

The VitalPBX logo features a stylized white crescent shape to the left of the text "VitalPBX". The text is in a bold, sans-serif font, with "Vital" in a smaller weight than "PBX". Two horizontal white lines extend from the left and right sides of the logo.

VitalPBX

The VitXi logo consists of a white icon on the left and the text "VitXi" on the right. The icon depicts a telephone handset inside a cloud, with three curved lines representing signal waves. The text "VitXi" is in a bold, sans-serif font.

VitXi

www.vitalpbx.org

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Introduction

VitXi WebRTC is a platform that integrates with VitalPBX in a transparent manner, and allows to have the following services:

- Audio Calls
- Video Calls
 - Screen Sharing
- SIP Chat (Chat between VitXi and SIP Users)
- Chat between VitXi Users
 - Voice Notes
 - Emojis
 - File Sharing
 - Image Sharing
- Graphic Voice Mail Interaction
- Call Recordings Viewer
- Presence
- Call History
- Contact List
- And Much More!

VitalPBX Preparations

1.- VitalPBX Server Preparations

For VitXi WebRTC to work perfectly, it is necessary to have a valid FQDN to assign it security certificates. Coming up, we will show you the steps to follow once we have VitalPBX installed on our server with a valid domain.

1.1.1.- Install VitXi License Manager

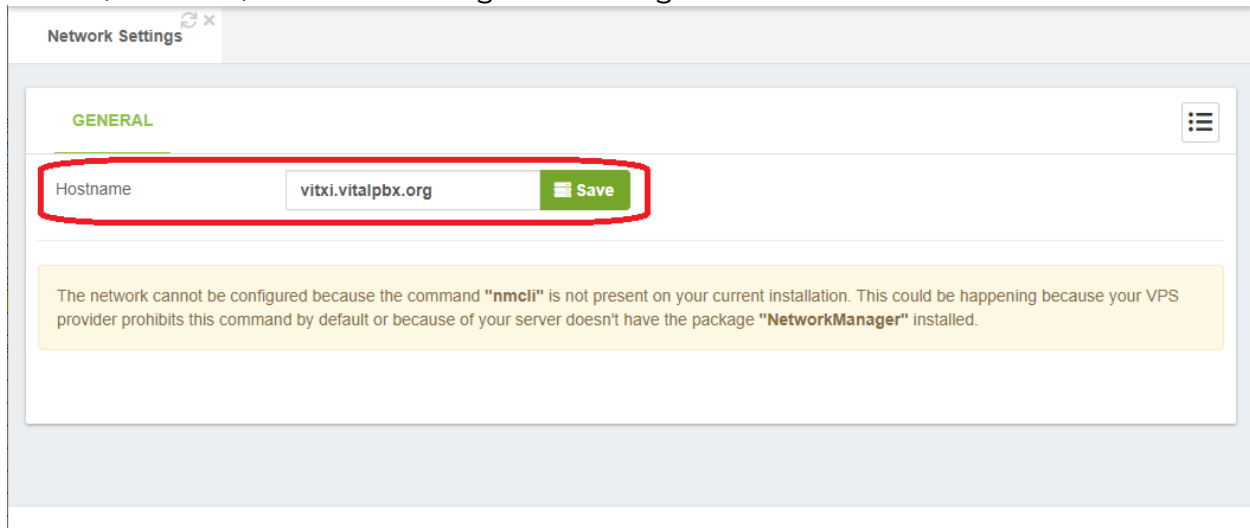
Go to Admin > Add-Ons > Add-Ons and select VitXi License Manager (VitXi Server) and install it. With this we guarantee ourselves at least two free licenses with the Community Version of VitalPBX to try out VitXi WebRTC or VitXi Mobile.



1.1.2.- Create a certificate and enable HTTP

Remember that it is necessary to have a valid FQDN and that our VitalPBX server must have a valid certificate.

It is also very important that the host name of the server matches the FQDN that we are using to generate the Let's Encrypt certificate, so first you have to go to Admin/Network/Network Settings and configure the Hostname as shown below.



Now we are going to configure the certificate for which we are going to Admin/System Settings/Certificates.

Certificates

GENERAL

Type	Let's Encrypt	Owners Email	rcuadra@vitalpbx.com
Description *	VPBX SSL	Country	United States
Hostname *	vitxi.vitalpbx.org	State	Florida

Save

Afterwards, go to Admin > System Settings > HTTP Server, and force HTTPS connection and select the certificate created previously.

HTTP Server

GENERAL

HTTP Port	80	HTTPS Enable	<input checked="" type="checkbox"/>
HTTPS Port	443	Force HTTPS	<input checked="" type="checkbox"/>
Certificate	VPBX SSL		

Save

Now go to Settings > PBX Settings > Mini HTTP Server and configure it as shown below. You must select the certificate we have created. Remember to save and Apply Changes. We do this so that VitXi WebRTC PJSIP WebSocket can communicate with VitalPBX.

Mini HTTP Server

GENERAL

HTTP Bind Address	0.0.0.0	8088	Enable HTTP	<input checked="" type="checkbox"/>
TLS Bind Address	0.0.0.0	8089	TLS Enable	<input checked="" type="checkbox"/>
Certificate	VPBX SSL			

Save

Now, go to Settings > PBX Settings > RTP Settings and configure it as shown below. You must select the certificate created previously. Remember to Save and Apply Changes.

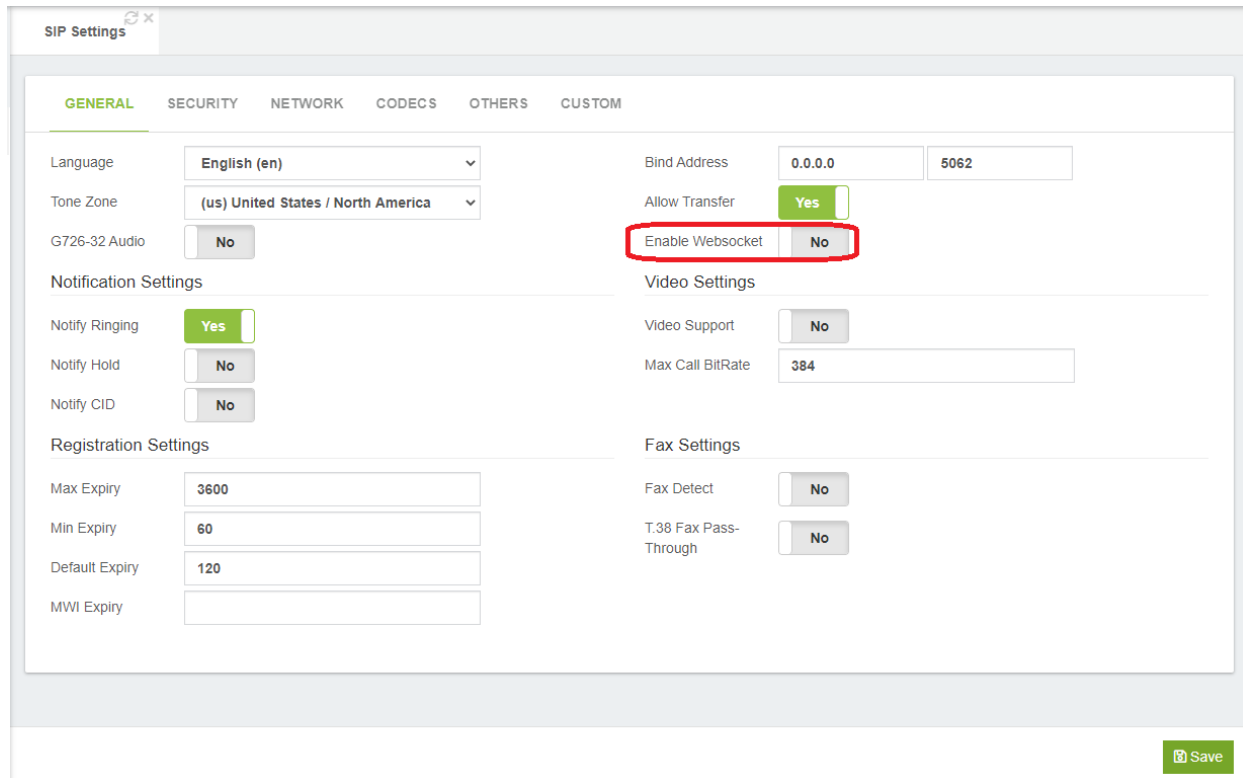
GENERAL			
RTP Start	<input type="text" value="10000"/>	Stun Server	<input type="text"/>
RTP End	<input type="text" value="20000"/>	Turn Server	<input type="text"/>
Strict RTP	<input checked="" type="checkbox"/>	Turn Server Name	<input type="text"/>
RTP Checksums	<input checked="" type="checkbox"/>	Turn Server Password	<input type="text"/>
ICE Support	<input checked="" type="checkbox"/>		

Now, we are going to add the firewall rule that will allow WebRTC connections from the PJSIP socket, for which we will go to Admin > Firewall > Rules and we add the rule **"Asterisk HTTP Daemon."** Then, we apply changes.

Add Rule	
Service	<input type="text" value="Asterisk HTTP Daemon"/>
Source	<input type="text"/>
Destination	<input type="text"/>
Action	<input type="text" value="ACCEPT"/>

Now we will proceed to disable the SIP websocket, since the websocket cannot work at the same time in SIP and PJSIP. For this we go to Settings/Technology Settings/SIP Settings, in the General disable the option "Enable Websocket" if it was enabled.

Later Go to the linux console and restart Asterisk with the following command:
systemctl restart asterisk



The screenshot displays the 'SIP Settings' web interface. At the top, there are tabs for 'GENERAL', 'SECURITY', 'NETWORK', 'CODECS', 'OTHERS', and 'CUSTOM'. The 'GENERAL' tab is selected. The interface is divided into several sections: 'Language' (English (en)), 'Tone Zone' ((us) United States / North America), 'G726-32 Audio' (No), 'Notification Settings' (Notify Ringing: Yes, Notify Hold: No, Notify CID: No), 'Registration Settings' (Max Expiry: 3600, Min Expiry: 60, Default Expiry: 120, MWI Expiry: empty), 'Bind Address' (0.0.0.0, 5062), 'Allow Transfer' (Yes), 'Enable Websocket' (No, highlighted with a red box), 'Video Settings' (Video Support: No, Max Call BitRate: 384), and 'Fax Settings' (Fax Detect: No, T.38 Fax Pass-Through: No). A green 'Save' button is located at the bottom right.

1.1.3.- Create a VitXi Extension

Go to PBX > Extensions > Extensions and create an extension with the following parameters:

The screenshot shows the 'Extensions' configuration page in a web interface. The 'GENERAL' tab is selected. The 'Extension' field is set to '600', 'Name' is 'VITXI Client', 'Class of Service' is 'All Permissions', 'Features Password' is '*95624', and 'Language' is 'English (en)'. Under the 'Devices' section, 'Technology' is 'PJSIP', 'User Device' is '600', 'Device Description' is 'VITXI Client', 'Profile' is 'Default WebRTC Profile', 'Max Contacts' is '1', and 'Codecs' are 'opus, ulaw, alaw, vp8, vp9'. On the right, 'Ring Device' is 'Yes', 'Send Push' is 'Yes', and 'VITXI Client' is 'Yes'. A 'save' button is at the bottom right.

- **Technology**, PJSIP
- **Profile**, Default WebRTC Profile
- **Codecs**, opus, ulaw, alaw, VP8, VP9
- **Send Push**, Yes
- **VitXi Client**, Yes

It is very important to select the listed codecs as this guarantees good communication quality.

Save and Apply Changes.

VitXi WebRTC

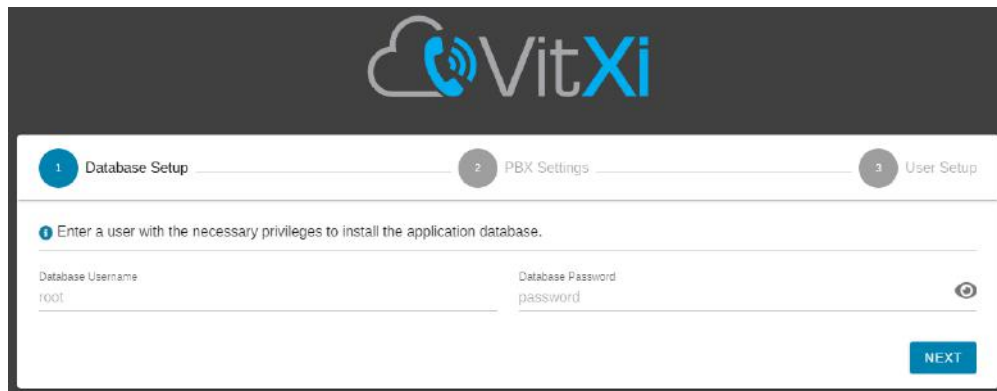
VitXi WebRTC is a full web application that integrates with VitalPBX and communicates through the PJSIP protocol over WebRTC.

1.- Installation

VitXi WebRTC works only with VitalPBX 3.0 and onwards. To install VitXi WebRTC it is necessary to go to the Add-On module (Admin > Add-Ons > Add-Ons) and press the green install button next to it. After a couple of minutes, the installation would be done and you can proceed to its URL (<http://IP-ADDRESS/VitXi>) and proceed with the installation wizard. You can press VitXi's name on the Add-Ons module to quickly go to this URL.

Now, we will see the installation wizard that will guide us through the final steps for configuration.

a.- Database Settings:

The screenshot shows the VitXi installation wizard interface. At the top, there is a dark header with the VitXi logo. Below the header, a progress bar indicates three steps: 1. Database Setup (active), 2. PBX Settings, and 3. User Setup. The main content area contains a blue instruction: "Enter a user with the necessary privileges to install the application database." Below this, there are two input fields: "Database Username" with the value "root" and "Database Password" with the value "password". A "NEXT" button is located at the bottom right of the form.

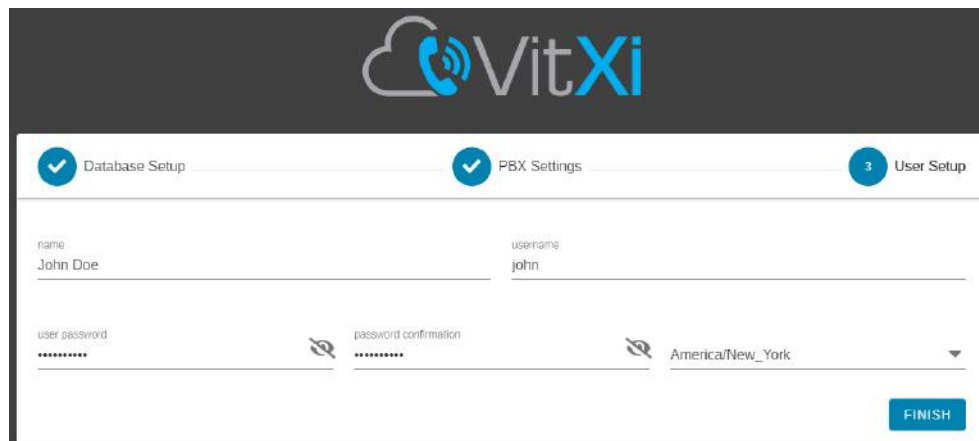
- **Database User**, MySQL user, if we are installing on the same server as VitalPBX, you can leave the username 'root' and blank password. Else, you will need to create a new MariaDB user to access remotely.
- **Database Password**, if we are installing on the same server as VitalPBX, the root user does not have a password. When accessing remotely, you must create a new username and password in MariaDB.

b.- PBX Settings:



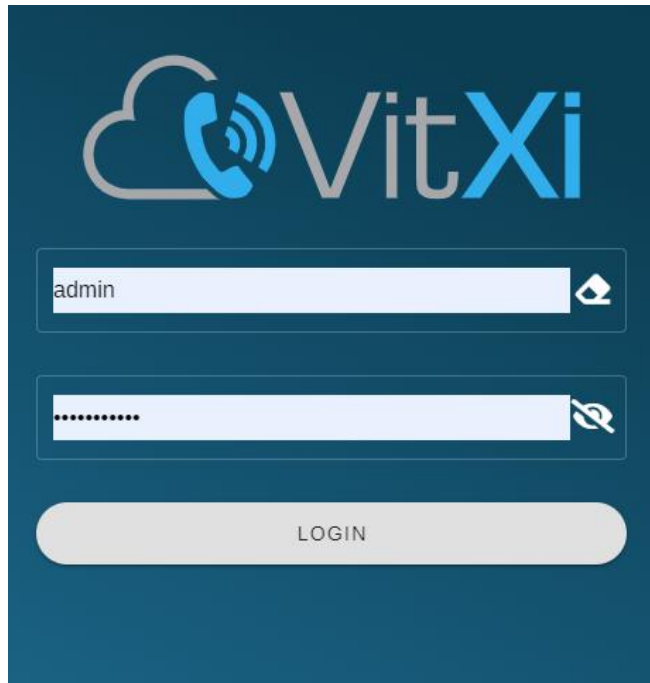
- **Host**, if we are installing on the same server as VitalPBX, it is recommended to leave this field as **localhost**. Else, we must input the host or remote IP Address.
- **Port**, if our server has a valid certificate and all the requests are redirected to HTTPS, we must configure port 443. If we are not using HTTPS, we configure port 80. If we are accessing the PBX remotely, remember to open these ports on the firewall.
- **Application key**, if the VitXi is located on the same server as VitalPBX, it is not necessary to generate an API key since it will be generated automatically. If VitXi is installed on a different server to VitalPBX you will need to generate an API key under Admin > Admin > Application Keys. You then copy it and paste it here.
- **Secure**, indicates a secure connection through HTTPS. Usually, you check this option when using port 443.

c.- User Setup:



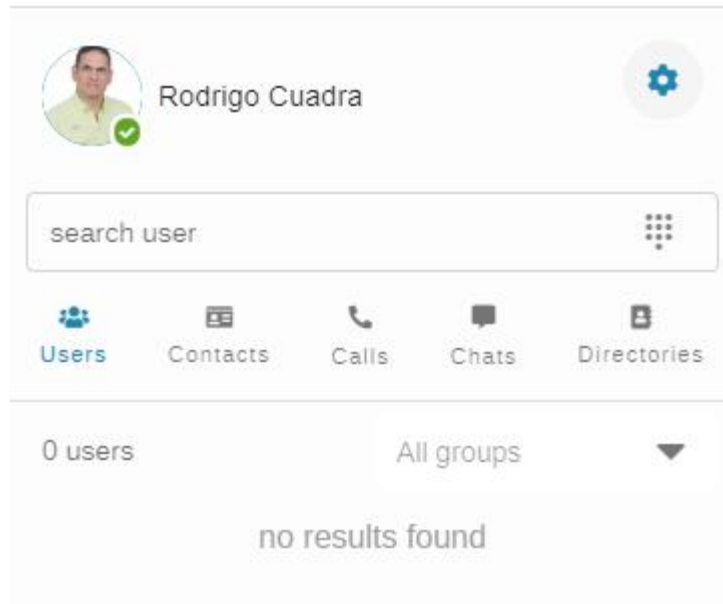
- **Name**, full name for the administrator user in VitXi.
- **Username**, is the administrator username to use in VitXi, usually 'admin.'
- **User Password y Password Confirmation**, admin user password.
- **Time zone**, here you choose a default time zone.

d.- Enter the Username and Password previously created.





The screenshot shows the VitXi login page. At the top is the VitXi logo, which includes a cloud and a telephone handset icon. Below the logo are two input fields. The first field is for the username, with the text 'admin' entered. The second field is for the password, shown as a series of dots. To the right of the password field is an eye icon. Below the input fields is a large, rounded rectangular button labeled 'LOGIN'.

2.- Menu



On the menu we got the following options:

- **Users**, the list of VitXi Users on our tenant.
- **Contacts**, the contact list added by the user manually.
- **Calls**, the user's call history.
- **Chats**, list of people with which the user has had some type of chat.
- **Directories**, phone directories that are extracted from the VitalPBX Phonebook.
-  , main menu to configure the system.
-  , Voicemail Messages indicator.

3.- Settings

3.1.- Settings

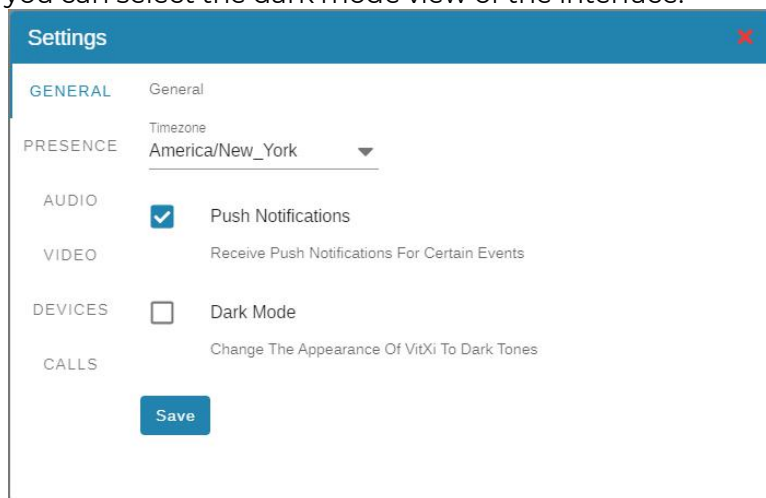
The first thing that we are going to configure are the System Settings, for which we will go to the main menu and select settings. This will display the following screen.

General

Timezone, the time zone for the user. This way, the user will see its own time zone no matter where they are located.

Push Notifications, the user can receive a notification for certain events, for example, receiving a call, a message, and more.

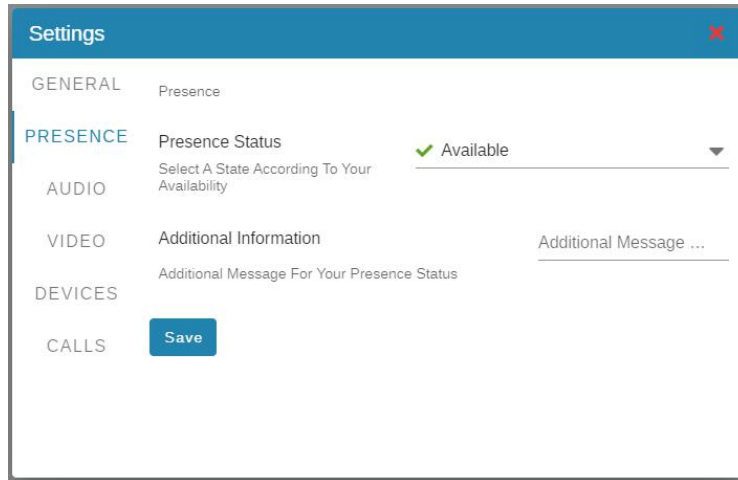
Dark Mode, here you can select the dark mode view of the interface.



Presence

Presence Status, select the presence status with which we desire to have when login in.

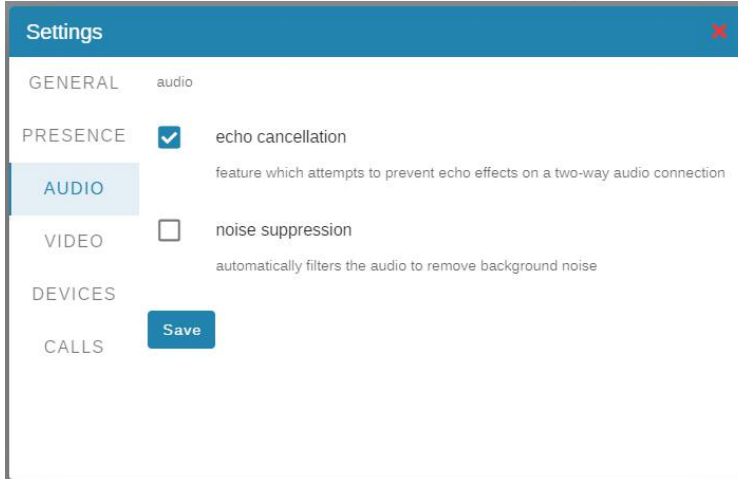
Additional Information, if the user wants to show some additional message that other users that are connected will see.



Audio

Echo Cancellation, this is used to prevent the echo effect during a call.

Noise Suppression, automatically filters and eliminates background noise.

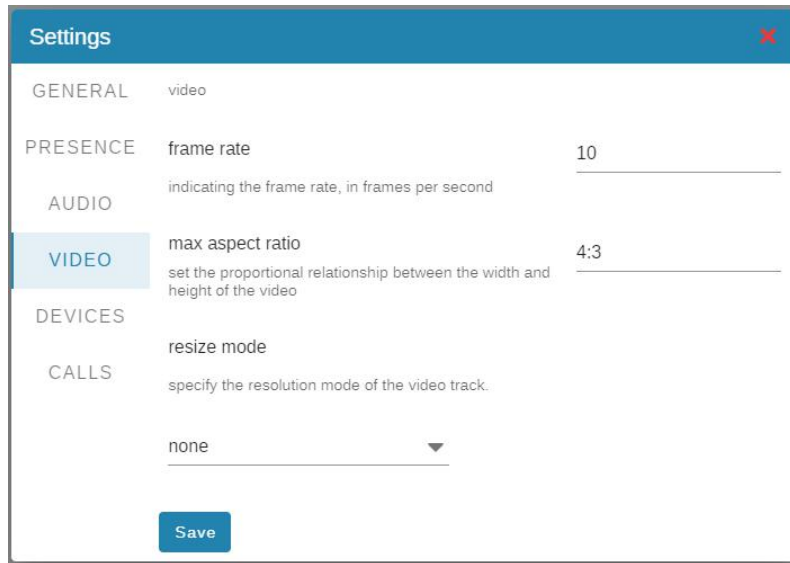


Video

Frame rate, this indicates the frames per second for your video feed.

Max aspect Ratio, this indicates the ratio for the dimensions of your video feed.

Resize Mode, specifies the resolution mode for the video image.

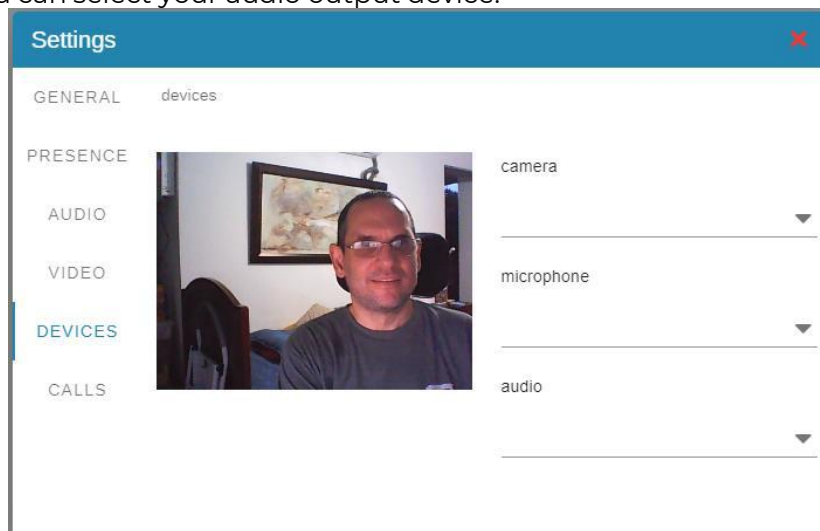


Devices

Camera, this allows you to select your video device for video calls.

Microphone, here you select your desired microphone device.


Audio, here you can select your audio output device.

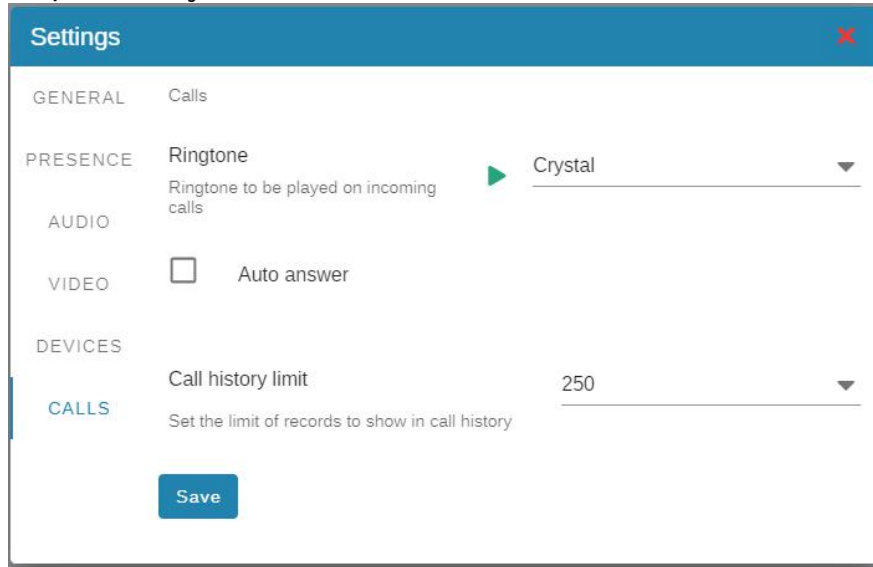


Calls

Ringtone, here you can select the ring tone to listen when the user is receiving a call.

Auto Answer, this will answer the call automatically.

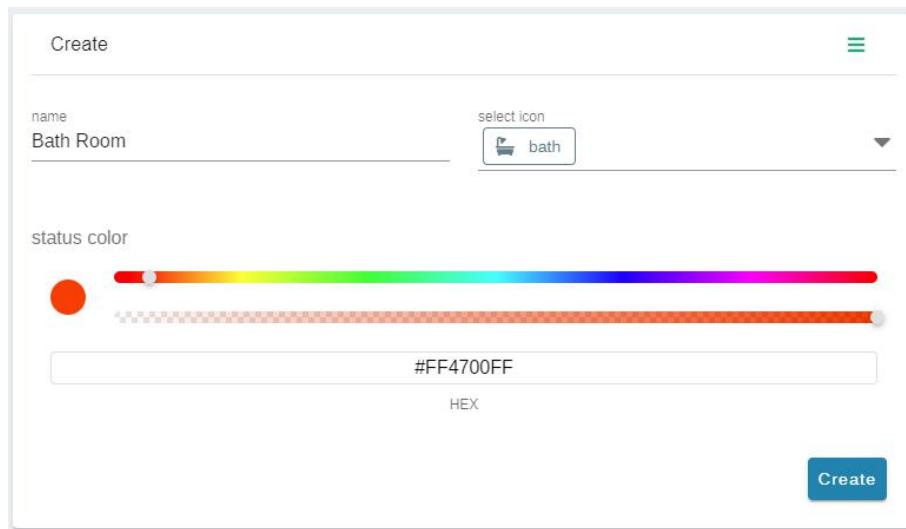
Call history limit, with this you can establish the call limit to show on the Calls option .



The screenshot shows a 'Settings' dialog box with a blue header and a close button. The settings are organized into sections: GENERAL (Calls), PRESENCE (Ringtone: Crystal), AUDIO (Auto answer: unchecked), VIDEO, DEVICES (Call history limit: 250), and CALLS (Set the limit of records to show in call history). A 'Save' button is located at the bottom left of the dialog.

3.2.- Presence Status

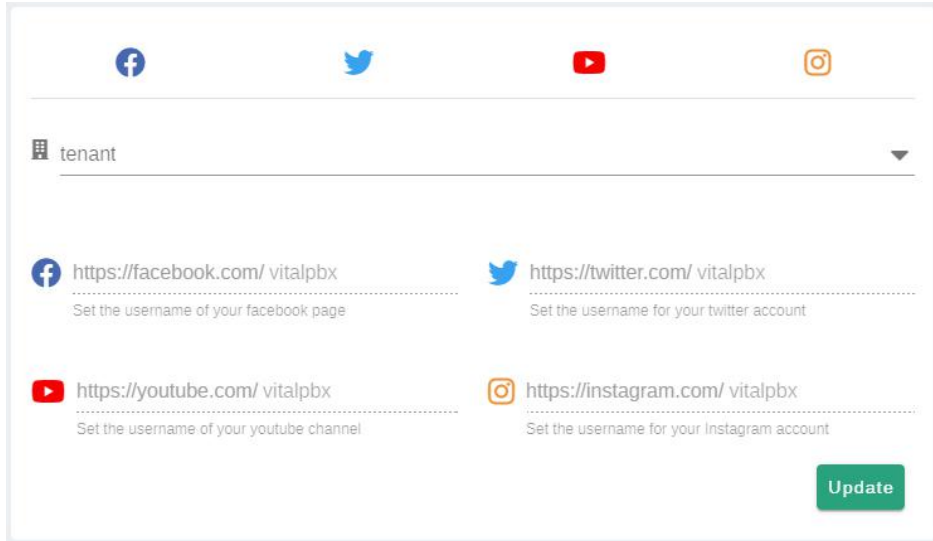
Here, the system administrator can create the different presence status that users can use. By default, there are five (5) status which are, Available, Do Not Disturb, Lunch Break, and Business Trip, however, you can add more.



The screenshot shows a 'Create' form for a presence status. The form has a title 'Create' and a menu icon. It includes fields for 'name' (Bath Room), 'select icon' (bath), 'status color' (a color picker showing a red circle and a rainbow bar), and a 'Create' button.

3.3.- Social Network

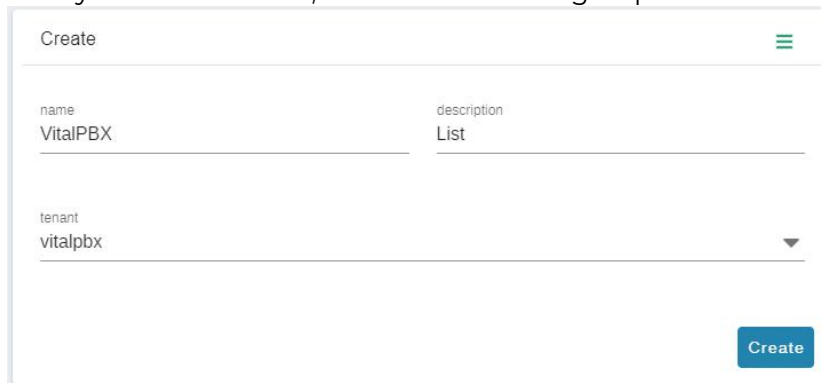
Here, you can configure the social media that will appear on the footer.



The screenshot shows a configuration panel for social media links. At the top, there are four social media icons: Facebook, Twitter, YouTube, and Instagram. Below the icons is a dropdown menu labeled 'tenant' with the value 'tenant'. The main area contains four input fields, each with a social media icon and a URL: 'https://facebook.com/ vitalpbx', 'https://twitter.com/ vitalpbx', 'https://youtube.com/ vitalpbx', and 'https://instagram.com/ vitalpbx'. Each input field has a small text prompt below it: 'Set the username of your facebook page', 'Set the username for your twitter account', 'Set the username of your youtube channel', and 'Set the username for your Instagram account'. A green 'Update' button is located at the bottom right of the form.

3.4.- Groups

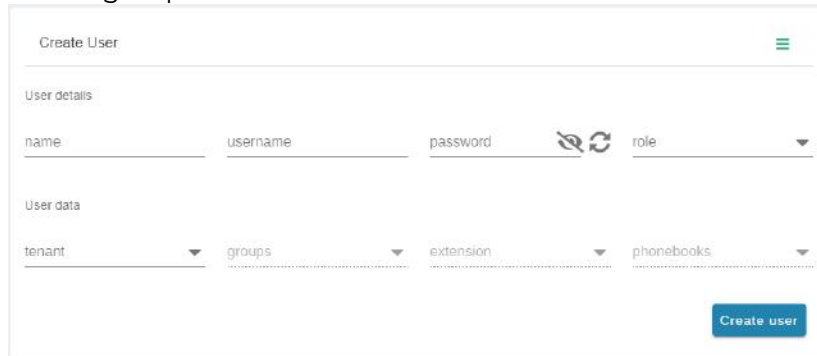
With the purpose that the VitXi users become visible between each other, it is necessary that each user has a group assigned to them, and afterwards, we give access to other users to see this group. This way, you can create multiple groups of users limiting them on which groups they can see. For this, we first create the group name.



The screenshot shows a 'Create' form for a group. The form has a title 'Create' and a hamburger menu icon. It contains two input fields: 'name' with the value 'VitalPBX' and 'description' with the value 'List'. Below these is a 'tenant' dropdown menu with the value 'vitalpbx'. A blue 'Create' button is located at the bottom right of the form.

3.5.- Users

Now, we will create the users and assign them to the groups we want to. A user can belong to one or more groups.



Name, user's full name.

Username, username with which the user will log into VitXi WebRTC.

Password, password with which the user will log into VitXi WebRTC.

Role, the type of user. There are three types of users.

- **Super Administrator**, capable of managing all the users and tenants.
- **Administrator**, capable of managing users within its tenant.
- **User**, VitXi WebRTC end-users.

Tenant, tenant to which the user belongs to.

Groups, groups to which the user belongs to.

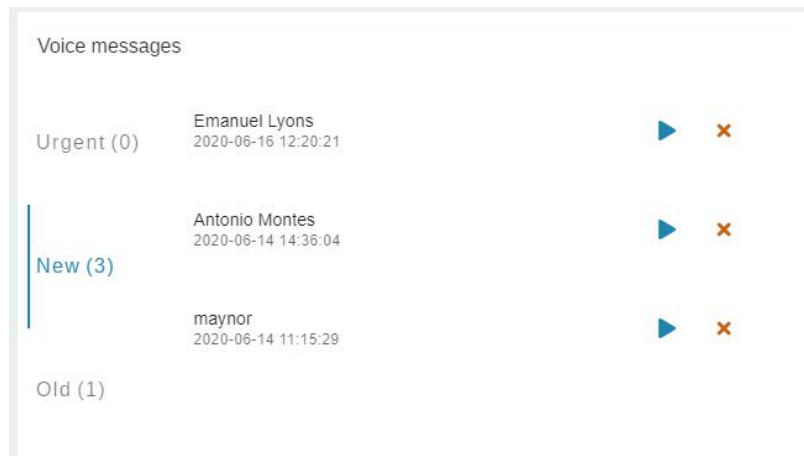
Extension, extension associated to the user. For this, the user needs to have a VitXi Device created on VitalPBX.

Phonebooks, phonebooks to which the user will have access to.

3.6.- Voice Messages

It is possible to view all of your Voicemail messages from VitXi WebRTC, which allows us to perform the following actions:

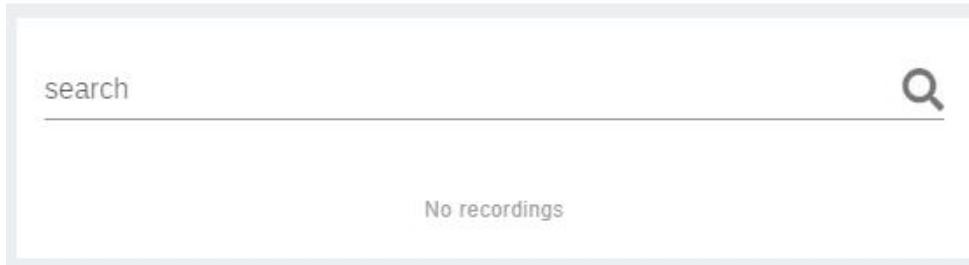
- Listen
- Delete



Status	Sender	Time	Listen	Delete
Urgent (0)	Emanuel Lyons	2020-06-16 12:20:21	▶	✕
New (3)	Antonio Montes	2020-06-14 14:36:04	▶	✕
	maynor	2020-06-14 11:15:29	▶	✕
Old (1)				

3.7.- Recordings

It is possible to listen to the user's call recordings from the extension they have associated to them.



A screenshot of a search interface. At the top, there is a search bar with the placeholder text "search" and a magnifying glass icon on the right. Below the search bar, the text "No recordings" is displayed in the center.



3.8.- PBX Settings

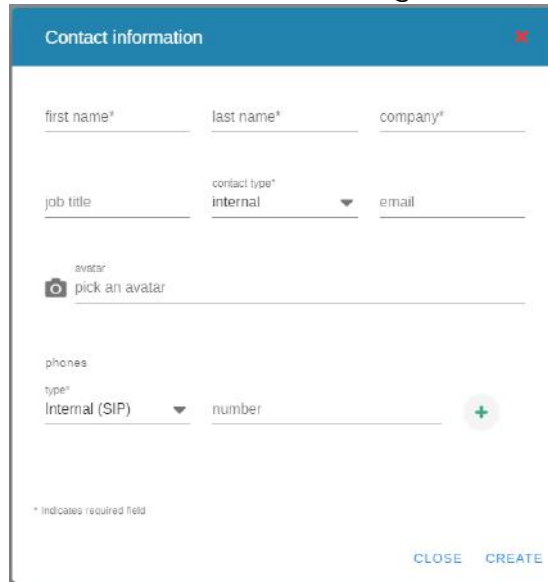
Even though this information is asked at the moment of installation, it is also possible to perform some modifications afterwards.



A screenshot of the "PBX Settings" form. The form has a title "PBX Settings" at the top. Below the title, there are two input fields: "host" with the value "beta3.vitalpbx.org" and "port" with the value "443". Below these fields, there is a "key" field with a dotted line and a lock icon, and a "secure" toggle switch that is currently turned on. At the bottom right of the form, there is a green "Update" button.

3.9.- Add Contacts

To add a new contact, it is necessary to go to 'Contacts' , and on the bottom press the 'Add Contact' option  and then it will show us the following form.



First Name, the contact's First Name.

Last Name, the contact's Last Name.

Company, name of the Company where the Contact works at.

Job Title, the job they perform at the company they work at.

Contact Type, the type of contact, Internal or External.




Email, contact's email address.

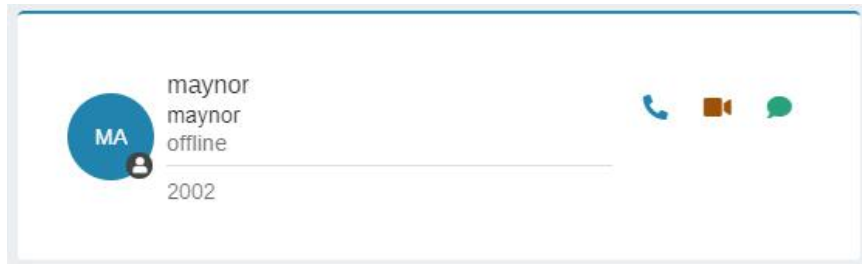
Avatar, image to remember the contact with.


Phones, contact's phone number, they can be SIP, cellphone, or any other type.

4.- Placing Calls

There are many ways to perform calls through VitXi WebRTC. The easiest way is by selecting the user and then pressing one of the three options available:

-  , Audio Call
-  , Video Call, with the option to share screen.
-  , Chat message



We can also use the Number Pad by pressing the  button, shown above the Directories menu.

