

# Integrating Cisco Unified CallConnector for Microsoft Dynamics CRM with Cisco Unified IPCC Express

This chapter addresses the desktop integration between Cisco Agent Desktop, the desktop component of Cisco Unified 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 Unified IPCC Express. This integration uses a utility program included with Cisco Unified CallConnector for Microsoft Dynamics CRM called CADLink.

Note

Cisco Unified IPCC Express integration is not necessary if you are just running Cisco Unified Communications Manager and Cisco Unified Communications Manager Express.

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# CADLink

CADLink's primary purpose is to act as an intermediary between the capabilities of Cisco Agent Desktop and those of the Cisco Unified CallConnector for Microsoft Dynamics CRM. This link is needed because the Cisco Telephony Application Programming Interface (TAPI) cannot properly detect caller ID information from calls routed by Cisco Unified Contact Center Express. CADLink solves this by providing one-way communication of caller ID information from Cisco Agent Desktop to the Cisco Unified CallConnector for Microsoft Dynamics CRM when the agent receives calls through Cisco Unified IPCC Express.

## Integration Methodology

To achieve the integration, the workflow events available in Cisco Unified IPCC Express pass inbound call information to CADLink, which is then passed to Cisco Unified CallConnector for Microsoft Dynamics CRM to be acted on. Outbound dialing and call recognition use TAPI.

Three events in every inbound call are of importance to Cisco Unified CRM Connector:

- **Ringing**—CallerID information must be processed during the ringing phase of the phone call. At this event, the Cisco Unified CallConnector for Microsoft Dynamics CRM search window appears.
- **Answered**—At this event, the Cisco Unified CallConnector for Microsoft Dynamics CRM client knows that the phone call has begun.
- Dropped—If the call is dropped, the Cisco Unified CallConnector for Microsoft Dynamics CRM client stores the appropriate information about call duration

These events correlate with those available in Cisco Unified IPCC Express. Each event uses the "Call external application" event action to enable CADLink with appropriate command-line parameters. However, because the "Call External Application" action is restricted in the available command-line parameters, CADLink relies on the number of command-line parameters to determine which event has occurred. For this reason, one of the events (Dropped) utilizes placeholder parameters, and you must follow these procedures.

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Note

Before beginning the integration procedures for Cisco Unified Contact Center Express and Cisco Agent Desktop, you must complete the preliminary installation and configuration steps for Cisco Unified Communications Manager available at the beginning of this document.

This section provides detailed instructions for the following:

- Assigning a Workflow Agent, page 43
- Configuring a Ringing Event, page 44
- Configuring the Answered Event, page 47
- Configuring the Dropped Event, page 48
- Additional Configuration Steps for Cisco Unified CallConnector for Microsoft Dynamics CRM Client, page 49

Each of the integrations is based on the CTI integration capabilities offered in Cisco Agent Desktop. For additional information, please refer to the Cisco Agent Desktop Administration Guide at http://www.cisco.com/univercd/cc/td/doc/prouct/voice/sw\_ap\_to/apps\_3\_5/english/admn\_app/cad\_ad mn.pdf.

Perform the integration by administratively configurating of workflows in the Cisco Agent Desktop Manager. You must first assign the workflows to the agent.

## Assigning a Workflow Agent

To assign a workflow agent, perform the following steps.

Step 1 Open the Cisco Desktop Administrator window as seen in Figure 34.

Figure 34 Cisco Desktop Administrator Window

Pie View Montoring Window Help         Image: Second Seco	📓 Cisco Desktop Administrator	
Image: Second carbon	File View Monitoring Window Help	
	Call Center I Call Phone Book Call Phone Book Call Reason Codes Call Reason Codes Call Reason Codes Call Reason Codes Call Reason Codes Configuration Call Reason Configuration Call Reason Configuration Call Reason Configuration Call Reason Codes Configuration Call Reason Codes Configuration Call Reason Configuration Call Reason Call Reas	Telephone Number Display       Outgoing Calb       Miscelaneous         External number format       Sample:       800-595-1212         Image: Subcriber code       Sample:       800-595-1212         Image: Subcriber code       Eachange       Eachange         Image: Subcriber code       Parentheses around area code       Eachange / Subscriber code         Image: Subcriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code         Image: Subscriber code       Image: Subscriber code       Image: Subscriber code     <

- Step 2 Select Work Flow Groups from the left pane.
- Step 3 Select Agents.

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- Step 4 Select the agent type to configure.
- Step 5 Click Work Flow in the right pane.

The Work Flow Setup window appears, as shown in Figure 35.

How to Integrate Cisco Unified CallCon	ector for Microsoft Dynamics CR	M with Cisco Unified IPCC Express
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Work Flow Setup			×
E vents Startup Shutdown	Rules (of current Event) <default></default>	Actions (of current Rule) <no action=""></no>	
Ringing Answered Dropped	<u>+</u>		ŧ
	<u>+</u>		<u>+</u>
	New Del	Add Edit Del	
Current Rule Conditions			
<default></default>			
🔽 Enable Rule	Data Field Con Edit	iditions:	
Execute Actions When	E dit		
C All Conditions are True	Edit		
	K Cancel	Help	CT3C14

Figure 35 Work Flow Setup Window

## **Configuring a Ringing Event**

To configure a ringing event, perform the following steps.

- Step 1 Select **Ringing** from the Events list, as shown in Figure 35.
- Step 2 Click New... to add a new Rule (middle list).
- Step 3 Name the rule RingingRule, or something similar that describes the rule (see Figure 36).

#### Figure 36 Create RingingRule

New Rule Name		×
Enter Rule Name:		
RingingRule		
OK	Cancel	A7367A

Step 4 Select the **RingingRule** from the list of rules and click **New...** to add a new action (from the right list in Figure 35).

The Select Action window appears, as shown in Figure 37.

Figure 37	Select Action	Window
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Select Action				×
Run Macro Call Control	Launch External Application	Agent State	Utility Action	
Launch Name	External App	lication		-
Laurentrane	Exemplep			- 11
•		1		J
		New Ed	iit Delete	
OK.	Cancel	Help		
				73-041

#### Step 5 Select the Launch External Application tab.

Step 6 Click the New button to add a new Launch External Application action.The Setup Launching External Application Action window appears, as shown in Figure 38.

*Figure 38 Setup Launching External Application Action Window* 

Setup Launching External Application	n Action		×
Action Name DoRinging			
Application isco CRM Communic	ations Connecto	or Client\CADLink.exe"	Browse
Arguments		Available Arguments	
[CALL_START_TIME] *ANI	<b>↑</b> ♥ ●	*ANI *DNIS *Layout Alerting# Called# Calling# Original Called# Original Calling# [CALL_DURATION] [CALL_ENDATION] [CALL_START_TIME] [CALL_START_TIME] [COMPUTER_NAME] [LOCAL_PHONE_EXTI *Enterprise Field	▲ ▼
ОК	Cancel	Help	612 C

Step 7 In the Action Name field enter **DoRinging**.

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- How to Integrate Cisco Unified CallConnector for Microsoft Dynamics CRM with Cisco Unified IPCC Express
  - Step 8 In the Application field, enter C:\Program Files\Cisco Systems\Cisco Unified CRM Connector Client\CADLink.exe, or your path to the CADLink.exe executable file on the client machines.

- **Note** You must install the Cisco Unified CallConnector for Microsoft Dynamics CRM client application in the same physical location on all clients that will use CADLink.
- Step 9 Select [CALL\_START\_TIME] as the first argument.
- Step 10 Select \*ANI as the second argument.
- Step 11 Click **OK** to accept the configuration.
- Step 12 In the Work Flow Setup window (Figure 35), enable RingingRule by clicking the first Edit box in the Current Rule Conditions.

The Data Field Condition window appears, as shown in Figure 39.

Figure 39	Data Field Condition Window	

Oata Field Condition		×
Data Field ∞∆NI	List	
Enable Condition		
Data Field Filter		
C Is Empty		
Is Not Empty		
C Is in the List	Add	Del
C Is Not in the List		
C Length of Data	- Length of Data	
	Minimum	0
*Enterprise Field	Maximum	0
ОК	Cancel H	Help

- Step 13 Select \*ANI from the Data Field.
- Step 14 Select Is Not Empty in the Data Field Filter list.
- Step 15 Check Enable Condition.
- Step 16 Click OK.

The Work Flow Setup window appears, as shown in Figure 40.

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Work Flow Setup				×
Events Startup Shutdown Ringing Answered Dropped	Rules (of current Event) RingingRule <default> New., Del.,</default>	Actions (of curre	nt Rule) Del	
Current Rule Conditions	Data Edit	Field Conditions:		
0	< Cancel	Help		02.201

Figure 40 Work Flow Setup Window

- Step 17 Check Enable Rule to make the rule active.
- Step 18 Repeat these steps for the Answered and Dropped events, making appropriate custimizations as described in the next two sections.

## **Configuring the Answered Event**

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To configure the answered event, follow the same steps as for the Ringing event (see the "Configuring a Ringing Event" section on page 44), except call the rule "AnsweredRule," and the action "DoAnswered." The parameter for the DoAnswered event is [CALL\_START\_TIME], as shown in Figure 41.

Setup Launching External Application	n Action		X	
Action Name DoAnswered				L
Application isco CRM Communic	ations Connecto	or Client\CADLink.exe"	Browse	
Arguments		Available Arguments		L
[CALL_START_TIME]	<b>▲</b> ♥ ●	*ANI *DNIS *Layout Alerting# Called# Calling# Original Called# Original Called# (CALL_DURATION) [CALL_END_TIME] [CALL_START_TIME] [COMPUTER_NAME] [LOCAL_PHONE_EXT] *Enterprise Field		
ОК	Cancel	Help		147570

Figure 41 Setup Launching External Application Action Window: Answered Event

### **Configuring the Dropped Event**

To configure the dropped event, follow the same steps as for the Ringing event (see the "Configuring a Ringing Event" section on page 44), except call the rule "DroppedRule," and the action "DoDropped." The parameters for the DoAnswered event are [CALL\_START\_TIME], [COMPUTER\_NAME], and [COMPUTER\_NAME].

As shown in Figure 42, the COMPUTER\_NAME parameter is repeated as a dummy placeholder to ensure that there are three parameters.

Setup Launching External Application Action		×
Action Name DoDropped		
Application isco CRM Communications Connec	ctor Client\CADLink.exe" Browse	
Arguments	Available Arguments	
[CALL_START_TIME] [COMPUTER_NAME] [COMPUTER_NAME] ↓	*ANI *DNIS *Layout Alerting# Called# Calling# Original Called# Original Calling# (CALL_OURATION) [CALL_END_TIME] [CALL_START_TIME] [COMPUTER_NAME] ILOCAL PHONE EXTI	
OK Cancel	Help	

Figure 42 Launch External Application Window

### Additional Configuration Steps for Cisco Unified CallConnector for Microsoft Dynamics CRM Client

Inbound call information are received from the Cisco Agent Desktop. You must configure the client to ignore incoming TAPI call information so that the Cisco Unified CallConnector for Microsoft Dynamics CRM client will be able to process incoming calls routed by the automated call distributor (ACD), and not by the TAPI messages sent from Cisco Unified Communications Manager. Therefore, you must check "Ignore Incoming Calls," as shown in Figure 43.

Note

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Failure to disable incoming TAPI messages results in double screen pops of the user-configured screen pops (specifically, Microsoft CRM contact records and phone call activity records).

Cisco CRM Communications Connector Client Configuration     TAPI Configuration   Ignore List   CRM Configuration   Logging
Select TAPI Line to Monitor:
Line Name
Intel(R) 537EP V9x DF PCI Modem WAN Miniport (L2TP) LPT1T IPCONF LINE
H323 Line Cisco Line: [SEP000E836F0A56] (3000)
Cisco Line: [SEP000E836F0A56] (3114)
TAPI Lookup timeout (ms): 500
✓ Ignore Incoming Calls
🔲 Ignore Outgoing Calls
OK Cancel

Figure 43 Cisco Unified CallConnector for Microsoft Dynamics CRM—TAPI Tab Configuration

# What to Do Next

You are now ready to use the Cisco Unified CallConnector for Microsoft Dynamics CRM (see the "Using the Cisco Unified CallConnector for Microsoft Dynamics CRM Client" section on page 51).

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