



# Integrating Cisco CRM Communications Connector with Cisco IPCC Express

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This chapter addresses the desktop integration between Cisco Agent Desktop, the desktop component of Cisco IPCC Express, and Microsoft Customer Relationship Management. This integration is based on the CTI capabilities in Cisco Agent Desktop Enhanced and Premium services offered under Cisco IPCC Express. This integration uses a utility program included with Cisco CRM Communications Connector called CADLink.



**Note**

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Cisco IPCC Express integration is not necessary if you are just running Cisco CallManager and Cisco CallManager Express.

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## CADLink

CADLink's primary purpose is to act as an intermediary between the capabilities of CAD and those of Cisco CRM Communications Connector. This link is needed because Cisco CRM Communications Connector cannot, on its own merits, properly detect caller ID information in a CAD environment. CADLink remedies this situation by providing one-way communication of caller ID information from CAD to the Cisco CRM Communications Connector when the agent receives calls through Cisco IPCC Express.

# Integration Methodology

In order to achieve the integration, the workflow events available in Cisco IPCC Express are utilized to pass inbound call information to CADLink, which is then passed on to Cisco CRM Communications Connector to be acted upon. Outbound dialing and call recognition will use TAPI.

There are three events to every inbound call that are of importance to Cisco CRM Communications Connector:

- **Ring**ing—CallerID information must be processed during the ringing phase of the phone call. At this phase, the Cisco CRM Communications Connector search window appears.
- **Answer**ed—At this phase, the Cisco CRM Communications Connector client knows that the phone call has begun.
- **Dro**pped—When the call is dropped, the Cisco CRM Communications Connector client stores the appropriate information about call duration

These events correlate with those available in Cisco IPCC Express. Each event will use the “Call external application” event action to execute CADLink with appropriate command-line parameters. However, because the “Call External Application” action is restricted in the command-line parameters available, CADLink relies on the number of command-line parameters in order to determine which event has occurred. For this reason, one of the events (Dropped) utilizes placeholder parameters, and it is important that you follow these procedures.

# Configuring Call Ringing Event Information



## Note

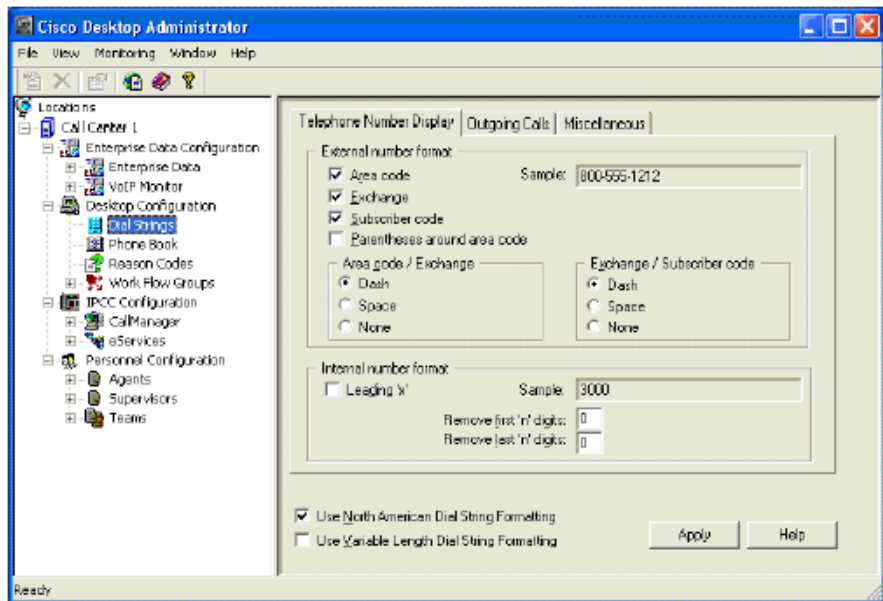
Each of the integrations described in this section are based on the CTI integration capabilities offered in CAD. For additional information, see the *CAD Administration Guide* at [http://www.cisco.com/univercd/cc/td/product/voice/sw\\_app\\_to/apps\\_3\\_5/english/admn\\_app/cad\\_admn.pdf](http://www.cisco.com/univercd/cc/td/product/voice/sw_app_to/apps_3_5/english/admn_app/cad_admn.pdf)

Cisco CRM Communications Connector integrates with Cisco IPCC Express by administrative configuration of workflows in the CAD Desktop Manager. Workflows must first assign to agents.

Perform the following steps to assign a workflow to an Agent:

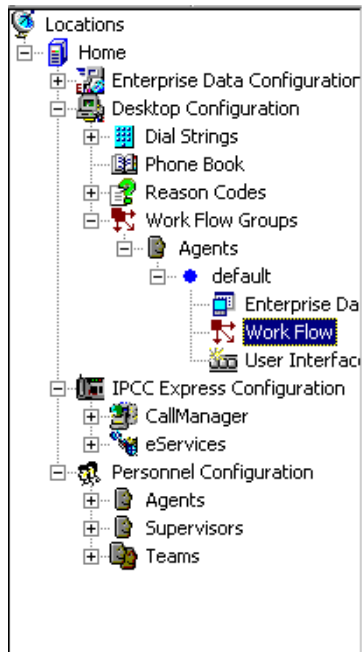
- Step 1** Open the Cisco Desktop Administrator application (see [Figure 40](#)).

*Figure 40 Cisco Desktop Administrator Window*



**Step 2** In the left pane, click **Desktop Configuration, Work Flow Groups** and **Agents** (see [Figure 41](#)).

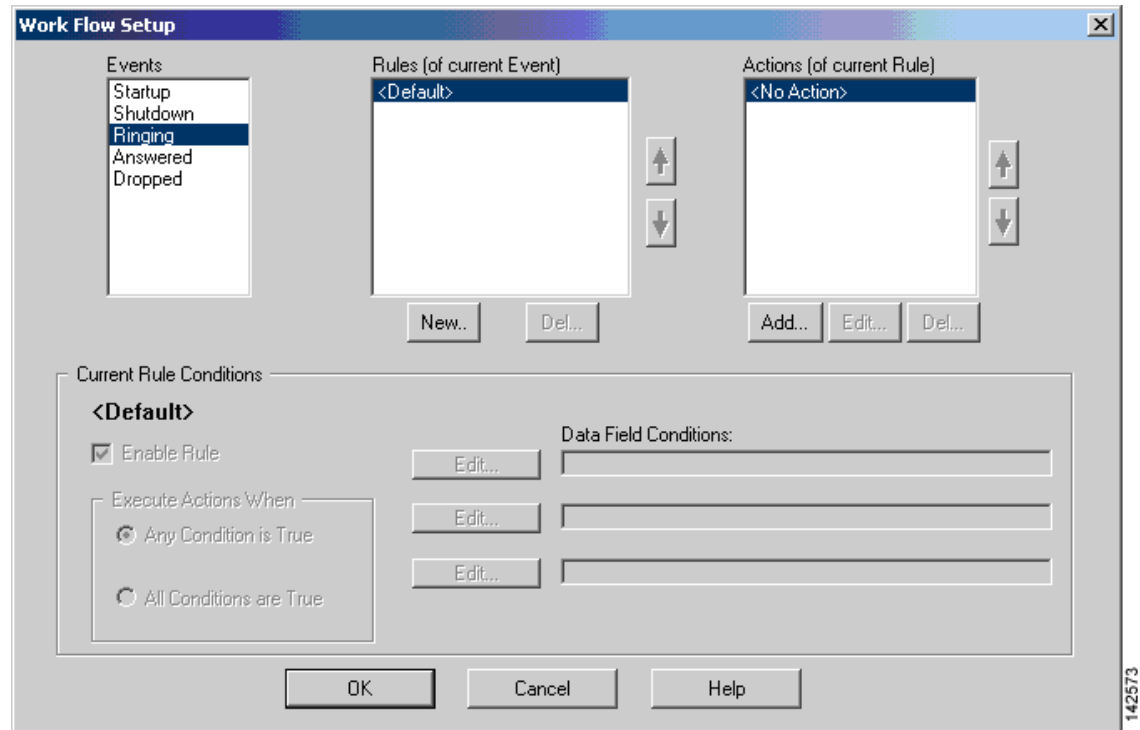
*Figure 41 Specifying Agent Type*



**Step 3** Select the **Workflow** Agent type.

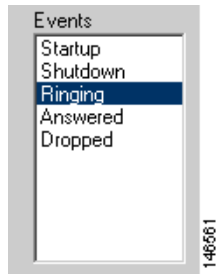
The Work Flow Setup window appears (see [Figure 42](#)).

*Figure 42 Work Flow Setup Window*



**Step 4** Select **Ring**ing from the Events list (see [Figure 43](#)).

**Figure 43** Specifying Ringing Event



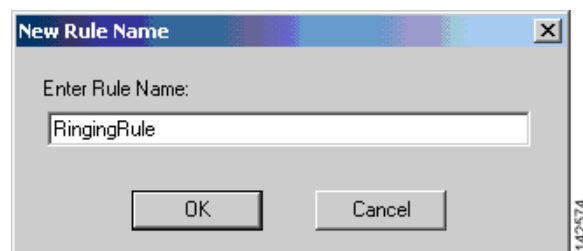
**Step 5** Click the **New...** button to add a new rule (see [Figure 44](#)).

**Figure 44** New Rule Button



The New Rule Name window appears (see [Figure 45](#)).

**Figure 45** New Rule Name Window

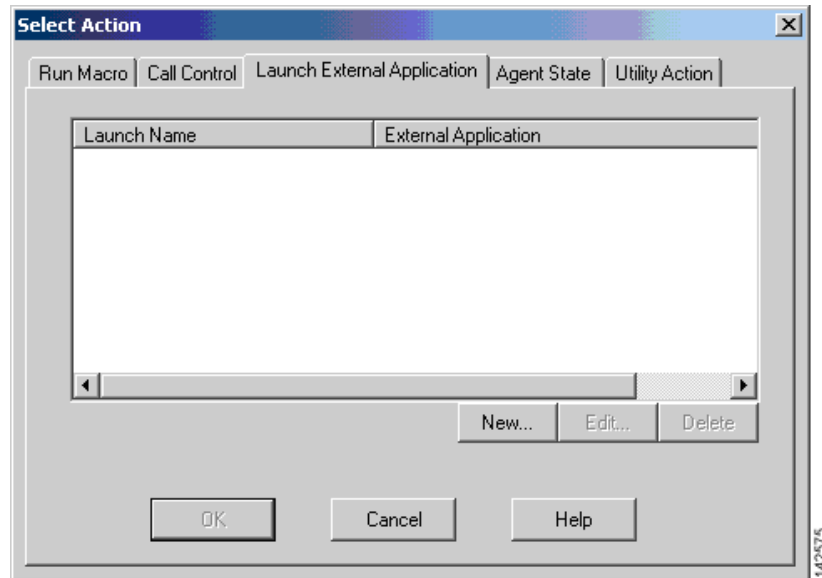


**Step 6** Enter a rule name. For example, RingingRule, or something similar that describes the rule appropriately.

**Step 7** Select **RinginRule** in the list of rules, and then click **Add...** to add a new action.

The Select Action window appears (see [Figure 46](#)).

*Figure 46 Select Action Window*

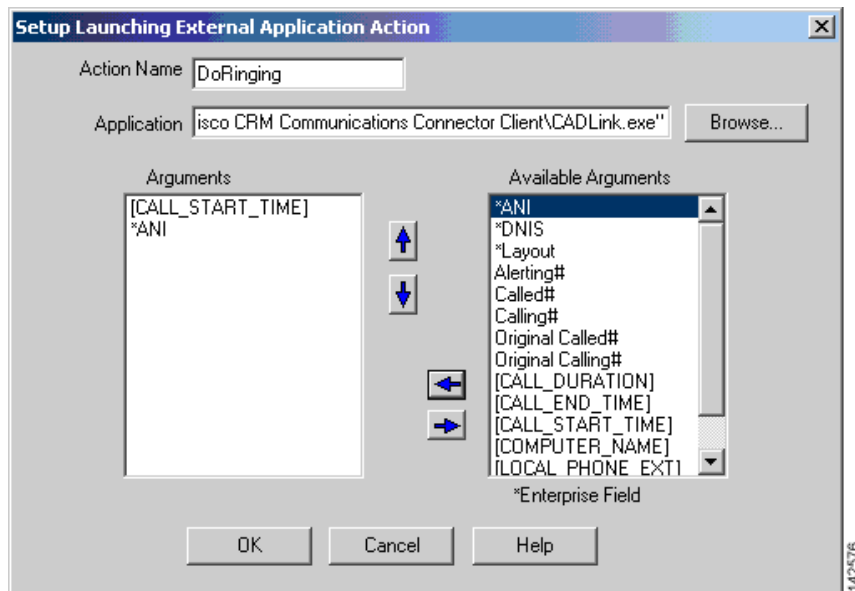


**Step 8** Select the **Launch External Application** tab.

**Step 9** Click the **New** button to add a new Launch External Application action.

The Setup Launching External Application Action window appears (see [Figure 47](#)).

*Figure 47 Setup Launching External Application Action Window*



**Step 10** In the Action Name field, name the Action **DoRinging**.

- Step 11** In the Applications field, enter the application as “**C:\Program Files\Cisco Systems Inc\Cisco CRM Communications Connector Client\CADLink.exe**” (including quotation marks), or whatever the path to the CADLink.exe executable is on the client machine.

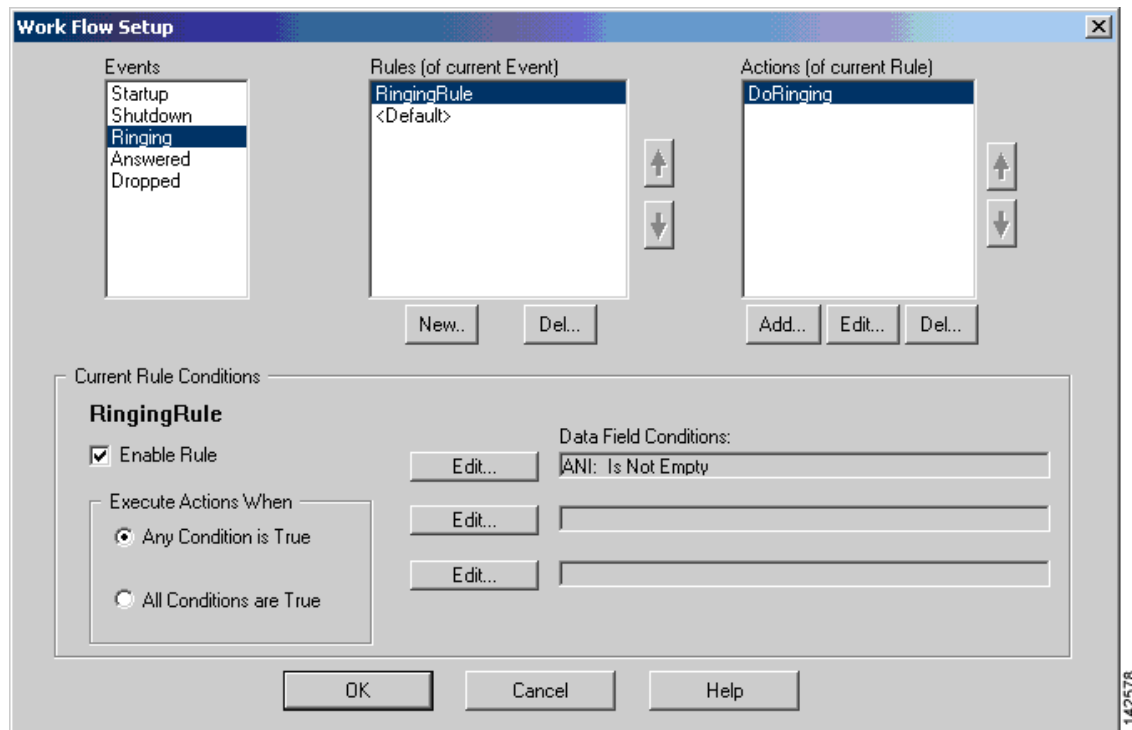
**Note**

The Cisco CRM Communications Client application must be installed in the same physical location as all of the clients that will use CADLink.

- Step 12** In the Arguments field, select the [CALL\_START\_TIME] argument.
- Step 13** In the Available Arguments field, select \*ANI as the second argument.
- Step 14** Click **OK** to accept the configuration.

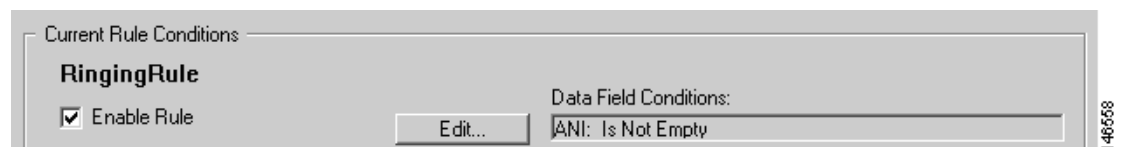
The Work Flow Setup window appears (see [Figure 48](#)).

*Figure 48 Work Flow Setup Window*



- Step 15** Enable the RingingRule by clicking the first **Edit** box in the Current Rule Conditions region (see [Figure 49](#)).

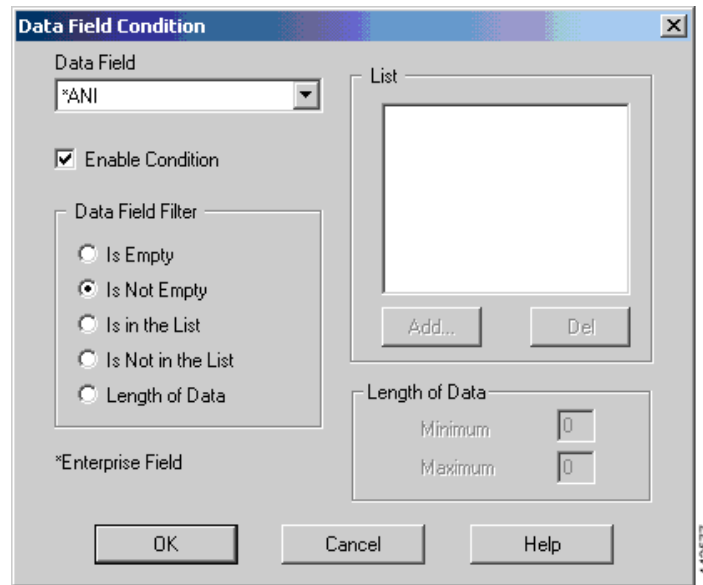
*Figure 49 Selecting Ringing Rule Edit Box*





The Data Field window appears (see [Figure 50](#)).

*Figure 50 Data Field Condition Window*



- Step 16** Select **\*ANI** from the Data Field.
- Step 17** Enter a check in the **Enable Condition** box.
- Step 18** Select **Is Not Empty** in the Filter List.
- Step 19** Click **OK**.

The Work Flow Setup window appears (see [Figure 48](#)).

**Step 20** Check **Enable Rule** to make the rule active.

*Figure 51 Work Flow Setup Window*



## Configuring Call Answered Event Information

Perform the following steps to configure answered event:

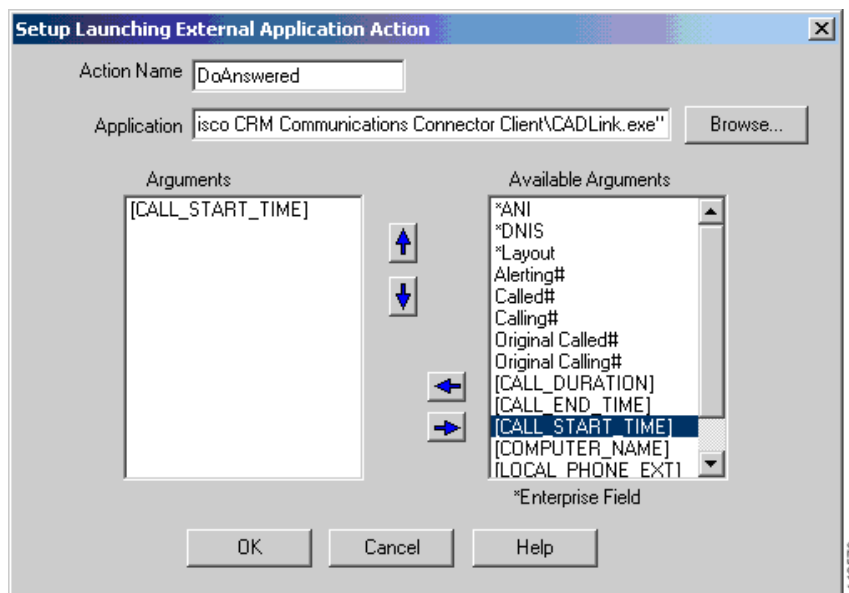
**Step 1** Configure the answered event.

To configure the answered event, repeat Steps 1 through 21 as for the ringing event, except:

- a. Select **Answered** from the Events list.
- b. Name the Rule AnsweredRule.
- c. Name the Action DoAnswered.
- d. The argument for the DoAnswered event is simply [CALL\_START\_TIME].

[Figure 52](#) shows the Setup Launch External Application Action window for answered event.

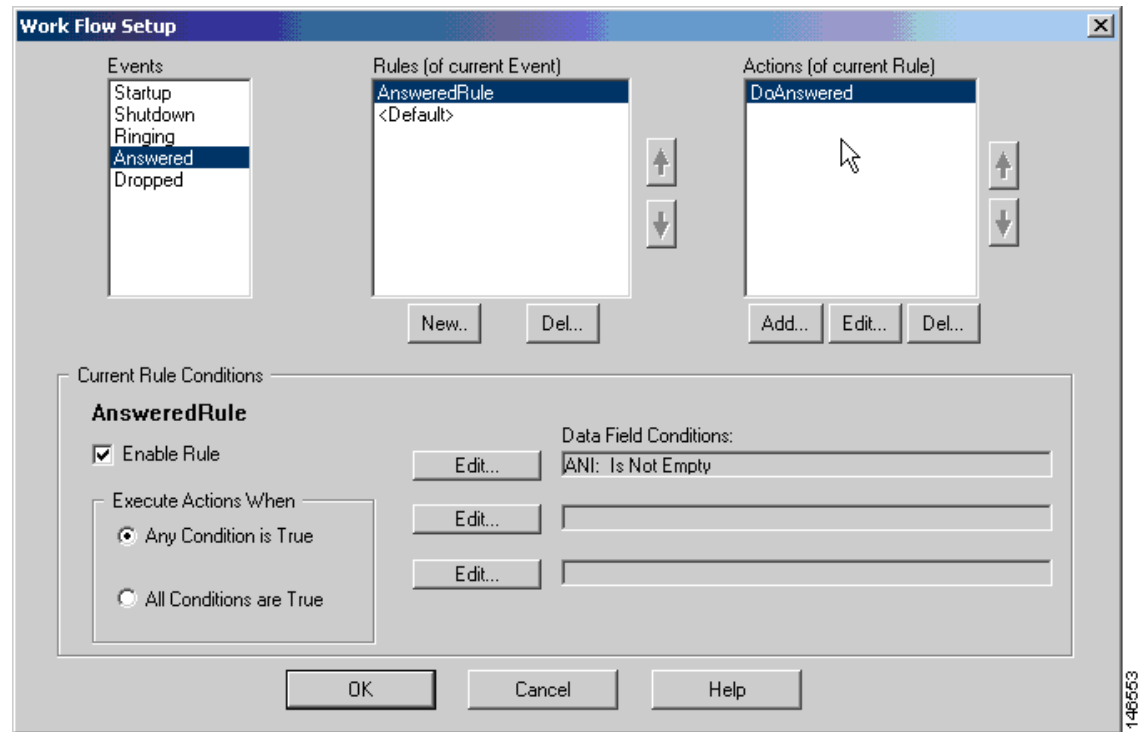
*Figure 52 Setup Launching External Application Action Window: Answered Event*



**Step 2** Click **OK**.

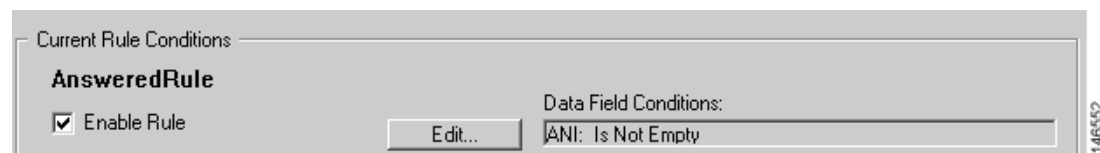
The Work Flow Setup window appears (see [Figure 53](#)).

*Figure 53 Answered Rule Setup Window*



- Step 3** Enable the AnsweredRule by clicking the first **Edit** box in the Current Rule Conditions region (see [Figure 54](#)).

*Figure 54 Answered Rule Edit*



The Data Field Entry window appears (see [Figure 50](#)).

- Step 4** Select \*ANI from the Data Field.
- Step 5** Enter a check in the **Enable Condition** box.
- Step 6** Select **Is Not Empty** in the Filter List.
- Step 7** Click **OK**.

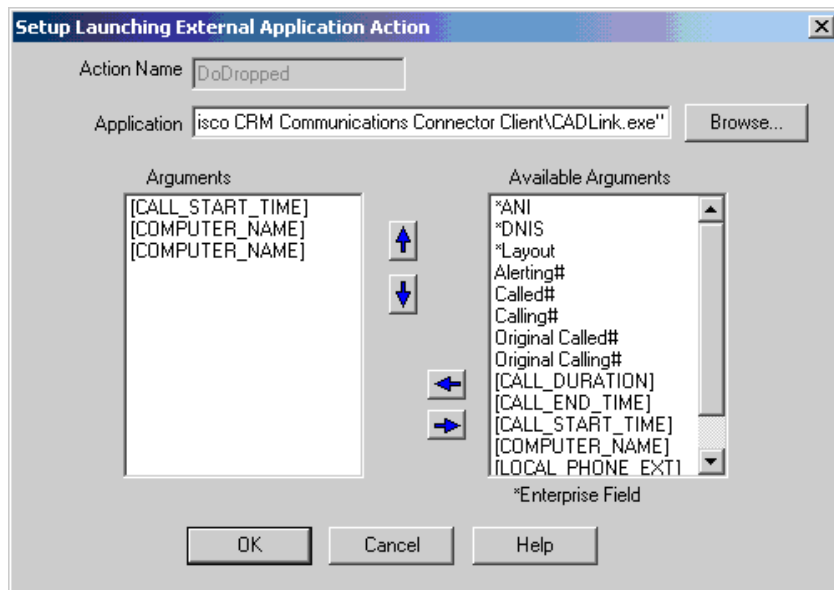
## Configuring Call Dropped Event Information

This section provides the procedure to configure call dropped event information.

Perform the following steps to configure call dropped event information:

- Step 1** To configure the dropped event, repeat Steps 1 through 21 as for the ringing event, except:
- Name the rule DroppedRule.
  - Call the action DoDropped.
  - The arguments for the DoDropped event are [CALL\_START\_TIME], [COMPUTER\_NAME], and [COMPUTER\_NAME].
  - Note that the COMPUTER\_NAME argument is repeated and acts as placeholder to ensure that there are three arguments (see [Figure 55](#)).

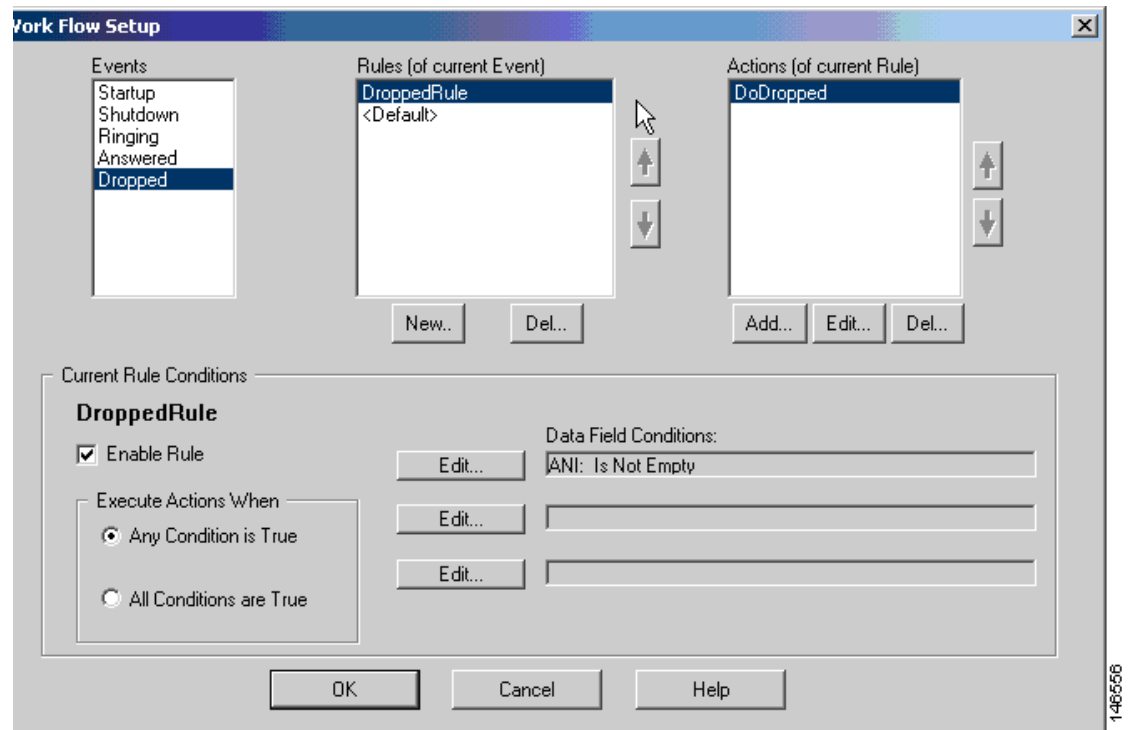
*Figure 55 Setup Launching External Application Action Window: Dropped Event*



- Step 2** Click **OK**.

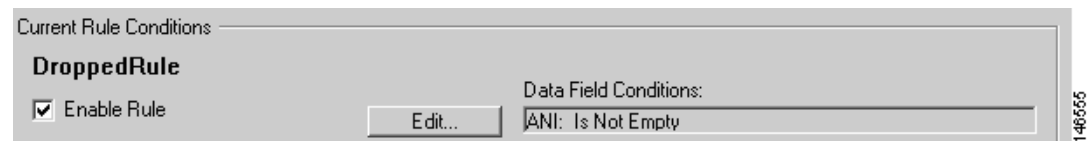
The Work Flow Setup Dropped Event window appears (see [Figure 56](#)).

*Figure 56 Work Flow Setup Dropped Event Window*



- Step 3** Enable the DroppedRule by clicking the first **Edit** box in the Current Rule Conditions region (see [Figure 57](#)).

*Figure 57 DroppedRule Edit Box*



The Data Field Entry window appears (see [Figure 50](#)).

- Step 4** Select **\*ANI** from the Data Field.
- Step 5** Enter a check in the **Enable Condition** box.
- Step 6** Select **Is Not Empty** in the Filter List.
- Step 7** Click **OK**.

# Configuring Cisco CRM Communications Connector Client to Ignore Incoming TAPI Messages

This sections provides the procedure to configure your PC to ignore incoming TAPI call information so that the Cisco CRM Communications Connector Client will process incoming calls routed by the ACD and not through the TAPI messages sent from Cisco CallManager or Cisco CallManager Express.

Perform the following steps to ignore incoming TAPI call information:

- Step 1** Click on **Ignore Incoming Calls** (see [Figure 58](#)).

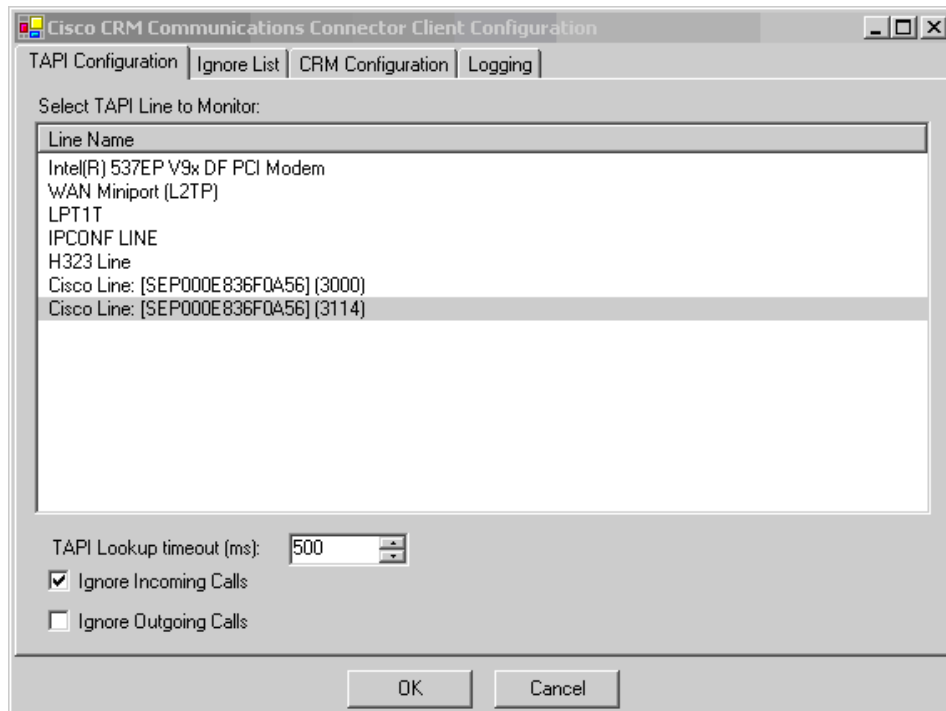
*Figure 58 Specifying to Ignore Incoming Call*

Ignore Incoming Calls

This instructs the PC to ignore incoming TAPI call information from the Cisco CRM Communications Connector Client Configuration window. Inbound call information will be received from the Cisco Agent Desktop.

[Figure 59](#) show a typical TAPI configuration.

*Figure 59 Cisco CRM Communications Connector Client Configuration Window*



## What to Do Next

You are now ready to use the Cisco CRM Communications Connector (see [“Using the Cisco CRM Communications Connector Client”](#) section on page 59).

