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# Genesys Engage cloud Reporting Guide

How do I use formulas to customize reports?

# How do I use formulas to customize reports?

## Important

This content may not be the latest Genesys Engage cloud content. To find the latest content, go to [Reporting in Genesys Engage cloud](#).

When a report template doesn't provide the statistics that you want, you can use a formula to retrieve specific key performance indicators (KPIs).

Who can create these statistics? If you can create and edit Genesys Pulse templates, you can use formulas.

- [Where can I add my formula?](#)
- [How can I display percentages in my reports?](#)
- [How can I display Agent Status KPIs?](#)
- [How can I display interaction properties?](#)

Once you know how to use the formulas, you can use [the function library](#) for Genesys Pulse standard templates.

## Where can I add my formula?

The screenshot shows a 'Clone a Template' dialog box with a 'Statistics' tab. On the left, under 'All Statistics', there is a list of statistics: Current Calls, Entered, Abandoned, Cleared, Forwarded, Answered, Answered No Wait, and Answered < 10s. Each item has edit and delete icons. At the bottom of the list are 'Up', 'Down', and 'Add New' buttons. On the right, the 'Description' field is empty. Below it, the 'Display Format' dropdown is set to 'Time'. The 'Formula' checkbox is checked. Below the checkbox is a large text area for the formula. At the bottom right of the dialog are 'Save' and 'Cancel' buttons. At the very bottom of the dialog are 'Previous', 'Next', and 'Cancel' buttons.

From the statistic detail pane while editing a widget or template, you can create or customize statistics by creating a formula.

The formula uses a javascript-based syntax, which lets you calculate expressions with values given by other statistic and use functions provided by Genesys for more specific calculations. For example, you can calculate the ratio of the calls abandoned to the calls offered in your queue to measure the percentage of abandoned calls in your queue.

## How can I display percentages in my reports?

Clone a Template

**Statistics**

All Statistics

		Current Calls	
		Entered	
		Abandoned	
		Cleared	
		Forwarded	
		Answered	
		Answered No Wait	
		Answered < 10s	

Up Down Add New

Description

Display Format \*

Percent

☒ Formula

Percentage

Formula

```
if ((Data.Outbound.Value + Data.Inbound.Value) != 0)
Result = 100 * Data.Outbound.Value / (Data.Outbound.Value +
Data.Inbound.Value);
else Result = 0;
```

Save Cancel

Previous Next Cancel

Let's say you want to display percentages based on two metrics. Just copy the following example using the statistics you want.

In this example, we want to retrieve the percentage of outbound calls out of the total of both inbound and outbound calls. The formula can access any statistic within a template with the following syntax: `Data.Statistic-Alias.Value`. The formula must return a valid `Result` value.

In the following formula, we assume the outbound calls are defined by a statistic alias `Outbound` and the inbound calls are `Inbound`.

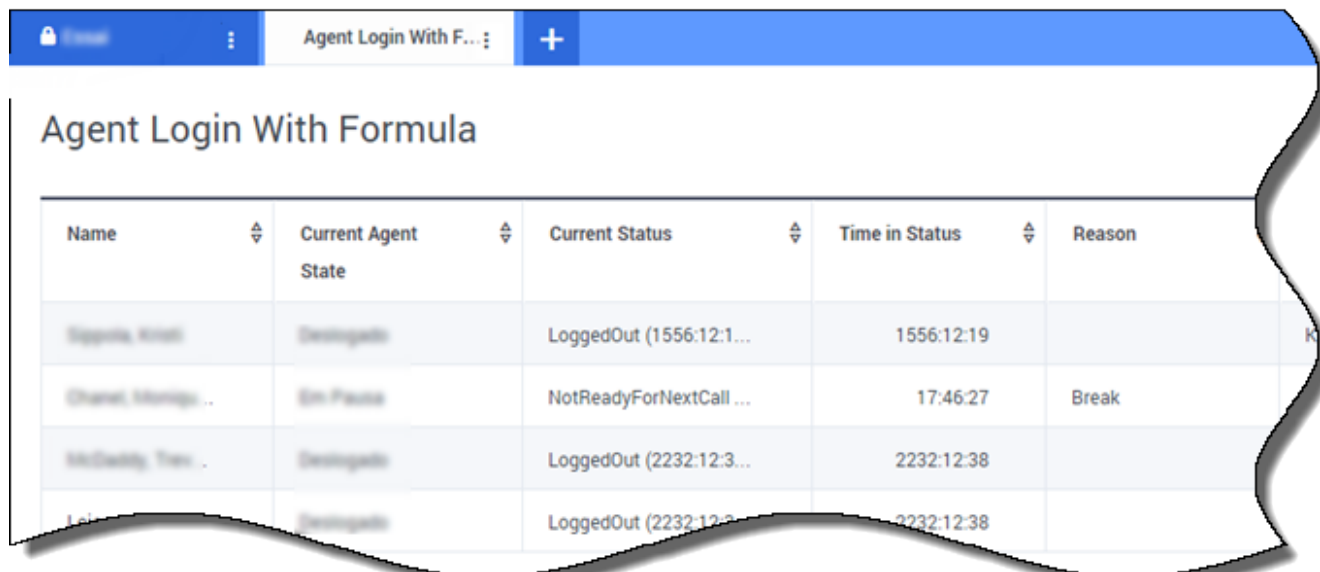
### Formula: Calculate a Percentage

```
if ((Data.Outbound.Value + Data.Inbound.Value) != 0)
Result = 100 * Data.Outbound.Value / (Data.Outbound.Value + Data.Inbound.Value);
else Result = 0;
```

How do I use formulas to customize reports?

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How can I display Agent Status KPIs?



The screenshot shows a report interface with a blue header bar containing a search icon, a filter icon, and a plus icon. The report title is 'Agent Login With Formula'. Below the title is a table with the following data:

Name	Current Agent State	Current Status	Time in Status	Reason
Support, Kristi	DesiredState	LoggedOut (1556:12:1...	1556:12:19	
Chanel, Monique ..	On Pause	NotReadyForNextCall ...	17:46:27	Break
McQuay, Tim ..	DesiredState	LoggedOut (2232:12:3...	2232:12:38	
Le...	DesiredState	LoggedOut (2232:12:3...	2232:12:38	

Let's say you want to display KPIs for agent status. Just use the Current\_Status statistic.

### [+] How the Current\_Status statistic is defined.

The Current\_Status statistic is defined by Stat Server options properties. The statistic type ExtendedCurrentStatus returns a specific object that can be further analyzed to provide only the Duration of the object.

```
[ExtendedCurrentStatus]
Category=CurrentState
MainMask=*
Objects=Agent
Subject=DNAAction
```

You can use formulas to find the information you need:

### [+] Show agent time in current state

You can display the agent status duration using the Current\_Status statistic.

**Formula: Get Status Duration**

```
Result = G.GetStatusDuration(Data.Current_Status.Value);
```

### [+] Show the Reason Code selected by the agent

You can display the reason code for the agent status.

#### Formula: Get Reason Code

```
Result = G.GetReasonCodes(Data.Current_Status.Value);
```

If you want to display more user data in addition to the Reason Code, you need to enable the Additional Data property (User Data) of the statistic and apply a formula to filter only the Reason Code from the resulting Current\_Status, which contains both the User Data and Reason code.

#### Formula: Filter only Reason Code

```
var res = G.GetReasonCodes(Data.Current_Status.Value);
var x = res.split(';');
Result = "";
for (var i = 0; i < x.length; i++) {
    var s = x[i];
    if (s.indexOf("Break") > -1 ||
        s.indexOf("Offline") > -1 ||
        s.indexOf("Training") > -1 ) { Result = s; break; }
}
```

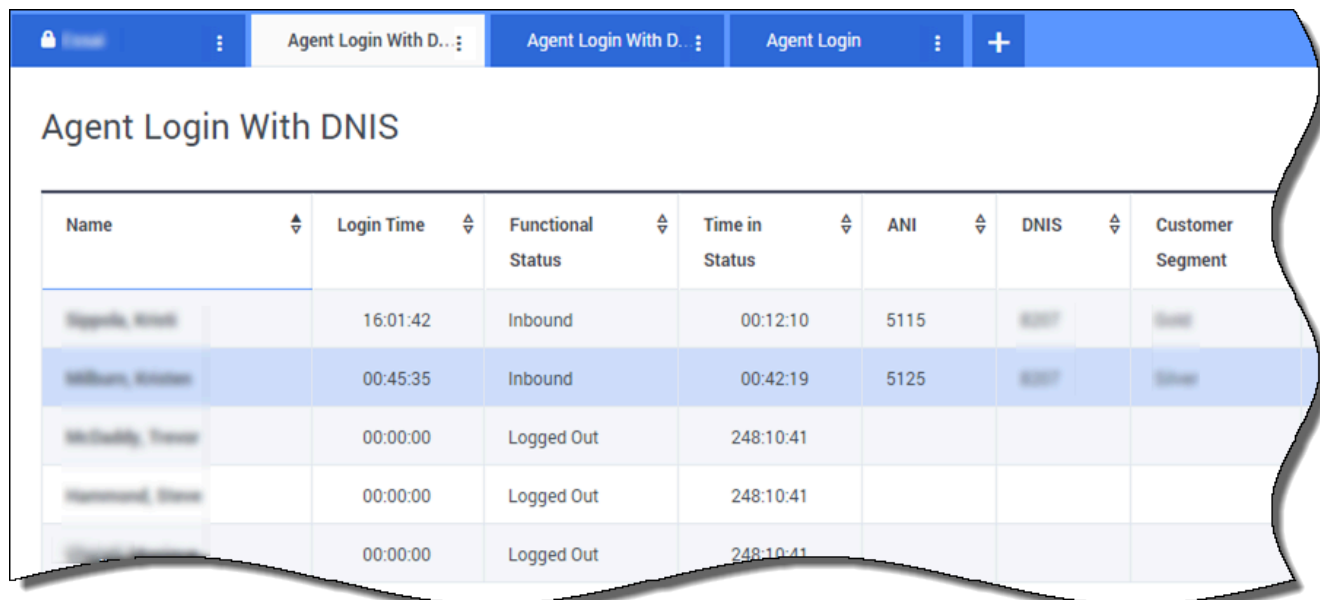
### [+] Show current agent state by media type

You can display the current agent state by media type.

### Formula - Get agent state by media type

```
Result = G.GetAgentStatusPerMedia (Data.Current_Status.Value,  
'email');
```

## How can I display interaction properties?



Name	Login Time	Functional Status	Time in Status	ANI	DNIS	Customer Segment
Agarwal, Anil	16:01:42	Inbound	00:12:10	5115	8007	Gold
Williams, Kristin	00:45:35	Inbound	00:42:19	5125	8007	Silver
McQuibbly, Trevor	00:00:00	Logged Out	248:10:41			
Hammond, Steve	00:00:00	Logged Out	248:10:41			
Shankar, Prakash	00:00:00	Logged Out	248:10:41			

Let's say you want to display interaction properties including flow segmentation, ANI, and DNIS. You can use formulas to find the information you need:

### [+] Show the customer segment of the interaction

You can display the customer segment defined by the CustomerSegment key-value pair of the interaction by using the following formula.

#### Formula: Get Customer Segment

```
Result = G.GetSegment(Data.Current_Status.Value);
```

#### **[+] Show the ANI of the customer**

You can display the ANI of the customer by using the following formula.

##### **Formula: Get ANI**

```
[Result = G.GetANI (Data.Current_Status.Value);
```

#### **[+] Show the DNIS of the customer**

You can display the DNIS of the customer by using the following formula.

##### **Formula: Get DNIS**

```
Result = G.GetDNIS (Data.Current_Status.Value);
```