

2N[®] VoiceBlue lite



How to install VoiceBlue lite Quick guide

Version 1.0.0

www.2n.cz

1. Preparation

1.1 IP address settings

Open the newest version of config program (you can download it from $\underline{www.2n.cz}$)

Choose Settings – Communication settings



Choose the type of communication...

Communication settings	
Communication type	
Communication type	Serial communication
Serial communication settings	
Serial port :	COM3 👤
Communication LOG	
✓ Save communication LOG to a fi	le
Append LOG file	
ОК	Cancel

... and connect to the gateway



Download parameters from the gateway

	_
📔 VoiceBlue Program	
File Gateway Gateway control Settings Help	
Topics Alphabetical glossary	
Gateway configuration Restart VoiceBlue config Would you like to load parameters from the gateway VoiceBlue Lite? Ano Ne	

First step is to set IP address for gateway. To do so, go to the System parameters and set IP address, subnet mask and also default gateway.

📜 VoiceBlue Program				<u> </u>
File Gateway Gateway control Setting	s Help		Network parametres fo	r 🗋
🖻 🖬 🔍 🗶 🔚 🗛 🍋 🕨	i 💥 💶 📼 🚺	(CPU	
Topics Alphabetical glossary				
Gateway control	IP address :	Mod		
System parameters	IP address : 192.168	50.39 CDR mode :	Succesful outgoing	
GSM basic parameters	Subnet mask : 255.255	255.0 Unit ID :	0	
GSM groups assignment GSM outgoing groups GSM incoming groups GSM incoming groups Prefixes	Default gateway : 192.168	50.1	(0 = off, 255 = max)	
CR table CLP Routing table OLP Routing table Mobility extension	PIN : 1234	End of dialling	(Empty=off): #	
	Mobility Extension (DTMF settings) : Start dialing (quick call forwarding) : End dialing (quick call forwarding) : Hold call :	# PIN # (the 7" SIM	for SIM cards e same for all (s)	
	Hang up call :	9# "SMS at no ans	Wer underwaren . #33	

1.2 VoIP trunk configuration

Let say that we want to connect VBN with our company VoIP PBX (SIP proxy) and we want to allow receiving calls from SIP proxy, so we can pass them to GSM and pass all incoming calls to it.

To allow call requests only from our SIP proxy we have to fill its IP address to field SIP proxy (IP -> GSM).

It is very important to set this IP address. In case that there is 0.0.0.0 in this field, call can come from any IP address on our network (in case that you have assigned public IP address, requests can be from any computer on Internet.

If you want to allow call from GSM to your SIP proxy, it is necessary fill its IP address to field SIP proxy (GSM -> IP). If you want more about incoming call setting go to section 3 (Incoming calls) of this document.

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File Gateway Gateway control Setting	js Help
	👷 💶 💼
Topics Alphabetical glossary	VolP parameters
Topics Alphabetical glossary Gateway control Digin account Digin account Digin account Digin acco	VolP parameters Day of deleting statistics : 1 (0-off) Voice parameters : 1 (0-off) Voice parameters : 1 (0-off) First RTP port: 9000 East RTP port: 9000 Last RTP port: 9938 equal by 10 than 1st port 6723 bitrate : SIP registration : 600 Registration : 10 Registration : 10 Paddresses : 600 IP addresses of SIP SiP protocol settings : Pasword :

The example of these settings is showed at this picture

1.3 Example of Cisco Call Manager configuration

Following example of configuration correspond with configuration interface of Cisco Call Manager 6 and 7.

System - Call Routing - Media	Resources 👻	Voice Mail 👻	Device -	Application -	User Management 👻	Bulk Administration 👻	Help 👻
Trunk Configuration							
			_	_	_	_	_
🔚 Save 🗶 Delete 🍟 Re	set 🛟 Add	New					
- Status							
(1) Status: Ready							
- Device Information	Přenosový sp	oi SIP					
Device Protocol:	SIP	0 51					
Device Name*	VB-GSM						
Description							
Device Pool*	GSM				•		
Common Device Configuration	< None >				•		
Call Classification*	Použít výcho	zí systémová	nastavení		•		
Media Resource Group List	< None >				•		
Location*	Hub_None				•		
AAR Group	< None >				-		
Packet Capture Mode*	Žádné				-		
Packet Capture Duration	0						
Media Termination Point Reg	quired						
Retry Video Call as Audio							
Transmit UTF-8 for Calling F	Party Name						
Unattended Port							
 Multilevel Precedence and 	Preemption	(MLPP) Info	rmation -				

MLPP Domain < None >

- Call Routing Information -

Significant Digits*	All	•
Connected Line ID Presentation st	Výchozí	•
Connected Name Presentation *	Výchozí	•
Calling Search Space	Local	•
AAR Calling Search Space	< None >	•
Prefix DN		

•

Outbound Calls	
Calling Party Selection*	Původce 👻
Calling Line ID Presentation*	Výchozí 👻
Calling Name Presentation*	Výchozí 👻
Caller ID DN	
Caller Name	
Redirecting Diversion Hea	der Delivery - Outbound

estination Address*	192.168.50.39	
Destination Address is an SRV		······································
Destination Port*	5060	
1TP Preferred Originating Codec*	711alaw	-
resence Group*	Standard Presence group	-
SIP Trunk Security Profile*	Non Secure SIP Trunk Profile	•
terouting Calling Search Space	< None >	-
Out-Of-Dialog Refer Calling Search Space	< None >	-
SUBSCRIBE Calling Search Space	< None >	-
SIP Profile*	Standard SIP Profile	-
DTMF Signaling Method*	RFC 2833	-
Save Delete Reset Add New]	

2. Outgoing calls

2.1 LCR configuration

Let's say that we have SIM cards of two GSM operators (4 pcs. for each one):

- The first one, we will call it N₅, it has following prefixes (602, 606, 607, 723, 724) and it requires you to dial the number from your mobile phone with the international prefix (+420). All numbers have a nine digit length with the prefix but without the international prefix.
- The second one, we may call it NobiCell, has the following prefixes (901, 902, 907, 909) and requires you to dial the number with the prefix (0). All numbers have a nine digit length with the prefix and without "0".

2.1.1 GSM outgoing group assignment

As a first step we have to assign modules to GSM outgoing groups. In this case will use two groups (for each operator one).

In this case we set modules 0 and 1 to GSM Outgoing group 1 (those will be used for operator N5) and modules 2 and 3 to GSM Outgoing group 2 which will be used for NobiCell.

For correct functionality has to GSM outgoing group settings follow real placement of the SIM a card on all GSM channels.

Topics Alphabetical glossary		GSM groups assignment
Gateway control Gateway configuration System parameters GNUP parameters GSM basic parameters	Groups assignment : Module : Outgoing : Incoming : 0. module 1. Group 💌 1. Group 💌	Ĵ
GSM groups assignment GSM outgoing groups GSM incoming groups	1. module 1. Group 💌 1. Group 💌	
Prefixes LCR table CLIP Routing table Mobility extension	2. module 2. Group ▼ 1. Group ▼ 3. module 2. Group ▼ 1. Group ▼]
L Restart		

2.1.2 Configuration of GSM outgoing groups.

GSM outgoing groups are used for detailed SIM card configuration. Most important options you can set here are:

- CLIR settings
- Free minutes for all SIM cards
- Billing interval settings

For switching between groups you can use the tabs.

Tabs for	GSM outgoing groups	
VoiceBlue Program File Gateway Gateway control Settings Image: Setting Settings Image: Setting Setting Settings Image: Setting	Heip	Parameter CLIR Build of the second of t

2.1.3 Prefix configuration

Now we have to create two Prefix lists, where we will specify prefixes of each operator. For each operator has to be used separate prefix list.

Prefix list is used for two purposes. First it to specify prefixes unique for each operator and second is to provide number normalization for called number.

Prefix lists are checked from prefix list one to prefix list eight. When first match is found, LCR table is check for correct outgoing direction.

In prefix list is number as a first think check for normalization. This means that number is compared with left side of number listed in Table of replaced prefixes (in our case it is 00420, +420, 420 and any other number which is represented by no number before slash). When match is found, replaced number is removed and rest of number is compared with prefixes listed in table of prefixes. As a last step we add an number specified on the right side of slash in Table of replaced prefixes.

Example:

From PBX is dialed number 420723658037. Gateway will look for first match in Table of replaced prefixes in first prefix list. Match is found on 3^{rd} line (420/+420). We remove 420 (so it's remaining 723658037). This number is compared with table of prefixes where match is found on 4^{th} line. As a last step we add +420 (right side from slash of 420/+420) so we have +420723658037.

N5 Prefix list:	Tabs for net	work lists		
🚺 VoiceBlue Program			Table of pre	fixes
File Gateway Gateway control Setting	gs Help		for N5 operation	ator)
🖻 🖬 🔍 🗶 🔚 🗣 🖡	. 💥 🎞 📼			
Topics Alphabetical glossary			Prefixes	
Gateway control	Prefix list 1 Prefix list 2 Prefix list 3	Prefix list 4 Prefix list 5 Prefix list 6 Pre	Prefix list 8	
VoIP parameters	Table of replaced prefixes :	Table of prefixes : GSM r	network ID :	
GSM basic parameters GSM groups assignment GSM outgoing groups	00420/+420 +420/+420 420/+420	602 606 607		
GSM incoming groups Prefixes	/+420	723 724 9		
LCR table CLIP Routing table				
Mobility extension	1			
	Edit	AddEdit	$\left(\right)$	Default
Table for nor	malization	Remove Remove all		number of
	/)	1	1
	Loa	d from the gate Default	Save to file	



2.1.4 LCR table configuration

Last step of configuration is to create connection between prefixes listed in Prefix lists and GSM Outgoing group. This is done in LCR table menu.

Click on ADD button (or edit the first line of LCR table) to add the first line and configure it the following way for the N5:

Edit LCR entry		$\mathbf{\overline{N}}$
Prefix list :	Prefix list 1/	Outgoing destination : GSM group 1
	04.00	<none></none>
From : UU:UU To :	24:00	<none></none>
Use whole weekend		<none></none>
C Use whole weekend		<none></none>
 Use the time set above 		<none></none>
Maximal duration of call :	(0 = off) 0	<none></none>
	OK Cancel	

Click on ADD button to add the second line and configure it the following way for the NobiCell:

Prefix list :	Prefix list 2/	Outgoing destin GSM group 2	ation :
		<none></none>	-
From: UU:UU To:	24:00	<none></none>	-
Use whole weekend		<none></none>	$\overline{\mathbf{v}}$
O Use whole weekend		<none></none>	$\overline{\mathbf{v}}$
 Use the time set above 		<none></none>	$\overline{\mathbf{v}}$
Maximal duration of call :	(0 = off) 0	<none></none>	Ψ.

Now you can see two LCR lines in the LCR table:

🕼 VoiceBlans Program 📃 🗖 KoiceBlans Yogram						
Topics Alphabetical glossary			LCR table			
Compared and Unity of the second	Petic List 1/ 2/	Validion/te 0000/24.00 0000/24.00	Outgoing destination 1 2	Cali duation limit 0 0	Edit Edit Remove al Load from the gate Save to the gate Default Default	
	Holday fat :	Date to move to summer time [dd mm]: Date to move to where time (dd mm]: Add Remove Remove all Default		00.00		

3. Incoming calls

For incoming calls you can define 4 groups with the different behavior and assign GSM modules for them. The settings are similar with GSM group assignment for outgoing calls.

Topics Alphabetical glossary	Groups assignment :	ing group
Gateway configuration	Module: Outaging: Incoming:	
System parameters System parameters	Module : Dulgoing : Incoming : 0. module 1. Group ¥ 1. Group ¥ 1. module 2. Group ¥ 1. Group ¥ 3. module 2. Group ¥ 1. Group ¥ 1. Group ¥	

In GSM incoming groups you can define the behavior for each GSM incoming group. Choose the mode to Reject, Ignore, or accept incoming calls.

Also, you can specify if call should be connected directly to some extension of (connected PBX or if you will allow user to dial over DTMF. Tabs for GSM incoming groups

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File Gateway Gateway control Setting	gs Help
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Topics (Mode)	GSM incoming groups
Gateway control	1 GSM group 2 GSM group 3 GSM group 4 GSM group
Login account	
	Mode : Accept incoming calls + dialtone List of called numbers :
	Cal popper by 2A, 2695 'S or pone or answer and wall for DTMP1 200
Terminal	
Call data records	и: го : ртиг
Statistics	Min. agits in DTMr.
Voice message	Max. digits in DTMF : 3 🗢
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	
Gateway configuration	
System parameters	Day of deleting GSM inc. gr
GSM basic parameters	
GSM groups assignment	
GSM outgoing groups	
GSM incoming -	Timeout for DTMF
CLIP Routing table	CLIP to VolP modification :
Mobility extension	
	Time to keep CLIP in table (hours) : 0 💽 🔽 Off
	Add record only for unconnected call
	Delete record for connected answer

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