



GXE5024 Users Manual



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1. Introduction

Thank you for purchasing the Grandstream GXE502x IP-PBX, a SIP-based, affordable, high-quality converged communications platform designed to enhance small to medium business enterprises.

The GXE502x is capable of providing the cutting-edge IP-based communications to businesses demanding the latest of technologies, while leveraging existing infrastructure and providing a most friendly transition into IP telephony for others. Supporting open-standard SIP, the GXE502x can easily integrate into and interoperate with other components of your IP-based communications network while providing a rich set of features to reduce costs and increase productivity. Built-in FXO and FXS ports enable the GXE502x to interface with analog lines and devices while concurrently registering to SIP trunks and SIP-based trunk gateways to maximize available communications resources.

An auto-provisioning Express Setup wizard and an intuitive user interface allow the GXE502x to be set up and installed quickly and confidently. Voicemail, voicemail-to-email, conference bridges, and other enhanced features can be enabled and functioning with just minimal effort via user-friendly web configuration pages. Its broad feature set, ease of operation, and quality and value makes it ideal for any business communication environment.

- Equipment Packaging

The GXE502x IP-PBX package contains:

- 1) One GXE502x IP-PBX unit
- 2) One 12 Volt power adapter
- 3) One Ethernet cable

2. Administering Extensions on the GXE

Extensions for the internal users can be created from the **Express Setup** menu of a factory-default GXE, or from the **Phone Extensions** menu at any time. This can be local users in the internal network, or even remote users connecting over the open Internet. This flexibility allows users to have their office extension with them virtually anywhere, keeping accessibility to personnel high without incurring any PSTN toll charges for the worker at home or the road-warrior.

The **Express Setup** provides a quick wizard to complete initial setup of all extensions on a new system, including auto-provisioning of the phones. The **Phone Extensions** menu allows you to add, batch add, modify, reboot, delete and batch delete extensions.

- **Using the Express Setup wizard to create extensions and auto-provision phones.**



GXE5024 IPPBX Administration Interface

<ul style="list-style-type: none"> Phone Extensions Trunk/Phone Lines Conference Bridge Hunt/Ring Group Auto-Attendant Call Queues 	Language English None						
<h3>Express Setup</h3>							
<p>General System Configuration:</p> <table style="width: 100%;"> <tr> <td style="width: 70%;">Extension Length</td> <td style="width: 30%;"><input type="text" value="4"/></td> </tr> <tr> <td>Extension Digit Prefix</td> <td><input type="text" value="6"/></td> </tr> <tr> <td>Identifier of this IPPBX</td> <td><input type="text" value="010"/></td> </tr> </table> <p style="text-align: center;"><input type="button" value="Next"/></p>		Extension Length	<input type="text" value="4"/>	Extension Digit Prefix	<input type="text" value="6"/>	Identifier of this IPPBX	<input type="text" value="010"/>
Extension Length	<input type="text" value="4"/>						
Extension Digit Prefix	<input type="text" value="6"/>						
Identifier of this IPPBX	<input type="text" value="010"/>						

The Express Setup wizard will allow you to set various system extensions on the GXE and create your phone extensions. It will also auto-provision your phones with the extensions you create. Please refer to the *GXE Quick Start Guide* for detailed instructions on setting up your GXW with the Express Setup wizard.

Extension Length: all extensions must have the number of digits specified here.

Extension Digit Prefix: all extensions will begin with this digit.

Local IPPBX Number: a unique identifier number for this local GXE system.

- **Using the Phone Extensions menu to create, modify, view, and delete extensions.**

In the General Settings section, the following settings can be set.

<ul style="list-style-type: none"> Phone Extensions Trunk/Phone Lines Conference Bridge Hunt/Ring Group Auto-Attendant Call Queues System Configuration Advanced Options Reset & Reboot Status 	Language English Logout																																			
<h3>Express Setup</h3>																																				
<p>Automatic Extensions Provisioning:</p> <table style="width: 100%;"> <tr> <td style="width: 40%;">Extension Number for Phone/FAX Ports</td> <td style="width: 10%;"><input type="text" value="6990"/></td> <td style="width: 10%;">for port 1;</td> <td style="width: 10%;"><input type="text" value="6991"/></td> <td style="width: 10%;">for port 2</td> </tr> <tr> <td>Extension Number for Paging</td> <td><input type="text" value="6992"/></td> <td colspan="3"></td> </tr> <tr> <td>Extension Number for Auto-Attendant</td> <td><input type="text" value="6993"/></td> <td colspan="3"></td> </tr> <tr> <td>Extension Number for Conference</td> <td><input type="text" value="6994"/></td> <td>for conference 1;</td> <td><input type="text" value="6995"/></td> <td>for conference 2;</td> </tr> <tr> <td>Starting Extension For Express Provisioning</td> <td><input type="text" value="6000"/></td> <td colspan="3"></td> </tr> <tr> <td>Ending Extension For Express Provisioning</td> <td><input type="text" value="6999"/></td> <td colspan="3"></td> </tr> <tr> <td>Extension Number for Operator</td> <td><input type="text" value="6000"/></td> <td colspan="3"></td> </tr> </table> <p style="text-align: center;"><input type="button" value="Start Auto Provisioning"/></p>		Extension Number for Phone/FAX Ports	<input type="text" value="6990"/>	for port 1;	<input type="text" value="6991"/>	for port 2	Extension Number for Paging	<input type="text" value="6992"/>				Extension Number for Auto-Attendant	<input type="text" value="6993"/>				Extension Number for Conference	<input type="text" value="6994"/>	for conference 1;	<input type="text" value="6995"/>	for conference 2;	Starting Extension For Express Provisioning	<input type="text" value="6000"/>				Ending Extension For Express Provisioning	<input type="text" value="6999"/>				Extension Number for Operator	<input type="text" value="6000"/>			
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Extension Number for Operator	<input type="text" value="6000"/>																																			

Extension Number for Internal Phone/FAX ports: Set the extension number for the TEL1 and TEL2 FXS ports on the back of the GXE here.

Extension Number for Paging: users may dial this number for group paging.

Extension Number for Auto-Attendant: set the extension to reach the auto-attendant menu here.

Extension Number for Conference: set the extensions to reach both conference bridges.

Starting Extension for Express Provisioning: Set the starting extension for auto-provisioning during Express Setup.

Ending Extension for Express Provisioning: Set the ending extension for auto-provisioning during Express Setup.

When finished, click on the **Submit** button to save your changes or **Cancel** to discard.

The Extensions Directory section displays all SIP phone extensions configured on the GXE including their details and registration status. The following actions can be performed in this section.

GXE5024 IPPBX Administration Interface

GREEN=Local BLUE=Remote Language English Logout

All	Extension	Name	Department	Device Type	IP Address	Status	Privilege	
<input type="checkbox"/>	6000	Operator				Offline	Super	Modify Delete
<input type="checkbox"/>	6001	John Doe	Sales	Grandstream GXP2000 1.1.5.15	192.168.10.100	Online	Regular	Modify Delete
<input type="checkbox"/>	6002	Jane Doe	Sales	Grandstream GXP2000 1.1.5.15	192.168.10.101	Online	Regular	Modify Delete
<input type="checkbox"/>	6003	Jane Doe	Support	Grandstream GXP2000 1.1.5.15	192.168.10.102	Online	Regular	Modify Delete
<input type="checkbox"/>	6004	Billy Bob	Support			Offline	Regular	Modify Delete
<input type="checkbox"/>	6005	Ricky Bobby	Support			Offline	Regular	Modify Delete

Delete Add one Extension Batch Add

Add an extension: Click on the **Add One Extension** button. The extension details page will be displayed, allowing you to set all of the extension’s settings. When done, click on the **Submit** button to add the extension or **Cancel** to go back.

Batch add extensions: Click on the **Batch Add** button. The next page allows you to specify the range of extensions to add, as well as some general extension settings to apply to them. You may go back to the extensions directory and modify the extensions to set extension-specific settings. When done, click on the **Submit** button to add the extensions or **Cancel** to go back.

Modify and/or reboot a SIP extension: Click on the **Modify** button to the right of the row displaying information for the extension you wish to modify. The extension details page will be displayed, allowing you to modify all of the extension’s settings. To reboot the phone, set the *Reboot Peer* setting to “Yes”. When done, click on the **Submit** button to modify and/or reboot the extension or **Cancel** to go back.

Delete: Click on the **Delete** button on the far right of the row displaying the information for the extension you wish to delete. You will be prompted for confirmation via a dialog box; click **OK** to confirm or **Cancel** to go back.

Batch delete: Delete multiple extensions in one step by checking each checkbox of all extensions to be deleted, and clicking on the **Delete** button below the column of checkboxes. To check all displayed extensions on the current page, check the uppermost checkbox, labeled as “All”. Note that this only affects extensions on the current page; extensions on other pages will not be deleted. You will be prompted for confirmation via a dialog box; click **OK** to confirm or **Cancel** to go back.

- **Busy Lamp Field and Message Waiting Indication**

Busy Lamp Field (BLF) support and Message Waiting Indication (MWI) support are enabled on the GXE. New voicemail messages will automatically trigger an MWI light on phones that support it to notify the user of new voicemail messages. To monitor the statuses of other users on the GXE, configure BLF keys on an IP phone to the extension numbers of the users to be monitored. The GXE will trigger the BLF keys to signal when the monitored user is idle, has a call ringing, or is busy.

- **Auto Provisioning Extensions after Express Setup**

You can Auto-Provision more extensions after completing the Express Setup process by clicking “Auto Provision” under the Phone Extensions menu (Firmware version 1.0.0.50 & greater). The starting and ending extensions for the phones that you are adding must be specified before connecting the phones.

Click the “start” button to start the auto provisioning process. Once the Auto-Provision page starts refreshing you may connect your phones into your switch/hub.

GXE5024 IPPBX Administration Interface

Language: English

Auto Provision

Starting Extension:

Ending Extension:

Device Type	Extension Provisioned	MAC Address	IP Address	Status
GXP2000	6001	00.0b.82.0b.18.ed	192.168.10.100	Online
GXP2000	6002	00.0b.82.0d.7f.1c	192.168.10.101	Online
GXP2000	6003	00.0b.82.0b.14.4c	192.168.10.102	Online
GXV-3000	6004	00.0b.82.0c.dc.d0	192.168.10.103	Online
GXV-3000	6005	00.0b.82.09.bd.2b	192.168.10.104	Online

3. Configuring Trunks on the GXE

PSTN trunks via the FXO ports, SIP trunks, and SIP-based PSTN trunk gateways can be configured on the GXE in the **Trunk/Phone Lines** menu. Also, the FXO and FXS port line electrical settings can be configured here as well. This will allow users on the GXE to call destinations anywhere through the trunks configured on the GXE.

- **Configuring internal PSTN trunks via FXO ports**

In the Internal PSTN Trunk Line section, the FXO ports on the back of the GXE can be configured to interface with and send/receive calls to/from the PSTN.

Compatibility with PSTN lines can be achieved by adjusting the following types of settings. The default settings should function in most cases, depending on your regional PSTN line characteristics.

Internal PSTN Trunk Line Configuration Language [Logout](#)

FXO Termination

Enable Current Disconnect	<input checked="" type="radio"/> No <input type="radio"/> Yes
Current Disconnect Threshold(ms)	200 (100-10000, default 200)
Enable Tone Disconnect	<input checked="" type="radio"/> No <input type="radio"/> Yes
Polarity Reversal Disconnect	<input checked="" type="radio"/> No <input type="radio"/> Yes
AC Termination Impedance	USA & Canada

Call Progress Tones (Syntax: f1=val@vol,f2=val@vol,c=on1/off1/on2/off2/on3/off3;[...])

Dial Tone	f1=350@-13,f2=440@-13,c=1000
Ring Back Tone	f1=440@-19,f2=480@-19,c=2000/4000
Busy Tone	f1=480@-24,f2=620@-24,c=500/500

Line Dialing Settings

DTMF Digit Length(ms)	ch1-4:80	(Example: ch1-8:35;)
DTMF Digit Volume(dBm)	ch1-4:-11	(Example: ch1-8:-11;)
DTMF Dial Pause(ms)	ch1-4:100	(Example: ch1-8:35;)
Wait for Dial-Tone(Y/N)	ch1-4:N	(Example: ch1-8:Y;)
Minimum Delay Before Dial	ch1-4:1000	(Example: ch1-8:100;)

Caller ID Standard

Caller ID Scheme	Bellcore
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FXO Termination: Specify line disconnect signaling and impedance.

Call Progress Tones: Configure tones to match regional settings.

Line Dialing Settings: Adjust line dialing properties to adhere to PSTN line requirements.

Caller ID Standard: Set caller ID handling to match PSTN settings.

The following Line Call Control settings allow you to specify how inbound and outbound calls are to be handled.



GXE5024 IPPBX Administration Interface

Phone Extensions

Trunk/Phone Lines

- Internal PSTN Trunk Line
- Internal Phone/Fax Port
- SIP Trunk
- External PSTN Trunk Line

Conference Bridge

Hunt/Ring Group

Auto-Attendant

Call Queues

Line Call Control

1. Line (e.g., 1-4,7) Dial Prefix Inbound Call Answer

Enable Password No Yes Password

2. Line (e.g., 1-4,7) Dial Prefix Inbound Call Answer

Enable Password No Yes Password

3. Line (e.g., 1-4,7) Dial Prefix Inbound Call Answer

Enable Password No Yes Password

Allow Other Peer Systems Use

Line: Specify a port or a range of ports to apply the same line call control rule to.

Dial Prefix: Configure the prefix digit on outbound calls to specify this trunk. When the call is sent out via this trunk, the prefix digit is removed.

Inbound Call Answer: In the first drop-down box of each row, select the type of destination for inbound calls on this trunk. Select the exact destination of that type in the second drop-down box, if applicable.

Enable Password: Enabling this field lets you password protect the corresponding trunk.

Delete: Delete an existing line call control rule.

More: Allow another line call control rule to be set.

Allow Other IPPBX Use: Allow other peered IPPBXs to dial through the local GXEs internal PSTN trunks.

When finished, click on the **Submit** button to save your changes or **Cancel** to discard.

- Configuring internal phone/fax devices via FXS ports

In the Internal Phone/Fax Port section, the line electrical and DTMF signaling settings of the FXS ports on the back of the GXE can be configured for compatibility with analog phone/fax devices. The extension numbers for these ports are set in the **Phone Extensions** menu, under the General Settings section.



GXE5024 IPPBX Administration Interface

Phone Extensions

Trunk/Phone Lines

Internal PSTN Trunk Line

Internal Phone/Fax Port

SIP Trunk

External PSTN Trunk Line

Conference Bridge

Hunt/Ring Group

Auto-Attendant

Call Queues

System Configuration

Language English ▼ [Logout](#)

Internal Phone/Fax Port

DTMF Transport Type	ch1-2:T=2833	<small>(Example: ch1:T=<2833/audio/signal>;ch2:T=<2833/audio/signal>;)</small>
SLIC Setting	USA	
Caller ID Scheme	Bellcore/Telcordia	
Polarity Reversal	<input checked="" type="radio"/> No <input type="radio"/> Yes <small>(reverse polarity upon call establishment and termination)</small>	
Current Disconnect	<input checked="" type="radio"/> No <input type="radio"/> Yes	
Current Disconnect Duration(ms)	200	<small>(100-10000)</small>
Hook Flash Timing(ms)	Min <input type="text" value="100"/> <small>(100-2000)</small> , Max <input type="text" value="500"/> <small>(100-2000)</small>	

When finished, click on the **Submit** button to save your changes.

- Configuring SIP trunks

In the SIP Trunk section, SIP trunks can be viewed, created, or modified. All configured SIP trunks as well as their details and current status are displayed. The following actions can be performed in this section.

Phone Extensions

Trunk/Phone Lines

Internal PSTN Trunk Line

Internal Phone/Fax Port

SIP Trunk

Language English ▼ [Logout](#)

SIP Trunk

Name	Active	SIP Server URL	Account ID	Max Concurrent Calls	Outbound Prefix	Status		
Trunk 1	Enable	trunk1.grandstream.com	8	5		DisConnected	<input type="button" value="Modify"/>	<input type="button" value="Delete"/>
Trunk2	Enable	trunk2.grandstream.com	8	4		DisConnected	<input type="button" value="Modify"/>	<input type="button" value="Delete"/>

Add: Click on the **Add** button. The SIP trunk details page will be displayed, allowing you to enter SIP account registration information.



GXE5024 IPPBX Administration Interface

Phone Extensions

Trunk/Phone Lines

Internal PSTN Trunk Line

Internal Phone/Fax Port

SIP Trunk

External PSTN Trunk Line

Conference Bridge

Hunt/Ring Group

Auto-Attendant

Call Queues

System Configuration

Advanced Options

Reset & Reboot

Status

Reports

Add SIP Trunk

Language English ▼ [Logout](#)

Trunk Name	<input type="text"/>		
Trunk Active	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable	
Enable Password	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Password	<input type="password"/>		
SIP Server URL	<input type="text"/>		
Outbound Proxy URL	<input type="text"/>		
Account Name	<input type="text"/>		
Account ID	<input type="text"/>		
Authenticate ID	<input type="text"/>		
Password	<input type="password"/>		
Registration Retry Interval	<input type="text" value="600"/>	seconds	
Heart Beat	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Max Concurrent Calls Allowed	<input type="text" value="8"/>		
Dial Prefix	<input type="text"/>		
Prepend Prefix	<input type="text"/>		
Inbound Call Answer	Auto-Attendant ▼	None ▼	
Session Keep Alive	Automatic/Session timer ▼		
Session Expiration	<input type="text" value="180"/>	<small>(in seconds, default 180 seconds)</small>	
Min-SE	<input type="text" value="90"/>	<small>(in seconds, default and minimum 90 seconds)</small>	
Use DNS SRV	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Unregister On Reboot	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Register Active	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
DID Switch	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

Enable the trunk: Enter a descriptive name in the *Trunk Name* field, and set *Trunk Active* to *Enable*.

Set SIP registration: Enter the SIP server and, if available, outbound proxy information along with SIP account and password details. Set the registration expiration time in the *Registration Retry Interval* setting, and set *Heart Beat* to *Yes* to Enable or disable availability detection of the remote end (requires compatibility on the remote end)..

Outbound call handling: Set the *Max Concurrent Calls Allowed* to prevent too many concurrent attempts to send calls out this trunk.

Set the *Dial Prefix* digit to specify an outbound call to be dialed through this trunk. When the call is sent out via this trunk, the dial prefix digit is removed.

The *Prepend Prefix* setting allows a prefix to be automatically added by the GXE to the outbound dialed digits.

Inbound Call Answer: Set the destination to route incoming calls on this trunk to.

Session Keep Alive: This field lets you enable the use of the system session timer.

Session Expiration: This field specifies the session expiration interval in seconds (SIP Server).

Min-SE: Enter the minimum session expiration time in seconds (RTP).

Use DNS SRV: If your SIP Trunk provider has redundant servers, set this field to "Yes."

DID Switch: This field lets you enter the P-Asserted-Identity (PAI) code from your SIP trunk provider. You can enter your code by setting this field to "Yes" and clicking the add button. This allows the GXE to authenticate with the SIP server. If your trunk provider requires a PAI code and it is not entered, the calls will be dropped. You also have to set the inbound call flow by selecting a choice from the "inbound call answer" drop down menu if you are using this feature.

Unregister on reboot: Unregisters the GXE from the SIP server during reboots.

Register Active: If your SIP Trunk provider requires registration, set this field to "Yes."

Set *Unregister on Reboot* to Yes if the SIP server allows it.

When done, click on the **Submit** button to add the extension or **Cancel** to go back.

Modify: Click on the **Modify** button to the right of the row displaying information for the SIP trunk you wish to modify. The SIP trunk details page will be displayed, allowing you to modify all of the SIP trunk's settings. When done, click on the **Submit** button to save your changes or **Cancel** to go back.

Delete: Click on the **Delete** button on the far right of the row displaying the information for the SIP trunk you wish to delete. You will be prompted for confirmation via a dialog box; click **OK** to confirm or **Cancel** to go back.

- Configuring external PSTN trunk gateways via SIP

In the External PSTN Trunk Line section, external PSTN trunk gateways can be viewed, created, or modified. All configured external PSTN trunks as well as their details and current status are displayed. The following actions can be performed in this section.



GXE5024 IPPBX Administration Interface

- Phone Extensions
- Trunk/Phone Lines
- Internal PSTN Trunk Line
- Internal Phone/Fax Port
- SIP Trunk
- External PSTN Trunk Line

Language English [Logout](#)

Name	Active	Gateway URL	Other UDP	Concurrent calls	Outbound Prefix	Status		
GXW4104	Enable	gxw1.grandstream.com		0	3	Unkown	Modify	Delete
GXW4108	Enable	gxw2.grandstream.com		0	2	Unkown	Modify	Delete
Add								

Add: Click on the **Add** button. The external PSTN trunk details page will be displayed, allowing you to enter SIP peer connection information to connect with the external PSTN trunk gateway.



GXE5024 IPPBX Administration Interface

- Phone Extensions
- Trunk/Phone Lines
- Internal PSTN Trunk Line
- Internal Phone/Fax Port
- SIP Trunk
- External PSTN Trunk Line
- Conference Bridge
- Hunt/Ring Group
- Auto-Attendant
- Call Queues
- System Configuration
- Advanced Options
- Reset & Reboot
- Status
- Reports

Language English [Logout](#)

Add External PSTN Trunk Line

Trunk Name	<input style="width: 95%;" type="text"/>		
Active	<input type="radio"/> Enable <input checked="" type="radio"/> Disable		
Enable Password	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Password	<input style="width: 95%;" type="text"/>		
SIP Gateway URL	<input style="width: 95%;" type="text"/>		
Other UDP List	<input style="width: 95%;" type="text"/>		
Heart Beat	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Max Concurrent Calls Allowed	<input style="width: 95%;" type="text" value="0"/>		
Dial Prefix	<input style="width: 95%;" type="text"/>		
Inbound Call Answer	<input type="text" value="Auto-Attendant"/> <input type="text" value="None"/>		
Session Keep Alive	<input style="width: 95%;" type="text" value="Automatic/Session timer"/>		
Session Expiration	<input style="width: 95%;" type="text" value="180"/> (in seconds, default 180 seconds)		
Min-SE	<input style="width: 95%;" type="text" value="90"/> (in seconds, default and minimum 90 seconds)		
Allow Other IPPBX Use	<input type="radio"/> Yes <input checked="" type="radio"/> No		
<input type="button" value="Submit"/> <input type="button" value="Cancel"/>			

Enable the trunk: Enter a descriptive name in the *Trunk Name* field, and set *Trunk Active* to *Enable*.

Set SIP peer information: Enter the SIP gateway IP address or domain name in the *SIP Gateway URL* field.

Set *Heart Beat* to *Yes* to Enable or disable availability detection of the remote side (requires compatibility on the remote end)..

Outbound call handling: Set the *Max Concurrent Calls Allowed* to prevent too many concurrent attempts to send calls out this trunk.

Set the *Dial Prefix* digit to specify an outbound call to be dialed through this trunk. When the call is sent out via this trunk, the dial prefix digit is removed

Inbound Call Answer: Set the destination to route incoming calls on this trunk to.

Session Keep Alive: This field lets you enable the use of the system session timer.

Session Expiration: This field specifies the session expiration interval in seconds (SIP Server).

Min-SE: Enter the minimum session expiration time in seconds (RTP).

Allow other IPPBX User: trunk with peer systems: If this trunk is to be available for use by peer systems, set the *Allow Other IPPBX Use* setting to *Yes*.

When done, click on the **Submit** button to add the extension or **Cancel** to go back.

Modify: Click on the **Modify** button to the right of the row displaying information for the external PSTN trunk you wish to modify. The external PSTN trunk details page will be displayed, allowing you to modify all of the external PSTN trunk's settings. When done, click on the **Submit** button to save your changes or **Cancel** to go back.

Delete: Click on the **Delete** button on the far right of the row displaying the information for the external PSTN trunk you wish to delete. You will be prompted for confirmation via a dialog box; click **OK** to confirm or **Cancel** to go back.

4. Configuring Conference Bridges

- View conference bridge statuses

The GXE supports up to two conference bridges, each one supporting up to ten participants on the 5028 and 6 on the 5024. In the **Conference Bridge** menu, the status, number of attendees, and the duration of an ongoing conference is displayed.

GXE5024 IPPBX Administration Interface

Language: English

	Extension	Password	Status	Attendees	Duration(mins)
Room 1	<input type="text" value="6994"/>	<input type="password" value="*****"/>	Vacant	0	0
Room 2	<input type="text" value="6995"/>	<input type="password" value="*****"/>	Vacant	0	0

- Assign extension numbers and passwords to conference bridges

To assign an extension number to a conference bridge, enter the extension number into the *Extension* field of a conference bridge room. If you wish to require users to enter a password before entering, enter a numeric password into the *Password* field. When done, click on the **Submit** button to save your changes.

5. Configuring Hunt/Ring Groups

Ring groups can be configured on the GXE to allow multiple users to provide a higher level of availability to incoming callers. Multiple ring methods are supported, and ring groups can have their own voicemail boxes as well.

- Viewing ring groups

The **Hunt/Ring Group** menu displays all configured ring groups and their details and allows you to create, modify, or delete ring groups.

GXE5024 IPPBX Administration Interface

Language: English

Extension	Group Name	Members	
6200	Sales	6000;6001;6002;6003	<input type="button" value="Modify"/> <input type="button" value="Delete"/>
6210	Support	6004;6005;6006;6007	<input type="button" value="Modify"/> <input type="button" value="Delete"/>

- Adding and modifying ring groups

Add: Click on the **Add** button. The ring group details page will be displayed, allowing you to configure the ring group settings:



GXE5024 IPPBX Administration Interface

Phone Extensions

Trunk/Phone Lines

Conference Bridge

Hunt/Ring Group

Auto-Attendant

Call Queues

System Configuration

Advanced Options

Reset & Reboot

Status

Reports

Language English [Logout](#)

Add Hunt/Ring Group

Extension	<input type="text"/>
Group Name	<input type="text"/>
Ring Mode	<input checked="" type="radio"/> Parallel <input type="radio"/> Serial
Serial Ring Attempts Per Member	<input type="text" value="1"/>
Serial Ring Interval	<input type="text" value="2"/> (in seconds)
Waiting Tone	<input type="text" value="System Music"/>
Members	<input type="text"/> (e.g., 5100;5101;5200, up to maximum 15 members)
Round Robin of Serial Ring Starting Attempt	among the first <input type="text" value="1"/> of the Group Member List
Email For Message Delivery	<input type="text"/> (if empty, the message Email do not be send)
Password to Retrieve Voicemail/Faxmail	<input type="text"/> (0-9, cannot be space, *, #)

- *Extension*: Enter an extension number to assign to this ring group. The leading digit for this extension must correspond with the *Leading Digit of Extensions* setting in the **General Settings** section of the **Phone Extensions** menu.
- *Group Name*: Enter a descriptive name to assign to this ring group.
- *Ring Mode*: Select a ring method for this ring group. Parallel will ring all ring group members at the same time, while Serial will ring members one at a time, starting from the first ring group member. A round-robin variation of Serial is available, and is enabled below. This allows the starting position of each ring group call to be the next ring group member of the previous ring group call, instead of from the first ring group member in the list.
- *Serial Ring Attempts Per Member*: If using Serial ring mode, select the number of attempts to ring all ring group members before sending the call to voicemail.
- *Serial Ring Interval*: If using Serial ring mode, select the number of rings for each ring group member before moving onto the next ring group member.
- *Waiting Tone*: Choose either ringback tone or hold-music to be played back to the ring group caller.
- *Group Members*: List all extensions who are members of this ring group, separating each with a semicolon.
- *Round Robin of Serial Ring Starting Attempt*: Enter the digit to specify the number of ring group members starting from the first in the list to round-robin the starting position of incoming ring group calls amongst. To disable the round-robin mode, enter 1. To round-robin amongst all ring group members, enter the total number of ring group members listed.
- *Email For Message Delivery*: Enter the email address to deliver voicemail-to-email messages to for voicemails left for this ring group.
- *Password to retrieve voicemail*: Set a password to retrieve voicemails & faxmail.

When finished, click on the **Submit** button to save your changes or **Cancel** to discard.

Modify: Click on the **Modify** button to the right of the row displaying information for the ring group you wish to modify. The ring group details page will be displayed, allowing you to modify all of the ring group's settings. When done, click on the **Submit** button to save your changes or **Cancel** to go back.

Delete: Click on the **Delete** button on the far right of the row displaying the information for the ring group you wish to delete. You will be prompted for confirmation via a dialog box; click **OK** to confirm or **Cancel** to go back.

6. Configuring Auto-Attendants

Incoming calls can be directed to auto-attendants to provide immediate and professional service to callers and automatically route calls to intended parties. You may schedule different auto-attendants to play based on the date, time, and day of the week as well. The **Auto-Attendant** menu displays all configured auto-attendants menus.



- Configuring auto-attendant menus

The following actions can be performed in the Voice Menu section.

Add: Click on the **Add** button. The voice menu details page will be displayed, allowing you to configure an auto-attendant:



GXE5024 IPPBX Administration Interface

Phone Extensions

Trunk/Phone Lines

Conference Bridge

Hunt/Ring Group

Auto-Attendant

Voice Menu

Playing Rules

Call Queues

System Configuration

Advanced Options

Reset & Reboot

Status

Reports

Modify Voice Menu
Language English [Logout](#)

Voice Menu Name	<input type="text" value="After Hours"/>	
<input checked="" type="checkbox"/> Press 0 to trigger	Extension	6000
<input type="checkbox"/> Press 1 to trigger	Hunting/Group	None
<input type="checkbox"/> Press 2 to trigger	Hunting/Group	None
<input type="checkbox"/> Press 3 to trigger	Hunting/Group	None
<input type="checkbox"/> Press 4 to trigger	Hunting/Group	None
<input type="checkbox"/> Press 5 to trigger	Hunting/Group	None
<input type="checkbox"/> Press 6 to trigger	Hunting/Group	None
<input type="checkbox"/> Press 7 to trigger	Hunting/Group	None
<input type="checkbox"/> Press 8 to trigger	Hunting/Group	None
<input type="checkbox"/> Press 9 to trigger	Hunting/Group	None

No entry time out 30 (second), play warning and repeat voice menu for up to 3 time(s)

Fax To None

Waiting Tone System Music

Please upload an audio file in the following format:wav file/sample rate 8K/sample data 16bit/single channel

Voice Prompt File Browse... Upload Preview

Submit
Cancel

- *Voice Menu Name*: Enter a name for this auto-attendant.
- *Press x to trigger*: Check the box next to the row for each keypad digit you would like to provide as an option for callers to choose. Callers automatically have the option to enter internal extension numbers from the auto-attendant, so no special configuration needs to be enabled for that. In the first drop-down box of each row, select the type of destination you would like this keypad digit to route the caller to. Select the exact destination of that type in the second drop-down box, if applicable.
- *No entry time out*: Enter the time to wait for the caller to enter a menu option before repeating the voice menu or exiting.
- *Fax To*: This field lets you automatically route all incoming faxes to a specific location.
- *Waiting Tone*: This field lets you set the waiting tone to the system music or rinback.
- *Play warning and repeat voice menu for up to*: Select from the drop-down box the number of times for this auto-attendant to repeat when the caller does not enter any menu options, before exiting.

The *Voice Prompt File* upload field will allow uploading of the voice recording for the new auto-attendant. Click on the **Browse...** button to search for files on your computer. Click on the **Upload** button to upload this file to the GXE. After the file is successfully uploaded, click on the **Submit** button to add this auto-attendant.

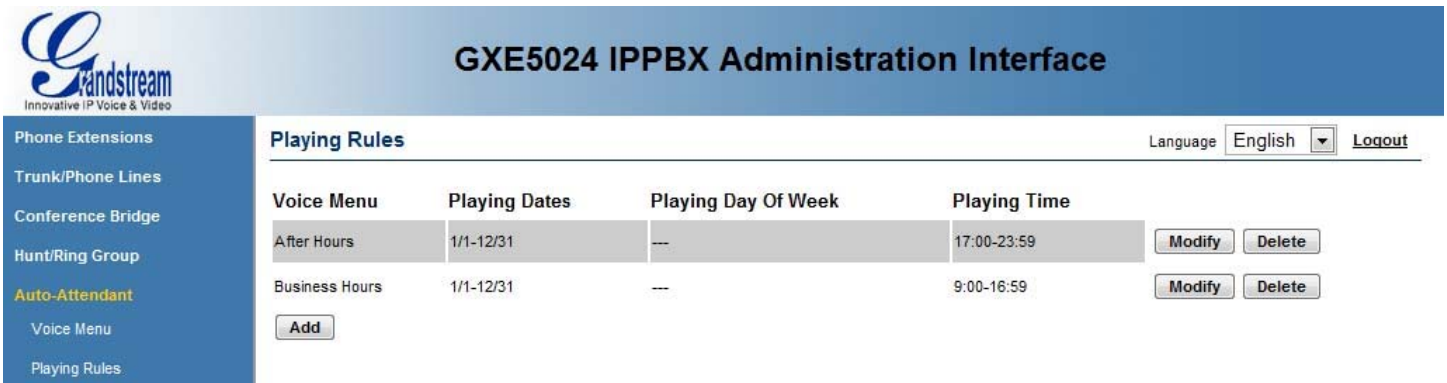
Modify: Click on the **Modify** button to the right of the row displaying information for the auto-attendant you wish to modify. The voice menu details page will be displayed, allowing you to re-configure the auto-attendant. When done, click on the **Next** button;

you may then upload a new voice recording for the auto-attendant if you wish. When done, click on the **Finish** button to modify this auto-attendant.

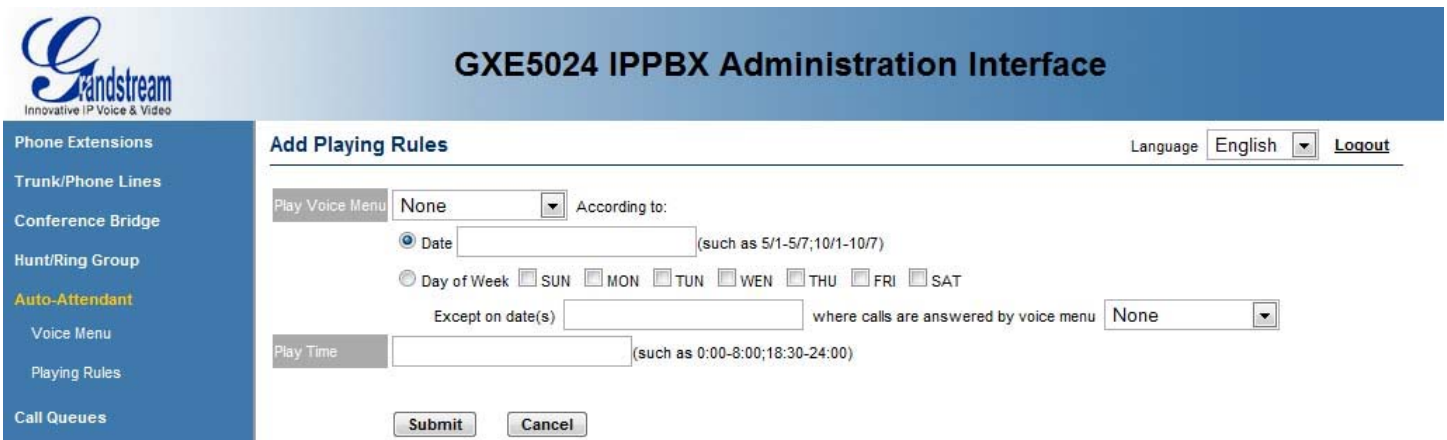
Delete: Click on the **Delete** button on the far right of the row displaying the information for the auto-attendant you wish to delete. You will be prompted for confirmation via a dialog box; click **OK** to confirm or **Cancel** to go back.

- Configuring time-based playing rules for auto-attendants

Playing rules may be created to dictate which auto-attendant is played to the incoming caller, based on the times you set. The Playing Rules section displays all configured voice menu playing rules, and allows the following actions to be performed.



Add: Click on the **Add** button. The playing rules details page will be displayed, allowing you to configure the time conditions for playing an auto-attendant:



- *Play Voice Menu:* Using the drop-down box, select the auto-attendant you wish to configure.
- *Date:* You may set the auto-attendant selected above to play either on a preset date or range of dates, or to play on all selected days of the week. To specify by date, select the radio button beside *Date* and enter the date or range of dates in the text field to the right.
- *Day of Week:* To specify the auto-attendant to play on all selected days of the week, select the radio button beside *Day of Week* and check each checkbox beside each day of the week you would like the auto-attendant to play on.

- *Except on date(s)*: If setting the auto-attendant to play based on selected days of the week, you may enter exceptions such as holiday dates where you would like another auto-attendant to be played. Enter exception dates in the blank text field, and use the drop-down box on the far right to select the auto-attendant to use instead on the listed exception dates.
- *Play Time*: Enter in the blank text field the time of day to play the auto-attendant during days the auto-attendant is set to play.

Modify: Click on the **Modify** button to the right of the row displaying information for the playing rules you wish to modify. The playing rules details page will be displayed, allowing you to modify all of the playing rules. When done, click on the **Submit** button to save your changes or **Cancel** to go back.

Delete: Click on the **Delete** button on the far right of the row displaying the information for the playing rule you wish to delete. You will be prompted for confirmation via a dialog box; click **OK** to confirm or **Cancel** to go back.

7. Call Queues

This screen allows you to upload an audio file in .wav (file/sample rate 8K/sample data 16bit/single channel) that will play while you are in a call queue.

- Setting up In-Queue Announcements

In-Queue Announcement Name

This field lets you enter a name (20 character limit) for the queue that you are uploading.

In-Queue Announcement File

This field lets you specify the location of the .wav file that you are uploading. You can type the path manually or click the browse button to navigate the file through Windows Explorer.

Phone Extensions
Trunk/Phone Lines
Conference Bridge
Hunt/Ring Group
Auto-Attendant
Call Queues
In-Queue Announcements

Add In-Queue Announcement

Please upload an audio file in the following format:wav file/sample rate 8K/sample data 16bit/single channel

In-Queue Announcement Name

In-Queue Announcement File

- Setting up Agents

Add an Agent

This page lets you add an agent and configure its rules within the queue. You must specify the name, extension, SIP password, skill level, and email of the agent. Your typical queue will start with the agent of the highest skill level.

- Call Queues

Add a Call Queue

This is the main configuration page for any call queues that you add to your system.

Name

Enter the name of your call queue here.

Extension

Enter the extension of the call queue here. See the drop down box for a list of current extensions.

Priority

Set the priority of the call queue.

Queue status update frequency

This determines how often the in-queue announcement message will play.

Other Announcements

This determines the frequency in which any other announcements you add will be played to the caller in the queue.

Maximum Caller Wait Time

This field lets you set the maximum amount of time that callers will wait within the queue before being forwarded to voicemail.

Minimum Caller Wait Time

This field lets you set the minimum amount of time that callers will wait within the queue before being forwarded to voicemail.

Maximum Queued Callers

This lets you set how many callers can be within the queue simultaneously.

Group Email Address for Voicemail Delivery

Enter the email address in which all voicemail for the queue/group will be delivered.

Agent Call Wrap-Up Time

This setting lets you specify the amount of wrap-up time an agent will have before receiving another call. For example an agent may need 5 minutes of wrap-up time to document a call.

Listed Agents For This Queue

All configured agents for the queue will be displayed here.

Automatic Call Distribution

This setting lets you configure enable and disable skill-based routing. If skill-based routing is enabled, you can configure it to rout by least-skilled first or more skilled first.

Ring Mode to Agents of Same Skill Level

These settings are similar to hunt/ring groups in that you can configure the order/rules in which agents within the group/queue ring.

- Serial - Agents ring one at a time based on availability.
- Parallel - All agents ring simultaneously.
- Circular -A different agent will ring first each time a caller enters the queue.
- Least Busy -The least busy agent will ring first.

Call Queue Greeting Message

Upload a .wav file (file/sample rate 8K/sample data 16bit/single channel) for the queue greeting message. You can type the path manually or click the browse button to navigate the file through Windows Explorer.

8. System Configuration

System configuration and administration may be performed from the **System Configuration** menu. The following sections detail the tasks which may be performed in this menu.

- Configuring network settings

The Networking Setting section allows you to configure the LAN-side IP addressing and DHCP server settings. For the WAN-side settings, IP addressing of the WAN port can be set as well as Dynamic DNS and port-forwarding settings. The below actions and their associated settings appear in order from top to bottom on the GXE web UI as well.

Setting the LAN-port IP address:

Set the LAN-port IP address by entering the IP address you wish to use in the *LAN Base IP* setting. Enter the subnet mask in the *LAN Subnet Mask* setting. Please note that this should be configured prior to auto-provisioning your phones through the **Express Setup** menu, as they will be using an incorrect IP address for the SIP server after the LAN-port IP address changes.

Configuring DHCP:

To use the GXE as the DHCP server on the LAN-side, set the *DHCP Enable* setting to *Enable* (this is enabled by default). You may specify the starting and ending IP addresses of the range of IP addresses offered by the DHCP server by setting the *Start of DHCP IP Pool* and *End of DHCP IP Pool* settings. The *DHCP IP Lease*

Time allows you to specify the number of hours an IP address is leased to a device before renewal.

<ul style="list-style-type: none"> Phone Extensions Trunk/Phone Lines Conference Bridge Hunt/Ring Group Auto-Attendant 	DHCP Enable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Start of DHCP IP Pool	100
	End of DHCP IP Pool	199
	DHCP IP Lease Time	120 (in units of hours, default is 120 hours or 5 days)

Setting the WAN-port IP address:

The WAN-port can be configured to be dynamically assigned via DHCP, to use PPPoE, or to be statically configured. Select the radio button beside the option you wish to use. To use PPPoE, you will need to enter the PPPoE account and password information and DNS server information in the provided fields. If statically configuring the WAN-port IP address, please enter the IP addressing details in the provided fields.

<ul style="list-style-type: none"> Phone Extensions Trunk/Phone Lines Conference Bridge Hunt/Ring Group Auto-Attendant Call Queues System Configuration Networking Setting System Setting Feature Codes Firmware Upgrade Backup & Restore Configure Syslog Configuration 	WAN Setting				
	<input checked="" type="radio"/> Dynamically Assigned Via DHCP <input type="radio"/> Use PPPoE				
	PPPoE Account ID		<input type="text"/>		
	PPPoE Password		<input type="text"/>		
	Preferred DNS server		<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>		
	<input type="radio"/> Statically Configured				
	IP Address	192	.168	.0	.160
	Subnet Mask	255	.255	.255	.0
	Default Router	192	.168	.0	.1
	Primary DNS	<input type="text"/>	. <input type="text"/>	. <input type="text"/>	. <input type="text"/>
Secondary DNS	<input type="text"/>	. <input type="text"/>	. <input type="text"/>	. <input type="text"/>	

Enabling/disabling WAN-side HTTP access:

Security and accessibility for management are considerations for whether or not you wish to enable or disable HTTP/Telnet access from the WAN-side of the GXE. If you decide to use the default setting of enabled, set *WAN Side Http/Telnet Access* to *Yes*; otherwise, disable it by setting it to *No*.

<ul style="list-style-type: none"> Phone Extensions Trunk/Phone Lines Conference Bridge Hunt/Ring Group Auto-Attendant Call Queues System Configuration Networking Setting System Setting Feature Codes Firmware Upgrade Backup & Restore Configure Syslog Configuration 	WAN Side Http/Telnet Access <input type="radio"/> No <input checked="" type="radio"/> Yes
---	--

Using Dynamic DNS:

If the WAN-port IP of the GXE is dynamically assigned, you may use Dynamic DNS to assign it a fixed domain name which is always synchronized with the IP address of your GXE. Enable Dynamic DNS by setting the *DDNS Active* setting to *Enable* and setting the DDNS ISP type, site name, and account and password information in the provided fields. If not using Dynamic DNS, set the *DDNS Active* setting to *Disable*.

DDNS Active	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
DDNS ISP Type	3domain.hk
Site Name	<input type="text"/>
DDNS Account	<input type="text"/>
DDNS Password	<input type="text"/>

Configuring port forwarding:

The GXE can be configured to perform port forwarding. In the *Port Forwarding* settings, enter the port to forward from the WAN-side, the LAN-side device IP address to forward to, the LAN-side device port to forward to, and the protocol (TCP, UDP, or both) to forward in the respective fields.

Port Forwarding			
WAN Port	<input type="text" value="0"/>	LAN IP	<input type="text"/>
LAN Port	<input type="text" value="0"/>	Protocol	UDP Only
WAN Port	<input type="text" value="0"/>	LAN IP	<input type="text"/>
LAN Port	<input type="text" value="0"/>	Protocol	UDP Only
WAN Port	<input type="text" value="0"/>	LAN IP	<input type="text"/>
LAN Port	<input type="text" value="0"/>	Protocol	UDP Only
WAN Port	<input type="text" value="0"/>	LAN IP	<input type="text"/>
LAN Port	<input type="text" value="0"/>	Protocol	UDP Only
WAN Port	<input type="text" value="0"/>	LAN IP	<input type="text"/>
LAN Port	<input type="text" value="0"/>	Protocol	UDP Only
WAN Port	<input type="text" value="0"/>	LAN IP	<input type="text"/>
LAN Port	<input type="text" value="0"/>	Protocol	UDP Only
WAN Port	<input type="text" value="0"/>	LAN IP	<input type="text"/>
LAN Port	<input type="text" value="0"/>	Protocol	UDP Only

When done, click on the **Submit** button to save your changes.

- **Configuring the Router Configuration**

If you have routers (other than GXE integrated router) on your subnet that you can enter the destination IP address, Mask and Gateway.

The screenshot shows the 'GXE5024 IPPBX Administration Interface' with a sidebar on the left containing 'Phone Extensions', 'Trunk/Phone Lines', and 'Conference Bridge'. The main content area is titled 'Route Configuration' and includes a table with columns for 'Destination IP', 'Mask', and 'Gateway'. Below the table is an 'Add' button. The top right corner shows a 'Language' dropdown set to 'English' and a 'Logout' link.

- **Configuring system settings**

The System Setting section contains various important internal system settings and allows configuration of several features and functions of the GXE. The below actions and their associated settings appear in order from top to bottom on the GXE web UI as well.

Setting the web UI login password:

To change the password for accessing the GXE web configuration pages, enter a new password in the *Login Password* field. Do not lose this password. For further security, you may disable WAN-side web UI access in the Networking Setting section.

Trunk/Phone Lines	Administrator Setting	
Conference Bridge	Login Password	<input type="password" value="*****"/>

Storing administrator contact and information:

Optional fields have been provided to store the administrator's name, phone numbers, and email address so that the administrator may be contacted for any issues requiring attention. The system name may also be labeled in the *System Name* setting to identify this GXE.

Phone Extensions	Name	<input type="text"/>
Trunk/Phone Lines	Contact Phone	<input type="text"/>
Conference Bridge	Contact Mobile	<input type="text"/>
Hunt/Ring Group	Contact Email	<input type="text"/>
Auto-Attendant		
Call Queues	System Name	<input type="text"/>

Setting SIP IP and port.

The SIP port for the GXE can be set to either the default of 5060 in the *SIP Port* field, or another port number may be used. The *Static Mapped WAN IP for SIP* and the *Static Mapped WAN Port for SIP* may also be changed in their respective fields.

System Configuration	SIP Port	<input type="text" value="5060"/>
Networking Setting	Static Mapped WAN IP for SIP	<input type="text"/>
System Setting	Static Mapped WAN Port for SIP	<input type="text"/>
Feature Codes		

Using STUN for NAT traversal:

If the GXE is behind a NAT router, it may be necessary to use STUN to allow the GXE to reliably communicate via IP through the router. Enter a STUN server IP address or domain name in the *STUN Server* field.

Call Queues	STUN Server	<input type="text" value="stun.grandstream.com"/> (e.g., my_stunserver_ip_or_url:port)
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Enabling voicemail-to-email:

To have the GXE email users their received voicemail files, enter the SMTP server and login name and password information, as well as the email address to send from. This will allow the GXE to send voicemail emails to users and ring groups with email addresses configured when they receive voicemail messages. If your email server requires authentication, make sure you set "Require Authentication" to yes.

System Configuration	SMTP Server	<input type="text"/>
Networking Setting	Require Authentication	<input checked="" type="radio"/> Yes <input type="radio"/> No
System Setting	Login Name	<input type="text"/>
Feature Codes	Login Password	<input type="password"/>
Firmware Upgrade	Email Address	<input type="text"/>
Backup & Restore Configure		

Setting the system time:

Select the correct time zone for the location of the GXE in the *Time Zone* drop-down box. Conversely, you may enter a *Self-Defined Time Zone*, using the following syntax: MTZ+6MDT+5,M4.1.0,M11.1.0

The syntax starts with “MTZ” followed by your time offset from Greenwich Mean Time (GMT). To set Pacific Standard Time, you would use “MTZ-8”. This is followed by “MDT” followed by your time offset from GMT during daylight savings time. A comma then follows to begin definition of the daylight savings start date.

For the GXE to find the accurate time, an NTP server IP address or domain name will need to be entered in the *NTP Server* field.

Syslog Configuration Advanced Options Reset & Reboot	Time Zone	GMT-5:00 (US Eastern Time, New York)
	Self-Defined Time Zone	MTZ+6MDT+5,M4.1.0,M (For example: "MTZ+6MDT+5,M4.1.0,M11.1.0")
	NTP Server	us.pool.ntp.org

Selecting Music on Hold source:

Specify a Music on Hold (MOH) source by setting the *System Music* drop-down box to either *System Music Files* for internally stored audio files or *Audio-In* to play audio from an external audio source connected to the AUDIO IN jack on the back of the GXE.

System Music	Audio-In
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Setting mailbox storage quota:

Voicemail, videomail, and faxmail storage can be limited for the different types of system users. The mailbox storage limits (in percentages of total system memory) are specified in the drop-down boxes beside each user privilege level.

Storage quota of voicemail/videomail/faxmail per privilege level	
Super	2%
Privileged	2%
Regular	2%
Basic	2%
Restricted	2%

When done, click on the **Submit** button to save your changes.

- **Setting feature codes**

Feature star codes allow GXE users to set features such as forwarding and Do Not Disturb on their individual extensions, as well as reach destinations such as the voicemail system. The Feature Codes section allows customization of the feature codes. The feature codes may be viewed or modified in the text box beside each feature name.

Feature Code	Code
Directory Assistance	*128
Prompt Voice Assistance	*7701
Enable Call Forward Unconditional	*7702
Cancel Call Forward Unconditional	*7703
Enable Call Forward Busy	*7704
Cancel Call Forward Busy	*7705
Enable Call Forward No-Answer	*7706
Cancel Call Forward No-Answer	*7707
Query Forward	*7708
Enable Do-Not-Disturbed	*7712
Cancel Do-Not-Disturbed	*7713
Enable Intercom	*7709
Cancel Intercom	*7710
Query Intercom	*7711
Park	*7730
Pickup	*7731
Voice Mail	*12345

- Directory Assistance:** Dial from a phone to have the GXE playback the phone's extension number.
- Prompt Voice Assistance:** For listening to and recording voice prompts. Dial the feature code plus * 0 * [prompt number] * to listen to the voice prompt. Dial the feature code plus * 1 * [prompt number] * to record the voice prompt.
- Enable Call Forward Unconditional:** Dial the feature code plus [forward-to number] to enable unconditional call forwarding for the extension you are dialing with.
- Cancel Call Forward Unconditional:** Cancel unconditional call forward, calls will ring in.
- Enable Call Forward Busy:** Dial the feature code plus [forward-to number] to turn on busy call forwarding for the extension you are dialing with.
- Cancel Call Forward Busy:** Cancel busy call forward; calls will ring when user is on the phone.
- Enable Call Forward No-Answer:** Dial the feature code plus [forward-to number] to turn on no-answer call forwarding for the extension you are dialing with.
- Cancel Call Forward No-Answer:** Cancel call forward on no answer, calls will go to voicemail.
- Query Forward:** Dial the feature code to have the GXE playback the call forwarding status and forward-to number.
- Enable Do-Not-Disturbed:** Calls will go straight to voicemail, or return busy if no voicemail.
- Cancel Do-Not-Disturbed:** Cancel DND, calls will ring in normally.
- Park:** When in a call, an extension can transfer the other party to this feature code to park the call.
- Pickup:** Dial the feature code plus * [parking extension] to pickup a call parked by the parking extension.
- Voice Mail:** Dial the appropriate feature code to access the voicemail system.

When done, click on the **Submit** button to save your changes.

- Uploading voice prompts and configuration templates

Custom voice prompts may be uploaded in the Firmware Upgrade section, as well as configuration templates for use when auto-provisioning phones. To upload these files, browse to your firmware/prompt files in the Firmware Upgrade and System Prompt Image fields and click the **Submit** button. You can upload zip files containing .wav files or a PV files that have been generated by the Grandstream Wavtools.exe prompt generator.

The screenshot shows a web interface for 'Firmware Upgrade'. At the top left, the text 'Firmware Upgrade' is displayed. At the top right, there is a 'Language' dropdown menu set to 'English' and a 'Logout' link. Below this, there are two distinct upload sections. The first section is labeled 'Firmware Upgrade' and contains a text input field, a 'Browse...' button, and a 'Submit' button. The second section is labeled 'System Prompt Image' and also contains a text input field, a 'Browse...' button, and a 'Submit' button.

- Upgrading firmware

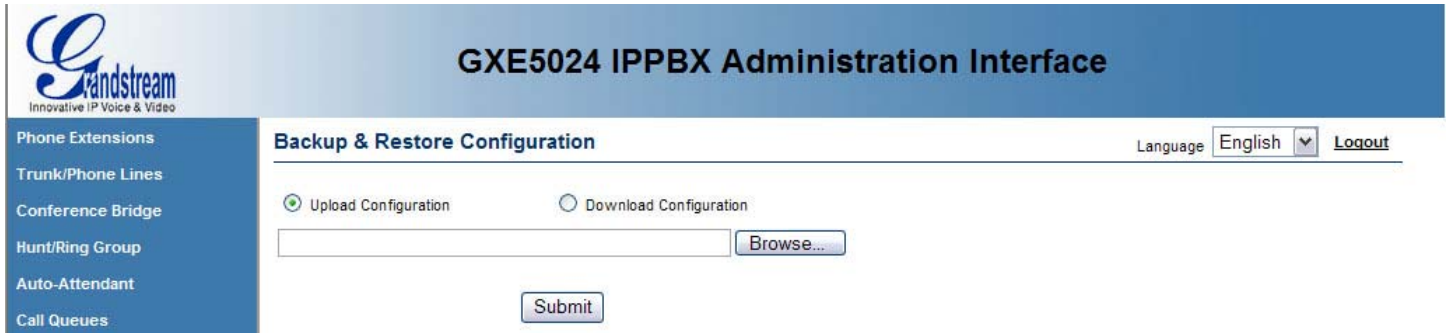
The Firmware Upgrade section allows you to upload firmware from your computer to the GXE and upload custom voice prompts.

Prior to the firmware upgrade, please read the release notes to review the changes. In addition, backup a copy of your GXE configuration, detailed in the next section. The GXE will not overwrite your existing configuration, but it is good practice to keep a backup copy in all cases.

Once you have downloaded new firmware from Grandstream, click on the **Browse...** button to find the file on your computer. After the file has been selected, click on the **Submit** button and wait for the file to finish uploading. When finished, reboot the GXE to load the new firmware.

- Backing up and restoring configuration files

Configuration files may be downloaded to or uploaded from your computer in the Backup & Restore Configuration section. It is good practice to keep a backup copy of your configuration file at all times.



Configuration backup: Select the *Download Configuration* radio button, and click on the **Submit** button. You will be prompted to download the configuration file onto your computer.

Configuration restore: Select the *Upload Configuration* radio button, and click on the **Browse...** button to find the configuration file on your computer. After the file has been selected, click on the **Submit** button and wait for the file to finish uploading. The GXE will automatically reboot when finished, and load the configuration file.

- Configuring Syslog logging

The GXE can be configured to send out several levels of Syslog messages; Info, Warning, Error, and Debug. With a Syslog server setup to catch these messages, problems are easier to find and diagnose. The Syslog Configuration section allows a Syslog server IP address and the Syslog level to be set.



Enter the IP address of the Syslog server in the *Syslog Server IP* field, and use the *Syslog Level* drop-down box to specify the level of logging. When done, click on the **Submit** button to save your changes.

9. System Level Backup & Restore

The System Level Backup & Restore page allows users to backup specific portions of the system configuration such as: voicemail, system tones, announcements & voice menus.

- Browse to your backup file and click the “submit” button to restore the contents of the file to your system configuration.
- Check the boxes next to the desired configuration components and click “submit” to backup up system level configuration data. You can even choose to backup voicemail and greetings for a specific extension by selecting an extension from the drop down menu.

The screenshot shows the 'GXE5024 IPPBX Administration Interface' with a sidebar menu on the left. The main content area is divided into two sections: 'System Level Restore' and 'System Level Backup'.
 In the 'System Level Restore' section, there is a 'Data File' input field with a 'Browse...' button and a 'Submit' button. The top right of this section shows 'Language English' and a 'Logout' link.
 The 'System Level Backup' section contains several checkboxes: 'Data' (checked), 'Announcement', 'Call Queue', 'System Tone', and 'Voice Menu'. Below these is a note: 'You can opt to backup the Personal Greeting, Recorded Name, & Voicemail for the extensions in the drop down menu below'. This is followed by a dropdown menu set to '6002' and an 'Add' button. Below this are three rows of extension settings for 6000, 6001, and 6002. Each row has checkboxes for 'Personal Greeting', 'Personal Name', 'Voice Mail', and 'Fax Mail', along with a 'Delete' button. A 'Submit' button is at the bottom of this section.

10. Configuring Peer PBX Systems

Remote GXE systems or other PBX systems can be peered with the local GXE. This allows local users to dial remote system extensions and the GXE will route the calls directly via IP to the remote system. In a multiple office environment, this provides the ability to provide the users with the convenience of reaching remote colleagues through simple and familiar extension dialing, and without incurring the toll costs of routing the call over the PSTN. The **Advanced Options** menu allows you to view, add, modify, and delete peer systems.

- Viewing peer systems

The Peer Systems section displays all configured peer systems and their details.

The screenshot shows the 'Peer Systems' section of the GXE5024 IPPBX Administration Interface. On the left is a navigation menu with options: Phone Extensions, Trunk/Phone Lines, Conference Bridge, Hunt/Ring Group, Auto-Attendant, Call Queues, System Configuration, and Advanced Options (with sub-items Peer Systems, Template Upload, and Reset & Reboot). The main content area has a 'Peer Systems' header with a 'Language' dropdown set to 'English' and a 'Logout' link. Below the header is a table with columns: Prefix, Peer URL, Max Concurrent Calls Allowed, Status, and Action. The table contains two rows: one with Prefix '2', Peer URL 'peer1.grandstream.com', Max Concurrent Calls Allowed '10', and Status 'Unknown'; the other with Prefix '3', Peer URL 'peer2.grandstream.com', Max Concurrent Calls Allowed '10', and Status 'Unknown'. Each row has 'Modify' and 'Delete' buttons. An 'Add' button is located below the table.

Prefix	Peer URL	Max Concurrent Calls Allowed	Status	Action
2	peer1.grandstream.com	10	Unknown	Modify Delete
3	peer2.grandstream.com	10	Unknown	Modify Delete

- Adding and modifying peer systems

The following actions can be performed in this section.

Add: Click on the **Add** button. The peer system details page will be displayed, allowing you to enter connectivity details for this peer system:

The screenshot shows the 'Add Peer Systems' form in the GXE5024 IPPBX Administration Interface. The navigation menu is similar to the previous screenshot, but 'Advanced Options' is highlighted. The main content area has an 'Add Peer Systems' header with a 'Language' dropdown set to 'English' and a 'Logout' link. The form contains several fields: 'Peer URL' (text input), 'Max Concurrent Calls Allowed' (text input with value '0'), 'Prefix' (text input with a note '(up to 10 digits)'), 'IPPBX Number' (text input), 'Heart Beat' (radio buttons for 'Yes' and 'No', with 'Yes' selected), 'Session Keep Alive' (dropdown menu with 'Automatic/Session timer' selected), 'Session Expiration' (text input with value '180' and note '(in seconds. default 180 seconds)'), and 'Min-SE' (text input with value '90' and note '(in seconds. default and minimum 90 seconds)'). At the bottom of the form are 'Submit' and 'Cancel' buttons.

- *Peer URL:* Enter the IP address or domain name of the peer system.
- *Max Concurrent Calls Allowed:* This field specifies the number of concurrent calls that can be used between the peers.
- *Prefix:* Configure the prefix digit on outbound calls to recognize this peer system as the destination. When the call is sent to this peer system, the prefix digit is not removed as it is when dialing out other trunks. You may specify multiple prefixes for a peer system by separating them with a semicolon (i.e. 6;7).
- *IPPBX Number:* Enter a unique number to identify the remote peer system.
- *Heart Beat:* Enable or disable availability detection of the remote peer system (requires compatibility on the remote end).
- *Session Keep Alive:* This field lets you enable the use of the system session timer.
- *Session Expiration:* specifies the session expiration interval in seconds (SIP Server).
- *Min-SE:* Enter the minimum session expiration time in seconds (RTP).

When done, click on the **Submit** button to add the extension or **Cancel** to go back.

Modify: Click on the **Modify** button to the right of the row displaying information for the peer system you wish to modify. The peer system details page will be displayed, allowing you to modify all of the peer system's settings. When done, click on the **Submit** button to save your changes or **Cancel** to go back.

Delete: Click on the **Delete** button on the far right of the row displaying the information for the peer system you wish to delete. You will be prompted for confirmation via a dialog box; click **OK** to confirm or **Cancel** to go back.

11. Template Upload

The template upload page lets you upload a configuration template that determines which features are configured on phones that are auto-provisioned by the GXE (During Express Setup or by using the Auto provision feature under the "Phone Extensions" section of the UI). Browse to your template file and click the "upload" button.

Custom templates can be created by using the Grandstream Configuration Template Generator tool.

Config Template Upload

12. Resetting (Factory Reset) & Rebooting

The Reset & Reboot section allows rebooting of the GXE or resetting of all settings to factory default. Please backup the configuration file before resetting to factory default, should you decide you need to restore the system configuration.

Rebooting: Select the *Reboot* radio button, and click on the **Submit** button. The GXE will reboot itself. You can log back into the GXE web portal when the "ready" LED lights up.

Reset to default: Select the *Reset to Default* radio button, and click on the **Submit** button. The GXE will reboot itself, and will boot up with all factory default settings. The web configuration page access password will revert back to the default password: "admin."

13. Viewing GXE Status and Reporting Information

- GXE current status information

In the **Status** menu, the following categories of GXE status information are displayed.

The screenshot displays the GXE5024 IPPBX Administration Interface. The interface includes a navigation menu on the left with options like Phone Extensions, Trunk/Phone Lines, Conference Bridge, Hunt/Ring Group, Auto-Attendant, Call Queues, System Configuration, Advanced Options, Reset & Reboot, Status (highlighted), and Reports. The main content area is titled 'GXE5024 IPPBX Administration Interface' and includes a language dropdown set to 'English' and a 'Logout' link.

System Statistics

Product Model	GXE5024	Hardware Version	V0.2 A
Bootloader Version	1.0.0.13	Core Version	1.0.0.31
Base Version	1.0.0.31	Firmware Version	1.0.0.47
WAN MAC Address	00:0B:82:11:DC:8A	LAN MAC Address	00:0B:82:11:DC:8B
System Up Time Since	2008-03-12 13:44	System Current Time	2008-03-12 14:58:58

Network Status

WAN Port Link Status	Plugged	WAN IP Address	192.168.1.131
LAN Port Link Status	Plugged	LAN IP Address	192.168.10.1
WAN-side NAT Detected	dissymmetrical	Mapped IP:port	72.72.74.210:0
PPPoE Link Status	Disabled	DDNS Status	Disable
Active DHCP Clients	4		

Peripheral Status

Phone/Fax Port 1	Idle	Phone/Fax Port 2	Idle
PSTN Line 1	Idle	PSTN Line 2	Unplugged
PSTN Line 3	Unplugged	PSTN Line 4	Unplugged
PSTN Line 5	Unplugged	PSTN Line 6	Unplugged
PSTN Line 7	Unplugged	PSTN Line 8	Unplugged
USB Port	Unlink	Music-On-Hold Port	

User Activity Status

Current Active Calls	0	Total Configured Users	7
Local Online Users	4	Remote Online Users	0

Prefix Info

PSTN/FXO trunk dial prefix(1-2)	9
PSTN/FXO trunk dial prefix(3)	8
Leading digits of local extensions	6

Debug Info

Buttons:

System Status: System identification and firmware information and system uptime.

Network Status: Shows the network connection information.

Peripheral Status: Physical ports connection status information.

User Activity Status: Current user and registration status and active calls information.

Prefix Info: This field shows all of the prefixes in use by extensions, trunks & peer systems.

Debug Info:

14. Reports

In the **Reports** menu, useful system statistics and call statistics collected by the GXE are reported.

Viewing system statistics


Under the System Statistics section, information regarding memory usage, faxes, and voice and video messages is displayed.

The screenshot shows the GXE5024 IPPBX Administration Interface. The top header includes the Grandstream logo and the title "GXE5024 IPPBX Administration Interface". A navigation menu on the left lists various system functions, with "Reports" highlighted. The "System Statistics" section is active, displaying a table of metrics. The table includes: System NAND Flash Utilization (0% used), Saved Inbound Voice Messages (0), Unread Voice Messages (0), Average Duration Per Voice Message (0 seconds), Saved Inbound Fax Messages (0), Average Pages Per Fax Received (0 pages), Total Outbound Fax Messages Sent (0), Average Pages Per Fax Sent (0 pages), Saved Inbound Video Messages (0), Unread Video Messages (0), and Average Duration Per Video Message (0 seconds). The interface also features a language dropdown set to "English" and a "Logout" link.

System Statistics	
System NAND Flash Utilization	0% used
Saved Inbound Voice Messages	0
Unread Voice Messages	0
Average Duration Per Voice Message	0 seconds
Saved Inbound Fax Messages	0
Average Pages Per Fax Received	0 pages
Total Outbound Fax Messages Sent	0
Average Pages Per Fax Sent	0 pages
Saved Inbound Video Messages	0
Unread Video Messages	0
Average Duration Per Video Message	0 seconds

Viewing call statistics

Under the Call Statistics section, information regarding inbound calls and outbound calls is displayed. These statistics are reset upon reboot of the GXE.



GXE5024 IPPBX Administration Interface

- Phone Extensions
- Trunk/Phone Lines
- Conference Bridge
- Hunt/Ring Group
- Auto-Attendant
- Call Queues
- System Configuration
- Advanced Options
- Reset & Reboot
- Status
- Reports
- System Statistics
- Call Statistics

Call Statistics

Language English [Logout](#)

Total Outbound Calls:	
Total Outbound Calls to Remote Extensions	0
Total Outbound Calls to PSTN Trunks	0
Total Outbound Calls to SIP Trunks	0
Average Duration per Outbound Call	0 seconds
Total Inbound Calls:	
Total Inbound Calls to Remote Extensions	0
Total Inbound Calls to PSTN Trunks	0
Total Inbound Calls to SIP Trunks	0
Average Duration per Inbound Call	0 seconds

Viewing Call Records

The Call Records section displays detailed information such as the Caller/Callee extension # and the start and end time for each inbound/outbound call.



GXE5024 IPPBX Administration Interface

- Phone Extensions
- Trunk/Phone Lines
- Conference Bridge
- Hunt/Ring Group
- Auto-Attendant
- Call Queues
- System Configuration
- Advanced Options
- Reset & Reboot

CDR Records

Language English [Logout](#)

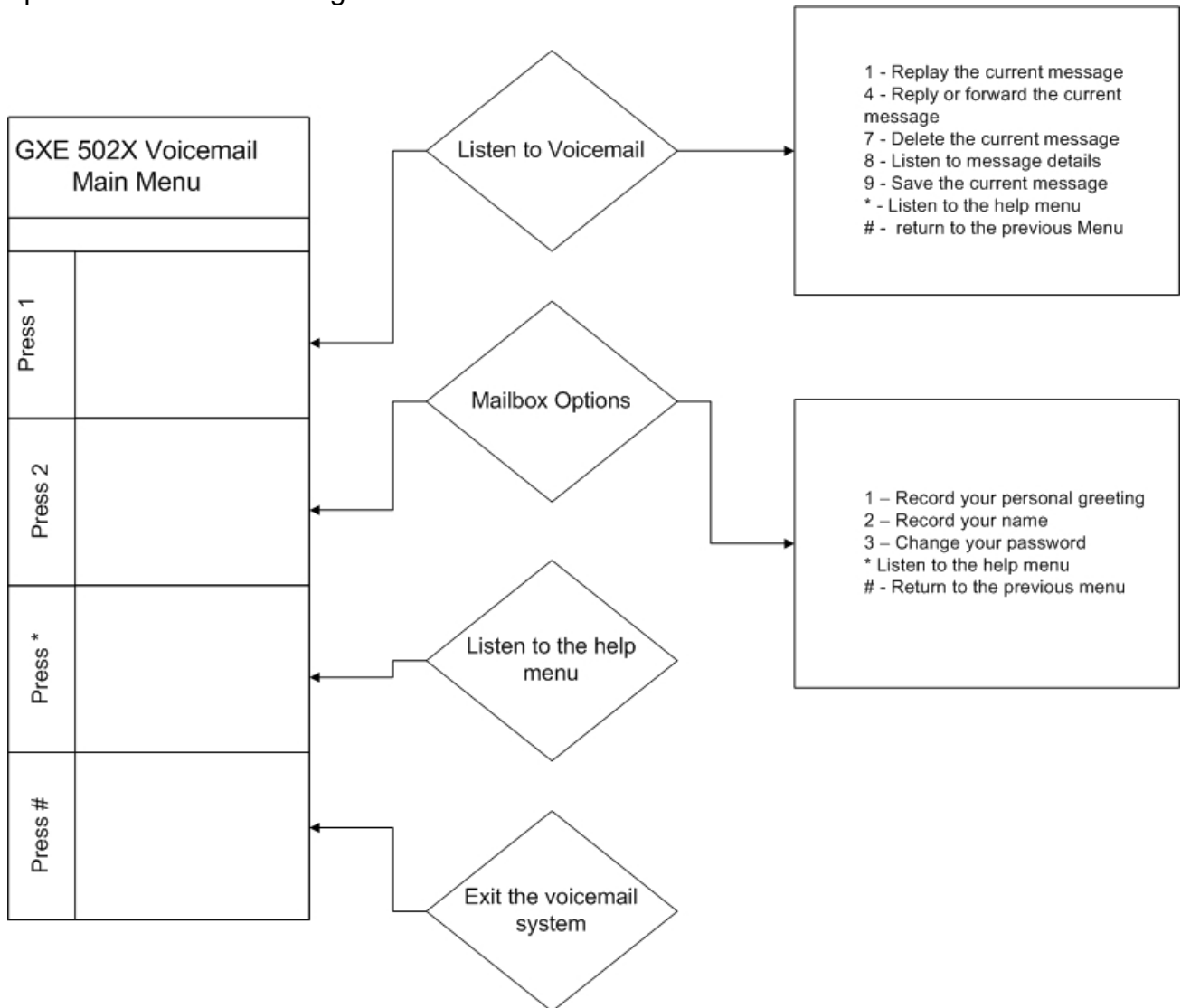
Caller	Callee	Start	End
6004	6005	WEN APR 2 10:57:15 2008	WEN APR 2 10:57:24 2008
6005	6004	WEN APR 2 10:56:25 2008	WEN APR 2 10:56:42 2008
6001	6003	WEN APR 2 10:56:06 2008	WEN APR 2 10:56:15 2008
6004	6002	WEN APR 2 10:11:46 2008	WEN APR 2 10:11:50 2008
6001	6002	WEN APR 2 10:11:14 2008	WEN APR 2 10:11:24 2008
Total:5		Index:0-4	

15. Configuring Voicemail

The GXE 502X allows users to manage voicemail via IVRs in their phones or through a personal web portal. This section summarizes how to manage voicemail and other settings using both of these features.

Configuring Voicemail through the IVR

The default feature code for voicemail access is *12345. After dialing this code, you will enter a basic IVR menu with the option to listen to/forward messages and configure your voicemail options. See the following flow chart for reference.

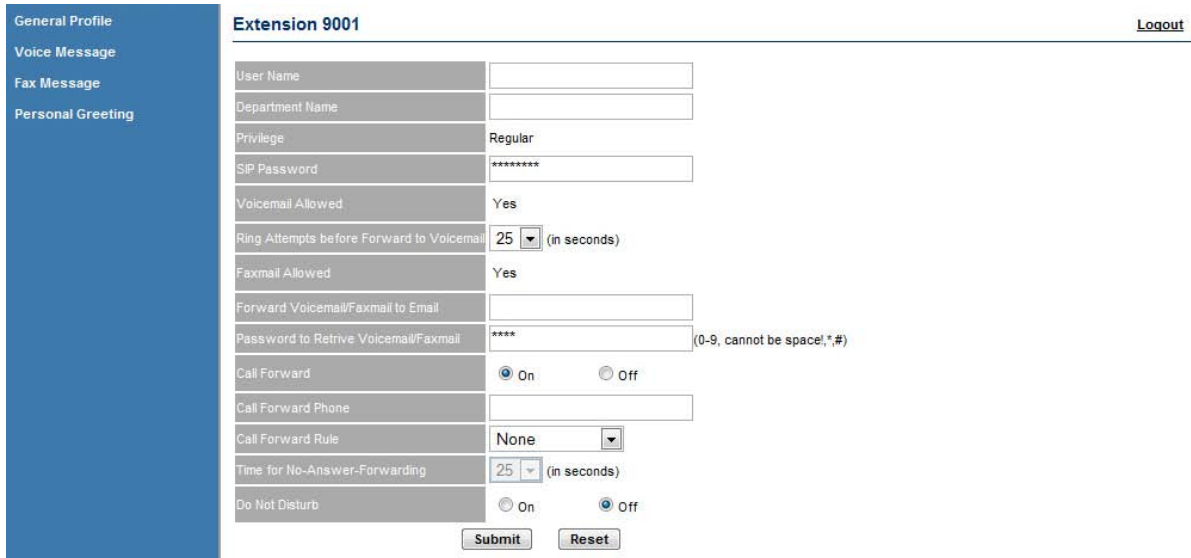


The Personal Web Portal

1. To log into the personal web portal for an extension. Log into the GXEs web GUI using the extension # as the user name and password. If you have changed your voicemail password from the default value, use your new password.



Once you have logged in the following page will display



2. To view current voice mails click on the “Voice Message” button on the left hand side of the interface. Doing this will load the voice mail management page. Here you can save or delete your messages.



3. To view your personal greeting, click the “Personal Greeting” button on the left hand side of the GUI. This will load the personal greeting management page for your extension. You can upload .wav files from a location of your choice and preview them here.

General Profile
Voice Message
Fax Message
Personal Greeting

9001 Greeting [Logout](#)

Personal Greeting

Personal Name

4. Click on the Fax Message button on the left hand menu to load the fax message management page.

General Profile
Voice Message
Fax Message
Personal Greeting

7001 Fax Message Language [Logout](#)

There is no FAX Message