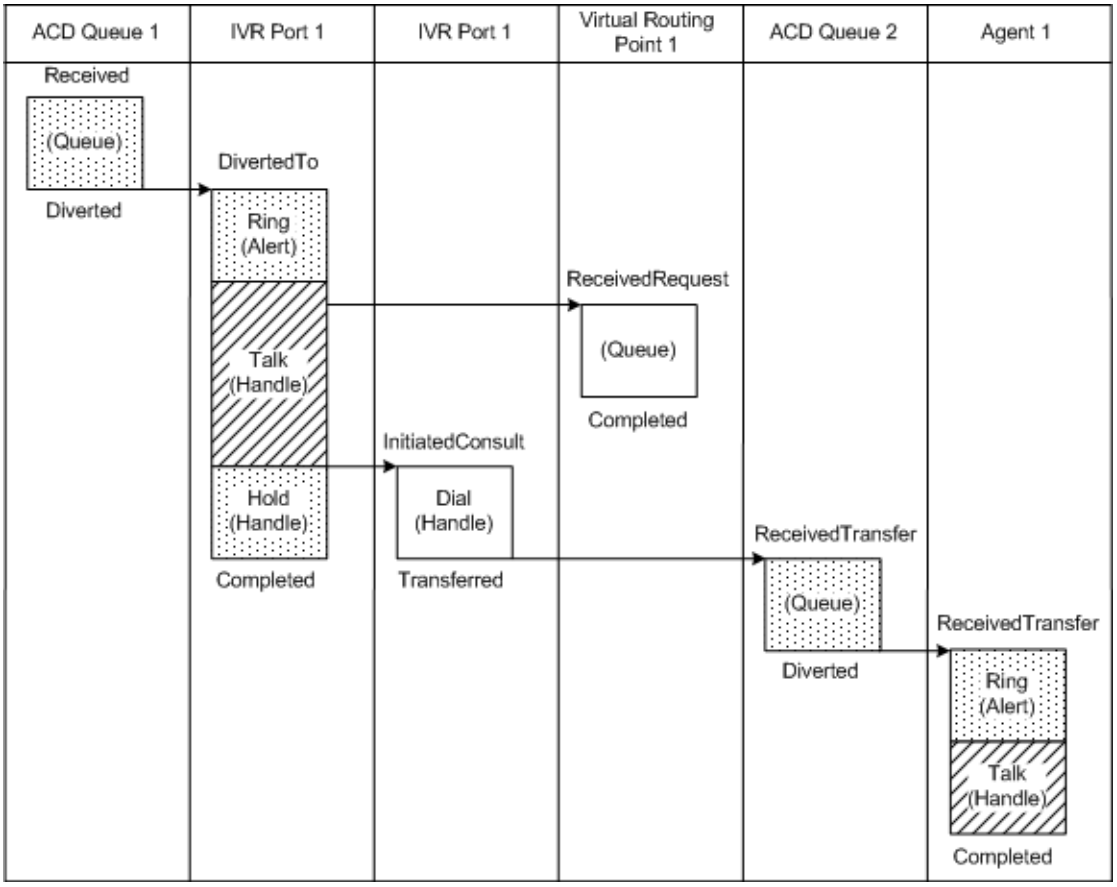

Figure 112: IVR Port Transfers to ACD Queue—ISF

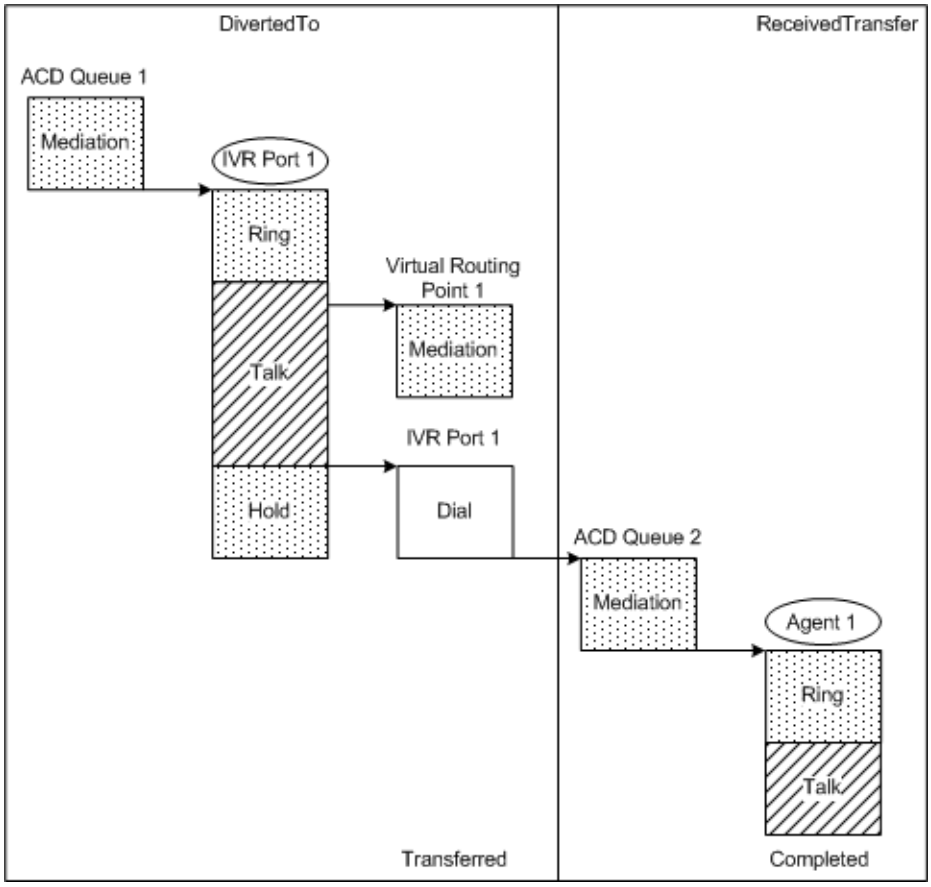

Figure 113: IVR Port Transfers to ACD Queue—IRF (SS IVR)

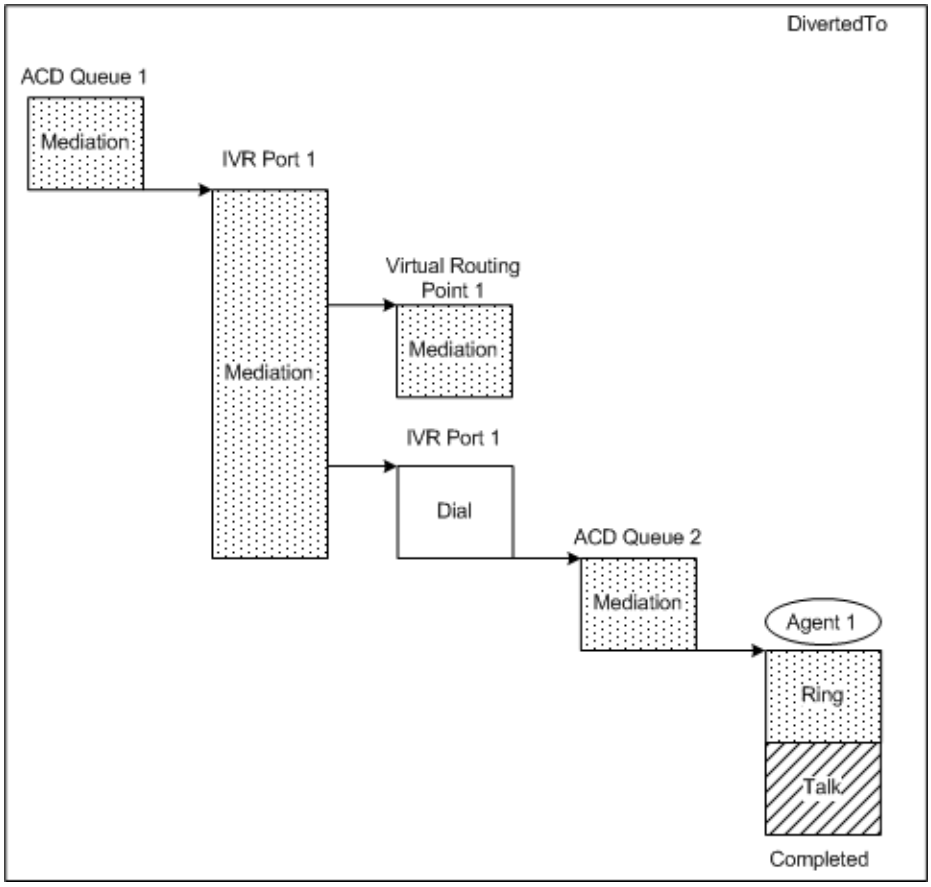

Figure 114: IVR Port Transfers to ACD Queue—IRF (nonSS IVR)

IVR Port Transfers to Agent

This call topology shows the outcome of a call that an IVR port transfers directly to an agent, in accordance with routing instructions. The call arrives at an ACD queue and is diverted to an IVR port. The IVR port requests routing instructions from a virtual routing point, and then mute transfers the call to an agent.

- Figure 115 depicts the Interaction Segment Fact (ISF) representation of the call topology.
- Figure 116 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of an SS IVR (when the IVR port is in its own box).
- Figure 117 on page 182 depicts the Interaction Resource Fact (IRF) representation of the call topology in the case of a nonSS IVR.

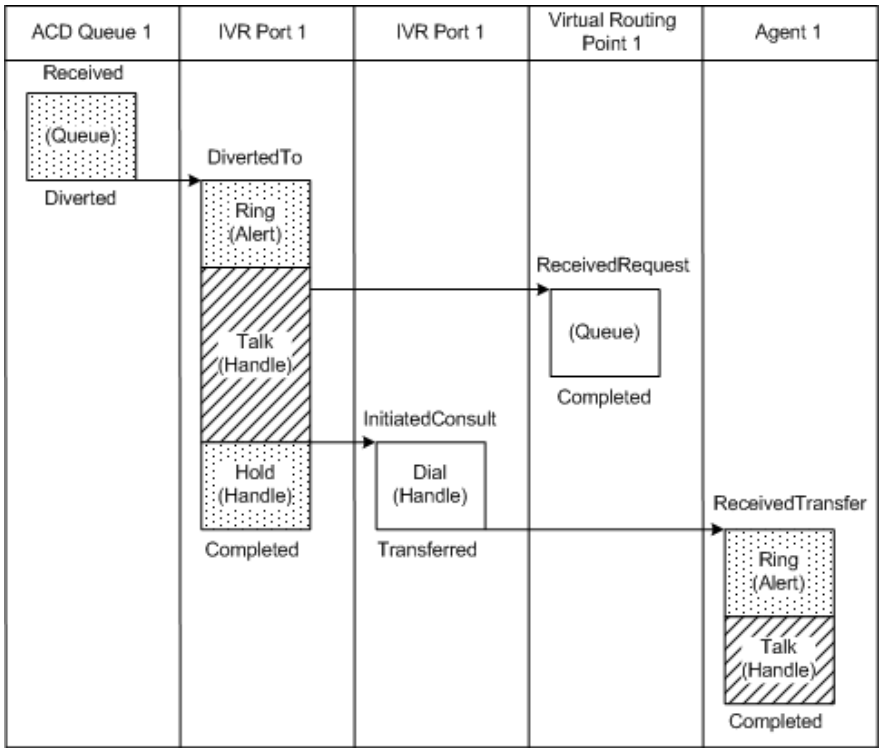

Figure 115: IVR Port Transfers to Agent—ISF

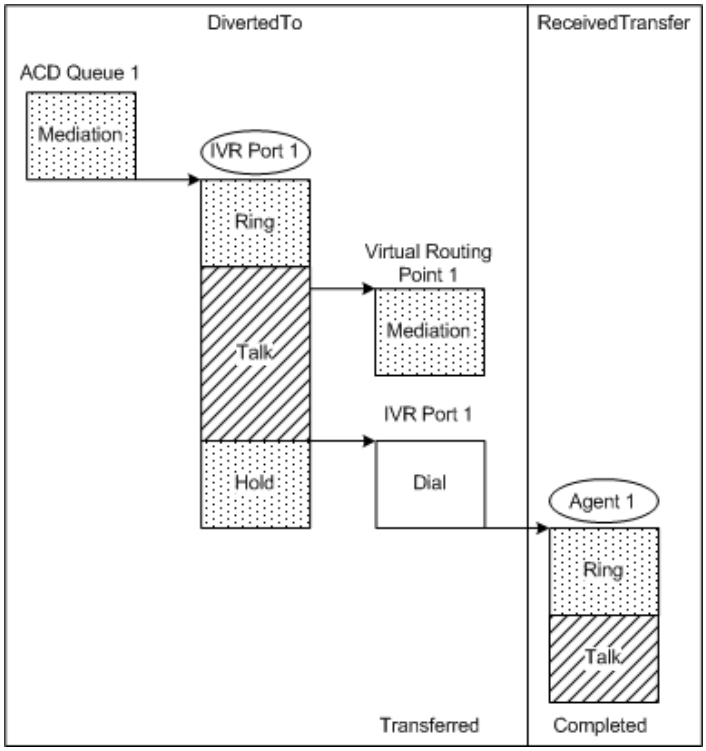

Figure 116: IVR Port Transfers to Agent—IRF (SS IVR)

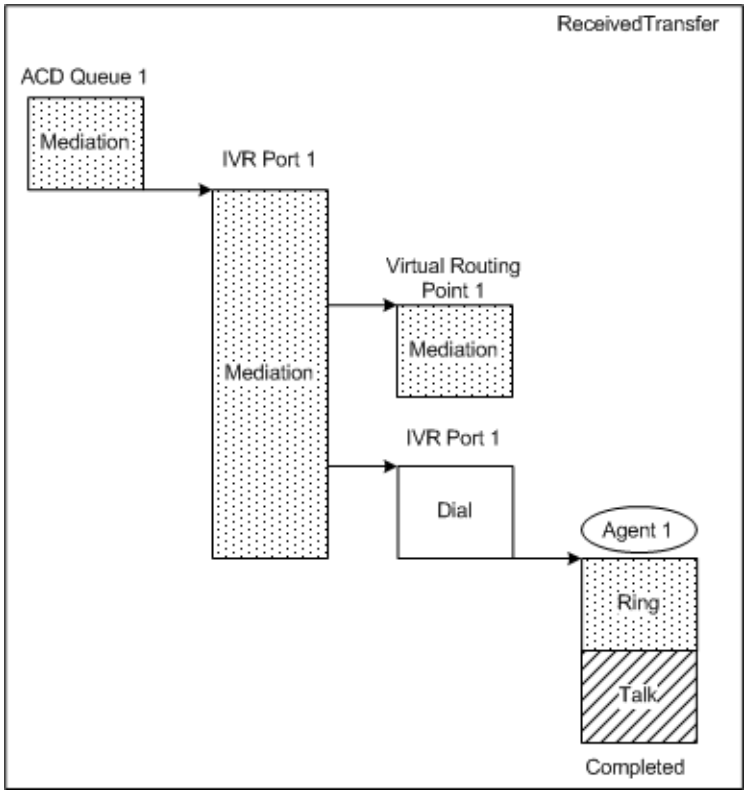

Figure 117: IVR Port Transfers to Agent—IRF (nonSS IVR)

Chapter

4 Validated Multimedia Interaction Flows

This chapter describes the recognized, validated Multimedia interactions that have been tested, and that are supported by Genesys Info Mart.

This chapter provides detailed sections that discuss chat and e-mail. However, Genesys Info Mart handles any Open Media interaction type.

Use the sections that discuss e-mail as a guide to interactions that do not require immediate handling (offline interactions), and the chat section as a guide to online interactions.

The interaction flows described in this chapter are intended as examples that you can modify for your environment. However, Genesys does not guarantee results for modified interaction flows.

This chapter contains the following sections:

Inbound E-Mail Interactions

This section contains several examples of inbound e-mail flows. Each example represents a different outcome:

- A routing strategy routes the e-mail interaction to an agent, and the agent replies (see page 185).
- A routing strategy routes the e-mail interaction to an agent, but the agent does not accept the invitation (see page 186).
- An incoming e-mail interaction receives an auto-acknowledgement and is also routed to an agent (see page 187).
- An incoming e-mail interaction is handled with an autoresponse (see page 188).

- A routing strategy transfers the e-mail interaction from one interaction queue to another (see page 189).
- A routing strategy routes the e-mail interaction to an agent, who transfers it to an interaction queue (see page 189).
- A routing strategy routes the e-mail interaction to an agent, who transfers it to another agent (see page 190).
- A routing strategy routes the e-mail interaction to an agent, who unsuccessfully attempts to transfer it to another agent (see page 192).
- A routing strategy routes the e-mail interaction to an agent, who consults to another agent before sending a reply (see page 193).
- A routing strategy routes the e-mail interaction to an agent, who unsuccessfully attempts to consult to another agent before sending a reply (see page 195).
- An agent saves a draft of the e-mail reply, and then later completes and sends it (see page 196).
- An agent pulls the e-mail interaction from the interaction workbin to which it was routed (see page 196).
- An agent pulls the e-mail interaction from the strategy before it is routed (see page 197).
- An agent sends a multipart reply (see page 198).

Diagram Conventions

The e-mail flow diagrams in this section use the same conventions as the call flow diagrams in Chapter 3 (see “Diagram Conventions” on page 99). Note, however, that e-mail interactions have no customer handle time or customer wait time, and therefore no shaded boxes appear in the e-mail flows.

Additional Convention

Some of the diagrams represent only a portion of the total interaction flow. In these cases, three underscores (_ _ _) at the bottom of a segment column indicate that the interaction flow continues in a manner similar to one of the other documented flows. In some of these cases, descriptive text that accompanies the underscores specifies particular follow-on interaction flows.

Strategy Routes E-Mail to Agent, and Agent Replies

Figure 118 shows the outcome of an e-mail interaction that a routing strategy routes to an agent, who accepts the invitation. The e-mail is submitted to an inbound interaction queue. The routing strategy pulls the e-mail from the interaction queue and sends it to an agent's desktop. The agent then replies to the e-mail.

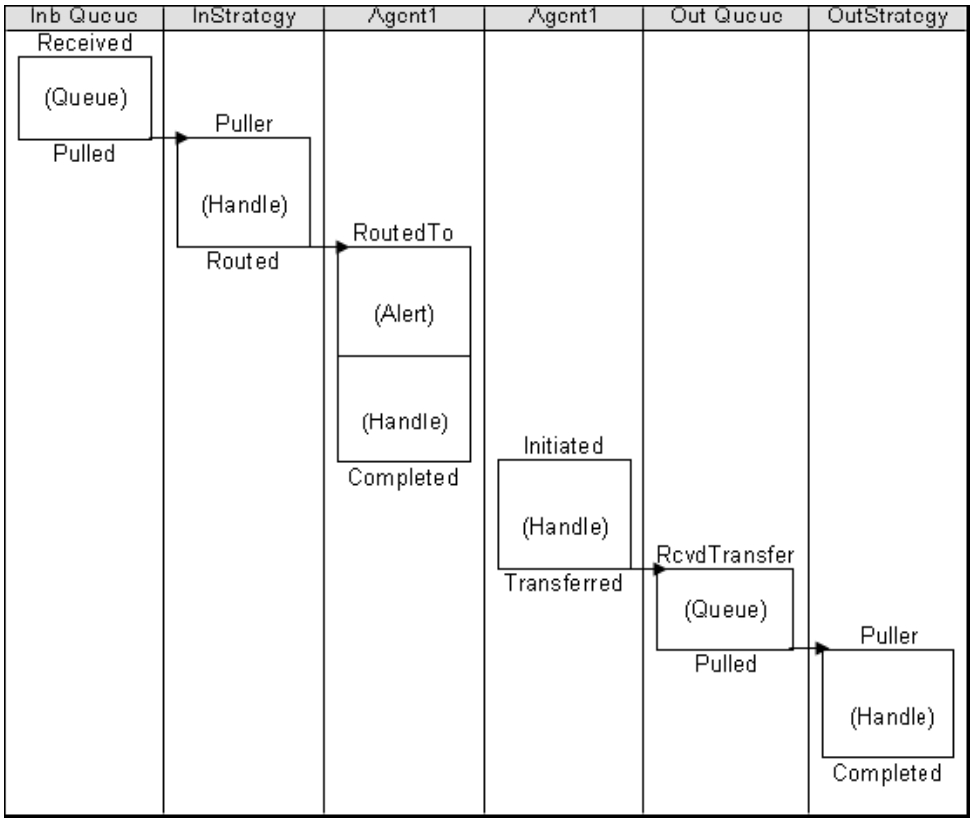

Figure 118: Strategy Routes E-Mail to Agent, and Agent Replies

Agent Invited into E-Mail Interaction, and Invitation Revoked

Figure 119 shows the outcome of an e-mail interaction that a routing strategy routes to an agent, who does not accept the invitation. The e-mail is submitted to an inbound interaction queue. The routing strategy pulls the e-mail from the interaction queue and sends it to an agent's desktop. The agent does not accept the invitation to the interaction, and the e-mail is returned to the interaction queue so that it can be reprocessed.

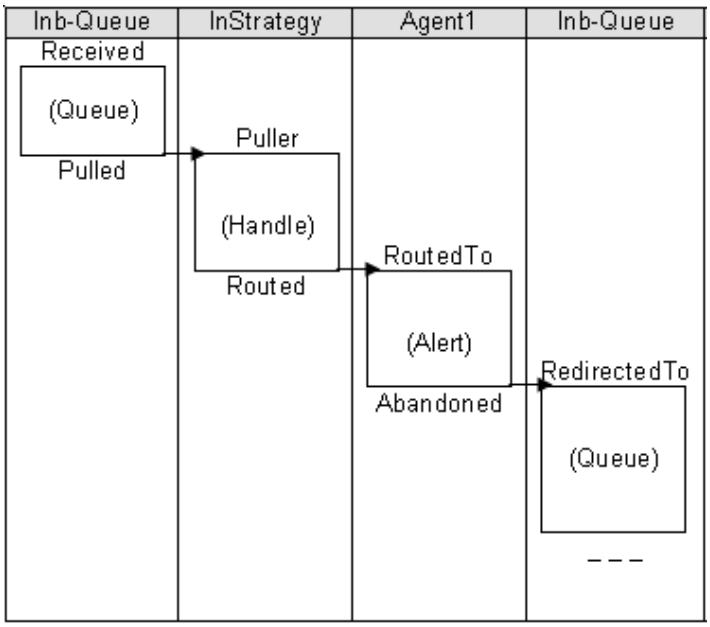

Figure 119: Agent Does Not Accept E-Mail Invitation

Note: When a routing strategy routes to an agent, the strategy is removed from the interaction as soon as the agent is invited into that interaction. In other words, the routing is complete as soon as the agent is invited.

E-Mail Acknowledged and Delivered to Agent

Figure 120 shows the outcome of an e-mail interaction that receives an auto-acknowledgement and is also routed to an agent. The e-mail is submitted to a pre-evaluation interaction queue. A routing strategy pulls the e-mail from the pre-evaluation interaction queue, performs some preprocessing to identify whether the e-mail should receive an acknowledgement, and places the e-mail into a post-evaluation interaction queue. Another routing strategy then pulls the e-mail from the post-evaluation interaction queue and delivers it to an agent's desktop. In the scenario shown, an acknowledgement is sent before the e-mail is delivered to the agent.

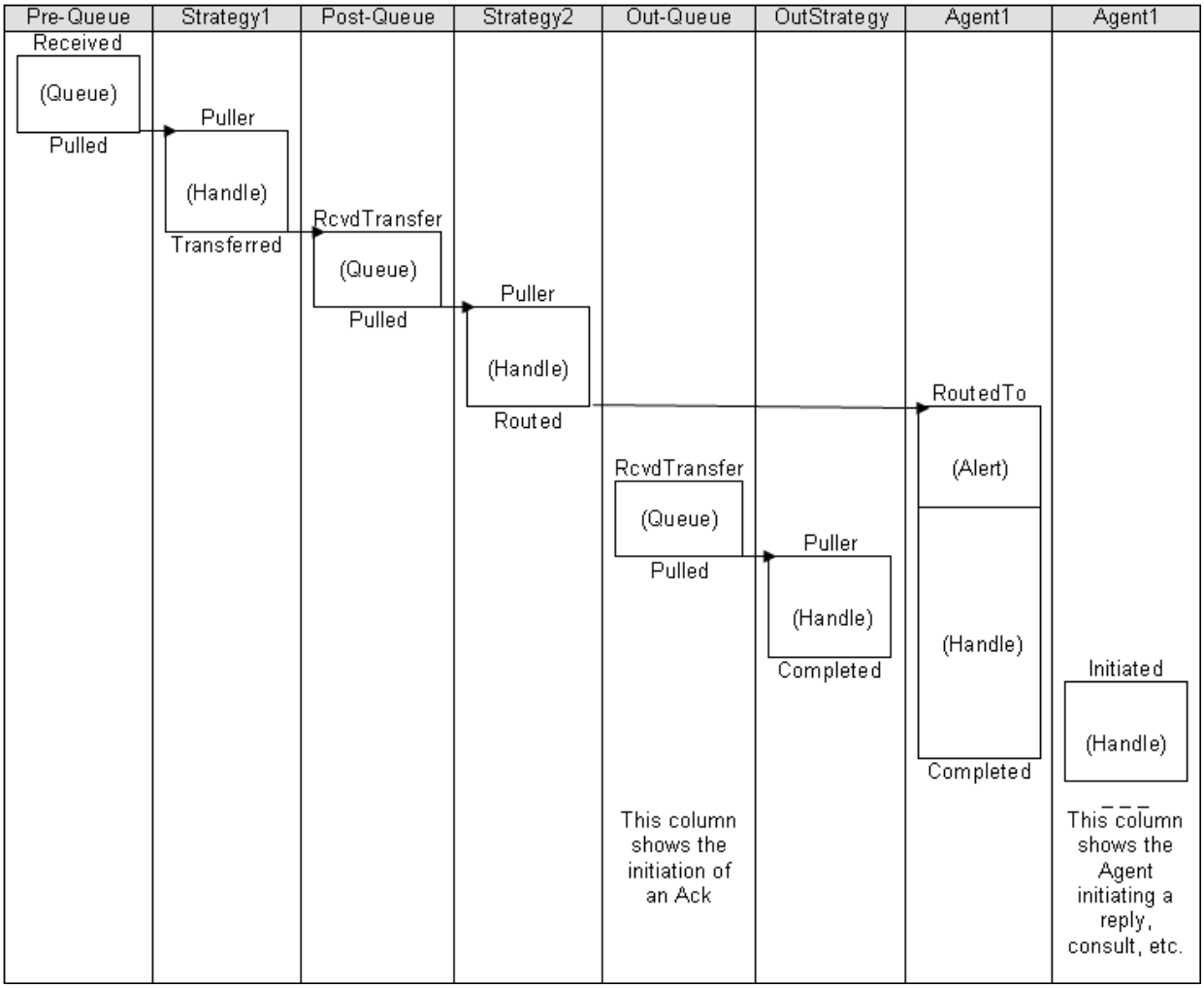

Figure 120: E-Mail Acknowledged and Delivered to Agent

E-Mail Interaction Handled with Autoresponse

Figure 121 shows the outcome of an e-mail interaction that a routing strategy determines can be handled with an autoresponse. The e-mail is submitted to an inbound interaction queue. The routing strategy pulls the e-mail from the interaction queue, and identifies that it requires an autoresponse. The autoresponse is generated.

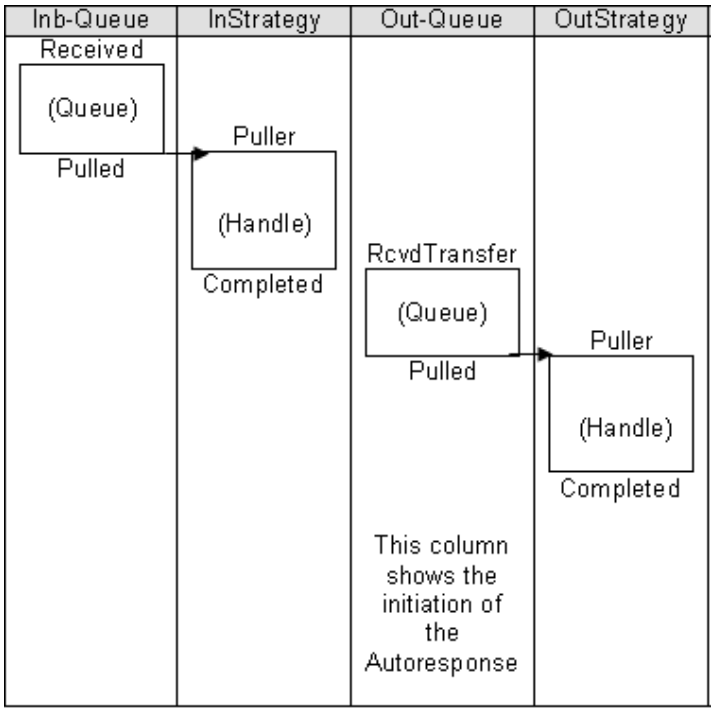

Figure 121: E-Mail Handled with Autoresponse

Strategy Transfers E-Mail Between Queues

Figure 122 shows the outcome of an e-mail interaction that is transferred from one interaction queue (for example, a pre-evaluation inbound queue) to another (for example, a skills-based queue). The e-mail is submitted to an interaction queue. The routing strategy pulls the e-mail from the interaction queue and places it into another interaction queue. At this point, any other e-mail flow can pick up the interaction flow, with a routing strategy or agent pulling the e-mail from the interaction queue.

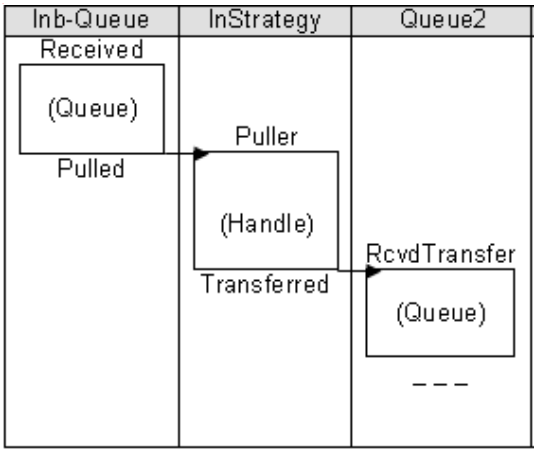

Figure 122: E-Mail Transferred Between Queues

Agent Transfers E-Mail to Queue

Figure 123 on page 190 shows the outcome of an e-mail interaction that is routed to an agent, who transfers the e-mail to an interaction queue (for example, so that the e-mail can be routed to an agent with a particular skill). The e-mail is submitted to an inbound interaction queue. A routing strategy pulls the e-mail from the interaction queue and delivers it to an agent's desktop. The agent then transfers the e-mail to another interaction queue (for example, a skills-based queue). At this point, any other e-mail flow can pick up the interaction flow, with a strategy pulling the e-mail from the queue and routing it somewhere else.

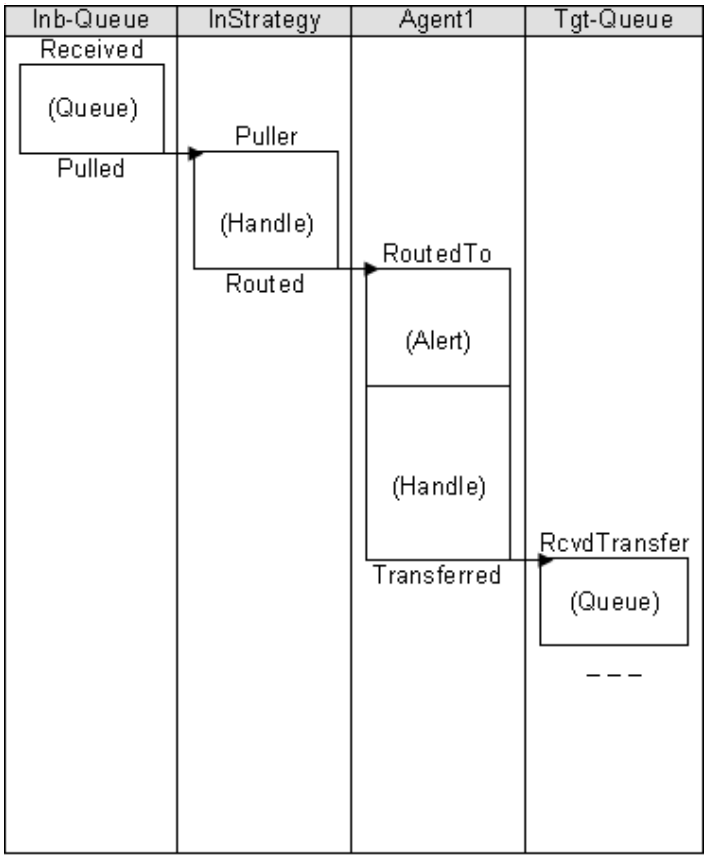

Figure 123: Agent Transfers E-Mail to Queue

Agent Transfers E-Mail to Another Agent

Figure 124 on page 191 shows the outcome of an e-mail interaction that is routed to an agent, who transfers the e-mail to another agent. The e-mail is submitted to an inbound interaction queue. A routing strategy pulls the e-mail from the interaction queue and delivers it to an agent's desktop. The agent then transfers the e-mail to another agent, who replies to the e-mail.

The transfer to the second agent (`Agent2`) begins when the original agent (`Agent1`) invites `Agent2` into the interaction. The transfer is not complete until `Agent2` actually accepts the invitation. After `Agent2` accepts the invitation, `Agent2` is added to the interaction, and `Agent1` is removed from it.

Note: When an agent attempts to transfer or consult to another agent, the original agent is not removed from the interaction until the target agent accepts the invitation. In other words, a transfer is not complete until the target agent accepts the invitation.

By contrast, when a routing strategy routes to an agent, the strategy is removed from the interaction as soon as the agent is invited into it. In other words, the routing is complete as soon as the agent is invited.

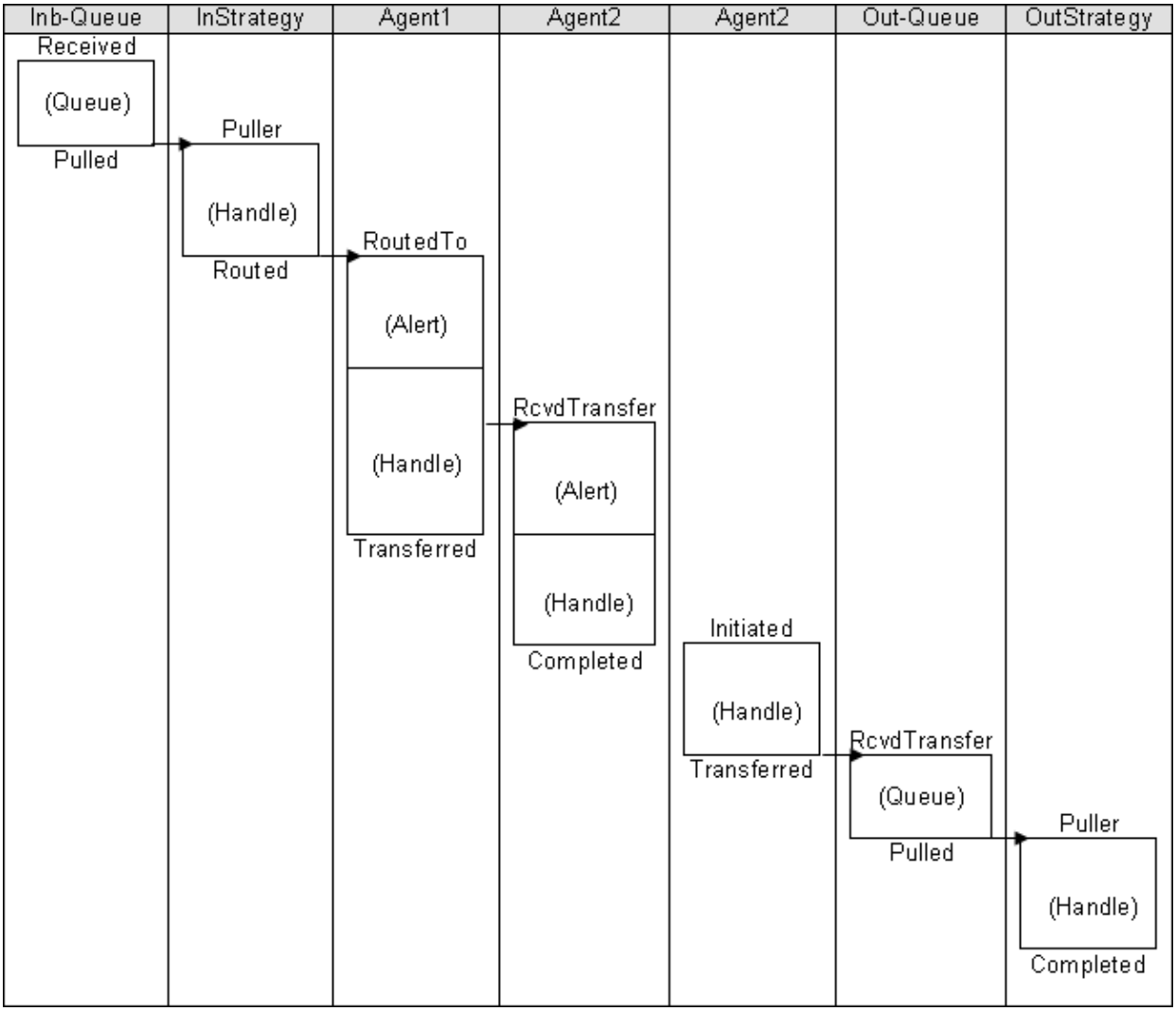

Figure 124: Agent Transfers E-Mail to Another Agent

Agent's Attempt to Transfer E-Mail to Another Agent Fails

Figure 125 shows the outcome of an e-mail interaction that is routed to an agent, who unsuccessfully attempts to transfer the e-mail to another agent. The e-mail is submitted to an inbound interaction queue. A routing strategy pulls the e-mail from the interaction queue and delivers it to an agent's desktop. The agent then attempts to transfer the e-mail to another agent. However, the second agent does not accept the invitation, and the invitation is revoked. At this point, the interaction can continue as a normal reply flow or as another e-mail flow (such as a transfer or consult) from the original agent.

Notice that an interaction segment is created when the second agent (`Agent2`) is invited into the interaction. However, because `Agent2` never accepts the invitation, `Agent2` is not an active participant in the interaction. Also, the original agent (`Agent1`) is never removed from the interaction.

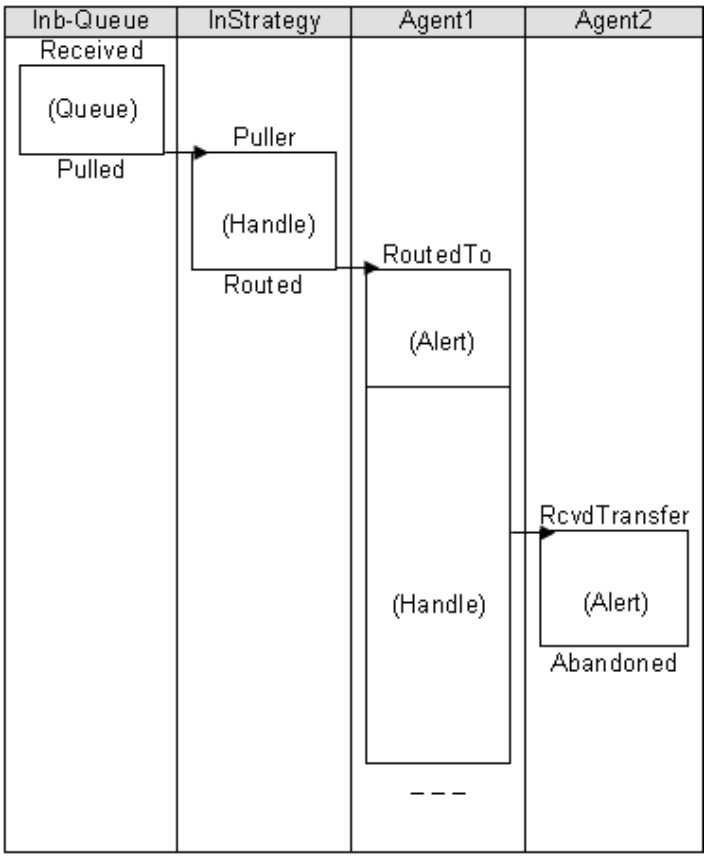

Figure 125: Unsuccessful Agent-to-Agent E-Mail Transfer Attempt

Agent Consults to Another Agent Before Sending Reply

Figure 126 on page 194 shows the outcome of an e-mail interaction that is routed to an agent, who consults to another agent before sending an e-mail reply. The e-mail is submitted to an inbound interaction queue. A routing strategy pulls the e-mail from the interaction queue and delivers it to an agent's desktop. The agent begins the reply, and then consults to another agent (a process called *collaboration* in Genesys Agent Desktop). After seeing the second agent's consultation reply, the original agent sends an e-mail reply to the customer.

Note: Genesys Agent Desktop enables the original agent to see the second agent's collaboration reply without actually pulling it from the workbin. When the original agent sends the reply to the customer, Genesys Agent Desktop cleans up the collaboration reply interaction, pulling it from the workbin and enabling it to be completed.

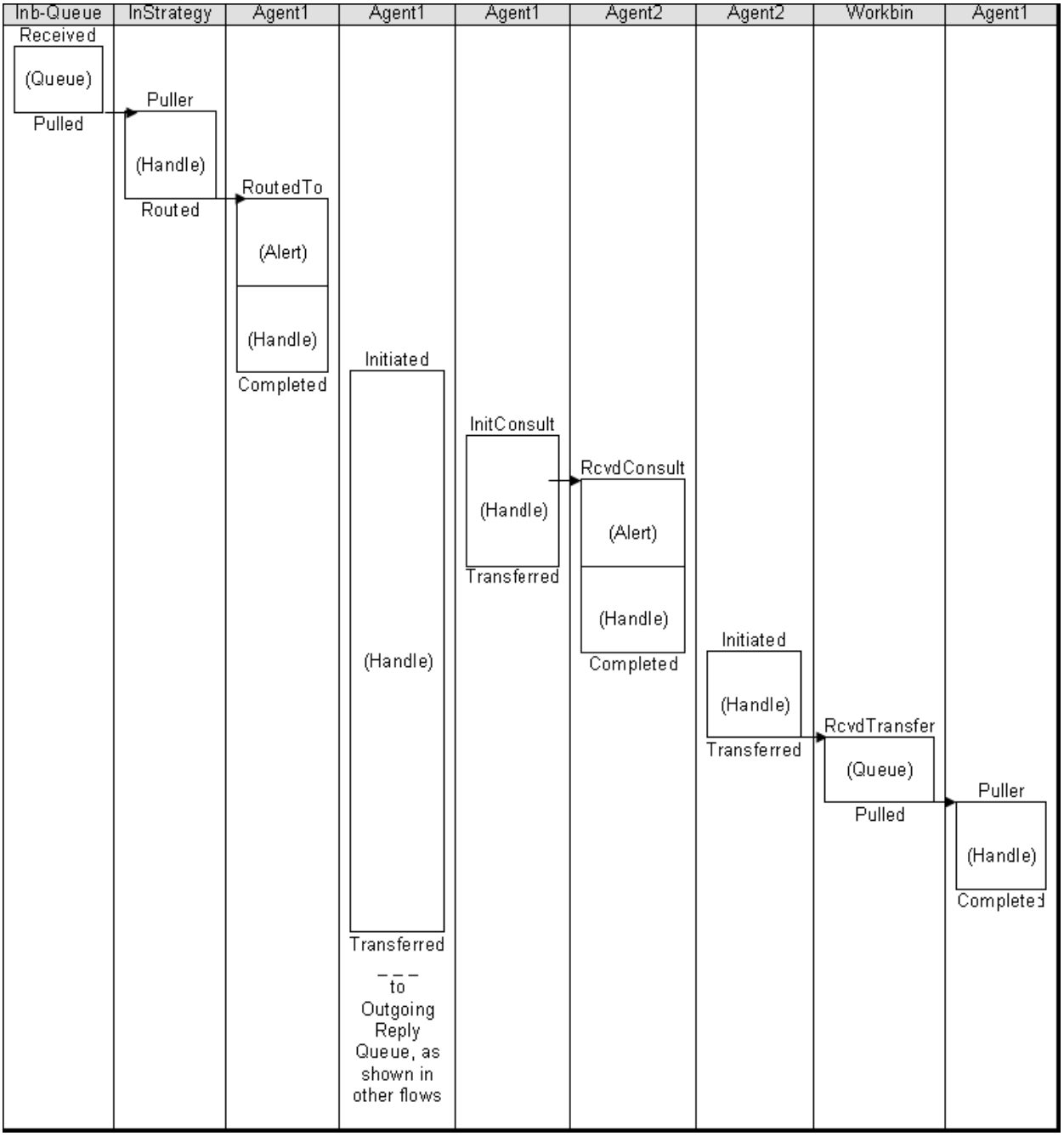

Figure 126: Agent Consults to Another Agent Before Sending Reply

Agent Unsuccessfully Consults to Another Agent Before Sending Reply

Figure 127 shows the outcome of an e-mail interaction that is routed to an agent, who unsuccessfully attempts to consult to another agent before sending an e-mail reply. The e-mail is submitted to an inbound interaction queue. A routing strategy pulls the e-mail from the interaction queue and delivers it to an agent's desktop. The agent begins the reply, and then attempts to consult to another agent. The second agent does not accept the invitation. At this point, the interaction can continue as a normal reply flow from the original agent.

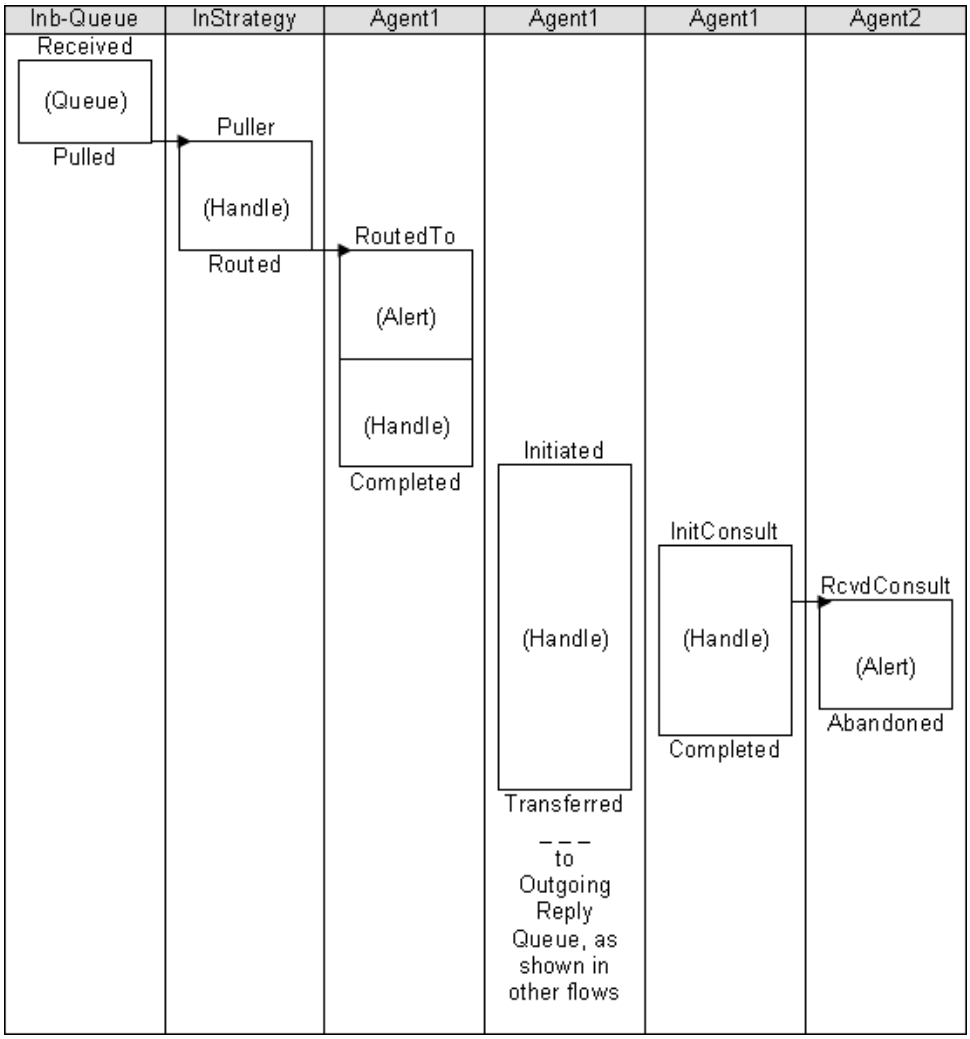

Figure 127: Agent Unsuccessfully Consults to Another Agent Before Sending Reply

Agent Saves Draft Reply Before Sending

Figure 128 shows the outcome of an e-mail interaction that is routed to an agent, who first saves a draft of the reply and then later completes and sends it. The e-mail is submitted to an inbound interaction queue. A routing strategy pulls the e-mail from the interaction queue and delivers it to an agent's desktop. The agent then begins the reply, but is interrupted. The agent saves the started reply as a draft. Later, the agent retrieves the draft, finishes the reply, and sends it to the customer.

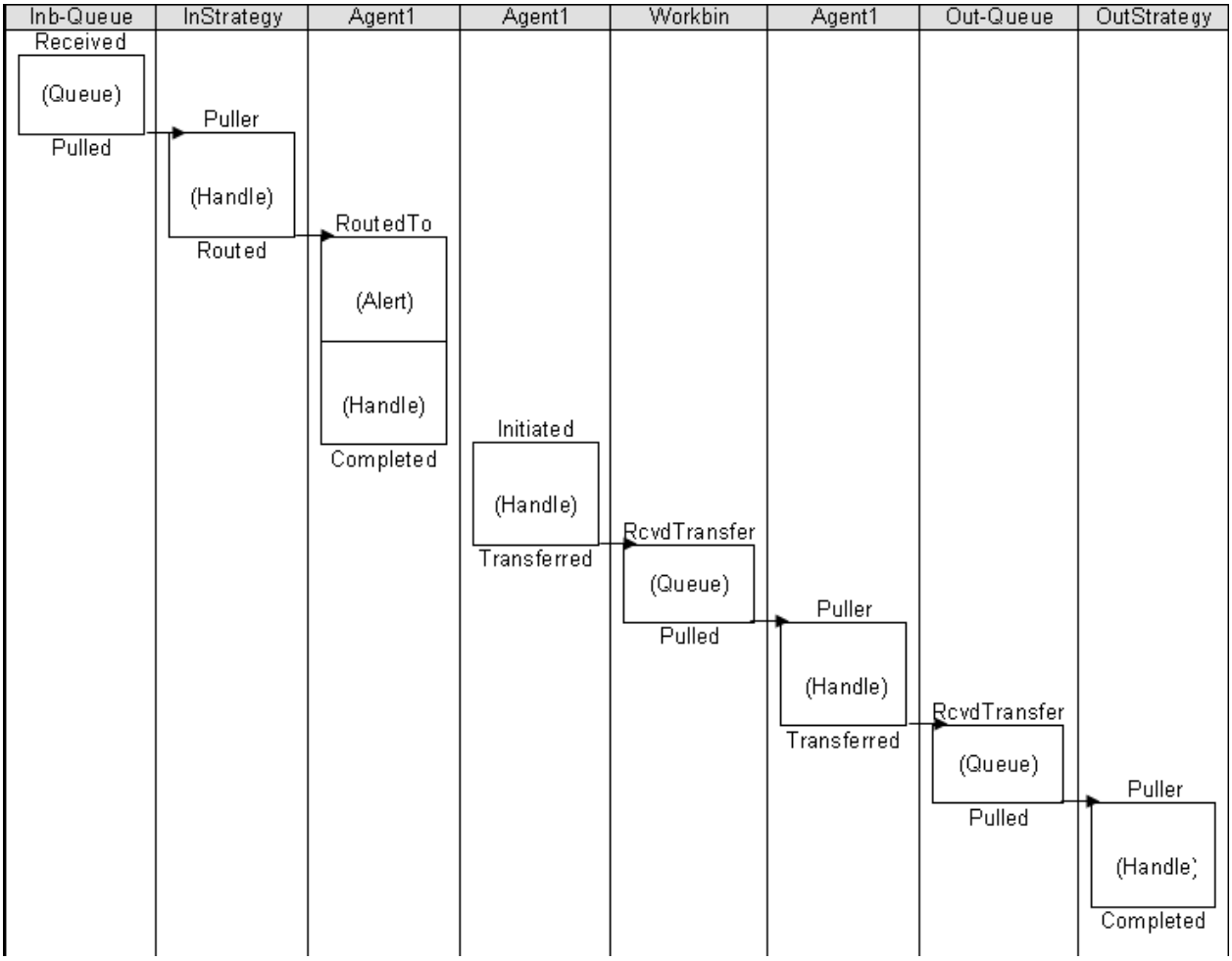

Figure 128: Agent Saves Draft Reply Before Sending

Agent Pulls E-Mail from Workbin

Figure 129 on page 197 shows the outcome of an e-mail interaction that an agent retrieves from a workbin. (For example, a routing strategy might route an interaction to an interaction workbin that has been designated for a particular agent group that handles a certain kind of customer interaction. Then, an agent in the agent group pulls the interaction from the interaction workbin.) The e-mail is submitted to an inbound interaction queue. The routing strategy pulls

the e-mail from the interaction queue and routes it to an interaction workbin. The agent then pulls the e-mail from the interaction workbin and replies to the customer.

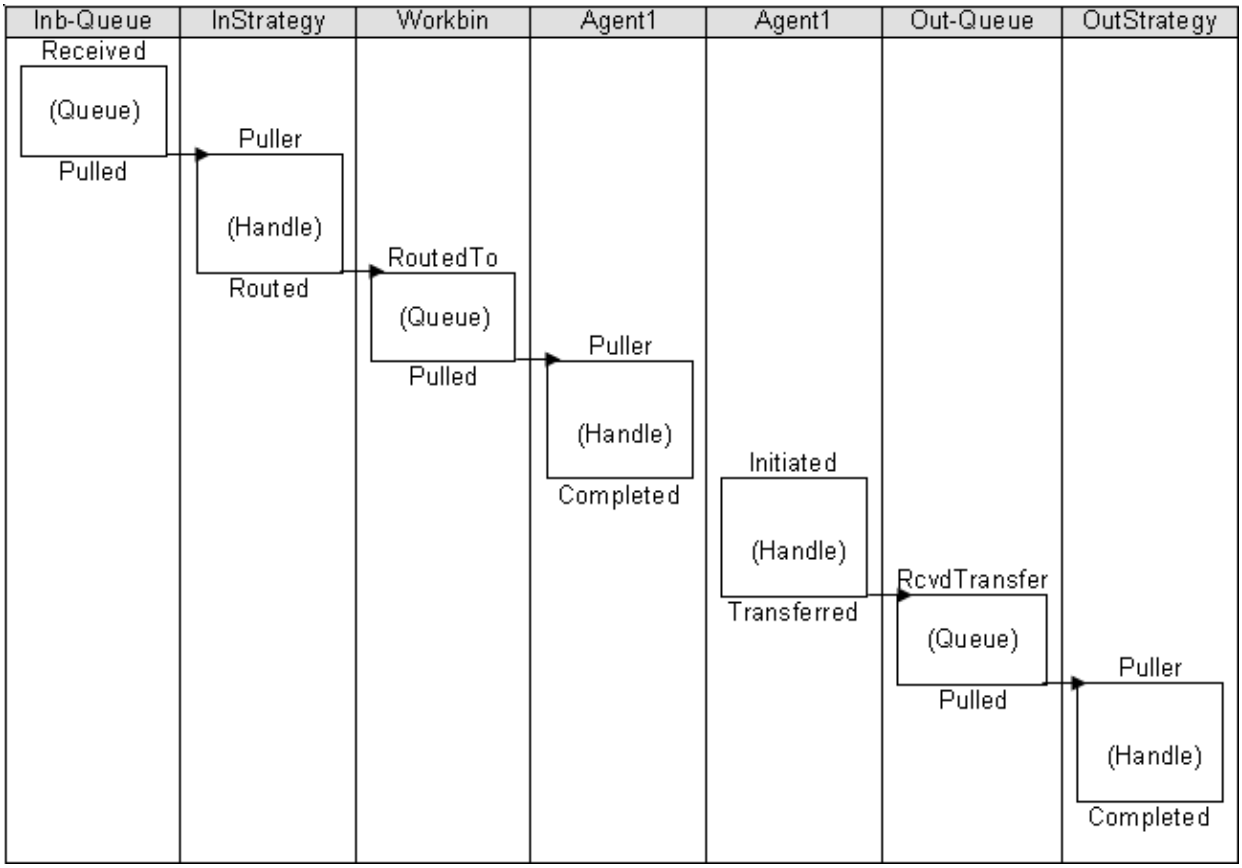

Figure 129: Agent Pulls E-Mail from Workbin

Agent Pulls E-Mail from Strategy

Figure 130 on page 198 shows the outcome of an e-mail interaction that an agent retrieves from a strategy. (For example, an agent is working on an e-mail and, from the contact history, discovers that an interaction from the same customer is in the routing process. The agent pulls the second interaction from the routing queue so that both interactions can be dealt with at the same time.) The e-mail is submitted to an inbound interaction queue. The routing strategy pulls the e-mail from the interaction queue. Before the strategy routes the

interaction, the agent pulls the e-mail from the strategy and replies to the customer.

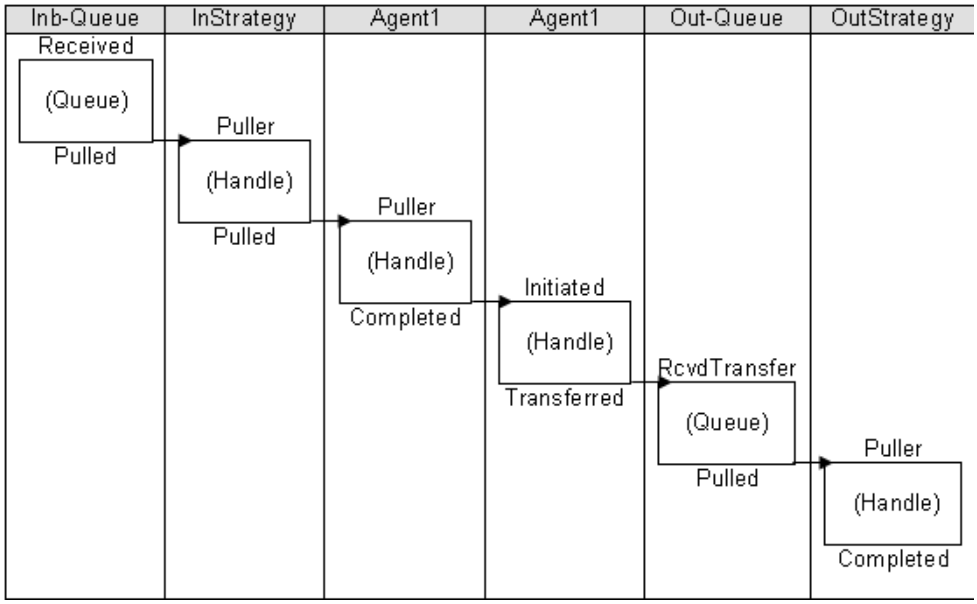

Figure 130: Agent Pulls E-Mail from Strategy

Agent Sends Multipart Reply

Figure 131 on page 199 shows the outcome of an e-mail interaction that is routed to an agent, who sends a multipart reply. The e-mail is submitted to an inbound interaction queue. A routing strategy pulls the e-mail from the interaction queue and delivers it to an agent's desktop. The agent then sends an initial reply to the customer. Later, the agent sends another e-mail reply to the customer.

Figure 131 illustrates a simple case, in which the same agent replies to one part of the e-mail, and then later replies to another part of it. In a more complicated case, the original agent might reply to one part of the e-mail, and then transfer it to another agent, who handles the second part.

(To create the multipart response flow with Genesys Agent Desktop, select the `Interim Reply` check box before you click `Reply`.)

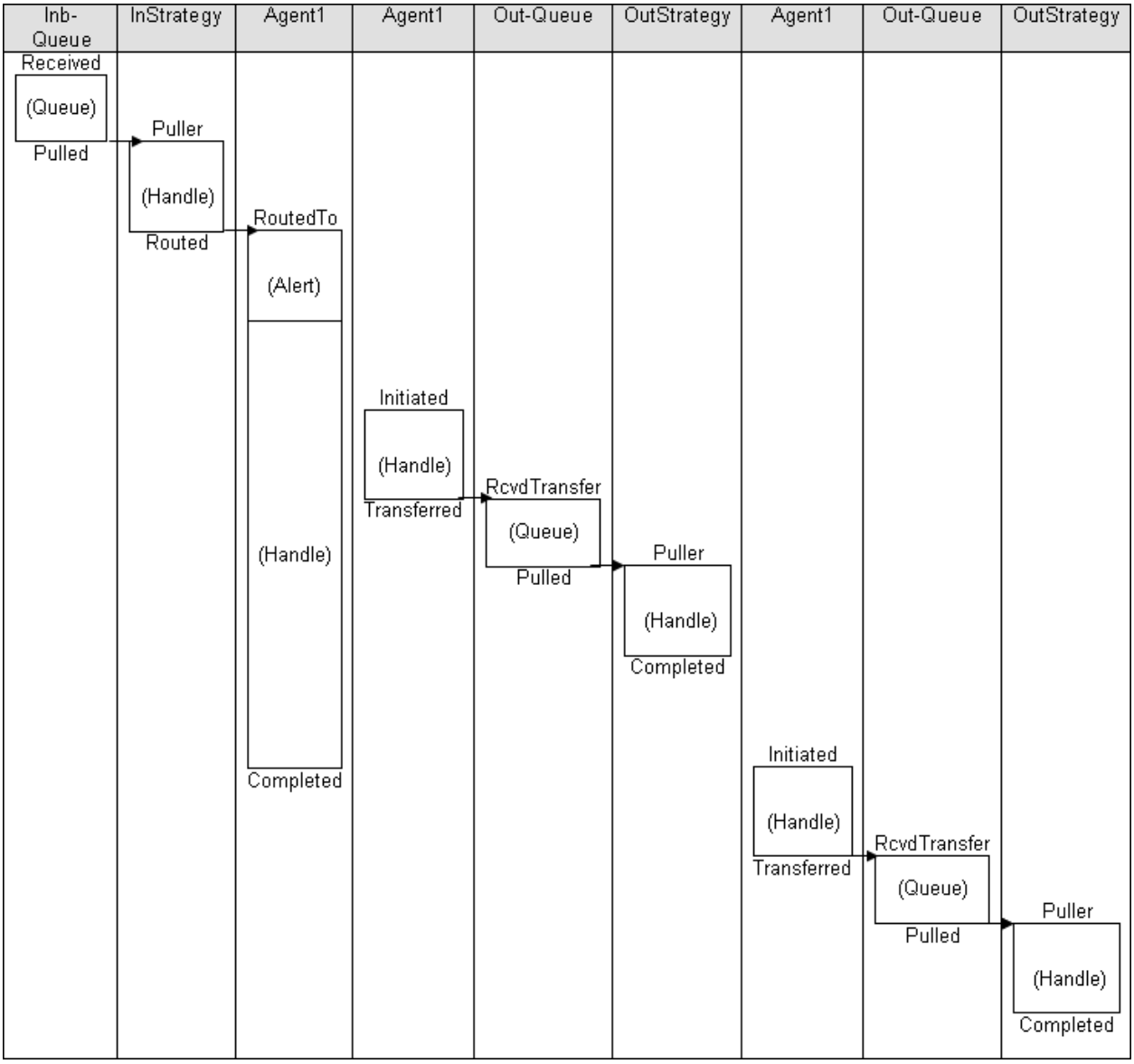

Figure 131: Agent Sends Multipart Reply

Inbound Chat Interactions

This section contains several examples of inbound chat flows. Each example represents a different outcome:

- A routing strategy routes the chat interaction to an agent, and the agent replies (see page 200).
- A routing strategy routes the chat interaction to an agent, but the agent does not accept the invitation (see page 201).
- A routing strategy routes the chat interaction to an agent, who transfers it to another agent (see page 202).

- A routing strategy routes the chat interaction to an agent, who unsuccessfully attempts to transfer it to another agent (see page 203).
- A routing strategy routes the chat interaction to an agent, who conferences in another agent (see page 204).
- The customer abandons the chat interaction while waiting in the interaction queue (see page 205).
- The customer abandons the chat interaction during routing (see page 206).
- A routing strategy routes the chat interaction to an agent, but the customer abandons the interaction before the agent joins the session (see page 206).

Diagram Conventions

The chat flow diagrams in this section use the same conventions as the call flow diagrams in Chapter 3 (see "Diagram Conventions" on page 99). Unlike e-mail interactions, Multimedia chat interactions have customer handle time or customer wait time, and therefore shaded boxes appear in the chat flows.

Additional Convention

Some of the diagrams represent only a portion of the total interaction flow. In these cases, three underscores (_ _ _) at the bottom of a segment column indicate that the interaction flow continues in a manner similar to one of the other documented flows.

Strategy Delivers Chat to Agent, and Agent Replies

Figure 132 shows the outcome of a chat interaction that a routing strategy routes to an agent, who accepts the invitation. The chat is submitted to an inbound interaction queue. The routing strategy pulls the chat from the interaction queue and sends it to an agent's desktop. The agent then participates in the chat session.

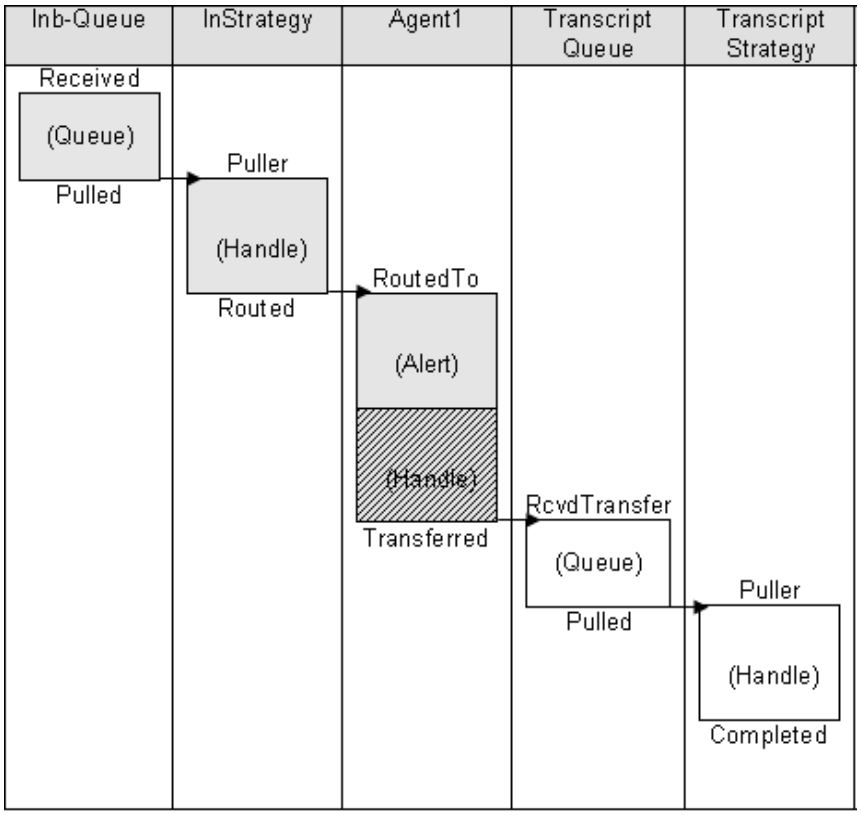

Figure 132: Strategy Routes Chat to Agent, and Agent Replies

Agent Invited into Chat and Invitation Revoked

Figure 133 on page 202 shows the outcome of a chat interaction that a routing strategy routes to an agent, who does not accept the invitation. The chat is submitted to an inbound interaction queue. The routing strategy pulls the chat from the interaction queue and sends it to an agent's desktop. However, the agent does not accept the invitation to the interaction, and the chat is returned to the interaction queue so that it can be reprocessed.

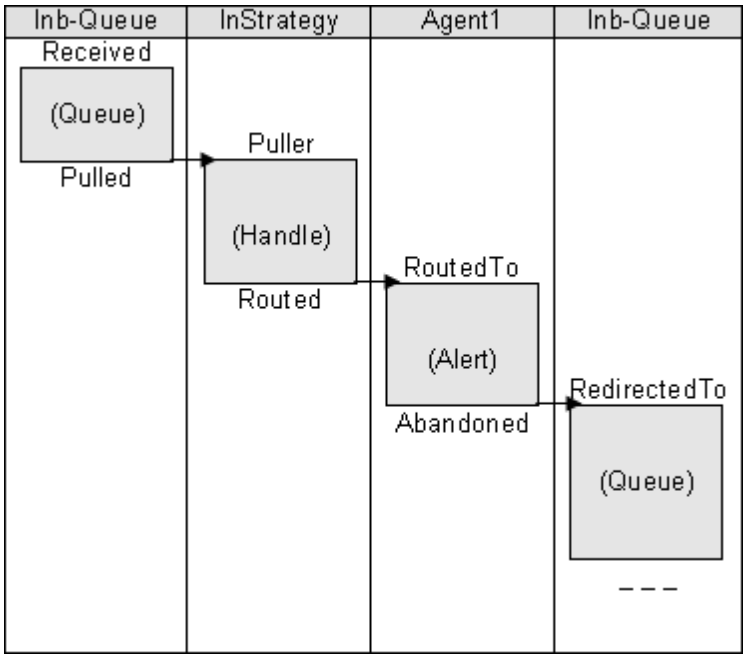

Figure 133: Agent Does Not Accept Chat Invitation

Agent Transfers Chat to Another Agent

Figure 134 on page 203 shows the outcome of a chat interaction that is routed to an agent, who transfers the chat to another agent. The chat is submitted to an inbound interaction queue. A routing strategy pulls the chat from the interaction queue and delivers it to an agent's desktop. The agent participates in the chat session and then transfers the chat to another agent, who also participates.

The transfer to the second agent (`Agent2`) begins when the original agent (`Agent1`) invites `Agent2` into the interaction. The transfer is not complete until `Agent2` actually accepts the invitation. After `Agent2` accepts the invitation, `Agent2` is added to the interaction, and `Agent1` is removed from it. In Figure 134, notice that the initiation of `Agent2` is shown in a clear box, because the customer is not waiting while `Agent2` is being invited to take part in the chat session.

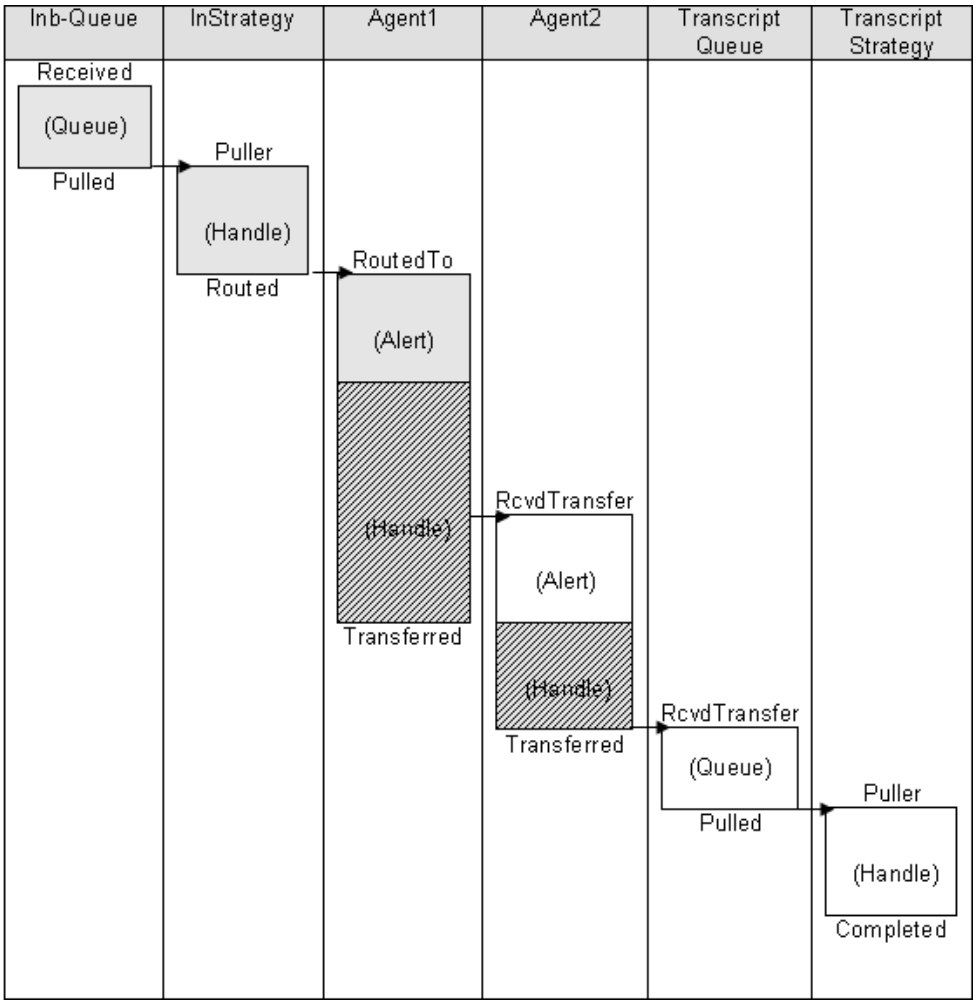

Figure 134: Agent Transfers Chat to Another Agent

Agent's Attempt to Transfer Chat to Another Agent Fails

Figure 135 on page 204 shows the outcome of a chat interaction that is routed to an agent, who unsuccessfully attempts to transfer the chat to another agent. The chat interaction is submitted to an inbound interaction queue. A routing strategy pulls the chat from the interaction queue and delivers it to an agent's desktop. The agent participates in the chat session, and then attempts to transfer the chat to another agent. However, the second agent does not accept the invitation, and the invitation is revoked.

In Figure 135, notice that the original agent (`Agent1`) remains connected while the second agent (`Agent2`) is being invited into the interaction. Because `Agent2` does not accept the invitation, the technical result of `Agent2`'s segment is shown as `Abandoned`. The technical result of `Agent1`'s segment shows how that segment ended—with a transfer to the `Transcript` queue. The unsuccessful attempt to transfer to `Agent2` is not reflected in `Agent1`'s technical result,

because Agent1 continued to participate in the chat interaction after the transfer attempt.

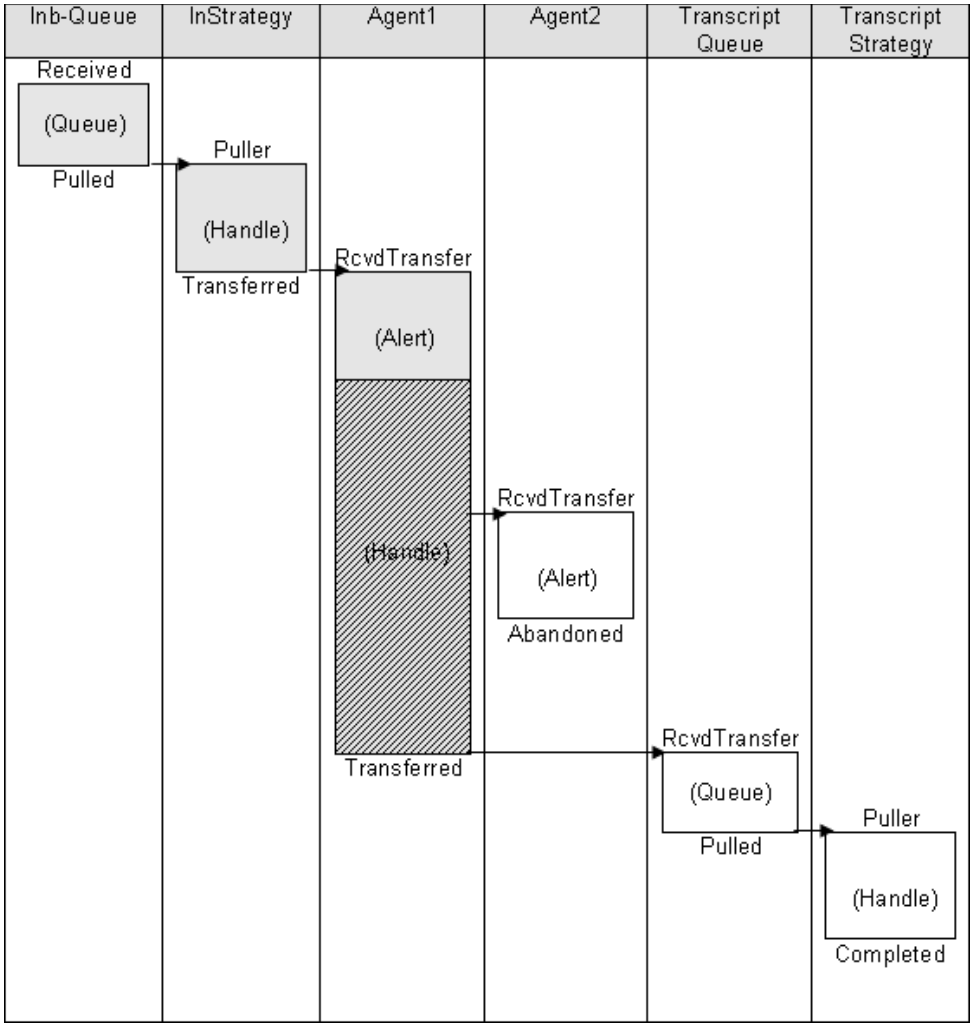

Figure 135: Unsuccessful Agent-to-Agent Chat Transfer Attempt

Agent Conferences In Another Agent

Figure 136 on page 205 shows the outcome of a chat interaction that is routed to an agent, who conferences in another agent. The chat interaction is submitted to an inbound interaction queue. A routing strategy pulls the chat from the interaction queue and delivers it to an agent's desktop. The agent participates in the chat session, and then conferences in another agent.

In Figure 136, notice that the alerting time for the second agent (Agent2) is shown in a clear box, because the customer is not on hold while Agent2 is being invited to participate in the chat session.

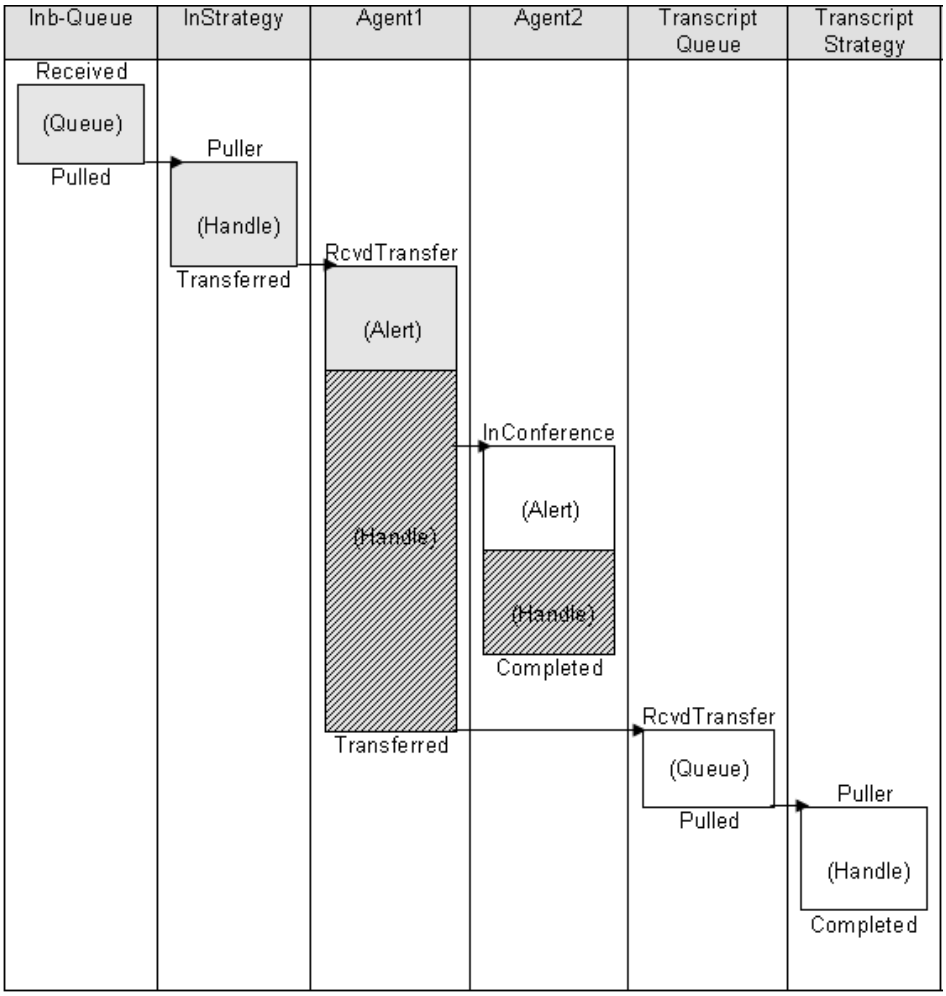

Figure 136: Agent Conferences in Another Agent

Customer Abandons Chat in Queue

Figure 137 shows the outcome of a chat interaction that is submitted to an inbound interaction queue, but is abandoned by the customer while it is in the interaction queue.

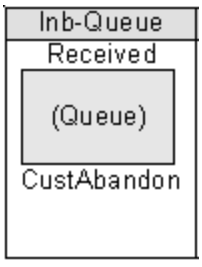

Figure 137: Customer Abandons Chat in Queue

Customer Abandons Chat During Routing

Figure 138 shows the outcome of a chat interaction that is abandoned during routing. The chat interaction is submitted to an inbound interaction queue. A routing strategy pulls the chat from the interaction queue. While the routing strategy is routing the interaction, the customer abandons the chat session.

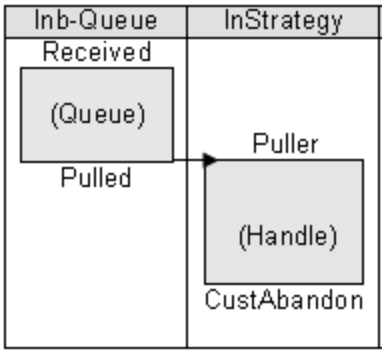

Figure 138: Customer Abandons Chat During Routing

Customer Abandons Chat During Agent Alerting

Figure 139 shows the outcome of a chat interaction that is abandoned while the agent is being alerted. The chat interaction is submitted to an inbound interaction queue. A routing strategy pulls the chat from the interaction queue and invites the agent to join the interaction. However, before the agent can accept the invitation, the customer abandons the chat session.

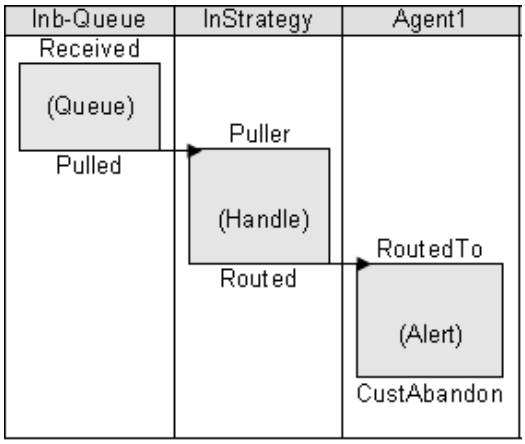

Figure 139: Customer Abandons Chat During Agent Alerting

Chapter

5 Representing Dates and Times of Day

This chapter describes how Genesys Info Mart represents dates and times of day. Because of the large volume of data extracted, transformed, and loaded by Genesys Info Mart, most SQL queries of a fact table are constrained by date and time.

This chapter contains the following sections:

Dates and Times of Day

Genesys Info Mart represents dates and times of day in the following ways:

- Each fact table row has surrogate key references to the `ENTERPRISE_DATE`, `TENANT_DATE`, and `TIME_OF_DAY` dimensions that represent its start date and time. These surrogate keys can constrain the fact table rows by start date and time of day. However, the keys cannot constrain the fact table rows by end date and time of day. Each fact table row represents a time span, but the date and time of day keys cannot constrain facts that straddle a given start date and time of day, nor a given end date and time of day.
- Each fact table row contains measurements that represent the start date and time of day, and the end date and time of day. These measurements can constrain fact table rows by any arbitrary time span, based on whether the fact table row:
  - Starts and ends within the time span.
  - Starts before, and ends within, the time span.
  - Starts within, and ends after, the time span.
  - Starts before, and ends after, the time span.

In any case, you must create the appropriate database indexes in order to efficiently retrieve the data you want.

Note: Dates and times of day are represented from the perspective of the tenant in which the fact occurred, and the Enterprise that encompasses all tenants. The tenant perspective uses the TENANT_DATE dimension, and the Enterprise perspective uses the ENTERPRISE_DATE dimension. This enables each tenant and the Enterprise to have independent fiscal period definitions for the same date.

- Rows in certain fact tables also have surrogate key references to the DATE_TIME dimension that represent the 15 minute date and time interval in which a fact started and ended, represented from the perspective of the tenant in which the fact occurred.

  The DATE_TIME dimension is useful for constraining or aggregating based on an arbitrary range of 15-minute time intervals, because this single dimension includes both date and time of day. The dimension keys increase monotonically each 15 minutes.

  DATE_TIME is supported in the following aggregate tables:
  - AG2_INB_V_AGENT_QUEUE_*
  - AG2_INB_V_IXN_AGENT_GRP_*
  - AG2_INB_V_IXN_AGENT_*
  - AG2_INB_V_IXN_ID_*
  - AG2_INB_V_I_IXN_AGENT_*
  - AG2_INB_V_I_SESS_STATE_*
  - AG2_INB_V_I_STATE_RSN_*
  - AG2_INB_V_QUEUE_ABN_*
  - AG2_INB_V_QUEUE_ANS_*
  - AG2_INB_V_QUEUE_GRP_*
  - AG2_INB_V_QUEUE_*
  - AG2_OUT_V_IXN_AGENT_*
  - AG2_OUT_V_IXN_AGENT_GRP_*

  DATE_TIME is supported in the following fact tables:
  - INTERACTION_RESOURCE_FACT
  - IXN_RESOURCE_STATE_FACT
  - MEDIATION_SEGMENT_FACT
  - SM_RES_SESSION_FACT
  - SM_RES_STATE_FACT
  - SM_RES_STATE_REASON_FACT
  - R_INTERACTION_RESOURCE_FACT
  - R_IXN_RESOURCE_STATE_FACT
  - R_MEDIATION_SEGMENT_FACT
  - R_SM_RES_SESSION_FACT
  - R_SM_RES_STATE_FACT
  - R_SM_RES_STATE_REASON_FACT

Time Zones

Dates and times of day are represented in multiple time zones:

- Greenwich Mean Time
- Enterprise standard time—Represents the standard time zone used for all reporting from the perspective of the Enterprise, or service provider.
- Tenant standard time—Represents the standard time zone used for all reporting from the perspective of the tenant. Each tenant may have a different standard reporting time zone.
- Local time—Currently not populated, but reserved for future use.

Note: The `DATE_TIME` dimension is supported in Tenant standard time only.

Table 11 summarizes the surrogate keys or facts you must use, depending on the desired time zone and perspective.

Table 11: Time Zones

Time Zone	Perspective	Dimension Surrogate Keys	Fact Measurements
Greenwich Mean Time	Enterprise	GMT_ENTERPRISE_DATE_KEY, GMT_TIME_OF_DAY_KEY	GMT_START_TIME, GMT_END_TIME
	Tenant	GMT_TENANT_DATE_KEY, GMT_TIME_OF_DAY_KEY	GMT_START_TIME, GMT_END_TIME
Standard Time	Enterprise	STD_ENTERPRISE_DATE_KEY, STD_ENTERPRISE_TIME_OF_DAY_KEY	STD_ENTERPRISE_START_TIME, STD_ENTERPRISE_END_TIME
	Tenant	STD_TENANT_DATE_KEY, STD_TENANT_TIME_OF_DAY_KEY, STD_TENANT_DATE_TIME_KEY/ STD_TENANT_START_DATE_TIME_KEY/ STD_TENANT_END_DATE_TIME_KEY	STD_TENANT_START_TIME, STD_TENANT_END_TIME
Local Time	Enterprise	LOCAL_ENTERPRISE_DATE_KEY, LOCAL_TIME_OF_DAY_KEY	LOCAL_START_TIME, LOCAL_END_TIME
	Tenant	LOCAL_TENANT_DATE_KEY, LOCAL_TIME_OF_DAY_KEY	LOCAL_START_TIME, LOCAL_END_TIME

Adjusting for Daylight Saving Time

Genesys Info Mart automatically adjusts the date and time of day facts, as well as the `ENTERPRISE_DATE`, `TENANT_DATE`, `DATE_TIME`, and `TIME_OF_DAY` dimension surrogate key references for daylight saving time, as follows:

- When populating the start date and time of day for the Enterprise standard and tenant standard time zones, Genesys Info Mart uses the time zone offset (from GMT) that was in effect at the time the fact started.
- When populating the end date and time of day for the Enterprise standard and tenant standard time zones, Genesys Info Mart uses the time zone offset (from GMT) that was in effect at the time the fact ended. If daylight saving time caused the time zone offset to change in the middle of a fact, the end date and time of day for the Enterprise standard and tenant standard time zones will reflect the "wall-clock" time and will not be equal to start time plus duration.
- If you constrain your queries by using the Enterprise standard or tenant standard time zones, any facts that started during the intervals, and that have the same "wall-clock" time due to a change in the time zone offset, appear to have started during the same interval.

  That is, you cannot distinguish which facts started during the interval just before the daylight saving time change occurred, and which facts started during the interval just after the daylight saving time change occurred.

  For example, if you configure the tenant standard time zone to be Eastern Standard Time, and if, at 2:00, the clock changes back to 01:00, you cannot distinguish which facts started during the first 01:00 hour interval, and which facts started during the second 01:00 hour interval; all the facts are reported as starting during the 01:00 hour interval.

  To eliminate this ambiguity, you can constrain your queries by using the GMT time zone, rather than the Enterprise standard or tenant standard time zone.

Chapter

6 Unpopulated Genesys Info Mart Columns

This chapter describes the fields, attributes, and table columns that have limited values, or are not populated in this release of Genesys Info Mart. It contains the following sections:

Local Time Zone

For this release, the following fields are not populated in all tables:

- LOCAL_ENTERPRISE_DATE_KEY
- LOCAL_TENANT_DATE_KEY
- LOCAL_TIME_OF_DAY_KEY
- LOCAL_START_TIME
- LOCAL_END_TIME

Skill Type

For this release, the SKILL dimension SKILL_TYPE is always set to Unspecified.

Currency Cost and Revenue

For this release, the following fields are not populated in INTERACTION_SEGMENT_FACT and INTERACTION_FACT tables:

- COST_STD_CURRENCY
- REVENUE_STD_CURRENCY
- CURRENCY_KEY
- COST_LOCAL_CURRENCY
- REVENUE_LOCAL_CURRENCY

External Resource ID

For this release, the RESOURCE_ dimension EXTERNAL_RESOURCE_ID is always set to Null.

Customer Dimension Attributes

For this release, only the following attributes are populated. for the CUSTOMER dimension:

- CUSTOMER_KEY
- TENANT_KEY
- EXTERNAL_CUSTOMER_ID
- GMT_START_TIME
- GMT_END_TIME

Resource State to Resource Session

For this release, the RESOURCE_SESSION_FACT_KEY is not populated in RESOURCE_STATE_FACT when the media type is voice.

Resource State Reason to Resource Session

For this release, the RESOURCE_SESSION_FACT_KEY is not populated in RESOURCE_STATE_REASON_FACT when the media type is voice.

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