Designer User's Guide

Statistic Block

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- Administrator

Use this block to retrieve statistics that can be used for routing interactions.

Related documentation:

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You can use the **Statistic** block in the **Assisted Service** phase to get the statistic value on queues or agent groups. These statistics can be used in the segmentation logic to route calls.

Using this Block

Click **Add Assignment** to add a statistic.

Select a variable in the **Variable** drop-down menu.

Click the **Type** drop-down menu to select the type of statistical value: current (**default**), **minimum**, **maximum**, or **average**.

Click the **Statistic** drop-down menu to select a statistic. For more information, see Statistic Types.

Click the **Object** drop-down menu to select the Agent Group or Queue for which the statistic is needed. When using a variable, the variable value must be a string in the form `ObjectName@.Type`, where the type can be one of Q (Queue) or GA (Agent Group), (for example, `Billing@.Q`).

Statistic Types

The following statistic types are available on the Statistic block:

Agent Loading

This statistic selects agents within an agent group and calculates a vector based on three values:

- The number of busy DNs.
- The agents' time in Ready state (the same value as the **Time In Ready State** statistic)
- A random number.

How It Works

The following assumes you are routing to multiple agents who are available in a group, and the routing engine must select one agent. The engine always selects an agent in the group according to **Agent Loading** statistics. It does this as follows:

- Evaluating the number of busy DNs and selecting the agent with the lowest number of busy DNs.
- If the number of busy DNs is equal among the agents, the routing engine selects the agent with the longest time in Ready state.
- If time in Ready state is equal among the agents, the routing engine uses a random number.

> ### Important
> The **Agent Loading** statistic works for agents only - it is not used for Agent Groups.

Agent Loading Media

This statistic is similar to **Agent Loading**, but it also considers other media types, such as chat and email channels.

The **Agent Loading Media** statistic ensures that the routing engine always distributes interactions evenly among agents.

Agent Occupancy

This statistic enables the routing engine to route interactions to the least occupied agent (the agent with the lowest occupancy rate). The occupancy rate is determined by the ratio between the time the agent has been busy since last login compared to the agent's total login time.

The **Agent Occupancy** statistic enables the routing engine to evaluate multiple available agents and select the least occupied agent, which balances the workload among available agents.

Agent Occupancy is defined and calculated when the agent logs in and can be used only in statistics that are applied for an agent. This statistic cannot be used with agent groups.

How it works

Consider the following scenario:

- After login, Agent 1 was on a call for five minutes and was in a Ready state for five minutes. His occupancy is 50 per cent (5 / (5+5)).
- After login, Agent 2 was on a call for one minute and was in a Ready state for two minutes. His occupancy is 33 per cent (1 / (1+2)).

When using the **Agent Occupancy** statistic, the routing engine distributes an incoming interaction to Agent 2, as he is the least occupied agent.

Agent State

This statistic provides the current status of agents.

How it works

You can use the **Agent State** statistic when you want to make a routing decision based on the status of your agents (for example, the number of agents logged out, ready, or not ready).

> ### Important
>
> To use this statistic, the application developer must first create and format the variable value for agent ID (for example, @.A.)

Agents Available

This statistic provides the current number of agents in Ready State within one or more agent group at any given point of time.

How it works

You can use the **Agents Available** statistic when you are routing to multiple agent groups and you want to make a routing decision based on agent availability in each group.

Agents Busy

This statistic provides the number of busy agents in an agent group at any given point of time.

How it works

You can use the **Agents Busy** statistic when you are routing to multiple agent groups and you want to make a routing decision based on the number of busy agents in each group.

Agents in Queue Login

This statistic provides the current number of agents who are logged into a queue. This applies to agents logged into a virtual queue or an ACD queue.

How it works

You can use the **Agents in Queue Login** statistic when you are routing an interaction and you want make a routing decision based on the number of agents logged into one or more specific queues.

Agents in Queue Ready

This statistic provides the current number of agents who are logged into a queue and in Ready state. This applies to agents logged into a virtual queue or an ACD queue.

How it works

You can use the **Agents in Queue Ready** statistic when you are routing an interaction and you want to make a routing decision based on the number of agents who are logged into one or more specific queues and are also in Ready state.

Agents Total

This statistic provides the total number of agents who are logged into an agent group.

How it works

You can use the **Agents Total** statistic when you are routing an interaction and you want to make a routing decision based on the number of agents who are logged into a specific agent group.

> ### Important
>
> Capacity Rule might affect the number of available agents that is reported by the **Agents Total** statistic. For example, if an agent is already handling the maximum number of interactions, as defined by a Capacity Rule, then the **Agents Total** statistic does not include this agent.

Calls Answered

This statistic provides the total number of calls answered by an agent or agent group.

How it works

You can use the **Calls Answered** statistic when you are routing an interaction to multiple agent groups and you want to make a routing decision based on the total number of calls answered by a specific agent group and pick the agent group with the lower total.

Calls Completed

This statistic provides the total number of calls that have been completed by an agent or agent group. This includes all types of calls (inbound calls, outbound calls, internal calls, and so on).

How it works

You can use the **Calls Completed** statistic when you are routing an interaction to multiple agent groups and you want to make a routing decision based on the total number of calls that have been completed by a specific agent group and pick the agent group with the lower total.

Calls in Queue

This statistic provides the current number of calls that are waiting in a specific queue. This could be an ACD queue or a virtual queue.

How it works

You can use the **Calls in Queue** statistic when you are routing an interaction to multiple queues and you want to make a routing decision based on the total number of calls in a specific queue and pick the queue with the lower total.

Calls Waiting

This statistic provides the current number of interactions waiting for a specific target. It takes into account all the interactions that are waiting for the targeted skill level, both directly and through groups. This statistic applies to the following objects:

- Agent.
- Agent Group.
- Destination Label.
- Place.
- Place Group.
- Queue (virtual and ACD).
- Queue Group.
- Routing Point (virtual and ACD).

How it works

You can use the **Calls Waiting** statistic when you are routing an interaction to multiple targets and you want to make a routing decision based on the total number of calls waiting for a specific target and pick a target with the lower total.

Estimated Waiting Time

This statistic provides the estimated wait time for queued calls, based on the average talk time and average answering time. This statistic applies to queues such as ACD queues, virtual queues, and routing points.

> ### Important
> This statistic does not take into account calls that are in transition.

Stat Server calculates the **Estimated Waiting Time** statistic according to the formula below:

```
LB =

If (ALI= 0) /*no agents at all, wait forever*/ 10,000,000,000

Else if (AR
```

Expected Waiting Time

Similar to the **Estimated Waiting Time** statistic, the **Expected Waiting Time** statistic also provides wait-in-queue estimates for the last interaction that entered a virtual queue. This statistic has been designed for the multimedia model but assumes agents cannot handle more than one simultaneous non-voice interaction at a time.

This statistic applies to all types of media and is calculated and refreshed internally for the last 600 seconds.

Load Balance

Load balancing between routing targets helps to ensure there is an equal distribution of interactions among queues, DNs, agent groups and queue groups. This statistic considers the number of calls distributed between objects, the percentage of busy agents, the expected waiting time, or other routing features.

When this statistic is defined, the routing engine automatically counts calls that are routed to different DNs and queues and adjusts the logic so there is an equal distribution of interactions across the specific DNs or queues.

Position in Queue

This statistic provides the exact position of an interaction in a queue. Interactions can be moved based on their position in the queue. Interactions of high value can be moved to a different queue to provide a quicker response.

Service Factor

This statistic is a percentage/interval pair that specifies a certain percentage of interactions must be handled in a certain period of time (for example, 80 percent of interactions in 20 seconds). The statistic is applied against an agent group.

The routing engine calculates the **Service Factor** at an interval of every 50 interactions or 30 seconds. Based on this information, the routing engine decides whether to expand or contract the current set of agents available for the next interval.

The internal algorithm within the routing engine calculates and manages this scenario based on three values:

- SLReal = The percentage of calls distributed in Y seconds.
- SLWarn = The percentage of calls distributed in $3/4 * Y$ seconds.
- AWT = The average waiting time for distributed calls.

The routing engine uses SLReal, SLWarn, and AWT to determine whether to adjust the current group of target agents as follows:

- If SLReal equals the **Service Factor** percentage, the routing engine makes no change to the current working agent group.
- If SLReal falls below the specified service factor (*SLReal*), *the routing engine compares the current AWT*

with the AWT previously measured.

- If the current AWT is less than the previous AWT, the **Service Factor** is improving. The routing engine assumes that the service factor will continue improving and makes no change to the current working agent group.

- If the current AWT is greater than the previous AWT, the routing engine adds agents to the working agent group according to the formula *1/4*(N-M)*, where *N* equals the number of selected agents and *M* equals the ideal set of agents.

- If the **Service Factor** level is acceptable but SLWarn is less than the percentage that should be achieved in *3/4 * Y* seconds for *X* per cent that was set as the **Service Factor**, the routing engine initiates one of the following preventive actions:

  - If the current AWT is greater than or equal to the previous AWT, the routing engine adds agents to the working agent group according to the formula *1/8 * (N-M)*.

  - If the current AWT is less than the previous AWT, the routing engine tries to reduce the number of agents in the current working agent group according to the formula *1/8 * (N-M)* for only those agents who are not ideal.

  - If the service factor SLWarn is greater than or equal to *Y* and the current AWT is less than the previous AWT, the routing engine tries to reduce the number of agents in the current working agent group according to the formula *1/4 * (N-M)* for only those agents who are not ideal.

> ### Important
> Routing Platform cannot reduce the number of working agents if all agents are currently handling interactions.

Time in Ready State

This statistic provides the total current time of an agent in Ready state. It is calculated based on availability - that is, there is no activity currently in progress on a particular DN and the agent has placed the DN in Ready state. The **Time in Ready State** statistic aggregates the total time for the state and this information can be used to build the target list.

You can use the **Time in Ready State** statistic to route interactions to the agent that has been waiting in Ready state for the longest time.