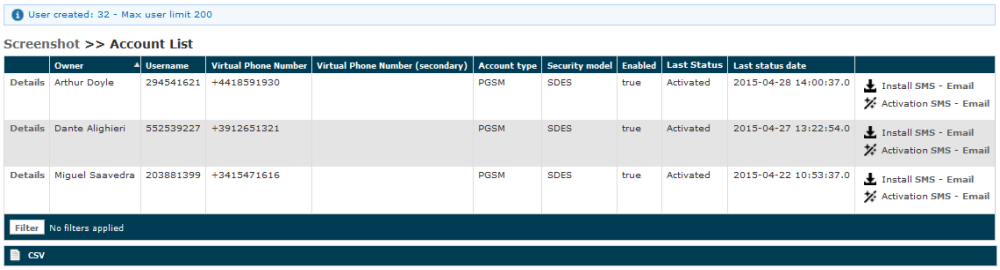
2. Accounts

2.1 Accounts creation

Once you have almost one group you can fulfill it with SIP Accounts. In the **Group List** (PSOM 1.0 Groups) click on the **Accounts** icon on the right of each group's row.



	Owner	Username	Virtual Phone Number	Virtual Phone Number (secondary)	Account type	Security model	Enabled	Last Status	Last status date	
Details	Arthur Doyle	294541621	+4418591930		PGSM	SDES	true	Activated	2015-04-28 14:00:37.0	Install SMS - Email Activation SMS - Email
Details	Dante Alighieri	552539227	+3912651321		PGSM	SDES	true	Activated	2015-04-27 13:22:54.0	Install SMS - Email Activation SMS - Email
Details	Miguel Saavedra	203881399	+3415471616		PGSM	SDES	true	Activated	2015-04-22 10:53:37.0	Install SMS - Email Activation SMS - Email

figure 1. The Sip Users Table

As a general list of the accounts which are present in each group, the one shown in figure 1. The Sip Users Table illustrates the main features for each account.

The first column is reserved for the **Details**, which is a link to monitor each account's activities, current status and configuration. Most of the following fields are quite self-explanatory. The last column is for quick links about installation and configuration of customer's clients.

Send Activation Sms is good for sending via Text message a link meant to be used to download and thus install the PrivateWave application. More about the **Automatic Activation** and about the **Provisioning** can be read in paragraph 1.1.4 Automatic Activation.

> The customer's platform is automatically detected.

Once the secure link is clicked a mobile web page is shown in the customer's smatphone: in the web page the user can found a link to the related app store to download tha app and an Activate link that serves to plant the configuration file into the selected customer's client.

You have three way for create new users:

1. the **wizard way**: automatic activation
2. the **plain way**: manual configuration
3. the **batch way**

Each one is going to be detailed in the next paragraphs.

2.1.1 Create a new account, the wizard way (automatic activation)

The "wizard way" is the new method for creating accounts. It's made for easing the load on the service manager's shoulder, letting him/her focusing on the service configuration without having to bother about the installation and configuration of the client.

In the Account List page (figure 1. The Sip Users Table) you can see an empty list of accounts. To create a new Sip User you have to click on the New Account (Activation Wizard) button in the top of the page.

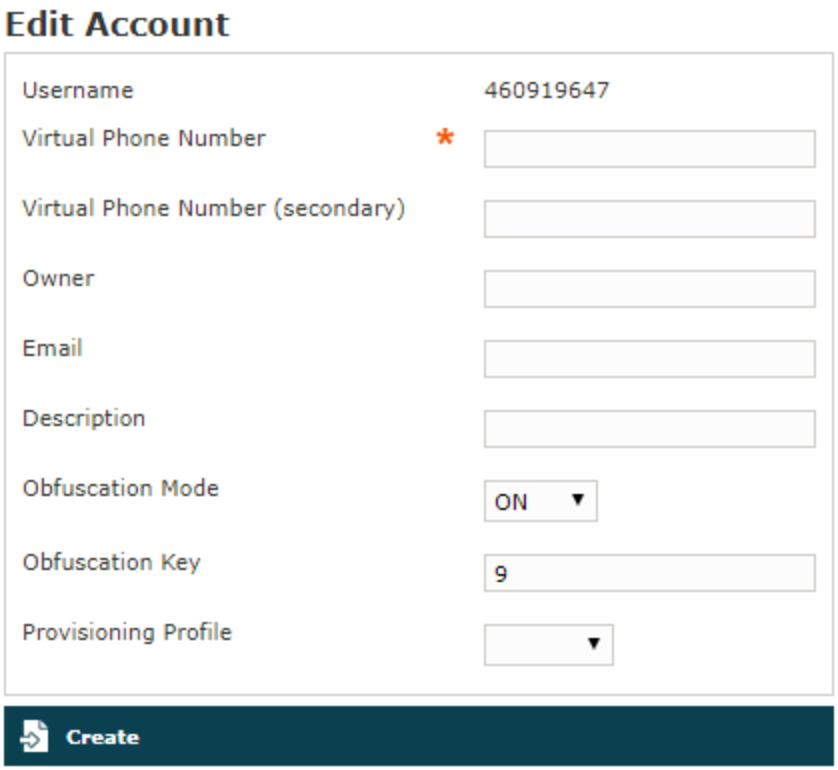


figure 2. new account by wizard

You'll see the "Edit Account page" with a precompiled, non-editable username as in figure 2. new account by wizard.

Please set a **Virtual Phone Number** and choose a **Provisioning Profile**.

> If you do not insert the international prefix before the real phone number then you cannot use the automatic activation features

If not differently configured, the default values for the **Obfuscation** are fine. The other fields are optional.

> In this mode the password is automatically chosen by the system and it's not editable

Compile all necessary fields of the new account, select a Provisioning Profile and click on "Create". Now jump to 1.1.4 Automatic Activation for activate the user.

> In the "wizard way" the user's account are **DISABLED** until the automatic activation is performed!

2.1.2 Create a new account, the plain way (manual configuration)

The "plain way" is a completely manual creation of the account. In this way you control any feature of the account, but you also need to configure the user's client manually. This way is the opposite of the automatic activation.

> This is the way for creating valid accounts for the SNOM devices.

In the Account List page (figure 1. The Sip Users Table) you can see an empty list of accounts. To create a new Sip User you have to click on the **New Account** button in the top of the page.

You can create both PGSM (PrivateWave) or SNOM accounts and they do differ a while.

2.1.2.1 PGSM

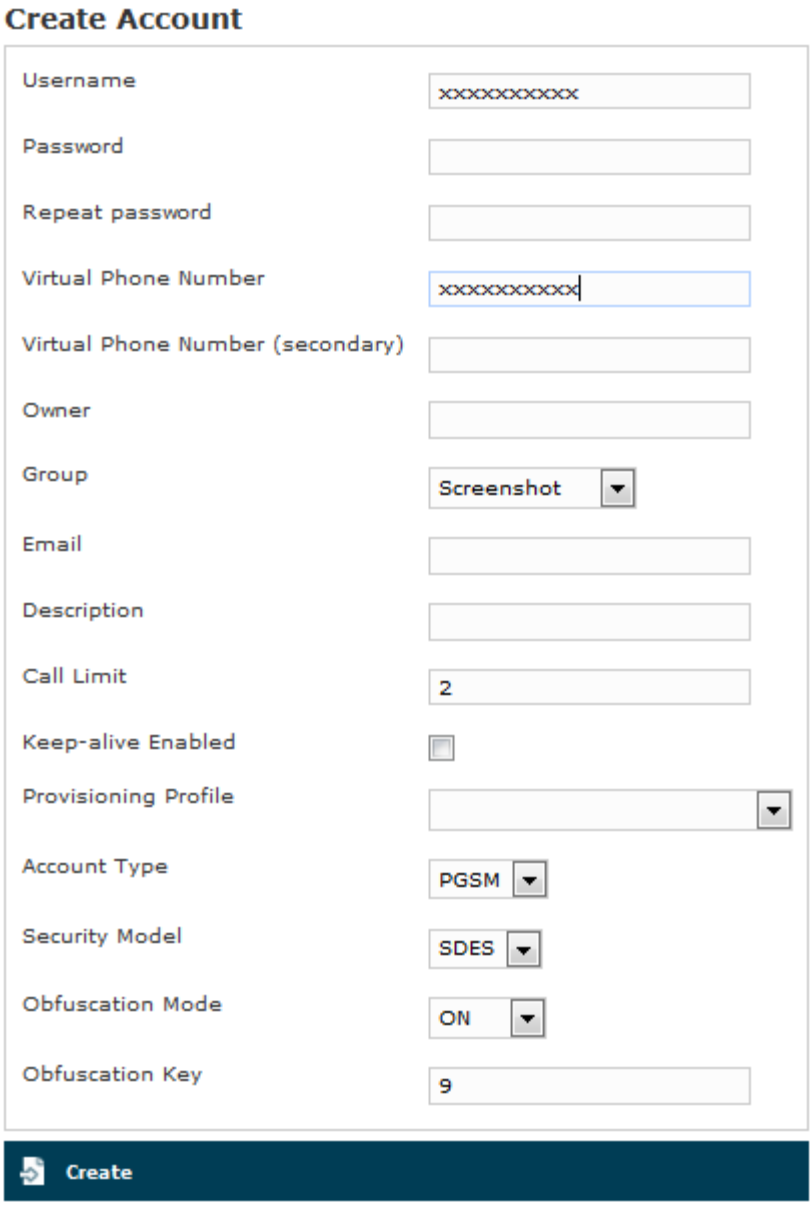


figure 3. Sip Account creation form

The **Create Account** page will show a form with many fields. Mandatory ones are:

- Username
- Password/Repeat Password
- Virtual Phone Number
- Account Type
- Security Model
- Obfuscation Mode
- Obfuscation Key
- Keep-alive Enabled

Username/Password

Username field is automatically generated as a random numeric value and you are not required to change it. Type in a password and repeat it in the proper fields.

> If you manually edit **Username** field, keep in mind that it MUST be unique, as Virtual Phone Number!

Virtual Phone Number

Set a **Virtual Phone number** as a numeric value of your choice. Please consider that the **Virtual Phone Number** is the number to be dialed to call the Account (and also the number shown as the caller, when the Account dials a call). We suggest a three character number such as "111" or "123" for SNOM devices and actual mobile phone number for PrivateWave accounts.

> Mobile phone numbers must be formatted with international prefix and + sign, before the real phone number, eg: +391234567890. If you do not use international format, it will not be possible to use automatic activation features.

Automatic Activation is not meant for SNOM devices. You need a PrivateWave client in order to process the URL and the configuration itself. Plus without a phone that can receive an SMS, it wouldn't be delivered at all.

> It's still possible to perform an Automatic Activation or to send the installation URL on iPads or devices without phone features using the Provisioning Messages.

Account Type

- To configure a PrivateWave account select "PGSM" by the drop down menu in "Account Type".
- To configure a SNOM account select "SNOM" by the drop down menu in "Account Type".

Unknown macro: 'builder-show' Unknown macro: 'builder-show'

Unknown macro: 'builder-show'

Obfuscation Mode

The Obfuscation mode is a simple but quite efficient trick to let the VoIP pass without being recognized by network equipment intended to block or censor VoIP traffic.

It's not known to be a perfect mask and it aims not to be one, still it works fine up to now and our suggestion is to keep it enabled as by default,

Obfuscation Key

The key used by the obfuscator can be an arbitrary one, still "9" is the default value. It doesn't matter which number you put in here as long as it is the very same one you set up on the client side.

> If the Obfuscation Key value is not the same on both client's account and server's one, then the call won't be placed properly and it might end suddenly voiceless.

Keep-alive Enabled

In order to receive secure phone calls, PrivateWave client must set up an always-on connection to PrivateServer . Each client sends a "keep alive" request to the server it is connected to, in order to keep up the socket. This is necessary as the TCP socket has an idle timeout after which the socket is closed. Some aggressive network equipment can shorten the standard timeout, less than 10 minutes.

In order to avoid the socket break caused by such aggressive network equipment, you can enable a server side "keep alive" request. In this way you can be sure that the socket and thus the connection would remain up and stable under every circumstances.

> The downside of this option is that there will be some more traffic on the socket (each passage of the request is 1.8 KiloByte, thus you can count almost 3.6 KB of traffic)

> **Battery life warning**
>
> This option can afflict the battery life since more traffic means more radio transmission and on same devices the radio wouldn't have a proper timeout for going idle.

The actual default value for the keep-alive interval is 60 seconds. You can configure the general keep-alive timeout in the NAT configuration form. Please read PSAM 2.4 Asterisk advanced configurations to get informations about it.

older clients issue

All the PrivateWave clients prior to the 11.1 version cannot respond to the keep-alive request and thus if such option was enabled for their users, then those users won't ever be on-line and reachable.

Virtual Phone Number (secondary)

This field is optional and rarely used, still it can prove itself quite useful if you need the account to be reachable by two different phone numbers on the same device. The secondary virtual number can't substitute the primary one, meaning that this field alone won't be accepted as a valid phone number. You still need to configure the primary phone number if you intend to make use of the secondary one.

Some example for using the secondary phone number are this scenarios:

1. **User changes his own mobile phone number.** Using secondary number it is possible to configure the NEW number as primary and the OLD number as secondary. The user will be able to receive secure calls dialed both on his NEW and OLD number.
2. **User install PrivateWave client on his business phone, but his colleagues could call him both using business and private phone numbers.** Using secondary number it is possible to configure the BUSINESS number as primary and the PRIVATE number as secondary. The user will be able to receive secure calls dialed both on his BUSINESS and PRIVATE number. More often that you could expect, users initiate secure calls using the wrong number, complaining about "it does not work".

2.1.2.2 SNOM

In the Account List page (figure 1. The Sip Users Table) you can see an empty list of accounts. To create a new Sip User you have to click on the New Account button in the top of the page.

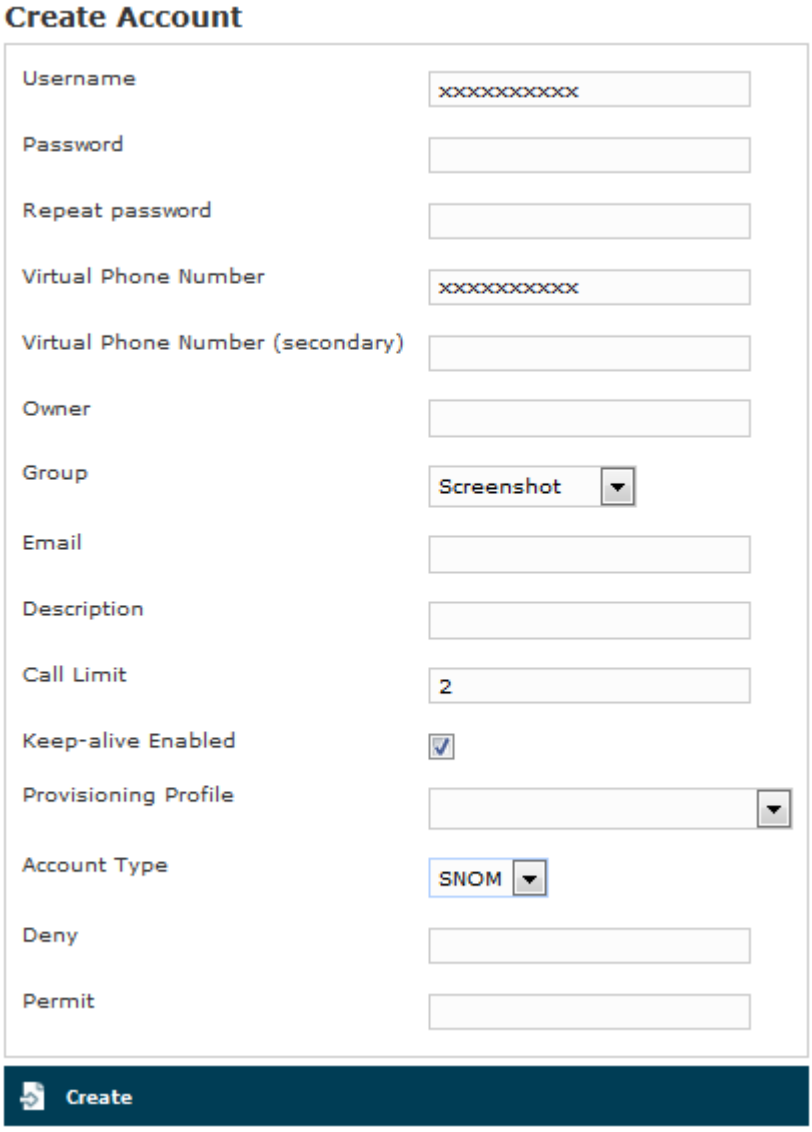


figure 4. Sip SNOM Account creation form

There are some few but still important differences between the figure 4. Sip SNOM Account creation form and the figure 3. Sip Account creation form: security model, obfuscation Mode and Obfuscation Key fields are gone and instead you can read Deny and Permit. Due to the type of hardware underlying the SNOM account, we do assume that the hardware would be wired connected on a desktop. Also no obfuscation is possible because the device doesn't allow it. Instead the wired channel can provide us an easy to go access list, based on the LAN IP addresses. We can create both one White-List and one Black-List in order to bind the user's access to one specific device which can be identified by the LAN IP address. The different option shown are:

- Deny
- Permit

Deny

Deny represent the blacklist based on the IP address and the net mask we want to deny when associated to the current user. You have to write this in the form: <ipaddress>/<network mask>

Example:

- 192.168.0.38/255.255.255.255 : Denies traffic from this IP address
- 0.0.0.0/0.0.0.0 : Denies every address

Permit

Permit is the exact opposite of the Deny option. It represent the whitelist based on the IP address and the net mask we want to have access. You have to write this in the form: <ipaddress>/<network mask>

Example:

- 192.168.0.38/255.255.255.0 : Allows traffic from this Network

EXAMPLE

You may have multiple rules for masking traffic. Combining together the Deny and the Permit option let you have a fine grain rule of access for any single user's account.

Please keep in mind that the access rules are processed **from the first to the last**, meaning that the Deny will be used first and then will be analyzed the Permit one.

So:

Deny: 0.0.0.0/0.0.0.0

Permit: 216.27.242.66/255.255.255.255

Deny every address except for the only one allowed.

2.1.2.3 Actually create the Account

After you filled in the form (either the PGSM or the SNOM one), please click on the Create icon at the page's bottom.

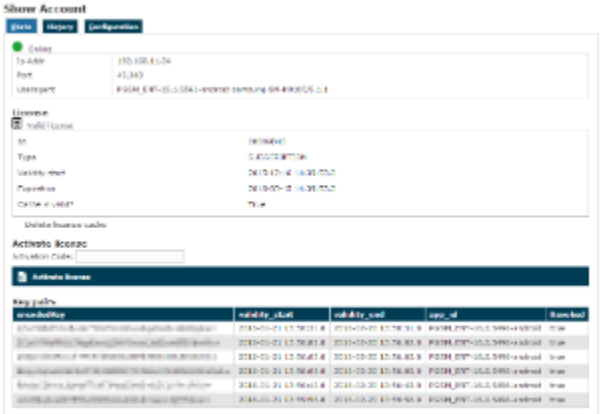


figure 5. new SIP account

An information line advice the operation just performed.

You'll get back the **Account List** page and the table shows now your new user (figure 5. new SIP account).

> ⚠ Using this way makes the account enabled by default.

To use the automatic activation even in the plain way go reading the 1.1.4 Automatic Activation.

2.1.3 Create a new account, the batch way

The "batch way" is an account creation mode designed specifically for large number of users to be created quickly.

Starting from **Account List** page figure 1. The Sip Users Tableclick on the **Create batch account** action to open Create batch account page:

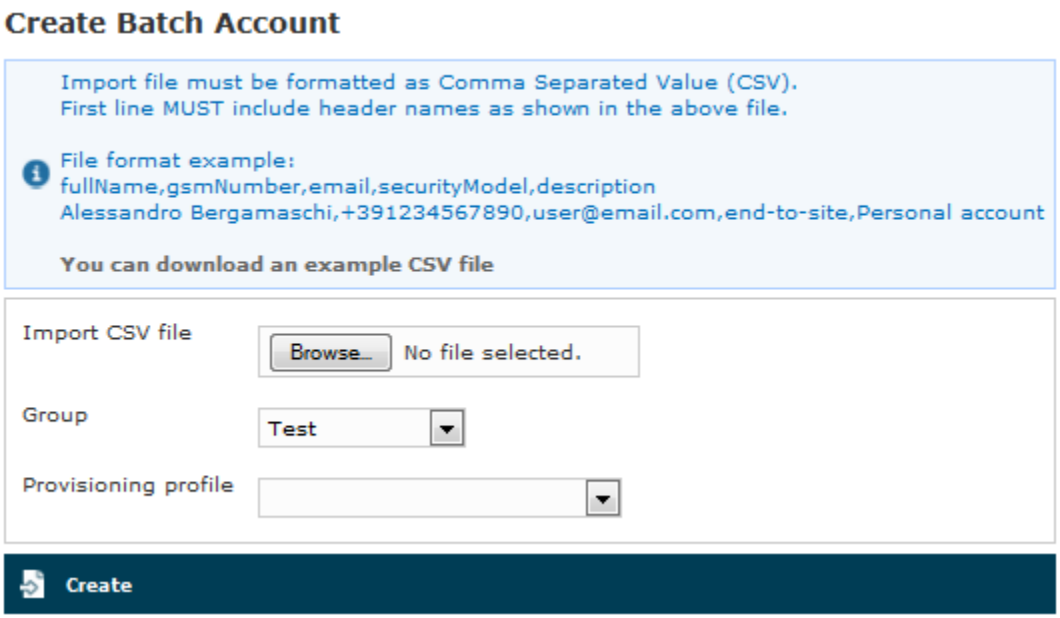


figure 6. create batch account

Prepare a .csv file with some account. The file must be formatted as the example below, keeping header names in the first row

batch users csv

```
fullName,gsmNumber,email,securityModel,description Alessandro Bergamaschi,+391234567890,alessandro.
bergamaschi@acme.com,end-to-site,Personal account Luigi Rossi,+3932456753,luigi.rossi@acme.com,end-to-site,
Personal account Marco Bianchi,+39432242342,mbianchi@gmail.com,end-to-site,Personal account Mario Colombo,
+394325346546,colombo.mario@acme.com,end-to-site,Personal account
```

Select the default provisioning profile and a group for the newly account created. Upload the file and click create: you'll be leaded to the Group list page.

Once you've done you can choose whether to manually activate the user or to lean on the automatic activation.

2.1.4 Account's details

The figure figure 5. new SIP account shows the last step of the procedure for account creation, but it's the same view you can get clicking on the **Details** lin k in the first column of the account's list (as in figure 1. The Sip Users Table.

Three tabs are shown in the Account's details window:

- State
- History
- Configuration

State is the default view you get and shows if the Account is connected and his licence status.

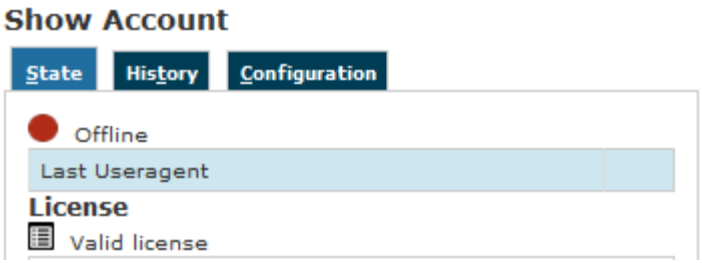
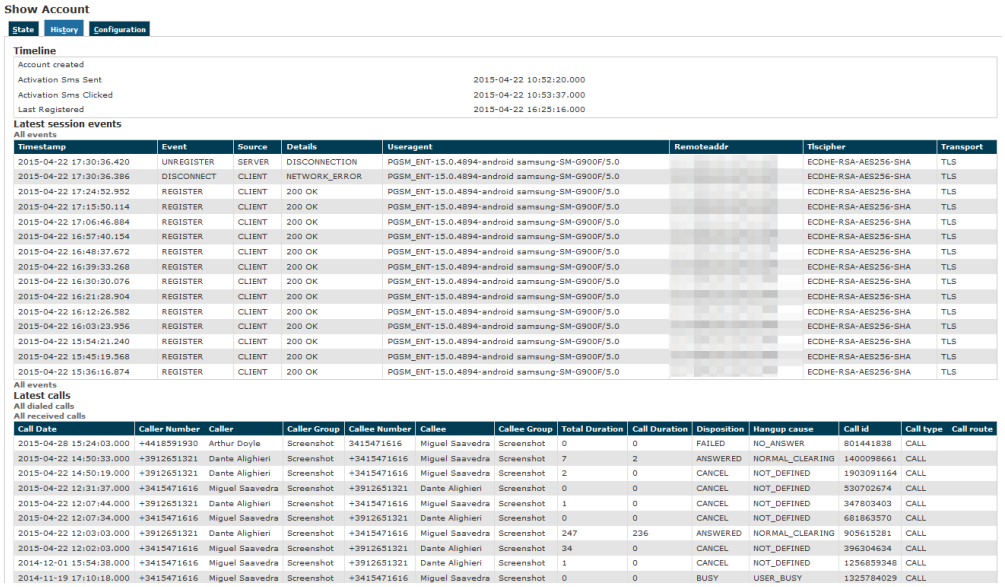


figure 7. State of the account show he's off-line

History shows any relevant information about the account.



Show Account

State | History | Configuration

Timeline

Account created	
Activation Sms Sent	2015-04-22 10:52:20.000
Activation Sms Clicked	2015-04-22 10:53:37.000
Last Registered	2015-04-22 16:25:16.000

Latest session events

All events

Timestamp	Event	Source	Details	Useragent	Remoteaddr	Tlscipher	Transport
2015-04-22 17:30:36.420	UNREGISTER	SERVER	DISCONNECTION	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 17:30:36.386	DISCONNECT	CLIENT	NETWORK_ERROR	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 17:24:52.952	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 17:15:50.114	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 17:06:46.884	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 16:57:40.154	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 16:48:37.672	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 16:39:33.268	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 16:30:30.076	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 16:21:28.904	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 16:12:26.582	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 16:03:23.956	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 15:54:21.240	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 15:45:19.568	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS
2015-04-22 15:36:16.874	REGISTER	CLIENT	200 OK	PGSM_ENT-15.0.4894-android samsung-SM-G900F/5.0		ECDHE-RSA-AES256-SHA	TLS

All events

Latest calls

All dialed calls

All received calls

Call Date	Caller Number	Caller	Caller Group	Callee Number	Callee	Callee Group	Total Duration	Call Duration	Disposition	Hangup cause	Call id	Call type	Call route
2015-04-28 15:24:03.000	+4418591930	Arthur Doyle	Screenshot	3415471616	Miguel Saavedra	Screenshot	0	0	FAILED	NO_ANSWER	801441838	CALL	
2015-04-22 14:50:33.000	+3912651321	Dante Alighieri	Screenshot	+3415471616	Miguel Saavedra	Screenshot	7	2	ANSWERED	NORMAL_CLEARING	1400098661	CALL	
2015-04-22 14:50:19.000	+3912651321	Dante Alighieri	Screenshot	+3415471616	Miguel Saavedra	Screenshot	2	0	CANCEL	NOT_DEFINED	1903091164	CALL	
2015-04-22 12:31:37.000	+3415471616	Miguel Saavedra	Screenshot	+3912651321	Dante Alighieri	Screenshot	0	0	CANCEL	NOT_DEFINED	530702674	CALL	
2015-04-22 12:07:44.000	+3912651321	Dante Alighieri	Screenshot	+3415471616	Miguel Saavedra	Screenshot	1	0	CANCEL	NOT_DEFINED	347803403	CALL	
2015-04-22 12:07:34.000	+3415471616	Miguel Saavedra	Screenshot	+3912651321	Dante Alighieri	Screenshot	0	0	CANCEL	NOT_DEFINED	681863570	CALL	
2015-04-22 12:03:03.000	+3912651321	Dante Alighieri	Screenshot	+3415471616	Miguel Saavedra	Screenshot	247	236	ANSWERED	NORMAL_CLEARING	905615281	CALL	
2015-04-22 12:02:03.000	+3415471616	Miguel Saavedra	Screenshot	+3912651321	Dante Alighieri	Screenshot	34	0	CANCEL	NOT_DEFINED	396304634	CALL	
2014-12-01 15:54:38.000	+3415471616	Miguel Saavedra	Screenshot	+3912651321	Dante Alighieri	Screenshot	1	0	CANCEL	NOT_DEFINED	1256859348	CALL	
2014-11-19 17:10:18.000	+3415471616	Miguel Saavedra	Screenshot	+3415471616	Miguel Saavedra	Screenshot	0	0	BUSY	USER_BUSY	1325784029	CALL	

figure 8. Show account. History tab

As you can see in figure 8. Show account. History tab there are three main subsections:

1. **Timeline** lists all the informations about the creation and activation of the account as well as date and time of text messages sent and received.
2. **Last session events** is an excerpt of the SIP Sessions targeted to the account.
3. **Latest calls** is an excerpt of the CDR showing all the recent calls placed by the account. It's possible to show all the received calls as well, by clicking on the **All received calls** at the list's bottom.

> Each list is expandable to show any record related to the account. This is possible by using the proper links at the bottom of each form displayed.

Configuration is what's left of the account's details form as it was intended in previous versions of PrivateServer .

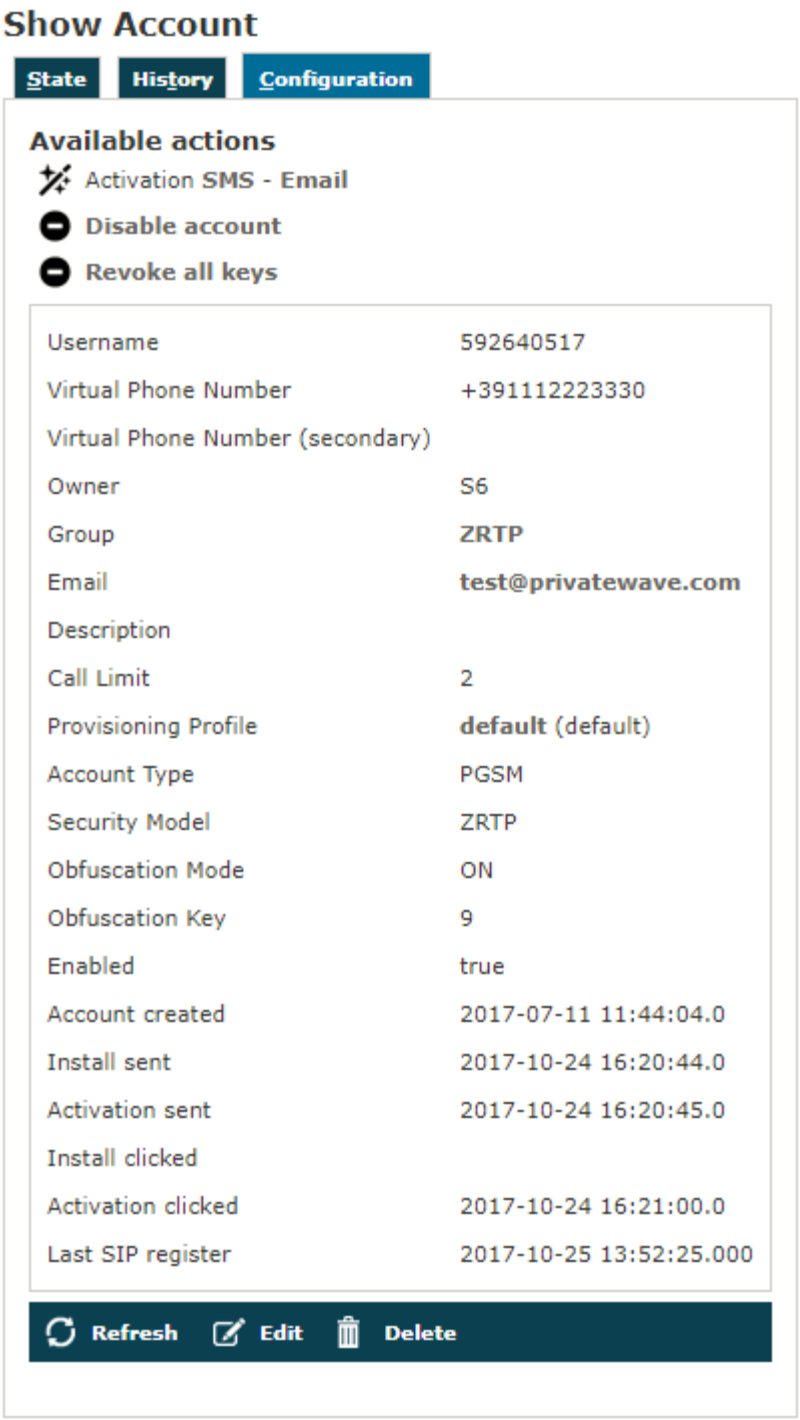


figure 9. account configuration

From this summary of the account's configurations you can manage the account itself. It's possible to **Send Activation Sms**, action which we explore deeper in paragraph 1.1.4, as well as to **Disable account**. Disable action inhibits the user to call or to be called and a specific Audio Message is issued by the PrivateServer to inform the user, the last action **Revoke all Keys,** this will revoke tls Keypair which is used to send and receive End-to-End Secure Messages, the only way to upload a new tls Keypair from client side are re-provision device by sending a new activation link, enabling/disabling PIN or whe n duress code is used.

It's also possible to **Edit** the account's settings (more about this in the paragraph 1.1.2), **Refresh** account's data (which is proved to be quite useful to monitor the Text Messages status, like the **Installation clicked**) or simply **Delete** (paragraph 1.1.3) the account itself. In the following paragraphs you'll read more about account's management.

2.2 Update the Account

To change the SIP Account values you need to reach the form showed in figure 9. account configuration, which has been explained in the paragraph 1.1.1.4 . Once there, you can just press the **Edit** button at the bottom.

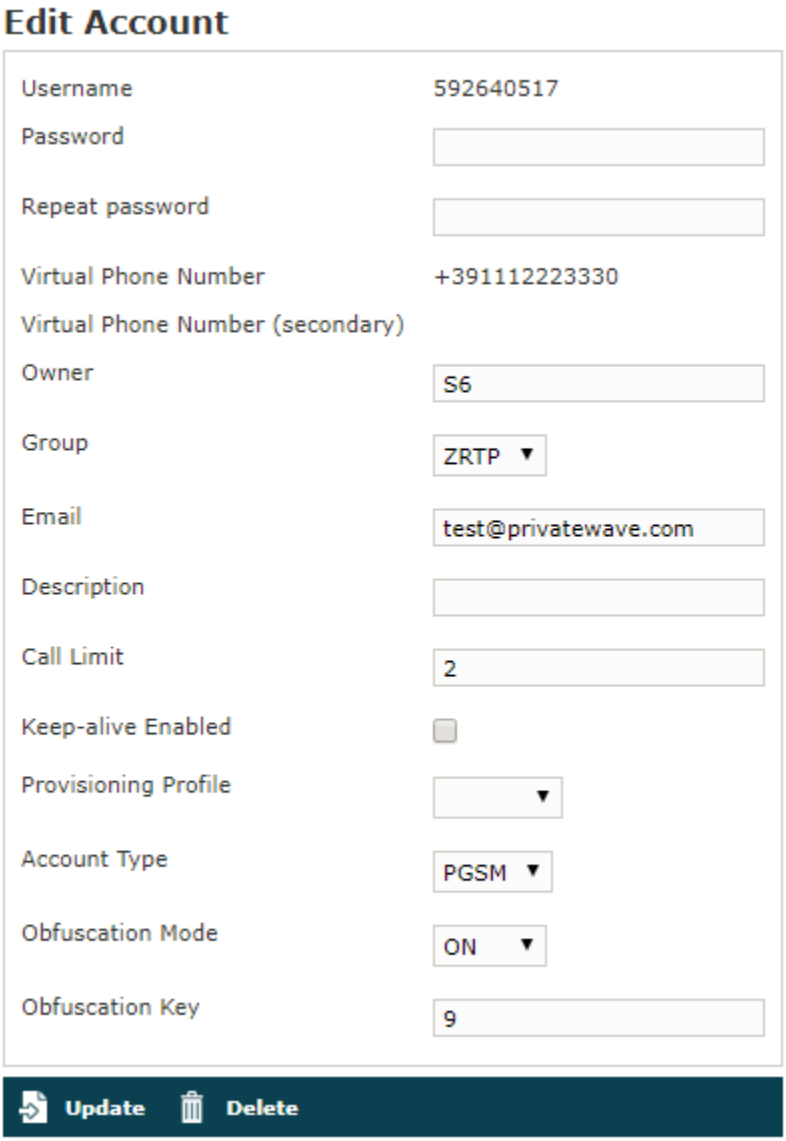


figure 10. form for changing account's parameters

In the form that would be presented to you (shown in figure 10. form for changing account's parameters) it's possible to change any value you need to. Once you're done, click on the **Update** button at the bottom of the form to save the changes. Only **Virtual Phone Numbers** (primary and secondary) are not editable. In order to change them it is necessary to delete and re-create the account.

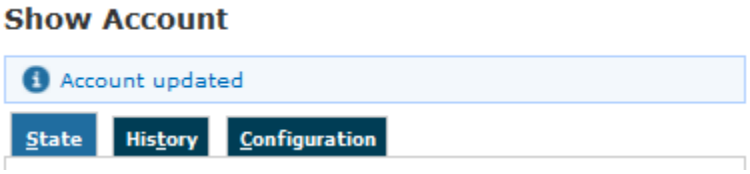


figure 11. the account has been updated

As shown in figure 11. the account has been updated the Web Console would warn you after the updated was processed. You can check the changes clicking on the **Configuration** tab.

2.3 Delete the Account

In order to delete the account you have to access at the account details as described in paragraph 1.1.1.4. You have to get the **Configuration** details as in figure 9. account configuration. At the bottom of the details window you can see a **Delete** button that's what you're looking for.

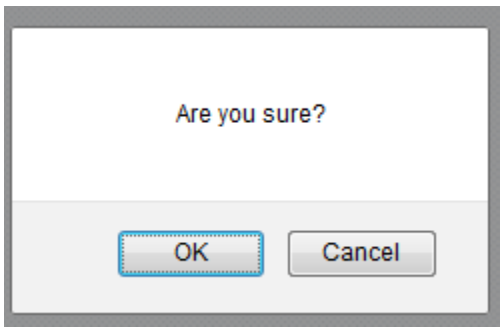


figure 12. confirm deletion

Press it and confirm the deletion in the next warning pop up window (figure 12. confirm deletion).

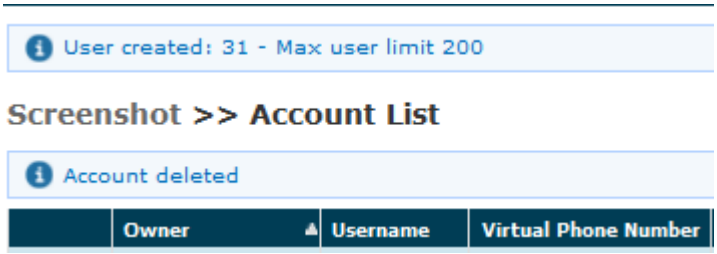


figure 13. The Account has been deleted

Once you're done, by pressing the "Ok" button, the **Account List** page will be shown up without the Account and with a warning: see figure 13. The Account has been deleted

2.4 Automatic Activation of the Account

After you created your new account(s) you have to configure the customer's client application PrivateWave . In the **wizard way** it's **MANDATORY** to use the automatic activation in order to enable the account.

The Automatic Activation is quite useful in two occasions:

1. after you just finished creating an user
2. whenever you need a quick account's reconfiguration without involving too much the user

To be able to send text messages with the Automatic Activation you first need to get the Account list (figure 1. The Sip Users Table) or the Account's configuration details (figure 9. account configuration). From both views it's possible to press the **Send Activation SMS** which would send automatically the URL of the configuration file via Text Message.

Confirm as in the above picture and the PrivateServer advices the operation has been completed:

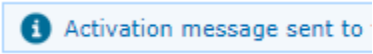


figure 14. installation sms sent

> The SMSs are sent to the account's Virtual Phone Number, so please check it exist as an actual mobile phone number before using the Automatic Activation

Getting back to the account list you can read the exact status and the time of its change:

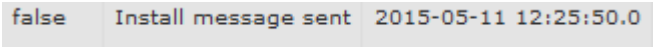


figure 15. account status

So what's happened is that the status has changed from "**Created**" to "**Installation SMS sent**" and "**Activation SMS sent**" and the "**Last Status date**" has been updated to the time the SMS has been sent to the customer.

> ⚠ The Automatic Activation and the Provisioning Profiles must be set up to have this procedure to work.

After the customer has downloaded and installed the application, the "**Last status**" changes to "**Installed**" but the "**Enabled**" is still "**False**". "**Last Status date**" is updated as well.

After the customer has clicked on the "**Activate**" link in mobile web page he has opened you can know for sure that the user has configured his/her PrivateWave application because after the action has been performed the account's "**Last Status**" becomes "**Activated**" and the "**Last Status date**" is updated as in the former cases.

Now the "Enabled" fields is changed to "true" meaning that the customer is ready to go.

> ⚠ Please remember that if you created the account in plain way then the account is enabled by default, no matter if you sent the Activation SMS or not.

If the customer actually goes on line with the PrivateWave application, than the "**Last Status**" becomes "**Connected**".

> ✓ You can check if the customer is connected using the "**Registered Clients**" menu.

2.5 Disabling/Enabling an Account

If you need to temporary **block** any account in both directions so that he cannot place or receive calls, then you can just disable him. When a disabled account tries to perform secure voice actions a proper audio message is played warning about the account' status.

Any account is enabled by default.

In order to disable an account you need first to reach the form shown in figure 9. account configuration. On the top of the form you can read the Disable account link.

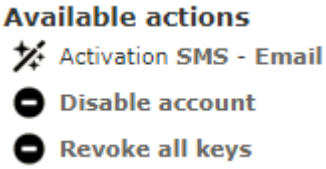


figure 16. account disabled

Just press it and it will change as in figure 16. account disabled. In order to enable the Account again you just have to press the **Enable account** and check the link and the related icon are changed again to the default.

2.6 Searching an Account

You can search search a group's accounts with the search box on the menu bar of the **Account list** page.

figure 17. The searching interface

The search covers the following fields of accounts:

- Owner
- Username
- Caller id
- E-mail
- Description

The search string is interpreted as a list of words, separated by spaces. All words in the search string must match. Words must match exactly, unless they contain wildcards:

- *****: matches zero or more characters
- **?**: matches one character, any character

Examples:

- **Marco** matches "**Marco** Rossi" and "**Marco** Bianchi", but not "Giulio Marconi"
- **Marco Rossi** matches "**Marco Rossi**", but neither "Marco Bianchi" nor "Giulio Marconi"
- **Marco*** matches "**Marco** Rossi", "**Marco** Bianchi" and "Giulio **Marconi**"
- **Marco??** matches "Giulio **Marconi**", but neither "Marco Rossi" nor "Marco Bianchi"

> The search engine is based on Apache Lucene; see "Query Parser Syntax" for a detailed description of the full syntax of search queries. The field names that can be used in search queries are `owner`, `username`, `callerid`, `email` and `description`.

2.7 Licensing

All licensing system now in managed trough user account by accessing figure 5. new SIP account.

The communication model of the licence can change quite a bit based on how user activated his account. Manual account creation leads the licence client on PrivateWave to communicate directly with PrivateWave Italia S.r.l. 's licence server. Automatic Activated clients would communicated with their own PrivateServer , which plays the role of a proxy to PrivateWave Italia S.r.l. 's licence server. In the latter case, the current licence is cached on PrivateServer and visible in account details.

> **example given**
>
> Let's say we have a PrivateServer named test1.acme.com. This PrivateServer sent an Automatic Activation text message to the client PGSM_A. PGSM_A would ask to test1.acme.com for its licence validation.
>
> If it was a manual configured account, then it would ask its licence validation to the main licence server.

Since the licence validation is an important component of the secure call, it's important that this difference in the behaviour of the client is fully understood by the Operator Manager. For instance if the Services weren't configured to let the **HTTPS/SmartPhone Web Service** be reachable on the public NIC, then the licence clients of any Automatically Activated PrivateWave s would never be able to validate their own licences and thus the client would be stuck until its licence status would be cleared somehow.

1. Groups

3. Conference Rooms