

MiCollab Advanced Messaging 9.3

XMediusFAX®

Integration Guide

For version 9.3 and above

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Preface

This guide explains how to integrate the XMediusFAX® fax server with MiCollab Advanced Messaging (MiCollab AM).

This guide is written for Mitel-certified administrators and technicians who are familiar with MiCollab Advanced Messaging (MiCollab AM) procedures and terminology, the **MiCollab AM Admin** utility, the **MiCollab AM Configuration** utility, and the Microsoft Windows® operating system.

Before implementing any procedures in this guide, ensure that XMediusFAX® fax server and the MiCollab AM software is installed and running successfully.

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 related 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>

XMediusFAX Integration Overview

The fax functionality for MiCollab Advanced Messaging (MiCollab AM) is supplied through an integration with the XMediusFAX 8.0 server. This document outlines how to integrate the XMediusFAX server with MiCollab AM. Before proceeding with the integration, you must have the XMediusFAX server installed and running as instructed in the XMediusFAX documentation. You also need to have MiCollab AM installed as described in *System Installation and Configuration Guide*.

IMPORTANT XMediusFAX is required to support Fax over IP (FoIP). MiCollab AM does not natively support FoIP.

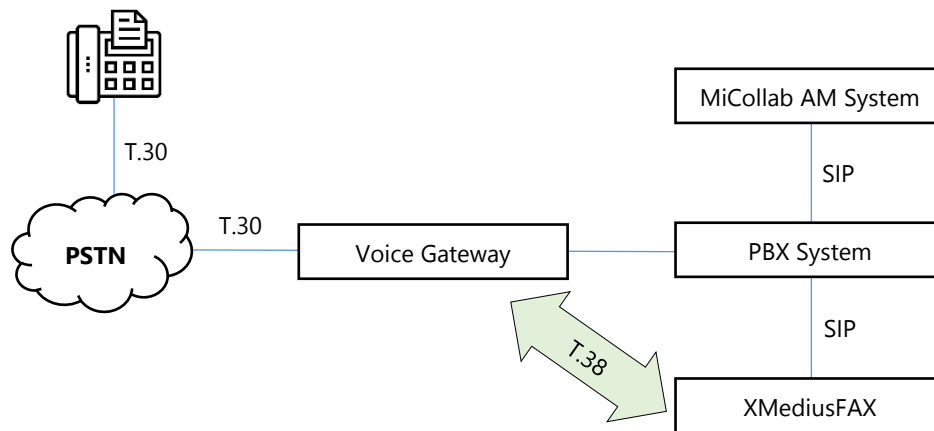


Figure 1. Reference Configuration

The following is the list of the telephone systems tested:

- NEC UNIVERGE SV9500 – Version 3
- Cisco Unified Communication Manager – Version 11.0
- Avaya Communication Manager – Version 7.0
- MiVoice MX-ONE – Version 6.2 SP2

Important Facts You Should Know

This section lists known benefits and limitations that affect the integration and its use. Be sure to review this information before continuing.

- SIP trunk between the telephone system at your site and XMediusFAX server must be configured prior to the MiCollab AM integration.

IMPORTANT You must configure XMediusFAX with the telephone system at your site over SIP Trunk prior to the MiCollab AM integration. For more information on how to configure XMediusFAX with the telephone system at your site, visit XMedius online knowledge base at support.xmediusfax.com and find the configuration guide. You will need a valid account in order to access their Support portal.

- SIP trunk is not required for the configuration between MiCollab AM and XMediusFAX.
- The telephone system at your site must have appropriate routes configured to route MiCollab AM transferred fax calls to XMediusFAX over SIP trunk.

NOTE The route must preserve the calling and called party information when transferring to the user's FAX device.

- You must configure XMediusFAX to use the Inbound Notification Python script to deliver inbound faxes to MiCollab AM subscriber mailboxes.
- XMediusFAX cannot deliver inbound faxes to MiCollab AM subscriber mailboxes via the Active Directory user as the Active Directory integration is not supported with the Inbound Notification Python script. You must create as many XMediusFAX internal users as required, one for each MiCollab AM subscriber.

NOTE Multiple **Internal Users** can be created by using the CSV file import. For more information, see the *XMediusFAX Administrator Guide* provided by XMedius.

- The administrator account used for MiCollab AM web services connection must be set up for web impersonation on the MiCollab AM side.
- MiCollab AM and XMediusFAX are configured independently, and there is no shared user configuration.
- Each subscriber must have a Fax device configured even if they are using a single number voice and fax, because the Fax device number is used as the target when transferring to XMediusFAX. Also, each user must be configured with the same fax number on the XMediusFAX server.
- Each subscriber must have an E-mail address configured as XMediusFAX will use the SMTP address of recipient rather than their mailbox ID when delivering inbound faxes to MiCollab AM.
- Users can simply transfer fax calls to a MiCollab AM pilot number if a fax call is answered from a phone configured with the single number voice and fax.

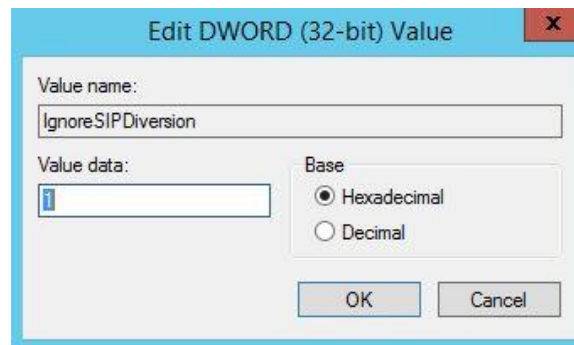
NOTE The MiCollab AM subscriber mailbox configured with the single number voice and fax must have a security code setup in order for the user to successfully transfer a fax call to MiCollab AM.

- The value of the **Fax Tone Detection** type under **Media Settings** on MiCollab AM must be set to *software* in order for MiCollab AM to support fax tone detection with IP integrations.

- For phone systems that include a diversion header in the SIP INVITE such as MiVoice MX-ONE when fax calls are transferred from MiCollab AM, XMediusFAX will use the number in the diversion header instead of the fax device number as the target-called party number by default. As a result, the fax message is not delivered because an incorrect called party number was captured. You will need to add a new DWORD value in the Windows Registry on the XMediusFAX server to disable the usage of the diversion header if you are integrating XMediusFAX with MiVoice MX-ONE only. Refer to the following table for more information.

Table 2. Edit Windows Registry DWORD Value

Key	HKLM\SOFTWARE\Interstar Technologies\XMedius\DriverSettings (32-bit OS)
Type	REG_DWORD (Dword value)
Value Name	IgnoreSIPDiversion
Value Data	0 -> Use the Diversion header (default) 1 -> Ignore the Diversion header



Setting up Fax Support in MiCollab AM

To set up fax support in MiCollab AM, you must perform the following steps:

- Review installation requirements
- Install the MiCollab AM feature file
- Specify the XMediusFAX fax domain name
- Configure the MiCollab AM system's dialing plans
- Create a source mailbox that the fax server can use to deliver faxes to the MiCollab AM recipients
- Create an administrator account for the MiCollab AM web services connection

Reviewing Installation Requirements

This section lists the requirements for successfully installing the fax support for MiCollab AM. Be sure to review and meet these requirements before continuing in this book.

Server Requirements

- A server deployed with XMediusFAX server software version 8.0 with the current XMediusFAX server hot fix, if any.
- A MiCollab AM feature file that is enabled with the fax applications you have purchased, emailed from Mitel. Place this file on your network or on a removable media such as CD-R so that it is accessible by the MiCollab AM server.

Telephone System Requirements

If you plan to have MiCollab AM to answer fax calls, make sure that the following conditions have been properly configured on lines supporting XMediusFAX and MiCollab AM prior to the fax integration:

NOTE When using this method of routing, no caller ID information can be passed on to the server.

- SIP trunk between the telephone system at your site and XMediusFAX is configured.
- Call routing for each fax number that routes to XMediusFAX is configured.
- Routes which allow MiCollab AM to transfer calls to XMediusFAX over SIP trunk while preserving the calling and called party information.

Installing the Feature File

There are three fax features: Fax Text, Fax Mail, and Fax Server. Telephony Server Routing requires the Fax Mail feature, the Fax Server feature, and the Web Services Impersonation feature. Proceed according to the software or feature you are installing.

Table 3. Feature File Installation

If you are installing...	Then...
A new MiCollab AM server	No installation is necessary; you have already installed the file during the setup sequence for MiCollab AM.
Fax support on an existing system	<ol style="list-style-type: none">1 Open MiCollab AM Configuration.2 In the Main tab, click Shutdown to stop MiCollab AM.3 In the Licensing tab, click the Import New License button and import a new or updated license certificate or feature file.4 In the Main tab, click Startup to run MiCollab AM. <p>For information on shutting down and restarting MiCollab AM properly, see the <i>System Installation and Configuration Guide</i>.</p>

Configuring XMediusFAX Settings

In order for MiCollab AM to successfully send a fax to XMediusFAX, you must specify the XMediusFAX fax domain name, document directory, and document extension as described in this section.

To configure the XMediusFAX settings:

- 1 Open **MiCollab AM Configuration** and select the **Main** tab.
- 2 If the system is running, click **Shutdown**. Wait until the **Current Status** changes to **Stopped**.
- 3 Select the **Fax** tab.

NOTE If MiCollab AM is deployed as a hosted solution in the cloud, skip **Step 3** and go to **Step 5**.

- 4 Select **XMedius** as the **Fax Type**, and then click **OK**.
- 5 Open **MiCollab AM Admin**, and select **Configuration > System**, and then click the **Fax** tab.

- 6 In the **Fax Type** section, select **XMedius**.
- 7 In the **Fax Domain Name** field, enter the IP address or the FQDN of the XMediusFAX.
- 8 In the **Document Directory** field, enter the location of the network directory where MiCollab AM can find the fax documents to be used by the Faxtext application.

NOTE The document directory must be a location that is readily and reliably accessible from all call servers and the system server. This could be a share on the network, a location on the system server, or on the system hosting the XMediusFAX service. Regardless of the chosen location, the files must be accessible via the service account under which MiCollab AM is running.

- 9 In the **Document File Extension** field, enter the file format (PDF or TIF) of the stored fax documents.
- 10 Click **Apply**, and then click **OK**.

Migrating from a RightFax Fax Server to an XMediusFAX Fax Server

If you are migrating from a RightFax fax server to an XMediusFAX fax server, you must do the following:

- Convert all documents to a single file type that is supported by XMediusFAX, typically either .pdf or .tif.
- Move the fax documents to a location that is readily and reliably accessible from all call servers and the system server. This could be a share on the network, a location on the system server, or on the system hosting the XMediusFAX service. Regardless of the chosen location, the files must be accessible via the service account under which MiCollab AM is running.
- Change the name of the document to match the document number/name used in the call processor.

For example:

If the document **OfficeDirections.tif** is referenced as document **12345** in the call processor, you should rename the document **12345.tif**.

Alternatively, you could retain the name of the document and update the entry in the call processor; however, there are limitations on the characters that can be in the call processor template.

Configuring the MiCollab AM Dialing Plans

Both Faxtext and Fax Messaging use dialing plans that let MiCollab AM validate telephone numbers entered by the outside callers and subscribers when they want to transmit faxes.

For example:

If a caller enters only six digits for their telephone number, MiCollab AM can look up the number on the dialing plan, and then prompt the caller that the number is invalid. The caller then can re-enter the correct seven-digit telephone number.

The dialing plan also gives MiCollab AM the dialing instructions for telephone numbers and indicates the call type: international, long distance, local, or extension. With the information from the dialing plan, the server can correctly place calls to any telephone number.

MiCollab AM uses the call type information it receives from the dialing plan to determine whether or not the call is allowed.

For example:

If a subscriber sends a fax to a long-distance number, the server uses the dialing plan to determine the call type. MiCollab AM then checks for the subscriber's mailbox to see if the subscriber has long-distance callouts allowed. If they are allowed, MiCollab AM places the call; if not, it advises the subscriber that the call is not allowed.

The fax server uses a similar dialing plan for its own outgoing calls, such as outbound faxes from subscribers. Using a sophisticated set of routing rules, the fax server can calculate the least-costly time of day to send a low-priority or medium-priority fax. If a network has more than one fax server, the dialing plans of the fax servers can be coordinated to share the total load of outgoing faxes.

When setting up the fax server's dialing plan, keep in mind that the MiCollab AM output to the fax server must be determined, as well as the client-generated telephone numbers for outgoing calls.

For example: Adding 9 to the beginning of local or long-distance calls.

Be sure to coordinate the two dialing plans to work together.

To configure the dialing plan for MiCollab AM, refer to the online help from the **MiCollab AM Admin** utility. The *XMediusFAX Administration Guide* provided by XMedius contains the corresponding instructions for setting up the dialing plan for the fax server.

IMPORTANT The telephone system at your site may offer the sophisticated cost-effective routing features of its own. If so, you may want to use your MiCollab AM and XMediusFAX dialing plans only to validate extension, local, and long-distance numbers. To provide the least-cost routing, set up your telephone system so that it processes all outbound calls and faxes according to its dialing plan.

Creating a Source Mailbox for Delivering Faxes

You must create a mailbox that the fax server can use to deliver faxes to the MiCollab AM recipients. MiCollab AM uses the name of this mailbox as the sender's name on faxes that are delivered to MiCollab AM subscribers.

NOTE While this mailbox can be a subscriber mailbox, we strongly recommend that you use a Call Processor mailbox, which does not require a security code.

MiCollab AM uses the name that was recorded for this mailbox as the information prompt that subscribers hear when a fax message is received from outside the system. When you record the name, use a generic phrase, such as "... *the fax server*" that will make sense when it follows such system prompt as "*This fax was sent on June 15th at 2:23 PM by ...*".

To provide a call processor for fax messaging:

- 1 Create the call processor mailbox and specify a name that identifies the source of the fax, such as **Fax Server**.

NOTE It is not necessary to configure any key actions for this call processor, because the fax server will be interacting with it over a LAN connection rather than by telephone.

However, to ensure that any caller who gains access to this mailbox by accident is returned safely to MiCollab AM's current initial call processor, we recommend that you set all key actions to **Go To Ans Mode**. Set the timeout for this mailbox to **0** (zero).

- 2 Record the name for this mailbox. For more information about recording mailbox names, see the *System Administration Guide*.

Creating an Administrator Account for MiCollab AM Web Services Connection

You must create an administrator account that XMediusFAX can use to post received fax messages to MiCollab AM. XMediusFAX uses this account to authenticate against the MiCollab AM web services connection when posting received fax messages to MiCollab AM.

You must also make sure that this account is set up for web impersonation through the **Tenant** tab in the **MiCollab AM Configuration** utility.

To create an administrator account for the MiCollab AM web services connection:

- 1 Log on to the **MiCollab AM Admin** utility, and then select **File > Administrators**.
- 2 Click **Add**. The **User ID** window appears.

- 3 In the **User ID** and **Name** fields, type the account ID and name. In this example, the administrator account created is **FaxAdmin**.
- 4 In the **Password** field, enter a password.
- 5 In the **Confirm** field, enter the same password.
- 6 Click **OK**.

To set up the administrator account for Web Services Impersonation:

- 1 Launch **MiCollab AM Configuration**, and then select the **Tenant** tab.
- 2 Select the tenant from the table and then click the **Edit** button. The **Tenant Summary** dialog box appears.

	In Use	Tenant's Limit	Available
Personal Assistant:	1	500	0
UM and ICA:	0	500	0
Subscribers:	6	Unlimited	Unlimited
TeamQ Supervisors:	0	20	0
TeamQ Agents:	0	100	0

- 3 In the **Web Services Impersonation** section, select the administrator account you created in the previous section.
- 4 Click **OK**.

Configuring a Fax Device for Subscribers

If you plan to have MiCollab AM to answer fax calls, each MiCollab AM subscriber must have a Fax device configured as the Fax device number is used as the target when transferring fax to XMediusFAX.

NOTE The fax device number added in this section must match the fax number configured for the **XMedius Internal User** explained in the [Creating an XMediusFAX Internal User for Each MiCollab AM Subscriber Mailbox](#) section.

IMPORTANT Call routing for each Fax device number you wish to have routed to XMediusFAX must be configured within the telephone system at your site in order for MiCollab AM to successfully transfer fax calls to XMediusFAX over SIP trunk.

To add a fax device to the subscriber's device:

- 1 Log on to **MiCollab AM Admin**.
- 2 Open the Subscriber Mailbox to edit, and then click the **Devices** tab.

The screenshot shows the 'Device' configuration window in MiCollab AM Admin. The 'Device List' on the left contains 'Extension' and 'Fax Extension'. The 'Properties' section on the right is configured for a fax device. The 'Number' field is set to '1200', 'Type/Capabilities' is set to 'Fax', 'Category' is set to 'Extension', and the 'Active' checkbox is checked. The 'Extension Properties' section shows 'Switch Section' set to 'Asterisk Asterisk Section'. The 'Barge In Sensitivity' slider is set to 0. The 'Mailboxes Sharing this Number' field is empty. The 'OK', 'Cancel', and 'Help' buttons are at the bottom right.

- 3 Click the **Add** button. The **Add “Device”** dialog box appears.
- 4 In the **Add “Device”** dialog box, create a fax device as follows:
 - a In **Category**, select **Extension**.
 - b In **Name**, type *Fax Extension*.
 - c Click **OK**. You are taken back to the **Device** tab.
- 5 In the **Properties** section, configure the following options:
 - a In the **Number** field, add the fax extension device number.
 - b From the **Type/Capabilities** drop-down list, select **Fax**.
- 6 Click **OK** to save the changes and exit.

Configuring an E-mail Address for Subscribers

NOTE The e-mail address configured in this section must match the **SMTP Address** configured for the **XMedius Internal User** explained in the [Creating an XMediusFAX Internal User for Each MiCollab AM Subscriber Mailbox](#) section.

To add an E-mail address to the subscriber mailbox:

- 1 Log on to **MiCollab AM Admin**.

- 2** Open the Subscriber Mailbox to edit, and then click the **Main** tab.

Main	Answering	E-mail	Features	Presentation	VIM	Recordings	Speech	Deives	SMS	Msg Notification	Msg Forwarding	Availability
Mailbox Number: <input type="text" value="1888"/>												
Extension Number: <input type="text" value="1888"/> SMDI Prefix: <input type="text"/> Direct Dial Switch: <input type="text"/> <input type="checkbox"/> MWI Section: <input type="text" value="Asterisk Asterisk Section"/> <input type="button" value="v"/> Node: <input type="text"/>												
Important Public Numbers Company Mobile: <input type="text"/> Personal Mobile: <input type="text"/> Home Number: <input type="text"/> Remote Office: <input type="text"/>												
Member of Distribution Lists <div style="border: 1px solid black; height: 100px; width: 100%;"></div>												
Availability Processing <input type="checkbox"/> Allow <input type="checkbox"/> Enable <input type="button" value="Reset to Defaults..."/> <input type="button" value="Delete..."/> Availability COS: <input type="text"/> <input type="button" value="..."/>												
Mailbox Class of Service Mailbox COS: <input type="text" value="0600 MAIN SUBSCRIBER COS"/> <input type="button" value="..."/> <input type="button" value="Update Subscriber..."/>												
Subscriber Information First Name: <input type="text" value="XM"/> Middle Name: <input type="text"/> Last Name: <input type="text" value="User"/> Display Name: <input type="text" value="SUBSCRIBER EXAMPLE"/> TTS Name: <input type="text"/> E-mail: <input type="text" value="xmuser01@domain.local"/>												
Speech Recognition Names <input type="checkbox"/> Allow Name Recognition <input type="button" value="Speech Alias..."/>												
Enable Mailbox: <input type="text" value="Yes"/> <input type="button" value="v"/> <input type="checkbox"/> Setup Tutorial Required <input type="checkbox"/> Propagate <input type="checkbox"/> Personal Assistant Personal Assistant Available Licenses: 500												
Group Assignments: <div style="border: 1px solid black; height: 50px; width: 100%;"></div> <input type="button" value="Group Assignments..."/>												
Security Code <input checked="" type="checkbox"/> Security Code Required <input type="button" value="Reset"/> <input type="checkbox"/> Use Advanced Security Policy <input type="button" value="Set..."/> <input type="checkbox"/> Lockout <input type="checkbox"/> Force Security Code Reset <input checked="" type="checkbox"/> Allow Subscriber to Reset Security Code <input type="button" value="Purge History"/> Status: Set to Default Updated: 8/22/2016 9:02:07 AM <input type="button" value="Revoke Authentication Tokens..."/>												
<input type="button" value="Reset Mailbox"/>												

- 3 In the **Subscriber Information** section **E-mail** field, enter an e-mail address.
- 4 Click **OK** to save the changes and exit.

Integrating XMediusFAX with MiCollab AM

The Python scripts provided in the MiCollab AM Installation Media (...\\Utilities\\XMedius\\inboundnotifier\\Readme) allow XMediusFAX to deliver inbound faxes to MiCollab AM.

NOTE If you have multiple MiCollab AM systems, you can integrate XMediusFAX to route to different MiCollab AM systems.

To ensure that XMediusFAX can deliver inbound faxes to MiCollab AM, you must perform the following steps:

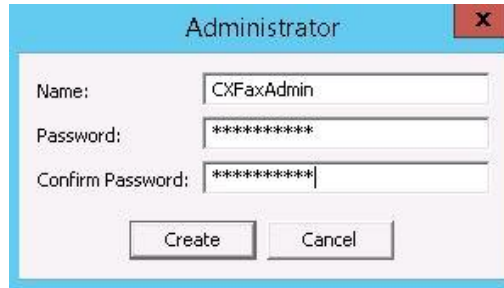
- Configure the administrator account on XMediusFAX for use with MiCollab AM
- Install the Inbound Notification Python module.
- Adjust the parameters in the configuration file (**avstinboundnotifier.ini**).
- Create a Python destination for the inbound notification.
- Configure the incoming routing table in XMediusFAX to enable notifications for inbound faxes.
- Create as many XMediusFAX internal users as required, one for each MiCollab AM subscriber mailbox through the XMedius administrative application.

Configuring the Administrator Account on XMediusFAX for Use with MiCollab AM

You must configure an administrator account on XMediusFAX for use with MiCollab AM so that it can send faxes for outbound delivery.

To configure an administrator account on XMediusFAX:

- 1 Launch the XMediusFAX administrative application, and then go to **System Configuration > Administrators**.
- 2 In the **XMediusFAX** application, click the **Add Record** icon from the toolbar to add a new administrator account. The **Administrator Properties** window appears.



- 3 In the **Name** field, enter *CXFaxAdmin*.
- 4 In the **Password** field, enter *CallXpress*.
- 5 In the **Confirm Password** field, re-enter *CallXpress*.
- 6 Click **Create**.

NOTE The name and password of the administrator account must be *CXFaxAdmin* and *CallXpress* respectively in order for MiCollab AM to send faxes for outbound delivery.

Installing the Inbound Notification Python Module

The Inbound Notification Python module requires one external module to be installed on the XMediusFAX server. If this module has not already been installed on the XMediusFAX server, install using the executable file **MySQL-python-1.2.5.win32-py2.7.exe** provided in the MiCollab AM Installation Media (...\\Utilities\\XMedius\\inboundnotifier).

NOTE To verify if the external module was previously installed, go to **Programs and Features** in the **Control Panel** and look for **Python 2.7 MySQL-python-1.2.5** in the list of installed programs.

Copy the following files provided in the MiCollab AM Installation Media to the folder, **C:\\Python27\\Lib\\site-packages**:

- avstinboundnotifier.py
- cxes SOAP.py
- avstinboundnotifier.ini

IMPORTANT

1. Execute this step on all XMediusFAX servers where the SMTP gateway is installed.
2. Any modifications made afterwards to these files within the folder **C:\\Python27\\Lib\\site-packages** will require a restart of the XMSMTPGateway service on the local machine.

Adjusting Parameters in the Configuration File

You will need to adjust the parameters in the configuration file (**avstinboundnotifier.ini**) according to your environment as shown in the example below:

[CXESettings]

ServerAddress=172.16.4.79
ServerPort=18276
AdminAccountName=FaxAdmin
AdminAccountPassword=0000
DefaultSenderMailboxId=0000

[MySQLSettings]

Host=localhost
Port=3306
User=CoconfigUser
Password=CoconfigUser
QueryAttribute=fax

NOTES If you want to integrate XMediusFAX to route to different MiCollab AM systems:

1. Create a new configuration file for each MiCollab AM server you have by copying and pasting the existing configuration file (**avstinboundnotifier.ini**) and renaming the file.

For example: **avstinboudnotifier2.ini**

2. Save the new configuration file in C:\Python27\Lib\site-packages.
3. Adjust the parameters in the file(s) according to the different MiCollab AM server environment (see Table 4 and Table 5.)
4. Repeat this process for each additional MiCollab AM system.

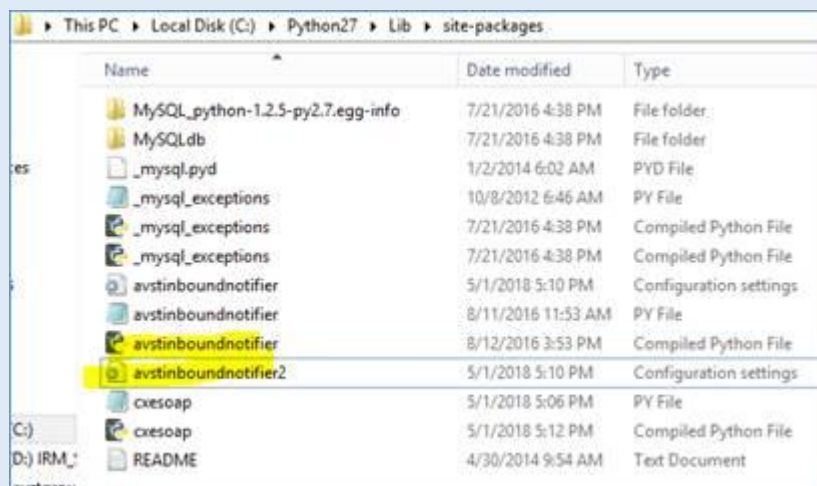


Table 4. **[CXESettings]** - Settings for MiCollab AM Web Services Connection

Parameter	Description
<i>ServerAddress</i>	Specify the IP address or the FQDN of the MiCollab AM server.
<i>ServerPort</i>	Specify the port number on which MiCollab AM is listening. The default port number is 18276.

AdminAccountName Specify the administrator account name you created previously in the [Creating an Administrator Account for MiCollab AM Web Services Connection](#) section.

IMPORTANT The name of the admin account for the MiCollab AM web services connection has to be setup for **Web Impersonation** through the **Database** feature on the **Main** tab of the **MiCollab AM Configuration** utility. For more information, refer to the [Creating an Administrator Account for MiCollab AM Web Services Connection](#) section.

AdminAccountPassword Specify the admin account password.

DefaultSenderMailboxId The MiCollab AM source mailbox ID you created previously in the [Creating a Source Mailbox for Delivering Faxes](#) section.

NOTE While this mailbox can be a subscriber mailbox, we strongly recommend that you use a call processor mailbox, which does not require a security code.

Table 5. **[MySQLSettings]** - Settings to Access XMediusFAX Internal User Database

Parameter	Description
<i>Host</i>	Specify the server name hosting the database. This is typically the hostname of the XMediusFAX server, or you can type <i>localhost</i> .
<i>Port</i>	Specify the port number on which SQL server is listening. The default port number is <i>3306</i> .
<i>User</i>	Specify the user account name used to access XMediusFAX internal user database. The default user account name is <i>CoconfigUser</i> .
<i>Password</i>	Specify the user account password. The default password is <i>CoconfigUser</i> .
<i>QueryAttribute</i>	Type <i>fax</i> as the query attribute.

Creating a Python Destination for the Inbound Notification

To create a Python destination for the Inbound notification:

- 1 Launch the XMediusFAX administrative application, and then go to **Sites** > **<Your Site Name>** > **Configuration** > **Notification Destination** > **Python Scripts**.

- 2 In the **XMediusFAX** application, click the **Add Record** icon from the toolbar to add a new Python script. The **Python Script Properties** window appears.

Python Script Properties

Python Script

Display Name: Inbound Notification

Python Code:

```
import avstinboundnotifier
import faxnotification
import ConfigParser

CONFIG_FILE_PATH = 'C:\\Python27\\Lib\\site-packag

if not 'open' in __builtins__.__dict__:
    __builtins__.__dict__['open'] = open

if fax == None or fax.Type != 'Inbound':
    message = 'Not an inbound fax'
    if fax != None:
        message = message + ': ' + str(fax.Transac
    raise RuntimeError, faxnotification.PermanentEi

try:
    config = ConfigParser.ConfigParser()
    config.read(CONFIG_FILE_PATH)
    mysql_settings = avstinboundnotifier.read_conf
    ws_settings = avstinboundnotifier.read_config_
    try:
        sender_emails = avstinboundnotifier.get_in
        if len(sender_emails) > 1:
            sender_email = None
        else:
            sender_email = sender_emails[0]
    except avstinboundnotifier.GeneralError, e:
        sender_email = None
    recipients = avstinboundnotifier.get_internal_
    avstinboundnotifier.route_fax_to_cxe(fax, ws_s
except avstinboundnotifier.GeneralError, e:
    raise RuntimeError, faxnotification.PermanentEi
```

Timeout (seconds): 120

☒ Make this destination available to all users for forward operation

Notification Options

☐ Notify on Broadcast

☒ Notify on Outbound Success

☒ Notify on Outbound Failure

☒ Notify on Inbound Success

☒ Notify on Inbound Failure

OK Cancel

NOTE The new **Python Script Properties** window will not show the boxes filled in with values as shown in this example. This example displays the Python Script Properties that have been configured.

- 3 In the **Display Name** field, enter the name.
For example: Inbound Notification
- 4 In the **Python Code** field, copy and paste the following content.

NOTE You can also find this script in the **Readme.txt** file from the MiCollab AM Installation Media (...\\Utilities\\XMedius\\inboundnotifier\\Readme.txt)

```
import avstinboundnotifier
```



```

import faxnotification
import ConfigParser

CONFIG_FILE_PATH = 'C:\\Python27\\Lib\\site-packages\\avstinboundnotifier.ini'

if not 'open' in __builtins__.__dict__:
    __builtins__.__dict__['open'] = open

if fax == None or fax.Type != 'Inbound':
    message = 'Not an inbound fax'
    if fax != None:
        message = message + ': ' + str(fax.TransactionId)
    raise RuntimeError, faxnotification.PermanentError(message)

try:
    config = ConfigParser.ConfigParser()
    config.read(CONFIG_FILE_PATH)
    mysql_settings = avstinboundnotifier.read_config_section(config, 'MySQLSettings')
    ws_settings = avstinboundnotifier.read_config_section(config, 'CXESettings')
    try:
        sender_emails = avstinboundnotifier.get_internal_user_from_did(fax.ANI,
            mysql_settings)
        if len(sender_emails) > 1:
            sender_email = None
        else:
            sender_email = sender_emails[0]
    except avstinboundnotifier.GeneralError, e:
        sender_email = None
    recipients = avstinboundnotifier.get_internal_user_from_did(fax.DID, mysql_settings)
    avstinboundnotifier.route_fax_to_cxe(fax, ws_settings, recipients, sender_email,
    fax.BannerLocation.None)
except avstinboundnotifier.GeneralError, e:
    raise RuntimeError, faxnotification.PermanentError(str(e))

```

NOTE If you want to integrate XMediusFAX to route to different MiCollab AM systems, create a Python script for the new configuration file you created. If you created multiple configuration files, create multiple Python scripts.

Change the CONFIG_FILE_PATH to use the name of the configuration file you created.

For example: If you named your additional configuration file "avstinboundnotifier2.ini", then:

```
CONFIG_FILE_PATH = 'C:\\Python27\\Lib\\site-packages\\avstinboundnotifier2.ini'
```

Repeat this process for each configuration file you created.

- 5 In the **Timeout (seconds)** field, set the timeout to a high enough value, such as **120**, to allow XMediusFAX to submit large faxes to MiCollab AM.
- 6 Click **OK**.

Configuring the Site Incoming Routing Table in XMediusFAX to Enable Notifications for Inbound Faxes

The **Incoming Routing Table** enables the automatic delivery of inbound faxes to the MiCollab AM server according to routing rules and criteria defined by the Administrator. It must be configured so that users can receive notification for inbound faxes

IMPORTANT Execute these steps for each Site that needs to be enabled with notifications for inbound faxes.

To configure the Site Incoming Routing Table:

- 1 Launch the XMediusFAX administrative application, and then go to **Sites > <Your Site Name> > Configuration > Incoming Routing Table**.
- 2 Depending on the complexity of your routing table, you can **create one Direct Rule for each DID**, or **create a single Python Rule for all of the DIDs**, or a combination of both options as follows:

[Option 1] Create one Direct Rule for each DID:

- a Click the **Add Record** icon to add a Direct Rule. The **Routing Table Entry Properties** window appears.

Routing Table Entry Properties

Routing

☒ Match DNIS/DID Pattern: *

☐ Match ANI Pattern:

☐ Match CSID Pattern:

☐ Match DTMF Pattern:

☐ Match barcode Pattern:

☐ Use OCR [Configure...](#)

Routing Destinations

Type: User

Filter: [Search](#) [Add User](#)

Search Results

[Add to List](#)

Destination

Type	User	Display Name
Python		Inbound Notification

[Remove](#)

☐ If this routing entry matches, continue processing the routing table

[OK](#) [Cancel](#)

- b Select the **Match DNIS/DID** box and write * in the **Pattern** field to match all incoming faxes.

- c In the **Routing Destination** section, from the **Type** drop-down list, select **Python**, and then click **Search**. The list of search results is generated.
- d From the **Search Results** box, select **Inbound Notification**, and then click **Add to List**. **Inbound Notification** is moved to the **Destination** box.

NOTES

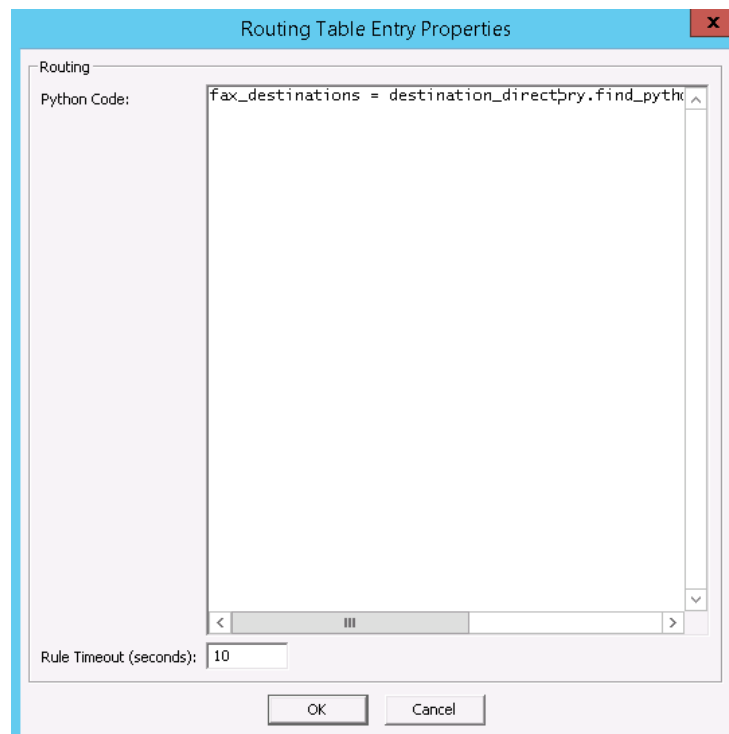
1. If you want to integrate XMediusFAX to route to different MiCollab AM systems, select the appropriate display name of new Python script you created and then click **Add to List**. Repeat this process for each additional Python script. The Python scripts appear in the **Destination** box
2. You can also create a rule to match a pattern.

For example: If you have two MiCollab AM systems with different area codes, then you can create two rules that will match the area code for each MiCollab AM system.

- e Clear the **If this routing entry matches, continue processing the routing table** check box.
- f Click **OK**.

[Option 2] Create a single Python Rule for all the DIDs:

- a Select **Action > Add Python Rule**. The **Routing Table Entry Properties** window appears.



- b In the **Python Code** field, copy and paste the following content:

```
fax_destinations = destination_directory.find_python('Inbound Notification')
```

- c Make sure the value passed in the **find_python** call in the script above matches the name of the Python Destination created in the [Creating a Python Destination for the Inbound Notification](#) section.
- d Leave the **Rule Timeout (seconds)** value as default.
- e Click **OK**.
- f Test the Site Incoming Routing Table with some DIDs to make sure it works as expected.

Creating an XMediusFAX Internal User for Each MiCollab AM Subscriber Mailbox

Create as many **XMediusFAX Internal Users** as required using the XMedius administrative application, one internal user for each MiCollab AM subscriber mailbox, with the following minimum required properties:

- **SMTP Address:** Enter the MiCollab AM subscriber's e-mail address.
- **Fax:** (In **Personal Information** tab) Enter the fax device number associated with the MiCollab AM subscriber mailbox.

NOTE The fax number should be configured if you plan to have MiCollab AM to answer fax calls.

XMediusFAX will use the SMTP address of the **Internal User** (recipient) for which Fax attribute matches the DID of the fax when delivering inbound faxes to MiCollab AM. Therefore, it is important to make sure that each subscriber in MiCollab AM has the e-mail address configured that matches the SMTP address for the **Internal User** you created in XMediusFAX.

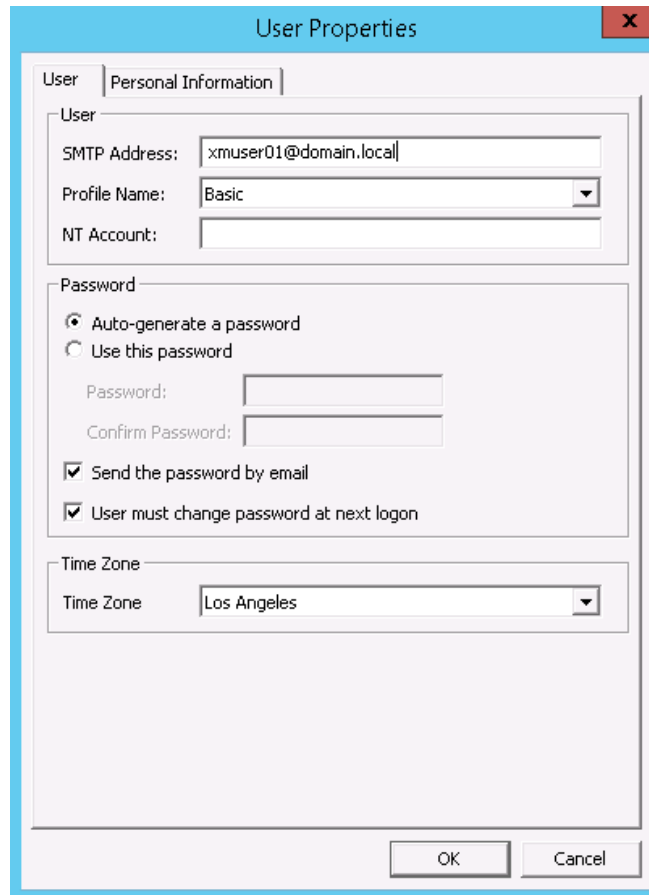
For more information on configuring e-mail address for the MiCollab AM subscribers, refer to the [Configuring an E-mail Address for Subscribers](#) section.

NOTE Active Directory integration is not supported with the Inbound Notification Python script. You must create as many XMediusFAX internal users as required, one for each MiCollab AM subscriber mailbox.

NOTE Multiple Internal Users can be created by the CSV file import. For more information, see the *XMediusFAX Administrator Guide* provided by XMedius.

To add an XMediusFAX internal user:

- 1 Launch the XMediusFAX administrative application, and then go to **Sites > <Your Site Name> > Internal Users**.
- 2 Click the **Add Record** icon in the tool bar to add an internal user. The **User Properties** window appears in the **User** tab.



The image shows a Windows-style dialog box titled "User Properties" with a close button (X) in the top right corner. It has two tabs: "User" and "Personal Information", with "Personal Information" currently selected. The "User" section contains three fields: "SMTP Address" with the value "xmuser01@domain.local", "Profile Name" with a dropdown menu showing "Basic", and "NT Account" which is empty. The "Password" section has two radio buttons: "Auto-generate a password" (selected) and "Use this password". Below these are "Password:" and "Confirm Password:" text boxes, both empty. There are two checked checkboxes: "Send the password by email" and "User must change password at next logon". The "Time Zone" section has a "Time Zone" label and a dropdown menu showing "Los Angeles". At the bottom right are "OK" and "Cancel" buttons.

- 3 In the **SMTP Address** field, enter the MiCollab AM subscriber's e-mail address.
- 4 Configure all other options as necessary.
- 5 Click the **Personal Information** tab.

The image shows a 'User Properties' dialog box with a blue title bar and a red close button. It has two tabs: 'User' and 'Personal Information'. The 'Personal Information' tab is selected, showing four sections: 'Personal Information' (Salutation, First Name, Last Name, Title, Cellular, Pager), 'Billing Information' (Billing Code, Sub Billing Code), 'Organization Information' (Organization, Address, City, State, Country, Zip), and 'Phone Number Information' (Phone, Fax). The Fax field has a placeholder '***_***_***'. At the bottom are 'OK' and 'Cancel' buttons.

NOTE If you plan to have MiCollab AM to answer fax calls, continue to **Step 6** to configure the fax number. Otherwise, skip to **Step 7**.

- 6** In the **Phone Number Information** section > **Fax** field, enter the fax number configured in the [Configuring a Fax Device for Subscribers](#) section.
- 7** Configure all other options as necessary.
- 8** Click **OK**.

Setting up a Faxtext Application

Faxtext enables a company to provide information, such as product literature and technical bulletins, to anyone who has access to a Dual Tone Multi Frequency (DTMF) telephone and a standard fax machine. Callers can dial the MiCollab AM system, specify a single document or multiple documents, enter the number of the fax machine they want the documents to deliver, and receive the documents by fax almost immediately. An industry term for this feature is "fax on demand". With Faxtext, a company can provide a range of information to its customers by fax machine, 24 hours a day.

Configuring a Faxtext Application

Before configuring a Faxtext application, both the MiCollab AM and the XMediusFAX server must be integrated and functional. For details on how to set up integration between both systems, refer to the [Setting up Fax Support in MiCollab AM](#) and [Integrating XMediusFAX with MiCollab AM](#) sections.

Configuring a Faxtext application involves the following steps, each of which is covered in this section:

- Define the network directory and file format
- Updating the System Server's Call Processors to provide access to the document library

Defining the Network Directory and File Format

The first step in creating a Faxtext application is to define the network directory where MiCollab AM can find the fax documents and file format to be used by the Faxtext application

To define the network directory and file format:

- 1 Open **MiCollab AM Configuration**, and then click the **Fax** tab
- 2 In the **Faxtext** section, enter the network directory in the **Document Directory** field.
For example:
C:\FaxText
- 3 Enter the file format in the **Document File Extension** field.
For example:
PDF or TIF

NOTE XMediusFAX only supports PDF and TIF files.

The screenshot shows a 'System Configuration' window with several tabs: SMS / SMTP, VIM, Speech, and Gro. The 'SMS / SMTP' tab is active, showing sub-tabs for Call Routing, Schedule Override Rules, Locations, Language, E-Mail, and Transcript. Under 'Fax Type', the 'XMedius' radio button is selected. The 'Settings' section contains three fields: 'Fax Domain Name' with the value '172.16.4.172', 'FaxText' with a sub-tab for 'Document Directory' set to 'C:\FaxText', and 'Document File Extension' set to 'pdf'.

- 4 Click **Apply**, and then click **OK**.

Updating the Call Processors

You must modify the System Server's Call Processors to give your callers menu options for receiving fax documents. Their menu options make use of the Fax action, an action only available to systems with Faxtext enabled. The Fax action causes the MiCollab AM and the XMediusFAX system to send out a fax document whose unique ID number is specified in the **Number** field.

For example: If the master document index is stored as number 4265 and you want to fax it to any caller who presses **1**, you would configure the call processor as shown in the following figure.

Number: 1006

Sponsor:

Language: Default

Max Msg Length (sec): 2700

Timeout (sec): 3

Max No Match Retries: 0

Max Mismatch Retries: 0

☐ Use Speech Recognition Timeout Rules

☐ Log System Port Usage

☐ Two-Part Greeting

☒ Use Answer Mode Operator

☐ Always Confirm Names

Call Processor Actions

View: DTMF Only

Key	Action	Arguments
0	Blind Transfer	0
1	Fax	4265Q
2	Undefined	
3	Undefined	
4	Undefined	
5	Undefined	
6	Undefined	
7	Undefined	

Key	Action	Arguments
8	Fax	XXXXQ
9	Undefined	
A	Undefined	
B	Undefined	
C	Undefined	
D	Undefined	
*	Undefined	
#	Access Messages	
Fax	Undefined	

This Fax action sends a specific document; in this example, the index.

This Fax action allows callers to enter any number in the 8000 series.

Figure 2. Sample Call Processor with Fax Action Specified

Announcement: "Thank you for calling our fax information line. If you know your document number, you may enter the number at any time. For an index of documents, press **1**."

To allow the caller to enter any document number in the 8000 series, you would specify XXXXQ in the **Number** field, as shown for Key 8 in Figure 2.

Table 6 shows the valid template characters for a Fax action that can be used in the **Number** field. The character Q is available with Faxtext.

Table 6. Valid Characters for a Fax Action Template

Character	Description
0–9	Any digit from 0 through 9 can be used to select a specific document.
Q	This character follows a document number or template and allows callers to request multiple fax documents and receive them after entering the fax machine telephone number.
X	Allows digits entered by a caller to be used in a document number. Normally, the number of Xs in a template must match the length of your document numbers.

For example: if your documents have four-digit numbers, you should use XXXX as a template.

The following example describes an application where documents are available using index selection. The initial call processor might resemble [Figure 3](#).

NOTE When offering a document index through a single key, be sure to select a key that does not represent the first digit of a document number. The 1 key, used in this example, is used for the document index and does not start any document number in the Acme numbering plan.

Call Processor Mailbox - DOCTEST System

Number: 1000

Sponsor: ...

Language: Default

Max Msg Length (sec): 2700

Timeout (sec): 2

Max No Match Retries: 0

Max Mismatch Retries: 0

☐ Use Speech Recognition Timeout Rules

☐ Log System Port Usage

☐ Two-Part Greeting

☒ Use Answer Mode Operator

☐ Always Confirm Names

Name: WIDGET FAXTEXT LIBRARY

Next Call Processor

CP: 1001 SECOND FAX

☐ Go To Answer Mode

Switch

Section: Asterisk Asterisk Section

Node: ...

No ASR Call Processor

CP: ...

Call Processor Actions

View: DTMF Only

Key	Action	Arguments
TO	Go To Answer Mode	
0	Fax	
1	Fax	4265Q
2	Fax	XXXXQ
3	Fax	XXXXQ
4	Fax	XXXXQ
5	Fax	XXXXQ
6	Fax	XXXXQ
7	Fax	XXXXQ

Key	Action	Arguments
8	Fax	XXXXQ
9	Fax	XXXXQ
A	Undefined	
B	Undefined	
C	Undefined	
D	Undefined	
*	Undefined	
#	Access Messages	
Fax	Undefined	

Figure 3. Call Processor Configured for Faxtext

Announcement: "Welcome to the Acme Manufacturing Company fax information line. For an index of documents available by fax from Acme, press **1**. If you know the document number of the fax you want to receive, please enter it now."

Assume that a caller has entered 5420 to receive the Super Widget product brochure (the caller knew that the number for this brochure was 5420 by looking at the index). MiCollab AM prompts the caller to enter a fax machine telephone number and asks for confirmation after the caller has entered the number.

After the number has been confirmed, MiCollab AM prompts the caller to enter an extension or telephone number to identify the fax. The caller responds to this prompt by entering the appropriate extension or direct-dial telephone number. This information is placed on the fax cover sheet (in the <TONAME> field) and in the header as the destination number. MiCollab AM repeats the above prompts if any timeouts occur.

NOTE For information about how to change the default cover sheet, refer to the "Managing Cover Sheets of a Profile" section in the *XMediusFAX Administrator Guide* provided by XMedius.

MiCollab AM then prompts, *"Your fax will be delivered shortly,"* sends the fax request to the Fax Server and sends control to the next call processor, 1001.

In the next call processor, the caller can select another document for delivery. MiCollab AM does not repeat the questions asking for the fax machine telephone number and the caller's extension or telephone number for identification because it has this information already.