

**MiCollab Advanced Messaging**  
**Avaya AURA Communication Manager**  
**E1/T1 Q.SIG**  
**Integration Technical Note**

For version 6.1 and above

## Notice

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# Contents

<b>Preface</b>	<b>5</b>
References	6
Documentation	6
Documentation Updates	7
Help	7
Document Conventions	7
Features Supported by This Integration	8
<b>Critical Application Considerations</b>	<b>10</b>
<b>Installation Requirements</b>	<b>12</b>
Telephone System Requirements	12
MiCollab AM Requirements	12
<b>Programming the Telephone System</b>	<b>13</b>
Installing the Interface Card	13
Setting Optional Features	13
Setting System Parameters	15
Creating the Trunk Group	18
Configuring the ISDN Private Numbering Format	23
Defining Routing Patterns	24
Configuring Digit Analysis	24
Defining the Hunt Group	26
Programming Subscriber Extensions for Voice Mail	27
Completing the Telephone System Programming	28
<b>Installing the Aculab and Dialogic Software Support Components</b>	<b>29</b>
<b>About Aculab Cards</b>	<b>30</b>
Installing the Aculab PCI Digital Access Card	30
Installing the Aculab Prosody X PCI Express Card	30
Adding the Aculab Card to MiCollab AM	30
<b>Configuring MiCollab AM</b>	<b>31</b>
Configuring MiCollab AM for the Integration During Initial Installation	31

Configuring Existing MiCollab AM for the Integration	32
Adding the Aculab PCI and Dialogic Linecard to the Boards Tab	34
Adding the Aculab Prosody X PCI Express Linecard to the Boards Tab	34

# Preface

This Integration Technical Note (ITN) is written for technicians 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 Communication Manager or Definity telephone systems.

This document describes how to integrate MiCollab AM with an Avaya Communication Manager or Definity telephone system using an E1 or T1 Q.sig interface. The document covers critical application considerations, as well as the installation and programming procedures necessary to integrate MiCollab AM with the Avaya telephone system.

The Q.sig integration is an outband digital integration. Each E1 or T1 PRI (ISDN) or T1 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 or T1 Q.sig connection is established at the Call Server platform through an Aculab E1/T1 Digital Network Access card or Aculab Prosody X E1/T1 telephony linecard.

The Aculab Digital Network Access card is the interface between the E1 trunk ports on the PBX and the Dialogic media linecards on the MiCollab AM platform. Aculab Prosody X linecards do not require Dialogic linecards as a media interface.

The PBX sends calls to MiCollab AM over the E1/T1 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 *System Installation Guide*, *System Administration Guide* and with 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 2. References

Document Type	Document Title
Server Documentation	System Installation Guide – <i>Removing Dialogic and Aculab Software Components Chapter</i>
Spare Parts Documentation	Dialogic PCI Express and Euro PCI Express Linecards Installation and Replacement
Spare Parts Documentation	Dialogic PCI and Euro PCI Linecards 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](https://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: Refer to *System Installation 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 Avaya Q.sig integration supports.

Table 3. 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	No

Table 4. Integration features supported for Avaya 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 1
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	Inband
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](#) Notes.

# 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 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. This feature must be purchased from Avaya and installed in the telephone system before it can be configured.
- The first Aculab PCI E1/T1 card is the master clock on the H.100 bus; 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 linecards can be restarted only by restarting the Call Server. This may be required following a loss of synchronization or clock with the PBX over the E1/T1 interface. Alternatively, synchronization problems with the Q.sig interface can be corrected at the PBX by blocking traffic to the E1/T1 board, restarting the board, and then unblocking traffic.
- Aculab does not provide BNC connectors on their linecards; they are supplied with RJ45 connectors only. An Aculab RJ45 to BNC converter may be used to convert the connection to BNC.
- 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.
- 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 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 MiCollab AM Configuration is not applicable to this integration.
- 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 Manager version 7.0
- System 75 R1V1 or later; System 85 R2V1 or later; Definity G1, G2, G3i, G3r, G3sDV1 or later, S8800 with G650, G430 or G450 with mm710B
- Path Replacement feature (recommended)
- One Avaya TN464GP DS1/PRI Interface Card for each E1 or T1 span involved in the integration
- 75-Ohm cable with BNC connectors for the low-impedance connection to the Aculab card, or 120-Ohm cable with RJ45 connector for the high-impedance connection to the Aculab card

## MiCollab AM Requirements

- MiCollab AM version 6.1
- MiCollab AM software key diskette or feature file update with the Avaya Definity 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 Avaya PBX for integration with MiCollab AM. Programming examples show only the commands and parameters 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. Perform programming from the Avaya Site Administration program on the Avaya administration terminal. For detailed programming information on the telephone system, refer to the appropriate Avaya documentation.

## Installing the Interface Card

One TN464Gp / TN464HP in G650 or mm710B in G430 / G450 Media Gateways DS1/PRI interface card must be installed in an appropriate card slot of the PBX for each E1 or T1 span involved in the integration. And all spans must be connected to both the PBX and the MiCollab AM platform, before PBX programming can begin.

Before installing each TN464GP card, make sure that its DIP switches are set for the appropriate number of channels to support the signal specifications of the selected interface as shown in the following image.

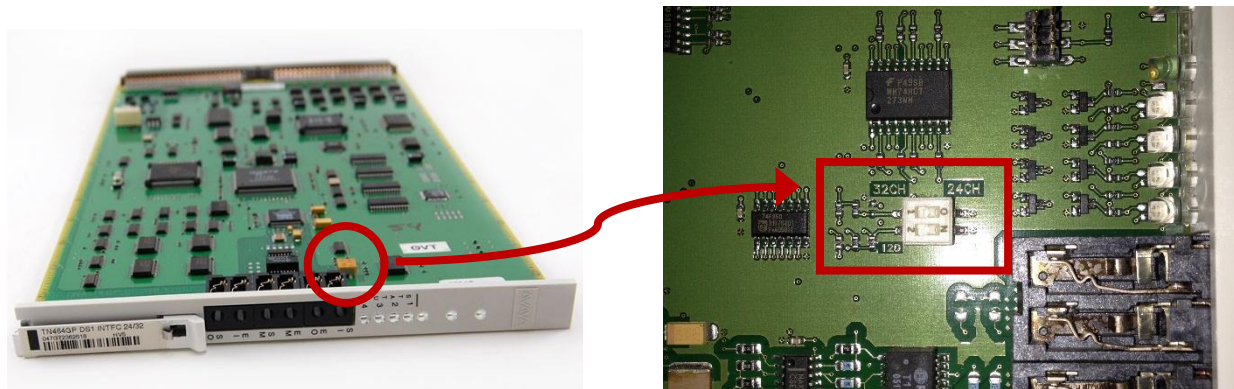


Figure 1. DIP Switch on TN464GP Card

## Setting Optional Features

Configure the customer options that are set on a system-wide level before you begin configuring the trunk or station ports. The following four examples display a typical customer option configuration. In each example, the settings related to this integration are shown in **boldface**.

To edit the customer options discussed in this section, type the command **display system-parameters customer-options** at the administration terminal and proceed to Page 4 of the **Optional Features** screen that appears.

The three **DCS** options are on Page 4. When the **DCS** options are activated, make certain the **DS1 MSP** option is deactivated.

display system-parameters custo	send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)																																		
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## NOTES

1. DCS is only required for networking
2. Cvg of Calls Redirected Off-net (CCRON) must be set to y if you are using *Find Me*.

On Page 5 of the **Optional Features** screen, the **ISDN Feature Plus** and **ISDN-PRI** settings are active as shown in the following example.

display system-parameters custo	send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)																																						
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Continue to Page 6, and then finish configuring the customer options for the system.

display system-parameters custo	send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)																																				
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Proceed to Page 9, titled **Q.sig Optional Features**. Enable the **Basic Call Setup, Basic Supplementary Services, Internetworking with DCS, Supplementary Services with Rerouting, and Transfer into Q.sig Voice Mail** options as shown in this example.

display system-parameters custo	send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)											
1	2	3	4	5	6	7	8	9	10	11	12							
QSIG OPTIONAL FEATURES																		
<table> <tr> <td>Basic Call Setup? y</td> </tr> <tr> <td>Basic Supplementary Services? y</td> </tr> <tr> <td>Centralized Attendant? y</td> </tr> <tr> <td>Interworking with DCS? y</td> </tr> <tr> <td>Supplementary Services with Rerouting? y</td> </tr> <tr> <td>Transfer into QSIG Voice Mail? y</td> </tr> <tr> <td>Value-Added (VALU)? y</td> </tr> </table>												Basic Call Setup? y	Basic Supplementary Services? y	Centralized Attendant? y	Interworking with DCS? y	Supplementary Services with Rerouting? y	Transfer into QSIG Voice Mail? y	Value-Added (VALU)? y
Basic Call Setup? y																		
Basic Supplementary Services? y																		
Centralized Attendant? y																		
Interworking with DCS? y																		
Supplementary Services with Rerouting? y																		
Transfer into QSIG Voice Mail? y																		
Value-Added (VALU)? y																		

**NOTE** Required when using DCS to network Avaya PBXs.

## Setting System Parameters

After you have configured the customer options for the system, you must set the following types of system parameters to support the integration:

- Feature-related parameters
- Parameters related to call coverage and call forwarding
- Feature access codes

To configure feature-related parameters, type the command **change system parameters features**, and then proceed to Page 8 of the **Feature-Related System Parameters** screen. The following illustration is an example of how to set the parameters on this page.

change system-parameters feat		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

**FEATURE-RELATED SYSTEM PARAMETERS**

**ISDN PARAMETERS**

Send Non-ISDN Trunk Group Name as Connected Name?

Display Connected Name/Number for ISDN DCS Calls?

Send ISDN Trunk Group Name on Tandem Calls?

Send Custom Messages Through QSIG?

QSIG/ETSI TSC Extension:

MWI - Number of Digits Per Voice Mail Subscriber:

**PARAMETERS FOR CREATING QSIG SELECTION NUMBERS**

Network Level:

Level 2 Code:

Level 1 Code:

National CPN Prefix:

International CPN Prefix:

Pass Prefixed CPN: ASAI?  UDN/Vector?

Delay for USNI Calling Name for Analog Caller ID Phones (seconds):

Unknown Numbers Considered Internal for AUDIX?

USNI Calling Name for Outgoing Calls?

Path Replacement with Measurements?

QSIG Path Replacement Extension:

Send QSIG Path Replacement Conf. Event to ASAI?

Path Replace While in Queue/Vectoring?

**NOTE** This parameter must match the extension length/mailbox length. For multiple length extensions leave this field blank.

To configure the parameters that deal with call coverage and call forwarding type the command, **change system-parameters coverage-forwarding**. The following are two examples of appropriate settings.

change system-parameters cov		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)
1	2							

**SYSTEM PARAMETERS CALL COVERAGE / CALL FORWARDING**

**CALL COVERAGE/FORWARDING PARAMETERS**

Local Cvg Subsequent Redirection/CFWD No Ans Interval (rings):

Off-Net Cvg Subsequent Redirection/CFWD No Ans Interval (rings):

Coverage - Caller Response Interval (seconds):

Threshold for Blocking Off-Net Redirection of Incoming Trunk Calls:

Location for Covered and Forwarded Calls:

PGN/TN/COR for Covered and Forwarded Calls:

COR/FRL check for Covered and Forwarded Calls?

QSIG/SIP Diverted Calls Follow Diverted to Party's Coverage Path?

**COVERAGE**

Criteria for Logged Off/PSA/TTI Stations?

Keep Held SBA at Coverage Point?

External Coverage Treatment for Transferred Incoming Trunk Calls?

Immediate Redirection on Receipt of PROGRESS Inband Information?

Maintain SBA At Principal?

QSIG VALU Coverage Overrides QSIG Diversion with Rerouting?

Station Hunt Before Coverage?

**FORWARDING**

Call Forward Override?

Coverage After Forwarding?



**NOTE** Maintain SBA at principal set to n ensures privacy. Once the call covers to MiCollab AM, the appearance on the station is removed. This prevents someone from listening to the call as it is recorded by the voice messaging system.

change system-parameters cov	send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)
------------------------------	---------------	-----------	--------------	------------	---------------	-----------	---------------

12

SYSTEM PARAMETERS CALL COVERAGE / CALL FORWARDING  
  
COVERAGE OF CALLS REDIRECTED OFF-NET (CCRON)  
  
Coverage Of Calls Redirected Off-Net Enabled?   
Activate Answer Detection (Preserves SBA) On Final CCRON Cvg Point?   
Ignore Network Answer Supervision?   
Disable call classifier for CCRON over ISDN trunks?   
Disable call classifier for CCRON over SIP trunks?   
  
CHAINED CALL FORWARDING  
Maximum Number Of Call Forwarding Hops:   
Station Coverage Path For Coverage After Forwarding:

**NOTE** Cvg of Calls Redirected Off-Net (CCRON) must be set to y if you are using Find Me.

To configure the feature access codes type the command, **change feature-access-codes**. On the **Feature Access Codes** screen, be sure to define an access code for **Auto Alternate Routing (AAR)**, as shown in the following example.

change feature-access-codes	send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)
-----------------------------	---------------	-----------	--------------	------------	---------------	-----------	---------------

12345678910

FEATURE ACCESS CODE (FAC)  
Abbreviated Dialing List1 Access Code:   
Abbreviated Dialing List2 Access Code:   
Abbreviated Dialing List3 Access Code:   
Abbreviated Dial - Prgm Group List Access Code:   
Announcement Access Code:   
Answer Back Access Code:   
Attendant Access Code:   
Auto Alternate Routing (AAR) Access Code:   
Auto Route Selection (ARS) - Access Code 1:  Access Code 2:   
Automatic Callback Activation:  Deactivation:   
Call Forwarding Activation Busy/DA:  All:  Deactivation:   
Call Forwarding Enhanced Status:  Act:  Deactivation:   
Call Park Access Code:   
Call Pickup Access Code:   
CAS Remote Hold/Answer Hold-Unhold Access Code:   
CDR Account Code Access Code:   
Change CDR Access Code:   
Change Coverage Access Code:   
Conditional Call Extend Activation:  Deactivation:   
Contact Closure Open Code:  Close Code:

## Creating the Trunk Group

Configure one or more trunk groups for the Q.sig channels by performing the following tasks for each E1 or T1 span used in the integration:

- Install the E1 or T1 circuit pack, and then configure it for the appropriate number of channels for the selected interface
- Configure a location on the telephone system for the DS1-level signal of each span
- Create a signaling group definition specifying ISDN PRI signaling on the D (data) channel of each span
- Create trunk groups that map the channels of each span to the appropriate signaling group definition

**IMPORTANT** When numbering channels for the E1 circuit, you must allow for the synchronization and signaling channels 0 and 16. Do not program channels 0 or 16 as voice ports. Configuring channel 0 or 16 as a voice channel causes MiCollab AM ports to fail intermittently, i.e. dropped calls or out of service.

- Create a separate trunk group for the channels used to clear and set MWIs

The following example shows typical DS1 location configuration settings. Type the command, **add ds1 number**, where *number* is the location number that the telephone system should assign to the DS1 signal (01A10 for E1, 01A09 for T1 in these examples).

**IMPORTANT** You must configure the Channel Numbering parameter as **timeslot**.

### E1 example of DS1 circuit pack programming

The screenshot shows a configuration window titled "DS1 CIRCUIT PACK" with a command line at the top containing "add ds1 01A10". The window displays the following configuration parameters:

Location: 01A10	Name: E1 Qsig
Bit Rate: 2.048	Line Coding: hdb3
Signaling Mode: isdn-pri	Interface: peer-master
Connect: pbx	Peer Protocol: Q-SIG
TN-C7 Long Timers?: n	Side: a
Interworking Message: PROGRESS	CRC?: y
Interface Companding: alaw	Channel Numbering: timeslot
Idle Code: 11111111	DCP/Analog Bearer Capability: 3.1kHz
	T303 Timer(sec): 4
	Disable Restarts?: n
Slip Detection?: n	Near-end CSU Type: other
Echo Cancellation?: y	
EC Direction: inward	
EC Configuration: 4	

**IMPORTANT** The **alaw** or **mulaw** format here must match with the Aculab Phone Line audio format.

## T1 example of DS1 circuit pack programming

add ds1 01A09    send (return)    help (f5)    cancel (esc)    enter (f3)    schedule (f9)    next (f7)    previous (f8)

1 | 2

**DS1 CIRCUIT PACK**

Location: 01A09	Name: Qsig T-1
Bit Rate: 1.544	Line Coding: b8zs
Line Compensation: 1	Framing Mode: esf
Signaling Mode: isdn-pri	
Connect: pbx	Interface: peer-master
TN-C7 Long Timers? n	Peer Protocol: Q-SIG
Interworking Message: PROGress	Side: b
Interface Companding: alaw	CRC? n
Idle Code: 11111111	
DCP/Analog Bearer Capability: 3.1kHz	
T303 Timer(sec): 4	
Disable Restarts? n	
Slip Detection? n	Near-end CSU Type: integrated
Echo Cancellation? n	

The following example shows typical signaling group configuration settings for an E1 or T1 span such as the one configured in the previous example. Type the command; **add signaling-group number**, where *number* is the number assigned to the new signaling group (10 for E1, 9 for T1 in this example).

## E1 example of Signaling Group programming

change signaling-group 10    send (return)    help (f5)    cancel (esc)    enter (f3)    schedule (f9)    next (f7)    previous (f8)

1 |

**SIGNALING GROUP**

Group Number: 10	Group Type: isdn-pri	
Associated Signaling? y	Max number of NCA TSC: 10	
Primary D-Channel: 01A1016	Max number of CA TSC: 10	
	Trunk Group for NCA TSC: 3	
Trunk Group for Channel Selection: 3	X-Mobility/Wireless Type: NONE	
TSC Supplementary Service Protocol: b	Network Call Transfer? n	

## T1 example of Signaling Group programming

change signaling-group 9    send (return)    help (f5)    cancel (esc)    enter (f3)    schedule (f9)    next (f7)    previous (f8)

1 |

**SIGNALING GROUP**

Group Number: 9	Group Type: isdn-pri	
Associated Signaling? y	Max number of NCA TSC: 10	
Primary D-Channel: 01A0924	Max number of CA TSC: 10	
	Trunk Group for NCA TSC: 5	
Trunk Group for Channel Selection: 5	X-Mobility/Wireless Type: NONE	
TSC Supplementary Service Protocol: b	Network Call Transfer? n	

**IMPORTANT** The Max number of NCA TSC (Non Carrier Associated Temporary Signaling Channels) should be 1 or higher. This allows a path (1 or more) for MWI to operate

The following examples show typical trunk group configurations. Type the command; **add trunk-group number**, where number is the number assigned to the newly created trunk group (3 in this exmple).

(Page 1)

change trunk-group 3		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)
----------------------	--	---------------	-----------	--------------	------------	---------------	-----------	---------------

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----

**TRUNK GROUP**

Group Number: 3      Group Type: isdn      CDR Reports: y

Group Name: Qsig - E1      COR: 1      TN: 1      TAC: 210

Direction: two-way      Outgoing Display? y      Carrier Medium: PRI/BR1

Dial Access? n      Busy Threshold: 99      Night Service:

Queue Length: 0

Service Type: tie      Auth Code? n      TestCall ITC: rest

Far End Test Line No:

TestCall BCC: 4

(Page 2)

change trunk-group 3		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)
----------------------	--	---------------	-----------	--------------	------------	---------------	-----------	---------------

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----

Group Type: isdn

**TRUNK PARAMETERS**

Codeset to Send Display: 6      Codeset to Send National IEs: 6

Max Message Size to Send: 260      Charge Advice: none

Supplementary Service Protocol: b      Digit Handling (in/out): overlap/enbloc

Digit Treatment:      Digits:

Trunk Hunt: cyclical

Digital Loss Group: 13

Incoming Calling Number - Delete:      Insert:      Format: unk-unk

Bit Rate: 1200      Synchronization: async      Duplex: full

Disconnect Supervision - In? y      Out? n

Answer Supervision Timeout: 0

Administer Timers? n      CONNECT Reliable When Call Leaves ISDN? n

XOIP Treatment: auto      Delay Call Setup When Accessed Via IGAR? n

Caller ID for Service Link Call to H.323 1xC: station-extension

(Page 3)

change trunk-group 3		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)
----------------------	--	---------------	-----------	--------------	------------	---------------	-----------	---------------

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----

**TRUNK FEATURES**

ACA Assignment? n      Measured: none      Wideband Support? n

Internal Alert? n      Maintenance Tests? y

Data Restriction? n      NCA-TSC Trunk Member: 29

Send Name: y      Send Calling Number: y

Hop Dgt? n      Send EMU Visitor CPN? n

Used for DCS? n

Suppress # Outpulsing? n      Format: unk-pvt

Outgoing Channel ID Encoding: exclusive      UUI IE Treatment: service-provider

Image continued on next page

	Replace Restricted Numbers?	<input type="text" value="n"/>
	Replace Unavailable Numbers?	<input type="text" value="n"/>
	Send Connected Number:	<input type="text" value="y"/>
	Hold/Unhold Notifications?	<input type="text" value="y"/>
Send UUI IE?	Modify Tandem Calling Number:	<input type="text" value="no"/>
Send UCID?		
Send Codeset 6/7 LAI IE?		Ds1 Echo Cancellation? <input type="text" value="n"/>
Apply Local Ringback?		
Show ANSWERED BY on Display?		
	Network (Japan) Needs Connect Before Disconnect?	<input type="text" value="n"/>

## NOTES

1. If the numbering format is set to **unk-pvt** then the PBX looks to the **Private-Numbering Table** to build the number. The **Network Level** must not be left blank—in most cases this is set to **0**. (See [Configuring the ISDN Private Numbering Format](#)) or No number will be sent. This is how the PBX builds the called-party number for the integration. If it is set to **unknown**, the PBX looks at the Public-Unknown table where an entry is required to build the number. If there is no entry in this table to build the number, no number is sent.
2. When you set the numbering format to unk-pvt on Page 2 of the trunk group form which is for the MM Trunk Group, you must configure the *private-numbering format Page 1 of 2* so the CM knows how to build the private format number. Do not leave the form blank or the integration will fail.

In the following examples, assign the E1 trunk group 3 to signaling group 10. Assign the T1 trunk group 5 to signaling group 9. Type the command, **change trunk-group number**, where number is the number assigned to the newly created trunk group.

### E1 example of Trunk Group programming (Page 5)

change trunk-group 3		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
TRUNK GROUP																				
										Administered Members (min/max): 1/30										
										Total Administered Members: 30										
GROUP MEMBER ASSIGNMENTS																				
	Port	Code	Sfx	Name	Night	Sig Grp														
1:	01A1001	TN464	H			10														
2:	01A1002	TN464	H			10														
3:	01A1003	TN464	H			10														
4:	01A1004	TN464	H			10														
5:	01A1005	TN464	H			10														
6:	01A1006	TN464	H			10														
7:	01A1007	TN464	H			10														
8:	01A1008	TN464	H			10														
9:	01A1009	TN464	H			10														
10:	01A1010	TN464	H			10														
11:	01A1011	TN464	H			10														
12:	01A1012	TN464	H			10														
13:	01A1013	TN464	H			10														
14:	01A1014	TN464	H			10														
15:	01A1015	TN464	H			10														

## T1 example of Trunk Group programming (Page 5)

change trunk-group 5		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
TRUNK GROUP																					
Administered Members (min/max): 1/23																					
Total Administered Members: 23																					
GROUP MEMBER ASSIGNMENTS																					
	Port	Code	Sfx	Name	Night	Sig	Grp														
1:	01A0901	TN464	G			9															
2:	01A0902	TN464	G			9															
3:	01A0903	TN464	G			9															
4:	01A0904	TN464	G			9															
5:	01A0905	TN464	G			9															
6:	01A0906	TN464	G			9															
7:	01A0907	TN464	G			9															
8:	01A0908	TN464	G			9															
9:	01A0909	TN464	G			9															
10:	01A0910	TN464	G			9															
11:	01A0911	TN464	G			9															
12:	01A0912	TN464	G			9															
13:	01A0913	TN464	G			9															
14:	01A0914	TN464	G			9															
15:	01A0915	TN464	G			9															

The following examples show typical trunk group definition settings for channels involved in clearing and setting MWIs. Type the command, **change trunk-group number**, where number is the number assigned to the trunk group (4 in this example).

(Page 1)

change trunk-group 4		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
TRUNK GROUP																				
Group Number: 4																				
Group Type: isdn																				
CDR Reports: y																				
Group Name: MAS 53400 Qsiq MWI																				
COR: 1																				
TN: 1																				
TAC: 211																				
Direction: two-way																				
Outgoing Display? y																				
Carrier Medium: PRI/BRI																				
Dial Access? y																				
Busy Threshold: 99																				
Night Service:																				
Queue Length: 0																				
Service Type: tie																				
Auth Code? n																				
TestCall ITC: rest																				
Far End Test Line No:																				
TestCall BCC: 4																				

(Page 2)

change trunk-group 4		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Group Type: isdn																				
TRUNK PARAMETERS																				
Codeset to Send Display: 6																				
Codeset to Send National IEs: 6																				
Max Message Size to Send: 260																				
Charge Advice: none																				
Supplementary Service Protocol: b																				
Digit Handling (in/out): overlap/enbloc																				
Digit Treatment:																				
Digits:																				
Trunk Hunt: cyclical																				
Digital Loss Group: 13																				

Image continued on next page

Image continued from previous page

Incoming Calling Number - Delete:  Insert:  Format:   
Bit Rate:  Synchronization:  Duplex:   
Disconnect Supervision - In?  Out?   
Answer Supervision Timeout:   
Administer Timers?  CONNECT Reliable When Call Leaves ISDN?   
XOIP Treatment:  Delay Call Setup When Accessed Via IGAR?   
  
Caller ID for Service Link Call to H.323 1xC:

(Page 3)

change trunk-group 4		send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
TRUNK FEATURES																				
ACA Assignment? <input type="text"/>										Measured: <input type="text"/>					Wideband Support? <input type="text"/>					
										Internal Alert? <input type="text"/>					Maintenance Tests? <input type="text"/>					
										Data Restriction? <input type="text"/>					NCA-TSC Trunk Member: <input type="text"/>					
										Send Name: <input type="text"/>					Send Calling Number: <input type="text"/>					
										Hop Dgt? <input type="text"/>					Send EMU Visitor CPN? <input type="text"/>					
Used for DCS? <input type="text"/>										Format: <input type="text"/>										
Suppress # Outpulsing? <input type="text"/>										Outgoing Channel ID Encoding: <input type="text"/>					UUI IE Treatment: <input type="text"/>					
															Replace Restricted Numbers? <input type="text"/>					
															Replace Unavailable Numbers? <input type="text"/>					
															Send Connected Number: <input type="text"/>					
															Hold/Unhold Notifications? <input type="text"/>					
Send UUI IE? <input type="text"/>										Modify Tandem Calling Number: <input type="text"/>										
Send UCID? <input type="text"/>																				
Send Codeset 6/7 LAI IE? <input type="text"/>															Ds1 Echo Cancellation? <input type="text"/>					
Apply Local Ringback? <input type="text"/>																				
Show ANSWERED BY on Display? <input type="text"/>																				
															Network (Japan) Needs Connect Before Disconnect? <input type="text"/>					

## Configuring the ISDN Private Numbering Format

Before you start configuring settings that affect how dialed numbers pass between the telephone system and the MiCollab AM server, you must configure the ISDN private numbering settings to prevent them from interfering with the number parsing that occurs between the two systems.

Type the command; **display isdn private-numbering**, and then configure the settings on the ISDN Numbering-Private Format screen as shown in the following example.

**NOTE** As of Avaya CM 4.0 and later, Network Levels and Level Codes are in system-parameters features under Parameters for Creating Q.sig Selection Numbers.

## ISDN NUMBERING - PRIVATE FORMAT

Network Level: 0  
 Level 2 Code:  
 Level 1 Code:

PBX Identifier:  
 Deleted Digits: 0

## Defining Routing Patterns

Typically, this integration requires that a single call routing pattern definition for all the trunk groups assigned to voice call traffic in the integration. In the following example, for instance, the routing pattern applies to trunk groups 100 and 102. In these examples, trunk group 101 was the group created for MWI support.

For any incoming call on these trunk groups that routes through this pattern, the pattern removes the first three digits. This reduces the hunt group's fully qualified voice mail number to the extension digits only.

To program the route pattern definition table type the command; **add route-pattern *number***, where *number* is the number assigned to the new routing pattern (10 in this example).

add route-pattern 10    send (return)    help (f5)    cancel (esc)    enter (f3)    schedule (f9)    next (f7)    previous (f8)

1    2    3

Pattern Number: 10    Pattern Name: Qsig E-1

SCCAN? ☐    Secure SIP? ☐    Used for SIP stations? ☐

Grp No	FRL	NPA	Pfx	Hop	Toll	No. Del	Inserted Dgts	DCS/ QSIG	IXC Intw
1:	3	0					3		n user
2:									n user
3:									n user
4:									n user
5:									n user
6:									n user

BCC	VALUE	TSC	CA-TSC	ITC	BCIE	Service/Feature	PARM	Sub	Numbering	LAR		
0	1	2	M	4	W	Request		Dgts	Format			
1:	y	y	y	y	y	n	y	none	bothept			none
2:	y	y	y	y	y	n	n		rest			none
3:	y	y	y	y	y	n	n		rest			none
4:	y	y	y	y	y	n	n		rest			none
5:	y	y	y	y	y	n	n		rest			none
6:	y	y	y	y	y	n	n		rest			none

## Configuring Digit Analysis

Configure AAR digit analysis and routing for the routing pattern you have just created, type the command; **change aar analysis <number>**, where **<number>** is the number assigned to the routing pattern.



In the following example, add an entry for the hunt group's voice mail number, so that calls to that number are modified and routed according to the instructions in the routing pattern.

change aar analysis 2   send (return)   help (f5)   cancel (esc)   enter (f3)   schedule (f9)   next (f7)   previous (f8)

1   2

**AAR DIGIT ANALYSIS TABLE**  
Location: all   Percent Full: 1

Dialed String	Total		Route Pattern	Call Type	Node Num	ANI Req'd
	Min	Max				
2	7	7	999	aar		n
3	7	7	999	aar		n
4	7	7	999	aar		n
4200	4	4	10	lev0		n
4300	4	4	10	lev0		n
4400	4	4	9	aar		n
4500	4	4	45	aar		n
4600	4	4	46	aar		n
4800	4	4	48	aar		n
490	4	4	99	aar		n
5	7	7	999	aar		n
5300	4	4	53	aar		n
5400	4	4	54	aar		n
5500	4	4	27	aar		n
5600	4	4	1	aar		n

Configure Automatic Route Selection (ARS) digit analysis and routing for all calls to the hunt group's voice mail number. Type the command, **change ars analysis <number> location** (where **<number>** is the number assigned to the dialed string) to display, and then edit the ARS Digit Analysis Table.

In the following example, add an entry for the voice mail number to the table as shown. Calls to the voice mail number route to the routing pattern you have defined for the integration.

change ars analysis 4300 locati   send (return)   help (f5)   cancel (esc)   enter (f3)   schedule (f9)   next (f7)   previous (f8)

1   2

**ARS DIGIT ANALYSIS TABLE**  
Location: all   Percent Full: 1

Dialed String	Total		Route Pattern	Call Type	Node Num	ANI Req'd
	Min	Max				
4300	4	4	10	pubu		n
4400	4	4	9	pubu		n
4600	4	4	46	pubu		n
49	4	4	1	intl		n
5	7	7	2	hnpa		n
555	7	7	deny	hnpa		n
6	7	7	2	hnpa		n
611	3	3	1	svcl		n
7	7	7	2	hnpa		n
8	7	7	2	hnpa		n
811	3	3	1	svcl		n
889	7	7	11	natl		y
9	7	7	2	hnpa		n
911	3	3	1	svcl		n
976	7	7	deny	hnpa		n

Type the command, **list aar digit-conversion**, to reach the AAR Digit Conversion table, and then make sure that all dialed calls starting with the digits 0 or 1 route through ARS, as shown in the following example.

list aar digit-conversion	send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)
Matching Pattern	Min	Max	Del	Replacement	Net	Conv	
0	1	28	0		ars	y	
1	4	28	0		ars	y	
4	4	4	0		ext	y	
5	4	4	0		ext	y	
6	4	4	0		ext	n	
8	4	4	0		ext	n	
x11	3	3	0		ars	y	

## Defining the Hunt Group

Create a hunt group that MiCollab AM requires to connect to the telephone system. To program the Hunt Group type the command; **add hunt number**, where *number* is the number assigned to this hunt group. The following example shows typical hunt group settings.

**IMPORTANT** Make note of the group and extension numbers you assign to the hunt group on this screen. You need to provide the Group Number when configuring subscriber stations and the Group Extension number when configuring MiCollab AM. Note also that the Voice Mail Number setting on Page 2 of the **Hunt Group** screen is the fully qualified version of this same extension, and configure the Routing Digits with the string you defined for Auto Alternate Routing (AAR).

(Page 1)

change hunt-group 3	send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
HUNT GROUP																								
Group Number: 3												ACD? <input type="checkbox"/>												
Group Name: Voicemail E1												Queue? <input type="checkbox"/>												
Group Extension: 4300												Vector? <input type="checkbox"/>												
Group Type: ucd-mia												Coverage Path: <input type="text"/>												
TN: 1												Night Service Destination: <input type="text"/>												
COR: 1												MM Early Answer? <input type="checkbox"/>												
Security Code: <input type="text"/>												Local Agent Preference? <input type="checkbox"/>												
ISDN/SIP Caller Display: mbr-name																								

(Page 2)

change hunt-group 3	send (return)	help (f5)	cancel (esc)	enter (f3)	schedule (f9)	next (f7)	previous (f8)																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
HUNT GROUP																								
LWC Reception: none												AUDIX Name: <input type="text"/>												
Message Center: qsiq-mwi																								
Send Reroute Request: y																								
Voice Mail Number: 4300																								
Routing Digits (e.g. AAR/ARS Access Code): 107												Provide Ringback? <input type="checkbox"/>												
TSC per MWI Interrogation? <input type="checkbox"/>																								

# Programming Subscriber Extensions for Voice Mail

Programming subscriber extensions for voice mail involves the following three tasks:

- Setting up a call coverage path that forwards calls to the hunt group you have defined for this integration
- Defining subscriber extensions to use the new call coverage path
- Defining the trunk group set up for MWI support

The following is an example of the call coverage path configuration. Note that call coverage is set for busy, ring-no-answer (RNA), and do-not-disturb (DND) conditions on both trunk and station (inside and outside) calls.

To program call coverage type the command; **add coverage path <number>**, where **<number>** is the identifying number the telephone system assigns to the new coverage path.

add coverage path 100 send (return) help (f5) cancel (esc) enter (f3) schedule (f9) next (f7) previous (f8)

1

**COVERAGE PATH**  
  
Coverage Path Number: 100  
Cvg Enabled for VDN Route-To Party? ☐ n Hunt after Coverage? ☐ n  
Next Path Number:  Linkage

**COVERAGE CRITERIA**

Station/Group Status	Inside Call	Outside Call
Active?	<input type="checkbox"/> n	<input type="checkbox"/> n
Busy?	<input type="checkbox"/> y	<input type="checkbox"/> y
Don't Answer?	<input type="checkbox"/> y	<input type="checkbox"/> y
All?	<input type="checkbox"/> n	<input type="checkbox"/> n
DND/SAC/Goto Cover?	<input type="checkbox"/> y	<input type="checkbox"/> y
Holiday Coverage?	<input type="checkbox"/> n	<input type="checkbox"/> n

Number of Rings:  2

**COVERAGE POINTS**  
Terminate to Coverage Pts. with Bridged Appearances? ☐ n  
Point1:  Point2:   
Point3:  Point4:   
Point5:  Point6:

The following two examples pertain to station configuration. To program stations type the command; **add (or change) station number**, where *number* is the extension number you want to configure.

(Page 1)

change station 5801 send (return) help (f5) cancel (esc) enter (f3) schedule (f9) next (f7) previous (f8)

1 2 3 4

**STATION**  
  
Extension: 5801 Lock Messages? ☐ n BCC: 0  
Type:  4602+ Security Code:  \* TN:  1  
Port: S00000 Coverage Path 1:  COR:  1  
Name: BUT Station 01 Coverage Path 2:  COS:  1  
Hunt-to Station:  Tests? ☐ y

Image continued on next page

STATION OPTIONS	
Loss Group: <input type="text" value="19"/>	Time of Day Lock Table: <input type="text" value=""/>
Speakerphone: <input type="text" value="1-way"/>	Personalized Ringing Pattern: <input type="text" value="1"/>
Display Language: <input type="text" value="english"/>	Message Lamp Ext: <input type="text" value="5801"/>
Survivable GK Node Name: <input type="text" value=""/>	Mute Button Enabled? <input type="text" value="n"/>
Survivable COR: <input type="text" value="internal"/>	Media Complex Ext: <input type="text" value=""/>
Survivable Trunk Dest? <input type="text" value="y"/>	IP SoftPhone? <input type="text" value="n"/>
	IP Video? <input type="text" value="n"/>
	Short/Prefixed Registration Allowed: <input type="text" value="default"/>

(Page 1)

STATION	
<div>change station 5801 <input type="button" value="send (return)"/> <input type="button" value="help (f5)"/> <input type="button" value="cancel (esc)"/> <input type="button" value="enter (f3)"/> <input type="button" value="schedule (f9)"/> <input type="button" value="next (f7)"/> <input type="button" value="previous (f8)"/></div> <div>1 2 3 4</div>	
FEATURE OPTIONS	
LWC Reception: <input type="text" value="spe"/>	Auto Select Any Idle Appearance? <input type="text" value="n"/>
LWC Activation? <input type="text" value="y"/>	Coverage Msg Retrieval? <input type="text" value="y"/>
LWC Log External Calls? <input type="text" value="n"/>	Auto Answer: <input type="text" value="none"/>
CDR Privacy? <input type="text" value="n"/>	Data Restriction? <input type="text" value="n"/>
Redirect Notification? <input type="text" value="n"/>	Idle Appearance Preference? <input type="text" value="n"/>
Per Button Ring Control? <input type="text" value="n"/>	Bridged Idle Line Preference? <input type="text" value="n"/>
Bridged Call Alerting? <input type="text" value="n"/>	Restrict Last Appearance? <input type="text" value="n"/>
Active Station Ringing: <input type="text" value="single"/>	
H.320 Conversion? <input type="text" value="n"/>	Per Station CPN - Send Calling Number? <input type="text" value="y"/>
Service Link Mode: <input type="text" value="as-needed"/>	EC500 State: <input type="text" value="enabled"/>
Multimedia Mode: <input type="text" value="enhanced"/>	Audible Message Waiting? <input type="text" value="n"/>
MWI Served User Type: <input type="text" value="sip-adjunct"/>	Display Client Redirection? <input type="text" value="n"/>
	Select Last Used Appearance? <input type="text" value="n"/>
	Coverage After Forwarding? <input type="text" value="s"/>
	Multimedia Early Answer? <input type="text" value="y"/>
Emergency Location Ext: <input type="text" value="5801"/>	Direct IP-IP Audio Connections? <input type="text" value="y"/>
Always Use? <input type="text" value="n"/>	IP Audio Hairpinning? <input type="text" value="n"/>

## Completing the Telephone System Programming

Verify that the programming is correct by using the print command related to each executable command.

# 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 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 exiting MiCollab AM system.

**NOTE** For general information on integrations, refer to the **Integrating MiCollab AM with the Telephone System** chapter in *System Installation Guide*, and the topic, **Integrate 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 **Definity**.
  - e From the **Integration Type** dropdown list, select **Q-SIG**.
- 2 Click **Next**. The **Board Options** dialog box displays.
- 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 displays.
- 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 guide, *System Installation Guide*.

- 6 Click **OK**. The **Integration Options** dialog box displays.
- 7 In the **Integration Options** dialog box, configure the values if necessary.
- 8 Click **OK**. The **Switch Section Options** dialog box displays.
- 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 **Hunt Group Access Code** field, enter the hunt group extension configured previously in the section, [Defining the Hunt Group](#). This is the pilot number that users dial to reach MiCollab AM.
  - c Click **OK**.
- 10 Continue through and complete the configuration. At the end of the configuration, a confirmation dialog box displays. 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 **Board** tab, and then click the **Add** button. The **Board** dialog box displays.



- 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 **Switch** tab and click the **Add** button. The **Switch Integration Data Setup** dialog box displays.
  - a From the **Manufacturer** dropdown list, select **Avaya**.
  - b From the **Model** dropdown list, select **Definity**.
  - c From the **Integration Type** dropdown list, select **Q-SIG**.
- 5 Click **OK**. The **Switch Options** dialog box displays.
- 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 guide, *System Installation Guide*.

- 7 Click **OK**. The **Integration Options** dialog box displays.
- 8 In the **Integration Options** dialog box, configure the values if necessary.
- 9 Click **OK**. The **Switch Section Options** dialog box displays.
- 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 **Hunt Group Access Code** field, enter the hunt group extension configured previously in the section, [Defining the Hunt Group](#). This is the pilot number that users dial to reach MiCollab AM.
  - c 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 Linecard 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 the 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 Express Linecard to the Boards Tab

Once the Prosody X linecard is configured in the Aculab Configuration Tool and the linecard displays on the ACT Prosody X Page as In Service, and 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 Express linecard is added to the **Boards** list. If there are other boards assigned previously, 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. Refer to *System Installation Guide* or the MiCollab AM online help system for more details about setting these parameters.