

Initial configuration

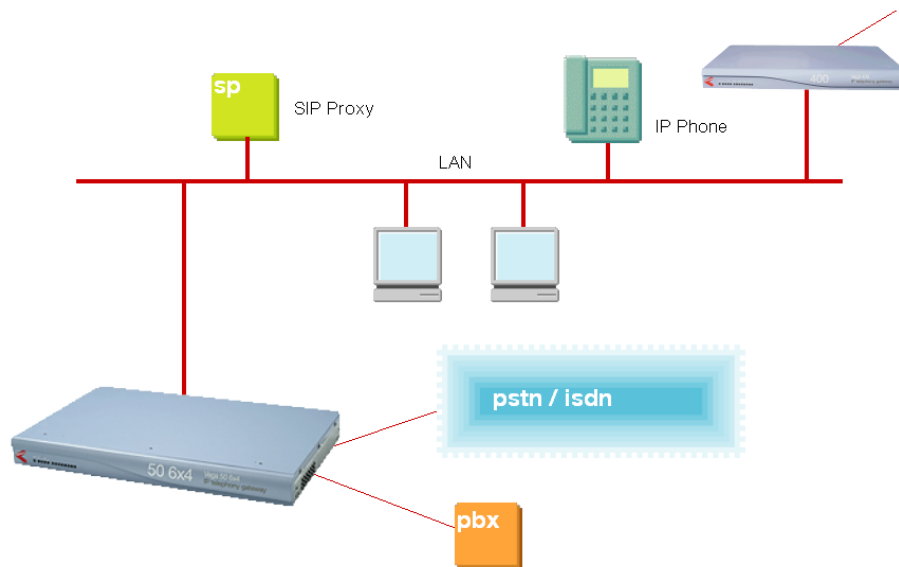
Vega 50 6x4 FXO (SIP) – R7.5



This document describes how to configure the FXO ports on a Vega 50 6x4 gateway using the web browser interface. The configuration described will allow the Vega to be rapidly installed and tested.

The instructions below will configure the Vega 50 6x4 FXO fail over ports for connection to the PSTN, and the main FXO ports for connection to the extension ports of a PBX (or to the PSTN). Calls through the Vega will operate as follows:

- Calls presented to the Vega FXO ports will be passed to the SIP proxy with the numeric telephone number part of the request URI containing the port ID on which the call was received (0201 .. 02nn).
- Calls received by the Vega on the SIP interface will be routed to one of the telephony interfaces. The physical interface over which the call is routed will be defined by the leading four digits of the telephone number (0201 .. 02nn). The digits following the leading four digits will be used as the digits to dial.



Although the Vega 50 6x4 supports two LAN interfaces, in this example configuration, only one LAN interface, LAN 1 will be used.

Notes are included describing the changes required if there is no SIP proxy in the installation and calls are to be routed to a specific destination device.

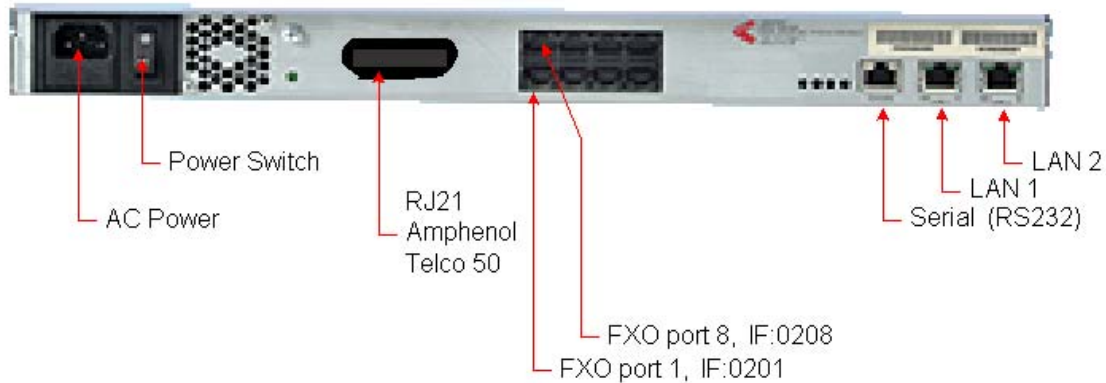
The configuration process is broken down into 12 stages as follows:

- 1 Connect your Vega to LAN, Telephone and Power
- 2 Configure the basic LAN parameters
- 3 Configure password and login timeout
- 4 Check and configure LAN settings and Host name
- 5 Configure the Dial Plan
- 6 Configure SIP parameters
- 7 Configure audio parameters
- 8 Configure Authentication
- 9 Configure Registration
- 10 Configure POTS parameters
- 11 Save Changes
- 12 Archive Vega Configuration

Please also see:

- 13 Technical Support
- 14 Advanced configuration

1. Connect your Vega to LAN, Telephone and Power



Before installing your Vega, ensure that you read the VegaStream VoIP Gateways Safety and Compliance Information document.

LAN:

Using the yellow booted cable(s) connect the LAN port(s) on the Vega to a standard or fast Ethernet hub or switch (10 baseT or 100 baseTx). The connector nearest the ferrite core should be plugged into the Vega.

For this configuration just connect the LAN 1 interface to the hub or switch.



WARNING!

If both LAN interfaces, LAN 1 and LAN 2 are to be used, the interfaces must be on separate subnets.

Telephony:

The connector locations at which the FXO telephone ports are available, depends upon where in the Vega the FXO interface cards are plugged. If an FXO card is plugged into interface slot 1 FXO ports will be available on the RJ45 connector at locations IF 1 to IF 4 and on the RJ21 / Amphenol / Telco 50 connector. With an FXO card plugged into interface slot 2, FXO ports will be available on the RJ45 connector at locations IF 5 to IF 8 and on the RJ21 / Amphenol / Telco 50 connector. With FXO card(s) plugged into interface slots 3 to 6, these FXO ports will be available on the RJ21 / Amphenol / Telco 50 connector only.

Note the port numbers on the RJ45 connector block increase in an anticlockwise direction from the bottom left corner.

IF 8 IF:0208	IF 7 IF:0207	IF 6 IF:0206	IF 5 IF:0205
IF 1 IF:0201	IF 2 IF:0202	IF 3 IF:0203	IF 4 IF:0204

See the 'Vega 50 6x4 product details' document for pinouts and cabling.



WARNING!

When BRI ports are fitted, two of the four BRI signals are brought out to the associated RJ21 / Amphenol / Telco 50 connector pins. In this situation DO NOT connect anything to these pins on the RJ21 / Amphenol / Telco 50 connector.

Power:

Insert the power cable into the AC power inlet on the Vega and switch on. The power LED on the front panel will illuminate.

The LAN LEDs will also illuminate indicating 10 (baseT) or 100 (baseTx) connection. The LAN LEDs are duplicated on the front and rear of the Vega. The LEDs blink off to indicate LAN activity.

After a short while the Vega Ready LED will illuminate – the Vega is ready to be configured.

2. Configure the basic LAN parameters

If a DHCP server is available, by default, the Vega will automatically pick up an IP address. If you know the IP address served to the Vega, skip this section and start at section [3](#).

If DHCP is not to be used to provide the Vega with an IP address, or you need to check the IP address provided to the Vega, connect the serial interface of the Vega to a PC serial interface using the supplied RJ45 to 9 way female D-Type connector cable.

Configure a terminal emulator program (such as Microsoft's HyperTerminal) for:

- Speed = 115200 baud
- Data bits = 8
- Parity = none
- Stop bits = 1
- Flow Control = none

Press <Enter> to get the Username: prompt

At the prompts enter the default user name and password

Username: admin

Password: admin

If this is your first login you will be presented with the opportunity to select the firmware to run (SIP or H.323):

```
=====
CHANGE ACTIVE PARTITION:

Partition 1: H.323 Firmware
             Version: 11.01.07.5
             Image: VEGA56x4_R075H001a Sep 16 2005 10:42:57

Partition 2: SIP Firmware (ACTIVE)
             Version: 11.02.07.5
             Image: VEGA-6x4_R075S001 Nov 25 2005 11:38:45

Type PART1 to activate partition 1, or EXIT to leave unchanged.
=====
```

- Ensure that the partition marked as ACTIVE is the SIP partition, if it is not, then select the other partition as instructed and reboot the Vega¹.
- If the SIP partition is already marked as ACTIVE, then type EXIT

Once the firmware has been selected and activated, from the command prompt, display the current IP address by typing:

```
show lan.if.1.ip
```

¹ If the partition is changed, after the reboot perform a 'factory reset' before continuing configuration.

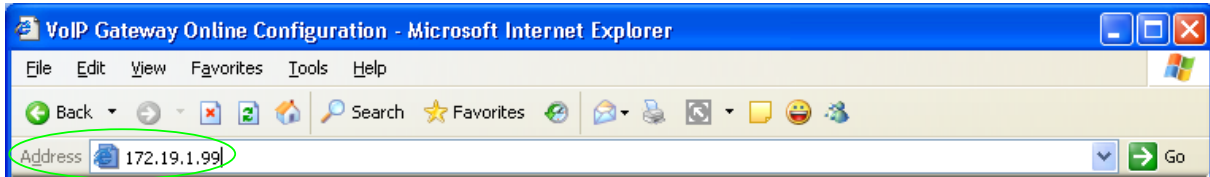
If this is not the IP address required, it can be overridden, together with other LAN parameters by typing:

- set lan.if.1.use_dhcp=0
- set lan.if.1.ip=aaa.bbb.ccc.ddd
- set lan.if.1.subnet=eee.fff.ggg.hhh
- set lan.gateway.ip=iii.jjj.kkk.lll
- set sip.lan_profile=1
- save
- reboot system

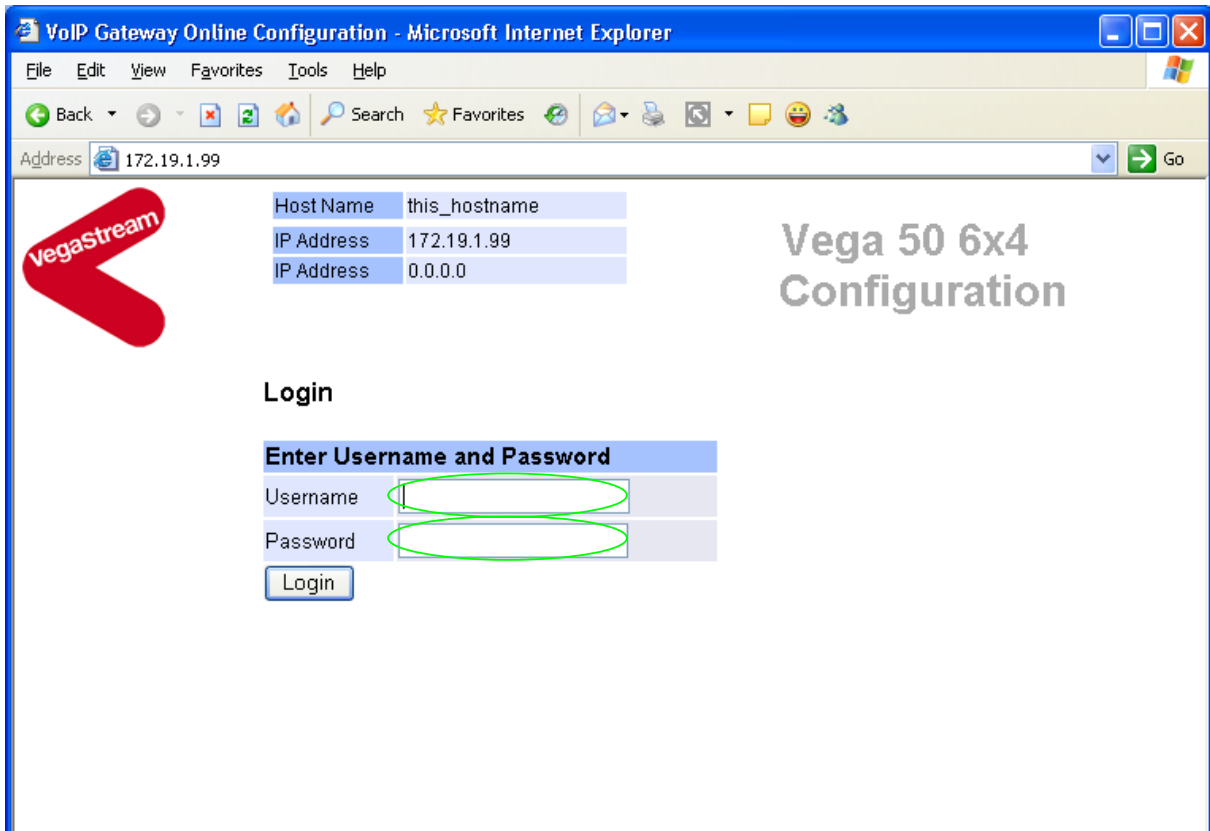
3. Configure password and login timeout

Now configuration will be carried out via a web browser.

- Enter the IP address of the Vega into the "Address" field of your web browser.



You will then be presented with the login page:



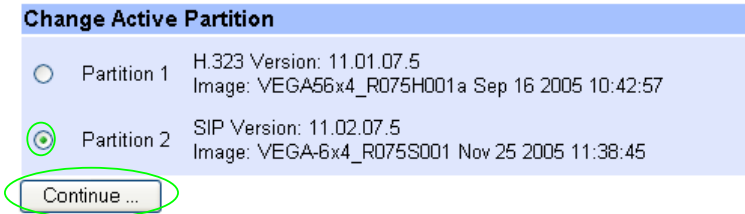
Enter the default Username and Password

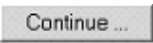
- Username: admin
- Password: admin
- Select

If you have not already selected the firmware to run (SIP or H.323) the boot manager will automatically be displayed allowing you to select the code to run, SIP or H.323.

Boot Manager

Please check the current active firmware version below, and select a different partition if required. If a new partition is selected then a reboot system will be needed to activate that version.



- Ensure that the partition selected is the SIP partition, if it is not, then select it
- Press 

If the partition is changed then the Vega will automatically reboot; in this case you will need to log in again once the reboot is complete².

If the partition is not changed then the management page will be displayed.

² If the partition is changed, after the reboot perform a 'factory reset' before continuing configuration.

Vega 50 6x4 Online Configuration - Microsoft Internet Explorer

Address: http://172.19.1.99/vsframe?sid=-1364306751&frame_id=6

VegaStream

Host Name	this_hostname
IP Address	172.19.1.99
IP Address	0.0.0.0
User Name	admin

Vega 50 6x4 Configuration

System Management

Tip: Place the cursor of the mouse on name or input fields to get concise help.

System Time

Set Time (hh:mm:ss)	12 : 03 : 26	<input type="button" value="Set Time"/>
Set Date (dd/mm/yyyy)	23 / 02 / 2006	<input type="button" value="Set Date"/>
Synchronise Time and Date	<input checked="" type="radio"/> With PC <input type="radio"/> With NTP server	<input type="button" value="Sync Time"/>

Call Reports

Report call progress summary	Show Calls
Report on all call progress statistics	Show Trace

System Logs

Show the Event Log	Show Event Log
Show the Billing Log	Show Billing Log

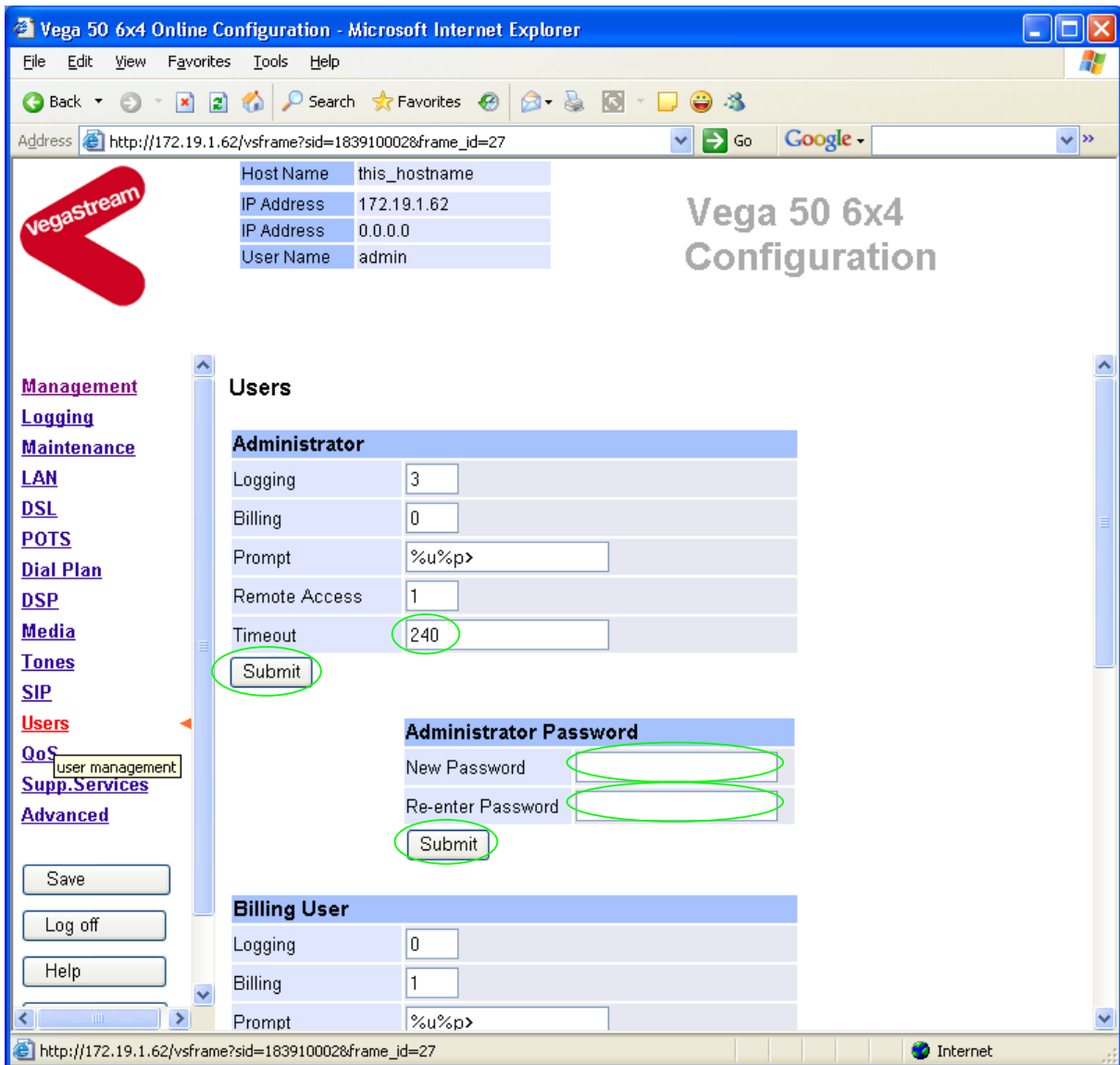
Call Control

All further calls are	Unblocked	<input type="button" value="Submit"/>
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Save
Log off
Help

Done Internet

- On the left hand side menu select [Users](#)



Recommended: Change the password

- enter New Password and Re-enter Password then
- select and then click "[here](#)" to return

Optional: Change the timeout³ – default is 240 seconds; can extend to 7200 seconds (2hrs)

- select and then click "[here](#)" to return

³ If the web interface is not used for this length of time the Vega will automatically log off the session. This change is only activated by logging out and back into the browser session.

4. Check and configure LAN settings and Host name

- On the left hand side menu select [LAN](#)

In this configuration scenario we are just going to use LAN interface 1, so in the next steps we will configure the parameters required for LAN interface 1, configuring both calls and management traffic to be routed via this LAN interface.

- Ensure that the IP address and subnet mask are configured correctly.
With DHCP enabled the current values collected by DHCP are shown 'greyed out'
- If static configuration of the IP information is required select 'Static IP Address' and configure the values as required.
- If changed select and then click "[here](#)" to return; return to LAN Interface 1 configuration page.

LAN Configuration			
LAN 1	172.19.1.99	LAN 2	0.0.0.0
<input checked="" type="radio"/> DHCP		<input checked="" type="radio"/> DHCP	
<input type="radio"/> Static		<input type="radio"/> Static	
IP Address	172.19.1.99	IP Address	0.0.0.0
Subnet Mask	255.255.255.0	Subnet Mask	255.255.255.0
Configure LAN Interfaces			
QoS	TOS/DiffServ	QoS	TOS/DiffServ
Accept non 8021q tagged frames	<input checked="" type="checkbox"/>	Accept non 8021q tagged frames	<input checked="" type="checkbox"/>
Configure QoS Profiles			
<input type="button" value="Submit"/>			

In the **LAN configuration** section

- Select [Configure LAN Interfaces](#)


LAN Configuration			
LAN 1	172.19.1.99	LAN 2	0.0.0.0
Physical Layer		Physical Layer	
Enable Full Duplex	<input type="checkbox"/>	Enable Full Duplex	<input type="checkbox"/>
Enable 10baseT	<input checked="" type="checkbox"/>	Enable 10baseT	<input checked="" type="checkbox"/>
Enable 100baseTX	<input checked="" type="checkbox"/>	Enable 100baseTX	<input checked="" type="checkbox"/>
<input type="button" value="Submit"/>			

Recommended: In the **Physical Layer** section for **LAN 1**, leave ticked only 100baseTx or 10 baseT (not both) – whichever is appropriate (*this ensures that any re-negotiation of the LAN connection bandwidth will always result in the same connection rate*)

Optional: In the **Physical Layer** section for **LAN 1**, tick 'Full Duplex' to allow the Vega to attempt to negotiate a full duplex LAN connection (*this gives increased bandwidth on the LAN link*)

- select and then click "[here](#)" to return

If you are planning to use LAN interface 2 – check its configuration too.

	<p>If both LAN interfaces, LAN 1 and LAN 2 are to be used, the interfaces must be on separate subnets.</p>
WARNING!	

Now continue configuring the other LAN parameters:

LAN Configuration	
Name	this_hostname
<input type="button" value="Submit"/>	

If the Vega has a DNS name associated with its IP address, in the **LAN Configuration** section

- set Name = the DNS name
- select **Submit** and then click "[here](#)" to return

- Scroll down to the **Default LAN Gateway** section

Default LAN Gateway	172.19.1.10
LAN Gateway IP Address	
<input checked="" type="radio"/> DHCP From DHCP server on LAN interface	1-LAN1
<input type="radio"/> Static IP Address	172.19.1.10
Submit	

Optional: If Static addressing is to be used to define the LAN gateway

- Select Static IP Address
- Set up the LAN Gateway IP address either as a DNS name or as a dotted decimal IP address.
- Select **Submit** and then click "[here](#)" to return

- Scroll down to the **Calls** section

Calls	
LAN Profile	1-LAN_1
Submit	

- Ensure that the LAN profile is 1-LAN_1
- If it needs changing, change it, then select **Submit** and then click "[here](#)" to return

- Scroll to the **TFTP Parameters** section

TFTP Parameters	172.19.1.68
TFTP Server IP Address	
<input checked="" type="radio"/> DHCP From DHCP server on LAN interface	1-LAN1
<input type="radio"/> Static TFTP Server IP Address	172.19.1.68
LAN Profile	1-LAN_1
Configure TFTP	
Submit	

Optional: If Static addressing is to be used to define the TFTP Server

- Select Static TFTP Server IP Address
- Set up the TFTP Server IP address either as a DNS name or as a dotted decimal IP address.
- Ensure that the LAN profile is 1-LAN_1
- Select and then click "[here](#)" to return

- Scroll to the **NTP Parameters** section

NTP Parameters	
NTP Server IP Address	0.0.0.0
<input checked="" type="radio"/> DHCP From DHCP server on LAN interface	1-LAN_1
<input type="radio"/> Static NTP Server IP Address	0.0.0.0
LAN Profile	1-LAN_1
Configure NTP	
<input type="button" value="Submit"/>	

Set up NTP to get time updates for the real time clock – this keeps the clock accurate over long periods of time.

Optional: If Static addressing is to be used to define the NTP Server

- Select Static NTP Server IP Address
- Set up the NTP Server IP address either as a DNS name or as a dotted decimal IP address.
- Ensure that the LAN profile is 1-LAN_1
- Select and then click "[here](#)" to return

- Scroll to the **Ping, SNMP, Radius etc** section

Ping, SNMP, Radius etc	
LAN Profile	1-LAN_1
<input type="button" value="Submit"/>	

- Ensure that the LAN profile is 1-LAN_1
- If it needs changing, change it, then select and then click "[here](#)" to return

- Scroll to the **DNS Servers** section

DNS	
DNS Server List	172.19.1.1
Use DNS Server defined by DHCP on Lan Interface	1-LAN1
<input type="button" value="Submit"/>	

Static DNS Servers	
DNS Server	Domain Name Server
1	0.0.0.0
2	0.0.0.0
3	0.0.0.0
<input type="button" value="Submit"/> <input type="button" value="Add"/> <input type="button" value="Delete"/>	

DNS servers will be set up using both DHCP served DNS servers and also static DNS Servers specified here.

- Ensure Use DNS Server defined by DHCP on LAN Interface = 1-LAN 1
- If it needs changing, change it, then select and then click "[here](#)" to return

Optional: If static DNS servers are to be defined, in the **Static DNS Servers** section

- Set up Domain Name Server IP address(es) (Press if more than 3 static entries are required)
- Select and then click "[here](#)" to return

(Note, the DHCP supplied DNS server will be used in preference to statically defined servers, unless the DHCP defined server is also statically defined, when the static order will be used.)

- Scroll to the **Management Access** section

Management Access		
	LAN Profile	LAN Port
Telnet	3-LAN_1&2	23
Web Server	3-LAN_1&2	80
<input type="button" value="Submit"/>		

- Set Telnet LAN Profile = 1-LAN_1
- Set Web Server LAN Profile = 1-LAN_1
- Select and then click "[here](#)" to return

5. Configure the Dial Plan

- On the left hand side menu select [Dial Plan](#)

Host Name this_hostname
IP Address 172.19.1.99
IP Address 0.0.0.0
User Name admin

Unsaved Configuration Changes

Management
Logging
Maintenance
LAN
POTS
Dial Plan
DSP
Media
Tones
SIP
Users
QoS Statistics
Supp.Services
Advanced

Save
Log off
Help
Reboot System

Dial Planner

Profiles

Del?	Profile ID	Enabled	Name	Plans	Chg?
<input type="checkbox"/>	1	1	default	===>	Modify

Delete Add

Post Profile

Enabled

Submit

Plans in Post Profile

Del?	Plan ID	Enable	Name	Srce	Dest	Chg?
<input type="checkbox"/>	1	0	International	TEL:00<.*>	TYPE:international	Modify

Delete Add

Planner Groups

Del?	ID	Name	Cause	Lan	Active times	Priority	Chg?
<input type="checkbox"/>	1	default	0	off	0000-2359	0	Modify

Delete Add

Call Presentation Groups Configuration

In the **Profiles** section, Profile ID 1

- Select [Modify](#)

[Dial Planner](#) > Profile 1

Modify Profile	
Profile ID	1
Enabled	<input checked="" type="checkbox"/>
Name	default

Plans in this Profile							
Del?	Plan ID	Name	Src	Dest	Cost	Group	Chg?
<input type="checkbox"/>	1	outgoing_lan	IF:0[1-4]...TEL:<.*>	IF:9901,TEL:<1>	0	1	Modify
<input type="checkbox"/>	2	incoming_lan	IF:9901,TEL:<...><.*>	IF:<1>,TEL:<2>	0	1	Modify

- > Set Name = Outbound_to_LAN
- > select and then click "[here](#)" to return

Dial Planner

Profiles					
Del?	Profile ID	Enabled	Name	Plans	Chg?
<input type="checkbox"/>	1	1	Outbound_to_LAN	==>	Modify

In the **Profiles** section, on Profile ID 1:

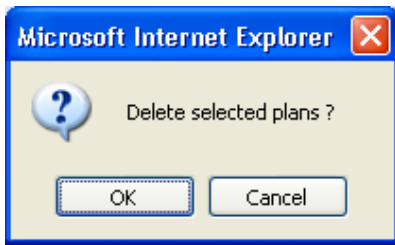
- > Select

[Dial Planner](#) > Profile 1

Modify Profile	
Profile ID	1
Enabled	<input checked="" type="checkbox"/>
Name	Outbound_to_LAN

Plans in this Profile							
Del?	Plan ID	Name	Src	Dest	Cost	Group	Chg?
<input type="checkbox"/>	1	outgoing_lan	IF:0[1-4]...TEL:<.*>	IF:9901,TEL:<1>	0	1	Modify
<input type="checkbox"/>	2	incoming_lan	IF:9901,TEL:<...><.*>	IF:<1>,TEL:<2>	0	1	Modify

- In the **Plans in this Profile** section:
- > Tick the Del? Tick box against Plan ID 2
 - > Select



➤ Select 

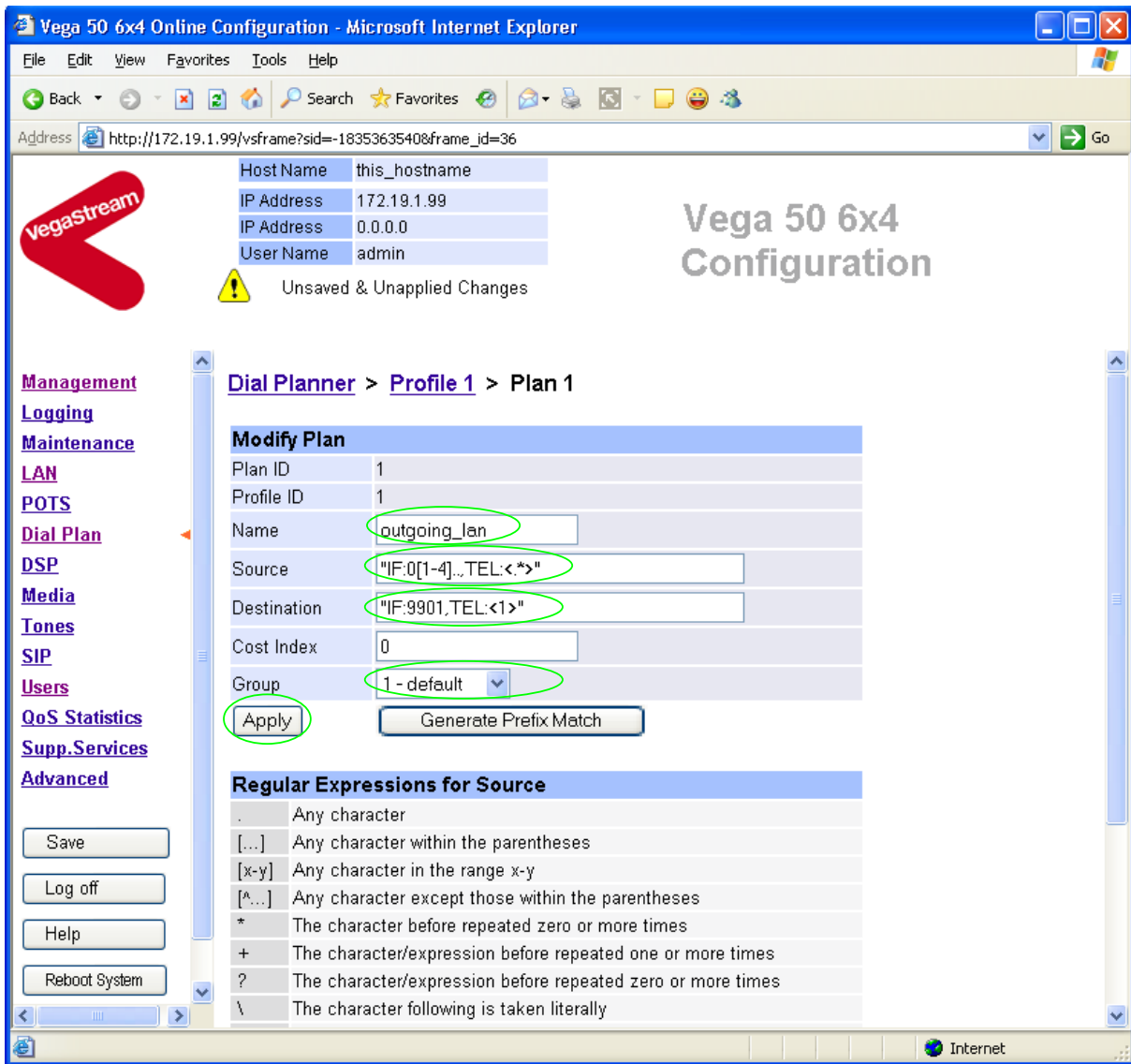
[Dial Planner](#) > Profile 1

Modify Profile	
Profile ID	1
Enabled	<input checked="" type="checkbox"/>
Name	<input type="text" value="Outbound_to_LAN"/>
<input type="button" value="Submit"/>	

Plans in this Profile							
Del?	Plan ID	Name	Src	Dest	Cost	Group	Chg?
<input type="checkbox"/>	1	outgoing_lan	IF:0[1-4]..,TEL:<*>	IF:9901,TEL:<1>	0	1	Modify
<input type="button" value="Delete"/> <input type="button" value="Add"/>							

In the **Plans in this Profile** section, Plan ID 1:

➤ Select [Modify](#)



- Set Name = From_any_FXO_port
- Set Source = IF:<02..>

(This takes a call from any of the FXO ports, 0201 to 0224, and stores the 4 digit interface ID of the port on which the call arrived in store <1>)
- Set Destination = IF:9901, TEL:<1>

(This routes the call to IF:9901 (the LAN) and passes the Interface ID of the port that the call arrived on as the destination telephone number)
- Set Group = 0 - no group
- select **Apply** and then click "[here](#)" to return

Host Name this_hostname
 IP Address 172.19.1.99
 IP Address 0.0.0.0
 User Name admin

Unsaved Configuration Changes

Vega 50 6x4 Configuration

Management
 Logging
 Maintenance
 LAN
 POTS
Dial Plan
 DSP
 Media
 Tones
 SIP
 Users
 QoS Statistics
 Supp.Services
 Advanced

Dial Planner > Profile 1

Modify Profile

Profile ID 1
 Enabled
 Name Outbound_to_LAN
 Submit

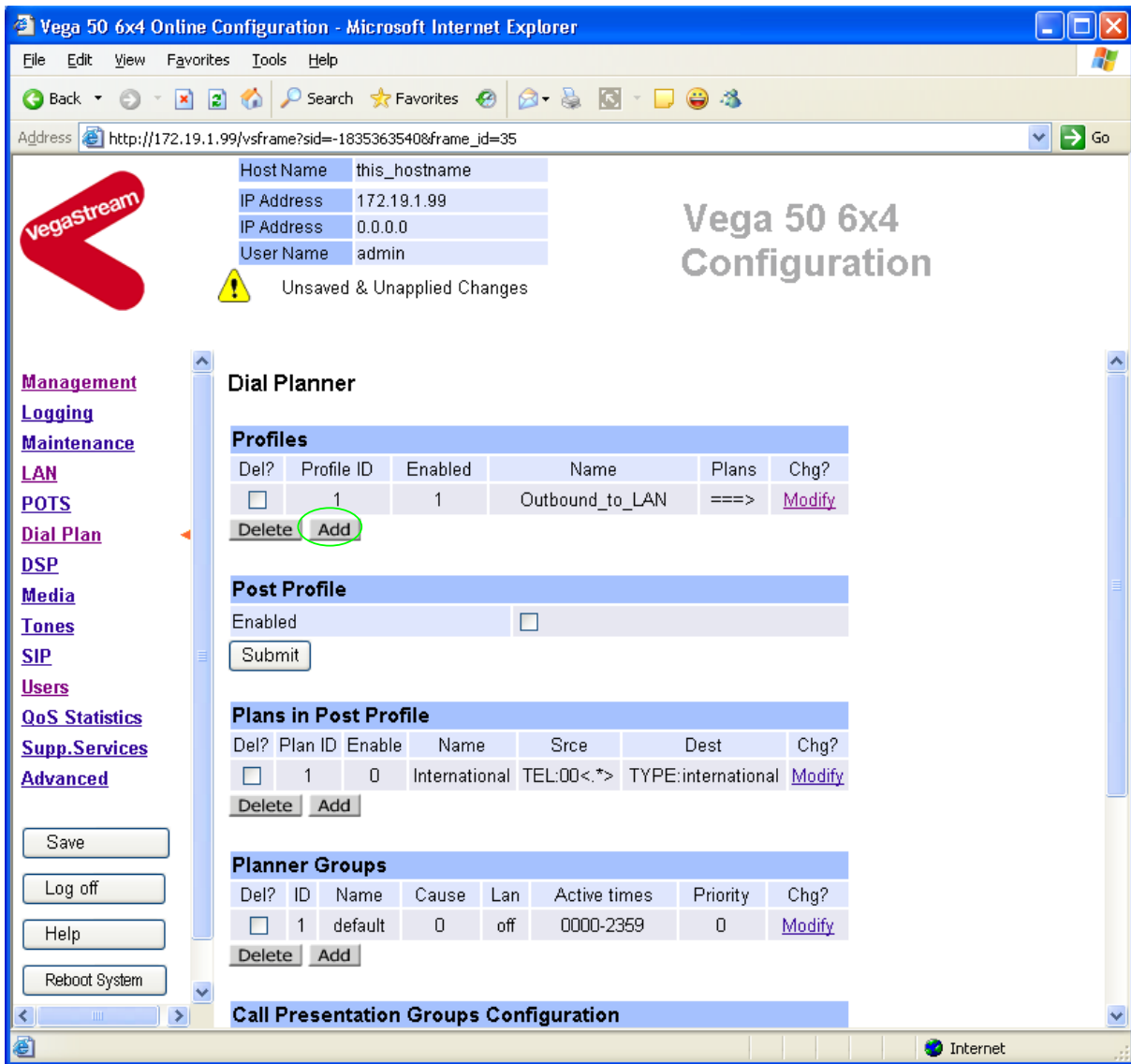
Plans in this Profile

Del?	Plan ID	Name	Src	Dest	Cost	Group	Chg?
<input type="checkbox"/>	1	From_any_FXO_port	IF:<02..>	IF:9901,TEL:<1>	0	0	Modify

Delete Add

Save
 Log off
 Help
 Reboot System

➤ On the left hand side menu select [Dial Plan](#)



Now create a new profile and in it create a dial plan entry to handle calls being received inbound from the LAN:

In the **Profiles** section

- Select **Add**

In a similar manner to configuring Profile ID 1, configure Profile ID 2

In the **Modify Profile** section

- Set Name = Inbound_from_LAN

Modify the first plan for Profile 2:

- Set Name = To_FXO_ports
- Set Source = IF:99.,TEL:<02.><. *> (For calls from IF:99xx (LAN), take the first four digits presented and store them in store <1>; take any further digits and store them in store <2>)

- Set Destination = IF:<1>, TEL:<2>

(The first four digits presented define the interface – 0201 to 0224 – and the remainder of the digits are passed on as the telephone number)

- select and then click "[here](#)" to return

Plans in this Profile							
Del?	Plan ID	Name	Src	Dest	Cost	Group	Chg?
<input type="checkbox"/>	1	To_FXO_ports	IF:9901,TEL:<02.><.*>	IF:<1>,TEL:<2>	0	0	Modify
<input type="button" value="Delete"/>		<input type="button" value="Add"/>					

Note: The SIP Proxy must choose the appropriate interface on the Vega to dial out from; when the Proxy presents a call to the Vega, the INVITE message starts something like:

```
INVITE sip:02021344784900@172.19.1.99 SIP/2.0
```

The digits preceding the @ (the telephone number field) must contain 02xxttt...t, where ttt...t is the telephone number to dial and 02xx is the FXO Interface from which to make the call.

If the Proxy does not want to decide which FXO interface to route the call out from, but let the Vega find a free port, this can be implemented. See [14.3 "Configure Vega to dial out from a free FXO port"](#) for details.

For more details on the operation of the dial planner, including the various tokens that may be used, see the section "The Dial Planner" in the Vega Primer.

Standalone / non-proxy installations: Where a proxy is not used add a TA: token to dial plans that send calls to VoIP (i.e. to IF:9901), e.g. if the destination device is at IP address 192.168.1.54 then the dial plans above become:

Profile 1 plan 1 (change to 'Destination'):

- Set Name = From_any_FXO_port
- Set Source = IF:<02.>
- Set Destination = IF:9901, TEL:<1>, **TA:192.168.1.54**
- Set Group = 0 - no group

Profile 2 plan 1 (no differences from above):

- Set Name = To_FXO_ports
- Set Source = IF:99., TEL:<02.><.*>
- Set Destination = IF:<1>, TEL:<2>

6. Configure SIP parameters

Note: everything in this section, except the configuration of 'accept non proxy invites' should be skipped for **Standalone / non-proxy installations**

- On the left hand side menu select [SIP](#)

The screenshot shows the 'SIP Configuration' page with the following details:

- General Section:**
 - Local Domain:
 - Local SIP Port:
 - Request URI Port:
 - Accept Non-Proxy Invites:
 - LAN profile:
 - Submit:
- SIP Profiles Section:**

SIP Profile	Alternative Local Domain	From Header 'userinfo'	From Header 'host'	To Header 'host'	Chg?
1	abcdefghijwhatever.com	Calling Party	Local Domain	Local Domain	Modify

Buttons: Add, Delete
- Proxy Configuration Section:**

Mode: normal cyclic dnssrv

In the **General** section:

- set Local Domain = Public_name_of_proxy_used_by_other_devices_to_send_their_INVITES_to
(this value is the "outside world's" name or IP address for the proxy)

Optional: To allow devices other than the proxy to make calls directly through the Vega

- tick Accept Non-Proxy Invites

If only the proxy is allowed to route SIP calls through the Vega ensure that this tick box is clear.

➤ select **Submit** and then click "[here](#)" to return

➤ Scroll down to the Proxy Configuration section

Proxy Configuration				
Mode	<input checked="" type="radio"/> normal <input type="radio"/> cyclic <input type="radio"/> dnssrv			
Minimum Valid Response	<input type="text" value="180"/>			
Timeout (ms)	<input type="text" value="5000"/>			
SIP Proxy	Enable	IP/DNS Name	Port	Chg?
1	0	0.0.0.0	5060	Modify
Add Delete				

In the **Proxy Configuration** section, for SIP Proxy 1

➤ Select [Modify](#)

[SIP](#) > SIP Proxy 1

SIP Proxy 1	
Enable	<input type="checkbox"/>
IP/DNS Name	<input type="text" value="0.0.0.0"/>
Port	<input type="text" value="5060"/>
Submit	

In the **SIP Proxy 1** section:

- Tick Enable
- set IP/DNS Name = IP_address_of_SIP_proxy, or
DNS_hostname_of_the_SIP_Proxy

select **Submit** and then click "[here](#)" to return

7. Configure audio parameters

The availability and priority of codecs offered and accepted by the Vega 50 6x4 is defined by Media Capability Sets.

- On the left hand side menu select [Media](#)

Capability Set	Name	Capability Indices	Chg?
1	voice	1,6,2,3	Modify
2	voice+t38Udp	1,6,2,3,5,8,9	Modify
3	g711faxmodem	8,9	Modify

Capability	Codec	Codec Profile	Chg?
1	g7231	1	Modify
2	g711Alaw64k	1	Modify
3	g711Ulaw64k	1	Modify
4	t38tcp	1	Modify
5	t38udp	1	Modify
6	g729	1	Modify
7	g729AnnexA	1	Modify
8	g711Alaw64k	2	Modify
9	g711Ulaw64k	2	Modify

The different codecs and their indices are specified in the **Media Capability** section.

Check that either capability set 1 or capability set 2 has the correct codecs defined and that they are defined in the preferred order of use. (The Vega will use the first codec in the list that it can negotiate.)

If not, in the **Media Capability Sets** section, in Capability Set 2:

- Select [Modify](#)

Modify Capability Set 2

Capability Set 2	
Name	voice+t38Udp
Capability Indices	1,6,2,3,5,8,9
<input type="button" value="Submit"/>	

In the **Capability Set 2** section, in Capability Indices

- List the codec indices in the required order (comma separated)
- select and then click "[here](#)" to return

On the left hand side menu select [SIP](#) and scroll down to the **Media** section

Host Name this_hostname
IP Address 172.19.1.99
IP Address 0.0.0.0
User Name admin

Unsaved & Unapplied Changes

Media
Capability Set 2

Registration
Show SIP Registration [Show Registration](#)
Enable Registration
Register Message Request URI Port 5060
Expiry Time (seconds) 600
Mode normal dnssrv
Maximum Number of Registrars 3
Minimum Valid Response 200
Timeout (ms) 5000

SIP Registrar	Enable	IP/DNS Name	Port	Chg?
1	0	0.0.0.0	5060	Modify

- Set Capability Set = 2 (if capability set 2 contains the preferred list, or 1 if capability set 1 contains the preferred list)

8. Configure Authentication

*Note: everything in this section should be skipped for **Standalone / non-proxy installations***

In some systems – to ensure that only authorised devices are allowed to set up and clear calls – SIP authentication is used. If authentication is used, it is typically required on the SIP REGISTRATION, INVITE, ACK and BYE messages.

For authentication, a user-name, and a password can be configured. In the Vega, the user-name is constructed from three parts

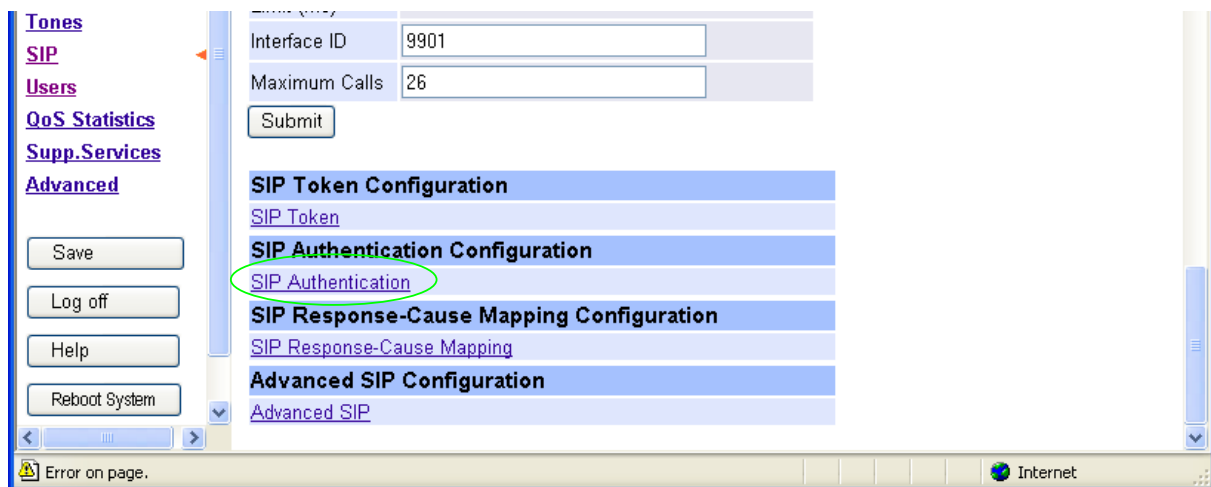
Username Prefix, Username and Username Suffix

each of which may be configured with alphanumeric values.

The values for user-name and password entered here must match the values that have been configured as the authorisation user and password in the proxy.

For example, to set up a single authentication username 'VegaGateway' and password 'VegaPass' which can be used for all calls:

- On the left hand side menu select [SIP](#)
- Scroll down to the bottom to the **SIP Authentication Configuration** section



- Select [SIP Authentication](#)

Host Name: this_hostname
 IP Address: 172.19.1.99
 IP Address: 0.0.0.0
 User Name: admin

⚠ Unsaved & Unapplied Changes

SIP > Authentication

SIP Authentication Users

Del?	User	Enable	Username Prefix	Username Suffix	Username	Built Username	Password	Source	Chg?
<input type="checkbox"/>	1	0	no prefix	no suffix	01	01	user01	IF:0201	Modify
<input type="checkbox"/>	2	0	no prefix	no suffix	02	02	user02	IF:0202	Modify
<input type="checkbox"/>	3	0	no prefix	no suffix	03	03	user03	IF:0203	Modify
<input type="checkbox"/>	4	0	no prefix	no suffix	04	04	user04	IF:0204	Modify
<input type="checkbox"/>	5	0	no prefix	no suffix	05	05	user05	IF:0205	Modify
<input type="checkbox"/>	6	0	no prefix	no suffix	06	06	user06	IF:0206	Modify

Add Delete

Save
 Log off
 Help
 Reboot System

For User 1

- Select [Modify](#)

[SIP](#) > [Authentication](#) > [User](#)

SIP Tokens	
Token	Value
1	unit1
2	01

Modify SIP Authentication User

SIP Authentication User 1	
Enable	<input type="checkbox"/>
Username Prefix	none
Username Suffix	none
Username	01
Password	user01
Source	IF:0201
<input type="button" value="Submit"/>	

- Tick Enable
- Check Username Prefix = none
- Check Username Suffix = none
- Set Username = VegaGateway
- Set Password = VegaPass
- Set Source = IF:.*

- select and then click ["here"](#) to return

[SIP](#) > [Authentication](#)

SIP Authentication Users									
Del?	User	Enable	Username Prefix	Username Suffix	Username	Built Username	Password	Source	Chg?
<input type="checkbox"/>	1	1	no prefix	no suffix	VegaGateway	VegaGateway	VegaPass	IF:.*	Modify
<input type="checkbox"/>	2	0	no prefix	no suffix	02	02	user02	IF:0202	Modify
<input type="checkbox"/>	3	0	no prefix	no suffix	03	03	user03	IF:0203	Modify
<input type="checkbox"/>	4	0	no prefix	no suffix	04	04	user04	IF:0204	Modify
<input type="checkbox"/>	5	0	no prefix	no suffix	05	05	user05	IF:0205	Modify
<input type="checkbox"/>	6	0	no prefix	no suffix	06	06	user06	IF:0206	Modify

9. Configure Registration

*Note: everything in this section should be skipped for **Standalone / non-proxy installations***

Typically trunking interfaces do not need to register with a SIP proxy. SIP registration was designed for end users to register themselves with the SIP proxy. Trunking gateways potentially support millions of end users and so typically the presence and capabilities of the gateways are manually configured into the SIP proxy.

For telephony to SIP calls, the SIP proxy is usually manually configured to accept calls from the Vega

- the dialled number of the call is placed in the request URI by the Vega

For SIP to telephony calls the Proxy must send the call to the Vega with a request URI of the format `iiiiittt...t@Host_Name_or_IP_address_of_Vega`

- where `iiii` is the interface number through which the call is to be made (Vega interface 0201 .. 0224), and
- where `ttt...t` is the telephone number for the Vega to dial

In some circumstances the SIP proxy does demand that the Vega registers with it. If registration is required, see [14.1 "Configure Vega FXO registration"](#)

10. Configure POTS parameters

For the FXO ports it is necessary to configure the Vega to recognise the cadence of the ring tone that it will receive to indicate that there is a new call for it, also the impedance of the FXO interface.

See also [14.2 “Configure caller ID per FXO port”](#) to configure the Vega to source a caller ID based on the FXO interface that the call arrives on.

Configuring Ring Cadence Detection for FXO ports

The Vega FXO ports are alerted to new telephony calls arriving by the PBX or CO switch presenting ringing voltage to the Vega. The Vega needs to have parameters adjusted to configure the detector for the ring tone(s) it is going to be presented with.

Configure the FXO ring cadence detector so that it detects incoming ring cadences correctly:

- On the left hand side menu select [POTS](#)

Host Name this_hostname
 IP Address 172.19.1.99
 IP Address 0.0.0.0
 User Name admin

Unsaved & Unapplied Changes

POTS Configuration

Port ID	Enabled	FXS	Caller ID	Layer 1	Tx Gain	Hardware profile	Interfaces	Chg?
1	1	0	off	g711Alaw64k	0	1	====>	Modify
2	1	0	off	g711Alaw64k	0	1	====>	Modify
3	1	0	off	g711Alaw64k	0	1	====>	Modify
4	1	0	off	g711Alaw64k	0	1	====>	Modify
5	1	0	off	g711Alaw64k	0	1	====>	Modify
6	1	0	off	g711Alaw64k	0	1	====>	Modify

POTS Interface Profiles
[POTS Interface Profiles](#)

Advanced POTS Configuration
[Advanced POTS](#)

Save
 Log off
 Help
 Reboot System

- Select [Advanced POTS](#)
- Scroll down to the **FXO Configuration** section

Vega 50 6x4 Online Configuration - Microsoft Internet Explorer

Address: http://172.19.1.99/vsframe?sid=1835363540&frame_id=32

VegaStream

Host Name: this_hostname
 IP Address: 172.19.1.99
 IP Address: 0.0.0.0
 User Name: admin

Unsaved & Unapplied Changes

Vega 50 6x4 Configuration

Management
[Logging](#)
[Maintenance](#)
[LAN](#)
[POTS](#)
[Dial Plan](#)
[DSP](#)
[Media](#)
[Tones](#)
[SIP](#)
[Users](#)
[QoS Statistics](#)
[Supp. Services](#)
[Advanced](#)

Save
 Log off
 Help
 Reboot System

Ring Generation Parameters

Del?	ID	Name	Fre-quency	Repeat	Ring1 On	Ring1 Off	Ring2 On	Ring2 Off	Ring3 On	Ring3 Off	Chg?
<input type="checkbox"/>	1	External	50	1	400	200	400	2000	0	500	Modify
<input type="checkbox"/>	2	Internal	50	0	2000	4000	2000	4000	0	500	Modify
<input type="checkbox"/>	3	bellcore-r1	20	1	400	400	900	400	400	3500	Modify

Delete Add

Hardware Profile Configuration

Profile ID	Hookflash Debounce Time	Hookflash Time	Line Reversal	Impedance	Loop Current Break	Loop Current Time	Loop Current Delay	Chg?
1	70	200	0	default	0	300	9000	Modify

Delete Add

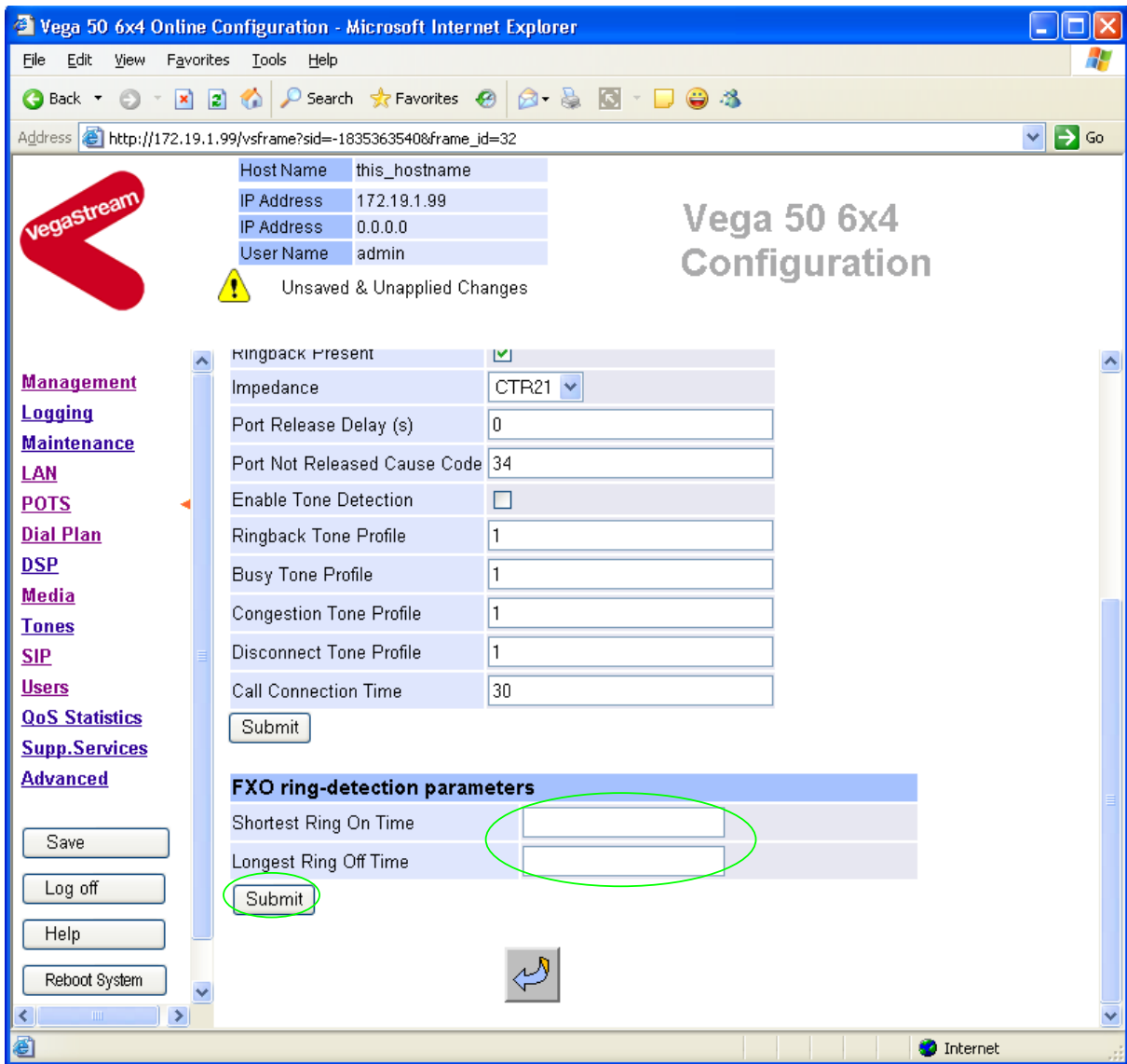
FXO Configuration

Hardware Profile Configuration

Profile ID	Loop Current Detect	Hookflash Time	Early Line Seize	Early Line Seize Timeout	Line Reversal Detect	Force Disconnects	DTMF Holdoff Time	Ringback Present	Impedance	Port Release Delay	Port Not Released Cause	More	Chg?
1	0	200	0	30	0	1	4000	1	CTR21	0	34	====>	Modify

Delete Add

- In the FXO Configuration **Hardware Profile Configuration** section select [Modify](#)
- Scroll down to the **FXO ring-detection parameters** section



- set Shortest Ring On Time = length of shortest ring in the incoming ringing voltage cadence
- set Longest Ring Off Time = length of longest silence in the incoming ringing voltage cadence
- select and then click "[here](#)" to return

Table 1 lists the standard values to use in the UK and USA.

Table 1. Ring tones parameters

Country	UK	USA
Longest silence	2000ms	4000ms
Shortest ring	400ms	2000ms

(for other countries see the country tones document on the technical documents page of www.VegaAssist.com)

Now configure the interface impedance

- Scroll down to the **FXO Configuration** section again

The screenshot shows the Vega 50 6x4 Online Configuration web interface in Microsoft Internet Explorer. The browser address bar shows http://172.19.1.99/vsframe?sid=-1835363540&frame_id=32. The page title is "Vega 50 6x4 Configuration". A red arrow points to the VegaStream logo. A yellow warning icon indicates "Unsaved & Unapplied Changes".

Host Information:

Host Name	this_hostname
IP Address	172.19.1.99
IP Address	0.0.0.0
User Name	admin

Ring Generation Parameters:

Del?	ID	Name	Fre-quency	Repeat	Ring1 On	Ring1 Off	Ring2 On	Ring2 Off	Ring3 On	Ring3 Off	Chg?
<input type="checkbox"/>	1	External	50	1	400	200	400	2000	0	500	Modify
<input type="checkbox"/>	2	Internal	50	0	2000	4000	2000	4000	0	500	Modify
<input type="checkbox"/>	3	bellcore-r1	20	1	400	400	900	400	400	3500	Modify

Hardware Profile Configuration:

Profile ID	Hookflash Debounce Time	Hookflash Time	Line Reversal	Impedance	Loop Current Break	Loop Current Time	Loop Current Delay	Chg?
1	70	200	0	default	0	300	9000	Modify

FXO Configuration Hardware Profile Configuration:

Profile ID	Loop Current Detect	Hookflash Time	Early Line Seize	Early Line Seize Timeout	Line Reversal Detect	Force Disconnects	DTMF Holdoff Time	Ringback Present	Impedance	Port Release Delay	Port Not Released Cause	More	Chg?
1	0	200	0	30	0	1	4000	1	CTR21	0	34	===	Modify

Buttons: Save, Log off, Help, Reboot System.

- In the FXO Configuration **Hardware Profile Configuration** section select [Modify](#)

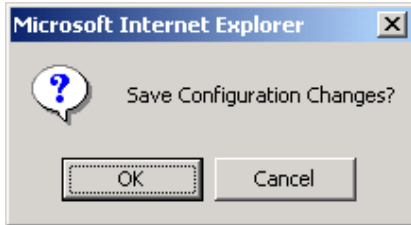
- In the **FXO parameters** section, select the appropriate Impedance for the lines that the Vega FXO ports are to be connected to:
 - CTR21 (typically Europe)
 - 600R (typically US)
 - 900R

- select **Submit** and then click ["here"](#) to return

11. Save Changes

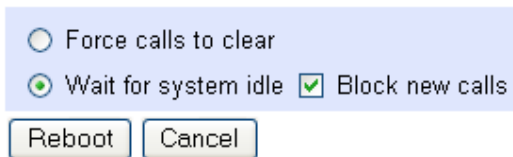
The changes to the configuration must be saved and activated. This is carried out as follows:

- On the left hand side menu select [Save](#)



- Select  and after the configuration has been saved click "[here](#)" to return
- On the left hand side menu select 

Reboot



- select 

The Vega will reboot and once back on-line, it will be ready to take its first call.

12. Archive Vega Configuration

Once configured it is recommended that the configuration is archived to an external server.

To do this check that the tftp address is configured to point to a tftp server (in the [LAN](#) page), then on the left hand side menu select [Advanced](#), and scroll to the CLI Command section:

CLI Command	
<input type="text"/>	<input type="button" value="Submit"/>

- in the text entry box type "PUT tftp:initial_cfg.txt".
- Select .

This will send all the configuration parameters to the tftp server and save them as the file "initial_cfg.txt". (Note: you may want to choose a unique name rather than "initial_cfg.txt", especially if you are configuring more than 1 unit).

The Vega configuration can be archived to an ftp server instead of a tftp server by configuring the ftp server address in the [LAN](#) page and then typing the CLI command "PUT FTP:initial_cfg.txt". (Again a unique name can be used in place of "initial_cfg.txt")

If the ftp server requires a login username and password:

- On the left hand side menu select [LAN](#)
- Scroll down to the **FTP Parameters** section

FTP Parameters	
Server IP	<input type="text" value="0.0.0.0"/>
FTP Port	<input type="text" value="21"/>
FTP Ping Test	<input checked="" type="checkbox"/>
FTP Timeout	<input type="text" value="20"/>
Anonymous Login	<input checked="" type="checkbox"/>
FTP Username	<input type="text" value="whatever"/>
FTP Password	<input type="password" value="••••••••"/>
LAN Profile	<input type="text" value="1"/>
Abort Socket Before Closing	<input type="checkbox"/>
Use DHCP Settings From Interface	<input type="text" value="1"/>
<input type="button" value="Submit"/>	

- Un-tick Anonymous Login
- Set FTP Username = <ftp username>
- Set FTP Password = <ftp password>
- Check Use DHCP Settings From Interface = 1
- select and then click "[here](#)" to return

13. Technical Support

Support information can be found on the VegaStream Support web site www.VegaAssist.com

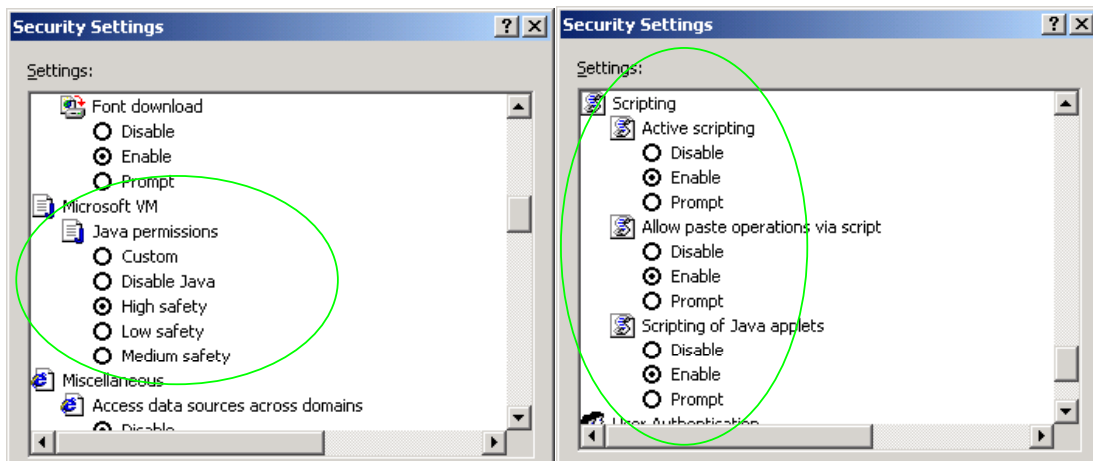
If you require help from VegaStream support personnel, please use the serial interface or telnet into the unit, log in and then type:

- show support
- sip monitor on
- log display on

Carry out the interaction you want explained, then copy the information provided by the Vega and e-mail it to support@VegaStream.com together with your question.

Notes:

1. If the screens do not appear as indicated, check that Java is enabled on your web browser (Tools>internet options>Security, select internet and custom level and configure Microsoft VM Java permissions and Scripting parameters as indicated below.



2. Where there are multiple sections – each with a **Submit** button – entries must be made to one section at a time, and those entries confirmed by the **Submit** button before the next section is altered. Each **Submit** button only confirms entries for its own section. Any changes in other sections will be discarded when the **Submit** is pressed.
3. Loss of audio mid call – consider reducing the selection of available codecs (see section 6). Some equipment, when presented with multiple codecs, may try and switch codec mid-call. Vegas do not support changing codec type mid-call.
4. Mismatched audio codecs. Use SIP monitor on to identify this. If the codecs of the endpoints are mismatched this will be reported as error 606 “No matching media”. To rectify, enable the appropriate audio codec (see section 6).
5. Outbound calls from the Vega send the INVITE to “Default Proxy Host Name/IP” with the request line: “INVITE sip: <dest TEL:>@Default Proxy Host Name/IP”.

14. Advanced configuration

Vega 6x4 gateways have further configurable parameters that may be desirable to configure in order to fully integrate into the attached infrastructure. Some are configurable through the web browser; others must be configured through the Command Line Interface.

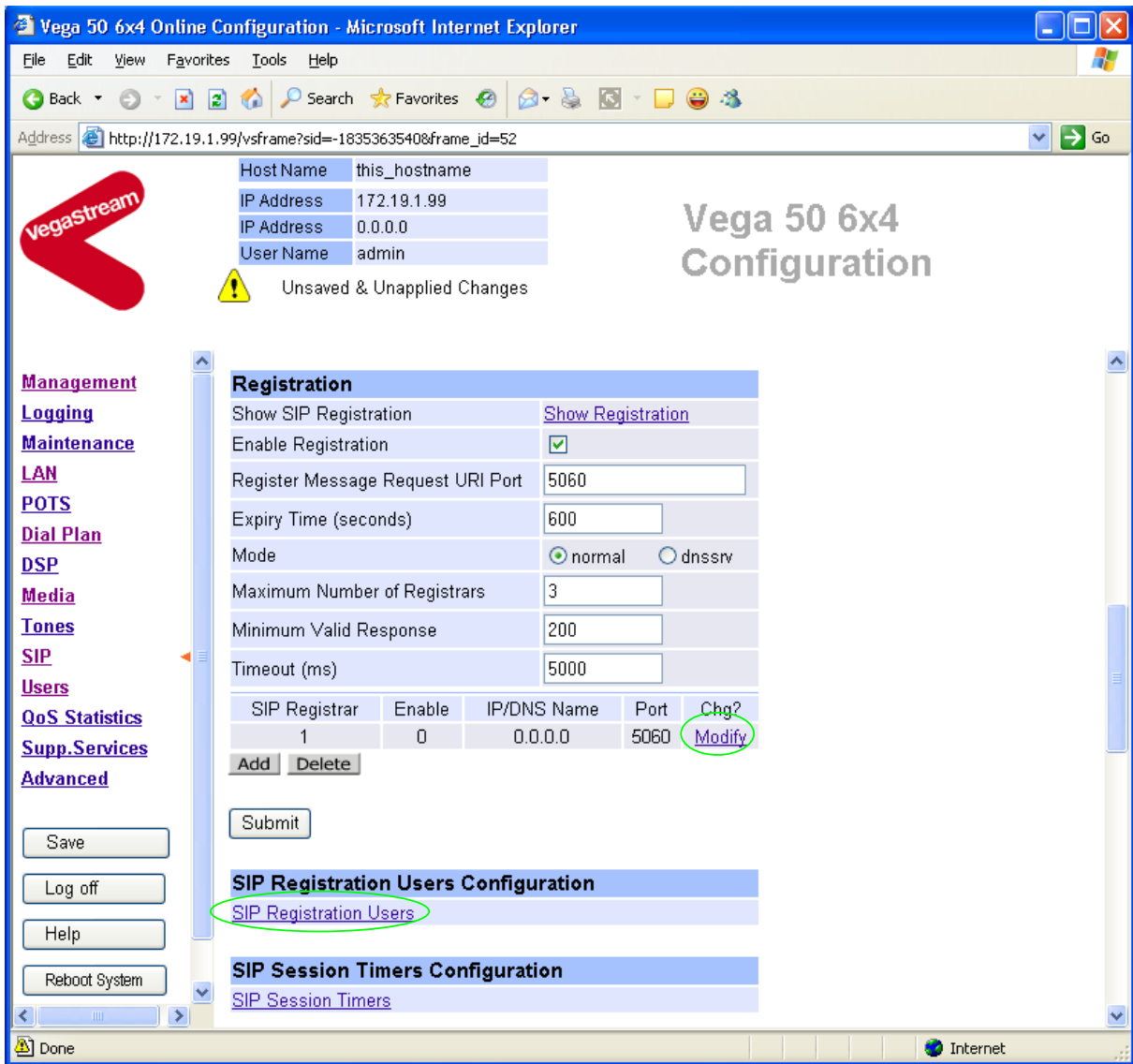
14.1 Configure Vega FXO registration

*Note: everything in this section should be skipped for **Standalone / non-proxy installations***

For trunking gateways, registration may be used to tell the Proxy that the Vega exists and is available to take calls. The number of 'users' that need to be registered by the Vega gateway on the SIP Proxy will depend on the Proxy's requirements, typically however, only a single registration is required.

For example, to register a single user with a username "VegaGateway123"

- On the left hand side menu select [SIP](#)
- Scroll down to the **Registration** section



For SIP Registrar 1:

- Select [Modify](#)

[SIP](#) > SIP Registrar 1

SIP Registrar 1	
Enable	<input type="checkbox"/>
IP/DNS Name	<input type="text" value="0.0.0.0"/>
Port	<input type="text" value="5060"/>
<input type="button" value="Submit"/>	

- Set IP/DNS Name = `IP_or_DNS_name_of_SIP_registrar_or_machine proxying_for_the_registrar`
- select and then click [here](#) to return

In the **SIP Registration Users Configuration** section

- Select [SIP Registration Users](#)

SIP > Registration

SIP Registration Users									
Del?	User	Enable	Dn	Username Prefix	Username Suffix	Username	Built Username	Authentication User Index	Chg?
<input type="checkbox"/>	1	0	01	no prefix	no suffix	01	01	1 - VegaGateway	Modify
<input type="checkbox"/>	2	0	02	no prefix	no suffix	02	02	2 - 02	Modify
<input type="checkbox"/>	3	0	03	no prefix	no suffix	03	03	3 - 03	Modify
<input type="checkbox"/>	4	0	04	no prefix	no suffix	04	04	4 - 04	Modify
<input type="checkbox"/>	5	0	05	no prefix	no suffix	05	05	5 - 05	Modify
<input type="checkbox"/>	6	0	06	no prefix	no suffix	06	06	6 - 06	Modify

[Add](#) [Delete](#)

For registration user 1:

- Select [Modify](#)
- Scroll down to the **SIP Registration User 1** section

Host Name this_hostname
 IP Address 172.19.1.99
 IP Address 0.0.0.0
 User Name admin

Unsaved & Unapplied Changes

SIP Authentication Users

User	Enable	Username Prefix	Username Suffix	Username	Built Username	Password	Source
1	1	no prefix	no suffix	VegaGateway	VegaGateway	VegaPass	IF:*
2	0	no prefix	no suffix	02	02	user02	IF:0202
3	0	no prefix	no suffix	03	03	user03	IF:0203
4	0	no prefix	no suffix	04	04	user04	IF:0204
5	0	no prefix	no suffix	05	05	user05	IF:0205
6	0	no prefix	no suffix	06	06	user06	IF:0206

Modify SIP Registration User

SIP Registration User 1

Enable

Dn 01

Username Prefix none

Username Suffix none

Username 01

Authentication User Index 1 - VegaGateway

Submit

In the **SIP Registration User 1** section

- Tick Enable
- Check Username Prefix = none
- Check Username Suffix = none
- Set Username = VegaGateway123

If Authentication will be needed for REGISTRATION

- Set Authentication User Index = required Authentication User

Modify SIP Registration User

SIP Registration User 1	
Enable	<input checked="" type="checkbox"/>
Dn	<input type="text" value="01"/>
Username Prefix	<input type="text" value="none"/>
Username Suffix	<input type="text" value="none"/>
Username	<input type="text" value="VegaGateway123"/>
Authentication User Index	<input type="text" value="1 - VegaGateway"/>
<input type="button" value="Submit"/>	

- Select and then click "[here](#)" to return
- Save and reboot to activate

Recommended: Configure the Vega to reject calls with cause code 38 if registration fails (this allows calls to be re-presented in the dial plan immediately, rather than having to wait for the SIP timeouts to find that the SIP proxy is not available to handle the INVITE)

On the left hand side menu select [Advanced](#), and scroll to the CLI Command section:

CLI Command
<input type="text"/>
<input type="button" value="Submit"/>

Enter

- set _advanced.sip.invite.registered=1
- Select and then close the CLI command window

See the 'Introduction to Vega dial plans' document on the step by step configuration page of the www.VegaAssist.com web site to learn how to create a redundant dial plan to handle calls when the Vega is not registered.

14.2 Configure caller ID per FXO port

Where caller ID reception is not enabled on the Vega FXO ports, or where the line will not supply caller ID information to the Vega, the Vega can be configured with telephone numbers on a per port basis which it will present as the Caller ID when calls are made from those ports.

Configuring caller ID on FXO ports

For this example set the caller IDs to 1344784900 ...

Firstly disable the prefix and suffix entries (that would apply to every port) – these can be used to apply a common prefix and/or suffix to all caller IDs, but it is typically easier to configure the whole caller ID on a per port basis:

- On the left hand side menu select [POTS](#)

POTS Configuration

Port Configuration								
Port ID	Enabled	FXS	Caller ID	Layer 1	Tx Gain	Hardware profile	Interfaces	Chg?
1	1	0	off	g711Alaw64k	0	1	====>	Modify
2	1	0	off	g711Alaw64k	0	1	====>	Modify
3	1	0	off	g711Alaw64k	0	1	====>	Modify
4	1	0	off	g711Alaw64k	0	1	====>	Modify
5	1	0	off	g711Alaw64k	0	1	====>	Modify
6	1	0	off	g711Alaw64k	0	1	====>	Modify

POTS Interface Profiles

[POTS Interface Profiles](#)

Advanced POTS Configuration

[Advanced POTS](#)

In the **POTS Interface Profiles** section

- Select [POTS Interface Profiles](#)

POTS Interface Profiles Configuration

POTS Interface Profiles						
Profile ID	Caller ID type	Caller ID wait	DTMF dial digit	DTMF dial timeout	Line busy cause	Chg?
1	off	6000	#	5	17	Modify
2	off	6000	#	5	34	Modify

[Delete](#) [Add](#)

In the **POTS Interface Profiles** section, Profile ID 2,

- Select [Modify](#)

POTS > Profile 2

Modify Profile	
Profile ID	2
Line busy cause	34
Caller ID wait	6000
Caller ID type	off
DTMF Termination Char	#
DTMF Dial Timeout	5
Username prefix	NULL
Username suffix	unit1
<input type="button" value="Submit"/>	

- Check that Username prefix=NULL
- Set Username Suffix=NULL
- select and then click "[here](#)" to return

Now for each FXO POTS port set up the full caller ID:

- On the left hand side menu select [POTS](#)

POTS Configuration

Port Configuration								
Port ID	Enabled	FXS	Caller ID	Layer 1	Tx Gain	Hardware profile	Interfaces	Chg?
1	1	0	off	g711Alaw64k	0	1	====>	Modify
2	1	0	off	g711Alaw64k	0	1	====>	Modify
3	1	0	off	g711Alaw64k	0	1	====>	Modify
4	1	0	off	g711Alaw64k	0	1	====>	Modify
5	1	0	off	g711Alaw64k	0	1	====>	Modify
6	1	0	off	g711Alaw64k	0	1	====>	Modify

In the **POTS Configuration** section, for Port ID 1

- Select [Modify](#)

POTS > Port 1

Modify Port	
Port ID	1
Enable	<input checked="" type="checkbox"/>
Layer 1	g711Alaw64k
Caller ID	off
FXS	0
Tx Gain	0
Hardware profile	1
<input type="button" value="Submit"/>	

Interface Configuration							
Port Index	Interface Profile	Interface ID	DN	Ring Index	Username	Usernumber	Chg?
1	2	0201	0201	2	port1	01	Modify
<input type="button" value="Delete"/> <input type="button" value="Add"/>							

In the **Interface Configuration** section

- Select [Modify](#)

POTS > Port 1 > Interface 1

Modify Interface	
Port Index	1
Interface Profile	2
Interface ID	0201
Ring index	2
dn	0201
Username	port1
Usernumber	01
<input type="button" value="Submit"/>	

POTS Interface Profiles					
Profile ID	Caller ID type	Caller ID wait	DTMF dial digit	DTMF dial timeout	Line busy cause
1	off	6000	#	5	17
2	off	6000	#	5	34

In the **Modify Interface** section

- Set the numeric part of Caller ID in dn
For this example dn=1344784900
- Set the textual part of Caller ID in Username
If a space is required in the username, enclose the whole username in quotes, e.g. "Steve Hight"

Repeat for all other FXO ports.

14.3 Configure Vega to dial out from a free FXO port

In some cases the Proxy will just want to use the Vega as a trunking gateway, and so will want the Vega to just find a free FXO interface to route the calls through.

The configuration below will:

- Take calls from the Proxy and route them to the first free port found in the group 0204, 0203, 0202 and 0201

Set up a Call Presentation Group to send calls to interfaces 0204, 0203, 0202, 0201

Set up a dial plan to take calls with a prefix 8888 and route them to the Call Presentation Group virtual interface (i.e. the first free interface 0204, 0203, 0202, 0201

- On the left hand side menu select [Dial Plan](#)
- Scroll to the **Call Presentation Groups Configuration** section

Call Presentation Groups Configuration

[Call Presentation Groups](#)

In the **Call Presentation Groups Configuration** section

- Select [Call Presentation Groups](#)

Call Presentation Groups

Del?	Call Presentation Group	Name	Enable	Interface	Sequence Mode	Destination Timeout	Destination Timeout Action	Max Destination Attempts	Cause	Chg?
<input type="checkbox"/>	1	default	0	1001	round_robin	180	Hang Up	8	17	Modify

[Add](#) [Delete](#)

Call Presentation Groups

Del?	Call Presentation Group	Destinations	Chg?
<input type="checkbox"/>	1	IF:06 IF:07 IF:08 IF:09 IF:10 IF:11 IF:12 IF:13	Modify

[Add](#) [Delete](#)

In the **Interface Configuration** section

- Select [Modify](#)

Call Presentation Group Configuration

Call Presentation Group 1

Name	default
Enable	0
Interface	1001
Sequence Mode	round_robin
Destination Timeout	180
Destination Timeout Action	Hang Up
Max Destination Attempts	8
Cause	17

Submit

Call Presentation Group 1

Destinations |F:06|F:07|F:08|F:09|F:10|F:11|F:12|F:13

Submit

In the **Call Presentation Group 1** section

- Set Destinations = 0204|0203|0202|0201
- select **Submit** and then click "[here](#)" to return
- Return to this page

Call Presentation Group Configuration

Call Presentation Group 1

Name	default
Enable	0
Interface	1001
Sequence Mode	round_robin
Destination Timeout	180
Destination Timeout Action	Hang Up
Max Destination Attempts	8
Cause	17

Submit

Call Presentation Group 1

Destinations |F:0204|F:0203|F:0202|F:0201

Submit

In the **Call Presentation Group 1** section

- Set Name = Find_free_FXO
- Set Enable = 1
- Set Sequence Mode = Linear_up

- Set Max Destination Attempts = 4
- Set Cause = 34
- select and then click "[here](#)" to return

Call Presentation Groups										
Del?	Call Presentation Group	Name	Enable	Interface	Sequence Mode	Destination Timeout	Destination Timeout Action	Max Destination Attempts	Cause	Chg?
<input type="checkbox"/>	1	Find_free_FXO	1	1001	linear_up	180	Hang Up	4	34	Modify

Call Presentation Groups			
Del?	Call Presentation Group	Destinations	Chg?
<input type="checkbox"/>	1	IF:0204 IF:0203 IF:0202 IF:0201	Modify

- On the left hand side menu select [Dial Plan](#)

Dial Planner

Profiles					
Del?	Profile ID	Enabled	Name	Plans	Chg?
<input type="checkbox"/>	1	1	Outbound_to_LAN	====>	Modify
<input type="checkbox"/>	2	1	Inbound_from_LAN	====>	Modify

In the **Profiles** section

- Select

In the **Profiles** section, Profile ID 3

- Select
- Set Name = LAN_to_free_FXO
- select and then click "[here](#)" to return
- Return and modify the dial plan

[Dial Planner](#) > [Profile 3](#) > [Plan 1](#)

Modify Plan	
Plan ID	1
Profile ID	3
Name	<input type="text" value="new_plan"/>
Source	<input type="text" value="TEL:<...><.*>"/>
Destination	<input type="text" value="IF:<1>,TEL:<2>"/>
Cost Index	<input type="text" value="0"/>
Group	0 - no group

In the **Modify Plan** section

- Set Name = 8888_to_free_FXO
- Set Source = IF:99...,TEL:8888<.*>

- Set Destination = IF:1001,TEL:<1>
- select and then click "[here](#)" to return

This will strip the leading 8888 and dial the rest of the number out from a free FXO port (specified by the CPG group interface 1001).

Plans in this Profile							
Del?	Plan ID	Name	Src	Dest	Cost	Group	Chg?
<input type="checkbox"/>	1	8888_to_free_FXO	IF:9901,TEL:8888<.*>	IF:1001,TEL:<1>	0	0	Modify
<input type="button" value="Delete"/>		<input type="button" value="Add"/>					

Remember to Save the changes.

Further details on these and other parameters may be found in the Vega Primer.

Contact Details
 Email: support@vegastream.com
 Web: <http://www.vegastream.com>

EMEA Office
 VegaStream Limited
 Western Centre
 Western Road
 Bracknell
 Berks RG12 1RW
 UK

USA Office
 VegaStream Inc.
 6200 Stoneridge Mall Road
 3rd Floor
 Pleasanton
 California 94588
 USA

+44 (0) 1344 784900

+1 925 399 6428