CASE STUDY

Meet Intercom panel integration with SIP Wildix switchboard

Description

It is described how to configure the Meet entrance panel and the Wildix SIP switchboard to be able to route calls from the entrance panel to any SIP extension.

INDICE

INTRODUCTION

In offices and companies, it is common to connect the video door entry panel to the telephone switchboard to receive the call at a specific extension, simplifying the work for employees. For this, a telephone interface is used that connects the entrance panel to an analog input of the switchboard. With the evolution of switchboards, and their deployment in the cloud, a world of previously unimaginable advantages is accessed, such as the reception of calls at any extension located in different **places** or even on the smartphone, and video reception on the call, which is not available on an analog phone interface. Therefore, it has the same features as in a video door entry monitor if the terminal receiving the call has a screen: two-way conversation, viewing the visit and opening the door.

The Fermax entrance panel has also evolved to adapt to this environment, and a clear example is the MEET panel, with IP technology, which supports the SIP protocol, necessary in this type of integration. In this application, the entrance panel must register in the SIP switchboard with a username and password and route calls to the required extension (s).

We are going to see, in the specific case of the WILDIX SIP switchboard, how the MEET entrance panel and the WILDIX switchboard must be configured so that they can work together.

REQUESTED MATERIAL

Any Fermax MEET entrance panel can be used to carry out this integration since they all support SIP protocol. In the case of calling one single extension, it is advisable to use the one-line MILO panel (a single push-button). If you want to call different extensions to locate different people, you can use the MILO panel or, if an electronic directory is required, the KIN or MARINE panel.
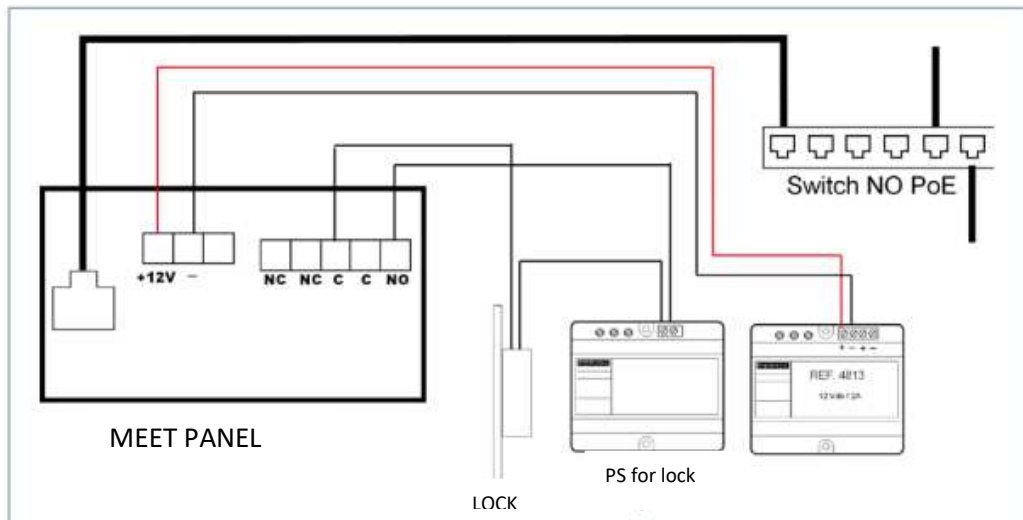
The entrance panel may require a power supply if it does not support PoE, in addition to requiring the electric door opener.

The WILDIX switchboard is normally used in the cloud format, so only an internet connection with sufficient bandwidth (minimum 10Mbit) will be necessary to access it.

BASIC SCHEMA
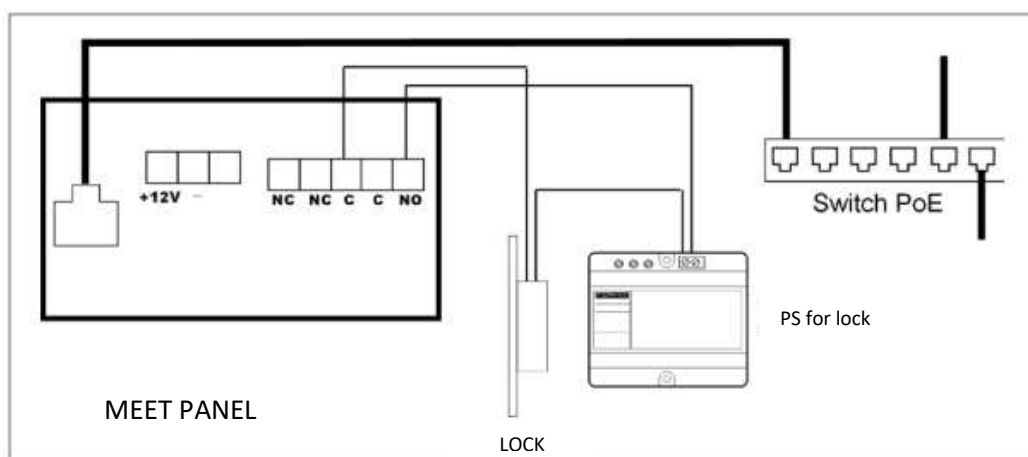
Panel power supply via PoE switch.

Panel power supply by additional source. The power supply can be shared with the lock release if both are 12 Vdc voltage and has sufficient power.

INSTALATION

Once the entrance panel is installed, it must be connected to a switch or directly to the installation router. The lock release connection will be wired to the entrance panel or, if maximum security is required, a ref.1490 module with 2 relays will be used to open from indoors, wiring the module to the panel using 3 wires (Cat-5 recommended). Lastly, the panel will be wired to the power supply.

It is possible to install a MEET monitor to simultaneously receive the call inside the office, as a backup to the call through the switchboard.

CONFIGURATION

ENTRANCE PANEL
To configure the entrance panel, you must use a browser and access the IP address assigned to the entrance panel, by default 10.1.0.1 (building entrance panel) or 10.1.1.2 (one-way panel) and enter the username (admin) and default password (123456).

The following steps will be followed:

1) General settings

In this example we have used a KIN entrance panel. The panel must be configured as a Block Panel, assign a block (by default 1) and a panel number (by default 1).

The Device Tag is important to identify the origin of the call in the SIP extensions.

The resolution of the camera will be adjusted to the characteristics of the terminals used to receive the call.

1) Network configuration

An IP address compatible with the computer network of the installation will be assigned and the address of the Gateway or router to access the Internet will be indicated. A DNS server is necessary if a URL is to be used to access the PBX.

The software IP will be left by default because in this case it will not be used unless it is required to manage access credentials for employees (proximity cards or facial recognition). In this case, the IP address of the computer that has the MEET management software (MMS) installed will be indicated..

2) Switchboard configuration

In the SIP Configuration section, the URL of the assigned Wildix PBX will be indicated, as shown in the screen below. The username and password assigned to the entrance panel extension will be entered.

Next, it will be checked if the panel is correctly configured in the control unit by clicking on the VIEW SIP STATUS link. If REGISTERED does not appear, check the information entered.
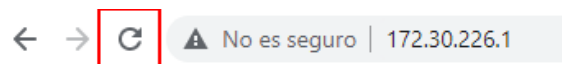

3) Call extensions configuration

Finally, an Excel will be configured with the assignment of calling codes to the extensions to be called. The Excel format can be downloaded from the SIP CALL section of the panel's web server, EXPORT option.

One example of Excel file is the following:

First, indicate the code to be dialled and, separated by a comma, the extension of the switchboard that should receive the call when this call code is dialled. In the example, dialling 700 will call extension 700. It is possible to call more than one extension by listing multiple extensions in the same row separated by commas. One of these extensions can be a MeetMe license to be able to call a smartphone through the MeetMe application.

To load the Excel on the panel, select the file created and click on the IMPORT button. The Excel call list will appear on the screen. Sometimes it is necessary to refresh the browser screen by clicking on the corresponding icon:

APARTMENT	NUMBER	APARTMENT	NUMBER	APA
700	sip:700@ucspain01.wildixin.com	4001	sip:4001@ucspain01.wildixin.com	
6003	sip:6003@192.168.1.29	6004	sip:6004@192.168.1.29	

If we also want to call a MEET monitor, the call code will be assigned as the monitor's house number, so that the entrance panel will call both the monitor and the assigned extension.

If we want to be able to call through the agenda in the case of a KIN panel, the agenda will be created in an Excel. The Excel format can be downloaded from the ADVANCED section of the panel's web server, EXPORT option.

One row is filled per agenda item, indicating the calling code, Name to appear, blank, Y ,.
Example:

APARTMENT,NAME,MAPPING CODE,WHITELIST(Y),		
4000,PEPE GARCIA, ,Y,		
4001, ALBERTO MARTINEZ,,Y,		
4002, JULIAN ECHENIQUE,,Y,		
4003, MARIA SOLIS,,Y,		

Excel is loaded using the IMPORT option:

The AGENDA option is enabled so that this option appears on the panel.

The registration of the entrance panel will be done through the SIP trunk and not by user, so we create one with the following data:

Access to *WMS > Trunks* and add a new SIP Trunk

Auth login: SIP Trunk user register
Address or host name: dynamic:5060   In this way we enable incoming register
Password: SIP Ttrunk password of registered user
Dialplan: Dialplan to be followed by calls made through Trunk
Enable registration: disabled

In advanced options, it is important to check the audio and video codecs to be used:

Last, set rfc2833 payload 101 as DTMF mode:

NAT IP

SDES-SRTP ☐

Transport UDP

DTMF mode rfc2833 Payload 101

Save

DIALPLAN CONFIGURATION

In this case, having established the "FromUCS02" dialplan in the SIP trunk configuration, we configure said dialplan with the numberings that the device will call. As an example, we establish that all the numbers (X.) that reach us through the "FromUCS02" dialplan are launched to the "Agents" call group, where different extensions have previously been configured.

If the panel is going to call a specific number, we can modify X. by the number. Example: The panel in this case calls 700, so we can indicate 700 on the dialplan.

In the case where the extensions and the panel are not on the same network, direct RTP can be forced to NO. To do this, add the instruction SET> DIRECT RTP> NO:

<u>UNLOCK BUTTON</u>

It is possible to add a button in the Vision / Supervision interface that opens the door, without the need for the user to know the code. For that:
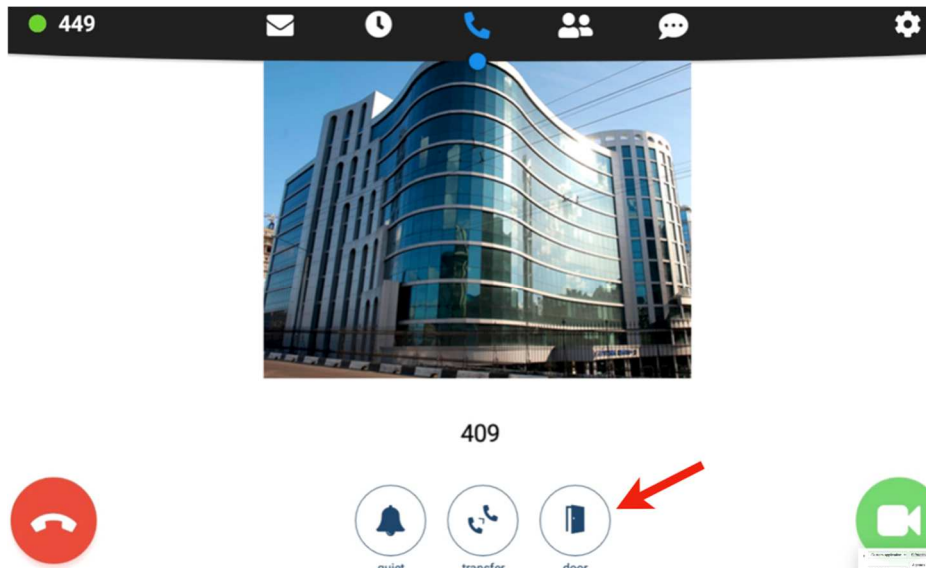
Access the dialplan configured for incoming calls from the device (in this case FromUCS02) and add the following line before sending the call to a call group or extension such as Custom Application:

SIPAddHeader(Unlock-Button:**#)
Where * (middle character) is the door unlock DTMF code. It is possible to use * either #.
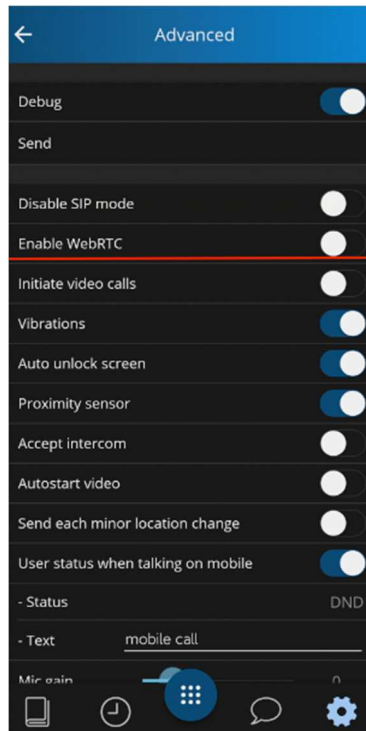

Visualization example:

<u>APP ANDROID / IOS</u>

For correct operation, the WebRTC option must be disabled:

Settings > Advanced > Disable option "*Enable WebRTC mode*":

WORKING MODE

To call a specific extension, the associated call code must be entered and confirmed with the corresponding button (depending on the panel, it will be the bell or 'B' button on the MILO and MARINE panel or the pick-up icon on the KIN panel). In the case of the KIN or MARINE panel, you also have the option to call through the Agenda, looking for the name of the receiver and pressing on it.

Direct call through code.   Call through Agenda.

The panel will generate the call as if it were a house:
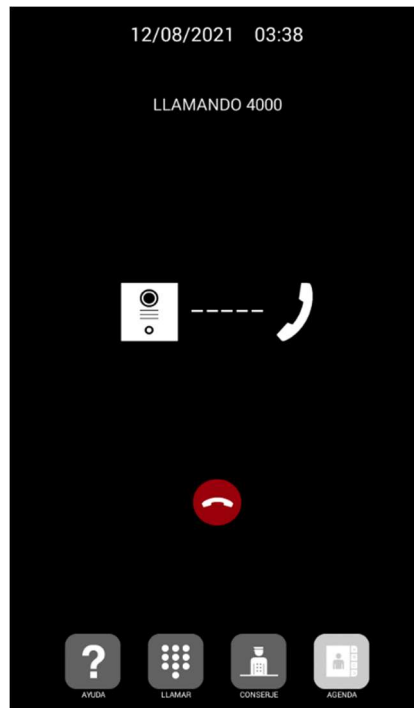
The called extension will receive the call tone and information on the origin of the call showing the Tag defined on the entrance panel and the image of the camera if it has the option of receiving video. The call will ring for a maximum of 30 seconds.

When accepting the call, bi-directional communication will be established that may last up to a maximum of 120 seconds.

You have the option of unlocking the door by pressing the '*' or '#' key, or if it has been configured, the opening icon, which will simultaneously activate the first external relay of ref. 1490. The '0' key exclusively activates the second relay of ref. 1490.

OTHER CONSIDERATIONS

To carry out this integration, the entrance panel must be configured as trunk on the Wildix switchboard, otherwise the unlock command cannot be sent correctly.

The Wildix App does not allow the reception of video at this moment, so you can use the MeetMe App if you want to receive video.