Unified ICM Configuration

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Configure Unified ICM Server

Procedure

**Step 1** Log in to Operations Console and click Device Management > Unified ICM.

**Step 2** Click Add New.

**Note** To use an existing ICM Server as a template for configuring a new ICM Server, select an ICM Server from the list of available Unified ICM Servers and click Use As Template and perform Steps 3 to 6.

**Step 3** Click the General tab and enter the field values. See General Settings, on page 2.

**Step 4** (Optional) Click the Device Pool tab and add the Unified ICM Server to a device pool. See Add Unified ICM to Device Pool, on page 2.

**Step 5** Click Save.
ICM Server Settings

General Settings

Unified CVP provides VoIP routing services for the Unified CCE and Unified CCX products. Unified ICM provides the services to determine where calls should be routed. These calls can be routed to ACDs, specific agents, or to VRUs. However, the routing services themselves must be provided by an external routing client.

A Unified ICM Server is required in Unified CVP Comprehensive, Call Director, and VRU-Only call flow models.

To configure General settings on an ICM Server, on the General tab, enter the field values, as listed in the following table:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Default</th>
<th>Value</th>
<th>Restart Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Address</td>
<td>The IP address of a Unified ICM Server</td>
<td>None</td>
<td>Valid IP address</td>
<td>No</td>
</tr>
<tr>
<td>Hostname</td>
<td>The name of the Unified ICM Server</td>
<td>None</td>
<td>Valid DNS name. It includes alphanumeric characters and a dash.</td>
<td>No</td>
</tr>
<tr>
<td>Description</td>
<td>Additional information about the Unified ICM Server</td>
<td>None</td>
<td>Up to 1024 characters</td>
<td>No</td>
</tr>
<tr>
<td>Device Admin URL</td>
<td>The URL for the Unified ICM Web configuration application.</td>
<td>None</td>
<td>Valid URL</td>
<td>No</td>
</tr>
</tbody>
</table>

Add Unified ICM to Device Pool

See Add or Remove Device From Device Pool.

Configure ICM Settings for Standalone Call Flow Model

You can convert a configuration from a nonreporting configuration (that is, no Call Server is defined) to a Reporting or ICM Lookup Configuration. If you have configured Unified CVP for a Standalone call flow model without reporting, the version of the VXML Server you defined cannot be associated with a Call Server. This VXML Server definition is required for reporting and for the ICM Lookup. Hence, delete the existing VXML Server definition and begin with Step 4 to incorporate a Call Server, a Reporting Server, and ICM Lookup Configuration steps.
### Variations

<table>
<thead>
<tr>
<th>Variations</th>
<th>Applicable steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting</td>
<td>Steps 2, 5, and 6</td>
</tr>
<tr>
<td>Without Reporting</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ICM lookup</td>
<td>Steps 1 to 7</td>
</tr>
<tr>
<td>All variations</td>
<td>Step 1</td>
</tr>
</tbody>
</table>

### Procedure

**Step 1** Create an application using Cisco Unified Call Studio and deploy it as a zip file.

*Note*  
- For ICM Lookup, use the **ReqICMLabel Element**. This element has two exit states: `error` and `done`. The `done` state must connect to a transfer element to transfer the caller to `ReqICMLabel` as referenced by the `ReqICMLabel Element`.  
- For details on the `ReqICMLabel Element`, see the [Element Specifications for Cisco Unified CVP VXML Server and Unified Call Studio](#).  
- For information about Unified Call Studio, see the [User Guide for Cisco Unified CVP VXML Server and Unified Call Studio](#).

**Step 2** Enable logging.

See the [User Guide for Cisco Unified CVP VXML Server and Unified Call Studio](#) for details on configuring loggers using Unified Call Studio.

**Step 3** Enable the **CVPSNMPLogger** for SNMP monitoring.

*Note* By default, **CVPSNMPLogger** is enabled when a new Unified Call Studio application is created and deployed to the VXML Server.

**Step 4** Add and configure a standard Call Server and enable the ICM service. See [Configure Call Server](#).

**Step 5** Configure the VXML Server.

a) Log in to Operations Console, select **Device Management > VXML Server** and add a VXML Server with an associated Primary Call Server.

b) To enable reporting for this VXML Server, in the Operations Console, click the **Configuration** tab and select **Enable Reporting for this VXML Server**.

c) Add appropriate filtering.

**Step 6** Deploy the Call Studio Application on the VXML Server.

a) Select **Device Management > VXML Server** in the Operations Console.

b) Select the VXML Server and click **Save and Deploy**.

**Step 7** Using the ICM Script Editor, create a Unified ICME script that returns a label.  
To transfer information from Unified ICME to the VXML Server in addition to the label, use the `ToExtVXML 0 - 4 ECC Variables or Peripheral Variables 1 to 10`. The format for using the `ToExtVXML 0 to 4` is with name-value pairs that are delimited by semicolons.

**Example:**

`ToExtVXML0 = "company=Cisco Systems;state=MA"`
Use the Peripheral Variables 1 to 10 to pass information to the VXML Server. The values in these variables will be taken as is.

For information about creating a Unified ICME script that returns a label in, see the Unified ICME documentation.

For information about using the ReqICMLabel element, see Pass Data to Unified ICME, on page 29.

**Configure ICM Settings for Comprehensive Call Flow Model for ICME and ICMH**

**Procedure**

**Step 1** Define Network VRUs, create an instance, and define a customer.

a) On Unified ICME or NAM, in the ICM Configuration Manager, select the **Network VRU Explorer tool**, define a Network VRU for the VRU leg and labels for each Call Server.

b) On the Cisco Intelligent Contact Manager (CICM) only, in the ICM Configuration Manager, select **Network VRU Explorer tool**, define a Network VRU for the VRU leg and labels for reaching the NAM.

For Steps 1(a) and 1(b), enter the following values:

- **Type:** 10
- **Name:** `<Network VRU Name>`. For example: `cvp`
- Define a label for each Unified CVP Call Server that is handling the switch leg:
  - **Label:** `<Network Routing Number>`
  - **Type:** **Normal**
    - Routing client for Unified ICME or NAM: From the drop-down list, select the routing client configured for that Call Server peripheral.
    - Routing client for CICM only: From the drop-down list, select the INCRP routing client.

**Note** The Network VRU label in NAM and CICM must be same. Similarly, the Network VRU Names on the NAM and CICM should also be same.

**Step 2** Configure the ICM VRU Label.

**Step 3** Define network VRUs and peripheral gateways for the switch leg in the ICM Configuration Manager.

On Unified ICMH, on the NAM and CICMs, in the Network VRU Explorer tool, define one label for each Unified CVP Call Server or NIC routing client.

**Note** Use the same Type 10 Network VRU that you defined in the Step 1 for the VRU leg.
For more information, see the ICM Configuration Guide for Cisco ICM Enterprise Edition.

**Step 4**
Set the client type for the INCRP NIC. On the CICM, in the ICM Configuration Manager, NIC Explorer tool, set the client type for the INCRP NIC. Select the **Client Type** as **VRU**.

**Step 5**
Define a VRU that uses INCRP. On the CICM, in the ICM Configuration Manager, Network VRU Explorer tool:

a) Define a Network VRU with a label that uses INCRP as its routing client.
   Specify the following:
   
   - **Type:** 10
   - **Name:** `<name of Unified CVP VRU>`

   **Example:**
   `cvpVRU`

b) Define a label for the NAM routing client.
   Specify the following:
   
   - **Type:** **Normal**
   - **Label:** `<Network Routing Number>`
   - **Routing client:** INCRP NIC

For more information, see the ICM Configuration Guide for Cisco ICM Enterprise Edition.

**Step 6**
Configure Peripheral Gateways.

On the NAM, ICM Configuration Manager, **PG Explorer** tool, configure a peripheral gateway (PG) for the Unified CVP. Configure a PG for each Unified CVP Call Server as follows:

In the tree view pane, select the applicable PG.

**Logical Controller** tab:

- **Client Type:** **VRU**
- **Name:** A name descriptive of this PG
  For example: `<location>_A` for side A of a particular location

**Peripheral** tab:

- **Peripheral Name:** Descriptive name of this Unified CVP peripheral. For example: `<location>_1cvp` or `<dns_name>`
  - **Client Type:** **VRU**
  - **Check the Enable Post-routing check box.**

**Advanced** tab: Select the name of the Unified CVP VRU from the Network VRU field drop-down list. For example: `cvpVRU`

**Routing Client** tab:

- **Name:** By convention, use the same name as the peripheral
- **Client Type:** **VRU**
If you are in a Unified ICMH environment and configuring the CICM, then do the following:

- Do not check the **Network Transfer Preferred** check box.
- Routing client: **INCRP NIC**

### Step 7
Define a default network VRU on Unified ICME or the NAM, in the ICM Configuration Manager, the **System Information** tool:

a) For Unified ICME or on the **CICM only**, define a default Network VRU.

Define the Default Network VRU: `<Network VRU Name>`. For example: `cvpVRU`

b) If there are Routing Scripts on the **NAM**, define a default Network VRU.

For more information, see the **ICM Configuration Guide for Cisco ICM Enterprise Edition**.

### Step 8
Configure dialed numbers, call types, and customers on the Unified ICME or Unified ICMH Server in the ICM Configuration Manager:

a) **Dialled Number List Tool tab**: Configure the dialed numbers.

b) **Call Type List tool tab**: Configure the call types.

c) **ICM Instance Explorer tool tab**: Configure the applicable customers.

For more information, see **ICM Configuration Guide for Cisco ICM Enterprise Edition**.

### Step 9
Install and configure one or multiple Call Servers.

Log in to the Operations Console and perform the following steps:

a) Enable the ICM and SIP Services on the Call Server.

   • On the Operations Console, click **Device Management > Unified CVP Call Server**.

   • Check the **ICM** and **SIP** check boxes.

b) Click **Device Management > Unified CVP Call Server > SIP**. Configure the SIP Service:

   • If you are using a SIP Proxy Server, enable the Outbound Proxy and select the SIP Proxy Server.

   Select the **SIP tab** and configure the following values:

   * Enable Outbound Proxy: **Yes**

   * Outbound Proxy Host: Select from drop-down list.

   * Configure Local Static Routes on the SIP Proxy Server itself.

   • If you are not using a SIP Proxy Server, configure Local Static Routes using the Dialed Number Pattern system configuration on the Operations Console. A Local Static Route must be configured for each SIP gateway or automatic call distributor (ACD) so that SIP endpoint can receive calls.

   Local Static Routes, Dialed Number (DN): Specify the dialed number pattern for the destination.

   Valid number patterns include the following characters:

   * Use the period or the **X** character for single-digit wildcard matching in any position.

   * Use the greater than (>), asterisk (*), or exclamation mark (!) characters as a wildcard for zero or more digits at the end of the DN.

   * Avoid the **T** character for wildcard matching.
* Dialed numbers must not exceed 24 characters.
* For valid format and precedence information about dialed numbers, see Valid Format for Dialed Numbers.

Example: 9> (Errors are 9292 and ringtone is 9191)

For more information, see SIP Devices Configuration and SIP Dialed Number Pattern Matching Algorithm.

The following static route configuration is incorrect because the least explicit routes must appear at the end. Load balancing or failover of calls require DNS SRV domain names, not multiple routes with the same DN Pattern, but a single route to an SRV domain name.

Incorrect Example:
1>,10.2.6.1
2>,10.2.6.2
3>,10.2.6.20
2229191>,10.2.6.241
2229292>,10.2.6.241
2229191>,10.2.6.242
2229292>,10.2.6.242
2>,ccm-subscribers.cisco.com
3>,ccm-subscribers.cisco.com

Correct static route configuration example:
22291>,cvp-ringtone.cisco.com
22292>,cvp-error.cisco.com
1>,ccm-subscribers.cisco.com
2>,ccm-subscribers.cisco.com
3>,ccm-subscribers.cisco.com

Note    "91919191>" pattern does not match the dialed number "91919191".

* Check the default values for the SIP Service and change, if desired.

c) Configure the ICM Service. Select Device Management > CVP Call Server > ICM tab, In the Maximum Length of DNIS field, enter the length of the Network Routing Number.

Example: For the Gateway dial pattern as 1800******, the maximum DNIS length is 10.

Configure Common Unified ICMH for Unified CVP Switch Leg

Procedure

Step 1  On the NAM, in the ICM Configuration Manager, Network VRU Explorer tool
  a) Define a Network VRU for Unified CVP for Type as 10 and Name as cvpVRU.
b) Assign labels. Define one Label per Unified CVP or NIC routing client. Select the Type as Normal and Label as Network Routing Number.

**Step 2** Set the client type.
On the CICM, using the ICM Configuration Manager, NIC Explorer tool:

- Select the Routing Client tab for the INCRP NIC.
- Enter the Client Type as VRU.

**Step 3** Define a Network VRU.
On the CICM, using the ICM Configuration Manager, Network VRU Explorer tool, define a Network VRU with a label that uses INCRP as its routing client.

Enter the following:

- Type: 10
- Name: cvpVRU
- Define one Label for the NAM routing client:
  - Label: Network Routing Number
  - Type: Normal
  - Routing client: INCRP NIC

**Step 4** Define the Peripheral Gateways (PGs).
On the NAM, using the ICM Configuration Manager, PG Explorer tool, configure a peripheral gate for each ICM Service to be used for a switch leg that is connected to each PG.

For each Unified CVP ICM Service connected to this PG, in the tree view pane, select the applicable PG.

On the Logical Controller tab, enter the following:

- Client Type: VRU
- Name: A name descriptive of this PG.
  For example: <location>_A, for side A of a particular location.

On the Peripheral tab, enter the following:

- Peripheral Name: A name descriptive of this Unified CVP peripheral, for example, <location>_<cvp1> or <dns_name>
- Client Type: VRU
- Check the Enable Post-routing checkbox
  On the Advanced tab, select the name cvpVRU from the Network VRU field drop-down list.

On the Routing Client tab, enter the following:

- Name: By convention, use the same name as the peripheral
- Client Type: VRU
• Do not check the Network Transfer Preferred check box.

Define Unified CVP ECC Variables

Set up the ECC variables that Unified CVP uses to exchange information with Unified ICME/ICMH.

Procedure

**Step 1** On the ICM Configuration Manager, select Tools > Miscellaneous Tools > System Information and check the Enable expanded call context check box.

**Step 2** On the ICM Configuration Manager, select Tools > List Tools > Expanded Call Variable List.

**Step 3** In the Expanded Call Variable List window, enable the Add button by clicking Retrieve.

**Step 4** Click Add.

The Attributes property tab is enabled.

**Step 5** Create each of the variables in the following table by clicking Save after defining each variable.

*Note* If you change the configuration of any ECC variable with the Expanded Call Variable List tool, stop and restart the Unified CVP Call Server.

*Caution* It is important that you enter the ECC’s Name values listed in following table exactly as specified. If you do not, the Unified ICME/ICMH software does not communicate with the micro-applications on the ICM Service.

*Length* values are more flexible. Unless the values listed in following table are noted as "required," the value in the Length column is the maximum that Unified ICMH can handle for that ECC. Specify a value between 1 and the maximum length.

*Note* In a Unified ICME/ICMH configuration, the ECC variable configuration, including the length, defined in the NAM must be defined same in the CICM.

If you change the length of the ECC variables while the Unified CVP ICM Service is running, restart the Unified CVP ICM Service so that it works properly.

**Step 6** Click Save to apply your changes.

*Table 2: Micro-Application ECCs*

<table>
<thead>
<tr>
<th>Name</th>
<th>Length</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>POD.ID</td>
<td>Length: 36</td>
<td>Unique identifier for use with Cisco Context Service to propagate call or task context data.</td>
</tr>
<tr>
<td>Name</td>
<td>Length</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| user.CourtesyCallbackEnabled  | Required for using Courtesy Callback. Length: 1 | Used to determine if Courtesy Callback must be offered to a caller. Valid values are:  
                                    "1" = Yes  
                                    "0" = No |
| user.cvp_server_info         | Length: 15 | Used by Unified CVP to send the IP address of the Call Server sending the request to Unified ICME.  
Example: An IPv4 address like  
192.168.150.181 |
| user.microapp.currency        | Value: 6 | Currency type.                                                                                                                         |
| user.microapp.error_code     | Value: 2 | Return status error code to be returned from the Unified CVP to Unified ICME/ICMH upon a False return code in the Run Script Result.        |
| user.microapp.fetchaudio     | Recommended length: 20; but length depends on the filename. | Filename for audio to be played by the VXML gateway while the gateway loads and processes the requested resource when there is significant network latency.  
Default: none  
Example: "flash:holdmusic.wav" |
| user.microapp.fetchdelay     | Length: 1 | The length of time (in seconds) to wait at the start of the fetch delay before playing the audio specified by user.microapp.fetchaudio. This setting only takes effect if the value of fetchaudio is not empty.  
Default: 2 seconds; used to avoid a "blip" sound heard in a normal network scenario  
Setting this value to zero plays hold music immediately, for a minimum of five seconds.  
Values: 1 to 9 |
<table>
<thead>
<tr>
<th>Name</th>
<th>Length</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>user.microapp.fetchminimum</td>
<td>Length: 1</td>
<td>The minimum length of time to play audio specified by <code>user.microapp.fetchaudio</code>, even if the requested resource arrives in the meantime. This setting only takes effect if value of fetchaudio is not empty. Default: 5 seconds Values: 1 to 9</td>
</tr>
<tr>
<td>user.microapp.isPostCallSurvey</td>
<td>Length: 1</td>
<td>Used to determine if post call survey must be offered to a caller after the agent hangs up. Valid values: &quot;y&quot; or &quot;Y&quot; is &quot;Yes&quot; &quot;n&quot; or &quot;N&quot; is &quot;No&quot; Default value is &quot;Yes&quot;</td>
</tr>
<tr>
<td>user.microapp.locale</td>
<td>Value: 5</td>
<td>Locale, a combination of language and country which defines the grammar and prompt set to use.</td>
</tr>
<tr>
<td>user.microapp.media_server</td>
<td>Required for any IVR scripting. Maximum length: 210 characters Recommended length: 30</td>
<td>Root of the URL for all media files and external grammar files used in the script. HTTP and HTTPS schemes can be specified as: • HTTP scheme is specified as &quot;http://&lt;servername&gt;&quot; • HTTPS scheme is specified as &quot;https://&lt;servername&gt;&quot;</td>
</tr>
<tr>
<td>user.microapp.play_data</td>
<td>40</td>
<td>Default storage area for data for Play Data micro-application.</td>
</tr>
<tr>
<td>user.microapp.sys_media_lib</td>
<td>10</td>
<td>Directory for all system media files, such as individual digits, months, default error messages, and so forth.</td>
</tr>
</tbody>
</table>
### Define Unified CVP ECC Variables

<table>
<thead>
<tr>
<th>Name</th>
<th>Length</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>user.microapp.app_media_lib</td>
<td>Maximum length: 210 characters</td>
<td>Directory for all application-specific media files and grammar files. You can also set this value to &quot;..&quot; (literally two periods in quotes), which bypasses the user.microapp.app_media_lib and user.microapp.locale ECC Variables when writing a URL path. For example, if you set the user.microapp.app_media_lib to &quot;..&quot;, the path: <a href="http://server/locale/../hello.wav">http://server/locale/../hello.wav</a> would really be: <a href="http://server/hello.wav">http://server/hello.wav</a></td>
</tr>
<tr>
<td>user.microapp.grammar_choices</td>
<td>Configurable on Unified ICME. Maximum length: 210 characters.</td>
<td>Specifies the ASR choices that a caller can input for the Get Speech micro-application. Each option in the list of choices is delimited by a forward slash (/). <strong>Note</strong> If text is placed in this variable that is longer than the variable is configured to handle, only the first 210 characters are sent.</td>
</tr>
<tr>
<td>user.microapp.inline_tts</td>
<td>Configurable on the ICM. Maximum length: 210 characters.</td>
<td>Specifies the text for inline Text To Speech (TTS). <strong>Note</strong> If text is placed in this variable that is longer than the variable is configured to handle, only the first 210 characters are sent.</td>
</tr>
</tbody>
</table>

**Note** The system and application media libraries need message and prompt files created or recorded for each locale that is referenced. For more information, see [Pass Data to Unified ICME](#) on page 29.
### Define Unified CVP ECC Variables

<table>
<thead>
<tr>
<th>Name</th>
<th>Length</th>
<th>Definition</th>
</tr>
</thead>
</table>
| user.microapp.input_type    | Value: 1 | Specifies the type of input that is allowed. Valid contents are:  
  - D - DTMF  
  - B - (Both, the default) DTMF and Voice  
  If you are not using an ASR, you can set this variable to D. If you are using an ASR, you can set the variable to either D or B.  
**Note** With input_mode set to "B" (both), either DTMF or speech is accepted, but mixed mode input is not. Once you begin entering with one mode, input using the other mode is ignored and has no effect. |
| user.microapp.caller_input  | Configurable on Unified ICME/ICMH. Maximum length: 210 characters. | Storage area for any ASR input that is collected from Get Speech.  
**Note** Get Speech text results are written to this ECC variable. Results from Get Digits or Menu micro-applications are written to the CED. |
| user.microapp.pd_tts        | Value: 1 | Specifies whether Unified CVP’s Text To Speech (TTS) or media files must be played to the caller. Valid contents are:  
  - Y - Yes, use TTS capabilities  
  - N - No, do not use TTS capabilities; play media files instead.  
**Note** Used only with Play Data micro-application. |
| user.microapp.UseVXMLParams | Value: 1 | This parameter specifies the manner in which you pass information to the external VoiceXML. Set this parameter to either "Y" (for yes) or "N" (for no).  
Y uses the values in the user.microapp.ToExtVXML variable array. N appends the name/value pairs in user.microapp.ToExtVXML to the URL of the external VoiceXML.  
Default: "N" |
### Define Unified CVP ECC Variables

<table>
<thead>
<tr>
<th>Name</th>
<th>Length</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>user.microapp.ToExtVXML</td>
<td>210</td>
<td>This variable array sends information to the external VoiceXML file. Must be configured as Array variables, not Scalar variables, even if the array length is set to 1. For more information on <code>user.microapp.ToExtVXML</code> variable length, see the Configure the CCE Script for Courtesy Callback section.</td>
</tr>
<tr>
<td>user.microapp.FromExtVXML</td>
<td>210</td>
<td>This variable array returns information from the external VoiceXML file. Must be configured as Array variables, not Scalar variables, even if the array length is set to 1. See Pass Data to Unified ICME, on page 29 for more information. For more information on <code>user.microapp.FromExtVXML</code> variable length, see the Configure the CCE Script for Courtesy Callback section.</td>
</tr>
<tr>
<td>user.microapp.override_cli</td>
<td>Configurable on Unified ICME/ICMH. Maximum length: 200 characters.</td>
<td>Used by system to override the CLI field on outgoing transfers. Following the Menu (M), GetData (GD) and Get Speech (GS) micro-applications, Unified CVP returns information about the execution of that micro-application. The <code>user.microapp.metadata</code> ECC variable is structured as follows: m</td>
</tr>
<tr>
<td>user.microapp.metadata</td>
<td>The variable length would normally be configured as 62 bytes, but if ECC space is restricted, you can configure it as 21 bytes. Following the Menu (M), GetData (GD) and Get Speech (GS) micro-applications, Unified CVP returns information about the execution of that micro-application. The <code>user.microapp.metadata</code> ECC variable is structured as follows: m</td>
<td>con</td>
</tr>
<tr>
<td>user.microapp.uui</td>
<td>Configurable on Unified ICME/ICMH. Maximum length: 131 characters.</td>
<td>Used to pass user-to-user information back to Unified CVP from Unified ICME/ICMH.</td>
</tr>
</tbody>
</table>
### Metadata ECC Variable

Following the Menu (M), Get Data (GD) and Get Speech (GS) micro-applications, Unified CVP returns information about the execution of that micro-application. This information is returned in the user.microapp.metadata ECC variable. Its format is defined in terms of a number of subfields, each separated by a vertical bar character ('|'). Also, the subfields are of fixed length in order to facilitate extraction either at reporting time or within the ICM routing script itself.

The **user.microapp.metadata** ECC variable is structured as follows:

```
m|con|tr|to|iv|duratn|vruscriptname
```

The following table shows the values for this variable:

<table>
<thead>
<tr>
<th>Metadata</th>
<th>ECC Variable Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>m</td>
<td>D, V or N - Indicates whether the user responded with Voice (V), DTMF (D), or not at all (N). (Note that for the Menu micro-application, any successful single digit entry will result in m being set to V or D, even if the entry was an invalid menu selection.)</td>
</tr>
<tr>
<td>con</td>
<td>000 to 100 - Indicates the ASR percent confidence level at which the voice input was finally recognized. This field is only valid if m is Voice (V).</td>
</tr>
<tr>
<td>tr</td>
<td>00 to 99 - Indicates how many tries were required. 01 means user responded successfully after the first prompt.</td>
</tr>
<tr>
<td>Metadata</td>
<td>ECC Variable Value</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>to</td>
<td>00 to 99 - Indicates how many timeouts occurred. Does not include interdigit timeouts.</td>
</tr>
<tr>
<td>iv</td>
<td>00 to 99 - Indicates how many invalid entries were received, including interdigit timeouts.</td>
</tr>
<tr>
<td>duratn</td>
<td>000000 to 999999 - Indicates the micro-application duration in milliseconds. Duration is defined as the elapsed time between entering and exiting the RunExternalScript node, as measured in the IVR Service.</td>
</tr>
<tr>
<td>vru script name</td>
<td>Full name of the VRU script which was executed. This is the only variable length field.</td>
</tr>
</tbody>
</table>

This ECC variable is optional. If you have used it, you must define it in the Unified ICME Expanded Call Context Variables configuration tool. Generally, the variable length to be configured is 62 bytes, but if ECC space is restricted, you can configure it as 21 bytes. This configuration drops the vruscriptname subfield. If you do define this variable, its contents get written to the Unified ICME database with every termination record, and can be used to provide a record of meta-information about the execution of each input micro-application.

**Common Configuration for Differentiating VRUs Based on Dialed Number**

As per the Network VRU configuration instructions, all callers are routed to the same VRUs (Unified CVPs) for VRU treatment purposes. Under this assumption, it is always simplest to rely on the system default Network VRU. However, it is sometimes necessary to differentiate the VRUs (Unified CVPs) based on dialed number.

This section is only applicable to call flow models which use the SendToVRU node to transfer the call to Unified CVP’s VRU leg (it does not apply to Translation Route transfers).

For example, some calls need to assign different customers or applications to their own Unified CVP machines.

To configure Unified ICME to differentiate the VRUs, perform the following tasks:

- Configure more than one Network VRU.
- On Unified ICME, in the ICM Configuration Manager of the ICM Instance Explorer tool:
  - Configure one or multiple customers.
  - Configure the Network VRU for each customer if that customer wants to use in a Network VRU other than the default in future.
- Associate the dialed number(s) to the customer in the Dialed Number List tool.
- Since each configured VRU script is specific to one specified Network VRU, create a distinct set of VRU scripts for each Network VRU. Also, ensure that the ICM routing script calls the correct set of VRU scripts.
Configure ICM Settings for Call Director Call Flow Model

Procedure

**Step 1** On the Unified CM server, CCMAdmin Publisher, perform the following SIP-specific action:

a) Add route patterns for outbound calls from the Unified CM devices using a SIP Trunk to the Unified CVP Call Server. Also, add a route pattern for error DN.

Select **Call Routing > Route/Hunt > Route Pattern > Add New** and add the following:

- Route Pattern: Specify the route pattern; for example: **3XXX** for a TDM phone that dials 9+3xxx and all Unified ICME scripts are set up for 3xxx dialed numbers.
- Gateway/Route List: Select the SIP Trunk defined in the previous substep.

**Note** For warm transfers, the call from one agent to another does not typically use a SIP Trunk, but you must configure the CTI Route Point for that dialed number on the Unified CM server and associate that number with your peripheral gateway user (PGUSER) for the JTAPI gateway on the Unified CM peripheral gateway. An alternative is to use the Dialed Number Plan on Unified ICME to bypass the CTI Route Point.

**Step 2** Configure the peripheral gateways for the switch leg.

On Unified ICME, ICM Configuration Manager, **PG Explorer** tool:

a) Configure each peripheral gateway (PG) to be used for the **Switch** leg. In the tree view pane, select the applicable peripheral gateway, and set the following:

1. **On the Logical Controller tab:**
   - Client Type: VRU
   - Name: A name descriptive of this PG
     For example: `<location>_A` for side A of a particular location

2. **On the Peripheral tab:**
   - Peripheral Name: A name descriptive of this Unified CVP peripheral
     For example: `<location>_<cvp1> or <dns_name>`
   - Client Type: VRU
   - Select the check box: **Enable Post-routing**

3. **On the Routing Client tab:**
   - Name: By convention, use the same name as the peripheral.
   - Client Type: VRU

For more information, see the **ICM Configuration Guide for Cisco ICM Enterprise Edition.**
b) Configure a peripheral for each Unified CVP Call Server to be used for a Switch leg connected to each PG.

**Step 3** Configure dialed numbers.
On the Unified ICME or Unified ICMH Server, in the ICM Configuration Manager, configure the following items:

a) **Dialled Number List Tool** tab: Configure the dialed numbers.
b) **Call Type List tool** tab: Configure the call types.
c) **ICM Instance Explorer tool** tab: Configure the applicable customers.
For more information, see the *ICM Configuration Guide for Cisco ICM Enterprise Edition*.

**Step 4** Create a Routing Script.
On the Unified ICME or Unified ICMH Server in the ICM Script Editor tool:
Create a routing script that handles the incoming call. The routing script must execute a Label node or Select node (node that returns a label right away).

**Note** Do not use the Queue node in the routing script.
The label must be configured in the SIP Proxy Server to the IP address of the device that the label corresponds to. The Proxy Server is optional. If you do not have one, you must configure the Gateway dial-peer to point to the Call Server (refer to the first step in this process). Also, you must configure the **destination labels** in the SIP Service for the Call Server.
See the *Scripting and Media Routing Guide for Cisco Unified ICM/Contact Center Enterprise & Hosted* for more information.

**Step 5** In the Operations Console, install and configure Call Servers.

a) Enable the ICM and SIP Services on the Call Server.
   In the Operations Console, select **Device Management > Unified CVP Call Server**.
   Select the check boxes: ICM and SIP

b) Configure the SIP Service:
   Select **Device Management > CVP Call Server > SIP tab**.
   • If you are using a SIP Proxy Server, enable the Outbound Proxy and select the SIP Proxy Server. If using a SIP Proxy Server, configure Local Static Routes on the SIP Proxy Server itself.
   • If you are not using a SIP Proxy Server, configure Local Static Routes using the Dialed Number Pattern system configuration in the Operations Console. A local static route must be configured for each SIP gateway/ACD, SIP endpoint in order to receive calls.
   • Check the default values for the SIP Service and change, if desired.
   See the *SIP Devices Configuration* and *SIP Dialed Number Pattern Matching Algorithm* for detailed information.

c) Configure the ICM Service by setting the maximum length DNIS to the length of the Network Routing Number:
   • Select **Device Management > CVP Call Server > ICM tab**.
   • Set the Maximum Length of DNIS to length of the Network Routing Number.

Example: For the Gateway dial pattern as 1800******, the maximum DNIS length is 10.
Configure ICM Settings for VRU-Only Call Flow Model: Type 8

Procedure

Step 1 Perform Steps 1 to 4 of the Set Up Type 8 VRU-Only Call Flow Model for ICME and ICMH procedure.

Step 2 Define a Network VRU on Unified ICME or (for Unified ICMH) on the NAM and each CICM. Using the ICM Configuration Manager, the Network VRU Explorer tool, specify the following:

• Type: 8
• Name: cvpVRU

Note Although any name works, cvpVRU is used by convention, and is an example name referenced in this guide.

Step 3 Configure the Peripheral Gates (PGs) on Unified ICME or (for Unified ICMH) on each CICM.

a) Configure each PG.
b) Configure a peripheral for each Unified CVP ICM Service connected to each PG.

Use the ICM Configuration Manager, the PG Explorer tool. For each Unified CVP ICM Service connected to this PG, in the tree view pane, select the applicable PG and configure the following items:

Logical Controller tab:

• Client Type: VRU
• Name: A name descriptive of this PG
   Example: <location>_A for side A of a particular location

Peripheral tab:

• Peripheral Name: A name descriptive of this Unified CVP peripheral
   Examples: <location>_<cvp1> or <dns_name>
• Client Type: VRU
• Select the checkbox: Enable Post-routing

Advanced tab:

• From the Network VRU field drop-down list, select the name: cvpVRU

Routing Client tab:

• Name: By convention, use the same name as the peripheral.
Step 4 Configure a Service and Route for each VRU on Unified ICME or (for Unified ICMH) on each CICM.

Note You can also use service arrays. See the Unified ICME documentation set for more information.

Using the ICM Configuration Manager, the Service Explorer tool, specify the following:

- Service Name: cvpVRU
- Route Name: PeripheralName_cvpVRU
- Peripheral Number: 2

Must match the "Pre-routed Call Service ID" in the Call Server configuration on the ICM tab in the Operations Console

- Select the Enable Post-routing checkbox.

Step 5 Define trunk groups.

Note Configure one Network Transfer Group and one associated Trunk Group for each VRU leg Unified CVP ICM Service.

Define and configure the network trunk group on Unified ICME or (for Unified ICMH) on each CICM.

Using the ICM Configuration Manager, the Network Trunk Group Explorer tool:

a) Identify the network trunk group.

- Network Trunk Group Name: A name descriptive of this trunk group

b) For each Unified CVP ICM Service for the VRU leg, configure an associated trunk group.

- Peripheral Name: A name descriptive of this trunk group
- Peripheral Number: 200

Must match the Pre-routed Call Trunk Group ID in the Call Server configuration on the ICM tab in the Operations Console

- Trunk Count: Select Use Trunk Data from the drop-down list
- Do not configure any trunks

Step 6 Define translation route(s).

Define and configure a Translation Route for each VRU Peripheral on Unified ICME or (for Unified ICMH) on each CICM.

On Unified ICME, ICM Configuration Manager, Translation Route Explorer tool:

a) Define a Translation Route for each VRU Peripheral. Specify the following:

Translation Route tab:

- Set the Name field to the name of the target VRU peripheral. (This is by convention; this value must be unique in the enterprise)
- Set the Type field to DNIS and select the Service defined in the previous step

b) Configure translation route and label information for each VRU peripheral. Complete the following:

Route tab:
• Set the **Name**: by convention, this is the name of the target VRU peripheral, followed by the DNIS that this route will use, for example, `MyVRU_2000`

  This value must be unique in the enterprise

• Service Name drop-down list, select: `PeripheralName.cvpVRU`

**Peripheral Target** tab:

• Enter the first DNIS that will be seen by the VRU that you will be using for this translation route.

  **Note** The DNIS pool used for each VRU peripheral must be unique

• From the drop-down list, select a **Network Trunk Group** which belongs to the target VRU

**Label** tab:

• Enter the translation route label (which might or might not be the same DNIS you entered on the Peripheral Target tab)

  **Type**: `Normal`

  **Routing Client**: Select the NIC Routing Client

  **Note**

  • You must create an additional label for each NIC routing client.

  • Repeat the Route and corresponding Peripheral Target and Label information for each DNIS in the pool.

---

**Step 7** Create VRU and routing scripts.

Create VRU scripts and routing scripts for IVR treatment and agent transfer on Unified ICME or (for Unified ICMH) on each CICM.

Using the ICM **Script Editor** tool, create the VRU scripts and routing scripts to be used for IVR treatment and agent transfer, as described in other sections of this manual and in the ICM manuals.

The VRU scripts are associated with the applicable Network VRU.

For example, `cvpVRU`

Use the ICM Script Editor's **TranslationRouteToVRU** node to connect the call to the Network VRU.

**Step 8** Configure the ECC variables on Unified ICME or (for Unified ICMH) on the NAM and each CICM.

Using the ICM Configuration Manager, create the ECC variables.

For more information, see **Define Unified CVP ECC Variables**, on page 9.

**Step 9** Configure dialed numbers and call types on Unified ICME or (for Unified ICMH) on the NAM and each CICM.

On Unified ICME, using the ICM Configuration Manager, configure dialed numbers and call types.

For more information, see **ICM Configuration Guide for Cisco ICM Enterprise Edition**.

**Step 10** On Unified CM, configure Unified CM.

For more information, see the Unified CM user documentation.

**Step 11** Install and configure the Call Servers.

Log in to the Operations Console, select **Device Management > CVP Call Server** and install and configure the Call Servers.
Check the **ICM** and **IVR** check boxes.

For detailed information, see the Operations Console online help.

**Step 12** Configure the ICM service.

On the Operations Console, select **Device Management** > **CVP Call Server** > **ICM tab**. On each Unified CVP Call Server, configure the **ICM Service** by specifying the following required information:

a) VRU connection port number.
   - Set the VRU Connection Port to match the VRU connection Port defined in ICM Setup for the corresponding VRU peripheral gateway (PIM).

b) Maximum Length of DNIS.
   - Set the maximum length DNIS to a number which is at least the length of the translation route DNIS numbers.
   
   Example: if the Gateway dial pattern is 1800******, the maximum DNIS length is 10.

c) Call service IDs: New Call and Pre-routed.
   - Enter the new and pre-routed call service IDs. Configure the ports for both groups according to the licenses purchased, call profiles, and capacity by completing the required fields on this tab.

d) Trunk group IDs: New Call and Pre-routed.
   - Enter the new and pre-routed call trunk group IDs
   - Configure the group number for the Pre-routed Call Trunk group. The group number must match the trunk group number in the Network Trunk group used for the translation route
   - Configure the number of ports according to the licenses purchased and capacity
   - Configure each of the numbers used for translation routes. (The “New Call” group is not used since the calls are being sent to the VRU (Unified CVP) after some initial processing by the NIC/Unified ICME)

e) Dialed numbers used in the translation route.
   - Add the dialed numbers in the DNIS field.

f) Check the default values of the other settings and change, if desired.

**Step 13** Configure the IVR Service.

On the Operations Console, select **Device Management** > **CVP Call Server** > **IVR tab**.

Check the default values and change, if desired.

Refer to the Operations Console online help for information about other settings you might want to adjust from their default values.

**Step 14** (Optional) Configure the Reporting Server.

In the Operations Console, select **Device Management** > **CVP Reporting Server** > **General tab**:

1  Configure the Reporting Server.
2  Select a Call Server to associate with this Reporting Server.
3  Check the default values of the Reporting properties and change, if desired.

For more information, see **Reporting Guide for Cisco Unified Customer Voice Portal**
Unified ICM Configuration

Configure ICM Settings for VRU-Only Call Flow Model: Type 8
VoiceXML Gateway Configuration Examples

Example Gateway Settings for Type 8 Call Flow Model

The first part of the following example provides the basic configuration for setting a VoiceXML gateway:

- Applies a timestamp to debugging and log messages
- Turns on logging
- Turns off printing to the command line interface console
- Sends RTP packets
- Configures ASR/TTS Server
- Configures gateway settings

The last part of this example provides the following:

- Initiates the VoiceXML leg
- Plays a .wav file that enables caller to hear message from critical_error.wav
- Logs errors on the gateway when the call fails
Example of Dial-peer for ICM VRU Label for Type 8 Call Flow Model

The following example provides the configuration for an ICM VRU label dial-peer for the Type 8 Unified CVP VRU-Only call flow model:

dial-peer voice 777 voip
description ICM VRU label
service bootstrap
voice-class codec 1
incoming called-number <your sendtovru label pattern here>
dtmf-relay rtp-nte
no vad
!

Configuration Guide for Cisco Unified Customer Voice Portal, Release 10.0(1)
Configure ICM Settings for VRU-Only Call Flow Model: Type 7

Procedure

**Step 1** Perform Steps 1 to 4 of the Set Up Type 8 VRU-Only Call Flow Model for ICME and ICMH procedure.

**Step 2** Configure each PG.

On the NAM, ICM Configuration Manager, PG Explorer tool:

a) Configure each PG to be used for the VRU Client leg.

b) Configure a peripheral for each Unified CVP ICM Service to be used as a VRU leg connected to each PG. For each Unified CVP ICM Service connected to this PG, in the tree view pane, select the applicable PG.

**Logical Controller** tab, configure:

- Client Type: VRU
- Name: A name descriptive of this PG
  
  For example: `<location>_A` for side A of a particular location

**Peripheral** tab, configure:

- Peripheral Name: A name descriptive of this VRU peripheral.
  
  For example: `<location>_<cvpl> or <dns_name>

- Client Type: VRU

- Select the checkbox: Enable Post-routing

**Routing Client** tab:

- Name: By convention, use the same name as the peripheral.

- Client Type: VRU

**Step 3** Define a Network VRU and labels.

On the CICM, ICM Configuration Manager, Network VRU Explorer tool, define a Network VRU for the VRU leg and labels for reaching the NAM.

Specify the following:

- Type: 7

- Name: `cvpVRU`

**Note** This name is used by convention. Although any name will do, since it is referenced elsewhere in this document, `cvpVRU` is assumed.

- Define a **Label** for the NAM.
  
  - Label: Network routing number

  - Type: Normal
Step 4 Define a Network VRU and a label for each NIC. On the NAM, ICM Configuration Manager, Network VRU Explorer tool, define a Network VRU and a label for each NIC that is using this VRU.

Specify the following:
- **Type:** 7
- **Name:** cvpVRU

**Note** This name is used by convention. Although any name will work, since it is referenced elsewhere in this document, cvpVRU is assumed.

- Define a **Label** for each NIC that is using this VRU:
  - **Label:** Network routing number
  - **Type:** Normal
  - Routing client: Select the Routing Client for that NIC from the drop-down list.

**Note** Ensure the Network VRU label is identical in the NAM and CICM. The Network VRU Name must be same to avoid confusion.

Step 5 If there are Routing Scripts on the NAM, define a default Network VRU. On the NAM, ICM Configuration Manager, System Information tool, in the General section:

- Define the Default Network VRU: cvpVRU

Step 6 Define a default VRU. On the CICM, ICM Configuration Manager, System Information tool, in the General section:

- Define a default Network VRU: cvpVRU

Step 7 Create the VRU and routing scripts. On the CICM, ICM Script Editor tool:

Create the VRU scripts and routing scripts to be used for IVR treatment and agent transfer, as described in other sections of this manual and in the Unified ICME manuals. The VRU scripts are associated with the applicable Network VRU, that is, cvpVRU.

Use the ICM Script Editor’s SendToVRU node to connect the call to the Network VRU.

**Note** A RunVRU Script or Queue node is an implicit SendToVRU node, although error handling will be easier if the explicit SendToVRU node is used.

Step 8 Configure the ECC variables. On the NAM and CICM, ICM Configuration Manager, configure the ECC variables.

For more information, see Define Unified CVP ECC Variables, on page 9.

Step 9 Configure dialed numbers and call types. On the NAM and CICM, ICM Configuration Manager, configure dialed numbers and call types.

For more information, see ICM Configuration Guide for Cisco ICM Enterprise Edition

Step 10 Define customers. On the NAM and CICM, ICM Configuration Manager:
a) If necessary, differentiate VRUs (Unified CVPs) based on dialed number.
b) Define customers and their Network VRU.
For more information, see Common Configuration for Differentiating VRUs Based on Dialed Number, on page 16.

Step 11 On Cisco Unified CM, configure Unified CM.
For more information, see the Unified CM user documentation.

Step 12 Install and configure the Call Server.
In the Operations Console, select Device Management > CVP Call Server.

a) Install and configure the Call Server.
b) To enable the ICM and IVR Services on the Call Server, select the ICM and IVR check boxes.

Step 13 Configure the ICM Service for each Call Server.
In the Operations Console, select Device Management > CVP Call Server > ICM tab. For each Unified CVP Call Server, configure the ICM Service by specifying the following required information:

a) VRU connection port number.
   Set the VRU Connection Port to match the VRU connection Port defined in ICM Setup for the corresponding VRU peripheral gateway (PIM).

b) Set the maximum length DNIS to the length of the Network Routing Number.
   Example: if the Gateway dial pattern is 1800******, the maximum DNIS length is 10.

c) Call service IDs: New Call and Pre-routed.
   Enter the new and pre-routed call service IDs. Configure the ports for both groups according to the licenses purchased, call profiles, and capacity by completing the required fields on this tab

d) Trunk group IDs: New Call and Pre-routed.
   Enter the new and pre-routed call trunk group IDs. Configure the group number for the Pre-routed Call Trunk group. The group number must match the trunk group number in the Network Trunk group used for the translation route.
   Configure the number of ports according to the licenses purchased and capacity. Configure each of the numbers used for translation routes. (The New Call group is not used because the calls are sent to the VRU (Unified CVP) after an initial processing by the NIC/Unified ICME).

e) Check the default values of other settings and change, if desired.

Step 14 Configure the IVR service.
In the Operations Console, select Device Management > CVP Call Server > IVR and configure the IVR Service.

Check the default values and change, if desired.
See the Operations Console online help for information about settings.

Step 15 (Optional) Configure the Reporting Server.

a) Configure the Reporting Server.
b) Select a Call Server to associate with this Reporting Server.
c) Check the default values of the Reporting properties and change, if desired.
   For more information, see Reporting Guide for Cisco Unified Customer Voice Portal.
Pass Data to Unified ICME

In the Unified CVP VXML Server (standalone) with ICM Lookup call flow model, Unified ICME sends a label to Unified CVP. This process requires the following configuration:

The Standalone with Request ICM Label variation of the Standalone call flow model performs a route request to Unified ICME, and then Unified ICME starts a script (new call). Unified ICME sees whatever the device puts in the new call message, then Unified ICME chooses a target, such as an agent, and sends a label back to the device. That route request to Unified ICME sends other information, such as ECC variables. Unified ICME can pass other ECC variables to Unified CVP. Also, you need to configure a Unified CVP VXML Server in the Unified CVP Call Server for the call flow model.

Configure the Connections

The following procedure describes how to set up a VXML Server that connects to a Call Server through the ICM Service, and the connection from the ICM Service to the peripheral gateway.

Note

The VRU PIM initiates the connection from the PG to the Call Server. The ICM Service listens for a connection from the VRU PIM.

Procedure

Step 1
Start the VXML Server. The VXML Server starts the VoiceXML Service using the DataFeed mechanism or the ReqICMLabel element. The ReqICMLabel element allows a Call Studio script to pass caller input, call variables, and External Call Context (ECC) variables to a Unified ICME script. The ReqICMLabel must be inserted into a Call Studio script as a decision element. In Call Studio, the returned Unified ICME label contains a result which can be used by other elements in the same application, such as the Transfer or Audio element. The Transfer element sends instructions to the IOS Voice Browser to transfer the caller to the desired location. After the VoiceXML Service starts, it starts communicating with the ICM Service.

Step 2
Log in to the Operations Console and configure a Call Server and ICM service. See Configure Call Server. See the Unified ICME documentation for instructions on configuring the VRU PIM to connect to a VRU. For example, Unified CVP.

Configure a Gateway for IP to TDM Calls

The following components are required for the gateway to process IP to TDM calls:

• Phones and numbers must be configured on the TDM switch.
• Gateway must be defined on Unified CM.
• Route pattern on the Unified CM that sends the call to the gateway.
• Dial peer on the gateway that sends calls that must be configured.
• Dial 888800605x on the IP phone (this is a specific physical phone extension).

**Procedure**

**Step 1**  Configure the gateway to send the call to a particular Unified CVP VXML Server application, as follows:

dial-peer voice 8888 voip
service [gateway application name]
incoming called-number 888800....
dtmf-relay rtp-nte
codec g711ulaw
no vad

**Step 2**  To match the number in the Unified CVP VXML Server transfer node and send it out the T1 port to the G3 to its destination, use the following configuration:

dial-peer voice 8880 pots
destination-pattern 888800....
incoming called-number
direct-inward-dial
port 1/0:D

---

**Configure a Cisco Multiservice IP-to-IP Gateway for Unified CM Connections**

For information on configuring the Cisco IOS gateway for Unified CM connections, see the Cisco Multiservice IP-to-IP Gateway Software documentation.

**Configure SNMP Monitoring for the Unified CVP VXML Server**

When a Call Studio application is created, the simple network management protocol (SNMP) monitoring for the VXML Server is provided. `CVPSNMPLogger` is enabled when a new Call Studio application is created and deployed to the Unified CVP VXML Server. `CVPSNMPLogger` logs error events received from the VXML Server. For example, using this process you can configure to send a page to a technical support representative when a particular error alert is triggered on the customer site.

**Procedure**

**Step 1**  To view `CVPSNMPLogger` for the Unified CVP VXML Server, access the Call Studio interface.

**Step 2**  From Call Studio for each Call Studio application, right-click the application and select **Properties > Cisco Unified CVP > General Settings.**
CVPSNMPLogger appears in the Loggers drop-down box.

⚠️ Caution
Do not remove CVPSNMPLogger because doing so disables viewing of SNMP events and alerts.