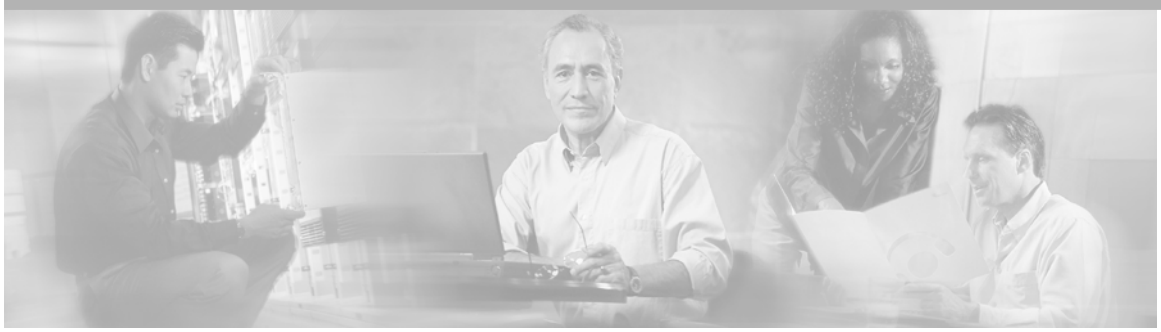

Cisco Unified CallConnector for Microsoft Dynamics CRM 2.1.2 Installation and Configuration Guide

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Cisco Unified CallConnector for Microsoft Dynamics CRM 2.1.2 Installation and Configuration Guide

Preface

This preface discusses the objectives, audience, and organization of this document. It also provides sources for obtaining documentation and technical assistance from Cisco Systems.

Documentation Objectives

This document describes the tasks and commands necessary to install and configure the Cisco Unified CallConnector for Microsoft Dynamics Customer Relations Management (CRM) Version 2.1.2 (formerly known as Cisco Unified CRM Communications Connector).You can use this product with Cisco Unified Communications Manager (formerly known as Cisco Unified CallManager), Cisco Unified Communications Manager Express (Cisco Unified CME, formerly known as Cisco Unified CallManager Express), and Cisco Unified IP Call Control Express (Cisco Unified IPCC Express).

Audience

This document is intended primarily for Cisco Partners and Resellers who install and maintain the Cisco Unified CRM Communications Connector—developed by Cisco Systems with the support of Microsoft Corporation—to enable small- to medium-businesses (SMBs) and networked branch offices to deploy a more complete CRM solution by connecting Cisco IP Communications with the Microsoft Business Solutions Customer Relationship Management (Microsoft CRM) application.

Documentation Organization

This document includes the following sections:

Table 1 Document Organization

Title	Description
Cisco Customer Relations Management Communications Connector 2.1.2 Overview	High-level description of Cisco CRM Communications Connector 2.1.2 concepts. Includes hardware and software prerequisites.
Installing Cisco Customer Relations Management Communications Connector 2.1.2	Step-by-step procedures to install the software required for Cisco CRM Communications Connector 2.1.2.
Integrating Cisco CRM Communications Connector with Cisco IPCC Express	Step-by-step procedures for integrating Cisco CRM Communications Connector 2.1.2 with Cisco IPCC Express.
Appendix A: Troubleshooting Tips	Troubleshooting tips for Cisco CRM Communications Connector 2.1.2.

Prerequisites for Cisco CRM Communications Connector 2.1.2

- If upgrading Cisco CRM Communications Connector 2.1, you must uninstall the old version before installing version 2.1.2.
- If you are using Cisco CallManager, Cisco CRM Communications Connector 2.1.2 must operate with Cisco CallManager 4.0 or later.
- If you are using Cisco CallManager Express, Cisco CRM Communications Connector 2.1.2 must operate with Cisco CallManager Express 3.3 or later.
- If you are using Cisco IPCC Express, Cisco CCC 2.1.2 must operate with Cisco IPCC Express 4.0 or later.

Restrictions for Cisco CRM Communications Connector 2.1.2

The installation process is supported by Virtual Network Computing (VNC) or other remote control desktop software, but is not supported by Terminal Services.

Related Documents

Related Topic	Document Title or URL
Cisco CallManager Express	Cisco CallManager Express technical documentation
Cisco CallManager	Cisco CallManager technical documentation
Cisco CCC 2.1	Cisco CRM Communications Connector 2.1
Cisco IPCC Express	Cisco IPCC Express technical documentation

Related Websites

Related Topic	URL
.NET regular expression syntax	http://msdn.microsoft.com/library/en-us/cpgenref/html/cpconRegularExpressionsLanguageElements.asp
Cisco CCC	http://www.cisco.com/go/ciscomicrosoftsmb
Microsoft CRM Version 1.2 SDK	http://msdn.microsoft.com/library/en-us/CrmSdk1_2/htm/v1d2microsoftcrmversion12sdk.asp

Related Support Aliases

Related Topic	Alias
For assistance for configuring and using CAD	Ask-cad@external.cisco.com
For assistance for Cisco IPCC Express	Ask-icd-ivr-support@external.cisco.com
For product plans and marketing information	Ask-icd-ivr-pm@external.cisco.com

MIBs

MIBs	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
The Cisco Technical Support & Documentation website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	http://www.cisco.com/techsupport

Cisco Customer Relations Management Communications Connector 2.1.2 Overview

Cisco Unified CallConnector for Microsoft Dynamics CRM (formerly known as Cisco Unified CRM Communications Connector)—developed by Cisco Systems with the support of Microsoft Corporation—enables small- to medium-businesses (SMBs) and networked branch offices to deploy a more complete CRM solution by connecting Cisco IP Communications with the Microsoft Business Solution Customer Relationship Management (Microsoft CRM) application. Cisco CRM Communications Connector is an integrated solution that provides such features as click-to-dial and screen pops on incoming calls, allowing any staff member in an SMB to view customer account activity before they even answer the phone.

The Cisco CRM Communications Connector integrates Cisco IP Communications solutions with Microsoft CRM at the desktop, without requiring additional hardware. In addition, the Microsoft CRM client uses Microsoft Outlook or Internet Explorer as the primary client for managing tasks and contacts.

Cisco CRM Communications Connector is a client/server based application that is highly configurable and supports the following primary features in Cisco IP Telephony environments that are utilizing Microsoft CRM:

- Automatic detection and screen-pop searches of the CRM database for both incoming and outgoing phone calls
- Automatic creation of phone call activity records for incoming and outgoing calls with call duration tracking
- Click-to-dial from the Microsoft CRM user interface
- Multisite configuration capabilities with geographically correct dialing configurations per user
- Easily pop associated Microsoft CRM Customer Services cases
- Easy to use search system allows the user to search by name or phone number and have access to contact records and associated support cases
- Integration with Cisco Unified Communications Manager (formerly known as Cisco Unified CallManager), Cisco Unified Communications Manager Express (Cisco Unified CME, formerly known as Cisco Unified CallManager Express), and Cisco Unified IP Call Control Express (Cisco Unified IPCC Express).

These features allow CRM users to provide improved service by personalizing their interaction with callers. It also helps to enforce administrative policy for creating phone call activity records.

Note For more information about Cisco IOS voice features, see the entire Cisco IOS Voice Configuration Library—including library preface and glossary, feature documents, and troubleshooting information—at http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123cgcr/voice_c/vcl.htm.

What to Do Next

You are now ready to download the required software to install Cisco CRM Communications Connector 2.1.2 (see the "Installing Cisco Customer Relations Management Communications Connector 2.1.2" section on page 11).

Installing Cisco Customer Relations Management Communications Connector 2.1.2

This chapter describes how to install the Cisco Customer Relations Management (CRM) Communications Connector 2.1.2 with the following software:

- Cisco CallManager 4.0 or later
- Cisco CallManager Express 3.2 or later
- Cisco IPCC Express 4.0 or later

Note For more information about Cisco IOS voice features, see the entire Cisco IOS Voice Configuration Library—including library preface and glossary, feature documents, and troubleshooting information—at http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123cgcr/voice_c/vcl.htm.

Contents

Upgrading Cisco CRM Communications Connector Software Versions 2.1x

The upgrade for Cisco CRM Communications Connector software versions 2.1x uses an auto-update process. Cisco CRM Communications Connector Client components automatically update when they detect that newer Cisco CRM Communications Connector Server components are installed.

Note This upgrade procedure is only for Cisco CRM Communications Connector software versions 2.1x and above.

Note It is recommended that you close all Cisco CRM Communications Connector Client sessions until the updated server components are installed and configured.

Perform the following steps to upgrade Cisco CRM Communications Connector software version 2.1x:

Step 1 Download the latest Cisco CRM Communications Connector software installers (see the "Downloading Cisco CRM Communications Connector Software" section on page 13). (No need to download the new client, even though that is the component that is being updated.???)

Step 2 (Optional) Create a backup copy of the C4Server installation directory to back-up your existing configuration files.

Step 3 Uninstall the prior software versions of the Cisco CRM Communications Connector Server and Server Web Installer using the Start/All Programs/Add or Remove Programs function.

Step 4 Install the new software versions of the Cisco CRM Communications Connector Server nd Server Web Installer into their existing directories.

Note During installation, the server configuration window should appear and all of the existing settings should be there.

Step 5 Restart the C4Client software.

The PC should recognize that there is a new version of the client available from the server, and will ask if you want to upgrade.

Step 6 Respond **Yes** to upgrade. The PC will upgrade to the corresponding new version that is provided by the server.

Repeat this procedure on each installed PC using Cisco CRM Communications Connector.

Required Steps to Install Cisco CRM Communications Connector

Perform these required steps to install Cisco CRM Communications Connector with Cisco CallManager, Cisco CallManager Express, and Cisco IPCC Express:

Step 1 Install the Cisco CRM Communications Connector Server software on the Cisco CRM server (see the "Installing the Cisco CRM Communications Connector Server" section on page 14).

Step 2 Install the Cisco CRM Communications Connector Server Web software on the Cisco CRM server (see the "Installing the Cisco CRM Communications Connector Server Web Installer" section on page 29).

Step 3 Install the Cisco TAPI Client software on all PCs using Cisco CRM Communications Connector (see).

Step 4 Finally, install the Cisco CRM Communications Connector Client software on all PCs using Cisco CRM Communications Connector (see the "Installing the Cisco CRM Communications Connector Client Software" section on page 33).

Note These four installation tasks must be performed in the order listed.

Downloading Cisco CRM Communications Connector Software

Perform the following steps to download and extract the Cisco CRM Communications Connector 2.1.2 software on your PC.

Note Before installing Cisco CRM Communications Connector, make sure that you are a member of the Administrators group under Control Panel > User Account settings.

Step 1 Create three folders on your desktop and label them:

- CRM_Server
- CRM_Server_Web_Installer
- CRM_Client

Step 2 Download the Cisco CRM Connector 2.1.2 software zip files for CRM Server, CRM Server Web, and CRM Client to your PC desktop from the following location:

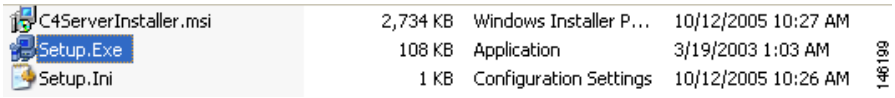
http://www.cisco.com/cgi-bin/Software/Tablebuild/tablebuild.pl/CRM-Connector

Note You must have a valid Cisco CCO account to download Cisco CRM Communications Connector.

Step 3 Unzip and extract the each set of files into their respective folders on your PC.

Files will automatically install into your specified folder location. Figure 1 shows a typical extracted folder; in this example, the Cisco CRM Communications Connector Server extracted files.

Figure 1 Cisco CRM Communications Connector Server Extracted Files



Installing the Cisco CRM Communications Connector Server

Install the Cisco CRM Communications Connector Server on any server in the same Active Directory domain as the target Microsoft CRM server. It is recommended, however, that it be installed on the Microsoft CRM server itself.

Perform the following steps to install the Cisco CRM Communications Connector 2.1.2 with Cisco CallManager, Cisco CallManager Express, and Cisco IPCC Express:

Step 1 Log in to your PC as administrator, locate and double-click the **Setup.exe** file for the Cisco CRM Communications Connector Server installer (see Figure 2).

Figure 2 Cisco CRM Communications Connector Server Setup.Exe File

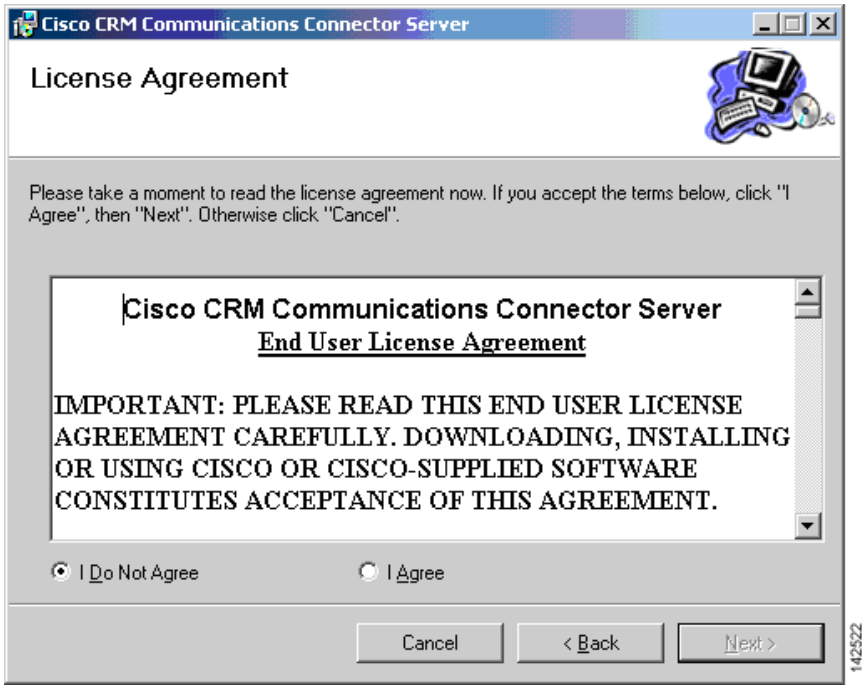
The Cisco CRM Communications Connector Server Setup Wizard appears (see Figure 3).

Figure 3 Cisco CRM Communications Connector Server Setup Wizard

Step 2 Click **Next**.

The License Agreement window appears (see Figure 4).

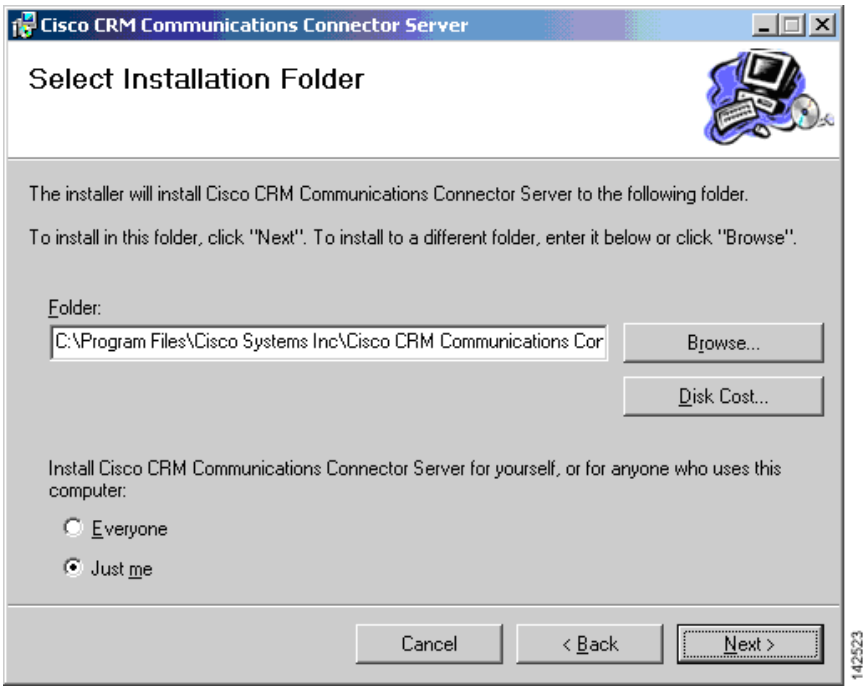
Figure 4 License Agreement Window



Step 3 Select **I Agree** and click **Next**.

The Select Installation Folder window appears (see Figure 5).

Figure 5 Select Installation Folder Window

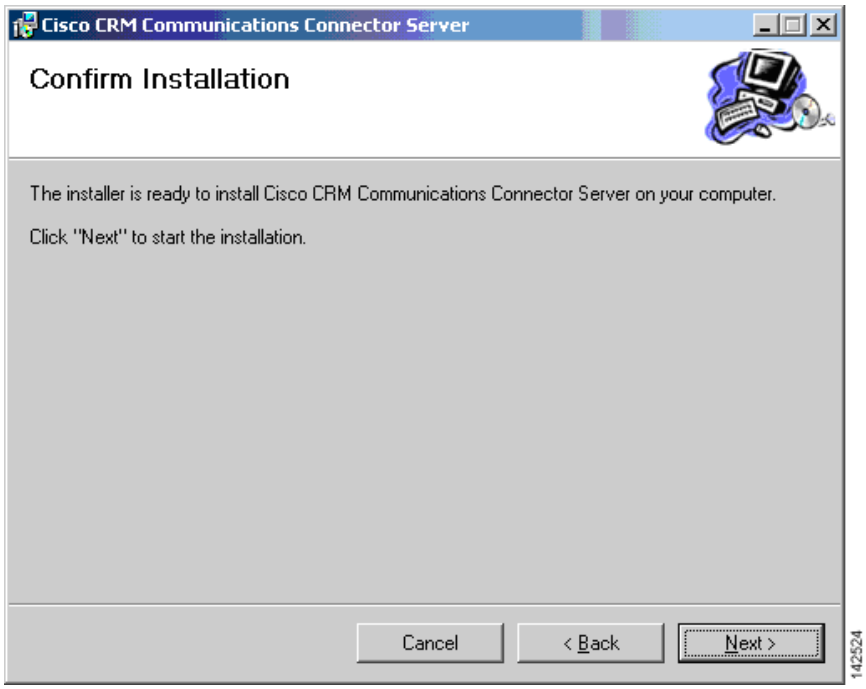


Step 4 Click **Just me** to install the Cisco Communications Connector Server to specify yourself as administrator.

Step 5 Click **Next** to accept the default installation folder location (recommended).

The Confirm Installation window appears (see Figure 6).

Figure 6 Installation Confirmation Window



Step 6 Click **Next** to confirm and start the installation.

The installation is now ready to begin copying files.

After the files are copied, the Cisco CRM Communications Connector Server Configuration window appears (see Figure 7). Table 2 summarizes the field options for the Cisco CRM Communications Connector Server Configuration window.

Figure 7 Cisco CRM Communications Connector Server Configuration Window

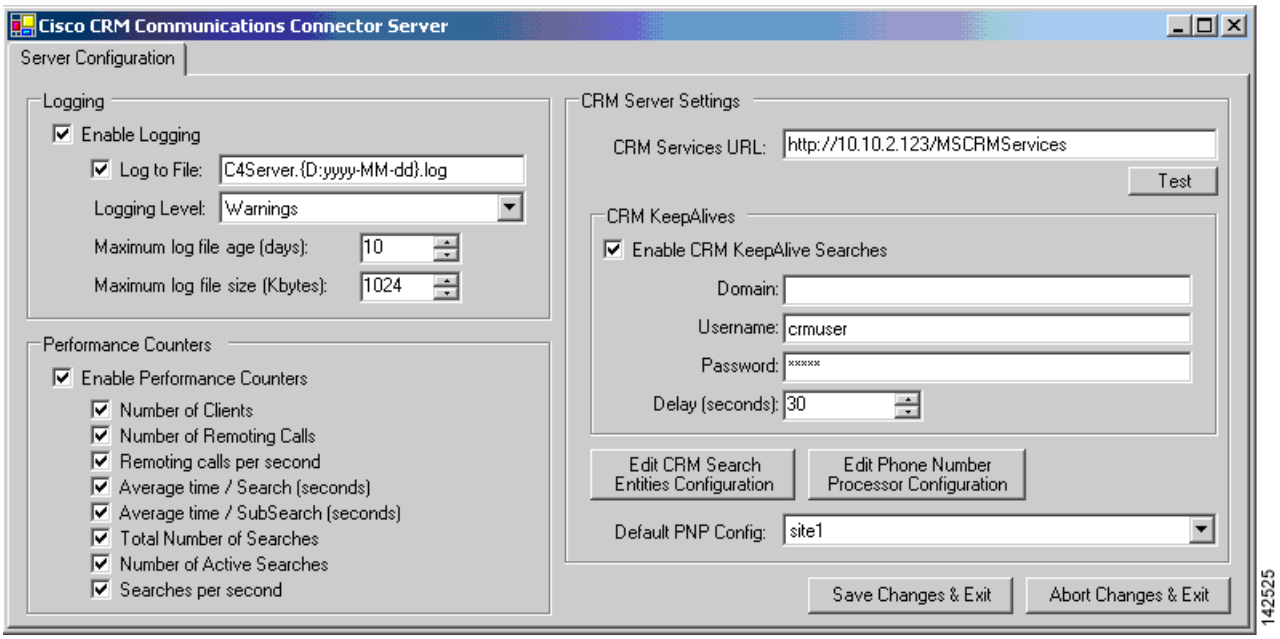


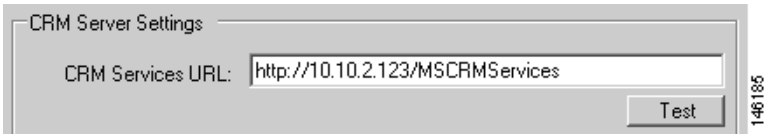
Table 2 Cisco CRM Communications Connector Server Window Field Descriptions

Field	Description
Logging Information	
Enable Logging	Check/uncheck this box to enable/disable logging.
Log to File	Type the filename to log to.
Logging Level	Sets the verbosity of the log file output.
Maximum log file age	The maximum age in days of old (existing) log files (must use dynamic filenames).
Maximum log file size	The maximum approximate size in kilobytes of any single log file.
Performance Counters Information **Note** Check/uncheck this box to enable/disable Performance Monitoring counters. To view these objects, add "C4.Server as a counter within the Microsoft Windows Performance Monitor and select the objects to monitor.	
Number of Clients	The number of clients that are currently connected.
Number of Remoting Calls	The total number of client-initiated server requests.
Remoting Calls Per Second	The average number of client-initiated requests per second.
Average time / Search	The average time in seconds to complete a full search.
Average time / Subsearch	The average time in seconds to complete a search of any particular entity.

Total Number of Searches	The total number of Searches that have been performed.
Current Number of Active Searches	The number of searches that are currently executing.
Searches Per Second	The average number of searches per second.
CRM Server Settings Information	
CRM Services URL	The URL to the Microsoft CRM Web Services interface (use 'Test' button to validate). You can specify the IP address or hostname for this value.
CRM KeepAlives	**Note** This feature is used to ensure that the Microsoft CRM server is continuously polled so that it does not drop objects from its cache which could negatively affect a demonstration environment. You will not need to use this feature in a live deployment / production environment.
Enable CRM KeepAlives	Check/uncheck this box to enable/disable keepalive searches.
Domain	The user's domain to use when authenticating for performing KeepAlive searches.
Username	The username to use when authenticating for performing KeepAlive searches.
Password	The user's password to use when authenticating for performing KeepAlive searches.
Delay	The delay in seconds to wait after any search is performed before initiating a KeepAlive search.
Edit CRM Search Entities Configuration	Click this button to configure how the server searches the CRM database.
Edit Phone Number Processor Configurations	Click this button to configure the PhoneNumberProcessor.
Default PNP Configuration	The default PNP configuration to present to clients with unspecified/invalid PNP configurations.

Step 7 Click **Test** to verify that the C4 Server Service is able to contact the Microsoft CRM Web Services (see Figure 8).

Figure 8 Cisco CRM Server Services Test

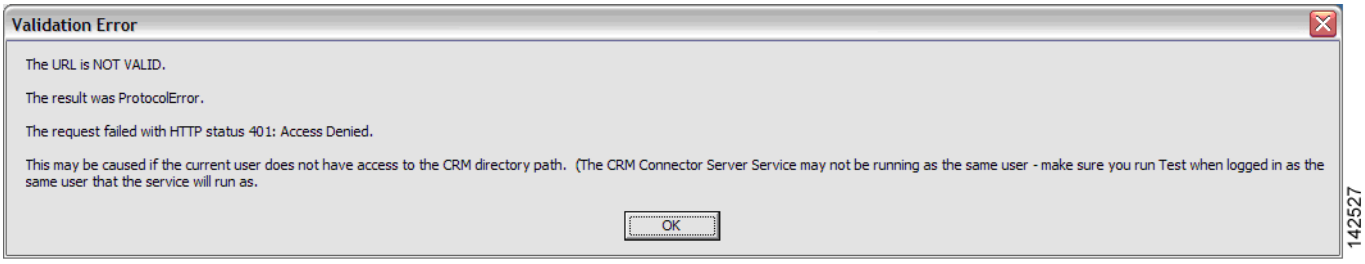


If successful, The URL is Valid message appears (see Figure 9).

Figure 9 C4 Server Contact Successful Window

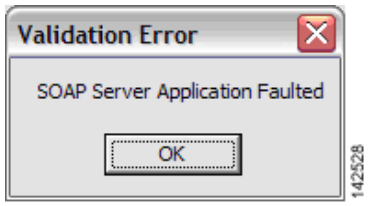
If you receive a Validation Error (see Figure 10), the URL is probably not the correct location to the Cisco CRM Communications Connector Web Services.

Figure 10 URL Error Window



If you receive a SOAP Server Application error (see Figure 11), you do not have access to Microsoft CRM.

Figure 11 SOAP Server Application Error Window



Step 8 Click **OK**.

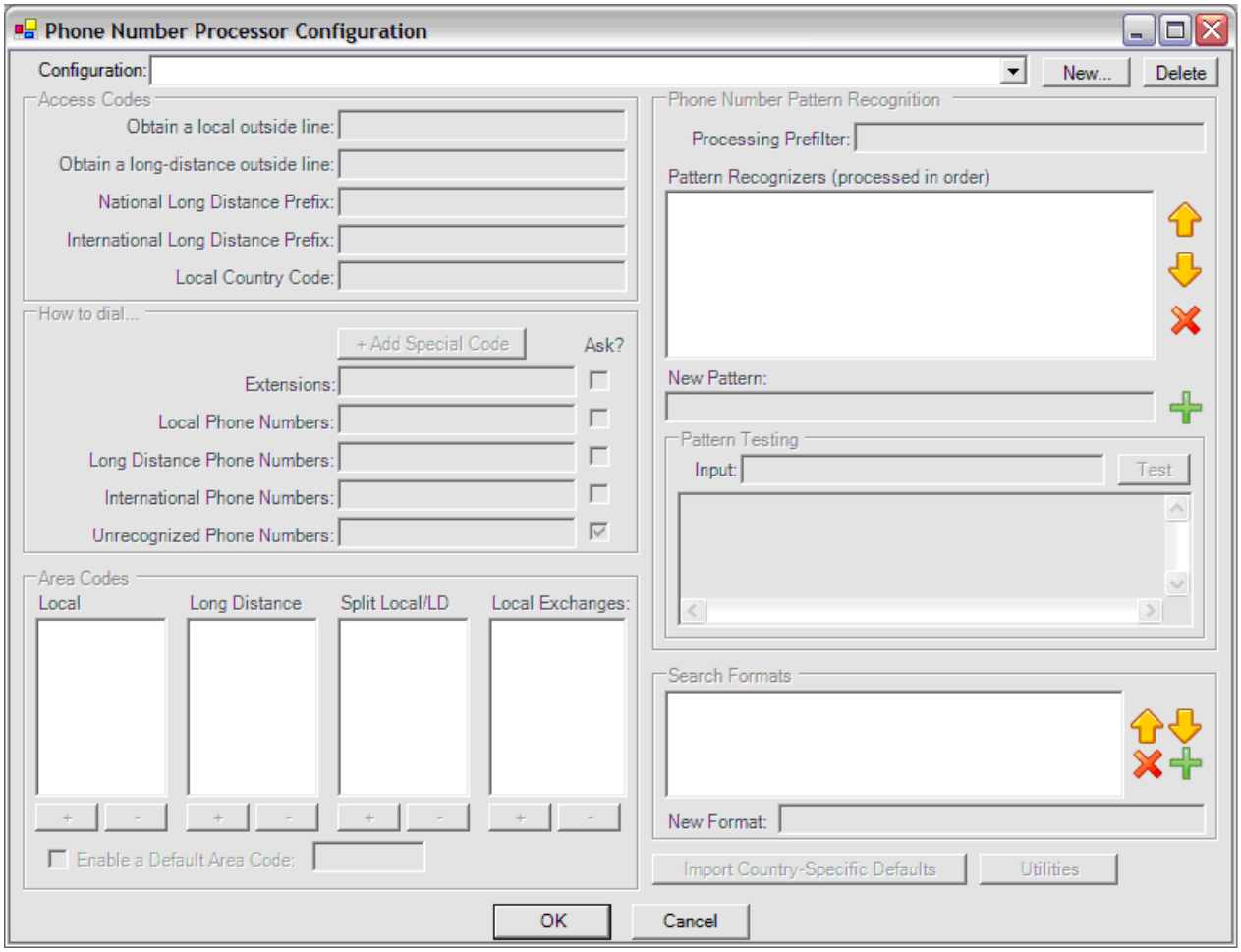
Step 9 Click the **Edit Phone Number Processor Configuration** button (see Figure 12).

Figure 12 Edit Phone Number Processor Configuration Button

The Cisco Phone Number Processor (PNP) Configuration window appears (see Figure 13).

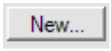
Note The Cisco PNP Configuration window is initially disabled until you create a new PNP configuration.

Figure 13 Cisco Phone Number Processor Configuration Window



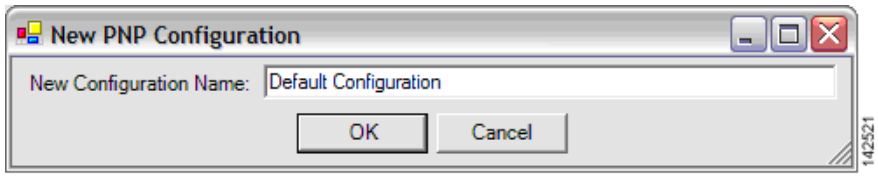
Step 10 Click the **New** button to begin a new PNP Configuration (see Figure 14).

Figure 14 New PNP Configuration Button



The New PNP Configuration window appears (see Figure 15).

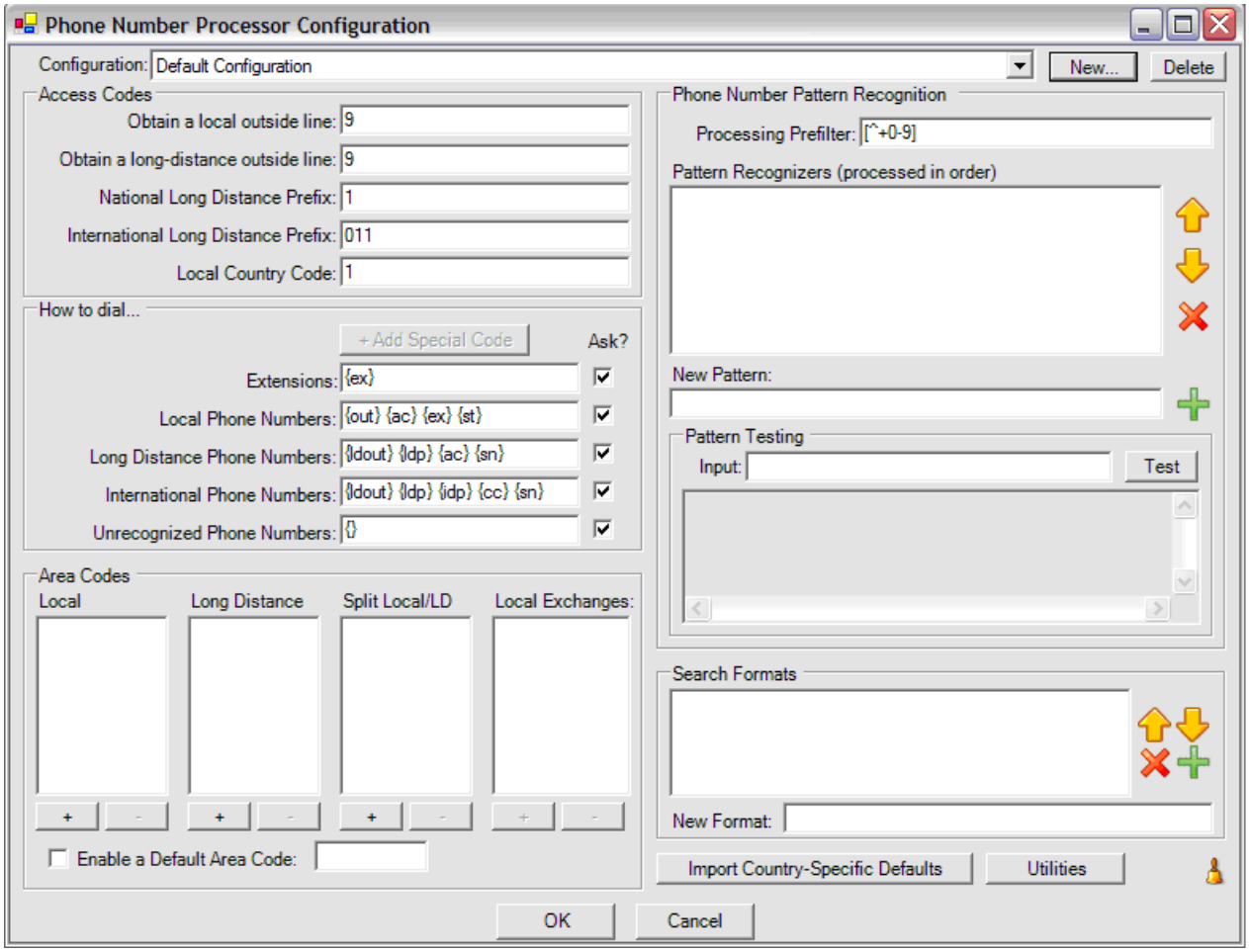
Figure 15 New PNP Configuration Window



Step 11 Enter a new configuration name and click **OK**.

The Cisco Phone Number Processor Configuration window appears (see Figure 16).

Figure 16 Cisco Phone Number Processor Configuration Window



Note Some defaults will load automatically. The defaults are based on the US 10-digit dialing rules.

You can define multiple configurations and use them on any PC. For example, you can define additional configuration as remote locations, for use with branch or remote offices which have a different area code than the main business location where the Microsoft CRM server is located.

Table 3 summarizes the Cisco Phone Number Processor Configuration window options.

Table 3 Cisco Phone Number Processor Configuration Window Field Descriptions

Field	Description
Area Codes Information Five access codes that can be defined are listed below. Their use is dictated by the values provided in the How to dial... section of the Phone Number Processor Configuration Window, but their general use is as described below. Each access code has a mnemonic associated with it, which is shown in curly braces.	
Obtain a local outside line {out}	The digit string that is typically dialed before placing local calls.
Obtain a long-distance outside line {ldout}	This digit string will be the digit string that is typically dialed before placing long-distance (and international) calls.
National Long Distance Prefix {ldp}	The digit string that is typically dialed ahead of the area code when dialing long-distance (and international) calls.
International Long Distance Prefix {idp}	The digit string that is typically dialed to indicate that the call is international.
Local Country Code {localcc}	The digit string that represents the country the user is located in when being dialed from another country.
How To Dial... Each box in this section defines how to dial a phone number once it has been broken into parts (country code, area code, and so forth). Typically, the values provided in each style phone number field will be various combinations of codes that are built into the program, although you could also provide numbers directly in each box. The codes that are available are the same codes that are shown in the Access Codes and Pattern Recognition sections, plus one special code, '{}' that means all digits. The Ask checkbox next to each field instructs the client whether it should still ask the user to verify the phone number before dialing when using click-to-dial, and when there is only one phone number for the requested click-to-dial contact.	
Area Code Information The values provided in these boxes are used by the Pattern Recognition section to determine the accurate parts of each phone number, and to determine the style (local, long distance, and so forth) of the phone number being processed. The exact manner in which these area codes are utilized are dictated by the Pattern Recognition section of the Phone Number Processor Configuration Window, but the intended meaning of values in each box are the following:	
Local	Values placed in this box considered local area codes.
Long Distance	Values placed in this box are considered long-distance area codes.
Split Local/LD	Values placed in this box are area codes in which some numbers are local and others are long distance.
Local Exchange	For each area code in the Split Local/LD box, values placed in the box are the local exchanges for that area code. Note that the values in this box are maintained individually for each area code in the Split Local/LD box.
Enable a Default Area Code	The Enable Default Area Code allows the system to assign the users local area code when it is not provided in the contacts record. If the area code is provided in the CRM contact record, then this field is not used during processing.

Phone Number Pattern Information

The Pattern Recognition area allows the client to pick out the parts of the phone number for efficient CRM searching and for accurate no-touch click-to-dial functionality. It utilizes Microsoft.NET Regular Expressions to identify each part of the phone number. The patterns are used during both incoming/outgoing phone call detection for efficient CRM Searches, as well as click-to-dial functionality.

First, the phone number is filtered according to the prefilter. Anything that matches the prefilter is removed from the digit string being considered. Then, the digit string is tested against each pattern in order until a match is found. Each pattern should result in at least one named match for the following values:

- **AC**—Area code
- **CC**—Country code
- **EX**—Exchange
- **EXT**—Extension
- **SN**—Generic subscriber number
- **ST**—Station

Note that the subscriber number may or may not follow the typical definition of subscriber number. It is a generic container.

Once a pattern is found that matches the digit string, and it is broken out into its parts, one of two things occurs:

- If the number is being processed for click-to-dial, the style of the phone number is determined by specific rules. The phone number is then dialed as specified in the How to dial... section of the Phone Number Processor Configuration Window.
- If the number is being processed for searching CRM, it is formatted and searched according to the patterns specified in the Search Formats section of the Phone Number Processor Configuration window.

Search Formats Information

The search formats allow the administrator to maximize efficiency and accuracy when searching CRM. After a phone number is processed by the Pattern Recognizers, the list of Search Formats is processed in order until one is found in which all components of the search format can be provided. Each search format component is a code that matches the named match values that are detected by the pattern recognizers. Each matching value is then replaced with that portion of the phone number. There are two formats for each search component, using AC as demonstration:

- **{ac}**—Replaces {ac} with the area code detected from the phone number.
- **{%ac%}**—Replaces {%ac%} with the area code detected from the phone number with '%' symbols interspaced between each digit.

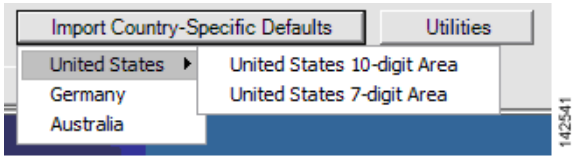
The difference between the two formats is that the first format provides the most accurate searching, but in some cases may not find the correct records if there are other characters interspersed in the text stored in Cisco CCC. Normally this will not occur if Cisco CRM 2.1 users are diligent about how they input phone numbers into the Cisco CCC system. If there are cases in which there are other characters interspersed in the text in Cisco CCC, the {%ac%} format can help because it will catch those values and probably produce results that are not true matches.

Step 12 Click **Import Country-Specific Defaults** and select one of the predefined configurations appropriate for your area (see Figure 17).

The supported predefined configurations are:

- US 10-digit dialing
- US 7-digit dialing
- Germany
- Australia

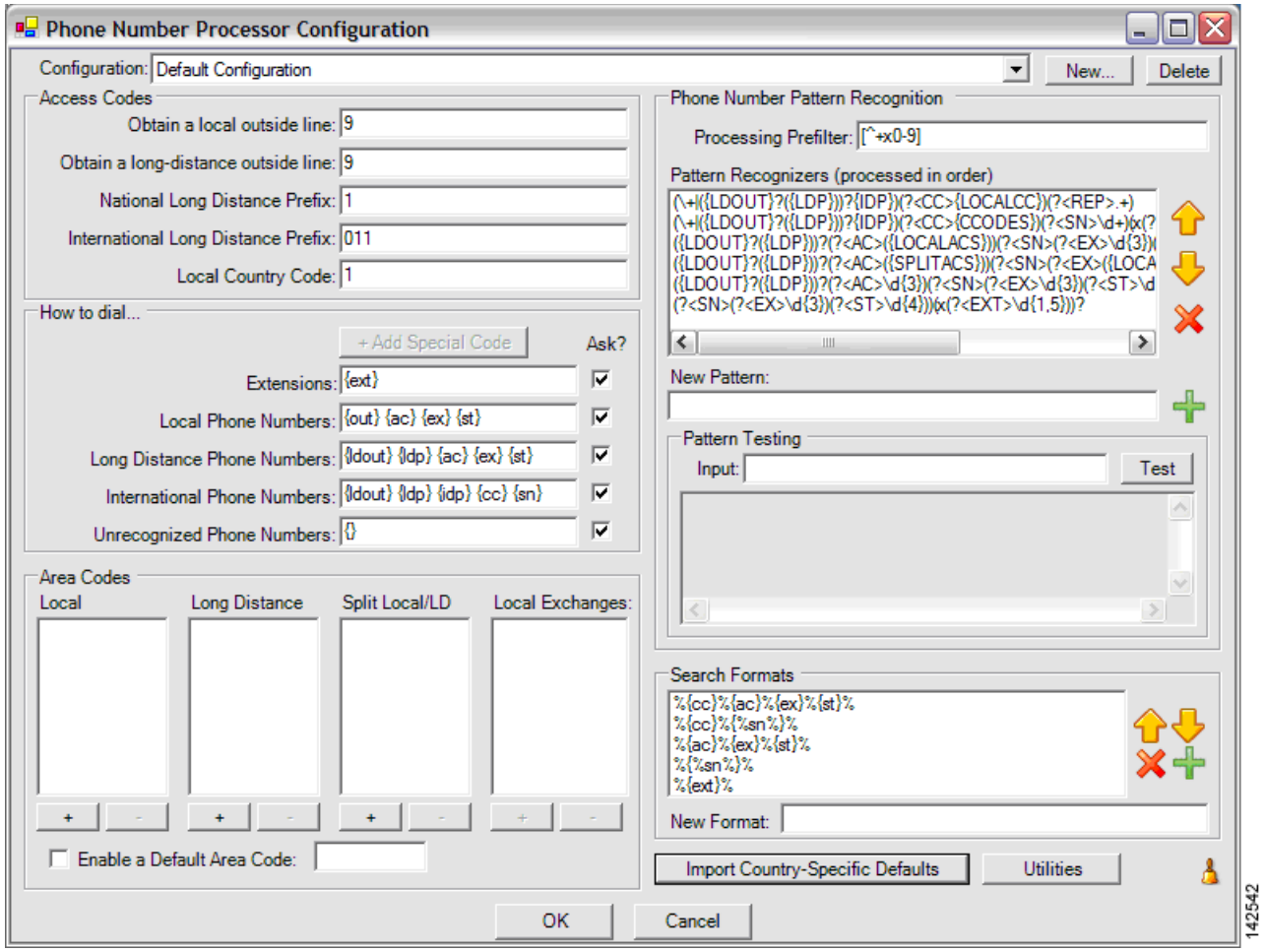
Figure 17 Import Country-Specific Defaults Menu



The specified Phone Number Processor Configuration window appears (see Figure 18).

Note All predefined configurations require additional information for your specific area.

Figure 18 Import Country-Specific Defaults Selection

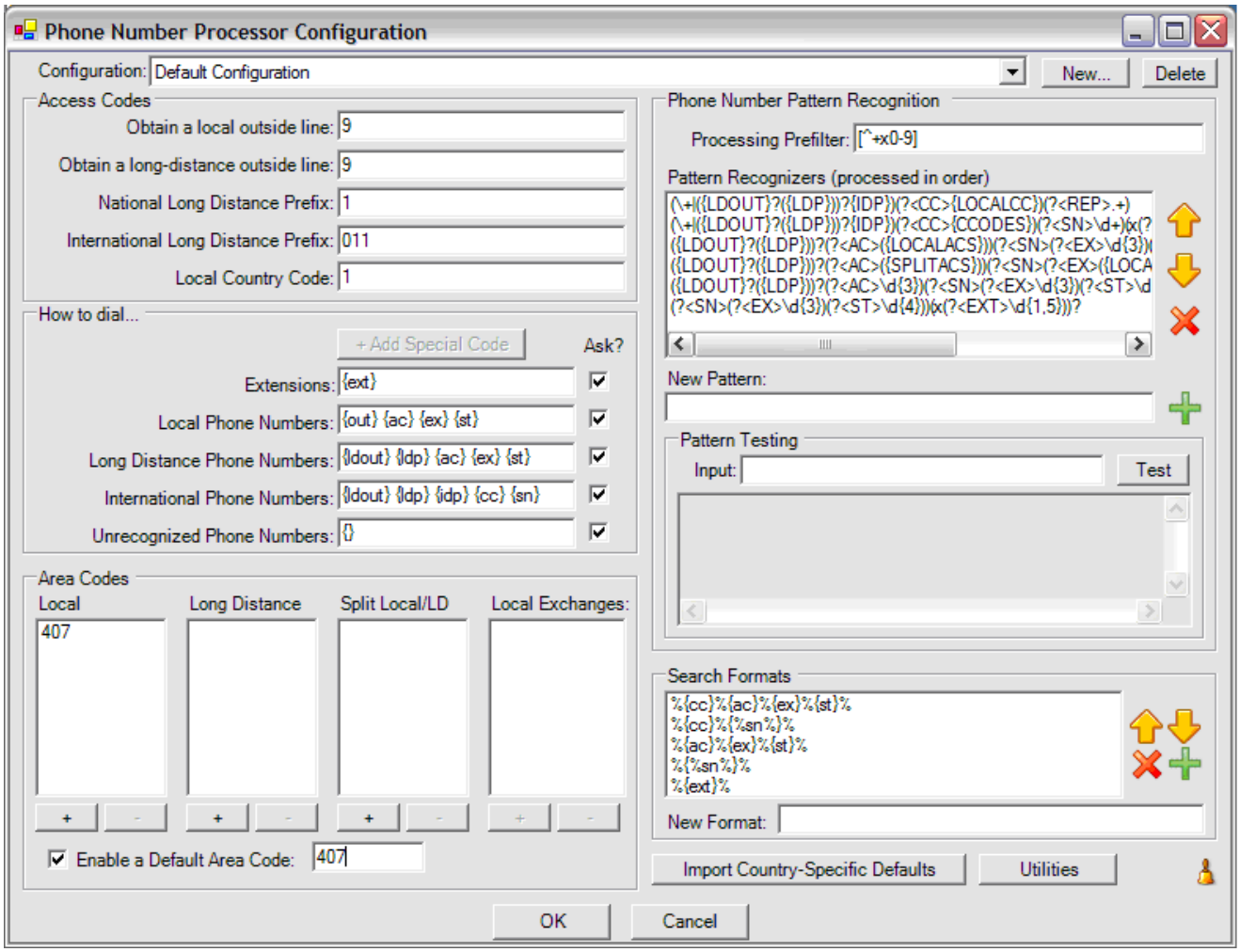


Step 13 Make further optional changes to the Phone Number Processor Configuration window. (See Table 3 on page 23 for a description of each field.)

Figure 19 shows an example of a typical basic Phone Number Processor configuration window.

Note If you make any updates to an existing configuration, the original configuration will be overwritten, and you may lose custom dialing rules (pattern recognizers and search formats).

Figure 19 Basic PNP Configuration

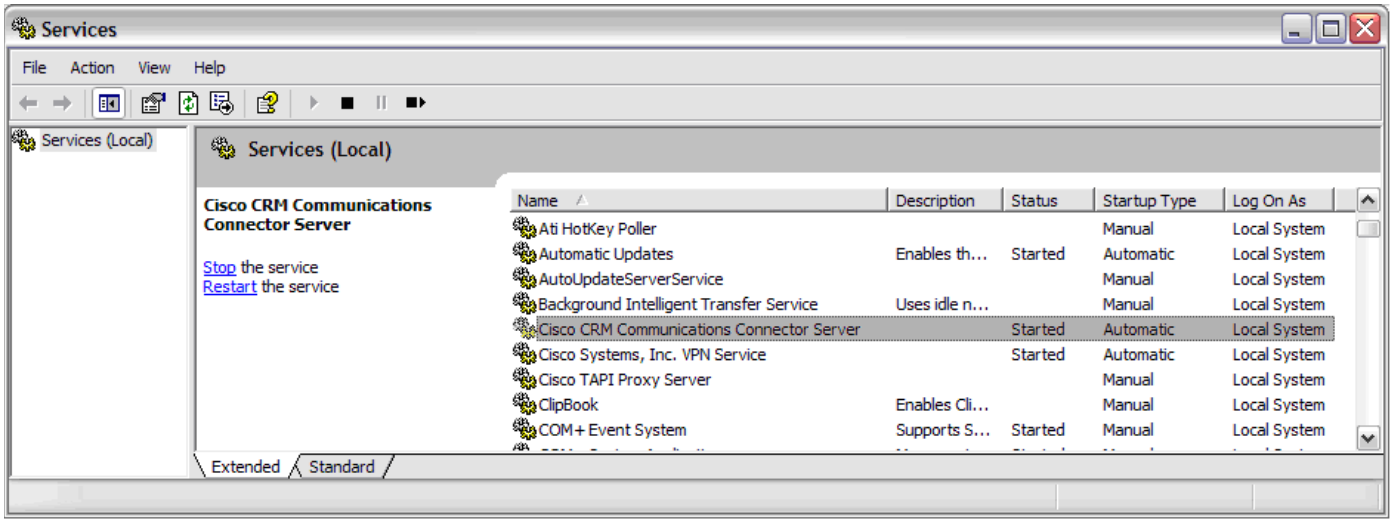


Step 14 When you finish the Phone Number Processor configuration, click **OK.**

Step 15 Click **OK** to exit the installation program.

The Cisco CRM Communications Connector Server installs and starts automatically (see Figure 20).

Figure 20 Cisco CRM Communications Connector Server Service Window



You are now ready to install the Cisco CRM Communications Connector Server Web (see the "Installing the Cisco CRM Communications Connector Server Web Installer" section on page 29).

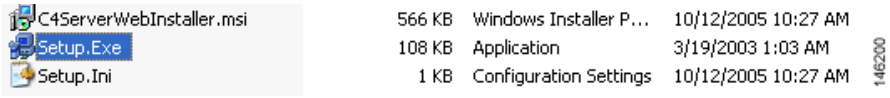
Installing the Cisco CRM Communications Connector Server Web Installer

The Cisco CRM Communications Connector Server Web Installer adds the Call This Person customization button within the Microsoft CRM contact records. The integration uses the ISV.config file on the Microsoft CRM server to customize the contact records.

Perform following steps to install the Cisco CRM Communications Connector 2.1.2 with Cisco CallManager, Cisco CallManager Express, and Cisco IPCC Express.

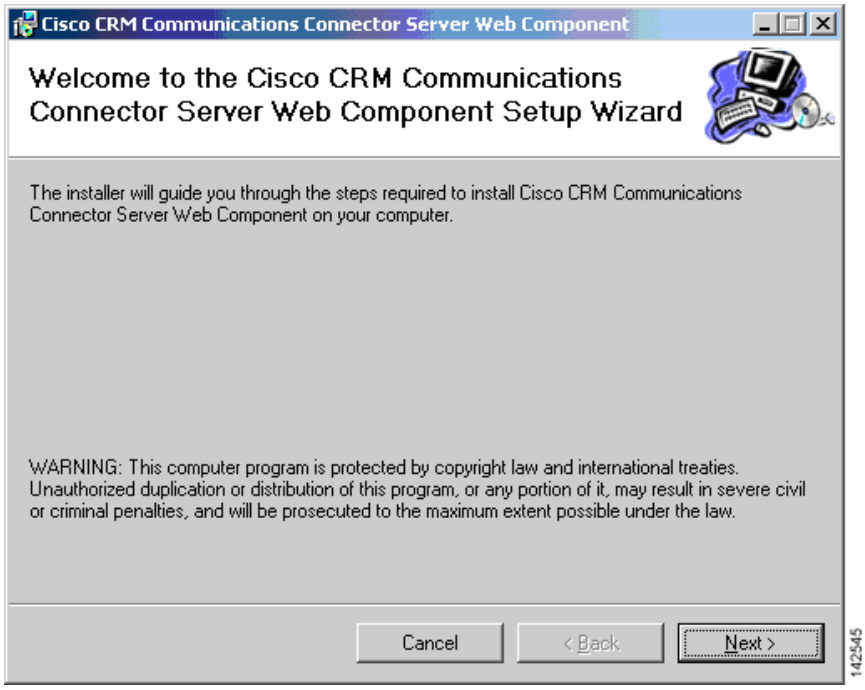
Step 1 In the CRM_Server_Web_Installer folder, double-click the **Setup.exe** file for the Cisco CRM Communications Connector Server Web installer (see Figure 21).

Figure 21 Cisco CRM Communications Connector Server Web Extracted Files



The Cisco CRM Communications Connector Server Web Installer Setup Wizard appears (see Figure 22).

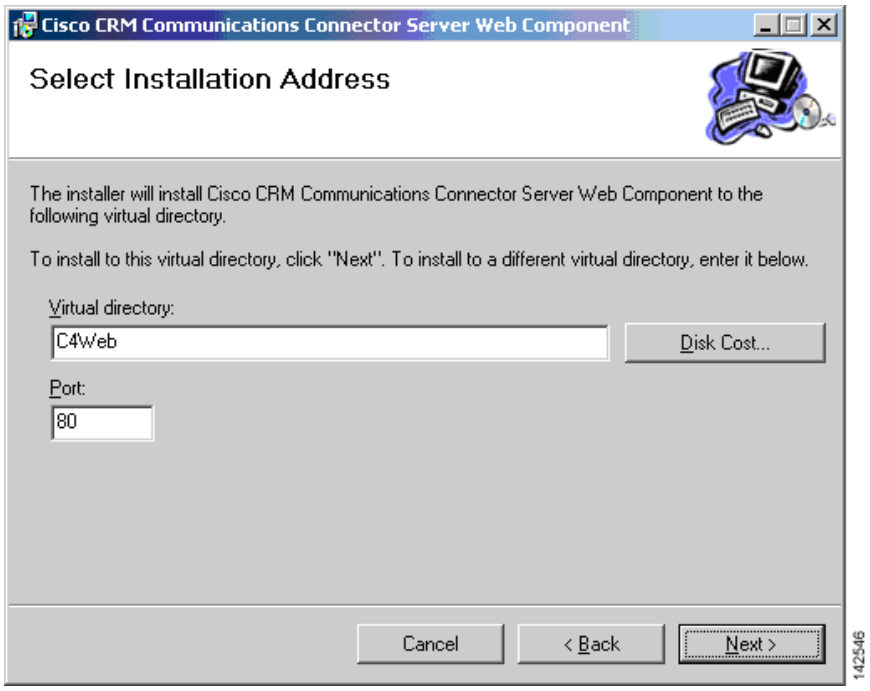
Figure 22 Cisco CRM Communications Connector Server Web Component Window Setup Wizard



Step 2 Click **Next** to proceed with the installation.

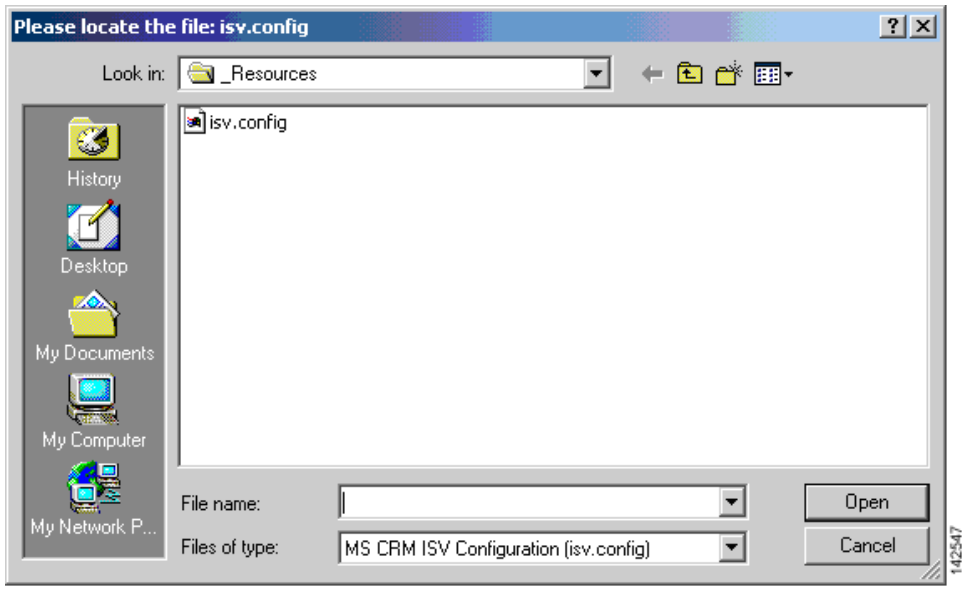
Step 3 Select an installation address. We recommend the default address C4Web (see Figure 23).

Figure 23 Cisco CRM Communications Connector Server Web Component Select Installation Address Window



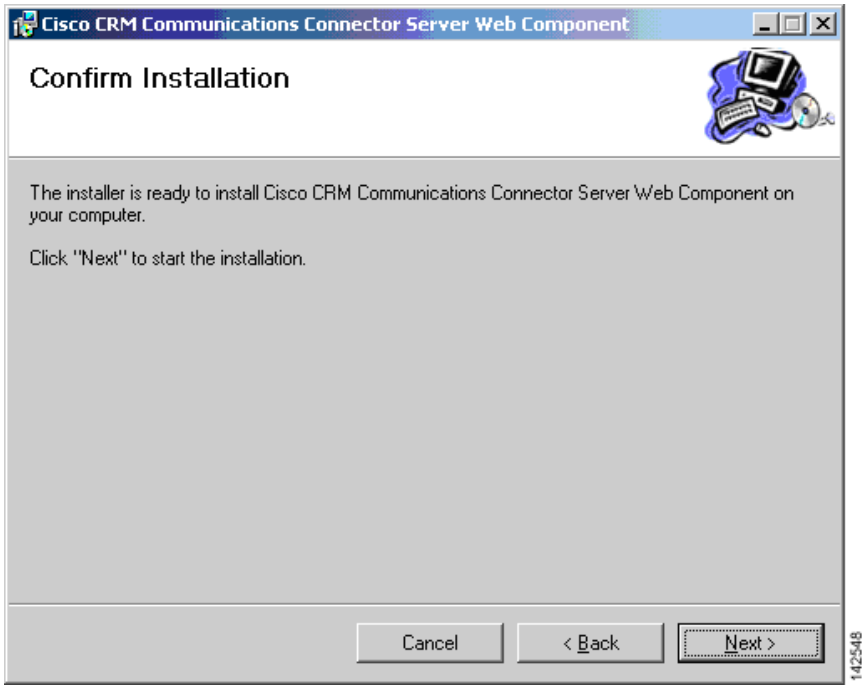
Step 4 When prompted, browse to the isv.config file located on the Microsoft CRM server (see Figure 24).

Figure 24 File Selection Window



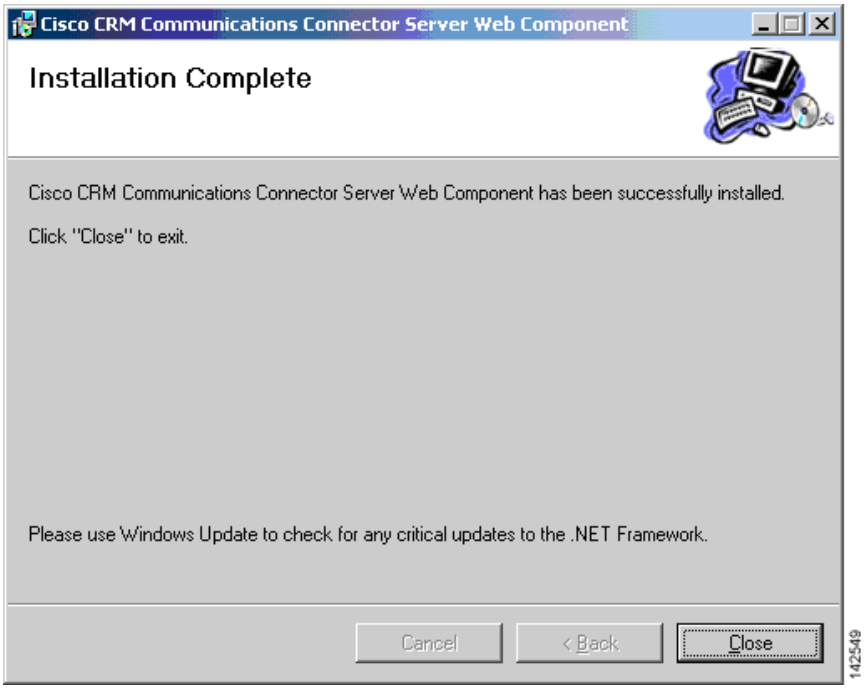
Step 5 Click **Next** to confirm the installation (see Figure 25).

Figure 25 Cisco CRM Communications Connector Server Web Component Confirm Installation Window



Step 6 The installer displays that the installation is complete (see Figure 26).

Figure 26 Cisco CRM Communications Connecdtor Server Web Component Installation Complete Window



Step 7 Click **Close** to exit the installer.

You are now ready to install the Cisco CRM Communications Connector Client (see the "Installing the Cisco CRM Communications Connector Client Software" section on page 33).

Installing the Cisco CRM Communications Connector Client Software

Note The Cisco CRM Communications Connector Server Service should be installed and operational before clients are installed because clients will attempt to contact the Cisco CRM Communications Connector Server during their installation.

Install the following software for the Cisco CRM Communications Connector Client.

- Install one of the following:
  - Cisco CallManager Telephony Application Programming Interface (TAPI) Client (if integrating with Cisco CallManager, with or without IPCC Express integration)
  - Cisco CallManager Express IOS TAPI Service Provider (IOSTSP) Client (if integrating with Cisco CallManager Express) You can obtain the latest version of this file from:

    http://www.cisco.com/cgi-bin/Software/Tablebuild/doftp.pl?ftpfile=cisco/voice/ip-phone/ip-iostsp/CiscoIOSTSP1.3.zip&app=Tablebuild&status=showC2A
- Install Microsoft .NET Framework v1.1

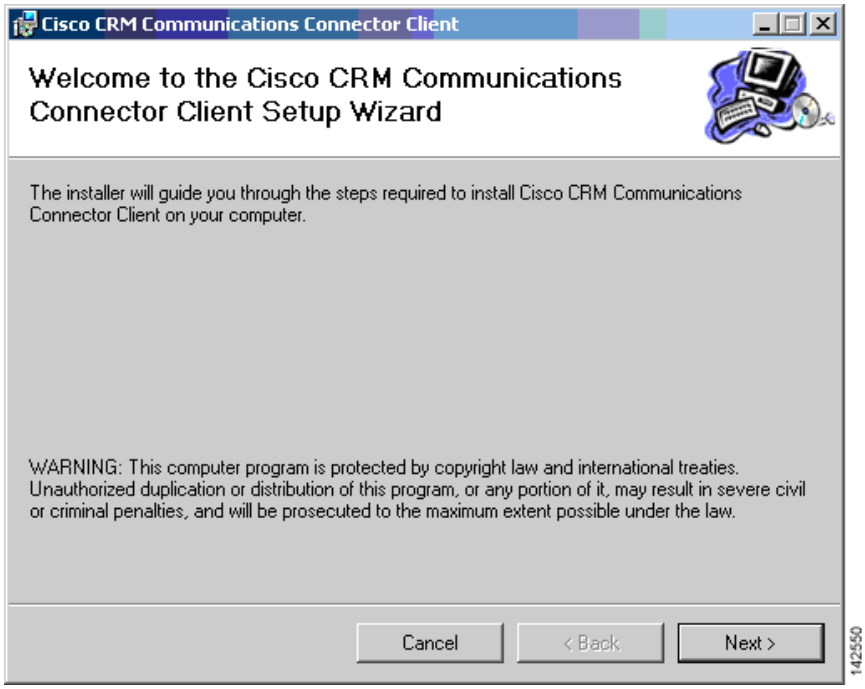
Perform the following steps to install the Cisco CRM Communications Connector Client with Cisco CallManager, Cisco CallManager Express, and Cisco IPCC Express.

Step 1 Log in to your PC as administrator, locate and double-click the **Setup.exe** file for the Cisco CRM Communications Connector Client installer (see Figure 27).

Figure 27 Cisco CRM Communications Connector Client Installer Extracted Files

The Cisco CRM Communications Connector Client Setup Wizard appears (see Figure 28).

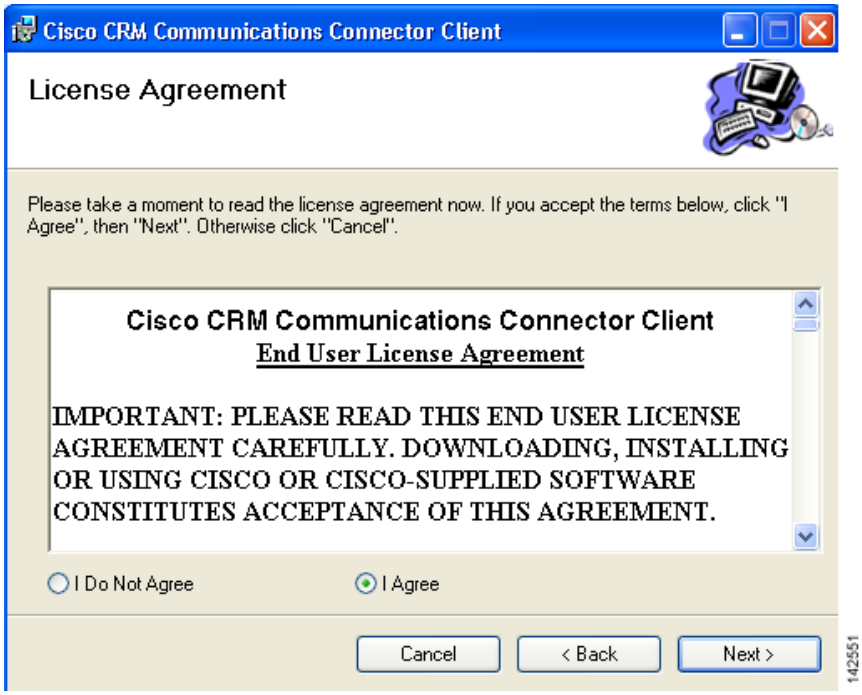
Figure 28 Cisco CRM Communications Connector Client Setup Wizard



Step 2 Click **Next**.

The License Agreement dialog appears (see Figure 29).

Figure 29 Cisco CRM Communications Connector Client Licence Agreement Window

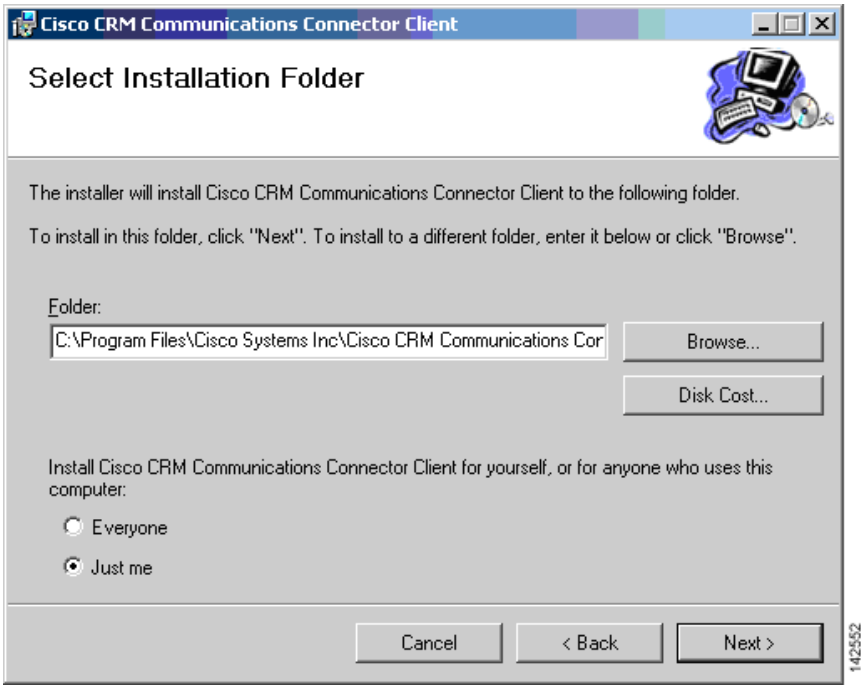


Step 3 Select **I Agree** to accept the licensing agreement.

Step 4 Click **Next**.

The Cisco CRM Communications Connector Select Installation Folder window appears (see Figure 30).

Figure 30 Cisco CRM Communications Connector Client Select Installation Folder Window

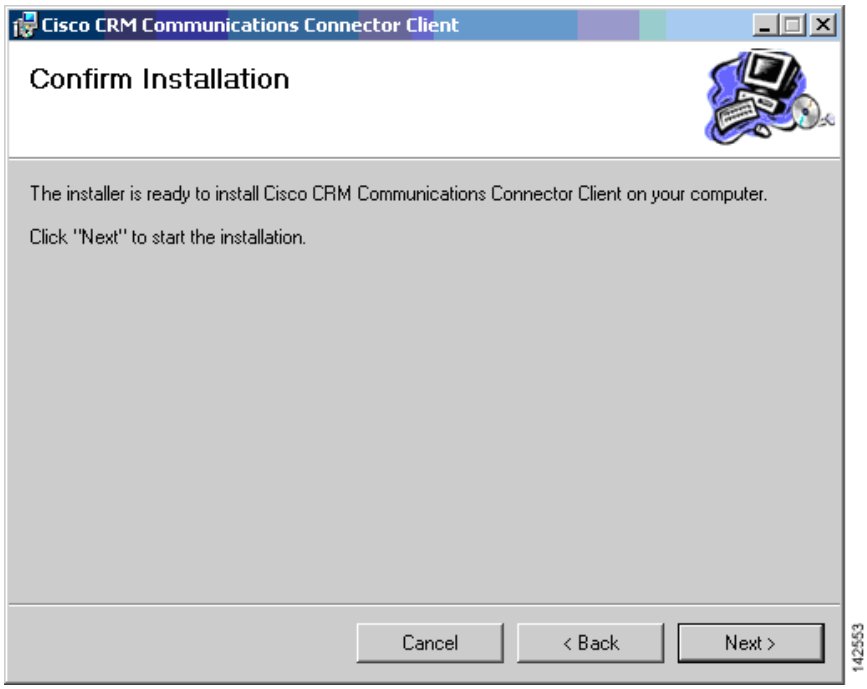


Step 5 Click **Just me**.

Step 6 Click **Next** to accept the default installation folder.

The Cisco CRM Communications Connector Client Confirm Installation window appears (see Figure 31).

Figure 31 Cisco CRM Communications Connector Client Confirm Installation Window

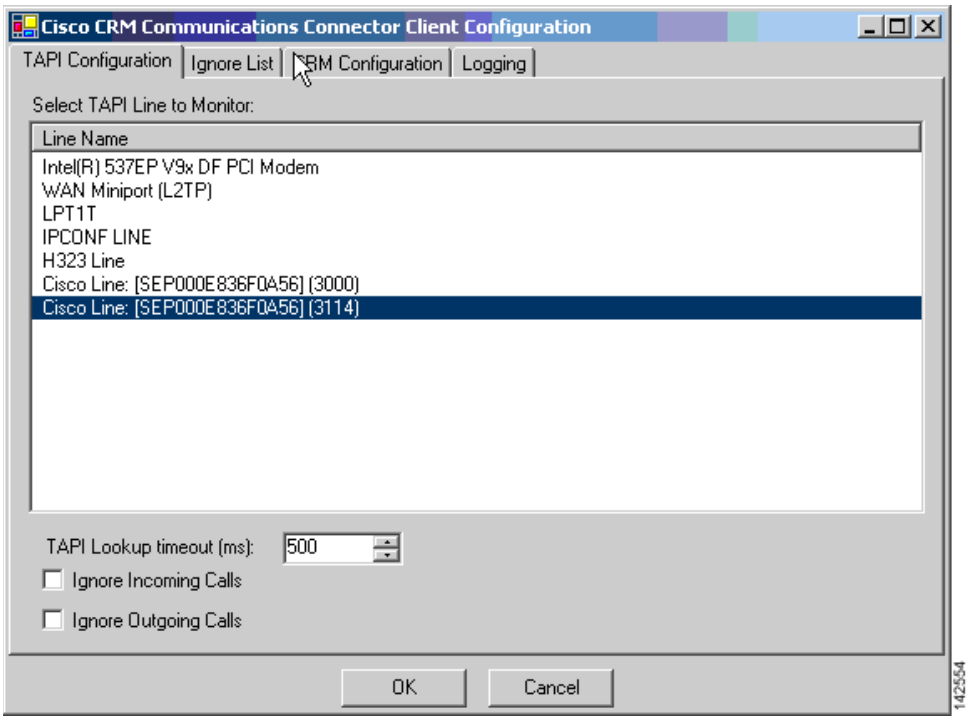


Step 7 Click **Next** to confirm the installation.

The installation is now ready to begin copying files.

After the files are copied, the Cisco CRM Communications Connector Client Configuration window appears allowing you to configure the Cisco CRM Communications Connector Client (see Figure 32).

Figure 32 Cisco CRM Communications Connector Client Configuration TAPI Configuration Tab-View Window



Step 8 Click the **TAPI Configuration** tab.

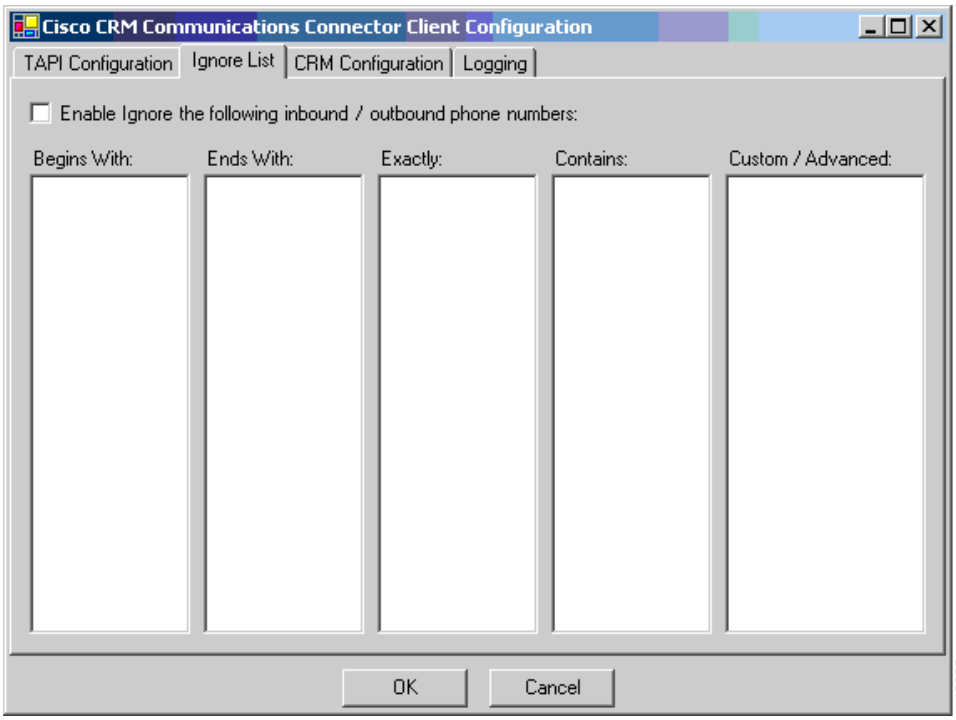
The TAPI Configuration tab allows you to specify which line should be monitored for incoming and outgoing calls. Optionally, you can also request to completely ignore either inbound or outbound calls (or both).

The TAPI Lookup timeout specifies a value, after which time (in milliseconds) if the TAPI client has not provided the Connector Client with Caller ID information, the Connector Client will manually ask the provider for the caller ID information. If you find that the client frequently reports the wrong phone number (such as the internal voice mail pilot extension) then try increasing this value.

Step 9 Click the **Ignore List** tab.

The Cisco CRM Communications Connector Client Configuration Ignore List tab-view window appears (see Figure 33).

Figure 33 Cisco CRM Communications Connector Client Configuration Ignore List Tab-View Window



The Ignore List tab allows you to specify specific phone numbers that the Connector Client should ignore when processing inbound/outbound phone numbers.

The first four boxes allow you to specify numbers to ignore when the phone number either begins with, ends with, is exactly, or contains the specified digit strings. In these four boxes, only digits are allowed.

The fifth box, Custom / Advanced, allows you to specify regular expressions of phone number digit strings to ignore.

For example, if you do not want to track internal phone call activity, In the Custom/Advanced box enter the following string:

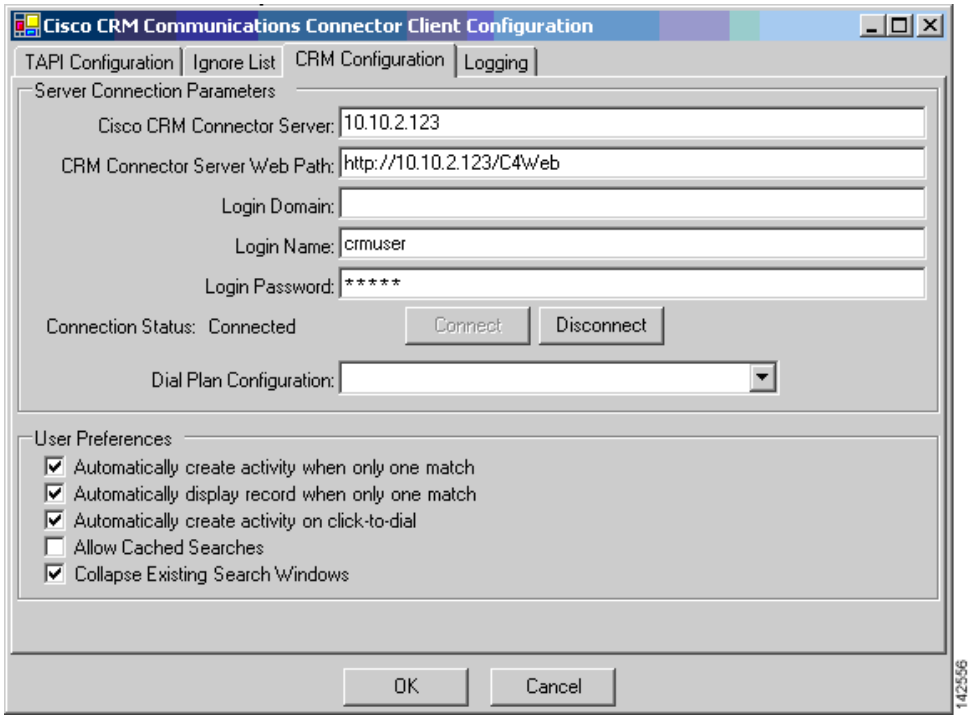
```
^\d{4}
```

This string instructs the Cisco CRM Communications Connector to ignore 4-digit internal phone-extension numbers. Depending on the number of digits of your internal phone-extension configuration, if necessary, replace the digit 4 with the digit corresponding to your configuration.

Step 10 Click the **CRM Configuration** tab.

The Cisco CRM Communications Connector Client Configuration CRM Configuration tab-view window appears (see Figure 34).

Figure 34 Cisco CRM Communications Connector Client Configuration CRM Configuration Tab-View Window



The CRM Configuration tab allows you to specify server and login information for both the Cisco CRM Communications Connector Server, and the Microsoft CRM server.

Step 11 Specify the machine name or IP address that the Cisco CRM Communications Connector Server is installed on in the Cisco CRM Connector Server field.

On initial configuration, when you changes the value in this field, the value in the "CRM Connector Server Web Path" will update with the same value. Change this value if the Server Connector Web Components were installed on a different server or have a different access URL.

Note The value in the "CRM Connector Server Web Path" should be a complete URL that points to the directory in which the C4Dial.aspx and C4Stub.aspx files are located.

Step 12 Enter your Microsoft CRM login information in the Login Domain, Login Name, and Login Password fields. Single sign-on is not supported.

Step 13 Specify your preferences by entering a check(s) in the User Preferences region.

Step 14 Click the **Connect** button.

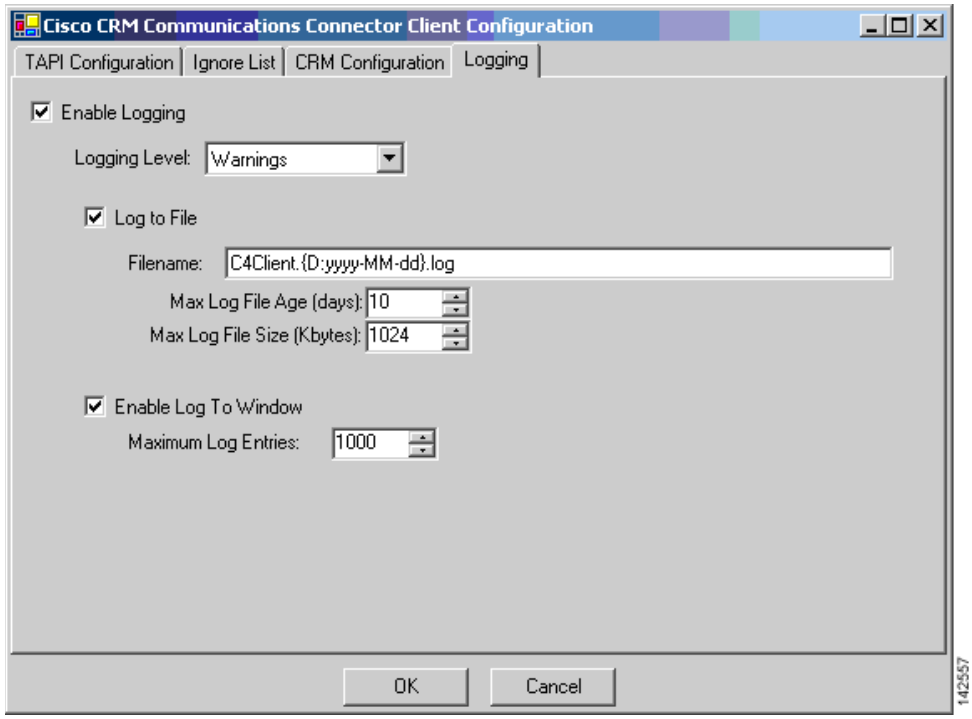
If successful, the status shows "Connected" and the "Dial Plan Configuration" drop-down menu becomes enabled.

Step 15 Select the appropriate Dial Plan Configuration (Phone Number Processor Configuration) from the drop-down menu as dictated by the geographic location and as provided for by the Cisco CRM Communications Connector Server Service administrative configuration.

Step 16 Click the **Logging** tab.

The Cisco CRM Communications Connector Client Configuration Logging tab-view window appears (see Figure 35).

Figure 35 Cisco CRM Communications Connector Client Configuration Logging Tab-View Window



The Logging tab allows you to configure how the client logs system events (available logging levels include messages from all previous levels).

Step 17 To enable logging, enter a check in the Enable Logging box.

Step 18 Specify the Logging Level from the drop-down menu.

The available logging levels are:

- Critical Errors
- Errors
- Warnings
- Info
- Debug
- Debug1 .. Debug 4

The "Critical Errors" level produces virtually no output, while the "Debug4" level produces large output.

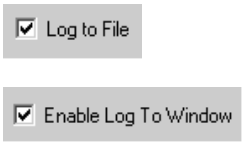
Note The recommended setting is "Warnings" for normal operation.

Note There are some messages (primarily relating to TAPI events) that do not have message levels associated with them, and thus they are always logged.

Step 19 Specify the way to collect logging information by entering a check in the desired box (see Figure 36). The two possible ways to collect the logging information are:

- Log to File
- Log to Window

Figure 36 Specifying Logging Information Destination



If you check **Log to File** (see Figure 37):

Figure 37 Log to File Field Options

a. The filename for the log appears in the Filename field.

b. Specify the maximum age (in days) for the log file using the arrow keys.

c. Specify the maximum size of the log file (in Kbytes) using the arrow keys.

If you check **Enable Log to Window** (see Figure 38):

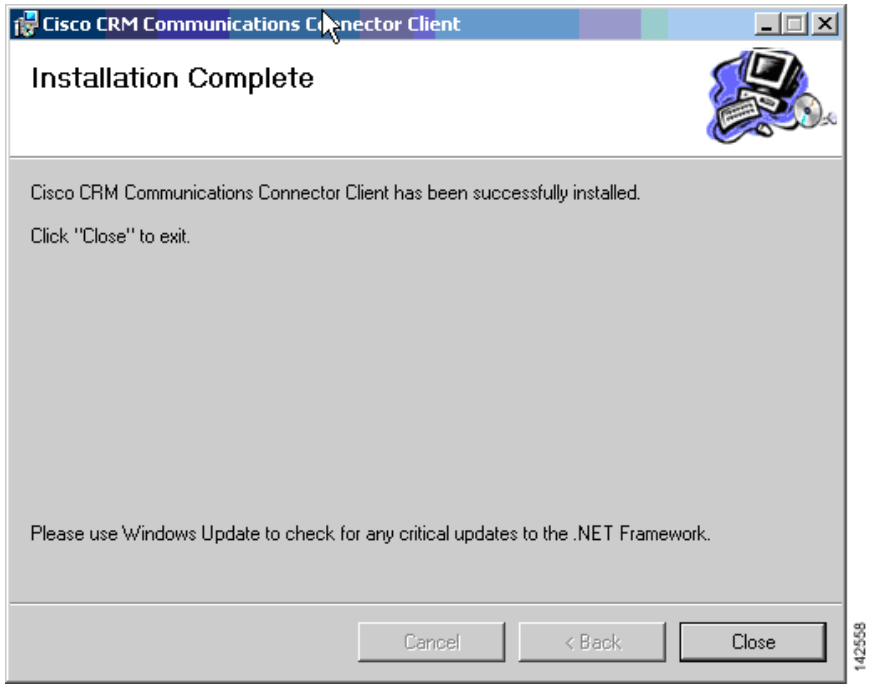
Figure 38 Enable Log to Window Field Option

a. Specify the maximum number of log entries using the arrow keys.

Step 20 When you finish completing the information in the window, click **OK.**

The Installation Complete dialog appears (see Figure 39). The client is now installed and ready to run from the Start Menu on your PC.

Figure 39 Cisco CRM Communications Connector Client Configuration Window Installation Complete



Step 21 Click **Close** to exit the installation.

What to Do Next

You are now ready to integrate Cisco CRM Communications Connector 2.1.2 with Cisco IPCC Express (see "Integrating Cisco CRM Communications Connector with Cisco IPCC Express" section on page 43).

Integrating Cisco CRM Communications Connector with Cisco IPCC Express

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

Contents

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:

- **Ringing**—CallerID information must be processed during the ringing phase of the phone call. At this phase, the Cisco CRM Communications Connector search window appears.
- **Answered**—At this phase, the Cisco CRM Communications Connector client knows that the phone call has begun.
- **Dropped**—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 the you follow these procedures.

Configuring Call Ringing Event Information

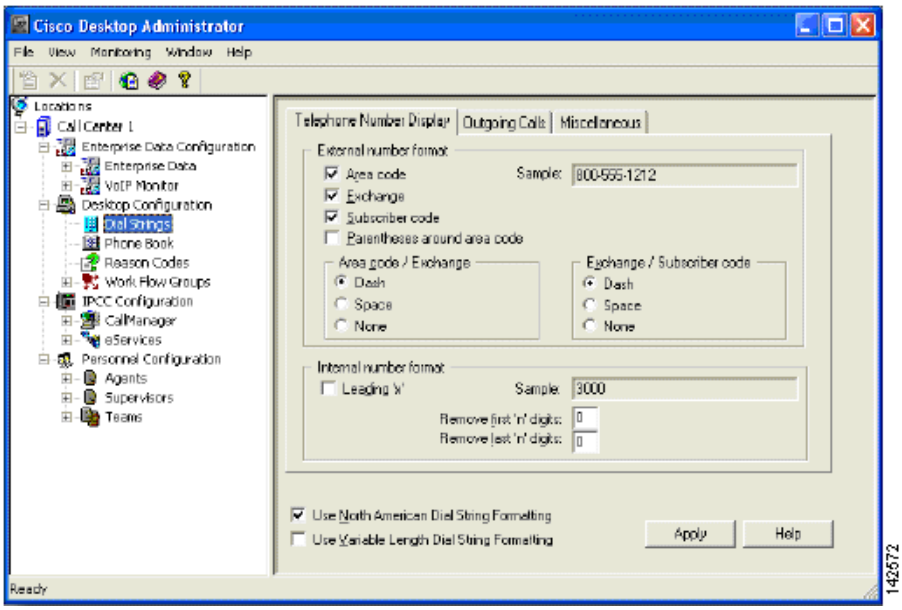
Note Each of the integrations described in this section are based on the CTI integration capabilities offered in CAD. For additional information, see the *CAD Administration Guide* at http://www.cisco.com/univercd/cc/td/product/voice/sw_app_to/apps_3_5/english/admn_app/cad_admn.pdf

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:

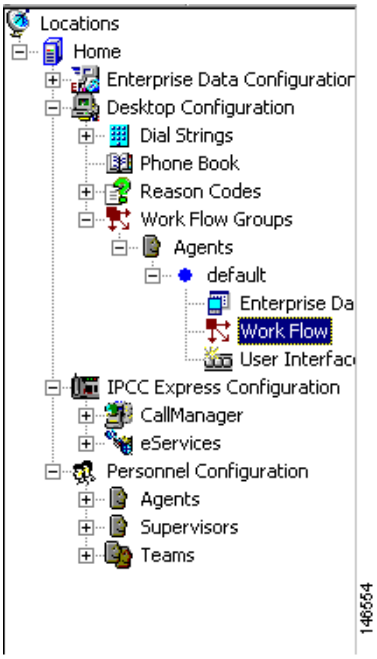
Step 1 Open the Cisco Desktop Administrator application (see Figure 40).

Figure 40 Cisco Desktop Administrator Window



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

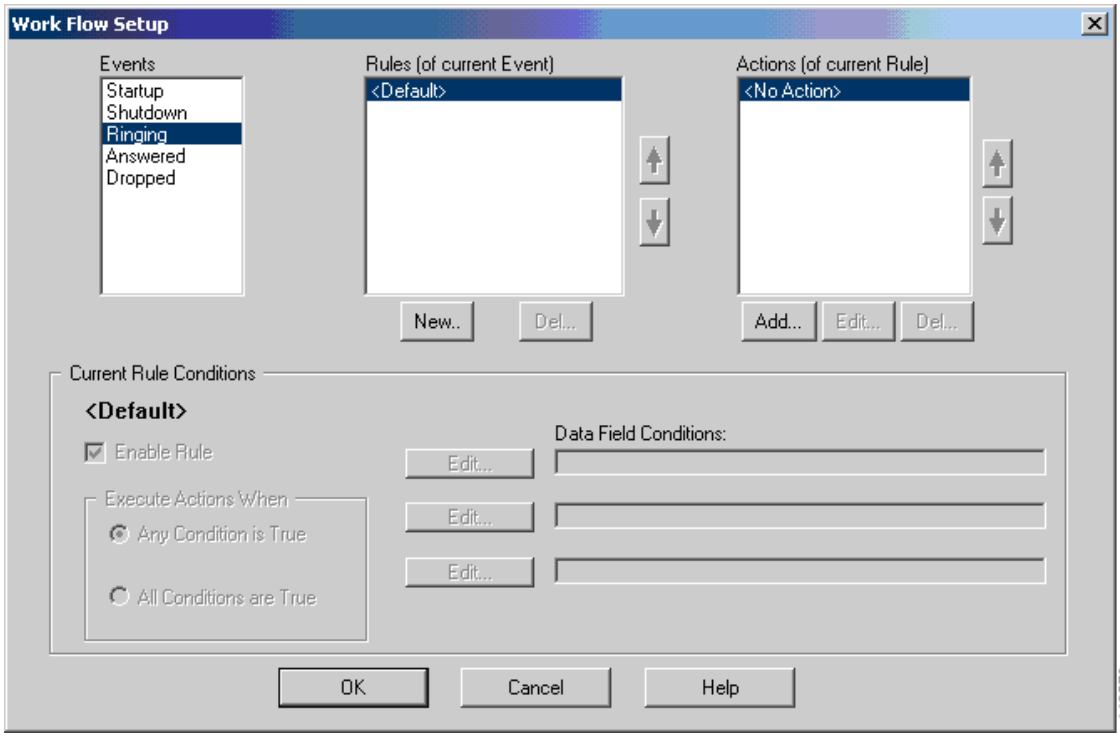
Figure 41 Specifying Agent Type



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

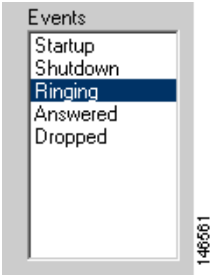
The Work Flow Setup window appears (see Figure 42).

Figure 42 Work Flow Setup Window



Step 4 Select **Ringing** from the Events list (see Figure 43).

Figure 43 Specifying Ringing Event

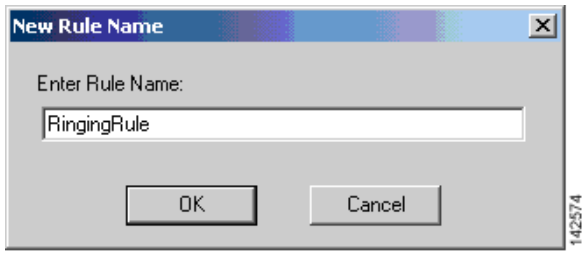


Step 5 Click the **New...** button to add a new rule (see Figure 44).

Figure 44 New Rule Button

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

Figure 45 New Rule Name Window

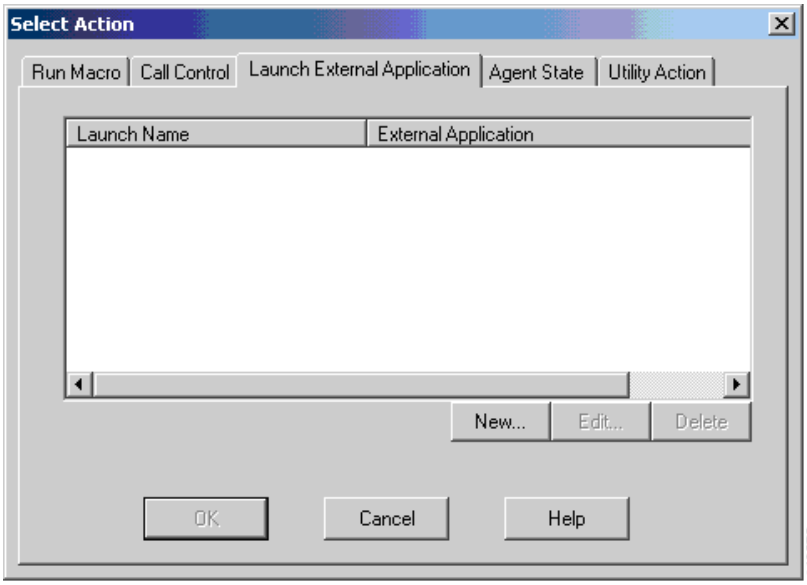


Step 6 Enter a rule name. For example, RingingRule, or something similar that describes the rule appropriately.

Step 7 Select **RingingRule** 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

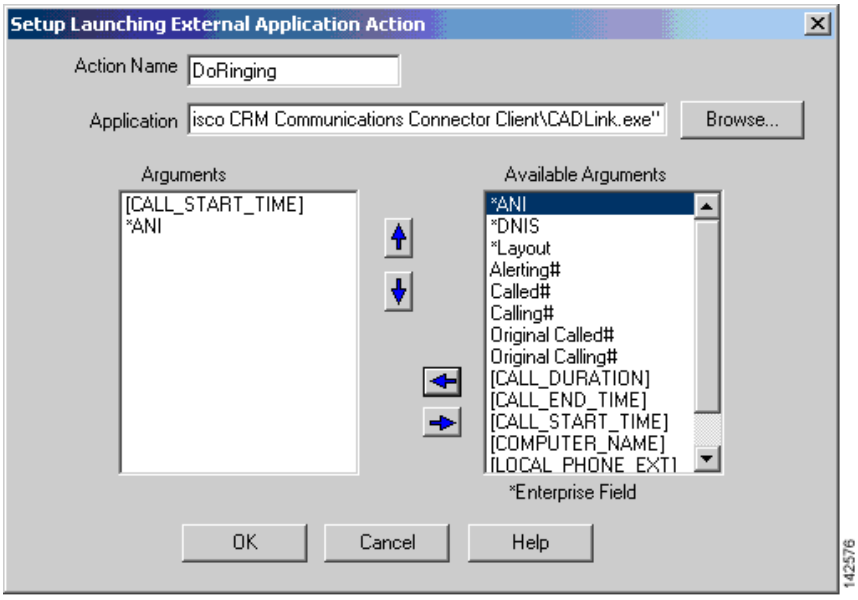


Step 8 Select the **Launch External Application** tab.

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 filed, 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.

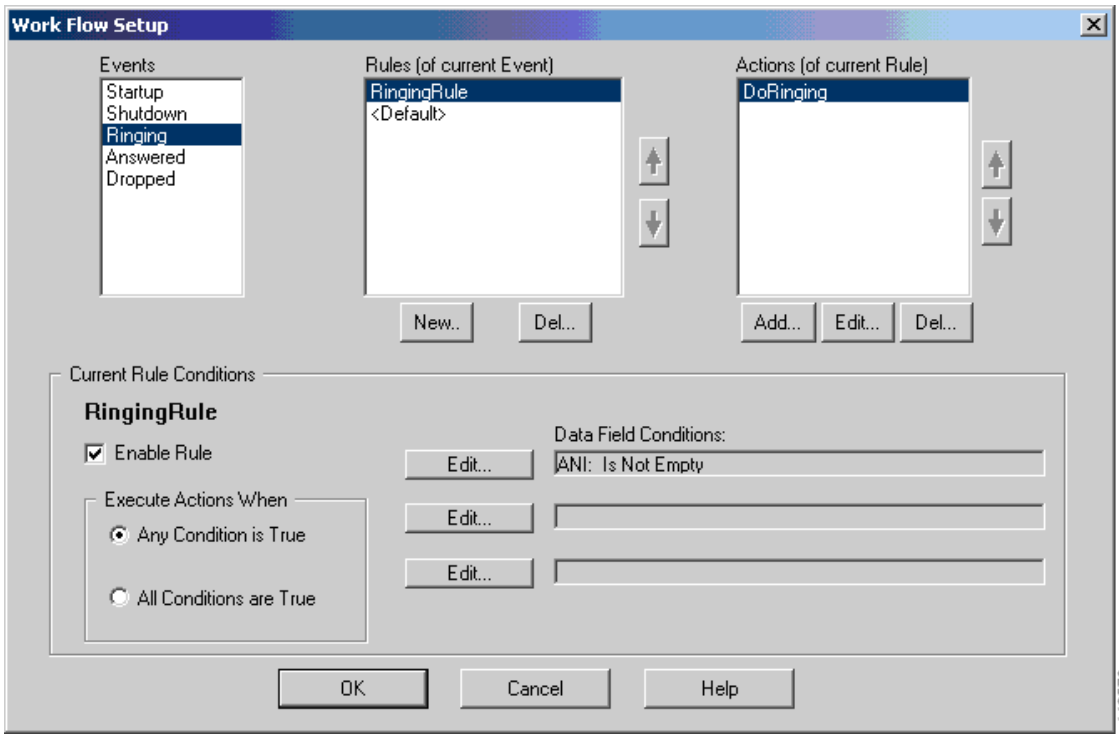
Step 12 In the Arguments field, select the **[CALL_START_TIME]** argument.

Step 13 In the Available Arguments field, select ***ANI** as the second argument.

Step 14 Click **OK** to accept the configuration.

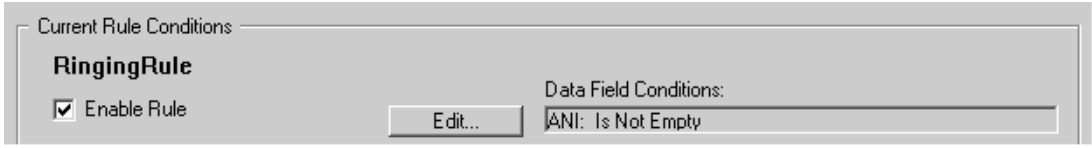
The Work Flow Setup window appears (see Figure 48).

Figure 48 Work Flow Setup Window



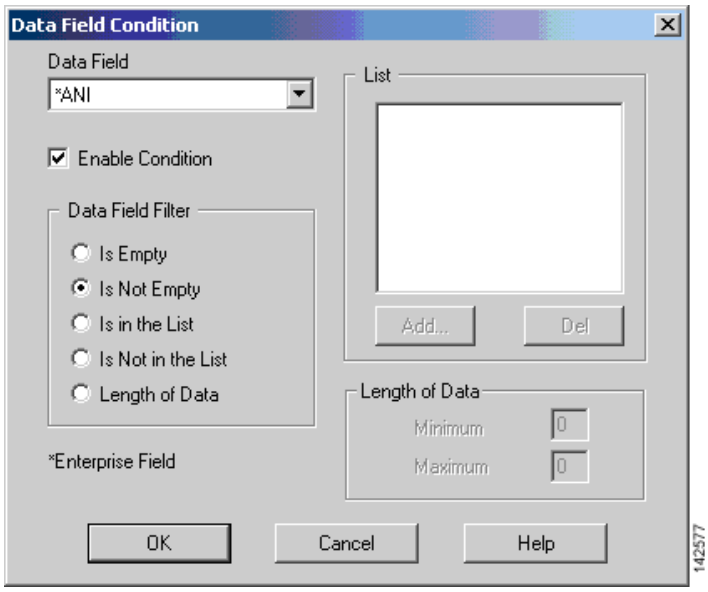
Step 15 Enable the RingingRule by clicking the first **Edit** box in the Current Rule Conditions region (see Figure 49).

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.

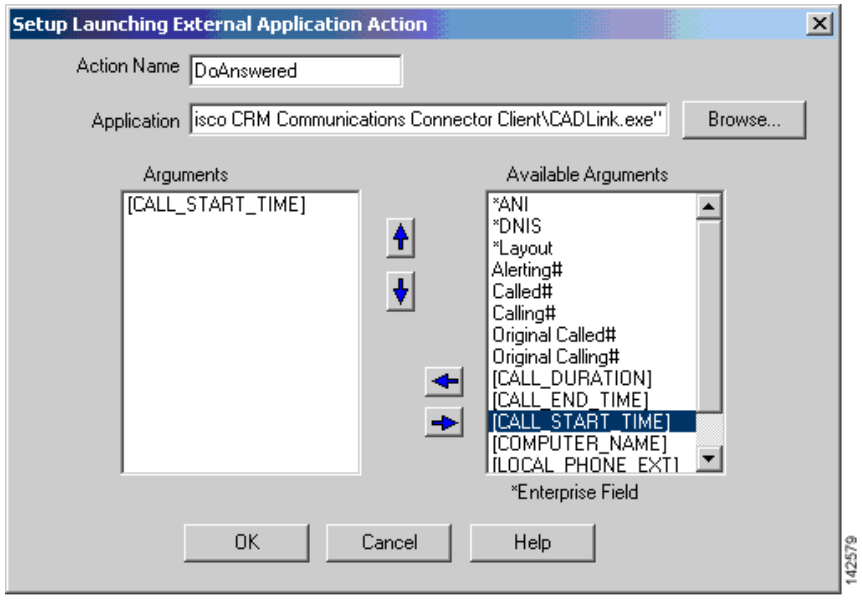
b. Name the Rule AnsweredRule.

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.

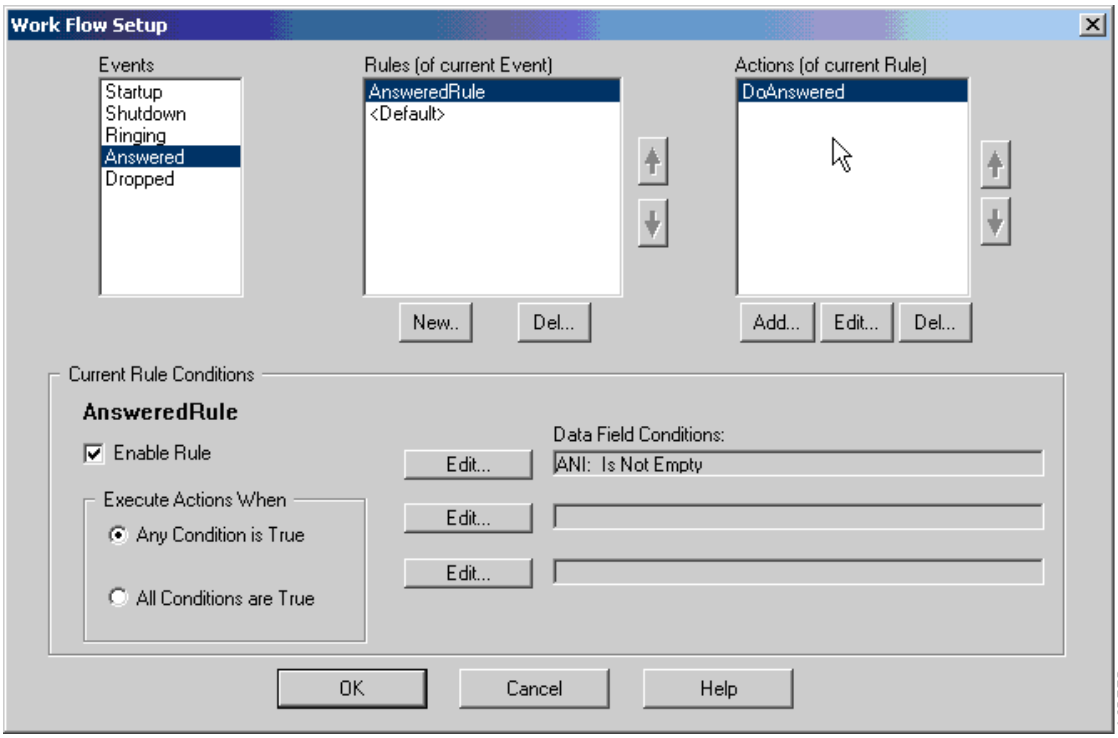
Figure 52 Setup Launching External Application Action Window: Answered Event



Step 2 Click **OK**.

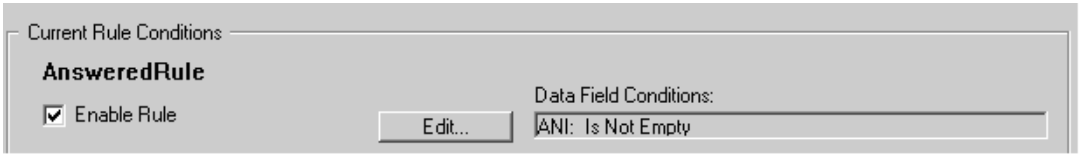
The Work Flow Setup window appears (seeFigure 53).

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:

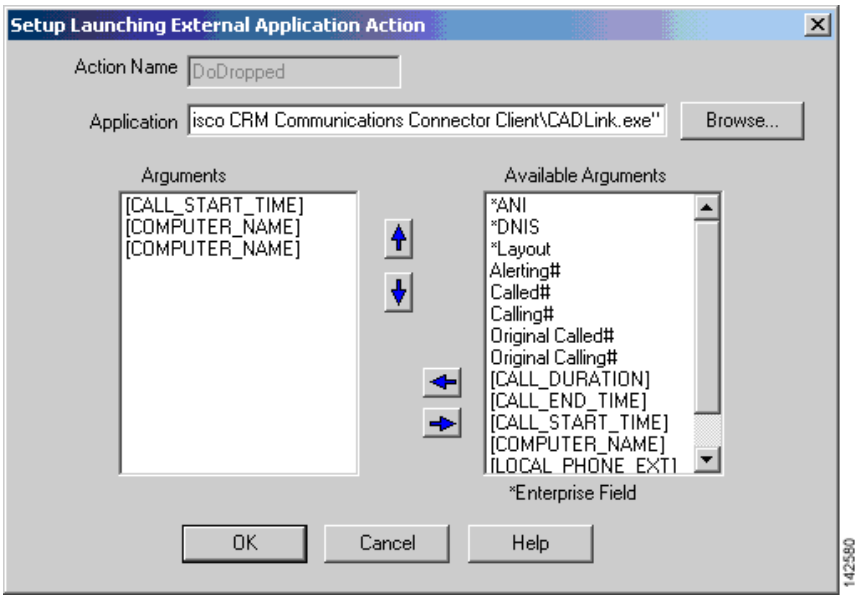
a. Name the rule DroppedRule.

b. Call the action DoDropped.

c. The arguments for the DoDropped event are [CALL_START_TIME], [COMPUTER_NAME], and [COMPUTER_NAME].

d. Note that the COMPUTER_NAME argument is repeated and acts as placeholder to ensure that there are three arguments (see Figure 55).

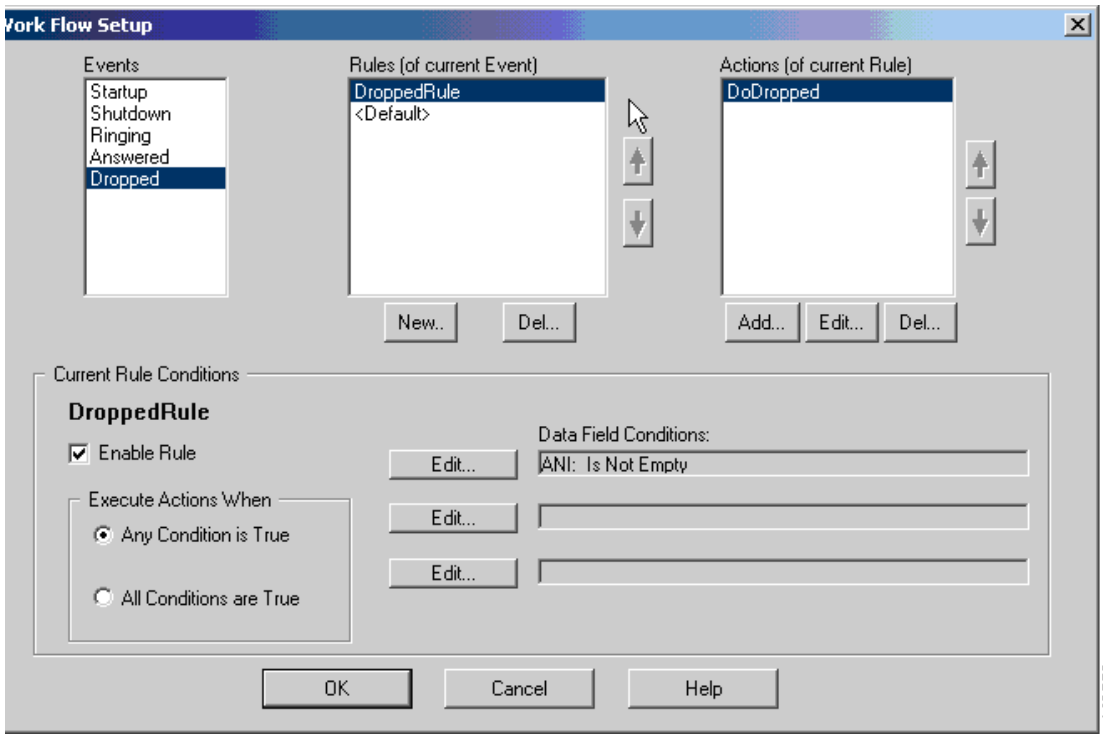
Figure 55 Setup Launching External Application Action Window: Dropped Event



Step 2 Click **OK**.

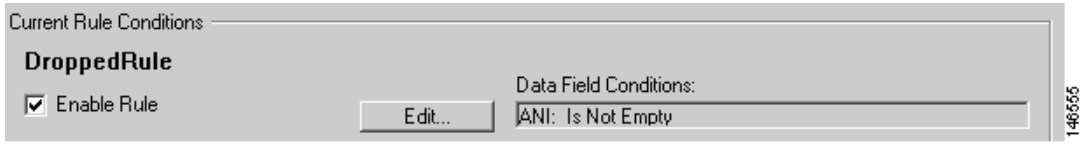
The Work Flow Setup Dropped Event window appears (see Figure 56).

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:

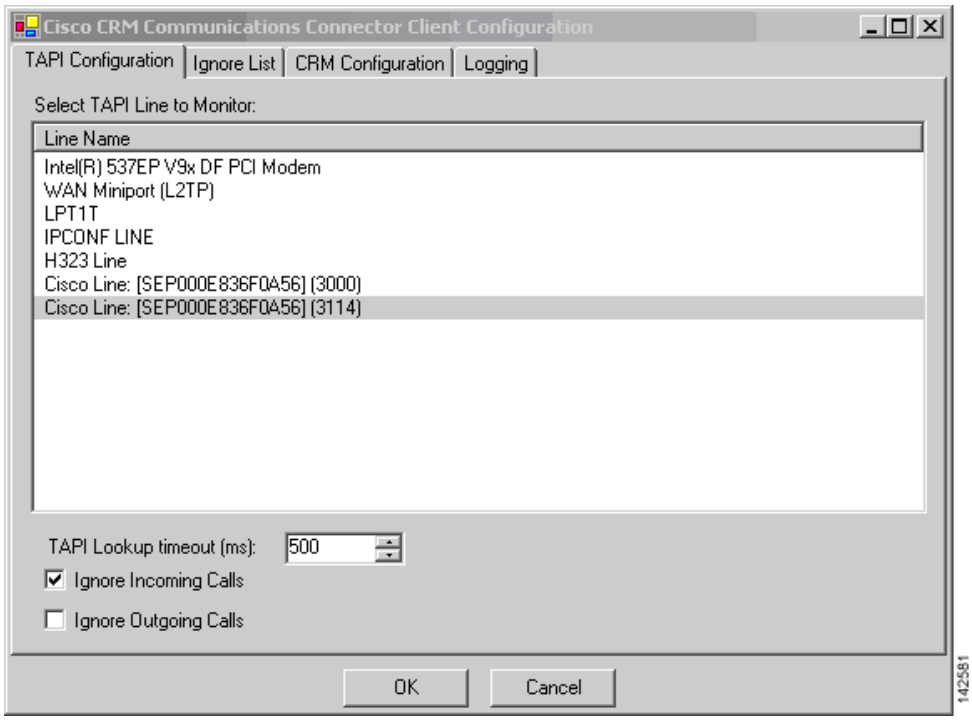
Step 1 Click on **Ignore Incoming Calls** (see Figure 58).

Figure 58 Specifying to Ignore Incoming Call

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

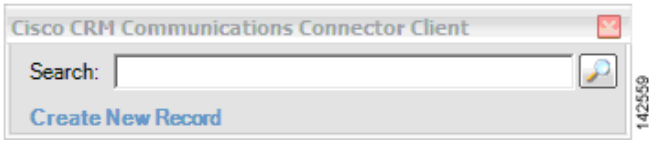
You are now ready to use the Cisco CRM Communications Connector (see "Using the Cisco CRM Communications Connector Client" section on page 61).

Using the Cisco CRM Communications Connector Client

This chapter describes how use the Cisco CRM Communications Connector Client.

When the Client first starts up, it attempts to contact the Cisco CRM Communications Connector Server Service. If successful, the Client's main window appears at the bottom-right corner of your screen (see Figure 60).

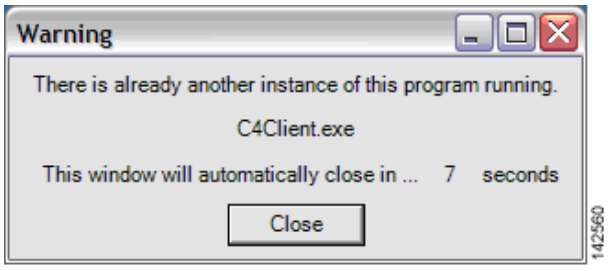
Figure 60 Cisco CRM Communications Connector Client Window



Note that the Client performs a "minimize on close." If you click the **Close** button in the Cisco CRM Communications Connector Client window, the Client will not exit, but rather minimizes itself to the tray (the tray icon is always visible, however). To exit the Client, select **Exit** from the menu when right-clicking on the menu.

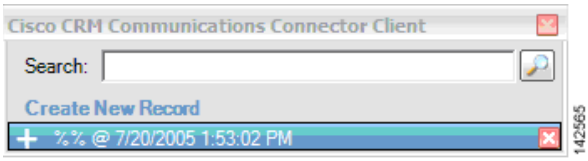
The Client is a single-instance application, meaning that only one copy of the application can be running at any one time. If you attempt to start a new Client while another is running, a warning message appears (see Figure 61).

Figure 61 Warning Message



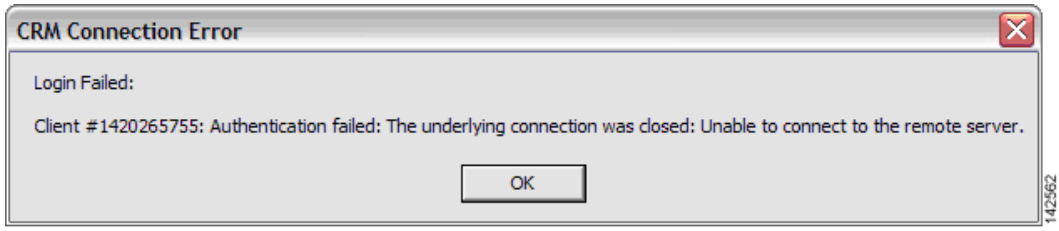
If the window is grayed out as shown in Figure 62, it means that the attempt to contact the server was unsuccessful, in which case you should receive an error message.

Figure 62 Cisco CRM Communications Connector Client Grayed-Out Window



One such possible error message is shown in Figure 63:

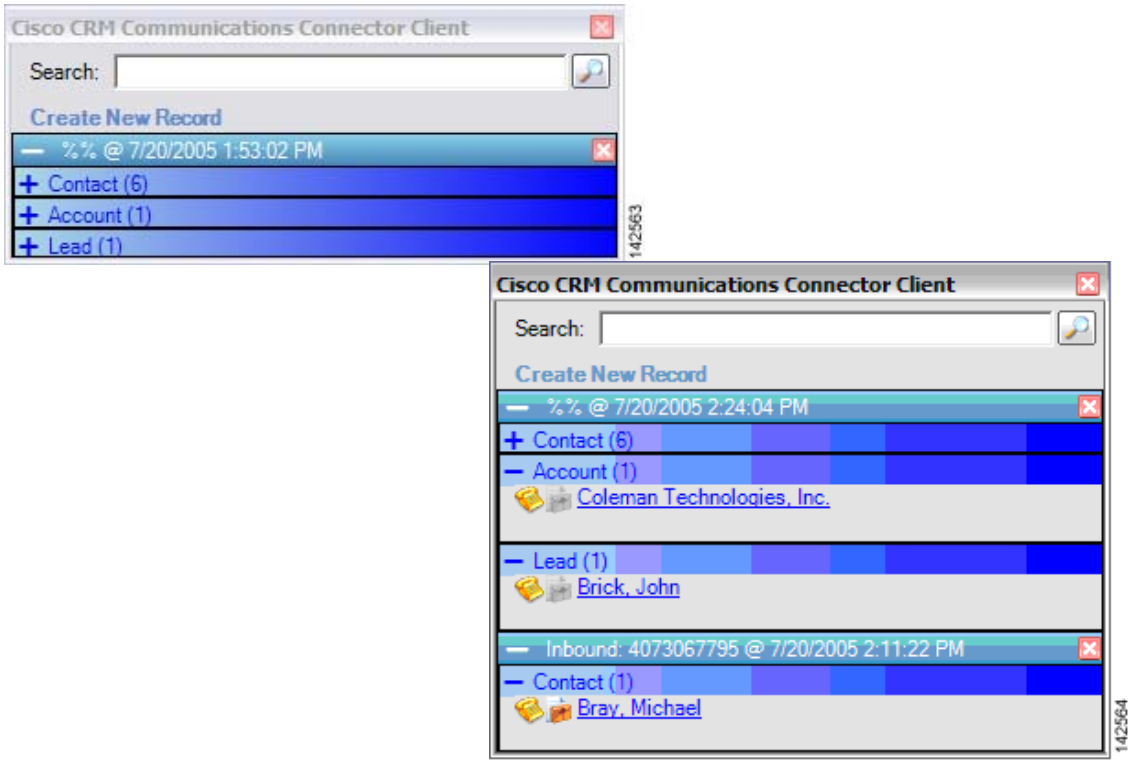
Figure 63 Error Message



In this case, the C4Server was successfully contacted, but the login was not successful (because the CRM Server could not be contacted by the C4 Server).

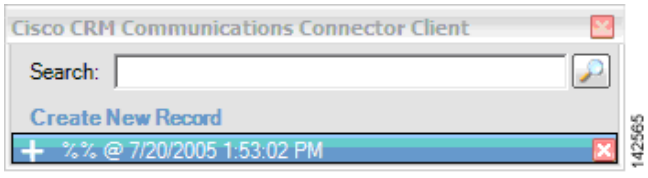
To perform a manual search, type something in the search box and press Enter or click the search button at the right. The results display in collapsible panels as shown in Figure 64. If there is only one matching type of record, the panel displays in its expanded form. To expand or collapse a contact-type panel, click on the blue horizontal bar that represents that contact type.

Figure 64 Cisco CRM Communications Connector Client Window Performing Manual Search



The Connector Client provides a multiple-search interface, which means that there can be multiple search results displayed at any one time. Each search result is also contained on a collapsible panel with a turquoise bar. Also note that the search collapsible panel has a 'close' button - the red X at the right side of the search panel (not the window close button). To remove the search results for any particular search, simply click that panel close button. A search window with one collapsed search panel is shown in Figure 65:

Figure 65 Cisco CRM Communications Connector Client Windows



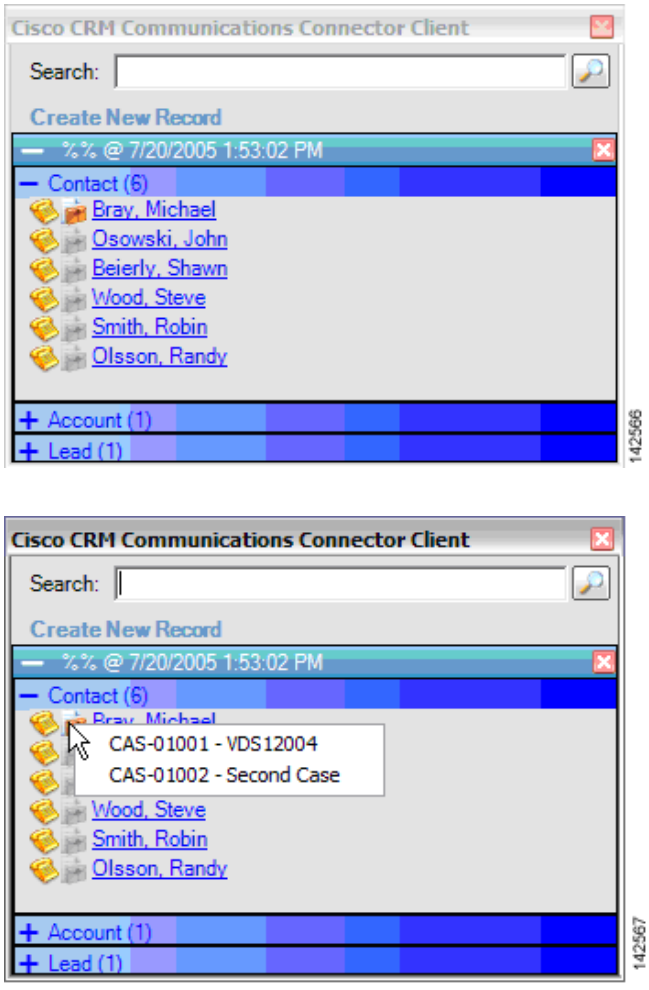
Inside each search panel will be the results of the search. The example in Figure 66 shows there are 6 Contacts, 1 Account, and 1 Lead that matched the search. The Contacts panel is expanded so that the results can be seen.

There are three hot spots in each search-panel results. Click the telephone icon and the client creates a phone call activity record for that contact. If the search was initiated by a phone call, then the details of the phone call will automatically fill in.

If you click the briefcase icon, a menu showing the active support cases for that customer appears. Click one of the support case. If the briefcase icon is grayed out, then there are no support cases available for that contact, or the administrator has not configured the server to return information about support cases.

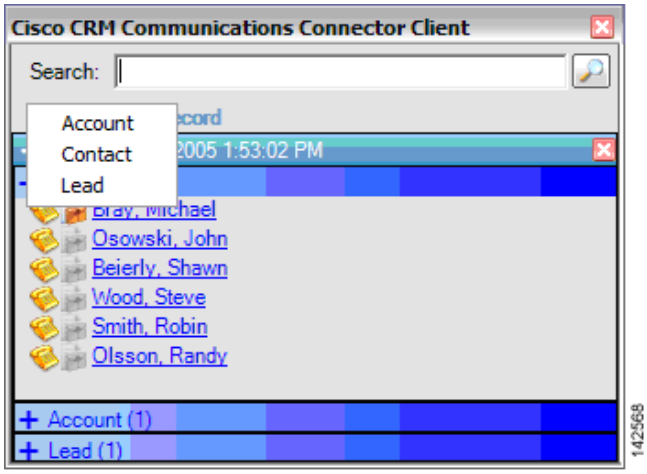
Finally, if you click a name, the contact record opens.

Figure 66 Cisco CRM Communications Connector Client Windows



To create a new contact, account, or lead record, click **Create New Record** and select the type of record you want to create from the menu. Clicking one of the items will open a new blank record in the CRM Interface.

Figure 67 Cisco CRM Communications Connector Client Window: Select a New Record



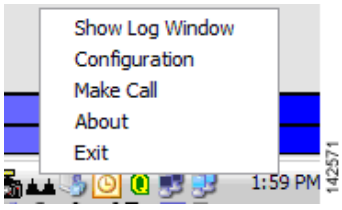
The client maintains an icon in the tray. The following are the two possible icons:

Indicates that the client has successfully contacted and logged in.

Indicates that the client either could not contact the C4 server or could not log in.

Left-clicking this icon hides/displays the main client window. Right-clicking the icon displays the menu as shown in Figure 68.

Figure 68 Hiding and Displaying the Main Client Window and Menu



The options are as follows:

- **Show/Hide Log Window**—Is visible only if logging to a window is enabled. Shows or hides the log window.
- **Configuration**—Accesses the client configuration dialog.
- **Make Call**—Manually accesses the Make Call window.

- **About**—Displays client version and support information.
- **Exit**—Exits the client.

Appendix A: Troubleshooting Tips

This appendix provides troubleshooting tips.

- Make sure that you have Microsoft CRM running. You need to be logged in and connected before any of the integration macros can work.
- Make sure that you have the Cisco CCC running. You should see it appear in the Tray on the right side of the Windows Task bar.
- Confirm that events are exactly as described. Misspellings and missing and extra spaces will cause problems.
- (For Cisco IPCC Express only) If you see an error message that states that cadlink.exe is not recognized, perform the following steps:
  - Confirm that cadlink.exe is installed in the proper location.

    Use “Start | Search | for files or folders” on your PC and enter cadlink.exe in the Search for files or folders named: field. The cadlink.exe executable should appear in the C:\Program Files\Cisco Systems\Cisco CRM Communications Connector Client \ CADLink.exe
  - If cadlink.exe is installed in a different location, copy the file to the C:\Program Files\Cisco Systems\Cisco CRM Communications Connector Client\ folder.

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