

VIDEOPHONE

Configuration guideline

Version 1.0

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GENERAL INFORMATION

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Please read the manual before beginning and keep the manual for later use.

The manual has been conceived and written for users who are experienced in the use of PCs and automation technology.

CONVENTIONS

[KEYS]	Keys that are to be pressed by the user are given in square brackets, e.g. [CTRL] or [DEL]
COURIER	On-screen messages are given in the Courier font, e.g. C:\>
COURIER BOLD	Keyboard input to be made by the user are given in Courier bold, e.g. C:\>DIR).
"..."	Names of buttons to be pressed, menus or other onscreen elements and product names are given within double quotes. (e.g. "Configuration").
PICTOGRAMS	In this manual the following symbolic are used to indicate particular text blocs.
	Caution! A dangerous situation may arise that may cause damage to material.
	Hint Hints and additional notes
	New New features

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1 Introduction

1.1 PURPOSE

This document is intended for installers / system integrators and explains how the individual components of a Video-phone-system can be configured and what are the parameters of interest; a fictive installation will be used to explain the whole configuration process. The presented approach can be applied in principle to all average Videophone-systems. De-tailed information about the individual products can be found in the relevant manuals; basic knowledge of the various products is supposed.



Hint: If all information about the single devices (IP addresses, call groups, areas etc.) are passed to DIVUS together with the order, the entire system is pre-configured by DIVUS; more detailed the information are, than better it is.

1.2 INSTALLATION EXAMPLE „BUILDING A“

Based on a fictive installation the configuration of a usual Videophone-system will be explained. For a better understanding of the system in the course of this manual the fictive installation is called "Building A".

Building A consists of 3 floors (ground floor, 1st floor and 2nd floor) and an office. There is an entry on the north and on the south side, where each entrance is equipped with a video door phone. In the office and in each floor there is an internal unit over which the communication takes place. The VoIP server, which handles all the door communication, is located on the ground floor in a separate utility room, where the entire network converges and all devices are connected in the same network through the corresponding equipment.

Now the internal units of the ground floor and the 1st floor should ring together, while the internal unit on the 2nd floor should be ring when a separate doorbell is pushed on one of the entries, because the 2nd floor is an individual apartment; for a better understanding the apartment on the 2nd floor will be called "apartment B". As the owner of the apartment is the daughter of the house, it should nevertheless be possible to communicate from apartment B to the ground floor and the 1st floor.

The separated office is hired by a contractor and therefore the internal unit there should ring only when a separate ring button is pressed on the southern entrance; the office is only accessible through the south entrance. An internal communication from the office with the three floors of Building A or with the door station on the north entrance must be prevented. The office can communicate only with the door station of the south entrance.

As IP range for the network will be used "192.168.0.XXX". Simultaneously with the fixed IP addresses, the call numbers for the various devices are defined. In the standard configuration, the call numbers of the internal units starts with "101" and those for the external units from "901":

- Internal unit ground floor: 192.168.0.101, call number „101“
- Internal unit 1st floor: 192.168.0.102, call number „102“
- Internal unit apartment B: 192.168.0.103, call number „103“

- Internal unit office: 192.168.0.104, call number „104“
- External unit north audio: 192.168.0.120, call number „901“
- External unit north video: 192.168.0.121
- External unit south audio: 192.168.0.122, call number „902“
- External unit south video: 192.168.0.123
- VoIP server: 192.168.0.100



Hint: It is recommended to make these considerations before planning the whole installation:

- Which external unit should reach which internal units?
- Which ring button should call which internal units (groups of internal units or only single internal units)?
- Which internal units should be able to communicate among each other, respectively with which external units (must be configured different areas)?
- The usage of a VoIP server with the right performance must be considered, where the hardware of the VoIP server depends on the max. amount of concurrent calls (calls between internal units among each other, calls to external units ...).
- Which IP addresses and call numbers will be configured on the single devices?
- If all this information is already passed to DIVUS on ordering the material, the entire order will be delivered pre-configured and already fully functional.

1.2.1 DEVICE SELECTION

Finally the customer has to decide which devices he want to install, but it is the job of the installer/system integrator, to consult the customer so that only devices will be chosen, which meets the technical requirements of the installation.

Following devices can be used as internal unit:

- DIVUS DOMUS (with multimedia-option only)
- DIVUS HOME (with multimedia-option only)
- DIVUS MIRROR (with multimedia-option only)
- DIVUS DIVA
- DIVUS SUPERIO PLUS
- DIVUS TOUCHZONE

Each Desktop/Laptop PC with a DIVUS Videophone-Software License (the target PC must reach the min. requirements of the Videophone-Software)

Android device with installed Videophone-App (the device must reach the min. requirements of the Videophone-App)

Following devices can be used as door station:

- OPENDOOR
- Videophone-Box (a compatible analogue intercom system must be installed on the plant)
- Compatible IP-ready door station

Following devices can act as VoIP server:

- DIVUS-VS1 (max. 30 participants)
- DB831 with VoIP-Configuration (max. 60 participants)
- For greater systems on request special hard- and software
- Third party producers SIP-compatible phone switchboards

In Building A the following devices are installed:

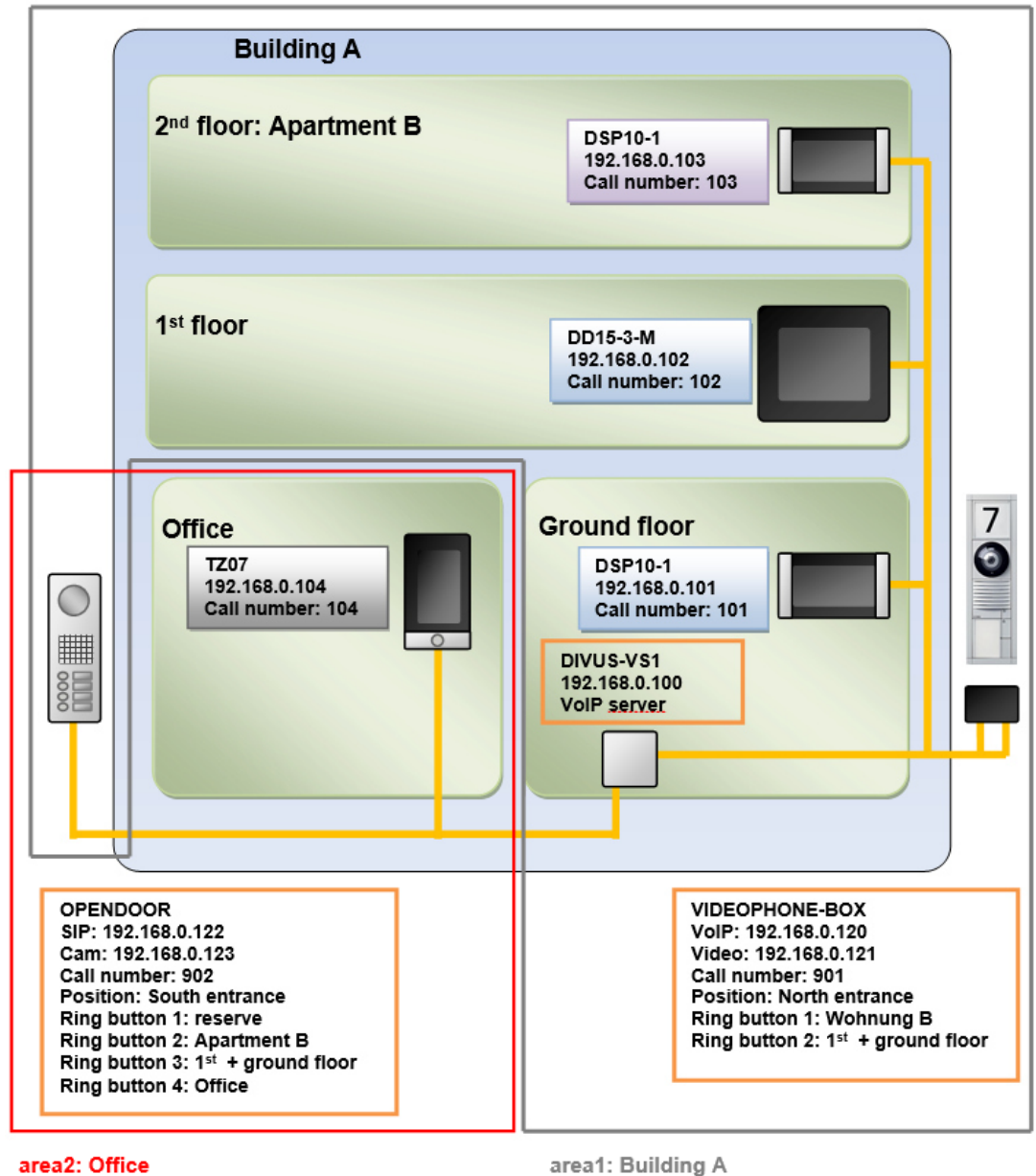
- Ground floor: DSP10-1 (DIVUS SUPERIO PLUS 10")
- 1st floor: DD15-3-M (DIVUS DOMUS with multimedia-option 15")
- 2nd floor: DSP10-1 (DIVUS SUPERIO PLUS 10")
- Office: DIVUS TOUCHZONE (7")
- North entrance: Videophone-Box with Siedle analogue Intercom system (2 bell buttons)
- South entrance: OPENDOOR with 4 bell buttons, Camera and SIP-module
- VoIP server: DIVUS-VS1 (max. 30 participants)



Hint: The VoIP server must always be chosen and positioned in the system, that only qualified personnel have access. This is important when a VoIP server manages several apartments: If the VoIP server is installed in one of the apartments and the owner would turn off the power of the whole apartment, because he goes for a long time on vacation, the entire door communication of the other Houses would no longer work.

1.2.2 SCHEME

A scheme of Building A with all installed devices and their related information follows:



The whole installation is divided into two areas, where the TOUCHZONE in the office cannot communicate with any device from area1 and no device from area1 can communicate with the TOUCHZONE in the office (area2); the OPEN-DOOR door station must of course be able to communicate with all devices of the system. The 1st floor and the ground floor should ring together as a group when the corresponding doorbell is pressed. In addition, each device in area1 is reachable under the corresponding call number (internal communication). The corresponding configuration is made in the VoIP server; more about that in the corresponding chapter.

2 Configuration

2.1 INTERNAL UNITS

It is advisable to start with the configuration of the internal units, since you can immediately test if the internal communication works. Once the internal communication is working correctly, you can go on and configure the external units. The correct configuration of the IP addresses of each device will be considered as already done.



Hint: For detailed information about the Videophone-Software or about the Videophone-App for Android please consult the respective manuals.

2.1.1 APARTMENT B: DSP10-1 – VIDEOPHONE-SOFTWARE

First the Videophone-Software must be enabled for configuration by entering the administrator password. Afterwards in the menu "VoIP" the following settings can be entered (defined call number "103"):

The image shows a screenshot of a videophone's configuration interface. At the top, there is a 'Save' button. Below it is a row of six icons: a speech bubble, a document, a left-pointing arrow, a computer monitor, a hand holding a microphone, and a telephone handset. Underneath these icons is a header bar with a mobile phone icon and the text 'VoIP'. The main area contains five rows of configuration fields, each with a label on the left and a text input field on the right:

Server IP	192.168.0.100
Username	103
Password	103
CID name	103
CID number	103

Anschließend muss in der Videophone-Software noch die Zuordnung der Videoquellen für die Türstationen gemacht werden. Dafür im Menu „Telefonbuch“ folgende zwei Kontakte anlegen:



Picture path: „http://192.168.0.121/Jpeg/Camlmg.jpg“



Picture path: „http://192.168.0.123/jpg/image.jpg“

Configured in this way the door cameras can also be used to spy outside through the Videophone-Software spy-functionality („Default“).

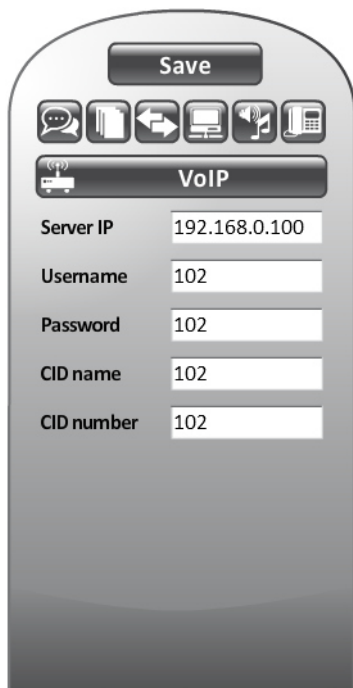
To make the internal communication easier, for each internal unit in area1 appropriate contacts are add in the “Phone-book”, where the option “Quickdial-button” must be enabled:



Finally click the “Save”-button. As soon as the background process of the Videophone-Software is restarted, the software is ready and should register on the configured VoIP server.

2.1.2 1ST FLOOR: DD15-3-M – VIDEOPHONE-SOFTWARE

First the Videophone-Software must be enabled for configuration by entering the administrator password. Afterwards in the menu "VoIP" the following settings can be entered (defined call number "102")



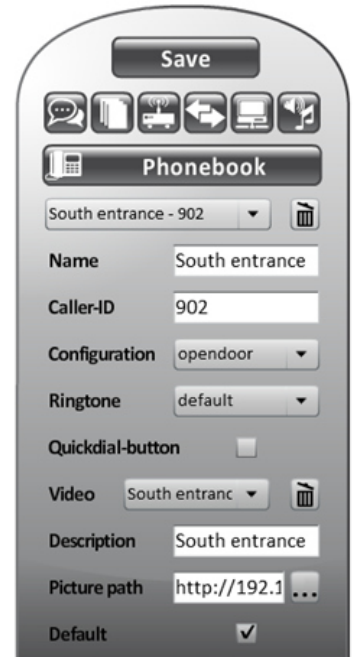
The image shows a touch-screen interface for a videophone. At the top, there is a "Save" button. Below it is a row of six icons: a speech bubble, a document, a double-headed arrow, a computer monitor, a hand holding a phone receiver, and a calculator. Underneath the icons is a "VoIP" menu header with a small phone icon to its left. Below the header are five configuration fields, each with a label and a text input box containing the value "102":

Server IP	192.168.0.100
Username	102
Password	102
CID name	102
CID number	102

The next step is to define which video source belongs to which door station inside the Videophone-Software settings. In the "Phonebook" the following contacts must be add:



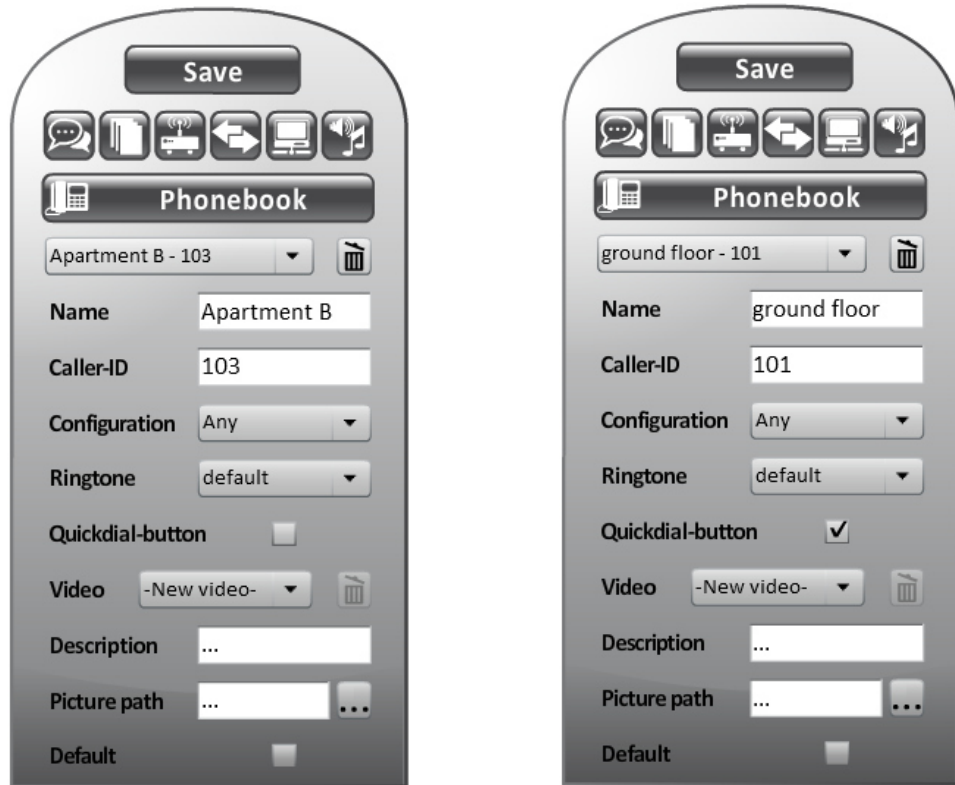
Picture path: „http://192.168.0.121/Jpeg/Camlmg.jpg”



Picture path: „http://192.168.0.123/jpg/image.jpg”

Configured in this way the door cameras can also be used to spy outside through the Videophone-Software spy-functionality („Default”).

To make the internal communication easier, for each internal unit in area1 appropriate contacts are add in the "Phone-book", where the option "Quickdial-button" must be enabled:



Finally click the "Save"-button. As soon as the background process of the Videophone-Software is restarted, the software is ready and should register on the configured VoIP server.

2.1.3 GROUND FLOOR: DSP10-1 - VIDEOPHONE-SOFTWARE

First the Videophone-Software must be enabled for configuration by entering the administrator password. Afterwards in the menu "VoIP" the following settings can be entered (defined call number "101")

The screenshot shows a touch screen interface with a 'Save' button at the top. Below it are several icons representing different functions. The main menu is 'VoIP'. The configuration fields are as follows:

Server IP	192.168.0.100
Username	101
Password	101
CID name	101
CID number	101

The next step is to define which video source belongs to which door station inside the Videophone-Software settings. In the "Phonebook" the following contacts must be add:

The screenshot shows a touch screen interface with a 'Save' button at the top. Below it are several icons. The main menu is 'Phonebook'. The configuration fields are as follows:

North entrance - 901	<input type="checkbox"/>
Name	North entrance
Caller-ID	901
Configuration	siedle
Ringtone	default
Quickdial-button	<input type="checkbox"/>
Video	North entranc <input type="checkbox"/>
Description	North entrance
Picture path	http://192.1... <input type="checkbox"/>
Default	<input checked="" type="checkbox"/>

Picture path: „http://192.168.0.121/Jpeg/CamIlg.jpg“

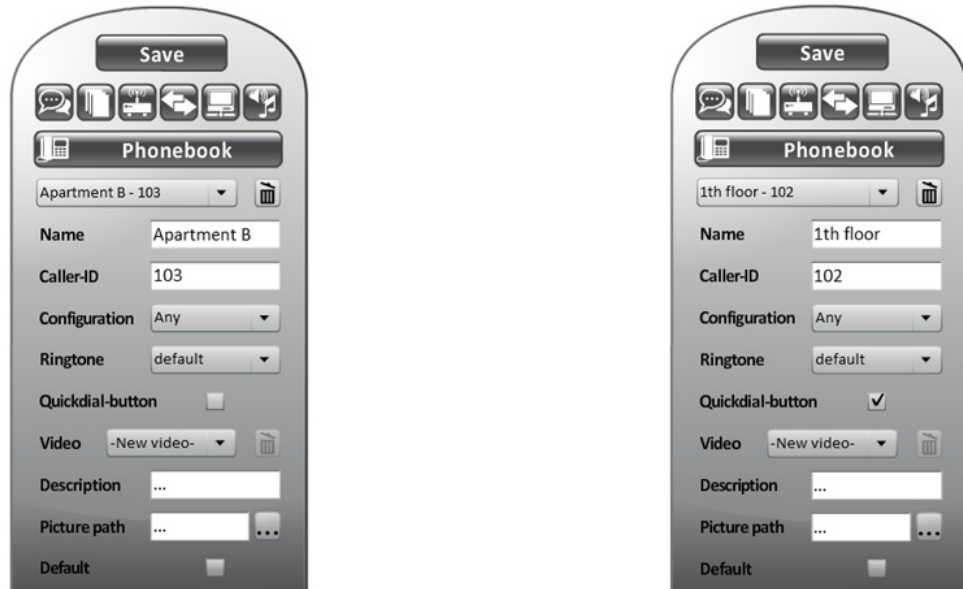
The screenshot shows a touch screen interface with a 'Save' button at the top. Below it are several icons. The main menu is 'Phonebook'. The configuration fields are as follows:

South entrance - 902	<input type="checkbox"/>
Name	South entrance
Caller-ID	902
Configuration	opendoor
Ringtone	default
Quickdial-button	<input type="checkbox"/>
Video	South entranc <input type="checkbox"/>
Description	South entrance
Picture path	http://192.1... <input type="checkbox"/>
Default	<input checked="" type="checkbox"/>

Picture path: „http://192.168.0.123/jpg/image.jpg“

Configured in this way the door cameras can also be used to spy outside through the Videophone-Software spy-functionality („Default“).

To make the internal communication easier, for each internal unit in area1 appropriate contacts are add in the “Phone-book”, where the option “Quickdial-button” must be enabled:



Finally click the “Save”-button. As soon as the background process of the Videophone-Software is restarted, the software is ready and should register on the configured VoIP server.

2.1.4 OFFICE: TZ07 – VIDEOPHONE-APP

First the Videophone-App must be opened by clicking the corresponding Icon in the TOUCHZONE launcher; with a click on the DIVUS-logo on the bottom the settings of the Videophone-App can be reached. The following parameters must be set:

- VoIP Server IP Address: 192.168.0.100
- VoIP Username : 104
- VoIP Password: 104

Next step is to navigate in the submenu “External units”.

For “External unit 1” enter the following settings:

- VoIP ID: 902
- Type: OPENDOOR
- Camera IP address: 192.168.0.123

Afterwards go back into the settings menu and select the "External unit 1" as video source for the spy-functionality.

If the GUI of the Videophone-App is opened again, the Videophone-App should register on the defined VoIP server and show the status "READY"; the Videophone-App now is ready.

2.1.5 TEST

Once the internal units have all successfully registered on the VoIP server, the internal communication can be tested. Simply do a call from one internal unit to another by dialing the call number of the target internal unit on one of the internal units. The target internal unit shall ring and communication between the two internal units shall be possible. If this is not the case, the configuration of the affected devices, the network and cable connections must be checked.

2.2 2.2 EXTERNAL UNITS

Once the internal communication works, the external units can be configured. As in Building A a Videophone-Box is installed, the correct connection and correct configuration of the analogue Intercom system is considered as already performed.



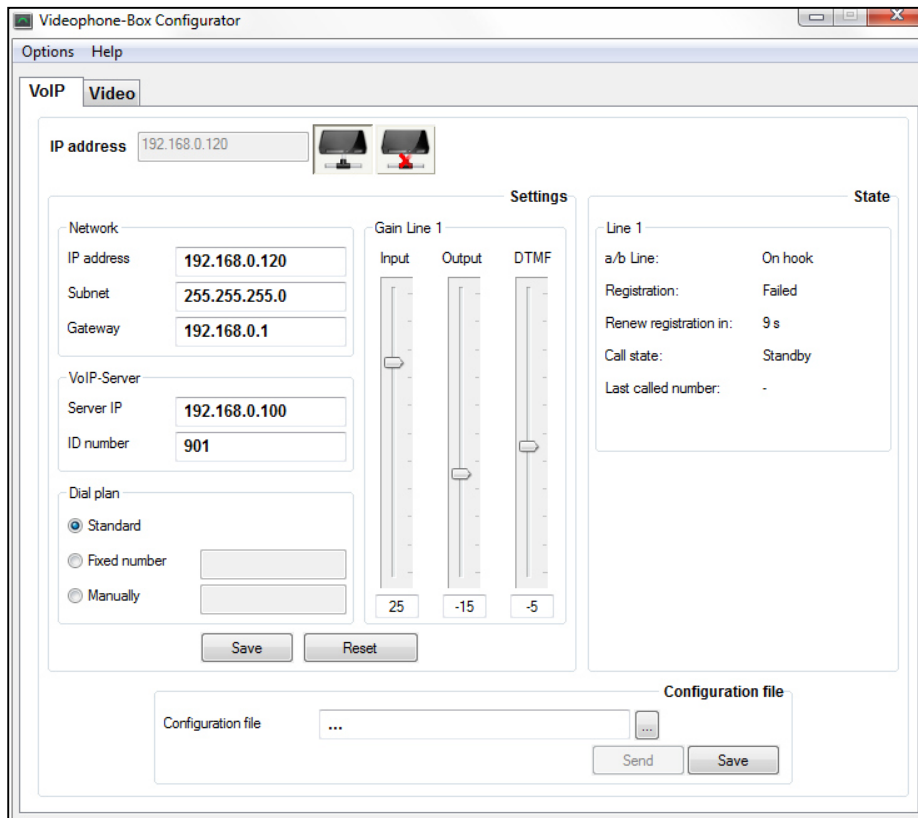
Hint: For detailed information about the Videophone-Box respective about OPENDOOR please consult the appropriate manuals.

2.2.1 VIDEOPHONE-BOX

In order to make the Videophone-Box work correctly, the analogue Intercom system must be programmed so that the two bell buttons of the Siedle external unit will trigger the a/b-Conversion module to pass different numbers to the Video-phone-Box; only in this way the Videophone-Box can launch different calls for each bell button. Since the VoIP server's default configuration provides the Videophone-Box to receive the numbers 101, 201, 301, 401, 501, 601, 701, 801 or 901 from the a/b-Conversion module, for our fictive installation bell button 1 (Apartment B) will dial the number "101" and bell button 2 (1st floor + ground floor) will dial the number "201". For detailed information about the configuration of the analogue Intercom system refer to the appropriate documentation from the producer.

Configuration VoiP

The easiest way to configure the Videophone-Box is by doing it with the Videophone-Box Configurator. Start the Video-phone-Box Configurator and open the "VoIP" tab. To be able to connect to the VoIP part of the Videophone-Box, the ap-proprate IP address must be known; it can be found on the supplied information sheet (default: 192.168.0.120). Enter the IP address of the device in the field "IP address" and press the "Connect"-button:



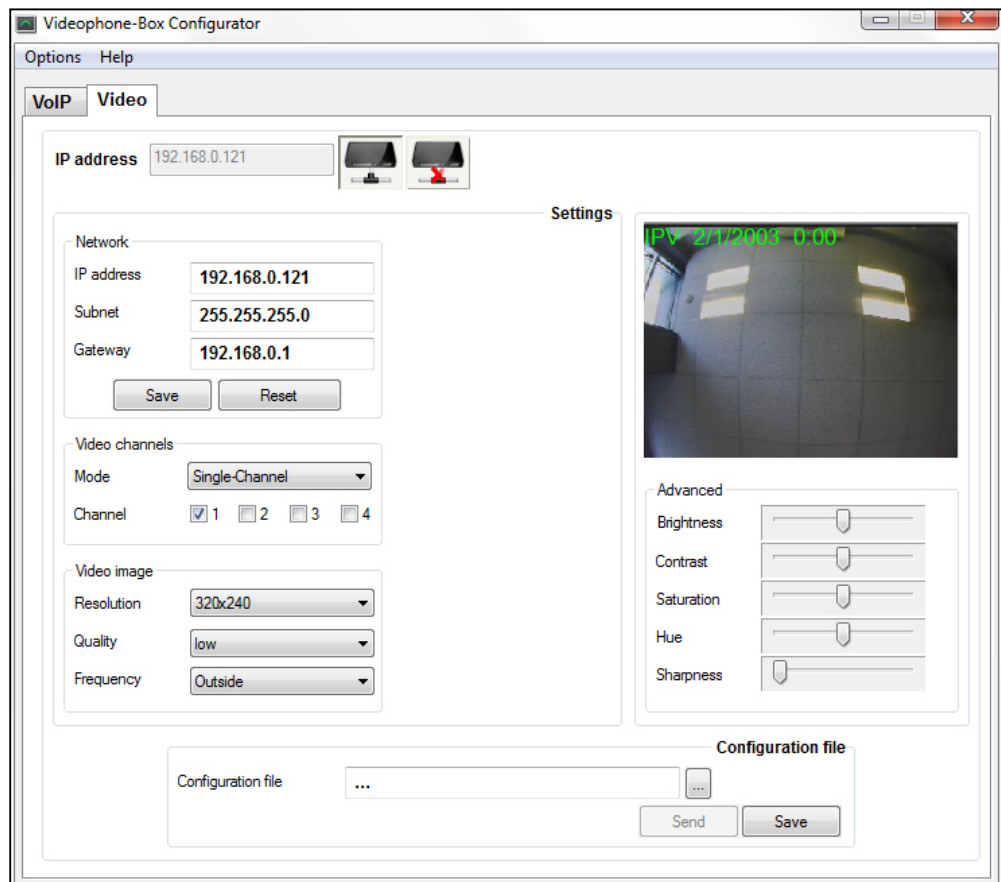
connection is established and then the desired data can be entered (defined call number "901"):

Then click on the "Save"-button to send the data to the VoIP part of the Videophone-Box. Once the device is rebooted, in the status window should appear the status "Registration" as "OK." If this is not the case, adjust the settings and check power supply and the network connection of the Videophone-Box.

If the Videophone-Box Configurator is not available, the configuration can be done through the web interface of the VoIP part of the Videophone-Box. For detailed information about this type of configuration refer to the Videophone-Box manual.

Configuration Video

The easiest way to configure the Videophone-Box is by doing it with the Videophone-Box Configurator. Start it and open the "Video" tab. To be able to connect to the video part of the Videophone-Box, the appropriate IP address must be known; it can be found on the supplied information sheet (default: 192.168.0.121). Enter the IP address of the device in the field "IP address" and press the "Connect"-button: a connection is established and then the desired data can be entered:



If the IP settings are changed, they must be confirmed by pressing the "Save"-button; the device afterwards restarts and the Videophone-Box Configurator will automatically reconnect with the device again using the new IP address. All other settings are applied immediately.

If the Videophone-Box Configurator is not available, the configuration can be done through the web interface of the video part of the Videophone-Box. For detailed information about this type of configuration refer to the Videophone-Box manual.

2.2.2 TEST

VoIP

When the configuration is complete and the VoIP part of the Videophone-Box shows the status "Registration: OK", the communication between the external unit and the internal units can be tested. Simply press one of the bell buttons of the Siedle external unit: all the internal units shall ring, as in the default settings of the VoIP server

the Videophone-Box group calls are parameterized to call all present internal units. How to customize the single group calls is explained in the chapter "VoIP server". If there is doubt that the a/b-Conversion module of the analogue Intercom system dials out the pro-grammed three-digit numbers in the right way to the Videophone-Box, then the communication can be tested with an analogue phone. Simply connect the analogue phone in place of the a/b-Conversion module of the analogue Intercom system to the Videophone-Box, pick up the phone and dial "101" or "201". If the internal units will ring, on VoIP level eve-rything is configured correctly and the fault lies within the configuration of the a/b-Conversion module of the analogue Intercom system.

Video

When the configuration is complete, the video can be tested through the spy-functionality of the Videophone-Software. Simply press the camera-button on the Videophone-Software and use the arrow keys to select the appropriate video "North entrance"; the video appears automatically when a call from the external unit at the north entrance starts. If no video is shown, then the appropriate image path in the settings of the Videophone-Software or the settings of the video part of the Videophone-Box must be checked.

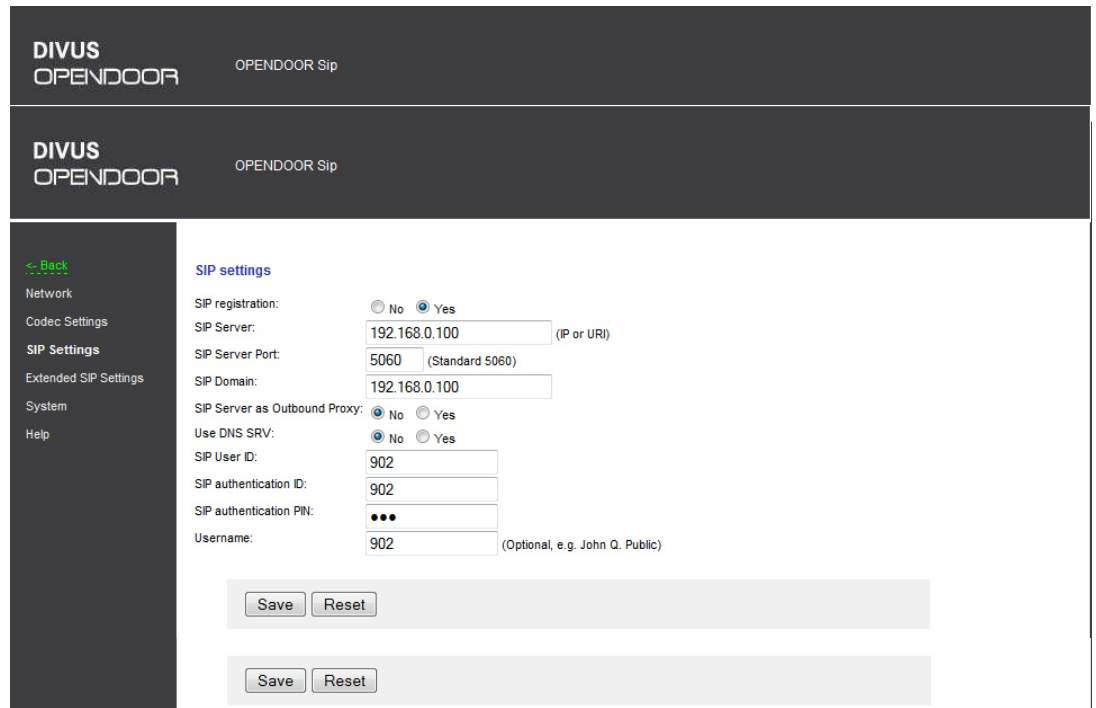
2.2.3 OPENDOOR

The correct connection of the OPENDOOR external unit to the network and the correct wiring of the components is pre-supposed.

Configuration OD-Sip

For being able to configure the OD-Sip, the IP address of the device must be known; it can be found on the supplied in-formation sheet (default: 192.168.0.120). Once the device is powered on and connected in the network, the OD-Sip web interface can be accessed through a browser (Internet Explorer or Firefox): simply enter the IP address of the device in the address bar of the browser. The default password is "1234".

Open the menu "Settings VoIP" to change the IP address:



For enabling the OD-Sip to register on the VoIP server in the same menu the "SIP Settings" must be changed (defined call number "902"):

Since each bell button should call another number, in the "Phone book" menu in section "Call Keys (Z1-Z4 to Ground)" for each bell button the corresponding call number must be configured:

The reserve button will have no number configured; if it is pressed anyway, the OD-Sip emits a corresponding beep, which indicates that the key is without any function.

To ensure, that all internal units can call the OPENDOOR external unit from inside, the parameter "Incoming" must be set to "Accept" for the individual call numbers defined in the "Phone book". Since the call numbers of internal units of the 1st floor and the ground floor are not present in the "Phone book", they will be "unknown caller" for the OD-Sip, when they call the OPENDOOR external unit from inside (they are called from the external unit through the group call number "20060101"). For such "unknown caller", the parameter "Incoming" must be set to "Accept" in the submenu "unknown caller", to enable also calls from internal units, which call number is not listed in the "Phone book" of the OD-Sip:

DIVUS
OPENDOOR Sip

OPENDOOR

← Back
Switchboard
Call Keys (Z1-Z4 to GND)
Call Keys Matrix Modules
Phonebook
Unknown caller

Unknown caller

DTMF-Code Incoming Relay

2 - - - - - Accept Off

Call Keys (Z1-Z4 to GND)

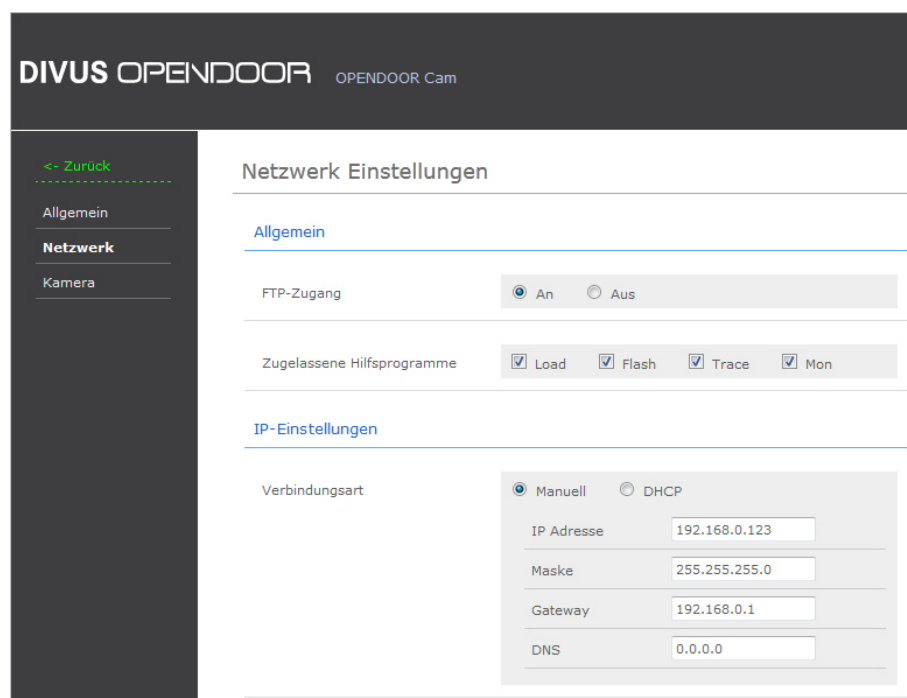
Name	Number	DTMF-Code	Incoming	Outgoing	Relay	Group-ID
101 ring button1		2 - - - - -	Accept	Announcement Off	Off	None
102 ring button1	103	2 - - - - -	Accept	Announcement Off	Off	None
103		- - - - -	Reject	Announcement Off	Off	None
104 ring button1	20060101	2 - - - - -	Accept	Announcement Off	Off	None
105		- - - - -	Reject	Announcement Off	Off	None
106		- - - - -	Reject	Announcement Off	Off	None
107		- - - - -	Reject	Announcement Off	Off	None
108 ring button1	104	2 - - - - -	Accept	Announcement Off	Off	None
109		- - - - -	Reject	Announcement Off	Off	None
110		- - - - -	Reject	Announcement Off	Off	None
111		- - - - -	Reject	Announcement Off	Off	None
112		- - - - -	Reject	Announcement Off	Off	None
113		- - - - -	Reject	Announcement Off	Off	None
114		- - - - -	Reject	Announcement Off	Off	None
115		- - - - -	Reject	Announcement Off	Off	None

The DTMF-code for the dooropener activation must be set to "2 ---" everywhere, so that the door lock relay can be operated via the Videophone-Software and the Videophone-App.

Configuration OD-Cam

To configure the OD-Cam, the IP address of the device must be known; it can be found on the supplied information sheet (default: 192.168.0.121). Once the device is powered on connected in the network, its web interface can be accessed through a browser (Internet Explorer or Firefox): Simply enter the IP address of the device in the address bar of the browser. The default user name is "admin", the default password is "1234".

When all the settings are set to factory default, it is only necessary to adapt the IP address settings:



2.2.4 TEST

OD-Sip

If the configuration is completed, the communication between the internal units and the external unit can be tested. Simply press one of the OPENDOOR bell buttons; if bell button 3 is pressed all internal units shall ring, since in the default configuration of the VoIP server all call groups are configured to call all present internal units (the separation into different group calls will be explained in chapter "VoIP server"). If bell button 2 or 4 is pressed, the internal unit corresponding to the defined call number for the respective bell button will ring (bell button 2: Apartment B, bell button 4: office). If a call is accepted, it should be possible to communicate between the internal and external unit; activating the dooropener should be possible, too. In addition, it should be possible to call the OPENDOOR external unit from any internal unit by dialing the number "902". Should an internal station not ring, the dooropener will not work or the external unit cannot be called, the corresponding configurations and the corresponding connections must be checked.

Video

When the configuration is done, the video can be tested through the spy-function of the Videophone-Software

or the Videophone-App. Simply press the camera-button on the Videophone-Software and use the arrow keys to select the appropriate video "South entrance"; the video image automatically appears when a call from the external unit at the south entrance starts. If no video can be seen on the Videophone-Software, the appropriate image path in the settings of the Videophone-Software and the settings of the OD-Cam must be checked. Since the external unit "South entrance" is also defined in the Videophone-App on the TOUCHZONE in the office, the video of the OD-Cam can also be tested from there: simply press the camera-button of the Videophone-App to show the video of the OD-Cam. When a call from the OPEN-DOOR external unit is started to the TOUCHZONE the corresponding video image appears automatically. If no video can be seen on the Videophone-App, the settings of the Videophone-App and of the OD-Cam must be checked.

2.3 VOIP SERVER

The VoIP server DIVUS-VS1 has following pre-defined Objects:

- 20 internal units: 101-120
- 10 external units: 901- 910

Each internal unit and external unit is reachable by their call number. Additionally 10 group calls for the Videophone-Box and 10 group calls for OPENDOOR are defined, where each group calls all 20 internal units at the same time. Each group call is launched by dialing a special number:

VIDEOPHONE-BOX:	OPENDOOR:
dooropener0101	20060101
dooropener0201	20060201
dooropener0301	20060301
dooropener0401	20060401
dooropener0501	20060501
dooropener0601	20060601
dooropener0701	20060701
dooropener0801	20060801
dooropener0901	20060901
dooropener1001	20061001

If one of these numbers is dialed from a client in the system, all existing internal units will ring simultaneously. All clients, which can use only alphanumeric characters, must use the group call numbers predefined for OPENDOOR.

The DIVUS-VS1 has a web interface that allows to check out the actual status of the VoIP server itself and the individual clients, as well as editing the configuration file. To access the web interface simply open a browser and enter the following URL "https:// <IP DIVUS-VS1>"; username is "admin" and password "1234".

A status page will be opened, which contains the most important information about the DIVUS-VS1 and the individual clients.

divusPBX Management

Status
Network
Edit
CLI
Prefs
System

Hostname:	divusPBX	IPv4 Address:	192.168.0.100
DNS:	search 192.168.0.100		
DNS:	nameserver 127.0.0.1		
System Time:	Tuesday, Jan 11 21:20:14 CET 2000	RAM Memory:	250 MB, Free 116 MB
System Uptime:	6 min	Load Average:	0.01, 0.09, 0.05
AstLinux Release:	astlinux-1.0.2 - Asterisk 1.8.9.2	Runnix Release:	runnix-0.4-5339
GUI Version:	1.8.06	License:	Show Licenses

Disk Usage:

Filesystem	Size	Used	Available	Use%	Mounted on
/dev/sda1	255.6M	37.9M	217.7M	15%	/oldroot/cdrom
/dev/sda2	1.6G	218.7M	1.3G	14%	/oldroot/mnt/asturw

Active Channels:

Channel	Location	State	Application(Data)
0 active channels			
0 of 15 max active calls (0.00% of capacity)			
0 calls processed			

SIP Peer Status:

Name/username	Host	Dyn	Forcerport	ACL	Port	Status
100/100	(Unspecified)	D	N	0		UNKNOWN
101/101	192.168.0.101	D	N	5060		OK (8 ms)
102/102	192.168.0.102	D	N	5060		OK (8 ms)
103/103	192.168.0.103	D	N	5060		OK (8 ms)
104/104	192.168.0.104	D	N	5060		OK (8 ms)
105/105	(Unspecified)	D	N	0		UNKNOWN
106/106	(Unspecified)	D	N	0		UNKNOWN
107/107	(Unspecified)	D	N	0		UNKNOWN



Hint: For detailed information about the DIVUS-VS1 consult the related manual.

2.3.1 CHANGE IP ADDRESS

The IP address of the DIVUS-VS1 can be found on the supplied information sheet (default: 192.168.0.100). If the IP address must be changed, simply access the web interface of the DIVUS-VS1, log in as administrator (user "admin" - pass-word: "1234") and change the settings in the "Network" tab.

Under "External Static IP Settings" the static IP address of the DIVUS-VS1 can be changed; the "Domain" must be set to the same value as the IP address. If you change the IP address, after pressing the "Save Settings"-button, the system must be restarted. For this select "Reboot System", click on "Confirm" and then click on the "Reboot / Restart"-button. The system reboots, and the DIVUS-VS1 will be reachable under the new IP address.

STLinux divusPBX Management

Status Network Edit CLI Prefs System

Network Configuration Settings:

Save Settings Reboot/Restart - Reboot System - Confirm

External Interface: eth0 IP Version: IPv4-Only

Connection Type: Static IP

Hostname: divusPBX Domain: 192.168.0.100 - Local Domain

DNS: (IPv4 and/or IPv6)

VLANS: (ethN.NN ethN.NN) VLAN COS

External Static IP Settings: (Cleared for DHCP)

Static IPv4: 192.168.0.100 NetMask: 255.255.255.0 IPv4 Gateway: 192.168.0.1

Static IPv6/nn: IPv6 Gateway:

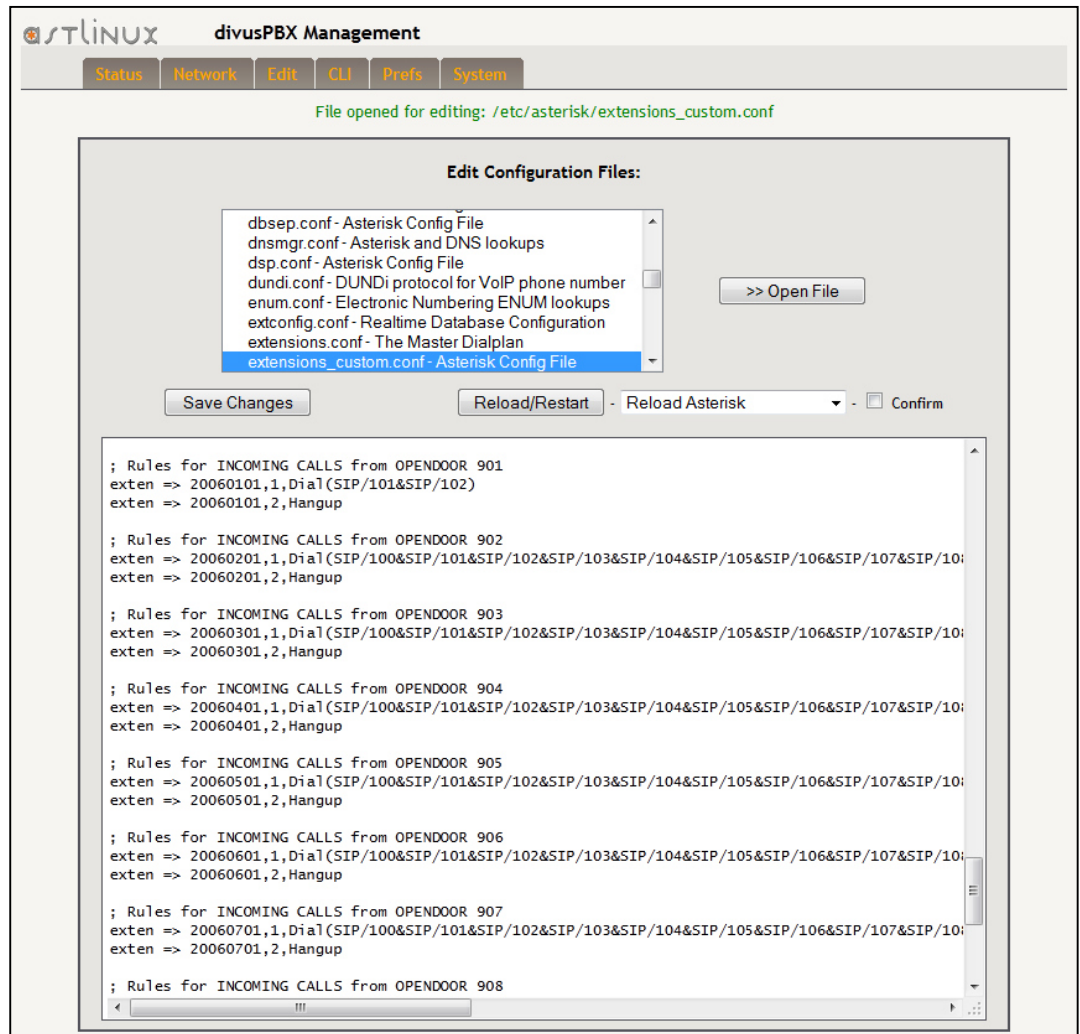
External PPPoE Settings:

PPPoE Username: PPPoE Password:

In our fictive Building A the default IP address "192.168.0.100" is used; change the IP address is not required in this case.

2.3.2 CHANGE GROUP CALLS

The group calls are defined in the file "extensions_custom.conf". For customizing this file open the "Edit" tab in the web interface of the DIVUS-VS1, select the file "extensions_custom.conf" from the list and click on the "Open File"-button. Afterwards the file can be changed in the lower window of the "Edit" tab.



Now you have to search in the file for the group call "20060101", which has been previously assigned to the bell button 3 in the "Phone book" of the OD-Sip. As you can see this call number executes a call to all 20 internal units:

```
exten => 20060101,1,Dial(SIP/100&SIP/101&SIP/102&SIP/103&SIP/104&SIP/105&SIP/106&SIP/107&SIP/108&SIP/109&SIP/110&SIP/111&SIP/112&SIP/113&SIP/114&SIP/115&SIP/116&SIP/117&SIP/118&SIP/119&SIP/120)
```

In order to change the group call in the way, that only client 101 (ground floor) and 102 (1st floor) will be called, all other clients must be deleted from the chain:

```
exten => 20060101,1,Dial(SIP/101&SIP/102)
```

Then you can save the file with "Save Changes". The modified file will be applied only if asterisk is reloaded. This can be accomplished right here: choose "Reload", click on the "Confirm"-checkbox and then press the "Reload / Restart"-button. If the bell button 3 of the OPENDOOR external unit is pressed again, only the internal unit in the

ground floor and the internal unit in the 1st floor will ring.

Now the bell buttons of the Siedle door station should also be personalized, so that bell button 1 calls the internal units in the ground floor and the 1st floor together, while bell button 2 shall call only the internal unit in Apartment B. The Video-phone-Box was configured with the Videophone-Box Configurator to use the default dialplan. The default dial plan consists of the text "dooropener0", to which a three-digit number is appended, that the Videophone-Box receives from the a/b-Conversion module of the analogue Intercom system ("101" for bell button 1, "201" for bell button 2). The Video-phone-Box sends the resulting string "dooropener0101" for bell button 1 and "dooropener0201" for bell button 2 to the VoIP server. For this two call numbers the following changes must be made in the file "extensions_custom.conf":

Bell button 1 „dooropener0101“, call target is apartment B (client 103):

```

exten => dooropener0101,1,Dial(SIP/100&SIP/101&SIP/102&SIP/103&SIP/104&SIP/105&SIP/106&SIP/107&SIP/108&SIP/109&SIP/110&SIP/111&SIP/112&SIP/113&SIP/114&SIP/115&SIP/116&SIP/117&SIP/118&SIP/119&SIP/120)
    
```

must be changed to:

```

exten => dooropener0101,1,Dial(SIP/103)
    
```

Bell button 2 „dooropener0201“, call target is ground floor (client 101) and 1st floor (client 102):

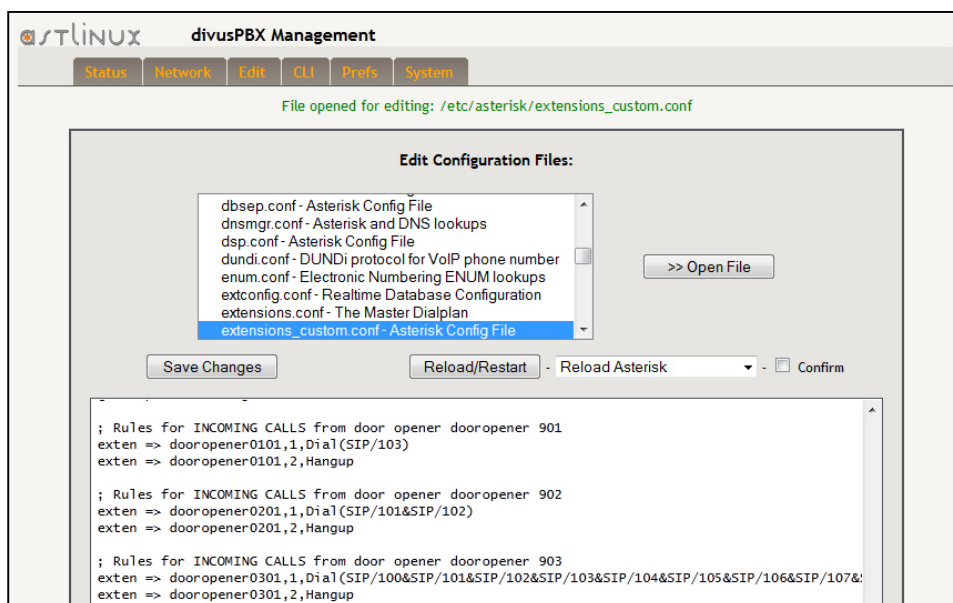
```

exten => dooropener0201,1,Dial(SIP/100&SIP/101&SIP/102&SIP/103&SIP/104&SIP/105&SIP/106&SIP/107&SIP/108&SIP/109&SIP/110&SIP/111&SIP/112&SIP/113&SIP/114&SIP/115&SIP/116&SIP/117&SIP/118&SIP/119&SIP/120)
    
```

must be changed to:

```

exten => dooropener0201,1,Dial(SIP/101&SIP/102)
    
```



Afterwards you can save the file with "Save Changes". The modified file will be applied only if asterisk is reloaded. This can be accomplished right here: choose "Reload", click on the "Confirm"-checkbox and then press the "Reload / Restart"-button.

If the bell button 1 of the Siedle external unit is pressed again, only the DSP10-1 in apartment A should ring, while pressing bell button 2 should cause the DD10-3-M on the 1st floor and the DSP10-1 on the ground floor to ring at the same time.

2.3.3 CREATE AREAS



Hint: If there is no need to split the installations into different areas, this chapter can also be ignored!

DIVUS-VS1 works with areas also called "context". Each client is assigned to such an area and can only call those numbers that have been defined in the same area. By default, all the internal units are assigned to the area "local" and all external units are assigned to the area "dooropener"; the area "dooropener" and "local" are linked among each other, so that both have access to the call numbers from the other area. In order to split the system now in two areas, so that the TOUCHZONE in the office can only communicate with the OPENDOOR external unit and with no other client, a new area must be created. The areas are created in the file "extensions_custom.conf", whereby the name of the area in square brackets marks the beginning of the area in the file. Therefore a new area "area2" must be created for the office:

The screenshot shows the 'divusPBX Management' web interface. At the top, there are navigation tabs: Status, Network, Edit, CLI, Profs, and System. Below the tabs, it indicates 'File opened for editing: /etc/asterisk/extensions_custom.conf'. The main area is titled 'Edit Configuration Files:' and contains a file selection list with 'extensions_custom.conf - Asterisk Config File' selected. Below the list are buttons for 'Save Changes', 'Reload/Restart', and a 'Confirm' checkbox. The main content area displays the configuration file's content, including extensions for dialing, recording, and defining areas like [bereich2], [dooropener_custom], and rules for incoming calls from door opener 901, 902, and 903.

```

;exten => _0.,1,Dial(SIP/801,,D(www${EXTEN:1})))
;exten => -0.,1,Hangup

exten => *77,1,Answer()
exten => *77,2,Wait(2)
exten => *77,3,Record(/web/html/smartdomuspad/modules/pbx/recording/${CALLERIDNUM}ivrrecording:
exten => *77,4,Wait(2)
exten => *77,5,Hangup
exten => *99,1,Answer()
exten => *99,2,Playback(/web/html/smartdomuspad/modules/pbx/recording/${CALLERIDNUM}ivrrecording:
exten => *99,3,Wait(2)
exten => *99,4,Hangup

[bereich2]

exten=>902,1,Dial(SIP/902,,g)

[dooropener_custom]

; Rules for INCOMING CALLS from door opener dooropener 901
exten => dooropener0101,1,Dial(SIP/103)
exten => dooropener0101,2,Hangup

; Rules for INCOMING CALLS from door opener dooropener 902
exten => dooropener0201,1,Dial(SIP/101&SIP/102)
exten => dooropener0201,2,Hangup

; Rules for INCOMING CALLS from door opener dooropener 903
exten => dooropener0301,1,Dial(SIP/100&SIP/101&SIP/102&SIP/103&SIP/104&SIP/105&SIP/106&SIP/107&

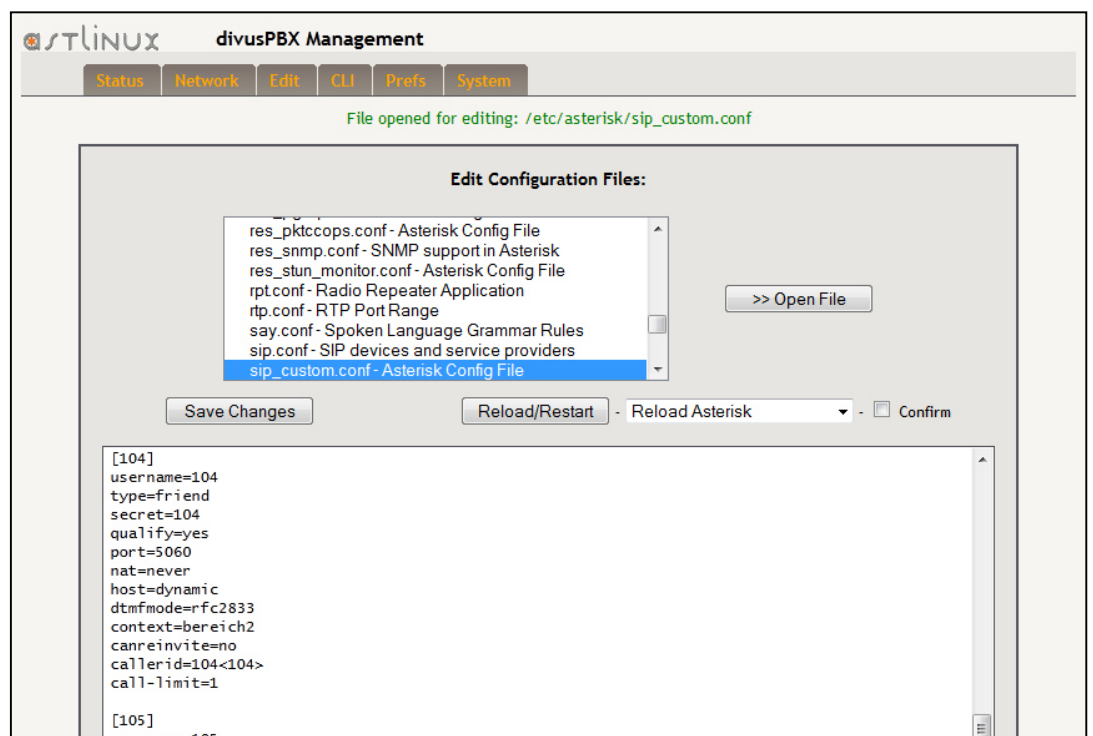
```

In this new area "area2" a dial command for calling the OPENDOOR external unit by dialing the call number "902" is added:

```
exten => 902,1,Dial(SIP/902,,g)
```

Any client that is assigned to the area "area2", can only call the number "902", reaching so the OPENDOOR external unit at the south entrance; if another number is tried to call, the call will fail.

Since the DIVUS-VS1 needs to know that the TOUCHZONE in the office (call number "104") belongs to the area "area2", the definition of the client "104" in the file "sip_custom.conf" must be adapted:



Definition des Clients „104“ in der „sip_custom.conf“ angepasst werden:

The definition of each client begins with its identification name in square brackets. The "context" determines to which area the client is assigned. By setting this parameter to "area2" for client "104" (TOUCHZONE in the office), client "104" will be assigned to area "area2", which allows only calls to the OPENDOOR external unit with call number "902"; incoming calls are still possible from any client in the system.

Afterwards you can save the file with "Save Changes". The modified file will be applied only if asterisk is reloaded. This can be accomplished right here: choose "Reload", click on the "Confirm"-checkbox and then press the "Reload / Restart"-button.

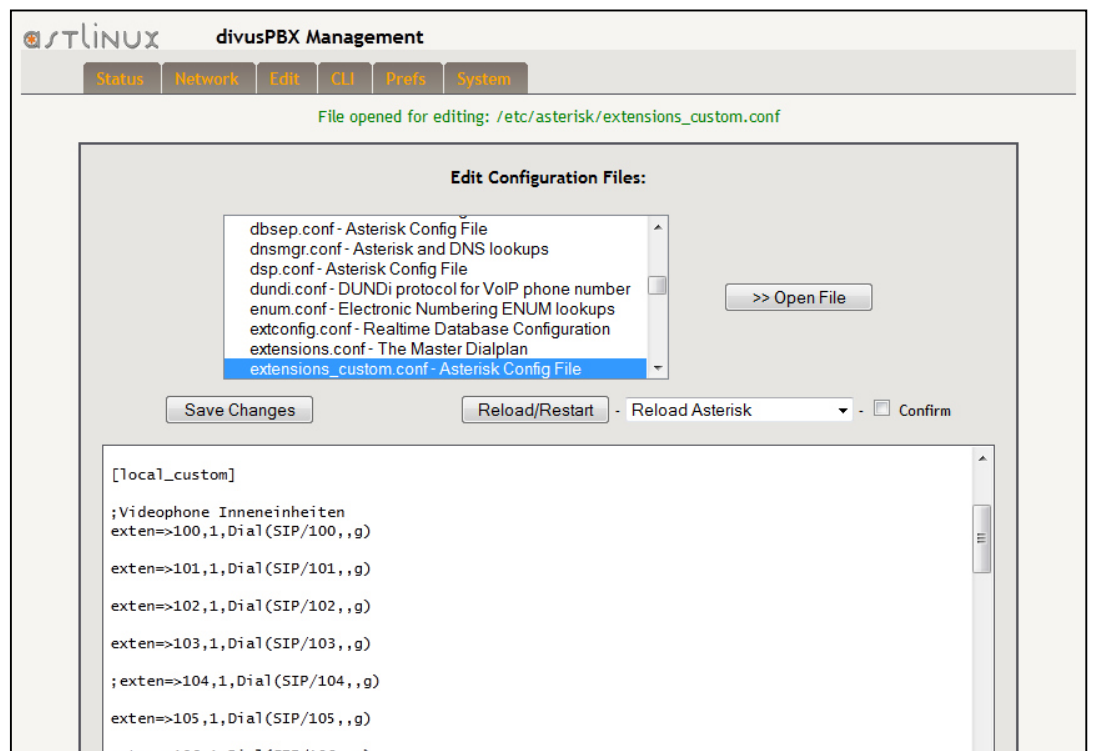
If someone tries to call client 101 in the ground floor, client 102 in the 1th floor or client 103 in apartment B from the TOUCHZONE in the office by dialing the appropriate call number in the Videophone-App, the call will fail. However, if the number "902" is dialed the TOUCHZONE in the office will be immediately connected to the OPENDOOR external unit.

In this way the client 104 in the office can only make calls to the OPENDOOR external unit. Should this also be suppressed for specific reasons, then simply delete the call command "exten => 902,1, dial (SIP/902,, g)" from the area "area2"; in this way the TOUCHZONE in the office could only get calls, but not make anycalls.

Nevertheless, it is still possible for the other internal units to call client 104. To suppress calls from any other internal unit to the TOUCHZONE in the office the following line in the area "local_custom" of the file "extensions_custom.conf" must be commented out or deleted (area "local_custom" is part of the area "local"):

```
exten => 104,1,Dial(SIP/104,,g)
```

The line can be commented out with ";" at the beginning.



Afterwards you can save the file with "Save Changes". The modified file will be applied only if asterisk is reloaded. This can be accomplished right here: choose "Reload", click on the "Confirm"-checkbox and then press the "Reload / Restart"-button.

Calls from client 101, 102 or 103 to client 104 (TOUCHZONE in the office) will now fail.

The separation of the two areas has been completed. It is recommended to back up the configuration of the DIVUS-VS1, since such customization of the configuration files is no more matching the standard configuration of the DIVUS-VS1.

