

MiCollab Advanced Messaging
Cisco Unified Communications Manager
E1 Q.sig
Integration Technical Note

For version 9.0 and above

Notice

The information contained in this document is believed to be accurate in all respects but is not warranted by Mitel Networks™ Corporation (MITEL®). Mitel makes no warranty of any kind with regards to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The information is subject to change without notice and should not be construed in any way as a commitment by Mitel or any of its affiliates or subsidiaries. Mitel and its affiliates and subsidiaries assume no responsibility for any errors or omissions in this document. Revisions of this document or new editions of it may be issued to incorporate such changes.

No part of this document can be reproduced or transmitted in any form or by any means - electronic or mechanical - for any purpose without written permission from Mitel Networks Corporation.

Trademarks

The trademarks, service marks, logos and graphics (collectively "Trademarks") appearing on Mitel's Internet sites or in its publications are registered and unregistered trademarks of Mitel Networks Corporation (MNC) or its subsidiaries (collectively "Mitel") or others. Use of the Trademarks is prohibited without the express consent from Mitel. Please contact our legal department at legal@mitel.com for additional information. For a list of the worldwide Mitel Networks Corporation registered trademarks, please refer to the website: <http://www.mitel.com/trademarks>.

© Copyright 2017, Mitel Networks Corporation

All rights reserved

Contents

Preface	4
References	4
Documentation	4
Documentation Updates	5
Help	5
Document Conventions	6
Features Supported by This Integration	7
Critical Application Considerations	9
Installation Requirements	11
Telephone System Requirements	11
MiCollab AM Requirements	11
Preparing the Telephone System	12
Installing the Interface Card	12
Adding and Configuring the Voice Gateway	12
Configuring the E1 Interface	13
Assigning a Route Pattern to the Gateway	14
Defining the Pilot Number	15
Configuring the Voice Mail Profile for MiCollab AM	15
Programming Subscriber Extensions for Voice Mail	16
Configuring Path Replacement	16
Installing the Aculab and Dialogic Software Support Components	18
About Aculab Cards	19
Installing the Aculab PCI Digital Access Card	19
Installing the Aculab Prosody X PCI Express Card	19
Adding the Aculab Card to MiCollab AM	19
Configuring MiCollab AM	20
Configuring MiCollab AM for the Integration During Initial Installation	20
Configuring Existing MiCollab AM for the Integration	21
Adding the Aculab PCI and Dialogic Linecards to the Boards Tab	22
Adding the Aculab Prosody X PCI or PCIe Linecards to the Boards Tab	23

Preface

This Integration Technical Note (ITN) is for dealers who are experienced with MiCollab Advanced Messaging (MiCollab AM) and are familiar with its procedures and terminology. It also assumes that you are familiar with the features and programming of Cisco Unified Communications Manager (CallManager) telephone systems.

This document describes how to integrate MiCollab AM with a Cisco Unified Communications Manager telephone system using the E1 Q.sig interface. Critical application considerations are documented, as well as installation and programming procedures necessary to integrate MiCollab AM with the Cisco Unified Communications Manager telephone system, referred to throughout this document as Unified CM.

The E1 Q.sig integration is an outband digital integration. Each E1/PRI (ISDN) physical interface is a single 2.048-MB 32-channel interface that provides up to 30 digital trunks or voice channels. Q.sig is a signaling protocol that enables the interconnection of PBXs and other equipment that support it over a public or private network. In this integration, the telephone system deals with MiCollab AM as another PBX that is connected over a private network.

The E1 Q.sig connection is established at the Call Server platform through an Aculab E1/T1 Digital Network Access card or an Aculab Prosody X E1/T1 telephony linecard. The Aculab card is the interface between the E1 trunk ports on the PBX and the Dialogic media linecards on the Call Server platform. Aculab Prosody X linecards do not require Dialogic linecards as a media interface. The PBX sends calls to MiCollab AM over the E1 Q.sig link; MiCollab AM parses the accompanying calling party and called-party information and answers with the appropriate dialog. End-to-end DTMF, message-waiting indicator (MWI) operation, and callouts are supported features of Q.sig.

Use this document in conjunction with the *System Installation and Configuration Guide*, the *System Administration Guide*, and the MiCollab AM online help system.

References

A catalog of technical documentation is included on the MiCollab AM Installation Media. If you are installing any advanced applications, such as Networking and Fax Server applications, you should refer to the appropriate technical documentation for application and installation information.

Documentation

The technical documentation is produced in the PDF format and requires the PDF reader to view it. The documentation set for this MiCollab AM includes the following documents and resources:

- **Developer Resources.** Contains programming guides and API references for developers for integrating the server clients and web applications with MiCollab AM.
- **Integration Technical Notes (ITN).** Contains a set of guides that describe the integration methods and instructions for a variety of phone systems to work with MiCollab AM. The ITNs are generally used by resellers or administrators who are experienced with MiCollab AM and familiar with the integration procedures and terminology.

- **Quick Reference Card (QRC).** Contains shortcuts and quick instructions telling subscribers how to access and use the messaging system.
- **Server Documentation.** Available as a PDF only. Contains administrative guides for administrators about installing, configuring, and administering the messaging system, and user guides for subscribers about accessing the messaging system and checking and sending messages.
- **Spare Parts Documentation.** Contains a set of guides that describe the instructions for installing and configuring hardware parts to work with MiCollab AM. These documents are written for Mitel certified MiCollab AM technicians who are experienced with MiCollab AM and familiar with the procedures and terminology.
- **Software Release Notice (SRN).** This notice introduces the new features, capabilities, and hardware/software requirements for the corresponding MiCollab AM version.

For more detailed documents, refer to the following list of references:

Table 1. References

Document Type	Document Title
Server Documentation	System Installation and Configuration Guide – <i>Removing Dialogic and Aculab Software Components Chapter</i>
Spare Parts Documentation	Aculab PCI E1/T1 Digital Access Linecard Installation and Replacement
Spare Parts Documentation	Aculab Prosody X PCI Express (PCIe) Linecard Installation and Replacement

Documentation Updates

Documentation updates may be available from the following sources:

- Mitel certified technicians can view or download the latest/updated documents and program files from our partner web site: connect.mitel.com/connect

Help

The primary source of information about MiCollab AM is the online help available within any of its administrative utilities. You can access **Help** as follows:

- Click the **Help** button in the dialog box or window in which you are working
- Press the **F1** key at any time.

Document Conventions

The following conventions are used in this document:

- **Key Names.** Names of keys on the keyboard are shown in a box.

Example: **Enter**

When two keys must be pressed simultaneously, they are joined by a + sign.

Example: **Alt** + **Tab**

- **Reference to Document.** *Italics* fonts can also signify the titles of other documents.

Example: See the *System Installation and Configuration Guide*.

- **UI Element Names.** Names of UI elements such as dialog windows, screens, menu items, tabs, buttons, icons, etc. are shown in bold.

Example: On the **Startup** screen, click the **Start** icon.

- **User Input.** Information required to be typed is shown in italics.

Example: Type the password *voicemail*.

- **Warning, Caution, Important, and Notes.** Text for the contents that require attention are shown as follows:

WARNING A warning paragraph advises you of circumstances that can result in the loss of data, harm to the system server platform, or personal harm.

CAUTION Failure to follow these recommendations can result in unauthorized access to the system and consequent loss of data.

IMPORTANT An important paragraph gives decision-making information or informs you of the order in which tasks need to be completed.

NOTE A note gives additional information, provides an explanation, or indicates an exception to the information in the preceding text.

Features Supported by This Integration

The following tables list the features that the Unified CM Q.sig integration supports.

Table 2. Call forward to personal greeting support for common call types

Divert to MiCollab AM on	Supported
No Answer	Yes
Busy	Yes
Forward All	Yes
Follow Me	Yes
Do Not Disturb	Yes

Table 3. Integration features supported for Cisco Unified CM E1 Q.sig

Feature	Supported	Notes
Automatic subscriber logon	Yes	
ANI/CLI	Yes	
Announce Busy greeting on forwarded calls	Yes	
Call screening	Yes	
Caller queuing	Yes	Note
DNIS/DDI	Yes	
End-to-end DTMF, attendant console	Yes	
End-to-end DTMF, proprietary telephones	Yes	
Fax Tone Detection	Yes	
Internal calling party ID for reply	Yes	
Live record, integrated	No	
Live reply to sender	Yes	
Message notification callouts	Yes	

MWI, set/clear	Yes
MWI, inband/outband	Outband
Networking, analog	Yes
Overflow from MiCollab AM to attendant	Yes
Overflow to MiCollab AM from attendant	Yes
PBX-provided disconnect signaling	Yes
Revert to operator from personal greeting	Yes
Transfers, blind	Yes
Transfers, confirmed	Yes
Transfers, fully supervised	Yes
Transfers, monitored	Yes
Trunk ID for call routing	No

NOTE Caller Queuing is specific to each local Call Server. Call Servers within the system are unaware of queued calls to the same subscriber on other Call Servers. For more information, refer to the [Critical Application Considerations](#) section.

Critical Application Considerations

Known limitations or conditions within the telephone system and MiCollab AM that affect the performance of the integration are listed here. General recommendations are provided when ways to avoid these limitations exist.

- Path replacement is recommended when integrating MiCollab AM with an E1 Q.sig interface. Because the Q.sig interface is an external trunk route, all transfer actions require an additional Q.sig channel to initiate and complete the call. When path replacement is enabled in the PBX, the additional channel releases after the transfer is completed or after a period of time set within the PBX. When path replacement is not used, this second channel is used for the duration of the transferred call.
- The first Aculab PCI E1/T1 card is the master clock on the SCbus; it must be set as the Resolved Primary Master FRU of the Dialogic TDM bus in Dialogic Configuration Manager. For information about configuring the Aculab card, consult the *Aculab E1/T1 PCI Installation and Replacement* spare parts document.
- Aculab cards can be restarted only by restarting the Call Server. This may be required following a loss of synchronization or clock signal with the PBX over the E1 interface. Alternatively, synchronization problems with the Q.sig interface can be corrected at the PBX by blocking traffic to the E1 board, restarting the board, and then unblocking traffic.
- Aculab does not provide BNC connectors on their PCI type boards. These boards are supplied with RJ45 connectors only. An Aculab RJ45 to BNC converter may be used to convert the connection to BNC.
- The MiCollab AM parameter, **Phone Line Default audio format** in the **Integration Specific Parameters** view of this integration applies only to Aculab Prosody X linecards. The parameter has no effect on legacy Aculab PCI Digital Access linecards. To change the A-Law/mu-Law audio format of an Aculab High Capacity Digital Access PCI linecard you must change the value of the media card inside the Dialogic Configuration Manager utility.
- The E1 DS1 interface is a 32-channel interface that supports 30 voice channels. Channels 0 and 16 are used for synchronization and signaling on each E1 interface. Do not program channel 0 or 16 as voice channels. Configuring channel 0 or 16 as a voice channel causes MiCollab AM ports to fail intermittently, i.e., dropped calls or out of service.
- The parameter **Busy telephone line when closed** on the **Lines** tab in the MiCollab AM Configuration utility is not applicable to this integration.
- There is a maximum *rings to wait* value of four rings on a supervised (T type) transfer. MiCollab AM is unable to monitor call progress during a transfer because the digital Q.sig trunk does not provide an audio path until a connection is made to the called party. MiCollab AM assumes a six-second ring cycle during transfer.
- The Call Queuing feature does not transcend the Call Server. Calls may be queued on multiple Call Servers for the same subscriber but Call Servers do not have knowledge of calls in the queue on other Call Servers within the system. Callers may be prompted with specific information about their

place in the queue; however, the information pertains to the specific Call Server on which their call is queued.

Installation Requirements

Review the following information before performing any of the procedures in this document. To install this integration successfully, you must meet the installation requirements for both the telephone system and MiCollab AM.

Telephone System Requirements

- Cisco Unified Communications Manager with system software version 5.1 (1b)
Consult the person or organization maintaining the PBX for software requirements on earlier versions.
- One Cisco E1 Voice/WAN Interface Card, part number VWIC-1MFT-E1 or equivalent, for each E1 span
- One 120-ohm cable with RJ45 connector to provide a high-impedance connection to the Aculab card for each E1 span

MiCollab AM Requirements

- MiCollab AM version 9.0
- MiCollab AM software key diskette or feature file update with the Cisco Unified CM Q.sig integration enabled
- One or more Aculab Prosody X PCI Express single-port, dual-port, or quad-port linecards
Or use
- One or more Aculab PCI Digital Network Interface single-port, dual-port, or quad-port Card cards and one digital Dialogic port for each MiCollab AM voice port to be integrated (Use Dialogic D/160JCT-U or D/320JCT-U media resource cards)

Preparing the Telephone System

Follow the recommendations and programming examples in this section to program Unified CM for integration with MiCollab AM. Programming examples show commands and parameters of Cisco Unified CM version 5.1 that are necessary for integration. They do not represent PBX programming in its entirety.

The installing technician should be familiar with programming the telephone system through Cisco's HTML-based Unified CM Administration utility. For detailed programming information on this software version or other Unified CM versions, refer to the appropriate Cisco documentation.

Installing the Interface Card

The Cisco E1 Voice/WAN Interface Card is an E1 interface that is installed in any voice gateway platform in the Unified CM system. You must install at least one of these cards, or an equivalent interface card, before you begin programming. For information on installing a VWIC in a gateway platform, refer to the documentation accompanying the gateway.

IMPORTANT The programming examples in this section show how to configure the telephone system for a VWIC-1MFT-E1 interface card. If you are installing a different card, you will need to use the appropriate settings and values for that card.

Adding and Configuring the Voice Gateway

After you have installed and configured a voice gateway platform that includes an E1 VWIC, you must add the voice gateway to Unified CM.

To add the gateway:

- 1 Start your Web browser and log on to Cisco Unified CM Administration.
- 2 From the Device menu, select **Gateway**.
- 3 In the Gateway list, select **Add New**.
- 4 From the Gateway Type list, select the appropriate model (**Cisco 2851**, in this example), and then click **Next** to continue.
- 5 From the Protocol list, select **MGCP**, and then click **Next** to continue.
- 6 In the Domain Name field on the Gateway Configuration form, type the domain name used to describe the voice gateway on the network. For example, **2851.mycompany.com**.
- 7 In the Cisco Unified CM Group list, select the appropriate group name for the gateway.
- 8 Under Configured Slots, VICs, and Endpoints, set the Module for the slot containing the E1 VWIC to **NM-HDV**, and then click **Save**.

- 9 In the Subunit list that appears under the Module list, select **VWIC 1MFT E1**.
- 10 Click **Save**.
- 11 **Reset** the gateway to apply changes.

Configuring the E1 Interface

After you have added the gateway that contains the E1 VWIC, you must configure the VWIC so that Unified CM recognizes its ports as E1 PRI ports operating under the Q.sig protocol.

To configure the E1 interface:

- 1 In the Gateway Configuration form, click the endpoint identifier that appears next to the subunit definition for the VWIC. This identifier usually takes the form n/0, where n represents the number of the slot where the VWIC is installed.
- 2 Configure the required settings listed in the following table. For all other settings, use either the defaults or the values that your site requires.

Table 4. E1 Interface Configuration

Setting	Value
Device Information	
Device Pool	Name of the pool to which the E1 span should belong
Call Classification	OnNet (may vary for some installations)
Network Locale	Country where the telephone system is located.
Interface Information	
PRI Protocol Type	PRI ISO Q.sig E1
Protocol Side	Network
Channel Selection Order	Top Down
Channel IE Type	Timeslot Number
PCM Type	μ-Law or A-law (See Critical Application Considerations in this document.)
Call Routing Information—Outbound Calls	
Called Party IE Number Type Unknown	National (recommended)
Calling Party IE Number Type Unknown	National (recommended)

Called Numbering Plan	Private (recommended)
Calling Numbering Plan	Private (recommended)
Product Specific Configuration	
Clock	Internal

- 3 Click **Save** and then **Reset** the gateway to apply the changes.

Assigning a Route Pattern to the Gateway

After you have configured the gateway, you must assign it a route pattern that defines how Unified CM routes calls to it. As part of this process, you assign this pattern a number that functions as the pilot number that MiCollab AM will use in the integration.

IMPORTANT Make a note of the route pattern number that you assign in this procedure. You need to reference it later in programming.

To assign a route pattern to the gateway:

- 1 On the Call Routing menu, point to **Route/Hunt**, and then click **Route Pattern**.
- 2 Click **Add New**.
- 3 In the Route Pattern Configuration form, configure the required settings listed in the following table. Leave all other settings at their default values.

Table 5. Route Pattern Assignment

Setting	Value
Route Pattern	Number string that will be used as the pilot number for the integration
Description	An informative phrase such as MiCollab AM Q.sig Integration Pilot Number
Numbering Plan	The appropriate plan for the country where the telephone system is installed
Gateway/Route List	Endpoint identifier describing the E1 VWIC
Route Option	Route this pattern
Call Classification	OnNet
Provide Outside Dial Tone	Not Selected

- 4 Click **Save**.

Defining the Pilot Number

Now that the route pattern number is defined, you must define it as the voice mail pilot number that subscribers use to call MiCollab AM.

To define the pilot number:

- 1 On the Voice Mail menu, click **Voice Mail Pilot**.
- 2 On the Find and List Voice Mail Pilots form, click **Add New**.
- 3 In the Voice Mail Pilot Number field on the Voice Mail Pilot Configuration form, type the number you assigned to the route pattern in the previous procedure.
- 4 In the Description field, type an informative phrase such as Q.sig MiCollab AM Integration.
- 5 If your site requires a specific Calling Search Space definition, select it from the Calling Search Space list. Otherwise, select **<None>**.
- 6 Save your changes by clicking **Save**.

Configuring the Voice Mail Profile for MiCollab AM

Configure Unified CM to use the MiCollab AM pilot number for voice message retrieval from subscriber telephones by configuring the voice mail profile for the pilot number.

To configure the voice mail profile:

- 1 In the Voice Mail menu, click **Voice Mail Profile**.
- 2 On the Find and List Voice Mail Profiles form, click **Add New**.
- 3 In the Voice Mail Profile Name field on the Voice Mail Profile Configuration form, type a name such as Q.sig.
- 4 In the Description field, type an informative phrase such as Q.sig MiCollab AM Integration.
- 5 From the Voice Mail Pilot list, select the pilot number you defined and configured in the two previous procedures.
- 6 (Optional) In the Voice Mail Box Mask field, type the mask you want to apply to subscriber directory numbers to create voice mailbox numbers. Use Xs to represent the digits in the directory numbers, and type other characters to represent the constant digits added to the directory numbers.
For example:
A mask of 5XXXX specifies that all voice mailbox numbers start with a 5, followed by the digits of the associated directory numbers.
- 7 Select **Make this the default Voice Mail Profile for the system**, and then click **Save**.

Programming Subscriber Extensions for Voice Mail

Subscriber extensions must be set to return unanswered calls to Unified CM so that it can pass them to MiCollab AM. The following procedure describes how to configure the extensions.

To program subscriber extensions for voice mail:

- 1 In Cisco Unified CM Administration, select **Device**, and then **Phone**.
- 2 Select the telephone and click **Line 1** to reach the Directory Number Configuration page.
- 3 In the Voice Mail Profile list, select the profile you created in the previous procedure.
- 4 For the Forward Busy Internal, Forward Busy External, Forward No Answer Internal, and Forward No Answer External call forward and pickup settings, select **Voice Mail**.
- 5 Click **Save**, and then reset the telephone for this change to become effective.

Configuring Path Replacement

In the course of a typical incoming call to MiCollab AM, the MiCollab AM server can transfer or forward the call several times. These actions can require that multiple connections remain active during the call. Removing the redundant connections reduces the load that each call imposes on the telephone system and therefore improves overall system performance. You can ensure this performance improvement by configuring the path replacement feature.

To configure path replacement:

- 1 On the System menu, click **Service Parameters**.
- 2 From the Server list on the Service Parameters Configuration form, select the IP address of the Unified CM platform.
- 3 From the Service list, select **Cisco Unified CM**.

NOTE In the following step, use your browser's text search tool to find the Cluster wide Parameters (Feature – Path Replacement) section heading.

- 4 In the Cluster wide Parameters (Feature – Path Replacement) section, select **True** from the Path Replacement Enabled list.
- 5 Verify that the default value of True appears in the Path Replacement on the Tromboned Calls list. If not, select **True** from the list.
- 6 Verify that an appropriate number of seconds, such as 5, appears in the Start Path Replacement Minimum Delay Time field. If a different value appears in this field, change it as needed.
- 7 Verify that an appropriate number of seconds, such as 15, appears in the Start Path Replacement Maximum Delay Time field. If a different value appears in this field, change it as needed.
- 8 Configure the Path Replacement PINX ID field depending on the number of switches in the telephone system.

If the system contains:	Then:
Only one switch	Leave the field blank.
More than one switch	Type the directory number of an empty call pickup group in the field. This call pickup group represents the Unified CM cluster for call replacement purposes.

- 9 Click **Save**.

Installing the Aculab and Dialogic Software Support Components

The Aculab and Dialogic software support components are installed in conjunction with the MiCollab AM Server software when you select the components as part of the installation package.

If you have previously installed MiCollab AM software, you must re-install it to install the Aculab and Dialogic software support components. Be sure to exit any running Windows programs before starting the Setup program.

IMPORTANT If this is an existing MiCollab AM system with a previous version of Dialogic or Aculab software installed, you must remove it and any Dialogic point release software before you install MiCollab AM Server software and the Dialogic and Aculab Software Support Components on the Call Server platform.

If the MiCollab AM InstallShield Wizard detects an existing version of Dialogic software during the setup process, the installation is aborted and a message displays to un-install all Dialogic software first.

For more information on removing previous versions of Dialogic software, refer to the online help or the *Removing, Installing Dialogic and Aculab Software Support Components* system installation manual.

About Aculab Cards

MiCollab AM supports several types of Aculab linecards. This section briefly describes the three types.

Installing the Aculab PCI Digital Access Card

The Aculab PCI E1/T1 Digital Access card provides the network CAS interface between the PBX E1 or T1 network card and MiCollab AM. The Aculab PCI Digital Access card interfaces to MiCollab AM through an H.100 bus connected to one or more Dialogic cards that supply the media component for each MiCollab AM line. A single-port E1 Aculab card supports 30 voice channels, a dual-port E1 Aculab card supports 60 voice channels, and a quad-port E1 Aculab card supports 120 voice channels.

For detailed instructions on the installation of the Aculab card, refer to the *Aculab E1 PCI Installation and Replacement* spare parts document.

Installing the Aculab Prosody X PCI Express Card

The Aculab Prosody X PCI Express E1/T1 linecard is a full media TDM telephony linecard with on-board DSP that provides call and signaling control of an E1 or T1 telephony interface. The Prosody X PCI Express E1/T1 linecard integrates MiCollab AM with a telephone system using the CAS or the Q.SIG signaling protocols. An Aculab Prosody X PCI Express linecard supports 1-4 ports, 30 voice channels per port. The Aculab Prosody X card has an H.100 (CTbus) connector that cables to the H.100 connector of any other telephony linecard in the system with an H.100 ribbon cable.

For detailed instructions on the installation of the Aculab Prosody X PCI Express linecard, refer to the *Aculab Prosody X PCIe Installation and Replacement* spare parts document.

Adding the Aculab Card to MiCollab AM

The Aculab Digital Network Access linecard and the Aculab Prosody X PCI Express linecard must be configured in MiCollab AM before they can be used in the Call Server. The cards are configured quite differently—each card type requires a unique set of steps to configure and add it to MiCollab AM. Refer to the spare parts document for the type of Aculab card you are installing.

Configuring MiCollab AM

Once the telephone system is programmed, you must configure MiCollab AM for the integration. There are two ways you can configure MiCollab AM: (1) Configuring MiCollab AM for the telephone system integration when you are installing MiCollab AM for the first time, or (2) Configuring the existing MiCollab AM with the new telephone system integration.

Click the appropriate steps that your system requires from below and follow the steps:

- [Configuring MiCollab AM for the Integration During Initial Installation](#): Integrate the telephone system while you install MiCollab AM for the first time.
- [Configuring Existing MiCollab AM for the Integration](#): Integrate a new telephone system on your existing MiCollab AM system.

NOTE For general information on integrations, refer to the **Integrating MiCollab AM with the Telephone System** chapter in the *System Installation and Configuration Guide*, and the topic, **Integrating the Telephony Server with the Telephone System**, in the online help.

Configuring MiCollab AM for the Integration During Initial Installation

To configure MiCollab AM for the integration during the initial installation:

- 1 In the **Database Initialization Parameters** dialog box, configure the following options:
 - a In the **Mailbox Length** box, enter the mailbox length in digits.
 - b In the **First Extension** box, enter first extension number for the first line. You can also leave the **First Extension** box empty.
 - c From the **Manufacturer** dropdown list, select **Cisco**.
 - d From the **Model** dropdown list, select **Unified Communications Manager**.
 - e From the **Integration Type** dropdown list, select **Q-SIG**.
- 2 Click **Next**. The **Board Options** dialog box appears.
- 3 Depending on the type of Aculab card you have installed, configure the board options. Refer to the appropriate Spare Parts document for more information on the Aculab card you are installing.
- 4 Click **OK**. The **Switch Options** dialog box appears.
- 5 If necessary, make any changes to the default settings your site requires in the **Switch Options** dialog box.

NOTE The settings related to the telephone system in the **Switch Options** dialog box are filled in automatically when you select the correct telephone system during setup.

If you need to customize settings on the **Switch Options** dialog box to meet requirements specific to your site, refer to the documentation accompanying the telephone system, the online help, and the *System Installation and Configuration Guide*.

- 6 Click **OK**. The **Integration Options** dialog box appears.
- 7 In the **Integration Options** dialog box, make any changes to the default settings your site requires, if necessary.
- 8 Click **OK**. The **Switch Section Options** dialog box appears.
- 9 In the **Switch Section Options** dialog box, configure the following options:
 - a In the **Local Integration Settings** section, select the **Required Parameters** view.
 - b For the **Incoming Hunt Mode** value, select the mode for this integration.
 - c In the **Hunt Group Access Code** field, enter the hunt group access code you configured previously in the section, [Assigning a Route Pattern to the Gateway](#). This is the pilot number or destination code that users dial to reach MiCollab AM.
 - d Click **OK**.
- 10 Continue through and complete the configuration. At the end of the configuration, a confirmation dialog box appears. Click **OK**.
- 11 If **MiCollab AM Configuration** does not open automatically after the configuration completes, open **MiCollab AM Configuration**, and select the **Lines** tab.
- 12 In the table from the **Lines** tab, configure callouts for the application. For information on configuring callout settings, see the topic *Configuring Callout Settings*, in the online help system.
- 13 Click **OK** to save all changes.

Configuring Existing MiCollab AM for the Integration

To configure exiting MiCollab AM for the telephone integration:

- 1 Open **MiCollab AM Configuration**, and go to the **Main** tab.
- 2 In the **Main** tab, click **Shutdown** to stop the system. Wait until the **Current Status** shows **Stopped**.

NOTE If you have not configured the virtual board with your MiCollab AM system yet, complete **Step 3**. If your MiCollab AM already has the virtual board configured, skip to **Step 4**.

- 3 **[Optional]** Select the **Boards** tab, and then click the **Add** button. The **Board Options** dialog box appears.
 - a Depending on the type of Aculab card you have installed, configure the board options. Refer to the appropriate *Spare Parts document* for more information on the Aculab card you are installing.
 - b Click **OK**.
- 4 Select the **Switches** tab, and click the **Add** button. The **Switch Integration Data Setup** dialog box appears.

- a From the **Manufacturer** dropdown list, select **Cisco**.
 - b From the **Model** dropdown list, select **Unified Communications Manager**.
 - c From the **Integration Type** dropdown list, select **Q-SIG**.
- 5 Click **OK**. The **Switch Options** dialog box appears.
- 6 If necessary, make any changes to the default settings your site requires in the **Switch Options** dialog box.

NOTE The settings related to the telephone system in the **Switch Options** dialog box are filled in automatically when you select the correct telephone system during setup.

If you need to customize settings on the **Switch Options** dialog box to meet requirements specific to your site, refer to the documentation accompanying the telephone system, the online help, and the *System Installation and Configuration Guide*.

- 7 Click **OK**. The **Integration Options** dialog box appears.
- 8 In the **Integration Options** dialog box, make any changes to the default settings your site requires, if necessary.
- 9 Click **OK**. The **Switch Section Options** dialog box appears.
- 10 In the **Switch Section Options** dialog box, configure the following options:
 - a In the **Local Integration Settings** section, select the **Required Parameters** view.
 - b For the **Incoming Hunt Mode** value, select the mode for this integration.
 - c In the **Hunt Group Access Code** field, enter the hunt group access code you configured previously in the section, [Assigning a Route Pattern to the Gateway](#). This is the pilot number or destination code that users dial to reach MiCollab AM.
 - d Click **OK**.
- 11 In **MiCollab AM Configuration**, verify that the telephone system is properly added and configured in the **Switches**, **Switch Sections**, and **Integrations** tabs.
- 12 Select the **Lines** tab.
- 13 In the table from the **Lines** tab, configure callouts for the application. For information on configuring callout settings, see the topic *Configuring Callout Settings*, in the online help system.
- 14 Click **OK** to save all changes.

Adding the Aculab PCI and Dialogic Linecards to the Boards Tab

The first Aculab PCI telephony interface linecard is the clock source for all Dialogic cards installed in the Call Server, so all of the Aculab and Dialogic cards installed in the system are connected to the same H.100 bus. Before you can start the Dialogic service, the Aculab card must be installed, configured, and running in the system. Once the Aculab software is installed the Aculab card is automatically configured in the Call Server. You must configure the correct integration in the **Integrations** tab and run the Auto Detect wizard in the **Boards** tab of the MiCollab AM Configuration utility.

To Auto-Detect the Aculab PCI and Dialogic linecards in the Boards tab:

- 1 Click the **Boards** tab, and then click the **Auto Detect** button.
- 2 The Auto-Detect wizard starts, and then finds each Aculab and Dialogic linecard that is installed.
- 3 The wizard prompts you to select the type of interface. Click **Yes** if you are connecting to a T1 interface. Click **No** if you are connecting to an E1 interface.
- 4 The system adds any new boards not previously found and automatically configures the Aculab card in the Dialogic Configuration Manager with the correct settings.
- 5 Click **OK** when you are finished.

Adding the Aculab Prosody X PCI or PCIe Linecards to the Boards Tab

Once the Prosody X linecard has been successfully configured in the Aculab Configuration Tool and the linecard displays on the ACT Prosody X Page as In Service, and also displays in the Card List, you can add it to the MiCollab AM **Boards** tab using the Auto-Detect wizard.

To Auto-Detect the Prosody X PCI linecard:

- 1 Click the **Boards** tab, and then click the **Auto Detect** button.
- 2 The Auto-Detect wizard starts, and then finds each Prosody X linecard that is installed, and In Service.
- 3 The wizard prompts you to select the type of interface. Click **Yes** if you are connecting to a T1 interface. Click **No** if you are connecting to an E1 interface.
- 4 The Prosody X PCI or PCIe linecards are added to the Boards list. If there are other boards previously assigned, the Prosody X cards are assigned line numbers based on existing boards in the system.
- 5 In the Integration Specific Parameters view of the **Integration Options** dialog box, select the **Phone Line Default audio format**; ALaw or MuLaw. Select the format used on the PBX. The default setting is ALaw.

NOTE This parameter has no effect when using an Aculab PCI E1/T1 card.

- 6 Click **OK** when you are finished.

The settings related to the telephone system in the Switch Options dialog box are filled in correctly when you select the correct telephone system during setup. You may need to customize other settings in the **Switch Sections** and **Integration Options** dialog boxes to suit the requirements of each application. See the *System Installation and Configuration Guide* or the online help system for more details about setting these parameters.