Routing and Queuing

Routing

When Webex CCE software receives a routing request, it determines the appropriate destination for the call by executing routing scripts.

These scripts use real-time information about activity at the contact centers to find the destination best able to handle the call. You can monitor how the system is handling calls and can make changes to the scripts when needed, using the Script Editor.

A destination (called a *routing target*) can be a network target such an announcement or a ring, or a skill target such as an agent, a skill group, or a service. Once these targets are defined in the Configuration Manager, they can be specified in the routing script.

Post-routing

Post-routing is a routing decision made after the call has initially been processed at a VRU or call center. Post-routing enables Webex CCE to process calls when an ACD, VRU, or PBX generates a route request via the PG.

Webex CCE executes scripts to process the route request and return the destination address. This directs the ACD/PBX to send the call to an agent, skill group, service or Call Type in the same call center or at a different call center. In making a post-routing decision, Webex CCE software can use all the same information and scripts used in pre-routing.

A post-routing is sent by the peripheral to refine the original route or redirect the call.

Note   Your *ACD Supplement Guide* describes the features of Webex CCE post-routing available with the ACD, as well as any considerations you should be aware of when using post-routing or Translation Routing on the PG.

Skills-Based Routing

Skills-based routing is a routing decision whereby a call is routed to the skill group that has agents with the appropriate expertise.

Queuing

Queued calls are calls that are being held until an agent is available.

Webex CCE software calculates a number of call center metrics based on the time spent in queues.

It is important to understand the two models of queuing and how queuing affects reporting metrics.

ACD Queuing

ACD queues are used to queue calls on a targeted ACD and are *controlled by the ACD*.

Webex CCE might route a call to the ACD, based on knowledge gathered by the PGs that a certain skill group or service at that ACD is best suited to answer the call.

Once the call arrives at the ACD, if an agent is not available, the ACD queues the call to the skill group. Optionally a call can be queued to a skill group on the ACD during agent transfers or resulting from a call treatment provided on the ACD.

Enterprise Queuing

*Webex CCE controls*Enterprise queues using the Service Control Interface (SCI), irrespective of the telephony platform chosen to queue the call.

In this model, calls are held at a "network-level" VRU that has an enterprise view of available agents, based on the skill groups and services configured for the peripheral.

The following telephony platforms are supported for Enterprise queuing:

- Cisco Voice Portal and Cisco IP-IVR, when connected to Webex CCE by a VRU PG

- A third-party VRU that supports service control and is connected to Webex CCE by a VRU PG

- A VRU at the TDM Network that supports service control and is connected to Webex CCE by a NIC

- For deployments where Webex CCE provides integration to an ACD for agent level routing, the ACD itself is used as the telephony platform that queues the call as the Webex CCE directs.

Enterprise queues are an efficient way to route a call in your enterprise network. Enterprise queues are also a cost-effective way to save on toll charges before terminating a call on the ACD.

How Calls Offered and Calls Queued Are Incremented

The Skill_Group_Real_Time database tracks calls offered and calls queued in separate fields.

Therefore, there is no double counting of calls queued and offered at the ACD and calls queued and offered at the network.

Effect of Enterprise Queues on Reporting

The use of enterprise queues affects Call Type, Skill Group, and Service reporting.

The reporting metrics that are affected include queued metrics, answered metrics, service level metrics, and abandoned metrics.

The reporting of these metrics is also affected by whether or not the call was routed when sent to an ACD. For more information, see, Routing.

Note

- Some reporting metrics for skill groups and call types are applicable only if calls are translation routed.

- Translation routing plays a significant role in the accuracy of reporting. Some reporting metrics gathered for Call Types and skill groups are applicable only if calls are translation routed. Calls can be translation routed either to a VRU Peripheral or to an ACD.

- Translation routing is primarily applicable when Webex CCE software is used for Enterprise Routing to traditional ACDs. This includes deployments connected to legacy ACDs using any supported TDM PG such as Aspect PG and deployments connected to Cisco Unified System Contact Center using Webex CCE Gateway PG. Translation Routing enables Webex CCE for cradle to grave reporting.

- For deployments where Webex CCE provides integrations to an ACD for Enterprise Routing, the following is true:

  - Webex CCE system reports on ACD queue metrics.

  - When Webex CCE software is used to provide initial call treatment and/or enterprise queuing, Webex CCE software reports on enterprise queue metrics. However, once the call is routed to an ACD the ACD may queue the call. In this case, Webex CCE software reports on both enterprise queue and ACD queue metrics.

  - Webex CCE system uses a Service Control VRU as the telephony platform for enterprise queuing.

- Reporting is the same whether Webex CCE script uses a Send To VRU node or a Translation Route To VRU node.

Call Type Metrics

When a call is translation-routed:

- The *AnswerWaitTime*, *ASA*, and *Service Level* include both the time spent in the Enterprise queue and the time spent in the ACD queue.

  The measurement of AnswerWaitTime for a call begins when the call is queued. The measurement of Service Level begins when the call arrives at the routing script or when its Call Type is changed.

  This method of measurement means that if self-service is performed on a call before the call is queued to an agent, the routing script must be set up to change the Call Type when self-service is completed. Otherwise, the time spent in self-service will negatively impact the Service Level.

- *Abandoned* statistics are classified in three ways:

  - Calls that abandoned while ringing at the agent desktop.

- Calls that abandoned in an Enterprise queue while waiting for an available agent.

- Total number of calls that abandoned. This number includes calls that abandoned in a VRU (prompting), calls abandoned in both Enterprise queue and ACD queue, and calls that abandoned at the agent.

> **Note** Although the total abandons includes calls that abandoned at the ACD, there is no separate count for only those calls that abandoned at the ACD.

When a call is not translation-routed:

- The Call Type *Abandoned* metrics allow you to determine the number of calls that abandoned in an enterprise queue while waiting for an available agent and the number of calls that abandoned while in self-service.

  However, they do not allow you to determine the number of calls that were abandoned after they left the VRU and before an agent answered them.

- The Call Type *Answered* metrics will always be zero and are not applicable.

- The Call Type *Service Level* metrics are not applicable.

Skill Group Metrics

When a call is translation-routed:

- The Skill Group *Answered* metrics include only time spent in the ACD queue.

When a call is not translation-routed:

- The Skill Group *Queued* metrics are applicable.

- The Skill Group *Abandoned* metrics allow you to determine the number of calls that abandoned in an enterprise queue while waiting for an available agent, but they do not allow you to determine the number of calls that abandoned after they left the VRU and before an agent answered them. The ACD report shows calls that abandoned after they arrived at the ACD.

- The Skill Group *Answered* metrics do not include any time spent in the enterprise queue and therefore are not applicable.

> **Note** None of the skill group metrics include time spent in self-service, or calls that ended during self-service. A call is not associated with a skill group until it is queued, and a call is queued after self-service is complete.

Service Metrics

If a Service Control VRU is used for VRU application, the Service metrics can be used to provide performance measures for the VRU service. The type of VRU and configuration determines the information and usefulness of the metrics reported for the VRU service.

The metrics reported for Webex CCE Services defined for the ACD peripherals do not include any time spent in the enterprise queue. Hence the service metrics are not useful when using an enterprise queue.

Precision Queues

Precision Routing is a feature available with Cisco Webex CCE. Precision Routing enhances and can replace traditional routing. Traditional routing looks at all the skills to which an agent belongs and defines the hierarchy of skills to map business needs. However, traditional routing is restricted by its single dimensional nature. Precision Routing provides multidimensional routing with simple configuration, scripting, and reporting. Agents are represented through multiple attributes with proficiencies so that the capabilities of each agent are accurately exposed, bringing more value to the business.

You can use a combination of attributes to create multidimensional precision queues. Using Webex CCE scripting, you can dynamically map the precision queues to direct a call to the agent that best matches the precise needs of the caller.

For more information on precision routing, see the *Cisco Unified Contact Center Enterprise Features Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-feature-guides-list.html.

Note Precision Routing is supported only on Webex CCE Communications Manager PG.

Note Precision Routing is only supported for inbound Webex CCE agents.