

# Switchvox FXS Station Configuration

## Overview

This document will guide you through the process of configuring Vega series of Gateway's to work with Switchvox. There are two major installations - 1) T1/E1/BRI and FXO for Trunking solutions, 2) FXS for Analog stations. This document will focus on FXS Analog Stations.

## Introduction

For Analog Station solutions. Vega Gateway to Switchvox Configuration Guide provides detailed information about the configuration requirements in Vega series of Gateways Vega 60G, Vega 3000G and Vega 3050G. A typical deployment connects POTS phones to the FXS interface of the Vega Gateway and the Vega connects to the Switchvox IP-PBX, registering all of the FXS Extensions to the Switchvox.



## Analog Extensions

Bringing POTS Phones into the Vega Gateway and Register the Extension onto the Switchvox. Each FXS Line will individually Register to the Switchvox. This will allow the Switchvox to call each Extension on the Vega.

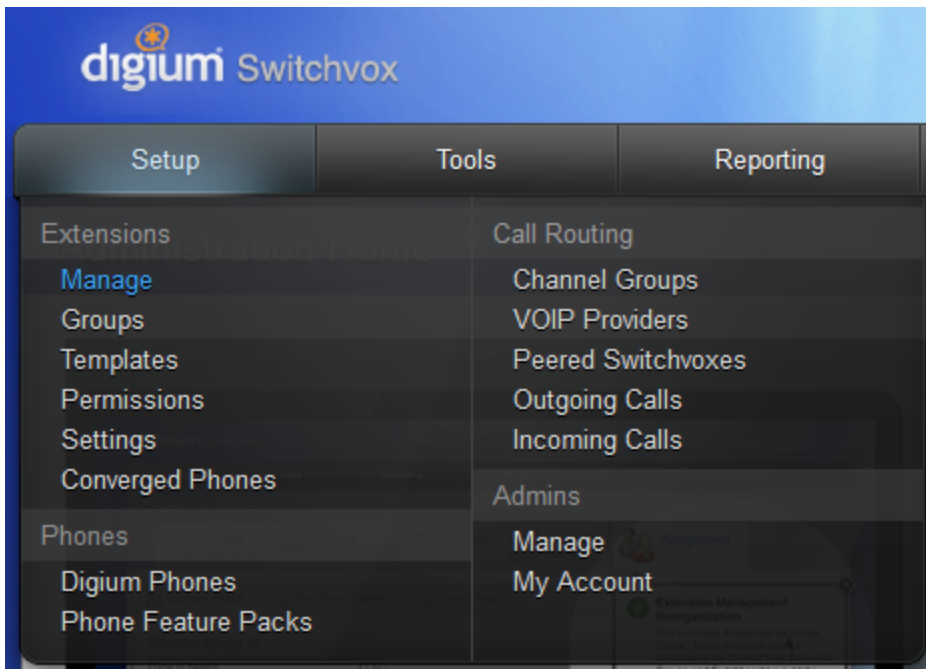
## Switchvox Configuration

### General Configuration

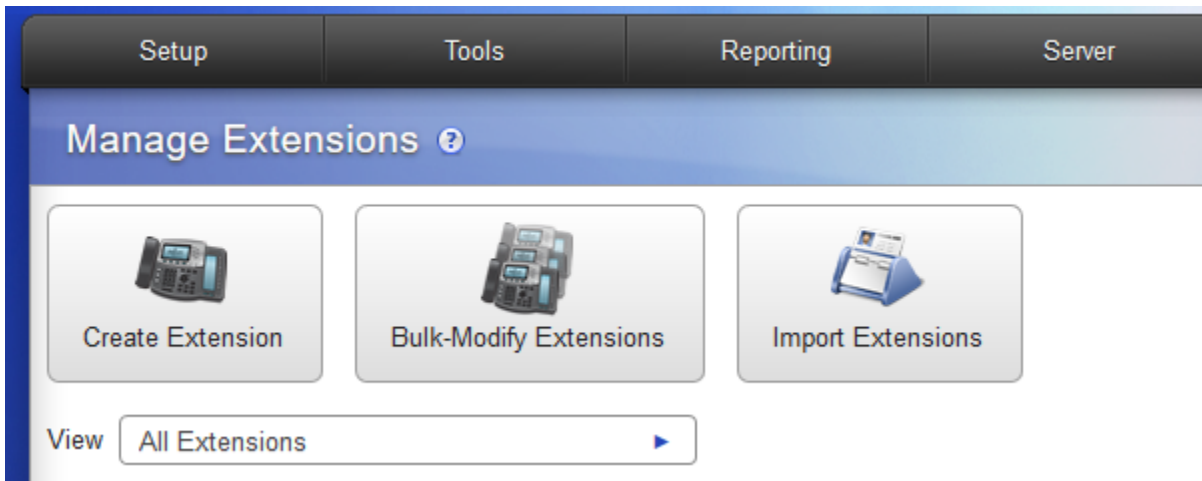
The Switchvox will typically have a Static IP or Fully Qualified Domain Name. In this configuration we are defining the Vega Gateway FXS Lines to individually register to the appropriate Switchvox Extension. From there the Switchvox will accept calls from the Vega Gateway FXS Line, and also make calls to the individual FXS line on the Vega.

### Manage Extensions

Open the Manage tab. ( Setup > Extensions > Manage )



Click Create Extension.








Under Create Extension - Profile Information complete the following information:

- **Extension Type:** Select SIP Phone or SIP Adapter for Analog Phone (ATA)
- **Extension Template:** Select Default

Setup      Tools      Reporting      Server

## Create SIP Extension [?](#)

 **Profile Information**  
  **Phone Settings**  
  **Permissions**  
  **Outgoing Call Rules**  
  **Assignment**

### Profile Information [?](#)

Extension

First Name   
Primary user of this extension

Last Name

Email Address   
For voicemail notification

Location

Title

Language / Locale

Timezone

Password   
For web tool access

Retype Password

Numeric PIN   
For voicemail

Retype Numeric PIN

Default Parking Lot

Under Create Extension - Phone Settings complete the following information:

- **Phone Password:** Enter a SIP Authentication Password
- **Retype Phone Password:** Enter the same SIP Authentication Password

**Note:** This is the same SIP Authentication Password that will need to be entered into the Vega Gateway FXS Port configuration.

Setup Tools Reporting Server

## Modify SIP Extension ?

Profile Information Phone Settings Permissions Outgoing Call Rules

Digium Phones Other Manufacturers Common Settings

### General Settings

Auto-answer Switchboard initiated calls  NO

Phone Password

Retype Phone Password

Phone NAT Traversal Always ▶

Rapid Dial List Assignment User Default (Custom) ▶

Click "Save SIP Extension"



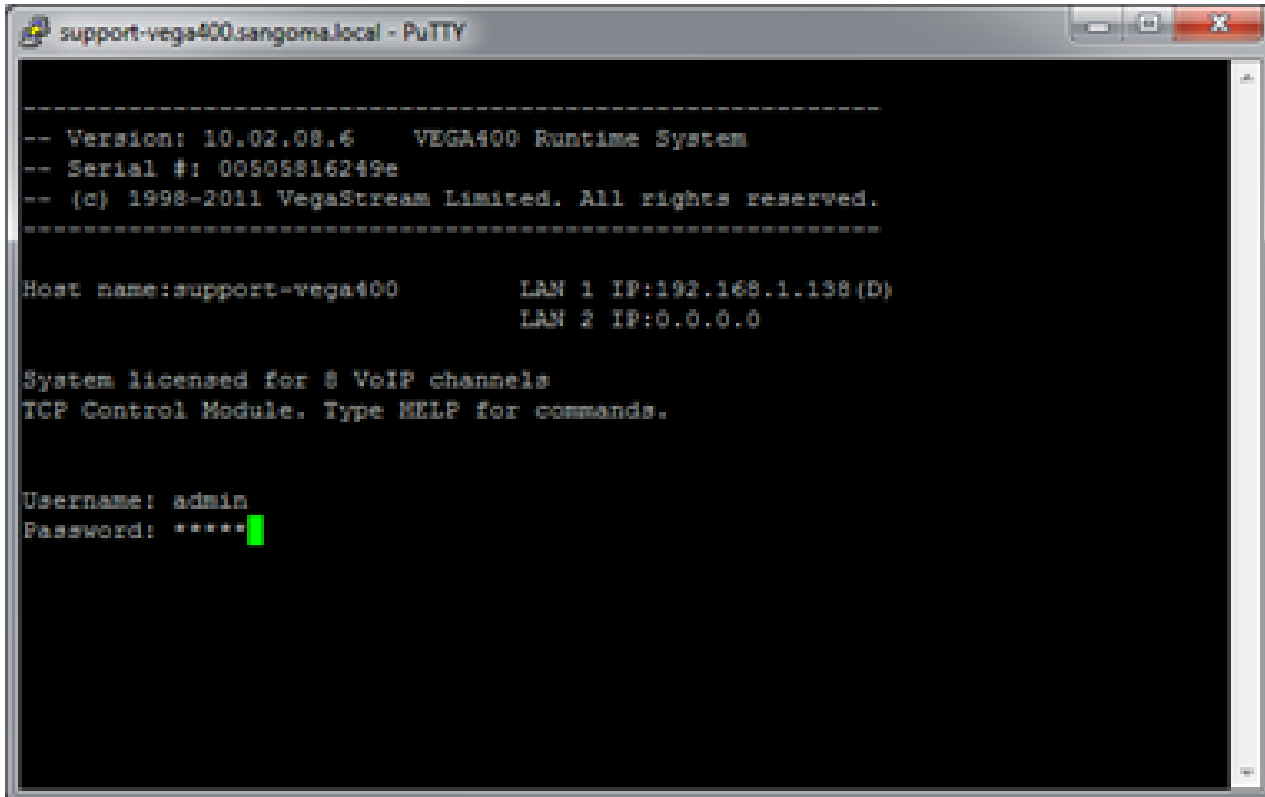
## Vega Gateway Configuration

### General Configuration

#### DHCP

All Vega Gateways use DHCP to assign an IP Address. Plug the Vega Gateway to the network, DHCP will assign an IP Address to the unit. To know what the IP Address that was assigned to Vega do one of the following;

- Attach Serial Cable to the Vega, 115200 8N1, login admin/admin - IP Address will be displayed on the Banner, or type Show Banner
- Refer to the DHCP Server reservation
- Use a network scan tool, look for the IP based on the MAC



```
-----  
-- Version: 10.02.08.6   VEGA400 Runtime System  
-- Serial #: 00505816249e  
-- (c) 1998-2011 VegaStream Limited. All rights reserved.  
-----  
  
Host name:support-vega400           LAN 1 IP:192.168.1.138(D)  
                                       LAN 2 IP:0.0.0.0  
  
System licensed for 8 VoIP channels  
TCP Control Module. Type HELP for commands.  
  
Username: admin  
Password: *****
```

### Use of Static IP

**NOTE:** Although the out-of-the-box Vega Gateway obtains an IP Address dynamically, it is recommended that Gateways use a Static IP Address. Configuration of Static IP will be done in each section.

## Quick Config

Quick Config is the Vega Gateway's configuration Wizard. The Wizard asks some specific questions related to the nature of your installation and upon Saving Configuration, the Wizard will complete the programming of the Vega Gateway, through the entire Expert Config. This document will focus on the Quick Config wizard and any supplemental Expert Config requirements. All Quick Config are the same across all Vega Gateways, although specific to Analog or Digital options for corresponding Gateway interfaces.

### Quick Config

When you login into the Vega Gateway, the System Status page is seen,

Vega 60G GW Configuration Network Capture System Status Warnings 4 Quick Config Reboot Logout

Overview / System Status

- Overview
- System Status**
- Configuration
- Report

#### System

Product Section	Vega 60G
Serial Number	005058206c02
Firmware File	VEGAARM_R1205003

[Version Information](#) [License Information](#)

#### LAN

IP Address LAN 1	10.10.48.31
LAN Gateway	10.10.48.1

[LAN Information](#) [Switch Information](#)

#### Registrar and Proxy

Domain	192.168.106.110
Proxy	192.168.106.110
Registrar	192.168.106.110

#### SIP Registrations

Registered Users	0 of 8 users registered
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[SIP Registrations](#)

#### Media

DSP Status: **ACTIVE**

[DSP Information](#)

#### Time and Date

Time (hh:mm:ss)	14:49:58
Date (mm/dd/yyyy)	03/05/2018


#### Interfaces

FXO	0 of 8 in service
-----	-------------------

[Port Information](#)

#### Calls

Answers	0
Total	0



[Call Information](#)

Click on **Configuration**

- Overview
- ▼ **Configuration**
  - ⚙ Quick Config
  - 👤 Expert Config
    - ▶ **System**
    - ▶ Logging
    - ▶ LAN/WAN
    - ▶ POTS
    - ▶ Dial Plan
    - ▶ Media
    - ▶ Tones
    - ▶ SIP
    - ▶ ENP
    - ▶ Supp.Services
    - ▶ Advanced
    - ▶ CLI
- Report

Click on **Quick Config**, a Warning will pop up, reminding you that any Edits here will overwrite the config. Click **Continue**

## Quick Config - Step 1 - Basic Configuration

First step in the Quick Config wizard, items such as Country, Time Zone, Emergency Numbers and LAN Interface details,

The screenshot shows the Vega 60G GW Configuration interface. The top navigation bar includes 'Vega', 'Vega 60G GW Configuration', 'Network Capture', 'System Status', 'Warnings', 'Quick Config', 'Reboot', and 'Logout'. The left sidebar shows a navigation menu with 'Overview', 'Configuration', 'Quick Config', 'Expert Config', and 'Report'. The main content area displays the 'Quick Configuration' wizard. A warning message states: 'Once finished with Quick Config the gateway is fully configured and ready to go! Do not enter Expert Config unless advanced modifications required.' The wizard progress bar shows 'Step 1 - Basic Configuration' as the current step, followed by 'Step 2 - VoIP' and 'Step 3 - FXO'. The 'Basic Configuration' section is divided into 'General' and 'LAN Interface'.

General	
Country	CA
Country Version	CA
Timezone Offset (HHMM)	0000
Emergency Numbers	999,112,911,000
Hostname	localhost

LAN Interface	
Interface	
Obtain IP Settings automatically Using DHCP	<input checked="" type="checkbox"/>
IP Address	10.10.40.31
Subnet Mask	255.255.240.0
Gateway	10.10.40.1
Preferred DNS Server	0.0.0.0
Alternate DNS Server	0.0.0.0
NTP Time Server	ca.pool.ntp.org
Physical	
Speed	Auto
Duplex	Full
QoS	
TOS/Diffserve	0
802.1pQ	<input type="checkbox"/>
VLAN ID	0
Priority	0

Select the appropriate **Country**, this is important to define the correct CallerID, Tones, Line Impedance and more for your region.

This close-up screenshot focuses on the 'General' section of the 'Basic Configuration' wizard. The 'Country' dropdown menu is set to 'US', and a red arrow points to the dropdown arrow. The 'Country Version' is also set to 'US'. Other fields include 'Timezone Offset (HHMM)' set to '0000', 'Emergency Numbers' set to '999,112,911,000', and 'Hostname' set to 'localhost'.

General	
Country	US
Country Version	US
Timezone Offset (HHMM)	0000
Emergency Numbers	999,112,911,000
Hostname	localhost

Change the Gateway from Dynamic IP to Static IP, this is not necessary, but recommended.

- Deselect "Obtain IP Settings automatically Using DHCP"
- Enter in the IP Address, Subnet Mask, Default Gateway, DNS Servers and NTP Server

LAN1 Interface	
Interface	
Obtain IP Settings automatically Using DHCP	<input type="checkbox"/>
IP Address	10.4.2.11
Subnet Mask	255.255.255.0
Gateway	10.4.2.254
Preferred DNS Server	8.8.8.8
Alternate DNS Server	10.4.2.254
NTP Time Server	ca.pool.ntp.org

### Quick Config - Step 2 - VoIP

This section is where the Switchvox is defined, as well as the behavior with the Switchvox.



VoIP ?

### VoIP Device Configuration

**General VoIP Configuration**

<b>Registration Mode</b>	Off <span style="float: right;">▼</span>
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**Local Gateway Configuration**

<b>SIP Local Port</b>	5060
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**Remote Server Configuration**

<b>SIP Server IP/FQDN</b>	default-proxy-1.com <span style="float: right;">?</span>
<b>SIP Server Port</b>	5060 <span style="float: right;">?</span>
<b>SIP Server Transport Mode</b>	udp <span style="float: right;">▼</span>
<b>SIP Accessibility Check</b>	options <span style="float: right;">▼</span>

<b>Registration/Authentication ID</b>	Reg and Auth ID
<b>Authentication Password</b>	****

**General VoIP Configuration - Registration Mode**

Here there are potentially three options, only one is applicable to Analog Stations: FXS Port

- Select **FXS Port**, when there is a requirement for each FXS Port to REGISTER or Authenticate with the Switchvox.

**Note:** Some variants of Vega 60G have both FXS and FXO. The Registration Mode must have FXS Port selected, and the FXO will behave like OFF was selected.

VoIP	
VoIP Device Configuration	
General VoIP Configuration	
Registration Mode	<input type="text" value="FXS Port"/> <ul style="list-style-type: none"> <li>Off</li> <li>Gateway</li> <li style="background-color: #007bff; color: white;">FXS Port</li> </ul>
Local Gateway Configuration	
SIP Local Port	<input type="text" value="5060"/>

**Remote Server Configuration**

Here is where the Switchvox location is configured, along with the SIP Port, Transport, SIP Accessibility Check (OPTIONS Ping) and if the Registration Mode: Gateway was selected, the Registration Username and Password

- **SIP Server IP/FQDN:** Enter the IP Address or Fully Qualified Domain Name of the Switchvox
- **SIP Server Port:** Enter the SIP Port of the Switchvox - 5060 is most common
- **SIP Server Transport Mode:** Select the Transport being used. UDP/TCP/TLS
- **SIP Accessibility Check:** Select Options
- **Registration/Authentication ID:** Because Registration Mode is FXS Port, there will be no single Registration to the Switchvox, each FXS Line will Register - you cannot edit this field
- **Authentication Password:** Because Registration Mode is FXS Port, there will be no single Registration to the Switchvox, each FXS line will Register - you cannot edit this field

Remote Server Configuration	
SIP Server IP/FQDN	<input type="text" value="192.168.77.112"/> ?
SIP Server Port	<input type="text" value="5060"/> ?
SIP Server Transport Mode	<input type="text" value="udp"/> ▾
SIP Accessibility Check	<input type="text" value="options"/> ▾
Registration/Authentication ID	<input type="text" value="Vega_Trunk_Username"/>
Authentication Password	<input type="text" value="****"/>

**Quick Config - Step 3 - FXS**

This section is where the Vega Gateway Analog interfaces are defined, here is where each Switchvox Extension with Authentication Username and Password are provisioned.

⚠ Once finished with Quick Config the gateway is fully configured and ready to go! Do not enter Expert Config unless advanced modifications required.

◀ Previous

Step 1 - Basic Configuration

Step 2 - VoIP

Step 3 - FXS

Step 4 - FXO

Next ▶

FXS

General FXS Configuration			
Visual Message Waiting Indication	tone	Caller ID Type Information	gr30-mdmf
Digital Rx Gain	-1	Digital Tx Gain	-2

Telephone Connections

Port	Enabled?	Enable Caller-Id Generation	Numeric Caller ID <small>copy to number list</small>	Textual Caller ID	Telephone number(s) to route to the FXS interface	Registration and Authentication ID <small>Numeric_ID</small>	Authentication Password
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5013	Charles deGaulle	5013	5013	****
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5014	Winston Churchill	5014	5014	****
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5015	George Patton	5015	5015	****
4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5016	Omar Bradley	5016	5016	****

Telephone Connections

- **Port:** This is the Line Port #
- **Enabled?:** Enable/Disable the port - Enable
- **Enable Caller-Id Generation:** Enable/Disable the CallerID on the FXS port. Use the Caller ID Type Information for protocol type. Enable.
- **Numeric Caller ID:** When originating a call from this FXS Line, this is the Numeric Caller ID - This is the Extension Number
- **Textual Caller ID:** When originating a call from this FXS Line, this is the Name Caller ID - This is the Extension Number
- **Telephone number(s) to route to the FXS interface:** When the Switchvox calls the Gateway, this is the number the Gateway will match to call this FXS Line. Enter the Extension Number.
- **Registration and Authentication ID:** Select Numeric\_ID, this uses the value in the Numeric Caller ID field. - This is the Extension Number.
- **Authentication Password:** Enter the same Phone Password from the Switchvox into this field for the corresponding Extension.

Save Configuration

You are done. Press Save Configuration.

Save Configuration

You will have to reboot as well when changing IP Addresses.

Reboot System

To validate if the Analog Extension is registered go to Overview | System Status. In the SIP Registration section you will notice if the extension is registered or not:

## SIP Registrations

Registered Users

1 of 8 users registered

SIP Registrations

Clicking on SIP Registration you will see the registration details.