



**Reporting Data
Examples
Sinch Contact Pro**

Version FP18 – November 2021



Revision History

Date	Description
31.08.2011	First version created
21.02.2012	The section <i>Answered Inbound Call with Consultation Call (Consultation Call Completed)</i> fixed
26.09.2012	<ul style="list-style-type: none">• <code>WaitingTimeInSeconds</code> changed to <code>QueueTimeInSeconds</code>• Calls with a Survey IVR option example added
08.01.2014	<ul style="list-style-type: none">• Waiting time in seconds values added• Parts of Queuing time in seconds values in examples fixed
13.01.2014	SP06 Patch 1 version updates
28.05.2014	BCM changed to SAP Contact Center
08.10.2015	Outbound email pending list usage added
11.8.2017	Chat examples section updated: chat consult, text and video and SMS chat examples added
1.11.2021	<ul style="list-style-type: none">• SAP Contact Center replaced with Sinch Contact Pro• CMC section and SPxx changes removed• Contact replaced with conversation where it's not a technical name



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1 Introduction

This document describes Sinch Contact Pro Reporting data with conversation handling examples.

The Reporting application is a tool for analysing history data. Reporting contains three different data levels:

- Data warehouse (SQL tables)
- OLAP database
- Microsoft Reporting Services reports

Data warehouse is the main data storage offering data for OLAP, and both the data warehouse and OLAP provide data for Microsoft Reporting Services reports.

NOTE In this document, the data staging database name DSArea and the data warehouse database name VWU are used. In real life, databases have a prefix [CustomerName], which is provided during the Reporting database server installation. For example, if a customer name is Sinch, the database names are Sinch_DSArea and Sinch_VWU.



2 Architecture Overview

For more information about the architecture, see the *Reporting Data Guide*.

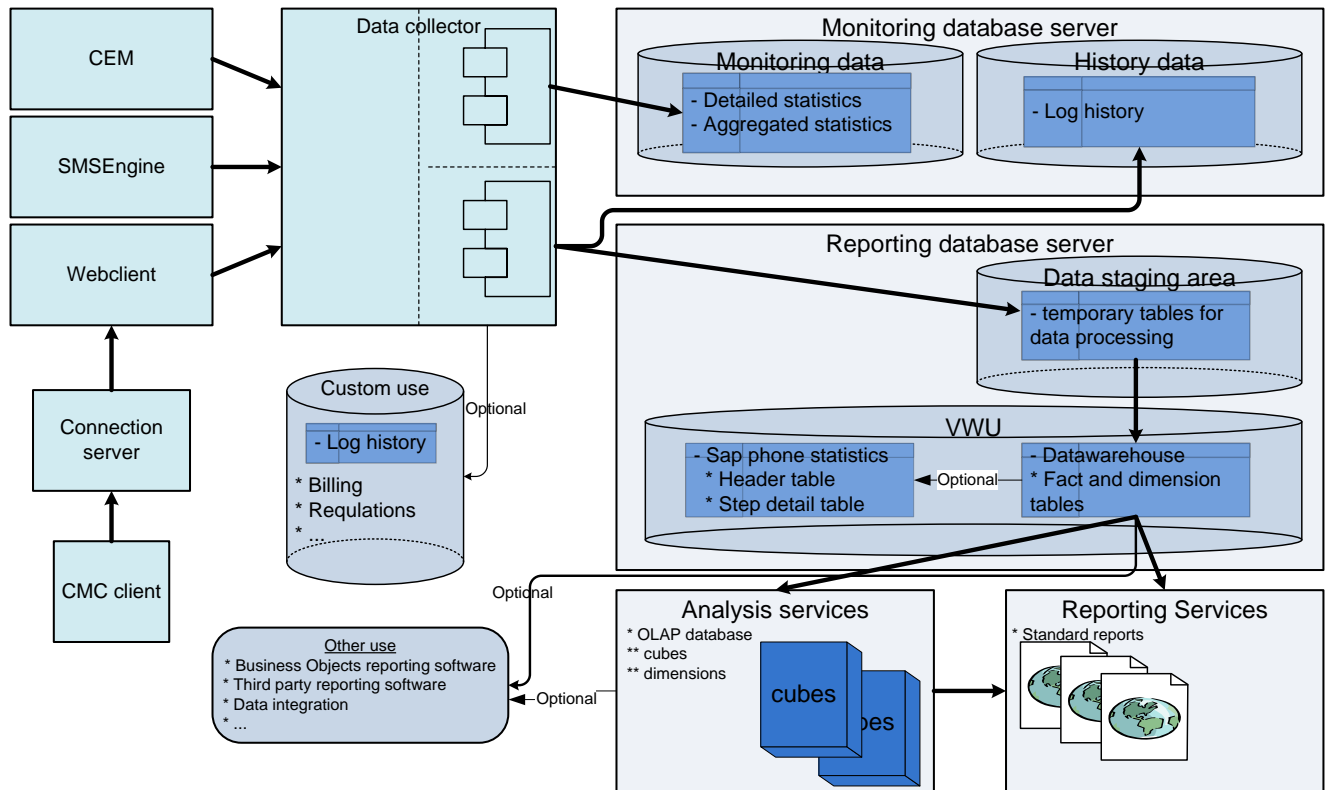


Figure 1: Overall Reporting Data Flow



3 Description of Used Configuration

When a conversation arrives in the Sinch Contact Pro system, the status of an agent must be *Ready* to take conversations immediately. It is stated separately if an example deviates from this default assumption.

The configuration is done in System Configurator (SC), and the following sections show the values and the configuration used in the examples.

3.1 Threshold Values

Threshold values are as follows:

- False-Attempt Limit: 5 seconds
- Answered-on-Time Limit (AOT): 20 seconds

3.2 Queue and Agent Configuration

	Number	Reporting Group
Queue1	901	N/A
Queue2	902	N/A
Queue3	903	N/A
Queue4	904	N/A
Queue5	905	N/A
Agent1	501	Team1
Agent2	502	Team2



Reporting has 15-minute intervals for each hour: 00:00 - 00:15; 00:15 - 00:30; 00:30 - 00:45; 00:45 - 01:00.



4 Call Examples

4.1 Basic Calls

Handled/Answered-on-Time Calls

An inbound call arrives in Queue1 (number 901) from an external number 0501234567 at 12:00:00. The call is in the queue 10 seconds until an agent is free to take the call. The call is allocated to the agent at 12:00:10. The agent answers the call at 12:00:19. The call ends at 12:02:19

Purpose: To describe the `FactCEMContacts` columns

- Source = 0501234567
- Destination = 901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = Queue1
- (FK_SecondaryQueue = Queue1 /* the same as FK_ApplicationLevel = the call had been answered in the same queue */)
- FK_Agent = Agent1
- FK_Team = Team1
- WaitingTimeInSeconds = (12:00:19 – 12:00:00) = 19 seconds
- QueuingTimeInSeconds = (12:00:19 – 12:00:00) = 19 seconds
- TalkingTimeInSeconds = (12:02:19 – 12:00:19) = 120 seconds
- CountOfAllocatedContacts = 1
- CountOfHandledContacts = 1
- CountOfAnsweredOnTimeContacts = 1 (19 seconds is less than 20 seconds AOT)

Handled (Not-Answered-on-Time) Calls

An inbound call arrives in Queue1 (number 901) from an external number 0501234567 at 12:00:00. The call is in the queue 10 seconds until an agent is free to take the call. The call is allocated to the agent at 12:00:10. The agent answers the call at 12:00:29. The call ends at 12:02:19

Purpose: To describe the `FactCEMContacts` columns



- Source = 0501234567
- Destination = 901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = Queue1
- (FK_SecondaryQueue = Queue1)
- FK_Agent = Agent1
- WaitingTimeInSeconds = (12:00:29 – 12:00:00) = 29 seconds
- QueuingTimeInSeconds = (12:00:29 – 12:00:00) = 29 seconds
- TalkingTimeInSeconds = (12:02:19 – 12:00:29) = 110 seconds
- CountOfAllocatedContacts = 1
- CountOfHandledContacts= 1
- CountOfAnsweredOnTimeContacts=0 (29 seconds is more than 20 seconds)

False-Attempt Calls (No Free Agent)

An inbound call arrives in Queue1 (number 901) from an external number 0501234567 at 12:00:00. The call is in the queue 4 seconds (no free agent is available). The customer hangs up at 12:00:04.

Purpose: To describe the `FactCEMContacts` columns

- Source = 0501234567
- Destination = 901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = Queue1
- (FK_SecondaryQueue = Queue1)
- FK_Agent = “undefined” (link to member having value 1)
- WaitingTimeInSeconds = (12:00:04 – 12:00:00) = 4 seconds
- QueuingTimeInSeconds = (12:00:04 – 12:00:00) = 4 seconds
- TalkingTimeInSeconds = 0 seconds
- CountOfAllocatedContacts = 0
- CountOfHandledContacts= 0
- CountOfFalseAttemptContacts=1 (4 seconds is less than 5 seconds)
- CountOfAbandonedContacts = 0

False-Attempt Calls (Allocated to Agent)



An inbound call arrives in Queue1 (number 901) from an external number 0501234567 at 12:00:00. The call is allocated to Agent1 after 4 seconds, (the agent does not answer), and the customer hangs up at 12:00:04.

Purpose: To describe the `FactCEMContacts` columns

- Source = 0501234567
- Destination = 901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = Queue1
- (FK_SecondaryQueue = Queue1)
- FK_Agent = "undefined" (key=1)
- WaitingTimeInSeconds = (12:00:04 – 12:00:00) = 4 seconds
- QueuingTimeInSeconds = (12:00:04 – 12:00:00) = 4 seconds
- TalkingTimeInSeconds = 0 seconds
- CountOfAllocatedContacts = 1
- CountOfHandledContacts= 0
- CountOfFalseAttemptContacts=1

Abandoned Calls

An inbound call arrives in Queue1 (number 901) from an external number 0501234567 at 12:00:00. The call is allocated to Agent1 after 15 seconds, (the agent does not answer) so the call is allocated to Agent2 for 15 seconds (the agent does not answer). The customer hangs up call at 12:00:30.

Purpose: To describe the `FactCEMContacts` columns

- Source = 0501234567
- Destination = 901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = Queue1
- (FK_SecondaryQueue = Queue1)
- FK_Agent = "undefined" (key=1)
- WaitingTimeInSeconds = (12:00:30 – 12:00:00) = 30 seconds
- QueuingTimeInSeconds = (12:00:30 – 12:00:00) = 30 seconds
- TalkingTimeInSeconds = 0 seconds



- CountOfAllocatedContacts = 2
- CountOfHandledContacts= 0
- CountOfFalseAttemptContacts=0
- CountOfAbandonedContacts = 1

When a call is disconnected, depending on the reason why the call was disconnected, the following fields may have the value 1:

- Busy => CountOfAbandonedBusyContacts=1
- Prompt => CountOfAbandonedBusyContacts=1
- Queue full => CountOfAbandonedQueueFullContacts=1

Calls with Prewelcome Message

An inbound call arrives in Queue1 (901) from an external number 0501234567 at 12:00:00. The prewelcome message is played to the customer (the duration is 10 seconds) and then the call is allocated to Agent1 for 12 seconds until the agent is free. The agent answers the call at 12:00:22. The call ends at 12:01:22.

Purpose: To describe the `FactCEMContacts` columns usage

- Source = 0501234567
- Destination = 901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = Queue1
- FK_Agent = Agent1
- FK_Team = Team1
- WaitingTimeInSeconds = (12:00:22 – 12:00:00) = 22 seconds
- QueuingTimeInSeconds = (12:00:22 – 12:00:10) = 12 seconds
- WelcomeTimeInSeconds = (12:00:10 – 12:00:00) = 10 seconds
- TalkingTimeInSeconds = (12:01:22 – 12:00:22) = 60 seconds
- CountOfAllocatedContacts = 1
- CountOfHandledContacts= 1
- CountOfAnsweredOnTimeContacts=1 (QueuingTimeInSeconds is less than 20 seconds AOT).



NOTE The `QueuingTimeInSeconds` calculation starts after the prewelcome message is played therefore the prewelcome message duration does not affect `QueuingTimeInSeconds`. The call is answered on time when `QueuingTimeInSeconds` is less than Answered-on-Time Limit threshold value.

Call Arrives Outside Service Times (Queue Schedule: Closed)

An inbound call arrives in Queue1 (number 901) from an external number 0501234567 at 12:00:00. Queue1 is closed according to the schedule. The customer ends the call (during the time when the *Service Closed* prompt is played) at 12:00:04.

Purpose: To describe the `FactCEMContacts` columns usage

- Source = 0501234567
- Destination = 901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = Queue1
- (FK_SecondaryQueue = Queue1)
- FK_Agent = "undefined" (key=1)
- `WaitingTimeInSeconds` = (12:00:30 – 12:00:00) = 4 seconds
- `QueuingTimeInSeconds` = 0 seconds
- `TalkingTimeInSeconds` = 0 seconds
- `CountOfArrivedContacts` =1
- `CountOfAllocatedContacts` = 0
- `CountOfHandledContacts`= 0
- `CountOfFalseAttemptContacts`=0
- `CountOfAbandonedContacts` = 0
- `CountOfServiceClosedContacts` =1

NOTE The `QueuingTimeInSeconds` is 0 since it never queued. When a call is `ServiceClosed`, no other measures than "Arrived" and "Service closed" are counted for the conversation.



Call Arrives Outside Service Times (Queue Schedule: Closed) and Overflows to Another Queue and the Call Is Handled

An inbound call arrives in Queue1 (number 901) from an external number 0501234567 at 12:00:00. Queue1 is closed according to the schedule. The call is overflowed to Queue2 at 12:00:03. Agent1 answers at 12:00:05 and handles the call. The call ends at 12:00:25.

Purpose: To describe the `FactCEMContacts` columns usage

- Source = 0501234567
- Destination = 901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = Queue1
- FK_SecondaryQueue = Queue5
- CountOfArrivedContacts = 1
- CountOfServiceClosedContacts = 1
- CountOfAllocatedContacts = 1
- CountOfHandledContacts = 0
- CountOfOverflowedContacts = 0
- CountOfDivertedContacts = 0
- CountOfAgentDisconnectedContacts = 0/1
- WaitingTimeInSeconds = (12:00:05 – 12:00:00 =) 5 sec
- QueuingTimeInSeconds = (12:00:05 – 12:00:03 =) 2 sec // Note: Reached Queue2
- TalkingTimeInSeconds = (12:00:25 – 12:00:05 =) 20 sec
- AfterworkTimeInSeconds = X sec

NOTE If a queue is closed according to the schedule, Reporting reports only the number of arrived calls and the number of calls arrived when the queue is closed, even if the call has been overflowed or forwarded and handled.

Call Arrives Outside Service Times (Queue Schedule: Closed) and Is Forwarded to an External Number



An inbound call arrives in Queue1 (number 901) from an external number 0501234567 at 12:00:00. Queue1 is closed according to the schedule. The call is forwarded to 05076564321 at 12:00:01. An external user answers at 12:00:05 and handles the call. The call ends at 12:00:25.

Purpose: To describe the `FactCEMContacts` columns usage

- `FK_ApplicationLevel = Queue1`
- `FK_SecondaryQueue = Queue1`
- `CountOfArrivedContacts = 1`
- `CountOfServiceClosedContacts = 1`
- `CountOfAllocatedContacts = 0`
- `CountOfHandledContacts = 0`
- `CountOfOverflowedContacts = 0`
- `CountOfDivertedContacts = 0`
- `(CountOfAgentDisconnectedContacts = 0)`
- `WaitingTimeInSeconds = (12:00:05 – 12:00:00 =) 5 sec`
- `QueuingTimeInSeconds = 0 sec // never “reach” the queue`
- `HoldTimeInSeconds = (12:00:01 – 12:00:05 =) 4 sec`
- `TalkingTimeInSeconds = (12:00:25 – 12:00:05 =) 20 sec`
- `(AfterworkTimeInSeconds = 0 sec)`
- `TransferTime = 12:00:05`
- `TransferNumber = 05076564321`
- `TransferTimeInSeconds = 42 seconds`

NOTE If the queue is closed according to the schedule, Reporting reports only the number of arrived calls and the number of calls arrived when the queue is closed, even if the call has been overflowed or forwarded and handled.

Call to Agent's Direct Number

An inbound call arrives from an external number 0501234567 in the agent's number 501. The agent answers the call.

Purpose: To describe the `FactCEMContacts` link to

- `Source=0501234567`



- Destination=901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = "ContactCenter_OperDir" queue /* "virtual" queue for direct calls */

Call Overflowed to Another Queue (Allocation to Both Queues)

An inbound call arrives from an external number 0501234567 in Queue1. The call is allocated after 20 seconds to Agent1 who is serving in Queue1. Agent1 does not answer, so the call is overflowed to Queue2. Agent2 answers after 5 seconds (the total waiting time ~25 s).

Purpose: To describe the `FactCEMContacts` column usage:

- FK_ApplicationLevel = Queue1
- FK_SecondaryQueue = Queue2
- FK_Agent = Agent2
- WaitingTimeInSeconds = 25
- QueuingTimeInSeconds = 25
- CountOfAllocatedContacts = 2
- CountOfHandledContacts=1;
- CountOfAnsweredOnTimeContacts =0 (25 > 20 AOT);
- CountOfOverflowedContacts=1

Call Overflowed to Another Queue (Allocation to the Second Queue)

An inbound call arrives from an external number in Queue1. The call overflows immediately to Queue2. Agent2 answers after 5 seconds (total waiting time ~5 s).

Purpose: To describe the `FactCEMContacts` column usage:

- FK_ApplicationLevel = Queue1
- FK_SecondaryQueue = Queue2
- FK_Agent = Agent2
- WaitingTimeInSeconds = 5
- QueuingTimeInSeconds = 5
- CountOfAllocatedContacts = 1
- CountOfHandledContacts=1;



- `CountOfAnsweredOnTimeContacts = 1` ($5 < 20$ AOT);
- `CountOfOverflowedContacts=1`

Call Hung Up by an Agent

An inbound call arrives from external number in Queue1. Agent1 answers and hangs up the call (without waiting for the customer to hang up the call).

Purpose: To describe the `FactCEMContacts` column usage

`CountOfAgentDisconnectedContacts = 1` /* Is reported 1 when the agent disconnects the call instead of the customer */

4.2 Calls with Consultation Calls

Answered Inbound Call with Consultation Call (Without Completing Consultation Call)

An inbound call arrives from an external number 0501234567 in Queue1 at 12:00:00. Agent1 answers at 12:00:01. Agent1 makes a consultation call to Agent2 at 12:01:00, and Agent2 answers at 12:01:10. Agent1 ends the consultation call at 12:02:20 and retrieves the customer call from hold at 12:02:25. Agent1 ends the call at 12:03:00.

Purpose: When the consultation call has been made during the call, Sinch Contact Pro shows 3 different calls. The first one is the inbound customer call, the second one is the internal call that Agent1 (number 501) makes to Agent2 (number 502), and the third one is the call to Agent2.

`FactCEMContacts`:

The first call is reported as an (external) inbound call to Queue1.

- `StartTime = 12:00:00`
- `EndTime = 12:03:00`
- `Source = 0501234567`
- `Destination = 501`
- `FK_ApplicationLevel = Queue1`
- `WaitingTimeInSeconds = (12:00:01 - 12:00:00 =) 1` seconds
- `QueuingTimeInSeconds = (12:00:01 - 12:00:00 =) 1` seconds



- TalkingTimeInSeconds = (12:03:00 – 12:00:01 =) 179 seconds (contain the time on hold as well)
- TalkingTimeAgentInSeconds = (12:03:00 – 12:00:01 =) 179 seconds
- HoldTimeInSeconds = (12:02:25 - 12:01:00 =) 85 seconds
- CountOfConsultedContacts = 1

The second call is reported as an (internal) outbound call with the `ConsGUID` value to link the customer call.

- StartTime =12:01:00
- EndTime = 12:02:20
- Source = 501
- FK_ApplicationLevel = “ContactCenter_OperDir” queue
- FK_Channel = CallOut (internal)
- WaitingTimeInSeconds = (12:01:10 - 12:01:00 =) 10 seconds
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = (12:02:20 – 12:01:10=) 70 seconds.
- TalkingTimeAgentInSeconds = (12:02:20 – 12:01:10=) 70 seconds.
- ConsGUID = “first call’s GUID”
- CountOfConsultedContacts = 0

The third call is reported as an (internal) inbound call with the `ConsGUID` value to link the customer call.

- StartTime =12:01:00
- EndTime = 12:02:20
- Source = 501
- Destination = 502
- FK_ApplicationLevel = “ContactCenter_OperDir” queue
- FK_Channel = CallIn (internal)
- WaitingTimeInSeconds = (12:01:10 - 12:01:00 =) 10 seconds
- QueuingTimeInSeconds = (12:01:10 - 12:01:00 =) 10 seconds
- TalkingTimeInSeconds = (12:02:20 – 12:01:10=) 70 seconds
- TalkingTimeAgentInSeconds = (12:02:20 – 12:01:10=) 70 seconds.



- ConsGUID = "first call GUID"
- CountOfConsultedContacts = 0

Answered Inbound Call with a Consultation Call (Consultation Call Completed)

An inbound call arrives from an external number 0501234567 in Queue1 at 12:00:00. Agent1 answers at 12:00:01. Agent1 makes a consultation call to Agent2 at 12:01:00, and Agent2 answers at 12:01:10. Agent1 completes the consultation call (connects the customer call to Agent2) at 12:02:20. Agent2 ends the call at 12:03:00.

Purpose: When the consultation call has been made during the call, Sinch Contact Pro has 3 different calls:

The first one is an inbound customer call, the second one is an outbound call that Agent1 calls to Agent2, and the third one is an inbound call for Agent2.

FactCEMContacts:

The first call / inbound customer call is reported as an (external) inbound call to Queue1.

- StartTime = 12:00:00
- EndTime = 12:03:00
- Source = 0501234567
- Destination = 501
- FK_ApplicationLevel = Queue1
- FK_Agent = Agent1 /* Agent 1 answered */
- WaitingTimeInSeconds = (12:00:01 - 12:00:00) = 1 seconds
- QueuingTimeInSeconds = (12:00:01 - 12:00:00) = 1 seconds
- TalkingTimeInSeconds = (12:03:00 - 12:00:01) = 179 seconds (contain hold time as well).
- TalkingTimeAgentInSeconds = 12:02:20 - 12:00:01 = 139
- HoldTimeInSeconds = (12:02:20 - 12:01:00) = 80 seconds
- CountOfConsultedContacts = 1
- TransferTime = 12:02:20
- TransferNumber = NULL
- TransferTimeInSeconds = 12:03:00 - 12:02:20 = 40 seconds



The second call is reported as an (internal) outbound call with `ConsGUID` value to link customer call.

- `StartTime` = 12:01:00
- `EndTime` = 12:03:00 /* NOTE: Although the call logically ends during the completion of the consultation call (that is, when the first agent connects the customer call to the second agent), the call is reported until it has ended.
- `Source` = 501
- `Destination` = 502
- `FK_ApplicationLevel` = "ContactCenter_OperDir" queue
- `FK_Agent` = Agent1
- `FK_Channel` = CallOut (internal)
- `WaitingTimeInSeconds` = (12:01:10 - 12:01:00 =) 10 seconds
- `QueuingTimeInSeconds` = 0 seconds
- `TalkingTimeInSeconds` = (12:03:00 - 12:01:10 =) 110 seconds
- `TalkingTimeAgentInSeconds` = 12:02:20 - 12:01:10 = 70 seconds
- `ConsGUID` = "first call GUID"
- `CountOfConsultedContacts` = 0
- `TransferTime` = NULL
- `TransferNumber` = NULL
- `TransferTimeInSeconds` = 0

The third call is reported as an (internal) inbound call having `ConsGUID` value to link customer call.

- `StartTime` = 12:01:00
- `EndTime` = 12:03:00
- `Source` = 901
- `Destination` = 902
- `FK_ApplicationLevel` = "ContactCenter_OperDir" queue
- `FK_Agent` = Agent2
- `FK_Channel` = CallIn (internal)
- `WaitingTimeInSeconds` = (12:01:10 - 12:01:00 =) 10 seconds
- `QueuingTimeInSeconds` = (12:01:10 - 12:01:00 =) 10 seconds



- TalkingTimeInSeconds = (12:03:00 – 12:01:10 =) 110 seconds
- TalkingTimeAgentInSeconds = (12:03:00 – 12:01:10 =) 110 seconds
- ConsGUID = “the first call GUID”
- CountOfConsultedContacts = 0
- TransferTime = NULL
- TransferNumber = NULL
- TransferTimeInSeconds = 0

4.3 Calls with MTD Usage

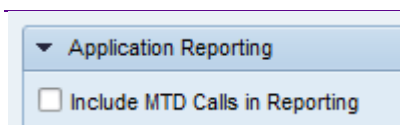
NOTE The viewpoint in these cases is the agent statistics (FactCEMAgents). When a desk phone is used as an MTD terminal, the desk phone does not have an agent session and the activities of the desk phone user are not reported separately. If the desk phone is used as an MTD terminal, the active agent session ends. When the MTD use ends, the agent session for the desk phone is created automatically.

Answered Inbound Call Using MTD Terminal (Desk Phone Registered to Sinch Contact Pro)

Agent1 uses the desk phone as an MTD terminal that is registered with the user’s own number 501 (the same as in CDT).

A customer calls from 05012345678 to Queue1 at 12:00:00. The agent’s MTD call starts when the call is allocated to the agent at 12:00:01, and Agent1 answers at 12:00:10. The agent ends the call at 12:01:00.

NOTE Internal MTD calls are not reported by default. You must select this option in *System Configurator-> Reporting-> Statistics Settings* to include them into the reports.



Purpose: To explain MTD terminal usage reporting in case of “external” terminal.

There are two calls. The first one is the customer call, the second one is the MTD outgoing call to reach the terminal.



The customer call:

- StartTime =12:00:00
- EndTime = 12:01:00
- Source = 05012345678
- Destination = 901
- FK_Channel = CallIn (external)
- TermGUID = (outbound MTD call's GUID)
- FK_ContactTerminal = DimContactTerminal member, where TerminalType="MTD TERMINAL", TerminalNumber = 909
- WaitingTimeInSeconds = (12:00:10 - 12:00:00 =) 10 seconds
- QueuingTimeInSeconds = (12:00:10 - 12:00:00 =) 10 seconds
- TalkingTimeInSeconds = (12:01:00 – 12:00:10=) 50 seconds

NOTE Even if the outbound MTD call is not reported, “the customer call” has values for TermGUID and FK_ContactTerminal.

- MTD call out:
- StartTime =12:00:01
- EndTime = 12:01:00
- Source = 501 /* agent's soft phone number */
- Destination = 501
- FK_ApplicationLevel = “ContactCenter_OperDir” queue
- FK_Channel = CallOut MTD (external)
- TermGUID =null
- FK_ContactTerminal = 1 /* default value, points “undefined” member */
- WaitingTimeInSeconds = (12:00:10 - 12:00:01 =) 9 seconds
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = (12:01:00 – 12:00:10=) 50 seconds.

Answered Inbound Call Using MTD Terminal (Desk Phone Registered to Sinch Contact Pro)



Agent1 uses a desk phone as an MTD terminal, which is registered with the number 551. A customer calls from 05012345678 to Queue1 at 12:00:00. The agent's MTD call starts when the call is allocated to the agent at 12:00:01, and Agent1 answers at 12:00:10. The agent ends the call at 12:01:00.

Purpose: To explain the use of the MTD terminal in reporting in case of “an external” terminal.

Two calls: the first call is the customer call, and the second one is the outbound MTD call to the terminal (NOTE: the inbound call to desk phone is not reported separately when the desk phone is used in the MTD mode).

The customer call:

- StartTime =12:00:00
- EndTime = 12:01:00
- Source = 05012345678
- Destination = 901
- FK_ApplicationLevel = Queue1
- FK_Channel = CallIn (external)
- TermGUID = (MTD call out's GUID)
- FK_ContactTerminal = DimContactTerminal member, where TerminalType="MTD TERMINAL", TerminalNumber = 1551
- WaitingTimeInSeconds = (12:00:10 - 12:00:00 =) 10 seconds
- QueuingTimeInSeconds = (12:00:10 - 12:00:00 =) 10 seconds
- TalkingTimeInSeconds = (12:01:00 – 12:00:10=) 50 seconds

NOTE Even if the outbound MTD call is reported, the customer call has values for TermGUID and FK_ContactTerminal.

The outbound MTD call:

- StartTime =12:00:01
- EndTime = 12:01:00
- Source = 501 /* agent's soft phone number */
- Destination = 551 /* Desk phone number */
- FK_ApplicationLevel = “ContactCenter_OperDir” queue



- FK_Channel = CallOut MTD (external)
- TermGUID =null
- FK_ContactTerminal = 1 /* default value, points “undefined” member */
- CountOfAllocatedContacts = 1
- WaitingTimeInSeconds = (12:00:10 - 12:00:01 =) 9 seconds
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = (12:01:00 – 12:00:10=) 50 seconds

Answered Inbound Call Using MTD Terminal (External Number)

Agent1 uses his mobile phone (number 05087654321) as the MTD terminal. A customer calls from 05012345678 to Queue1 at 12:00:00. The agent’s MTD call starts when the call is allocated to agent at 12:00:01, and Agent1 answers at 12:00:10. The agent ends the call at 12:01:00.

Purpose: To explain the use of the MTD terminal in reporting in case of “an external” terminal.

Two calls: The first one is the customer call and the second one is the outbound MTD call to the terminal.

The customer call:

- StartTime =12:00:01
- EndTime = 12:01:00
- Source = 05012345678
- Destination = 901
- FK_ApplicationLevel = Queue1
- FK_Channel = CallIn (external)
- TermGUID = (MTD call out’s GUID)
- FK_ContactTerminal = DimContactTerminal member, where TerminalType=“MTD TERMINAL”, TerminalNumber = 05087654321
- WaitingTimeInSeconds = (12:00:10 - 12:00:00 =) 10 seconds
- QueuingTimeInSeconds = (12:00:10 - 12:00:00 =) 10 seconds
- TalkingTimeInSeconds = (12:01:00 – 12:0:10=) 50 seconds.



NOTE Even if the outbound MTD call is not reported, the customer call has values for TermGUID and FK_ContactTerminal.

Outbound MTD call:

- EndTime = 12:01:00
- Source = 501 /* agent's soft phone number */
- Destination = 05087654321
- FK_ApplicationLevel = "ContactCenter_OperDir" queue
- FK_Channel = CallOut MTD (external)
- TermGUID =null
- FK_ContactTerminal = 1 /* default value, points "undefined" member */
- CountOfAllocatedContacts = 1
- CountOfHandledContacts = 1
- WaitingTimeInSeconds = (12:00:10 - 12:00:01 =) 9 seconds
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = (12:01:00 – 12:00:10=) 50 seconds

NOTE MTD calls are not reported by default. You must select this option in *System Configurator-> Reporting-> Statistics Settings* to include them into the reports.

Outbound Call Using MTD Terminal (External Number)

Agent1 (who has the CDT number 501) uses his mobile phone (number 05012345678) as the MTD terminal. Agent1 makes an outbound call to number 0501112233.

Purpose: To explain the use of the MTD terminal for outbound calls in case of "an external" terminal

Two calls: the first call is an outbound call, and the second one is the outbound MTD call to the terminal.

The customer call:

- Source = 501
- Destination = 0501112233



- FK_ApplicationLevel = Queue1
- FK_Channel = CallOut (external)
- TermGUID = (outbound MTD call's GUID)
- FK_ContactTerminal = DimContactTerminal member, where TerminalType="MTD TERMINAL", TerminalNumber = 05012345678

NOTE Even if the outbound MTD call is not reported, the customer call has values for TermGUID and FK_ContactTerminal.

Outbound MTD call:

- Source = 501 /* agent's soft phone number */
- Destination = 05012345678
- FK_ApplicationLevel = "ContactCenter_OperDir" queue
- FK_Channel = CallOut MTD (external)
- TermGUID =null
- FK_ContactTerminal = 1 /* default value, points "undefined" member */
- CountOfAllocatedContacts = 1
- CountOfHandledContacts = 1

NOTE MTD calls are not reported by default. You must select this option in *System Configurator-> Reporting-> Statistics Settings* to include them into the reports.

4.4 Calls with Wrap-Up/Wrap-Up Time

Only the data related to wrap-up times is showed in the examples below. Other data is as in standard calls.

NOTE Wrap-up times are reported only when they occur after the conversation has been handled. For example, if an agent fills out a script and saves it during the call, no scripting time is reported. In some transfer cases, the wrap-up time is counted even when the conversation is not handled completely.

Answered Inbound Call with Rest Time (5 s), No Scripting



An inbound call arrives in a queue, and Agent1 answers. After the call, the agent is set to the “rest” mode by the Sinch Contact Pro system for 5 seconds.

Purpose: To describe the `FactCEMContacts` columns usage.

`AfterworkTimeInSeconds` is the sum of script and rest time durations. The rest time indicates how long the agent was in the rest mode.

- `AfterworkTimeInSeconds` = 5
- `RestingTimeInSeconds` = 5

Answered Inbound Call with Scripting (5 s), No Rest Time

An inbound call arrives in a queue, and Agent1 answers. After the call, Agent1 fills out the script in 5 seconds.

Purpose: To describe the `FactCEMContacts` columns usage:

- `AfterworkTimeInSeconds` = 5
- `RestingTimeInSeconds` = 0

Answered Inbound Call with Scripting (5 s) and Rest Time (5 s)

An inbound call arrives in a queue, and Agent1 answers it. After the call, Agent1 fills out the script in 5 seconds. When the script is saved, the agent is set to the “rest” mode by the Sinch Contact Pro system for 5 seconds.

Purpose: To describe the `FactCEMContacts` columns usage

- `AfterworkTimeInSeconds` = 10 /* contains the sum of scripting and resting */
- `RestingTimeInSeconds` = 5 /* resting time separately */
- `CountOfConsultedContacts` = 0

Answered Inbound Call with a Consultation Call (Consultation Call Completed) with Scripting (5 s) and Rest Time (5 s)

An inbound call arrives in queue and Agent1 answers it. Agent1 makes a consultation call to Agent2, Agent2 answers the consultation call. Agent1 completes the consultation call (connects the customer call to Agent2). Agent1 fills the script. Agent2 or the customer ends the call.

In this case, there are three different calls but only the first call has a script. The customer call (the first call) is disconnected when Agent2 or the customer ends the call. Agent1 fills the script before the first call is disconnected and in this transfer



case, the scripting and resting times are counted to the conversation event when afterwork is done during the call.

Purpose: To describe the FactCEMContacts columns usage

- AfterworkTimeInSeconds = 10 /* contains the sum of scripting and resting */
- RestingTimeInSeconds = 5 /* resting time separately */
- CountOfConsultedContacts = 1

4.5 Calls with Scripts

Below only the data related to scripts is showed. The other data is as in standard calls.

Answered Inbound Call with Scripts with Two Questions, Both Questions Contain 5 Answers

A customer calls to Queue1, and Agent1 answers it. After the call, the agent fills out the script that contains the following answers: for Question1 answers 2 and 3, and for Question2 answers b and c.

Script1 has the following configuration:

- Question1: Choose the number:
 - Answers: 1,2,3,4,5
- Question2: Choose a letter:
 - Answers: a,b,c,d,e

Purpose: To describe the DimCallStatistic usage (a matrix for a script, a question, and an answer)

- Has a script, a question-and-answer matrix for answer combination, which can be for Script1:
 - Script1; Choose a number; 2
 - Script1; Choose a number; 3
 - Script1; Choose a letter; b



- Script1; Choose a letter; c

The dimension contains values only for the used answers.

- Tables for the `FactCallStatistics` usage (as many rows as answers). This table links the conversation facts (`FactCEMContacts`) to the answers (`DimCallStatistics`).
- **Contains 4 rows**
 - `ContactGUID`: the call's GUID, `FK_CallStatistics` points to `DimCallStatistics`, whose member has the value `Script1, Choose a number, 2`
 - `ContactGUID`: the call's GUID, `FK_CallStatistics` points to `DimCallStatistics`, whose member has the value `Script1, Choose a number, 3`
 - `ContactGUID`: the call's GUID, `FK_CallStatistics` points to `DimCallStatistics`, whose member has the value `Script1, Choose a letter, b`
 - `ContactGUID`: the call's GUID, `FK_CallStatistics` points to `DimCallStatistics`, whose member has the value `Script1, Choose a letter, c`

4.6 Calls with Skill-Based Routing (SBR)

Call Arrives and Is Allocated to an Agent Based on SBR

A customer calls in `Queue1`. The call has the following skill requirement: `English=4`; `Sinch Contact Pro=5`.

`Agent1` has the following skills `English=3`; `Sinch Contact Pro=5`; `CRM=2`. `Agent1` answers the call and handles it.

Purpose: To describe:

- The dimension's `DimContactSkills` usage: The conversation's skill dimension member: `Sinch Contact Pro=5`; `English=4` (one string ordered by the skill names); `PK_ContactSkills = XXX`



- The dimension's DimAgentSkills usage: The agent's skill dimension member: Sinch Contact Pro=5; CRM=2; English=3; (one string ordered by the skill names); PK_AgentSkill = YYY
- FactCEMContacts
 - The column PointsOfSkillMatch = $(100 * (\text{agent skills} / \text{conversation skills})) = 100 * (5+3)/(5+4) = \sim 89$
 - FK_ContactSkills = XXX
 - FK_AgentSkill = YYY

NOTE The conversation's skill dimension (DimContactSkills) is populated based on the required conversation skills. The agent's skills are populated based on the agent's skill settings.

4.7 Calls with Recordings

Answered Inbound Call, the Call Is Handled and Recorded

A call arrives, and Agent1 answers it and at the same time, a server-side recording is generated.

Purpose: To describe:

- The table ContactRecord usage (hidden recordings are reported as well)
 - ContactGUID = the call's GUID
 - RecordFileName = the name of the recording
 - An example:

2011_08\15_10_22_34_SSR_501_FDE512906593E547983E258
D4EA20857.wav

4.8 Calls with Blind Transfers

Answered Inbound Call Forwarded Using the Blind Transfer Method to an External Number



A call arrives from 05012345678 in Queue1 at 12:00:00, and Agent1 answers the call at 12:00:00. Agent1 forwards the call to the number 05087654321 at 12:01:00. The transferred call ends at 12:05:00.

Purpose: To describe the `FactCEMContacts` columns usage

- Source = 05012345678
- Destination = 901
- StartTime = 12:00:00
- EndTime = 12:05:00
- TalkingTimeInSeconds = (1+4= 5 minutes =) 600 seconds
- TalkingTimeAgentInSeconds = (1 minute =) 60 seconds
- TransferTime =12:01:00
- TransferTimeInSeconds =(4 minutes =) 480 seconds
- TransferNumber = 05087654321
- CountOfDivertedContacts =0 (this is 1 only when CEM forwards the call to another application or external number)
- Answered Inbound Call Forwarded Using the Blind Transfer Method to Internal Number

A call arrives in Queue1 at 12:00:00, and Agent1 answers the call at 12:00:10. Agent1 forwards the customer call to Queue2 at 12:01:00. Agent2 answers at 12:02:00 and ends the call at 12:05:00.

Purpose: To describe the two calls of which the first one is the customer call and the second one the transferred call.

In the first call, the `FactCEMContacts` column usage is as follows:

- StartTime = 12:00:00
- EndTime = 12:01:00 (NOTE: An internally transferred call ends when it is transferred. In this case, you also have NextGUID.)
- Source = 05012345678
- Destination = 901
- FK_Application = Queue1
- NextGUID = the second call's GUID,
- TransferTime = 12:01:00,



- `TransferTimeInSeconds = 0`
- `TransferNumber = 902 /* Queue2's number */`
- `WaitingTimeInSeconds = (12:00:10 - 12:00:00 =) 10 seconds`
- `QueuingTimeInSeconds = (12:00:10 - 12:00:00 =) 10 seconds`
- `TalkingTimeInSeconds = (12:01:00 - 12:00:10 =) 50 seconds`
- `TalkingTimeAgentInSeconds = (12:01:00 - 12:00:10 =) 50 seconds`
- `HoldTimeInSeconds = 0 /* transfer to internal number happen fast, could have value >0 */`

In the second call, the `FactCEMContacts` column usage is as follows:

- `StartTime = 12:01:00`
- `EndTime = 12:05:00`
- `Source = 05012345678`
- `Destination = 902`
- `OrigGUID = the first call's GUID`
- `FK_ApplicationLevel = Queue2,`
- `FK_PreApplicationLevel = Queue1,`
- `PreWaitingTimeInSeconds = 10 seconds`
- `PreTalkingTimeInSeconds = 50 seconds`
- `WaitingTimeInSeconds = (12:02:00 - 12:01:00 =) 60 seconds`
- `QueuingTimeInSeconds = (12:02:00 - 12:01:00 =) 60 seconds`
- `TalkingTimeInSeconds = (12:05:00 - 12:02:00 =) 180 seconds`
- `TalkingTimeAgentInSeconds = (12:05:00 - 12:02:00 =) 180 seconds`

4.9 Calls Using the Transfer-On-Hold Method

Answered Inbound Call Forwarded Using the Transfer-On-Hold to an External Number

A call arrives from 05012345678 in Queue1 at 12:00:00, and Agent1 answers the call at 12:00:10. Agent1 uses the transfer-on-hold method to transfer the call to the



external number 05087654321 at 12:01:00. The call is connected at 12:02:00, and it ends at 12:05:00.

Purpose: To describe the `FactCEMContacts` column usage

- StartTime = 12:00:00
- EndTime = 12:05:00
- Source = 05012345678
- Destination = 901
- FK_Application = Queue1
- TransferTime = 12:02:00 /* Transfer time is the time when transfer is connected, not the begin of transfer */
- TransferTimeInSeconds = (12:05:00 -12:02:00 =) 180 seconds
- TransferNumber = 05087654321
- WaitingTimeInSeconds = 10 seconds
- QueuingTimeInSeconds = 10 seconds
- TalkingTimeInSeconds = (4 min 50 seconds =) 290 seconds /* include hold duration */
- TalkingTimeAgentInSeconds = 12:01:00 - 12:00:10 = 50 seconds
- HoldTimeInSeconds = (12:02:00 - 12:01:00 =) 60 seconds

Answered Inbound Call Forwarding Fails Using the Transfer-On-Hold to External Number

A call arrives from 05012345678 in Queue1 at 12:00:00, and Agent1 answers the call at 12:00:10. Agent1 uses the transfer-on-hold method to transfer the call to the external number 05087654321 at 12:01:00. The transfer will fail, and the call returns to Agent1 at 12:02:00, Agent1 ends the call at 12:05:00.

Purpose: To describe the `FactCEMContacts` column usage

- StartTime = 12:00:00
- EndTime = 12:05:00
- Source = 05012345678
- Destination = 901
- FK_Application = Queue1



- TransferTime = 12:02:00 /* Transfer time is the time when transfer is connected, not the begin of transfer */
- TransferTimeInSeconds = (12:05:00 -12:02:00 =) 180 seconds
- TransferNumber = 05087654321
- WaitingTimeInSeconds = 10 seconds
- QueuingTimeInSeconds = 10 seconds
- TalkingTimeInSeconds = (4 min 50 seconds =) 290 seconds /* include transfer duration */
- TalkingTimeAgentInSeconds = (4 min 50 seconds =) 290 seconds /* include transfer duration as call was not successfully transferred*/

HoldTimeInSeconds = (12:02:00 - 12:01:00 =) 60 seconds

4.10 Call Forwarding from IVR to Contact Center (CC) Applications

Call to an IVR, then Forwarded to a contact center queue

NOTE Customized IVRs are not reported by default. You must select them to be included in the reporting in *System Configurator-> Reporting-> Statistics Settings-> Application Reporting*.

An inbound call arrives from the external number 05012345678 in an IVR (number = 222) at 12:00:00. The call is forwarded to contact center queue Queue1 at 12:00:20, and Agent1 answers it at 12:00:25. The agent discusses with the customer and ends the call at 12:01:00.

Purpose: To describe the two reported rows of which the first row is for the IVR application and the second one for the contact center.

In the first row, the `FactCEMContacts` columns usage is as follows:

- Source = 05012345678
- Destination = 222
- StartTime = 12:00:00
- EndTime = 12:00:20
- NextGUID = ContactCenter call's GUID



- TalkingTimeInSeconds = (12:00:20 - 12:00:00) 20 seconds
- TransferTime = 12:00:20
- TransferTimeInSeconds = 0 seconds
- TransferNumber = 901 (Queue1's number)
- CountOfDivertedContacts = 1

In the second row, the FactCEMContacts columns usage is as follows:

- Source = 05012345678
- Destination = 901
- StartTime = 12:00:20
- EndTime = 12:01:00
- OrigGUID = IVR call's GUID /* reported even when CustomIVR not reported */
- PreWaitingTimeInSeconds = 0 seconds /* reported even when CustomIVR not reported */
- PreTalkingTimeInSeconds = 20 seconds /* reported even when CustomIVR not reported */
- WaitingTimeInSeconds = (12:00:25 – 12:00:20 =) 5 seconds
- QueuingTimeInSeconds = (12:00:25 – 12:00:20 =) 5 seconds
- TalkingTimeInSeconds = (12:01:00 - 12:00:25 =) 35 seconds
- TransferTime = null
- TransferTimeInSeconds = null
- TransferNumber = null
- CountOfDivertedContacts = 0

4.11 Call to Contact Center, Forwarded to Voicemail

Call to Agent's Number from which Forward to Voicemail

A call arrives from 05012345678 in Agent2's number at 12:00:00. Based on the presence profile and the caller action, the call is forwarded to the agent's voicemail, number 802, at 12:00:10. The caller leaves a voicemail message and ends the call at 12:01:00.



Purpose: To describe the two reported rows of which the first one is for the ContactCenter application and the second one for the Voicemail application.

- The first row includes:
 - StartTime = 12:00:00
 - EndTime = 12:01:00 (or if no prompt selection for user => immediately transfer then 12:00:00)
 - Source = 05012345678
 - Destination = 502
 - FK_ApplicationLevel = Contact center's "Oper direct" queue;
 - FK_Channel = CallIn (external)
 - FK_Agent = Agent2 /* direct calls, even not answered ones are reported for the agent */
 - NextGUID = Voicemail contact's GUID
 - TransferTime = 12:00:10 (or if no prompt selection for user => immediate transfer, then 12:00:00)
 - TransferTimeInSeconds = 0 /* internal transfer */
 - TransferNumber = 802
 - WaitingTimeInSeconds = 10 seconds
 - QueuingTimeInSeconds = 10 seconds
(Note: Waiting and queuing times can be 0 if direct forward to Voicemail)
 - TalkingTimeInSeconds = 0 seconds
 - HoldTimeInSeconds = 10 seconds (Note: Can be 0 when direct forward to Voicemail)
 - CountOfHandledContacts = 1 /* Successfully transferred */
 - CountOfDivertedContacts = 1 /* transfer without agent action to another application */

- The second row includes:
 - StartTime = 12:00:10
 - EndTime = 12:01:00
 - Source = 05012345678



- Destination = 802
- FK_ApplicationLevel = Voicemail application's "Oper direct queue";
- FK_Channel = Voicemail (external)
- FK_Agent = Agent2 /* direct calls, even not answered ones are reported for the agent */
- OriqGUID = ContactCenter call's GUID
- FK_PreApplicationLevel= Contact center's "Oper direct" queue
- PreWaitingTimeInSeconds = 10 seconds
- PreTalkingTimeInSeconds = 0 seconds
- WaitingTimeInSeconds = 0 seconds /* IVR answer/connect immediately */
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = (12:01:00 – 12:00:10 =) 50 seconds

NOTE The *Presence IVR* event is combined with the contact center event and therefore, the conversation is not reported separately.

4.12 Calls to CC Queue with Queue Voicemail

Call with Queue Voicemail

A customer calls from 05012345678 to Queue1 at 12:00:00, and while waiting, the customer leaves a voicemail message by pressing the pound (#) key at 12:00:30 (Queue1's voicemail number is 1901). The voicemail is connected at 12:00:35. The customer leaves a voicemail message and ends the call at 12:01:00.

Purpose: To describe the two calls reported of which the first one is for contact center and the second one for voicemail.

- The first row includes:
 - Start time = 12:00:00
 - EndTime = 12:00:35
 - Source = 05012345678
 - Destination = 901



- FK_ApplicationLevel = Queue1;
 - NextGUID = Voicemail contact's GUID
 - TransferTime = 12:00:35
 - TransferTimeInSeconds = 0
 - TransferNumber = 1901
 - CountOfDivertedContacts = 1
 - WaitingTimeInSeconds = 35
 - QueuingTimeInSeconds = 35
 - TalkingTimeInSeconds = 0
 - HoldTimeInSeconds (12:00:35 - 12:00:30 =) 5 seconds
- The second row includes:
 - Start time = 12:00:35
 - EndTime =12:01:00
 - Source = 05012345678
 - Destination = 1901
 - FK_ApplicationLevel = Queue1”;
 - OriqGUID = ContactCenter contact's GUID
 - FK_PreApplicationLevel = Queue1;
 - PreWaitingTimeInSeconds = 35
 - WaitingTimeInSeconds = 0
 - QueuingTimeInSeconds = 0

TalkingTimeInSeconds = (12:01:00 -12:00:35) = 25 seconds

4.13 Calls Related to Conference

Agent1 activates the conference function mode and makes 2 outbound calls.

Purpose: To describe 2 different calls

Calls are reported as normal outbound calls with the same conference ID in

```
FactCEMContacts. ConferenceID
```



4.14 Calls Related to Outbound Campaigns

Outbound Campaign Calls and Call Classification (Calls Made to Customers)

An agent serves in an Outbound campaign named OBC1 (the campaign is in the preview mode). The dialer starts to call to 05087654321 at 12:00:00 and allocates the call to Agent1 at 12:00:10. Agent1 looks at the preview information and starts the call at 12:00:20. The call is connected to the customer at 12:00:30. After talking to the customer awhile, the agent ends the call at 12:01:00. The agent marks the call as “Transaction with the customer was successful” and saves the call result at 12:01:30.

NOTE The Outbound campaign has the Queue8 queue assigned to it, and calls are reported to be called from the queue number.

Purpose: To show essential information related to the Outbound campaign call
“Basic conversation statistics”

- Source = 908 /* Queue8, assigned to the OB campaign */
- Destination = 05087654321
- FK_ApplicationLevel = Queue8
- FK_Channel = CallOut OB (external)
- FK_Agent = Agent1
- CountOfHandledContacts = 1
- WaitingTimeInSeconds = (12:00:30 - 12:00:10 =) 20
- QueuingTimeInSeconds = 0
- TalkingTimeInSeconds = (12:01:00 - 12:00:30) = 30 seconds

“Outbound Campaign specific statistics”

- FK_OutboundCampaign = OBC1
- FK_ContactResult = Points to DimContactResult with the right value for CallResult, CustomerResult and Classifier. In this case, the value combination is CallResult= SUCCESS; CustomerResult= SUCCESS;Classifier=“Transaction with the customer was successful”
- OB_CallOutAccessTimeInSeconds = (12:00:30 - 12:00:20 =) 10 seconds



- OB_PreviewTimeInSeconds = (12:00:20 -12:00:10 =) 10 seconds
- OB_CountOfTotalHandledCustomers = (An informative value for reporting about the total number of handled customers including this reported call.)
- Other OB_xxx = 0 or 1. Column values based on the call and customer result:
 - OB_CountOfHandledCustomers=>Outbound campaign call statistics: whether the customer is handled during this call. “Customer result” has been different from ('CALL','MAXCALLS', '') and CallResult has any value (different from)
 - OB_CountOfUnknownCTIHandledCustomers=> Outbound campaign call statistics: any external error codes (CTI code) during this call. “Customer result” has been different from (('CALL', 'MAXCALLS', 'SUCCESS', 'REFUSAL', 'HANGUP', 'NO_BNUMBERS_LEFT', 'WRONG_PERSON', 'AGENT_REJECTED',"))
 - OB_CountOfSuccessfulCalls=> Outbound campaign call statistics: The right customer was reached and the customer transaction was “successful” (for example the customer agreed to subscribe a magazine). “Customer result” has been ‘SUCCESS’.
 - OB_CountOfRefusalCalls=> Outbound campaign call statistics: The right customer was reached and the customer refused to buy anything (for example the customer did not agree to subscribe a magazine). “Customer result” has been ‘REFUSAL’.
 - OB_CountOfSkipped=> Outbound campaign call statistics: The agent has skipped a customer call. “Call result” has been ‘SKIP’

NOTE “Conversation” is created even if the call is skipped.

- OB_CountOfRejected=> Outbound campaign call statistics: The agent has rejected a customer call. “Customer result” has been ‘AGENT_REJECTED’.

NOTE “Conversation” is created even if the call is rejected.



- **OB_CountOfHangups=>** Outbound campaign call statistics: The agent has classified the call as “Hang up”. “Customer result” has been ‘HANGUP’.
- **OB_CountOfRedials=>** Outbound campaign call statistics: The agent has classified the call to be redialed. “Customer result” has been ‘CALL’.
- **OB_CountOfMaxcalls=>** Outbound campaign call statistics: Campaign administrators have defined the number of redials for the customer in case the customer does not answer for the first call. “Customer result” has been ‘MAXCALLS’.
- **OB_CountOfWrongNumbers=>** Outbound campaign call statistics: The agent has classified the customer number as a wrong number. “Call result” has been ‘WRONG_NUMBER’.
- **OB_CountOfWrongPersons=>** Outbound campaign call statistics: The agent has classified the number owner as a wrong person. “Customer result” has been ‘WRONG_PERSON’.
- **OB_CountOfNoBNumbers=>** Outbound campaign call statistics: person. In case the customer has had a “wrong number”, this may result to a case in which there are no other numbers for customer in the system. “Customer result” has been ‘NO_BNUMBERS_LEFT’.
- **OB_CallRetryNumber=>** Outbound campaign call statistics: The number of times the agent has tried to reach the customer due to a busy number or no answer situation.

Outbound Campaign Calls and Call Classification (Call Rejected or Skipped)

An agent serves in an Outbound campaign named OBC1 (the campaign is in the preview mode). The dialer starts to call to 05087654321 at 12:00:00 and allocates the call to Agent1 at 12:00:10. Agent1 looks at the preview information and marks the customer as rejected or skipped at 12:00:30.

NOTE The Outbound campaign has the queue Queue8 assigned to it and calls are reported to be called from the queue’s number.

Purpose: To show essential information related to the Outbound campaign call.

“Basic conversation statistics”

- Source = 908 /* Queue8, assigned to the OB campaign */
- Destination = 05087654321



- FK_ApplicationLevel = Queue8
- FK_Channel = CallOut OB (external)
- FK_Agent = Agent1
- CountOfHandledContacts = 0
- WaitingTimeInSeconds = (12:00:30 - 12:00:10 =) 20 seconds
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = 0 seconds

“Outbound Campaign specific statistics”

- FK_OutboundCampaign = OBC1
- FK_ContactResult = Points to DimContactResult with the right value for CallResult, CustomerResult and Classifier. In this case, the value combination is:
 - For skip: CallResult= SKIP; CustomerResult= CALL;Classifier=” undefined”
 - For reject: CallResult= AGENT_REJECTED; CustomerResult= AGENT_REJECTED;Classifier=” undefined”
- OB_CallOutAccessTimeInSeconds = 0 seconds
- OB_PreviewTimeInSeconds = (12:00:30 - 12:00:10 =) 20 seconds
- OB_CountOfTotalHandledCustomers = XX (An informative value for the reporting about the total number of handled customers including this reported call.)

Other OB_xxx = 0 or 1. Column values based on the call and customer result. For more information, see *Reporting Data Guide*.

4.15 Calls with Destination Routing Data

Calls with Destination Routing Data

Agent1 makes an outbound call to the number +358505481620, which is routed to a gateway and the routing information is logged.

Purpose: To describe the FactCEMColumns usage:

- DestinationRouted: The field may contain two formats for number mask information [routing rule];[destination rule]



- The first one: A typed number after number manipulation which is based on routing rules (SwitchingRule)
- The second one: Possible destination masking which is the number Sinch Contact Pro sent to the gateway
- DestinationGW => IP address of the used gateway

For example, if routing masks +358 to be 0, and the destination mask adds the prefix 0, and calls go to PSTN through the gateway 10.10.10.10, the report shows the data listed below.

Purpose: To describe the FactCEMColumns usage

- Destination = +358505481620
- DestinationRoute = 05087654321; 005087654321
- DestinationGW = 10.10.10.10

NOTE Routing information is logged only if one of the reporting options has been chosen for the setting *Use Gateway Reporting* in *System Configurator->Call Switching->Global Switching Settings->Signaling*.

4.16 Calls with Survey Option

Call with Survey option

An inbound call arrives in Queue1 (901) from an external number 0501234567 at 12:00:00. The call is routed to Opt-In IVR (number 800). The call returns from Opt-In IVR back to queue at 12:00:10 and then the call is allocated to Agent1 for 10 seconds until the agent is free. The agent answers the call at 12:00:20. The agent ends call at 12:01:20. When agent has ended the call, the call is routed to Survey IVR (number 801) at 12:01:40. The call ends at 12:02:00.

Purpose: When the survey feature is set to the queue the Sinch Contact Pro shows 3 different calls. The first one is the inbound customer call, second is the external inbound call to Opt-In IVR and third is the internal call to the Survey IVR.

FactCEMContacts:

The first call is reported as an (external) inbound call to Queue1



- StartTime = 12:00:00
- EndTime = 12:01:20
- Source = 0501234567
- Destination = 901
- FK_Channel = CallIn (EXTERNAL-IN)
- FK_ApplicationLevel = Queue1
- FK_Agent = Agent1
- FK_Team = Team1
- NextGUID = ContactGUID of “Survey IVR” call (3rd)
- QueuingTimeInSeconds = (12:00:20 – 12:00:10) = 10 seconds
- WaitingTimeInSeconds = (12:00:20 – 12:00:00) = 20 seconds
- TalkingTimeInSeconds = (12:01:20 – 12:00:20) = 60 seconds
- CountOfAllocatedContacts = 1
- CountOfHandledContacts= 1
- CountOfDivertedContact = 0
- CountOfAnsweredOnTimeContacts=1 (QueuingTimeInSeconds is less than 20 seconds AOT).

The second call is reported as an internal IVR call.

- StartTime = 12:00:00
- EndTime = 12:00:10
- Source = 901
- Destination = 800
- FK_Channel = IVR internal (INTERNAL)
- FK_ApplicationLevel = CustomIvr Opt-In
- TalkingTimeInSeconds = (12:00:10 – 12:00:00) = 10 seconds
- CountOfAllocatedContacts = 0
- CountOfHandledContacts= 1
- CountOfDivertedContact = 1
- CountOfAnsweredOnTimeContacts=1



NOTE Opt-In IVR call does not have link to the customer call. (History event data has the event IVROrigCall info.)

The third call is reported as an internal IVR call with the `OrigGUID` value to link the customer call.

- `StartTime` = 12:01:40
- `EndTime` = 12:02:00
- `Source` = 0501234567
- `Destination` = 801
- `OrigGUID` = `ContactGUID` of customer call (first call)
- `FK_Channel` = IVR (EXTERNAL-IN)
- `FK_ApplicationLevel` = CustomIvr Survey
- `TalkingTimeInSeconds` = (12:02:00 – 12:01:40) = 20 seconds
- `PreWaitingTimeInSeconds` = (12:00:20 – 12:00:00) = 20 seconds
- `PreTalkingTimeInSeconds` = (12:01:20 – 12:00:20) = 60 seconds
- `CountOfAllocatedContacts` = 0
- `CountOfHandledContacts` = 1
- `CountOfDivertedContact` = 0
- `CountOfAnsweredOnTimeContacts` = 1



5 Conversation Statistics: Email Examples

5.1 Basic Email Handling

Inbound Email Handled

An inbound e-mail arrives in Queue6 at 12:00:00 and is allocated to Agent1 at 12:00:10. Agent1 accepts the e-mail at 12:00:20 and marks it handled 12:01:00.

Purpose: Arrived and handled e-mails reported

Arrived e-mail: `FactCEMContactsArrived` columns:

- `ArrivalTime` = 12:00:00
- `FK_ApplicationLevel` = Queue6
- `FK_Channel` = EmailIn (external)
- `CountOfArrivedContact`=1

Handled e-mails: `FactCEMContacts` columns:

- `Start time` = 12:00:00
- `End Time` = 12:01:00
- `FK_ApplicationLevel` = Queue6
- `FK_Agent` = Agent1
- `FK_Channel` = EmailIn (external)
- `WaitingTimeInSeconds` = (12:00:20 -12:00:00 =) 20 seconds
- `QueuingTimeInSeconds` = (12:00:20 -12:00:00 =) 20 seconds
- `TalkingTimeInSeconds` = (12:01:00 -12:20:00 =) 40 seconds
- `CountOfArrivedContact` = 1
- `CountOfArrivedEmails` = 0
- `CountOfHandledContacts` = 1



5.2 Inbound Email Arrived Outside Service Times

Inbound E-Mail Deleted

An inbound e-mail arrives in Queue6 at 12:00:00 and is allocated to Agent1 at 12:00:10. Agent1 accepts the e-mail at 12:00:20 and delete it at 12:01:00.

Purpose: Arrived and deleted e-mails reported

Arrived e-mail: `FactCEMContactsArrived` columns:

- `ArrivalTime` = 12:00:00
- `FK_ApplicationLevel` = Queue6
- `FK_Channel` = EmailIn (external)
- `CountOfArrivedContact` = 1

Handled e-mails: `FactCEMContacts` columns:

- `Start time` = 12:00:00
- `End Time` = 12:01:00
- `FK_ApplicationLevel` = Queue6
- `FK_Agent` = Agent1
- `FK_Channel` = EmailIn (external)
- `WaitingTimeInSeconds` = (12:00:20 -12:00:00 =) 20 seconds
- `QueuingTimeInSeconds` = (12:00:20 -12:00:00 =) 20 seconds
- `TalkingTimeInSeconds` = (12:01:00 -12:20:00 =) 40 seconds
- `CountOfArrivedContact` = 1
- `CountOfArrivedEmails` = 0
- `CountOfHandledContacts` = 1
- `CountOfDeletedEmailsContacts` = 1

5.3 Inbound Email/Pending List Usage

Inbound E-Mail, Pending List Usage



An inbound e-mail arrives in Queue6 at 12:00:00. The e-mail is allocated to Agent1 at 12:00:05, and the agent accepts the e-mail at 12:00:20. Agent1 handles e-mail and saves it to the pending list at 12:01:00. The same agent picks the e-mail at 12:02:00 and marks it handled at 12:03:00.

Purpose: To explain the `FactCEMContacts` columns (from the viewpoint of handled e-mail statistics)

- Start time = 12:00:00
- End Time = 12:03:00
- FK_ApplicationLevel = Queue6
- FK_Agent = Agent1
- FK_Channel = EmailIn (external)
- WaitingTimeInSeconds = (12:00:20 -12:00:00 =) 20 seconds
- QueuingTimeInSeconds = (12:00:20 -12:00:00 =) 20 seconds
- TalkingTimeInSeconds = (12:03:00 -12:00:20 =) 160 seconds /* calendar time, which e-mail has been being handled */
- TakingTimeAgentInSeconds = (12:01:00 -12:00:20 + 12:03:00-12:02:00 =) 100
- HoldTimeInSeconds = (12:02:00 – 12:01:00 =) 60 seconds /* calendar time which e-mail has been in pending list or being forwarded */
- SchedulebasedWaitingTimeInSeconds = (12:00:20 - 12:00:00) = 20 seconds
- SchedulebasedHandlingTimeInSeconds = (12:01:00 -12:00:20 + 12:03:00-12:02:00 =) 100 seconds

NOTE Reporting counts this as follows: TalkingTimeInSeconds – HoldTimeInSeconds = 100 seconds

- CountOfArrivedContact=1
- CountOfArrivedEmails=0
- CountOfHandledContacts=1



5.4 Inbound Email/Email Forwarding

When an e-mail is forwarded, the reporting creates internally a new conversation row to the `FactCEMContacts` table for each transfer.

Inbound E-Mail Handled by Another Agent

An inbound e-mail arrives in Queue6 at 12:00:00. The e-mail is allocated to Agent1 at 12:00:05, and the agent accepts the e-mail at 12:00:20. Agent1 handles the e-mail and forwards the e-mail to Queue7 at 12:01:00.

The e-mail is allocated to Agent2 at 12:01:50. Agent2 accepts it at 12:02:00 and marks it handled at 12:03:00.

Purpose: To describe the `FactCEMContacts` columns usage

In the first row, the `FactCEMContacts` columns usage is as follows:

- Start time = 12:00:00
- End Time = 12:03:00
- FK_ApplicationLevel = Queue6
- FK_Agent = Agent1
- FK_Channel = EmailIn (external)
- WaitingTimeInSeconds = 12:00:20 - 12:00:00 = 20
- QueuingTimeInSeconds = 12:00:20 - 12:00:00 = 20
- AllocationTimeInSeconds = 12:00:20 - 12:00:05 = 15
- TalkingTimeInSeconds = 12:03:00 - 12:00:20 = 160 /* includes transfer part */
- TalkingTimeAgentInSeconds = 12:01:00 - 12:00:20 = 40
- HoldTimeInSeconds = 12:02:00 - 12:01:00 = 60
- TransferTime = 12:01:00
- TransferTimeInSeconds = 12:03:00 - 12:01:00 = 120
- SchedulebasedHandlingTimeInSeconds = (12:01:00 - 12:00:20) + (12:03:00 - 12:02:00) = 100
- NextGUID = Transferred conversation ContactGUID
- CountOfArrivedContacts=1
- TransferNumber = Queue7 address



In the second row, the `FactCEMContacts` columns usage is as follows:

- Start time = 12:01:00
- End Time = 12:03:00
- FK_ApplicationLevel = Queue7
- FK_Agent = Agent2
- FK_Channel = EmailIn internal (internal)
- WaitingTimeInSeconds = 12:02:00 - 12:01:00 = 60
- QueuingTimeInSeconds = 12:02:00 - 12:01:00 = 60
- AllocationTimeInSeconds = 12:02:00 - 12:01:50 = 10
- TalkingTimeInSeconds = 12:03:00 - 12:02:00 = 60
- TalkingTimeAgentInSeconds = 12:03:00 - 12:02:00 = 60
- SchedulebasedHandlingTimeInSeconds = 12:03:00 - 12:02:00 = 60
- OrigGUID = first call ContactGUID

CallId is the same as the first call CallId.

5.5 Outbound Email

Outbound Email Conversation

Agent1 creates a new e-mail at 12:00:00. Agent1 writes the e-mail and sends it at 12:00:30.

- Start time = 12:00:00
- End Time = 12:00:30
- FK_Agent = Agent1
- FK_Channel = EmailOut (external)
- FK_ApplicationLevel = ContactCenter_OperDir
- CountOfArrivedContacts = 1
- CountOfArrivedEmails = 0
- CountOfAllocatedContacts = 0
- CountOfHandledContacts = 1
- AllocationTimeInSeconds = 0



- WaitingTimeInSeconds = 0
- QueuingTimeInSeconds = 0
- TalkingTimeInSeconds = 30 seconds
- SchedulebasedWaitingTimeInSeconds = 0

SchedulebasedHandlingTimeInSeconds = 30

5.6 Outbound Email/Pending List Usage

Outbound E-Mail, Pending List Usage

Agent1 creates a new e-mail at 12:00:00. Agent1 writes the e-mail and saves it to the pending list at 12:01:00. The Agent1 pick the e-mail at 12:02:00 and sends it. The Agent1 marks the e-mail handled at 12:03:00.

Purpose: To describe the `FactCEMContacts` columns usage

- Start time = 12:00:00
- End Time = 12:03:00
- FK_Agent = Agent1
- FK_Channel = EmailOut (external)
- FK_ApplicationLevel = ContactCenter_OperDir
- CountOfArrivedContacts = 1
- CountOfArrivedEmails = 0
- CountOfAllocatedContacts = 0
- CountOfHandledContacts = 1
- AllocationTimeInSeconds = 0
- WaitingTimeInSeconds = 0
- QueuingTimeInSeconds = 0
- TalkingTimeInSeconds = 180 seconds
- HoldTimeInSeconds = 60
- TalkingTimeAgentInSeconds = 120 seconds
- SchedulebasedWaitingTimeInSeconds = 0
- SchedulebasedHandlingTimeInSeconds = 120 seconds



NOTE Reporting counts `SchedulebasedHandlingTime` as follows:
`TalkingTimeInSeconds` – `HoldTimeInSeconds` = 120 seconds



6 Conversation Statistics: Chat Examples

6.1 Basic Chat

Basic “text” Chat

A **text** chat request arrives from [Customer@Jihuu.com](#) in Queue9 (Q9@SAPCctr.com) at 12:00:00. It is allocated to Agent1 at 12:00:10. Agent1 accepts the chat request at 12:00:20. Agent1 handles the chat and closes it at 12:01:00.

Purpose: To describe the `FactCEMContacts` columns usage.

- Source = Customer@Jihuu.com
- Destination = Q9@SAPCctr.com
- Start time = 12:00:00
- End Time = 12:01:00
- FK_ApplicationLevel = Queue9
- FK_Agent = Agent2
- FK_Channel = “ChatIn Text (external)”
- AllocationTimeInSeconds = (12:00:20 - 12:10:00 =) 10 seconds
- WaitingTimeInSeconds = (12:00:20 – 12:00:00 =) 20 seconds
- QueuingTimeInSeconds = (12:00:20 – 12:00:00 =) 20 seconds
- TalkingTimeInSeconds = (12:01:00 – 12:00:20 =) 40 seconds

Basic “video” Chat

A **video** chat request arrives from [Customer@Jihuu.com](#) in Queue9 (Q9@SAPCctr.com) at 12:00:00. It is allocated to Agent1 at 12:00:10. Agent1 accepts the chat request at 12:00:20. Agent1 handles the chat and closes it at 12:01:00.

Purpose: To describe the `FactCEMContacts` columns usage.

- Source = Customer@Jihuu.com
- Destination = Q9@SAPCctr.com



- Start time = 12:00:00
- End Time = 12:01:00
- FK_ApplicationLevel = Queue9
- FK_Agent = Agent2
- FK_Channel = "ChatIn Video (external)"
- AllocationTimeInSeconds = (12:00:20 - 12:00:10 =) 10 seconds
- WaitingTimeInSeconds = (12:00:20 - 12:00:00 =) 20 seconds
- QueuingTimeInSeconds = (12:00:20 - 12:00:00 =) 20 seconds
- TalkingTimeInSeconds = (12:01:00 - 12:00:20 =) 40 seconds

6.2 Chat Forwarding

Chat Forwarded to a Queue

A text chat request arrives from Customer@Jihuu.com in Queue9 (Q9@SAPCctr.com) at 12:00:00. It is allocated to Agent1 at 12:00:10. Agent1 accepts the request at 12:00:20. The agent handles it and forwards it to Queue10 (Q10@SAPCctr.com) at 12:01:00. The chat session is allocated to Agent2 at 12:01:10. Agent2 accepts it at 12:01:20. Agent2 handles it and closes it at 12:02:00.

Purpose: To describe two chats.

The first text chat:

- Source = Customer@Jihuu.com
- Destination = Q9@SAPCctr.com
- First chat: Start time = 12:00:00
- End Time = 12:01:00
- FK_ApplicationLevel = Queue9
- FK_Agent = Agent1
- FK_Channel = "ChatIn **Text** (external)"
- AllocationTimeInSeconds = (12:00:20 - 12:00:10 =) 10 seconds
- WaitingTimeInSeconds = (12:00:20 - 12:00:00 =) 20 seconds
- QueuingTimeInSeconds = (12:00:20 - 12:00:00 =) 20 seconds
- TalkingTimeInSeconds = (12:01:00 - 12:00:20 =) 40 seconds



- CountOfHandledContacts =1 /*
- TransferTime = null /* Chat does not have forward reported */
- TransferNumber = null
- TransferTimeInSeconds = null
- ContactGUID = ContactGUID1 of customer chat (first chat)
- CallId = DiscussionGUID for chat discussion id for reporting, which remain same for all chat conversation within chat discussion.

The second text chat:

- Source = Agent1@SAPCctr.com
- Destination = Q10@SAPCctr.com
- First chat: Start time = 12:01:00
- End Time = 12:02:00
- FK_ApplicationLevel = Queue10
- FK_Agent = Agent2
- FK_SecondaryAgent = Agent1
- FK_Channel = "ChatIn **Text** (internal)"
- AllocationTimeInSeconds = (12:01:20 - 12:01:10 =) 10 seconds
- WaitingTimeInSeconds = (12:01:20 – 12:01:00 =) 20 seconds
- QueuingTimeInSeconds = (12:01:20 – 12:01:00 =) 20 seconds
- TalkingTimeInSeconds = (12:02:00 – 12:01:20 =) 40 seconds
- CountOfHandledContacts =1 /* agent completed chat */
- TransferTime = null /* Chat does not have forward reported */
- TransferNumber = null
- TransferTimeInSeconds = null
- ContactGUID = ContactGUID2 of transferred chat (second chat)
- CallId = DiscussionGUID for chat discussion ID for reporting, which remains the same for all chat messages within the chat discussion.



6.3 Chat consultation

Chat consultation to an agent or a queue

The example below has a consultation chat to a queue. The chat directly to an agent would generate similar statistics: only the queue for the second chat would be ContactCenter_OperDir.

A text chat request arrives from Customer@Jihuu.com in Queue9 (Q9@SAPCctr.com) at 12:00:00. It is allocated to Agent1 at 12:00:10. Agent1 accepts the request at 12:00:20. The agent makes a consultation chat to the queue Queue10 (Q10@SAPCctr.com) at 12:01:00. The consultation chat is allocated to Agent2 at 12:01:10. Agent2 accept it at 12:01:20. Agent1 and Agent2 have short chat discussion and complete chat at 12:02:00. Agent1 continue chatting with customer and complete chat at 12:03:00.

Purpose: To describe the `FactCEMContacts` columns usage.

The first chat:

- Source = Customer@Jihuu.com
- Destination = Q9@SAPCctr.com
- First chat: Start time = 12:00:00
- End Time = 12:03:00
- FK_ApplicationLevel = Queue9
- FK_Agent = Agent1
- FK_Channel = "ChatIn **Text** (external)"
- AllocationTimeInSeconds = (12:00:20 - 12:10:00 =) 10 seconds
- WaitingTimeInSeconds = (12:00:20 – 12:00:00 =) 20 seconds
- QueuingTimeInSeconds = (12:00:20 – 12:00:00 =) 20 seconds
- TalkingTimeInSeconds = (12:03:00 – 12:00:20 =) 160 seconds
- CountOfHandledContacts =1
- ContactGUID = ContactGUID1 of customer chat (first chat)
- ConsGUID = null



The second chat:

- Source = Agent1@SAPCctr.com
- Destination = Q10@SAPCctr.com
- First chat: Start time = 12:01:00
- End Time = 12:02:00
- FK_ApplicationLevel = Queue10
- FK_Agent = Agent2
- FK_SecondaryAgent = Agent1
- FK_Channel = "ChatIn **Text** (internal)"
- AllocationTimeInSeconds = (12:01:20 - 12:01:10 =) 10 seconds
- WaitingTimeInSeconds = (12:01:20 - 12:01:00 =) 20 seconds
- QueuingTimeInSeconds = (12:01:20 - 12:01:00 =) 20 seconds
- TalkingTimeInSeconds = (12:02:00 - 12:01:20 =) 40 seconds
- CountOfHandledContacts = 1 /* agent completed chat */
- ContactGUID = ContactGUID2 of inbound consultation chat (second chat)
- **ConsGUID = ContactGUID1 of customer chat (first chat)**

NOTE The difference between chat consultation and call consultation is that there is no outgoing chat for consultation.

6.4 Conversational Chats

SMS / Facebook / xxx Chats

Conversational messaging (for example SMS and Facebook messages) can be integrated to Sinch Contact Pro and handled as chat discussions. When customer sends the first message to Sinch Contact Pro system, the system generates a chat discussion (discussion is a virtual object for reporting) and a conversation (= chat conversation in reporting). System handles outgoing and incoming messages (chat posts) into same discussion. Discussion ends when the agent marks the chat to be completed.



From the reporting point of view this means that these chat conversations are not reported in the same way as previously. The difference are dynamic chat channels that are based on the subtype information of the chat.

When an “SMS chat” arrives in the system for the first time, reporting generates dynamically new “conversation channels” for “SMS chat” (internal and external, inbound and outbound channels).

Example of “SMS chat”:

An “SMS chat” request arrives from Customer@Jihuu.com in Queue9 (Q9@SAPCctr.com) at 12:00:00. It is allocated to Agent1 at 12:00:10. Agent1 accepts the chat request at 12:00:20. Agent1 handles the chat and closes it at 12:01:00.

Basic “SMS” Chat:

A **SMS** chat request arrives from Customer@Jihuu.com in Queue9 (Q9@SAPCctr.com) at 12:00:00. It is allocated to Agent1 at 12:00:10. Agent1 accepts the chat request at 12:00:20. Agent1 handles it and closes it at 12:01:00.

Purpose: To describe the `FactCEMContacts` columns usage

- Source = Customer@Jihuu.com
- Destination = Q9@SAPCctr.com
- Start time = 12:00:00
- End Time = 12:01:00
- FK_ApplicationLevel = Queue9
- FK_Agent = Agent2
- FK_Channel = “ChatIn SMS (external)”
- AllocationTimeInSeconds = (12:00:10 - 12:00:00 =) 10 seconds
- WaitingTimeInSeconds = (12:00:20 – 12:00:00 =) 20 seconds
- QueuingTimeInSeconds = (12:00:20 – 12:00:00 =) 20 seconds
- TalkingTimeInSeconds = (12:01:00 – 12:00:20 =) 40 seconds
- ContactGUID = ContactGUID of customer chat
- CallId = ContactGUID of customer chat. This value is Chat discussion id for reporting



Other chats with different subtypes are handled in the similar way by reporting data collection.

NOTE “SMS chat messaging / posts” do not generate SMS conversations / reporting data.

6.5 Chat: SAP CRM Instant Messages

SAP CRM instant messages are routed through Sinch Contact Pro chat server(s), but they are not included into Sinch Contact Pro reporting statistics.



7 Conversation Statistics: Callback Request Examples

7.1 Basic Callback Request

Callback Request Handled with First Call

A customer 0501234567 calls to Sinch Contact Pro Queue1 at 12:00:00 and presses the pound (#) key to leave a callback request at 12:00:10. The callback request is left at 12:00:20 and the call ends.

The callback request caller starts to handle the call at 12:00:30. The call is allocated using Queue3 to Agent1 at 12:00:40. The agent answers at 12:00:45. IVR calls to the customer at 12:00:50, and the customer answers at 12:01:00. Agent1 talks with the customer and marks the call handled. The call ends at 12:02:00.

Purpose: To describe 6 reported rows.

The first call (the customer called to Queue1 and left a callback request)

- Source = 0501234567
- Destination = 901
- First chat: Start time = 12:00:00
- End Time = 12:00:10 /* call transferred to CBR-IVR */
- FK_ApplicationLevel = Queue1
- FK_Agent = null
- FK_Channel = "CallIn (external)"
- NextGUID = Callback request's GUID
- AllocationTimeInSeconds = 0 seconds // this case not allocated to any agent(s)
- WaitingTimeInSeconds = (12:00:10 – 12:00:00 =) 10 seconds
- QueuingTimeInSeconds = (12:00:10 – 12:00:00 =) 10 seconds
- TalkingTimeInSeconds = 0 seconds
- HoldTimeInSeconds = 5 seconds /* duration for call transfer / prompt playing */
- CountOfHandledContacts = 1 /* successfully transferred */
- CountOfDivertedContacts = 1



- TransferTime = 12:00:10
- TransferNumber = 906 (= Callback IVR's number)
- TransferTimeInSeconds = 0

The second call (the transferred call to Callback IVR)

- Source = 0501234567
- Destination = 906 /*Callback IVR's number*/
- Start time = 12:00:10
- End Time = 12:00:20
- FK_ApplicationLevel = CallBackIVR_906 /* IVR's numbers are reported as Queues. Queues are named as "[IVR type]_" + number */
- FK_Agent = null
- FK_Channel = "IVR (external)" /* as source is external number */
- OrigGUID = First (customer's) call's GUID
- NextGUID = null
- AllocationTimeInSeconds = 0 seconds // this case not allocated to any agent(s)
- WaitingTimeInSeconds = 0 seconds
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = (12:00:10 – 12:00:00 =) 10 seconds
- PreWaitingTimeInSeconds = 10 seconds
- PreTalkingTimeInSeconds = 0 seconds
- HoldTimeInSeconds = 0 seconds
- CountOfHandledContacts = 1 /* IVRs always "answer" */

The third conversation is the arrived callback request (callbacks reported as e-mails with arrival time and handling time)

- Source = 0501234567 /* or the number described for callback */
- Destination = 903 /* = Number, which is configured for Queue 901 as callback queue */
- First chat: Start time = 12:00:30
- End Time = 12:00:30



- FK_ApplicationLevel = Queue3
- FK_Agent = null
- FK_Channel = "CBR (External)"
- OrigGUID = null
- NextGUID = null
- AllocationTimeInSeconds = 0 seconds
- WaitingTimeInSeconds = 0 seconds
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = 0 seconds
- PreWaitingTimeInSeconds = 10 seconds
- PreTalkingTimeInSeconds = 0 seconds
- HoldTimeInSeconds = 0 seconds
- CountOfArrivedContacts = 0
- CountOfArrivedCBRs = 1
- CountOfHandledContacts = 0

The fourth conversation is the (handled) callback request

- Source = 0501234567 /* or the number described for callback */
- Destination = /* = Number, which is configured for Queue 901 as callback queue */
- First chat: Start time = 12:00:30
- End Time = 12:02:00
- FK_ApplicationLevel = Queue3
- FK_Agent = Agent1 /* agent who mark Callback request as handled*/
- FK_Channel = "CBR (External)"
- OrigGUID = First (customer's) call's GUID
- NextGUID = link to CBR internal outbound call; NOTE: These are not reported. They could be linked to an inbound internal call, which points to Queue3
- AllocationTimeInSeconds = 0 seconds // this case not allocated to any agent(s)
- WaitingTimeInSeconds = (12:00:45 – 12:00:20=) 25 seconds
- QueuingTimeInSeconds = (12:00:30 – 12:00:20=) 10 seconds
- TalkingTimeInSeconds = (12:02:00 – 12:00:50 =) 70 seconds



- PreWaitingTimeInSeconds = 10 seconds
- PreTalkingTimeInSeconds = 0 seconds
- HoldTimeInSeconds = 0 seconds
- CountOfArrivedContacts = 1
- CountOfArrivedCBRs = 0
- CountOfHandledContacts = 1 /* IVRs always “answer” */

The fifth conversation is the internal call that CBR IVR calls to Queue3 (in this case, two internal calls are logged to the history, outbound and inbound. However, only the inbound call to Queue3 is reported.)

- Source = 0501234567
- Destination = 903
- First chat: Start time = 12:00:10
- End Time = 12:00:20
- FK_ApplicationLevel = Queue3
- FK_Agent = Agent1
- FK_Channel = “CallIn CBR Int. (internal)”
- OrigGUID = null
- NextGUID = null
- AllocationTimeInSeconds = 0 seconds
- WaitingTimeInSeconds = (12:00:45 - 12:00:30 =) 15 seconds
- QueuingTimeInSeconds = (12:00:45 - 12:00:30 =) 15 seconds
- TalkingTimeInSeconds = (12:02:00 – 12:00:45 =) 75 seconds
- PreWaitingTimeInSeconds = 10 seconds
- PreTalkingTimeInSeconds = 0 seconds
- HoldTimeInSeconds = 0 seconds
- CountOfHandledContacts = 1 /* IVRs always “answer” */

The sixth conversation is the outbound call that CBR IVR makes to reach the customer. This call is then connected to Agent1

- Source = 903



- Destination =05012345678
- First chat: Start time = 12:00:45
- End Time = 12:02:00
- FK_ApplicationLevel = Queue3
- FK_Agent = Agent1
- FK_Channel = "CallOut CBR (External)"
- OrigGUID = link to Callback request contact
- NextGUID = null
- AllocationTimeInSeconds = 0 seconds
- WaitingTimeInSeconds = (12:01:00 - 12:00:45 =) 15 seconds
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = (12:02:00 - 12:01:00 =) 60 seconds
- PreWaitingTimeInSeconds = 20 seconds /* duration from CBR contact */
- PreTalkingTimeInSeconds = 70 seconds /* duration from CBR contact */
- HoldTimeInSeconds = 0 seconds
- CountOfHandledContacts =1



8 Conversation Statistics: SMS Example

8.1 Basic SMS Message

SMS Sent Using CDT

Agent1 uses CDT to send an SMS message to number 05087654321 at 12:00:05.

- Source = 501 /* Agent's CDT number */
- Destination =05087654321
- First chat: Start time = 12:00:05
- End Time = 12:00:05
- FK_ApplicationLevel = "Contact center's oper direct queue"
- FK_Agent = Agent1
- FK_Channel = "SMS (External)"
- AllocationTimeInSeconds = 0 seconds
- WaitingTimeInSeconds = 0 seconds
- QueuingTimeInSeconds = 0 seconds
- TalkingTimeInSeconds = 0 seconds
- CountOfArrivedContacts =1
- CountOfHandledContacts =1



9 Conversation Arrival Statistics

Each conversation in `FactCEMContact` is also reported to `FactCEMContactsArrived` according to the arrival time.

The `CountOfArrivedEmails` and `CountOfArrivedCbr` in `FactCEMContact` are no longer used since all conversations are reported to `FactCEMContactsArrived` according to the arrival time.

9.1 Inbound E-Mail Arrived and Handled

An inbound e-mail arrives in `Queue6` at 1.1.2014 12:00:00. There are no agents serving in the queue. `Agent1` starts serving in the queue at 2.1.2014 12:00:00. The e-mail is allocated to `Agent1` at 12:00:10. `Agent1` accepts the e-mail at 12:00:20 and marks it handled at 12:01:00.

Purpose: Arrived and handled e-mails reported

Arrived e-mail: `FactCEMContactsArrived` columns:

- `FK_Time = ArrivalTime = 1.1.2014 12:00:00-12:15:00`
- `FK_ApplicationLevel = Queue6`
- `FK_Channel = EmailIn (external)`
- `CountOfArrivedContact=1`

Handled e-mails: `FactCEMContacts` columns:

- `FK_Time = 2.1.2014 12:00:00-12:15:00`
- `Start time = 12:00:00`
- `End Time = 12:01:00`
- `FK_ApplicationLevel = Queue6`
- `FK_Agent = Agent1`
- `FK_Channel = EmailIn (external)`
- `WaitingTimeInSeconds = (12:00:20 -12:00:00 =) 20 seconds`
- `QueuingTimeInSeconds = (12:00:20 -12:00:00 =) 20 seconds`
- `TalkingTimeInSeconds = (12:01:00 -12:20:00 =) 40 seconds`
- `CountOfArrivedContact = 1`



- `CountOfArrivedEmails = 0`
- `CountOfHandledContacts = 1`



10 Agent and Queue Statistics

Queue statistics is based on agent states and agents' queue serving states.

When an agent is serving queues, the agent's activities are reported for specific queues. If a queue has no agents serving during a reporting interval, the queue statistics are not reported ("zero" rows are not reported).

The tables below show an example of an agent's work, the queues in which the agent serves, and conversation handling times. The first table shows the agent's queues and what conversations the agent handled during different time periods. The second table shows statistics collected into the agent statistics (`FactCEMAgents`). And the third table shows the statistics collected into the queue statistics (`FactCEMQueue`).





DEFAULT	Not ready	-	H											
DEFAULT	Not ready	-	AW				H							
DEFAULT	Not ready	-					H=							
							han							
							dle							
DEFAULT	Not ready	-					d							

Table 1: Agent activity and statuses in queues in different time periods

Agent fact														
Ready	Not Ready	Pause	Queue Wait.. Time	Free time	Alloc.call (resp. time)	Hand. call	Talk time	Alloc. email (resp. time)	handl. email	Email time	Alloc. chat	Hand. chat	chat time	After work
	15		15											
		15	15											
15			15	15										
15			15	15										
15				15										
15				15										
15				15										
15					1 (15)		15							
15					1 (60)		(2*15) = 15							
15							(2*15) = 15	1 (10)	0	15				
15							(2*15) = 15			15				
15							(2*15) = 15			15				
15							(2*15) = 15			15				
15					1 (60)	1	(3*15) = 15				1(75)			
15							(2*15) = 15				1(45)		15	
15							(2*15) = 15						(2*15) = 15	
15							(2*15) = 15						(2*15) = 15	
15							(2*15) = 15			15			(2*15) = 15	
15							(2*15) = 15			15		1	(2*15) = 15	
15							(2*15) = 15			15			15	
15							(2*15) = 15						15	
	15						(2*15) = 15						15	
	15						(2*15) = 15			15		1	15	
	15					1	(2*15) = 15			15				
	15							15	1	15				15
	15							15						
	15							15						
	15							15						
		15				1		15						
		15												15



Queue fact										Queue fact										Queue fact										Queue fact									
Q1					Q2					Q3					Q4																								
Co	nt	ac	t	ha	After	Ser	Not	Pa	act	/	Se	Not	Pa	ha	/	Ser	re	Pa	nd	k/	Co	nt	Aft	er	No	act	er	wor	g	e	y	e	g	p					
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11 Additional Notes for Reporting

11.1 Conversation Statistics and Linked Agent

Example case: When users look at the conversation statistics, they must be aware that the reports show statistics from the viewpoint of a conversation, not from the viewpoint of an agent. For example, a call is allocated from a queue to Agent1 for 30 seconds. The agent does not answer, so Sinch Contact Pro allocates the call to Agent2 who answers it after 5-second allocation time.

Reporting reports the example case into the following statistics:

- Conversation statistics
 - Conversation handled by Agent2
 - AllocationTimeInSeconds = 35 seconds
 - CountOfAllocations = 2. This does not mean that the call has been allocated to Agent2 for 35 seconds twice.
- Agent statistics
 - Agent1:
 - CountOfAllocatedContact = 1
 - ResponseTimeInSeconds = 30 seconds
 - CountOfHandledContact = 0
 - CallInTimeInSeconds = 0
 - Agent2:
 - CountOfAllocatedContact = 1
 - ResponseTimeInSeconds = 5 seconds
 - CountOfHandledContact = 1
 - CallInTimeInSeconds =



11.2 Conversation Statistics and Personal Call Forwarding

Example case: A call arrives in Agent1's personal number at 12:00:00 and is forwarded based on the presence profile to an external number or the voicemail at 12:00:10.

Reporting reports this example case for inbound call (contact center call)

- Conversation statistics
 - Conversation handled by Agent1
 - AllocationTimeInSeconds = 0 seconds
 - CountOfAllocations = 0
 - CountOfHandledContact = 1
 - CountOfDivertedContact = 1
 - QueuingTimeInSeconds = 10 seconds
 - TalkingTimeInSeconds = 0 or xx seconds /* for external number transfer may take some time */
 - TransferTimeInSeconds = 0 or xx seconds /* for external number transfer may take some time */
- Agent statistics /* there is no statistics point of agent since there has not been session */
 - Agent1:
 - CountOfAllocatedContact = 0
 - ResponseTimeInSeconds = 0 seconds
 - CountOfHandledContact = 0
 - CallInTimeInSeconds = 0

