Unified ICME Warm Consult Transfer/Conference

When an agent attempts a warm consultative transfer/conference to another agent, but there is no agent available in the skill group to service the request, the first agent is placed in a queue to wait for the availability of an agent in the desired skill group. To place the first agent in queue, a call is initiated from Unified CM to Unified Customer Voice Portal (CVP), via a Translation Route to VRU, to provide queue music to the first agent. To Unified CVP, this appears as a new call from an IP phone.

Optionally, customer business call flows may require that IP phone users call Unified CVP directly. For example, you may have a corporate IP phone network that is serviced by a Unified CVP help desk call center. IP phone users with problems would call a Unified CVP number to open trouble tickets.

This chapter provides information about the minimal software component release requirements for the Unified ICME Warm Consult Transfer and Conference to Unified CVP feature for Type 7 VRUs. Resource sizing and configuration requirements are also included.

> ✎ **Note** For information about using the Warm Consult Transfer feature with SIP and Type 10 VRUs, see Warm Transfer with SIP Calls, on page 3. For configuration procedure of Call Director and Comprehensive call flow models using SIP, see Unified CVP Call Flow Models.

Configure Unified ICME Warm Consult Transfer/Conference to Unified CVP

Procedure

Step 1 Install a new Call Server (see *Installation and Upgrade Guide for Cisco Unified Customer Voice Portal* for detailed information).

> **Note** It can be configured identically to all other Unified CVP machines, with the exception that you must add each Translation Route DNIS.

- Define it as a Type 7 VRU in the Network VRU Explorer tool in Unified ICME.

- **Network Transfer Preferred** must be disabled for this peripheral.

- Add a new DNIS in the **Add DNIS** box on the ICM tab in the Operations Console. Ensure to add each translation route DNIS.

Step 2 If the Unified CVP machine resides in a different location from the Unified CM cluster initiating the calls, WAN bandwidth is a consideration because the prompts are played G.711 from the Unified CVP machine. In this case, size and configure the network appropriately. Wherever possible, Unified CVP should be co-located with Unified CM to eliminate these bandwidth requirements.

Step 3 Define a SIP trunk in the Unified CM, using the Unified CVP machine IP address as the Destination address in **Device** > **Trunk** > **SIP Information**.

Step 4 (Perform this step for IP-originated calls only). Determine if customer business call flows require that IP phone users call Unified CVP directly. In Unified CM administration, in "Route Plan" using route groups/lists/patterns, route Unified CVP DNIS's to the Unified CVP gateway installed in Step 1.
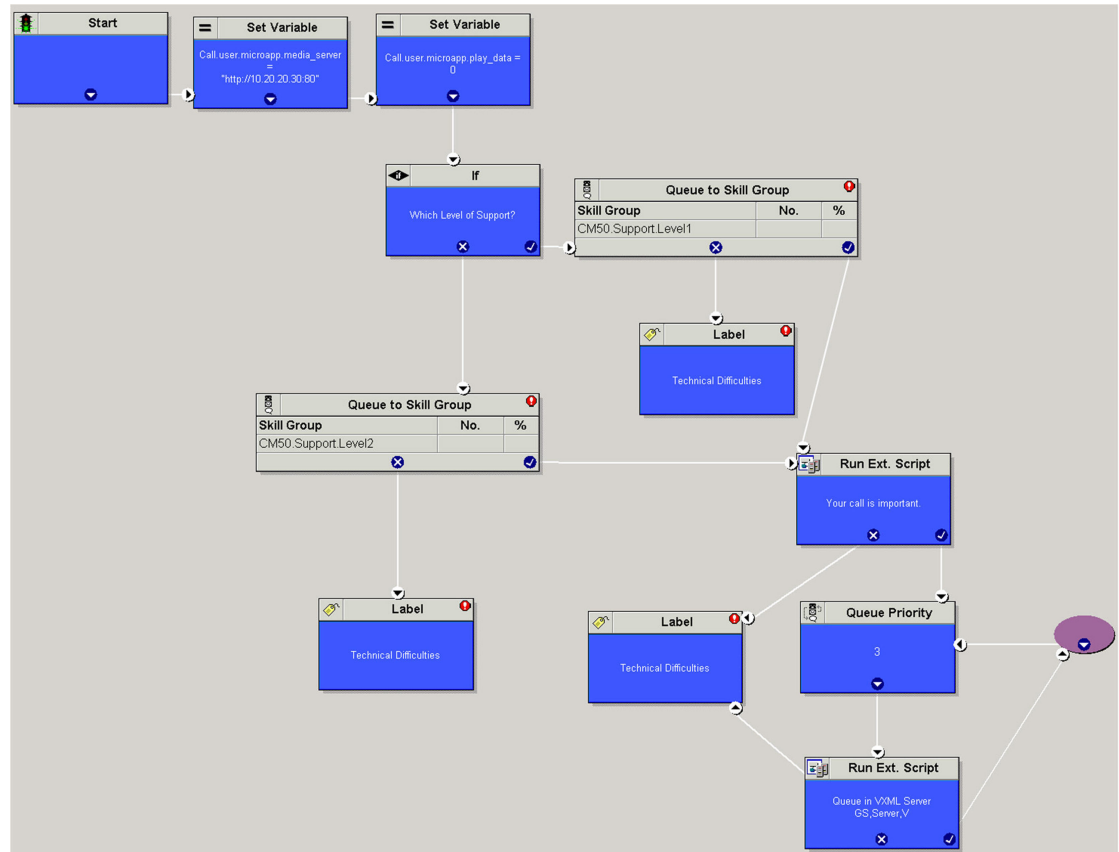
If you want to load-balance between two Unified CVP systems:

- Create a route group and put both of the Unified CVP gateways in the route group, both with order priority 1.

- Create a route list and put the route group in the route list.

- Create a route pattern and assign the route list to the route pattern.

- In Service Parameters for Unified CM, set **Reorder Route List** to **True** and the **H225 TCP timer** to **5**.

Note The Reorder Route List setting applies only for Unified CM 3.3 and earlier.

Step 5 Create a Unified ICME script similar to the script below. (See the Unified ICME documentation for details). This script should be tied to the Dialed number and call type that the agent invokes to do a warm consultative transfer/conference. This dialed number's Routing Client should be associated with a Unified CM peripheral from which the agent will be invoking the transfer or conference.

Figure 1: Unified ICME Script

Minimal Component Version Requirement

See the https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html for the list of component versions that are required to use the Unified ICME Warm Consult Transfer and Conference to Unified CVP feature.

Warm Transfer with SIP Calls

If an agent performs a warm transfer to another agent and then that agent is queued, or a SendToVRU label returns to Unified CM using jtapi on the Unified CM PG connection, then you must associate a Route Pattern for that label with a SIP TRUNK to send to Unified CVP or the Proxy Server to ensure the call returns to Unified CVP. Unified CVP then sends the **request instruction** message back to Unified ICME on the Unified CVP routing client and starts the queuing.

Note   These SIP calls do not require MTP enablement on the SIP trunks.

When using the Warm Transfer feature for SIP Calls with queuing, and the agent completes a consult transfer to ther caller while the call is still in the queue (VXML Gateway), then the call flow does not require MTP enabled on the SIP trunk that is associated with the VRU label route pattern.

Note The MTP is not required if VXML GW version is IOS 12.4.(15)T8 or 12.4(20)T2 or later versions on these T releases. In cases, where there is SIP DTMF capability mismatch, MTP is required between Unified Customer Voice Portal (CVP) and Cisco Unified Communications Manager (CUCM).

Set Up Unified ICME Warm Consult Transfer

Note Unified CVP with a Type 10 VRU does not support multiple Network VRUs on the same Unified CVP peripheral device. Multiple customer instances can be used in order to address multiple Network VRUs, but they must then address different physical Unified CVP Call Servers as well. Calls that originate from an ACD or Unified CM, such as Warm Transfer/Conference, Helpdesk, or Outbound calls, are also limited to one Network VRU on any given Unified CVP Call Server. Note that the reverse is supported - multiple Unified CVP Call Servers can share the same Network VRU.

In this scenario, an agent transfers a call to another agent by dialing that agent's ID. If the agent is unavailable, the originating agent is placed in a queue to wait for the second agent to pick up the call.

For the first agent to be queued while waiting for another agent, set up the following configuration:

Procedure

Step 1 In the ICM Configuration Manager's PG Explorer tool Routing Client tabs, uncheck the **NetworkTransferPreferred** check box for Unified CM and Unified CVP routing clients.

Step 2 On the **Advanced** tab for the Unified CM routing client, select **None** for the Network VRU and the Type 10 VRU for the Unified CVP routing client.

Step 3 For the Type 10 VRU, in the ICM Configuration Manager's Network VRU Explorer tool, define a label for the Unified CM routing client as well as the Unified CVP routing client, and associate them with a customer instance.

Step 4 In the ICM Configuration Manager's Dialed Number List Tool, associate the dialed numbers for the incoming call as well as the transfer dialed number with the same customer instance.

When the second call is placed for the warm transfer and no agent is available, the label defined on the Unified CM RC plus the correlation ID will be sent back via EAPIM/JGW to Unified CM. For example, if the label is 7777777777, with a correlation ID it could be 777777777712345 because the call originated from the Unified CM RC, and also because the **NetworkTransferPreferred** check box is not checked.

Step 5 In Unified CM, select **Call Routing** > **Route/Hunt** > **Route Pattern** > **Add New**. Add a new route pattern to route the call to Unified CVP using the SIP trunk if you are adding from the Device Management menu (for example, 777! where ! allows label plus arbitrary length correlation ID).

When Unified CVP sees this call, it perceives it as a pre-routed call with a correlation ID and sends it back to Unified ICME to continue the script.

Unified ICME sends a temporary connection back to Unified CVP, which queues the agent call while the caller hears music on hold (MoH) from Unified CM.

Note When customized CTI clients are used, consult transfer mechanism is utilized to check if the second agent is really answering the call before the call is being finally transferred automatically by the customized CTI client. In this scenario, it is not required for the agents transferring the call to complete the transfer manually as customized CTI client automatically transfers the calls. However, this is applicable only when the second agent (called agent) answers the call and not before. Customized clients should wait for five seconds before completing the automatic consult transfer to avoid race conditions.