

MiCollab Advanced Messaging 9.4
Avaya Communication Server 1000
E1/T1 Q.Sig
Integration Technical Notes

For version 9.4 and above

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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 Avaya CS 1000 telephone systems.

This document describes how to integrate MiCollab AM with a Avaya CS 1000 telephone system using an E1 or T1 Q.sig interface. Critical application considerations are documented, as are installation and programming procedures necessary to integrate MiCollab AM with the telephone system.

The Q.sig integration is an outband digital integration. Each E1 or T1 PRI (ISDN) physical interface is a single high-speed digital link subdivided into channels. Table 1 shows the normal data rate for each type of interface in millions of bits per second (Mbps), the total number of channels available for each, and the number of those channels that can be used as digital trunks or voice channels.

Table 1. Bit rates and capacity for E1 and T1 interfaces

Interface Type	Data Rate	Total channels	Digital Trunks or Voice Channels
E1	2.048 Mbps	32	30
T1	1.544 Mbps	24	23

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. End-to-end DTMF, message-waiting indicator (MWI) operation, and callouts are supported features of Q.sig.

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.

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 MiCollab AM Documentation Library includes the following documents and resources:

- **Administration Documentation.** Available as a PDF only. Contains the following:
 - **Administration Guides.** Available as a PDF only. Contains administrative guides for administrators about how to manage and configure the messaging system.
 - **Quick Reference Cards (QRC).** Contains shortcuts and quick instructions telling subscribers how to access and use the messaging system.
 - **User Guides.** Available as a PDF only. Contains user guides for subscribers about accessing the messaging system and checking and sending messages.
- **Server Documentation.** Available as a PDF only. Contains the following:
 - **Developer Resources.** Contains programming guides and API references for developers for integrating the server clients and web applications with MiCollab AM.
 - **Installation and Configuration.** Available as a PDF only. Contains installation and configuration guides for server administrators about how to install and configure the messaging system.
 - **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.
 - **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.

Documentation Updates

Documentation updates may be available from the following sources:

- Mitel-certified technicians can view or download documents and program files from our partner web site: www.mitel.com

Help

The primary source of information about MiCollab AM is the online help available within any of its administrative utilities. You can access **Help** by clicking the **Help** button in the dialog box or window in which you are working.

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** Titles of other documents are shown in italics.

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

- **User Interface (UI) Element Names.** Names of UI elements such as dialog boxes, windows, screens, menu items, tabs, buttons, and icons 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 MiCollab AM 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.

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

Table 2. References

Document Type	Document Title
Administration Documentation	<i>System Administration Guide</i>

Server Documentation	<i>System Installation and Configuration Guide</i>
Server Documentation	<i>Dialogic and Aculab System Administrator Guide</i>
Spare Parts Documentation	<i>Aculab PCI E1/T1 Digital Access Linecard Installation and Replacement</i>
Spare Parts Documentation	<i>Aculab Prosody X PCI Express (PCIe) Linecard Installation and Replacement</i>
Online help	MiCollab AM online help system

Features Supported by this Integration

The following tables list the features supported using the CS 1000 E1 or T1 Q.sig integration.

Table 3. Call forward to personal greeting for these call types

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

Table 4. Integration features supported for Avaya CS 1000 E1 or T1 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 [Critical Application Considerations](#).

Critical Application Considerations

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

- Path replacement is recommended when integrating MiCollab AM with a 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 will release 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 or T1 interface. Alternatively, synchronization problems with the Q.sig interface can be corrected at the PBX by blocking traffic to the E1 or T1 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 interface (IFC) settings for the D channel and route associated with each E1 or T1 span must be set correctly for MWI operations and call diversions to work. The correct value for these settings is ISGF (ISIG integer-based interface, GF platform).

IMPORTANT If you do not configure these settings correctly the first time, you must delete all existing configuration data related to the integration, and then start over to correct the settings.

- 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 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 parameter, **Busy telephone line when closed** on the **Lines** tab of 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

- Avaya Communication Server 1000 release 7.6 or prior
 - Consult the PBX maintainer for software requirements on previous versions.
- North America Premium Network Services L3B feature set, including the following specific feature packages:
 - Feature Package 316 (Q.sig Supplementary Service)
 - Feature Package 305 (Q.sig General Functional Protocol)
 - Feature Package 263 (Q.sig Interface)
 - Feature Package 202 (International Primary Rate Access)
 - Feature Package 167 (International Gateway)
 - Feature Package 161 (International ISDN Supplementary Features)
 - Feature Package 154 (2.0 Mbit Primary Rate Interface)
 - Feature Package 145 (Integrated Services Digital Network)
 - Feature Package 129 (2.0 Mbit Digital Trunk Interface)
 - Feature Package 75 (Digital Trunk Interface)
 - Feature Package 19 (Digit Display)
- One Universal Digital Trunk Card E1/T1 (NTDW79ABE5, Release 1) or one 1.5 Mbit T1 TMDI interface card (part no. NTRB21AC, Release 2)
- One 120-Ohm cable with RJ45 connector for each E1 or T1 span involved in the integration

MiCollab AM Requirements

- MiCollab AM version 9.4
- MiCollab AM software key diskette or feature file with the Avaya CS 1000 Q.sig integration enabled
- One or more Aculab Prosody X PCI Express single-port, dual-port, or quad-port linecards

Programming the Telephone System

Follow the recommendations and programming examples in this section to program the telephone system for integration with MiCollab AM.

The programming examples in this document show only those prompts and responses that are necessary for this integration. They do not represent telephone system programming in its entirety; the installing technician is expected to be familiar with general system programming requirements and the needs of each specific site. For detailed programming information on this Avaya software version or others, refer to the appropriate Avaya documentation.

Installing the Interface Card

An authorized PBX engineer must install the E1 or T1 interface card into the telephone system. If you do not have such an engineer in your organization, contact your Avaya dealer to have the card installed.

After the card is installed, use the change request (REQ CHG) within overlay module 17 (LD 17) to configure the port settings on the card and the data formatting settings in the E1 or T1 span as shown in the following table.

Table 5. Interface Card Installation

Prompt	E1 Responses	T1 Responses	Comments
TYPE	CEQU	CEQU	Common equipment configuration
DLOP		02	Loop number (T1 only)
MODE		PRI	Operating mode set to ISDN PRI (T1 only)
PRI2	01		Loop number (E1 only)

After you have entered these settings, the telephone system displays the status of the newly configured loop on the console. The following example shows the text displayed for a laboratory test system that includes one E1 span (PRI2, loop 01) and one T1 span (PRI, loop 02).

```
DLOP  NUM DCH FRM TMDI LCMT YALM T1TE TRSH
PRI    2  23 ESF  ES  B8S  FDL   0  00
PRI2   01
```

Configuring the D Channel

To begin configuring the D channel on the E1 or T1 card in your telephone system, use the change request (REQ CHG) within overlay module 17 (LD 17). In this module, type the prompt responses shown in the following table.

IMPORTANT You must configure the IFC setting as shown. If this setting is saved with an incorrect value, you must delete all configuration information in the telephone system that relates to this integration and start over. Note also that the remote capabilities string (RCAP), the PR_TRIGS setting, and the OVLRL setting must be configured as shown to support path replacement, overlap receiving, and MWI.

NOTE If an E1 span and a T1 span are both installed, the CARD and DCHL prompts must have a response of 2.

Table 6. D Channel Configuration

Prompt	E1 Responses	T1 Responses	Comments
ADAN	NEW DCH 5	NEW DCH 6	
CTYP	MSDL	TMDI	Card type
CARD	1	1	Card number
PORT	1	1	Port number
DES	EURO_PRI	US_PRI	Descriptive designator
USR	PRI	PRI	Primary Rate Interface user
DCHL	1	1	Loop number assigned on the telephone system
IFC	ISGF	ISGF	Interface type ISIG, GF platform
SIDE	NET	NET	Channel on the network side of the system
RCAP	COLP NDI PRI DV1I CTI QMWI	COLP NDI PRI DV1I CTI QMWI	Remote capabilities support path replacement and MWI

PR_TRIGS	CTR1 2 1	CTR1 2 1	Call transfers allowed to trigger path replacement
OVLR	YES	YES	Overlap receiving on; callouts enabled

Configuring the Route

Within overlay module 16 (LD 16), use the new entry request (REQ NEW) and type in the prompt responses shown in the following table to define a tie-line route between the telephone system and MiCollab AM.

IMPORTANT You must configure the IFC setting as shown. If this setting is saved with an incorrect value, you must delete all configuration information in the telephone system that relates to this integration and start over. The search mode you select (SRCH) must match the incoming hunt mode selected in MiCollab AM for the switch section that serves this integration. Linear search (LIN), the default, corresponds to terminal hunting in MiCollab AM; round-robin search (RRB) corresponds to reverse circular hunting.

Table 7. Route Configuration

Prompt	E1 Responses	T1 Responses	Comments
TYPE	RDB	RDB	
CUST	0	0	
ROUT	5	6	
DES	EURO_PRI	US_PRI	Descriptive designator
TKTP	TIE	TIE	Trunks defined as tie lines
DTRK	YES	YES	Digital trunk route
DGTP	PRI2	PRI	ISDN PRI protocol: 30B+D for E1, 23B+D for T1
ISDN	YES	YES	
MODE	PRA	PRA	ISDN Primary Rate access

IFC	ISGF	ISGF	ISIG interface, GF platform
PNI	00001	00001	Private network identifier (you may change this according to your site's requirements)
ICOG	IAO	IAO	Incoming and outgoing calls
SRCH	LIN or RRB	LIN or RRB	Line search mode
TRMB	NO	NO	Tromboning deactivated
ACOD	7001	7002	Access code (you may change this according to your site's requirements)

Configuring E1 or T1 Channels as Trunks

Within overlay module 14 (LD 14), configure the voice channels available in each E1 or T1 span as tie trunks. You can configure these trunks in a batch by entering a new entry request with the total number of voice channels in the span as an argument (REQ NEW 30 for E1 spans, REQ NEW 23 for T1 spans).

While entering configuration settings for the trunks, be sure to use the values in the following table for the settings listed there. Configure the remaining settings as your site requires them.

Table 8. E1 or T1 Channels Configuration

Prompt	E1 Responses	T1 Responses	Comments
TYPE	TIE	TIE	Trunks defined as tie lines
TN	1 1	2 1	
DES	EURO_PRI	US_PRI	Descriptive designator
CUST	0	0	
RTMB	5 1	6 1	Members of route previously defined

CLS	UNR DTN	UNR DTN	Unrestricted and Digitone enabled (you may configure the other settings in the class of service as your site requires)
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Creating a Route List Index

Within overlay module 86 (LD 86), create a new route list index (REQ NEW) and use the settings in the following table to configure it as a resource for the route you created earlier in this document.

Table 9. Route List Index

Prompt	E1 Responses	T1 Responses	Comments
CUST	0	0	
FEAT	RLB	RLB	
RLI	5	6	List index for route previously defined
ENTR	0	0	
ROUT	5	6	Route previously defined
ISSET	1	1	

Assigning a Steering Code

Configure a steering code that MiCollab AM can invoke as part of a hunt pilot number. When MiCollab AM invokes the pilot number, the telephone system passes the associated call to the route list index. The index specifies the route defined earlier in this document, which locates and assigns an available E1 or T1 channel.

NOTE If the steering code contains fewer digits than a typical extension number, the telephone system accepts any extension number starting with the steering code digits as a hunt pilot number. In the example shown in this section, any extension number from 4400 through 4499 would work as a pilot number for the integration.

To create the steering code, use the new entry request (REQ NEW) within overlay module 87 (LD 87). Configure the settings in the following table with the values shown in the table; you may configure other settings in the module as your site requires.

Table 10. Steering Code Assignment

Prompt	E1 Responses	T1 Responses	Comments
CUST	0	0	
FEAT	CDP	CDP	
TYPE	DSC	DSC	Distant steering code
DSC	43	44	Digits assigned to steering code
RLI	5	6	Route list index associated with steering code

Programming Network Data for the Customer Data Block

Within overlay module 15 (LD 15), use the change request (REQ CHG) to specify network data for the Customer Data Block (CDB). Configure the settings shown in the following table with values appropriate to your site. (The values shown in the table are examples only.)

Table 11. Network Data Programming

Prompt	E1 Responses	T1 Responses	Comments
TYPE	NET_DATA	NET_DATA	
CUST	0	0	
ISDN	YES	YES	
PNI	1	1	Private network identifier (you may change this according to your site's requirements)
PINX_DN	2223	2223	

Programming Subscriber Extensions for Voice Mail

Program all of the subscriber telephones to forward to MiCollab AM on busy and Ring-No-Answer (RNA) conditions. For the FDN and HUNT settings, specify the pilot number previously configured.

To configure the class of service (CLS)...

- Include FNA and MWA for all subscribers.
- If you use blind transfers, activate HTA. However, if you use monitored or T-type (supervised) transfers, deactivate HTA.
- To allow All Call Forward for a subscriber's extension, include CFXA in that subscriber's class of service.
- Optionally, you can assign a programmable key to retrieve messages through the MWK response to the KEY prompt. On I2004 sets, key 16 is often used for this purpose.

To program subscriber extensions, use the change request (REQ CHG) within overlay module 11 (LD 11). The following table lists the settings that must be configured to support this integration, with example settings for a typical site.

Table 12. Subscriber extensions

Prompt	Responses	Comments
TYPE	I2004	Station set type defined as I2004
TN	77 2	
FDN	4400	Pilot number defined earlier
HUNT	4400	Pilot number defined earlier
CLS	FNA HTA MWA CFXA	Class-of-service settings (see earlier in this section)
KEY	16 MWK 4400	Key 16 configured to retrieve messages at pilot number defined earlier

Allowing MiCollab AM Startup and Shutdown

When MiCollab AM starts up or shuts down, it opens and closes the lines connected to it. It is possible for the telephone system to detect these changes in status as malfunctions and shut down the E1 or T1 span. The system administrator must then reset the span from the telephone system to get the integration running again. To prevent this from happening every time MiCollab AM is shut down or started, use the change request (REQ CHG) within overlay module 73 (LD 73) to deactivate the error counters that the changes in line status would trigger. The following table shows these counters and their appropriate values for this integration.

Table 13. MiCollab AM Startup and Shutdown

Prompt	Responses	Comments
TYPE	DDB	
TRSH	0	
BIPC	0	Bipolar Violation Count Threshold set to zero
LFAC	0	Loss of Frame Alignment Counter set to zero

E1 Spans

Each type of span requires specific programming to allow interruptions in the availability of MiCollab AM. For E1 spans, use the change request (REQ CHG) within overlay module 73 (LD 73) and set error checking as shown in the following table.

IMPORTANT Do not enter this request if you are using T1 spans in your integration.

Table 14. E1 Spans

Prompt	Responses	Comments
TYPE	PRI2	Span type (E1-based ISDN PRI)
FEAT	LPTI	
LOOP	1	Loop number
MFF	CRC	Cyclic Redundancy Check (CRC-4) format
ACRC	YES	Automatic reporting of CRC-4 errors
OOSC	0	Out-of-service counter disabled

T1 Spans

For T1 spans, you only need to respond to a single prompt after entering the change request within overlay module 60 (LD 60) as shown in the following table. Note that the card number shown in the table is provided as an example only; the T1 interface card does not need to be configured as card 2.

IMPORTANT Do not enter this request if you are using E1 spans in your integration.

Table 15. T1 Spans

Prompt	Responses	Comments
DSYL	2	Yellow alarm processing disabled for card 2

NOTE For either E1 or T1 spans, you may optionally use the DROL prompt in overlay module 17 (LD 17) to reset the threshold counters every night.

Completing the CS 1000 Programming

Use the PRT request to verify all of the changes you have made.

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 MiCollab AM online help or *Dialogic and Aculab System Administrator Guide*.

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 **Avaya**.
 - d From the **Model** dropdown list, select **CS 1000**.
 - 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 If necessary, make any changes to the default settings your site requires in the **Integration Options** dialog box.
- 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 In the **Incoming Hunt Mode** field, enter the mode for this integration.
 - c In the **Hunt Group Access Code** field, enter the hunt group extension you configured previously in the section, [Configuring the Route](#). 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 existing 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 **Avaya**.
 - b From the **Model** dropdown list, select **CS 1000**.
 - 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 If necessary, make any changes to the default settings your site requires in the **Integration Options** dialog box.
- 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 In the **Incoming Hunt Mode** field, enter the mode for this integration.
 - c In the **Hunt Group Access Code** field, enter the hunt group extension you configured previously in the section, [Configuring the Route](#). 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 must be connected to the same H.100 bus. Before the Dialogic service can be started, 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 MiCollab AM Configuration.

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.