Gigaset

T300 PRO - T500 PRO

Gigaset pro

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Introduction

The Gigaset T300 PRO and Gigaset T500 PRO PABXs offer numerous features for operating and configuring your phones.

This user guide describes the **administration** functions for both devices. Information about **operating** the PABX can be found in the user guide.

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Further information about your PABX can be found at:
www.gigaset.com/pro

UI elements for Gigaset T300 PRO / Gigaset T500 PRO

UI elements and symbols

🛈	To call up help topics
✏	To edit
✕	To remove entries
▶ ▼	To open/close sub-menus
⊕	New element
✚	To add detail
☑	Property activated
⊟	Property partially activated
⌷	User
👥	Group
👪	Conference room
◈	Module (configuration)
▯	To select addressbook entries
✿	User settings
⊙	To display additional functions
🗐	To open or save fax as PDF file
◀))	To listen to voicemail announcements
☎	To listen to voicemail messages
⊗	To close window
�《《⟨ **Page 2/7** ⟩⟩⟩	Navigating through the list
	To sort the list

Last Name

Please note

Detailed information about operating your Gigaset T300 PRO / Gigaset T500 PRO PABX can be found in the user guide.

Your firewall settings

Your network's firewall must be opened to operate Gigaset T300 PRO / Gigaset T500 PRO ports for specific protocols. You will find an overview of protocols and logs in the appendix ➜ **Page 89**.

Initial configuration

Your Gigaset T300 PRO / Gigaset T500 PRO PABX is supplied with a web user interface and can be configured using an Internet browser on the computer of your choice.
Prerequisite: You have connected your PABX to your local network, as described in the short user guide provided.

Please note

There are extension modules available to connect analogue and ISDN phones for Gigaset T300 PRO / Gigaset T500 PRO. If you wish to use these modules, install the cards in your PABX before starting the configuration.

Gigaset T300 PRO / Gigaset T500 PRO should already be assigned a fixed IP address or should have received an IP address automatically generated via DHCP. This IP address is shown on the computer's start display on completion of the booting process.

You can copy the IP address on to a USB stick:

▶ Insert a USB stick into the USB port on the server. The IP address is automatically saved in a text file **pbxurl.txt** on the USB stick.

▶ Remove the USB stick and insert it into the workstation computer on which you wish to configure Gigaset T300 PRO / Gigaset T500 PRO.

▶ Open the text file **pbxurl.txt** using any text editor and copy the IP address to the clipboard.

To configure Gigaset T300 PRO / Gigaset T500 PRO, enter the IP address into the web browser's address bar as shown in the following example:

Example: **http://192.168.100.123/**

With 192.168.100.123 representing the IP address to be entered.

The configuration menu opens in the browser.

The initial configuration comprises three steps:

Locating and configuring the phones and adapters in the network that are to communication via the Gigaset T300 PRO / Gigaset T500 PRO PABX.

Configuring the lines to be used by the PABX to establish connections in the phone network.

Creating the administrator account

Please note

With the exception of specifying internal phone numbers in Step 2 and creating an administrator account in Step 3, the settings from the initial configuration can be carried out at a later stage.

▶ Click on **Next**, to start the initial configuration.

Step 1: Configuring the phone

During the first step, all phones and ATA adapters are set up in the network. There are three methods of set up available:

◆ Autoprovisioning

◆ Automatic scan and configuration of the phones

◆ Manual set up of the phones This is described in Chapter **General information about administration** in section **Manually configuring phones** (➔ **Page 25**).

Automatically detecting and configuring phones

If you are using phones from the Gigaset IP PRO range, these can be configured by an automatic network scan. This process also works for various ATA and analogue cards. A list of supported models can be found at www.gigaset.com/pro.

▸ Click on **Search now** to start the scan. All devices available on the local network are detected and are automatically configured, if they are not already configured.

The scan has a progress indicator and the **Search now** button changes to **Cancel**.

If any devices are located that are already configured, you must decide whether the configuration for each one should be overwritten.

The **Configured Devices** section shows a list indicating all devices configured during the scan.

Please note

Devices that are used as fax machines must be configured manually despite the automatic configuration (see **Fax functionality** (➔ **Page 26**)).

Limiting the phone search

If you do not wish to search the complete network for phones, you can limit the IP address space to be scanned.

▸ Click on **Specify IP range to search** to open the **Subnet** dialogue field.

Here, you can limit the address space to be searched by changing the start and end IP address. The network is scanned for devices from the IP address in the **Start** field (e.g., 192.168.2.120) to IP address in the **End** field (e.g., 192.168.2.180).

```
Subnet

Range:  ( 192.168.250.*  ∨ )

Start:   [192 ].[168 ].[150 ].[0  ]
End:     [192 ].[168 ].[150 ].[255 ]

                              [ Ok ] [ Cancel ]
```

If your server has several IP addresses and/or network cards, you can select the subnetwork you wish to scan via the **Range** dropdown menu.

▶ Click on **Ok** to apply the restricted IP address space.

▶ Now start the search with **Search now**.

─── **Please note** ───

Not all phones that are to be connected to the Gigaset T300 PRO / Gigaset T500 PRO have to be configured during initial configuration. Additional phones can be added at a later stage in the configuration section.

▶ Click on **Next** to complete step 1 of the initial configuration.

Settings

Autoprovisioning new phones

Autoprovisioning can automatically provide Gigaset pro phones (e.g., Gigaset DE900 IP PRO, Gigaset DE700 IP PRO, Gigaset DE400 IP PRO, Gigaset DE300 IP PRO) with the following functions:

◆ Firmware updates

◆ Configuration

◆ SIP account (registering the phone on the system)

◆ Function keys (without BLF)

◆ Voice files

◆ User menu for the phone display

If you activate autoprovisioning for new phones, devices that have already been fully configured and all devices connected in future will be encompassed in this process. In the **Limiting autoprovisioning/authorised MAC addresses** section (➔ **Page 10**), you can determine the new devices to be included.

Firmware update

The **Firmware auto update** option provides the phones with the latest firmware available. The devices use the new firmware once the machine is restarted. You can edit the devices to be updated in the **Limiting autoprovisioning/authorised MAC addresses** section (➔ **Page 10**).

If the firmware update is active, you can perform the update immediately via the **Update now** button.

—— **Please note** ——
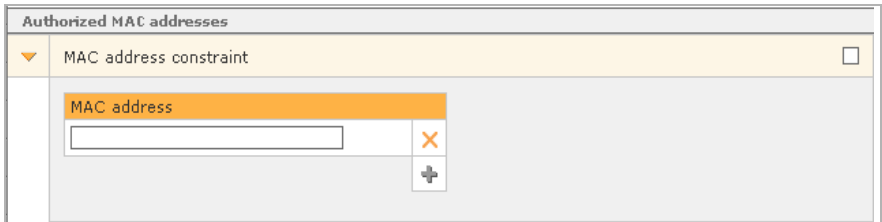
The firmware update is only available, if **Autoprovisioning new phones** is enabled.

Limiting autoprovisioning/authorised MAC addresses

If you do not wish autoprovisioning to be active for every newly connected phone, then you should enable the **MAC address constraint** checkbox. This setting means that only phones already registered to the PABX will be provisioned.

▶ Now enter the MAC addresses of the additional phones to be included in the list. The MAC address for Gigaset pro phones can be found on the devices' type plate or on the web user interface under **Status ➔ Device**.

▶ If you wish to deactivate the MAC address constraint temporarily, simply deactivate the **MAC address constraint** checkbox. MAC addresses already entered in the list are retained.

Step 2: Configuring the lines

General settings

```
┌─────────────────────────────────────────────────────────────────────┐
│  ┌─────────┐ ┌───────┐ ┌────────────────┐                            │
│  │ General │ │ Lines │ │ Emergency Call │                            │
│  └─────────┘ └───────┘ └────────────────┘                            │
│  ──────────────────────────────────────────────────────────         │
│  Country Code:  [ 0049 ]          Area Code:  [ 721 ]                │
│                                                                       │
│  Prefix:        ( - none -        ∨ )                                │
│  Country:       ( Germany         ∨ )                                │
│  Deposit:       ○ None  ⦿ Internal Number:  [ 10 ]                   │
│  ─────────────────────────────────────────────────────────────      │
│  Internal Numbers                                                     │
│  Number Range:  [ 10 ]    to  [ 99 ]    ᴬ𝒸                           │
│                                         ᴮ                             │
└─────────────────────────────────────────────────────────────────────┘
```

Prefix	In order to differentiate between internal and external numbers, a number can be inserted that must be entered when dialling. This is important because it is not possible to differentiate between assigned three-digit internal numbers and three digit external numbers (e.g., the emergency call number 110 is prefixed with 0 to change it to 0110 and thus clearly differentiate it from the internal number 110). If the previous PABX inserted a prefix, this can be retained for continuity purposes.
Deposit	Defines a number via which all unassigned connections are routed, e.g., calls for users without an active or registered phone. Specifying a deposit prevents incoming calls from "getting lost" in the system.
Internal Numbers	These are the connection numbers to be assigned locally, with which Gigaset T300 PRO / Gigaset T500 PRO network users communicate with each other.

Step 3: Setting up the administrator account

The Gigaset T300 PRO / Gigaset T500 PRO user concept

A user is characterised by the following features in the Gigaset T300 PRO / Gigaset T500 PRO system:

◆ Login-ID
◆ Password
◆ First Name
◆ Last Name
◆ E-Mail
◆ Internal Number

A user logs in via the web user interface using a login ID and password.

The login ID is also used to log the user on to a phone via the keypad.

Setting up a user account

The **Login-ID** must be unique, i.e., two users cannot have the same login ID. The ID should be at least 4 characters long. Only the digits 0 to 9 may be used as characters to enable the user to log in using a phone's keypad!

─────── **Please note** ───────
You should always disable the feature available in most Internet browsers for auto-matically filling in boxes or saving passwords, otherwise the password fields for new users will be automatically filled in with a previous password.
─────────────────────────────

The **Password** must be at least six characters long. All lower and uppercase letters of the alphabet can be used including umlauts as well as the digits 0 to 9, dash, underscore, full stop, hash and star. Ensure you choose a secure password as described in the **Entering the root password** section (➜ **Page 86**).

Login ID and password are sent to the user automatically via **e-mail**. This is why the e-mail address specified must be the user's current e-mail address. Save the user profile to complete the initial configuration of your Gigaset T300 PRO / Gigaset T500 PRO PABX.

Completing initial configuration

After successfully completing the initial configuration, the login dialogue appears. From here you can access the main menu by entering your user ID and password.

General information about administration

You can edit all key system settings in the configuration tab.

▸ Click on **Configuration** in the main menu bar to open the configuration tab.

Please note

Before you can operate your PABX via the browser, your Internet browser must be enabled to accept cookies and popups and JavaScript must be enabled.

The configuration menu

On the left-hand side of the configuration tab, you can see a menu bar comprising buttons that open the individual setting tabs. The following chapter describes their function in order of appearance in the menu bar.

👤 Users	For creating and editing user groups
👥 Groups	For defining and editing groups
☎ Phones	For autoprovisioning and integrating phones and ATA adapters Gigaset PRO modules
📦 Modules	
📞 Voicemail	For setting up voicemail boxes
👥 Conference	Basic settings for managed conferences
📇 Addressbook	For addressbook settings
7_1^2 Phone numbers	For assigning numbers to users
🖐 Lines	For VoIP, ISDN, analogue emergency call numbers
Routing	For routing priority and cost optimized routing
🖱 Server	For server settings, updates, backups and licenses
📈 Statistic	For connection statistics
🔗 Interconnection	For interconnection
Extended Settings	For on-hold loops, XMPP servers, macros

Users

> **Important**
>
> The number of user accounts is limited by the number of user licenses! If you have user licenses, register these beforehand under **Server** in the **Licenses** tab.

Creating user accounts

▸ Click on ⊕ or **New User** to add a new user account to the user list. The procedure is identical to the one for initial configuration (see **Setting up a user account** → **Page 12**).

▸ To edit a user entry, click on ✎ .

> **Please note**
>
> You should always disable the feature available in most Internet browsers for automatically filling in boxes or saving passwords, otherwise the password fields for new users will be automatically filled in with a previous password.

Importing user accounts

The import function enables you to create a large number of user accounts quickly. For this to work, the user data must be saved in a CSV file and saved on the server. There is a template available at
www.gigaset.com/pro for you to download and create your own CSV file. The template already contains the correct field names.

Please observe the following when editing and saving the template with an editor:

◆ The individual values must be separated by commas and not by semi-colons!

◆ Text values are enclosed by double quotes " ".

◆ The file should be saved in UTF-8 format.

The fields in the import file

login	Is the login ID of the user as a text value
firstname	As a text value
lastname	As a text value
external	Optional external phone number as a text value (a phone number on the Gigaset T300 PRO / Gigaset T500 PRO server that already exists and is not assigned.)
internal	Requires an internal phone number (a phone number on the Gigaset T300 PRO / Gigaset T500 PRO server that already exists and is not assigned.)
mail	Requires an e-mail address as a text value
password	As a text value

… **_perm**   (permission) indicates the individual user rights. To accept the standard permissions, leave all permission fields empty. To grant a right explicitly, insert **1**. To deny a right explicitly, insert **0** or leave the field empty.

A shortened example in the text editor is shown below:

login,firstname,lastname,external,internal,mail,password,(…)

"0028","John","Sample",,"57","user1@example.com","Pw1",(…)

"0029","Test","User",,"53","user2@example.com","Pw2",(…)

"0008","Max","Sample",,"24","user3@example.com","Pw3",(…)

Each line represents a user data record. The optional external phone numbers are not inserted; however, the empty "cells between two commas must be present.

Important

As soon as a value is inserted for a permission, all other permissions must be explicitly granted or denied! Empty fields represent permissions denied rather than standard permissions.

Example:

(…),login_perm,callman_perm,redirect_perm,(…),voice_perm,(…),fax_perm

(…),1,1,0,1,1,0,1,1,0,0,0,1,1,0

The values deviate from the standard permissions in three places. This user has not been given permission to redirect calls, use a voicemail box or view faxes.

Please note

Invalid user accounts will not be imported and listed in an overview. You can either abort the complete import or click on **Import** to only import the valid data records.

Configuring user accounts

Personal data

All core data for a user account including the login ID can be changed retrospectively here. In the lower section, you will find the **Fax Preferences** section. These settings are applicable for sending software faxes and software fax-2-mails (see **Phone number properties → Page 19**). If there is nothing specified for the user here, the system uses Gigaset pro FAX as the sender name and 00 as the sender number.

Please note

With the exception of the login ID, the user can change all of these details in his preferences.

Redirection rules

Redirection rules can be specified for the user's phone numbers via the corresponding tabs. These rules can always apply or apply only when the user is making a call via the number or does not pick up a call after a certain amount of time.

▶ To activate a redirection for a number, activate the appropriate checkbox to the left. You can redirect a call to any number, including an external or mobile phone number.

─── **Important** ───

If the line settings require a digit as a **Prefix**, then this must be included in the **Target Number** field for redirections to external phone numbers.

Alternatively, if the user has a voicemail box, you can specify this as the call destination. If a redirection is not activated in the **Timeout** tab, any unanswered calls are redirected to the "deposit" after 30 seconds. You can specify the number for this deposit in the general line configuration or alternatively during the configuration of each line you set up (see **Step 2: Configuring the lines → Page 11** and **Advanced settings → Page 52**).

─── **Please note** ───

The user can make/edit these settings himself in his preferences.

Assigning phones to the user

Use **Add Phone** or ⊕ to view the selection of available phones. Once you have made your selection, all the user's phone numbers are active on this device.

> ——— **Please note** ———
>
> A configured telephone is only activated when it is assigned to a user.

Primary Phone for several assigned devices: The call manager (i.e., the phone interface on the Gigaset T300 PRO / Gigaset T500 PRO web user interface) and the WinClient use the primary phone to establish connections as standard.

> ——— **Please note** ———
>
> The user can make/edit this setting himself in his preferences.

Call Waiting Indication: If this option is active, the user will be notified of other incoming calls during a call. He can decide whether to take a call, hold it or call back later.

> ——— **Please note** ———
>
> By activating the **Call Waiting Indication** function, redirections will not occur when the line is busy!

Active: In the list of devices below, you can activate or deactivate the individual phone numbers for each phone. This means that, for example, one phone is only available for internal calls and a second for external calls. This restricted activation is denoted by ⊟.

> ——— **Important** ———
>
> The device name **IAX2/...** denotes a Gigaset T300 PRO / Gigaset T500 PRO phone plug-in. This must be activated by each user, even if the setting here is active ☑. 'Active' refers solely to the use of the selected phone numbers on this particular phone.

The first registered user "owns" the phone, i.e., his number is indicated on outgoing calls, the call will be assigned to him. If the user would like to listen to voicemails, he must be logged on to the corresponding phone. See also **Key combinations on the phone** (➔ **Page 89**) in the Appendix.

> ——— **Please note** ———
>
> If a user logs off from the phone using ⌐7⌐ ⌐8⌐ + login ID, it is no longer assigned to him unless he logs back in again with ⌐7⌐ ⌐7⌐ + login ID or an administrator assigns him the phone in Gigaset T300 PRO / Gigaset T500 PRO.

Assigning phone numbers

▶ Open the list of available internal and external phone numbers with **Add Number** or
  ⊕.

▶ To copy the number of your choice, mark it and then select it. The new phone number
  is automatically activated for all of the user's phones.
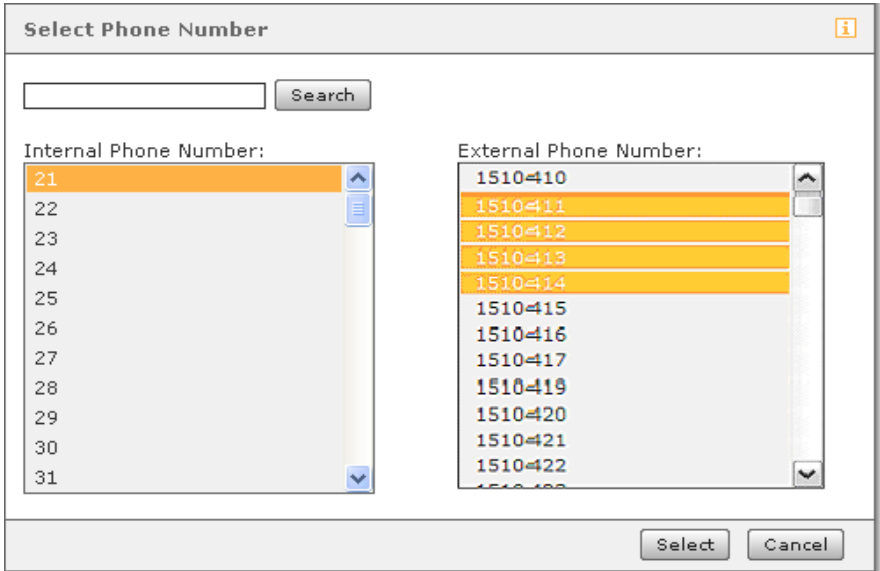
If the user is assigned several external phone numbers, you can choose the number to be
displayed to call participants from the **Display Number** selection menu. The default set-
ting is the number display withheld, i.e., the call participant will see the call as "anony-
mous" or "unknown" on the display.

─── **Please note** ───
The user can make/edit this setting himself in his preferences.

The **Primary internal number** is used for assigning the function keys in the web user
interface.

The **Primary external number** is only of importance in an existing interconnection. It is
used as an alternative number in the event of the user not being contactable via the inter-
nal phone number.

Default Rule: The default setting (**Standard Call**) for each phone number can be changed
by selecting this option.

Phone number properties

Conference Room	Reserves the number permanently as a conference room. This option is independent of any planned conference (see **Conference → Page 42**). Conferences held on this number cannot be managed or followed in contrast to those that do not use this number.
Software Fax 2 Mail	Denotes this number as a fax number. Incoming faxes are forwarded to the user's e-mail address and can be viewed in the fax lists on the web user interface.
Software fax	Denotes this number as a fax number. The user can view incoming faxes in the fax lists on the web user interface.

Group assignment

In the list on the left, you can see all the groups that have been set up.

▸ Add or remove the user as a member of the highlighted group by using the arrow keys between the list fields.

```
┌──────────────────────────────────────────────────────────────────────────┐
│ ┌─────────┐┌──────────┐┌────────┐┌───────────────┐┌────────────────┐┌────────┐ │
│ │User Data││ Redirect ││ Phones ││ Phone Numbers ││Group Membership││ Rights │ │
│ └─────────┘└──────────┘└────────┘└───────────────┘└────────────────┘└────────┘ │
│                                                                            │
│ Selectable Groups:                         Assigned Groups:                │
│ ┌───────────────────────────┐              ┌───────────────────────────┐  │
│ │ Project A                 │              │ West                      │  │
│ │ Sales                     │              │                           │  │
│ │                           │              │                           │  │
│ │                           │    ┌───┐     │                           │  │
│ │                           │    │ > │     │                           │  │
│ │                           │    └───┘     │                           │  │
│ │                           │    ┌───┐     │                           │  │
│ │                           │    │ < │     │                           │  │
│ │                           │    └───┘     │                           │  │
│ └───────────────────────────┘              └───────────────────────────┘  │
└──────────────────────────────────────────────────────────────────────────┘
```
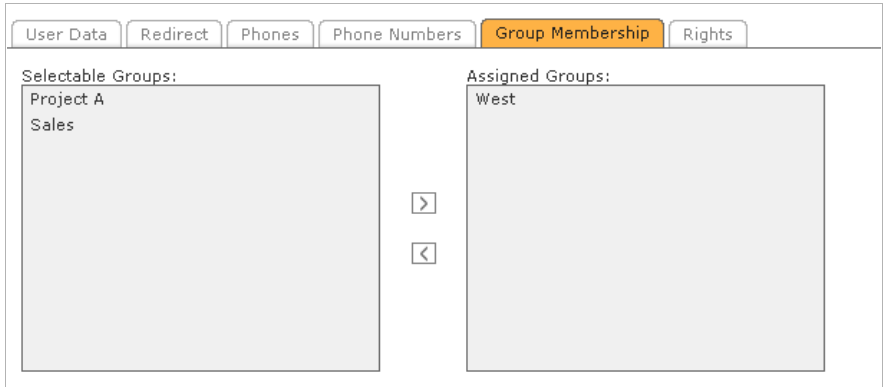
User rights

Activating/deactivating the checkboxes assigns/revokes rights for the user. Any changes to the user's permissions will come into effect the next time he logs in to Gigaset T300 PRO / Gigaset T500 PRO. The buttons for the modified items are shown in the menu bar for the web user interface (once activated) or are no longer available (once deactivated).

Automatic assignment of rights for new user accounts

Granted permissions:

◆ User settings
◆ Login
◆ Call manager
◆ Voicemail
◆ Redirection
◆ Conference
◆ Records
◆ Addressbook
◆ Fax lists
◆ Keys

Denied permissions:

◆ Phone plug-in
◆ Administration

Groups

Groups are used to define teams in which anyone is entitled to pick up a call. They are also used for mapping functions such as fax and broadcast.

▸ Click on the **New Group** button at the bottom of the **List of registered groups** window.

> **Important**
>
> In contrast to a user password, a group requires an identification number using the digits 0-9. Group members can then log in and out by entering the group ID and password on the keypad (see Appendix **Key combinations on the phone** ➔ **Page 89**).

Example: A group called Sales is created to improve customer orientation. This group is assigned the external connection number 20123746. This number is listed on the company website for complaints and service issues. A call to this number is indicated on the phones belonging to those members logged in to the group. Any of these users can accept the call.

Editing group preferences

There are only minor differences between group and user administration. Just like users, groups have phone numbers (**Assigning phone numbers** ➜ **Page 18**), voicemail boxes (**Voicemail** ➜ **Page 39**) etc.

▸ Click on the editing icon in the **List of registered groups** window. You can configure or edit all group data here.

The call properties for a group

Ringing Strategy: Apart from the standard call functions, simultaneous ringing of the phones for all logged-in group members (**ring-all group**), the following options are available:

Broadcast	This option has only been available on Gigaset IP PRO phones so far. Similar to an announcement (i.e., without having to actively accept the call), all members will receive the call via the phone loudspeaker.
Call hunting	The call is directed to only one group member. If the call is not accepted within 15 seconds, the next member's phone will ring and so on.
Software fax	This function turns the group into a collection point for faxes sent to the group's phone number. All members of the group will receive these faxes.

───── **Please note** ─────

Extended module configurations may create an additional option for the **Ringing Strategy**.

User assignment

▸ You must change to the **User Assignment** tab to assign users to a group.

▸ Click on ⊕ or **Add Person**. You can search for local users or users from other PABXs in an interconnection using the search/list view.

You can set the availability of the members via the group's phone number(s) by activating the checkbox in the **Logged On** column. This activation/deactivation corresponds with the setting that the user makes in his preferences. This means that if the member is logged in, the availability is activated in his user preferences and vice versa.

Phones

Preferences/Autoprovisioning

Phone autoprovisioning is described in chapter **Initial configuration** (see **Settings**
➔ **Page 9**).

List of configured phones

Important

This list does not contain any Gigaset pro phone plug-ins. These must not be config-
ured or applied. If a user is given permission to use the plug-in, he must only activate
it in his preferences. The user can see the phone plug-in in the list of his phones and
it is displayed with **IAX2/...** as its device name.

All automatically and manually configured phones are displayed here. The list view can
be restricted by selecting the first letter of the tab. The number of entries displayed can
be changed to suit your individual needs under **Rows**. Depending on the number to be
displayed, the list will be spread over several pages.

The list contains the following information and options for each phone:

◆ State (whether the device is registered on the PABX)
◆ Device Type
◆ Device Name
◆ IP address
◆ Assigned users - users to whom the device is assigned.
◆ Double clicking on the row or a single click on 🖉 opens the phone's detailed settings.
◆ Clicking on ✕ deletes the phone entry from the list and ultimately from the system.
◆ A single mouse-click on an **IP address** marked in bold opens the web user interface (if
   available) for the corresponding device in a separate browser window.

Other phones can be added via the **Manually** and **Search** buttons.

Configuring phones

Instructions on automatically detecting and configuring phones via the network can be found in the **Initial configuration** chapter (see **Step 1: Configuring the phone** ➔ **Page 8**).

Manually configuring phones

Softphones and hardware phones that cannot be configured automatically can be set up manually.

▶ Using the **Manually** button, open the dialogue for configuring additional phones.

▶ Select the type of phone from the **Telephone Type** dropdown list.

This dropdown list contains all standard phones currently supported by Gigaset T300 PRO / Gigaset T500 PRO. If a device or softphone is not listed, you can either:

– Select "Standard SIP", which contains the basic function settings.

– Create your own configuration for this type of device (see **Defining new device types** ➔ **Page 27**).

▶ Enter a name and password in the **Telephone name** and **Password** fields for the end device. These two entries, in conjunction with the server (IP) address, form the **SIP account**.

─── **Please note** ───

The field corresponding to **Telephone name** has different designations in the configuration interface on the various phone types (clients). Examples include: User name, authorisation name/authentication name.

For some clients, the **Telephone name** must be entered in two separate fields, e.g., in **user name** und **authorisation name**.

▶ Click on **Save** to complete the manual configuration of a new phone.

▶ Assign the phone to a user. This will then show the phone's state as active.

─── **Important** ───

For softphones and manually configured end devices, it is also necessary to enter the SIP account (user name, password, server IP address) in the settings of the respective phone and to restart the device.

Overwriting phone settings

For several device types, there is an option to copy the settings of the Gigaset T300 PRO / Gigaset T500 PRO directly to the phone via the network without having to change the settings on the phone.

The prerequisites for this are:

◆ The phone has already been configured for the first time in Gigaset T300 PRO / Gigaset T500 PRO and on the phone.

◆ The phone's HTTP access must not be protected by a user name and/or password.

◆ The corresponding SIP account must be stored on the phone's primary line, as Gigaset T300 PRO / Gigaset T500 PRO only overwrites this line. If the SIP account is located on another line, Gigaset T300 PRO / Gigaset T500 PRO will create an additional account on Line 1.

Fax functionality

This must be specified via **Functionality** for ATA adapters used to connect fax machines.

Advanced settings

Important

When operating external phones, several ports in the firewall that protect the local network from Internet access (not the firewall for the Gigaset T300 PRO / Gigaset T500 PRO server) must be enabled. The following ports are affected: 5060 UDP and 10000-20000 UDP (for SIP and RTP), 4569 UDP (for the IAX protocol).

NAT	If the phone is not part of the local network, **nat** must be changed to **yes** to allow the transfer of voice information via firewall/router.
Codecs	Codecs convert analogue (voice) information into digital data and vice versa (encoding and decoding). One or more codecs may be assigned to the phone. You must enter multiple codecs as comma-separated values, e.g., **alaw,ulaw,gsm**.
	Although Gigaset T300 PRO / Gigaset T500 PRO supports many of the commonly used codecs, we recommend using the codecs G.711 alaw and ulaw. G.711 has the best voice quality (comparable to ISDN) and a minimal delay of 2ms. However, it does require a (relatively) high bit rate of up to 84 kbit/s. In comparison, codes such as G.729 only require a bit rate of 8 kbit/s but have a delay of between 25 and 35 ms.
	To use a device for video telephony, you will also require the appropriate codec h263 or h263p.
	If you wish the phone to transfer voice and video data, you must enter the voice codec first followed by the video codec.
	Example: **alaw,ulaw,h263p**
restr. to IP	**restr. to IP** limits operation of the phone to the specified IP address.

─────── **Please note** ───────

Usage of several codecs is subject to license G.729, for example, is integrated in Gigaset T300 PRO / Gigaset T500 PRO, but must be registered first. The program for this can be found in **/usr/lib/asterisk/modules/g729/** and is launched with the command
./register-g729-32-bit.

Defining new device types

If you cannot find the device you wish to use listed in the default list, you can add several device types.

▸ Select **new...** from the **Telephone Type** dropdown menu.

Configure the new device type n the **New Phone** dialogue window.

▸ Give the device type a unique name.

In the entry screen, the fields **type**, **dtmfmode**, **canreinvite** and **qualify** are preset and can be applied in many cases. All other fields are not mandatory fields. Their importance is explained in the following section.

Options for phone configuration

type	The phone's connection type.
peer	Can receive calls via the Gigaset T300 PRO / Gigaset T500 PRO server.
user	Can instigate calls via the Gigaset T300 PRO / Gigaset T500 PRO server.
friend	A device that can both receive and instigate calls. This is the most common setting and advisable in most instances.
host	Use the **dynamic** option (instead of specifying an IP address), as several device types can only log in with **dynamic**.
dtmfmode	Indicates the tone dialling standard that should be used. This is dependent on the phone type being configured (see manufacturer's specifications).
permit	IP address(es), via which the client can log on to the server. Either a pure IP (e.g., **192.168.0.1**) or IP/subnet mask (e.g., **192.168.0.2/255.255.255.0**). Multiple entries must be separated by commas.
deny	Is the opposite of **permit** and excludes the IP addresses specified here.
mask	If you have specified IP addresses without subnet masks under **permit** and **deny**, you can enter a single subnet mask (e.g., **255.255.255.0**) for both fields.
nat	**yes**: If the phone is located outside of the LAN firewall, or **no** (default value).
canreinvite	**yes** provides clients with the option to exchange data directly (without server involvement) after establishing a connection. As several hardware components malfunction with this setting, the default value **no** should not be changed.
disallow	It is advisable to prohibit all codecs by specifying **all** and explicitly allow the codecs of your choice by specifying these in the **allow** field. The codecs must be entered as comma-separated values, e.g., **alaw,ulaw**.

insecure	**very** - if the host is already registered, it can instigate calls without having to reauthenticate itself. **yes** - a peer can register himself easily with the IP address (without specifying a specific port).
trustrpid	**yes** or **no** (default value).
progressinband	**yes**, **no** or **never** (default value).
promiscredir	**yes** or **no** (default value).
port	The port number 5060 is the default value for the SIP protocol on the Gigaset T300 PRO / Gigaset T500 PRO server. This value can be replaced by a port number to be used exclusively for SIP.
qualify	Either **yes**, **no** or a specification in milliseconds. For **yes**, the server tests every 2000 ms whether the client is still available. If the client does not react within this timeframe, it is regarded as not available for Gigaset T300 PRO / Gigaset T500 PRO and no other calls are forwarded to the client.
defaultip	Standard IP address for a client; if the value **dynamic** is specified in the **host** field, the Gigaset T300 PRO / Gigaset T500 PRO will attempt to forward incoming calls for a client still to be registered to this IP address.
rtptimeout	Number of seconds after which a connection is automatically terminated after data traffic inactivity (RTP). This is advisable, e.g., when a subscriber forgets to replace the receiver.
rtpholdtimeout	If **rtptimeout** does not respond during a call, then specify the maximum number of seconds for which a call may be held here. The number must be greater than the **rtptimeout** value.
fromdomain and **fromuser**	Connections to some SIP networks require a user name and the domain name of the server.

▸ Click on **Save** to copy your configuration to the list of phone types.

In future, you can click on ✐ in the dropdown list for device types to open it for editing purposes.

Modules

The Gigaset pro modules have additional features and functions that are not permanently integrated in Gigaset T300 PRO / Gigaset T500 PRO. Pre-defined modules are provided for the following functions:

Announcement before pick up	(Ansage vor Melden) Playing back a sound file (music or an announcement) for incoming calls for specific numbers.
Call-through	Connecting external calls via Gigaset T300 PRO / Gigaset T500 PRO to other external phone numbers. This will incur fewer costs for the caller, e.g., a field worker using a mobile phone, as he will only be charged for the connection to Gigaset T300 PRO / Gigaset T500 PRO.
Personal secretary	(Chefsekretärin) Redirecting various callers (groups) to two separate target numbers.
Single-stage IVR	(IVR einstufig) Configuration of a voice menu with keypad input. A target number can be saved for each key, to which the caller can be forwarded at the press of a button.
Memo for me	(Memo an mich) Recording of voice files on the phone via selected phone numbers. Subsequently, the recording is sent via e-mail to a user-defined address.
SIP password security check	(SIP Passwort Sicherheitscheck) Checking SIP passwords.
Voicemail playback	(Voicemailabfrage) Listening to the messages on the voicemail box.
Time-controlled redirection	(Zeitgesteuerte Umleitung) "Day and night service". Calls for phone numbers that correspond to the specified samples are redirected to a voicemail box or a voice message. Negative lists can be used to ensure callers and called numbers are not processed by this module.

The modules supplied with Gigaset T300 PRO / Gigaset T500 PRO can be modified to suit personal requirements. However, the module concept primarily offers the possibility of creating your own functions.

Detailed, up-to-date descriptions of the modules provided can be found in the Gigaset pro Wiki http://wiki.gigaset.com.

Module configuration allows you to apply the module quickly and easily. This configuration process is described below.

Module configuration

A **Module Configuration** is an executable instance of a module. The underlying module is modified for productive use in or by the **Configuration**.

Existing configurations are denoted by four indicators in the overview list.

State: If this is not highlighted in green, there is an error in the module. The error message is shown by moving the mouse over the status.

Module: Name of the underlying module.

Name: The actual name of the configuration.

Active: This option can temporarily deactivate each module configuration thus ensuring it will no longer be executed. Nonetheless, the settings within the configuration are retained.

Creating a new module configuration

▸ Open the selection of available modules via **New Configuration**.

▸ Select the module you wish to use from the list and click on **Create**.

This opens the configuration editing view. Depending on the module selected, this contains various tabs.

All module configurations contain the **General** tab.

▸ Specify a name for your configuration here, with the option of adding a short description or comment for internal documentation purposes.

Several module configurations contain the **Phonenumbers** tab. This is used to select phone numbers from your Gigaset T300 PRO / Gigaset T500 PRO PABX, for which the module should be used.

The following paragraphs illustrate the module configuration steps using the modules supplied with the Gigaset T300 PRO / Gigaset T500 PRO.

Log file

This section is used to display log entries for the respective module configuration. The scope and level of the log file is specified directly in the module on which the configuration is based. This log file cannot be changed here and varies considerably from module to module - many modules do not have any protocol features.

The log levels in the selection menu are sorted in ascending hierarchical order. This means that every level also contains information about the stages above it. For example, the **TRACE** level also can display the entries for the other levels.

If there are log entries in the selected view, a button for downloading a file containing these entries is shown below the list on the left. This file contains the number of entries or rows specified above.

--- **Please note** ---

The number of lines displayed relates to the last n rows in the log file; these are displayed in chronological descending order for improved readability!

Order of execution

Configurations of modules from **Call-Processing** may have the same rights and thus compete for access to calls. The **Execution order** domain is used to control this. Here, you can specify the sequence of the various call processing subtype modules, according to which the module configurations should process call connections. You can change the sequence using the arrow keys or drag & drop.

Edit execution order			ℹ
▶	Execution: always		
▼	Execution: on all incoming calls		

Priority	Module Configuration	Module	
▦ 1	Redirect	Zeitgesteuerte Umleitung	▲ ▽

| ▼ | Execution: on incoming calls to user / group | | |

Priority	Module Configuration	Module	
▦ 1	Test	Ansage vor Melden	▲ ▽

| ▶ | Execution: on outgoing calls | | |
| ▶ | Execution: on outgoing calls per used line | | |

Save Cancel

The execution lists only contain the relevant module configurations. This means that you do not have to add these yourself or put them in a sequence. If a sequence does not contain any entries, this means that there are no competing module configurations of this type.

Module library

The library contains the modules supplied with Gigaset T300 PRO / Gigaset T500 PRO and can be expanded by adding self-created and imported modules to suit your needs.

Modules are shown in the overview list with the following indicators:

State   If this is not highlighted in green, there is an error in the module. The error message is shown by moving the mouse over the status.

Name   Name the module

Vendor   The name of the module creator

🔒   The module is protected by its own password can not be edited, copied or downloaded. Click on this icon to enter the password.

🔓   The password protection is temporarily deactivated. This module can be edited, copied and downloaded during the current Gigaset T300 PRO / Gigaset T500 PRO session. One mouse-click on the icon closes the module again!

📑   For creating an identical copy (clone) of the module. The copy is inserted below the original version in the list and can be edited and modified independently of the original.

⤓   For downloading the module as a ZIP file. Downloading a module allows you to save it locally, e.g., to use on another Gigaset T300 PRO / Gigaset T500 PRO installation or to transfer it. Select the option "Save to hard disk/diskette" and save the file in the directory you wish to use.

✏   For editing this module in the module designer

✕   For deleting this module

Module import

▸ Click on **Import Module** to import a module.

▸ Then, select a module file in ***.jar** or ***.zip** format in the file manager and upload it on to the server. The module is copied to the library list.

──────── **Warning** ────────

When importing a module that is already available, this will be overwritten irrespective of the version number by the file being uploaded.

Creating new modules

The module designer is the development environment for creating modules.

You can edit existing modules and create new modules. Create functions and function components that you can adapt to suit your needs and integrate in various modules.

Open the module designer by clicking on ⊕ or **Create new Module**.

The Gigaset T300 PRO / Gigaset T500 PRO module designer

> ── **Please note** ──────────
>
> Several windows of the module designer can be open at the same time, making it possible to edit an existing module and create a new one simultaneously. Functions and individual functional components can be copied and inserted in both module designers.

A module always contains (as a minimum) a function, which defines what the module should execute. Hence, the most important step in creating a module is the function development in the **Development** tab.

Development

▸ In the left-hand side of the window, click on ⊕ under **Functions** to create a function. This pane will eventually show all functions of the current module and can be opened for editing.
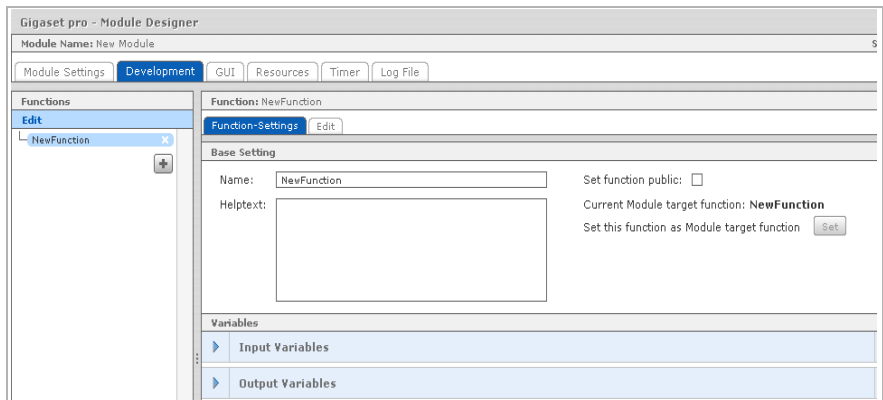
The **Function-Settings** tab contains the following key properties:

◆ The name of the function as it appears on the left in the **Functions** list.

◆ The **Set function public** option. This is used to allow the function to be integrated into other modules.

◆ The **Set this function as Module target function** option. The target function for a module will always be executed when the module is started. If the module only has one function, then this is naturally the target function.

The **Edit** tab is where the function is actually developed. This view contains two main panes: the editor is displayed in the centre with the component selection **Components** on the right.

The components comprise core components listed in the **Library** menu and public (**Public**) functions from modules that already exist.

Modules

Now you can create the function using the commands from the components. There are two ways to do this:

◆ By double-clicking with the left mouse key on a component or

◆ By dragging the command from the components menu on the right and dropping it into the editor in the centre. The command "clicks" into place.

If the component is displayed in the editor, you can configure it in the lower section of the editor window.

```
Function-Settings    Edit

||| //This is a simple "Hello World" program
||| GetCallerNumber() --> _callerNumber, _countryCode
||| ▼ if((_countryCode == 'DE'))
    ||| //For a german caller say "Hello World" in german
    ||| TextToSpeech(['Hallo','Welt'],'Katrin','0','0') --> _result
||| ▼ else
    ||| //For everyone else, just say "Hello World"
    ||| TextToSpeech(['Hello','World'],'David','0','0') --> _result
||| Hangup()
```

A simple function using **TextToSpeech** that greets the caller with "Hello World". Please note lines 4 and 5 as well as 7 and 8: these command lines are slightly indented as they will only be executed depending on the **if() else** loop.

A log entry is added to the function containing the caller's country code (_**countryCode**).

The editor menu

The editor menu enables you to edit one or more previously selected components (rows) in the editor. The individual commands are:

✂	Cut
⧉	Copy
⇥	Insert above selection
⇤	Insert below selection
//	Deactivate (corresponds to commenting out program rows. The deactivated components are not executed.)
✕	Enable
✕	Delete
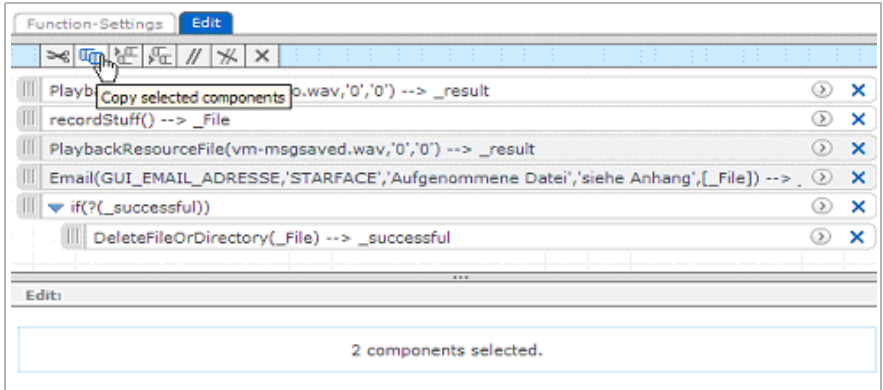
Copying two components using the editor menu. Below the components, the current selection is displayed in text form (2 components selected).

The editing options are also available in the ⓥ pop-up menu for each component.
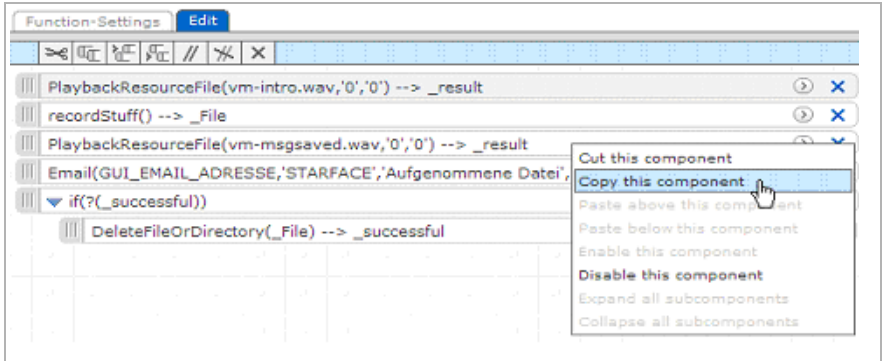
Copying a component using the context menu

GUI

In this tab, the developer can insert his own tabs with graphical UI elements. These allow you to customise modules during module configuration. The interface elements range from simple components for creating headings and messages or fields for user inputs, for example checkboxes and phone number lists, right through to complex components such as user and group lists, elements for creating schedules and **Key Value Maps** – tables for assigning **value**s to **key**s.

You can insert a GUI component into the **Edit** tab by double-clicking or dragging and dropping the components from the component pane on the right. While developing the user interface, you can preview the components at any time by switching to the **Preview** tab.

Resources

If additional files, such as a specific sound file, are going to be used in the module, you can add these to the module using the file upload function.

Timer

A module can be executed via timers in call events as an additional feature or alternative to the start of a call. It is possible to specify a binding schedule directly in the module or to use the corresponding input element **TimerSettingsInput** in the **GUI** tab. This enables you to create a customised schedule in every module configuration based on the module.

> ——— **Warning** ———————————————————————
>
> A timer defined directly in the module uses and saves the time zone of the server, on which the module was created. This means: If the start point, for example, is set for 1/1/2009 00:00 and the server uses Central European time, the module will be started on 31/12/2008 at 23:00 on a server using GMT.

Log file

If you have incorporated the command **Log** for the **System** component into one of the module functions, all future log outputs will occur both here in the **Log File** tab and in the **Log file** pane for module configurations.

Module settings

The **Module Settings** tab is for specifying several basic module properties. These details can be entered once the individual functions and GUI components have been developed, as soon as the area of application and module features have been determined.

The key settings include:

Define module type

The system differentiates between three basic module types:

Standard   The module reacts to calls for phone numbers that have been assigned during module configuration. It "answers" these calls. This module type is suitable for IVR (Interactive Voice Response).

Call-Processing   A module of this type intervenes during the standard PABX call process and can make changes (e.g., changing incoming phone number/resolving caller name in a directory) and forwarding the call conventionally. This type of module is suitable for e.g., blacklists, reverse number lookup in external systems, announcement before pick up. This module type also requires the **Activation** setting. This specifies the cases in which the module should be activated:

◆ For all calls

◆ For all incoming calls

◆ For incoming calls for groups and users

◆ For all outgoing calls

◆ For outgoing calls differentiating between the lines used. This means that you can define functions with case distinctions for various lines (ISDN, provider, etc.) in the module.

Extended   This module type is only required for very complexly structured modules. The module can be called up via **Standard Entrypoints** (based on user and group properties) and **Call-Processing Entrypoints**. Configuring modules of this type creates an additional option for the standard rule for phone number and/or the ringing strategy of groups (see **Phone number properties** ➜ **Page 19** and **The call properties for a group** ➜ **Page 22**).

Target function

If the module contains several functions, the target function is the one executed when the module or more accurately its future configurations are called up.

Voicemail

A list of the voicemail boxes already set up is displayed. Operation is standardised, i.e., with sorting, searching, alphabetical tabs etc. You can add, edit and delete voicemail boxes.

In the editing screen (accessed via ✐) for a voicemail box, you can add and remove users and user groups. It is possible to create, edit and play back announcements. Announcements created here are saved as system-wide announcements meaning that they are visible to all users, can be selected and also be edited by users with administration rights. Personal, private announcements should thus always be configured in the user's own preferences.

If the option for voicemail is checked when creating a user/group account, the names of the corresponding voicemail box are already assigned.

Configuring and editing voicemail boxes

```
Edit Voicemail Box

Mailbox Name:  mailbox 37      Mailbox Number:*9    Password:  3654
```

———— **Please note** ————
One a new voicemail box has been saved, its ID is automatically generated.
This number is used to listen to any voicemails received via the key combination
⟨ 9 ⟩ + <ID for voicemail box> directly on the phone.

Send Message By E-Mail: Incoming messages on the voicemail box can be sent to the user as an e-mail attachment as an option. Simply activate the checkbox below **Send Message By E-Mail**. The user can make and change these settings in his preferences at any time.

Recording a voicemail announcement

▶ Select **Manage Announcements**. You will see the list of available announcements.
▶ You can open the dialogue window for recording new texts with the **New Announcement** button.
▶ First, select a name for the new text.
▶ Select the phone with which you wish to record the announcement and click on **Record**.

New Announcement	ⓘ

Name: [   ]

⦿ Record Announcement:
   (SIP/1001.DE900I ∨) [Record]

◯ Upload announcement:
   [   ] Browse   [Upload]

[Save] [Cancel]
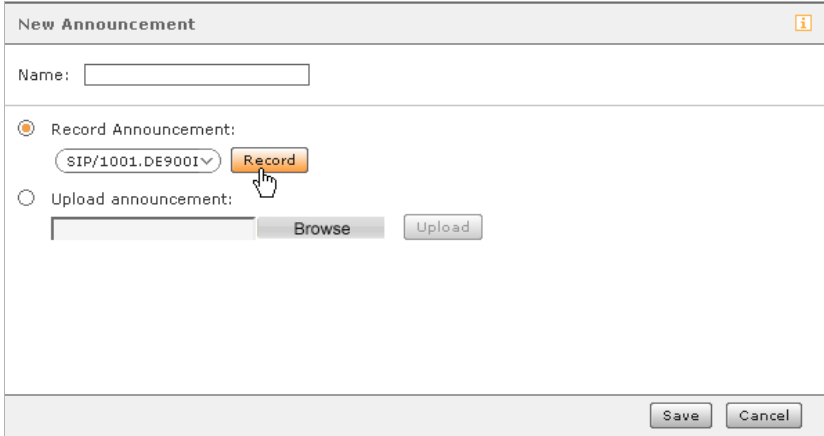
The telephone rings and you can hear a spoken instruction.
▶ Speak the new announcement text and then press ⎡ # ⎤ on the phone to end the recording.
▶ Then click on **Save** in the dialogue window to save the new announcement on Gigaset T300 PRO / Gigaset T500 PRO.

If you wish to change the announcement, click on ✎ and repeat the recording process.

Uploading a file with an announcement

▶ Select **Manage Announcements**.
▶ By pressing the **New Announcement** button, you will open the dialogue window with the same name.
▶ First, select a name for the new text.
▶ Activate the **Upload announcement** option.
▶ Click on **Browse** and select the file you need on the PC.
▶ Select **Upload**.

Please note

Audio files for announcement must have the following properties:
WAV mono format, sampling rate: 8 kHz, bit rate: 16 bit, PCM coding.

New Announcement	i

Name: [on busy]

○ Record Announcement:
  (SIP/1001.DE900I∨) [Record]

◉ Upload announcement:
  [   ] [Browse] [Upload]

[Save] [Cancel]

If the file has been loaded successfully, the file name will be displayed.
▶ Then click on **Save** in the dialogue window to save the new announcement on the Gigaset T300 PRO / Gigaset T500 PRO.

If you wish to change the announcement, click on ✎ and repeat the recording process.

Conference

Several base settings must be made before you can use the managed conference function. First, phone numbers are defined, via which the participants can join the conference. When setting up an individual conference via the corresponding function window in the main menu, a PIN is automatically generated for each invited participant. This is required to be able to access the conference; otherwise participants will not be able to dial in to the conference.

The **Server Address for Web Link** specifies an internal or external IP address that is inserted into the e-mail as a web link. By going to this address, participants can fully participate in the conference in the Internet browser.

The invitation text available is a general template and should be modified when planning and setting up individual conferences. There are **Template Variables** available for automatically creating texts of invitation. These are dynamically replaced with values such as conference PIN, phone number, time etc. when the e-mail is sent.

▸ To insert a variable, mark the desired point in the text and click on the corresponding entry in the selection list.

Addressbook

Selecting the addressbook

You have the option to either create new directories using the addressbook integrated in Gigaset T300 PRO / Gigaset T500 PRO or integrate existing directories via **LDAP**.

The directories required for the addressbook are created in the **Folder Configuration** - e.g., a directory for customer contacts and a second for business partners. You can create additional directories at any time. If users are supposed to be able to edit contact data and create new entries, activating the checkbox below **Write rights** will allow the directory to be edited.

The folders configured in this manner are accessible to the addressbook user in a selection list, which he can use to change between the individual directories.

The layout of the addressbook view and the view of the individual contact data records is configured in the **Layout** tab. The layout of the addressbook is already set up but can be modified here to suit the user's needs. However, the layout for LDAP folders must be set up first.

Connection to the LDAP server

To establish a connection to the LDAP server, you will require the IP address of the server, valid user name and password, and the base directory on the LDAP server that should be accessed. The format of this data should be in LDAP syntax. Once a connection to the server has been established, it is possible to select the directories that should be available in the addressbook in the folder configuration.

Folder configuration

Give the directories in the left-hand column a name that will then be used in the selection list for the addressbook folder.

The "Private" folder has been renamed and folder "Partner" has been added.
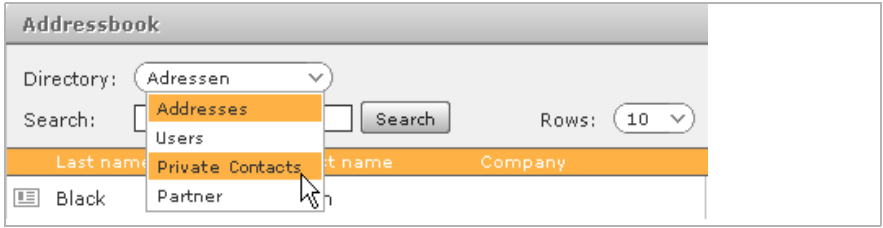
The modified directory list in the addressbook.

Please note

There is a layout already available for the addressbook. If it is intended for address-books to be accessed on the LDAP server, then the layout for these addressbooks must be configured first. More information about this can be found in the next section.

Layout

You can choose from several options:
◆ MS Active Directory 2003
◆ LDAP view
◆ Internal addressbook
◆ Extended internal addressbook

Individual modifications can be made here.

Configuring the list-view

Here, you can specify entries that should be seen directly in the open addressbook. Column 4 is used for phone numbers. Gigaset T300 PRO / Gigaset T500 PRO uses name resolution, i.e., to assign names to phone numbers, with the phone numbers saved here. If one of these fields is removed from the view (e.g., "mobile"), the corresponding name can not be shown in the call lists or the call manager.

Configuring the contact view

The blocks created here are used for the contact view, similar to an index card. All detail fields defined in the blocks are visible to the user in the index-card view and can be edited (if read/write permissions available).

The standard contact views

There are blocks ready for use for the addressbook from the Gigaset T300 PRO / Gigaset T500 PRO in the templates "Internal addressbook" and "Extended internal addressbook":

The contact view, as generated by the "Internal addressbook" template and displayed to the users.

The contact view, as generated by the "Extended internal addressbook" template and displayed to the users.

Extending existing blocks

▶ To add a new field or additional line to a block, simply click on ✛ in the block's right-hand column.

▶ In the **Displayname** column, select the column for the input field.

▶ By selecting the **Fieldname** column, you are assigning the value you require to the field.

Example: The entries in the **Contact** block should contain the position of the person within the company alongside the company's name. Add a row to the block as described above and select the entry **Job Title** below **Displayname**. For the field name, specify **job_title**.

Adding blocks to the contact view

▸ To add an additional block to the contact view, click on **New Block** or ⊕ .

▸ Search for the title of the block section in the **Block name** selection.

▸ Then add the fields you require to the **Displayname and order** table, as described in the previous section.

Example: You want to expand the contact view to contain a field for the delivery address. Create a new block with the block name **Dispatch address** and insert the address fields you require for this into the table using ⊹ .

Phone numbers

This list view provides an overview of the phone numbers already assigned and their mapping to users, groups and module configurations.

▸ To change a list entry, double click on it or click on ✎ .

The **Phone Numbers** tab for the relevant user or group account or module configuration opens and the mapping can be modified.

Lines

General

The general settings affecting all lines in the first tab are described in Chapter **Initial configuration** in **Step 2: Configuring the lines** (➔ **Page 11**).

The following sections describe setting up individual lines in the same tab and their external call numbers.

Lines

Lines denote the connections of the Gigaset T300 PRO / Gigaset T500 PRO PABX that are used for telephony.

These are:

◆ Direct Internet connections via a VoIP provider

◆ ISDN connections to an ISDN vendor or internal ISDN device

◆ Connections to analogue devices or to an analogue phone network

Hence, there are the following options available for connection in the selection list:

◆ Provider

◆ ISDN card, external/ISDN card, internal

◆ Analogue FXS/FXO

> **Please note**
>
> Analogue and ISDN connections are only possible if you install an analogue and/or ISDN card in your Gigaset T300 PRO / Gigaset T500 PRO. You can obtain these cards from Gigaset Communications. Third-party cards may not be supported or only in part.
>
> If there are no cards installed in the PABX or these can not be recognised, then you can only select the lines for VoIP providers.

> **Please note**
>
> To set up a provider line or an ISDN connection, call up the **Quickstart Wizard**, which will guide you through the configuration.

Provider connection

Select the configuration of your VoIP provider from the **Provider** selection list. If this is not available in the list, then you can create a new configuration. See **Creating and editing the provider configuration** ➜ **Page 47**.

If your provider or the type of contract requires an authentication, you will find your user name and password in your provider's documents, with which the line will authenticate itself to the provider.

The phone numbers are input in the middle tab, Number range (see **Number range** ➜ **Page 51**). Successful authentication is indicated by a green **Provider Status** and the comment "Registered".

Creating and editing the provider configuration

If the VoIP provider is not in the selection list, you can create a new configuration for your provider by using the **new...** option.

In the **New Provider** dialogue window that opens, give the configuration a unique **Provider Name**. In the entry screen at the bottom, the fields **type**, **dtmfmode**, **auth mode**, **auth**, **can reinvite** and **qualify** are preset and can be applied in many cases. Of course, the **host** field is important for the provider address.

The meaning of the individual fields:

type	The connection type	
	peer	Can receive calls via the Gigaset T300 PRO / Gigaset T500 PRO PABX.
	user	Can instigate calls via the Gigaset T300 PRO / Gigaset T500 PRO PABX.
	friend	A partner station that can receive and instigate calls. This is the most common setting and advisable in most instances.
host	The IP address (or the DNS name) of the provider.	
dtmfmode	Indicates the tone dialling standard that should be used. Possible values: rfc2833, inband, info	
auth mode	Depending on the provider, the Gigaset T300 PRO / Gigaset T500 PRO authenticates itself via the IP address or by using a user name and password.	

auth	When authenticating using user name and password, the login data is transferred as either **plaintext** or encoded (**md5**, **rsa**).
canreinvite	**yes** provides clients with the option to exchange data directly (without server involvement) after establishing a connection. As several hardware components malfunction with this setting, the default value **no** should not be changed.
qualify	Either **yes**, **no** or a specification in milliseconds. With **yes**, the server tests at regular intervals whether the client is still contactable with each query lasting 2000 ms. If the client does not react within this timeframe, it is regarded as not available for Gigaset T300 PRO / Gigaset T500 PRO and no other calls are forwarded to the client.

Additional options for the provider configuration

  Please note ---

We can only provide general explanations and recommendations here, as the config-
uration parameters vary from provider to provider. This is why it is advisable to contact
your provider about the correct settings.

---

permit	IP address(es), via which the client can log on to the Gigaset T300 PRO / Gigaset T500 PRO server. Either a pure IP (e.g., 192.168.0.1) or IP/subnet mask (e.g., 192.168.0.2/255.255.255.0). Multiple entries must be sepa-rated by commas.
deny	Is the opposite of **permit** and excludes the IP addresses specified here.
nat	**no** is the default value. **yes -** if the provider's VoIP server (see address in **host**) is not directly contactable, but the address is affected by NAT.
disallow	It is advisable to prohibit all codecs by specifying **all** and explicitly allow the codecs of your choice by specifying these in the **allow** field. These must be entered as comma-separated values, e.g., **alaw,ulaw**.
insecure	**very** - if the host is already registered, it can establish connections with-out having to reauthenticate itself. **yes** - a peer can register himself easily with the IP address (i.e., without specifying a specific port).
progressinband	
	yes, **no** or **never** (default value).
port	The port number 5060 is the default value for the SIP protocol on the Gigaset T300 PRO / Gigaset T500 PRO server. This value can be replaced by a port number to be used exclusively for SIP.
defaultip	If the default IP address for the host; if the **host** field is assigned a **dynamic** value, the Gigaset T300 PRO / Gigaset T500 PRO will attempt to establish connections via this IP address.
	Only effective for type=peer
rtptimeout	Number of seconds after which a connection is automatically terminated after data traffic inactivity (RTP). This is advisable, e.g., when a subscriber forgets to replace the receiver.
	Only effective for type=peer

rtpholdtimeout

If **rtptimeout** does not respond during a call, then specify the maximum number of seconds for which a call may be held here. The number must be greater than the **rtptimeout** value.

Only effective for type=peer

fromdomain / **fromuser** Connections to some SIP networks require you to reenter a user name and the domain name of the server.

Calling line display

Here, you can specify which format is used to show phone numbers in displays, phone lists etc. Please check with your provider which formats it supports!

Using cards/adapters

Cards already installed are usually recognised by the Gigaset T300 PRO / Gigaset T500 PRO and can be selected in the **Card Type** menu. The line can have whatever name you wish; however, it should be self-explanatory (e.g., the name of the respective ISDN vendor).

--- **Please note** ---

If you wish to assign the connections of a card to different lines/connections, then each line must be added using **New Line** or ⊕.

Activating the checkbox below the relevant line will assign it. The status of each connection is indicated by a colour:

◆ Lines already connected, i.e., physically linked with a connector, are highlighted in green.

◆ Not connected but already configured connections are highlighted in yellow. This can occur, e.g., if a cable is disconnected.

◆ Connections that are still not configured or physically connected are indicated by dark grey.

◆ If a connection has already been assigned to a line, it is greyed out and does not have a checkbox.
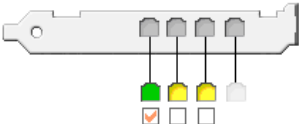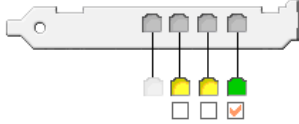
--- **Please note** ---

◆ If you wish to assign several ISDN cards to the same connection/number range, add each additional card using ⊹.

◆ The colour coding only pertains to ISDN cards. The individual connections on analogue cards are always shown in the same colour.

49

Lines

Two connections on an ISDN card can be assigned different lines.

ISDN connection (external/internal)

The first step for configuring ISDN lines is specifying external or internal.

◆ Select **ISDN external**, if the line is to assume the connection to the telephone network.

◆ Select **ISDN internal** to use the line for ISDN fax machines, ISDN pones or as a connection to an existing PABX.

The ISDN card must be connected with a crossover cable at the terminal for the external connection to the telephone network. For Gigaset T300 PRO / Gigaset T500 PRO PABXs, use the crossover ISDN cable supplied.

Important

After any change to the ISDN configuration, the telephony subsystem must be restarted. This will end all running connections!

Analogue cards

Depending on the type of card used and its design, either one of the following options is available or both.

◆ **Analog External** (FXO interface) is for a connection to the telephone network.

◆ **Analog Internal** (FXS Interface) is intended for connecting analogue devices such as fax machines or phones.

Please note

Each analogue line can only be assigned one connection on the analogue card.

Number range

Enter the phone number(s) of your VoIP or ISDN provider here. If the **Country Code** or the **Area Code** deviate from the general settings in the **Preferences** tab, enter these here.

The **Number Type** selection aids the input of several phone numbers or number ranges. The method of input does not affect the functionality of the line.

Examples:

◆ **Single Number**: You have individual phone numbers: 2345-11, 2345-13, 2345-15. As these are not consecutive, select **Single Number** and add each number by clicking on ⊹.

◆ **Number Block**: Your provider has issued you with the numbers 2345-1 to 2345-99. Enter **2345** as the phone number and **1** to **99** as the number range.

Advanced settings

Here you can make changes to each line that deviate from the general settings.

The options and input elements differ depending on the type of line, i.e., whether it is a provider connection, an ISDN or analogue card.

The following settings are possible for all types of lines:

Line Prefix	If several lines have been configured, a dialling code can be created using the line prefix to establish connections via a specific line. Please note that only digits, i.e., single-digit numbers, may be entered as a prefix. The displayed ** * must be input during the dialling process at a later stage.
Deposit	An internal number can be entered for each line as an alternative deposit for incoming calls that are not answered. If **Default** is retained as a setting, this is assumed as a setting in the general settings.
No Screening	The feature **CLIP – No Screening** enables an alternative number to be sent and displayed to the call recipient on outgoing calls. The availability of these features is service provider dependent.
Phone Number Prefix	If **No Screening** is activated, the Gigaset T300 PRO / Gigaset T500 PRO PABX may have to be changed to match the service provider's specification regarding the phone number format of the dialling code. Please clarify this with your provider.

Extended settings for lines to VoIP providers

Max Connection	With provider lines, the maximum number of simultaneous connection per line can be specified manually. This depends on the respective provider/contract. With preset value 0, the number is unlimited!

Extended settings for ISDN cards

Connection	The type of connection depends on your ISDN contract and the ISDN card used.

A basic connection (also known as BRI, BA) or the ISDN card intended for this connection can be either a **Device Connection** or **Multi-device Connection**.

Primary multiplex connections (also known as PRI, PMxA, S_2m, E1, T1, J1) and the cards used for these require the **Device Connection** option.

Important

Setting the line type is crucial for establishing connections and for the ISDN line to function. If you select the incorrect line type, the line will not work despite the line's status display showing green! Please check the documents from your ISDN provider to verify what type of connection you have!

Echo-Cancellation (EC): This feature is only currently available for ISDN cards from Sirrix. If you wish to activate Echo-Cancellation for these cards, the setting depends on the respective card:

◆ Sirrix **PCI2E1** and Sirrix **PCI4S0** with additional EC hardware require the **Hardware** option.

This setting should remain deactivated for all other cards.

Extended settings for analogue cards

The **Signaling** is the method by which connected devices are alerted that the other part has hung up. **Kewlstart** is usually the correct choice for internal lines to devices. For external lines to the telephone network, you may have to choose **loopstart** in the event of your provider not supporting **kewlstart**.

─── **Important** ───────────────────────────────────
The type of signalling depends on the respective device and/or phone service provider. Check with the manufacturer and your provider about the correct signalling!
──

Emergency call

The official emergency numbers 110 and 112 are set by default. However, these must still be named and assigned to at least one line. Open the detailed view via ▶ and add the line(s) using 🕀. Where there are several lines, the top one in the list is given priority. You can changes the sequence by using arrow symbols in the **Position** column.

Using ⊕ or **New Emergency Telephone Code**, you can define any number of additional phone or special numbers.

─── **Important** ───────────────────────────────────
If emergency numbers are deleted, they can be assigned as internal phone numbers again. This must be considered when deleting the official emergency numbers 110 and 112.
──

Routing

Routing priority

The **Routing Priority** is required if

◆ more than one line is configured and

◆ at least one COR rule is defined in the **Cost Optimized Routing** tab,

◆ or the PABX is part of an interconnection with location routing (see **Interconnection** → **Page 72** and **Location routing** → **Page 74**).

The priority setting is particularly important for user phone calls that are configured to have a specific phone number display for outgoing connections.
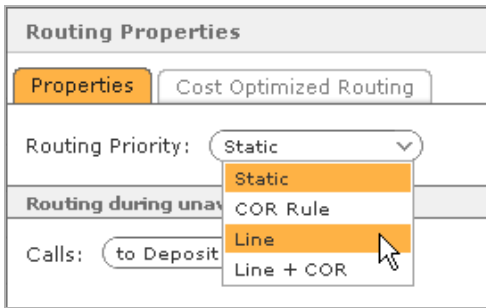
Options for routing priority

Static   A line is automatically selected. CID is withheld. Unless

◆ the routed line belongs to the phone number to be displayed, or

◆ **No Screening** is activated for the line currently being used and your provider supports this service.

Please note: This setting is not the best option for several configured lines. Use the **COR Rule** option instead!

COR Rule   The routing rules specified in the **Cost Optimized Routing** tab are applied. CID is withheld. This is not the case if the routed line belongs to the phone number to be displayed or **No Screening** is activated for the line currently in use, the provider supports this service and the user has not suppressed CID.

Line   Select this option if the number specified in the user preferences should always be displayed for outgoing calls. This selects the line to this numbers.

Caution: If this does not work, e.g., if the line is currently not available or overloaded, an alternative line will not be used. No connections will be established!

Line + COR   If the line requested for the number display is currently not available, then the routing is applied.

Please note: If the user suppresses the number display, the COR rule is applied and the number is withheld.

Routing during unavailability

It must be defined how the PABX processes calls where the user receives a call but does not have an active phone (i.e., he is not logged in to a device) and has not set up redirection.
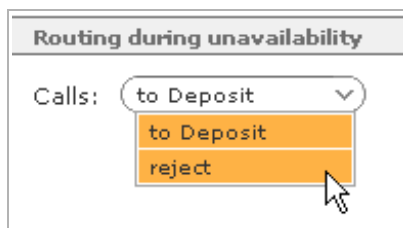
to Deposit	The caller is forwarded to the deposit, the number for which is entered during line configuration. If a deposit is not specified, the call is rejected.
reject	This is indicated to the caller by a special unavailability tone. The call is not redirected!

Cost optimized routing

> **Please note**
>
> If a call is established using a line prefix with ** *, the routing rules for the call are overridden.

▶ Click on ⊕ or **New Rule** to create a COR rule.

▶ Then enter the **Phone Number**, to which the rule should apply. This means that every routing rule created has a unique number range. For outgoing calls, the COR rule applied is the one whose number range best corresponds to the number dialled.

Example: Two COR rules have been defined - the first for the number range 0123, the second for the range 01234. The number 0123456 has just been dialled for an outgoing call. This activates the second COR rule (number range 01234) as 01234 has a longer matching sequence of digits with 0123456 than the 0123 of the first COR rule.

Each COR rule applies within a specific timeframe. You can specify the weekdays (via checkboxes) and the time for this.

In **Specify Line Sequence**, one or more lines are assigned to the timeframe using ⊹. The sequence of lines determines their priority. This means that the top line is tried first to establish a connection, then the next one etc. until all assigned lines have been tried. If this fails for all specified lines, the next available line in the system is used to ensure the connection is established.

A **Pre-Preselection** (call-by-call) can be specified for each line. These then prefix the actual phone number when a connection is being established.

Example: The number 01234567 is dialled. Call-by-call 01019 has been entered for the corresponding line, the Gigaset T300 PRO / Gigaset T500 PRO thus dials 0101901234567.

Important

Call-by-call numbers establish the connections via the respective provider by using these prefixes. The phone tariffs for call-by-call numbers apply and not those from the provider of the line used.

To use the COR rule in another timeframe, simply click on ⊕ or **New Time Frame**.

Important

The timeframes may not overlap. When creating a COR rule with overlapping time-frames, an error message will appear and the row in question is highlighted.

Server

The server screen enables the administration of all key server features and functions of the Gigaset T300 PRO / Gigaset T500 PRO.

These include:

◆ Software updates
◆ Language settings
◆ Configuration of date and time (NTP)
◆ Network settings, DNS, proxy connection
◆ Mail server
◆ Web server
◆ Data backup and system recovery
◆ Log files for system diagnostics
◆ License administration

Status

Software updates

▸ Via **Updates**: **Search now**, you can open the list of available Gigaset T300 PRO / Gigaset T500 PRO updates.

Only versions that are more recent than the existing installation and also compatible with it will be executed. The newest available version is already selected on the right. This contains all features and properties of older versions. This allows you to update to the latest version without possibly have to install several updates one after another.

During the update process, the system's data is backed up. If an error should occur during the update, you can restore the current system status without losing any data.

Depending on the scope of the update, the process can last several minutes. On completion, your Gigaset T300 PRO / Gigaset T500 PRO PABX is restarted, and the update view contains the **To Login** button.

Important

During the updating process, all ongoing server connections and processes are aborted!

Sprache

The server's language setting applies to administrative e-mails, the login field and the web user interface for all users who have not specified a language in their settings.

Server status

The key services (telephony, database, web server, instant messaging) or the complete server can be restarted, if it should be necessary.

Important

The restart disconnects all live connections. Users will have to log back in to the system after the restart.

Time and date – NTP server
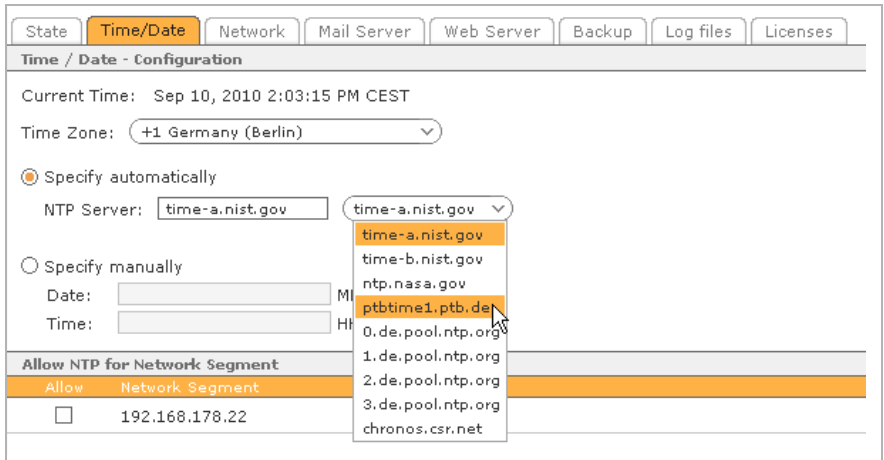
NTP (Network Time Protocol) is used for synchronising the system time of a computer with an NTP server. Depending on whether the server is inside or outside the actual network, it can set the computer time with an accuracy of between 10 ms and 20 s. The drop-down menu contains a list of NTP servers on the Internet. However, a different server address can be entered too. Alternatively, the time can be defined manually. The server's system clock imports the specified time and date information.

Important

The firewall must enable Port 123 to establish outgoing connections to external NTP servers.

By being enabled for the network segment, the Gigaset T300 PRO / Gigaset T500 PRO likewise becomes an NTP server, from which the phones and client computers connected in this segment take their system time. This option must, however, be activated on the end devices.

Warning

After modifying the time settings, the web server must be restarted!

Network

This tab provides an overview of the configurations entered during initial installation, which can be modified here.

SIP settings

SIP (Session Initiation Protocol) is an open network protocol standard for establishing connections between two or more SIP-capable VoIP end devices. A key SIP property is the usage of RTP (Realtime Transport Protocol). RTP "packets" the connection's audio and video data and sends it via UDP (User Datagram Protocol). As port assignment with UDP is dynamic, routers using NAT will not be able to assign the data packets to the corresponding ports. If the server is in a network that uses NAT, e.g., via a router, you must activate the NAT checkbox.

Important ⎯⎯⎯⎯⎯⎯⎯⎯

The following ports in the firewall must be enabled for using external end devices:

◆ 5060 UDP and 10000-20000 UDP for SIP clients
◆ 4569 UDP for IAX-Clients

NAT (Network Address Translation) "masks" the individual internal IP addresses "to the outside" (to the Internet) using one or more public IP addresses. Port masquerading, as this is known, is also frequently used to replace the port numbers during data transfer. The NAT settings must be considered when the Gigaset T300 PRO / Gigaset T500 PRO server is linked via a provider connection and/or external phones are connected (see also **Advanced settings** ➜ **Page 26**).

The interaction of Gigaset T300 PRO / Gigaset T500 PRO and NAT is very dependent on the network architecture, and the settings should not be changed on a functioning system (telephony to be precise). Conversely, the cause of non-functioning connections may be found in the interaction of firewalls, routers and server.

A more in-depth explanation about NAT and its interaction with VoIP can be found at: www.voip-info.org

External address

The **External address** field is particularly important: both the server for instant messaging and the Gigaset T300 PRO / Gigaset T500 PRO WinClient access this entry. With the help of the corresponding button on the right, the server's automatically detected address can be copied into this field. Nevertheless, you can also use the public domain name for your Gigaset T300 PRO / Gigaset T500 PRO server. In the event of Gigaset T300 PRO / Gigaset T500 PRO being masked by NAT, resulting in problems with the external address, the following **STUN** field can help.

STUN

STUN (**S**imple **T**raversal of **U**DP over **N**ATs) is a network protocol used to determine the external IP address of the server. You must enter the address of a freely accessible STUN server. Frequently, your VoIP provider will specify a STUN server.

A list of public servers and additional information on the topic of STUN can be found at http://www.voip-info.org/wiki-STUN.

Network settings

The server addresses determined or configured during installation are entered here. To manually change the addresses for the gateway and DNS server, you must ensure the DHCP setting is **static** for the **Network Adapter**.

Network Settings		
Gateway IP: 192.168.178.1	DNS Server 1:	192.168.178.1
Hostname: .	DNS Server 2:	
	DNS Server 3:	

The **Gateway IP** is the IP address for the interface between your network and the Internet.

The **Hostname** is the computer name of the server that should be unique within the network.

The function of **DNS servers** (**D**omain **N**ame **S**ervice) is to determine IP addresses from web addresses, e.g., www.gigaset.de is 85.214.20.166. Expressed in layman's terms, it is the same relationship as that between telephone numbers and names in the directory.

Proxy settings

If the Gigaset T300 PRO / Gigaset T500 PRO connects to the Internet via a proxy, enter the connection data for the proxy here. This is necessary so that the PABX can send queries for updates and the license management. The availability of the web user interface is ensured without the proxy settings.

Activate **Use for**: **HTTP** to use the connection via the proxy. If the proxy for your network can manage HTTPS traffic, you can also activate the option **HTTPS** to encode and send the server queries mentioned above.

Address expects the network/IP address of the proxy.

Port: is **80** by default (if the proxy is not configured differently).

If the proxy expects an authentication, activate the corresponding option and enter the access data for the proxy. Your network administrator will supply you with this data.

Network adapter

This is an overview of the server network card(s) and their DHCP settings.

If the **Protocol** setting is set as **static**, you can enter the IP address and subnet mask manually.

Mail server

Gigaset T300 PRO / Gigaset T500 PRO sends voicemails, faxes, backup files, backup reports and other system messages (e.g., changes to user data by administrators) via e-mail to users using an integrated SMTP server.

You can specify an alternative **Sender Email Address**. This is shown as sender (as "From" and "Return path" in the mail header) once the message is sent. The recipient of system e-mails can thus reply to an existing address.

Configuration – external mail server

SMTP Server: The address of the SMTP server is available from your e-mail provider or from your network administrator if you are using a company-owned mail server.

User: The user name usually is the full e-mail address or the part before the @ symbol. You can obtain the user name from the respective provider or your network provider.

Type of SMTP dispatch

Most SMTP servers await the sender to "log in" before sending e-mails. This can occur via **SMTP with AUTH** with user name and password or with the, now seldom used **SMTP after POP3**, whereby it is checked whether there are new messages on the incoming post server (POP3) first. The log in data used here also applies for the subsequent e-mail dispatch. To use this option, set **SMTP with AUTH** to **no**, then activate **SMTP after POP3** and input the address of the POP3 server.

Before saving the configuration, the correctness of the data can be checked by clicking on **Test**, where you can also make any necessary changes.

Web server

As a default, **HTTPS Service** is already activated alongside HTTP for the Gigaset T300 PRO / Gigaset T500 PRO web server. Both services are available on the standard port numbers, which you can freely change.

The **Force redirect to HTTPS** option enables access to the Gigaset T300 PRO / Gigaset T500 PRO web user interface via HTTPS only.

———— **Please note** ————

If HTTP is deactivated or the port number is not **80**, problems with several connections may arise, e.g., the addressbook for Gigaset SIP phones.

HTTPS and server certificate

HTTPS (Hypertext Transfer Protocol Secure) is a network protocol for encoding data being transferred using SSL/TLS and provides:

◆ Data confidentiality, i.e., the data can not be viewed by third parties.

◆ Data integrity, as the data can not be manipulated.

◆ Authenticity through the certainty of being connected only to the requested web server.

A certificate for the web server is required to use HTTPS. In the Gigaset T300 PRO / Gigaset T500 PRO, there is only a provisional certificate available.

Click on **New Certificate** to open an entry screen. Two entries are absolutely necessary in this screen:

◆ The server name indicates the domain for which the certificate should apply.

◆ The number of days for which the certificate should be valid.

The domain name must be complete and correct, e.g., **yourcompany.net** (without **https://**). A certificate usually is not valid for any possible sub-domains - however, exceptions are found in the form of the wildcard certificates.

The certificate should be signed by a certificate authority to satisfy the server certificate requirement. A selection of certificate authorities can be found in the settings of your Internet browser (for Internet Explorer: **Internet options** ➜ **Content**; in Firefox: **Options** ➜ **Advanced** ➜ **Encryption**). Obtain the information for the certificate authority as to what details your certificate should contain and the requirements to be fulfilled by the applicant.

The **Certificate Request** button creates an encoded file from the certificate. You can copy the content of the window and send it via e-mail to a certificate authority. The authority checks the request and returns the signed certificate via e-mail.

Importing a certificate

Import Certificate Response opens a new window with two text fields. Copy and paste the signed CA certificate into the upper field and copy and paste the root CA certificate into the lower text field.

Backup

Standard data backup

Gigaset T300 PRO / Gigaset T500 PRO automatically creates a data backup of user, group and system configurations and the call lists, voicemails and voicemail announcements every 24 hours. The backup is stored on the server itself and USB storage media connected to the server. These must be formatted with the file systems FAT32, VFAT or ext2. The file will have the extension **.sar** and be saved on the server at **/root/starface/backup/ Default/**.

The last seven backup files are stored, i.e., the data from seven days will be kept available. This data volume may of course exceed the capacity of external data carriers. In such an event, the oldest backup is always overwritten.

▸ In **List of backup schedules**, you can modify the standard backup settings.

▸ If you wish to create your own backup routines in addition to this, click on **Create** or **New Schedule** in Backup options.

Creating a backup

Step 1: Set name and schedule

The **Name** allows you to identify the backup file at a later stage. In the backup process summary, the protocol will also use this name. In addition, the subdirectory will be created on the server, in the folder **/root/starface/backup/**, where the file will be saved.

In the **Report to** field, you can specify an e-mail address, e.g., of a Gigaset T300 PRO / Gigaset T500 PRO administrator as recipient. The error report is also saved in the **Protocol** tab, if the back up routine is saved as a new configuration (see **Step 4: Finish backup**).

With **Start**, you must specify the time for the first execution. The time specified will be used for all subsequent backups.

Create Backup 1/4
Set name and schedule

Name: `OneClick`　　　Report to: `admin@example.net`

Define execution time:

Backup schedule: `Manual ⌄`

Start: `10 ⌄` `September ⌄` `2010 ⌄`　　　Time (hh:mm): `15 ⌄` `0 ⌄`

Step 2: Choose backup details

A basic data backup comprises core data such as users, groups and configuration settings. In addition, voicemails received, personally created announcements, and the call detail record (CDR) can be backed up. The CDR is a communication data record that can be used for invoicing purposes. It contains information about the calls made, such as participants, time, duration etc.
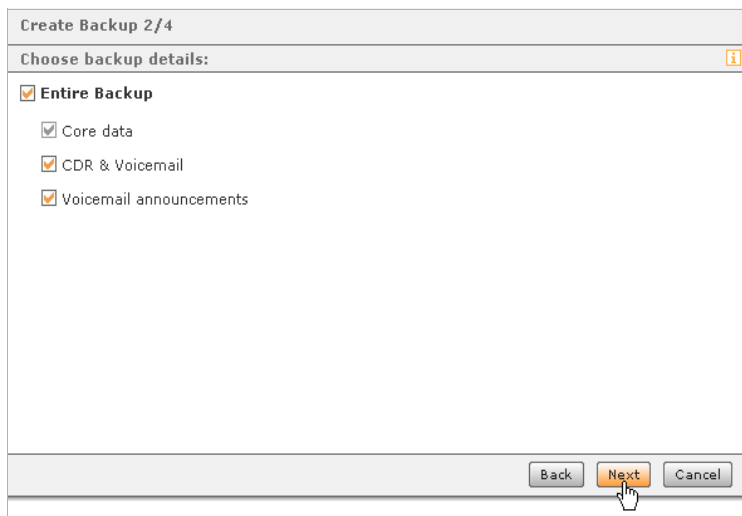
──── **Please note** ────

Both the CDR and voicemails can contain considerable data volumes thus making the backup file correspondingly large. You should consider this when selecting the storage location for the backup.

```
Create Backup 2/4
Choose backup details:                                           [i]
☑ Entire Backup
    ☑ Core data
    ☑ CDR & Voicemail
    ☑ Voicemail announcements




                                          [ Back ] [ Next ] [ Cancel ]

```

Step 3: Define location and data

When creating a new backup routine, you can only select one storage location. In Step 4, the new backup configuration can be copied for saving, whereupon you can add additional medium types.

The options **USB** and **SD-Card** relate to storage locations connected to the server!

```
Create Backup 3/4
Define location and data                                          [i]

Storage device:
  ○ Server Harddrive
  ○ Windows Share
  ○ USB-Stick / SD-Card
  ◉ Send per Mail   [ admin@example.ne ]




                                          [ Back ] [ Next ] [ Cancel ]
```
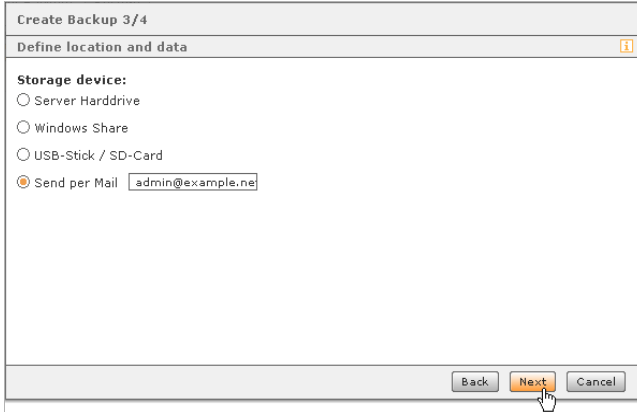
The **Send via E-Mail** option has the backup file sent as an e-mail attachment to the address specified. After saving the backup configuration (in Step 4), the maximum file size of the attachment can be specified. If the specified size is exceeded, an e-mail will not be sent.

If you select **Windows Share**:

▸ Click on ✎ to enter the access data.

Depending on the configuration of the file server, the domain may also have to be entered as the user name.

```
Windows share settings

User:        [ DOMAIN/username      ]
Password:    [ ••••••••••••••••     ]
Server:      [ 192.168.2.122        ]
Share:       [ /gigaset/backups     ]




                                          [ Ok ] [ Cancel ]
```
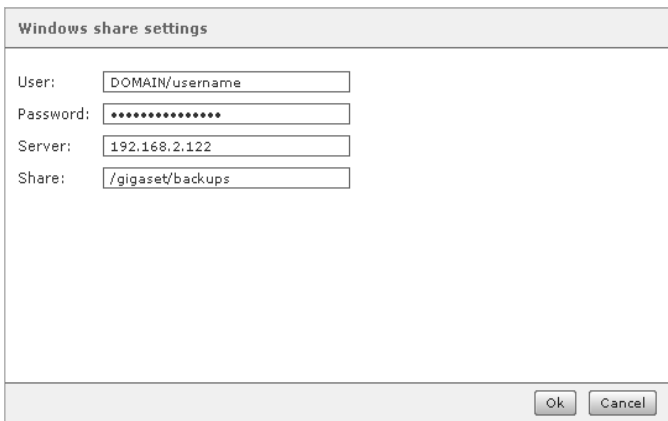
▸ For **Server**, enter the IP address of the file server without specifying the protocol.

▸ Enter the complete directory path in **Share** without the server address!

Step 4: Finish backup

```
Create Backup 4/4
Finish backup                                                              [i]

 ◉ Execute backup and keep settings
 ○ Only execute backup
 ○ Only keep settings

 Summary:
 Name:     OneClick
 Time:     Manual
 Content:  Core data ,CDR & Voicemail ,Voicemail announcements
 Location: E-mail (admin@example.net)

                                          [ Back ] [ Ok ] [ Cancel ]
```

This starts the data backup and a progress bar for the process is opened. If the process reaches
100%, then the data backup has been completed successfully.

```
Backup progress

 Creating Backup:

 [████████████████████████████████████████]  100 %

 Size: 4 MB

                                          [ Download ] [ Close ]
```
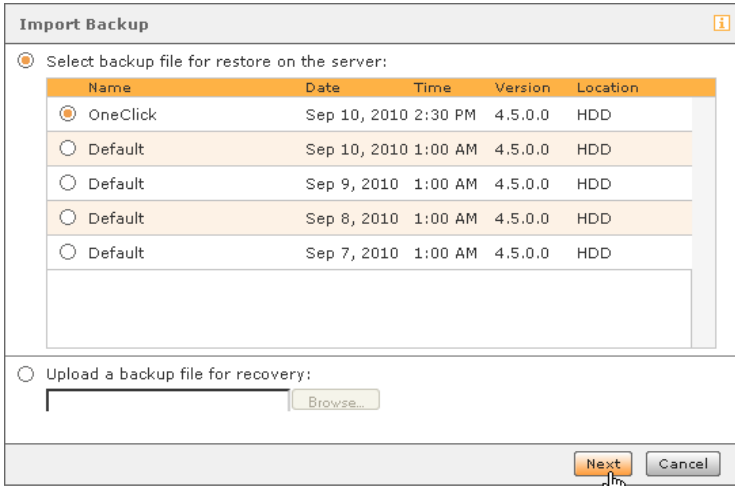
In addition to the storage location specified in Step 3, the backup file can be downloaded to be
saved on the local computer.

Importing a backup

The list shows all of the backup files available on the server in descending chronological order. The most recent file is already highlighted. The name indicates whether the backup has been created as part of the daily routine ("Default") or a self-created backup.

To use a backup on the local computer, select **Upload a backup file for recovery**.

After selecting the backup file, all important related details are listed in the next step.

Backup content

If the backup file contains voicemail announcements, voicemails and the CRD, as well as core data, you can activate the adjacent checkbox to specify whether these data records should also be restored. The CDR (call detail record) is a communication data record that can be used for invoicing purposes. It contains the call records.

The **Ignore IP address** option is important if a backup is being imported from a different Gigaset T300 PRO / Gigaset T500 PRO server. In this case, it is imperative that this function is activated, or left activated.

After confirming with **Next**, you will receive a list of all logged in users and active calls. As the restoring process would end all these processes, you now have the final opportunity to decide whether this process should actually be executed.

List of backup schedules

The daily backup routine and all the saved self-created backup configurations can be edited retrospectively here. In addition, each routine can be started via **Execute**.

The setting options for the individual backups can be found in the detailed view by clicking on ▶. The options in the first three tabs correspond to the steps for creating backups (see **Creating a backup** ➔ **Page 64**).

You can make extended settings in the **Location** tab:

In the **Limited to** column, you can specify the maximum number of backup files to be saved on data carriers. If the maximum number is exceeded, the oldest backup file is overwritten. The number is preset to seven files. The daily back-up can therefore save one week's worth of files before overwriting the first file.

For the e-mail saving option, it is possible to restrict the files size of a backup. This enables you to prevent the sending of e-mail attachments that are too large.

If problems arise due to the memory, error messages can be viewed in the **Protocol** tab.

The meaning of the error messages

◆ **No space left on this device** - This error message is displayed, if there is only 512 MB memory available. This minimum capacity is required by the Gigaset T300 PRO / Gigaset T500 PRO during the update process!

◆ **Warning: No space for another backup on device** - The data backup was saved but the next backup will fail if no additional memory capacity is made available or if the storage medium is not changed.

Log files

With the **Send error report** option, the pop-ups that appear in the event of error messages have an additional button, with which the relevant error report can be sent directly to Gigaset Support. If you do not wish users (i.e., "non-administrators") to have this option, deactivate the function!

As administrator, you can submit the error reports arising in the event of an error at any time using **Send log files to Gigaset support**.

▶ Click on **Send** to send the error reports via e-mail:
  mailto:support.pro@gigaset.com.

Selecting the log file

Here, you can view various log files and configure the scope of storage. By selecting **Level**, you can specify the level of errors/messages that should be stored in each respective file.

The log levels in the selection menu are sorted in descending hierarchical order. This means that each higher level also contains the information from the lower levels. For example: In the **WARN** level, all entries from the **ERROR** and **FATAL** categories are also saved and displayed. Any change to the log level must be saved or copied, before the view will update itself.

———— **Please note** ————

Saving will not affect the existing entries, i.e., these remain in the file and view.

Licenses

## License information

Licensed Users	shows the maximum number of user accounts available for your license.
Still available	shows the number of user accounts not yet used.

Update option

If you have an update agreement, you will see the corresponding option model and the end date of the agreement.

Licenses

To start the registration process for your server, click on **Add License** or ⊕ . Now enter the license key for the server license in the **License Data** form, fill in the (mandatory) fields and click on **Register**.

If you also have a user license, repeat the above process to register the license key for the user license.

Statistical evaluation

Exporting call records

To aid statistical evaluation, you have the option to save the call detail records of individual users and groups as a CSV file locally. Select the corresponding person or group, the range for the calls and the timeframe and then click on **Export**. These can then be processed using an external application such as MS Office Excel and used for billing purposes.

Statistics

The visual display of the call detail record can be influenced by various parameters. This enables you to create views for each user and every group during timeframes of your choice.

Apart from the number and duration of calls, the type selection can provide a visual display of the capacity utilisation of the ISDN lines for the specified timeframes.
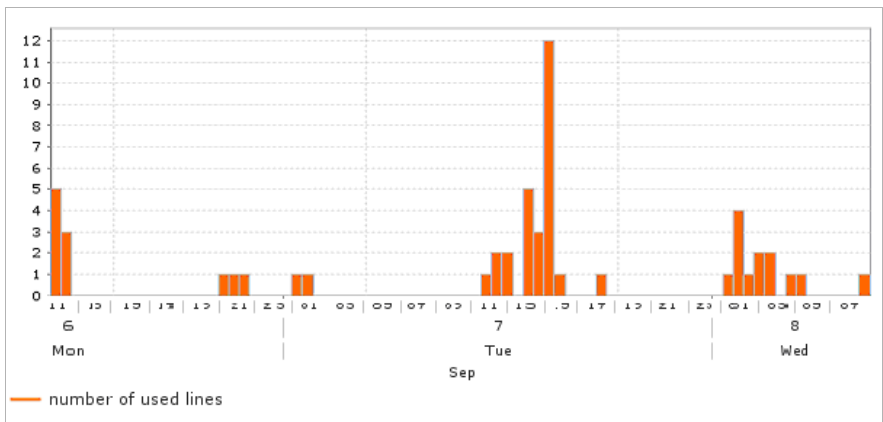
▶ Click on **Update** to generate a graphic table containing the data selected above.

Interconnection

A Gigaset T300 PRO / Gigaset T500 PRO interconnection is the linking up of several Gigaset T300 PRO / Gigaset T500 PRO PABXs at various locations. A prerequisite for the interconnection is that the locations are connected via virtual private networks (Site-to-Site VPN recommended) or static IP addresses with the appropriate firewall configurations. This is necessary as the interconnection depends on unfiltered IP communication between the various locations.

Important

Port 3090 must be enabled for TCP via the integrated firewalls for the interconnection.

Location details

Give the location an appropriate and unique name within the group. The name can contain letters, number and underscores (umlauts and ß are excluded).

The **Prefix** field requires a number that prefixes the internal phone numbers of the PABX within the group. The purpose of this is to avoid overlaps in internal phone number ranges.

Important

Only leave this field blank, when it is assured that all PABXs in the group have separate phone number ranges.

Example: Two PABXs (A and B) both have internal numbers from 10 to 99. PABX A is given the prefix 3 and PABX B 4. If a user from PABX A calls the user with the phone number 10 on PABX B using a function key, the system automatically predials the prefix 4, meaning that 410 is dialled.

Please note

When entering internal phone numbers for another PABX, the caller must enter the prefix manually.

Creating an interconnection

> **Important**
>
> The PABXs in an interconnection are equal. It doesn't matter at which location (on which PABX) the interconnection is created. The PABX on which the interconnection is set up does not act in the sense of a host, server or network node.

Once the **Location details** have been specified, click on **Create group**. In the dialogue window that opens, enter the collective name of the interconnection. The same restrictions apply to this name as stated for the location names. In the next step, you will create the group certificate and save it locally on your computer. Other PABXs will require this certificate to join the group. Clicking on **Save** creates the group and the PABX is online within the group.

Now otherGigaset T300 PRO / Gigaset T500 PRO PABXs can join the group.

Adding other Gigaset T300 PRO / Gigaset T500 PRO PABXs

Once the interconnection has been created (see section **Creating an interconnection**), other PABXs can be added to the group. Here, it is necessary to login to each respective PABX.

After logging in to the web user interface of the other Gigaset T300 PRO / Gigaset T500 PRO PABX, open the administration pane and select **Interconnection** from the menu. Enter the **Name** and **Prefix** of the location. Then click on the **Connect now** button in the **Group details** pane and upload the group certificate from the hard drive to the server. Save it to connect the PABX to the group.

The PABX is immediately shown as being online in the group. The **Number of connected locations** will not yet include the other PABX(s) in the group at this point. Just wait a few seconds and then click on the current tab **Settings** to update the status or change to the **Connected locations** tab.

If a location name or prefix should be changed retrospectively, a PABX can be disconnected from the group at any time via the corresponding button. To reconnect the PABX, you must upload the certificate once more by simply clicking on **Connect device**.

Connected locations

This overview shows the status and details of the other PABXs in the group. Each location is displayed with the following properties:

◆ Status of the location within the group (online/offline)
◆ Name
◆ Phone number prefix
◆ External and internal phone numbers

Non-connected locations can be removed from the list by clicking on the corresponding ✕.

Important

If a location is deleted from the list, the routing and assignment of rights (i.e., user, group and status information) for the location concerned are deleted from the PABX's configuration. If the location should rejoin the group, these settings must be edited in the corresponding tabs once more.

Location routing

Location routing controls which location(s) is/are used to establish outgoing connections on the telephone network. The routing is automatically assumed from all locations with the preset routing priority **COR Rule**. It is possible as a "minimum scenario" that all PABXs make phone calls in the network using only one phone line.

Multiple routing rules can be set for various timeframes and differing number ranges. For outgoing calls, it will then be checked which number range (which rule) corresponds best to the phone number dialled.

Example: Routing rules have been defined for the number ranges 01 and 012 respectively. An outgoing call is instigated for the number 012 5656. The call will be set up via the routing for the number range 012, as this has a longer matching digit sequence than the rule for the 01 number range.

It is important to remember that routing rules on the individual PABXs (see **Cost optimized routing** ➜ **Page 55**) will be included too. This means that if a local COR is a better match for the phone number dialled, then this is given precedence over the location routing.

If a routing rule can not be executed (e.g., due to maximum capacity or over-capacity on a line), the closest corresponding rule is used.


Important

Routing only applies to locations with preset routing priority **COR Rule**.

Rights

The settings in the **Rights** tab are for releasing user and group information from the current location. Released information is available to other locations in the group in the addressbook, as a presence display for function keys and the call manager. Local users can also be members of remote groups, just as remote users can be assigned to local groups.
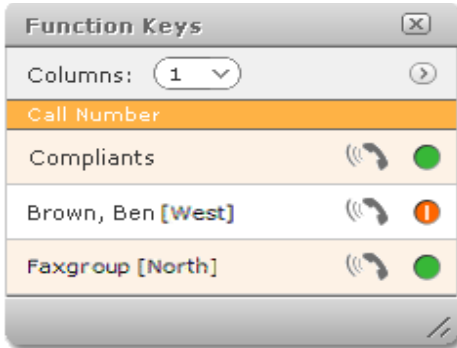
It is necessary to differentiate between user data, group data, user state and group state (the state is required for presence displays). The information can be released individually for each user and group account.

▶ To change the standard release settings for all locations, click on ✎.

Using the **Default setting for new users** (**Groups**), you can specify whether future information from users and groups newly created at this location is automatically accessible. After the standard settings have been saved, all settings for each individual location in the interconnection can be modified separately.

Interconnection

At the location West branch, the local administrator status and information should not be available.

▶ To edit the information release for a specific location, click on ⊕ and select the location you wish to edit from the list above.

A view containing the individual information groups for the selected location appears. The standard settings have been automatically copied and can now be changed.

Advanced settings

On-hold loop

In this view, you can edit the existing on-hold loop and create additional on-hold loops.

The "default" on-hold loop supplied with the Gigaset T300 PRO / Gigaset T500 PRO can be extended by additional sound files or the existing music file can be replaced. To listen to the music, select the phone with which you would like to listen to the file.

▸ Now click on **Listen**. While the on-hold music is being played back, you can adjust the volume of the sound files: click on 🔉, to reduce the volume and on 🔊 to increase it.

Warning

"Excessive" use of this function can damage the sound file! Every mouse-click edits and saves the file. This function does not correspond to simply changing the output volume on the computer or phone.

▸ To create an additional on-hold loop, click on ⊕ or on **Add Music On Hold**.
▸ In **Settings**, specify the name of the music on hold and click on **Apply**.
▸ Go to the **Music** tab to upload the MP3 file(s) of your choice for the on-hold loop on to the server.

The system regards music on hold with several music files as a single entity. Thus, when you click **Listen** to listen to one of the files, all files in the loop are played one after the other, just as the caller would hear them.

An on-hold loop is a "group", to which any phone numbers, users and/or user groups can be assigned via the corresponding tabs. However, this does not apply to the "default" on-hold loop. This is used across the system for all phone numbers not assigned to any newly created on-hold loops.

Macros

Warning

To extend the functionality scope of the Gigaset T300 PRO / Gigaset T500 PRO PABX, we recommend the use of Gigaset T300 PRO / Gigaset T500 PRO modules. Any intervention to the phone system using macros should always be a last resort and executed by experienced administrators!

This editor is used for creating your own extensions or macros for the dial plan. The dial plan essentially consists of all rules and routines for processing all VoIP connections.

In the **Global Includes** text field, global variables are defined, which the **Macros Definition** can use in the lower text field. The syntax has deliberately been kept simple: For every row, enter a variable in the form of **variablename=value**. A macro definition does not necessarily require pre-defined variables: the upper field can also remain blank.

Macros written here can be found under 🖥 **User** in the editing view of a user account, 🖉 in the **Phone Numbers** tab or as an additional option under **Default Rule**.

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The prerequisite for this is that the name of the macro (deviating from the official writing convention) is in the following format:

[[macro-...]]; ${...}

XMPP

XMPP (Extensible Messaging and Presence Protocol) is an XML-based standard protocol for instant messaging, voice services and intra-platform exchange of data. It stems from XMPP from the messaging protocol Jabber, whose core it represents. Both terms are used frequently synonymously.

Every Gigaset T300 PRO / Gigaset T500 PRO installation also contains an independent XMPP server. This establishes the connections for the following applications:

◆ Gigaset T300 PRO / Gigaset T500 PRO WinClient with
– Gigaset T300 PRO / Gigaset T500 PRO Software Fax
– Gigaset T300 PRO / Gigaset T500 PRO TAPI
◆ Several Gigaset T300 PRO / Gigaset T500 PRO integrations (CTI)
◆ Instant messaging

Status

The upper **Connected to XMPP server** display relates to the connection of Gigaset T300 PRO / Gigaset T500 PRO to the XMPP server. It is not an indicator of the state of the XMPP server!

The second **Connected WinClients** status display shows the number of currently connected Gigaset T300 PRO / Gigaset T500 PRO WinClients and their users. Moreover, clients connected for instant messaging are not listed here.

Important

All connections are interrupted when the XMPP server is restarted. This also applies to instant messaging as its connection status is not shown here!

Settings

The **Domain** is the server address via which XMPP clients (instant messaging programs, the Gigaset T300 PRO / Gigaset T500 PRO WinClient and several Gigaset T300 PRO / Gigaset T500 PRO integrations) are connected. The field is automatically filled in by the system:

◆ Either with the external IP address, if an external IP address has been identified
◆ Or with the internal IP address

However, the **Domain** can be entered manually:

◆ If, for example, only clients in the local network should establish connections, insert the internal IP address.

◆ For external clients, you can also specify the DNS name instead of the external IP address.

—————— **Important** ——————

When the domain is changed, the XMPP server is restarted! All existing connections are interrupted.

Resetting the system

Your Gigaset T300 PRO / Gigaset T500 PRO device comes supplied with a fully installed, functioning system. Should you experience serious problems during operation that make the system unusable, you can restore functionality using a recovery version. You can obtain a recovery version ready for installation on a USB stick from Gigaset PRO support.

Prior to installation

◆ Ensure data is available on the computer where necessary. A Gigaset T300 PRO / Gigaset T500 PRO reset is generally performed on a "non-customized" system, i.e., all partitions to be used for Gigaset T300 PRO / Gigaset T500 PRO are automatically deleted in full during the reset. It is not possible to install to available systems at the same time.

◆ The computer should already be connected with the local network and/or Internet via a network card.

◆ If you would like to use ISDN, the computer must be connected with the ISDN network terminator (NTBA/NTPM) via an ISDN adapter and ISDN cable.

◆ To ensure installation starts from the USB stick, USB must be entered as the primary boot medium in BIOS. Following successful installation, the setting can be changed specifying the hard disk as the primary boot medium. For security reasons, access to BIOS should be protected by a password.

Installation steps

▸ Insert the USB stick into a USB slot and restart the system.
The start screen appears.

▸ Press the enter or return key to start the installation process.

First, the process for detecting essential hardware components is performed.

After successfully detecting the graphic input and output components, the graphic installation wizard is launched.

Selecting the language

▸ Select the language setting for the operating system at this point.

This language is then used as you progress through the installation process and in future system messages and server console outputs. The language setting for the Gigaset T300 PRO / Gigaset T500 PRO is made at a later stage and is not affected by this setting.

Selecting the keyboard layout
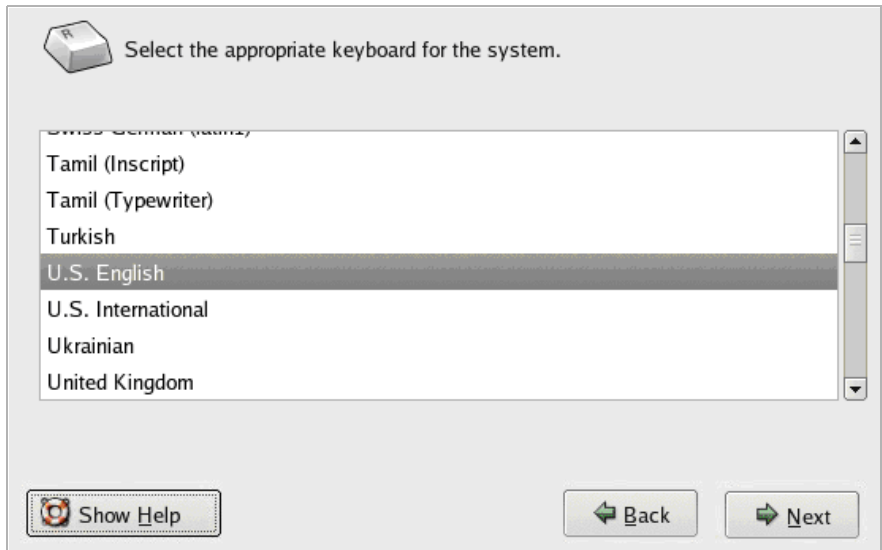
Selecting the keyboard layout is particularly important for defining the root password. Keys can be located in different positions on different keyboards. You must therefore select your country, and, if necessary, the keyboard layout for your computer.

Partitioning the hard disk

The next stage involves partitioning the hard disk. You can choose to manually or auto-matically partition the hard disk.
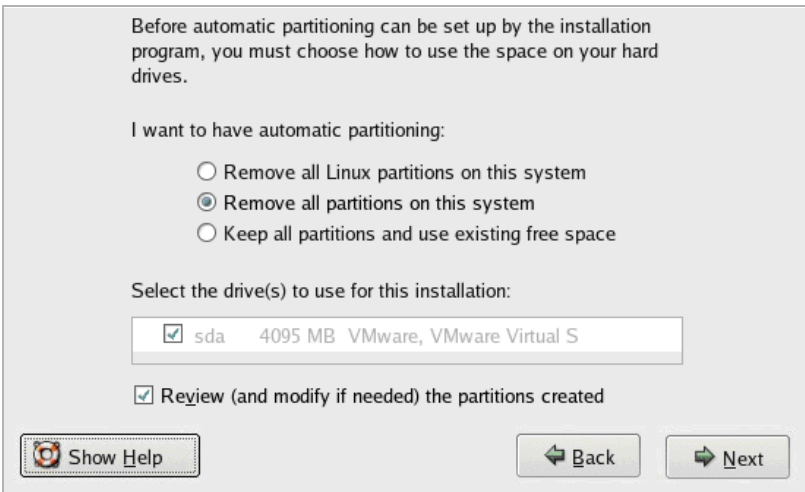
Automatic Partitioning sets partitions based on the selected installation type. You also can customize the partitions once they have been created.

The manual disk partitioning tool, Disk Druid, allows you to create partitions in an interactive environment. You can set the file system types, mount points, partition sizes, and more.

 ⊙ Automatically partition
 ○ Manually partition with Disk Druid

 Show Help   ⬅ Back   ➡ Next

Settings for automatic partitioning:

You have three options for automatic partitioning:

◆ **Remove all Linux partitions on this system**

◆ **Remove all partitions on this system**

◆ **Keep all partitions and use existing free space**

The hard disk to be used for automatic partitioning is also selected at this point.

Before automatic partitioning can be set up by the installation program, you must choose how to use the space on your hard drives.

I want to have automatic partitioning:

 ○ Remove all Linux partitions on this system
 ⊙ Remove all partitions on this system
 ○ Keep all partitions and use existing free space

Select the drive(s) to use for this installation:

 ☑ sda   4095 MB VMware, VMware Virtual S

 ☑ Review (and modify if needed) the partitions created

 Show Help   ⬅ Back   ➡ Next

The **Review (and modify if needed) the partitions created** option is already activated. The next step opens the overview of the partitions. You are still able to make manual changes to the partitioning at this stage. If you deactivate this option, the assistant will switch to **Network settings** (➜ **Page 85**).

Warning

During the partitioning process, all data found in each partition is permanently deleted! If a pre-used hard disk is selected, any data on the hard disk must be saved onto a separate storage medium prior to partitioning! There is not a warranty covering any loss of data.

Manual partitioning

Here you can manually create logical volumes or software RAIDs for example, or enlarge or reduce partitions.

Warning

During the partitioning process, all data found in each partition is permanently deleted! If a pre-used hard disk is selected, any data on the hard disk must be saved onto a separate storage medium prior to partitioning! There is not a warranty covering any loss of data.

Deviations from the suggested partitioning process should only occur where specifically specified in your configuration. For all 'normal' Gigaset T300 PRO / Gigaset T500 PRO installations, we recommend following the recommended partitioning process.

Selecting the boot loader

The boot loader is responsible for selecting and starting the specified operating system. When installing Gigaset T300 PRO / Gigaset T500 PRO, GRUB is already selected as the boot loader. GRUB is able to boot various operating systems, e.g., Linux, Windows 98, XP etc. If Gigaset T300 PRO / Gigaset T500 PRO is the only system operated on the computer, or if Gigaset T300 PRO / Gigaset T500 PRO is booted as the standard operating system, no modifications need to be made at this stage. In this case, continue to **Network settings** (→ **Page 85**).

Important

We recommend using Gigaset T300 PRO / Gigaset T500 PRO as the sole operating system on a computer by selecting the default settings during the installation process. If you make any changes to the boot loader settings, there should be a specific reasons for making this change with regard to the hardware or similar and you should have the relevant knowledge for this particular step!

Select **Change boot loader** and the option **Do not install a boot loader** if the machine you wish to use already has a boot loader.

If there is another partition present in addition to the partition suggested for Gigaset T300 PRO / Gigaset T500 PRO, and you would like to start an operating system using this partition, select the option **Standard** from the list for this partition.

If the operating system is not listed, select **Add** and specify the location of the system.

Extended boot loader options

The boot loader is installed in the master boot record by default, i.e., in the first block on the hard disk. If you are configuring multiple parallel operating systems, this setting must be modified where necessary, e.g., for operating Gigaset T300 PRO / Gigaset T500 PRO and an NTFS-based operating system.

Network settings

Instructions for configuring the network are as follows: Here, you can assign an IP address and subnet mask to the individual network cards if the computer is not connected to a DHCP server or if automatic assignment of a network address is not required. When manually entering the computer name, the gateway and various DNS server settings must also be configured. The gateway specifies the IP address of the computer or router, which in principle acts as an interface between the network and the Internet.

Selecting the time zone

The time zone of the computer is entered on the following screen. One of the yellow points on the world map can be selected using the mouse. Alternatively, you can select the time zone from a list. By activating the UTC option, the coordinated world time is used to calculate time shifts in your specified time zone.

Entering the root password

The administrator of a Linux system is always automatically given the user name "root". The password must contain at least six characters. As you enter the password, it will not appear on the screen. You must enter the password twice. If the two entries do not correspond, the installation program will request that you re-enter the password.

You should always choose a secure password. A secure password is made up of numbers and letters in both upper and lower case, and does not contain meaningful words (an example of a secure password is **Atz38pPj**). Please ensure that you check each individual character when entering your password, i.e., the password is case-sensitive.

The general configuration for the installation is completed on entering the root password.

Starting the installation process

Click next to begin installation of Starface.

A complete log of the installation can be found in the file '/root/install.log' after rebooting your system.

A kickstart file containing the installation options selected can be found in the file '/root/anaconda-ks.cfg' after rebooting the system.

Show Help   ← Back   → Next

▶ Click on **Next** to confirm the start process and install the system on the hard disk.

After restarting the system, a full installation protocol can be viewed in the file **./root/install.log**.

──── **Please note** ────

The console command for opening the installation protocol and/or the "kickstart" file is: **less /root/install.log** or **less /root/anaconda-ks.cfg**

Completing the installation

Congratulations, the installation is complete.

Remove any installation media used during the installation process and press the "Reboot" button to reboot your system.

Show Help   Back   Reboot

▶ Remove the USB stick from the drive and restart the computer.

Gigaset T300 PRO / Gigaset T500 PRO can now be configured and operated in the Internet browser from any computer within the local network. To do this, enter **http://** and the IP address of the Gigaset T300 PRO / Gigaset T500 PRO server into the web browser's address bar. The IP address is shown on the start display.

The start display

After restarting the server, the start display appears showing the IP address of your Gigaset T300 PRO / Gigaset T500 PRO device.

▶ To log into the system, press Alt+F2.

▶ Click on **OK** to open the diagnostic and admin menus.

In the diagnostic menu, you are supplied with general information about the system, e.g., available memory, operating time, version of operating system etc.

In the admin menu, you can restart or switch off the system, for example, or amend the IP address if no DHCP server is available.

Appendix

Ports to be opened on the network/firewall

Port number	For protocol	Is used for
80	TCP	HTTP
443	TCP	HTTPS
5060	UDP	SIP
10000–20000	UDP	RTP
4569	UDP	IAX
123	UDP or if necessary TCP	NTP, if this is to be used to control the system time
5222 / 5223	TCP	XMPP, for instant messaging and the Gigaset T300 PRO / Gigaset T500 PRO WinClient. Port 5223 is used for secure connections with SSL
3090	TCP	JMS, for setting up and using an interconnection

Key combinations on the phone

`*` `1`		Recording the call and sending as a voicemail
`*` `3` `2`	+ Group ID	Logging the user in to the group
`*` `3` `3`	+ Group ID	Logging the user out of the group
`*` `5`	+ Phone number	Activating redirect for this call
`*` `5`		Deactivating redirect
`*` `6`	+ Speed dial	Calling a phone number using speed dial
`*` `7` `7`	+ Login ID	Logging the user on to the phone
`*` `7` `8`	+ Login ID	Logging the user out of the phone
`*` `7` `9`	+ Login ID	Logging all users out of the phone
`*` `8`	+ Internal phone number	Picking up a call for the user with this phone number
`*` `8`		Randomly picking up a call
`*` `9`	+ ID for a voicemail box	Checking a voicemail box
`*` `*`	+ Number + `*`	Establishing a call via a line with corresponding line prefix

Moderating a conference

$*$ 1	Activating and deactivating mute (microphone)
$*$ 2	Conference participants: Requesting to speak
$*$ 3	Moderator: Blocking and unblocking conference
$*$ 4	Lowering volume
$*$ 5	Increasing volume
$*$ 6	Lowering microphone volume
$*$ $*$	Increasing microphone volume

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