



Call Recording

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This document pertains to call recording for the MX250, MX-SE and MXvirtual. At the present time the MX30 does not support onboard automatic recording of calls. This document describes changes implemented with Release 8 and subsequent releases

- Auto recording of all groups (ACD/ICC/Hunt/Operator) (NOTE: ACD/Hunt and Operator call groups require a Call Recording License.)
- Automatic and On Demand Call Recordings of Users could be stored with the Archive Server.
- SIP calls (LAN to LAN) can now be recorded if SBC is properly configured.
- LAN to WAN (remote phones) calls can be recorded.
- Call Recording Licenses are only enforced WHILE a call is being recorded.

MX30 supports On Demand Call Recordings only.

When assigning call recording rights to call group agents, it is required to set the agents user profile | call recording profile to allow call group recording as well.

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2 Call Recording Capabilities

Call recording is allowed on the following MXs, providing the proper licensing and Hard Drive space is available. Further discussion on the type of trunks that allow for call recording is further on in the document.

- Automatic Call Recording
 - MX250
 - MX-SE
 - MXv

- On Demand Call Recording
 - MX30 (Starting with MX firmware version 5.2)
 - MX-SE
 - MX250
 - MXv

License Type	MX30	MX-SE	MX250	Two System Cluster	Four System Cluster
Voice Mail Storage	48 Hours	100 Hours	400 Hours	800 Hours	800 Hours
Automatic Call Recording Storage	NA	7G/~125 Hours	10G/~125 Hours	10G/~125 Hours	10G/~125 Hours
Call Recording on Demand	10 Hours	30 Hours	60 Hours	60 Hours	60 Hours

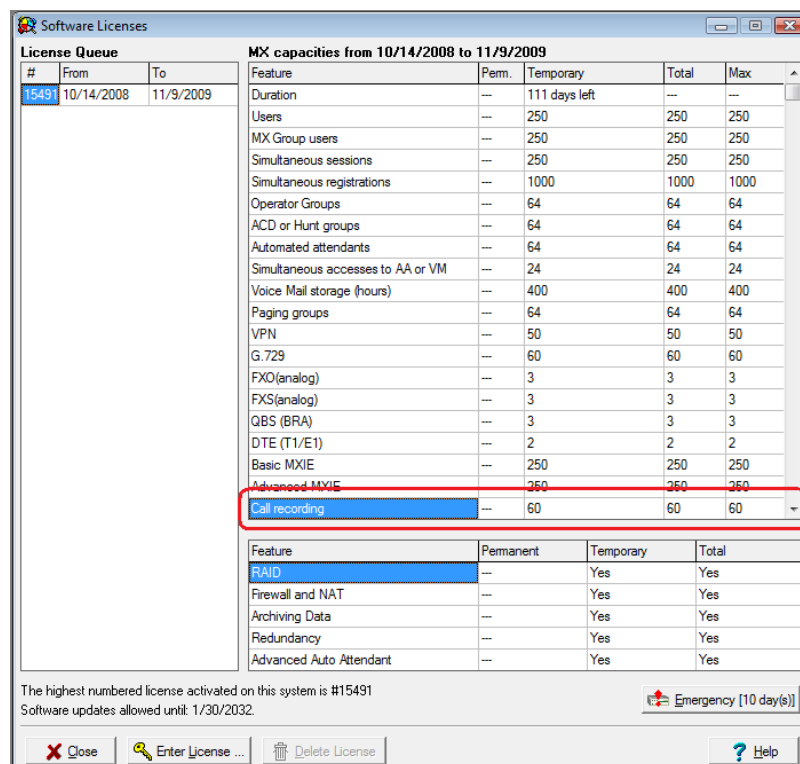
3 User call recording

Enabling call recording for a user is a 3 step process

1. Make sure a call recording license is available for the user(s).
2. Create a Call Recording profile with enabled call recording (Automatic or On Demand).
3. Assign Call Recording profile to the user(s).

3.1 Check Available Licenses

Check the number of Call Recording Licenses under *Maintenance / Software Licenses*. If an administrator configures users with the capability to record calls “On Demand,” and N licenses have been purchased, up to N calls can be selected to record simultaneously.

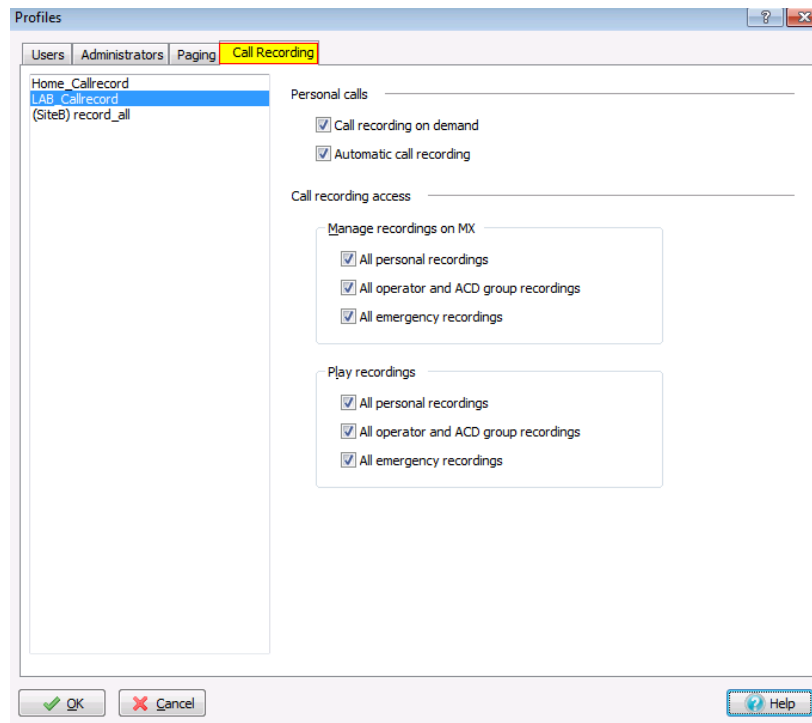


3.2 Create a Call Recording Profile with recording option Enabled

Click the *Profiles* button under *Configure / Users*. Click on the *Call Recording* tab to create a new call recording profile, and select from *Auto Call Recording* and/or *Call Recording On Demand*. Then select from the *Options* for preferences for viewing/listening to the recordings, and managing recordings.

It is important to note that the MX does not allow for the control of which users may listen to individual users, it is an all or none configuration.

- **All personal recordings:** This refers to all recordings made by ALL users in the system as a user, not just their own.
- **All operator and ACD group recordings:** This refers to all recordings made by ALL users in the system as an agent of an ACD/Hunt/Operator group, not just their own.
- **All emergency recordings:** This refers to any calls that are marked as emergency calls (911 for example).



3.2.1 Profile Attributes

The parameters on the upper right side of the panel configure recording rights for the users that are assigned to this profile. Data entry boxes display parameter settings for the highlighted profile in the Profile List.

Call recording on demand: Select this option to allow users assigned to this profile to record individual calls. The recording can be accessed through the user's MXIE account.

Automatic call recording: Select this option to record all calls of users assigned to this profile. These recordings are stored in the call recording database on the MX.

Manage recordings on MX: These options permit users assigned to this profile to remove (delete) phone recordings from the call recording database on the MX.

- **All personal recordings:** Select this option to manage calls involving system users within their user roles.
- **All operator and ACD group recordings:** Select this option to manage calls involving ACD groups, Operator groups, hunt groups, and Inbound Call centers.
- **All emergency recordings:** Select this option to manage all emergency calls.

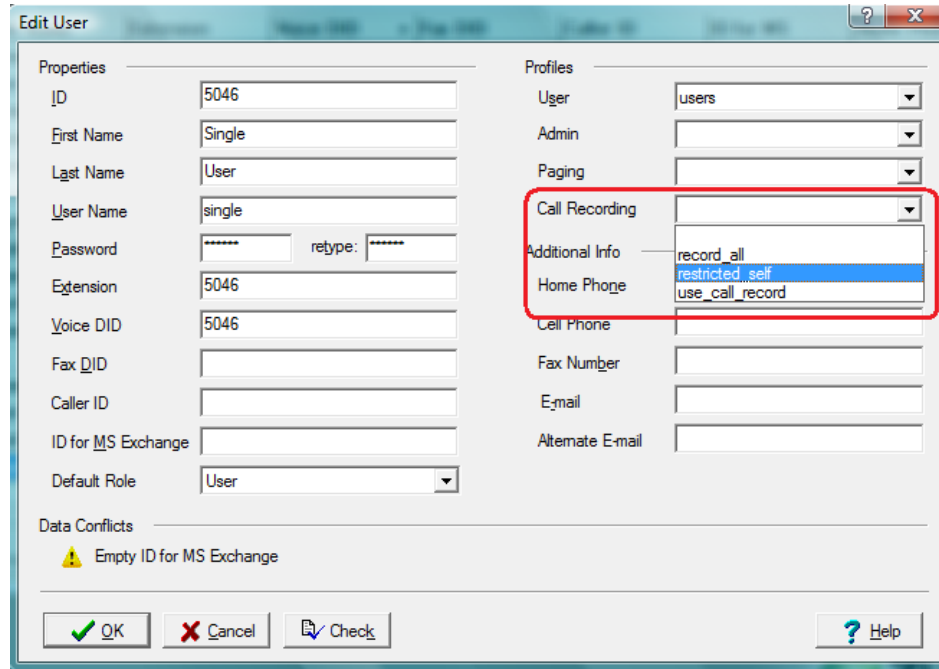
Play recordings: These options permit users assigned to this profile to listen to any phone recording in the call recording database.

- **All personal recordings:** Select this option for access to calls involving system users within their user roles.
- **All operator and ACD group recordings:** Select this option for access to calls involving ACD groups, Operator groups, hunt groups, and Inbound Call centers.
- **All emergency recordings:** Select this option for access to emergency calls.

3.3 Assign Call Recording Profile To Users


Apply a profile to users through the *Configure* | *Users* menu.

Double click on user line to edit



The screenshot shows the 'Edit User' dialog box with the following fields and values:

Field	Value
ID	5046
First Name	Single
Last Name	User
User Name	single
Password	*****
Extension	5046
Voice DID	5046
Fax DID	
Caller ID	
ID for MS Exchange	
Default Role	User
Profiles - User	users
Admin	
Paging	
Call Recording	record_all
Additional Info	record_all
Home Phone	restricted_self
Cell Phone	use_call_record
Fax Number	
E-mail	
Alternate E-mail	

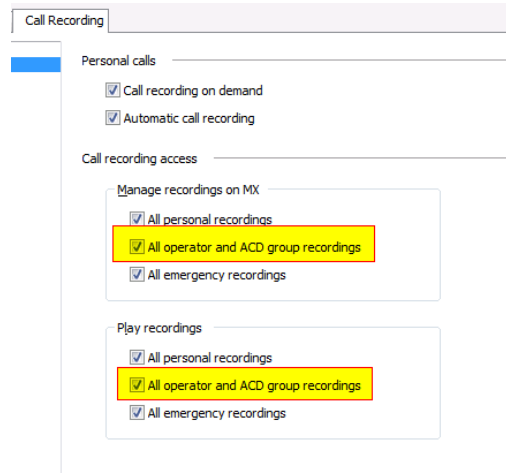
Data Conflicts:  Empty ID for MS Exchange

Buttons: OK, Cancel, Check, Help

4 ACD/Hunt/Operator Group Call Recording

Enabling call recording for an ACD/Hunt/Operator is a 3 step process.

1. Make sure an available call recording license is available for the user.
2. Set recording options for the ACD/Hunt/Operator group.
3. Set call recording permissions in the agents user profile | call recording profile.



Call Recording

Personal calls

- Call recording on demand
- Automatic call recording

Call recording access

Manage recordings on MX

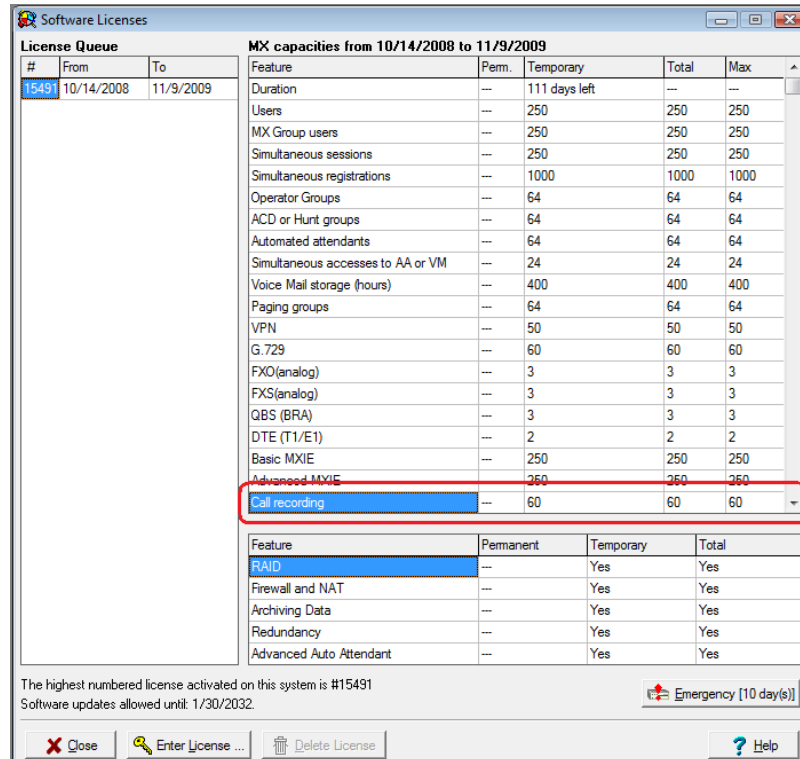
- All personal recordings
- All operator and ACD group recordings
- All emergency recordings

Play recordings

- All personal recordings
- All operator and ACD group recordings
- All emergency recordings

4.1 Check Available Licenses

- Check the number of Call Recording Licenses available through the *Maintenance / Software Licenses* menu. If an administrator configures users with the capability to record calls “On Demand,” and N licenses have been purchased, up to N calls can be enabled through MXIE to record simultaneously, depending on the number of current calls, which are under Automatic Call Recording, as licenses applied both to Automatic Call Recordings and On Demand Call Recordings



License Queue			MX capacities from 10/14/2008 to 11/9/2009				
#	From	To	Feature	Pem.	Temporary	Total	Max
15491	10/14/2008	11/9/2009	Duration	---	111 days left	---	---
			Users	---	250	250	250
			MX Group users	---	250	250	250
			Simultaneous sessions	---	250	250	250
			Simultaneous registrations	---	1000	1000	1000
			Operator Groups	---	64	64	64
			ACD or Hunt groups	---	64	64	64
			Automated attendants	---	64	64	64
			Simultaneous accesses to AA or VM	---	24	24	24
			Voice Mail storage (hours)	---	400	400	400
			Paging groups	---	64	64	64
			VPN	---	50	50	50
			G.729	---	60	60	60
			FXO(analog)	---	3	3	3
			FXS(analog)	---	3	3	3
			QBS (BRA)	---	3	3	3
			DTE (T1/E1)	---	2	2	2
			Basic MXIE	---	250	250	250
			Advanced MXIE	---	250	250	250
			Call recording	---	60	60	60

Feature	Permanent	Temporary	Total
RAID	---	Yes	Yes
Firewall and NAT	---	Yes	Yes
Archiving Data	---	Yes	Yes
Redundancy	---	Yes	Yes
Advanced Auto Attendant	---	Yes	Yes

The highest numbered license activated on this system is #15491
 Software updates allowed until: 1/30/2032

Emergency [10 day(s)]

Close Enter License ... Delete License Help

4.2 Set recording options for ACD/Hunt/Operator

Click on the *Call Recording* tab under the *Configure / Operator and Call Groups* menu, and:

- Enable *Automatic Call Recording*, applies to all group calls.
- Enable *Recording Call On Demand individually per agent*
- Select the access permissions needed to listen to and manage recorded calls
 - No Access
 - View Own
 - View All

Operator and Call Groups

General | Members | Call handling | Number associations | Queue configuration | Call recording | MX Group

Type	Name	Ext.	DID	Home Node
⚠ ACD	Park_01	01		Zultys_Lab_0
Hunt Group	5010_504	5010	5010	Zultys_Lab_0
Hunt Group	Hunt_Lea	5011	5011	Zultys_Lab_0
Hunt Group	Technical	5012	5012	Zultys_Lab_0
Inbound Call Center	ICC	5013	5013	Zultys_Lab_0
Operator	operator	5000	5014	Zultys_Lab_0
ACD	ACD	5015	5015	Zultys_Lab_0
Hunt Group	test	5016	5016	Zultys_Lab_0

Zultys_Lab_OH

Apply Cancel

Preferences

- Play beep at start
- Play beep every seconds
- Ask for caller's permission before recording a call
- Enable automatic call recording**

Agent Options

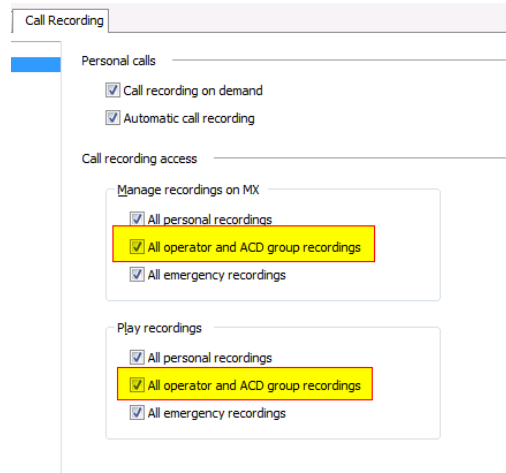
Agent	Recording on demand	Access to automatic recordings
Paul Chase	<input type="checkbox"/>	View own
Shannon Chase	<input type="checkbox"/>	View all
Stephen Chase	<input type="checkbox"/>	No access
Jennifer Chase	<input type="checkbox"/>	No access
55i user	<input type="checkbox"/>	No access
Polycom	<input type="checkbox"/>	No access

Help

5 ICC Call Recording

Enabling call recording for an ICC group is a 3 step process.

1. Make sure an available ICC licenses is available for the Agent.
2. Set recording options for the ICC group.
3. Set call recording permissions in the agents user profile | call recording profile.



Call Recording

Personal calls

- Call recording on demand
- Automatic call recording

Call recording access

Manage recordings on MX

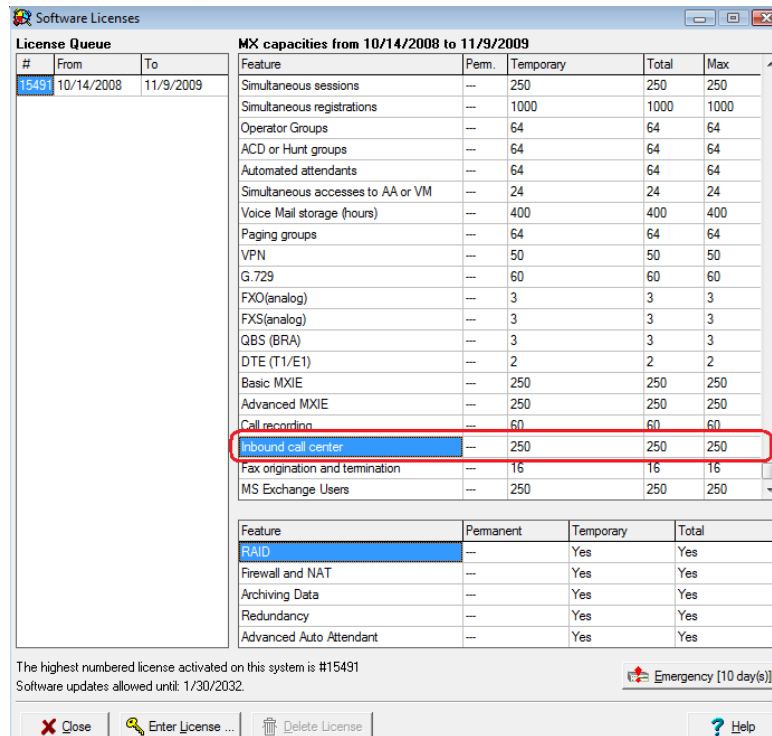
- All personal recordings
- All operator and ACD group recordings
- All emergency recordings

Play recordings

- All personal recordings
- All operator and ACD group recordings
- All emergency recordings

5.1 Check Available Licenses

Check the number of Call Recording Licenses available through the *Maintenance / Software Licenses* menu. One call recording license is included with the ICC license and can only be applied to ICC calls. Note: ICC call recording licenses will not appear under call recording licenses.



The screenshot shows the 'Software Licenses' window with the following data:

License Queue			MX capacities from 10/14/2008 to 11/9/2009				
#	From	To	Feature	Perm.	Temporary	Total	Max
15491	10/14/2008	11/9/2009	Simultaneous sessions	---	250	250	250
			Simultaneous registrations	---	1000	1000	1000
			Operator Groups	---	64	64	64
			ACD or Hunt groups	---	64	64	64
			Automated attendants	---	64	64	64
			Simultaneous accesses to AA or VM	---	24	24	24
			Voice Mail storage (hours)	---	400	400	400
			Paging groups	---	64	64	64
			VPN	---	50	50	50
			G.729	---	60	60	60
			FXO(analog)	---	3	3	3
			FXS(analog)	---	3	3	3
			QBS (BRA)	---	3	3	3
			DTE (T1/E1)	---	2	2	2
			Basic MXIE	---	250	250	250
			Advanced MXIE	---	250	250	250
			Call recording	---	60	60	60
			Inbound call center	---	250	250	250
			Fax origination and termination	---	16	16	16
			MS Exchange Users	---	250	250	250

Feature	Permanent	Temporary	Total
RAID	---	Yes	Yes
Firewall and NAT	---	Yes	Yes
Archiving Data	---	Yes	Yes
Redundancy	---	Yes	Yes
Advanced Auto Attendant	---	Yes	Yes

The highest numbered license activated on this system is #15491
 Software updates allowed until: 1/30/2032. Emergency [10 day(s)]

Buttons: Close, Enter License..., Delete License, Help

5.2 Set recording options for ICC

Click on the *Call Recording* tab under the *Configure / Operator and Call Groups* menu:

- Enable *Automatic Call Recording* , applies to all group calls.
- Enable *Recording Call On Demand individually per agent*
-
- Select the access permissions needed to listen to and manage recorded calls
 - No Access
 - View Own
 - View All

Operator and Call Groups

Type	Name	Ext.	DID	Home Node
⚠ ACD	Park_01	01		Zultys_Lab_0
Hunt Group	5010_504	5010	5010	Zultys_Lab_0
Hunt Group	Hunt_Lea	5011	5011	Zultys_Lab_0
Hunt Group	Technical	5012	5012	Zultys_Lab_0
Inbound Call Center	ICC	5013	5013	Zultys_Lab_0
Operator	operator	5000	5014	Zultys_Lab_0
ACD	ACD	5015	5015	Zultys_Lab_0
Hunt Group	test	5016	5016	Zultys_Lab_0

Zultys_Lab_OH

Apply
 Cancel

General | Members | Call handling | Number associations | Queue configuration | Call recording | ⚠ MX Group

Preferences

- Play beep at start
- Play beep every seconds
- Ask for caller's permission before recording a call
- Enable automatic call recording

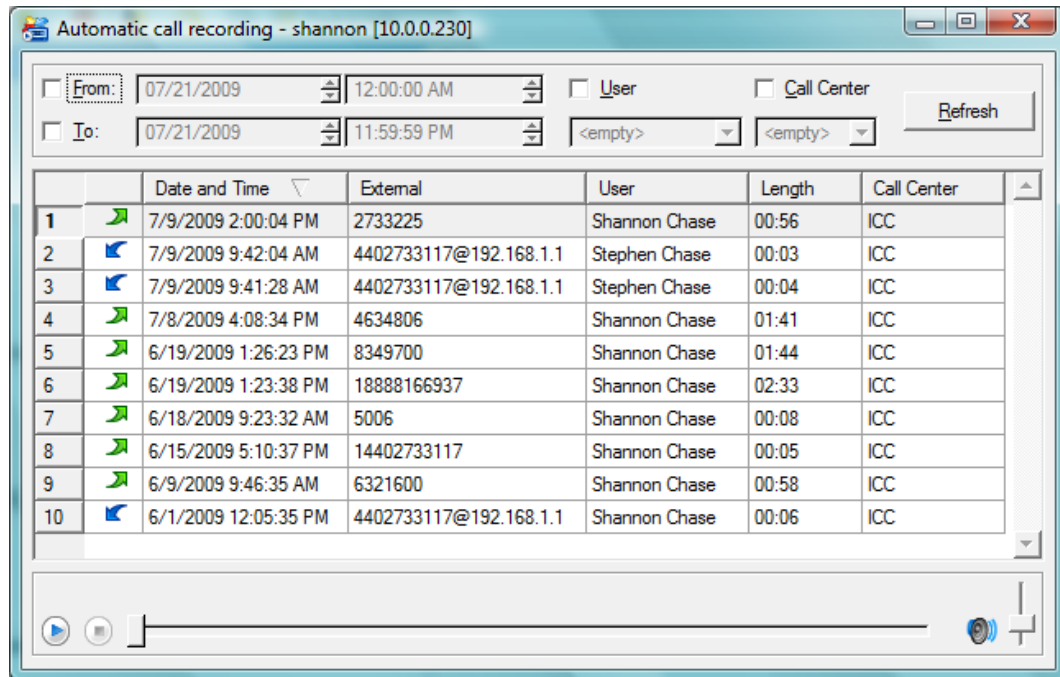
Agent Options

Agent	Recording on demand	Access to automatic recordings
Polycorn	<input type="checkbox"/>	No access
Stephen Chase	<input checked="" type="checkbox"/>	View own
Paul Chase	<input checked="" type="checkbox"/>	View all
Demo2 User <SiteB>	<input type="checkbox"/>	No access
55i user	<input type="checkbox"/>	No access
Jennifer Chase	<input type="checkbox"/>	View own
Shannon Chase	<input checked="" type="checkbox"/>	No access

Help

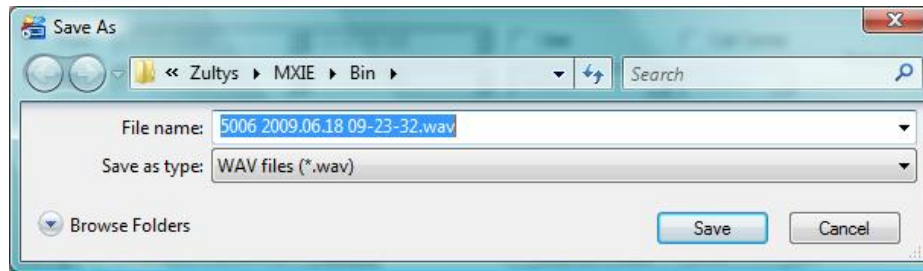
6 Viewing Automatic Call Recordings

Users view automatically recorded calls through MXIE by selecting the *View / Auto Call Recordings* menu. Call recordings can be searched by date, user and call group. The recording playback controls are located on the bottom of this screen.



6.1 Saving

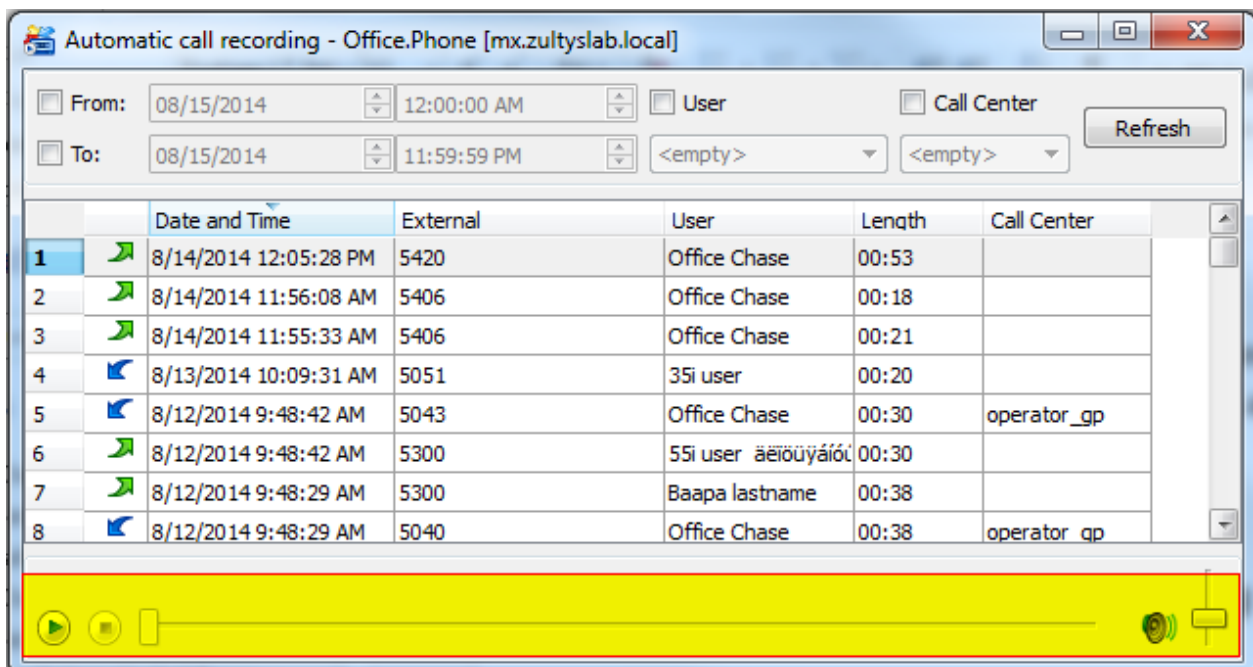
Recordings can be saved to a local drive by highlighting the recording and doing a right mouse click to bring up an additional commands menu and then selecting *Save to File*. Files are saved as WAV files named in the following manner [caller id of the call]_[YYYY.MM.DD]_[HH:MM:SS]



6.2 Playing

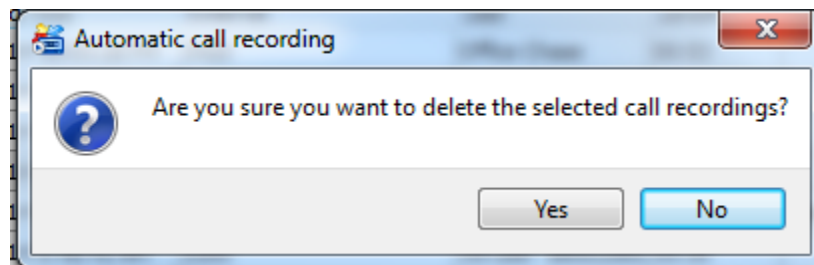
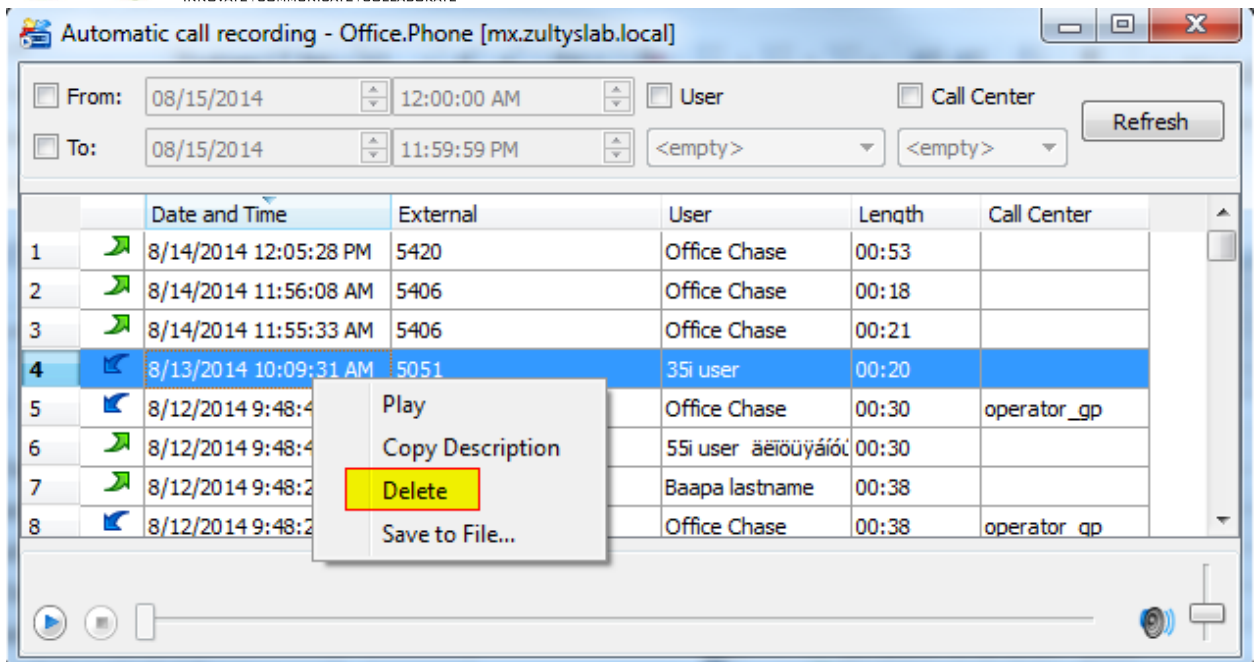
To play a recording (automatic or on demand) highlight the recording in question and use the play controls at the bottom of the screen. The controls allow for

- Play
- Stop
- Fast forward/rewind using the slider
- You can control the volume using the volume slider



6.3 Deleting

To delete a recording (automatic or on demand) highlight the recording in question and right click for a menu selection. From the menu select “Delete”, and confirm from the warning popup.



7 Verified Auto Recording Scenarios

Station	Internal Station With Auto	Internal Station Without Auto	Internal Hunt/ ACD/ Operator	External Hunt/ ACD/ Operator	ICC	External Forward	Internal Forward	External Transfer	Internal Transfer	Internal Find Me/ Follow Me	External Find Me/ Follow Me	External PRI
	n	n	n	y	y	y	n	n	n	n	y	y

Hunt/ ACD/ Operator	n	n	n	y	y	y	n	n	n	n	y	y
ICC	n	n	n	y	y	y	n	n	n	n	y	y

8 Call Recording Space Calculations

Space calculations for recorded calls, all calculations are calculated for worst case scenario.

- Voice Channel: G711 payload is 64 kilobits/second = 8kiloBytes/second
- Ethernet packet size with 20 ms RTP payload is 218 bytes; Traffic is 50 packets; totaling 87.2 kiloBytes/second
- 87.2 kiloBytes/second = 10.9 kiloBytes/second or about 650 kiloBytes/min or about 40 Mbytes/Hour

Automated Call Recording keeps TWO channels, so storage size required is about 80 Mbytes/hour. Actual storage size for automatic call recordings is bit over 10 Gig (approx 125 hours).

If Silence suppression is used, or packet length is more than 20 ms, storage used for the call will be lower.

9 Controlling the quota of on demand call recordings

Voice Mail and On Demand Call recording are subject to the same quota limitations and is controlled by the system administrator from the MXAdministrator. Under Configure | Voice Mail and Fax Limits.

The Voice Mail panel, as shown below, allocates mail box resources to MX users. This panel comprises four elements: profile, users, profile capacities, and total voice mail capacity. To access this panel, select the Voice Mail tab on the Fax and Voice Mail Limits window. Voice Mail describes the MX voice mail system.

9.1 Profiles

One mailbox is allocated to each user that is authorized to receive voice mail or do On Demand Call Recording and to each group (operator, ACD, and hunt).

User mail boxes are defined in terms of User profiles, as configured in the Profiles:User panel and assigned in the User List. Each user within a profile is assigned a mail box.

Groups are defined in the Call Group Configuration window. Profile column contents cannot be edited from this window. Each group is assigned one mail box regardless of the number of users assigned to the group.

9.2 Users

This column lists the number of users assigned to each user profile or to each ACD, operator, and hunt group. This information is derived from the User List and Call Group Configuration windows. User column contents cannot be edited from this window.

The number in this column for user profiles defines the number of voice mail boxes created to service profile members.

Each Operator, ACD, and Hunt group is assigned one mail box, regardless of the number of users listed in this column for those groups.

9.3 Voice Mail and On Demand Call Recordings

These columns determine the capacity of each voice mail box and the cumulative storage requirement of all voice mail boxes.

- **Delete saved after:** This column configures the time after the messages is marked as saved until it is automatically deleted.

- **Total Messages:** This column configures the number of messages that members of each profile entity can retain in the voice mail inbox. This limit includes the messages that have been listened to and saved as well as to those that have not yet been played. The voice mail system plays a message and disconnects callers that are routed to a filled voice mailbox.

· **Limit per Message:** This column configures the maximum length of any message that can be left by a caller; the default value is three minutes. When a caller approaches this limit, the MX emits warning beeps for ten seconds before terminating the call.

· **Total Time:** This column defines the maximum storage time that can be allocated to each user mail box or, for group boxes the maximum storage that is allocated per member of the group. This limit applies to the number of messages that have been saved as well as to those that have not yet been played. The voice mail system disconnects callers after playing a message if they are routed to a voice mail box that is full.

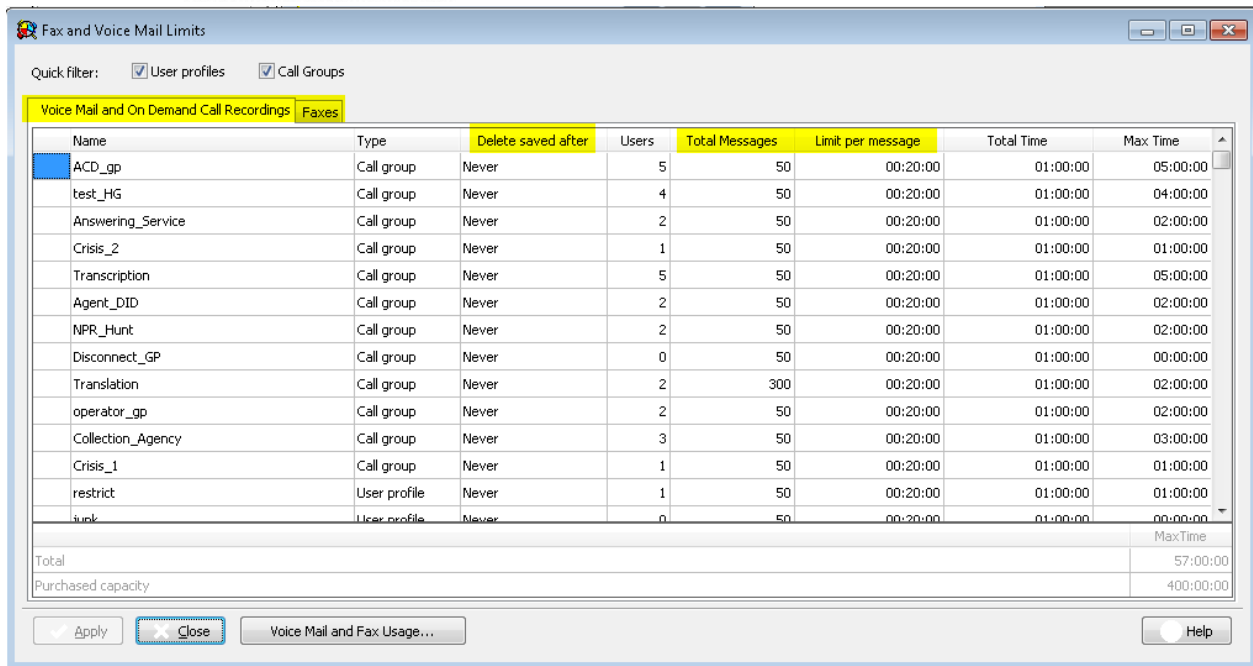
· **Maximum Time:** The program calculates the time allocated for each User Profile voice mailboxes as follows:

*Maximum Time equals Users * Capacity per User,*

where

*Capacity per User is the smaller of Total Time or Total Messages *
Message Limit*

This column has no meaning for ACD, Hunt, and Operator groups.



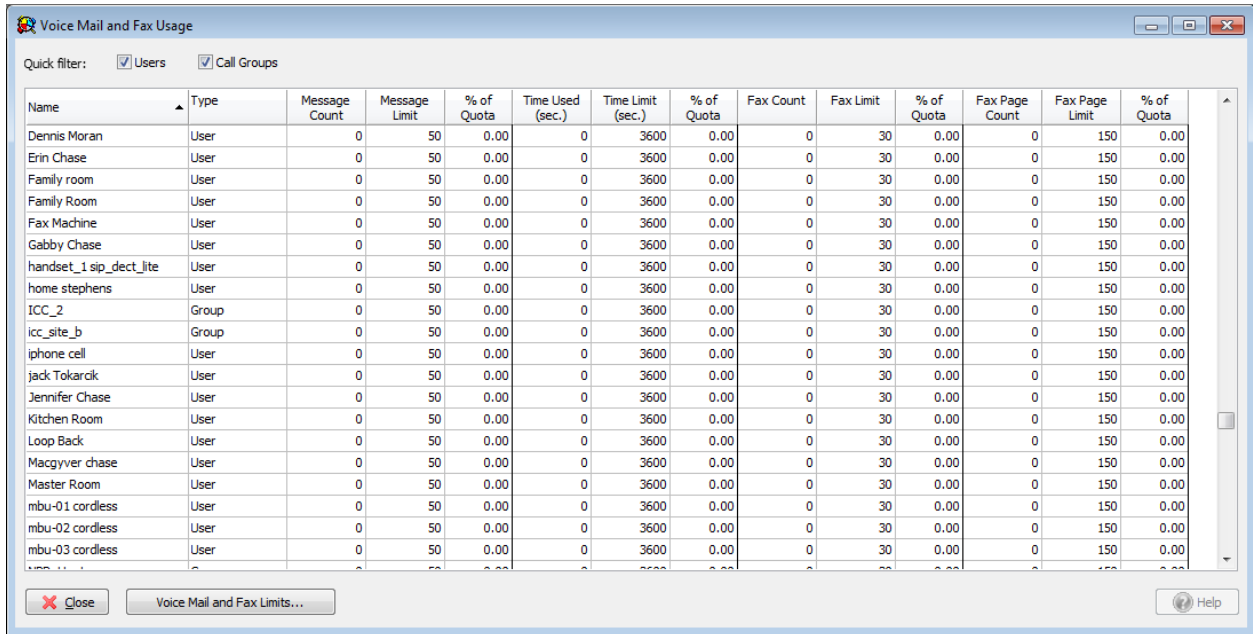
Name	Type	Delete saved after	Users	Total Messages	Limit per message	Total Time	Max Time	
ACD_gp	Call group	Never	5	50	00:20:00	01:00:00	05:00:00	
test_HG	Call group	Never	4	50	00:20:00	01:00:00	04:00:00	
Answering_Service	Call group	Never	2	50	00:20:00	01:00:00	02:00:00	
Crisis_2	Call group	Never	1	50	00:20:00	01:00:00	01:00:00	
Transcription	Call group	Never	5	50	00:20:00	01:00:00	05:00:00	
Agent_DID	Call group	Never	2	50	00:20:00	01:00:00	02:00:00	
NPR_Hunt	Call group	Never	2	50	00:20:00	01:00:00	02:00:00	
Disconnect_GP	Call group	Never	0	50	00:20:00	01:00:00	00:00:00	
Translation	Call group	Never	2	300	00:20:00	01:00:00	02:00:00	
operator_gp	Call group	Never	2	50	00:20:00	01:00:00	02:00:00	
Collection_Agency	Call group	Never	3	50	00:20:00	01:00:00	03:00:00	
Crisis_1	Call group	Never	1	50	00:20:00	01:00:00	01:00:00	
restrict	User profile	Never	1	50	00:20:00	01:00:00	01:00:00	
junk	User profile	Never	0	50	00:20:00	01:00:00	00:00:00	
							Max Time	
Total								57:00:00
Purchased capacity								400:00:00

9.4 Total Voice Mail Capacity

These parameters list the purchased voice mail capacity, followed by the theoretical voice mail capacity required if all user mailboxes are filled to capacity.

In reality, most users rarely use their maximum voice mailbox allotment, which allows you to safely configure a theoretical requirement that is larger than the purchased capacity. This window displays the theoretical requirement in red if it is more than three times larger than the purchased capacity.

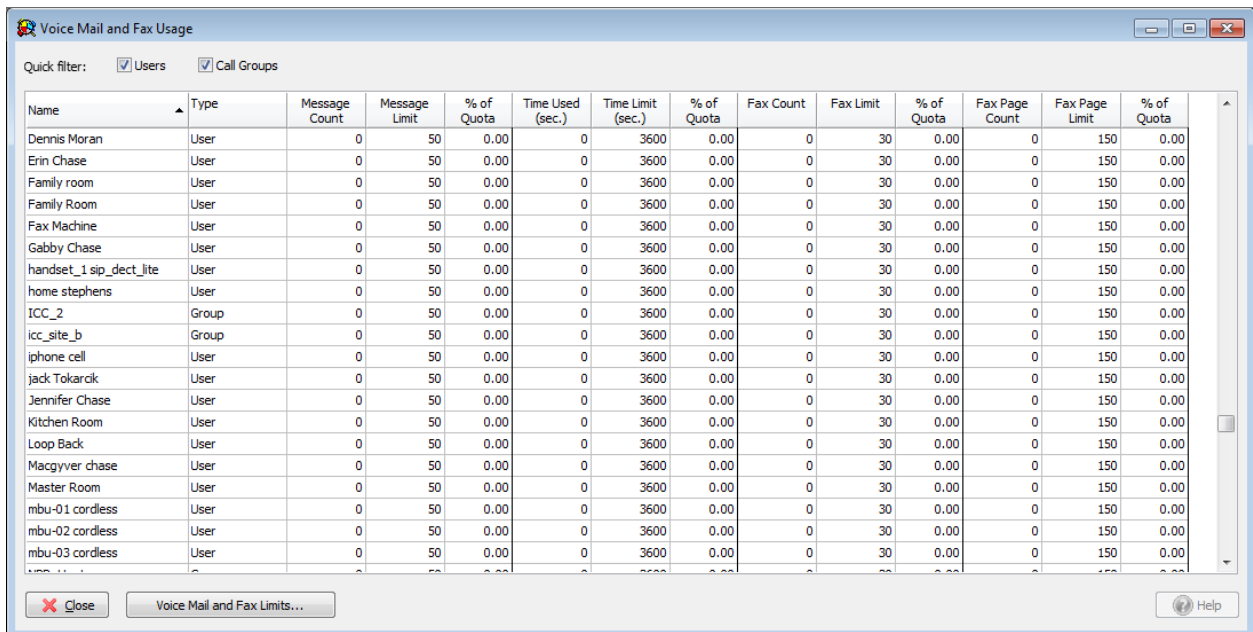
Important: Fax and Voice Mail Limits window changes do not take effect until you press the Apply button. If you press the Cancel button before pressing Apply, all pending changes to Fax and Voice Mail Limits panels are disregarded. Pressing the Apply button saves all pending changes to every Fax and Voice Mail Limits panel.



Name	Type	Message Count	Message Limit	% of Quota	Time Used (sec.)	Time Limit (sec.)	% of Quota	Fax Count	Fax Limit	% of Quota	Fax Page Count	Fax Page Limit	% of Quota
Dennis Moran	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Erin Chase	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Family room	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Family Room	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Fax Machine	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Gabby Chase	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
handset_1 sip_dect_lite	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
home stephens	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
ICC_2	Group	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
icc_site_b	Group	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
iphone cell	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
jack Tokarcik	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Jennifer Chase	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Kitchen Room	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Loop Back	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Macgyver chase	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Master Room	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
mbu-01 cordless	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
mbu-02 cordless	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
mbu-03 cordless	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00

10 Viewing Call Recording

On Demand call recording is stored with the user's voice mail, and is subject to the Quotas put on the user by the system administrator. The system administrator can view the user, or call group usage from the MXAdministrator from View | Fax and Voicemail Usage



Name	Type	Message Count	Message Limit	% of Quota	Time Used (sec.)	Time Limit (sec.)	% of Quota	Fax Count	Fax Limit	% of Quota	Fax Page Count	Fax Page Limit	% of Quota
Dennis Moran	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Erin Chase	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Family room	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Family Room	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Fax Machine	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Gabby Chase	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
handset_1 sip_dect_lite	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
home stephens	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
ICC_2	Group	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
icc_site_b	Group	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
iphone cell	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
jack Tokarcik	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Jennifer Chase	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Kitchen Room	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Loop Back	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Macgyver chase	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
Master Room	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
mbu-01 cordless	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
mbu-02 cordless	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00
mbu-03 cordless	User	0	50	0.00	0	3600	0.00	0	30	0.00	0	150	0.00

11 Call Recording Limits

11.1 On Demand Call Recording

For on demand call recording the maximum time per recording is governed by “Voice Mail limit per message” in Configure | Voice mail and Fax Limits. This option is controlled on a per profile basis and defines limit per call and limit per all calls for the user who is member of some user profile. There is no automatic cleanup, as those recordings are treated the same way as voice mail messages. If the limit per user is reached the following message will appear in syslog

[Fax or voice mail limit has been reached: User name = xxxx yyyy; Limit Type = Total voice mail Time; Limit=ddd]

11.2 Automatic Call Recording

Maximum call recording length per call is 10 hours, and cannot be modified.

There is the limit for the disk space used for recordings. If the next call recording would violate the disk space limit, the oldest file(s) will be deleted giving space for the new recording.

12 Call Recording FAQs

Q: Which calls can be recorded when using the call recording option with the MX250?

A: The media for a call must pass through an MX250 system in order for a call to be capable of being recorded. Any call coming through MX cards will be recorded. SIP to SIP calls will be recorded if SBC would be set reflecting the used networks.

Some examples:

- Any call that comes from the PSTN interface (ISDN, CAS, FXO) or terminated on PSTN interface can be recorded without any additional settings.
- Any call between ITSP and MX IP phone on the LAN or WAN can be recorded

- The internal call between two MX IP phones that does not pass through the MX250 (by default) *cannot* be recorded. If there is a need to record such calls between IP phones on the LAN, configure SBC to route the calls through the MX to record these calls.

Q: What is the difference between “On Demand” and “Automatic” call recording on the MX250?

A: On Demand call recording allows a user selectively record a specific call enabling the recording from MXIE user interface. When the user selects to record a call, the call recording is saved from the beginning of the call and is stored in the user’s voice mail box. If a user is going to record a significant number of calls, the Administrator of the MX system should set the limits accordingly.

Automatic call recording allows for all calls for a particular user or Inbound Call Center (ICC), ACD, Hunt or Operator group to be recorded. This is assigned by an administrator of the MX250. These recordings are stored on the MX250 system and can be overwritten unless the MX Archiving (licensed) option is used to pull call recording data from the MX250 system and store it externally. Full time call recording is licensed separately for individual users and groups (ACD/Hunt/Operator). A recording license comes standard with the purchase of an ICC license.

Q: What is the maximum storage capacity call recordings when using the call recording option with the MX250?

A: When call recording “On Demand” is used, the maximum storage capacity is equal to the size of the user’s voice mail box configured on the MX250. When using “Automatic” call recording on the MX250 without the MX Archiving (licensed) option, the maximum storage space is 10GB (160 hours) before recordings are overwritten. When using “Automatic” call recording on the MX250 with the MX Archiving option, the maximum storage capacity depends on the external storage device where the recordings are being archived.

Q: What is the maximum number of simultaneous call recordings that the system can handle when using the call recording option with the MX250?

A: The MX250 can handle a maximum of 60 simultaneous call recording sessions. These can be “On Demand” recorded calls, or calls that are being automatically recorded. When using a cluster of MX250 systems, call recording does not scale linearly. The maximum number of simultaneous call recording sessions in an MX Cluster is 60 calls.

Q: What occurs when the maximum number of simultaneous call recordings that the system can handle is exhausted and another call desired to be recorded?

A: The record icon will not be presented on MXIE with the call. A request for recording “On Demand” is not possible.

Q: How do I access and review calls that have been recorded by the MX250?

A: This depends on how the calls were recorded.

- For calls that have been recorded “On Demand,” you can use the Media Exchange Interface for End users (MXIE) to view and manage “On Demand” recordings that have been saved in your voice mail box. No special permissions are needed for a user to view their own recordings. On Demand recorded calls. Users can be granted permission by the system administrator to view On Demand calls from all other users.
- MXIE is also used to view call recordings for calls that have been recorded automatically (which are stored on the MX system). Permission must be granted by an Administrator of the MX250 to allow a user to view automatic call recordings. If MX Archiving is in use and call recordings have been pulled from the MX250 and stored on an external server, a special MX Archive Viewer must be used to view and query the recordings. This viewer can be downloaded from the MX250 web page, but a user must have the proper credentials to connect to the PC running the MX Archiving software to be able to view the recordings.

Q: How do I record all calls for my Inbound Call Center (ICC) group?

A: Automatic call recording capability is included with the cost of the ICC agent license. However, it must be configured for that ICC group by an administrator of the MX250. The Administrator can also grant users the right to be able to view the recordings while they are stored on the MX250. If you want to keep calls for a very long time for review or training purposes, you should also purchase the MX Archiving option. This option allows software on an external storage PC to pull the recordings from the MX system on a regular basis. Once configured, all inbound calls to the call center passing through the MX250 will be recorded. It should be noted that for outbound calls to be recorded, agents making outbound calls must use the MXIE PC client and initiate the call by clicking in the agent area of MXIE.

Q: How do I record all calls for my ACD/Hunt/Operator group?

A: Automatic call recording capability is NOT included with the license for ACD/Hunt/Operator groups. A separate Call Recording license must be purchased for each concurrent call you want to record. It must be configured for that ACD/Hunt/Operator group by an administrator of the MX250. The Administrator can also grant users the right to be able to view the recordings while they are stored on the MX250. If you want to maintain calls for an extended period of time for review or training purposes, it is highly recommended that the MX Archiving option be purchased. This option allows software on an external storage PC to pull the recordings from the MX system on a regular basis. Once configured, all inbound calls to the call center passing through the MX250 will be recorded. It should be noted that for outbound calls to be recorded, that agents making outbound calls must use the MXIE PC client and initiate the call by clicking in the agent area of MXIE.

Q: How is call recording licensed on the MX250?

A: You can purchase individual call recording licenses which are treated like a pool of resources. There are two types of call recording that can be configured on the MX250; "On Demand" and "Automatic." If an administrator configures users with the capability to record calls "On Demand," and N licenses have been purchased, up to N calls can be selected to record simultaneously. If an

administrator configures a user to have all of their calls recorded automatically, only N-1 licenses will be available to other users. Call recording is not licensed separately for the Inbound Call Center; rather, it is included in the cost of the ICC agent license.

Q: If I have call recording configured on an MX250 and have configured that MX250 into a cluster with redundancy, are all of my call recordings backed up onto the redundant MX250?

A: The answer depends upon the type of recording being used. “On Demand” call recordings are copied to the backup system along with the content of the voice mail boxes. Automatic Call recordings are not copied to the backup system and will only be duplicated on the local RAID drive. If you have a redundant MX in a cluster and a main MX goes down, the redundant box covers the recording functionality. After the failed MX comes back into service all recordings made during the switched over period are copied back to the newly active MX.

Q: What is the behavior of call recording for calls placed on hold or calls that are transferred?

A: When a call is placed on hold by recording side the recording is not active. If the call is transferred, the MX looks at the call recording policy enabled for the (potentially) new parties in a conversation as well as call recording capabilities (see “Which calls can be recorded ...”) which apply to those new parties in a conversation.