

How to Perform Service Level Calculation for Calltypes

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Introduction

This document describes how exactly is Service Level calculated for each interval in a Call Type and over a reporting interval. It also shows how Service Level footer is populated for Calltype Historical All Fields reports.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Unified Contact Center Enterprise (UCCE)
- Cisco Unified Intelligence Center (CUIC)

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Problem: How to Perform Service Level Calculation for Calltypes

How exactly is Service Level calculated for each interval in a Call Type and over a reporting interval? Also how Service Level footer is populated for Calltype Historical All Fields reports?

Solution

All calls that are either answered or abandoned within a specified interval are considered to be

Service Level (SL) calls offered for that interval.

Note: Service level is not affected for calls that are neither answered nor abandoned within the service level time. For example, calls that encounter an error condition within the service level threshold do not affect the service level.

Two important configuration parameters contribute to the calculation of service level:

1. Service level threshold--the number of seconds you set as a goal to treat a call. To calculate the service level for a period of time, CCE determines the number of calls that have had a service level event within that interval. For example, if your goal is to answer 80% of calls within two minutes, you would set the service level threshold to be 120 seconds. Reports show you the percentage of calls that have had a service level event within that interval.

2. Service level type--determines how calls that abandon before the service level threshold impact the service level calculation. This is configured under System Information configuration. There are three options for service level type:

Ignore--Abandoned calls are excluded from the service level calculation.

Negative impact--Calls that abandon within the service level threshold are not counted as treated calls.

Positive impact--Calls that abandon within the service level threshold are counted as treated calls. The calculations for service level are based on the service level type defined for the service level configuration.

Here's the is the formula to calculate them:

1. IgnoreAbandCall:

$$\text{ServiceLevelCalls} / (\text{ServiceLevelCallsOffered} - \text{RouterCallsDequeued} - \text{RouterCallsAbandDequeued} - \text{ServiceLevelAband})$$

2 .Abandoned Calls has Negative Impact:

$$\text{ServiceLevelCalls} / (\text{ServiceLevelCallsOffered} - \text{RouterCallsDequeued} - \text{RouterCallsAbandDequeued})$$

3. Abandoned Calls have Positive Impact:

$$\text{ServiceLevelCalls} + \text{ServiceLevelAband} / (\text{ServiceLevelCallsOffered} - \text{RouterCallsDequeued} - \text{RouterCallsAbandDequeued})$$

They are described in Cisco Unified Contact Center Enterprise Reporting User Guide

Ignore abandoned calls:

$$\text{ServiceLevelCalls} / (\text{ServiceLevelCallsOffered} - \text{ServiceLevelAband})$$

Negative impact of abandoned calls:

$\text{ServiceLevelCalls} / (\text{ServiceLevelCallsOffered})$

Positive impact of abandoned calls:

$(\text{ServiceLevelCalls} + \text{ServiceLevelAband}) / \text{ServiceLevelCallsOffered}$

Service level threshold and type can be set for the system as a whole in UCCE System Configuration and for individual call types, skill groups, and precision queues. Settings for individual entities override those set at the system level.

Note: In order to calculate the Service Level over a Reporting Interval (also referred as SL footer) , you have to calculate the numerators and denominators separately and then apply division operation in order to get the service level.

This is exactly achieved by use of “DoNotUseSLTop” and “DoNotUseSLBottom”. As the name suggests, this is not to be used in any direct presentation. This is used to calculate the service level:

$\text{ServiceLevel} = (\text{DoNotUseSLTop}) / (\text{DoNotUseSLBottom})$

The “DoNotUseSLTop” and “DoNotUseSLBottom” are calculated as follows based on how you would see it in the report definition,

$\text{DoNotUseSLTop} = \text{CASE min(isnull(CTI.ServiceLevelType,0))}$

$\text{WHEN 1 THEN sum(isnull(CTI.ServiceLevelCalls,0)) * 1.0}$

$\text{WHEN 2 THEN sum(isnull(CTI.ServiceLevelCalls,0)) * 1.0}$

$\text{WHEN 3 THEN (sum(isnull(CTI.ServiceLevelCalls,0)) + sum(isnull(CTI.ServiceLevelAband,0))) * 1.0}$

ELSE 0 END,

$\text{DoNotUseSLBottom} = \text{CASE min(isnull(CTI.ServiceLevelType,0))}$

$\text{WHEN 1 THEN (sum(isnull(CTI.ServiceLevelCallsOffered,0)) - sum(isnull(CTI.ServiceLevelAband,0)))}$

$\text{WHEN 2 THEN sum(isnull(CTI.ServiceLevelCallsOffered,0))}$

$\text{WHEN 3 THEN sum(isnull(CTI.ServiceLevelCallsOffered,0))}$

ELSE 0 END,

The Service level types described earlier in the document are used when you select the case statement in the formula.

For Example:

In the selected calltype "Aamal_Ar_CT", although Tasks offered/Answered shows 39/39. Why is

the Service level not 100 percent?

As can be seen in the screenshot the service threshold is set as 30 secs. However for one interval the Avg Speed of Answer is high (28 secs) as compared to other interval values. Which is the reason why this interval shows 50 percent for service level. Out of 2 calls in that particular interval one must have exceeded the Service level Threshold and hence the Service level is only 50%.

Edit Aamal_Ar_CT

Department: Global

* Name: Aamal_Ar_CT

Description: Aamal Services Arabic Call Type

Service Level Threshold: System Default (30) seconds

Service Level Type: Abandoned Calls have Negative Impact

Bucket Interval: System Default (BuiltIn)

ID: 5020

Call Type Historical All Fields

Call Type Historical All Fields Only Thresholds

Call Type	Date/Time	Service Level	Abandoned Within Service Level	Avg Speed of Answer	Tasks			Completed Tasks							
					Offered	Assigned From Queue	Answered	Answer Wait Time	Handled	Abandoned	Return	Default Tr...	Netwo...	Flow	
Aamal_Ar_CT		88.24%	0	00:00:12	17	3	17	00:03:27	17	0	0	0	0	0	0
	7/10/19 9:30:00 am	100.00%	0	00:00:05	1	0	1	00:00:05	1	0	0	0	0	0	0
	7/10/19 11:00:00 am	100.00%	0	00:00:05	2	0	2	00:00:10	0	0	0	0	0	0	0
	7/10/19 11:30:00 am	100.00%	0	00:00:03	3	1	3	00:00:11	5	0	0	0	0	0	0
	7/10/19 12:30:00 pm	100.00%	0	00:00:02	1	0	1	00:00:02	1	0	0	0	0	0	0
	7/10/19 1:00:00 pm	100.00%	0	00:00:03	1	0	1	00:00:03	1	0	0	0	0	0	0
	7/10/19 4:30:00 pm	100.00%	0	00:00:03	1	0	1	00:00:03	1	0	0	0	0	0	0
	7/10/19 5:00:00 pm	0.00%	0	00:00:00	1	0	0	00:00:00	0	0	0	0	0	0	0
	7/10/19 5:30:00 pm	0.00%	0	00:01:51	0	1	1	00:01:51	1	0	0	0	0	0	0
	7/10/19 6:00:00 pm	100.00%	0	00:00:04	1	0	1	00:00:04	1	0	0	0	0	0	0
	7/10/19 7:00:00 pm	100.00%	0	00:00:03	1	0	1	00:00:03	1	0	0	0	0	0	0
	7/10/19 7:30:00 pm	75.00%	0	00:00:12	4	1	4	00:00:51	4	0	0	0	0	0	0
	7/10/19 10:00:00 pm	100.00%	0	00:00:04	1	0	1	00:00:04	1	0	0	0	0	0	0

In this example, Service Level Type was set as Abandoned calls have negative impact so all the calculation is based on this formula:

$$\text{Service Level} = \frac{\text{sum(isnull(CTSG.ServiceLevelCalls,0)) * 1.0}{\text{sum(isnull(CTSG.ServiceLevelCallsOffered,0)) - \text{sum(isnull(CTSG.RouterCallsDequeued,0))} - \text{sum(isnull(CTSG.RouterCallsAbandDequeued,0))}}$$