Network IVRs/VRUs

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VRU Configuration Tools

Network VRU Explorer Tool

This tool allows a network applications manager (NAM) to view, edit, or define network VRUs, labels, and their associations. The system software can send a customer call to a network VRU.

Note The Network VRU Explorer is not available on a limited (single Instance) Administration & Data Server.

To begin, select the filters you want and click **Retrieve**.

The changes you make in the Network VRU Explorer window are not applied to the database until you click **Save**.

Network VRU Script List Tool

This tool allows you to list the network VRU scripts currently defined in the Unified ICM database, to define new ones, and to view, edit, or delete the records of existing ones.

Network VRU scripts are created by VRU engineers for VRUs. This List tool defines these previously created scripts for the system software so it can interact with the scripts.

Note The Network VRU Script List tool is not available on a Limited (single Instance) Administration & Data Server.

VRU Currency List Tool

This tool allows you to list the VRU currencies currently defined in the Unified ICM database, to define new ones, and to view, edit, or delete the records of existing ones.

VRU Defaults List Tool

This tool allows you to list VRU defaults currently defined in the Unified ICM database, to define new ones, and to view, edit, or delete the records of existing ones.

VRU Locale List Tool

This tool allows you to list the VRU locales currently defined in the Unified ICM database, to define new ones, and to view, edit, or delete the records of existing ones.

Configuring Network VRUs and VRU Scripts

Before you start configuring a Network VRU, you must know its type. The VRU type determines what routing script nodes the system software needs to use to communicate with the VRU. For example, when interacting with a Type 3 VRU, the system software runs a routing script containing a Send to VRU node to successfully process a call.

The following table lists the VRU types that are currently available.

Table 1: Voice Response Unit (VRU) Types

Type	Description	Nodes to use with this type
1	Normal label type and a correlation ID.	
2	Normal label type and a DNIS.	Required: Translation Route to VRU. Optional: Queue and Run VRU Script.
3	Resource label type and a correlation ID. The routing client can automatically take back the call from the VRU when the system software returns a destination label. **Note** Use this type (rather than Type 7) when the routing client can automatically take back the call from the VRU when the system software returns a destination.	Optional: Send to VRU, Queue, and Run VRU Script.

Type	Description	Nodes to use with this type
5	Resource label type and either a correlation ID or a DNIS. **Note** Use this type (rather than a Type 3 or Type 7) when the routing client itself takes care of mapping the call to requests from the system software.	Required: Send to VRU. Optional: Queue and Run VRU Script.
6	No label, no correlation ID, and no DNIS (call is already at the VRU).	The VRU for this type is programmed so that it can recognize such a request based on the call qualifiers, so you can assume the call is already at the VRU. Optional: Queue and Run VRU Script.
7	Similar to Type 3, but the system software automatically instructs the VRU to release the call when it sends a destination label to the routing client. **Note** Use this type (instead of Type 3) when the routing client cannot take back the call from the VRU. That is, the system software automatically instructs the VRU to release when it sends a route response to the routing client; for example, CWC Network VRUs.	Optional: Send to VRU, Queue, and Run VRU Script.
8	Similar to Type 2, but a Type 8 VRU is used when the NAM has a routing client that controls the call to the VRU.	Required: Translation Route to VRU. Optional: Queue and Run VRU Script.
9	Simplifies configuration requirements in Unified Customer Voice Portal(Unified CVP) Comprehensive Model deployments. Use this type for calls that originate from a TDM VRU or ACD and need to be transferred to Unified CVP for self service or queuing, and for calls that originate from an Unified CCE or Unified CM, and need to be transferred to Unified CVP for self service or queuing.	Required: All Unified CVP micro-application scripts

Type	Description	Nodes to use with this type
10	Type 10 was designed to simplify the configuration requirements in Unified CVP Comprehensive Model deployments. There is a Handoff of routing client responsibilities to the Unified CVP switch leg. There is an automatic transfer to the Unified CVP VRU leg, resulting in a second transfer in the case of calls originated by the VRU, ACD, or Cisco Unified Communications Manager. For calls originated by Cisco Unified Communications Manager, the Correlation ID transfer mechanism is used. The Correlation ID is automatically added to the end of the transfer label defined in the Type 10 Network VRU configuration. The final transfer to the Unified CVP VRU leg is similar to a Type 7 transfer, in that a RELEASE message is sent to the VRU prior to any transfer.	

It is not really necessary to include a Send to VRU node in a script referring to a Type 3 or Type 7 VRU, as the Queue and Run VRU Script nodes automatically send the call to the VRU if it is not already there when they run. However, including it in such scripts can act as a visual aid if you ever need to troubleshoot the script.

For Types 3 and 7 you must use the System Information dialog to configure a range of correlation IDs. These IDs allow the system software to match calls arriving at the VRU with calls sent there by the system software. (For Types 2 and 8, the system software uses the DNIS values associated with the translation route to match up the calls. For Type 6, no matching is required since the call is already at the VRU.)

VRU Port Map Data Descriptions

A VRU port map associates a VRU trunk with an ACD trunk or an ADC port. In cases where ACD and VRU PIMs are controlled by the same PG, each row in the VRU_Port_Map table specifies how a VRU port maps to an ACD trunk or port.

You can add or modify the VRU Port Map in bulk using the VRU Port Map Bulk Inster or Bulk Edit tools in **Configuration Manager** > **Bulk Configuration** > **.**

Table 2: VRU Port Map Data Descriptions

Field	Description
State	(display only) A symbol indicating whether a row's record is changed, not changed, to be deleted, or to be inserted.
VRU Trunk Group (required)	Indicates the VRU Trunk Group associated with this port map.

Field	Description
VRU Trunk Number (required)	Indicates the VRU Trunk associated with this port map.
Mapping Type (required)	Type of mapping associated with this port map. There are two mapping types: • VRU Trunk, which maps to ACD Trunk • VRU Port, which maps to ACD Port This selection determines which two of the next four fields are editable.
ACD Trunk Group	(optional) Indicates the ACD Trunk Group associated with this port map.
ACD Trunk Number	(optional) Indicates the ACD Trunk associated with this port map.
ACD Peripheral	(optional) Indicates the ACD Peripheral associated with this port map.
ACD Port	(optional) Indicates the ACD Port associated with this port map.

Network VRU Script Data Descriptions

Each row identifies a script used by a network VRU to handle a call. A VRU script is managed by the VRU itself. It is not stored in the Unified ICM database or directly managed by the system software. The system software can only direct the VRU to run the script.

Note The Network VRU Script Bulk tool is not available on a Limited (single Instance) Administration & Data Server.

Table 3: Network VRU Script Data Descriptions

Field	Description
State	(display only) A symbol indicating whether a row's record is changed, not changed, to be deleted, or to be inserted.
Network Target (required)	Identifies the network VRU associated with the script.
VRU Script Name (required)	The name of the script as known at the VRU.
Network VRU Script (required)	The enterprise name of the script.
Customer	(optional) The name of the customer associated with the script.
Interruptible (required)	Indicates whether the system software can interrupt the script (for example, if a routing target becomes available): Yes or No.
Overridable (required)	Indicates whether the script can override its own Interruptible attribute: Yes or No.

Field	Description
Configuration Parameter	(optional) A parameter string that is sent to the VRU to initialize the script.
Timeout	(optional) The number of seconds the system software will wait for a response after invoking the script. If the system software does not receive a response from the routing client within this time, it assumes the VRU script has failed.
Description	(optional) Additional information about the script.

Network VRUs

Define each logical VRU in the database before continuing to the following sections.

Create Network VRU Target

Procedure

Step 1 Within the Configuration Manager, select **Tools** > **Explorer Tools** > **Network VRU Explorer**.

The Network VRU Explorer window appears.

Step 2 In the Network VRU Explorer window, click **Retrieve** to enable **Add Network VRU** .

Step 3 Click **Add Network VRU**.

The Network VRU property tab appears.

Step 4 Complete the Network VRU property tab.

The Name and Type fields are required. All other fields are optional.

The ECC Payload field provides the name of the ECC payload that has scope for interactions with this network VRU. For additional information refer to the Online Help.

Step 5 Click **Save** to apply your changes.

Define Network VRU Label

You must associate all VRU Types (except Type 6) with a Network VRU label.

Procedure

Step 1 In the Network VRU Explorer window, click **Retrieve** and select the Network VRU you want to add the label to.

The Label property tab appears.

Step 2 Complete the Label property tab.

The **Routing client**, **Label**, and **Label type** fields are required. All other fields are optional. For additional information refer to the online Help.

Step 3 Click **Save** to apply your changes.

Set Default Network VRU and Range of Correlation Numbers

For Network VRUs, you must use the System Information dialog to define a range of correlation IDs so the system software can communicate with the VRU about the call.

Procedure

Step 1 Within the Configuration Manager, select **Tools** > **Miscellaneous Tools** > **System Information**.

The System Information window appears.

Step 2 In the System Information window, select the **Default Network VRU**.

Step 3 Enter the **Minimum Correlation Number**.

Step 4 Enter the **Maximum Correlation Number**.

For additional information refer to the online help.

Step 5 Click **Save** to apply your changes.

Configure VRU Scripts

To allow a routing script to control the processing on the VRU, you must configure VRU-based scripts within the system software. A routing script can then direct the VRU to run a specific script.

Note VRU scripts are defined and maintained on the VRU. The system software maintains only a name for each VRU script. It does not maintain the scripts themselves.

Procedure

Step 1 Within the Configuration Manager, select **Tools** > **Network VRU Script List**. The Network VRU Script List window appears.

Step 2 In the Network VRU Script List window, enable **Add** by clicking **Retrieve**.

Step 3 Click **Add**. The Attributes property tab appears.

Step 4 Complete the Attributes property tab.

Note
The **Name**, **Network VRU**,**VRU script name**, and **Timeout** fields are required. All other fields are optional. For additional information refer to the online Help.

Step 5 Click **Save** to apply your changes. The system software database manager automatically generates a unique Network VRU Script ID.

Accessing VRUs in Scripts

After you configure Network VRU and VRU scripts, you can use the Script Editor (refer to the *Scripting and Media Routing Guide for Cisco Unified ICM/Contact Center Enterprise* for additional information) to write a routing script to send a call to the VRU and invoke a specific VRU script.

Calls Queued at VRUs

You can queue a call at a Network VRU until a specific resource becomes available. A call can be queued directly to an agent, to a precision queue, to one or more skill groups, to an enterprise skill group, or to one or more scheduled targets. As soon as an agent becomes available at one of the specified targets, the call is removed from the queue and sent to the target.