

# **Icecom SwitchBoard**

Version 3.0

*System Administrator's Manual*

**ICECOM**

**SwitchBoard**



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This manual was made for Icecom SwitchBoard version 3.0.

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## TERMINOLOGY



## INTRODUCTION

This manual was made for Icecom SwitchBoard version 3.0 and directed to system administrators. The starting point with the manual is that the system is already installed on the computer. This manual only gives instructions on functions linked with using the system. Instructions for installing the system are provided separately.

The pages of this manual describe the operations of the Icecom SwitchBoard and give instructions on using them. The manual includes clear and detailed instructions as well as pictures for illustrating the instructions.

At the end of the manual there is a vocabulary with a collection of the most essential concepts and terminology used in the manual.

In the manual, the names of buttons have been written with Verdana font, and the names of windows and pages have been written in *italics*.



## 1 ACCESS LEVELS

System administrator can handle three kinds of access levels:

- System administrator
- Switchboard attendant
- Virtual switchboard attendant

**System administrator** has the rights to connect the system to the Asterisk server, add new users and set up number messages and number groups. The system administrator can also activate the CallCenter service for Switchboard attendants, make changes to the user's phonebook by editing files and choose which files are shown to which user and furthermore change the night switch number.

**Switchboard attendant** has certain defined number groups for internal and external numbers (number group definition explained in 4.3). Two phone numbers must be defined for the switchboard attendant, an individual number for each switchboard and a common, general switchboard number for all of them. This is the number that is called from outside the company. The switchboard attendant has besides the rights to normal CallCenter operations, also the rights to edit the contents of the phonebook and shared files attached to the phonebook. In addition, he/she can monitor phone call data and edit his/her own presence information.

**Virtual switchboard attendant** is configured only for retransferring the calls that are arriving to the main switchboard number, to switchboard attendant(s). Calls made to the switchboard number can then be redirected to different switchboard attendants. Virtual Switchboard attendant operates only in the background of the system and is in no way visible to the users of the system.

## 2 LOGGING IN TO THE SYSTEM

When the system's *Login* page (Figure 1) is opened, the user is asked to type in the username and password to the respective fields. After typing them in, the **LOGIN** button is pressed.

The users of all the access levels log in similarly through the *Login* page.




Figure 1. Login page

The *Login* page also includes the instructions for system administrator and switchboard attendant.



### 3 CONNECTING TO THE ICECOM SWITCHBOARD SERVER

Only the system administrator can connect the system to the Asterisk server. When the system administrator logs in, the *Admin* page is opened (Figure 2).

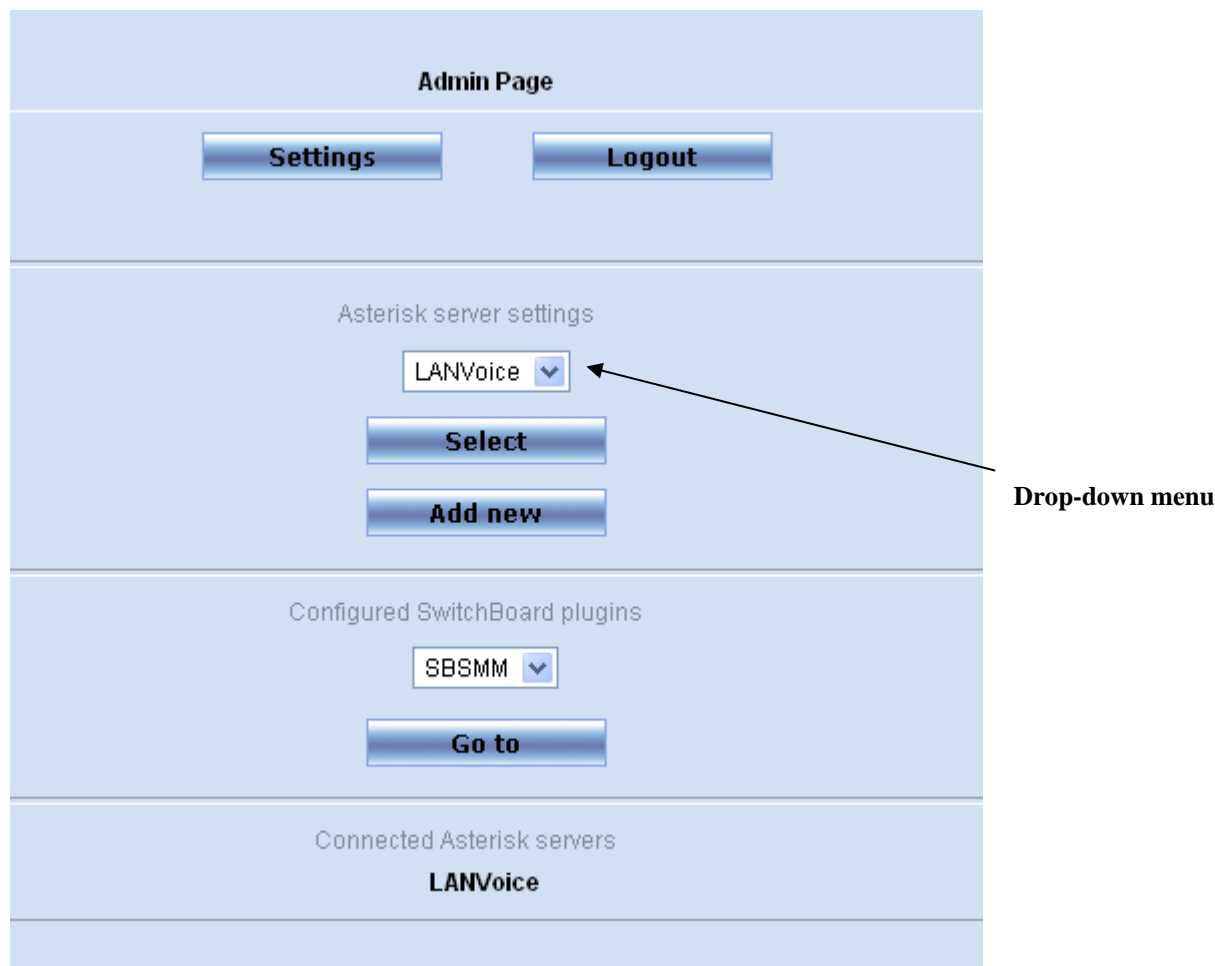


Figure 2. Admin page

Start by choosing the name of the Asterisk server that is to be connected from the drop-down menu and clicking the **Select** button. Now the system can be connected to the server by clicking the **Connect** button. Alternatively at this time the settings of the server can be changed by editing the information in the text fields and clicking the **Change** button. To add a new server to the drop-down-menu, click the **Add New** button. This opens the *Asterisk server* window. Insert the information of the new server and click the **Add** button.



Icecom SwitchBoard server settings:

<b>Name:</b>	Server name
<b>Address:</b>	Server IP address
<b>Port:</b>	Port defined in Asterisk server's manager.conf file
<b>Channel agent name:</b>	Virtual user agent defined in Asterisk server's sip.conf file (asteriskCaller by default).
<b>Channel agent port:</b>	Define port used by user agent (58867 by default).
<b>Busy call retries:</b>	Define a default value of how many times the system tries to switch to a transferred number, before the call is returned to the switchboard attendant. One transfer attempt lasts ten seconds at a time.
<b>Connect:</b>	Connects automatically to the Asterisk
<b>Activate CallCenter:</b>	Activates the CallCenter automatically.

**Please note!**

The Asterisk server should NOT be reconnected each time when logging in. The header "Connected asterisk servers" in the bottom of the System Admin page shows already connected asterisk servers. The connection must be established to the server, if the desired server is not shown under the header.

When the connection to the server is established successfully, the name of the connected server will appear at the bottom of the page under the header "Connected servers".

If connection to the server is not established, the text (Could not connect to 'XXX XXX'!) will appear under the Add new button. In this case, check that the server is operational. If connection to the server in question had already been established, the same location on the screen will display the text "Already connected to 'XXX XXX'!".

## 4 SETTINGS

In the *Settings* window the system administrator can create new Icecom SwitchBoard web users, edit their information and delete Icecom SwitchBoard web users from the system. In the *Settings* -window it is also possible to add phone numbers to the phonebook of the web users, edit previous additions and delete them from use. The system administrator can also add, edit and delete number messages and number groups as well as define the CallCenter service for use by the switchboard attendant.

In the *Settings* window, the system administrator can also change the number of the night switch to which calls are directed in the absence of switchboard attendants. The night switch



number is changed by typing in a new number in the text field and then clicking the Change button.

In the *Settings* window it can also be defined if the switchboard table will "pop up" as an active browser window when a call arrives to the switchboard.

The system administrator can also change the setting of the clear queue timer in the *Settings* window (figure 3). Timer can be set from 3 to 10 seconds from the drop-down menu. Clear queue timer defines the time the system waits after a call before it connects the next call from the queue.

The *Settings* window (figure 3) is opened by clicking the Settings button in the *Admin* page (figure 2).

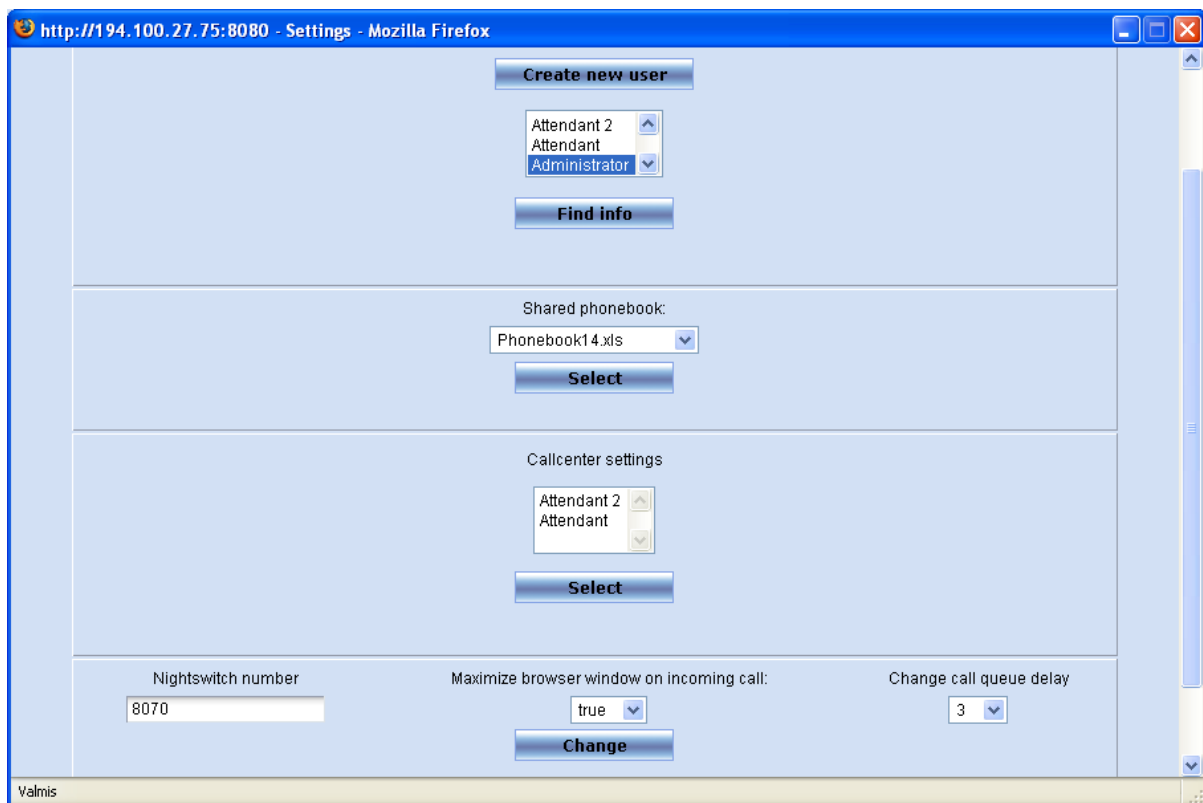


Figure 3. Settings window

#### 4.1 Adding a new Icecom SwitchBoard web user, editing information and deleting a user

Only the system administrator can **add** new Icecom SwitchBoard users to the system. A new Icecom SwitchBoard web user is added through the *Settings* window (Figure 3) by clicking the Create new user button.

Then a *Create new Icecom SwitchBoard web user* window will open at the *Settings* window (Figure 4). The information on the new Icecom SwitchBoard web user (specified below) is typed in the text fields opening on the page and the Create button is clicked. Then the new Icecom SwitchBoard web user will appear in the user information on the switchboard table (switchboard attendants).



Figure 4. Create new Icecom SwitchBoard web user window

Information in the text fields in Figure 4 (user here signifies Icecom SwitchBoard web user):

<b>Real name:</b>	Name shown to other users in user information on the switchboard table/UserBoard
<b>Username:</b>	Name used for logging in to the system
<b>Password:</b>	Freely selected password
<b>Password confirmation:</b>	Re-type password
<b>Phone number:</b>	User's normal phone number, e.g.1234567
<b>SIP identification:</b>	User SIP ID defined in server's sip.conf file
<b>Context:</b>	Context to which the user is wanted to belong. The context of the number defined in the Asterisk server's extensions.conf file.
<b>Asterisk server:</b>	The name of the Icecom SwitchBoard server, which the person is specified as user of
<b>Id number:</b>	Number for user identification. SIP ID is recommended to be used here.
<b>Additional info:</b>	Additional information for example of the skills and expertise of the user, shown to other users in the



**Access level:** additional info field  
From the drop-down menu select system administrator, switchboard attendant or other users as the access level describing the user's access rights.

A system administrator can **edit** the information on the Icecom SwitchBoard web users. In the Settings window (Figure 3) select username from the menu and click the Find Info button. The information is changed in the desired fields before clicking the OK button. Similarly, a system administrator can also change his/her own information.

A system administrator can also **delete** Icecom SwitchBoard web users from the system. This is done by searching the information of an Icecom SwitchBoard web user through the *Settings* window as before and then clicking the Delete user button.

## 4.2 Phonebook additions as well as editing and deleting them

The system administrator can edit the shared phonebooks of the Icecom SwitchBoard web users. The changes are made to the files which include the phonebooks. The system administrator also defines which of the files are shown to each user.

Additions to the files can be made by choosing in the *Settings*-window from the drop-down menu the file that is to be edited and clicking the Select button (figure 3). Information of the file will then be displayed on the screen (figure 5).

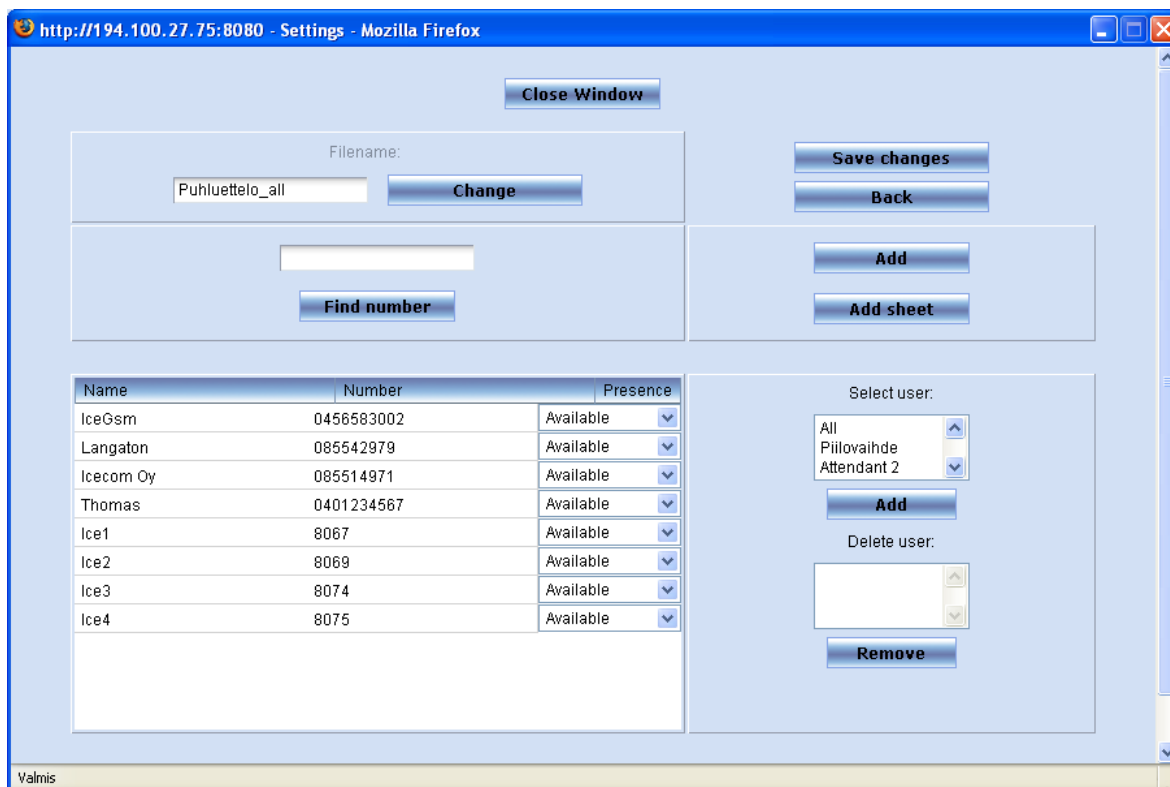


Figure 5. Editing a file



To make additions to the file click the **Add** button. A new window is opened. Type the name, the phone number and the type of the phone number (e.g. GSM) to the respective text fields. Information about the person's skills and status can be written in the "Additional info" field. The information helps the switchboard attendant who may have to connect the call to an expert of a certain field. The information is shown on the switchboard attendant's phonebook when clicking the mouse once on the name of the person.

Figure 6. Adding information

**Please note!**

If the entered Id number or phone number is already in use in the same file, the top of the page will display a message stating this, with information of the person using the number (Figure 9).

When all the information has been entered in the fields, finally click the **Add** button. When all the desired additions have been made, click the **Save changes** button in the *Edit File* window (Figure 5), and the additions will be saved in the file.



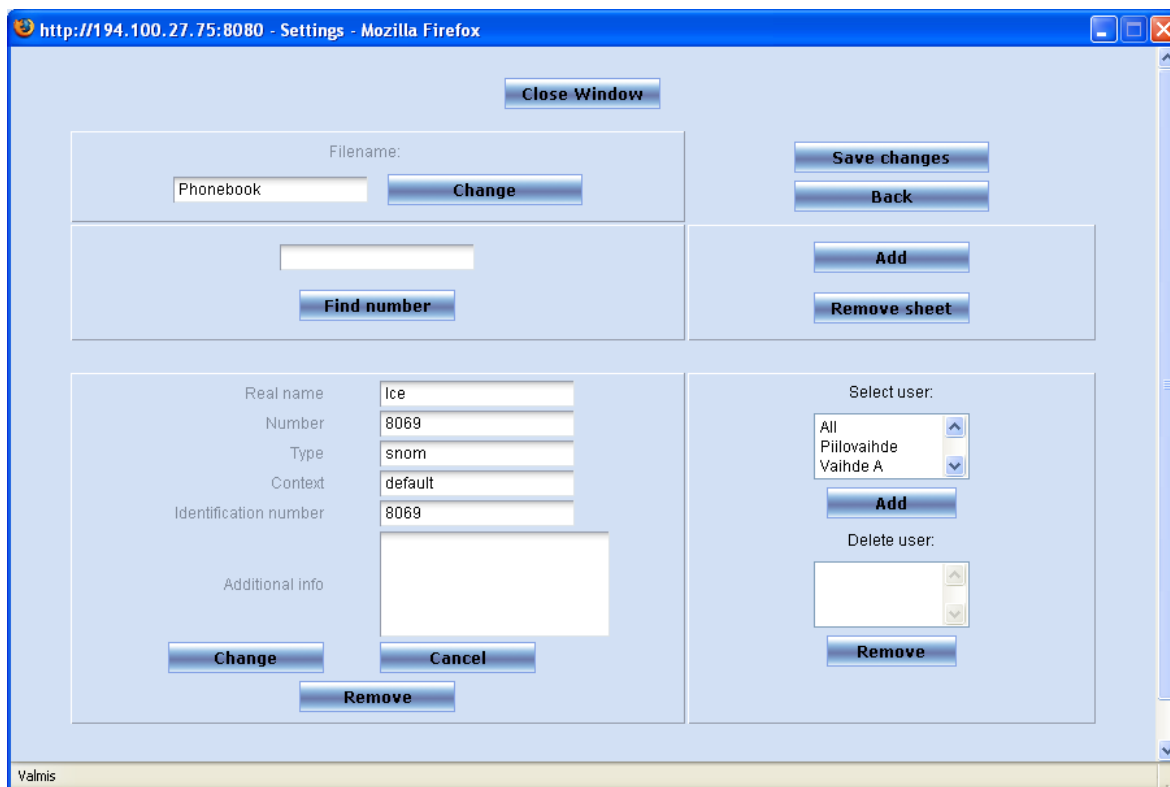


Figure 7. Editing and deleting information in the file

Saved additions can be **edited** and **deleted** by choosing the name of a selected person from the list (figure 5). The window that opens allows editing the information of the selected person by changing the information in the fields and clicking the Change button (Figure 7). The information can be deleted from the file by clicking the Remove button. To exit the window without changing the information or saving the changes made, click the Cancel button.

**Please note!**

Every time that a user name or phone number is changed, the user password changes into the original one (= user's phone number).

When a file contains a lot of information, a number to be edited or deleted can also be searched from the file with the Search function. Type the number or a part of a number in the respective field and click the Find number button (Figure 6). The system then shows only the information on that number from the file. When wanting to see all the information in the file afterwards, click the Show all button.

When needed, a system administrator can also change the presence information for users added in the file; for example in a situation when a user has gone on vacation and forgotten to change the information about his/her current status. The presence information can be changed directly in the *Edit File* window (figure 5) from the drop-down menus.

The filename can be changed by typing the new name in the text field (Figure 6) and clicking the Change button. Scandinavian alphabets with dots cannot be used in the filename.

In the same window the system administrator can choose whether the files will be shown in all users' phonebooks or just in the phonebooks of selected users. If the alternative "All" is



chosen, information is shown to every web-user. The system administrator can also choose users one by one by selecting a user from the menu and clicking the **Add** button. When a user is to be removed from the list, select the wanted user and then click the **Remove** button.

After making all the changes to the file the **Save Changes** button should be clicked (figure 6) in order to save all changes made.

**Please note!**

The directory path of the files is saved to a file on the server \$CATALINA\_HOME/webapps/IcecomSwB/WEB-INF/configuration/plugin-config.xml to <phonebook> (default: /etc/asterisk/spreadsheets, the spreadsheets file has to be created by the user himself). After this the files can be saved to the directory created.

**Please note!**

New users added through the files can use a separate additional SwitchBoard Status Manager Module service (SBSMM). The users can in that case change their presence information also with their phones. When calling to the presence information numbers specified by the system administrator, the users can change their presence status for example into "Busy". Messages should be recorded to the system for different statuses for the additional service and it should be determined whether the phone call will be redirected to the switchboard number if the person in question can not be reached. The use of the SBSMM with a phone has to be specified in the extension.conf file (instruction in the configuration manual)

### 4.3 Adding, editing and deleting number groups

Number groups can be set up only to the switchboard attendants and only the system administrator has to rights to do so. With the help of the number groups the system administrator can place several different numbers in the supervision of one switchboard attendant or one phone number under the supervision of several switchboard attendants. A switchboard attendant supervises several different number e.g. in a situation where phone calls to several different companies arrive to the same switchboard. Several switchboard attendants can supervise together one number, and the phone call is answered by the attendant who gets there first, in case the CallCenter service is not activated.

Number groups are defined in the *CallCenter Settings* window for one switchboard attendant at a time. An attendant's number is selected from the list and the **Select** button is clicked (figure 8). A new window is opened (figure 9) that displays all call center settings of the attendant. In the left hand side of the window numbers can be added to and deleted from the attendant's number group.



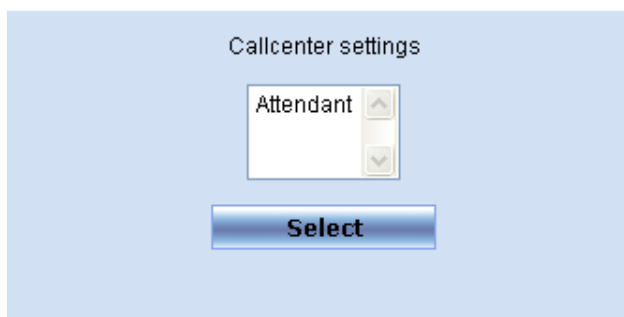


Figure 8. Callcenter Settings

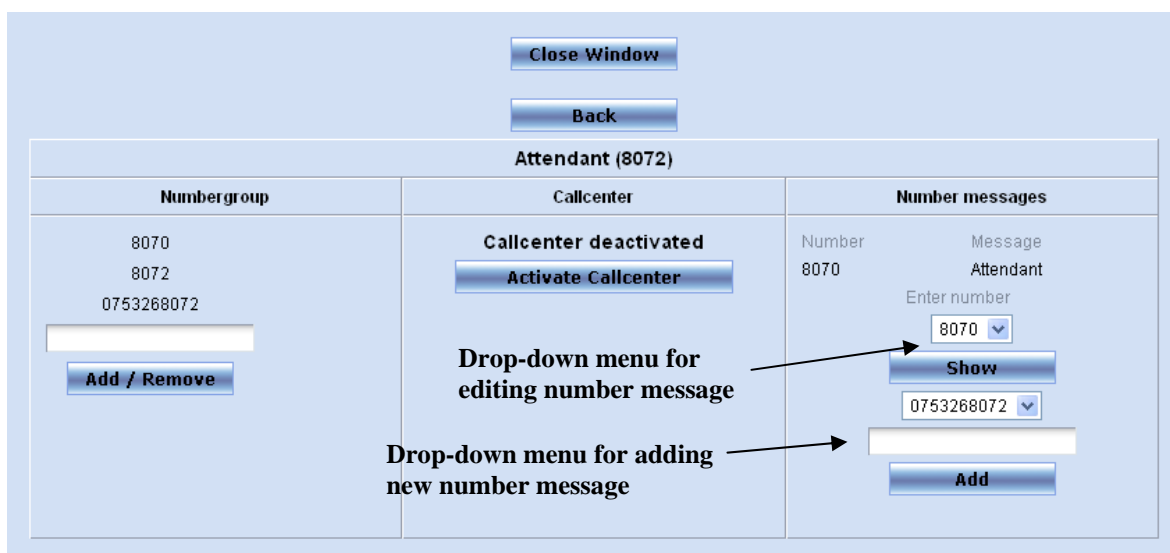


Figure 9. Chosen attendant's CallCenter's settings

When **adding** numbers in a number group for a switchboard attendant, type the new number in the text field, and click the **Add/Remove** button. To **delete** a number from a number group, the number has to be typed in the text field and the **Add/Remove** button clicked. If one number is to be supervised by several switchboard attendants, the number in question has to be added to the number groups of all the attendants individually. **Editing** a number group is done by removing a desired number from the number group and then adding a new number for the username in the number group.

**Please note!**

In order for the switchboard attendant to receive incoming calls, also the number of the switchboard has to be added in the attendant's number group.

When a number has been set in a number group, the attendant's phone will ring normally when receiving a call, but the call is also shown on the switchboard table of the attendant. Setting up number groups does not prevent the attendant's phone from working, but instead it gives the switchboard attendant the possibility to answer calls incoming to a defined number.



## 4.4 Adding, editing and deleting number messages

A system administrator can add number messages for the web users in the Icecom Switchboard system, to facilitate the work of the switchboard attendant. The switchboard attendant sees the number message in call queues where the recipient is indicated, and is able to tell the number to which a call was placed. If for example the numbers of several companies are being supervised in the system, and the calls of all companies have been directed to the same switchboard, the number messages show the company to which an incoming call was placed. Then the switchboard attendant can answer calls placed to different numbers in a different way. A number message can also be added in connection to very important calls in order to separate them from other calls, for example calls placed to a CEO, if the switchboard attendant monitors his/her calls.

Number messages are added in the *CallCenter Settings* window. A switchboard attendant is selected from the list and the **Select** button is clicked (figure 8). A new window is opened (figure 9). Number messages can be added, edited and deleted in the right hand side of the window.

When **adding** number messages, first the drop-down menu is used to select the number to which a number message is added. (Figure 9). After this the message is typed in the field below and the **Add** button is clicked.

The number messages can be **added** and **deleted** by selecting the desired number from the drop-down menu and clicking the **Show** button. The current message can be edited by changing the messages in the text field and then clicking the **Change** button, which will save the changes made. When wanting to delete a message from a number, the **Remove** button is clicked at this point.

### **Please note!**

Number messages can be created only for numbers that exist in the switchboard attendant's number group. If two attendants have the same number in their number groups, the same message will be displayed to both of them.

## 4.5 CallCenter

The CallCenter service can be activated when there are several switchboard attendants in the system simultaneously. The number of the switchboard has to be defined in the system in order for the service to work. The switchboard number is a number that is called from outside of the company and is generally given out as the company switchboard number.

The CallCenter service offers a function that distributes incoming calls between the switchboard attendants logged in at the same time. When the service is not on, the phones of all the attendants ring simultaneously. In this case the call is taken by the attendant who gets there first.

The CallCenter service can be activated in the *Settings* window. A switchboard attendant is selected in the *Callcenter Settings* window (figure 9) and the **Select** button is clicked. The



CallCenter can be activated or deactivated from the switchboard attendants CallCenter settings. When the button **Activate CallCenter** is displayed the CallCenter is not in use. The service is activated when the button has the text **Deactivate CallCenter**.

To add switchboard attendants to the CallCenter the number of the attendant for which the CallCenter service is activated has to be selected from the *CallCenter Settings* window menu (figure 9). Click the **Select** button and numbers can now be added to the attendant's numbergroup. Each attendant included in the CallCenter must always have **the internal and external number for the switchboard number** in his/her number group. In addition, the number group must include **the internal and external number for the switchboard attendant him/herself**. When it is wanted that the switchboard attendant also supervises the calls of other switchboard attendants or other users, also the numbers for these are added in the number group of the attendant. Finally the **Add to CallCenter** button is pressed in order to activate the service to the switchboard attendant in question.

After defining the number group it is possible to select whether the switchboard attendant has the CallCenter in or out of use. The same window (Figure 9) is used to select the button **Remove from CallCenter** or **Add to CallCenter**. In the window, the location of the buttons displays the text "CallCenter disabled", when the CallCenter is generally not activated. The CallCenter can then be activated by clicking the **Activate CallCenter** button in the Settings section (Figure 9).

## 4.6 Night switch

The switchboard attendant who leaves work last has the possibility to activate the Night switch function when leaving work. When the function is activated, all the calls coming to the switchboard number are automatically directed to the night switch number.

The system administrator can change the night switch number through the *Settings* window (figure 3). The desired phone number is entered in the text field and the **Change** button is pressed.

## 5 LOGGING OUT

Logging out is done by clicking the **LOG OUT** button in the top right corner of the *System admin* page (Figure 2). After logging out, the Login page will open (Figure 1), and a new user can log in.



## TERMINOLOGY

Active call	Call that is active on the switchboard table.
Additional info field	Displayed when the mouse is clicked once over the name of a person in the user information.
Asterisk Server	server where the switchboard software resides.
Attended transfer	Switchboard attendant transfers a call to another number by putting the call on hold and calling the number first.
Available status	User is logged in to the system, and is not occupied at the time.
Away status	User is not logged in to the system.
Busy status	User is logged in to the system but is occupied at the time.
Call group	Asterisk server feature, meaning call group.
Call queue	The term comprises both the Incoming calls queue and Queued calls queue.
Channel agent	User agent that is used to make calls from the switchboard table.
Common prefix number for the extensions	Normal phone number without extension (for example: when normal phone number is 4444111, the prefix is 4444).
Hold	Call can be placed on hold to wait for further actions.
Icecom SwitchBoard web user	All switchboard attendants and other users.
Incoming call	New call coming to the system.
Incoming calls queue	All new calls are transferred to this queue along with calls that were unsuccessfully redirected to another number.
Number message	Number message is an extra qualifier created to help the switchboard attendant, containing additional info on the number to which a call was placed.
Normal transfer	Switchboard attendant transfers a call to another number without calling it first.
Number group	Numbers under the supervision of a switchboard attendant.
Phonebook	The phonebook is used to save the information on everybody except the Icecom SwitchBoard web users.
Pickup group	Asterisk server feature, referring to call pickup group.



Presence status	User's presence status is shown in the user information on the switchboard table. The possible presence statuses are: Available, Busy, At lunch, Do not disturb, Be right back, and Away.
Queued calls queue	Queue to which calls handled by the switchboard attendant are transferred.
Switchboard attendant	User with defined number groups for an internal and external number.
Switchboard number (Global number)	Phone number that is called from outside of the company; the number is common to all switchboard attendants.
Switchboard table	Switchboard attendant's WWW browser based user interface.
System administrator	User with rights to connect the system to the Icecom SwitchBoard server, add new users, set up call messages and number groups, make additions to the phonebook from Excel tables, activate the CallCenter service for the switchboard attendant and change the night switch number.
Timed transfer	Feature of the phone, allowing definition of how many times the system will try to transfer the phone call before redirecting it for example to an answering machine.
User	The term is used in this manual to refer to all users.
User information	Located at the top of the switchboard table and the phone table; includes both the information and phonebook of the Icecom SwitchBoard web users.
Virtual switchboard attendant	The user level that is configured only for retransferring the calls that are arriving to the main switchboard number, to switchboard attendant(s).



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