

# Initial configuration

## Vega 50 6x4 FXS

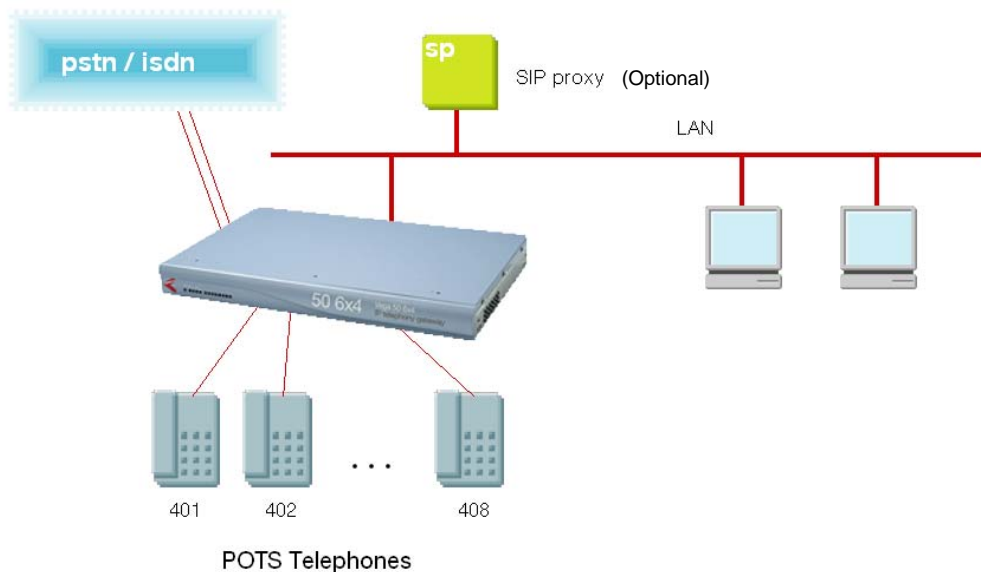
### (SIP) – R7.5



This document describes how to configure the FXS 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 to operate as follows:

- Calls made by any of the attached analogue phones will be routed to the SIP proxy (or if no SIP proxy to a specific IP address); the Vega will pass on any dialed digits.
- Calls received from the SIP proxy (or if no SIP proxy, from a VoIP device) will be routed to the appropriate telephone based on the 3-digit extension number presented.
- Phones 401 and 402 will be directly connected to the 2 FXO ports connected to the PSTN if the Vega is powered down, or is undergoing an upgrade.



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.

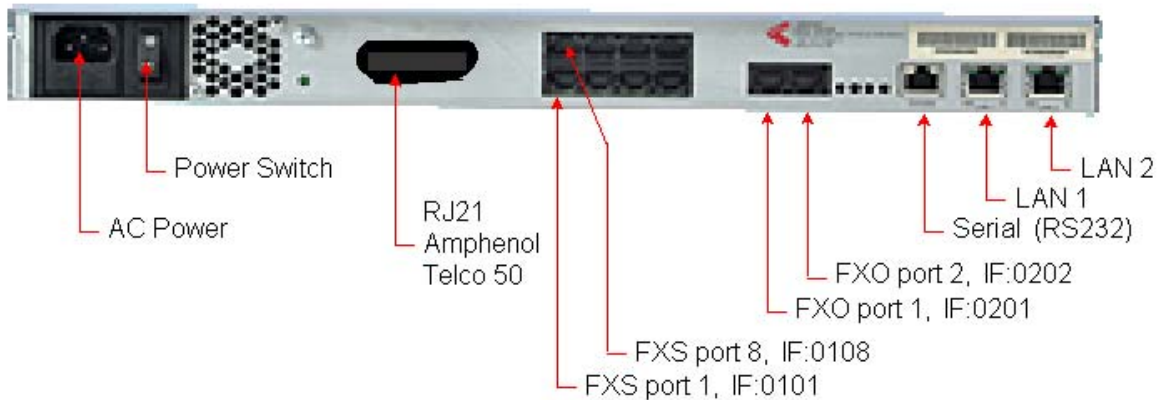
The configuration process is broken down into 12 stages as follows:

- 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.

## Telephony:

The connector locations at which the FXS telephone ports are available, depends upon where in the Vega the FXS interface cards are plugged. If an FXS card is plugged into interface slot 1, FXS 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 FXS card plugged into interface slot 2, FXS ports will be available on the RJ45 connector at locations IF 5 to IF 8 and on the RJ21 / Amphenol / Telco 50 connector. With FXS card(s) are plugged into interface slots 3 to 6, these FXS 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<br>IF:0108 | IF 7<br>IF:0107 | IF 6<br>IF:0106 | IF 5<br>IF:0105 |
| IF 1<br>IF:0101 | IF 2<br>IF:0102 | IF 3<br>IF:0103 | IF 4<br>IF:0104 |

|                   |                   |
|-------------------|-------------------|
| FXO 1<br>IF: 0201 | FXO 2<br>IF: 0202 |
|-------------------|-------------------|

Telephone lines can be connected to the two FXO ports.

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



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.

**WARNING!**

**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.

LAN LEDs will also illuminate indicating 10 (baseT) or 100 (base TX) 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: SIP Firmware (ACTIVE)
Version: 11.02.07.5
Image: VEGA-6x4_R075S004 Mar 6 2006 11:24:32

Partition 2: H.323 Firmware
Version: 11.01.07.5
Image: VEGA56x4_R075H001a Sep 14 2005 17:33:48

Type PART2 to activate partition 2, 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 Vega<sup>1</sup>.
- 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`

---

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

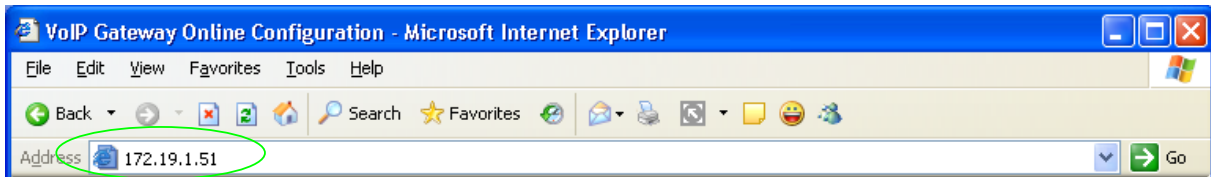
If this is not the IP address required, it can be overridden, together with other LAN parameters by typing:

- 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

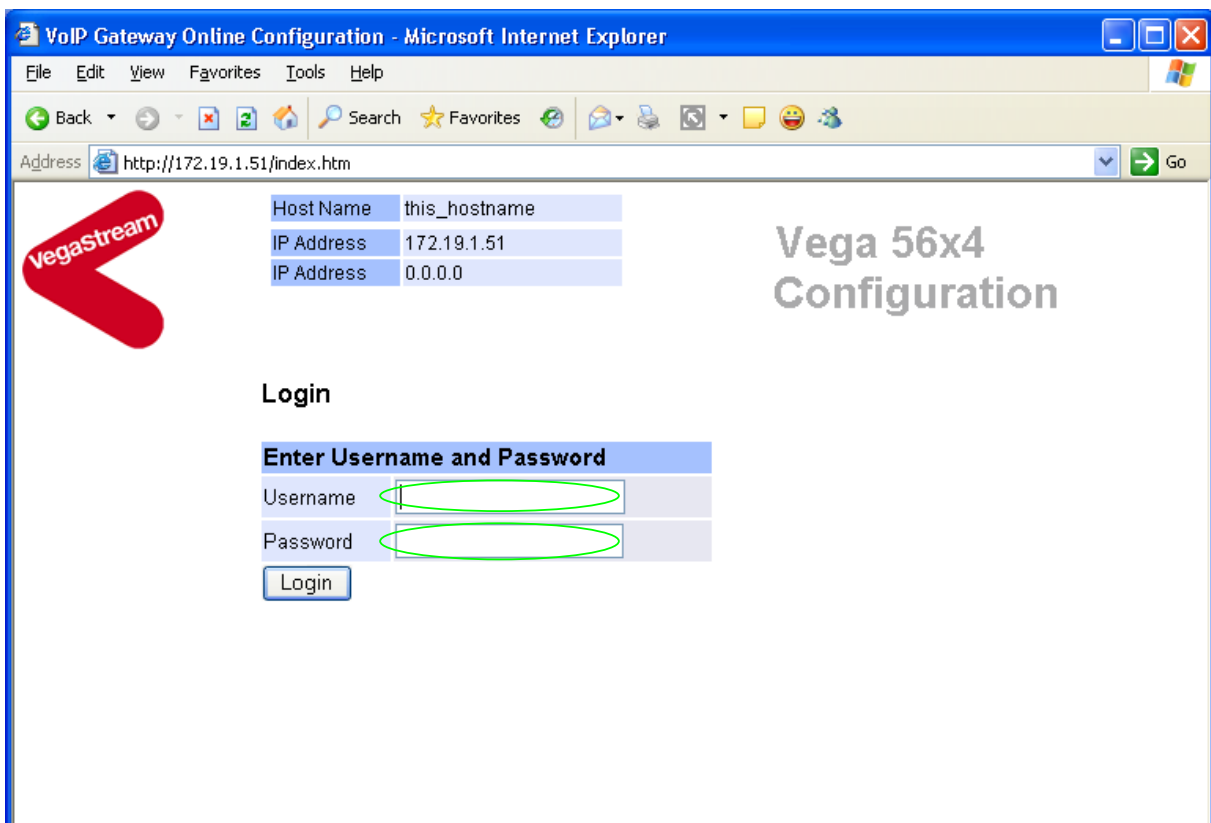
### 3. Configure password and login timeout

Now configuration will be carried out using 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.

| Change Active Partition                      |   |
|--|---|
| <input checked="" type="radio"/> Partition 1 | SIP Version: 11.02.07.5<br>Image: VEGA-6x4_R075S004 Mar 6 2006 11:24:32     |
| <input type="radio"/> Partition 2            | H.323 Version: 11.01.07.5<br>Image: VEGA56x4_R075H001a Sep 14 2005 17:33:48 |
| <input type="button" value="Continue ..."/>  |   |

- 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 complete<sup>2</sup>.

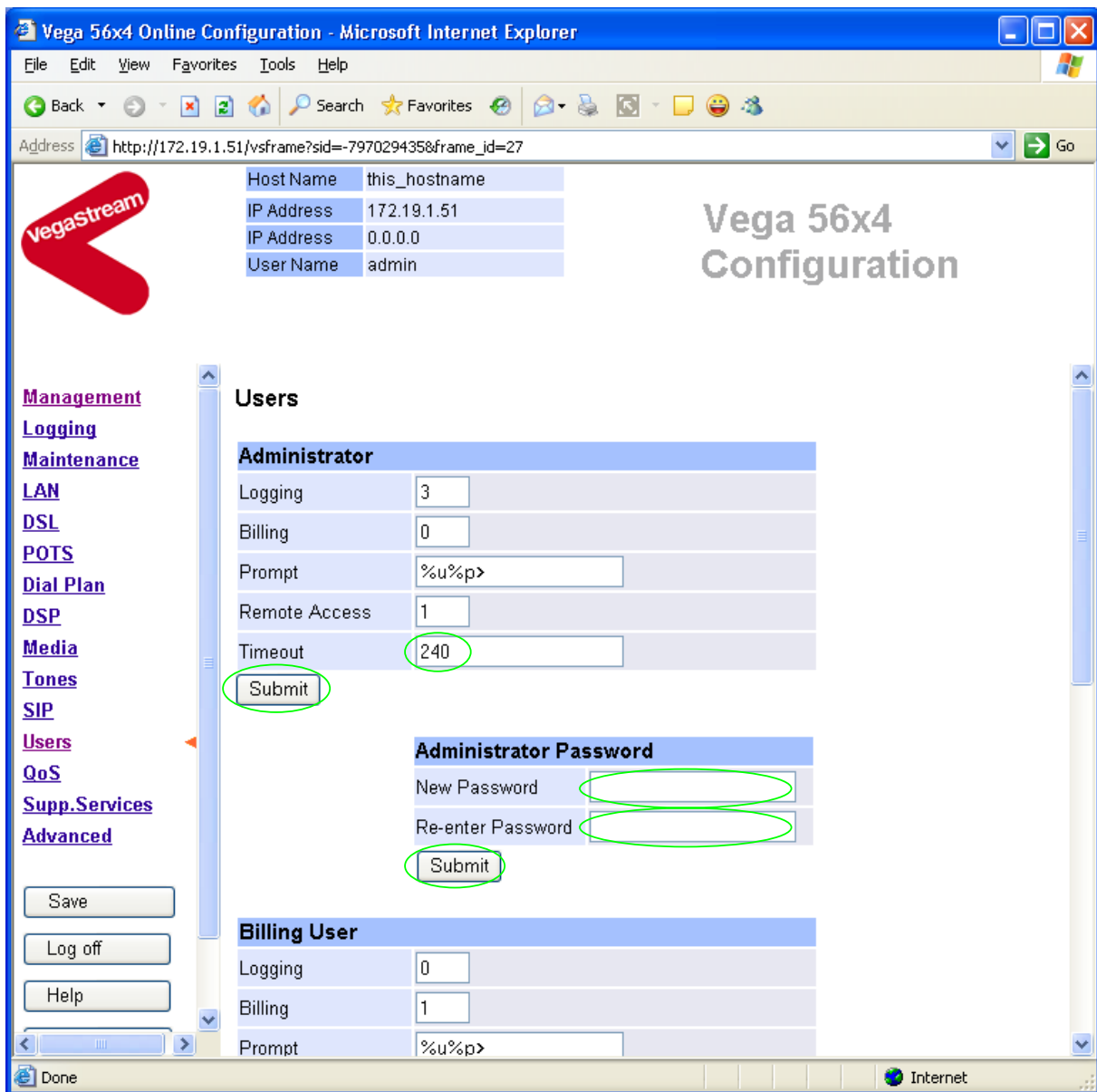
If the partition is not changed then the management page will be displayed.

---

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



- 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 timeout<sup>3</sup> – default is 240 seconds;

this can be extend to 7200 seconds (2hrs)

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

<sup>3</sup> If the web browser 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 web 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                        |                                     |                                       |                                     |
|--|-------------------------------------|---------------------------------------|-------------------------------------|
| <b>LAN 1</b>                             | 172.19.1.99                         | <b>LAN 2</b>                          | 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                       |
| <a href="#">Configure LAN Interfaces</a> |                                     |                                       |                                     |
| QoS                                      | TOS/DiffServ                        | QoS                                   | TOS/DiffServ                        |
| Accept non 8021q tagged frames           | <input checked="" type="checkbox"/> | Accept non 8021q tagged frames        | <input checked="" type="checkbox"/> |
| <a href="#">Configure QoS Profiles</a>   |                                     |                                       |                                     |
| <input type="button" value="Submit"/>    |                                     |                                       |                                     |

In the **LAN configuration** section

- Select [Configure LAN Interfaces](#)

| LAN Configuration                     |                                     |                       |                                     |
|---------------------------------------|-------------------------------------|-----------------------|-------------------------------------|
| <b>LAN 1</b>                          | 172.19.1.99                         | <b>LAN 2</b>          | 0.0.0.0                             |
| <b>Physical Layer</b>                 |                                     | <b>Physical Layer</b> |                                     |
| 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.*

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

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

|  |             |
|--|-------------|
| <b>Default LAN Gateway</b>   | 172.19.1.10 |
| LAN Gateway IP Address   |             |
| <input checked="" type="radio"/> DHCP<br>From DHCP server on LAN interface | 1-LAN1      |
| <input type="radio"/> Static<br>IP Address                                 | 172.19.1.10 |
| <input type="button" value="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  and then click "[here](#)" to return
- Scroll down to the **Calls** section

|                                       |         |
|---------------------------------------|---------|
| <b>Calls</b>                          |         |
| 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 **TFTP Parameters** section

|  |             |
|--|-------------|
| <b>TFTP Parameters</b>   | 172.19.1.68 |
| TFTP Server IP Address   |             |
| <input checked="" type="radio"/> DHCP<br>From DHCP server on LAN interface | 1-LAN1      |
| <input type="radio"/> Static<br>TFTP Server IP Address                     | 172.19.1.68 |
| LAN Profile  | 1-LAN_1     |
| <a href="#">Configure TFTP</a>   |             |
| <input type="button" value="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<br>From DHCP server on LAN interface | 1-LAN 1 |
| <input type="radio"/> Static<br>NTP Server IP Address                      | 0.0.0.0 |
| LAN Profile  | 1-LAN_1 |
| <a href="#">Configure NTP</a>  |         |
| <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

Dial plans for the FXS ports are below; for dial plans to route local and emergency numbers to the FXO ports, see [14.3 “Configure Emergency numbers to route to the two FXO ports”](#), and [14.4 “Configure local numbers to route to the two FXO ports”](#).

Configure the dial plans for FXS

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

Host Name this\_hostname  
IP Address 172.19.1.51  
IP Address 0.0.0.0  
User Name admin

VegaStream

Unsaved & Unapplied Changes

Vega 56x4 Configuration

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

Save  
Log off  
Help

### Dial Planner

#### Profiles

| Del?                     | Profile ID | Enabled | Name    | Plans | Chg?                   |
|--------------------------|------------|---------|---------|-------|------------------------|
| <input type="checkbox"/> | 1          | 1       | default | ===>  | <a href="#">Modify</a> |

Delete Add

#### Post Profile

Enabled

Submit

#### Plans in Post Profile

| Del?                     | Plan ID | Enable | Name          | Src        | Dest               | Chg?                   |
|--------------------------|---------|--------|---------------|------------|--------------------|------------------------|
| <input type="checkbox"/> | 1       | 0      | International | TEL:00<.*> | TYPE:international | <a href="#">Modify</a> |

Delete Add

#### Planner Groups

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

Delete Add

#### Planner Whitelist Enable

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                             |
| <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     | <a href="#">Modify</a> |
| <input type="checkbox"/>              | 2       | incoming_lan                       | IF:9901,TEL:<...><*> | IF:<1>,TEL:<2>  | 0    | 1     | <a href="#">Modify</a> |
| <input type="button" value="Delete"/> |         | <input type="button" value="Add"/> |                      |                 |      |       |                        |

- > Set Name = FXS\_to\_Proxy
- > select  and then click "[here](#)" to return

**Dial Planner**

| Profiles                              |            |                                    |              |       |                        |  |
|---------------------------------------|------------|------------------------------------|--------------|-------|------------------------|--|
| Del?                                  | Profile ID | Enabled                            | Name         | Plans | Chg?                   |  |
| <input type="checkbox"/>              | 1          | 1                                  | FXS_to_Proxy | ===>  | <a href="#">Modify</a> |  |
| <input type="button" value="Delete"/> |            | <input type="button" value="Add"/> |              |       |                        |  |

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

- > Select [Modify](#)

[Dial Planner](#) > Profile 1

| Modify Profile                        |                                     |
|---------------------------------------|-------------------------------------|
| Profile ID                            | 1                                   |
| Enabled                               | <input checked="" type="checkbox"/> |
| Name                                  | FXS_to_Proxy                        |
| <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     | <a href="#">Modify</a> |
| <input checked="" type="checkbox"/>   | 2       | incoming_lan                       | IF:9901,TEL:<...><*> | IF:<1>,TEL:<2>  | 0    | 1     | <a href="#">Modify</a> |
| <input type="button" value="Delete"/> |         | <input type="button" value="Add"/> |                      |                 |      |       |                        |

In the **Plans in this Profile** section:

- > Tick the Del? Tick box against Plan ID 2
- > Select



➤ Select 

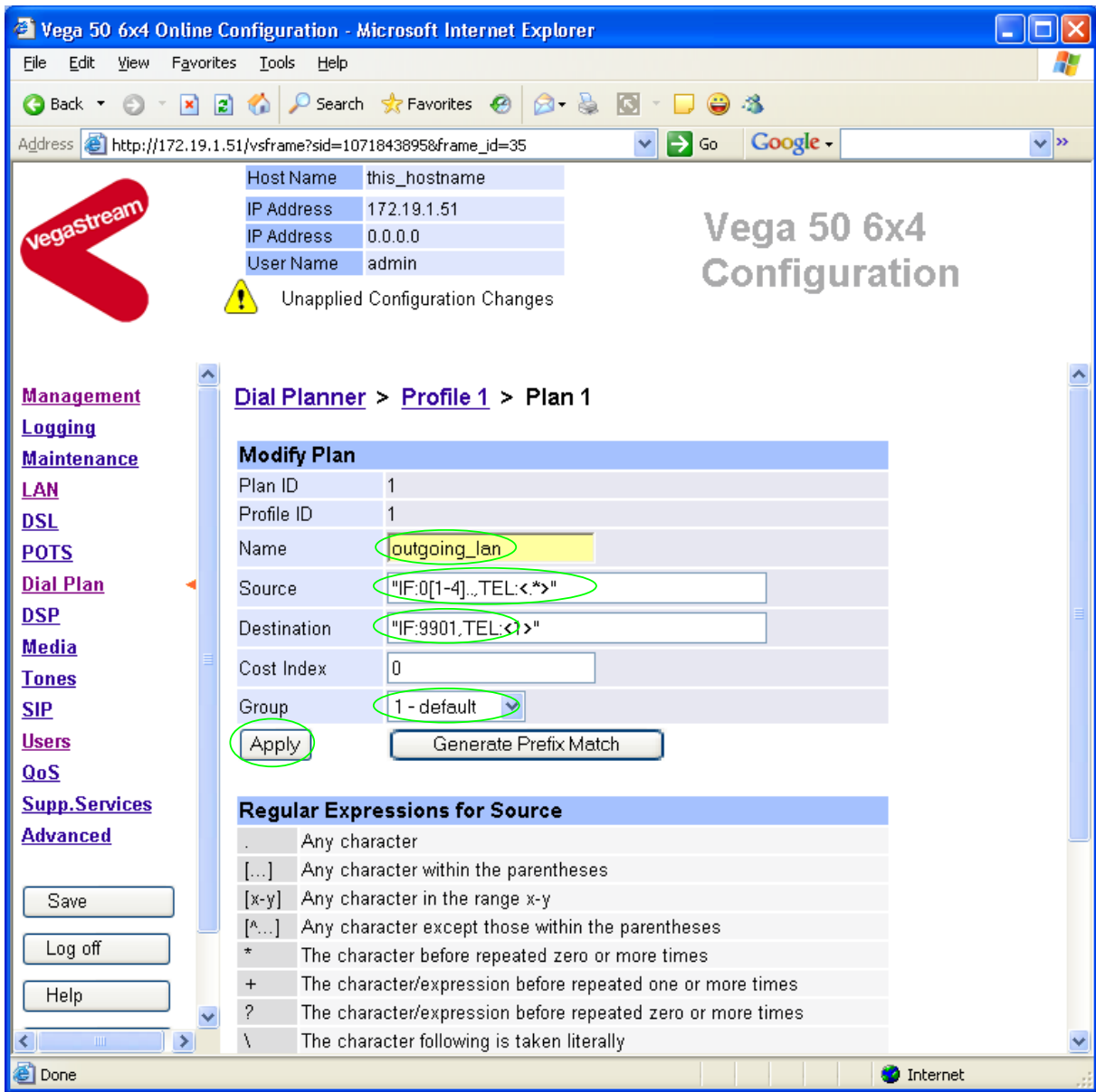
[Dial Planner](#) > Profile 1

| Modify Profile                        |                                     |
|---------------------------------------|-------------------------------------|
| Profile ID                            | 1                                   |
| Enabled                               | <input checked="" type="checkbox"/> |
| Name                                  | FXS_to_Proxy                        |
| <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     | <a href="#">Modify</a> |
| <input type="button" value="Delete"/> |         | <input type="button" value="Add"/> |                     |                 |      |       |                        |

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

➤ Select [Modify](#)



- Set Name = FXS\_to\_Proxy
- Set Source = IF:01... , TEL:<.\*> *(This takes a call from any of the FXS interfaces and stores the telephone number dialled in store <1>)*
- Set Destination = IF:9901 , TEL:<1> *(This routes the call to IF:9901 (the LAN) and passes the received telephone number 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 172.19.1.51  
 IP Address 0.0.0.0  
 User Name admin

Unsaved Configuration Changes

**Dial Planner > Profile 1**

**Modify Profile**

Profile ID 1  
 Enabled   
 Name FXS\_to\_Proxy  
 Submit

**Plans in this Profile**

| Del?                     | Plan ID | Name         | Src               | Dest            | Cost | Group | Chg?                   |
|--------------------------|---------|--------------|-------------------|-----------------|------|-------|------------------------|
| <input type="checkbox"/> | 1       | FXS_to_Proxy | IF:01...,TEL:<.*> | IF:9901,TEL:<1> | 0    | 1     | <a href="#">Modify</a> |

Delete Add

➤ 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 1, configure profile 2

In the **Modify Profile** section

- set Name = Proxy\_to\_FXS
- select **Submit** and then click “[here](#)” to return

Modify the first plan for Profile 2:

- set Name = For\_4xx
- set Source = IF:99...,TEL:4<..>

*(This dial plan handles calls from IF:99xx (LAN), made to telephone numbers 4xx; store*

- set Destination = IF:01<1>

*the 2 digits received after the leading digit 4 in store <1>)  
(As the last 2 digits of the extension numbers start at 01 and increase sequentially, and this matches the last 2 digits of the FXS port interface numbers, the digits stored in store <1> can be used as the offset into the FXS ports)*

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

**Note:** The SIP Proxy registration will assign the correct numbers to present for each interface; when the Proxy presents a call to the Vega, the INVITE message starts something like:

```
INVITE sip:403@172.19.1.51 SIP/2.0
```

*The digits preceding the @ (the telephone number field) must contain 4xx, the 3 digit extension number to ring.*

**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 = FXS\_to\_Proxy
- Set Source = IF:01..,TEL:<.\*>
- 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 = For\_4xx
- set Source = IF:99..,TEL:4<..>
- set Destination = IF:01<1>

## 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](#)

Host Name this\_hostname  
IP Address 0.0.0.0  
IP Address 172.19.1.67  
User Name admin

### 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

#### SIP Configuration

##### General

Local Domain abcdehghijwhatever.com  
Local SIP Port 5060  
Request URI Port 5060  
Accept Non-Proxy Invites   
LAN profile 1

Submit

##### SIP Profiles

| SIP Profile | Alternative Local Domain | From Header 'userinfo' | From Header 'host' | To Header 'host' | Chg?                   |
|-------------|--------------------------|------------------------|--------------------|------------------|------------------------|
| 1           | abcdehghijwhatever.com   | Calling Party          | Local Domain       | Local Domain     | <a href="#">Modify</a> |

Add Delete

##### Proxy Configuration

Mode  normal  cyclic  
 dnssrv  
Minimum Valid Response 100

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)

- check that LAN Profile = 1

**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  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<br><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 | <a href="#">Modify</a> |
| <input type="button" value="Add"/> <input type="button" value="Delete"/> |  |             |      |                        |

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

- Select [Modify](#)

[SIP](#) > SIP Proxy 1

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

In the **SIP Proxy 1** section:

- Ensure that Enable is ticked
- set IP/DNS Name = IP\_address\_of\_SIP\_proxy, or  
DNS\_hostname\_of\_the\_SIP\_Proxy
- select  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](#)

Host Name this\_hostname  
IP Address 0.0.0.0  
IP Address 172.19.1.67  
User Name admin

### 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

### Media

#### Media Control Profiles Configuration

[Media Control Profiles](#)

#### Media Capability Sets

| Capability Set | Name         | Capability Indices | Chg?                   |
|----------------|--------------|--------------------|------------------------|
| 1              | voice        | 6,2,3              | <a href="#">Modify</a> |
| 2              | voice+t38Udp | 6,2,3,5,8,9        | <a href="#">Modify</a> |
| 3              | g711faxmodem | 8,9                | <a href="#">Modify</a> |

Add Delete

#### Media Capability

| Capability | Codec       | Codec Profile | Chg?                   |
|------------|-------------|---------------|------------------------|
| 1          | g7231       | 1             | <a href="#">Modify</a> |
| 2          | g711Alaw64k | 1             | <a href="#">Modify</a> |
| 3          | g711Ulaw64k | 1             | <a href="#">Modify</a> |
| 4          | t38tcp      | 1             | <a href="#">Modify</a> |
| 5          | t38udp      | 1             | <a href="#">Modify</a> |
| 6          | g729        | 1             | <a href="#">Modify</a> |
| 7          | g729AnnexA  | 1             | <a href="#">Modify</a> |
| 8          | g711Alaw64k | 2             | <a href="#">Modify</a> |
| 9          | g711Ulaw64k | 2             | <a href="#">Modify</a> |

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 desired 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               | <input type="text" value="voice+t38Udp"/> |
| Capability Indices | <input type="text" value="6,2,3,5,8,9"/>  |

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 0.0.0.0  
 IP Address 172.19.1.67  
 User Name admin

**Vega 50 6x4 Configuration**

**Media**  
 Capability Set

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

| SIP Registrar | Enable | IP/DNS Name | Port | Chg?                   |
|---------------|--------|-------------|------|------------------------|
| 1             | 0      | 0.0.0.0     | 5060 | <a href="#">Modify</a> |

**SIP Registration Users Configuration**

- Set Capability Set = 2 (if capability set 2 contains the preferred list, or 1 if capability set 1 contains the preferred list)
- select  and then click "[here](#)" to return

## 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

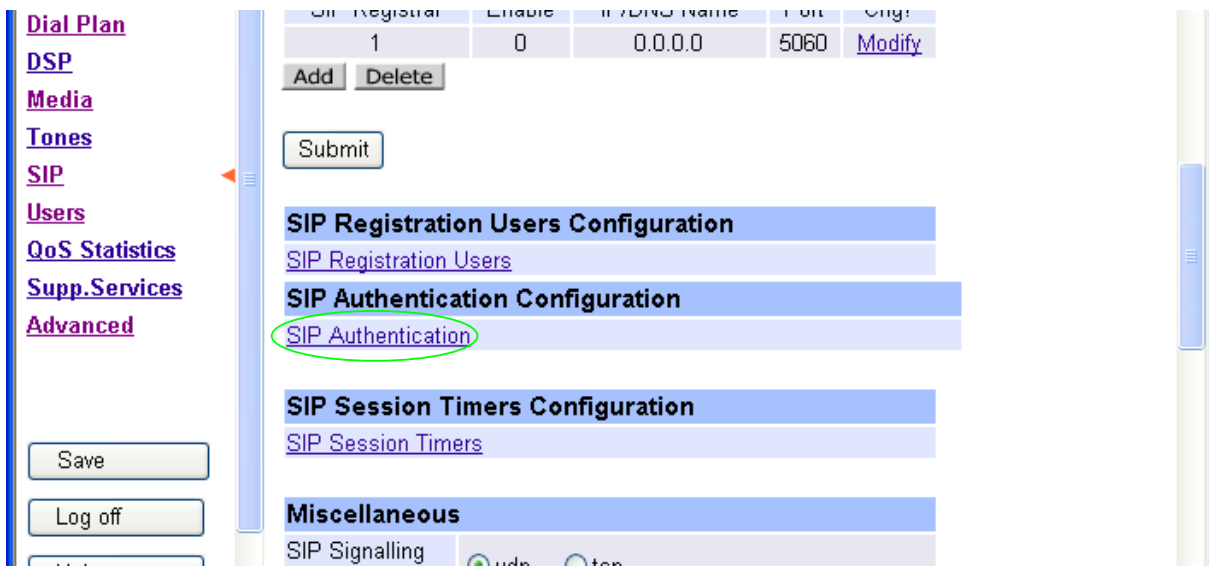
Username Prefix, Username and Username Suffix

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 authentication using username 'User\_xxx' and password 'Pass\_xxx' (where xxx is the extension number):

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



The screenshot shows the Vega web interface. On the left is a navigation menu with links for Dial Plan, DSP, Media, Tones, SIP, Users, QoS Statistics, Supp. Services, and Advanced. The main content area displays a table with columns for SIP Registration, Enable, IP Address Name, Port, and City. Below the table are 'Add' and 'Delete' buttons, and a 'Submit' button. The 'SIP Authentication Configuration' section is highlighted in blue, and the 'SIP Authentication' link within it is circled in green. Other sections visible include 'SIP Registration Users Configuration', 'SIP Session Timers Configuration', and 'Miscellaneous'.

- Select [SIP Authentication](#)

Host Name this\_hostname  
 IP Address 172.19.1.51  
 IP Address 0.0.0.0  
 User Name admin

VegaStream

Unsaved & Unapplied Changes

Vega 50 6x4 Configuration

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

Save  
 Log off  
 Help

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       | unit1           | 01       | 01unit1        | user01   | IF:0101 | <a href="#">Modify</a> |
| <input type="checkbox"/> | 2    | 0      | no prefix       | unit1           | 02       | 02unit1        | user02   | IF:0102 | <a href="#">Modify</a> |
| <input type="checkbox"/> | 3    | 0      | no prefix       | unit1           | 03       | 03unit1        | user03   | IF:0103 | <a href="#">Modify</a> |
| <input type="checkbox"/> | 4    | 0      | no prefix       | unit1           | 04       | 04unit1        | user04   | IF:0104 | <a href="#">Modify</a> |
| <input type="checkbox"/> | 5    | 0      | no prefix       | unit1           | 05       | 05unit1        | user05   | IF:0105 | <a href="#">Modify</a> |
| <input type="checkbox"/> | 6    | 0      | no prefix       | unit1           | 06       | 06unit1        | user06   | IF:0106 | <a href="#">Modify</a> |
| <input type="checkbox"/> | 7    | 0      | no prefix       | unit1           | 07       | 07unit1        | user07   | IF:0107 | <a href="#">Modify</a> |
| <input type="checkbox"/> | 8    | 0      | no prefix       | unit1           | 08       | 08unit1        | user08   | IF:0108 | <a href="#">Modify</a> |
| <input type="checkbox"/> | 9    | 0      | no prefix       | unit1           | 09       | 09unit1        | user09   | IF:0209 | <a href="#">Modify</a> |
| <input type="checkbox"/> | 10   | 0      | no prefix       | unit1           | 10       | 10unit1        | user10   | IF:0210 | <a href="#">Modify</a> |

Add Delete

By default, Authentication entries are set up but disabled for each analogue interface. User 1 is designed to be used for the first analogue port, use 2 for the second, etc.

Against the desired User

- Select [Modify](#)
- e.g. for User 1

**SIP > Authentication > User**

| SIP Tokens |       |
|------------|-------|
| Token      | Value |
| 1          | unit1 |
| 2          | 01    |

**Modify SIP Authentication User**

**SIP Authentication User 1**

Enable

Username Prefix **none** ▾

Username Suffix **none** ▾

Username **01**

Password **user01**

Source **IF:0101**

- Tick Enable
- Check Username Prefix = none
- Check Username Suffix = none
- Set Username = User\_401
- Set Password = Pass\_401
- Check Source = IF:0101
  
- select  and then click "[here](#)" to return

Repeat the configuration for all required Authentication users.  
e.g.

| User    | Enable | Prefix | Suffix | Username | Password | Source  |
|---------|--------|--------|--------|----------|----------|---------|
| user 2  | ✓      | none   | none   | User_402 | Pass_401 | IF:0102 |
| user 3  | ✓      | none   | none   | User_403 | Pass_403 | IF:0103 |
| ... etc |        |        |        |          |          |         |

For the FXO ports, ensure that the port numbering starts at IF:0201.

## 9. Configure Registration

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

FXS gateways are normally configured to register each FXS port individually. Each FXS port is therefore effectively handled as a separate endpoint. Registration provides the SIP proxy with two main pieces of information:

- “address” – the public address of the Vega port (the URL which other SIP endpoints will use to make calls to this port)
- “contact” – the URL which the proxy will use to forward the call to the relevant port (interface) on the Vega

When a SIP call request is sent to the SIP proxy, the SIP proxy receives the call addressed to the public address, it then performs a translation from the public address to the contact address, and uses the contact details to present the call to the Vega.

The Registration format is:

```
--- address:
    Public_Address@Registration_Domain
--- contact:
    <sip:Dn@Host_Name_or_IP_address_of_Vega>
```

In the Vega, `Public_Address` is made up of the registration user `Username_prefix`, `Username`, and `Username_suffix`

Other values needed for registration include:

- Local Domain (`Registration_Domain`) ... already configured in section 6 ‘Configure SIP parameters’
- Dn ... configured in registration section
- `Host_Name_or_IP_address_of_Vega` ... set up by DHCP or in section 4 ‘Check and configure LAN settings and Host name’

Registration message format:

```
--- address:
    Username_prefixUsernameUsername_suffix@Registration_Domain
--- contact:
    <sip:Dn@Host_Name_or_IP_address_of_Vega>
```

e.g. to set up registration so that the Vega registers:

```
FXS Port 1
--- address:
    1344784401@Registration_Domain
--- contact:
    <sip:401@Host_Name_or_IP_address_of_Vega>
```

etc.

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

Host Name this\_hostname  
 IP Address 0.0.0.0  
 IP Address 172.19.1.67  
 User Name admin

**Vega 50 6x4 Configuration**

**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 | <a href="#">Modify</a> |

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

**SIP Registration Users Configuration**  
[SIP Registration Users](#)

**SIP Authentication Configuration**  
[SIP Authentication](#)

**SIP Session Timers Configuration**

Save  
 Log off  
 Help

For SIP Registrar 1:

- Select [Modify](#)



[SIP](#) > SIP Registrar 1

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

- Ensure that Enable is ticked
- 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       | unit1           | 01       | 01unit1        | 1 - User_401              | <a href="#">Modify</a> |
| <input type="checkbox"/> | 2    | 0      | 02 | no prefix       | unit1           | 02       | 02unit1        | 2 - User_402              | <a href="#">Modify</a> |
| <input type="checkbox"/> | 3    | 0      | 03 | no prefix       | unit1           | 03       | 03unit1        | 3 - User_03               | <a href="#">Modify</a> |
| <input type="checkbox"/> | 4    | 0      | 04 | no prefix       | unit1           | 04       | 04unit1        | 4 - User_04               | <a href="#">Modify</a> |
| <input type="checkbox"/> | 5    | 0      | 05 | no prefix       | unit1           | 05       | 05unit1        | 5 - User_05               | <a href="#">Modify</a> |
| <input type="checkbox"/> | 6    | 0      | 06 | no prefix       | unit1           | 06       | 06unit1        | 6 - User_06               | <a href="#">Modify</a> |
| <input type="checkbox"/> | 7    | 0      | 07 | no prefix       | unit1           | 07       | 07unit1        | 7 - User_07               | <a href="#">Modify</a> |
| <input type="checkbox"/> | 8    | 0      | 08 | no prefix       | unit1           | 08       | 08unit1        | 8 - User_08               | <a href="#">Modify</a> |
| <input type="checkbox"/> | 9    | 0      | 09 | no prefix       | unit1           | 09       | 09unit1        | 9 - User_09               | <a href="#">Modify</a> |
| <input type="checkbox"/> | 10   | 0      | 10 | no prefix       | unit1           | 10       | 10unit1        | 10 - User_10              | <a href="#">Modify</a> |

By default, Registration entries are set up but disabled for each analogue interface. User 1 is designed to be used for the first analogue port, use 2 for the second, etc.

In the **SIP Registration Users** section, for the first user

- Select
- Scroll down to the **Modify SIP Registration User** section

**Modify SIP Registration User**

**SIP Registration User 1**

Enable

Dn

Username Prefix

Username Suffix

Username

Authentication User Index

In the **SIP Registration User 1** section

- Tick Enable
- Set Dn = 401
- Check Username Prefix = none
- Set Username Suffix = none
- Set Username = 1344784401
- Check Authentication User Index = 1-User\_401
- Select  and then click "[here](#)" to return

Repeat the configuration for all required Registration users.  
e.g.

| User    | Dn  | Enable | Prefix | Suffix | Username   | Authentication User Index |
|---------|-----|--------|--------|--------|------------|---------------------------|
| user 2  | 402 | ✓      | none   | none   | 1344784402 | 2 - User_402              |
| user 3  | 403 | ✓      | none   | none   | 1344784403 | 3 - User_403              |
| ... etc |     |        |        |        |            |                           |

**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**

Enter

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

## 10. Configure POTS parameters

FXS ports can be configured with telephone numbers so that they present the correct caller ID when calls are made from them.

Two FXO ports are available for powerfail fallback; the first two FXS ports are connected to these two FXO ports when the Vega is not powered or when the Vega is performing an upgrade.

No configuration is required to use these ports as fallback ports. If routing of calls to these ports is required, then see the FXO version of the Vega 50 6x4 initial configuration guide.

Configuring caller ID on FXS ports

*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       | 1   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 2                  | 1       | 1   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 3                  | 1       | 1   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 4                  | 1       | 1   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 5                  | 1       | 0   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 6                  | 1       | 0   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |

### 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              | <a href="#">Modify</a> |
| 2                       | off            | 6000           | #               | 5                 | 34              | <a href="#">Modify</a> |

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

In the **POTS Interface Profiles Configuration** section, Profile ID 1,

- Select [Modify](#)

[POTS](#) > Profile 1

| Modify Profile                        |      |
|---------------------------------------|------|
| Profile ID                            | 1    |
| Line busy cause                       | 17   |
| Caller ID wait                        | 6000 |
| Caller ID type                        | off  |
| DTMF Termination Char                 | #    |
| DTMF Dial Timeout                     | 5    |
| Username prefix                       | NULL |
| Username suffix                       | NULL |
| <input type="button" value="Submit"/> |      |

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

Now for each FXS 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       | 1   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 2                  | 1       | 1   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 3                  | 1       | 1   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 4                  | 1       | 1   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 5                  | 1       | 0   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |
| 6                  | 1       | 0   | off       | g711Alaw64k | 0       | 1                | ====>      | <a href="#">Modify</a> |

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                                   | 1                                   |
| 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                       | 1                 | 0101         | 0101 | 2          | port1    | 01         | <a href="#">Modify</a> |

In the **Interface Configuration** section

- Select [Modify](#)

**POTS > Port 1 > Interface 1**

| Modify Interface                      |       |
|---------------------------------------|-------|
| Port Index                            | 1     |
| Interface Profile                     | 1     |
| Interface ID                          | 0101  |
| Ring index                            | 2     |
| dn                                    | 0101  |
| 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
- 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"*

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

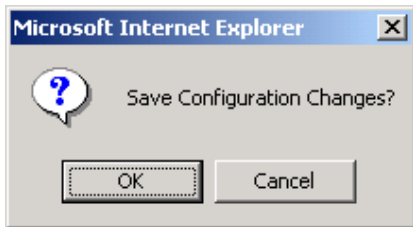
Repeat for all other FXS ports.


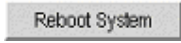
*If FXO ports are being used, see the POTS configuration section of the 'Vega 50 6x4 FXO' initial configuration guide for details of the configuration necessary for these ports.*

## 11. Save Changes

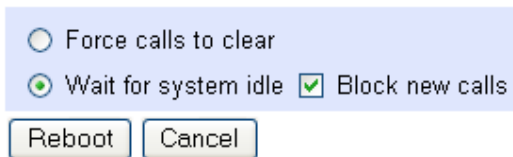
The changes to the configuration must be saved and activated. This is carried out as follows:

- 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

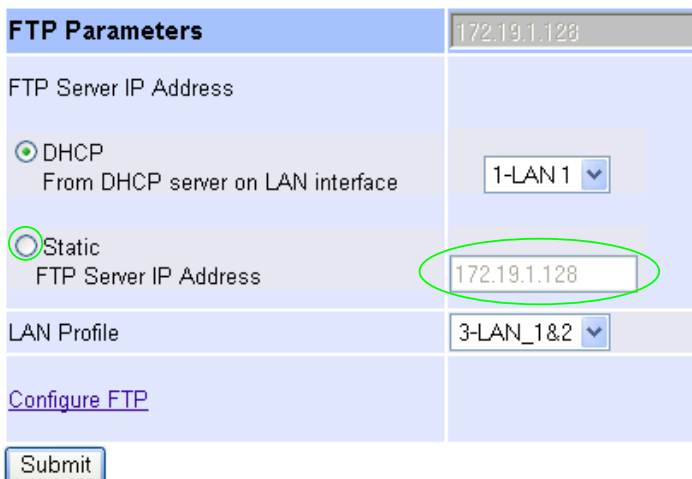
- in the text entry box type “PUT tftp:initial\_cfg.txt”. Select .

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   |              |
|--|--------------|
| FTP Server IP Address  | 172.19.1.128 |
| <input checked="" type="radio"/> DHCP<br>From DHCP server on LAN interface | 1-LAN 1      |
| <input checked="" type="radio"/> Static<br>FTP Server IP Address           | 172.19.1.128 |
| LAN Profile  | 3-LAN_1&2    |
| <a href="#">Configure FTP</a>  |              |
| <input type="button" value="Submit"/>                                      |              |

- Set up the static IP address of the FTP server (if not already supplied through DHCP)
- select  and then click “[here](#)” to return
- select [Configure FTP](#)



| FTP Parameters                                   |                                     |
|--|-------------------------------------|
| Login  |                                     |
| <input checked="" type="radio"/> Anonymous Login |                                     |
| <input type="radio"/> Username Login             |                                     |
| FTP Username                                     | whatever                            |
| FTP Ping Test                                    | <input checked="" type="checkbox"/> |
| FTP Timeout                                      | 20                                  |
| FTP port   | 21                                  |
| Abort Socket Before Closing                      | <input type="checkbox"/>            |
| <input type="button" value="Submit"/>            |                                     |

- Select Username Login
- Set FTP Username = <ftp username>
- select  and then click "[here](#)" to return

Through the Advanced page CLI Command section, configure the password by typing

- Set FTP.\_password=<ftp password>

## 13. Technical Support

Support information can be found on the VegaStream Support web site [www.VegaAssist.com](http://www.VegaAssist.com)

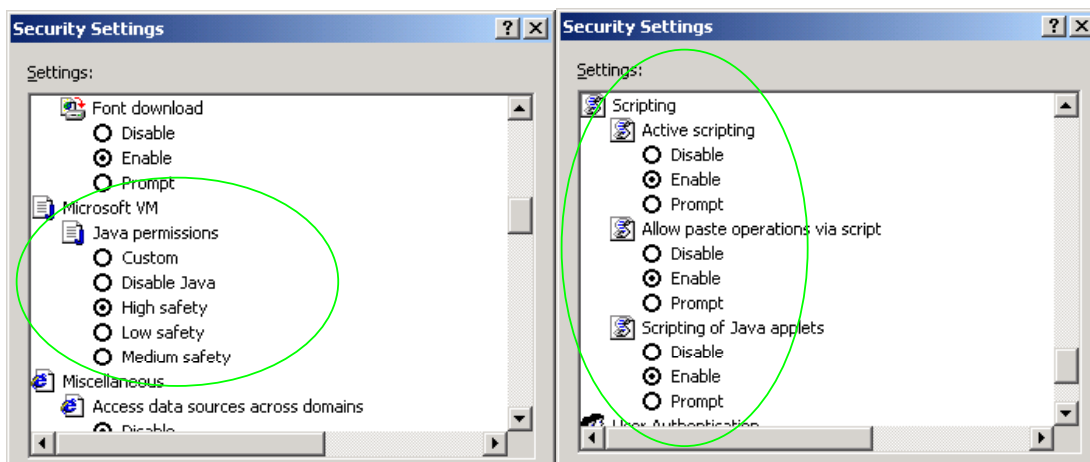
If you require help from VegaStream support personnel, please use the serial interface or telnet into the unit, log in and then type:

- 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](mailto: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 50 6x4 units have further configurable parameters that may be desirable to configure in order to fully integrate into the attached infrastructure.

### 14.1 Hook-flash, call hold and transfer

See IN\_27 FXS Call Transfer for details on configuration and operation.

### 14.2 Country specific ring tones

See IN\_16 Progress Tones and IN\_29 Country Tones for details on configuration.

### 14.3 Configure Emergency numbers to route to the two FXO ports

In many cases it is preferable to route emergency calls to the local FXO ports rather than via the SIP Proxy. The configuration below will:

- Route 999 and 112 to FXO port 0202 – the dial plan will be tagged as 'priority' so as to clear any existing call to a local number already in progress on 0202.

*Set up dial plan planner group 2 to be the 'priority call' group*

*Set up dial plans for 999 and 112*

- 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

**Vega 50 6x4 Configuration**

Unapplied Configuration Changes

**Dial Planner**

**Profiles**

| Del?                     | Profile ID | Enabled | Name         | Plans | Chg?                   |
|--------------------------|------------|---------|--------------|-------|------------------------|
| <input type="checkbox"/> | 1          | 1       | FXS_to_Proxy | ====> | <a href="#">Modify</a> |
| <input type="checkbox"/> | 2          | 1       | Proxy_to_FXS | ====> | <a href="#">Modify</a> |

Delete Add

**Post Profile**

Enabled

Submit

**Plans in Post Profile**

| Del?                     | Plan ID | Enable | Name          | Src        | Dest               | Chg?                   |
|--------------------------|---------|--------|---------------|------------|--------------------|------------------------|
| <input type="checkbox"/> | 1       | 0      | International | TEL:00<.*> | TYPE:international | <a href="#">Modify</a> |

Delete Add

**Planner Groups**

| Del?                     | ID | Name    | Cause | Lan | Active times | Priority | Chg?                   |
|--------------------------|----|---------|-------|-----|--------------|----------|------------------------|
| <input type="checkbox"/> | 1  | default | 0     | off | 0000-2359    | 0        | <a href="#">Modify</a> |
| <input type="checkbox"/> | 2  | default | 0     | off | 0000-2359    | 0        | <a href="#">Modify</a> |

Delete Add

In the **Planner Groups** section

- Select **Add**

**Planner Groups**

| Del?                     | ID | Name    | Cause | Lan | Active times | Priority | Chg?                   |
|--------------------------|----|---------|-------|-----|--------------|----------|------------------------|
| <input type="checkbox"/> | 1  | default | 0     | off | 0000-2359    | 0        | <a href="#">Modify</a> |
| <input type="checkbox"/> | 2  | default | 0     | off | 0000-2359    | 0        | <a href="#">Modify</a> |

Delete Add

In the **Planner Groups** section, Planner Group ID 2

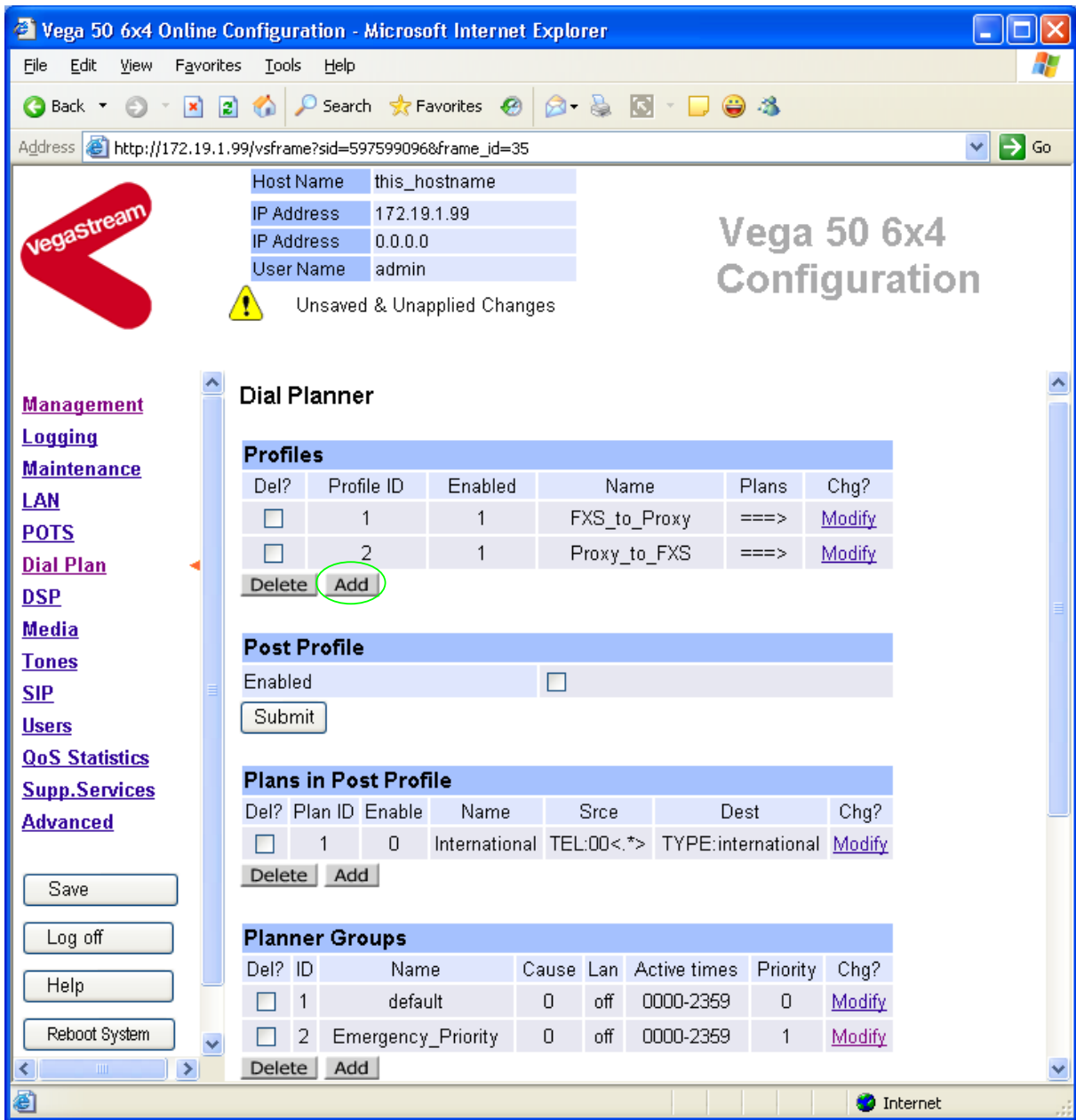
- Select **Modify**

**Dial Planner > Planner Group 2**

| <b>Modify Group</b>                   |  |
|---------------------------------------|--|
| Group ID                              | 2                                      |
| Name                                  | <input type="text" value="default"/>   |
| Cause                                 | <input type="text" value="0"/>         |
| Lan                                   | <input type="text" value="off"/>       |
| Active Times                          | <input type="text" value="0000-2359"/> |
| Priority                              | <input type="checkbox"/>               |
| <input type="button" value="Submit"/> |  |

In the **Modify Group** section

- Set Name = Emergency\_Priority
- Tick the Priority tick box
- select  and then click "[here](#)" to return



In the **Profiles** section

- Select **Add**

### Dial Planner

| Profiles                 |            |            |              |       |                        |  |
|--------------------------|------------|------------|--------------|-------|------------------------|--|
| Del?                     | Profile ID | Enabled    | Name         | Plans | Chg?                   |  |
| <input type="checkbox"/> | 1          | 1          | FXS_to_Proxy | ===>  | <a href="#">Modify</a> |  |
| <input type="checkbox"/> | 2          | 1          | Proxy_to_FXS | ===>  | <a href="#">Modify</a> |  |
| <input type="checkbox"/> | 3          | 1          | new_profile  | ===>  | <a href="#">Modify</a> |  |
| <b>Delete</b>            |            | <b>Add</b> |              |       |                        |  |

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

- Select [Modify](#)

[Dial Planner](#) > **Profile 3**

| Modify Profile |  |
|----------------|--|
| Profile ID     | 3  |
| Enabled        | <input checked="" type="checkbox"/>      |
| Name           | <input type="text" value="new_profile"/> |

| Plans in this Profile    |         |          |              |                |      |       |                        |
|--------------------------|---------|----------|--------------|----------------|------|-------|------------------------|
| Del?                     | Plan ID | Name     | Srcce        | Dest           | Cost | Group | Chg?                   |
| <input type="checkbox"/> | 1       | new_plan | TEL:<...><*> | IF:<1>,TEL:<2> | 0    | 0     | <a href="#">Modify</a> |

In the **Modify Profile** section

- Set Name = FXS\_Emergency\_Calls
- select  and then click "[here](#)" to return
- Return to this page

In the **Modify Profile** section

- Select

[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:&lt;...&gt;&lt;*&gt;"/>   |
| Destination | <input type="text" value="IF:&lt;1&gt;,TEL:&lt;2&gt;"/> |
| Cost Index  | <input type="text" value="0"/>                          |
| Group       | 0 - no group  |

0 - no group  
1 - default  
2 - Emergency\_Priority

In the **Modify Plan** section

- Set Name = 999\_call
- Set Source = IF:01...,TEL:<999>
- Set Destination = IF:0202,TEL:<1>
- Set Cost Index = 1
- Set group = 2 – Emergency\_Priority
- select  and then click "[here](#)" to return

Add a new plan to this profile (profile 3), the configure as follows:

In the **Modify Plan** section

- Set Name = 112\_call
- Set Source = IF:01...,TEL:<112>
- Set Destination = IF:0202,TEL:<1>
- Set Cost Index = 1
- Set group = 2 – Emergency\_Priority
- select  and then click "[here](#)" to return

The result should be as follows:

[Dial Planner](#) > **Profile 3**

| Modify Profile                        |  |
|---------------------------------------|--|
| Profile ID                            | 3  |
| Enabled                               | <input checked="" type="checkbox"/>              |
| Name                                  | <input type="text" value="FXS_Emergency_Calls"/> |
| <input type="button" value="Submit"/> |  |

| Plans in this Profile                 |         |                                    |                    |                 |      |       |                        |
|---------------------------------------|---------|------------------------------------|--------------------|-----------------|------|-------|------------------------|
| Del?                                  | Plan ID | Name                               | Src                | Dest            | Cost | Group | Chg?                   |
| <input type="checkbox"/>              | 1       | 999_call                           | IF:01...,TEL:<999> | IF:0202,TEL:<1> | 1    | 2     | <a href="#">Modify</a> |
| <input type="checkbox"/>              | 2       | 112_call                           | IF:01...,TEL:<112> | IF:0202,TEL:<1> | 1    | 2     | <a href="#">Modify</a> |
| <input type="button" value="Delete"/> |         | <input type="button" value="Add"/> |                    |                 |      |       |                        |

Remember to Save and Apply the changes to activate.

## 14.4 Configure local numbers to route to the two FXO ports

In many cases it is preferable to route local calls to the FXO ports rather than via the SIP Proxy. The configuration below will:

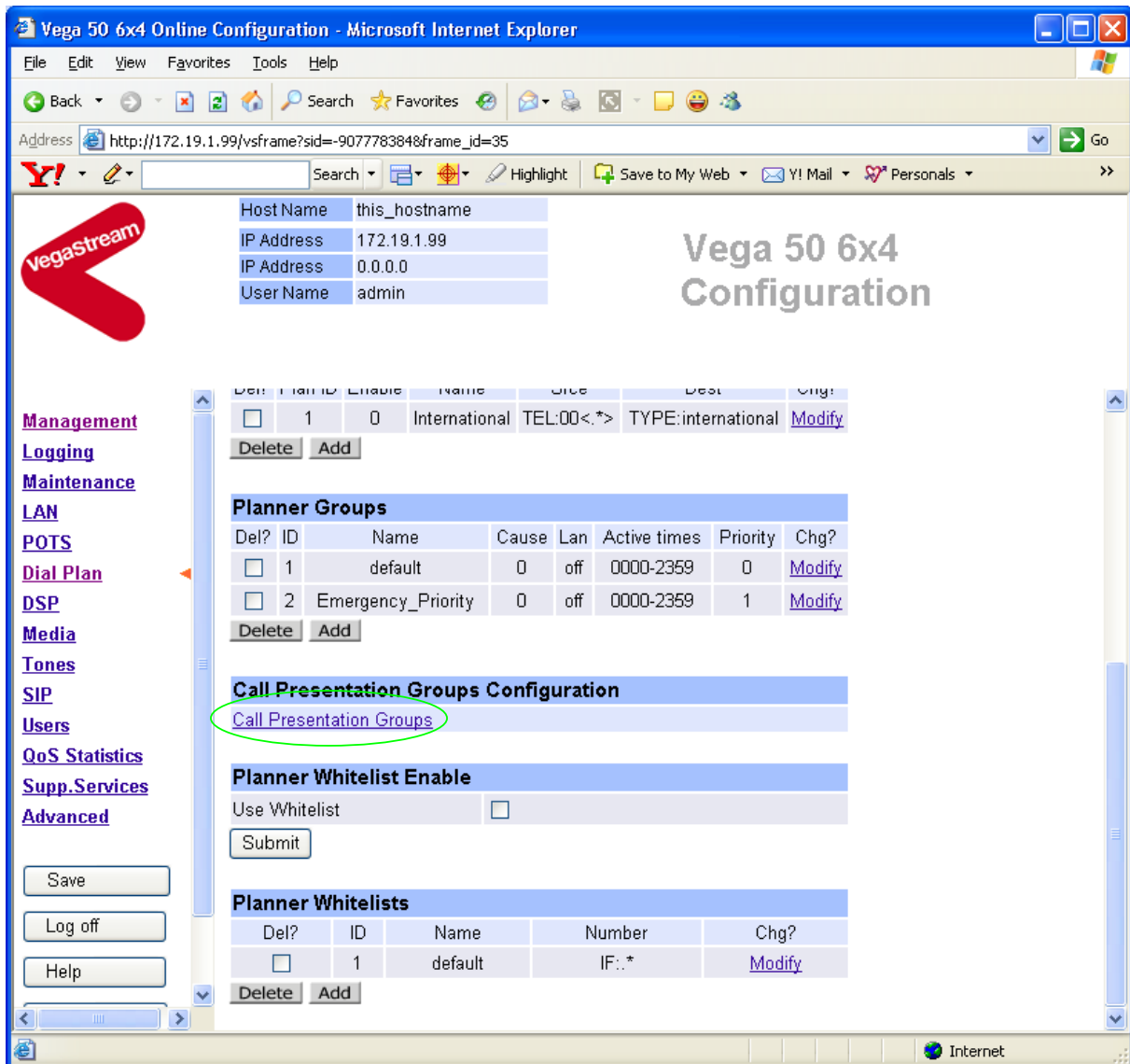
- Route calls prefixed by 1344 to FXO port 0201, or if that is busy to 0202

*Set up Call Presentation Group to send calls to interfaces 0201 and 0202*

*Set up dial plan to route calls where the telephone number prefix is '1344' to the Call Presentation Group virtual interface.*

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





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                 | Try Next Destination       | 8                        | 17    | <a href="#">Modify</a> |

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

| Call Presentation Groups |                         |  |                        |
|--------------------------|-------------------------|--|------------------------|
| Del?                     | Call Presentation Group | Destinations   | Chg?                   |
| <input type="checkbox"/> | 1                       | IF:0101  IF:0102  IF:0103  IF:0104  IF:0105  IF:0106  IF:0107  IF:0108 | <a href="#">Modify</a> |

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

In the **Call Presentation Groups** section

- Select [Modify](#)

## Call Presentation Group Configuration

| Call Presentation Group 1             |                          |
|---------------------------------------|--------------------------|
| Name                                  | default                  |
| Enable                                | <input type="checkbox"/> |
| Interface                             | 1001                     |
| Sequence Mode                         | round_robin              |
| Destination Timeout                   | 180                      |
| Destination Timeout Action            | Try Next Destination     |
| Max Destination Attempts              | 8                        |
| Cause                                 | 17                       |
| <input type="button" value="Submit"/> |                          |

| Call Presentation Group 1             |  |
|---------------------------------------|--|
| Destinations                          | IF:0101  IF:0102  IF:0103  IF:0104  IF:0105  IF:0106  IF:0107  IF:0108 |
| <input type="button" value="Submit"/> |  |

In the **Call Presentation Group 1** section

- Set Destinations = IF:0201||IF:0202
- select  and then click "[here](#)" to return
- Return to this page

## Call Presentation Group Configuration

| Call Presentation Group 1             |                          |
|---------------------------------------|--------------------------|
| Name                                  | default                  |
| Enable                                | <input type="checkbox"/> |
| Interface                             | 1001                     |
| Sequence Mode                         | round_robin              |
| Destination Timeout                   | 180                      |
| Destination Timeout Action            | Try Next Destination     |
| Max Destination Attempts              | 8                        |
| Cause                                 | 17                       |
| <input type="button" value="Submit"/> |                          |

| Call Presentation Group 1             |                  |
|---------------------------------------|------------------|
| Destinations                          | IF:0201  IF:0202 |
| <input type="button" value="Submit"/> |                  |

In the **Call Presentation Group 1** section

- Set Name = Local\_Calling\_Hunt
- Tick Enable

- Set Sequence Mode = Linear\_up
- Set Max Destination Attempts = 2
- 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                       | Local_Calling_Hunt | 1      | 1001      | linear_up     | 180                 | Hang Up                    | 2                        | 34    | <a href="#">Modify</a> |

| Call Presentation Groups |                         |                 |                        |
|--------------------------|-------------------------|-----------------|------------------------|
| Del?                     | Call Presentation Group | Destinations    | Chg?                   |
| <input type="checkbox"/> | 1                       | IF:0201 IF:0202 | <a href="#">Modify</a> |

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

## Dial Planner

| Profiles                 |            |         |                     |       |                        |
|--------------------------|------------|---------|---------------------|-------|------------------------|
| Del?                     | Profile ID | Enabled | Name                | Plans | Chg?                   |
| <input type="checkbox"/> | 1          | 1       | FXS_to_Proxy        | ====> | <a href="#">Modify</a> |
| <input type="checkbox"/> | 2          | 1       | Proxy_to_FXS        | ====> | <a href="#">Modify</a> |
| <input type="checkbox"/> | 3          | 1       | FXS_Emergency_Calls | ====> | <a href="#">Modify</a> |

In the **Profiles** section

- Select

In the **Profiles** section, Profile ID 4

- Select [Modify](#)
- Set Name = Local\_calls\_to\_FXO
- select  and then click "[here](#)" to return
- Return and modify the dial plan

[Dial Planner](#) > [Profile 4](#) > [Plan 1](#)

| Modify Plan   |   |
|---|---|
| Plan ID   | 1   |
| Profile ID  | 4   |
| Name  | <input type="text" value="new_plan"/>                   |
| Source  | <input type="text" value="TEL:&lt;...&gt;&lt;*&gt;"/>   |
| Destination   | <input type="text" value="IF:&lt;1&gt;,TEL:&lt;2&gt;"/> |
| Cost Index  | <input type="text" value="0"/>                          |
| Group   | 0 - no group <input type="button" value="v"/>           |
| <input type="button" value="Apply"/> <input type="button" value="Generate Prefix Match"/> |   |

In the **Modify Plan** section

- Set Name = 1344\_to\_local\_hunt
- Set Source = IF:01...,TEL:<1344.\*>
- Set Destination = IF:1001,TEL:<1>
- select  and then click "[here](#)" to return

Remember to Save the changes.

***Further details on Vega parameters may be found in the Vega Primer.***

**Contact Details**

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