nexVortex Setup Guide

Fortivoice

August 2014

510 SPRING STREET | HERNDON, VA 20170 | +1 855.639.8888

Introduction

This document is intended only for nexVortex customers and resellers as an aid to setting up the Fortivoice PBX software to connect to the nexVortex Business Grade SIP Trunking Service.

- Further Fortivoice information can be found at http://www.fortivoice.com.
- Further help may be obtained by emailing support@nexvortex.com.

If you find any errors in this document or have any suggestions, please email us at support@nexvortex.com so that we can make updates to this document.

Important! Your DNS Address
Your specific DNS address was provided in the Account Set Up email you received the day you opened your account. Your Authentication User ID and password are also in this email. If you need assistance locating this information, please contact support@nexvortex.com.

Note: For all instructions throughout this Guide, you must substitute your DNS address wherever xx.xx.xxx.xxx is referenced.

Proxy Servers
To connect to the nexVortex network, you will need to add our proxy address into your phone system or device. The address of our proxy server will be a fully qualified domain name (FQDN). It was automatically sent to you when your account was setup. If you no longer have this information or would like us to issue a new proxy key, please contact us at support@nexvortex.com.

Note: If your system does not support a fully qualified domain name format, please contact support for a list of valid IP addresses for your account.

Special Characters
Please note that special characters should not be used anywhere in SIP configurations. These include, but are not limited to, @#$%&! and spaces.

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Step 1: Trunk Configuration

Inbound service – You may receive SIP signaling from nexVortex from any of the following IP addresses:

- 66.23.129.253
- 66.23.138.162
- 66.23.190.100
- 66.23.190.200
- 209.193.79.80

Your PBX should be configured with as many trunks as necessary to field traffic from these IPs. If you need additional assistance ensuring your local PBX configuration meets this requirement, please contact technical support for your equipment directly.

Outbound service – The most efficient way to ensure redundancy for outbound calling is to utilize DNS SRV for routing traffic to nexVortex. At present, if your PBX supports DNS SRV, pointing to 'nexvortex.com' as your Proxy IP address is all that should be necessary to ensure outbound redundancy.

If your PBX does not support DNS SRV, hopefully it supports configuration of multiple outbound proxies. If so, you should configure px1.nexvortex.com or px3.nexvortex.com or as your primary proxy IP address, and px5.nexvortex.com as your secondary IP address. If you need additional assistance with DNS SRV or configuring multiple outbound proxy IPs on your PBX, please contact technical support for your equipment directly.

Step 2: Trunk Settings

Your trunks MUST be configured to present your provisioned E911 number(s) (The E911 settings you created for your account at nexVortex.com) for Emergency calls (911) or emergency TEST calls (311 or 933). Either a proper FROM or P-Asserted-Identity (preferred) header containing your provisioned Emergency number, if you require additional information, please contact support.

In order to provide the highest level of service availability possible, nexVortex utilizes an n+1 architectural model for our call processing. You will need to ensure that your network edge (router and/or firewall) is configured to accommodate this architecture.

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- 66.23.190.100
- 66.23.190.200
- 209.193.79.80

You must ensure that each of these IPs is allowed to pass UDP 5060 traffic into your network and that this traffic is port-forwarded (if necessary) to the internal IP of your PBX.

You will also need to open the RTP or audio ports. This is different for each customer premise device. Please reference Fortivoice for this detail. Your edge device must be configured to allow inbound RTP traffic on this port range from ALL IP addresses.

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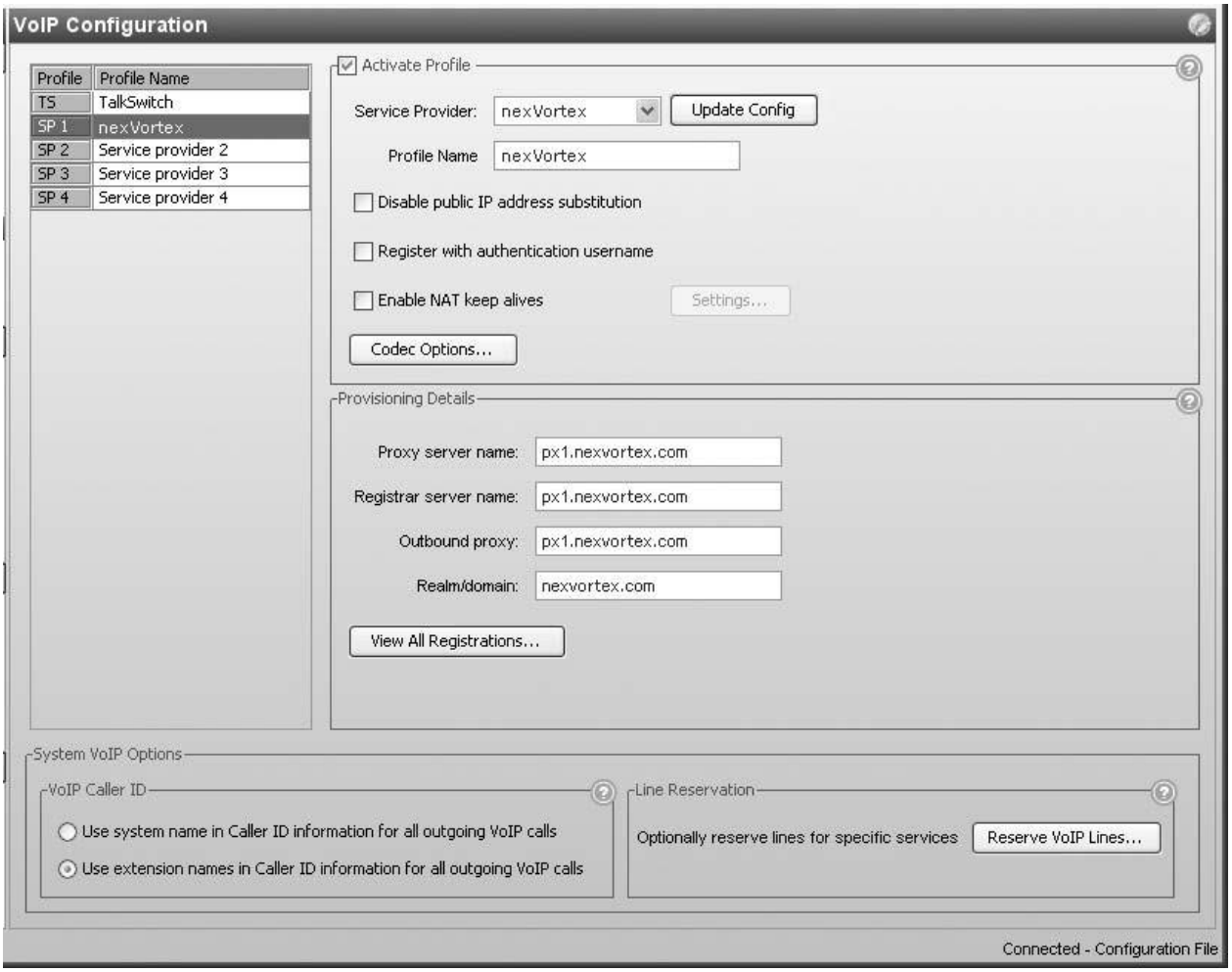
A service provider profile contains the settings that allow your FortiVoice to register with the provider.

1. Select the *VoIP Configuration–on* page.



2. Select a *Profile* (*SP 1* to *SP 4*) that you wish to assign for use with nexVortex.
3. Select the *Activate Profile* checkbox.
4. In the *Service Provider* pull-down menu, select *nexVortex* as the *Profile name*.
5. Click the *Update Config* button. The essential settings for communication with the service provider's registration server will be completed automatically.

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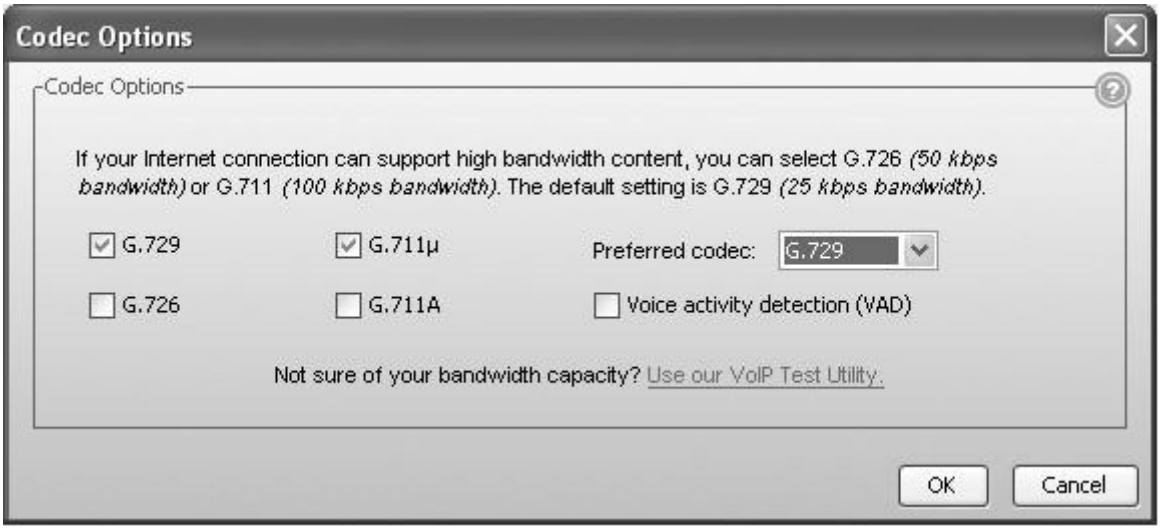
Setting Codec Options (If Necessary)

A codec is a method of compressing and decompressing audio signals for communication across a network. FortiVoice supports the G.729, G.726 and G.711 (µ-law or A-law) codecs for VoIP calls. If your service provider or equipment requires specific codecs for VoIP or Fax over IP calls, you can restrict FortiVoice to use the required codec. The *Codec Options* button opens a window which allows you to select the codecs your system can use, specify the preferred codec, and clear the unsupported codecs. You can specify the codecs for the multi-branch profile, and for each service provider profile. External IP extensions will use the preferred codec specified in the multi-branch profile.



The following codecs are supported:

- *G.729* — This codec provides good quality. It requires the least bandwidth and accommodates the highest number of concurrent calls.
- *G.711µ* — This codec provides high quality and supports Fax over IP. It requires the most bandwidth and accommodates the fewest number of concurrent calls. G.711µ is used in North America and Japan.
- *G.729* is set as the *Preferred codec*.
- *Voice activity detection (VAD)* — This is disabled by default, as it is not recommended for this service.

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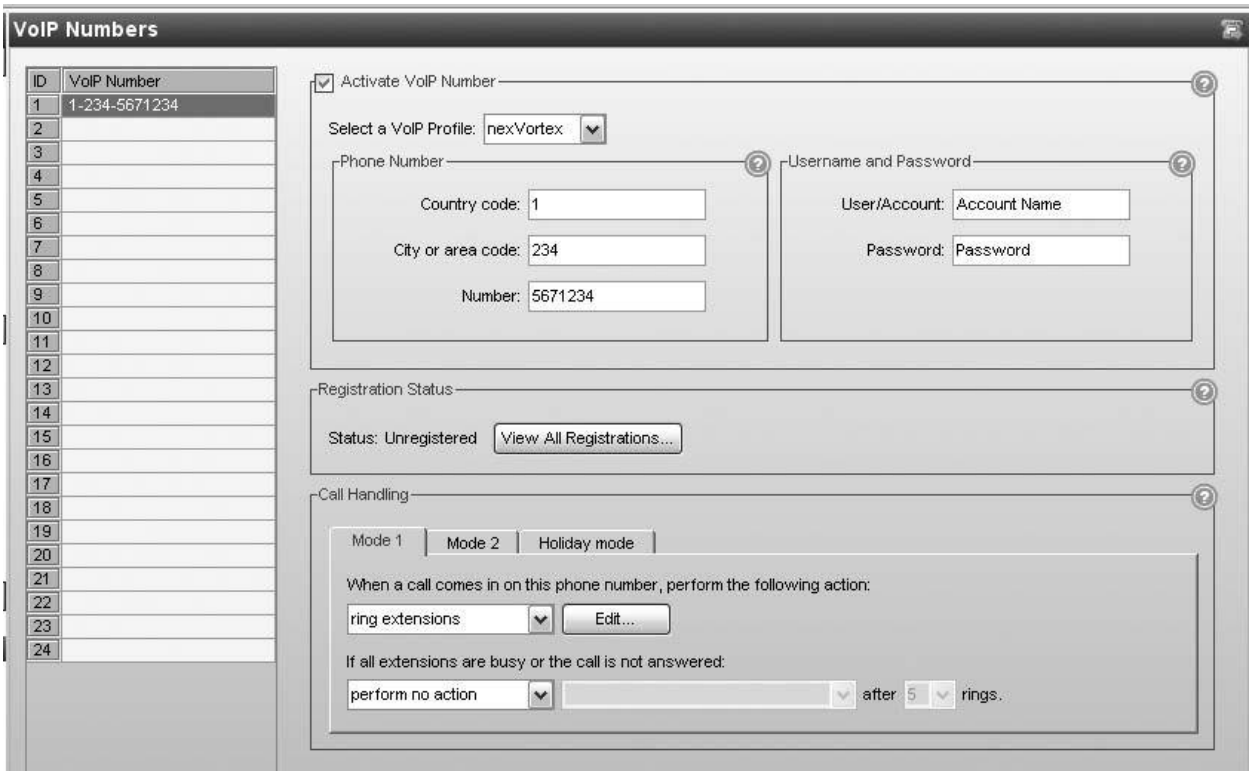
Setting up VoIP numbers

A VoIP number is like a telephone number, and is used to dial a FortiVoice system at a particular location. nexVortex assigns the Account Numbers, Account Names and Passwords for each location.

1. Select the *VoIP Numbers* page.



2. Select a VoIP number slot.
3. Select the *Activate VoIP Number* checkbox.
4. Set the VoIP profile to *nexVortex*.
5. Enter the VoIP number. This is the Account Number provided by nexVortex.
    a) Enter the first digit as the *Country code*.
    b) Enter the next three digits as the *City or area code*.
    c) Enter the final seven digits as the *Number*.
6. Enter the *User/Account* name. This is the Account Name provided by nexVortex.
7. Enter the *Password* provided by nexVortex.
8. Set up call handling for the VoIP number. For more information, click the Help icon in the *Call Handling* area.
9. Repeat steps 2 to 8 for each additional VoIP number.

Setting Up a Line Hunt Group

Ensure that Hunt group 9 is assigned to the group of telephone lines or VoIP trunks used for calls to emergency services.

Set up a line hunt group for nexVortex, as described in the "VoIP Information" section of the *FortiVoice User Guide*.

The configuration has nine different line hunt groups. If a FortiVoice unit is VoIP enabled, line hunt group 88 uses multi-branch VoIP by default, and the other line hunt groups use telephone lines. You can modify these default settings as required. If you are using multiple service provider VoIP networks, set up a line hunt group for each service provider.

FortiVoice recommends the use of the line hunt group's Busy Overflow feature for failover to telephone lines and protection against SIP trunk failure (for example, loss of broadband access).

Saving Settings

To transfer settings from your computer to the FortiVoice system, choose *File > Save*. A window appears indicating the configuration is being sent.

Verifying Registration

1. Select the *VoIP Configuration* or *VoIP Numbers* page.
2. Click *View All Registrations*. The *Registration Status* window appears with a list of VoIP numbers, their registration status, and the number of seconds until their registrations with the SIP server will expire. This confirms that the VoIP numbers are registered with the service provider.
3. Choose *All Registered Numbers* or an active profile (e.g. nexVortex).
4. Ensure the status of the VoIP numbers is *Registered*.

Client information shown is for example purposes only.

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Troubleshooting

Customer System will not register with nexVortex:

- Check the system is pointing at xx.xx.xxx.xxx
- Check UDP port 5060 is open on the firewall
- Check NAT translation is correct between LAN private IP address and public IP address
- Check you have the correct proxy user name and password configured.

Customer System cannot make a call:

- Check the system is pointing at xx.xx.xxx.xxx
- Check UDP port 5060 is open on the firewall
- Check NAT translation is correct between LAN private IP address and public IP address
- Check you have the correct proxy user name and password configured.

Customer System cannot receive a call:

- Some systems require our IP Address xx.xx.xxx.xxx for verification to be configured
- Check UDP port 5060 is open on the firewall
- Check NAT translation is correct between LAN private IP address and public IP address
- Check that you have setup the IP route for the number correctly with nexVortex. This is done through the customer or reseller Partner Connect portal->Settings-> Number Routing
- Check that the dial plan is configured to route the number to a valid location on the customer system.

One way audio or no audio after call is setup:

- Check the RTP audio ports are open on the firewall.

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