



STARFACE
COMFORTPHONING



STARFACE ADMINISTRATION MANUAL

www.starface.com

STARFACE Administration Manual for Version 8.0.0.X / Edition 02

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1 About This Manual

This administration manual deals with the topics of installing, configuring and managing the STARFACE telephone system. This document's target group is administrators and users who already have basic knowledge in the fields of telephony, VoIP and network technology.

The user manual for STARFACE, which gradually guides users through the use of STARFACE and its user interface, is available as a counterpart to this manual. The user manual is available [to download for free](#).

If you have further questions or require additional information, particularly regarding adaptations and extensions to your STARFACE telephone system, please contact one of our certified STARFACE partners.

Please note that STARFACE is a software product which is being continuously further developed and improved. The version of the manual delivered with the product may not, therefore, correspond to the software version as regards content. Installing updates or patches may also change the functional scope or appearance of certain operating elements. We therefore recommend that you use the STARFACE Online Help if in doubt. We expressly reserve the right to make changes and further developments in the name of technical progress. We are more than happy to receive content-related suggestions or information relating to errors in the manual at any time.

We are delighted to be able to welcome you as a new member of the growing STARFACE community, and hope you have lots of fun with and wish you every success in your everyday work with STARFACE.

1.1 Special Font Styles in This Manual

The STARFACE interface's different actions and labels are identified within the text using the following formatting:

Buttons on the STARFACE web interface

Sample text

Labels on the web interface:

Sample text

Keyboard entries and file paths:

`/path1/folder1/`

Cross-references within the manual

"1.1.1 – Chapter"

Telephone keys:



Notes and important comments:

Note: Sample text

1.2 The Most Important Operating Elements and Icons
















The following control elements can be found time and again in the different sections of the STARFACE web interface, and there is a standardized function behind the corresponding icon.

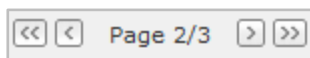
This is why the icons are only listed here centrally and are not described over and over again in the relevant chapters.

 Calling up the Online Help

 Edit

 Delete entries

-  Open / close sub-menus
-  New element
-  Add detail
-  Property activated
-  Property partially activated
-  Select user icon / user entry
-  Group icon
-  Conference room
-  Module (configuration)
-  Select address book entries
-  Show more actions
-  Listen to calls / announcement on the telephone
-  Contact areas for positioning using Drag & Drop
-  Close dialog / window
-  View options for list columns



Scrolling forward and backward in lists

2 Notes on the Operating Modes

In principle, there are 3 different ways of using a STARFACE, which differ, among other things, in terms of the necessary technical prerequisites, the procurement costs and the operating costs. You can receive competent advice from your STARFACE sales contact regarding this matter.

This section of the manual provides information on how the different technical implementations can be started for the first time.

2.1 STARFACE as a Hardware Appliance

If you have a STARFACE appliance, start up the device as described in the quick guide supplied. It also lists the individual steps for wiring the telephone system.

If the hardware appliance is equipped with a Sirrix ISDN card, it must be noted that there are differences in the wiring between the card and the network connection or ISDN terminal device depending on the version of the ISDN card.

Note: You must read the manual provided under [Documentation Relating to the Sirrix Cards](#) for this purpose.

2.2 STARFACE as a VM Edition

The STARFACE VM edition is a pre-installed system for the VMware or Microsoft virtualization platforms. This VM edition can be downloaded for free from the [STARFACE website](#). With regard to start-up, please read the [VM documentation](#) first of all and then “4 – Configuring STARFACE for the First Time”.

2.3 STARFACE as a Cloud Service

STARFACE hosted in the cloud service already has a basic configuration, so you can start creating users and dealing with further system administration directly (“5 – General Information Relating to STARFACE Administration”). You will obtain the Internet address for the cloud instance, as well as the access data, from the commissioned STARFACE partner companies.

Note: Access to the cloud via SSH or database access is not possible!

3 Prerequisites

In this chapter, the prerequisites that have to be met to be able to use STARFACE correctly are documented.

3.1 Internet Browser

The graphic web interface is used to operate and configure STARFACE.. To do this, you call up the STARFACE IP address in an Internet browser. In principle, any of the common browsers which support JavaScript, HTML5 and cookies are suitable for this.

3.2 Firewall Settings

The network's firewall must have the following ports open in both directions for the STARFACE IP address if the underlying functions are to be used.

Port	Protocol	Description
53	TCP / UDP	DNS
80	TCP	Access to the STARFACE web interface and the STARFACE REST interface via http
123	UDP	Synchronization of the system time using an external NTP server
389	LDAP	Unencrypted access to an external address book
443	TCP	Access to STARFACE via https
443	TCP	Access to the address book and the function key configuration in the desktop apps
636	LDAP	Access to an external address book using TLS
1902	UDP	User authentication via Active Directory
3090	TCP / UDP	Set-up and use of the system network
5060	UDP	Use of SIP (e.g. setting up calls)
5060	TCP	Use of SIP (e.g. setting up calls)
5061	TCP	TLS encryption in the desktop apps and for encrypted connections to some SIP providers
5222	TCP	Desktop and mobile app login onto the XMPP server
10,000 to 20,000	UDP	Incoming RTP audio data
1025 to 65,535	UDP	Outgoing RTP audio data
50080	TCP	Autoprovisioning (all 3 types) and telephone menus (unencrypted)
50081	TCP	Autoprovisioning (all 3 types) for Openstage and Snom (with TLS)

Table 1 – Overview of the ports used

The following server addresses must be accessible from STARFACE:

Address	Port	Protocol	Description
license.starface.de	80	HTTP	Access to the STARFACE license server
license.starface.de	443	HTTPS	Access to the STARFACE license server
license.starface.de	8383	HTTPS	Access to the STARFACE license server
update.starface.de	80	HTTP	Access to STARFACE updates
update.starface.de	443	HTTPS	Access to STARFACE updates
starface-cdn.de	80	HTTP	Access to STARFACE updates
starface-cdn.de	443	HTTPS	Access to STARFACE updates
www.starface-cdn.de	80	HTTP	Access to STARFACE updates
www.starface-cdn.de	443	HTTPS	Access to STARFACE updates
siptrunk.de	443	HTTPS	Access to the provider portal

Table 2 – Overview of the necessary server access instances

The following subdomain must be accessible from STARFACE if a STARFACE Connect line is to be used:

cluster.starface-connect.com

If this is not possible, the following IP addresses can also be entered in the firewall:

- 37.120.180.58
- 37.120.180.6
- 37.120.181.198
- 37.120.181.229
- 46.38.248.81
- 46.38.248.53
- 85.184.250.15
- 185.145.168.32
- 185.145.168.63
- 185.145.168.86
- 185.145.168.116

Note: It is not recommended to enter individual IP addresses in the firewall. The used IP addresses can be extended and / or changed at any time.

The following IP addresses must be accessible from STARFACE if a [STARFACE Connect line](#) is to be used:

- 37.120.180.58
- 37.120.180.6
- 37.120.181.198
- 37.120.181.229
- 85.184.250.15
- 185.145.168.32
- 185.145.168.63
- 185.145.168.86
- 185.145.168.116

Note: Alternatively, the subdomain "cluster.starface-connect.com" can be used in the firewall. This means that it is not always necessary to use the individual IP addresses.

The following DNS entry must be accessible via port 443 for the STARFACE and the mobile apps so that the functionality of the mobile apps is guaranteed:

- push-cluster.starface.de (version 7.0.0.19 and higher)

- push.starface.de (up to the version 7.0.0.8)

The use of TLS 1.0 and TLS 1.1 is not possible for the following ports, all higher versions of TLS are supported:

- 443
- 5061
- 5222

If telephones from the manufacturer Yealink are to be connected to a STARFACE cloud via the partner portal of the Starface company, the telephones must be able to reach the following hosts

- dm.yealink.com
- api-dm.yealink.com
- rps.yealink.com
- rpscloud.yealink.com
- pscloud.yealink.com

The following ports must be released for the hosts listed above:

- 80
- 443
- 8443
- 8445
- 8446
- 9989

4 Configuring STARFACE for the First Time

At this point, it is assumed that, if you are using a STARFACE cloud service, you have already been informed of the access option by your STARFACE partner and that you are aware of the IP address of the virtualized STARFACE VM.

All STARFACE appliances are configured in their basic settings so that they expect to be assigned an IPv4 address via DHCP. There are several ways of finding out this IP address:

- In the case of all STARFACE appliances with LC display, the current IPv4 address is shown in the display on the front of the housing following completion of the booting process.
- Certain STARFACE appliances offer a VGA monitor connection, which can be used to connect a monitor directly. The appliance's IPv4 address can also be read off by it directly.
- If a USB stick is connected to any STARFACE appliance, it automatically writes a file named "pbxurl.txt" to the connected stick. The file can then be read out and receives the current STARFACE IPv4 address.

To configure STARFACE, enter the system's identified IP address into the web browser's address line as follows:

`http://123.123.123.123/`

whereby 123.123.123.123 is representative of the IP address to be entered.

The STARFACE Initial Configuration menu now opens in the browser. At this point, you can first of all select the language setting for the subsequent configuration in the top right-hand corner using the drop-down menu.

4.1 Optional System Restore

To perform a system, restore at this point, select the corresponding button, then select a backup file on your local computer to upload to STARFACE.

Only backup files from the same or a lower version of STARFACE can be installed.

Note: At this point, we also recommend always updating to the latest version of STARFACE within the release. An update is always only possible within the release without an installed license.

4.2 Making Basic Settings

The system's language setting made at this point applies to all administrative e-mails, prompts, the Login area and the web interface of all users who have not chosen their own preferred language in Settings. This language is also used on terminal devices if a user cannot be identified (e.g. in the event of a failed login).

When a country is selected, the corresponding country code is automatically adopted. Please also amend the area code accordingly afterwards.

Note: The area code is indicated without a leading digit (prefix). So, for example, in Germany, Austria and Switzerland, it does not have a leading 0.

The internal call number range indicates which numbers on STARFACE are available for users, groups, conference rooms and module configurators. This number range can be freely selected in terms of format and extension (e.g. 10 to 999 or 500 to 520), whereby there is a restriction that there may be no one-digit internal numbers.

Note: It is recommended to select the internal call number range so that it is made up of two or three digits, and to coordinate the selection of larger internal number ranges with your Sales or Technical contact beforehand.

4.3 Creating Users for the Administrator

At least one administrator account must be created to manage STARFACE. Additional user and administrator accounts can be created and managed later in the administration interface.

The login ID must be unique for each user / administrator, so two users / administrators cannot have the same login ID. Only the digits 0 to 9 can be used as characters, because a user must also be able to log in with the number keys on a telephone.

The password must be made up of at least eight characters and should contain numbers, uppercase letters, lowercase letters and special characters for security reasons.

Note: The length of the password has an enormous influence on its security, so longer passwords are always preferable.

Finally, all the initial configuration values entered are saved and summarized in an overview.

5 General Information Relating to STARFACE Administration

All of the important system settings can be edited in the STARFACE Administration section. The Administration section is opened using the **Configuration** button on the main menu bar.



Figure 1 – Selecting the Administration section

Note: Cookies and pop-ups must be permitted and JavaScript must be activated to operate STARFACE via the web browser.

System Status	Overview of the current system settings / messages
Users	Creating and editing user accounts
Groups	Creating and editing groups
Phones	Connecting terminal devices
Modules	STARFACE modules
Voicemail	Setting up and managing voicemail boxes
Conference	Basic settings for moderated conferences
Addressbook	Settings for the address book
Phone Numbers	Overview of the assigned internal / external call numbers
Lines	Lines on STARFACE (SIP providers, ISDN, NGN and analog)
Routing	Outgoing routing rules and cost-optimized routing (COR)
Server	General server settings (e.g. time / date or licenses)
Statistic	Exporting connection data and creating statistics
Interconnection	Setting up and configuring the system network
Security	STARFACE security settings
Extended Settings	On-hold music, XMPP server, macros and Active Directory


Figure 2 – List of items in the Administration section

The menu bar, the buttons of which can be used to open the individual setting sections, can be found on the left-hand side of the Administration section. The window for the administration area can be drawn larger and wider by clicking on the edge of the window.

The following chapters describe their functions in the order in which they are positioned in this menu bar.

6 System Status


In this section, there are various overviews available to the administrator.

Using the  button in the top right-hand corner, it is possible to open the currently selected tab in a new browser window and to use STARFACE independently of the other browser windows.

6.1 Reports

In this section, the following messages are listed, whereby the most recent message is always displayed first:

- [Automatic entries in the blacklist](#)
- [E-mail could not be sent](#)
- [Error messages when a backup is created](#)
- [RAID system error messages](#)
- [Low disk space available on the hard drive](#)
- [Password checker messages](#)
- [Error messages associated with licenses](#)
- [Mail delivery not possible due to low disk space](#)
- [Availability of new updates for STARFACE](#)
- [Problem with downloading a provider profile from siptrunk.de](#)
- [Message on automatic sending of the error report if a severe system error occurs](#)

Using the  button, 3 different types of note can be left for individual messages.

- Confirm
- Solve
- Edit

These three 3 items are only notes documenting handling of the message. No direct processing takes place through adding a note. There are two other options available:

- Resend
- Delete

The "Resend" item is only available when e-mails have failed to send and triggers repetition of the sending process. The "Delete" selection item permanently deletes a message from the overview.

With the "Delete all" button it is possible to delete all system messages at once. The deletion of all system messages generates a corresponding entry in the status log file.

6.2 System Summary


In this tab, the general information relating to STARFACE is summarized and can be read out and off at a glance.

Licenses: All of the important license information relating to STARFACE (also see "[17.8 – Licenses](#)").

Hardware: All of the important information concerning the hardware used.

Configuration: All of the important key data of the current STARFACE configuration.

Enabled Module Configurations: Overview of the active module configurations (see “[10 – Modules](#)”).

An information message is identified by a warning triangle icon  and can have the following causes, for example:

- -Installed version is higher than the system's licensed version
- -No server license has been entered
- -Update option has expired (refers to the option's validity date)
- More users have been created than are licensed
- Routing priority is “COR Rule”, “LBR Rule” or “Line + COR”, and no COR rules are configured
- Routing priority is “Static” or “Line”, but COR / LBR rules are configured in spite of this
- No emergency call numbers are configured
- No internal and/or external conference numbers are configured
- XMPP domain was entered

6.3 Utilization

In this tab, the current utilization of the CPU(s) and the STARFACE working memory are displayed. Use of the various services can also be read out. The view updates itself once per second to deliver current data at all times.

Note: In the event of high system utilization, the frequency of this tab updating is automatically lowered so as not to additionally increase the system load.

The following data can also be read in this section:

Designation	Description
Further user logins	Specification of how many other users are logged in on to the STARFACE web interface
Active call channels	Number of internally and externally active call channels
Call channels on hold	Number of internally and externally held call channels
Active conference channels	Number of active conferences on STARFACE with at least one participant
Connected STARFACE Apps	Number of apps connected to STARFACE
Logged-in app users	Number of users who are connected to STARFACE via app

Table 1 - Overview of the utilization information

If a terminal server is used, the last two values can differ from one another, since in this constellation it is possible that there are fewer connected apps than logged-in app users.

6.4 Diagnostics

A PCAP file which can be used to diagnose problems on the telephone system, for example, can be created in this tab.

The maximum recording file size should be defined first of all (minimum = 1 MB / maximum = 1000 MB / 0 = 1000 MB). If the current PCAP file reaches this size, it is deleted and replaced by a new PCAP file.

If the “Log Only SIP and RTP” checkbox is active, only the data traffic which runs via the following ports is recorded:

- 5060
- 5061
- 10,000 to 20,000

During this process, all the data packages received and sent by the telephone system are written to the PCAP file. If this checkbox is not active, all the data traffic on the telephone system is recorded without any port restrictions.

Using the **Start** button, data traffic recording can be started. A currently active recording is indicated by means of a corresponding note displayed in the tab.

Once recording has been stopped using the **Stop** button, it can be downloaded using the same button. It is only ever possible to download the current PCAP file.

7 Users

The number of maximum user accounts which can be created is limited by the number of user licenses integrated into STARFACE. If you have user licenses, please register them beforehand under **Server** in the **Licenses** tab (also see “[17.8.1 – Installing New Licenses](#)”).

A distinction is made between two different user types on the STARFACE. On the one hand there is the full-fledged user who can use all functions of STARFACE. In addition, there is the “User Light” who is not allowed to use the following features:

- Login on the STARFACE web interface
- Login on the STARFACE Apps for windows or macOS
- Login on the REST interface

7.1 Creating a New User Account

The following key data is very important for a user on the STARFACE and the fields are therefore also defined as mandatory:

- Login ID
- Password
- First name
- Last name
- E-mail
- Internal call number
- License Type (User or User Light)

A user template can also be selected directly from the "Template" drop-down menu for the new user account. This will apply the user template directly to the newly configured user account (see also [7.4 Templates](#)).

If administrator permissions are set, no user template can be selected for this user.

Note: The password for the user must consist of at least 8 characters and must be changed when the user logs in for the first time.

If telephones and lines are already configured at this time, one or more external call numbers or telephones can also be directly assigned to the user account during the creation process.

It is also possible to set the user account permission for administration at this point. If administrator permissions are set, no user template can be selected for this user.

After clicking on **Save** or **Apply**, you can reconfigure or modify the user account (“[7.2 – Configuring User Accounts](#)”).

7.1.1 Importing User Accounts

The import function offers the option of creating a large number of user accounts at the same time. To do this, the data must be available in a CSV file and uploaded.

To create an import CSV file, there is a template available for download in the web interface under **Import**. The correct field headings are already entered in this template file. There is also a sample user, which can be used for testing imports or as a template, within the template file.

When editing the template, it must be ensured that the file is saved with UTF-8 coding.

7.1.1.1 The Fields of the Import File

- login The user's unique login ID
- firstname The user's first name
- lastname The user's last name
- external External telephone number in the fully qualified format without leading 00
- internal The user's internal telephone number
- mail The user's unique e-mail address
- password The user's password
- license type License Type for the User (User or UserLight)

Note: The external telephone number must not start with a + or another character; rather, It must be fully qualified and be indicated without any leading zeros (e.g. 4955667788).

The possible entries for the user rights are listed in the table below. To set the standard permissions, all the permission fields must remain empty.

The order of the fields in the template file can vary, which is why the order from the web interface of the telephone system is listed in the overview table.

Main Right	Subordinate Right	Default	Column Name during Import
Login		Yes	login_perm
Callmanager		Yes	callman_perm
Redirect		Yes	redirect_perm
	Group forwarding	Yes	group_redirect_perm
Call Lists		Yes	calllist_perm
	Edit comments	Yes	calllist_comment_perm
Addressbook		Yes	address_perm
Voicemail		Yes	voice_perm
Keys		Yes	fkey_perm
	Permit Display Forwarding Targets	Yes	fkey_shw_fwd_state_perm
	Permit Display Chat Status	Yes	fkey_shw_im_state_perm
	Permit Activate Modules	No	fkey_module_key
	Permit Display And Pickup All But Blocked	No	fkey_show_all_call_detail_perm
	Block Display And Pickup	No	fkey_provide_no_call_detail_perm
	Permit Display Connected CallerId	Yes	fkey_show_act_call_perm
	Permit Display And Pickup Ringing CallerId	Yes	fkey_show_inc_call_perm
Preferences		No	admin_perm
	Users	No	admin_user_perm
	Groups	No	admin_groups_perm
	Phones	No	admin_phones_perm
	Modules	No	admin_modules_perm
	Miscellaneous	No	admin_misc_perm

Instant Messaging		Yes	im_perm
	Send files	Yes	instant_messaging_send_file
Remote Connect		No	remote_perm
Conferences		Yes	conference_perm
Fax		Yes	fax_perm
IFMC		Yes	ifmc_use_perm
	Modify	Yes	ifmc_edit_perm
E-mail Notifications		No	admin_mail_perm
Phone Login		Yes	phone_login_perm
UCI		Yes	uci_perm
	App Premium Functions	Yes	uci_autoprovisioning_perm
	Integration into Microsoft Teams	No	ms_teams_integration_perm
	Windows terminal server	No	winclient_terminal_server_perm
	STARFACE NEON Video Meeting	Yes	neon_video_meetings_perm
Provider Actioncodes		No	admin_actioncodes
Call recording		Yes	call_recording_perm

Table 3 – Overview of rights (order as in the web interface)

Note: The “Remote Connect” right still has no function at present and is not taken into account at any point in the STARFACE configuration process.

To explicitly grant a right, set the value 1. To explicitly deny a right, use 0 or leave the field empty. The administration permission (admin_perm) is only observed when at least one of its sub-permissions (admin_...) are set too.

The admin_mail_perm is not included in the administration rights, however.

Note: If no value is entered in an import field, the authorizations are only granted during the import if it is a default authorization.

An abridged example of the fundamental key data looks like this in a text editor:

```
login,firstname,lastname,external,internal,mail,password,(...)
```

```
0028,John,Sample,49721334455,28,user1@example.com>Password1,(...)
```

```
0029,Test,User,43559922,29,user2@example.com>Password2,(...)
```

```
0008,Max,Muster,41338877,24,user3@example.com>Password3,(...)
```

Each row stands for a user data record. The optional external call numbers have been omitted here. But there must be an empty “cell” between two commas.

An abridged example of set permissions might look like this:

```
(...),login_perm,callman_perm,redirect_perm,(...),voice_perm,(...),fax_perm,(...)
```

```
(...),1,1,0,1,1,0,1,1,0,0,0,1,1,0
```

At the three items highlighted in red, the values deviate from the standard permissions. So, this user does not receive the permission for call redirections, use of the voicemail box and fax display.

Invalid user accounts are listed in an overview and will be not imported. The process can then either be aborted completely or only the valid data records are imported by selecting the **Import** button.

7.2 Assignment of license types

The **License Type Assignment** button opens a new overview that provides a quick overview of the following information

- Existing and associated user licenses
- Existing and associated user light licenses
- License assignment based on the individual STARFACE users

In addition, the search field offers the possibility to search for individual users. All configured users can be assigned to a specific license type using the **Assign** button


7.3 Configuring User Accounts

Last Name	First Name	External No.	Internal No.	Primary Phone	DND
Anderson	Andreas	+49 111 77889922	22	---	
Benderson	Bertha	+49 111 77889933	33	---	
Carlson	Carl	+49 111 77889944	44	SIP/1972.snom760	
Darson	David	+49 111 77889955	55	SIP/2169.MacClient	
Edison	Edward	+49 111 77889966	66	---	

Figure 3 – Overview of configured users

The main User Administration view offers an overview of the already existing user accounts and their most important key data.

- Name [“7.2.1 – User Data”](#)
- Internal and external call numbers [“7.2.4 – Phone Numbers”](#)
- Primary telephone [“7.2.3 – Phones”](#)
- DND status [“7.2.3 – Phones”](#)

A user account can be edited by clicking on  or by double-clicking on the corresponding row. The following sections describe the setting options of the individual User Account Administration tabs.

7.3.1 User Data

Here, you will find all the important key data relating to a user account, and this data, including the login ID, can also be subsequently modified in this tab by an administrator.

If the access data (login ID and/or password) is changed, the user automatically receives an e-mail notification with the changed access data and if the option "Send credentials by e-mail" is selected. In addition, the user must change his password the first time he logs in after the administrator changed his password.

Note: The password for the user must consist of at least 8 characters.

Using the **E-mail on missed calls:** checkbox, the function of the user being informed by e-mail of any missed calls can be activated here. This information does not relate to missed group calls.

Note: With the exception of the login ID, the user can also subsequently modify the stored data in their settings.

7.3.1.1 Edit Image

The avatar is used to show the user on the busy lamp field function keys and on telephones which support the "Picture CLIP" feature. The selected image file may not exceed the maximum size of 3 MB and must be available in the "jpg", "png" or "gif" format.

The graphic is automatically scaled to the suitable dimensions during the upload process. An image which has already been uploaded can be deleted here if an avatar is no longer to be used here.

7.3.1.2 User Language

The setting selected in the drop-down **Language** menu only applies to this user and adjusts the language in the following sections:

- STARFACE user interface
- Telephone menus on the user's telephones
- All system messages which the user receives by e-mail
- Announcements on STARFACE

Any change made to the user language by the administrator only becomes visible for the user once they have logged back into the web interface.

7.3.1.3 Fax Preferences

These settings apply to sending faxes using the fax printer in the desktop apps. If no individual data is stored for a user, STARFACE uses the number from the drop-down menu "Display number" from the "Phone numbers" tab as the sender.

Note: The sender's number must be in the international format and entered without any spaces or special characters.

There are two options for tracking sent faxes:

- Transmission report: A send report is also saved in the user's fax lists for the respective sent and received faxes using this option.
- Transmission result by e-mail: The send report and the faxed document are sent to the sender's e-mail address.

If the options are active, they are also executed if fax transmission fails.

7.3.1.4 Template

In the "Template" area, a previously configured user template can be applied to an individual user. All configured user templates are available for this in a drop-down menu. After selecting the "Start template rollout" button, the user template is applied immediately, and the possible changes are made to the user.

7.3.2 Redirect

Redirection rules can be defined for the user's call numbers using this tab. A distinction is made between 3 different redirection types in this regard:

Always: Redirection takes place immediately, and the incoming call is immediately forwarded to the configured destination.

Busy: If the called user is already on a call, the incoming call is immediately forwarded to the redirection destination.

Timeout: If the incoming call is not answered within the saved time period, it is forwarded to the redirection destination. This redirection takes effect immediately without the configured time being observed if one of the following conditions is met:

- The user is not logged on to any phone or has no logged on softphone.
- The user has activated the DND function.
- The user does not have any telephones / softphones that should or can ring for this number.

This redirection takes effect immediately for a group without the configured time being observed if one of the following conditions is met:

- There are no group members registered in the group.
- None of the registered group members has an active telephone / softphone.
- None of the registered group members has a telephone / softphone that should or can ring for the group call number.
- All registered group members are in a conversation.

Note: Activating the **Call waiting** function causes Redirections When Busy to become ineffective.

To activate a redirection for a certain number, the checkbox on the far left must be selected. Any internal or external call number is specified as the redirection destination.


In the “Call number / Name” field, it is also possible to search for a name and select the redirection destination from the results. During this process, the internal users on the telephone system and also in the address books are searched for the entered name.

Note: If one digit is set in the line settings for the outside line, it does not need to be entered for redirections to external call numbers in the **Call number / Name** field.

It is also possible to specify a **configured line prefix** (e.g. **1*) to select an external number using a certain line.

On/Off	Called number	After x Sec	Voicemail Box	Call number/Name
<input checked="" type="checkbox"/>	+49 111 77889922	120	mailbox 22	99
<input type="checkbox"/>	22	120	mailbox 22	

Figure 4 – Configuring redirection when a set time is exceeded.

The  icon indicates a group's call number. Only members of the respective group with corresponding rights can see a redirection such as this.

It is also possible to select a voicemail box from the drop-down menu as a redirection destination. During this process, it must be ensured that the user's call numbers can only be forwarded to voicemail boxes which the user has access to.

Exceptions to this rule are group voicemail boxes, because they can only be selected as a destination when a group call number is redirected.

7.3.3 Phones

Display number: Here, the call number which signals an external number during an outgoing call can be defined using the drop-down menu.

If the routing priority is set to **Lines** in Routing (also see “[16.1 – Properties](#)”), the call number selected here determines which line is used for an outgoing call.


Primary phone: With this setting, for a user with several telephones, it is determined via which Call Manager telephone in the STARFACE web interface or the STARFACE apps the outgoing connections are established by default.

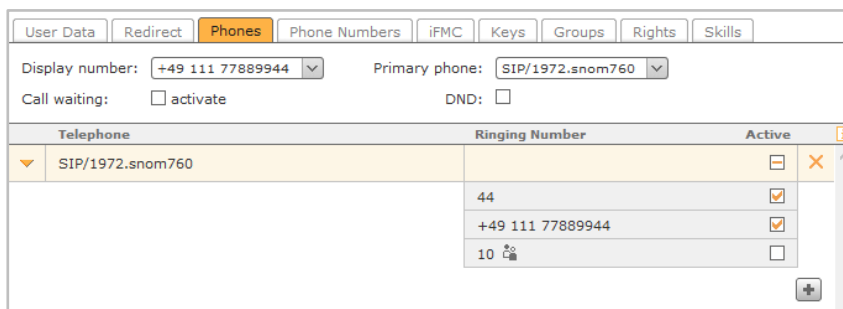
It should be noted that a device that has been connected via iFMC can also be used as the primary telephone (see also “[7.3.5 - iFMC](#)”).

Call waiting: If this option is active, the user is acoustically informed of another incoming call during an active telephone call.

Note: Activating the **Call waiting** function causes Redirections When Busy to become ineffective.

DND: If this function is activated, the user is no longer available on any of their call numbers, and all incoming calls are rejected. If redirection once a set time has elapsed is not set up for the called number, in this case redirection takes place immediately and not once the configured time has elapsed.

With , the selection of all of STARFACE’s available telephones is opened, and in principle all of the available telephones are displayed even if they have already been assigned to another user. Once the telephones have been selected, all of the user’s call numbers are active for this device.



Telephone	Ringing Number	Active
SIP/1972.snom760		<input type="checkbox"/>
	44	<input checked="" type="checkbox"/>
	+49 111 77889944	<input checked="" type="checkbox"/>
	10	<input type="checkbox"/>

Figure 5 – Sample configuration in the “Phones” section

Active: In the list of telephones, the individual call numbers can be activated or deactivated based on the telephones. By selecting the checkbox, the telephone responds in future if the corresponding call number is called.

So, for example, a telephone can only ring when an internal number is called, while another telephone only responds when an external number is called.

Note: The “FMC/<Number>” device name identifies an external number connected via iFMC (also see “[7.2.5 – iFMC](#)”).

The checkbox is configurable if the number has one of the following call number properties:


- Standard call
- Group number (telephone calls)

The checkbox is not configurable if the number has one of the following call number properties:

- Fax number (e.g. fax2e-mail software)
- Group fax number
- Conference room
- Number of a module (e.g. Chefsekretärin)

The use of a non-configurable number is indicated using the known icons (also see “[1.2 – The Most Important Operating Elements and Icons](#)”). The shown icons are displayed instead of the checkbox.

7.3.4 Phone Numbers

The  button opens the list of available internal and external call numbers. Only the internal numbers which have not yet been assigned to another user, group, conference room or module configuration are shown in this list.

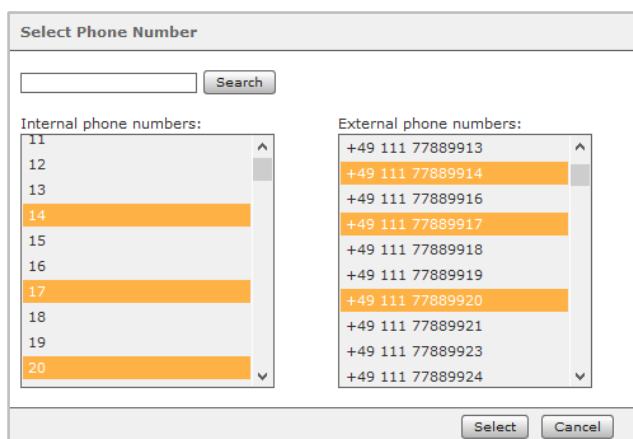


Figure 6 – Adding several call numbers

Display number: Here, the telephone number signaled using an external telephone number during an outgoing call can be defined using the drop-down menu.

Primary internal Number: This selection is used to assign the function keys.

Primary external Number: The call number selected here is used in the system network as an alternate number if the user cannot be reached using the internal call number. Additionally, the country and area codes of the call number specified here are amended if a call is made to the local network without fully qualified number information.

7.3.4.1 Call Number Properties

Standard Call: The number is treated as a regular telephone number.

Conference Room: The number is permanently reserved as a conference room. This setting is independent of the planned conferences (“[12 – Conference](#)”).

The conferences managed using this number can also be managed using the key commands on the telephone (also see “[22.4.4 – Shortcuts for Managing Moderated Conferences](#)”), but are not monitored / tracked in the web interface.

Software Fax: The number is identified as a fax number, but unlike with the fax2e-mail software, the user can only view incoming faxes in the STARFACE web interface's fax lists.

Software Fax2Mail: This number is identified as a fax number where all the incoming faxes are forwarded to the user's e-mail address as PDF files. However, the faxes can still be viewed in the STARFACE web interface's fax lists.

Figure 7 – Changing a call number property

Note: In this drop-down menu, other selection items may be available e.g. due to module configurations. Please note the respective module descriptions.

7.3.5 IFMC

The IFMC function allows the user to integrate one or more terminal devices which are not connected using STARFACE (e.g. smartphones) by entering an external call number.

Figure 8 – Configuring an IFMC

A fully qualified destination call number must be saved to use IFMC, and this call number can only be entered once in STARFACE as a whole as an IFMC call number.

The iFMC configuration accesses the internal and external phone numbers of the user for all incoming calls within the configured period. This also includes all incoming calls to a group number if the user is logged into the group at the time of the incoming call.

It must be noted that iFMC must not be set up for a device on which the softphone functionality is already active through one of the mobile apps. The softphone functionality on the end device must be deactivated before activating the iFMC configuration.

It is also possible to use the device connected via iFMC as a user's primary telephone (see also “[7.3.3 Phones](#)”). In this way, with an outgoing call from STARFACE, a connection to the destination number is established and the user's iFMC device is called at the same time. The dialing process for the outgoing call is triggered via the STARFACE web interface or the desktop app for Windows or macOS.

Call delay: This configuration setting enables incorporation of a certain time delay which creates a timeframe to e.g. answer an incoming call using the telephone connected to STARFACE first of all.

The selected call delay only takes effect if the user is not assigned telephones connected to STARFACE. In this situation, the IFMC number is called immediately.

If two IFMC numbers are entered, the relationship (e.g. 10-second difference) is maintained between the two call delays. The first IFMC number is called immediately, while the second one is called after 10 seconds.

Confirm answering calls by keypress: If this checkbox is active, during incoming calls on the IFMC terminal device a voice message is played back, and the actual call can be answered by pressing a number.

Once the IFMC configuration has been created in the **Phones** section, another terminal device named "FMC/<Configured Number>" which can be configured just like a normal telephone can be created.

When using IFMC, note the number of voice channels made available by your provider. So, for example, an outgoing IFMC call to a cell phone number still only occupies one additional voice channel if the corresponding user's number is called.

7.3.5.1 Time Control of IFMC Use

Days		Duration
<input checked="" type="checkbox"/> Mo <input checked="" type="checkbox"/> Tu <input checked="" type="checkbox"/> We <input checked="" type="checkbox"/> Th <input checked="" type="checkbox"/> Fr <input type="checkbox"/> Sa <input type="checkbox"/> Su	From: 08:00 to: 12:00	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mo <input checked="" type="checkbox"/> Tu <input checked="" type="checkbox"/> We <input checked="" type="checkbox"/> Th <input checked="" type="checkbox"/> Fr <input type="checkbox"/> Sa <input type="checkbox"/> Su	From: 13:00 to: 17:00	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mo <input type="checkbox"/> Tu <input type="checkbox"/> We <input type="checkbox"/> Th <input checked="" type="checkbox"/> Fr <input type="checkbox"/> Sa <input type="checkbox"/> Su	From: 13:00 to: 16:00	<input checked="" type="checkbox"/>

Figure 9 – Sample configuration for using the IFMC time control

To use the IFMC functionality in a time-controlled manner, in the **Period** section of the IFMC configuration it is possible to create freely configurable schedules based on weekdays and freely selectable time periods.

7.3.6 Keys

The function keys offer STARFACE users a simple and quick way of accessing frequently used standard functions and actions, such as:

- Calling predefined telephone numbers (internal or external)
- Call transfer (call grabbing)
- Switching call redirect on and off
- Logging into and out of a group
- Initiating automatic callback
- Parking calls
- Activating and deactivating ringer cutoff function / DND

Many of the options displayed by the function keys cannot only be used in the STARFACE web interface or the desktop apps; they can also be displayed on the telephone's function keys.

The configuration and use of the function keys in the STARFACE web interface and in the desktop apps are, however, independent of the user's telephone model.

The transfer of the key assignment on the user's telephone is optionally carried out when the configuration is saved or applied. But whether the function keys can be used on the telephone depends on the telephone model.

Autoprovisioning in STARFACE must be activated for the key transfer. If a new user is logged onto a telephone, the function keys there only update if the telephone model supports the “Hot Desking BLF” option, otherwise the function keys are only available following a telephone restart.

A key type can be added from the selection list on the right-hand side either using Drag & Drop or using the **Add Key** button in the bottom left-hand window.

If all the columns shown are filled, there is also the option of creating a new column by dragging and dropping a new function key onto the dividing line between the existing function keys.

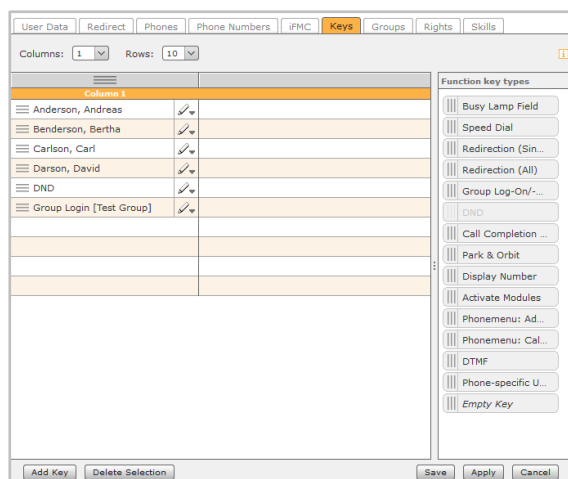


Figure 10 – Example of created function keys

Note: Some types of function key are only available when certain prerequisites are met. So, for example, the “Group Log On / Off” key type is only available if the user is also a member of a group.

If an extension or add-on module is used for a telephone, it is automatically filled with function keys as soon as all the available keys on the user’s telephone are filled. If no function keys are to be transferred to a telephone, these keys must be filled with function keys of the “Empty Key” type.

7.3.6.1 Busy Lamp Field

This type of function key is linked to another user’s or a group’s primary internal call number. As a result, different user / group statuses can be easily read off using the busy lamp field:

- Telephony (available / active incoming call / busy / wrap-up time)
- Set redirects
- DND
- Avatar image
- The user’s status message

This type of function key is also available in the Call Manager. In different, color-coded scenarios, selection of the busy lamp field triggers another action. The different possibilities are:

Signaling	Description	Action when Key is Pressed
Green	User is free	Call
Yellow	Incoming call for the user	Call transfer / call grabbing
Red	User is on the phone	Call waiting (if activated)
Blue	Wrap-up time in the queue	Call
Gray	User not available	Cancellation or drop point

Table 4 – The function key’s signaling behavior.

7.3.6.2 Speed Dial

This type of function key is used for assignment with call numbers outside of STARFACE. These numbers can be entered manually and selected from the address book. Also, control codes can be transferred to the provider, to e.g. install a redirection or use another service feature.

This type of function key does not have a status indicator and is also available in the Call Manager.

Note: A potentially existing outside line does not have to be entered.

7.3.6.3 Redirection (Single)

With this function key, always redirections which have already been set up for individual call numbers can be switched on and off. If the corresponding rights are set for the user, always redirections for group call numbers can also be controlled using this key type.

Note: Only the STARFACE Always redirections can be controlled with this option.

The function key's signaling behaves as follows:

Signaling	Description	Action when Key is Pressed
Off	Redirections inactive	Switch on redirections
On	Redirections active	Switch off redirections

Table 5 – The function key's signaling behavior

7.3.6.4 Redirection (All)

If this function key is configured, it is possible to select between the 3 following types of redirections:

- Always
- Busy
- Timeout

With this function key, all the redirections of a specific redirection type which are set up are activated or deactivated. Activation or deactivation applies to all call numbers assigned to the user, with the exception of group call numbers.

The function key's signaling behaves as follows:

Signaling	Description	Action when Key is Pressed
Off	Redirections inactive	Switch on redirections
On	Redirections active	Switch off redirections

Table 6 – The function key's signaling behavior

7.3.6.5 Redirection call numbers

When configuring this function key, one or more internal and external phone numbers can be selected. If the function key is activated, all incoming calls to this number (s) are immediately forwarded to the configured forwarding destination. This function key cannot be used for forwarding group call numbers.

The function key's signaling behaves as follows:

Signaling	Description	Action when Key is Pressed
Off	Redirections inactive	Switch on redirections
On	Redirections active	Switch off redirections

Table 7 – The function key's signaling behavior

7.3.6.6 Group Log On / Off

With this function key, the user can log into or log out of in one or more groups. The function is only available for groups which the user is also a member of.

Signaling	Description	Action when Key is Pressed
Off / green	Not logged in	Logging into the group
On / red	Logged in	Logging out of the group

Table 8 – The function key's signaling behavior

Note: It is advisable not to assign more than 5 groups in parallel to a function key of this type.

7.3.6.7 DND

With this function key, the ringer cutoff function is activated on STARFACE so that all the incoming calls are rejected for the user. Unlike the ringer cutoff key on the local telephone, this ringer cutoff function then applies to all of the user's telephones and call numbers.

If a redirection upon timeout is not set up for the called number, in this case redirection takes effect immediately and not once the configured time has elapsed.

This type of function key can only be assigned to a function key once. The corresponding possible selection is therefore inactive or grayed-out in the list of function key types following creation of the first key.

Signaling	Description	Action when Key is Pressed
Off	Ringer cutoff function inactive	Ringer cutoff function is activated
On	Ringer cutoff function is active	Ringer cutoff function is deactivated

Table 9 – The function key's signaling behavior

7.3.6.8 Call Completion on Busy

With this function key, the STARFACE automatic callback function can be triggered. The function key flashes when the destination call number of an internal and external call is busy. The user can now activate the STARFACE automatic callback function. This option is also still exists up to 30 seconds after the attempted call has already ended.

STARFACE will now attempt to reach the destination call number 5x every 10 seconds in a first step. If these first 5 attempts are unsuccessful because the destination number is still busy, for example, the attempt repeat interval is increased to 20 seconds and continues to run for 60 minutes. Once these 60 minutes have elapsed, the automatic callback function deactivates automatically.

This type of function key can only be assigned to a function key once per user. The corresponding possible selection is therefore inactive or grayed-out in the list of function key types following creation of the first key.

Signaling	Description	Action when Key is Pressed
Off	"Call Completion on Busy" inactive	No action
Flashing	"Call Completion on Busy" possible	"Callback When Busy" is activated
On	"Call Completion on Busy" active	"Callback When Busy" is deactivated

Table 10 – The function key's signaling behavior

7.3.6.9 Park & Orbit

With this function key, calls to predefined waiting places can be postponed. STARFACE provides 100 waiting places (00 to 99) on which only one call can be parked. A dedicated function key must be created for each of the waiting places.

Unlike normal call holding, here other users also have access to the waiting places and can independently take over the calls parked there. But to do this, the users must have function keys with the corresponding waiting place numbers.

Signaling	Description	Action when Key is Pressed
Off	Waiting place is free	Call is parked
Flashing	Caller waiting in orbit	Call is answered

Table 11 – The function key's signaling behavior

Note: Only parked calls can be picked up from orbit using the function keys in the STARFACE web interface. Calls can only be parked directly on the telephone.

7.3.6.10 Display Number

With this function key, the user can configure which call numbers are displayed to the call destination. It is also possible to suppress the call number.

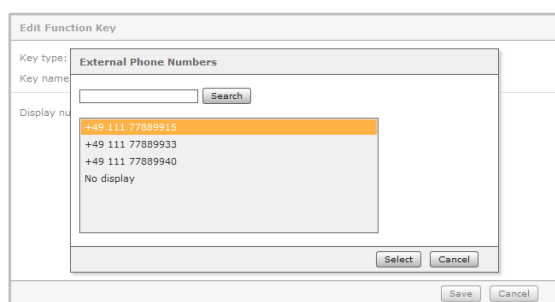


Figure 11 – Selecting call number signaling

Signaling	Description	Action when Key is Pressed
Off	Call number is not displayed	Stored call number is set
On	Call number is signaled	The call number is suppressed

Table 12 – The function key's signaling behavior

If the phone number is changed with a function key of the "Display number" type, the displayed phone number for the user is not automatically reset to its default setting when the function key is deactivated. The correct call number must be set with a function key of the "Display number" type.

If no function keys of the type "Display number" are active, outgoing calls from the user are made with a suppressed call number.

7.3.6.11 Activate Modules

With this function key, existing module configurations can be activated or deactivated.

Signaling	Description	Action when Key is Pressed
Off	Module inactive	Activate module configuration
On	Module active	Deactivate module configuration

Table 13 – The function key's signaling behavior

Note: This type of function key is only available if the user has the corresponding rights.

Activate	Module Name
<input type="checkbox"/>	Beta
<input checked="" type="checkbox"/>	Test Modul

Figure 12 – Creating a function key of the “Activate module” type

7.3.6.12 Phonemenu: Addressbook

With this function key, access to the STARFACE address books can be set up.

Figure 13 – Creating a function key of the “Phone Menu: Address Book” type

Note: This function key can only be used on telephones and is not available on the STARFACE web interface and in the desktop apps.

With the initial **View** drop-down menu, it can be selected whether access to the address book is to take place as read-only (Contact List) or as a search (Contact Search).

Note: The search is carried out as a full-text search. So, that way, not only are all the address book entries starting with “fo” shown during a search for “fo”, but rather all data records containing the search parameter “fo” are shown too.

In the second **Directory** drop-down menu, it is configured which of the STARFACE address books are listed or searched.

7.3.6.13 Phonemenu: Call Lists

With this function key, access to the respective user’s different call lists can be set up. At present, there are only the user’s 3 call list listed below to choose from.

Figure 14 – Creating a function key of the “Phonemenu: Call Lists” type

Note: This function key can only be used on telephones and is not available on the STARFACE web interface and in the desktop apps.

7.3.6.14 DTMF

With this function key, individual DTMF tones or even a sequence of DTMF tones which are supposed to indicate in an active call, for example, can be configured. The most common area of application is opening of a door lock by a defined sequence of DTMF tones.

Note: This function key can only be used on telephones and is not available on the STARFACE web interface and in the desktop apps.

7.3.6.15 Phone-Specific URL

With this function key, the call to a freely configurable URL can be displayed via http. So, for example, a Raspberry Pi can be addressed, which in turn triggers another action during a URL call.

Which protocol can be used for the reply depends on the respective phone type. In the following overview, the telephone manufacturer is mentioned first of all, followed by the protocol:

- Aastra XML
- Alcatel HTML/XHTML
- Gigaset XML
- Snom HTML/XHTML
- Tiptel HTML/XHTML
- Yealink HTML/XHTML

Note: We recommend that only experienced administrators use this type of function key while additionally observing the manufacturer’s documentation.


7.3.6.16 Empty Key


This function key is used for visual structuring purposes and can be used to display headings for the department or separators, for example.

7.3.6.17 Moving and Removing Function Keys

You can select one or more function keys by clicking the mouse while pressing and holding the Ctrl key; several function keys can also be highlighted by dragging the mouse over the area of the keys

while pressing and holding the left button. The selected area is highlighted in orange during the dragging process.

The selected function keys can now be moved to the contact areas on the left  and arranged using Drag & Drop. In the same way, complete columns can be swapped with one another using their contact areas above the column heading.

To remove highlighted function keys, right-click in the marked area and then click on the **Delete Selection** option. Alternatively, individual function keys can be deleted using the  editing menu.

7.3.7 Groups

All groups created on STARFACE and of which the respective user is not yet a member are listed in the left column. By double-clicking on the group name, or by using the arrow keys shown, the user can therefore be added to or removed from a group.

7.3.8 Permissions

The user is assigned or deprived of individual rights by selecting the checkboxes. If the rights are changed, the user is informed of this if they are logged into the STARFACE web interface at this time, and they must log back in.

You will find a list of individual rights under [“7.1.1.1 – The Fields of the Import File”](#).

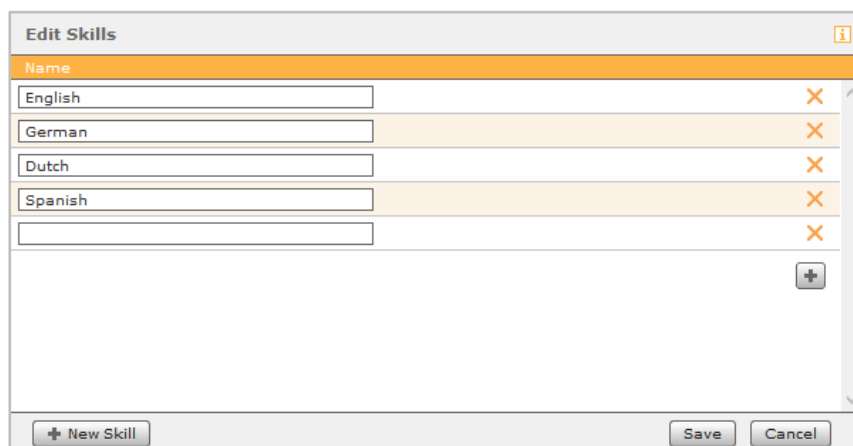
If the **Administration** Permission option was selected when creating the user account, the user has all the permissions from the Administration section.

With regard to configuration of the rights, the following special features must be observed:

- The “Remote Connect” right still has no function at present and is not taken into account at any point in the STARFACE configuration process.
- The “App Premium functions” right indicates whether the respective user has activated the softphone functionality subject to licensing or not when logging into the desktop app. If the softphone functionality was activated by the user, a corresponding license is required to use it. Even if this right is revoked, it can always be reactivated by the user.

7.3.9 Skills

In this tab, skills which can be used in an iQueue when Skill-Based Routing is activated can be configured for a user.




Name	
English	X
German	X
Dutch	X
Spanish	X
	X


+ New Skill

Save Cancel

Figure 15 – Example of configured skills

New skills can be added using the  or **+ New Skill** buttons. The following menu opens when one of the two buttons are selected:

The newly configured skills are saved using the **Save** button. The changes made are discarded using the **Cancel** button. The skills created in this way are now available to and can be added to all users.

Existing skills can be edited at any time using the  button.





Note: It must be noted that changes (e.g. adjustment to the name) made to a certain skill are always valid for all users.

7.4 Templates

Templates can be created in this tab to distribute different settings to one or more user accounts at the same time. A user template is also available when manually configuring a new user account.

Note: The "STARFACE Standard" user template cannot be edited or deleted.

The following buttons are available for the user templates:

Symbol	Beschreibung
	Opens the menu for applying the user template.
	Clones the user template as a basis for a new user template.
	Edit the user template.
	Delete the user template.

Tabell 14 - Overview of symbols in user templates

If a new user template is created via the "New template" button or via the clone button, a name must first be assigned. The following 3 tabs with different configuration options are then available. Each tab can be enabled individually for the respective user template via the "activate" checkbox. At least one of the tabs must be activated in each user template.

It should be noted that parallel access by two administrators to a user template leads to an error message.

7.4.1 Tab “Phone settings”

The points listed in this tab correspond to the configuration options of the same name for a single user account (see also [7.3.1 User Data](#) and [7.3.3 Phones](#)).

Currently available are:

- Call waiting
- E-Mail on missed calls
- Display number

The checkboxes or the drop-down menu are used to configure whether the user's previous settings should be retained or whether they should be activated or deactivated.

7.4.2 Tab “Function keys”

Function keys for the user template can be configured in this tab. The following function key types are available:

- Busy Lamp Field

- Speed Dial
- DND
- Call Completion on Busy
- Park & Orbit
- DTMF
- Empty key

A description of the various function keys can be found under [7.3.6 - Keys](#). It should be noted that when the user template is distributed, all function keys of the function key types listed above will be removed at the target user and then rewritten. The function key types not listed are not affected by this.

If a user or a group is deleted on the STARFACE, the corresponding function keys are automatically removed from all user templates.

Note: If the "activate" checkbox is selected in this tab, but no function keys are configured, all function keys of the types listed above will be removed from the user when the user template is distributed!


7.4.3 Tab “Permissions”

The permissions for the user template can be configured in this tab. The same rights are available as when configuring an individual user (see also [7.3.8 Permissions](#)).

Note: The administration rights cannot be changed via a user template, these rights must always be configured manually for the individual users.

The checkboxes are used to configure whether the user's previous settings should be retained or whether they should be activated or deactivated.

7.4.4 Apply a user template

The distribution of the user template to one or more users is activated via the button .

Note: The user templates cannot be applied to users who have a Light user license. The user templates cannot be applied to users who have a Light user license.

It is possible to search for individual users using the input field in the top bar. The "Group" drop-down menu allows only users of a specific group to be displayed. A time period can also be configured in the last two fields of the top bar, so that only users who were created in this time period are displayed.

The user for whom the user template is to be used is selected via the checkbox in the respective line. The user template is applied to the selected users via the "Start Template Rollout" button.

User templates with many function keys that are distributed to many users can lead to a high system load on STARFACE. It is therefore recommended that the user template be distributed during times with low system load.

8 Groups

The groups are used on STARFACE to logically summarize several users and make them available e.g., on the same call number.

8.1 Creating a New Group

Figure 16 – Configuring a new group

Group name: A freely selectable name for the group can be entered here. We recommend using as meaningful a group designation as possible here.

Ringing strategy: There are several possible configurations for how a group behaves during an incoming call in STARFACE. In this regard, it must be noted that only telephones which are also actively configured for the group call number are addressed (also see “[7.2.3 – Phones](#)”).

- **Ring All Group:** The telephones of all active group members ring in parallel to one another.
- **Broadcast:** The telephones of all active group members answer the incoming call and independently switch to loudspeaker mode so an announcement can be displayed, for example. It must be noted that not all telephone models support the Auto-Answer functionality necessary for this.
- **Call Hunting Group:** The incoming call is only forwarded to one group member. If the call is not answered by this user within 15 seconds, the call is forwarded to the group’s next active member, and so on.

The Call Hunting order corresponds to the member list in a group's **User Assignment** tab and can also be changed there (also see [“8.5 – User Assignment”](#)).

Note: All active members of the group are addressed using this ringing strategy until the call is redirected once a set time has elapsed.

- **iQueue:** The incoming call is handled according to configurable rules (also see [“8.6 – iQueue”](#)).
- **Software Fax:** The group's call numbers are marked as fax numbers and all incoming faxes can be viewed in the STARFACE web interface by group members.
- **Software Fax2Mail:** The group's call numbers are marked as fax numbers and all incoming faxes can be viewed in the STARFACE web interface by group members. Additionally, the incoming faxes are sent to all group members' e-mail addresses as a PDF file.

Group ID: This ID can be freely made up of numbers and is used if logging into a group takes place using the keyboard on a telephone.

Chat group: If this checkbox is activated, the group members are shown as a group in different messaging programs which can be connected using XMPP, and there is the option of sending a collective message to all group members.

Only if this checkbox is activated can a group chat be initiated in the desktop app for windows or macOS using the group's busy lamp field.

Voicemail box: If this checkbox is activated, a group voicemail box is also automatically created when a new group is created.

8.2 Configuring a Group

Once a group has been created, in the **Group Data** section all the settings which were already made when the group was created can be subsequently applied or modified. The only exception to this rule is the automatic creation of a group voicemail box.


8.3 Redirect

A group's redirections are configured according to the same rules as those applied to an individual user (also see [“7.2.2 – Redirect”](#)). Particular attention must be paid to the conditions if a redirect for timeout takes effect immediately.

8.4 Phone Numbers


In this tab, more call numbers can be added to or removed from the group at a later time.

8.5 User Assignment

New users can be added to a group by selecting  or **+ Add Person**. The **Logged On** checkbox indicates whether the user is switched to active in the group and whether group calls are assigned to them or not.

If a group member logs out of the group, e.g. using a function key, this view is also updated and the **Logged On** checkbox is no longer ticked.

The order of group members visible here indicates which users are called one after another due to the **Call Hunting Group** ringing strategy (also see [“8.1 – Creating a New Group”](#)).

The order of users can be changed by dragging the  button while pressing and holding the left mouse button.

8.6 iQueue

The iQueue is a special ringing strategy where incoming calls are held in a call queue until they can be assigned to a group user. It is also possible to work with various ringing strategies and announcements.

Note: The iQueue replaces the “Group with Call Queue” module from STARFACE version 6.0.

The standard iQueue cannot be configured and can only be used with the permanently saved settings. The iQueue settings can only be adjusted once a paid module license has been installed.

Note: Using the “Default Settings” button, the entire iQueue configuration can be reset to the default settings.

8.6.1 Configuring the Queue Rules

The various key data concerning waiting times in the iQueue can be configured in the **Queue Rules** tab. Other time-controlled redirection rules are not taken into account for an iQueue group.

Maximum queue length: Here, you can specify the maximum number of callers in the call queue. If the number is exceeded, if it is active the Redirect When Busy feature takes effect for additional callers, or they will hear the busy tone.

Maximum waiting time: If the waiting time set here is exceeded, the Redirect When Time Exceeded feature takes effect or, if it is not active, the connection is automatically disconnected. The waiting time is unlimited with the default setting of 0 seconds.

Wait for agents: This option regulates what should happen if all the members of a group are logged out or if no members are available.

If the checkbox is activated, the caller will be held in the call queue until a group member logs into the group and answers the call or until the maximum waiting time has elapsed. If the checkbox is deactivated, the Redirect When Time Exceeded feature takes effect immediately (if it is configured).

Note: Within the iQueue, the group members or STARFACE users are also frequently referred to as “agents”.

8.6.2 Configuring the Agent Settings

Ringing duration: The ringing duration is the time after which an attempted call to the agent is canceled. In the case of the **Last recent** call strategy, this is the time after which the next agent receives the call. After 120 seconds, there is a very brief interruption to the attempted call to the agent before it is continued.

Ringing pause: This determines the minimum timeout in seconds which an agent receives after every call (ringing). During this break, the agent cannot be called, regardless of the call strategy and of when they answered the last call. If the agent has just processed (answered and ended) a call, and if the ringing break is longer than the rework time set below, the ringing break takes effect.

Agent intermission: Ringer cutoff time in seconds for agents who have just ended a call. If the ringing break set above is longer than the rework time, the ringing break takes effect.

A distinction is made between two different ringing strategies in the iQueue:

Parallel: In the event of parallel ringing, all the agents receive the call at the same time.

Last recent: The caller is connected to the agent who has not been assigned a call for the longest time. If an agent is also working in other iQueue groups at the same time, their calls and break times will also be taken into account there.

Concurrent calls: This is an option for the **Last Recent** call strategy and determines how many callers can be connected to the call queue at the same time. A meaningful value here is within the range of 1 and the number of agents.

Number of Unanswered Calls: An agent who receives calls based on the longest timeout but who does not answer them can be automatically logged out of the group using this option and based on the number of unanswered calls. The next agent in the order can therefore be moved up.

Note: If an agent rejects an incoming call in the iQueue, this rejected caller is not put through to them again. But more incoming calls from other callers are still put through.

8.6.3 Configuring the On-Hold Music and Announcements

In the iQueue default setting, a call is automatically added to the call queue. During this time, the caller hears the STARFACE music on hold and the configured intermediate announcements. Even while an agent is ringing, the caller always hears the music on hold or the intermediate announcements.

Note: The welcome announcement is always played in full and no attempt is made to assign the caller to an agent during this time.

However, if the **Off** option is active here, the line for the caller rings until the call is answered by an agent or the connection is automatically disconnected by the telephone exchange. Due to this setting, therefore, the caller does not have the impression of being in a call queue, but rather of being on a normal call.

Intermediate: An intermediate announcement with different content can be played back at a freely selectable time interval for waiting callers.

- **None:** No intermediate announcement is played back.
- **“Hold the line”:** All of our employees are on calls at the moment. Please hold the line and you will be connected to our next available employee.
- **Position:** You are currently caller number or your call is now first in the queue and will be answered by our next available employee
- **Position + Hold:** The position announcement and waiting announcement are played back one after the other.

Your Own Language Files: A language file can also be uploaded in WAV format as a welcome announcement and an end message for the call queue.

The welcome announcement is played back as soon as the caller arrives in the call queue. The end message is played back once the maximum hold time has elapsed once the call has been completed in full. If a call is forwarded once the maximum hold time has elapsed, the end message is not played back.

Note: You can change the on-hold music for all groups in the Administration extended settings or create it yourself.

8.6.4 Configuring the Evaluation

In the **Statistic** tab of the iQueue configuration, it can be defined whether, when and how the iQueue group's archived report data and audio recordings are transferred.

Create report files: This checkbox activates the general creation of report files. The structure of the report files is described below.

Enable live interface: If this interface can be activated, regardless of the creation of report files, it is possible to access the iQueue group's current information using XML-RPC from other platforms. You will find the documentation for the XML RPC interface [in the online documentation](#).

Enable history interface: If this interface can be activated, regardless of the creation of report files, it is possible to access the iQueue group's saved connection data using XML-RPC from other platforms. You will find the documentation for the XML RPC interface [in the online documentation](#).

Enable audio recording: If this checkbox is activated, the recordings from the voice mailboxes assigned to this group are also part of the evaluation. The recordings are made available in ".wav" format.

Execution: Mail is delivered or report and audio files are transferred at the time set here or at the interval set here.


The scope with regard to content also depends on this setting, so in the event of daily execution the data stock from the last 24 hours is sent, while in the event of weekly execution the stock from the last week is sent, and so on.

Transfer of reports: Here, one of the two options available for selection must be selected so that the evaluation can take place. But both options can be selected too.

The collected data (CSV files for the report data and WAV files for audio recordings) is packed into a ZIP archive and transferred / sent.

The first possible transfer option is sending the collected data by e-mail; only a valid e-mail address needs to be specified for this.

Note: Depending on the implementation interval and the call volume in the iQueue group, very large data volumes can be generated. Many e-mail servers / providers, and also client programs, set a maximum file size for e-mails, and send and receipt is rejected if this maximum size is exceeded.

The second option is transferring the collected data in a Windows Fileshare. Once the corresponding checkbox has been selected, access to the Windows Share, which is valid for the entire evaluation configuration, must be set up using .

The available configuration fields are:

User: The user name used must be entered in this field. Depending on the destination system's configuration, the domain may have to be specified too, e.g. as domainname/username or username@domainname

Password: The password for the user entered above must be stored in this field.

Server: The destination system's IPv4 address is stored in this field. There is no need to state the protocol used.

Share: The name of the share on the destination system is entered in this field. Possible sub-directories can be attached with /.

Security: The authentication procedure used can be selected from this drop-down menu. The default option, “ntlm”, is designed for compatibility with most destination platforms, but is not recommended with regard to security.

Please find out about the suitable procedure from the destination system administrator.

Audio recording: If this checkbox is activated, all of the telephone calls managed using the iQueue group are recorded and stored locally on STARFACE once the call is complete.

The audio recordings can be accessed by using the “STARFACE Archivierung” module. Alternatively, the audio recordings can also be transferred to a shared Windows directory using the “Copy in Windows Share” checkbox.

The Windows Share configuration option available here accesses the same central configuration as the point of the same name under **Transfer of reports**.

8.6.4.1 Structure of the “cdr.csv” Report File

The first report file named “cdr.csv” contains an overview of all the incoming calls in the iQueue and of which agent has answered how many calls.

The individual fields are:

- **callId** The call’s unique ID in the database
- **callerNumber:** The caller’s number
- **startDateString** The time at which the call entered the iQueue
- **waitingTimeSec** Time in the queue (specified in seconds)
- **talkTimeSec** Duration of the call with the agent (specified in seconds)
- **agentLogin** The login ID of the agent who answered the call
- **callerExtern** Indication of whether an external call has been handled or not
- **answered** Indication of whether the incoming call has been answered or not
- **lineName** Name of the line through which an external call is incoming

Below the information provided above, there is a brief overview of which agent has answered how many internal and external calls. It is also possible to read off how long the average call duration was and how many calls were transferred.

8.6.4.2 Structure of the “cdrFax.csv” Report File

The second report file named “cdrFax.csv” contains an overview of the faxes sent to the iQueue and important individual details concerning the respective faxes.

The individual fields are:

- **faxid** The fax’s unique ID in the STARFACE database
- **faxend** Time at which fax processing was ended
- **file** Absolute path to the respective fax file on STARFACE
- **pages** Actual information about the received / sent pages
- **folder** Database field
- **totpages** Target information about the received / sent pages

• successful	Indication of whether the send / receive was successful or not
• errorcode	HylaFAX error code if send / receive was unsuccessful
• tottries	Number of retry attempts
• hylajobid	The fax's unique ID in HylaFAX
• faxname	The fax's name
• cdrid	The fax's unique ID in the CDR database table
• starttime	The fax's start time
• ringingtime	Ringling start time
• linktime	Successful connection start time
• calledcallerid	Name resolution of the called number from the address book
• callingcallerid	Name resolution of the calling number from the address book
• cdraccountid	Ownership assignment of the database entry
• calleraccountid	Indication of the sender's internal account ID (external call = 0)
• calledaccountid	Indication of which account ID has received the fax
• incoming	Indication of whether the fax was an outgoing or incoming fax
• callbacknumber	Indication of the callback number transferred
• login	The user's login ID

8.6.4.3 Structure of the “cdrMonitor.csv” Report File

The third report file named “cdrMonitor.csv” contains an overview of the audio recordings created in the iQueue and important individual details concerning the respective recordings.

• monitorid	The recording's unique ID in the STARFACE database
• monitortimestart	Recording start time
• monitortimeend	Recording end time
• duration	Recording duration (specified in seconds)
• file	Absolute path to the respective recording on STARFACE
• cdrid	The recording's unique ID in the CDR database table
• starttime	The recording's start time
• ringingtime	Ringling start time
• linktime	Successful connection start time
• calledcallerid	Name resolution of the called number from the address book
• callingcallerid	Name resolution of the calling number from the address book
• cdraccountid	Ownership assignment of the database entry
• calleraccountid	Indication of the sender's internal account ID (external call = 0)

- **calledaccountid** Indication of which account ID has received the recording
- **callbacknumber** Indication of the callback number transferred
- **login** The user's login ID

8.6.4.4 Structure of the “cdrVoicemail.csv” Report File



The fourth report file named “cdrVoicemail.csv” contains an overview of the voicemail messages assigned to iQueue and important individual details concerning the respective voicemail message.

- **id** The voicemail message's unique ID in the database
- **voicemailend** The voicemail message's end time
- **duration** Duration of the voicemail message (specified in seconds)
- **file** Absolute path to the respective voicemail message
- **mailbox** ID of the voicemail box
- **exten** The caller's number
- **cdrid** The voicemail message's unique ID in the CDR database table
- **starttime** Voicemail message start time
- **ringingtime** Ringing start time
- **linktime** Successful connection start time
- **calledcallerid** Name resolution of the called number from the address book
- **callingcallerid** Name resolution of the calling number from the address book
- **cdraccountid** Ownership assignment of the database entry
- **calleraccountid** Indication of the sender's internal account ID (external call = 0)
- **calledaccountid** Indication of which account ID has received the voicemail message
- **callbacknumber** Indication of the callback number transferred
- **login** The user's login ID

8.6.6 Configuring Skill-Based Routing

Skill-based routing is used to assign incoming calls to the suitable member in the iQueue based on the agents' individual skills. The skills should be assigned to the corresponding users in the iQueue group in advance (also see “7.2.8 – Skills”).

A paid license must be installed to be able to use skill-based routing in the iQueue. By selecting the “Use skill-based routing” checkbox, the use of skill-based routing can be activated once the license has been successfully installed.

New skills are configured or existing skills are added for the iQueue group using the  button. Skills which have already been entered are edited using the  button.

Note: It must be noted that changes (e.g. adjustment to the name) made to a certain skill are always valid for all users and iQueues.

Using the “Maximum Time to Wait for Suited Agents” entry field, it is configured how long a caller will wait on an agent with the suitable skill.

If no agents with the suitable skill are available in the iQueue group within the waiting time configured here, skill-based routing is suspended for the caller and they are assigned to an agent according to the normal iQueue rules.

This only applies if the “Maximum Time to Wait for Suited Agents” was configured to be shorter than the “Maximum Waiting Time” in the iQueue group.

8.6.6.1 “Caller Number” Criterion Type

If the “Caller Number” criterion type is configured for a skill using the drop-down menu, an entry must be made in the filter field below. The fully qualified call number for which the configured criterion is to apply must be stored in this entry field.

Some sample applications for the entered call numbers look like this:

Entry	Description
0049	Numbers starting with 0049
0031	Numbers starting with 0031
0049721	Numbers starting with 0049721
00497211510	Numbers starting with 00497211510

Table 15 – Examples of incoming call numbers

In this regard, it must be noted that STARFACE always uses incoming numbers in the international format, i.e. with 0049 at the start of the call number for Germany.

Skills	Criteria	Filter
German	Caller number	0049
Spanish	Caller number	0034
Dutch	Caller number	0031
France	Caller number	0033

Figure 17 – Example of the configuration of the “Caller Number” criterion type

8.6.6.2 “Called Number” Criterion Type

If the “Called Number” criterion type is configured for a skill using the drop-down menu, one of the iQueue group’s internal or external call numbers can be selected in the drop-down menu below.

Skills	Criteria	Filter
German	Called number	+49 111 77889915
Spanish	Called number	+49 111 77889925
Dutch	Called number	+49 111 77889935
France	Called number	+49 111 77889945

Figure 18 – Examples of the configuration of the “Called Number” criterion type

8.6.7 Configuring Caller Prioritization

A paid license must be installed to be able to use caller prioritization in the iQueue. By selecting the “Enable Caller Prioritization” checkbox, the use of caller prioritization can be activated once the license has been successfully installed.

Prioritization is carried out using configurable criteria. An incoming call is thus entered higher up in the call queue for each criterion it satisfies.

It is weighted by the number of satisfied criteria first of all, then by the existing waiting time in the queue.

Note: A caller is no longer displaced from the first position in the queue, even if another caller comes into the iQueue after him who has more suitable entries. This special protection only applies to the first position in the queue.

Examples are listed below to clarify the basic principle:

Example 1:

- + Call A meets 2 out of 5 configured criteria and waits 7 minutes
- + Call B meets 4 out of 5 configured criteria and waits 2 minutes

Order in the queue:

- 1) Call B (more criteria than call A / waiting time irrelevant)
- 2) Call A (fewer criteria than call B / waiting time irrelevant)

Example 2:

- + Call A meets 1 out of 5 configured criteria and waits 7 minutes
- + Call B meets 0 out of 5 configured criteria and waits 2 minutes
- + Call C meets 0 out of 5 configured criteria and waits 5 minutes

Order in the queue:

- 1) Call A (more criteria than all other calls / waiting time irrelevant)
- 2) Call C (criteria equal to call B / waiting time longer than call B)
- 3) Call B (criteria equal to call C / waiting time shorter than for call C)

Example 3:

- + Call A meets 2 out of 5 configured criteria and waits 5 minutes
- + Call B meets 4 out of 5 configured criteria and waits 2 minutes
- + Call C meets 4 out of 5 configured criteria and waits 5 minutes

Order in the queue:

- 1) Call C (criteria equal to call B / longer waiting time than call B)
- 2) Call B (more criteria met than call A / waiting time irrelevant)
- 3) Call A (fewer criteria met than call B / waiting time irrelevant)

New criteria can be added using the  button.

8.6.7.1 “Caller Number” Criterion Type

If the “Caller Number” criterion is configured using the drop-down menu, an entry must be made in the filter field below. The fully qualified call number for which the configured criterion is to apply must be stored in this entry field.

In this regard, it must be noted that STARFACE always uses incoming numbers in the international format, i.e. with 0049 at the start of the call number for German numbers or 0041 for numbers from Switzerland.

Some sample applications for the entered call numbers might look like this:

Criterion	Entry	Description
A	0049	Numbers starting with 0049
B	0031	Numbers starting with 0031
C	0049721	Numbers starting with 0049721
D	00497211510	Numbers starting with 00497211510

Table 16 – Example of possible entries

The following number of fulfilled criteria would result from this:

Calling Number	“Number of Hits”	Criterion
004972115104230	3	A and C and D
003177889900	1	B
00493020179130	1	B
00497215994266	2	A and C
09001226688	0	

Table 17 – Examples of incoming numbers

8.6.7.2 “Called Number” Criterion Type

If the “Called Number” criterion type is configured using the drop-down menu, one of the iQueue group’s internal or external call numbers can be selected in the drop-down menu below. It is also possible to configure an individual number as a criterion several times and thus to increase the priority of the criterion.

Each configured entry is individually evaluated as a fulfilled criterion.

9 Phones

9.1 Explanation of STARFACE Autoprovisioning

Before a description is provided of the individual configuration options in this section of STARFACE, a general explanation of STARFACE autoprovisioning is provided here.

In principle, the telephones automatically receive the following properties through autoprovisioning:

- SIP account (registering the telephone on STARFACE)
- Access data to protect the telephone configuration
- Function keys
- Language files
- STARFACE user menu for the telephone display
- Firmware updates

Note: Some of the properties listed here cannot be displayed with all telephone models, so the firmware update on the terminal device's web interface must be triggered on a Gigaset N720, for example.

In principle, a distinction is made between 3 types of autoprovisioning.

Zero-Touch: With this form of autoprovisioning, no measures need to be taken by you as the administrator, and the telephones are connected to STARFACE fully automatically. The following conditions must be met for this form of provisioning to work:

- The telephone to be connected is in the same subnet as STARFACE, so the telephone has the IP address 192.168.1.35 and STARFACE has the IP address 192.168.1.100.
- The telephone model to be connected supports Zero-Touch provisioning.
- The corresponding ports were taken into account in the network's security settings (also see "[3.3 – Firewall Settings](#)").

One-Touch (Auto): The term One-Touch (Auto) refers to the fact that the action only needs to be performed on STARFACE once. During this process, the STARFACE telephone search must be used to connect the telephones.

Note: This functionality is no longer available in version 7.3.0.5 and higher!

If there are problems with the search, the DHCP option 66 can also be used. As far as this option is supported by the used DHCP server (see also [TFTP Server Address Option for DHCPv4](#)).

One-Touch (Manual): The term One-Touch (Manual) refers to the fact that the telephones only have to be configured once to prepare them for connection to STARFACE.

During this process, the server path to STARFACE must be entered manually on the telephone's web interface. The corresponding path information can be found in the [online documentation](#).

Note: Telephones from the manufacturer Snom are only provisioned by STARFACE once. If a change is made to the telephone later on (e.g. firmware is reset), a new password must be allocated for the corresponding telephone account.

In contrast to the procedure described above, the connection to a cloud instance takes place in the partner portal of Starface company under the item "Cloud Management". To do this, the "New Phone" button must be selected for the respective instance and the Mac address of the phone entered.

Note: In addition to the Mac address, the 4-digit ID is required to connect Gigaset phones.

It must also be ensured that the desired phone is released for use on the cloud.

9.1.1 Notes for the manufacturers Snom and Yealink

The peculiarities of the provisioning procedure described here only affect all devices from the manufacturers Snom and Yealink. It should be noted that the first time a telephone is provisioned, the entire configuration is transferred from the STARFACE to the phone, including the passwords for the following points:

- SIP account (registration of the phone at STARFACE)
- Phone menus
- Phone's web interface

In all subsequent provisioning processes for a telephone from these two manufacturers, the passwords mentioned above will no longer be transferred.

In the STARFACE database, it is stored for each SIP account whether it is allowed to query the various passwords or not. The passwords for the SIP account and the telephone menu may only be requested within a defined time window (standard: 10 minutes).

If the passwords are to be retransmitted, this is possible in the overview of the configured phones.

9.2 Settings

STARFACE autoprovisioning can be switched on and off using the Activate and Deactivate buttons. It must be noted that changes made here become active immediately, and there are no further messages / queries.

Applied server address: Using this option, it is centrally controlled which IPv4 address is set on the connected telephones using STARFACE autoprovisioning in order to establish the connection between the terminal device and STARFACE. The possible "Default" selection sets the IPv4 address which is configured on the STARFACE eth0 port.

If desktop apps or mobile apps are to be used, it is necessary to select the correct FQDN from the drop-down menu at this point.

Enable new phones automatically: By deactivating this option, telephones can be prevented from independently registering via autoprovisioning and from being supplied with access data. The telephones are then listed as detected in the overview list, but they are not registered on STARFACE or functional.

Telephones marked as inactive must be individually shared using the corresponding checkbox in the overview list of configured telephones.

Note: To avoid unauthorized registrations, it is highly recommended to deactivate this for telephone systems which are accessible via a public IPv4 address. This is why the option is deactivated in the basic settings on STARFACE cloud instances.

Firmware auto update: By default, telephones which have autoprovisioning activated automatically obtain the most up-to-date firmware delivered with STARFACE. This distribution process can be deactivated here if necessary.

If the corresponding checkbox is activated, an attempt is made to use the "OPUS" codec for all connections between STARFACE and the two mobile apps. If an outdated version of the mobile App is used that does not support the "OPUS" codec, the "g722" or "alaw" codec is used instead.

Note: The use of the OPUS Codec can lead to an increased server load, which is why it is recommended to keep an eye on the system load.

It is not only possible to activate the codec for all mobile apps, but also to configure it for individual phone accounts of a user. To do this, the codec must be added to the detailed data of the respective telephone account. The codec must be entered in the first position in the list of codecs.

Update phones now: Using this button, the distribution of the firmware version stored on STARFACE can be launched on all connected telephones.

Authorized MAC Addresses: To only use autoprovisioning for certain telephones or to set up an additional security measure, a MAC address filter can be activated at this point. Therefore, only telephone / terminal device registration attempts are only taken into account by STARFACE for those telephones / terminal devices with a MAC address entered in the list.

If the limitation of MAC addresses is to be temporarily suspended, the checkbox can be deactivated without the existing entries being lost.

Note: If the MAC address restriction is activated later on, all of the telephones already registered on STARFACE will continue to work even if their MAC addresses are no longer entered in the list.

9.3 Configured Terminal Devices

All of the telephones created and other terminal devices (e.g. gateways) are listed here regardless of whether the telephone / terminal device is in operation at present or not. It is possible to search for the telephone's name or for the name of the logged-in user using the search field.

The following information can be read off from the overview list:

- | | |
|------------------|---|
| • Device Type | The telephone's / terminal device's type |
| • Phone Name | Name of the SIP account which the telephone / terminal device is registered with |
| • IP | Last IP address which the telephone / terminal device registered with |
| • Assigned Users | Name of the user to whom the telephone / terminal device is assigned |
| • Active | Checkbox indication as to whether this SIP account is allowed to be actively used |

Double-clicking on the row or clicking once on  opens the telephone account's detailed settings (also see ["9.3.2 – Overview of a Telephone Account"](#)).

Clicking on  deletes the telephone entry from STARFACE.

If necessary, the context menu for a telephone account can be opened up with a right-click and all passwords are sent again to the respective telephone by selecting "Send access data". This procedure can also be carried out for several telephone accounts in parallel by making multiple selections.

Note: If a red warning triangle is displayed in this overview list on a telephone made by Snom or Yealink, the warning symbol must be clicked and the corresponding explanation must be observed.

9.3.1 Overview of a Telephone Account

This chapter describes what key data and detailed information you can read out within an individual telephone account on STARFACE and which possible settings can be made at this point.

9.3.1.1 Details

Device Type: Here, you can see which predefined STARFACE device profiles were automatically selected for this telephone account.

Functionality: At this point, it is possible to configure whether the set-up account belongs to a telephone, a fax machine or an IPC functionality.

The **Fax** setting must be selected for fax machines connected via ATA adapters, e.g. if an analog Patton or Grandstream Gateway is being used.

The **IPC** setting is provided for terminal devices of IPC's trading communication systems. Unlike with SIP telephones, the terminal device's fixed IP address is specified in the **Restrict to IP** field instead of a password.

Phone name: The telephone name stored here is the "username" of the SIP account, so to speak, and should be selected so that it is as meaningful and unique as possible.

The automatically generated telephone name always includes an abbreviation which applies to a note on the telephone model and can be applied without any problems as a general rule.

Note: The automatically generated phone names for phone accounts that belong to a mobile app (e.g. 1234.SFiphone or 6789.SFandroid) must not be changed.

Password: The password should be selected so that it is as long and complicated as possible, and we recommend using a password generated using the **Random Password** button.

Emergency Call: If the telephone account is not operated in the same area code as STARFACE, another location must be selected here, because an emergency call is always connected to the respective location's local area network and within its prefix range. Additional emergency call locations are created and configured in the line range (also see "[15.3 – Emergency Calls](#)").

Overwrite device config: If this function is activated, changes to the SIP account made above are automatically transferred to the telephone's / terminal device's first line / connection.

But the following aspects must be taken into account during this process:

- Autoprovisioning must be active on STARFACE.
- This function only takes effect when the device's HTTP access is not protected by access data other than that specified by the system.
- The automatic configuration always only affects the first line of an SIP telephone. If the telephone is already registered e.g. on another telephone system via this first line, this configuration is overwritten.
- If the existing SIP account is not on the first line of the SIP telephone, its settings are not changed by automatic overwriting. The account is also created on line 1. This can lead to problems, because the telephone will try to register on the server using both lines.

Note: The setting is not saved permanently; rather, it only affects one configuration process. The

field is active again by default the next time the configuration view is opened.

9.3.1.2 Extended Settings

NAT: The **Default** setting means that the global STARFACE setting is adopted from the Network section (“[17.3.2 – Network Settings](#)”). It is recommended to always use **Default** or **Yes** here, particularly if the telephone / terminal device is outside of the local network.

Codecs: A codec ensures the conversion of analog (voice) information to digital data and vice versa (encoding and decoding).

The G.711 codecs **alaw** and **ulaw** are used as default settings for most telephone models.

It is possible to explicitly assign one or more codecs to a telephone account; several codecs are entered and separated by commas. For example:

g722,alaw,ulaw

But it should be ensured beforehand that the respective telephone model supports the codecs and that use of the codecs is activated on the telephone itself.

Generally speaking, STARFACE supports the use of the following codecs:

- alaw
- ulaw
- g722
- g726
- gsm
- h263
- h263p
- h264

Door Intercom: Here, information on whether the telephone account is a door intercom or not can be activated or deactivated.

Camera URL: If it is a door intercom with camera, the IPv4 address and the file path for accessing the door camera’s image data can be stored here. The camera image is displayed in the Callmanager of the STARFACE web interface and in the desktop apps.

It must be ensured that STARFACE also has access to the camera, since all communication runs directly via STARFACE (camera <--> STARFACE <--> call manager / desktop app). This also means that the camera URL must be accessible on the Internet if a STARFACE cloud is used.

Some telephones (e.g. Yealink T48G) are also shared for use of a camera image. Examples of camera URLs:

http://IP address of the door intercom/jpg/image.jpg for Baudisch

http://IP address of the camera enu/camera320x240.jpg for 2N EntryCom IP

When integrating a door intercom, always observe the manufacturer's documentation and the protection of the camera URL against unauthorized access (e.g. by a firewall).

DTMF: The DTMF code for opening the door using the telephone keys is stored here. Additionally, in the Call Manager a link is assigned with the key code via which the door can be opened at the mere click of a mouse.

For the correct functioning of the image transmission to Yealink phones, it is absolutely necessary that a DTMF code has been configured.

Note: The “Opening Doors using DTMF” functional feature can be used independently of the use of a door camera and also with door intercoms which do not have a camera.

9.3.2 Manually Setting Up a Telephone Account

If a telephone account is not automatically created by STARFACE, you can create one manually using the **+Manually** button in the **Configured Phones** tab.

The telephone name, the password and the STARFACE IP address form the key data for the SIP account, which has to be stored on the telephone. You will find a description of the individual fields under “9.3.2.1 – Details”.

Note: The “Standard SIP” device type can be used as a basic setting for telephones which support SIP, but no STARFACE functionalities such as the function keys are available with this device type.

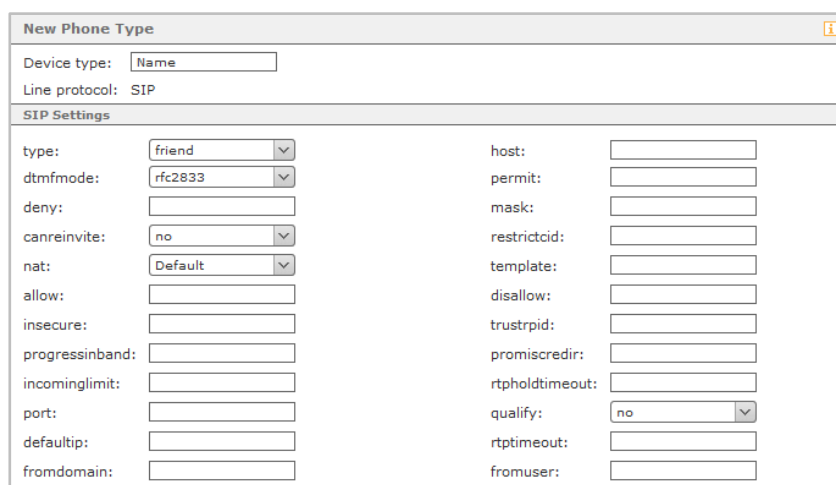
The field corresponding to the **Telephone Name** has different designations such as user ID, permission name, authentication name or username in the different telephone types’ configuration interfaces.

9.3.2.1 Defining a New Device Type

If the desired device type is not available in the STARFACE default list and the “Standard SIP” device type cannot be used either, it is possible to add your own device types. This is done by selecting **New...** from the **Device Type** drop-down menu.

The new configuration can be set up in the **New Phone Type** dialog window that opens.

Note: The configuration of a new device type requires more in-depth knowledge of SIP telephony and of how Asterisk works, and it is recommended that only experienced administrators perform such configuration work.



The screenshot shows the 'New Phone Type' dialog window. At the top, there is a 'Device type' field with a dropdown menu showing 'Name'. Below it is the 'Line protocol' field set to 'SIP'. The main section is titled 'SIP Settings' and contains two columns of fields. The left column includes: 'type' (dropdown with 'friend' selected), 'dtmfmode' (dropdown with 'rfc2833' selected), 'deny' (text field), 'canreinvite' (dropdown with 'no' selected), 'nat' (dropdown with 'Default' selected), 'allow' (text field), 'insecure' (text field), 'progressinband' (text field), 'incominglimit' (text field), 'port' (text field), 'defaultip' (text field), and 'fromdomain' (text field). The right column includes: 'host' (text field), 'permit' (text field), 'mask' (text field), 'restrictcid' (text field), 'template' (text field), 'disallow' (text field), 'trustpid' (text field), 'promiscdir' (text field), 'rtpholdtimeout' (text field), 'qualify' (dropdown with 'no' selected), 'rtptimeout' (text field), and 'fromuser' (text field).

Figure 19 – Configuring a new device type

In the entry mask, the options for the following fields:

- type
- dtmfmode
- canreinvite
- nat
- qualify

are already preset, and all the other fields can be filled out as options. In detail, the available configuration options are as follows:

type: This configuration field defines the connection type between the terminal device and STARFACE.

- peer The terminal device can receive calls via STARFACE, but cannot initiate them.
- user The terminal device can only initiate calls via STARFACE, but cannot receive them.
- friend The terminal device can receive and initiate calls via STARFACE.

host: Here, the “Dynamic” entry should be used (without quotation marks) instead of specifying an IPv4 address, because some device types can only log in with the “Dynamic” setting.

dtmfmode: This configuration field sets the tone dialing default used by the telephone. This specification depends on the telephone to be set up. Please also observe the documentation provided by the telephone manufacturer.

permit: IPv4 addresses over which the terminal device can register on STARFACE can be entered at this point. During this process, it is possible to enter either an individual IP address (e.g. 192.168.0.1) or a network mask (e.g. 192.168.0.2 / 255.255.255.0). Multiple entries must be separated by a comma.

deny: This configuration field is the counterpart to **permit** and connects the IP addresses specified here.

mask: If IP addresses are entered under **permit** and **deny** without network masks, a network mask can be (e.g. 255.255.255.0) can be stored here centrally for both fields.

canreinvite: In the meantime, this option has no function on STARFACE.

restrictcid: In the meantime, this option has no function on STARFACE.

nat: The settings which are possible here for the NAT correspond to the information provided in [“9.3.2.2 Extended Settings”](#).

template: In the meantime, this option has no function on STARFACE.

allow: All explicitly permitted codecs can be entered here and separated by commas (e.g. alaw,ulaw).

disallow: All explicitly denied codecs can be entered here and separated by commas (e.g. gsm,hs63).

insecure: In this configuration field, only the two **port** and **invite** entries can be made, and both details should always be provided.

trustripid: By specifying the **Yes** option, the Remote Party ID is used for setting up calls instead of the Caller ID.

progressinband: This option controls how ringing is signaled:

- Yes Ringing is signaled using the RTP audio channel.

- No Ringing is signaled using the RTP audio channel if it already exists.
- Never The terminal device generates the ringing signal.

promiscredir: This option controls whether local redirections which are only set on a terminal device are taken or not. There are two specifications here: **Yes** and **No**.

port: The preset default port number for the SIP protocol is 5060. If an entry is made here, this port specification can be replaced by another port number to be used exclusively for SIP.

qualify: There are different configuration options here using the drop-down menu:

- Yes STARFACE tests whether the terminal device is still available at intervals of 2000ms.
- 500 STARFACE tests whether the terminal device is still available at intervals of 500ms.
- 1000 STARFACE tests whether the terminal device is still available at intervals of 1000ms.
- 1500 STARFACE tests whether the terminal device is still available at intervals of 1500ms.
- 25000 STARFACE tests whether the terminal device is still available at intervals of 25000ms.
- No The availability of the terminal device is not checked.

If the terminal device does not respond within this timeframe, STARFACE shall consider it to be unavailable. Afterwards, no more calls are forwarded to the terminal device until the check has been successful.

defaultip: This specification sets the default IP address, to which an INVITE package is sent for an unregistered terminal device. This option takes effect only if the **peer** selection is made for **type**.

rtptimeout10: Here, it can be configured how long an active call still exists for after no more audio RTP data is exchanged between the people on the call. The duration is specified in seconds.

rtpholdtimeout10: Here, it can be configured how long a call set to on hold is on hold for. The duration is specified in seconds and should be higher than the entry under **rtptimeout10**.

fromdomain: The server's domain name, which can be entered here, is required for connections to some SIP networks.

fromuser: The username, which can be entered here, is required for some SIP networks.

9.4 ID Display

The calling number display on the telephone can be influenced using the **Call number display** drop-down menu. The following 3 possible selections are available:

- With international and area code (e.g. 0049721112233)
- With area code only (e.g. 0721112233)
- Without codes (e.g. 112233)

The setting made using the drop-down menu has no effect on incoming international call numbers which deviate from STARFACE's configured country code. If 0049 is configured as the country code on STARFACE, for example, all call numbers with the country code 0041 or 0043 are always displayed in a fully qualified manner. In this way, it is ensured that unrestricted callbacks are possible.

9.4.1 Configuring the Different Call Displays

In this section, changes should only be made by experienced STARFACE administrators. It is also recommended to perform a backup before making changes to this section (also see “[17.6 – Backup](#)”).

Certain changes can have further-reaching effects on STARFACE which extend to the non-functionality of individual features, terminal device types and modules.


The meaningfully labeled sub-points stand for a certain display scenario. A display scenario always consists of one or more of the following display elements:

- Called number
- Called name
- Caller's first name
- Caller's last name
- Caller number
- Call transfer first name
- Call transfer last name
- Call transfer call number
- Free text input

The display elements used can be individually summarized for every display scenario.

In the simplest case, only the order of the display elements already existing in a display scenario are changed using the:

- ▼ Move down
- ▲ Move up

buttons. It is also possible to add new display elements using the  button. Its type can be changed using the respective drop-down element's drop-down menu.

Note: Personal text must be entered under the “Free text input” display element.

The standard values can be restored in all individual sub-items at any time using the **Reset** button.

The standard values are set in all sub-items using the **Restore** button. It should be noted that the reset to the standard values takes place immediately with the selection of the button and is saved without further query.

9.5 Security

Generate new SIP passwords for all phones: By selecting the “Update passwords now” button, the passwords for all telephone accounts are changed and distributed to the end devices. If there are many telephones, the distribution process is automatically staggered.

This option can be used, for example, if it is assumed that one or more SIP accounts have been compromised.

Authentication for phone menus: Access to the STARFACE users' telephone menus is protected ex works by means of a safety mechanism. However, this leads to the telephone menu being impossible to use on some telephone models, because they do not support this access protection.

To nevertheless use the menu on devices such as this, you can deactivate authentication globally for all device types here.

Note: Deactivating authentication for telephone menus is a considerable security risk, particularly in the case of telephones which are directly accessible over the Internet.

Encryption can be activated for the following 3 manufacturers in the manufacturer-specific settings:

- Gigaset
- SNOM
- Yealink

Encryption is disabled by default and must be enabled manually.

Note: It must be ensured that STARFACE has a valid certificate, otherwise some encrypted service features may not work correctly.

Encryption includes the following points:

- Auto-provisioning of end devices (HTTPS)
- Telephone menus of the terminals (HTTPS)
- Telephony between the end devices and STARFACE (TLS + SRTP)

The following list contains all phone models from the respective manufacturer that support encryption:

Yealink				
T19	T31	T41s	T42s	T46s
T46u	T48s	T53	T54	T56
T57	T58	T58w	VP59	CP965
CP960	CP925	CP920		
Snom				
710	720	760	D120	D305
D315	D345	D375	D385	D710
D712	D715	D717	D725	D735
D745	D765	D785	m900	
Gigaset				
N670	N870			

Tabell 18 - Overview of the encrypted end devices

Manufacturer-specific Settings: The passwords for Administrator mode and, if available, the User mode of the various telephone models supported by STARFACE can be centrally updated here.

If the passwords for access to the web interface of the telephones are changed, the provisioning of the passwords for all phones of the respective manufacturer configured on the system is enabled once

when saving. The phones are automatically notified and, as soon as there is no active call, they get the new configuration from STARFACE.

The stored passwords correspond to the default passwords set by the respective manufacturers following the basic installation and should be changed under all circumstances for security reasons.

Note: Please observe the manufacturer's respective documentation for using the Administration and User modes on the telephones.

Digest Authentication: The access data is not transferred in plain text but is instead transferred to the telephone in encrypted format, due to the selectable special option on the Snom devices.

9.6 IP Range restrictions

In this tab, an IPv4 restriction can be configured so that only telephones and terminal devices which have a corresponding IP address can be connected to the telephone system.

Entire subnets and address ranges can be shared for access during this process. Some examples of the entries might look like this:

- 192.168.38.0/24
- 192.168.10.*
- 172.168.*.*

Note: Only IPv4 information is supported at present.

10 Modules

The STARFACE modules offer additional features and functions such as time-controlled redirection of calls or archiving of faxes, for example.

The standard modules contained in STARFACE also undergo extensions to the functional scope and different adaptations due to new versions of STARFACE.

There are also different modules which have been created by third-party providers and which illustrate additional STARFACE extensions.

10.1 Creating a New Module Configuration

The selection list of existing modules is opened using the **New Configuration** button. The standard modules existing in every STARFACE installation are called:

- Audio memo
- CA Certificate for LDPAS
- Call-Through
- Personal Assistant
- Klingeltöne (kostenlos)
- Audio memo
- Archiving
- Voicemail Check
- Scheduled Redirection

A new module configuration is created by selecting the suitable checkbox and clicking on **Create**.

10.1.1 Logging the Module Configuration

One thing that all module configurations have in common is the tab with the designation **General**, in which a name can be stored for the module configuration and, optionally, a brief description too.

The extent of logging (log level) can be set independently for each module configuration in the **Log File** section. The saved log level determines which entries are written to the log file. If, for example, it is defined in a module that certain results are logged as INFO, the level INFO or higher must be set and saved in the module configuration so that the results can also be recorded for this module configuration.

The scope of the different log levels cumulates in ascending order:

- The WARN level logs warnings and entries of the ERROR level
- INFO also logs messages of the ERROR and WARN levels, etc.

The number of rows shown refers to the last rows of the log file, which are however output in a chronologically descending order for better legibility. However, the specification does not determine the number of entries actually to be saved.

Downloading always supplies all of a module configuration's recorded entries and takes the form of a ZIP archive, which can contain up to three text files. This is justified by the maximum log file size of 10 MB. If this is exceeded, logging takes place in another file. Up to three 10 MB files can be created at most before the first file is overwritten.

Note: In contrast to the module configurations, the module log files are not taken into account during backups and have to be backed up independently.


10.1.2 Pre Answer

Audio files such as announcements can be played back using this module if calls are made to a certain call number. It is also possible to play back on-hold music for the caller instead of the classic dial tone.

The audio file to be played back can be selected in the **Announcement** section if the call number configured further down is to be called.

Note: The audio file is always played back in full before the incoming call is forwarded to the destination. Parallel ringing at the destination call number does not take place.

If the checkbox is set at **Ignore internal calls**, the settings made only apply to incoming external calls, and an internal caller will not hear any announcements or potentially modified on-hold music.

New call numbers to which the module configuration should be applied can be added using the  button. The complete call number does not always have to be specified during this process; instead, “wildcards” can also be used. The wildcard * stands for several arbitrary digits, and ? stands for one digit exactly.

Some sample applications might look like this:

- 0788151042* Calls starting with 0788151042
- *1075 Calls ending in 1075, regardless of the digits before
- 0721042?? Calls starting with 0721042 and with two 2 further digits
- ??????55 Calls which indicate 6 arbitrary digits first of all and then the number 55

Announcement											
Please upload a file in *.wav format for announcements for incoming calls.											
File upload:	<div>No file selected</div> <div>Browse...</div> <div>Upload File</div> <div>[Welcome text.wav]</div>										
Phone numbers											
Ignore internal calls	<input checked="" type="checkbox"/>										
Dialed numbers:	<table border="1"> <thead> <tr> <th>Number pattern</th> <th></th> </tr> </thead> <tbody> <tr> <td>*1075</td> <td>X</td> </tr> <tr> <td>*1080</td> <td>X</td> </tr> <tr> <td>*2095</td> <td>X</td> </tr> <tr> <td colspan="2" style="text-align: center;">+</td> </tr> </tbody> </table>	Number pattern		*1075	X	*1080	X	*2095	X	+	
Number pattern											
*1075	X										
*1080	X										
*2095	X										
+											
Music on hold											
Music on hold instead of dial tone:	<input checked="" type="checkbox"/>										
Music on hold:	Music2										

Figure 20 – Sample configuration for the “Pre Answer” module

Once the announcement audio file has been played back in full, the caller hears the classic dial tone until the phone call is answered.

Alternatively, instead of the dial tone, on-hold music can be activated using the **Music on hold instead of dial tone** checkbox. The name of the desired queue music must then be entered under all circumstances in the **Music on hold** field.

The name of the STARFACE default queue music is "Default". (Without quotation marks). The name of alternative on-hold music can also be entered ("[21.1 – Music On Hold](#)").

10.1.3 CA Certificate for LDAPS

Starting with version 7.0.0.X of STARFACE, this module can be used to upload self-signed certificates, for the case in which these certificates are used to connect the address book via LDAPS or to connect the Active Directory via LDAPS. This is only necessary if the "TLS with certificate validation" option is activated and self-signed certificates are to be used.

The certificate files must be in the ".cer" file type.


The alias used should be selected as clear and descriptive as possible and is used to clearly indicate the purpose of the various certificate files. The example alias "ldaps" does not have to be used.

Since every time the module configuration is deactivated and reactivated, an attempt is made to import the certificate file into the trust store, so it is strongly recommended to use each module configuration only once and to delete it after use.

10.1.4 Call-Through

A predefined call number can be signaled outwardly with this module. To this end, the module configuration is called, the call's actual destination call number is specified, and the module then sets up an outgoing call to the entered destination call number, whereby the number stored in the module configuration is signaled.

As a result, field sales staff with their own cell phone, for example, can set their office number as the call destination instead of their cell phone number.

Internal and external call numbers on which the module configuration is subsequently available can be assigned to the module configuration in the **Phonenumbers** tab using the  button.

The following settings can be made in the **Configuration** tab:

Authentication code: Here, a sequence of digits which are used as a PIN for all incoming calls to the module configuration can be defined. The length of the code is limited to 20 characters.

Note: We always recommend using an authentication code at least 4 digits long to suppress misuse of the Call-Through module configuration.

Trusted callers: The permissible call numbers of trusted callers can be entered at this point to further restrict access to the module configuration.

The complete call number does not always have to be specified during this process; instead, "wildcards" can also be used. The wildcard * stands for several arbitrary digits, and ? stands for one digit exactly. Some sample applications might look like this:

- 0721* Calls starting with 0721 are allowed.
- *1075 Calls ending with 1075 are allowed.
- 01??????? Calls starting with 01 and transferring 7 more digits are allowed.

Signaling number (Call-Through): The number entered here is signaled outwardly to the call destination by the module configuration.

With Call-Back: The module's method changes if this option is activated. The incoming calls to the module configuration are "rejected" by a busy tone, whereupon STARFACE calls the caller back directly. From this point, the module continues to work as usual, but no further costs are incurred for the caller.

IVR: The IVR (interactive voice response) refers to the voice announcements for navigating through the module's menus during an incoming call, e.g. the prompt to enter the authentication code.

Without voice menu: The voice menus can be deactivated with this checkbox, so the caller has to e.g. already know in advance at which time the destination call number has to be entered and confirmed with the # key. A caller who is unfamiliar with the module process therefore has a far lower chance of using the module correctly.

Time before call placement: The time (in seconds) waited from the entry of the last digit before the outgoing call to the actual destination call number is automatically triggered can be determined in this drop-down menu. So no buttons have to be pressed specifically to confirm the destination call number.

Language: This drop-down menu allows you to select whether the voice menus are played back in German or English.

10.1.5 Personal Assistant

This module is used to redirect different callers (or caller groups) to two separate destination numbers.

In the **Configuration** tab, one destination number each for the two fields:

Target number for wanted callers

Target number for unwanted callers

must be entered.

The destination number which all of the callers mentioned in the whitelist are forwarded to is specified in the first field. The destination number which the callers entered in the blacklist are forwarded to is stored in the second field.

Note: The whitelist is always checked before the blacklist, and the calls are forwarded accordingly.

Once the module configuration has been saved, a new selection item is available in the Call Number Properties drop-down menu (also see "7.2.4.1 – Call Number Properties").

Phone Number	Default Rule
55	Standard Call
+49 111 77889955	Chef-Sek (Chefssekretarin)

Figure 21 – Assignment of the new call number property

10.1.6 Klingeltöne (kostenlos)

From version 7.2.0.5 of STARFACE, this free module can be used to display different ringtones for the following calls:

- internal call
- external call
- Call to a group
- Calls that match specific filter categories

At the moment, only end devices from the following manufacturers are supported by this module:

- Yealink
- Snom

It must always be ensured that the telephones are equipped with the latest STARFACE firmware.

Note: Only one module configuration should be created for each group on the STARFACE, otherwise the ringtones will overwrite each other.

The module is configured in the first area "Konfiguration: Modus".

The following two configuration options are available via the "Modus" drop-down menu:

Klingeltöne nach Ruf-Kategorie + Gruppenspezifische Klingeltöne: If this option is selected, the ringtone is determined by the category (internal calls, external calls or group) of the respective call. The ring tone for a category of incoming calls is configured under the heading " Konfiguration: Klingeltöne für Ruf-Kategorie ".

In addition, individual ringtones for incoming calls to different groups can optionally be configured. This configuration is made under the heading " Konfiguration: gruppenspezifische Klingeltöne ".

Klingelton nach Filter: If this option is selected, the filter options configured under the heading " Konfiguration: filterbasierte Klingeltöne " are applied to incoming calls. With this option, for example, certain incoming calls can be identified and marked with a different ring tone.

The " Endgeräte-Typ " drop-down menu is used to configure which end devices in the respective group the module configuration applies to. Only one device manufacturer can be selected here. Configuring two module configurations for the same group is not supported and will result in the ringtones overwriting each other.

Note: Within a group, devices from the manufacturer Snom and Yealink cannot be assigned ringtones at the same time. Otherwise the ring tones would overwrite each other.

If a ring tone is selected in one of the ring tone lists of this module under the heading " Klingeltöne ab STARFACE", this is first downloaded to the respective telephone for each incoming call. The "Klingelton-URL-Generierung über" drop-down menu is used to configure how the download process attempts to reach STARFACE in the network.

Examples for the structure of the download link:

http://[Host name of the STARFACE]/download/ringone.wav

http://[Internal IP address of the STARFACE]/download/ringone.wav

http://[External IP address of the STARFACE]/download/ringone.wav

Note: If the ringtone cannot be downloaded, the phone's default ringtone is used


In the second area "Konfiguration: Klingeltöne für Ruf-Kategorie" the standard ringtones for the incoming call categories can be configured.

The following three categories are available:

- Interne Rufe (all incoming internal calls to a phone number that is assigned to a user)
- Externe Rufe (all incoming external calls to a phone number assigned to a user)
- Gruppenrufe (all incoming internal and external calls to a number assigned to a group)

The various available ring tones are listed in the selection list, with a distinction being made between ring tones that are already pre-installed on the respective end devices (entries under "Telefonintegrierte Klingeltöne") and ring tones that are first downloaded from STARFACE for each incoming call must (entries under "Klingeltöne ab STARFACE"). Different or even the same ringtones can be assigned to the different scenarios.

Note: It should be noted that the entry "Silent" means that the respective telephone rings silently. The entry "-" stands for the standard ringtone of the respective telephone.

In the third area, "Konfiguration: gruppenspezifische Klingeltöne", a specific ringtone can be configured for up to 10 groups using the button , so that calls to different groups have different acoustics.

The various available ring tones are listed in the selection list, with a distinction being made between ring tones that are already pre-installed on the respective end devices (entries under "Telefonintegrierte Klingeltöne") and ring tones that are first downloaded from STARFACE for each incoming call must (entries under "Klingeltöne ab STARFACE"). Different or even the same ringtones can be assigned to the different scenarios.

Note: It should be noted that the entry "Silent" means that the respective telephone rings silently. The entry "-" stands for the standard ringtone of the respective telephone.

In the fourth area "Konfiguration: filterbasierte Klingeltöne" the filter data can be configured if the "Klingelton nach Filter" mode has been selected.

The ringtone that is played when an incoming call matches the configured filter criteria is selected in the "Klingelton für Filter" drop-down menu.

The two respective checkboxes can be used to configure whether the configuration only reacts to internal, only to external or to all incoming calls.

Nummer des Anrufers: This input field stores the caller number(s) for which the individual ringtone applies. Multiple caller numbers can also be stored.


Nummer des Angerufenen: This input field is used to configure the destination number(s) for which the individual ringtone applies. Multiple phone numbers can also be stored.

The complete call number does not always have to be specified during this process; instead, "wildcards" can also be used. The wildcard * stands for several arbitrary digits, and ? stands for one digit exactly. Some sample applications might look like this:

- *151042* All calls to an arbitrary number containing 151042
- *1075 All calls ending in 1075
- * All calls

10.1.7 Audio Memo

This module offers the opportunity to record a voice file on a telephone over a configured call number. The recording is then sent by e-mail. This module is particularly suitable for recording announcement texts which are used in other modules. During the recording itself, the caller is forwarded to a voice menu with different options and key entries.

Internal and external call numbers on which the module configuration is subsequently available can be assigned to the module configuration in the **Phonenumbers** tab using the  button.

There are two options in the last tab, **Properties**:

E-mail adresse: The recorded voice file is sent to the e-mail address stored here.

Salutation in e-mail: The salutation used for the e-mail sent by the module can be entered in this free text field.

Maximum duration (Sec): This option specifies the maximum length of the voice file in seconds and must always be defined to be greater than 0.

10.1.8 Archiving

This module archives call lists (CDR), faxes, voice messages and call recordings in a Windows Share (network share) in a time-controlled manner. The content is deleted from STARFACE following successful archiving.

In the **Basic Settings** tab, the following information must be provided first of all under **Details of the Windows share for archiving**:

- **Transfertype** Transfer type (smb or sftp)
- **Address** The destination system's IPv4 address
- **Fileshare** The name of the network share as stored in the destination system
- **Subfolder** The sub-directory on the destination system (optional)
- **Username:** The username as expected by the destination server (e.g. with domain)
- **Password:** The share user's password
- **Security** The authentication method used by the target system.

Note: If the transfer type "sftp" is used, the "Fileshare" input field and the "Security" drop-down menu are ignored.

Under the **Notifications** heading, an e-mail address to which information about the disk space on STARFACE before and after archiving and about occurring error messages can be stored as an option in the **E-mail address** field.

The **CDR**, **Fax**, **Voicemail** and **Recordings** tabs each offer the same possible configurations:

Number of days: This input box is used to select how long the data remains on STARFACE before being archived. If the deadline is set to value 0, all data of the corresponding sections is always affected. The maximum value that can be entered is 192.

Permanent values can be selected from the drop-down menus for the archiving start and implementation interval.

In this example, e.g. all of the call recordings which are older than 64 days are archived once per week at 2.30 a.m.

The screenshot shows the 'Recordings' configuration window. At the top, there are tabs: General, Basic Settings, CDR, Fax, Voicemail, and Recordings (selected). Below the tabs is the 'Call Recordings' section with a sub-header 'Settings for the archiving of the audio files of recorded phone calls'. Under this is the 'Safekeeping Period' section, which states: 'Audio files of recorded calls which are older than the given number of days will get archived and removed from the system.' A caution note says: 'Caution: Selecting 0 days will affect all recordings. The maximum number is 192.' The 'Number of days' is set to 64. Below this is the 'Start and Schedule' section. It has a 'Time interval' dropdown set to 'Week', 'Repeated every' set to '1' week, and a 'Start (dd/mm/yyyy)' field showing '16/5/2021'. The 'Time (hh:mm)' is set to '02:30'.

Figure 22 – Example of the configuration of the “Archiving” module

The archiving process starts on 05/16/2021 and would start the next time on 05/23/2021 after one week.

An internal STARFACE monitoring process prevents the module and backup creation from being started in parallel with one another. The process started first runs until it ends, and the second process starts one hour later. It is recommended to make a clear temporal separation here.

10.1.9 Voicemail Check

This module enables the STARFACE voicemail boxes to also be queried using external call numbers. One or more call numbers on which this module configuration is to be available can be stored in the **Phonenumbers** tab.

In the **Mailbox assignment** tab, it should first of all be determined which incoming call numbers have access to which voicemail box. The authorized call numbers must be specified in the left column of the table in the 0049XXX format, and the voicemail boxes along with their mailbox ID (“11 – Voicemail”) must be specified in the right column of the table.

If a caller’s number is not listed in the assignment, it can still query a mailbox using its ID and the password.

Note: Voicemail boxes without password protection cannot be accessed in the manner described above.

If the **Password query**: checkbox is activated, callers with a call number stored in the module configuration must also enter the voicemail box’s password in the event of access.

Note: Here, too, voicemail boxes without password protection cannot be accessed in this way.

10.1.10 Scheduled Redirection

Time-controlled redirections can be defined for freely configurable call numbers with different destinations using this module. The configurable items are:

Legacy mode: If this checkbox is activated, fully qualified call numbers (incl. country and area codes) do not have to be specified. When the incoming call is being processed by the module, a wildcard (*) is automatically prefixed to the specified call number. The module’s behavior is therefore displayed as it was before STARFACE version 6.0.X.X.

Redirection for: The call numbers for which redirection is to be configured are stored at this point.

The complete call number does not always have to be specified during this process; instead, “wildcards” can also be used. The wildcard * stands for several arbitrary digits, and ? stands for one digit exactly. Some sample applications might look like this:

- *151042* All calls to an arbitrary number containing 151042 are redirected.
- *1075 All calls ending in 1075 are redirected.
- * All calls are redirected.

Exceptions: Call numbers for which redirecting does not take effect can be stored at this point. The wildcards mentioned above can be used here too.

Redirection from: Information about the caller numbers which redirection applies to can be stored here. It is possible to permit the numbers determined using **Exceptions** during this process. The wildcards mentioned above can be used here too.

Ignore Internal calls: If this checkbox is activated, calls from internal telephones or internal call numbers are not redirected.

Redirection periods: The time period in which time-controlled redirection applies is configured in this entry field. Time information with up to three conditions consisting of the date, weekdays and time can be configured in each row.

These conditions are separated by spaces and each row is evaluated as a whole. The rows are checked from top to bottom, and as soon as the conditions in one row have been met, the other rows are not checked further.

Some sample applications are:

- 06/01/2018 – 06/30/2018 Applies from 06/01/2018 to 06/30/2018 (00.00 a.m. to 11.59 p.m.)
- 06/15/2018 Applies to the whole of 06/15/2018 from 00.00 a.m. to 11.59 p.m.
- Monday Applies to every Monday from 00.00 a.m. to 11.59 p.m.
- Saturday – Sunday Applies to every Saturday and Sunday from 00.00 a.m. to 11.59 p.m.
- 11.00 – 13.00 Applies every day from 11.00 a.m. to 1.00 p.m.
- Saturday 11.00 – 15.00 Applies every Saturday from 11.00 a.m. to 3.00 p.m.

Due to the combination of different conditions, very complex time controls can also be displayed:

Date/time language: Set the language used here to correctly process the time / date. The entered time information must correspond to the respective language format. This means dd.mm.yyyy for date information in German and mm/dd/yyyy for date information in English.

Redirection target: This drop-down menu defines to which redirection destination the incoming calls are redirected. A redirected call rings for 45 seconds at the redirection destination before the module terminates the incoming call. The termination after 45 seconds does not apply to calls that have been accepted in any form by the redirected destination (e.g. queue of an iQueue or mailboxes).

The following options are possible:

Mailbox: If this option is selected, the number of the voicemail box to which the call is redirected must be specified in the **Mailbox No.:** field. You can find the mailbox number in the voicemail list in the format *9XXX, whereby XX illustrates the voicemail box number.

Ansage: If this option is selected, an audio file of the “wav” type (maximum 30MB, mono, 16 kHz, 16 bit, PCM) must be uploaded using the **Upload File** button. This audio file is then played to the redirected caller.

Number: For this option, an internal or external call number to which the caller is redirected must be stored in the **Phone Number** field. If an external call number is configured as a destination, it must always be specified in the fully qualified format (e.g. 0049721778899).

Audio + Number: The uploaded announcement file is played back first of all, and then the caller is forwarded to the entered internal or external number. If an external call number is configured as a destination, it must always be specified in the fully qualified format (e.g. 0049721778899).

Audio + Mailbox The uploaded announcement file is played back first of all, and then the caller is forwarded to the entered mailbox number.

Note: The English language options in the drop-down menu can be used as equivalents to the German language options. They are used to prepare for the module’s internationalization.

10.2 Modules’ Execution Order

Different module configurations have potentially equal and thus competing access to incoming calls.

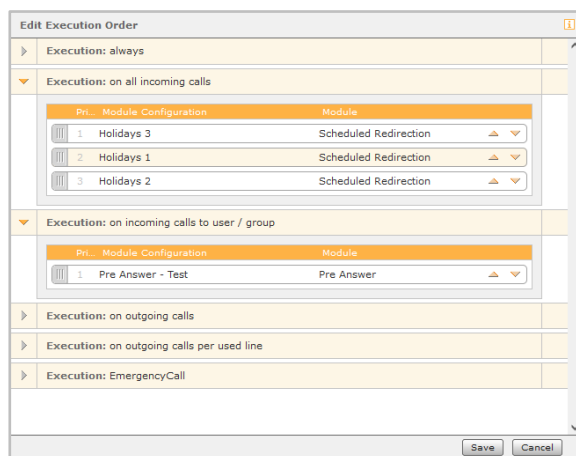


Figure 23 – Example of the change to the module configurations’ execution order

Using the **Execution Order** button, it is possible to define a clear execution hierarchy here and therefore guarantee smooth processing of the module configurations.

The execution order is adjusted using the arrow keys or Drag & Drop. The execution lists only contain the relevant module configurations. They must not, therefore, be added independently. If an execution list does not contain any entries, there are also no competing module configurations.

10.3 Module Library

The module library contains the modules delivered with STARFACE and can be arbitrarily extended with internally created and imported modules.

Modules are listed in the overview list with the following information:

Status

- ✓: The module is up-to-date and functional
- ✗: The module contains errors or is not intended for the system version.
- 👤: The license required for the module is valid and was successfully registered.
- 👤: The module requires a license. The license was either not registered or has expired.

Name: The module's name

Vendor: The module creator's name

Version: The module's version number



The module is protected by an internal password and cannot be edited, copied or downloaded. Click on this icon to enter the password.



The password protection is temporarily suspended. The module can be edited, copied and downloaded during the current STARFACE session. Clicking the icon with the mouse closes the module again!



Create an identical copy (clone) of the module. The copy is added to the list below the original and can be edited and modified independently of the original.



Module download. A module download is used for local storage purposes, e.g. to use it on or forward it to another STARFACE installation.



Edit this module in the Module Designer.



Delete this module.

10.3.1 Importing a Module

To import a new module, only the **Import Module** button below the current module list has to be selected.

The corresponding dialog opens. You now have two options:

- The new module's license key is entered, and STARFACE downloads the module data directly from the server of the company Starface.
- A module file which you received directly from the module creator is selected. The file has the extension "sfm" or "zip", and for modules which require a license, the module license key must be installed afterwards ("[17.8 Licenses](#)").

Note: When importing an existing module using the file upload process, it is replaced by the uploaded module version regardless of the version number.

The corresponding sfm module file must always be downloaded manually to the Starface cloud instances (see "Module für die STARFACE" under [Übersicht der STARFACE Downloads](#)) and selected.

11 Voicemail

Once the button of the same name has been selected, the overview list of voicemail boxes already created is shown.

Note: In this documentation, the two terms “Voicemail box” and “Mailbox” do not refer to different configuration items; rather, they are synonymous with one another.

The readable data in the overview list is:

Name: The freely definable name of the mailbox.

Assigned Users: The user(s) who are assigned to this mailbox.

Assigned Groups: The group(s) assigned to this mailbox.

Number: The number of a voicemail box is always made up of *9 and the ID automatically generated when the mailbox is created. This automatically generated ID cannot be changed later on and can be between 1 and 4 digits long.

Note: With the number mentioned above, received voicemail messages can be listened to directly on the telephone using the:

9* + mailbox ID

Shortcut (also see [“22.4 – Shortcuts on the Telephone”](#)).

11.1 Creating a New Voicemail Box

A new mailbox is created using the **+ New Voicemail Box** button. The following possible configurations are available:

Voicemail box: Register new ...

Mailbox name: Mailbox number: *9 Password:

Recording Settings

No recording: ☐ (only announcement) Maximum duration:

On Timeout / Always Redirections

Announcement:

On Busy

Announcement:

Assigned Users

Name	Send Messages by E-Mail	User-defined Name of Mailbox
Carlson, Carl	<input type="checkbox"/>	Central

Assigned Groups

Name	Send Messages by E-Mail
Test Group	<input type="checkbox"/>

Figure 24 – Example of the configuration of a new voicemail box

Mailbox name: The name of the mailbox can be freely defined and should be selected so that it is as meaningful and unique as possible.

Password: The password allocated at this point may consist of a maximum of 6 digits and must be entered when querying the mailbox using a shortcut on the telephone, for example.

No recording: If this checkbox is selected, you are therefore deactivating the voicemail box's voice recording and only the announcement audio file is played back.

Maximum duration: Using this drop-down menu, it can be configured how long the maximum recording duration for an individual voice message is.

Using the two **+ Add User** and **+ Add Group** buttons, a new user or an entire group can be authorized for access to the mailbox.

By selecting the **Send Messages by E-Mail** checkbox, it can be set as an option that all voice messages incoming to the voicemail box are sent to the user or to all users in a group by e-mail.

Under the **User-defined name of Mailbox** heading, a different mailbox name can be saved as an option for every user.

Note: There is no way to save a different mailbox name at group level.

11.1.1 Managing Announcements

In principle, a distinction is made between two types of announcement. Firstly, when a busy redirection forwards the call to the voicemail box, and secondly when a time-exceeded or always redirection forwards the call to the voicemail box.

If the default STARFACE announcements are not to be used for this, it is also possible to use your own announcements. You gain access to the existing announcements on STARFACE using the **Manage Announcements** button.

The following aspects must be noted in the announcements' overview list:

- If an administrator creates an announcement, all administrators can manage it. The announcement can be used by all users and all administrators for all voicemail boxes.
- If a user creates an announcement, all administrators and the creating user can use it. The announcement can only be used by the user who created it. Administrators can only use it for the voicemailbox of the respective user.

If a brand-new announcement has to be created, the **+ New Announcement** button must be selected to do this.

Figure 25 – Selecting a telephone to record a new announcement

Here, you can now use the **Record** button to call a STARFACE telephone and record an announcement text. As soon as a name is entered for the new announcement, the process can be saved.

An existing audio file can which was created e.g. using the “Memo an mich” module can also be uploaded (also see “10.1.5 – Memo an mich”).

Note: The announcement named “default” corresponds to the STARFACE default announcement and cannot be changed.

12 Conference

Some basic settings have to be made before the moderated conference function can be used on STARFACE.

First of all, the internal and external call numbers on which the participants can access the conference have to be defined. When individually planning conferences using the corresponding function windows in the main menu, a PIN is automatically generated for each invited participant. This is required to gain access to the conference if the participants are not added to the conference by calling.

The internal IPv4 address, external IPv4 address or the STARFACE host name must be entered in the "Server address for web link" input field. The participants can follow the conference in the web browser using this web address. No port may be appended in this field. If STARFACE can be reached both via HTTP and HTTPS, https: // must be placed in front if the conference is to be displayed via HTTPS.

The existing invitation text is a general template which is available in various languages and can be adapted to your own requests and requirements. Different **Template variables** are available for automated creation of the invitation texts. They are dynamically replaced by values such as the conference PIN, call number, time, etc., when the invitation e-mail is sent to the conference participants. To insert a variable, all you have to do is select the desired point in the text and select the suitable entry from the drop-down menu.

The following variables are available:

- Time
- Date
- PIN
- Conference name
- Participant's name
- External phone number
- Web link
- Internal phone number
- STARFACE initiates call

The e-mails with an invitation to the conference are always sent to the participants once a new conference has been created.

An e-mail is also sent:

- if changes, such as a time change, are subsequently made to conference details
- as a reminder 15 minutes before the conference starts
- as an invitation to the next appointment if the conference is recurring (once a current conference appointment has ended)

Note: If changes are made to the conference management, e.g. new call numbers being allocated, the participants in conferences which have already been planned are not notified by e-mail. In these cases, the conference plan must be opened again and saved with a change.

13 Address Book

In the **Configuration** tab, it is possible to select whether the STARFACE address books should be used or whether existing directories should be connected via an LDAP.

13.1 Using the STARFACE Address Book

If the STARFACE address directories are to be used, there are 3 predefined folders:

- All Contacts from all of the address books created, with the exception of the private ones.
- Users All of the users created on STARFACE.
- Private Private address book individual to the user.

Note: No name resolution takes place for calls to the private address books.

Using the **New Folder** button, it is possible to create new address directories, such as a directory for customer contacts and a separate directory for business contacts. A maximum of 10 additional address directories can be created.

The Write Access checkbox indicates whether the contained contact data can be edited and new entries can be created.

The layout of the address book view and the view of individual contact data records is configured in the Layout tab. The layout of the STARFACE address book is already ready for use, but it can be modified in any way.

13.2 Configuring the LDAP Connection

The following key data are required to connect an address directory via LDAP:

- Server address (with port specified in the port number format as an option)
- User name
- Password
- Base folder of the LDAP server

The user account used must have read rights for the base folder and write and read rights for the address book directories.

LDAP syntactically uses what are known as “distinguished names” (DNs) as unique identifiers. These are made up of comma-separated units such as DC= (domain controller) or CN= (common name) which display the directory path. The username and base folder must be entered in this syntax. The directory of an organizational unit (OU=) is expected as the base folder.

Example:

Server address: 192.168.1.100 or 192.168.100:712

Username: CN=ldapuser,CN=users,DC=domain,dc=de

Password: xxxxxx

Base folder: OU=addresses,DC=domain,DC=de

Note: In the case of a AD Win Server 2012, the base folder must be the contacts' topmost OU (e.g. OU=contacts,DC=domain,DC=tld)

The user can be in a different OU, but must then be specified in a fully qualified manner (e.g. CN=adminimator,OU=users,DC=domain,DC=tld).

The following options are available in the "Security" drop-down menu when using LDAP:

TLS with certification validation

If this option is selected, the certificates used are validated when the connection is established. Officially signed certificates from a certification authority (CA) can be used for this. In this case, no changes need to be made to STARFACE.

Alternatively, self-signed certificates can also be used, whereby the certificates must be uploaded to STARFACE via the module "CA Certificate for LDAPS".

If this option is used, access is no longer via port 389, but via port 636.

TLS without certification validation

If this option is selected, there is no validation of the certificates when the connection is established.

It should be noted that the expiry date of the certificate used is checked anyway and must not have expired.

If this option is used, access is no longer via port 389, but via port 636.

Unencrypted

If this option is selected, it is assumed that the target server will accept unencrypted connections.

Access via TLS is only possible via ports 636 and 714. If no port is configured, port 636 is used automatically when TLS is active. With all other port specifications, STARFACE can only be accessed via StartTLS, which is not accepted by MetaDirectory systems.

Note: If the security option "Unencrypted" is selected and no port specification is configured, port 389 is used.

Using the "Search Mode" checkbox, it is possible to select whether the search in the LDAP address book is carried out with many wildcards ("exact" selection) or with fewer wildcards ("fast" selection).



13.3 Layout

Several templates are available to choose from in the **Layout** tab:

- Extended international addressbook
- Internal addressbook
- MS Active Directory
- LDAP

These templates can also be adjusted individually by changing the field order or adding new fields, for example.

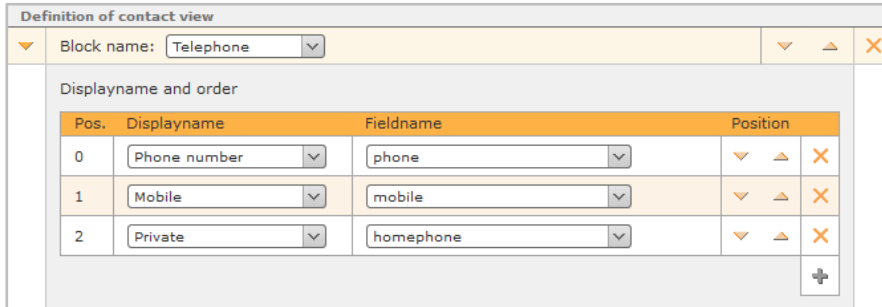
Details which are viewed by default when the address book is opened are defined under **Definition of list view**. The right column is provided for telephone numbers, because this column is accessed for name resolution. Only the names selected here can be assigned to the STARFACE call lists and to the Call Manager, and they can only be called up from the address book by directly clicking the mouse.

The sections and contact fields for the detailed view (icon = ) and the editing view (icon = ) in the address book can be defined under **Definition of Contact View**.

13.4 Using the Address Book in the desktop apps

To be able to use an address book connected using an Active Directory or LDAP in the desktop app for windows or macOS, it is absolutely essential to configure the address book's contact view.

Below is an example of the configuration of the contact view. In this example, a new block was added for the telephone numbers. The names of the fields depend on the LDAP used and may therefore deviate from the field names shown here.
















Pos.	Displayname	Fieldname	Position
0	Phone number	phone	  
1	Mobile	mobile	  
2	Private	homophone	  

Figure 26 – Example of configuration of the contact view

14 Phone Numbers

This list view is used to provide an overview of the internal and external call numbers which have already been specified. Their allocation to the different objects in STARFACE can be read off using the following icons:

- User 
- Group 
- Conference room 
- Module configuration 

To make a change, all you have to do is double-click on the corresponding row or on the  icon. Then, the **Phone Numbers** tab of the relevant user, group, etc., opens and the number assignment can be changed.

14.1 Signaling

In this tab, external phone numbers can be configured from all created lines that can be signaled externally by any STARFACE user. All entries in this tab only affect the signaling of an outgoing phone number and have no effect on incoming calls.

Phone numbers that have already been assigned to a specific user, group or module can also be selected here.

A new external phone number can be added using the "New Signaling number" button, whereby only one phone number can be released per entry. The released phone number can now be configured by each STARFACE user as a "Display number" (see also "[7.3.4 - Phone numbers](#)").

15 Lines

The STARFACE lines are configured in this section.

15.1 General

The settings made in this tab apply to all lines in the **Lines** tab, to the extent that no deviating configuration is stored for the individual lines.

The following fields are filled by selecting the default country profile in the “Country” drop-down menu:

- Exit-Code
- Country code

The “Area code” entry field must always be completed manually.

Note: In some country profiles, it is possible to choose between different exit codes.

Additionally, country specific emergency call numbers are blocked, so they can no longer be allocated to users, modules, etc. An overview of the respective blocked emergency call numbers can be found under [Overview of country-specific special numbers and emergency numbers](#)

The digits which can be selected in the “Prefix” drop-down menu can be used to distinguish between internal and external numbers. The digits must always also be entered during external dialing processes.

From a technical standpoint, in the Telephony section there is no added value to distinguish between internal and external calls in this way.

The screenshot shows the 'General' configuration tab for a line. At the top, there are dropdown menus for 'Country' (set to 'Germany') and 'Prefix' (set to '- none -'). Below these are input fields for 'Exit code' (00), 'Country code' (49), and 'Area code' (111). A checkbox for 'Callnumber normalization' is checked and labeled 'Enable'. Below this is a section titled 'Internal Numbers' which contains a table with two columns: 'Number Type' and 'Number Area'. The table has one row with 'Number block' in the 'Number Type' column and '10 to 89' in the 'Number Area' column. There are 'X' and '+' buttons next to the table. At the bottom, there are radio buttons for 'Deposit' with options 'None' and 'Internal number' (selected), followed by an input field for the number '50'.

Figure 27 – Example of general line data

If the “Callnumber normalization” checkbox is active, the call number is amended to include the international format (e.g. 0049721556677) for all outgoing calls. This ensures that the respective provider can handle the call number correctly. Normalization affects all configured lines and all line types.

Note: Call number normalization should only be deactivated in special cases, e.g. if the respective country’s system does not provide numbers in the international format.

The internal call number ranges and individual call numbers which are available on STARFACE for users, groups, conference rooms and module configurations are configured under the “Internal Numbers” heading.

These number ranges can be freely selected in terms of format and extension (e.g. 10 to 30 and 500 to 520). If the internal number range is changed once later on, the call number assignments already made are retained.

Note: There may be no one-digit internal call numbers

The configuration of a drop point defines which internal call numbers all calls which are not handled correctly for various reasons are forwarded to. The following calls are forwarded to the drop point, for example:

- Calls to an internal number from the configured number range that is not assigned to a user etc.
- Calls to an external number that is not assigned to a user etc.
- Calls to a user who is not logged onto a telephone

This prevents calls from being dropped on STARFACE.

15.2 Lines

STARFACE makes a distinction between different line types, whose availability depends on which STARFACE appliance is being used and which ISDN cards are installed.

In principle, the following line types can be created using the **+** button:

- SIP provider connection
- ISDN external
- ISDN internal
- Analog internal
- NGN provider connection

15.2.1 Creating a Line for SIP Providers

If a new SIP provider line is created, the suitable provider profile must be selected from the “Provider” drop-down menu. The provider profiles downloaded from [SIPTRUNK.DE](https://siptrunk.de) are indicated with the remark “Verified”. It is recommended to only use verified provider profiles, because only these profiles are also covered by Starface Support.

Note: When using the respective provider profile, the applicable data protection law must be observed under all circumstances. It must be independently checked whether the data transferred to the provider satisfies the requirements set forth in data protection regulations.

If the desired SIP provider product is not listed, it is possible to create your own provider profile (also see [Creating an SIP Provider Profile](#) for this purpose).

If the provider or their product being used provides for authentication, the access data can also be entered under Username and Password at this point in the configuration process. Successful authentication is indicated by means of a green line status and the remark “Registered”.

On STARFACE, it is checked every 60 seconds whether the line is still correctly registered as a line monitoring mechanism for a SIP provider. If this is not the case, re-registration of the line to the SIP provider is triggered automatically.

Note: If an NGN line is configured on STARFACE, the information regarding the route used for NGN lines must be observed.

15.2.2 Externally Creating a Line for an ISDN Connection

If a new line is created for an external ISDN connection in the direction of an ISDN provider, for example, a line name which is selected to be as meaningful and unique as possible must be allocated first of all. Then the installed card to be used for the connection must be selected from the drop-down menu under Card Type. If several ISDN cards are installed, the cards are numbered consecutively. The lowest number stands for the lower PCI slot.

Generally speaking, a conventional patch or ISDN cable can be used for wiring the ports to the selected ISDN card to the endpoint (e.g. the NTBA).

If the hardware appliance is equipped with a Sirrix ISDN card, it must be noted that there are differences in the wiring between the card and the network connection or ISDN terminal device depending on the version of the ISDN card.

Note: You must read the manual provided under [Documentation Relating to the Sirrix Cards](#) for this purpose!

These are assigned to the newly created line by activating the checkbox below the wired ports. The status of each port is indicated by a color:

- Green Ports which are already connected and are connected to a telephone line.
- Yellow Ports which are not connected but are configured (e.g. if the cable was removed).
- Dark gray Ports which are not configured or are connected to the ISDN provider.

Note: If a port is already occupied by another ISDN line, the port is grayed out in a light gray color and does not have a checkbox.

15.2.3 Internally Creating a Line for an ISDN Connection

If a new line is created for an internal ISDN connection, a line name must be allocated first of all. Then the installed card to be used for the connection must be selected from the drop-down menu under **Card Type**.

A generally crossed ISDN cable must be used for wiring the ports at the selected ISDN card to the endpoint (e.g. the ISDN telephone). Please also always observe the documentation for the ISDN terminal device during this process.

These are assigned to the newly created line by activating the checkbox below the wired ports. The status of each port is indicated by a color:

- Green Connection to the terminal device possible
- Yellow Ports which are not connected but are configured (e.g. if the cable was removed).
- Dark gray Connection to the terminal device not possible

Note: Depending on the type, age, model, etc., of an ISDN terminal device, the port's status may not be set correctly, even though the functionality of the terminal device is available.

15.2.4 Internally Creating a Line for Analog

At present, STARFACE only offers internal analog connections using STARFACE COMPACT. The process of creating a new internal analog line on a STARFACE COMPACT is described in separate [online documentation](#).

Note: Internal analog patterns can be implemented using external gateways (e.g. from the manufacturer Patton).

15.2.5 Creating a Line for an NGN

If a new NGN line has to be created, a line name which must be selected to be as meaningful and unique as possible has to be allocated first of all. Then, in the graphic interface to the right, the checkbox can be used to select which of the available network connections can be used for the NGN connection. The network connection used for NGN must be configured to "DHCP".

The following information must always be stored too:

Username: You receive the username from your NGN provider.

Password: You receive the password from your NGN provider.

NGN route: The route must be specified by the NGN provider in the CIDR notation.

Note: It must be ensured that the route entered is also used by all SIP lines which are configured with the same provider profile.

15.2.6 Creating a Line for “STARFACE Connect”

A preconfigured SIP line named “STARFACE Connect” can be found on each STARFACE from version 6.2.

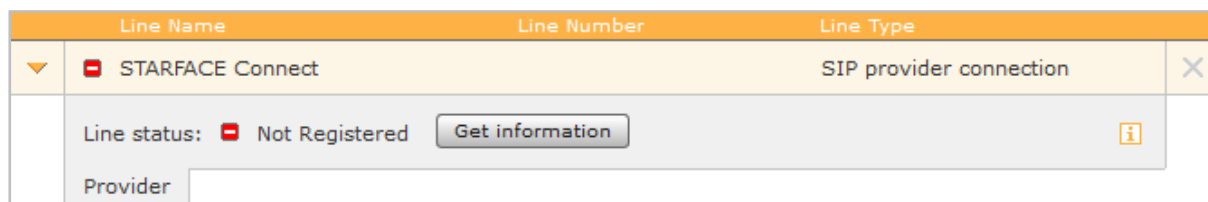


Figure 28 – Unregistered STARFACE Connect line

There is an [FAQ page](#) for all key questions relating to STARFACE Connect.

The SIP line is not registered by default and must be activated using the **Get information** button. The STARFACE Connect customer portal is called up as an external web page for this purpose. The line can be activated on this web page, and the contractual conditions can be found there too.

Some special features must be noted with regard to the line:

- The line's name cannot be changed
- The line cannot be deleted
- Only German landline and cell phone numbers can be reached using this SIP line
- The “CLIP no Screening” feature is always active for the line

Note: Emergency calls are always forwarded to the emergency call center which belongs to the respective registration address., regardless of which call number is signaled using the line.

Once the line has been activated and the call numbers have been assigned on the external web page, the line's status will change to "green".

The line's general configuration can be edited using the **Configure now** button; also during this process the STARFACE Connect customer portal is called up again as an external web page.

Line Name	Line Number	Line Type
✓ STARFACE Connect	No.: 1	SIP provider connection

Line status: ✓ Registered Configure now

☒ This line gets highest routing priority for calls to German landlines.

☒ This line gets highest routing priority for calls to German mobile networks.

☒ Use line in configured routing

Provider Phone Numbers Extended

Figure 29 – Example of a STARFACE Connect line

Using the two checkboxes available, an additional routing can be pre-connected to the normal STARFACE routing (also see [“16 – Routing”](#)), so that all the calls to German landlines or German cell phone networks are managed using this line.

With the “Use Line in configured Routing” checkbox, it is configured whether the STARFACE Connect line is taken into account or not in the normal STARFACE routing (also see [“16 – Routing”](#)).

Unlike all the other line types, only restricted possible configurations are available in the two “Phone Numbers” and “Extended” tabs.

No changes can be made in the “Phone Numbers” tab; rather, only the shared numbers can be read off.

In the last tab, “Extended” only the following options are available:

Line prefix: If several lines are configured, an additional prefix can be created using the line prefix. The connections can thus be established in a targeted manner using a certain line. It must be noted that only one-digit numbers can be entered as prefixes. The * * * characters shown must also be entered during the dialing process.

Max. connections: At this point, the maximum number of simultaneous connections per line can be entered. The default value of 0 sets the number to unlimited. The information provided here refers only to outgoing calls in this regard.

15.2.7 Configuring the Number Range

The call numbers for the line are stored in this section. One of the following two call number types can be added using the button:

Single number: This type of call number displays numbers which are too different to be recorded in a call number block. This is either because they are completely distinct (e.g. 778899 and 122233), because no related blocks are created or because the blocks are incomplete.

Number block: Generally speaking, there is always a complete call number block which can be entered with this type of call number (e.g. 5544-1 to 5544-20) at a connection.

Number Type	E.C.	C.C.	A.C.	Number	Number Area
Single number	00	49	999	667788	
Number block	00	49	721	112233	10 to 50
Single number	00	49	721	112233	
Number block	00	49	999	667788	10 to 99

Provider Phone Numbers Extended

Figure 30 – Example of a possible call number configuration

It is also possible at a later date to move numbers from one line to another line (see documentation on knowledge.starface.de)

15.2.8 General Extended Settings

The options and entry elements in the **Extended** section differ depending on the line type. The following possible configurations are available for all line types:

Line prefix: If several lines are configured, an additional prefix can be created using the line prefix to be able to establish connections using a specific line in a targeted manner. It must be noted that only one-digit numbers can be entered as prefixes. The * * * characters shown must also be entered during the dialing process.

Deposit: An internal number can be entered here for each line as an alternative drop point. If **Default** remains set, the specification from the **General** tab is applied.

CLIP no Screening: The “CLIP no Screening” for outgoing telephone calls enables sending of an alternative call number to be displayed to the call receiver. Not only does this feature have to be shared on STARFACE; it must also be activated by the provider.

Call number prefix: If the checkbox is activated under **CLIP no Screening**, this option can be used to configure which part of the outgoing call number is not transferred to the provider. It is then expected that the provider always amends the outgoing number accordingly.

Manual Configuration: By activating this checkbox, it is possible to directly intervene in STARFACE's incoming call handling process. We recommend that this option is only used by administrators who have extensive experience relating to STARFACE and Asterisk.

15.2.8.1 Additional Settings for SIP Providers

The following possible configurations are only available when the line is an SIP provider line:

Max. connections: At this point, the maximum number of simultaneous connections per line can be entered. This number depends on the provider and the contract concluded. The default value of 0 sets the number to unlimited.

Note: The information provided here refers only to outgoing calls.

The **Call number prefix** configuration point is not available for SIP lines; instead configuration takes place in the respectively used provider profile.

15.2.8.2 Additional Settings for ISDN External

The following possible configurations are only available when the line is an external ISDN line:

Connection: The type of connection depends on your ISDN contract and the ISDN card used.

- A base connection, also referred to as a BRI or a BC, can either be a system connection or a point-to-multipoint connection.
- The primary multiplex connections, also referred to as PRI, PMxA, S2m, E1, T1 or J1, use the system connection option.

Note: The connection type setting is decisive for the ISDN line's functionality. If a connection type is selected incorrectly, the line's status indicator may show a green signal even though the line is not working.

Please find out about your connection type in the documents supplied by your ISDN provider.

Number format: This option defines what STARFACE expects the number format to be like for incoming calls from the direction of the ISDN provider.

Note: Particularly when it comes to Austrian ISDN providers, it should be carefully checked in the log files what format the incoming call number is signaled in.

The default setting (Default) corresponds to standard which is generally customary in the respective country and is generally set using the Country setting in the General tab. But depending on the provider, there may be deviations in terms of the format of incoming call number signaling.

The following possible settings are available:

- | | | |
|-----------------|---|---------------------|
| • International | International call number format | E.g. 49 30 1234 567 |
| • National | Call number with area code | E.g. 30 1234 567 |
| • Subscriber | Connection or main number with extensions | E.g. 1234 567 |
| • Unknown | Only the extensions | E.g. 567 |

The spaces in the examples listed above are only used to improve legibility and are not part of the signaling process.

Echo Cancellation: Echo cancellation is a way of suppressing echo effects when signals are being sent and received at the same time. The selection points available depend on the card installed and the line type. Generally speaking, the following possible selections are available:

- Off
- Hardware
- Oslec
- Aec
- Speex
- Mg2
- Fir
- Kb1
- Sec
- Sec2

15.2.8.3 Additional Settings for ISDN Internal

The same possible settings as for the external ISDN lines are available here. The only exception to this rule is the “Number format” option, which is not available here.

15.2.8.4 Additional Settings for Analog Connections

The following possible configurations are only available when the line is an internal analog line:

Echo Cancellation: Echo cancellation is a way of suppressing echo effects when signals are being sent and received at the same time. The selection points available depend on the card installed and the line type. Generally speaking, the following possible selections are available:

- Off
- Hardware
- Oslec
- Aec
- Speex
- Mg2
- Fir
- Kb1
- Sec
- Sec2

Signaling: This option indicates how call hanging-up is signaled to the connected terminal device. The setting depends on the connected terminal device, whereby Kewlstart is correct for internal lines to terminal devices in most cases.

Note: Please also always observe the documentation for the connected terminal device.

15.2.8.5 Additional Settings for NGN Connections

The following possible configurations are only available when the line is an NGN line:

Max. connection: At this point, the maximum number of simultaneous connections per line can be entered. This number depends on the provider and the contract concluded. The default value of 0 sets the number to unlimited.

Note: The information provided here refers only to outgoing calls.

15.3 Emergency Call

Arbitrary emergency call and premium rate numbers can be defined using the **+** or **New Emergency Number** button. The name of the emergency call line should be selected so that it is as unique and meaningful as possible. The call number is entered in the right field, and at least one telephone line must be assigned to each number.


Additional lines can be added with the **+** button. During this process, if there are several entered lines it must be ensured that the lines' priority will always be specified from top to bottom.

The official emergency call numbers 110 and 112 cannot be allocated to STARFACE as internal call numbers; instead, they are only used for the emergency call numbers. Additionally, various premium

rate numbers can also not be allocated as internal numbers, including the likes of the public authorities' number 115 (also see [Overview of country-specific special numbers and emergency numbers](#)).

If telephones are operated on STARFACE in different area code ranges, the devices must be assigned to these locations. When an emergency call is dropped, this should help to ensure that the call is connected to a local emergency call authority.

If a call is made to an emergency number or a special number via the STARFACE App for Android or STARFACE App for iOS, this is always made via GSM and not via STARFACE. This ensures that the mobile device can be located by the emergency call center.

New locations can be added by clicking on the  editing icon in the top right-hand corner. It is then possible to switch between the various location profiles using the drop-down menu.

Note: A line with the associated area code must be configured for each location, and the corresponding location profile must be set up in the telephone settings for each device which is not operated at the main location (also see [“9.3.2.1 – Details”](#)).

An example might look like this:

STARFACE is operated in Berlin (area code 30) and Berlin is therefore the main location (default). However, some telephones are located in a branch office in Hamburg (area code 40) and are also connected to STARFACE.

In this situation, the process would be as follows:

- Set up the emergency call numbers in the **Default** location profile and assign the line with the Berlin area code to it.
- Then create the “Hamburg” location profile.
- Also set up the emergency numbers in the “Hamburg” location profile and assign a line with a Hamburg area code to it.
- Now, the “Hamburg” emergency call location has to be set up for the corresponding telephones (also see [“9.3.2.1 – Details”](#)).

16 Routing

All of the settings made in this section relate to the routing of outgoing calls on STARFACE and have no influence on incoming calls. Routing is used to control which of the existing lines are used for an outgoing call, or the order in which the existing lines are used.

Completion of the numbers during calls to the local area network are also influenced by routing.

16.1 Properties

In this tab, the **Routing priority** drop-down menu can be used to define which routing is used for the outgoing calls. In detail, these are:

Static: STARFACE automatically selects one of the existing lines and attempts to set up the call once using this line. If a line on which the call number to be signaled is not configured is selected, the call number display is suppressed.

Note: If the “CLIP no Screening” feature is activated on STARFACE for the automatically selected line, the call number display is not suppressed.

This option is the STARFACE basic setting and only works reliably in very simple scenarios, e.g. with just one line.

Note: It is always recommended to select another routing priority such as **Line** or **COR rule**.

Line: In the case of this routing priority, the line used for the outgoing call is determined by the call number to be signaled (also see “[7.2.3 – Phones](#)”). The call is set up using the line on which the call number is configured.

Only one attempt is carried out, and if it is unsuccessful, the outgoing call is canceled.

COR Rule: If this option is selected, the rules defined in the **Cost Optimized Routing – Location Based Routing** tab shall apply. If a line on which the call number to be signaled is not configured is selected for the outgoing call, the call number display is suppressed by the provider or the outgoing call is even rejected.

During local area dialing, e.g. to the number 1234, the dialing user’s primary call number is used to complete the country and area codes. If a primary external call number is not configured for a user, the STARFACE general management section is used to complete the country and area codes.

Note: If the “CLIP no Screening” feature is activated on STARFACE on the line specified by the rules, the call number display is not suppressed.

LBR Rule: If this option is selected, the rules defined in the **Cost Optimized Routing – Location Based Routing** tab shall apply. If a line on which the call number to be signaled is not configured is selected for the outgoing call, the call number display is suppressed by the provider or the outgoing call is even rejected.

During local area dialing, e.g. to the number 1234, the STARFACE general management section is used to complete the country and area codes.

Note: If the “CLIP no Screening” feature is activated on STARFACE on the line specified by the rules, the call number display is not suppressed.

Line + COR: In the case of this routing priority, an attempt is made to assign a line to the outgoing call using the **Line** setting described above. If this assignment is not possible, or if the corresponding line is not available, the COR rules are applied.

Under the **Routing during unavailability** item, the drop-down menu can be used to select how calls to users who do not have an available telephone and who have not created any call redirection definitions are handled. The following options are available to choose from:

to deposit: The caller is immediately forward to the drop point whose number was entered in the line configuration. The call is rejected if no drop point is configured.

Reject: The call is rejected and not forwarded.

16.2 Cost-Optimized Routing

A new COR rule can be created using the **+** or **+ New Rule** button.

Cost Optimized Routing - Location Based Routing

Phone number: 0049 Name: All

COR Rules

Mo Tu We Th Fr Sa Su From: 00:00 to: 23:59

Specify line sequence

Pos.	Line Name	Pre-Preselection	Position	Delete
1	SIP Line			X

Figure 31 – Example of a COR rule

Phone number: The fully qualified call number to which the created COR rule is to apply must be stored at this point.

In this regard, it must be noted that STARFACE always dials outgoing numbers in the international format, i.e. with 0049 at the start of the call number for German numbers or 0041 for numbers in Switzerland.

The “best match” rule also applies when using the COR rules. This means that, if there are several COR rules which would apply to a selected number, the COR rule which has the most matching digits is used.

Note: COR rules for cell phone numbers must also be entered with the leading international prefix, i.e. as 0049175, for example.

Some sample applications for the entered call numbers might look like this:

- 0049 This rule applies to all outgoing calls in Germany
- 0031 This rule applies to all international calls in the Netherlands
- 0900 This rule applies to all calls to numbers starting with 0900

Name: A name which is as unique and meaningful as possible should be selected for the COR rule.

A COR rule is time-controlled using the day-based checkboxes and the freely selectable “From – To” time period.

It is also possible to display several time periods within a COR rule; to do this, a new time period must be created using the **+ New Time Frame** button. This new time period may not overlap with one of the other periods within the COR rule.

Under **Specify line sequence**, the sequence of the lines used can be stored for each configured time period. The order of the configured lines determines their priority. This means that an attempt is made to establish a connection using the topmost line first of all, then using the second line, etc., until all of the assigned lines have been run through.

If the outgoing calls fail on all of the specified lines, the outgoing call is canceled.

Note: If no lines are assigned to a COR rule, no outgoing calls can be made on the configured call numbers.

Call-by call numbers which are prefixed to the number actually called during a connection establishment process can be stored in the **Pre- Preselection** field. If, for example, the number 072112233 is selected and the added pre-prefix "888" is added, this results in 888004972112233.

17 Server

The various tabs enable administration of all the key STARFACE functions. These include:

- STARFACE status overview, language settings and software update
- Configuration of the date and time
- Network settings
- Mail server configuration
- Web server configuration
- Creating and managing backups
- STARFACE log files
- License management

17.1 State

Under **Software Version**, some system information, e.g. which version of STARFACE is currently installed, or details on when STARFACE was last updated, is provided in the top part of this tab.

If the checkbox is activated under **E-mail notification of new updates**, it is checked once per week whether there are new updates for STARFACE. If new updates are available, all of the administrators are informed of this by email.

Under the heading "REST API" the current version of the API specifications can be downloaded.

Language: The language setting applies to administrative e-mails, the Login area and the web interface of all users who have not chosen a different language in their settings. This language is also used on telephones if no users are logged in.

The following actions can be triggered using the respective buttons in the **Server Status** section:

- Services Restart Restarts all of the important services (database, telephony, etc.)
- Server Restart Restarts STARFACE as a whole.
- Server Shutdown Shuts STARFACE down

Once one of the buttons have been selected, an overview of how STARFACE is currently being used is shown, and this must be confirmed before the desired action is carried out.

17.1.1 Performing System Updates

Generally speaking, the search for new versions of STARFACE is triggered using the **Search now** button. If a newer version than the one currently installed is found, the corresponding release note is shown. Whether the version shown can also be installed is directly linked to the installed licenses and the existence of an update contract (also see "[17.8 – Licenses](#)").

Note: It is therefore necessary for STARFACE to be able to access the [necessary server addresses](#).

Which of the available versions are to be installed can be selected. At the same time, it is shown whether all of the installed modules are compatible with the new version of STARFACE. If more recent versions of the modules are available, they are automatically selected using the checkbox and are updated as part of the system update. Warning messages are also issued if a module is not shared or updatable, for example.

A backup is automatically carried out before the update is installed. If an error occurs during the installation, the previous STARFACE state is restored without any data loss. Depending on the extent of the backup, the process may last several minutes. To complete the update, STARFACE is restarted, and in the update view it is possible switch back to the login screen for the STARFACE web interface.

There are two possible ways of carrying out the installation process:

Performing Download and Installation Together

1. The “Separate Download and Installation” checkbox is not selected.
2. Search for a new version using the button
3. Select the version to install
4. Wait for the new version to download and install

Note: In this installation variant, STARFACE is completely unavailable while the new versions is being downloaded and installed. So no incoming or outgoing calls, redirections, etc. can be made.

Separate Download and Installation

1. The “Separate Download and Installation” checkbox must be selected
2. Search for a new version using the button
3. Select the version to install
4. Specify the time for starting the download
5. Wait until the download in the background has ended
6. Start the installation process at any time using the “Install Now” button

Note: In this installation variant, STARFACE is not completely available during the actual installation process. So, no incoming or outgoing calls, redirections, etc. can be made. The download runs in the background and can also be set to low-load times.

17.1.2 Firmware update after an update of the STARFACE

If a STARFACE is updated, all telephones that receive a firmware update can receive the passwords for the SIP account and the telephone menus as often as required within a period of 20 minutes after the update. This is to prevent the phone from working properly after an update.

17.2 Time / Date

There are the following settings on STARFACE with regard to time and date.

Time zone: The corresponding time zone in which STARFACE is being operated must be selected in this drop-down menu. All of the time zones existing in the world are available in this regard.

Share NTP service over network: Activating this checkbox causes STARFACE to provide the NTP service and thus its time setting for SIP telephones and computers within the local network. However, this option must be activated on the terminal devices.

You can choose between the two following options under NTP settings:

Specify manually: The time and date information must be set manually here.

Specify automatically: If this option is selected, you can choose between freely accessible NTP servers and pools which have already been stored. It is advisable to select several servers which handle their list position accordingly. Selecting several servers should help to ensure that the system time is reliably set even when a server is not available.

More addresses can be added using the last selection option, **new**

Note: If the time settings are changed, the services must be restarted.

17.3 Network

In this tab, the various settings for the STARFACE network connection can be made. The different possible configurations are:

17.3.1 SIP Settings

Behind NAT?: Here, it must be specified whether STARFACE is located behind an NAT (a network address translation) or not. Generally speaking, the checkbox for **yes** must be selected here.

The interaction between STARFACE and the NAT very much depends on the network's architecture, and the settings should not be changed in a functional system configuration. Conversely, non-functional connections are caused by the interaction of firewalls, routers and STARFACE.

External address: The automatically detected, external STARFACE IPv4 address can be entered here using the **Use This IP** button. This entry is particularly important if telephones are connected over the Internet, for example. A domain name can also be entered at this point.

Note: If a domain name is entered, it is resolved before it is entered in the internal STARFACE configuration. It must be ensured that the domain name is correctly resolved with the external IPv4 address.

17.3.2 Network Settings

Gateway IP: The IPv4 address of the router / computer / etc. over which the internal network is connected to the Internet must be entered here.

Hostname: An internally and externally resolvable FQDN (Fully Qualified Domain Name) must be entered in this field. This is necessary for the desktop apps and the mobile apps to function correctly.

An example: pbx.example.org

This FQDN would be resolved from the internal network with the internal IPv4 address of STARFACE (e.g. 192.168.10.50) and with external access with the external IPv4 address (e.g. 213.65.1.2).

The FQDN must be stored on the STARFACE web interface in the following places in order to ensure the correct functioning of the desktop apps and mobile apps:

- Configuration --> Server --> Network --> Field "Hostname"
- Configuration --> Extended Settings --> XMPP --> Field "Domain"
- Configuration --> Phones --> Settings--> Drop-Down-Menu " Applied server address"

It is recommended to store a domain name at these points, which is resolved internally on the firewall with an internal RFC1918 address (if applicable) and externally with the external IPv4 of the STARFACE host. Otherwise the external IPv4 address of STARFACE can be entered here as an experiment.

The function of the two DNS servers is to resolve URLs into IPv4 addresses. The server addresses determined during the installation of STARFACE are entered here and are automatically updated.

17.3.3 Proxy Settings

If a proxy is being operated in the network that STARFACE is running in, the necessary settings can be made here so that STARFACE has access to updates (HTTP) and to license management

(HTTPS). The availability of the web interface is also provided without proxy settings. The checkboxes under **HTTP** and **HTTPS** can be used to specify which access instances the proxy is used for.

Address: The proxy's IPv4 address.

Port Port 80 is used by default if the proxy is not configured differently.

Requires authentication: This checkbox must only be set if the proxy used expects authentication. The username and password can be entered directly below if necessary.

17.3.4 Network Adapters

An overview of the available network adapters is available here. At this point, it is also possible to select using the **Protocol** checkbox whether the corresponding network adapter has a static or a dynamic IP address.

The screenshot shows a window titled "Network Adapters". It contains a table with one row for the network adapter "eth0 'Realtek Semiconductor Co., Ltd. RTL8111/8168/8411 PCI Express Gigabit Ethernet Controller (rev 06)' link: yes". To the right of this row is a checkbox labeled "activate" which is checked. Below the table, there are fields for "Protocol:" with radio buttons for "DHCP" and "static" (selected), "IP address:" with a text box containing "192.168.2.100", and "Subnet mask:" with a text box containing "255.255.0.0".

Figure 32 – Example of eth0's static configuration

If **Activate** is not checked, the respective network adapter is deactivated. As a result, the corresponding connection can then also be used for an NGN line (also see "[15.2.5 – Creating a Line for an NGN](#)").

Note: If a network adapter is to be used for NGN, the "DHCP" option must be selected for it.

17.4 Mail Server

In this tab, it is configured whether the e-mails sent by STARFACE are sent over the internal STARFACE mail server or over an external mail server.

It is always recommended to enter an external mail server, because the internal STARFACE mail server uses a send mail functionality which can be blocked by various security protocols time and again.

An alternative sender e-mail address for the STARFACE e-mails can also be entered (Standard sender = pbx@example.com), so that possible replies are sent to an active e-mail inbox, for example.

The screenshot shows a window with tabs: "State", "Time/Date", "Network", "Mail Server" (selected), "Web Server", "Backup", "Log Files", and "Licenses". Under the "Mail Server" tab, there are radio buttons for "internal" and "external" (selected), a text box for "Sender e-mail address:" containing "sf-sadmin@example.com", and a "Test" button. Below this is a checkbox for "Send HTML-E-Mails:" which is checked. A section titled "External Mail Server" contains fields for "SMTP server:" (mx.test.de:993), "User name:" (mail@test.de), "Password:" (masked with dots), "Security:" (STARTTLS), "Verify certificates:" (checked), "SMTP with AUTH:" (radio buttons for "yes" and "no", with "yes" selected), "SMTP after POP3:" (checkbox), and "POP3 server:" (localhost).

Figure 33 – Example of setting up an external mail server

Note: If STARFACE is operated as a cloud service, the sender e-mail address must be adapted in any case.

Sending of a test e-mail can be initiated using the **Test** button in order to check an existing or newly set-up configuration.

Send HTML-E-Mails: If this checkbox is activated, all of the sent emails are provided with STARFACE's HTML branding. If this checkbox is deactivated, all emails sent are sent as plain text emails, e.g. without a logo.

The following settings must be made to use an external mail server:

SMTP server: The IPv4 address or the host name of the SMTP server which is to be used for sending e-mails must be entered here. To use a port other than the default port number, 25, it must be entered after the IP address with a colon (e.g. 101.202.303.404:88).

User name: The username which is to be used to access the mail server must be entered at this point.

Password: The password which is to be used to access the mail server must be entered at this point.

Security: In this drop-down menu you can choose between the following options:

TLS	If this option is activated, TLS encryption is used to access the mail server. The Port 465 is very often used for TLS access and must also be entered in the SMTP server field above.
STARTTLS	If this option is activated, STARTTLS encryption is used to access the mail server. The Port 587 is very often used for TLS access and must also be entered in the SMTP server field above.
Unencrypted	The connection to the mail server is not encrypted. For security reasons, it is not recommended to use this setting.

Verify certificates: If this checkbox is activated, certificates are checked for validity when the connection to the mail server is established.

Most SMTP servers expect the sender to "register" before sending e-mails. This login can be done using the option "SMTP with AUTH" with a username and password.

Alternatively, the option "SMTP after POP3" can be used. First, the incoming mail server (POP3) is searched for new messages. To use this option, the selection field "SMTP with AUTH" must be set to "no" and the checkbox "SMTP after POP3" activated. The address of the POP3 server can then be configured.

17.5 Web Server

The HTTPS service is also activated by default for the STARFACE web server in addition to the HTTP service. Both services are available on the default port numbers (80 and 443), and they can also be changed in the respective fields.

The **Force redirect to HTTPS** option makes access to the STARFACE web interface only possible over HTTPS.

Note: If the HTTP service is deactivated or if the default port 80 is modified, problems with independent connections can occur with the address book on SIP telephones, for example.

A certificate is required for the web server to use HTTPS. A provisional certificate is already stored in STARFACE.

Note: For cloud instances without a dedicated IPv4 address, the port for HTTPS (443) must not be changed.

An entry mask opens when the **New Certificate** button is pressed. Two pieces of information are required under all circumstances in this mask:

- **Server name** This information refers to the domain for which the certificate is to be valid.
- **Days of validity** This information refers to how long the certificate is to be valid for in days.

The domain name must be complete and correct, e.g. companyname.net (without https://). Generally speaking, a certificate is not valid for possible sub-domains, but what are known as “wildcard certificates” are an exception to this rule.

To meet the purpose of a server certificate, the certificate must be signed by a certificate authority (CA). A selection of recognized certificate authorities can be found in the settings of the web browser used.

Note: Please also note the respective certificate authorities' requirements and conditions for this process.

An encrypted file of the certificate is generated using the **Certificate Request** button. The content of the window must be copied and sent to the selected certificate authority by e-mail. The certificate authority checks the application and sends the signed certificate back, generally by e-mail.

The signed certificate is imported using the **Import Certificate Response** button; a new window with two text boxes opens during this process. The certificate authority's signed certificate is copied to the top text box, while the certificate authority's root certificate is copied to the bottom text field.

17.6 Backup

The STARFACE backup can be created in this tab, and it is also possible to reinstall a backup file. The list of backup times can be viewed too.

17.6.1 “Default” Preconfigured Backup Process

There is a preset backup configuration named “Default” on each STARFACE. This backup process backs up all STARFACE data once per day at 1.00 a.m.

During this process, the backup file is saved on the local STARFACE hard drive.

The backup file is saved with the extension “.sar” and can be found on the local STARFACE hard drive in the “/home/starface/backup/Default/” directory.

The last 7 backup files are saved, so the data from the last seven days is available. If there is a problem with creating or saving the backup files, this is noted in the **Protocol** tab.

Note: It is recommended to adapt the preset backup process according to your actual needs or to replace it with a backup process you created yourself.

17.6.2 Creating a New Backup Configuration

A new backup configuration can be created using the **Create**, **New Schedule** or **+** button. The Configuration is carried out in 4 steps.

17.6.2.1 First Step

The configurable items in the first step are:

Name: A name for the backup configuration which is as meaningful and unique as possible should be entered here.

Report to: If an error occurs, the backup configuration messages are sent to the e-mail address stored here.

Backup interval: This drop-down menu is used to control how often a backup configuration is to be executed in a time-controlled manner. The **Manual** selection means that the backup process is not started automatically; instead, it must always be started manually.

The information provided for **Start** and **Time** indicate the time that the backup process automatically starts for the first time. The time information provided under **Backup interval** is calculated from the time configured at this point.

An internal STARFACE monitoring process prevents STARFACE Archivierung and backup creation being started in parallel with one another. The process started first runs until it ends, and the second process starts one hour later. It is recommended to make a clear temporal separation here.

17.6.2.2 Second Step

In the second step, the checkboxes are used to define what STARFACE data forms part of the backup and is therefore backed up:

- Core data Users, groups, telephones, contacts, chat history, etc.
- CDR and voicemails Voicemails' voice messages + call lists' data records
- Voicemail announcements Independently created announcement texts (e.g. for voicemail boxes)

Note: Both CDR data and the voicemails can contain considerable amounts of data and therefore make the backup file very big. This should be taken into account when choosing the backup file's storage location.


17.6.2.3 Third Step

In this third step, the storage location for the backup file can be selected. In this regard, only one of the possible options can be selected during this configuration step.

More storage locations can be added later while the backup process is being configured.

The available storage locations are:

- Server hard drive Saves the backup file on the local STARFACE hard drive
- Windows Share Saves the backup file on a Windows Share
- SFTP Saves the backup file on a server via Secure FTP
- Dropbox Saves the backup file on a Dropbox account
- USB storage Saves the backup file on a connected USB disk
- Send to e-mail address Send the backup file by e-mail

During this process, the access data for the respective system must be specified using the  button in the case of individual options such as Windows Share or Dropbox.

If **Windows Share** has been selected as the storage location, the following access data must be entered:

The screenshot shows a dialog box titled "Settings For Windows Share". It has five input fields: "User" with the text "DOMAIN/User", "Password" with masked characters, "Server", "Share", and "Security" with a dropdown menu showing "ntlm". At the bottom right, there are "Ok" and "Cancel" buttons.

Figure 34 – Example of setting up a Windows Share

- **User** The username as expected by the destination server (e.g. with domain)
- **Password** Password for accessing the destination server
- **Server** The destination server's IPv4 address
- **Share** Name of the share plus sub-directories which are attached with /
- **Security** Drop-down menu for choosing the authentication process

Note: The backup process itself creates a “starface-backup” directory containing a sub-directory whose name corresponds to the name of the backup process.

If **SFTP** has been selected as the storage location, the following access data must be entered:

- **User** The username as expected by the destination system
- **Password** Password for accessing the destination system
- **Server** The destination system's IPv4 address (not including protocol or port information)
- **Path** The absolute path or . (dot) for the current directory

The screenshot shows a dialog box titled "Settings for SFTP". It has four input fields: "User" with the text "backupuser", "Password" with masked characters, "Server" with the text "192.168.50.100", and "Path" with the text ".". At the bottom right, there are "Ok" and "Cancel" buttons.

Figure 35 – Example of the configuration for access via SFTP

If **Dropbox** has been selected as the storage location, access to Dropbox must be guaranteed for the STARFACE backup process.

Note: The backup process itself creates a “starface-backup” directory containing a sub-directory whose name corresponds to the name of the backup process.

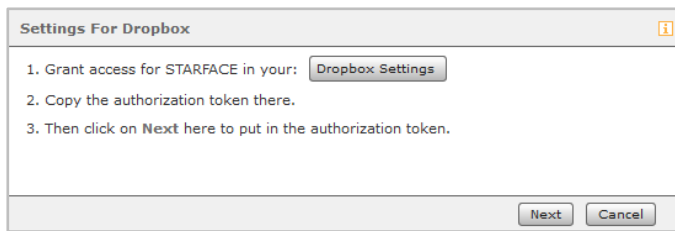


Figure 36 – Dropbox settings

The simplest possible configuration option here is to use the **Dropbox Settings** button. This button allows direct access to the Dropbox page and immediate creation of the confirmation code following successful login to the same.

17.6.2.4 Fourth Step

Keep settings and execute backup: The backup process is executed immediately, and the created configuration is saved too.

Only execute backup: The backup process is executed immediately, but the created configuration is not saved.

Only keep settings: The created configuration is saved, but the backup process is not executed immediately.

Note: If the backup process is executed immediately, it can also be downloaded straight after it has been carried out successfully.

17.6.3 Importing a Backup

The list of all of the backup files available on the server is shown in a chronologically descending order by clicking on the **Restore** button.

Note: In principle, only backups with the same version as or a lower version than the STARFACE version currently installed can be imported. It is not possible to restore backups from higher versions of STARFACE.

The most recent backup file is always selected. The name can be used to distinguish which backup process created the backup file.

To upload a backup file, the checkbox must be selected for **Upload a backup file for recovery**. It should be noted during this process that backup files which are uploaded may not have any umlauts or special characters in their name. If the name contains invalid characters, uploading of the backup file is refused with an error message.

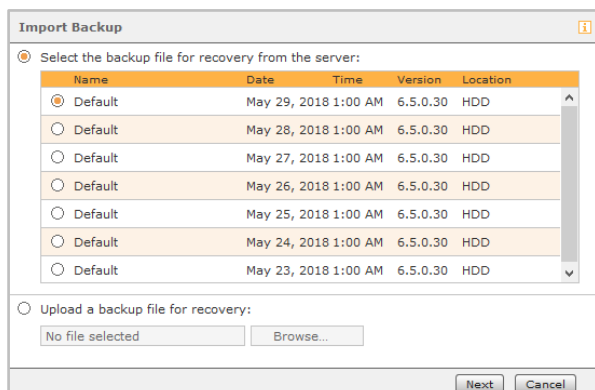


Figure 37 – Overview of backups on the STARFACE hard drive

Once the backup file has been selected, the checkboxes in the next window can be used to determine which data exactly should be adopted from the backup file.

Backup content	Select for import
Complete backup	<input checked="" type="checkbox"/>
Core data	<input checked="" type="checkbox"/>
CDR and voicemails	<input checked="" type="checkbox"/>
Voicemail announcements	<input checked="" type="checkbox"/>

Figure 38 – Overview of information about the backup

A list of the numbers of all of the logged-in users and active telephone calls is shown following confirmation using **Next**. Because restoration ends all of these processes, it can now be decided for the last time whether the restoration process should really be carried out.

17.6.4 List of Backup Appointments

All of the configured backup processes can be subsequently adjusted here in the different tabs, e.g. by adding the new storage locations for the backup file, or changing the execution time control.

In the **Location** tab, it can still be defined how many backup files are to be saved in total before the oldest one is overwritten.

The **E-mail** and **Dropbox** memory types are exceptions to this rule, because in these two cases the number of available backup files is not configured; instead, the maximum backup file size is determined.

The information messages relating to the backup files' different memory processes are documented in the **Protocol** tab.

17.7 Log File

The different STARFACE log files can be viewed and the log files' logging level can be configured in this tab.

The activated **Display button to send error report to web interface** checkbox releases an additional option which can be used to send error messages directly to STARFACE Support if STARGFACE error pop-ups appear

Note: Please note that a sent error message does not automatically generate a new support ticket; instead, a new ticket is reported as being qualified and must be opened.

The **Log File** drop-down menu enables selection of the log file for which the log level is to be changed.


Selecting the **Level** enables selection of the error logging or messages' detail depth. The log levels in the selection menu are arranged in a hierarchically descending order. This means that the higher level also contains the information provided at the lower levels. So, for example, all of the entries in the ERROR and FATAL categories are also saved and output in the WARN level.

Comments on using the log files

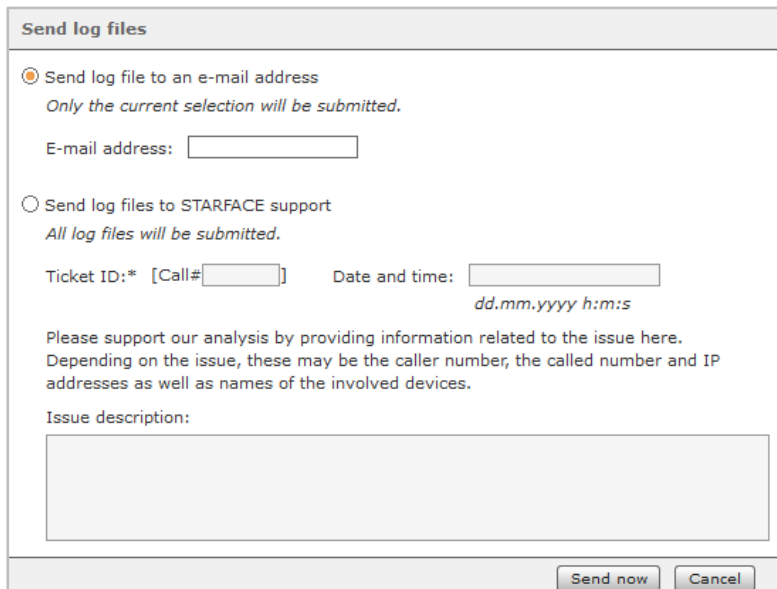
- The change to the log level is not applied retrospectively to the entire log file. The changed log level is only recorded from the time that the change made is saved / applied.
- The change to the log level must be applied or saved first of all before the view is updated.

The log file displayed at present can be defined using the **Display log file** drop-down menu. The specification provided in the **Rows** entry field always refers to the last rows of the log files and must be between 1 and 999.

The activated **Auto update** checkbox always continuously updates the view of the selected log file automatically, so that this does not have to be done manually using the **Refresh** button.

Using the  button, it is possible to open the currently selected log file tab in a new browser window and to use STARFACE independently of the other browser windows.

The **Send log files** button opens the following window:



Send log files

☒ Send log file to an e-mail address
Only the current selection will be submitted.

E-mail address:

☐ Send log files to STARFACE support
All log files will be submitted.

Ticket ID:* [Call#] Date and time:
dd.mm.yyyy h:m:s

Please support our analysis by providing information related to the issue here.
Depending on the issue, these may be the caller number, the called number and IP addresses as well as names of the involved devices.

Issue description:

Figure 39 – Window for sending log files

Selecting the first option enables sending of the currently selected log file to any e-mail address.

Note: An external mail server must be entered for the log file to be sent (also see “[17.4 – Mail Server](#)”).

The second selection option transfers all of the important STARFACE log files to STARFACE Support as a zipped file.

Note: Please note that the transferred log files do not automatically generate a new support ticket; instead, a new ticket must be opened using the support form.

Additional information, such as the number of an existing ticket, or providing detailed information which might be helpful in analyzing the log files, can also be provided when sending files to Support.

It must be remembered that the log files are only included in this transfer process 5 days retrospectively and that the log files must be sent promptly.

In both cases, sending takes place using the **Send now** button.

The STARFACE log files can also be downloaded as a zipped file using the “Download log files” button. These are the same log files that are sent to support.

17.8 Licenses

Different information concerning the STARFACE licenses can be read off and new licenses can also be added in this tab.

Note: It is therefore necessary for STARFACE to be able to access the [necessary server addresses](#).

The following information can only be read off and is automatically generated due to the licenses registered on STARFACE.

Under the **License Information** heading, it is shown how many users can be created at most, and how many new users can still be created.

Under **Update Option**, it is shown whether there is an active update option for the entered licenses, how many users they are issued for, and when the update option is valid until.

Under the heading “App Permissions” it can be configured whether a user is automatically assigned the “App Premium permissions” or “Terminal server permissions” right when logging on to the desktop app or on the terminal server.

If the respective checkbox is not activated, the user does not automatically receive the right when logging in, but an administrator must assign the respective right to the user individually.

17.8.1 Installing New Licenses

A new license code can be installed using the **+** or **+ Add License** button. It is therefore necessary for STARFACE to be able to access the [necessary server addresses](#).

Note: The PBX server license code must always be installed first of all, because all other types of license code are linked to this license.

The important key data such as the company name, address, etc., must be entered the first time that the server license code is installed. This data is pre-filled as default data when all the other licenses are installed.

In principle, in addition to the server license code there are also the types of license code:

- User licenses New user accounts can be created.
- Module licenses Certain paid modules can now be used.
- Premium App Users can use desktop app premium functions.
- TSP for terminal Users can use the desktop app on a Windows terminal server.

The details of the licenses for paid modules are also provided in the list. These licenses are valid for a fixed number of used module instances.

If a license is designed for ten instances, for example, ten configurations of this module can be run at the same time. Other configurations can be created but not activated unless an existing configuration is deactivated.

Note: Module licenses can also be entered directly during the module import process (also see [“10.3.1 – Importing a Module”](#)).

18 Statistic

In this section of STARFACE, different types of evaluations can be carried out based on users, groups, various time settings, etc.

18.1 Export Line Usage

In this tab, it can be defined using several drop-down fields what connection data can be exported for a user or a group. Time periods can also be set for the data to be exported.

The screenshot shows a configuration form for exporting line data. It includes a 'User' section with radio buttons for 'Person' (selected) and 'Group'. The 'Person' dropdown is set to 'Benderson, Ber...'. The 'Selection of calls' dropdown is set to 'Outgoing'. The 'Period' section has radio buttons for 'All' and 'From'. The 'From' date is set to '28 May 2018' and the 'to' date is '30 May 2018'.

Figure 40 – Example of a line data export

The connection data is output as a CSV file named “output.csv”. The structure of the output file is described in our [online documentation](#).

18.2 Export Call records

In this tab, it can be defined using several possible settings which connection data can be exported. Time periods can also be set for the data to be exported.

The screenshot shows a configuration form for exporting call records. It includes a 'User' section with radio buttons for 'Person' (selected) and 'Group'. The 'Person' dropdown is set to 'Anderson, Andr...'. The 'Selection of calls' dropdown is set to 'Outgoing'. The 'Period' section has radio buttons for 'All' and 'From'. The 'From' date is set to '28 May 2018' and the 'to' date is '30 May 2018'.

Figure 41 – Example of a connection data export

The connection data is output as a CSV file named “output.csv”. The structure of the output file is described in our [online documentation](#).

18.3 Statistics

In this tab, it is possible to have graphical illustrations of the connection data output. Also, here, it is possible to influence what data is illustrated using several checkboxes and drop-down menus.

Note: The **ISDN line utilization** selection option in the **Type** drop-down menu is only available if an ISDN card is also being used.

18.4 Fax Journal

In this tab, it can be defined which faxes can be exported using several checkboxes and drop-down menus. Time periods can also be set for the faxes to be exported.

The screenshot shows a configuration form for the fax journal. It includes a 'User' section with radio buttons for 'Person' (selected) and 'Group'. The 'Person' dropdown is set to 'Carlson, Carl'. The 'Selection of faxes' dropdown is set to 'Incoming and ou...'. The 'Fax state' dropdown is set to 'All'. The 'Period' section has radio buttons for 'All' and 'From'. The 'From' date is set to '12 May 2018' and the 'to' date is '19 May 2018'. At the bottom, there are radio buttons for 'Export as: CSV file' (selected) and 'PDF file'.

Figure 42 – Overview of the existing possible configurations

The send information of all the fax messages sent via the system is provided in STARFACE for exporting the fax journal. This also applies to faxes which have already been deleted from the user interface's fax list or which have been deleted through use of the "STARFACE Archivierung" module.

The following information is exported for each fax:

- Date
- Time
- Duration of transfer
- User
- Sender name (if available)
- Sender number
- Recipient number
- Number of pages (sent / total)
- Send result

19 Interconnection

A system network is the logical link between several STARFACE appliances to be able to use various features and functionalities together, such as:

- Internal calls over the network
- Status signaling of the busy lamp fields
- Cross-system call groups

It must be noted in this regard that, while STARFACES are linked to one another, they are still separate instances which are not combined to form a common STARFACE.

The prerequisite for the system network is the STARFACE connection over a virtual private network (a site-to-site VPN is recommended) or fixed IPv4 addresses with corresponding firewall configurations (also see “[3.3 – Firewall Settings](#)”). This is necessary because the system network depends on unfiltered IP communication between the individual locations. Also, all of the STARFACES within the system network must be run with a fixed IPv4 address.

If the communication between the different STARFACE over the network is disturbed, there is an automatic fallback scenario, so that internal calls (e.g., from user to user) are established over the external line.

Due to these prerequisites, a system network run between a STARFACE run in the cloud and a STARFACE run as a VM or on an appliance is not possible. The system connection between two clouds is basically possible, but is not supported and is not tested by Starface.

It is also important to note that it is not possible to log in or log off to a group on another STARFACE in the interconnection. Logging in or out of a group is only possible for a user for groups on the STARFACE where the user is configured.

Also, all STARFACES within the network must be the same version.

19.1 Location details

The name entered under **Location name**: should be as unique and meaningful as possible. The name can be made up of letters, numbers and underscores.

A digit which is prefixed to this STARFACE's internal call numbers within the system network can be specified in the **Prefix** field. The purpose of this digit is to handle overlapping internal call number ranges. If the internal call number ranges of two STARFACES overlap within the system network, or if conflicts arise, each STARFACE shall give their own internal call numbers priority.

Note: This field does not have to be filled if it has been ensured that all STARFACES' internal call number ranges do not overlap within the system network.

Example: Two STARFACES (X and Y) each have an internal number range of 10 to 99. STARFACE X receives 3 as a prefix, while STARFACE Y is given 4.

If a user of STARFACE X now uses the function key to call the user with the call number 10 on STARFACE Y, STARFACE automatically selects the suitable prefix 4.

Note: The digit 1 should not be allocated as a prefix to avoid conflicts with emergency call numbers such as 110 or 112.

The **Applied server address**: drop-down menu defines over which internal IP address STARFACE communicates with the other locations. The **Default** option automatically selects the IPv4 address of the first network connection (eth0) if there are several IP addresses available.

19.2 Creating a New System Network

A new system network can be created using the **Create Interconnection** button. The name of the new system network must be defined in the dialog window. The network certificate can then be downloaded by clicking on the **Create Certificate** button.

The network certificate is required to include other STARFACES into the system network just created. Once it has been saved, the STARFACE is immediately online in the system network.

Note: The STARFACES within the system network are always of an absolutely equal value. It does not matter which STARFACE the system network was created on and whether this STARFACE does not accept tasks as a server, host, network node, etc.

19.3 Including New STARFACES in the System Network

Once the system network has been created, additional STARFACES can be added to the system network.

To do this, you must log into the other STARFACE's web interface, where the settings must also be made for the location (also see "[19.1 – Location Details](#)"). Then, the network certificate can be selected using the **Connect now** button.


Following inclusion in the system network, the number of connected locations will also independently update after some time.

If information such as the location name or the prefix are to be changed later on, STARFACE can be disconnected from the system network at any time using the corresponding button. To reconnect STARFACE following the changes, the network certificate must not be installed again. In this case, it is sufficient to select the **Connect now** button.

19.4 Connected Locations

The overview in this tab shows the status and important information relating to the other STARFACES in the system network. Each location is shown with the following key data:

- Status of the location within the system network (online / offline)
- Name
- Prefix
- External and internal call numbers

Locations which are not connected can be removed from the list by clicking on the  button. When a STARFACE is deleted from the list, the routing and the rights allocation for the location in question are deleted from this STARFACE's configuration. If the location is to be reconnected to the system network, these settings must be made again in the corresponding tabs.

19.5 Location Routing

Location routing regulates via which location an outgoing connection in the direction of the provider is established. The routing is automatically adopted by all STARFACES in the system network with the **COR Rule** routing priority (also see "[16.1 – Properties](#)").

As a result, it is also possible, for example, to display a scenario in which all STARFACES within the system network only make calls via the line of an individual STARFACE.

Note: It is not absolutely necessary to store location routing if the lines of a different STARFACE are to be used to make calls within the system network.

Several routing rules for different time periods and different number ranges can be configured during this process. Configuration is carried out in the same way for the COR rules (also see “[16.2 – Cost-Optimized Routing](#)”), only instead of the lines the STARFACE location names are specified within the system network.


In the case of outgoing phone calls, it is automatically checked which number range or which routing rule should apply. If a routing rule cannot be executed (e.g. if a line is at maximum utilization), the next routing rule takes effect according to the “best match” principle.


Note: To prevent problems from occurring with the different routing rules, the rules for location routing within the system network must always be configured in greater detail than the local routing rules on the respective local STARFACE (e.g. “0” in the local routing and “00” in the system network).

19.6 Rights

Each STARFACE within the system network regulates for itself what internal information is transferred to the other STARFACES within the system network.

A distinction is made in this regard between user data, group data, user status and group status. Sharing of the user status is e.g. required to indicate availability on function keys. Sharing of information can be individually configured for each user and each group.

The default settings for all locations can be edited using . With this default setting, it is defined what information is and is not shared in the case of newly created users and groups for the other STARFACES in the system network.

A share can also be individually created for a certain location. To do this, the  button must be selected, and you can select the desired location using the following drop-down menu. Then, the checkboxes can be used to share or not share the individual pieces of information.

20 Security

Various security aspects of STARFACE can be configured in this area.

The screenshot shows the 'Security' configuration page. At the top, there are 'Settings' and 'Filter' buttons. Below is the 'SIP Password Policy' section with an information icon. It includes a 'Minimum password strength' dropdown set to 'Secure' and an unchecked checkbox for 'Allow manually assigning weak passwords'. The 'Password Check' section has a checked checkbox for 'Check passwords regularly' and a 'Scan interval' dropdown set to 'Daily'. The 'Automatic Password Update' section has a checked checkbox for 'Change insecure passwords automatically'. The 'Phone Administrator Passwords' section has a checked checkbox for 'Check phone administrator passwords regularly'. The 'Group Pickup and Caller ID Display' section has a label 'Group pickup and caller ID display when assigning suitable user permissions:' and a dropdown menu set to 'All'.

Figure 43 – Overview of the configuration options for password security

20.1 SIP Password Policy

In this section, the minimum required password strength for the complexity of the passwords of the telephone accounts on STARFACE is configured via a drop-down menu. The detailed password complexity requirements are:

Secure: At least 16 characters
 3x a to z
 2x A to Z
 2x 0 to 9
 No special characters allowed

Paranoid: At least 30 characters
 5x a to z
 5x A to Z
 5x 0 to 9
 No special characters allowed

Allow manual assignment of weak passwords: This option allows configuration of SIP accounts with insecure passwords, whereby no warning is issued before storage.

Note: It is highly recommended not to permit insecure passwords for the telephone accounts (SIP accounts).

20.2 User Password Policy

In this section, the minimum required password strength for the complexity of the passwords of the user accounts on STARFACE is configured via the drop-down menu. The detailed password complexity requirements are:

Secure: At least 8 characters
 2x a to z

2x A to Z
2x 0 to 9
2x special characters : . ! @ # \$ % ^ & * ? _ ~

Paranoid: At least 16 characters
4x a to z
4x A to Z
4x 0 to 9
4x special characters : . ! @ # \$ % ^ & * ? _ ~

Allow manual assignment of weak passwords: This option allows configuration of user accounts with insecure passwords, whereby no warning is issued before storage.

Note: It is highly recommended not to permit insecure passwords for the user accounts.

20.3 Password Check

Check passwords regularly: If this checkbox is activated, all of the SIP passwords are checked straight after the setting is stored and then at the time interval set below.

If one or more passwords which do not comply with the security guideline are identified during the check, the administrators and authorized users receive an e-mail with a list of the affected telephone accounts.

20.4 Password Update

Change insecure passwords automatically: This checkbox relates to telephone accounts with existing access data which log on to the system by making an autoprovisioning request. If this option is activated, and if the telephone account (SIP account) password does not comply with the security guideline, STARFACE automatically allocates a new secure password during the telephone's next request.

Note: This setting works independently of the (potentially permitted) manual allocation of weak passwords and the regular password check.

20.5 Phone Administrator Passwords

Check phone administrator passwords regularly: If this checkbox is enabled, it is checked whether the standard passwords for accessing the telephones' web interface have been changed (also see [9.5 – Extended Settings](#)). If this is not the case, the administrators are informed by e-mail.

20.6 Global Call Privacy

Group pickup and caller ID display when assigning suitable user permissions: This drop-down menu controls how extensive or restricted the pick-up on STARFACE is by users with the "Show and pick incoming caller" right. The following options are available:

- | | |
|-------|---|
| All | All users with the "Show and pick incoming caller" right can pick up an incoming call from all other users on the STARFACE. In addition, if the call rings, the caller's number is displayed on the BLF of the person called. |
| Group | All users with the "Show and pick incoming caller" right can pick up an incoming call from all other members within the same group (s) on the STARFACE. In addition, if the call rings for other group members, the caller's number is displayed on the BLF of the person called. |

Nobody: Nobody can use a pick-up for an incoming call. Moreover, it is not possible to see via BLF with whom a user is talking on the phone.

For further details it is essential to observe the different "group pickup" rights for the individual users (see also [Configuring Rights for Users](#)).

20.7 Filters

The STARFACE whitelist and blacklist can be viewed and also edited in this tab.

Automated adding to blacklist and whitelist: If this checkbox is activated, IPv4 addresses are automatically added to the blacklist if they have e.g. too many STARFACE SIP registration attempts with incorrect access data. Brute-force attacks should thus be suppressed, because an IP address on the blacklist is completely ignored by STARFACE.

At the same time, the IP addresses from the valid registration attempts are added to the whitelist, whereby they are excluded from the check for 24 hours. The list entries' validity period restarts with each additional successful registration.

Note: IP addresses that are on the blacklist can be manually entered into the whitelist and are thus automatically removed from the blacklist.

E-mail notification for each new entry in blacklist: If this checkbox is activated, all users with a corresponding permission are informed of a new automatic blacklist entry. During this process, the notification e-mail is sent to the e-mail address entered for the respective user.


20.7.1 Validity of an Automatic Blacklist Entry

The duration of an IP block depends on the respective reason for the blacklist entry or the type of attack identified:

Reason	Duration
Web interface	10 minutes
Telephone menu	24 hours
Call	24 hours
SIP	24 hours
Autoprovisioning	24 hours
XMPP	10 minutes
UCI	10 minutes

Table 19 – Overview of the blocking period

20.8 Editing Entries

To edit an entry in the whitelist or blacklist, the corresponding rows can be selected by double-clicking on them or by using the  editing icon.

The reason for the entry can be specified in more detail here, and it can also be specified how long the entry is valid for using the drop-down menu.

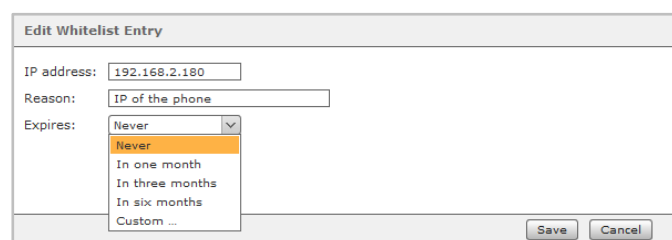


Figure 44 – Example of editing a whitelist entry


21 Extended Settings



21.1 Music on Hold

The term “on-hold music” is generally used within STARFACE for the acoustic output played back when a call is in the queue or “on hold”.

For STARFACE, an individual piece of on-hold music is made up of one or more audio files. A distinction must therefore always be made between both of these terms, so, e.g. whether new on-hold music is created, or whether new audio files have been added to existing on-hold music.


Note: An audio file must be of the “wav” type (mono, 16 kHz, 16 bit, PCM).

Any on-hold music stored on STARFACE can be edited using the  editing icon. In the **Music** tab, the **Listen** button can be used to listen to on-hold music audio files using a telephone.

The volume of an audio file can be reduced or increased using the two  and  buttons.

Note: Frequent use of this function causes the audio file’s quality to drop significantly and should therefore be avoided.

21.1.1 Creating New On-Hold Music

The  or **Add Music on Hold** button can be used to create new on-hold music. A name which is as unique and meaningful as possible must be allocated first of all.

The audio file(s) can now be uploaded in the **Music** tab.

Note: An audio file must be of the “wav” type (mono, 16 kHz, 16 bit, PCM).

21.1.2 Assigning On-Hold Music

Once new on-hold music has been created, it can be allocated to a call number, group or user using the corresponding tab.

The STARFACE default on-hold music applies to all other call numbers, groups and users.

Note: The possible assignments described do not exist for the “default” on-hold music.


21.2 Macros

This editor is used to create independent dial plan extensions or macros. In simple terms, the dial plan is all of the rules and routines for handling all VoIP connections.

Note: To expand STARFACE’s functional scope, we recommend using STARFACE modules as a matter of principle. Intervention in the telephone system using macros should be avoided and only carried out by experienced administrators!

Global variables are defined in the top **Global Includes** text box; they can be used in the **Macro Definitions** in the bottom text box. The syntax must be kept deliberately simple in this regard:

A variable in the form of variablename=value must be entered for each row. But a macro definition does not need necessarily predefined variables.

In the User Management, in a user account’s editing view () , in the **Phone Numbers** tab, macros created here find additional options under **Default Rule**.

The prerequisite for this is that the name of the macro was noted in the following format (deviating from the official notation):

[[macro-...]]; \${...}

21.3 XMPP

Each STARFACE contains an independent XMPP server. It provides connections for the following applications:

- STARFACE desktop apps
- STARFACE mobile apps
- STARFACE software fax
- STARFACE TAPI
- Various STARFACE integrations (CTI)
- Instant messaging over Jabber / XMPP chat applications
- UCI

In the case of the top **Connected to XMPP server** indicator, the status information relates to the STARFACE connection to the internal XMPP server. This status does not, therefore, reflect the direct status of the XMPP server.

The second status indicator, **Connected STAARFACE Apps**, shows the number of currently connected STARFACE apps. Other clients which are used for instant messaging are not included in the counting process.

The STARFACE XMPP server can be completely restarted using the **Restart XMPP Server** button.

Note: If the XMPP server is restarted, all XMPP connections are always restarted and all apps will lose their connection for a short time.

An internally and externally resolvable FQDN (Fully Qualified Domain Name) must be entered in field "Domain". This is necessary for the desktop and mobile apps to function correctly.

An example: pbx.example.org

This FQDN would be resolved from the internal network with the internal IPv4 address of STARFACE (e.g. 192.168.10.50) and with external access with the external IPv4 address (e.g. 213.65.1.2).

The FQDN must be stored on the STARFACE web interface in the following places in order to ensure the correct functioning of the desktop and mobile apps:

- Configuration --> Server --> Network --> Field "Hostname"
- Configuration --> Extended Settings --> XMPP --> Field "Domain"
- Configuration --> Phones --> Settings--> Drop-Down-Menu " Applied server address"

It is recommended to store a domain name at these points, which is resolved internally on the firewall with an internal RFC1918 address (if applicable) and externally with the external IPv4 of the STARFACE host. Otherwise the external IPv4 address of STARFACE can be entered here as an experiment.

Note: Once a domain or IPv4 address has been entered, it is recommended to restart the services on STARFACE.

21.4 Active Directory

This tab is used to configure the user authentication in STARFACE, via an Active Directory within the local network. When using the Active Directory, only the username (without domain address) and the password are required to log into the STARFACE web interface, in the desktop apps for windows or macOS and the STARFACE mobile apps. Mixed use of access data from the AD and the access data from STARFACE is not possible.

Note: Users with administrator rights can always log into the web interface with their normal STARFACE access data.

To ensure unique assignment of domain users and users on STARFACE, the exact same e-mail address should be stored in both systems for each user.

Note: Uppercase and lowercase in the e-mail address are checked and must be entered in exactly the same way in all configuration fields.

21.4.1 Establishing a Connection to the Active Directory

Before activating user login using Active Directory, valid server settings must be stored and a configuration test must be carried out.

Domain: The name of the Windows domain is specified here in DNS notation (e.g. example.com).

1st Directory server: The name of the Active Directory server must be stored here along with the user information. An alternative port number can be attached after a colon (:) as an option. Port 8502 is the default port used.

2nd Directory server: The name of a second server used if the first directory server is unavailable can be entered here as an option.

Base DN: Here, the directory must be specified along with the user information in the LDAP syntax (e.g. OU=users,DC=example,DC=com).

The following options are available in the "Security" drop-down menu when using LDAP:

TLS with certification validation

If this option is selected, the certificates used are validated when the connection is established. Officially signed certificates from a certification authority (CA) can be used for this. In this case, no changes need to be made to STARFACE.

Alternatively, self-signed certificates can also be used, whereby the certificates must be uploaded to STARFACE via the module "CA Certificate for LDAPAS".

If this option is used, access is no longer via port 389, but via port 636.

TLS without certification validation

If this option is selected, there is no validation of the certificates when the connection is established.

It should be noted that the expiry date of the certificate used is checked anyway and must not have expired.

If this option is used, access is no longer via port 389, but via port 636.

Unencrypted

If this option is selected, it is assumed that the target server will accept unencrypted connections.

User: The username used to access the Active Directory server.

Password: The user's password used to access the Active Directory server.

Finally, the **Test Connection** button can be used to check whether access was successful and whether the configuration can be saved.

Note: If Active Directory usage is enabled or disabled, a server restart must be performed before the change is active.

21.5 estos

The connection to an ECSTA server from estos can be configured in this tab. The connection is required to connect applications such as "estos ProCall" to STARFACE.

In order to configure a connection, the "ECSTA control" checkbox must first be activated. The following configuration options are then available:

Server host: The IPv4 address or the domain name of the server must be entered in this field.

Server port: The port via which the connection to the server can be established must be entered in this field.

Server password: The password for access to the server must be entered in this field.

Transport: This drop-down menu is used to select which protocol is used to establish the connection.


22 Annex

22.1 Switching Off an Appliance

The STARFACE appliance is designed for permanent operation and generally does not have to be restarted or switched off. If this is nevertheless necessary or desired, there are several ways of doing this:

- Using the STARFACE web interface (also see “[17.1 – State](#)”)
- Using the STARFACE Administration menu via a directly connected monitor

If access to the STARFACE web interface is not possible, and it is also not possible to use a directly connected monitor, the hardware can be switched off directly with the following process:

The start button  on the front of the device is pressed three times within 30 seconds. This functionality prevents unintended STARFACE switch-off.

22.2 RAID Controller Manager

STARFACE appliances with RAID controller have a RAID Controller Manager with an autorepair and notification function. The manager checks the state of the RAID system for problems and changes every three minutes and, if necessary, sends an e-mail to users with the corresponding notification.

Note: The RAID controller’s internal logging is carried out at the `DEBUG` log level.

If the RAID controller is in the “OK / Verifying” state, a RAID hard drive can be switched with ease. The RAID Controller Manager detects this process and synchronizes the new hard drive automatically. If a problem occurs with the RAID configuration, the manager tries to rectify the problem in ten steps. During this process, it sends additional notification on the current state of the repair process. If the repair fails, this is also reported with further instructions.

The three cases deviating from the normal state (OK / Verifying) are:

DEGRADED: The RAID controller is restricted in terms of its function, e.g. if problems occur with an RAID hard drive.

REBUILDING: The last step in a RAID system repair by default. This step can last several hours, whereby a notification is sent at the start and end.

INITIALIZING: The RAID Controller Manager’s start routine, whereby a notification is sent at the start and end.

22.3 Hard Drive Monitoring

Hard drive monitoring is an application which runs independently in the background to check the hard drive’s disk space. If the available disk space falls below the minimum value of 512 MB, authorized users receive an e-mail containing a warning to this effect.

22.4 Shortcuts on the Telephone

The following shortcuts can be used on telephones which are autoprovisioned using STARFACE in order to control various features and functions.

22.4.1 Shortcuts for General Control

Key(s)	Additional Entry	Description
* 2	Destination number	Identifies the phone call as private in the call lists
* 3 2	Group ID	User logging into the group
* 3 3	Group ID	User logging out of the group
* 6	Speed dial	Speed dial from the address book is being called
* 7 7	Login ID	User logging into the telephone
* 7 8	Login ID	User logging off of the telephone
* 7 9		All users logging off of the telephone
* 8	Internal call number	Call takeover for the user / group (call grabbing)
* 8		Random call transfer (call grabbing)
* 9	ID of the voicemail box	Querying and configuring a voicemail box
* *	Digit *	Setting up a call using the line with the line prefix digit
#	E.g. ##2	Entries after the first # are signaled to the provider without any filters (requires the “provider-side service feature” right). It is recommended only to use this shortcut in combination with a line prefix.

Table 20 – Shortcuts for general control

22.4.2 Shortcuts During an Active Phone Call

Key(s)	Additional Entry	Description
* *		Sets the call on all of the user’s telephones (Call2Go)
* 1		Start or stop recording. The recording is sent as an e-mail attachment once the phone call is ended.
* 2		Calling up the language menu for a transfer with a query. The ongoing call is on hold during this process. Following consultation with the transfer destination, the on-hold caller is transferred by hanging up.
* 3		Start a spontaneous telephone conference with the current call and all calls set to on hold.
* 4		Any DTMF tones can be transferred for the next 10 seconds.

Table 21 – Shortcuts during an active phone call

22.4.3 Shortcuts for Additional Service Features

Key(s)	Additional Entry	Description
* 0 1 1	Destination number	Switch on Always redirection to destination number (not including group numbers)
* 0 1 1		Activate all Always redirections which have already been configured (not including group numbers)
* 0 1 0	Destination number	Switch off all Always redirections (not including group numbers)
* 0 2 1	Destination number	Switch on Busy redirection to destination number
* 0 2 1		Activates all Busy redirections which have already been configured (not including group numbers)

* 0 2 0		Switch off all Busy redirections
* 0 3 1	Destination number	Switch on Time-Exceeded redirection to destination number
* 0 3 1		Activates all Time-Exceeded redirection which have already been configured (not including group numbers)
* 0 3 0		Switch off all Time-Exceeded redirections
* 5	Destination call number	Switch on Always redirection to destination number (not including group numbers)
* 5		Switch off all Always redirections (not including group numbers)
* 0 7 1		Switch on Callback When Busy
* 0 7 0		Switch off Callback When Busy
* 0 8	+ 00 to 99 (waiting place ID)	Park the on-hold caller in a waiting place or pick them up from the waiting place (Park and Orbit)
* 0 9 1		Activate ringer cutoff / DND for the logged-in user
* 0 9 0		Deactivate ringer cutoff / DND for the logged in user

Table 22 – Shortcuts for additional service features

22.4.4 Shortcuts for Controlling of Conferences

Key(s)	Additional Entry	Description
*		Call up the voice menu for the control options
* 1		Switch muting (the microphone) on and off
* 2		Speak if muted by the moderator
* 4		Decrease conference volume
* 5		Resets the earpiece volume to the standard value
* 6		Increase conference volume
* 7		Decrease microphone volume
* 8		Resets the microphone volume to the standard value
* 9		Increase microphone volume

Table 23 – Shortcuts for controlling moderated conferences

22.5 Reinstalling a STARFACE System

If a STARFACE system is to be reinstalled, the following steps must be observed.

22.5.1 Preparations for an Appliance

The following points must be observed to prepare for the re-installation of a STARFACE appliance:

- Download the corresponding ISO file [Link to the Download section](#)
- Prepare a USB stick [Link to the USB stick creation process](#)
- Create an external backup of the existing system Also see “17.6 – Backup”
- Determine the current root password [Link to the root password](#)

Note: In the case of older systems, a BIOS update may be necessary before a re-installation can be carried out (also see the following [documentation](#)).

It must be noted that the appliance's entire hard drive must be formatted for a re-installation and that there cannot be an installation in parallel to an existing system.

Before carrying out the re-installation process, it should be ensured that the connection to the local network is plugged in and also that potentially available ISDN cards are already wired correctly.

Note: An appliance does not require an IPv4 address if the network cable is subsequently plugged in. The network cable must therefore always be plugged in beforehand.

22.5.2 Preparations for a VM

The following points must be carried out to reinstall a STARFACE VM:

- Download the corresponding ISO file ([link to the Download section](#))
- Create a Linux 64 bit guest operating system (e.g. CentOS 8) with the following minimum configuration (2 GB RAM / 16 GB HDD / 1 network adapter / 1 DVD drive).
- The device type of the CD / DVD drive must be configured as a **data memory ISO file**, and the STARFACE ISO file must be selected. The **Connect During Switch-On** option must also be activated and UEFI Secure Boot must be deactivated.
- Create an external backup of the existing system (also see "[17.6 – Backup](#)")

An already prepared VM edition of STARFACE which makes configuring a guest operating system superfluous can also be found in the [Download section](#) mentioned above.

22.5.3 Installation Steps

The following steps are carried out one after the other when (re-)installing an appliance or a VM:

- Start the appliance / VM
- Select the Install New System or Install New System (VMware) option
- Automatically detect the essential hardware components
- Start the graphic installation wizard
- Allocate the password for the root user
- Start the installation using the **Next** option

Once the installation is complete, the corresponding display appears with the **Reboot** button, and the subsequent restart can be carried out. Then, the current STARFACE IPv4 address is output on the screen. All subsequent steps are dealt with in the chapter entitled "[4 – Configuring STARFACE for the First Time](#)".