Chat Server Administration Guide

Integrating Chat Server with Genesys Historical Reporting

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Chat session reporting relies on Interaction Server reporting events to provide session-related data to the products that enable Genesys historical reporting:

- Interaction Concentrator, which comprises the Interaction Concentrator (ICON) server and Interaction Database (IDB) -- Stores detailed reporting data from Interaction Server and other sources.
- Genesys Info Mart -- Extracts, transforms, and loads (ETLs) data from IDB into the Info Mart database, a data mart suitable for contact center reporting.
- Reporting and Analytics Aggregates (RAA) -- Aggregates Info Mart data to provide contact center activity metrics for downstream reporting applications.
- Genesys Customer Experience Insights (GCXI) -- Extracts aggregated data from the Info Mart database and presents it in readable historical reports.

This page describes the component and configuration requirements to enable historical reporting on chat session activity in your deployment.

> **Important**
>
> For information on Asynchronous (Async) Chat, see the Asynchronous Chat section in this guide.

Overview

1. After a chat session is finished, Chat Server attaches reporting statistics to the user data of the interaction in Interaction Server. For more information about the attached user data key-value pairs (KVPs), see Chat Server reporting data.
2. ICON stores the user data in the G_USER_DATA_HISTORY table in IDB in near real-time.
3. On a regular schedule, Genesys Info Mart extracts the IDB data and transforms it into the CHAT_SESSION_FACT table and supporting dimensions in the Info Mart dimensional model. For more information about the session-related tables in the Info Mart database, see the *Genesys Info Mart Physical Data Model* for your RDBMS. For more information about managing the Genesys Info Mart ETL jobs, see the *Genesys Info Mart Operations Guide*.
4. RAA summarizes and organizes the Info Mart data in ways that enable GCXI to extract meaning. For more information about RAA data, see the *RAA User's Guide*.
5. GCXI uses the aggregated data in the Info Mart database to present out-of-box chat session reports, including:
   - Chat Message Statistics Report

- Chat Termination Report
- Async Chat Dashboard

6. In deployments that include Bot Gateway Server (BGS) starting with version 8.5.203.09, there are reports and dashboards on bot-related activity. **Note:** BGS is currently only available as a restricted release.
7. In deployments where Async Chat functionality is enabled, the Async chat dashboard displays async chat metrics.
8. For more information about the GCXI reports, see Chat reports in the GCXI *User's Guide*.

Enabling historical reporting on chat session activity

Prerequisites

The following table summarizes the minimum release requirements for the components that enable chat session historical reporting.

Component	Minimum release for chat	Minimum release for async chat
Chat Server	8.5.203.09 (restricted release) 8.5.301.06 (general release)	8.5.302.03 8.5.315.xx (for intermediate updates)
ICON	8.1.514.11	8.1.514.11
Genesys Info Mart	8.5.011.04	8.5.011.14 8.5.116.20 (for intermediate updates)
RAA	8.5.003	8.5.006
GCXI	9.0.005	9.0.007
WDE	No minimum requirement	8.5.122.08

Setting up historical reporting

> **Important**
> Genesys Info Mart release 8.5.011 and later provides support for chat session reporting out-of-box, with no additional configuration required on the Genesys Info Mart side. However, to send chat session data to Genesys Info Mart, as well as to see chat session data in GCXI reports, you need to modify the configuration of Interaction Concentrator and RAA.

1. Ensure that your deployment has been configured as required for Genesys Info Mart to support

reporting on eServices activity in general. If necessary, migrate Genesys Info Mart and RAA to meet the release Prerequisites. For a summary of the configuration requirements, see Enabling Reporting on Multimedia Activity in the *Genesys Info Mart Deployment Guide.*

2. Configure Chat Server:
   - To attach the required statistics, set the Chat Server attach-session-statistics option to `all` (which is not the default value).
   - To send intermediate updates (supported by GIM version 8.5.116.20 or higher) for an async chat session, set the required value both for attach-stats-rep-events and attach-stats-rep-place.
3. In the **Route Interaction properties**, ensure that the workflow always provides a "Queue" in **Interation Queue > Queue for Existing Interaction**. If no Queue is provided, the interaction is stopped by an agent desktop, and Chat Server may not be able to update the interaction with reporting statistics.
4. Configure ICON to capture the user data KVPs that Genesys Info Mart requires. Modify the ICON attached data specification file as necessary, to include the KVPs identified in Chat Server reporting data as KVPs that are used by Genesys Info Mart.

> **Tip**
>
> The attached data specification file included in the Genesys Info Mart IP (**ccon_adata_spec_GIM_example.xml**) includes all the KVPs required for the reporting features supported in that Info Mart release. You might need to upload a new version of the attached-data specification file or update your existing version with additional KVPs to enable reporting enhancements.

5. Enable aggregation of chat session data. (Required for GCXI reporting or other applications that use RAA aggregation.) In the **[agg-feature]** section on the Genesys Info Mart application object, specify the enable-chat option.

Chat Server reporting data

After a chat session is finished, Chat Server attaches the following types of reporting statistics to the user data of the interaction in Interaction Server:

- Chat session characteristics
- Chat session end reason codes
- Chat session transcript statistics
- Async chat session statistics
- Bot-related statistics

> **Important**
>
> Starting with release 8.5.107, Chat Server attaches reporting statistics and then stops

> the interaction (if required by the configuration and scenario). Previously, Chat Server was not able to attach the specified reporting statistics if the stop-abandoned-interaction option was set to a value, different from the default value never and the corresponding scenario occurred.

Chat Session Characteristics

The following chat session characteristics are attached at the end of a chat session. If the KVPs are required for the out-of-box chat session reporting provided by Genesys Info Mart and GCXI, the "Info Mart Database Target" column indicates the Info Mart database table and column to which the KVP is mapped.

Unless indicated otherwise, the session characteristics KVPs were introduced in Chat Server 8.5.201.

KVP	Description	Info Mart Database Target
ChatServerSessionClosedAt	Timestamp of chat session closure. Always attached. **Note:** This KVP is mandatory for Genesys Info Mart reporting.	CHAT_SESSION_FACT.END_DATE_TIME_KEY
ChatServerSessionStartedAt	Timestamp of chat session creation. Always attached. **Note:** This KVP is mandatory for Genesys Info Mart reporting.	CHAT_SESSION_FACT.START_DATE_TIME_KEY
csg_ChatSessionID	The ID (identifier) of chat session. Could be different from Interaction ID. Attached only if the value of **attach-session-statistics** is not none.	Not mapped
csg_LanguageName	The value identifies the language specified for the chat session. Might be absent. Attached only if the initial UserData for the chat session includes the GCTI_LanguageName KVP, and the value of **attach-session-statistics** is not none.	CHAT_SESSION_DIM.LANGUAGE_NAME (referenced through CHAT_SESSION_FACT.CHAT_SESSION_DIM_KEY)
csg_MediaOrigin	The value identifies the origination of the chat session (web chat, social media channels, sms, and so on). Might be absent. Attached only if the initial UserData for the chat session includes the	CHAT_SESSION_DIM.MEDIA_ORIGIN (referenced through CHAT_SESSION_FACT.CHAT_SESSION_DIM_KEY)
KVP	**Description**	**Info Mart Database Target**

KVP	Description	Info Mart Database Target
	MediaOrigin KVP, and the value of **attach-session-statistics** is not none.	
csg_MediaType **Introduced:** 8.5.203.09 (restricted release) / 8.5.301.06 (generally available release)	The MediaType for chat interaction. Always attached.	MEDIA_TYPE.MEDIA_NAME_CODE (referenced through CHAT_SESSION_FACT.MEDIA_TYPE_KEY)
csg_TenantId	The tenant ID for the chat session. Always attached.	CHAT_SESSION_FACT.TENANT_KEY
KVP	**Description**	**Info Mart Database Target**

Chat Session End Reason Codes

The following reason codes describe what triggered the end of a chat session and how it was triggered. If the KVPs are required for the out-of-box chat session reporting provided by Genesys Info Mart and GCXI, the "Info Mart Database Target" column indicates the Info Mart database table and column to which the KVP is mapped.

KVP	Description	Info Mart Database Target
csg_SessionEndedAgent **Introduced:** 8.5.109	The indication of agent presence in chat session. Please note that in this reason code, only human (in other words, non-bot) agents who are visible to a customer are taken into account. **Valid values:** • ABSENT — Session considered as abandoned. No agent (in other words, not-bot participant visible to client) ever joins chat session. • PRESENT — Session considered as not abandoned. At least one agent is still participating in chat session during the moment of chat session closure. • VISITED — Session could be	Not mapped
KVP	**Description**	**Info Mart Database Target**

KVP	Description	Info Mart Database Target
	considered either as abandoned or not abandoned - depending on business requirements. At least one agent participated in chat session, but no agents were present at the moment of chat session closure. **Note:** In the very specific condition of a session restoration having occurred where an agent joins the session before restoration and does not re-join after restoration, and no messages are sent by any chat party before restoration, the value of csg_SessionEndedAgent will be ABSENT.	

csg_SessionEndedBy
 	
Introduced: 8.5.105
	The type of participant that triggered the chat session closure.
	
	Valid values:
	
	• CLIENT — Denotes a customer. This value is provided whenever a client leaves the chat session first. For example, this value will be set when a client leaves while the session continues due to the presence of an agent and ended later by an agent.
	• AGENT, SUPERVISOR, BOT — Denotes either agent, supervisor or chat bot participant. This type is provided only when:
	  • A session is `closed` because the actor (agent/supervisor/bot) sent the `Release` request with the `close if no more agents`, or `force close` after-action; or
	  • A session without a customer during the course of this chat session
		CHAT_SESSION_DIM.ENDED_BY (referenced through CHAT_SESSION_FACT.CHAT_SESSION_DIM_KEY)

KVP	**Description**	**Info Mart Database Target**

KVP	Description	Info Mart Database Target
	is closed because the actor sent a Release request. • SYSTEM — Denotes a server/system. See the `csg_SessionEndedReason` table for possible reasons.	
csg_SessionEndedReason **Introduced:** 8.5.105	The description of how a chat session was closed. **Valid values:** • DISCONNECT — The participant left due to a disconnect (basic protocol) or a flex timeout expiration (denotes disconnect in flex protocol). **Possible values for the associated `csg_SessionEndedBy`:** CLIENT, AGENT, SUPERVISOR, BOT • QUIT — The participant left a chat session in a normal way (flex logout or basic `self-release` request, that is with the keep `alive` after-action). **Possible values for the associated `csg_SessionEndedBy`:** CLIENT, AGENT, SUPERVISOR, BOT • FORCE — The participant left a chat session in a normal way and requested the session to be closed (either `close if no more agents` or `force closure` after-action). **Possible values for the associated `csg_SessionEndedBy`:** AGENT, SUPERVISOR, BOT • INACTIVE — Chat Server closed a chat session due to	CHAT_SESSION_DIM.ENDED_REASON (referenced through CHAT_SESSION_FACT.CHAT_SESSION_DIM_KEY)
KVP	**Description**	**Info Mart Database Target**

KVP	Description	Info Mart Database Target
	activated inactivity control monitoring. **Possible values for the associated `csg_SessionEndedBy`:** SYSTEM • DB_ERROR — Chat Server closed a chat session because it received the non-recoverable error from UCS while attempting to save the intermediate chat transcript (only possible when the **transcript-save-on-error** option is set to `close`). **Possible values for the associated `csg_SessionEndedBy`:** SYSTEM	
KVP	**Description**	**Info Mart Database Target**

Chat Session transcript statistics

Chat Server attaches general and extended reporting statistics, based on the attach-session-statistics option settings.

General transcript statistics

In the general transcript statistics, an *agent* means both an agent and a supervisor, when either of those is visible to a customer. For example, the statistics do not count/include an activity for an agent who is coaching another agent, or for a supervisor who monitors the session silently.

The following general transcript statistics are attached at the end of a chat session. If the KVPs are required for the out-of-box chat session reporting provided by Genesys Info Mart and GCXI, the "Info Mart Database Target" column indicates the Info Mart database table and column to which the KVP is mapped.

Unless indicated otherwise, the general transcript statistics KVPs were introduced in Chat Server 8.5.101.

KVP	Description	Info Mart Database Target
cse_ActiveIdleMaxTime **Introduced:** 8.5.301.06	The maximum time (in seconds) a chat session has been inactive while at least one agent was connected and a configured inactivity threshold was exceeded.	Not mapped
cse_ActiveIdleTotalCount **Introduced:** 8.5.301.06	The total number of times when an inactivity period exceeded a configured threshold while at least one agent was connected to the chat session (in other words, while the chat session was technically in an active state).	CHAT_SESSION_FACT.ACTIVE_IDLE_COUNT
cse_ActiveIdleTotalTime **Introduced:** 8.5.301.06	The total amount of time (in seconds), exceeding configured threshold, without any activity when the chat session was in the active state (at least one Agent participated).	CHAT_SESSION_FACT.ACTIVE_IDLE_DURATION
cse_SessionHandleMaxTime **Introduced:** 8.5.301.06	The maximum time (in seconds) that at least one agent was connected to a chat session.	Not mapped
cse_SessionHandleTotalCount **Introduced:** 8.5.301.06	The total number of times a session was in an active state, that at least one agent was connected to a chat session.	CHAT_SESSION_FACT.HANDLE_COUNT
cse_SessionHandleTotalTime **Introduced:** 8.5.301.06	The total time (in seconds) that at least one agent was connected to a chat session.	CHAT_SESSION_FACT.HANDLE_DURATION
csg_MessagesFromAgentsCount	The total number of all messages sent by all agents (messages which are visible to customer). **Note:** There can be several agents in a chat session, for example, conferences, transfers, and others.	CHAT_SESSION_FACT.MSG_FROM_AGENTS_COUN
csg_MessagesFromAgentsSize	The total character count (including spaces) of all messages sent by agents.	CHAT_SESSION_FACT.MSG_FROM_AGENTS_SIZE
csg_MessagesFromCustomersCount	The total number of messages sent by customers.	CHAT_SESSION_FACT.MSG_FROM_CUSTOMERS_C
csg_MessagesFromCustomersSize	The total character count (including spaces) of all messages sent by customers.	CHAT_SESSION_FACT.MSG_FROM_CUSTOMERS_S
csg_PartiesAsAgentCount	The number of parties that participated in a session as agents.	CHAT_SESSION_FACT.AGENTS_COUNT
KVP	**Description**	**Info Mart Database Target**

KVP	Description	Info Mart Database Target
	Note: Only unique parties are counted. For example, if the same party joins the session several times, it only counts as one for the purpose of this statistic.	
csg_PartiesAsCoachCount	The number of parties that participated in a session in the coaching mode (for example, an agent joins with the VIP visibility). **Note:** Only unique parties are counted. For example, if the same party joins the session several times, it only counts as one for the purpose of this statistic.	Not mapped
csg_PartiesAsMonitorCount	The number of parties that participated in a session in the monitoring mode (for example, a supervisor join with the INT visibility). **Note:** Only unique parties are counted. For example, if the same party joins the session several times, it only counts as one for the purpose of this statistic.	Not mapped
csg_SessionTotalTime	The total duration of a chat session from the time it was created until it was completely finished/closed in Chat Server. **Note:** This does not include the time between `Chat Session End` and `Mark Done`, as the interaction can still be handled by an agent.	CHAT_SESSION_FACT.SESSION_DURATION
csg_SessionUntilFirstAgentTime	The duration of the waiting period, or the period of time a customer waits until the first agent (visible to a customer) joined the session. **Note:** The 0 (zero) value has two alternative interpretations: no agents ever joined the session (if csg_PartiesAsAgentCount=0) or an agent joined immediately when the session was started (if csg_PartiesAsAgentCount > 0).	CHAT_SESSION_FACT.UNTIL_FIRST_AGENT_DURA
csg_SessionUntilFirstReplyTime	The period of time until the first agent submits the first visible to a customer greeting/message into a chat session.	CHAT_SESSION_FACT.UNTIL_FIRST_REPLY_DURAT
csg_SessionWithCustomerTime	The period of time a customer is in a chat session.	Not mapped
KVP	**Description**	**Info Mart Database Target**

Extended (wait-reply) statistics

The extended statistics provide details about customer and agent wait and reply times. As in the case of general transcript statistics, an "agent" means both an agent and a supervisor, when either of those is visible to a customer.

- `Wait` time - The time between a message from the reporting party (or the last message, if there were a few messages in a row) being sent and the first message from another party being received in a reply.
- `Reply` time - The time between a message (or the first message, for a few messages in a row) from another party being received and the message from reporting party being sent in a reply.

The following extended transcript statistics are attached at the end of a chat session. If the KVPs are required for the out-of-box chat session reporting provided by Genesys Info Mart and GCXI, the "Info Mart Database Target" column indicates the Info Mart database table and column to which the KVP is mapped.

Unless indicated otherwise, the extended transcript statistics KVPs were introduced in Chat Server 8.5.101.

> **Important**
>
> The calculation of TotalCount/MaxTime/TotalTime was adjusted and does not include dormant state for async chat sessions for "Extended (wait-reply) Statistics": `cse_AgentReply` and `cse_AgentWait`.

KVP	Description	Info Mart Database Target
cse_AgentReplyMaxTime	The maximum time (in seconds) an agent spent on replying to a customer. **Note:** For async chat sessions, if a chat session was in a dormant state while a customer message was received, the time until the agent rejoins the session is excluded.	CHAT_SESSION_FACT.AGENT_REPLY_MAX_DURAT
cse_AgentReplyTotalCount	The number of times an agent replied to a customer.	CHAT_SESSION_FACT.AGENT_REPLY_COUNT
cse_AgentReplyTotalTime	The total time (in seconds) an agent spent on replying to a customer.	CHAT_SESSION_FACT.AGENT_REPLY_DURATION
KVP	**Description**	**Info Mart Database Target**

KVP	Description	Info Mart Database Target
	Note: For async chat sessions, if a chat session was in a dormant state while a customer message was received, the time until the agent rejoins the session is excluded.	
cse_AgentWaitMaxTime	The maximum time (in seconds) an agent spent on waiting the reply from a customer. **Note:** For async chat sessions, cumulative dormant time until a customer's reply is received is excluded.	CHAT_SESSION_FACT.AGENT_WAIT_MAX_DURATIO
cse_AgentWaitTotalCount	The number of times an agent waited for replies from a customer.	CHAT_SESSION_FACT.AGENT_WAIT_COUNT
cse_AgentWaitTotalTime	The total time (in seconds) an agent spent on waiting the reply from a customer. **Note:** For async chat sessions, cumulative dormant time until a customer's reply is received is excluded.	CHAT_SESSION_FACT.AGENT_WAIT_DURATION
cse_CustomerReplyMaxTime	The maximum time (in seconds) a customer spent on replying to an agent.	CHAT_SESSION_FACT.CUSTOMER_REPLY_MAX_DU
cse_CustomerReplyTotalCount	The number of times a customer replied to an agent.	CHAT_SESSION_FACT.CUSTOMER_REPLY_COUNT
cse_CustomerReplyTotalTime	The total time (in seconds) a customer spent on replying to an agent.	CHAT_SESSION_FACT.CUSTOMER_REPLY_DURATIO
cse_CustomerWaitMaxTime	The maximum time (in seconds) a customer spent on waiting the reply from an agent.	CHAT_SESSION_FACT.CUSTOMER_WAIT_MAX_DU
cse_CustomerWaitTotalCount	The number of times a customer waited for the reply from an agent.	CHAT_SESSION_FACT.CUSTOMER_WAIT_COUNT
cse_CustomerWaitTotalTime	The total time (in seconds) a customer spent on waiting the reply from an agent.	CHAT_SESSION_FACT.CUSTOMER_WAIT_DURATIO
KVP	**Description**	**Info Mart Database Target**

Async chat session statistics

Async chat session statistics are provided only for async chat sessions (in other words, when

`GCTI_Chat_AsyncMode=true` is specified during session creation). The calculation of these statistics takes into account the active and dormant phases of an async chat session, as well as async inactivity control (which is different from regular inactivity control).

KVP	Description	Info Mart Database Target
cse_AsyncDormantMaxTime **Introduced:** 8.5.301.06	The maximum time (in seconds) a chat session was staying in dormant state.	Not mapped
cse_AsyncDormantTotalCount **Introduced:** 8.5.301.06	The total number of times session entered dormant state	CHAT_SESSION_FACT.ASYNC_DORMANT_COUNT
cse_AsyncDormantTotalTime **Introduced:** 8.5.301.06	The total amount of time (in seconds), customer chat session was in the dormant state (with no Agent participant). Routing time is excluded from dormant time.	CHAT_SESSION_FACT.ASYNC_DORMANT_DURATIO
cse_AsyncIdleMaxTime **Introduced:** 8.5.301.06	The maximum time (in seconds) an async chat session was staying in idle state.	Not mapped
cse_AsyncIdleTotalCount **Introduced:** 8.5.301.06	Total number of times an async session entered idle state.	CHAT_SESSION_FACT.ASYNC_IDLE_COUNT
cse_AsyncIdleTotalTime **Introduced:** 8.5.301.06	The total amount of time (in seconds), exceeding configured threshold, without any activity when the chat session was in the dormant state (with no Agent participant).	CHAT_SESSION_FACT.ASYNC_IDLE_DURATION
csg_ChatAsyncMode **Introduced:** 8.5.301.06	Denotes async session. Equals "1" for async chat session or "0" for regular chat session.	CHAT_SESSION_DIM.ASYNC_MODE (referenced through CHAT_SESSION_FACT.CHAT_SESSION_DIM_KEY)
KVP	**Description**	**Info Mart Database Target**

Bot-related statistics

In deployments that include BGS, Chat Server also attaches the following KVPs:

- csg_MessagesFromBotsCount
- csg_MessagesFromBotsSize
- csg_SessionUntilFirstBotTime
- csg_PartiesAsBotCount

For more information about the bot-related KVPs, see Bot-related reporting data in the *Bot Gateway Server Quick Start Guide* (accessible only to restricted release customers).

Known limitation

The following is a known limitation with async chat reporting:

- Information about a chat session running in an async mode is available only after the chat session ends.