

MiCollab Advanced Messaging Mitel TSW E1 CAS Serial Integration Technical Note

For version 9.1 and above

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Preface

This Integration Technical Note (ITN) is written for dealers who are experienced with MiCollab Advanced Messaging (MiCollab AM) and who are familiar with MiCollab AM procedures and terminology. It also assumes that you are familiar with the features and programming of Mitel TSW.

This document describes how to integrate MiCollab AM with a Mitel TSW system using an E1 CAS EL7 interface in conjunction with the Voice Mail (VM) integration, which is an outband data link integration.

The E1 CAS EL7 interface is a digital 2.048-MB 32-channel interface that can provide up to 30 channel associated signaling (CAS) voice mail ports to MiCollab AM per E1 link. The E1 CAS 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 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. End-to-end DTMF and voice communications are performed through the E1 CAS link.

The Mitel TSW Voice Mail interface is an RS-232 serial interface between Mitel TSW and MiCollab AM. Calling-party and called-party information is sent to MiCollab AM over the Mitel TSW RS-232 voice mail interface at the same time that a call is sent to a CAS channel. The data is matched with the ringing channel and MiCollab AM answers with the appropriate dialog. Message-waiting indicator (MWI) operation is also performed through the RS-232 serial link.

Refer to the *Mitel Extra Facility Voice Mail VM* description and the *Interworking Description, CAS extension, EL7 Interface to Voice Mail* system for complete details.

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 1. References

Document Type	Document Title
Administration Documentation	<i>System Administration Guide</i>
Server Documentation	<i>System Installation and Configuration 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>
Spare Parts Documentation	<i>Perle IOLAN DS1 Serial to Ethernet Converter Installation</i>
Spare Parts Documentation	<i>Dialogic PCI and Euro PCI Linecards Installation and Replacement</i>
Online help	MiCollab AM online help system

Features Supported by this Integration

The following tables list the features supported using a Mitel TSW E1 CAS integration.

Table 2. Call forward to personal greeting for these call types

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

Table 3. Integration features supported for Mitel TSW E1 CAS

Feature	Supported	Notes
Automatic subscriber logon	Yes	
ANI/CLI	Yes	Note 1
<i>Announce Busy</i> greeting on forwarded calls	Yes	
Call screening	Yes	
Caller queuing	Yes	
DNIS	No	
End-to-end DTMF, attendant console	Yes	
End-to-end DTMF, proprietary telephones	Yes	
Fax Ports	Yes	Note 2
Internal calling party ID for reply	Yes	
Live record, integrated	No	Note 3
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

NOTES

1. Requires Mitel TSW software version BC10 or later.
2. Requires separate analog fax cards.
3. Third-party conferences are not allowed on an integrated VM port. To use this feature, you must have a separate non-integrated port.

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.

- The Mitel TSW voicemail port number of each CAS EL7 extension must be assigned correctly to each integrated MiCollab AM port. The integration cannot function if these entries are incorrect. The voicemail port numbers and format (POFMT) are programmable parameters and are defined during the initiation of the voice mail port of Mitel TSW.
- Program the instrument category (ICAT) of the CAS EL7 extensions that serve MiCollab AM for enhanced global tones and assign them as voice mail ports.
- To support this integration, the telephone system must be set to pass each call to MiCollab AM immediately after ringing the port carrying that call. To ensure that this setting is in effect, verify that Application System Parameter 145 is set to its default value of zero.
- The Call Screening feature requires T-type supervised transfers. To use this feature without having to remove diversion programming from the subscriber telephone, set the traffic matrix (TCMAP) and TRAF parameter of the extension category to restrict voice mail ports from calling other voice mail ports.
- The use of traffic-restricted voice mail ports is not compatible with blind transfers. Mitel recommends that you use the monitor transfer type unless the application requires a T-type supervised transfer.
- Do not enable any communications protocol such as XON/XOFF on the ICU port serial connection for MiCollab AM.
- If malicious call trace is enabled on the voice mail ports, no disconnect packet is sent to MiCollab AM from the ICU port.
- When using reason code diversions from subscriber telephones, these calls always go to the common diversion position. If MiCollab AM is chosen as the common diversion position (CDCOI), then ICS calls are always diverted to this position, even if individual diversion (CDINI) has been programmed to divert calls elsewhere.
- The parameter, **Busy telephone line when closed** on the **Lines** tab of the MiCollab AM Configuration utility is not applicable to this integration.
- Non-numeric DTMF tones cannot be used as any character in a station number. The maximum length of a station number is six digits.
- 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.
- The Aculab card can only be restarted by restarting the Call Server. This may be required following a loss of synchronization or clock with the PBX over the E1 interface. Alternatively, synchronization

problems with the CAS interface can be corrected at the PBX by blocking traffic to the E1 board, restarting the board, and then unblocking traffic.

- Aculab does not provide BNC connectors on their PCI type boards. These boards are supplied with RJ45 connectors only. An Aculab RJ45 to BNC converter may be used to convert the connection to BNC.
- The MiCollab AM parameter, **Phone Line Default audio format** in the **Integration Specific Parameters** view of this integration applies only to Aculab Prosody X linecards. The parameter has no effect on legacy Aculab PCI Digital Access linecards. To change the A-Law/mu-Law audio format of an Aculab High Capacity Digital Access PCI linecard you must change the value of the media card inside the Dialogic Configuration Manager utility.

Serial Integrations in a Multi-Box Call Server Environment

In a multi-box environment, it is possible that a single serial link connection may need to service two or more Call Servers. The serial link can be terminated on any Call Server or System Server with Call Services within the system. The data is then distributed to the correct Call Server or Call Servers through the network interface of the MiCollab AM system.

- Use the Link Integration mode parameter on the **Integration Options** dialog box of the server to configure each server in the system as:
 - Normal – the serial link is connected to this server's COM port, and is not passing serial data through the network to other Call Servers
 - Link Client – The serial link is connected to another server in the system and is receiving integration data through the network
 - Link Server – The serial link is connected to this server and is passing serial data through the network to other Call Servers
 - MWI Only – The server is only sending/receiving MWI data to the switch
- If you are terminating the serial link at the System Server, the System Server must have Call Services enabled. It is not required to have lines enabled on the System Server.
- If you use the System Server to perform only MWI operation for the integration, the System Server must have Call Services enabled. It is not required to have lines enabled on the System Server.
- To send serial data independently to multiple Call Servers in the system, use the Perle IOLAN DS1 and TruePort software to configure each participating server in the system. See the *Installing the Perle™ IOLAN™ DS1 Serial to Ethernet Converter* spare parts document for information on the DS1 device and installation instructions.

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

- Mitel TSW PBX with system software version BC7.1 or later. For ANI/CLI service to the GICI port, Mitel TSW must have software version BC10 or later. The following version BC10 patches are required for ANI/CLI information to the GICI port: 86376, 86377, 86444, 93545, and 93856
 - One ICU or ICU2 port provides the RS-232 serial interface required. The recommended baud rate is 4800 on ICU boards. You can use 9600 baud on ICU2 boards and ICU boards; however, follow ICU port specifications for use on ICU boards
 - A TSR 902 0472/15000 cable for the RS-232 connection between the filter top and MiCollab AM
 - One TLU76/3 E1 CAS board provides up to 30 analog voice ports
 - A TSR 902 0267/15000 cable for the RJ45 high impedance connection between the TLU76/3 card and the E1 Aculab card
- Or
- A TSR 901 0301/7000 cable for the BNC low impedance connection between the TLU76/3 card on Mitel TSW and the E1 Aculab card

NOTE You must use an Aculab BNC to RJ45 adapter when using a BNC cable.

MiCollab AM Requirements

- Properly configured system server platform running Windows Server 2012 R2, Windows Server 2016 (Server with Desktop Experience), or Windows Server 2019 (Server with Desktop Experience)
- MiCollab AM 9.1 – consult the Mitel Connect web site for the current software patches and service pack information .
- Mitel software key diskette or feature file with the Mitel TSW CAS RS232 integration enabled
- An available serial COM port
- One or more Aculab PCI Digital Network Access single-port, dual-port, or quad-port cards and one digital Dialogic port for each MiCollab AM voice port to be integrated
- Use Dialogic D/160JCT-U or D/320JCT-U linecards.

Or

- One or more Aculab Prosody X linecards with the number of ports configured for each E1 span the card is supporting.
- Uninterruptible power supply and surge protection device (recommended)

Programming the Telephone System

Follow the recommendations and programming examples in this section to program Mitel TSW for integration with MiCollab AM. Programming examples show commands and parameters of version BC9 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. For detailed programming information on this software version or other software versions of Mitel TSW, refer to the appropriate ASB Basic Exchange and Extra Facility documentation and the Mitel TSW OEM country-specific documentation.

Initiating the Number Series for the CAS Extensions

Initiate extension numbers in Number Analysis for the MiCollab AM extensions. Use EX as the NUMTYP. Choose directory numbers that are appropriate for your numbering plan.

For example:

```
NANSI:NUMSE=3001&&3030,NUMTYP=EX;
```

To verify your work, type the following command:

```
NADAP;
```

Programming the Category for the CAS Extensions

To program the category for the CAS extensions:

- 1 Set the extension category code for the MiCollab AM ports. Use a separate category for the MiCollab AM ports.
- 2 Program the TRAF parameter of CAT so that MiCollab AM ports are not restricted from calling each other unless the application requires a specific restriction.

For example:

```
EXCAS:CAT=1,TRAF=03151515,SERV=02151207,CDIV=011151000,ADC=010000301;
```

To verify your work, type the following command:

```
EXCAP:CAT=1;
```

Initiating the CAS Extensions

Initiate the CAS EL7 extensions; assign the equipment, the category, and the instrument category. ICAT=0086 assigns enhanced global tones for call progress and enables the CAS ports as voice mail ports.

For example:

```
EXTEI:DIR=3001&&3015,EQU=2-1-30-01,TYPE=EL7,CAT=1,ICAT=0086;
```

```
EXTEI:DIR=3016&&3030,EQU=2-1-30-17,TYPE=EL7,CAT=1,ICAT=0086;
```

To verify your work, type the following command:

```
EXDDP:DIR=3001&&3030;
```

Initiating the Hunt Group

To initiate the Hunt Group:

- 1 Initiate a hunt group and assign the MiCollab AM extensions to the group. Specify the type as **Longest Free Hunting** and set Queuing to **10**. Define the SEL parameter to allow overflow diversion when all ports are busy, if desired:

For example:

```
GHGRI:GRP=3000,TRAF=01,SEL=110,QUE=10,SERV=1000;
```

To verify your work, type the following command:

```
GHDAP:GRP=3000;
```

- 2 Assign the MiCollab AM directory numbers to the hunt group:

```
GHGMI:GRP=3000,DIR=3001&&3030;
```

To verify your work, type the following command:

```
GHDAP:GRP=3000;
```

- 3 You can program the MiCollab AM ports to divert when they are unavailable. For example, the following programming command diverts calls intended for MiCollab AM to the attendant, if all ports were busy or RNA.

For example:

```
CDINI:DIR=3000,DIV=00; (00=operator)
```

To verify your work, type the following command:

```
CDIDP:DIR=3000;
```

Initiating the Serial ICU Port Information Computer Function

To initiate the Serial ICU Port Information Computer Function:

- 1 Initiate the ICU port that is used for the MiCollab AM serial port. Set the directory format length (DFMT) to match the directory number length of the extensions, set the update function (UPDFCN) to **YES**, and set the FILLER to **32** (space):

The recommended baud rate is 4800 on ICU boards. You can use 9600 baud on ICU2 boards and ICU boards; however, follow ICU port specifications for use on ICU boards.

```
ICFUI:IFCIND=0,EQU=1-1-40-0,RATE=9600,DFMT=4,  
UPDFCN=YES,PARITY=EVEN,CHECK=YES,TXC=NO,FILLER=32;
```

2 Enable MWI capability for the ICU port:

```
ICFUC:MWF=ALL;
```

To verify your work, type the following command:

```
ICFUP;
```

3 Initiate the message waiting data for the voice mail port. Define the system ID (SID) of the PBX, the DTXT, and group number (DIG) to be called when subscribers press the message-waiting button (MWC) to retrieve messages.

For example:

```
ICMWC:SID=01,DTXT=3000,DIG=3000,KFCN=MWC;
```

To verify your work, type the following command:

```
ICMWP:SID=01;
```

Initiating the Serial Port Voice Mail Function

To initiate the Serial Port Voice Mail Function:

1 Initiate the Voice Mail function for the ICU port. Set the port format (POFMT) to 3. If ANI/CLI services is used, set the voice mail functionality (VMF) to **EXTN3**. If ANI/CLI services are not required, set VMF to **EXTN2**.

For example:

```
VMFUI:IFCIND=0,VMF=EXTN3,POFMT=3;
```

To verify your work, type the following command:

```
VMFUP;
```

2 Initiate the voice mail port and identify the starting PORT number. Add the MiCollab AM directory numbers and the hunt group number to the voice mail port.

```
VMPOI:IFCIND=0,DIR=3001&&3030;  
VMPOI:IFCIND=0,GRP=3000;
```

To verify your work, type the following command:

```
VMPOP;
```

Programming Message Waiting for Subscriber Telephones

To program message waiting for subscriber telephones:

- 1 Digital subscriber telephones can have an MWI key assigned in addition to the message waiting display on their LCD telephones. Subscribers can press the lit MWI key to retrieve messages from MiCollab AM. Use the key system function key change command to assign an MWI key appearance on each subscriber telephone:

```
KSFKC:DIR=2001&&2299,KEY=2,FCN=MEW;
```

To verify your work, type the following command:

```
KSFKP:DIR=2001&&2299;
```

- 2 Analog subscriber telephones can receive a pling ring for MWI or a special dial tone. Use the ASPAC command to set either pling ring or special dial tone.

For example:

```
ASPAC:PARNUM=88,PARVAL=1;
```

(PARVAL=1 sets special dial tone and PARVAL=0 sets pling ring.)

NOTE When PARVAL=0 the *Message Waiting* text message on digital set displays is not available.

- 3 Program the time interval between pling rings when pling is used for message notification. The following example sets the pling interval to fifteen minutes.

For Example:

```
ASPAC:PARNUM=45,PARVAL=90
```

To verify your work, type the following command:

```
ASPAP;
```

Programming the Call Diversion for Subscriber Telephones

Assign the MiCollab AM hunt group as the diversion point for subscribers. Use the CDCOI command to create a common diversion to voice mail for subscribers or use the CDINI command to create individual diversions.

For example:

```
CDINI:DIR=2001&&2299,DIV=3000;
```

To verify your work, type the following command:

```
CDIDP:DIR=2001&&2299;
```

If call diversion is not programmed, subscribers must use the FOLLOW ME feature to divert calls to MiCollab AM.

NOTE If MiCollab AM is selected as the common diversion position (CDCOI), then ICS calls are always diverted to this position, even if CDINI has been programmed to divert calls elsewhere. In other words, reason code diversion always goes to the common diversion position. Refer to the VIM online book for more information on programming reason code diversions.

Completing the Mitel TSW Programming

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

Make sure that the following program units have been installed in Mitel TSW in accordance with the Line Interface Module (LIM) disposition table, as follows:

- DIR
- MWP
- DIM
- IHAH
- ILP
- IDP
- IHH

Removing Previous Versions of Aculab Software

If you are upgrading an existing Aculab supported integration from a previous version of MiCollab AM, you must first un-install any previous version of the Aculab software from the system server before you install MiCollab AM version 9.1 software. If the MiCollab AM version 9.1 InstallShield Wizard detects an existing version of Aculab software during the setup process, the installation is aborted, and a message displays to advise that you must un-install all Aculab software before the installation can continue.

Un-installing Aculab version 5.x.x software

Follow the procedures in this section to un-install Aculab software version 5.xx. This Aculab software version installed with MiCollab AM versions prior to 5.0.

NOTE Aculab software version 5.xx is referenced in MiCollab AM software versions prior to MiCollab AM version 5.0 as Aculab version 7.80.1. The version numbers refer to the same Aculab software package.

To remove previous 5.x.x versions of Aculab software:

- 1 From the Start menu, point to **Settings**, and then click **Control Panel**.
- 2 Double-click **Add/Remove Programs**.
- 3 In the list of installed programs, select **Aculab Configuration Tool**, and then click **Change/Remove**.
- 4 In the Confirm File Deletion dialog box, click **Yes**.
- 5 Click **OK** when the un-install is complete.
- 6 Click **Close**, and then close the Control Panel window.
- 7 Manually delete any remaining Aculab folders, such as C:\Program Files\Aculab.

Un-installing Aculab 6.x.x software

Follow the procedure in this section to un-install Aculab software version 6.x.x. This Aculab software version installed with MiCollab AM versions 5.0.

NOTE Aculab software version 6.xx is referenced in MiCollab AM 5.1 and later as Aculab version 8.20.0.1. The version numbers refer to the same Aculab software package.

To remove previous 6.x.x versions of Aculab software:

- 1 Start the MiCollab AM Configuration utility. The Main tab of MiCollab AM Configuration displays
- 2 On the Main tab, click **Shutdown**.
- 3 Go to **Start > All Programs > Dialogic System Software**, and then click **Configuration Manager – DCM**. The Configuration Manager displays.
- 4 On the toolbar, click the red **Stop** icon button to stop the service.
- 5 Close the Dialogic Configuration Manager.
- 6 Go to **Start > My Computer**, and then double-click **Local Disk C**. The root folders display.
- 7 Double-click the **C:\Program Files\AculabInstaller** folder. The folder contents display.
- 8 Double-click the Aculab file **AIT_GUI.exe**. The Aculab Installation Tool displays.
- 9 If you are prompted to enter a User Name and Password, click **Cancel**.
- 10 From the menu bar select **File**, and then select **Open Package**. The AIT Open Package dialog box appears.
- 11 In the AIT Open Package dialog box, highlight the listed package, and then click **Open**. The Aculab Installation Tool displays.
- 12 If necessary, in the Installation Path dialog box, click **OK** to accept the default location.
- 13 In the right-hand pane, right-click the **Package Tag Component, Included Components**, and then select, **Uninstall**.
- 14 When the un-install process completes, close the Aculab Installation Tool.
- 15 Manually delete any remaining Aculab and AculabInstaller folders, from the disk.
- 16 Restart the platform.

Removing Previous Versions of Dialogic Software

If you are upgrading from a previous version of MiCollab AM, and the Call Server is purposing Dialogic D/160 or D/320 linecards with Aculab PCI E1/T1 linecards, or a Dialogic linecard for another integration, you must first un-install any previous version of the Dialogic software from the system server before you install MiCollab AM version 9.1 software. If the MiCollab AM version 9.1 InstallShield Wizard detects an existing version of Dialogic software during the setup process, the installation is aborted, and a message displays to advise that you must un-install all Dialogic software before the installation can continue.

IMPORTANT

1. If you are removing Dialogic software with the intention of removing it from the system permanently after you have installed MiCollab AM version 9.1 software, you must re-install the MiCollab AM version 9.1 software after the Dialogic software has been un-installed and the server has been restarted. For example, if you are replacing Aculab PCI linecards with Aculab Prosidy linecards, the Call Server does not require Dialogic linecards or software.
2. To maintain the integrity of your MiCollab AM system, complete the procedures in this section in the order given.

Removing Dialogic Version SR 5.x.x Software

Follow the procedures in this section to un-install Dialogic software version SR 5.xx. This version of Aculab software installed with MiCollab AM in versions prior to version 5.0.

To remove Dialogic SR 5.x.x point releases from the system server platform:

- 1 Start the system server platform and log on to Windows with an account that has local Administrator privileges on the platform.
- 2 Shut down all running programs.
- 3 From the Start menu, go to **Programs > Dialogic System Software**, and then click **Dialogic Configuration Manager – DCM**.
- 4 If the Dialogic System Service is running, click the red **Stop** icon on the toolbar, and then wait for the service to stop.
- 5 Close the Dialogic Configuration Manager (DCM).
- 6 From the Start menu, select **Settings**, and then click **Control Panel**.
- 7 In the Control Panel window, double-click **Add/Remove Programs**.

IMPORTANT In the next step, find, and then select any item labeled Dialogic Service Applications, **not** the Dialogic Service Application.

- 8 In the list of currently installed programs within the Add/Remove Programs dialog box, locate the entry labeled **Dialogic Service Applications** and select it.

Table 4. Dialogic Service Application options

If there is...	Then...
An entry labeled Dialogic Service Applications	Continue with step 9.
No entry labeled Dialogic Service Applications	Skip to step 17.

- 9 After the Dialogic Service Applications entry has expanded, click **Change/Remove**.
- 10 On the Welcome dialog box, select **Remove**, and then click **Next**.
- 11 On the Confirm Uninstall dialog box, click **OK**.
- 12 If you are prompted to delete or retain any shared or read-only files, delete them. Alternately, if a file is reported as being locked, click **Reboot** to remove the file the next time you restart the platform.
- 13 On the Maintenance Complete dialog box, select **Yes, I want to restart my computer now**, and then click **Finish**.
- 14 After the platform restarts go to, **Start > Settings**, and then click **Control Panel**.
- 15 In the Control Panel window, double-click **Add/Remove Programs**.
- 16 If there more **Dialogic Service Applications** display, repeat steps 9-15 until all Dialogic Service Applications are un-installed.
- 17 In the list of currently installed programs within the Add/Remove Programs dialog box, locate and select the entry labeled **Dialogic Service Application**.
- 18 After the Dialogic Service Application entry has expanded, click **Change/Remove**.
- 19 On the Confirm Un-install dialog box, click **OK**.
- 20 If you are prompted to delete or retain any shared or read-only files, delete them. Alternately, if a file is reported as being locked, click **Reboot** to remove the file the next time you restart the platform.
- 21 On the Maintenance Complete dialog box, select **Yes, I want to restart my computer now**, and then click **Finish**.

To remove Dialogic System Software 5.x.x from the system server platform:

- 1 From the Start menu, select **Settings**, and then click **Control Panel**.
- 2 In the Control Panel window, double-click **Add/Remove Programs**.

- 3 In the list of installed programs within the Add/Remove Programs dialog box, locate the entry labeled **Dialogic System Software** and select it.
- 4 After the Dialogic System Software entry has expanded, click **Change/Remove**.
- 5 On the Uninstall dialog box, click **Yes**.
- 6 On the second Uninstall dialog box, click **OK**.

IMPORTANT If the uninstall program displays a warning about deleting the shared file Ctl3d32.dll, click No to prevent its deletion. It is safe to delete all other shared files.

- 7 When the Remove Programs from Your Computer dialog box prompts you that installation is complete, click **OK**.
- 8 When prompted to restart the platform, click **Yes**.
- 9 After the platform restarts and you have logged on, right-click the **My Computer** icon and select **Explore**.
- 10 From the C:\Program Files directory, delete the Dialogic folder and its contents.
- 11 Restart the computer.

Removing Dialogic Version SR 6.x Software

Follow the procedures in this section to un-install Dialogic software versions SR 6.0 SU190 or SR6.0 SU241. These versions of Dialogic software installed with MiCollab AM versions 5.0 and 5.0, respectively.

To remove Dialogic System Release 6.x.x:

- 1 Start the system server platform and log on to Windows with an account that has local Administrator privileges on the platform.
- 2 Shut down all running programs.
- 3 From the Start menu, go to **Programs > Dialogic System Software**, and then click **Dialogic Configuration Manager – DCM**.
- 4 If the Dialogic System Service is running, click the red **Stop** icon on the toolbar, and then wait for the Service to stop.
- 5 Close the Dialogic Configuration Manager (DCM).
- 6 From the Start menu, point to **Settings**, and then click **Control Panel**.
- 7 Double-click **Add/Remove Programs**.
- 8 Select Dialogic System Release 6.0 PCI Redistributable Edition, and then click **Remove**.
- 9 To confirm the software removal, click **OK**.
- 10 Select **Yes, I want to restart my computer now** and click **Finish**. Once the server restarts the clean-up utility removes any remaining Dialogic components automatically.

NOTE If the Windows Found New Hardware wizard appears, click **Cancel**.

Installing the Aculab, Dialogic, and MiCollab AM Software

The Aculab and Dialogic software components are installed in conjunction with the MiCollab AM version 9.1 software when you select the components as part of the installation package. If you have previously installed an earlier MiCollab AM version, you must use that version's installation media to re-install it to install the correct Aculab and Dialogic software. Be sure to exit any running Windows programs before starting the Setup program. Refer to the *Install Guide* for MiCollab AM the version you are installing for more information on preparing the server for MiCollab AM and installing MiCollab AM software.

IMPORTANT You must remove previous versions of the Dialogic system software, the Aculab driver software, and the Avaya/Nortel BCM enabling software before starting the MiCollab AM version 9.1, Aculab, and Dialogic installation process. If you do not remove these items, the Setup program will require you to do so before proceeding with the installation. When removing previous software versions, you must restart your server before you begin installing MiCollab AM. Failure to do so can result in errors with the installation process.

To start the setup wizard for the MiCollab AM Server Software installation:

- 1 Log on to the platform using a Windows Administrator account.

IMPORTANT If you are installing MiCollab AM Unified Messaging, log on using the Unified Messaging account instead. For more information on Unified Messaging administrative accounts, see the Unified Messaging online book for the type of Unified Messaging you are using.

- 2 Shut down all running programs.
- 3 Insert the MiCollab AM Installation Media into the appropriate drive.
- 4 Do one of the following.

Table 5. Setup options

If autorun is...	Then
Enabled	The MiCollab AM Installation Media displays. In the Mitel MiCollab AM Installation Media Components area, click MiCollab AM Server , and then skip to Step 6
Not Enabled	On the taskbar go to Start > Run > Browse , and then continue to step 5.

- 5 Locate and open the Server Installs\Telephony Server folder, double-click **start**, and then click **OK**. The MiCollab AM Installation Media main window displays.
- 6 Click **MiCollab AM Server** in the Server components submenu. The Welcome page displays.
- 7 In the Welcome page, click **Next** to continue.
- 8 Click **Yes** to accept the License Agreement. If you have not installed the MiCollab AM Speech and TTS Support components, a warning displays.

IMPORTANT You must read and accept the terms of the license agreement to continue with Setup.

- 9 If you are installing ASR (Automatic Speech Recognition), the MiCollab AM TTS and Speech software must be installed before you can install MiCollab AM Server version 9.1 software or later. If the *Required software not found* dialog box displays, click **Cancel** to exit the installation, and then refer to the section, *Installing TTS and Speech Software*, of the *Install Guide* to learn how to install these components.
- 10 Click **Next** to continue with the next step in the installation. The Select Hardware Support Components page displays.
- 11 Select the **Aculab Driver Software Package 8.10.0.0** component, the Dialogic System Release 6.0 PCI Update 252 component (optional—not required for Aculab Prosidy cards), and then click **Next** to continue through the installation process.
- 12 Follow the prompts to complete the software installation. Refer to the *Install Guide* for more information on installing and configuring MiCollab AM software.

IMPORTANT Once the MiCollab AM version 9.1 software is installed, and the system server is restarted successfully, the Windows Hardware Wizard detects the new hardware. When you are prompted to let the Hardware Wizard add the linecards to the system, click **Yes, this time only**. Windows configures the new hardware and its drivers, and then adds the new linecards to the Device Manager list.

Follow the prompts to complete the MiCollab AM and Aculab software installation. Once the software is installed, you can install the Aculab card into the platform. Refer to the *Install Guide* for more information on installing and configuring MiCollab AM software.

About Aculab Cards

MiCollab AM version 9.1 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 or PCIe Card

The Aculab Prosody X PCI or PCIe 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 or PCIe E1/T1 linecard integrates MiCollab AM with a telephone system using the CAS or the Q.SIG signaling protocols. An Aculab Prosody X PCI card supports 1-8 ports, 30 voice channels per port; an Aculab Prosody X PCIe card supports 1-4 ports, 30 voice channels per port. The Aculab Prosody X card has an H.100 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 card, refer to the *Aculab Prosody X PCI Installation and Replacement* or the *Aculab Prosody X PCIe Installation and Replacement* spare parts document.

Adding the Aculab Card to MiCollab AM

The Aculab Digital Access card and the Aculab Prosody X cards 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 particular spare parts document for the type of Aculab card you are installing. The documents can be found on the MiCollab AM Installation Media or on the Mitel Connect website, connect.mitel.com/connect.

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 **Mitel**.
 - d From the **Model** dropdown list, select **MiVoice MX-ONE**.
 - e From the **Integration Type** dropdown list, select **CAS RS232**.
- 2 Click **Next**. The **Board Options** dialog box appears.
- 3 Depending on the type of Aculab card you have installed, configure the board options. Refer to the appropriate Spare Parts document for more information on the Aculab card you are installing.
- 4 Click **OK**. The **Switch Options** dialog box appears.
- 5 If necessary, make any changes to the default settings your site requires in the **Switch Options** dialog box.

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

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

- 6 Click **OK**. The **Integration Options** dialog box appears.
- 7 In the **Integration Options** dialog box, configure the following options:
 - a In the **Local Integration Settings** section, select the **Communication Settings** view.
 - b In the **TCP/IP Port number** field, enter the port number programmed in Mitel TSW.
- 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 access code you configured previously in the section, [Initiating the Hunt Group](#). This is the pilot number that users dial to reach MiCollab AM.
 - d Click **OK**.
- 10 Continue through and complete the configuration. At the end of the configuration, a confirmation dialog box appears. Click **OK**.
- 11 If **MiCollab AM Configuration** does not open automatically after the configuration completes, open **MiCollab AM Configuration**, and select the **Lines** tab.
- 12 In the table from the **Lines** tab, configure callouts for the application. For information on configuring callout settings, see the topic *Configuring Callout Settings*, in the online help system.
- 13 Click **OK** to save all changes.

Configuring Existing MiCollab AM for the Integration

To configure exiting MiCollab AM for the telephone integration:

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

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

- 3 **[Optional]** Select the **Boards** tab, and then click the **Add** button. The **Board Options** dialog box appears.

- a** Depending on the type of Aculab card you have installed, configure the board options. Refer to the appropriate *Spare Parts document* for more information on the Aculab card you are installing.
 - b** Click **OK**.
- 4** Select the **Switches** tab and click the **Add** button. The **Switch Integration Data Setup** dialog box appears.
 - a** From the **Model** dropdown list, select **MiVoice MX-ONE**.
 - b** From the **Integration Type** dropdown list, select **CAS RS232**.
- 5** Click **OK**. The **Switch Options** dialog box appears.
- 6** If necessary, make any changes to the default settings your site requires in the **Switch Options** dialog box.

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

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

- 7** Click **OK**. The **Integration Options** dialog box appears.
- 8** In the **Integration Options** dialog box, configure the following options:
 - a** In the **Local Integration Settings** section, select the **Communication Settings** view.
 - b** In the **TCP/IP Port number** field, enter the port number programmed in Mitel TSW.
- 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 access code you configured previously in the section, [Initiating the Hunt Group](#). This is the pilot number that users dial to reach MiCollab AM.
 - d** Click **OK**.
- 11** In **MiCollab AM Configuration**, verify that 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 the MiCollab AM Configuration utility.

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

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

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

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

To Auto-Detect the Prosody X PCI linecard:

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

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

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

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