



2N[®]

VoiceBlue Next



2N[®] VoiceBlue Next gateway installation guide

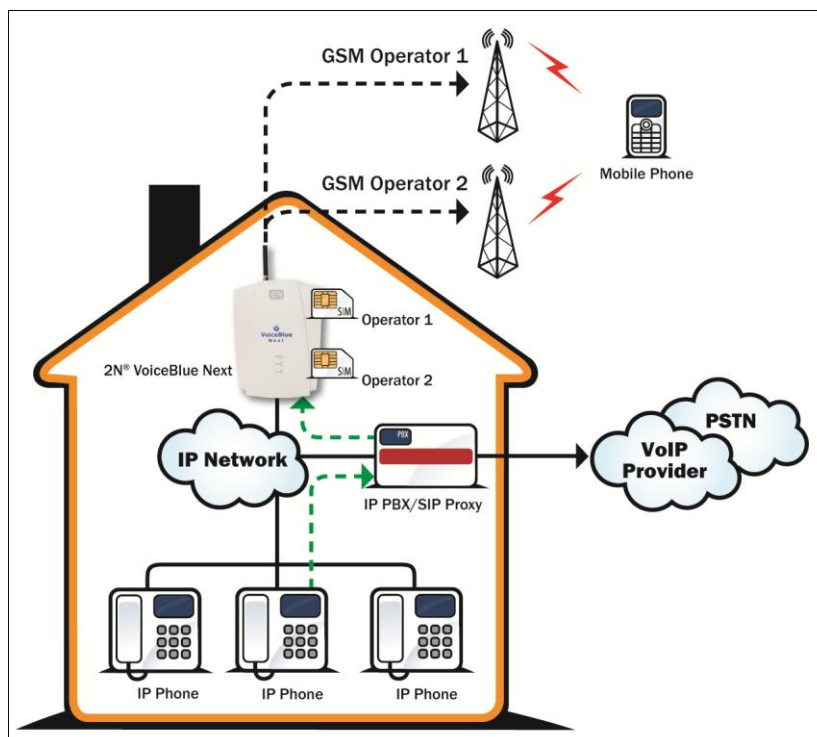
Quick guide

Version 1.00

www.2n.cz

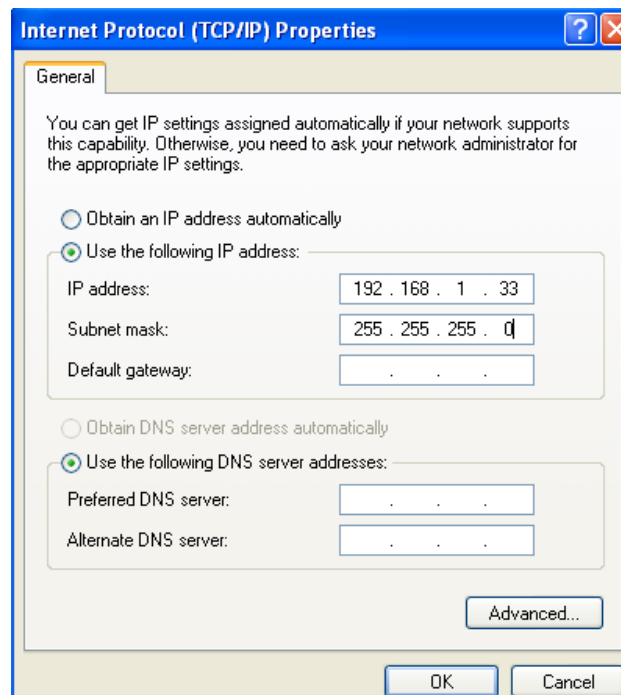
2N® VoiceBlue Next gateway installation guide

2N® VoiceBlue Next is designed to reduce the costs of outgoing calls to GSM networks. The main advantage is the ability to expand the IP PBX to include a GSM gateway and make use of a LCR which selects the best GSM operator depending on the called number.



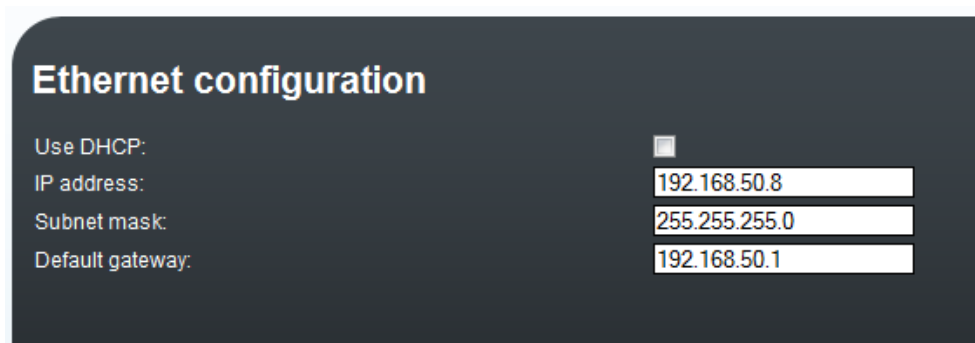
1. How to connect VoiceBlue Next

Connect the 2N® VoiceBlue Next via Ethernet cable directly to the computer. Change the IP address setting in the configuration of your PC (e.g. 192.168.1.33 and Subnet Mask 255.255.255.0)



Open your web browser and enter the default GSM IP address 192.168.1.2 with the default credentials.

In the gateway configuration and Ethernet configuration you are able to change the IP address.



2. How to set up connection to the opposite device (PBX)

For the setting of the trunk between the VoiceBlue Next and your PBX you need to configure SIP proxy (GSM→IP) for GSM incoming calls. SIP proxy (IP→GSM) is designed for secure

communication just with traffic from your PBX. You can specify the IP address and port which will accept SIP packets from.

In case you leave there 0.0.0.0 it will be open for all traffic.

!!!! This can lead to misuse of equipment by an unauthorized person !!!!

Gateway configuration

- System parameters
- VoIP parameters**
- GSM basic parameters
- GSM groups assignment
- GSM outgoing groups
- GSM incoming groups
- Prefixes
- LCR table
- CLIP Routing table
- Mobility Extension
- Ethernet configuration
- Login configuration
- Web configuration
- Report configuration

Codec settings

Codec	Number of blocks	VAD
G711:	2 x 10ms	<input type="checkbox"/>
G729:	2 x 10ms	<input type="checkbox"/>

Codec priority

Priority	Codec
Priority 1:	G711a (8)
Priority 2:	G711u (0)
Priority 3:	G729 (18)

IP addresses

Field	IP Address	Port	Action
SIP proxy (IP->GSM):	0.0.0.0	5060	Set default port
SIP proxy (GSM->IP):	192.168.50.5	5060	Set default port
SIP registrar:	0.0.0.0	5060	Set default port
NAT firewall:	0.0.0.0		
STUN server:	0.0.0.0	3478	Set default port
Next STUN server request (60-6553, 0=off) [s]:	600		

Callouts:

- The IP address to which the traffic is send
- The IP address and port which will accept traffic from
- Only for registered trunks (ME)

3. How to configure LCR table

Situation...

Let's say we have SIM cards of two GSM operators:

- T-mobile: Using the 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.
- Vodafone: Using the following prefixes (901, 902, 907, 909) and requires you to dial the number with the prefix (420). All numbers have a nine digit length with the prefix and without "420".

We have to assign modules to two GSM outgoing groups (for each operator). The first step we have to do is to place the SIM cards into the SIM holders. We will start with modules 0 using the T-mobile operator SIM. Module 2 will follow the same procedure but using the Vodafone SIM.

Gateway control

Gateway configuration

- System parameters
- VoIP parameters
- GSM basic parameters**

GSM groups assignment

Module	Outgoing	Incoming
0. module	1. Group	1. Group
1. module	2. Group	1. Group

Callouts:

- T-mobile
- Vodafone

3.1.Configuration of GSM outgoing groups

You are able to set up different setting for each GSM group (CLIR, free minutes, Virtual ring tone, roaming and others)

Gateway configuration

- System parameters
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- **GSM outgoing groups**
- GSM incoming groups
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- CLIP Routing table

Basic settings

Roaming enabled for network code:

CLIR:

Maximum count of called minutes (1-65535,0=off):

Count of SMS messages (1-65535,0=off):

Day of restore call limit and delete statistics:

First count:

Next count:

Day limit of called minutes (1-1440,0=off):

3.2.Prefix lists

We have to create two network lists, the first one for T-mobile and the second one for Vodafone.

T-mobile network list:

We configure the normalization of Called party number in the Table of replaced prefixes (the number in front of the slash mark is replaced by number behind the slash mark, if there is not any number in front of the slash mark it is equaled to “everything”).

We also have to fill in the Table of prefixes with all prefixes of the T-mobile operator. Because all numbers are 9 digits length, it is not necessary to specify for each prefix, we can use the parameter Default count of digits and fill there the value 9.

For the match in prefix list, the Table of replaced prefixes, Table of accepted prefixes and Digits count must correspond with the called number.

Gateway control

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Configuration backup

Logout

Prefixes

GSM prefix lists

Prefixlist 1 Prefixlist 2 Prefixlist 3 Prefixlist 4 Prefixlist 5 Prefixlist 6 Prefixlist 7 Prefixlist 8

Basic settings

GSM network ID:

Default count of digits:

Table of replaced prefixes

Only 0123456789*# characters are allowed

00420/+420
+420/+420
420/+420
/+420

Prefix:

Replace with:

Add Remove Remove all

Table of accepted prefixes

Only 0123456789*# characters are allowed

602
606
607
723
724

Prefix:

[Digits count]:

Add Remove Remove all

Table of normalization

Default number of digits

Table of prefixes for T-mobile operator

Vodafone network list:

We configure the normalization of Called party number in the Table of replaced prefixes (the number in front of the slash mark is replaced by number behind the slash mark, if there is not any number in front of the slash mark it is equaled to "everything"). We also have to fill in the Table of prefixes with all prefixes of the Vodafone operator. Because all numbers are 9 digits length, it is not necessary to specify for each prefix, we can use the parameter Default count of digits and fill there the value 9.

Gateway control

Gateway configuration

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Prefixes

GSM prefix lists

Prefixlist 1 Prefixlist 2 Prefixlist 3 Prefixlist 4 Prefixlist 5 Prefixlist 6 Prefixlist 7 Prefixlist 8

Basic settings

GSM network ID:

Default count of digits:

Table of replaced prefixes

Only 0123456789*# characters are allowed

00420/+420
+420/+420
420/+420
/+420

Prefix:

Replace with:

Add Remove Remove all

Table of accepted prefixes

Only 0123456789*# characters are allowed

901
902
907
909

Prefix:

[Digits count]:

Add Remove Remove all

3.3. LCR Table

We have to configure rows in the LCR table where we bind together GSM Outgoing groups with Prefix lists. 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 T-mobile:

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LCR table

Edit record

Prefix list:

Time limitation:

Weekend usage:

Maximum length of call:

Groups:

Prefix list 1/

00 : 00 - 24 : 00

Use as in week (set above)

Off

GSM group 1

----- None -----

Ok

Cancel

Prefix list	Time limitation	Weekend usage	Max. length of call	Groups	Add	Remove all
1/	0:00/24:00	Use as in week	Off	1	Edit	Remove

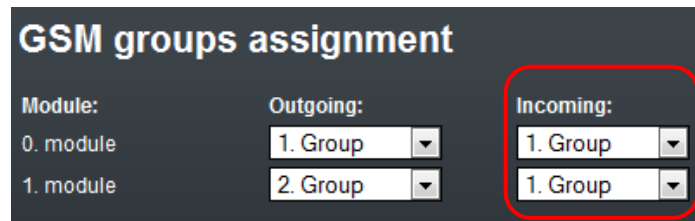
Click on ADD button to add the second line and configure it for the Vodafone.

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

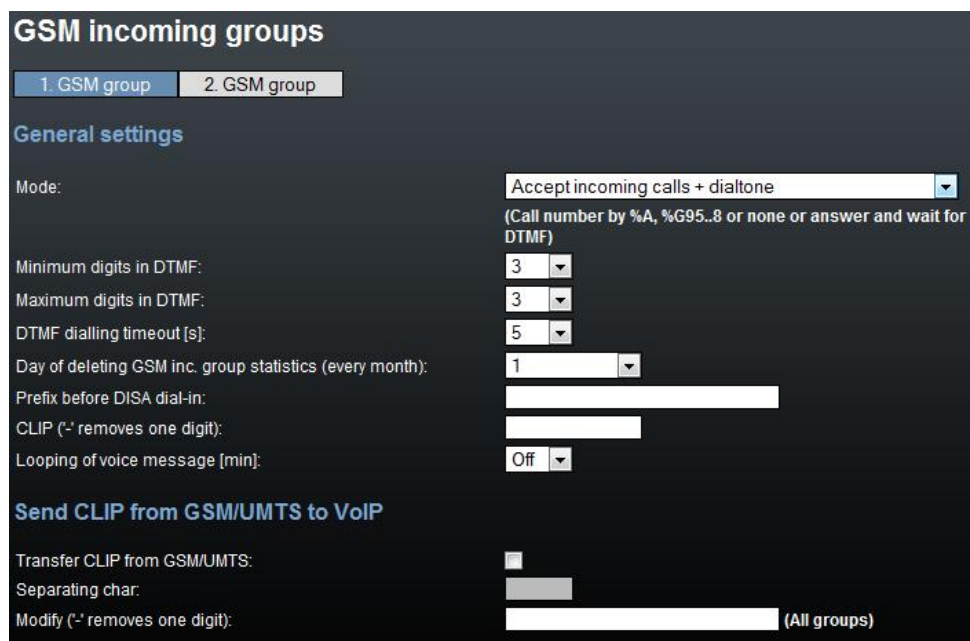
LCR table						
Prefix list	Time limitation	Weekend usage	Max. length of call	Groups	Add	Remove all
1/	0:00/24:00	Use as in week	Off	1	Edit	Remove
2/	0:00/24:00	Use as in week	Off	2	Edit	Remove

Incoming calls

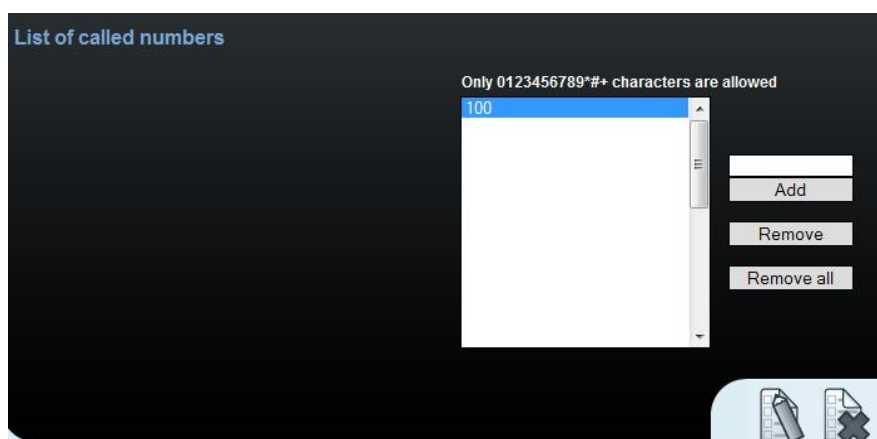
For incoming calls you can define 2 groups with the different behavior and assign them to the GSM modules. The settings are similar with GSM groups assignment for outgoing calls.



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



You can define the list of called numbers which will be automatically dialed after DTMF dialing timeout if the customer don't press any button till the specified time. From the configuration, you can see 5 seconds for DTMF dialing and after that the call will be routed to the extension 100 to your PBX (if you set up SIP proxy (GSM->IP) in VoIP parameters).



SIM cards

In the Gateway control and module control you can see the status of the SIMs. The recommendation for quality of the signal is between -65 and -85dBm.

Module control

Module 0

Reset

Block

Down

Off

On

Information	
Layer 2 status	IDLE
Layer 3 status	NULL
Network name	T-Mobile CZ
Network ID	23001
Network cell	1,000,17230,00705
Signal	-89 dBm
Module ID	MC55i
Module firmware	01.201
Module IMEI	353681040288318
SIM card 1 (actual)	230014000525392

The logged SIM card is indicated by switched off the led diode on the 2N®VoiceBlue Next.



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