

MiCollab Advanced Messaging

Software Release Note

For version 9.0

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Contents

Preface	6
New and Improved Features	7
9.0	7
Ability to Create a Custom Security Code Prompt	7
Ability to Include Media Server Data in a Diagnostic Log	7
Ability to Prevent Calls to Subscribers Excluded from a Speech Directory	7
AUDIX® Telephone User Interface (TUI) Enhancement	7
Avaya® Aura Communication Manager/Session Manager 7.1 Qualification	7
Avaya® IP Office 10.1 Qualification	7
Improved User Recordings & Message Scalability	8
Message Encryption of Stored Messages	8
Microsoft Windows Server® 2016 Hyper-V® Support	8
Multi-Tenancy	9
Neverfail 8.1 Support	10
NotifyXpress® Enhancements	10
Nuance Recognizer Update	10
Original Telephone User Interface (TUI) Enhancement	10
Original Voice User Interface (VUI) Enhancement	10
Private Message Enhancements	10
Recorded Name of Subscriber Mailbox Plays Before Security Code Prompt	11
System Configuration Option to Suppress Operator Prompting	11
Tango Networks Accelerator SIP Integration	11
Unified Messaging Enhancements	11
Web Client Authentication Tokens Feature	11
Web Client Enhancements	12
Web PhoneManager Enhancements	12
Windows Server® 2016 Support	13
Discontinued Features	14
Localization	15
System Prompts/TUIs	15

Client Applications	16
Text-to-Speech	16
Automatic Speech Recognition (ASR)	18
Upgrading and Migrating to MiCollab AM 9.0	19
Computer Platform Requirements	20
Windows Update Policy	20
Minimum Hardware Requirements	20
Server Class Configurations	22
Recommended Hardware Configurations	22
Recommended Hardware by Server and Ports	23
Recommended Hardware by Server Class	24
Maximum Ports by Operating System	24
Port Distribution across Call Servers	25
Capacities by Number of Call Servers	26
Minimum Server Requirements for Neverfail	27
Minimum Web PhoneManager Requirements	28
Site Requirements	28
Microsoft Internet Information Server (IIS) Requirements	28
Linux-based Apache Web Server Requirements	28
Subscriber Browser Requirements	29
Minimum Standalone Integrated Client Access Server Requirements	29
Minimum UCCConnect Developer Platform Requirements	30
Minimum UCCConnect Remote Platform Requirements	31
Minimum NetConnect Digital Networking Platform Requirements	31
Directory Propagation Server	31
Standalone Digital Networking Server	32
Minimum MiCollab AM Mobile Service Requirements	33
Site Requirements	33
Microsoft Internet Information Server (IIS) Requirements	33
Linux-based Apache Web Server Requirements	34
Minimum Requirements for VMware ESX/ESXi	34
Minimum Requirements for Microsoft Hyper-V	34

Minimum Live Reply for Lync Requirements	35
RightFax Support	35
Unified Messaging Third-Party Compatibility	36
Capacities and Limitations	37
Single Server	37
MiCollab AM Single Server	37
MiCollab AM Multi-Server	37
Networking and Global User Administration	38
Message Waiting Indication for Unified Messaging	38
For More Information	39
Documentation Resources	39
Other Resources	39

Preface

This document introduces you to the new features and capabilities available in MiCollab Advanced Messaging (MiCollab AM) version 9.0. The details of how MiCollab AM works are found in the full set of documentation available through the following sources:

- MiCollab AM documentation library which is included on the Mitel MiCollab AM 9.0 Telephony Server DVD in the Documentation folder.
- Online help is available within most of the MiCollab AM administrative utilities and is accessible via the Help menu or by pressing **F1**.

Additionally, this document provides:

- The hardware and software requirements necessary to install and run MiCollab AM and its various components and applications.
- Third-party hardware and software compatibility information.
- Languages supported by MiCollab AM in the various end-user client interfaces.
- High-level capacity and limitations information.

New and Improved Features

This section provides a high-level overview of the improvements and other changes that have been made to MiCollab AM.

9.0

Ability to Create a Custom Security Code Prompt

MiCollab AM 9.0 has a new feature that gives administrators the ability to replace the “Please enter your security code” prompt with a custom security code prompt. This is useful for subscribers who need to log in to another mailbox to retrieve messages.

Ability to Include Media Server Data in a Diagnostic Log

MiCollab AM 9.0 has added the ability to include media server data (such as Automatic Speech Recognition [ASR] and Text to Speech [TTS] logs) in a diagnostic log that can be exported in a .zip archive file for delivery to Technical Support personnel.

Ability to Prevent Calls to Subscribers Excluded from a Speech Directory

In MiCollab AM 9.0, the existing subscriber mailbox feature option to exclude a subscriber mailbox from an Automated Attendant directory has been updated to prevent calls to subscribers who are excluded from a Call Processor Mailbox Speech Recognition Directory.

AUDIX® Telephone User Interface (TUI) Enhancement

In MiCollab AM 9.0, the Intuity™ AUDIX® TUI has been enhanced with the ability for a subscriber to record a new message from the **Respond/Forward Options** menu.

Avaya® Aura Communication Manager/Session Manager 7.1 Qualification

With MiCollab AM 9.0 comes qualification for the most recent version of Avaya® Aura Communication Manager/Session Manager, version 7.1.

Avaya® IP Office 10.1 Qualification

With MiCollab AM 9.0 comes qualification for the most recent version of Avaya® IP Office, version 10.1.

Improved User Recordings & Message Scalability

MiCollab AM 9.0 is now able to handle up to 5 million local store messages, 100,000 recorded names, and 1 million recorded greetings.

Message Encryption of Stored Messages

MiCollab AM 9.0 can support encryption of messages at rest on the system server and call server using the Encrypting File System (EFS) on Microsoft® Windows®. You can encrypt stored messages on the system server and call server in the tenant-data directory. By enabling EFS on the tenant-data directory, messages will remain encrypted after they are copied to the online backup location. You can also encrypt archived messages. Please note that message encryption of stored messages is not enabled by default on all new systems.

Microsoft Windows Server® 2016 Hyper-V® Support

Mitel has formally certified the use of MiCollab AM in Microsoft Windows Server® 2016 R2 Hyper-V® virtual environments. This also includes web applications running Microsoft Internet Information Server (IIS) 10 that is part of Windows Server 2016. For anyone who is already using Hyper-V, MiCollab AM 9.0 supports using a software license with Hyper-V eliminating the need for a dongle and AnywhereUSB® device. For hardware requirements and technical limitations, please refer to [Minimum Requirements for Microsoft Hyper-V](#).

The following table provides additional details regarding support for Hyper-V.

Table 1. Hyper-V Support

Feature	Supported	Details
MiCollab AM Licensing	Yes	<ul style="list-style-type: none">• Either software licensing or use of a dongle connected to an AnywhereUSB device is supported.
Neverfail	Yes	<ul style="list-style-type: none">• MiCollab AM with Neverfail running on a Hyper-V virtual environment has been certified.
Live Migration	Yes	<ul style="list-style-type: none">• There may be instances of degraded audio (including DTMF) for brief periods as the system transfers.
High Availability	Yes	<ul style="list-style-type: none">• Hyper-V uses Microsoft Clustering Service (MSCS) and Network Load Balancing (NLB) for virtual machine High Availability.• MSCS and NLB are included in Windows Server 2012 R2 Standard, Datacenter, and Hyper-V 2012 R2 Core.• Shared storage and a trusted Active Directory domain are also required.

Dynamic Memory	No	<ul style="list-style-type: none"> The MiCollab AM application suite does not support Dynamic RAM. Virtual servers running the MiCollab AM application must be assigned a fixed amount of RAM.
Pass Through	No	<ul style="list-style-type: none"> Pass through of any type, including USB, is not supported.
AnywhereUSB	Yes	<ul style="list-style-type: none"> AnywhereUSB is a 3rd-party device that has been tested with the MiCollab AM application suite in Hyper-V environments. Mitel does not sell or provide technical support for this product. Consult the manufacturer's documentation for additional information about using AnywhereUSB products in virtualized environments.

Multi-Tenancy

MiCollab AM 9.0 is deployable as a multi-tenant software as service (SaaS) application that supports up to 100 tenants per system.

The following updates have been made to enable multi-tenancy in CX:

- System Configuration
 - Multiple tenants can be added on the new **Tenant** tab
 - Settings for mailbox length, message retention, and messaging or report data retention can be configured on the new **Tenant Summary** dialog box
- Admin Configuration
 - Tenant email messaging server profiles can be configured on the new **E-Mail** tab
 - Tenant fax servers can be configured on the new **Fax** tab
 - Tenant presence servers can be configured on the new **Presence** tab
 - Tenant languages can be configured on the new **Language** tab
- The **Main** tab of the Subscriber Mailbox now has an editable **Username** field, which is a unique user name that identifies the subscriber and is entered in an e-mail format (for example, Name@companyname) for a multi-tenanted system. While the system does not require the **Username** to be a valid e-mail address, it will accept one if provided. The only requirement is for the **Username** to be unique and in an e-mail format for a multi-tenanted system. If the administrator does not provide one, the system generates a unique value Auto55007@tenantname where Auto is a label showing it was auto generated and the numeric value is the mailbox ID.

NOTE For systems supporting multi-tenanting, it is highly recommended that the administrator provides a **Username** when creating a subscriber account, since this **Username** will be used to access the mailbox via the web client or Desktop Suite clients.

- Licensing is done via the feature key and is for whether or not the customer can utilize multi-tenanting. If the feature is licensed for a single tenant, the multi-tenant feature is disabled on the

feature key and the system will be installed with a single tenant. If the feature is licensed for multiple tenants, the feature is enabled on the feature key and the system will be installed with one tenant and have the ability to create up to 100 tenants.

- The following are not supported in a multi-tenanted system: NetConnect Digital Networking, NotifyXpress, TeamQ, UCConnect, and VIM.

Neverfail 8.1 Support

MiCollab AM 9.0 now supports Neverfail Continuity Engine 8.1, which replaces Neverfail Continuity Engine 6.7.7. Users who upgrade to MiCollab AM 9.0 will need to upgrade their Neverfail environment to 8.1.

NotifyXpress® Enhancements

MiCollab AM 9.0 includes the following enhancements to NotifyXpress:

- Updated the application to be a .NET application
- Added Short Message Service (SMS) notification support
- Added support for Twilio and Tropo SMS services (as an SMS service provider type in MiCollab AM which NotifyXpress can then utilize for its SMS notifications)
- Added email notification support
- Licensing is now done via the MiCollab AM feature key instead of a separate license file

Nuance Recognizer Update

In MiCollab AM 9.0, Nuance Recognizer has been updated to version 10.2.7 for improved performance.

Original Telephone User Interface (TUI) Enhancement

In MiCollab AM 9.0, the Original TUI and Original Alternate Addressing TUI have been enhanced with the ability for a subscriber to **Reply All** to messages that were sent to a distribution list.

Original Voice User Interface (VUI) Enhancement

In MiCollab AM 9.0, the Original VUI has been enhanced with the ability for an internal or external caller to mark a message **Private**.

Private Message Enhancements

MiCollab AM 9.0 has a new class of service setting that controls the ability to restrict the attachment of a private message to an email notification and restrict automatically forwarding a private message. These settings are selected by default for new Subscriber mailboxes and Class of Service mailboxes.

In addition, MiCollab AM 9.0 will inform recipients that the message is private every time a private message is accessed via the Telephone User Interface (TUI), Voice User Interface (VUI), Web PhoneManager, Mobile client, or Unified Messaging clients.

Recorded Name of Subscriber Mailbox Plays Before Security Code Prompt

MiCollab AM 9.0 includes an enhancement to all Telephone User Interfaces (TUIs) and the Voice User Interface (VUI) that reminds subscribers what mailbox they are logging into. When a subscriber dials voicemail, they will hear the recorded name of the subscriber mailbox they are logging into, prior to being prompted to enter the security code.

System Configuration Option to Suppress Operator Prompting

MiCollab AM 9.0 has the option to suppress the prompting for the operator that is heard after the subscriber's greeting. This option is automatically enabled for new installations of MiCollab AM. For upgrades, the option must be manually enabled.

Tango Networks Accelerator SIP Integration

MiCollab AM 9.0 now supports integration with the Tango Networks Accelerator telephone system using the Session Initiation Protocol (SIP). For more information, please see the new *Tango Networks Accelerator SIP Integration Technical Note*.

Unified Messaging Enhancements

MiCollab AM 9.0 includes the following enhancements for Unified Messaging:

- Message Waiting Indicator (MWI) for Messages Stored in Google™ Gmail™

MiCollab AM 9.0 has added the ability to turn the MWI on/off for users who store messages in Google Gmail. When a user receives a new message, the MWI is sent to all of the receiving user's devices that have MWI enabled in accordance with the **MWI Settings** contained within the **Switch Options** of the PBX integrations for the relevant devices. In addition, when a user listens to or views an unread message, then the MWI is cleared on all of the user's devices that have MWI enabled in accordance with the **Clear MWI Mode** setting on the **Features** tab of the subscriber's mailbox.

- Support for Customization of Exchange Message Classes

MiCollab AM 9.0 has added the ability to customize the message class for messages stored in Microsoft Exchange. This allows the message classes for both voice and fax messages to be modified so that the messages will open in the Microsoft Exchange UM forms as an alternative to the MiCollab AM messages opening in the Exchange UM forms.

- XMediusFAX® Viewer

In MiCollab AM 9.0, Unified Messaging clients now use XMediusFAX Viewer to display faxes. When installing or upgrading the MiCollab AM Unified Messaging client, users who do not have XMediusFAX Viewer already installed are provided the option to do so. For more information, please see the Unified Messaging Administration Guides and the *XMedius Fax Integration Guide*.

Web Client Authentication Tokens Feature

MiCollab AM 9.0 has added a new authentication tokens feature in the system configuration setting for web clients.

Web clients use authentication tokens now instead of stored user credentials. With the new authentication tokens feature, you can:

- Configure expiration time to force users to re-authenticate periodically. For both new installs and upgrades from versions that did not have this feature, the default setting for this feature is 30 days.
- Revoke authentication tokens for one user or all users, which prevents unauthorized access to the web client until the user re-authenticates.
- Reduce mailbox lockouts that would result from a security code change if the user didn't update their security code in the web client right away.

Web Client Enhancements

MiCollab AM 9.0 includes the following list of new features and enhancements for Mitel web client:

- Web client now runs on a Node.js/AngularJS platform. Previously, it ran on a PHP platform either on Windows IIS or Apache (Linux or Windows).
- Web client user enhancements:
 - On the Login page, **Mailbox** has been changed to **Username**, and the **Can't access your account?** feature has been added.
 - Live Reply is now available.
 - The ability to import audio to send as a message has been added.
 - Desktop notification can be toggled in **Settings** (only available with certain platforms).
 - Message action items appear when a user selects one or more messages from the message list (Desktop view only).
 - Message filtering now includes **Notifications** for Missed Calls, Acknowledgments, Read receipts, etc.
 - Usability changes to recipient list control have been added.
- Web client administrator enhancements:
 - Support has been added for multi-tenanting.

NOTE To correctly configure a multi-tenant system with the web client, a separate standalone Message Cache Manager is required that targets that server from within the web client.

- In the **Application Settings** section: **Product name**, **Login instructions and information**, **Additional logon information**, **Remember me on this computer**, and **Security Code Reset Request**, and **Inactivity Timeout** can be set.

Web PhoneManager Enhancements

MiCollab AM 9.0 includes the following list of new features and enhancements for Mitel Web PhoneManager:

- Web PhoneManager user enhancements:

- On the Login page, **Mailbox** has been changed to **Username**.
- Web PhoneManager administrator enhancements:
 - More settings have been added to the **Expose Availability Settings to Subscribers** section of the **Web PhoneManager Settings** page.
 - Support has been added for multi-tenanting.

NOTE To correctly configure a multi-tenanted system with Web PhoneManager, a separate standalone Message Cache Manager is required that targets that server from within the Web PhoneManager.

Windows Server® 2016 Support

MiCollab AM 9.0 extends support to Microsoft Windows Server 2016 (Server with Desktop Experience option). Please note that MiCollab AM 9.0 supports the Server with Desktop Experience option only; the Server Core option is not supported.

Discontinued Features

This version of MiCollab AM no longer supports the following:

- Integration with Mitel® PBXs using MiTAI®. Mitel recommends using the Mitel MiVoice/MCD SIP integration instead.

NOTE If someone happens to have a MiTAI integration and attempts to upgrade to 9.0, the installer should alert the installing technician that upgrading to 9.0 will break the integration and give them the ability to abort the install and stay at their current release.

- OpenText RightFax 9.4
- PHP 5.5 and older
- Google discontinued C2DM support for push notifications to Android devices back in June 2012 in favor of the newer GCM protocol. Google shut down the C2DM servers in July 2015 making it no longer possible to use C2DM. As such, the configuration settings for C2DM have now been removed from the Mobile Service web application.
- IBM Notes 7.0
- Microsoft Exchange 2007

NOTE MiCollab AM 9.0 is the last version of MiCollab AM that will support Microsoft Exchange 2007. To help with this transition, anyone currently using Microsoft Exchange 2007 should upgrade to MiCollab AM 9.0 first, and then upgrade to a new version of Microsoft Exchange.

- Microsoft Office 2007

NOTE MiCollab AM 9.0 is the last version of MiCollab AM that will support Microsoft Exchange 2007. To help with this transition, anyone currently using Microsoft Office 2007 should upgrade to MiCollab AM 9.0 first, and then upgrade to a new version of Microsoft Office.

- Neverfail 6.7.7
- OS2ToNT migration utility
- KinesisToCX migration utility
- Repartee for WindowsTo MiCollab AM migration utility

Localization

This section details what languages are supported for the various MiCollab AM client interfaces.

System Prompts/TUIs

As of this release, the system prompts, various telephone user interfaces (TUIs), and standard database are localized into the following languages:

- Arabic
- Chinese – Cantonese
- Chinese – Mandarin
- Danish
- Dutch
- English – Australian
- English – British
- English – North American
- Finnish
- French – Canadian
- French – European
- Italian
- German
- Japanese
- Norwegian
- Portuguese – Brazilian
- Portuguese – European
- Russian
- Spanish – Latin American
- Spanish – European
- Swedish
- TTY

Client Applications

As of this release, the MiCollab AM end-user client applications, as well as MiCollab AM Mobile Admin, are localized into the following languages:

- Danish
- Dutch
- English – North American
- Finnish
- French – European
- German
- Italian
- Norwegian
- Spanish
- Swedish

Text-to-Speech

As of this release, MiCollab AM supports the text-to-speech (TTS) languages and voices below. **Bold text** indicates the preferred voice when a language has more than one:

NOTE Version 6.0 replaced the previous RealSpeak TTS engine with Nuance Vocalizer. As such, you will need to update the TTS engine and any TTS languages when upgrading from any version prior to 6.0.

Table 2. Text-to-Speech

Language ¹	Dialect	Gender	Voice
Basque	Basque	F	Arantxa
Czech	Czech	F	Zuzana
Danish	Danish	F	Ida
Dutch	Belgian	F	Ellen
Dutch	Netherlands	F	Claire
English	Australian	F	Karen
English	Australian	M	Lee

English	British	F	Serena
English	British	M	Daniel
English	Indian	F	Sangeeta
English	Irish	F	Moira
English	Scottish	F	Fiona
English	U.S.	F	Donna
English	U.S.	F	Samantha
English	U.S.	M	Tom
French	French	F	Virginie
French	Canadian	F	Julie
German	German	F	Steffi
Greek	Greek	M	Alexandros
Italian	Italian	F	Silvia
Norwegian	Norwegian	F	Stine
Polish	Polish	F	Agata
Portuguese	Brazilian	F	Raquel
Portuguese	Portuguese	F	Joana
Russian	Russian	F	Milena
Spanish	Castilian	F	Monica
Spanish	Americas	F	Paulina
Swedish	Swedish	F	Alva
Turkish	Turkish	F	Aylin

¹ The System supports only one voice for a particular language.

Automatic Speech Recognition (ASR)

As of this release, MiCollab AM supports the ASR languages listed below.

Table 3. ASR

Language	Dialect
English	Australia
English	UK
English	United States
French	Canada
French	France
German	Germany
Spanish	Spain
Spanish	United States
Swedish	Sweden

Upgrading and Migrating to MiCollab AM 9.0

For detailed instructions on how to upgrade and migrate previous versions of MiCollab AM to MiCollab AM 9.0, please refer to the *Upgrading and Migrating MiCollab AM* online book included in the Documentation folder on the MiCollab AM 9.0 Telephony Server DVD.

Computer Platform Requirements

This section describes the basic computer hardware and software configurations necessary to run MiCollab AM and provides compatibility information for *UCConnect*, *OpenText RightFax*, and *NetConnect Digital Networking* installations.

Windows Update Policy

All updates made via Windows Update should be manually installed. The system should not be automatically updated and restarted. Mitel recommends the following rules for Windows Update:

- *Critical* and *Important Updates* including *Security Updates* for the Windows operating system in use should be installed.
- *Recommended* and *Optional Updates* should be reviewed for compatibility prior to installing.
- Service Pack or major release updates should only occur if they have been validated by Mitel.
- Backups should be made prior to any updates.

Minimum Hardware Requirements

You must dedicate a platform to the operation of MiCollab AM, its client utilities, and its maintenance programs. This computer platform must satisfy the following minimum requirements:

NOTE The following list represents the minimum hardware and software required for a basic four-port MiCollab AM version 9.0 system. The hardware requirements for your implementation of MiCollab AM may be substantially greater, depending on the features purchased, the type of integration installed, the expected traffic load, and any future upgrade planning.

- Windows Server 2008 R2 with Service Pack 1 (64-bit/x64), Windows Server 2012 R2 (64-bit/x64), or Windows Server 2016 (Server with Desktop Experience)
- Hard disk with at least 10GB of free space available on the Operating System Partition plus 10GB of free space on the Telephony Server partition
- Dual Core Intel® Celeron™ G3900 2.8 GHz CPU or better microprocessor
- 8GB memory with or without speech
- Microsoft .NET 3.5 SP1
- 1024 x 768 Color VGA-compliant graphics adapter and monitor
- DVD drive compatible with DVD±R media
- Network interface card
- Remote connectivity through TCP/IP (preferred), or a Windows compliant external modem and dedicated RS-232 serial (COM) port, to support remote administration

- Appropriately configured feature and license certificate files
- At least one USB port on the System Server, if using hardware-based licensing
- Sufficient full-length PCIe, PCI, or PCI-X expansion slots to support all required linecards, DSP cards, and digital interface cards. 5-volt cards require 5-volt PCI slots, while universal cards may be installed in 5-volt PCI, 3.3-volt PCI, or PCI-X slots.
- If integrating with a circuit-based switch, at least one compliant voice linecard. No physical voice linecards are required with an IP telephony integration
- If integrating using an outband RS-232 integration, at least one dedicated COM port and serial cable to communicate with the telephone system is required. If there is a single serial port with calls spread across multiple call servers, the serial port must be on the system server. If there are multiple serial links to a PBX, one serial port per call server is required and the serial links must be plugged into the individual call servers. Alternatively, a Perle IOLAN DS1 serial to IP converter can be used to connect a serial integration to MiCollab AM using TCP/IP instead of a serial (COM) port. Optionally, the IOLAN DS1 can split the integration data across multiple call servers as well.
- If Short Message Service (SMS) support is installed, a dedicated modem to contact the SMS provider or the subscribers' GSM-based mobile telephones (in addition to the modem used for remote administration); contact your SMS provider for their modem requirements and refer to the SMS Online Book for additional information. Note that SMTP-based message notification and delivery, which is configured as an SMS provider, does not require such a modem; instead, it uses the network interface card and TCP/IP connectivity specified earlier in this list.

Table 4. Supported Voice Line Cards

Line Card or Digital Interface Card	PCI Slot Requirements
Aculab Prosody X	PCIe slots
Dialogic D/41JCT-LS	PCIe ² or Universal (compatible with 5-volt PCI, 3.3-volt PCI, and PCI X slots)
Dialogic D/41JCT-LS Euro	PCIe or Universal (compatible with 5-volt PCI, 3.3-volt PCI and PCI X slots)
Dialogic D/42JCT	PCIe or Universal (compatible with 5-volt PCI, 3.3-volt PCI and PCI X slots)
Dialogic D/82JCT-U	PCIe or 5-volt PCI
Dialogic D/82JCT-U-PCI-UNIV	Universal (compatible with 5-volt PCI, 3.3-volt PCI, and PCI X slots)
Dialogic D/120JCT-LS	PCIe or 5-volt PCI
Dialogic D/120JCT-LS-U	Universal (compatible with 5-volt PCI, 3.3-volt PCI, and PCI-X slots)

Dialogic D/120JCT-LS Euro	PCIe or Universal (compatible with 5-volt PCI, 3.3-volt PCI, and PCI X slots)
Dialogic D/240JCT-T1	PCIe or Universal (compatible with 5-volt PCI, 3.3-volt PCI, and PCI X slots)
Dialogic D/480JCT-2T1EW	PCIe (compatible with 5-volt PCI, 3.3-volt PCI, and PCI X slots)
Dialogic D/480JCT-2T1-U	Universal (compatible with 5-volt PCI, 3.3-volt PCI, and PCI X slots)

² The PCIe cards listed in this table are an x1; however, according to Dialogic, all but the D/41 cards require the chassis to have the Power Budgeting feature or the card must be plugged into a x4 or greater slot to provide enough power to the card.

Table 5. Supported Media Gateways

Dialogic Media Gateway
Dialogic 2030 Media Gateway - Single E1/T1
Dialogic 2060 Media Gateway - Dual E1/T1
Dialogic 2120 Media Gateway - Quad E1/T1

Server Class Configurations

Refer to the configurations provided from [Table 6](#) through [Table 11](#) to determine hardware requirements.

Recommended Hardware Configurations

Table 6. Recommended Hardware Configurations

Server Class	Processor Reference	Memory (Windows Server 2008 R2 with SP1, Windows Server 2012 R2, or Windows Server 2016, 1 ASR language)	Memory (Each additional ASR language)
A	1 x Dual Core Intel® Celeron™ G3900 2.8 GHz CPU or better	4GB	1GB
B	1 x Six Core Intel® Xeon™ E5-2609 v3 1.9 GHz CPU or better	8GB	1GB
C	2 x Six Core Intel® Xeon™ E5-2609 v3 1.9 GHz CPU or better	16GB	1GB

D	2 x Eight Core Intel® Xeon™ E5-2640 2.6 GHz CPU or better	16GB	1GB
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NOTE Unless otherwise specified in the [New and Improved Features](#) section of the SRN, the hardware requirements for the current feature release (for example 9.0) have not changed from the most recent previous feature release (for example 6.1). As a result, if an existing system running the previous feature release is operating satisfactorily, it can be upgraded to the current version without performance concerns. However, new customers, or customers that are planning to add capacity to their systems with or without upgrading, should review the above classification in order to assure satisfactory system performance.

Recommended Hardware by Server and Ports

Table 7. Recommended Hardware by Server/Ports

System Server				
Total Ports	Up to 96	Up to 288	Up to 384	Up to 800
Server Class	A	B	C	D
Call Servers	1-8	1-8	1-20	1-20
Call Server ³				
Ports	4-24	4-48	4-96	4-144
Speech Resources	0-24	0-48	0-48	0-96
Server Class	A	B	C	D
System Server with Call Services				
Ports	4-24	4-48	4-96	4-144
Speech Resources	0-24	0-48	0-48	0-96
Server Class	A	B	C	D
Additional Call Services	No	1 ⁴	3	3

³ Please refer to [Minimum Requirements for VMware ESX/ESXi](#) or [Minimum Requirements for Microsoft Hyper-V](#) if running a Call Server in a virtual environment.

⁴ Additional Call Servers may be possible if none are at full capacity. Contact Mitel Sales Engineering to discuss this type of configuration before ordering.

Recommended Hardware by Server Class

Table 8. Recommended Hardware by Server Class

System Server				
Server Class	A	B	C	D
Total Ports	4-96	4-384	4-384	4-800
Call Servers	1	8	20	20
Call Server ⁵				
Server Class	A	B	C	D
Ports	4-24	4-48	4-96 ⁶	4-144 ⁷
Speech Resources	0-24	0-48	0-48	0-120
Combined System Server and Call Server				
Server Class	A	B	C	D
Ports	4-24	4-48	4-96 ⁶	4-144 ⁷
Speech Resources	0-24	0-48	0-48	0-120
Additional Call Servers	No	1	3	3

⁵ Please refer to [Minimum Requirements for VMware ESX/ESXi](#) or [Minimum Requirements for Microsoft Hyper-V](#) if running a Call Server in a virtual environment.

⁶ Maximum 48 ports when using speech recognition.

⁷ Maximum of 96 ports when using speech recognition.

Maximum Ports by Operating System

Port capacity may vary depending on the operating system used. The following table details port capacity by Operating System.

Table 9. Maximum Ports by Operating System

Operating System	Maximum Number of Ports
Windows Server 2008 R2 with Service Pack 1, Windows Server 2012 R2, or Windows Server 2016	96 with speech or 144 without speech

Port Distribution across Call Servers

The following table illustrates the class of server to use when splitting your MiCollab AM system across multiple Call Servers when MiCollab AM is using a dedicated System Server (i.e. a System Server with no ports on it). The rows indicate how many ports total across all Call Servers there will be in the system. The columns indicate how many Call Servers those ports would be split across with an equal number of ports on each Call Server. The intersection of the row and column is the minimum type of Call Server required for each of the Call Servers.

For example:

If you require a 192 port system and are thinking of splitting that into 2 Call Servers with 96 ports each, then you would locate the row for 192 Total Ports and the column for 2 Call Servers and find that you would need a high level server of type C for each of the Call Servers. If you split the system up into 4 Call Servers with 48 ports each instead, you can use low-level Call Servers which may cost less than 2 high level servers. Additionally, using 4 Call Servers would reduce the impact of a Call Server being out of service to only $\frac{1}{4}$ of overall capacity instead of $\frac{1}{2}$.

Table 10. Recommended Server Class by Number of Ports and Call Servers

		Number of Call Servers							
Total Ports		1	2	3	4	5	6	7	8-20
	4 - 24	A	A	A	A	A	A	-	-
	25 - 48	B	A	A	A	A	A	A	A
	49 - 72	C	B	A	A	A	A	A	A
	73 - 96	C	B	B	A	A	A	A	A
	97 - 120	-	C	B	B	A	A	A	A
	121 - 144	-	C	B	B	B	A	A	A
	143 - 168	-	C	C	B	B	B	A	A
	169 - 192	-	C	C	B	B	B	B	A
	193 - 240	-	-	C	C	B	B	B	B
	241 - 288	-	-	C	C	C	B	B	B
	289 - 336	-	-	-	C	C	C	B	B
	337 - 384	-	-	-	C	C	C	C	B
	385 - 500	-	-	-	D	D	C	C	C
	501 - 800	-	-	-	-	-	D	D	D

NOTE For information about applications not covered from Table 6 through Table 9, contact Mitel.

Capacities by Number of Call Servers

The table below details the maximum capacities based on the number of Call Servers used.

Table 11. Multiple Call Server Configuration

Call Servers ⁸	Max Ports without ASR	Max Ports with ASR	Text to Speech Channels	Max Users without ASR (Approx.)	Max Users with ASR (Approx.)
1	144	96	96	15,000	10,000
2	288	192	192	30,000	20,000
3	432	288	288	40,000	30,000
4	576	384	384	40,000	40,000
5	720	480	480	40,000	40,000
6 – 20	800	800	800	60,000	60,000

⁸ Each call server is limited to 3 integration types; the 3 integration types can be any mix of TDM and SIP (e.g. 1 TDM and 2 SIP). There is a limit of 1 Cisco UCM SCCP IP integration per call server, which can be mixed with TDM, but not SIP. Each Call Server can support up to 10 telephone systems in total; for example, 2 Avaya Communication Manager systems using SIP with 5 Avaya IP Office systems using SIP and 3 Siemens HiPath 4000 systems using Station Set Emulation.

Additional Notes Regarding Table 6 through Table 11

- All orders or inquiries involving Call Servers that are not co-located (where co-location is defined as the installation of 2 or more Call Servers in the same physical location, serving a homogeneous group of users, typically to support high volumes of traffic) must be submitted through Mitel.
- The NetConnect directory propagation server must be on a separate platform from the MiCollab AM server; the two products are incompatible on the same server.
- For mission-critical MiCollab AM applications, Mitel strongly recommends the use of an uninterruptible power supply (UPS), redundant hot swappable platform power supplies, redundant hot-swappable fans with washable air filters, and a RAID 1 or RAID 5 disk drive array with hot spare.
- MWI response time can vary widely depending on the number of indicators being changed at a time and the number of ports that are available and designated for changing MWIs. A MiCollab AM messaging application that subjects the system to high levels of burst MWI activity (an application that includes an all-company distribution list, for example) may need additional port capacity to satisfy customer requirements for MWI response. If the MiCollab AM application being planned involves a large number of Unified Messaging subscribers, if large distribution lists are frequently used, or if the customer has specific requirements for MWI response time, contact Mitel for assistance in configuring the system.

Minimum Server Requirements for Neverfail

The following are the minimum server requirements for the Neverfail Continuity Engine software.

- MiCollab AM 9.0 requires Neverfail 8.1 be installed or upgraded to.
- The primary, secondary, and tertiary System Servers must meet the minimum requirements, as any one of them may be the active System Server at any time. Mitel recommends identical platform hardware for all System Servers.
- The same Windows operating system, Service packs and hot fixes must be installed on all System Servers.
- Network adapters must be as follows:
 - 2 NICs are required for Primary-Secondary *Neverfail* topology
 - 3 NICs are required for Primary-Secondary-Tertiary *Neverfail* topology
 - Teaming is supported, but only among the NICs that participate in the same data link.

For example:

Two servers have four NICs each, and you are deploying Primary-Secondary topology:

 - Data link 1 (public + maintenance) can be a team of two NICs
 - Data link 2 (heartbeat/replication) can be a team of two NICs
 - You cannot team adapters that are meant to serve different data links.

For example:

Two servers have two NICs each, and you are deploying a Primary-Secondary topology:

 - You cannot team the NICs in the servers, as each NIC must serve a different data link.
- A minimum of 3 non-teamed network adapters are required in each server. One adapter is for the LAN connection, the second adapter is for the replication channel, and the third adapter serves as the maintenance port.
- A minimum of 2GB of additional memory. Refer to [Table 6. Recommended Hardware Configurations](#) for the memory requirements for your system.
- A minimum of 10GB (20GB for Trio configurations) free disk space per server on which you want to install Neverfail
- Administrator access to the primary, secondary, and tertiary servers
- Onsite expertise is required to install and verify the application and setup. Installers must be certified on *Neverfail* prior to installation or an Mitel Professional Services engineer must be onsite to perform the installation.

For problem resolution of *Neverfail* applications on MiCollab AM systems please contact the Mitel Technical Support department.

For more information on *Neverfail* and the *Neverfail* products please see the *Neverfail* website, www.neverfailgroup.com.

Minimum Web PhoneManager Requirements

Depending on its configuration, as many as three server platform components may be involved in the deployment of *Web PhoneManager*: the MiCollab AM System Server, the *Web PhoneManager* server, and the *Message Cache Manager* server. See the *Web PhoneManager* online book for requirements on the latter two servers.

NOTE On the server platform where *Web PhoneManager* resides, the web server software (either Microsoft Internet Information Services or Apache Web Server) and the scripting engine software (PHP) must be present and running correctly before *Web PhoneManager* can be installed or configured. Mitel cannot provide support for the web server or the scripting engine.

NOTE The *Web PhoneManager* online book discusses how to test these components using the *phpinfo()* function. Before contacting Mitel Technical Support, the web server administrator must conduct this test to verify that both components are working properly and that the PHP SOAP and XSL modules are installed.

Site Requirements

- TCP/IP-based connectivity between the various server components involved

Microsoft Internet Information Server (IIS) Requirements

- Microsoft IIS 7.0 or above
- PHP version 5.6 or 7.0
- World Wide Web Publishing Server (World Wide Web Service) installed
- To ensure web security using SSL, a certificate purchased from a Certificate Authority (optional)

Linux-based Apache Web Server Requirements

NOTE Most current Linux server distributions include copies of Apache and PHP. However, because those distributions are not updated between releases, you may need to download, build, and install the required versions of Apache and PHP.

- Current server-class Linux distribution such as Fedora, Debian, or OpenSUSE Linux
- Apache Web Server 2.2.x or above
- PHP version 5.6 or 7.0
- OpenSSL 1.0.2 or above (optional)
- To ensure web security using SSL, a certificate purchased from a Certificate Authority (optional)

Subscriber Browser Requirements

MiCollab AM subscribers can use *Web PhoneManager* through a web browser on current releases of the Windows, Mac OS X, or Linux operating systems. The following table shows the current browser and operating system combinations under which Mitel has tested and verified *Web PhoneManager*.

Table 12. Web PhoneManager Browser and Operating System Support

Browser	Windows	Mac OS	Linux
Microsoft Internet Explorer 9 and Above	✓		
Microsoft Edge	✓		
Mozilla Firefox	✓	✓	✓
Apple Safari	✓	✓	
Opera	✓	✓	✓
Google Chrome	✓	✓	✓

Minimum Standalone Integrated Client Access Server Requirements

NOTE For systems with more than 96 ports or 1,000 subscribers, Integrated Client Access (ICA) must be installed on a separate server platform. Each dedicated ICA server can support up to 3,000 concurrent connections and may support up to 5,000 subscribers, depending on how often your client application connects to the ICA server and how long it remains connected. Each MiCollab AM system can support multiple dedicated ICA servers for a maximum total of 10,000 subscribers.

If you are installing a standalone ICA server, the platform must meet the following requirements:

- Dual Core Intel® Celeron™ G3900 2.8 GHz CPU or better microprocessor; Windows Server 2008 R2 with Service Pack 1, Windows Server 2012 R2 64-bit, or Windows Server 2016 requires a x64 processor or a Dual Core processor.
- 4GB of RAM
- Hard disk drive with at least 10GB of free space available (additional free space is required if the operating system will be installed on the platform over a network)
- DVD drive
- TCP/IP protocol
- Availability to both subscriber workstations and the MiCollab AM server platform over the LAN or WAN

Minimum UConnect Developer Platform Requirements

The *UConnect* developer platform is a platform dedicated to the development of *UConnect IVR* applications. *UConnect* developer platforms require the hardware and software components shown in [Table 13. UConnect Developer Platform Requirements](#).

NOTE The following list represents the minimum hardware required to develop *UConnect IVR* scripts. The hardware you require to develop *UConnect IVR* scripts may be greater. Contact Mitel for specific hardware requirements.

Table 13. UConnect Developer Platform Requirements

Platform Requirements	Windows 7, 8, 10	Windows Server 2008 R2 with SP1, 2012 R2, and 2016
Processor group	Dual Core Intel® Celeron™ G3900 2.8 GHz CPU or better microprocessor	Dual Core Intel® Celeron™ G3900 2.8 GHz CPU or better microprocessor
RAM	4GB	8GB
Hard disk space	10GB free space	10GB free space

- Microsoft Windows Server 2008 R2 with Service Pack 1, Windows Server 2012 R2, Windows Server 2016, Windows 7 (32-bit and 64-bit editions), or Windows 8 (32-bit and 64-bit editions)
- Microsoft Visual Studio 2008 or above

NOTE By default, all .NET applications compile with a Target CPU of AnyCPU; however, *UConnect* scripts compiled with this setting do not function on 64-bit operating systems. To correct this limitation, open the Advanced Compiler Settings window, and then set the Target CPU to x86.

- Microsoft .NET 3.5 SP1
- Color VGA-compliant display adapter and monitor
- DVD drive
- Sound card and microphone that support recording and playback of .wav files
- Sound editing software – The Windows Sound Recorder provides basic sound editing functionality. However, an editor with the ability to trim silence at the beginning and end of a phrase and to do other audio manipulations is recommended. Such an editor may be included with the software bundled with the computer's sound card. Refer to the *Recording Prompts* section of the *UConnect Getting Started* online book for more information.

Minimum UConnect Remote Platform Requirements

The *UConnect* remote platform is a computer platform dedicated to the execution of *UConnect* IVR scripts and connected to the MiCollab AM server through a LAN. *UConnect* remote platforms require the following hardware and software components:

- Microsoft Windows Server 2008 R2 with Service Pack 1, Microsoft Windows Server 2012 R2, or Microsoft Windows Server 2016
- Microsoft .NET 3.5 SP1
- Color VGA-compliant display adapter and monitor
- Windows-compatible LAN adapter card
- DVD drive compatible with DVD+R media

NOTE This list represents the minimum hardware required to run *UConnect* IVR scripts on a remote platform. The processor and memory requirements for a specific remote *UConnect* platform depend on the size, complexity, and number of scripts the platform runs; the developer of each script is responsible for determining that script's requirements.

Minimum NetConnect Digital Networking Platform Requirements

Directory Propagation Server

The *NetConnect Directory Propagation* server must meet the requirements shown below.

NOTE The following list represents the minimum hardware requirements for the *NetConnect Directory Propagation* server to function. The hardware requirements for your implementation of *NetConnect Directory Propagation* may be greater. Contact Mitel for specific hardware requirements based on your implementation.

Table 14. NetConnect Directory Propagation Server Requirements

Number of Nodes	Number of Propagated Mailboxes	Processor Group
Up to 20	Up to 20,000	Dual Core Intel® Celeron™ G3900 2.8 GHz CPU or better microprocessor
21-50	Up to 30,000	Six Core Intel® Xeon™ E5-2609 v3 1.9 GHz CPU or better microprocessor

In addition, the server should include the following:

- 2GB of additional memory
- 10GB or larger hard disk drive free space
- DVD drive
- Microsoft Windows Server 2008 R2 with Service Pack 1, Microsoft Windows Server 2012 R2, or Microsoft Windows Server 2016
- Microsoft .NET 3.5 SP1
- Network interface card compatible with your site's LAN
- TCP/IP network protocol installed
- Color VGA-compliant display adapter and monitor
- Windows-compatible Ethernet LAN adapter card with the TCP/IP protocol installed and configured

NOTE The Directory Propagation Server must be a dedicated machine. It is incompatible with the MiCollab AM System Server and Call Server software.

Standalone Digital Networking Server

When running on a computer other than the MiCollab AM server platform, the *NetConnect Digital Networking* server must meet the requirements shown in Table 14: NetConnect Digital Networking.

NOTE A standalone *Digital Networking* server is only required if you are running the *Digital Networking* application in *Peer to Peer* mode. You do not need a standalone server if you are running the *Digital Networking* application in *Star Networking* mode.

NOTE The following list represents the minimum hardware requirements for the *NetConnect Digital Networking* server to function. The hardware requirements for your implementation of *NetConnect Digital Networking* may be greater. Contact Mitel for specific hardware requirements based on your implementation.

Table 15. NetConnect Digital Networking Server Requirements

Platform Requirements	Windows Server 2008 R2 with Service Pack 1, Windows Server 2012 R2, or Windows Server 2016
Processor group	Dual Core Intel® Celeron™ G3900 2.8 GHz CPU or better microprocessor
RAM	4GB
Hard disk space	10GB free space

In addition, the server should include the following:

- Microsoft .NET 3.5 SP1
- Color VGA-compliant display adapter and monitor
- DVD drive
- Windows-compatible Ethernet LAN adapter card with the TCP/IP protocol installed and configured

Minimum MiCollab AM Mobile Service Requirements

The requirements for the MiCollab AM Mobile Service are as follows:

NOTE The mobile clients are only compatible with the current and the two previous shipping versions of the mobile service.

Site Requirements

- TCP/IP-based connectivity between the various server components involved

Microsoft Internet Information Server (IIS) Requirements

- Microsoft IIS 7.0 or above
- PHP version 5.6 or 7.0 (SOAP, OpenSSL, and cURL must be selected during PHP installation)
- World Wide Web Publishing Server (World Wide Web Service) installed
- To ensure web security using SSL, a certificate purchased from a Certificate Authority (optional)
- Java with the path to the java.exe executable specified in the configuration via config.xml or in the admin page

Linux-based Apache Web Server Requirements

NOTE Most current Linux server distributions include copies of Apache and PHP. However, because those distributions are not updated between releases, you may need to download, build, and install the required versions of Apache and PHP.

- Current server-class Linux distribution such as Fedora, Debian, or OpenSUSE Linux
- Apache Web Server 2.2.x
- PHP version 5.6 or 7.0 (SOAP, OpenSSL, and cURL must be selected during PHP installation)
- To ensure web security using SSL, a certificate purchased from a Certificate Authority (optional)
- Java with the path to the java.exe executable specified in the configuration via config.xml or in the admin page

Minimum Requirements for VMware ESX/ESXi

When running MiCollab AM servers, applications, or services in a virtual environment, the following identify the minimum requirements for a given configuration:

- VMware ESX/ESXi version 5.1, 5.5 Update 2, 6.0 Update 2, or 6.5.
- The number of CPU cores specified in the [Server Class Configurations](#) section in this document.
- The amount of RAM required per Virtual Machine is defined in the [Server Class Configurations](#) section of this document.
- The amount of RAM required per Virtual Machine on 64-bit Windows Server 2012 R2 installations as defined in the [Server Class Configurations](#) section of this document.

NOTE In cases where a virtual machine encounters heavy activity, additional memory is required.

NOTE See the *System Installation and Configuration Guide* for more details on sizing the MiCollab AM virtual machines.

NOTE Technical Support may require you to isolate a specific Call Server virtual machine to a dedicated physical server for troubleshooting purposes.

Minimum Requirements for Microsoft Hyper-V

When running MiCollab AM servers, applications, or services in a virtual environment, the following identify the minimum requirements for a given configuration:

- Microsoft Hyper-V for Windows 2012, Windows 2012 R2, or Windows 2016.
- Microsoft Windows 7, Windows 8/8.1, or Windows 10

- The number of CPU cores specified in the [Server Class Configurations](#) section in this document.
- The amount of RAM required per Virtual Machine is defined in the [Server Class Configurations](#) section of this document.
- The amount of RAM required per Virtual Machine on 64-bit Windows Server 2012 R2 or Windows Server 2016 installations as defined in the [Server Class Configurations](#) section of this document.

NOTE In cases where a virtual machine encounters heavy activity, additional memory is required.

NOTE See the *System Installation and Configuration Guide* for more details on sizing the MiCollab AM virtual machines.

NOTE Technical Support may require you to isolate a specific Call Server virtual machine to a dedicated physical server for troubleshooting purposes.

Minimum Live Reply for Lync Requirements

In order to run Live Reply for Lync, you must be using:

- Microsoft Lync 2010 or 2013 client
- Microsoft Skype for Business Client 2016
- Microsoft Windows 7, Windows 8/8.1 or Windows 10

RightFax Support

MiCollab AM supports integration with the following versions of RightFax.

- OpenText RightFax 10.6
- OpenText RightFax 10.5
- OpenText RightFax 10.0

NOTE MiCollab AM supports all editions of RightFax except the Branch Office Server edition.

Unified Messaging Third-Party Compatibility

The following table shows the third-party software versions supported.

Table 16. Supported Versions for Microsoft Exchange, Lotus Notes and Domino, and IMAP

Application	Version	Minimum Required Service Pack
Operating System (Workstation)	Windows 10	
	Windows 8/8.1	
	Windows 7	
Exchange Server ⁹	2016	
	2013	
	2010	
Office 365	Exchange 2010, 2013 or 2016 based	
Gmail	All	
Outlook	2016 (32-bit and 64-bit) ¹⁰	
	2013 (32-bit and 64-bit) ¹⁰	
	2010 (32-bit and 64-bit)	
Notes / Domino ¹¹ and Notes Client	R9.0 (32-bit and 64-bit)	
	R8.5 (32-bit and 64-bit)	
	R8.0	SP1.2
GroupWise Server and Client	6.5.5 and above	
Mirapoint ¹²	3.6 and above	

⁹ MWI support for server-based UM requires that an English version of Exchange is running on an English version of Windows Server 2008 R1 with Service Pack 1, Windows Server 2012 R2, or Windows Server 2016.

¹⁰ Requires .NET version 4

¹¹ MWI support for server-based UM requires that an English version of Domino is running on an English version of Windows Server 2008 R1 with Service Pack 1, Windows Server 2012 R2, or Windows Server 2016.

¹² Mirapoint E-mail Server is supported under University of Washington namespace configurations only.

Capacities and Limitations

The following section lists capacities and limitations for the MiCollab AM of products.

Single Server

The following are the capacity and limitations for a system running on a single server:

- Up to 300 users per system
 - All users have a Unified Messaging and Personal Assistant license
- Up to 16 ports
 - All ports include ASR and TTS resources and 1 language
 - All ports include SIP/RTP resources
- Up to 5 ASR and TTS languages
- 1 IP integration only

MiCollab AM Single Server

The following are the capacity and limitations for a MiCollab AM system running on a single server:

- Up to 144 ports on a single server with no ASR resources and 96 ports on a single server using ASR on all ports
- Users per system:
 - 7,500 Local store
 - 3,750 Unified Messaging
 - 3,750 Personal Assistant
- Up to 96 ASR resources and 5 languages
- Up to 96 TTS resources and 5 languages
- Up to 3 integrations total, limit 3 SIP integrations or 1 non-SIP IP integration

MiCollab AM Multi-Server

The following are the capacity and limitations for a MiCollab AM system running on multiple servers:

- Up to 20 Call Servers per system

- Up to 144 ports on a single Call Server with no ASR resources and 96 ports on a single Call Server using ASR on all ports
- Up to 800 total ports, distributed across all Call Servers in the system.
Example: 20 Call Servers with a varying number of ports on each one, but with no more than 800 ports total.
- Users per system:
 - 60,000 Local store
 - 60,000 Unified Messaging
 - 60,000 Personal Assistant
- Up to 96 ASR resources per Call Server / 800 ASR resources total per system
- Up to 96 TTS resources per Call Server / 800 TTS resources per system
- Up to 5 ASR and 5 TTS languages per system (same languages on all Call Servers)
- Up to 10 integrations total per system
 - Up to 3 integrations total per Call Server, limit 3 SIP integrations or 1 non-SIP IP integration per Call Server
 - Up to 10 Dialogic Media Gateway (DMG) devices per Call Server

Networking and Global User Administration

MiCollab AM supports the following networking capacities:

- Up to 75 MiCollab AM systems

NOTE When using Global User Administration, all of your MiCollab AM servers must be on the same MiCollab AM release. For example, if one of your MiCollab AM servers is on the 9.0 release, the other MiCollab AM servers must be on the 9.0 release as well in order for the Global User Administration feature to work.

- Up to 50,000 fully propagated subscriber mailboxes

Message Waiting Indication for Unified Messaging

Table 17. Message Waiting Indication for UM

Feature	Capacity ¹³
Message-waiting indicator (MWI) support for	Maximum of 20,000 users. Refer to Microsoft's
MWI support for IBM Notes	Up to 5,000 MiCollab AM users

¹³ If you need more capacity in any of these features, contact Mitel Sales Engineering to discuss a solution to meet your requirements.

For More Information

The following resources are available:

Documentation Resources

The Mitel MiCollab AM Telephony Server DVD includes a Documentation folder containing all MiCollab AM technical documents that pertain to this release. Additional documentation resources are available on the connect.mitel.com/connect website for customers with Premium Support.

Other Resources

For pre-sales technical support, contact Mitel.