

Courtesy Call Back Configuration Quick Steps (Lab)

This document provides quick configuration steps to implement Courtesy Call Back in lab for POC. Assumption is, basic CVP comprehensive call flow working fine and Reporting server is added in CVP Ops Console.

Components used in this lab:

1. Ingress and VXML Gateways are co-located –
Cisco IOS Software, C1861 Software (C1861-ADVIPSERVICESK9-M), Version 15.2(3)T2, RELEASE SOFTWARE (fc1)
2. CVP Call Server, VXML Server and Reporting are co-located. Ver : 9.x
3. ICM Sprawler. Ver: 9.x
4. CUCM Ver: 9.x
5. Call Studio 9.x
6. IP Phone/ IP communicator

Topology:

IP Phone ----> Route Pattern CUCM 9.x---> SIP-Trunk -----> Ingress Gateway [*Software (C1861-ADVIPSERVICESK9-M), Version 15.2(3)T2*] ----> CVP (9.x All in one) ----> ICM Sprawler

Configuration Steps:

Step 1 Ingress and VXML Gateway configuration (specific to CCB):

```
voice service voip
no ip address trusted authenticate
allow-connections sip to sip
signaling forward unconditional
sip
min-se 360 session-expires 360
header-passing
!
voice class codec 1
codec preference 1 g711ulaw
codec preference 2 g729r8
!
ip host media 20.20.205.223 <----- CVP Media server in my lab.
!
```

voice class sip-profiles 103

request INVITE sip-header Call-Info add "X-Cisco-CCBProbe:id:20.20.205.1;loc:sydlab;trunks:4"

=====

Note: The IOS used in this POC lab does not require above SIP profile association. **If** you are using CUBE with below mentioned IOS then you need sip profile configuration and **apply it on outgoing dial-peer to CVP**. Please refer below example.

Using Cisco ISR as a Unified Border Element with below mentioned IOS

Unified CVP supports ISR 15.0(1)M1.2, 15.1(4)M3, 15.2(2)T, 15.2(3)T1 and 15.2.4 M with the following limitations:

- #A "sip-profile" configuration is needed on ISR for the courtesy callback feature. To configure the "sip-profile", the following must be added:

voice class sip-profiles 103 request INVITE sip-header Call-Info add "X-Cisco-CCBProbe: <ccb param>"

where "<ccb param>" is the "ccb" parameter defined in the survivability service. Add this "sip-profile" to the outgoing dial-peer to the CVP.

- **The following is a configuration example:**

**voice class sip-profiles 103 request INVITE sip-header Call-Info add "X-Cisco-CCBProbe:
id:20.20.205.10;sydlab;trunks:4"**

application service survivability flash:survivability.tcl

param ccb id:20.20.205.1;locsydlab;trunks:4

dial-peer voice 5001 voip

description Comprehensive outbound route to CVP

destination-pattern 5001

session protocol sipv2

session target ipv4:20.20.205.223:5660

dtmf-relay rtp-nte

voice-class sip profiles 103

codec g711ulaw no vad

=====

```
!  
application  
service survivability flash:survivability.tcl  
  paramspace english index 0  
  paramspace english location flash:  
  paramspace english prefix en  
  paramspace english english en  
  param ccb id:20.20.205.1;loc:sydlab;trunks:4 # Note: 20.20.205.1 is IP address of ingress gateway #  
!  
service cvp_cc flash:cvp_ccb_vxml.tcl  
!  
vxml version 2.0  
vxml audioerror  
!  
dial-peer voice 5001 voip  
**** description to send a call to CVP call server, DN on ICM *** in my lab 5001 is DN.  
destination-pattern 50..  
session protocol sipv2  
session target ipv4:20.20.205.223  
voice-class codec 1  
dtmf-relay rtp-nte h245-signal h245-alphanumeric  
no vad  
!  
dial-peer voice 1000 voip  
**** description call back dial-peer pointing to CUCM *** Extension range on CUCM is 1xxx.  
destination-pattern 1...  
session protocol sipv2  
session target ipv4:20.20.205.221  
voice-class codec 1  
dtmf-relay rtp-nte h245-alphanumeric h245-signal  
no vad  
!  
dial-peer voice 50 voip  
***** description Incoming DID for SIP Calls *****  
service survivability  
session protocol sipv2  
incoming called-number .  
dtmf-relay rtp-nte  
codec g711ulaw
```

no vad

After configuring application type following command

call application voice load survivability

call application voice load cvp-cc

Step 2 Configure Reporting Server for CCB

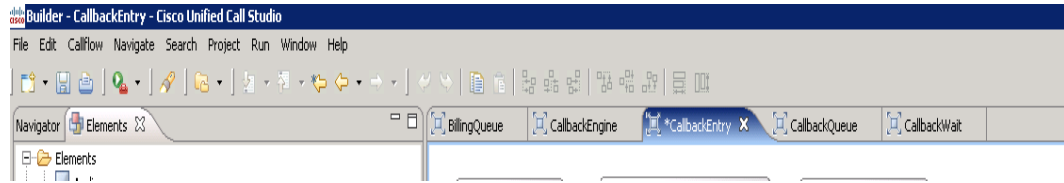
1. Open Ops Console ---- > System --- > Courtesy Callback Configuration --- > General Tab
 - a. Select CVP reporting Server from Drop down
 - b. Tick the check box for Allow Unmatched Dialed Numbers
2. Open Ops Console ---- > System --- > Courtesy Callback Configuration --- > Call Server Deployment Tab
 - a. Associate Call server by dropping into selected section
 - b. Save and Deploy.

Step 3 Configure Media Server for CCB

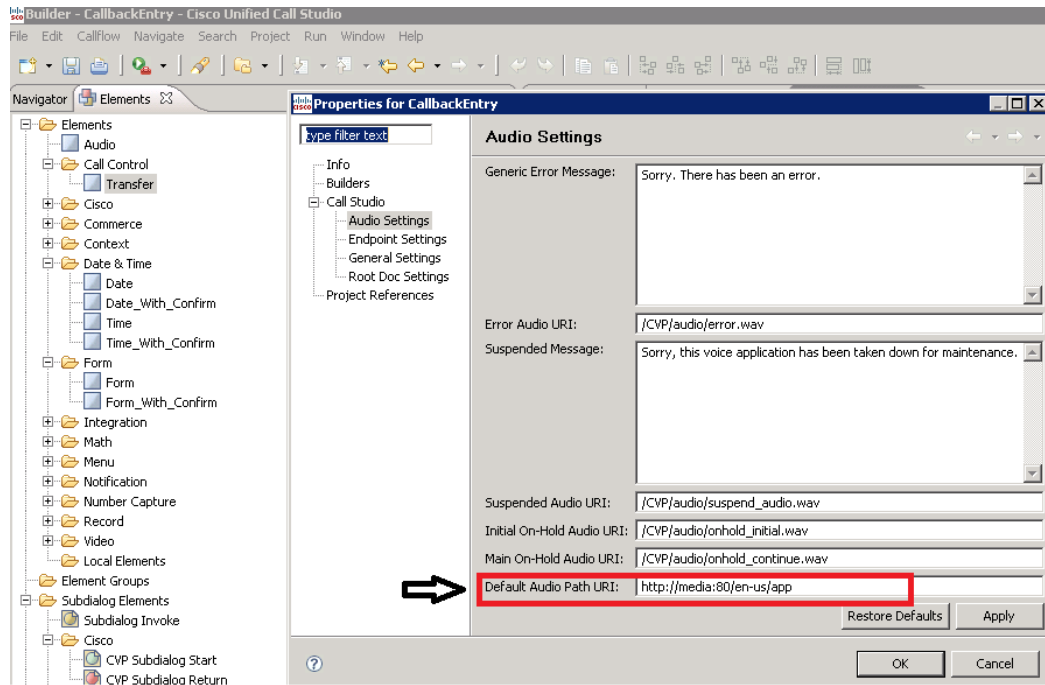
- a. Go to path C:\Cisco\CVP\OPSConsoleServer\CCBDownloads
- b. Select CCBAudioFiles.zip and unzip to path C:\inetpub\wwwroot\en-us\app
- c. Ensure that IIS is running.

Step 4 Configure and Deploy CCB studio scripts

- a. Go to path C:\Cisco\CVP\OPSConsoleServer\StudioDownloads
- b. Extract CourtesyCallbackStudioScripts.zip at same location.
- c. Open each CCB studio script (i.e. *BillingQueue*, *CallbackEntry*, *CallbackWait*, *CallbackEngine*, *CallbackQueue*) in Call Studio using following instructions.
 - a. Start > Programs > Cisco > Cisco Unified Call Studio >
 - b. File > Import
 - c. Expand Call Studio and select Existing Call Studio Project Into Workspace and click
 - d. Browse the location where CCB studio scripts are extracted and select above mentioned the studio scripts.

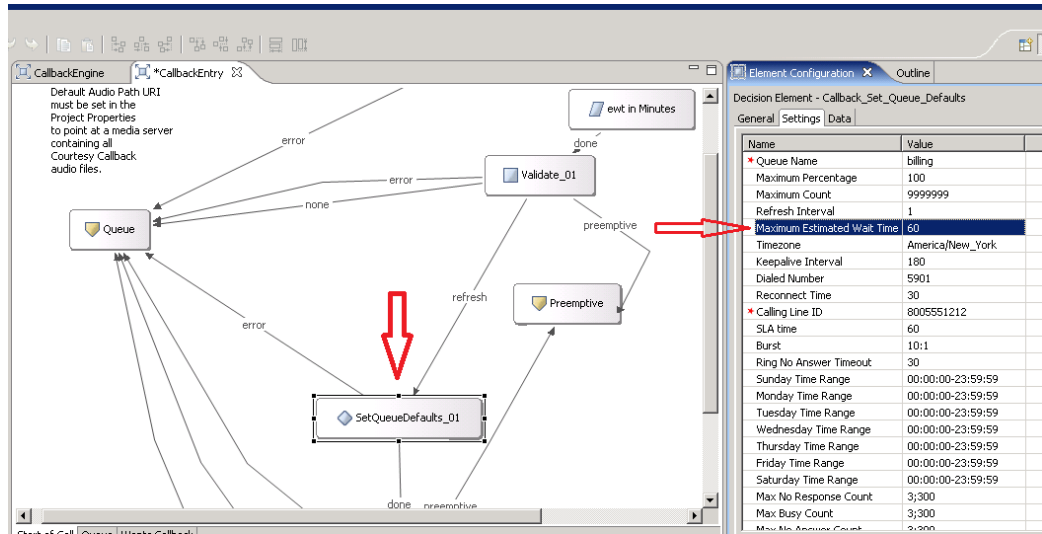


- d. After opening all 5 studio scripts, Click on Project > Properties > Call Studio > Audio Settings. On the **Audio Settings** Window and modify **Default Audio Path URI** to CVP media server ip address and port number i.e. <http://media:80/en-us/app>. Complete this step for all 5 scripts.



- e. Go to CallbackEntry project and select **SetQueueDefaults_01** node, In the Element Configuration panel, select the setting tab and modify "**Maximum Estimated wait Time**" to **'0'**. Leave rest of the values to default.

(Note: Callbacks will be offered for this queue when the Estimated wait time is >=this number of seconds. If 0, callbacks will always be offered regardless of estimated waittime.)



- f. Validate each of the five projects associated with the Courtesy Callback feature and deploy them to your VXML Server.
- g. To deploy them, Right-click each Courtesy Callback project in the Navigator window and select Validate
- h. Right click each of the projects and click Deploy, then click Finish.
- i. Using windows explorer, navigate to %CVP_HOME%\VXMLServer\applications.
- j. For each of the five Courtesy Callback applications, open the project's admin folder, in %CVP_Home%\VXMLServer\applications, and double-click deployApp.bat to deploy the application to the VXML Server.
- k. Verify that all the applications are running by going into %CVP_HOME%\VXMLServer\admin and double-clicking status.bat. All five applications should be listed under Application Name and the status for each one should be Running

Step 5 Configure ICM scripting for CCB:

a. Create Network VRU Scripts.

Using the ICM Configuration Manager, Network VRU Script List tool, create the following Network VRU Scripts:

Interruptible Script (agent can interrupt the caller on hold):

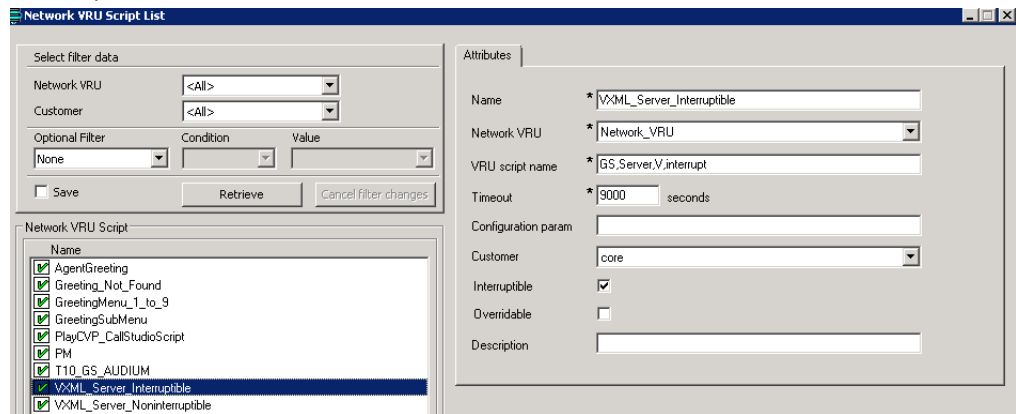
Name: VXML_Server_Interruptible

Network VRU: Select your Type 10 CVP VRU

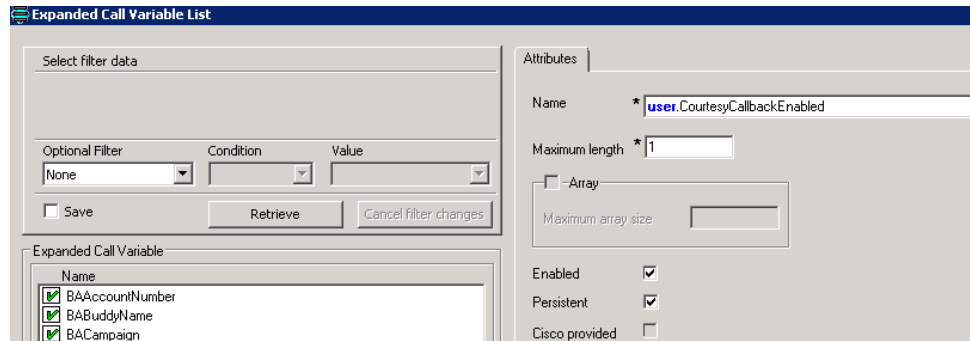
VRU Script Name: GS,Server,V,interrupt
Timeout: 9000 seconds
Interruptible: Checked

Noninterruptible Script (agent cannot interrupt because no caller is available):

Name: VXML_Server_Noninterruptible
Network VRU: Select your Type 10 CVP VRU
VRU Script Name: GS,Server,V,nointerrupt
Timeout: 9000 seconds (must be greater than the maximum possible call life in Unified CVP)
Interruptible: Not Checked

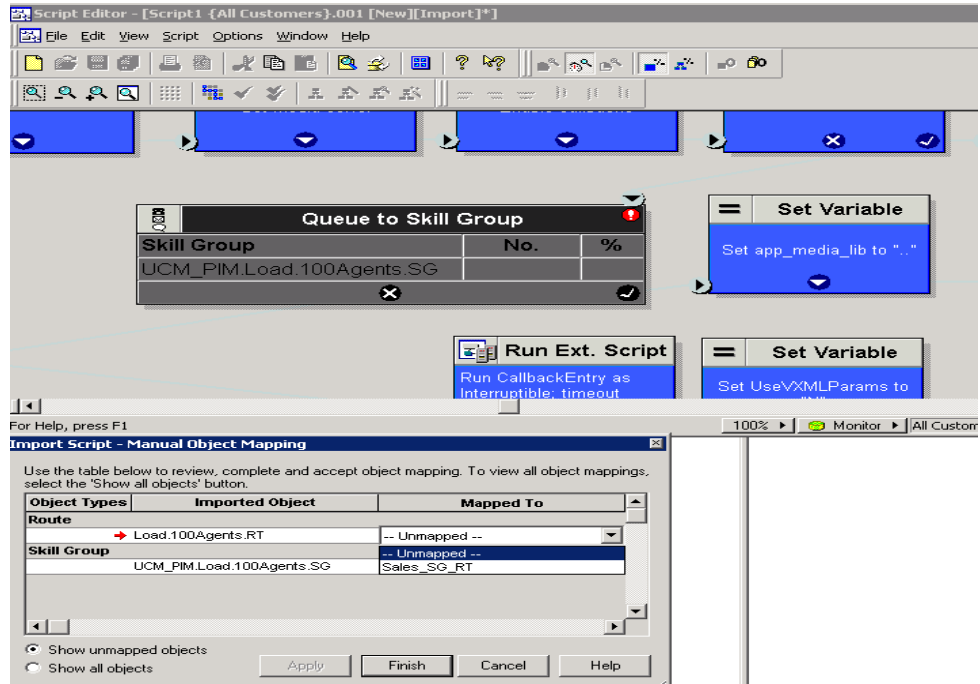


- b. Open **Expanded call variable** list from config manager and add new ECC variable **CourtesyCallbackEnabled** and set max length to 1.

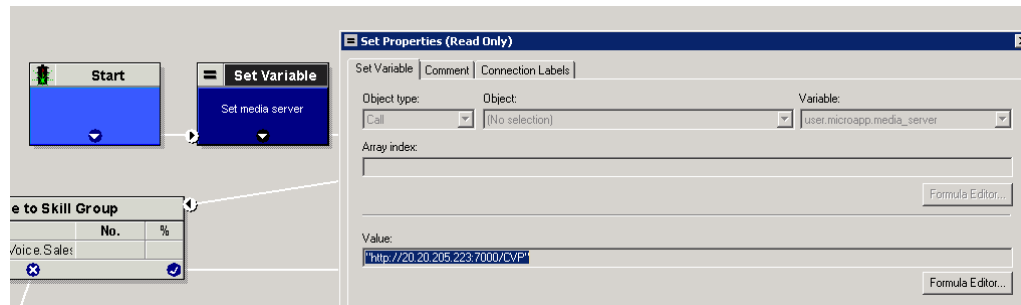


- c. Set **user.microapp.ToExtVXML** Ecc variable Array size to '5' and maximum length to 60. Also make sure **user.microapp.FromExtVXML** variable is set up for an array of 5 with max size of 60 chars.
- d. From the CVP Call server combo box, copy **CourtesyCallback.ICMS** to ICM AW
Go to ICM Admin Work station > Open Script Editor
- e. Select File > Import Script

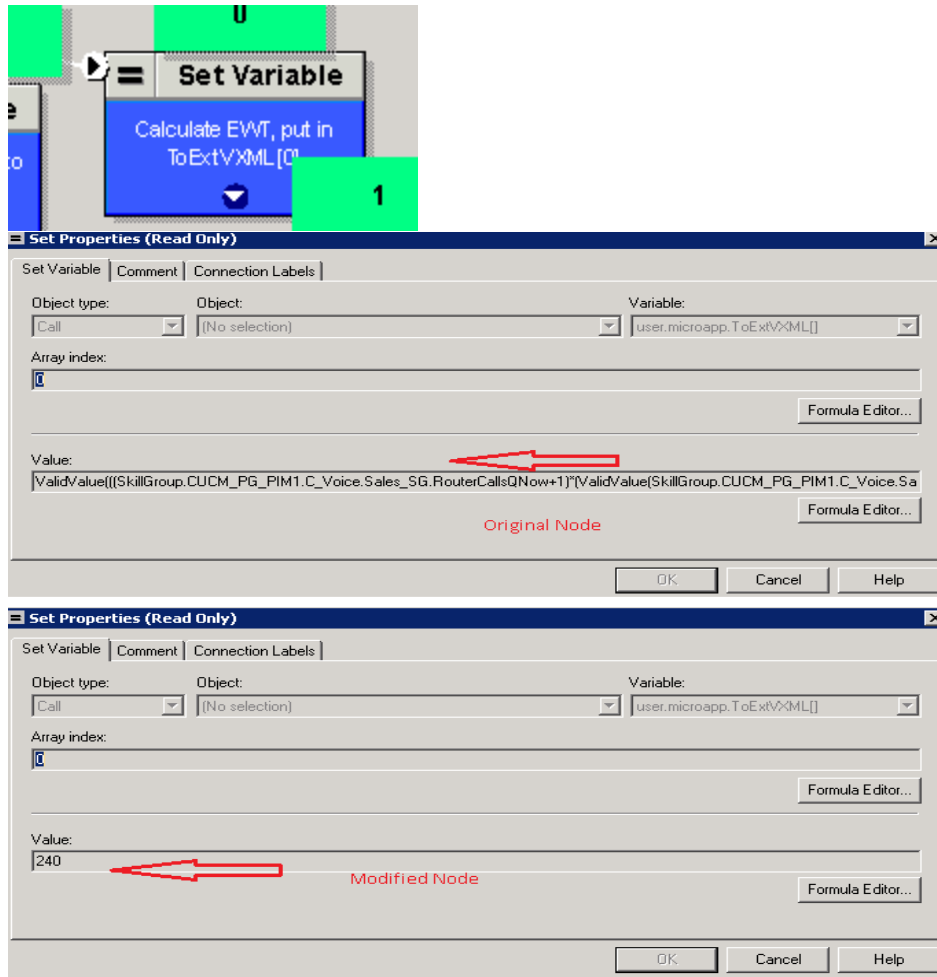
- f. Locate the file CourtesyCallback.ICMS script and click open.
- g. In the Import Script - Manual Object Mapping window, map the route and skill group to the route and skill group available for courtesy callback (identified previously). *In my lab Skill Group is Sales_SG, you can select based on your SG configuration.*



- h. Once the script is opened, open the **set media server** node and specify URL for your VXML server.



- i. Open node "Set Variable" Calculate EWT, put in ToExtVXML[0], and modify Value to 240. This value is set statically for testing purpose. You can also use the formula used in this node by replacing Skill Groups with your configured Skill Groups.



Step 6 Save CCB script and schedule it.

Step 7 Health check.

1. Call Server, VXML server and Reporting Server showing **Up** in Ops Console.
2. Make sure CCB script is scheduled properly and test call is hitting to CCB script

Step 8 Login the agent, put in not ready state make a test call and verify CCB is working.