Configuring QX IP PBXs with Adiptel SIP Trunks

Abstract: This guide describes the configuration of QX IP PBXs to use the SIP trunk service from Adiptel.

Document Revision History

Revision	Date	Description	Valid for FW	Valid for Models
1.0	29-Aug-17	Initial Release	6.1.50 and higher	QX IP PBXs

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1 Introduction

This document describes the configuration of Epygi QX IP PBXs (herein QXs) to use the VoIP SIP trunking service from Adiptel – the industry leader among business VoIP providers in Spain. The QX is capable of making IP-PSTN calls via Adiptel SIP trunks. This solution allows QX users to make cost saving calls to the global PSTN network.

Note:

- The described configuration is generic for all Epygi QX IP PBX models, such as the QX20, QX50, QX200, QX500, QX2000 and QXISDN4+.
- Security issues and calling rates are beyond the scope of this document. See the listed documents in References section to get more information on the security related issues.

2 Scenario

Provider: **Adiptel**

- Offers outbound and inbound calls.
- Allows parallel outbound calls to be made from one account.
- Allows parallel calls to be received on one account.

Customer:

- The customer will make long distance cost saving PSTN calls through the Adiptel SIP trunks.

2.1 Requirements and Preparations

- QX is connected to the network and all network settings are properly configured.
- One or more IP phones in Epygi supported phones list are autoconfigured with QX.
- Always use the **latest** available QX **firmware** to achieve maximum compatibility for the QX's telephony features and settings.

2.2 Account Information from Adiptel

Adiptel will provide the customer with the following data (all listed data below are just samples):

- **Username** (authorization username/userID) – 4997414497
- **Password** – ************
- **SIP server** – clientes.adiptel.com
- **Signaling port for SIP server** – 5060
- **Telephone number(s)** (DID allocated to the customer) – 9476XXXXX

3 Configuration

The sections below describe the configuration steps required on the QX to allow the users to

- Make outgoing calls through the Adiptel SIP trunks.
- Receive incoming calls from the Adiptel SIP trunks
- Send and receive faxes through the Adiptel SIP trunks.

We will use the QX's **VoIP Carrier Wizard** designed to simplify the configuration of QX with different VoIP SIP providers. The wizard allows collecting the account information from provider and generating the needed configuration for each specific VoIP SIP provider on QX. Just after finishing the wizard, the QX local PBX extensions will be able to place calls to the PSTN using the provider's SIP trunks, as well as receive calls from the provider's VoIP SIP trunks.

3.1 Making Outgoing Calls through the Adiptel

Create automatically a new extension on the QX and configure if with the Adiptel SIP trunks as follows:

1. Go to the **Telephony→VoIP Carrier Wizard**, pass through the wizard by inserting the below listed parameters:
   - Select **Manual** from the **VoIP Carrier** list.
   - **Description** – optional (e.g. Adiptel)
   - Click **Next**.

Figure 1: Select VoIP Carrier section

2. Insert the following parameters in the **VoIP Carrier Settings** section (Figure 2):
   - **Account Name** – the username provided by the Adiptel (4997414497 for this example)
   - **Password** – ************
   - **SIP server –** clientes.adiptel.com
   - **SIP Server Port** – 5060
   - **Use RTP Proxy** – selected
   - Click **Next**.

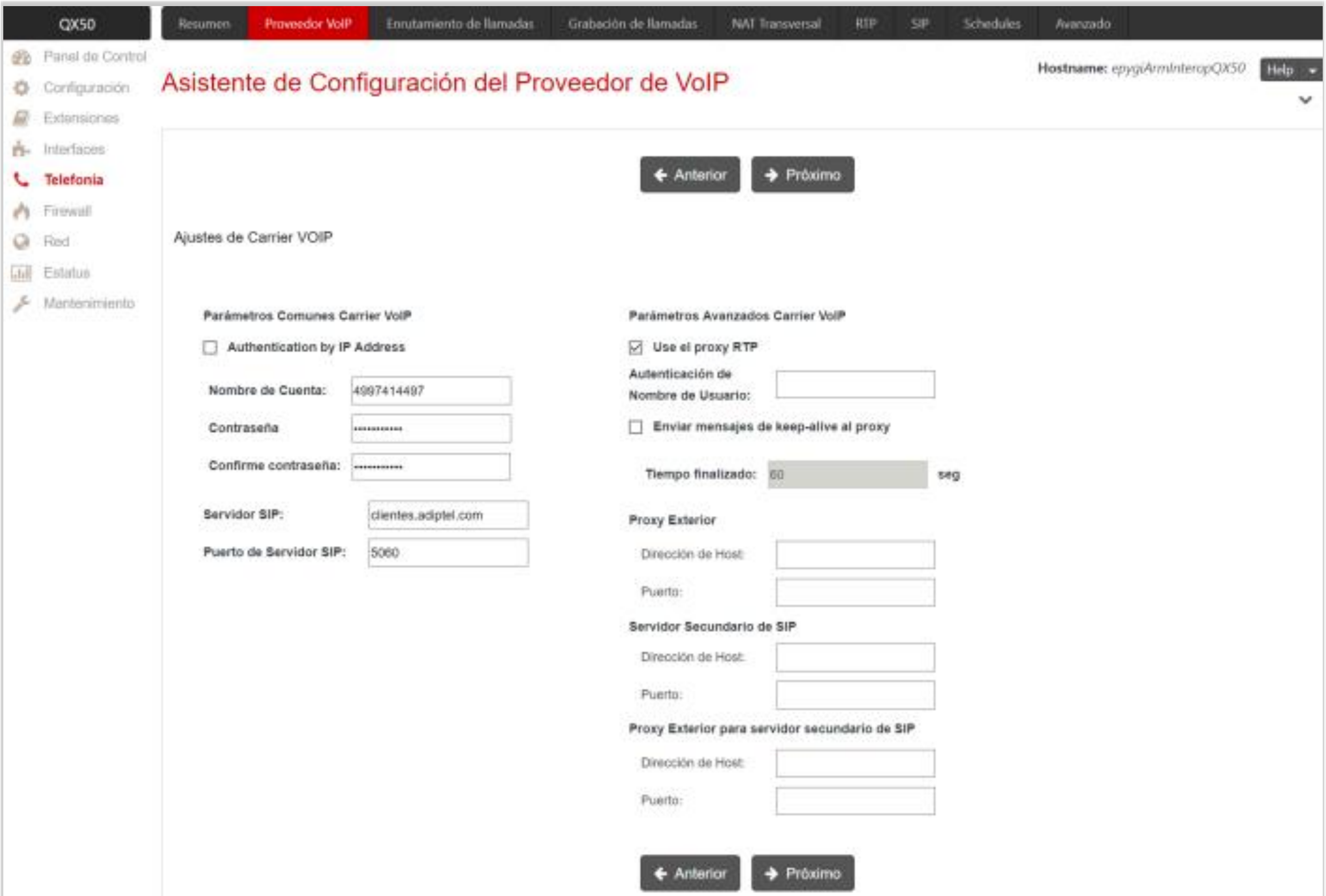

Figure 2: VoIP Carrier Settings section

3. Configure the following parameters in the **VoIP Carrier Access Code** section: (Figure 3):
   - **Access Code** – 1 (for this example)
   - **Emergency Code** – leave the default value or put your emergency call number for your area.
   - **Route Incoming Calls to** – 00 (the QX default Auto Attendant). Routing all incoming calls to the Auto Attendant is the most frequently used scenario. Using other QX extension as a call receiver is also applicable.
   - **Failover to PSTN** – Enable the **Failover to PSTN** service if it is desirable to allow calls failover through the QX's on-board FXO/ISDN lines. This option is available for QX50, QX200 and QXISDN4+ models.
   - Click **Next**.

Figure 3: VoIP Carrier Access Code section

4. Confirm the entered settings on the last section of **VoIP Carrier Wizard** and click **Finish**.

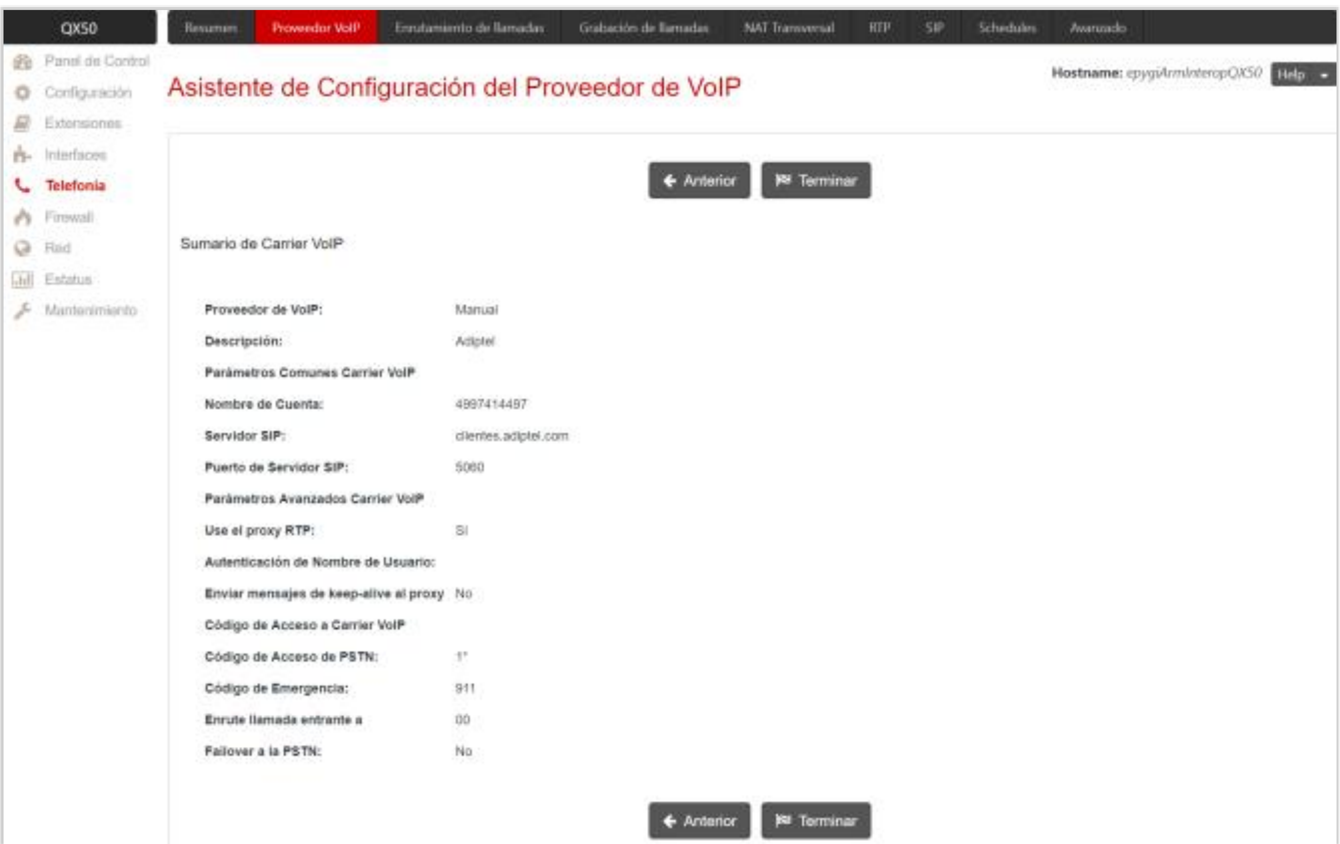

Figure 4: VoIP Carrier Wizard – Summary section

Now the provided account is configured with the QX. The extension (e.g. 999) with provided credentials (username, password) will be created automatically in the **Extensions Management** (Figure 5). The appropriate routing rules with **1*** and **{911}** patterns will be automatically added on the **Call Routing Table** (Figure 6).

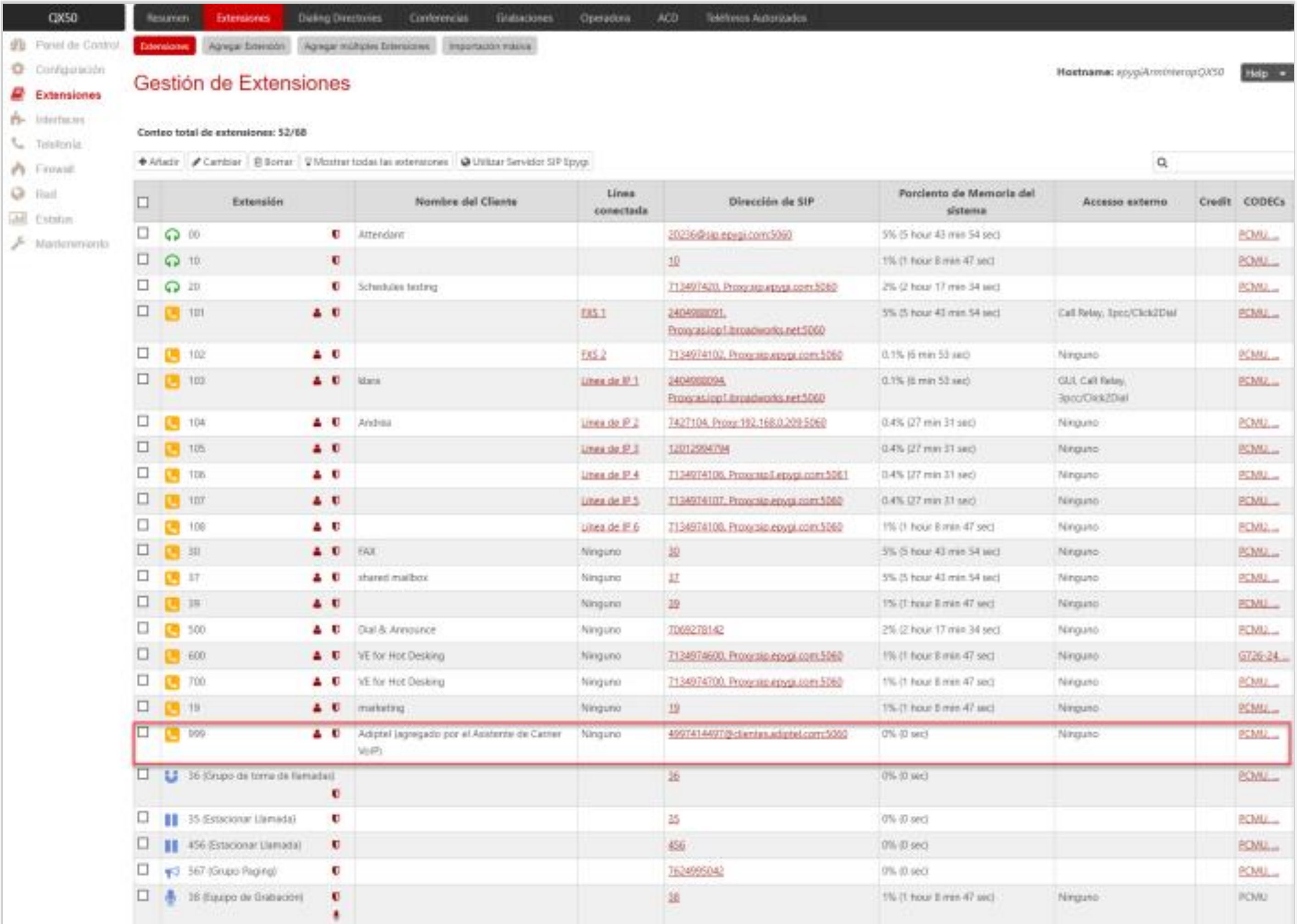

Figure 5: Extensions Management page

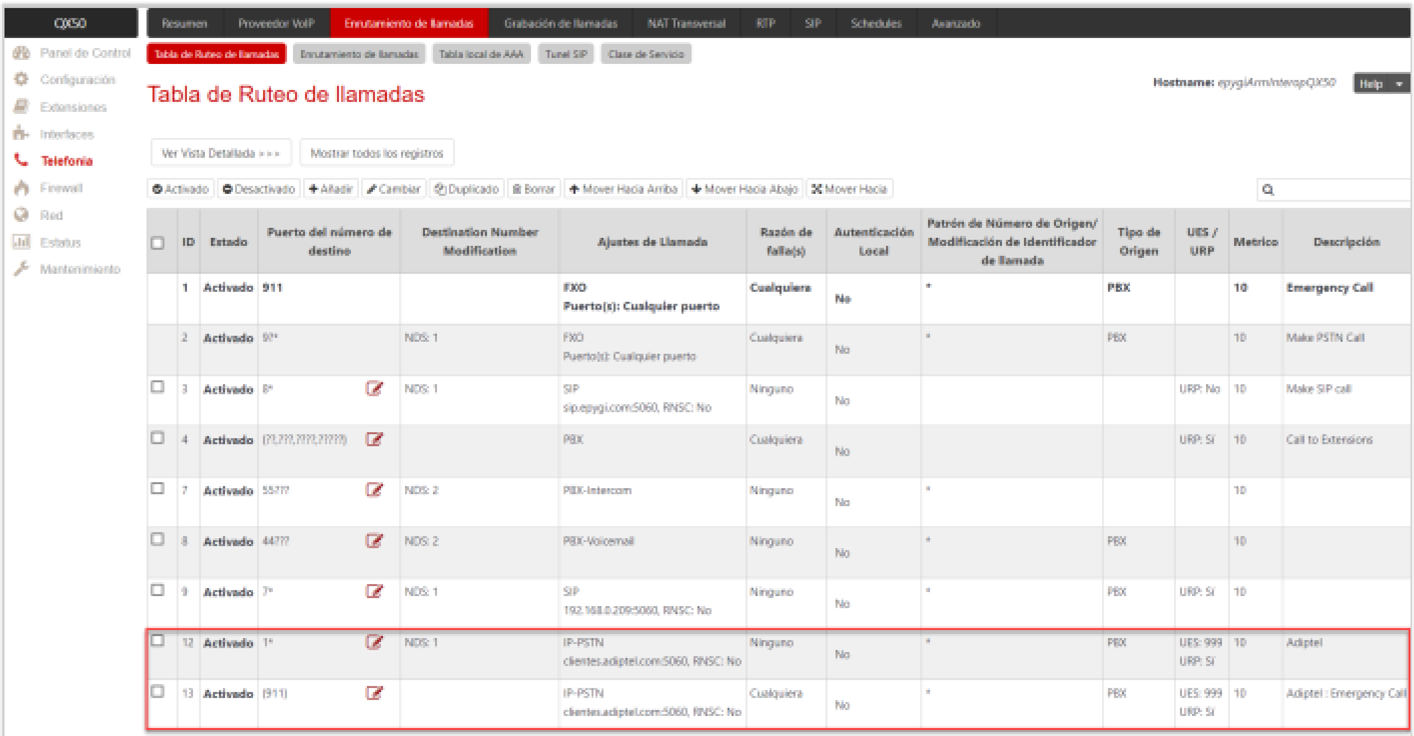

Figure 6: Call Routing Table page

<u>How this works:</u> The system will route all outbound calls matching the pattern **1*** to the Adiptel SIP trunks. Adiptel, in its turn, will route all inbound calls to the DID 9476XXXXX number to the QX Auto Attendant (00).

3.2 Receiving Inbound Calls from Adiptel

To receive incoming calls from the Adiptel SIP trunks, the required configuration is already created through the **VoIP Carrier Wizard**, so now all incoming calls to the DID number 9476XXXXX will go to the extension 00, which is the QX's default Auto Attendant.

4 Additional Notes

4.1 Sending Music on Hold to Remote Parties

Each extension of the QX can be configured to send its own hold music to remote parties on hold (PSTN, IP, or IP-PSTN destinations). While sending the extensions' music on hold (MOH) to PSTN parties does not require any configuration on the QX, certain configuration is needed when the remote party is an IP or IP-PSTN destination. The following steps describe how to configure an extension to send its own MOH to remote IP parties:

1. Open the **Basic Services→Hold Music Settings** page.
2. Enable the "**Send Hold Music to remote IP party**" checkbox and click **Save**.

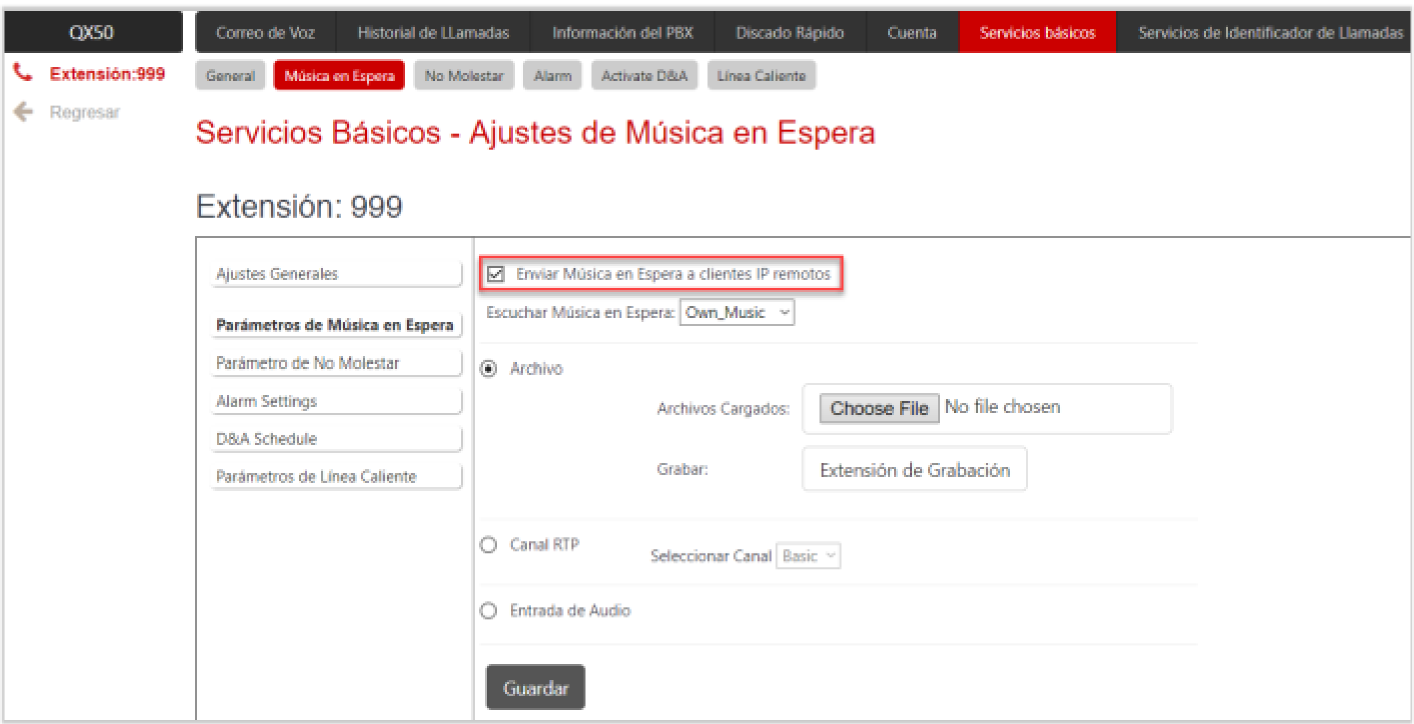

Figure 7: Basic Services – Hold Music Settings page

If the QX is configured with an ITSP that does not support remote MOH (the ITSP closes the received audio stream when receiving a SIP re-INVITE message with the c=IN IP4 0.0.0.0, a=send only media attributes), please follow these steps to complete the configuration:

1. Go to the "http://xxx.xxx.xxx.xxx/generalconfig.cgi" hidden page (Figure 8).
2. On this page, select the "**Force Hold Music**" checkbox and click **Save**.

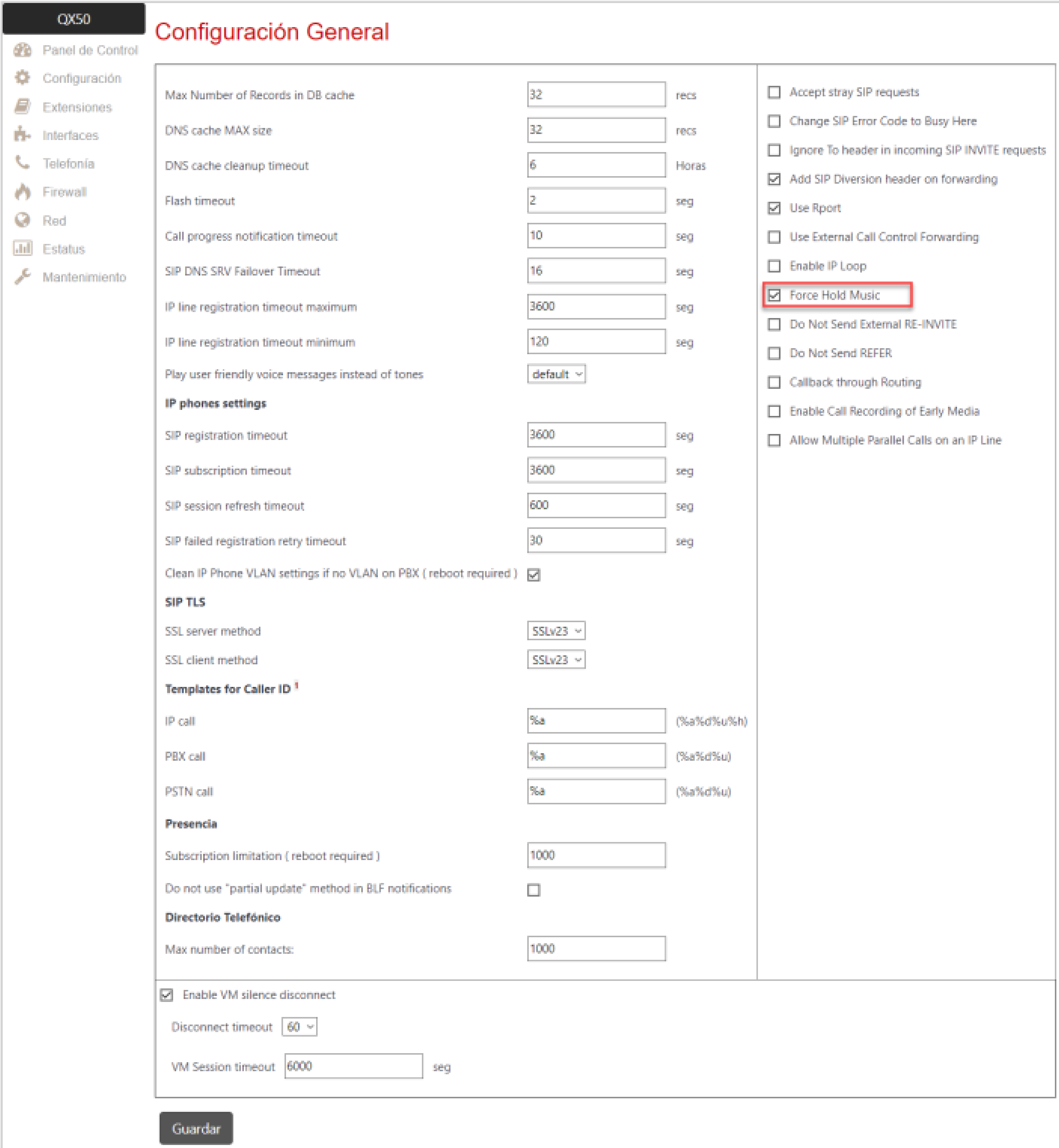

Figure 8: General Configuration hidden page

4.2 Sending and Receiving Faxes through the Adiptel

To send a FAX connect the FAX machine to one of FXS ports on IP PBX and enable **T.38 FAX** and **Enable Pass Through FAX** options in the codecs' list for the corresponding FXS extension (extension 102, FXS-2 in this example).

For receiving FAX from the **Adiptel** SIP trunks you can use an already created configuration through the VoIP Carrier Wizard. After the additional configuration steps described below you will receive FAX on the FAX machine attached to the FXS-2, extension 102:

1. Choose the **Extensions→Extensions Management** page.
2. On the **Extensions Management** page, click the **Codecs** link of the extension 102.
3. On the **Extension Codecs** page select the **Enable T.38 FAX** and **Enable Pass Through FAX** checkboxes.

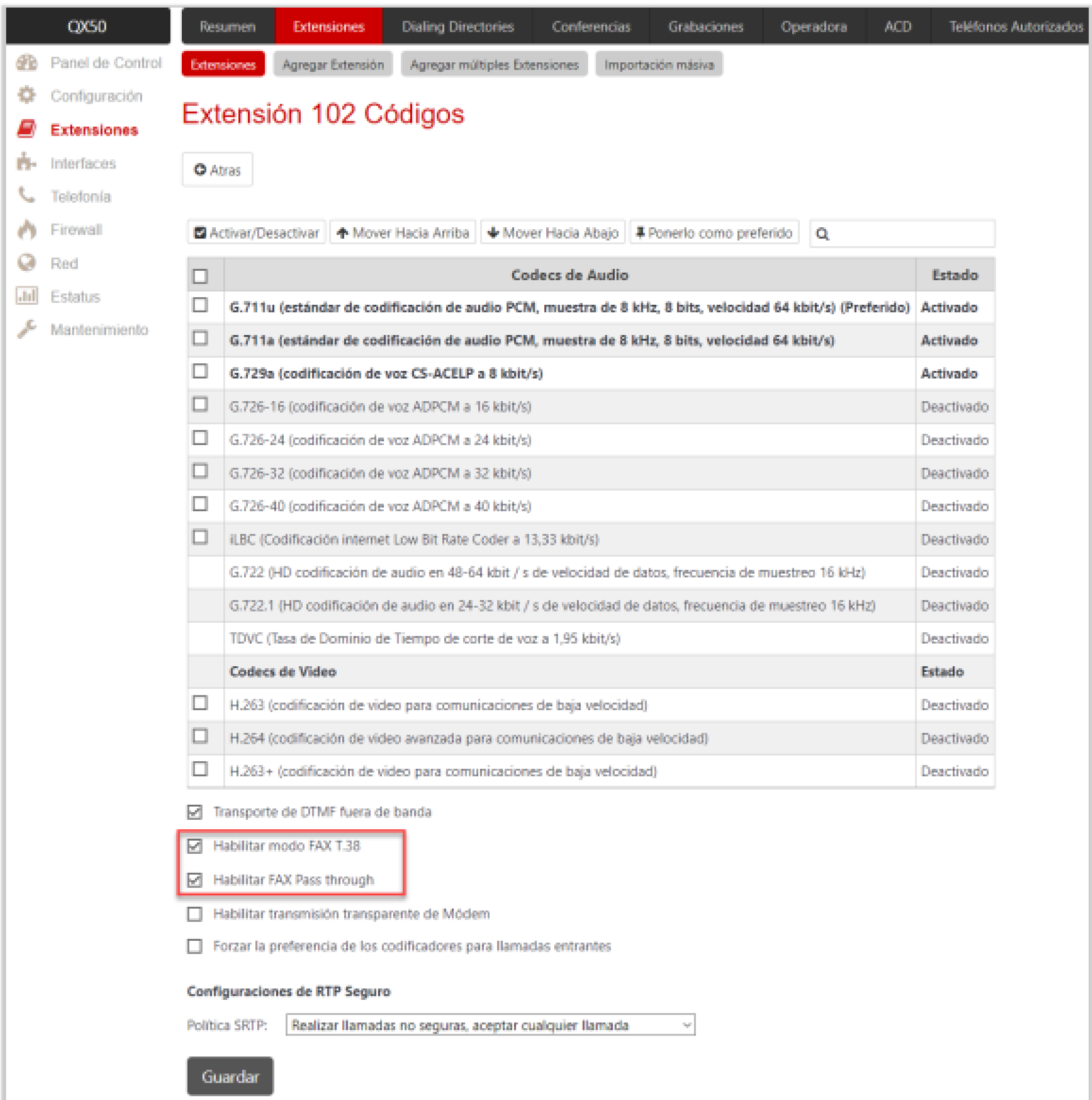

Figure 9: Codecs page for extension 102

These are the configuration options for receiving FAX on the QX:

- Incoming calls are routed directly to the extension with the FAX machine attached. A special DID number is dedicated for that extension in this case.
- Incoming calls are routed to the Auto Attendant with FAX forwarding enabled to the appropriate extension. Pressing **START** from the sending fax machine while listening to the Auto Attendant greeting message will forward the call to the predefined FAX extension that has the fax machine attached.

The QX also allows receiving FAX messages as a TIFF file into the extension's voice mailbox if there is no FAX machine attached to the extension. In this case, the following should be configured on that extension:

- The voice mail service should be enabled (default).
- Enough memory space should be allocated to the selected extension for storing incoming faxes.
- The **No answer timeout** should be set to its min value in the extension settings.
- The **Enable T.38 FAX** and **Enable Pass Through FAX** options for that extension should be enabled as well.

Note: In all scenarios, the **Enable T.38 FAX** and **Enable Pass Through FAX** checkboxes should be selected for the FAX extension.

5 References

Refer to the below listed recourses to get more details about the configuration settings used in this guide:

- Manual-II: Administration Guide for QX IP PBXs
- Manual-III: User Guide for QX IP PBXs
- User Rights Management on QX IP PBXs
- Preventing Unauthorized Calls on QX IP PBXs

Find the above listed documents on Epygi Support Portal.