

# Initial configuration

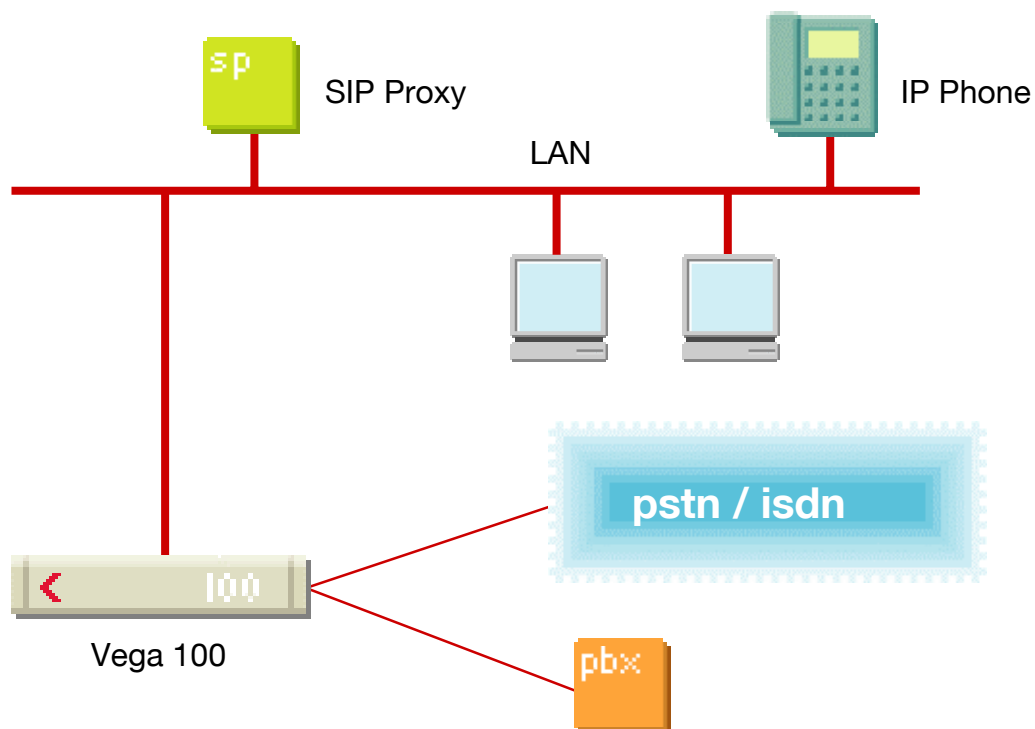
## Vega 100 T1 (SIP) – R5.1



This document describes how to configure the Vega 100 T1 SIP unit 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 100 to be a transparent gateway for a SIP Proxy.

- Calls made from the PBX or PSTN to the Vega will be forwarded to the SIP Proxy. The telephone number passed to the Vega will be forwarded unchanged to the SIP Proxy.
- Calls made from the SIP Proxy to the Vega will be forwarded to the PSTN or to the PBX based on the leading two digits of the telephone number passed by the proxy. A leading 01 will cause the call to be routed to the PSTN, and a leading 02 will cause the call to be routed to the PBX. The digits following the 01 or 02 will be passed as the dialed digits.



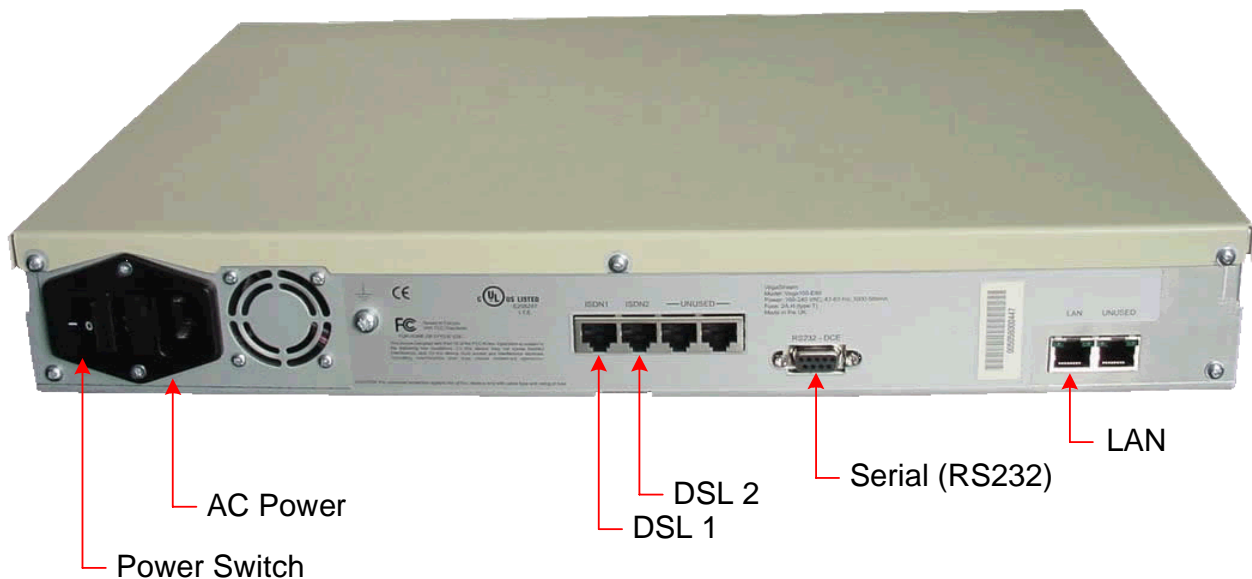
The configuration process is broken down into 11 stages as follows:

- 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 Registration
- 7 Configure SIP and audio parameters
- 8 Configure DSLs
- 9 Configure pointer to CD ROM documentation
- 10 Save Changes
- 11 Archive Vega Configuration

Please also see:

- 12 Technical Support
- 13 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 connect the LAN port on the Vega [5] 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.

## Telephony:

Connection to a PBX - If you are connecting the Vega 100 to a PBX, the Vega 100 acts as the NeTwork equipment and a red-booted cable must be used.

For each trunk that is to be connected to the PBX, insert one end of a red booted cable into one of the Vega 100 DSL sockets [DSL 1 or DSL 2] and the other end to the PBX.

Connection to the PSTN - If you are connecting the Vega 100 directly to the public telephone network it acts as the Terminal Equipment and the blue-booted cable must be used.

For each trunk that is to be connected to the PSTN, insert one end of a blue booted cable to one of the Vega 100 DSL sockets [DSL1 or DSL2] and the other end to the PSTN terminating box.

## 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, and the FDX LED will illuminate if Full Duplex mode has been negotiated.

## 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 a 9 way male to female straight through 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

To display the current IP address, type:

```
> show lan.ip
```

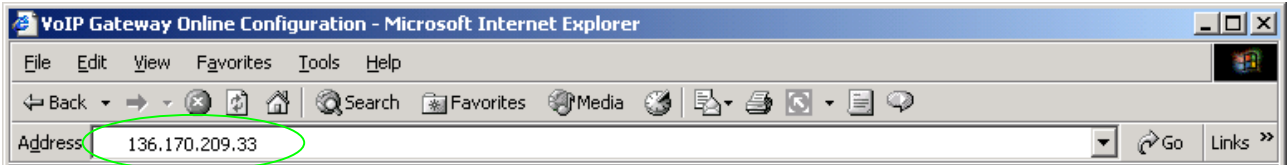
If this is not the IP address required, it can be overridden, together with other LAN parameters by typing:

```
> set lan.use_dhcp=0
> set lan.ip=aaa.bbb.ccc.ddd
> set lan.subnet=eee.fff.ggg.hhh
> set lan.gateway=iii.jjj.kkk.lll
> save
> reboot system
```

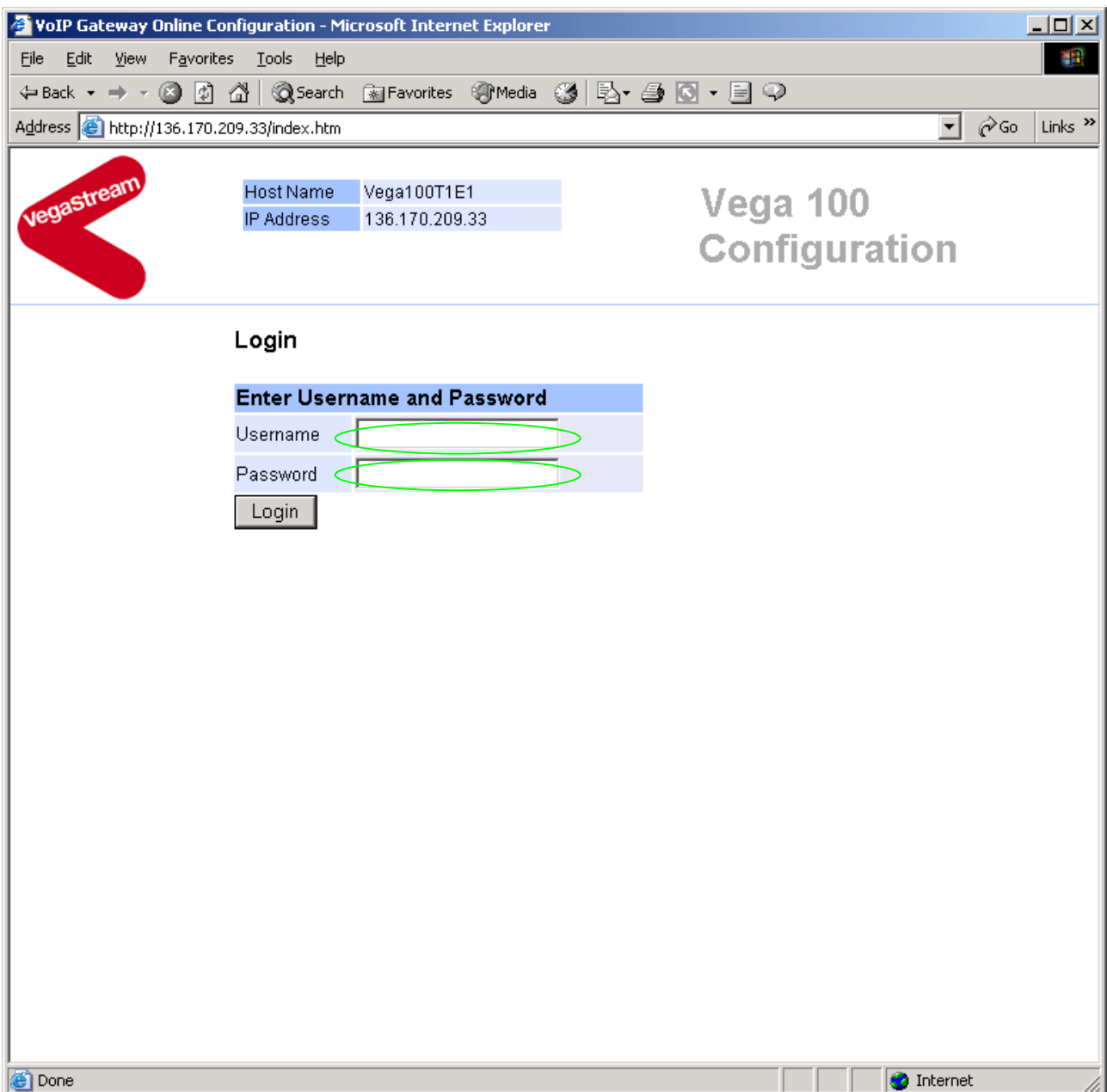
### 3. Configure password and login timeout

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

Host Name Vega100T1E1  
IP Address 136.170.209.33  
User Name admin

**Vega 100 Configuration**

**Management** **System Management**

Logging  
Maintenance  
LAN  
DSL  
Dial Plan  
Media Channels  
Tones  
SIP  
**Users**  
QoS  
Advanced

Save  
Log off  
Help  
Reboot System

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

**Quick Configuration Wizard**  
Quick step by step essential configuration

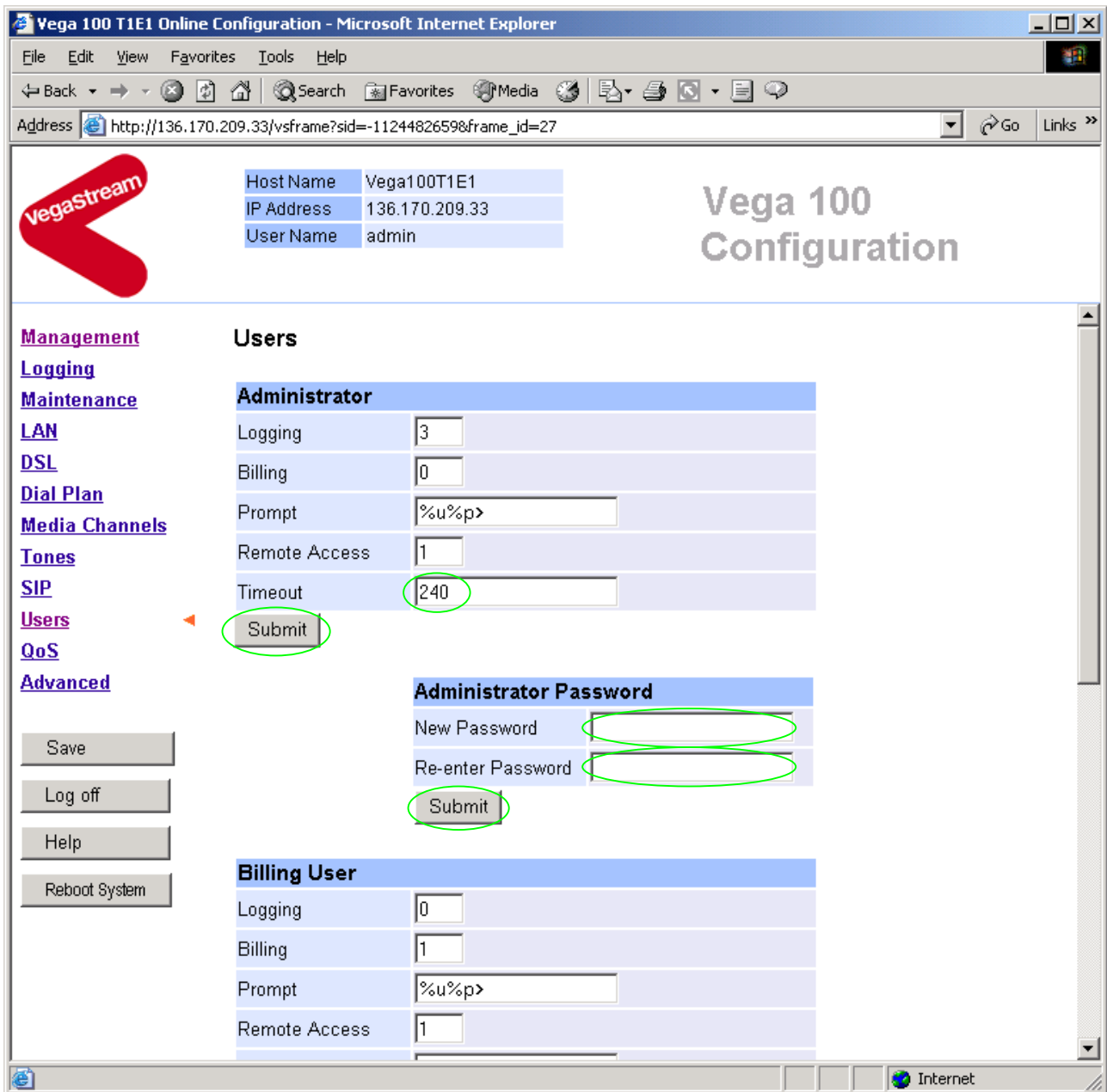
**System Time**  
Set Time (hh:mm:ss) 10 : 42 : 26   
Set Date (dd/mm/yyyy) 08 / 09 / 2003   
Synchronise Time and Date  With PC  With NTP server

**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

- 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>1</sup> – default is 240 seconds; can extend to 7200 seconds (2hrs)

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

<sup>1</sup> 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](#)

Host Name Vega100T1E1  
IP Address 136.170.209.33  
User Name admin

Unsaved Configuration Changes

**Local Area Network (changed)**

Warning: Changing these parameters may prevent remote access.

**Current Mode: Standard Ethernet Mode**

Change to VLAN (8021q) Ethernet mode    VLAN Mode

**LAN Configuration**

Use DHCP	<input checked="" type="checkbox"/>	
Host Name	Vega100T1E1	
IP Address	DHCP defined	
Subnet Mask	DHCP defined	
Domain Name Server	DHCP defined	Use DHCP <input checked="" type="checkbox"/>
Default Gateway	DHCP defined	Use DHCP <input checked="" type="checkbox"/>
TFTP Server	DHCP defined	Use DHCP <input checked="" type="checkbox"/>
Network Time Server	DHCP defined	Use DHCP <input checked="" type="checkbox"/>
FTP Server	192.168.1.108	
NTP Offset (hhmm)	0000	
NTP Poll Interval	0	

**Physical Layer Configuration**

Full Duplex	<input type="checkbox"/>
-------------	--------------------------

**Optional:** If there are any LAN values that need to be set up manually set them up now (e.g. tftp and ftp addresses), then

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



## 5. Configure the Dial Plan

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

Host Name Vega100T1E1  
IP Address 136.170.209.33  
User Name admin

Vega 100 Configuration

Unsaved Configuration Changes

**Management**  
[Logging](#)  
[Maintenance](#)  
[LAN](#)  
[DSL](#)  
[Dial Plan](#) ◀  
[Media Channels](#)  
[Tones](#)  
[SIP](#)  
[Users](#)  
[QoS](#)  
[Advanced](#)

Save  
Log off  
Help  
Reboot System

### Dial Planner

#### Profiles

Del?	Profile ID	Enabled	Name	Plans	Chg?
<input type="checkbox"/>	1	1	Vega100T1E1_default	====>	<a href="#">Modify</a>

Delete Add

#### Planner Groups

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

Delete Add

#### Planner Whitelist Enable

Use Whitelist

Submit

#### Planner Whitelists

Del?	ID	Name	Number	Chg?
<input type="checkbox"/>	1	default	IF:.*	<a href="#">Modify</a>

Delete Add

Firstly, turn off the default profile:

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

➤ Select [Modify](#)

[Dial Planner](#) > Profile 1

Modify Profile	
Profile ID	1
Enabled	<input checked="" type="checkbox"/>
Name	Vega100T1E1_default
<input type="button" value="Submit"/>	

- disable (un-tick) Enabled, then
- select  and then click "[here](#)" to return

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

**Dial Planner**

Profiles						
Del?	Profile ID	Enabled	Name	Plans	Chg?	
<input type="checkbox"/>	1	0	Vega100T1E1_default	===>	<a href="#">Modify</a>	
<input type="button" value="Delete"/>	<input type="button" value="Add"/>					

In the **Profiles** section

- Select

**Dial Planner**

Profiles						
Del?	Profile ID	Enabled	Name	Plans	Chg?	
<input type="checkbox"/>	1	0	Vega100T1E1_default	===>	<a href="#">Modify</a>	
<input type="checkbox"/>	2	1	new_profile	===>	<input type="button" value="Modify"/>	
<input type="button" value="Delete"/>	<input type="button" value="Add"/>					

In the **Profiles** section, on Profile 2 (the new profile):

- Select

[Dial Planner](#) > Profile 2

Modify Profile	
Profile ID	2
Enabled	<input checked="" type="checkbox"/>
Name	new_profile
<input type="button" value="Submit"/>	

- Set Name = ISDN\_To\_LAN
- select  and then click "[here](#)" to return

## Dial Planner

Profiles						
Del?	Profile ID	Enabled	Name	Plans	Chg?	
<input type="checkbox"/>	1	0	Vega100T1E1_default	====>	<a href="#">Modify</a>	
<input type="checkbox"/>	2	1	ISDN_To_LAN	====>	<a href="#">Modify</a>	

In the **Profiles** section, on Profile 2 (the ISDN\_To\_LAN profile):

- Select [Modify](#)

### [Dial Planner](#) > Profile 2

Modify Profile	
Profile ID	2
Enabled	<input checked="" type="checkbox"/>
Name	<input type="text" value="ISDN_To_LAN"/>

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

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

- Select [Modify](#)

- Set Name = From\_ISDN\_or\_PBX
- Set Source = IF: [ ^9 ] . , TEL: < . \* > *(This takes a call from either of the two ISDN interfaces and stores the telephone number presented in store <1>)*
- Set Destination = IF: 99 , TEL: < 1 > *(This routes the call to IF:99 (the LAN) and passes the received telephone number on as the destination telephone number)*
- select **Apply** and then click "[here](#)" to return

Host Name Vega100T1E1  
IP Address 136.170.209.33  
User Name admin

**Vega 100 Configuration**

Unsaved Configuration Changes

**Management**  
Logging  
Maintenance  
LAN  
DSL  
**Dial Plan**  
Media Channels  
Tones  
SIP  
Users  
QoS  
Advanced

**Dial Planner > Profile 2**

**Modify Profile**

Profile ID 2  
Enabled   
Name ISDN\_To\_LAN  
Submit

**Plans in this Profile**

Del?	Plan ID	Name	Src	Dest	Cost	Group	Chg?
<input type="checkbox"/>	1	From_ISDN_or_PBX IF:[*9].,TEL:<*>	IF:99,TEL:<1>	IF:99,TEL:<1>	0	0	<a href="#">Modify</a>

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 a similar manner to adding profile 2 add another profile, profile 3,

- set Name = LAN\_to\_ISDN\_or\_PBX

Modify the first plan for Profile 3:

- set Name = From\_LAN
- set Source = IF:99,TEL:<...><.\*> *(For calls from IF:99 (LAN), take the first two 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 two digits presented define the interface – 01 or 02 – and the remainder of the digits are passed on as the telephone number)*

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

**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:021344784900@172.20.11.2 SIP/2.0
```

*The digits preceding the @ (the telephone number field) must contain either 01t...t or 02t...t, where t...t is the telephone number to dial and 01 or 02 is the interface through which the call is to be made.*

***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.***

## 6. Registration

The Vega 100 does not support registration with a SIP Proxy. Registration is designed to register end users with a proxy, and the Vega 100 does not support end users, but is a gateway to a wider network of users.

The SIP proxy must be manually configured to accept calls from the Vega 100 (the telephone number for the call to be routed to will be in the request URI).

For outgoing calls the Proxy must send the call to the Vega 100 with a request URI of the format `iiitt...t@contact_address`

where `ii` is the interface number through which to make the call (Vega interface 01 or 02) and where `ttt...t` is the telephone number for the Vega to dial



## 7. Configure SIP and audio parameters

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

Host Name Vega100T1E1  
IP Address 136.170.209.33  
User Name admin

Unsaved & Unapplied Changes

**SIP Configuration**

**General**

Default Proxy Host Name/IP 0.0.0.0  
Local Domain vegastream.com  
Local SIP Port 5060  
Remote SIP Port 5060  
Accept Non-Proxy Invites   
QoS profile 0

Submit

**Multiple Proxy Support**

Mode  normal  cyclic  
Minimum Valid Response 180  
Timeout (ms) 5000

Backup Proxy	Enabled	IP/Name	Port	Chg?
1	1	0.0.0.0	5060	<a href="#">Modify</a>
2	1	0.0.0.0	5060	<a href="#">Modify</a>

Delete Add  
Submit

Audio

In the **General** section:

- set Default Proxy Host Name/IP = IP\_address\_of\_SIP\_proxy, or DNS\_hostname\_of\_the\_SIP\_Proxy
- 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 the calls to the Vega ensure that this tick box is clear.

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

➤ Scroll down to the Audio section

In the **Audio** section

➤ Select the audio codecs desired using the drop down menus

Unless there is a specific reason not to allow a specific codec to be used, it is recommended that all codecs should be enabled as follows:

Audio	
Audio Profile 1	<input type="text" value="G723"/>
Audio Profile 2	<input type="text" value="G729"/>
Audio Profile 3	<input type="text" value="G711 Ulaw"/>
Audio Profile 4	<input type="text" value="G711 Alaw"/>

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

## 8. Configure DSLs

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

**Host Name** Vega100T1E1  
**IP Address** 136.170.209.33  
**User Name** admin

**Vega 100 Configuration**

Unsaved & Unapplied Changes

**Management**  
[Logging](#)  
[Maintenance](#)  
[LAN](#)  
[DSL](#)  
[Dial Plan](#)  
[Media Channels](#)  
[Tones](#)  
[SIP](#)  
[Users](#)  
[QoS](#)  
[Advanced](#)

**DSL**

**DSL Configuration**

Network Type: ETSI  
Network Topology: E1  
Line Encoding: HDB3  
Framing: CRC4  
Bus Master: 1

Submit

**PORT Configuration**

PORT ID	Enabled	NT	Clock Master	Layer 1	E1 rx Short Haul	T1 tx equalization	ISDN	CAS	Groups	Chg?
1	1	0	0	g711Alaw64k	1	sh220_330	==>	==>	==>	<a href="#">Modify</a>
2	1	1	1	g711Alaw64k	1	sh220_330	==>	==>	==>	<a href="#">Modify</a>

Delete Add

Save  
Log off  
Help  
Reboot System  
Apply Changes

Start by selecting the correct Network Topology

### DSL

**DSL Configuration**

Network Type: ETSI  
Network Topology: E1  
Line Encoding: E1  
Framing: CRC4  
Bus Master: 1


Submit

➤ In the **DSL Configuration** section select the required Network Topology = T1

In the **DSL Configuration** section select the Network Type as required:

## DSL

DSL Configuration	
Network Type	ETSI
Network Topology	ETSI
Line Encoding	
Framing	
Bus Master	
<input type="button" value="Submit"/>	



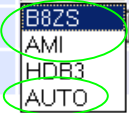
- ATT = 4ESS / 5ESS
- DMS = DMS 100
- DMS\_M1 = Meridian specific DMS signalling
- NI = National ISDN NI1 / NI2
- QSIG = QSIG signalling
- RBS = Robbed bit CAS signaling
- AUTO – this selects DMS signaling

Note: ETSI is not supported on the T1 interface.

In the **DSL Configuration** section select the Line Encoding as required:

## DSL

DSL Configuration	
Network Type	ATT
Network Topology	T1
Line Encoding	HDB3
Framing	B8ZS
Bus Master	
<input type="button" value="Submit"/>	



- B8ZS = Bipolar with 8 zero substitution (forces line reversals regularly)
- AMI = Alternate Mark Inversion
- AUTO – selects B8ZS

Note: HDB3 is not supported on the T1 interface.

In the **DSL Configuration** section select the Framing Method as required:

## DSL

DSL Configuration	
Network Type	ATT
Network Topology	T1
Line Encoding	B8ZS
Framing	CRC4
Bus Master	ESF
<input type="button" value="Submit"/>	

ESF  
SF  
CRC4  
PCM30  
AUTO

- ESF = Extended Super-Frame – 16 state signaling
- SF = Super-Frame (also known as D4)
- AUTO – selects ESF

Note: CRC4 and PCM30 are not supported on the T1 interface

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

**Vega 100 Configuration**

Host Name: Vega100T1E1  
 IP Address: 136.170.209.33  
 User Name: admin

Unsaved & Unapplied Changes

**DSL**

**DSL Configuration**

Network Type: ATT  
 Network Topology: T1  
 Line Encoding: B8ZS  
 Framing: ESF  
 Bus Master: 1

Submit

**PORT Configuration**

PORT ID	Enabled	NT	Clock Master	Layer 1	E1 rx Short Haul	T1 tx equalization	ISDN	CAS	Groups	Chg?
1	1	0	0	g711Alaw64k	1	sh220_330	====>	====>	====>	<a href="#">Modify</a>
2	1	1	1	g711Alaw64k	1	sh220_330	====>	====>	====>	<a href="#">Modify</a>

Delete Add

Save  
 Log off  
 Help  
 Reboot System  
 Apply Changes

For the configuration indicated in the initial diagram DSL1 = connection to the PSTN and DSL 2 is a connection to a PBX. Therefore the Vega needs DSL 1 configured as TE (and a blue booted cable used on DSL 1), and DSL 2 configured as NT (and a red booted cable used on DSL 2).

Bus Master needs to be configured to point to a TE trunk – to identify where the Vega will synchronise its internal clock from – in this configuration this should be 1 (DSL 1).

These are the default settings of the Vega and so no changes are required to the Network Terminator, Clock\_Master, or Bus\_Master settings.

In the **Port Configuration** section, for PORT ID 1:

➤ Select [Modify](#)

➤ Set Layer 1 = g711Ulaw64k

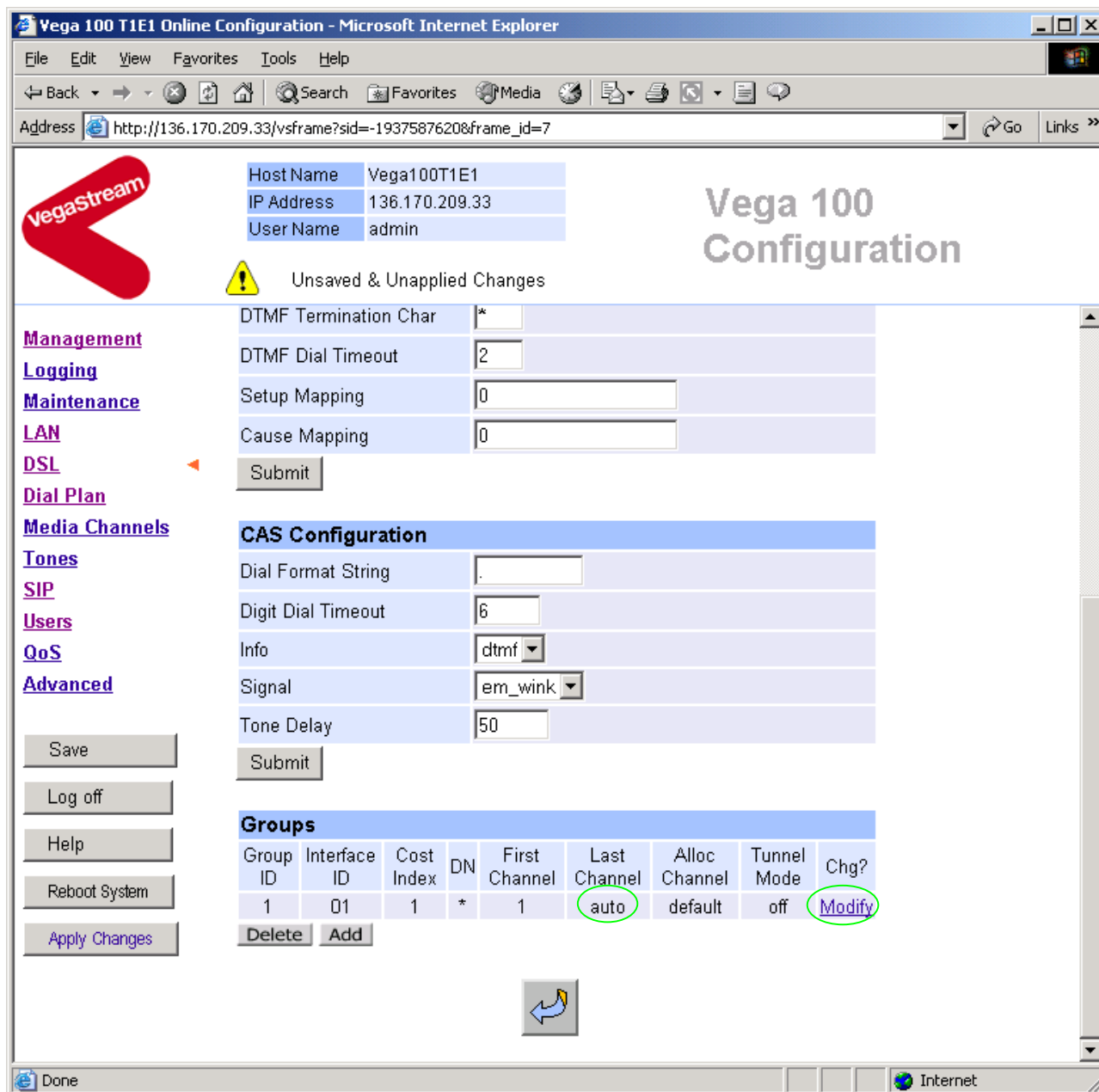
- Note:
1. If a configuration is to be used that requires the Network Terminator value to be changed, this can be altered as well. Typically if NT is ticked then Clock Master should also be ticked. If NT is un-ticked (TE mode) then typically Clock Master should also be un-ticked.
  2. if either trunk is TE then the Bus Master value (in the ISDN Configuration section) should be set to point to the (one of the) TE trunk(s); 1 for DSL 1 and 2 for DSL 2.

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


If you selected RBS as the signaling type, see RBS CAS configuration in the advanced configuration section [13.1 Configuring RBS CAS](#) for details on additional configuration.

In the **Port Configuration** section, for PORT ID 1:

- Again select [Modify](#)
- Scroll down to the bottom of the page



If Last Channel is not auto

- Select [Modify](#) and
- Set Last Channel = auto, or 23 for PRI signalling schemes, or 24 for RBS CAS
- select [Submit](#) and then click [here](#) to return
- select 



- Repeat the Port configuration for the other Port (PORT ID 2) – including g711ulaw, NT/clock master and last channel.

Table 1 can be used as a guide when setting up parameters for Vega 100 T1 ISDN installations.

**Table 1. Network type, Line Encoding, and Topology**

Product	Physical Connection	Network Topology	Network Type	DSLs	Framing	Line Encoding	Calls
Vega 100-PRI-T1	T1-1.544 Mbps	T1	AT&T 4ESS / 5ESS, NI 1 / NI 2, DMS-100	2	SF / ESF	B8ZS, AMI	23 / 46
Vega 100-PRI-T1	T1-1.544 Mbps	T1	QSIG	2	SF / ESF	B8ZS, AMI	23 / 46
Vega 100-T1-RBS_CAS	T1-1.544 Mbps	T1	RBS	2	SF / ESF	B8ZS, AMI	24 / 48

## 9. Configure pointer to CD ROM documentation

- On the left hand side menu select [LAN](#)
- Scroll to the bottom of the screen

Host Name Vega100T1E1  
IP Address 136.170.209.33  
User Name admin

**Vega 100 Configuration**

Unsaved & Unapplied Changes

**Management**  
[Logging](#)  
[Maintenance](#)  
**[LAN](#)**  
[DSL](#)  
[Dial Plan](#)  
[Media Channels](#)  
[Tones](#)  
[SIP](#)  
[Users](#)  
[QoS](#)  
[Advanced](#)

Subnet Mask DHCP defined  
Domain Name Server DHCP defined Use DHCP   
Default Gateway DHCP defined Use DHCP   
TFTP Server DHCP defined Use DHCP   
Network Time Server DHCP defined Use DHCP   
FTP Server 192.168.1.108  
NTP Offset (hhmm) 0000  
NTP Poll Interval 0

**Physical Layer Configuration**  
Full Duplex   
Ethernet Type 10baseT & 100baseTX  
QoS profile 1

Submit

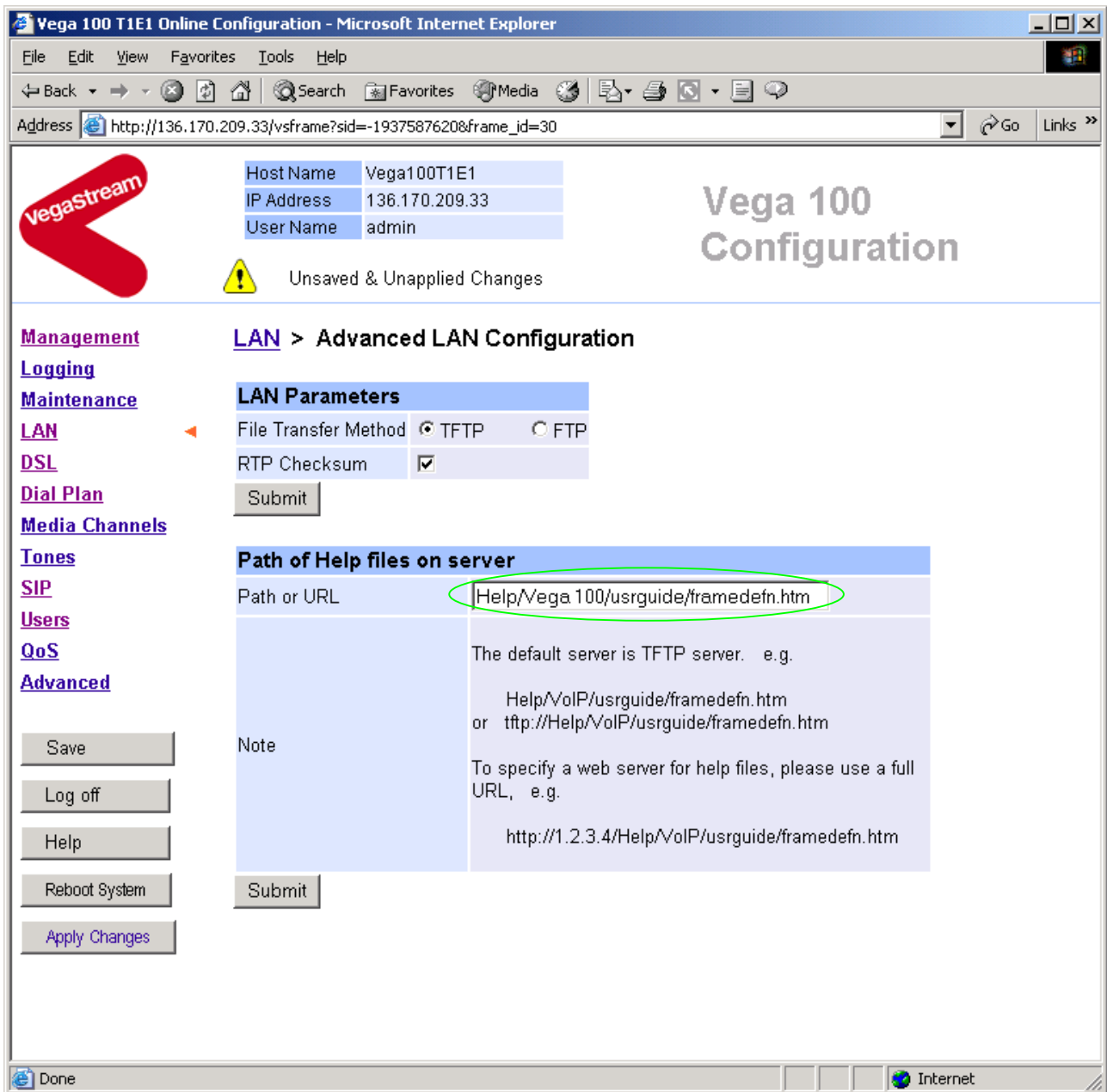
**Lan Hosts**

ID	Name	IP	Chg?
1	loopback	127.0.0.1	<a href="#">Modify</a>

Delete Add

**Advanced LAN Configuration**  
[Advanced LAN](#)


- Select [Advanced LAN](#)



To configure for operation using the CD in the local PC CD-ROM drive,

- Set Path or URL = D:/Content/help/v100t1s\_R5.htm
- ... *N.B. use forward slashes "/" not back slashes "\".*

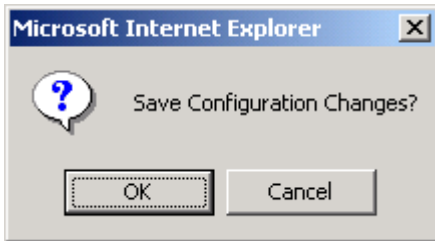
(Substitute the appropriate drive letter if D: is not the CD-ROM)

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

## 10. Save Changes

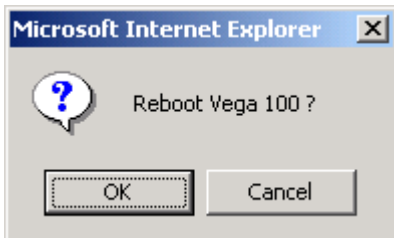
The changes to the configuration must be saved and activated. This is carried out as follows:

- 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



- Select

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

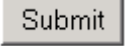
## 11. Archive Vega Configuration

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:



The screenshot shows a web interface with a blue header bar labeled "CLI Command". Below the header is a white text input field and a grey "Submit" button.

- 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 configure the following:

- set \_advanced.lan.ftp.anonymous\_login=0
- set \_advanced.lan.ftp.username=<ftp username>
- set \_advanced.lan.ftp.\_password-<ftp password>

## 12. Technical Support

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

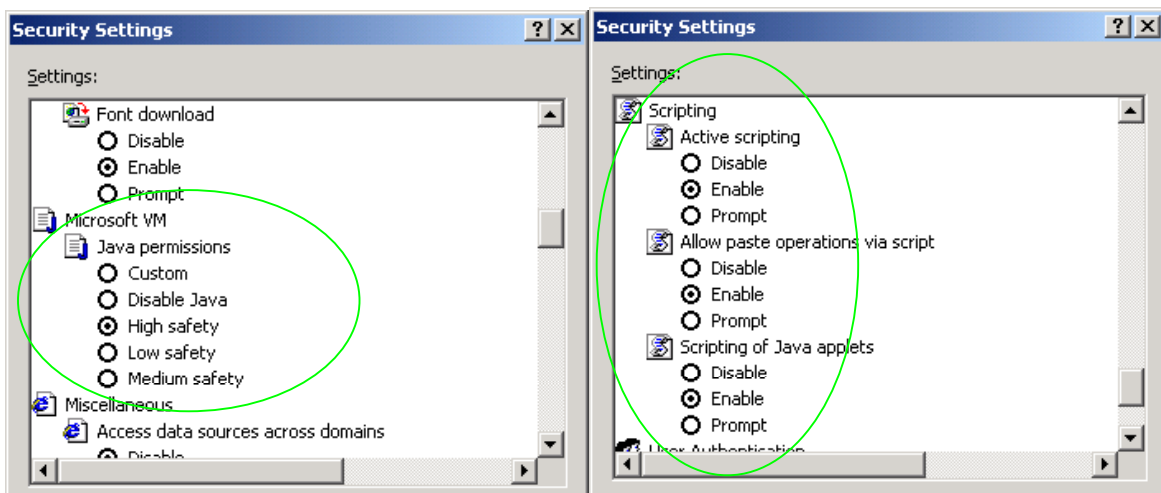
If you require help from VegaStream support personnel, please use the serial interface or telnet into the unit, log in and then type:

- 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 7). 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 7).
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”.

## 13. Advanced configuration

T1 units have further configurable parameters which may be desirable to configure in order to fully integrate into the attached ISDN infrastructure.

### 13.1 Configuring RBS CAS

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

In the **Port Configuration** section:

PORT Configuration										
PORT ID	Enabled	NT	Clock Master	Layer 1	E1 rx Short Haul	T1 tx equalization	ISDN	CAS	Groups	Chg?
1	1	0	0	g711Ulaw64k	1	sh220_330	==>	==>	==>	<a href="#">Modify</a>
2	1	1	1	g711Alaw64k	1	sh220_330	==>	==>	==>	<a href="#">Modify</a>

➤ Select Modify

➤ Scroll down to the **CAS Configuration** section

CAS Configuration	
Dial Format String	<input type="text" value="."/>
Digit Dial Timeout	<input type="text" value="6"/>
Info	<input type="text" value="dtmf"/>
Signal	<input type="text" value="em_wink"/>
Tone Delay	<input type="text" value=""/>

➤ Select the type of RBS CAS signalling

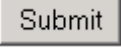
- em\_wink = E & M wink start signalling
- loopstart = loop start signaling
- gndstart = ground start signaling
- fgd = E & M wink start signaling supporting feature group D (for caller ID)

CAS Configuration	
Dial Format String	<input type="text" value="."/>
Digit Dial Timeout	<input type="text" value="6"/>
Info	<input type="text" value="dtmf"/>
Signal	<input type="text" value="em_wink"/>
Tone Delay	<input type="text" value="50"/>

Dial Format String – this chooses the format of the dialled number DNIS and calling party number ANI. See *the Vega Primer for more details*.

Info – this selects whether the tones used to communicate on the CAS link are MF tones or DTMF tones.

Select Signal, Dial Format String and Info to match the device to which the Vega is going to be connected.

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

## 13.2 Line impedance matching

In order to match the signal shapes produced by the Vega to the T1 line it is working with there is a parameter `tx_equalisation` that can be configured:

- `set _advanced.isdn.tx_equalization=<tx_equ>`

`<tx_equ>` can take the following values:

<code>1h1b00</code>	(long haul line break out 0 dB)	
<code>1h1b07_5</code>	(long haul line break out -7.5 dB)	
<code>1h1b015</code>	(long haul line break out -15 dB)	
<code>1h1b022_5</code>	(long haul line break out -22.5 dB)	
<code>sh0_110</code>	(short haul 0-110 ft.)	
<code>sh110_220</code>	(short haul 110-220 ft.)	
<code>sh220_330</code>	(short haul 220-330 ft.)	- default setting
<code>sh330_440</code>	(short haul 330-440 ft.)	
<code>sh440_550</code>	(short haul 440-550 ft.)	
<code>sh550_660</code>	(short haul 550-660 ft.)	

Long haul values are used where the distance between the Vega and the closest repeater or other ISDN endpoint is greater than 660 feet. Short haul value lengths are the distance between the Vega and the closest repeater or other ISDN endpoint.

If the appropriate test and measurement equipment is not available to check the required setting, for long haul try `1h1b00` and for short haul try `sh220_330`.



## 13.3 Channel Allocation Strategies

The Vega allows configuration of the channel allocation strategy to be used for each DSL on outgoing calls. Four options are available,

- i) *Linear\_down* – where the Vega will use the highest available free channel to make the outbound call ... use this mode when the attached device is configured to make outbound calls using *Linear up*.
- ii) *Linear\_up* – where the Vega will use the lowest available free channel to make the outbound call ... use this mode when the attached device is configured to make outbound calls using *Linear down*.
- iii) *Round\_robin* – in this mode the Vega remembers the last allocated channel and then tries to use the next channel up from this for the next outbound call. (After reaching the highest channel ID it restarts at the lowest channel again.) ... use this mode when the attached device is configured to make outbound calls using *Round\_robin* mode.
- iv) *Default* – if the DSL is configured as NT then the Vega will use the *Linear\_up* scheme, and if the DSL is configured as TE then the Vega will use *Linear\_down*.


By default the Vega has `chan_alloc set=Default`

Using the web browser interface:

- On the left hand side menu select [DSL](#)
- Then select the Port to alter
- Scroll to the bottom of the page

Vega 100 T1E1 Online Configuration - Microsoft Internet Explorer

Address: http://136.170.209.33/vsframe?sid=1769783211&frame\_id=7



Host Name: Vega100T1E1  
 IP Address: 136.170.209.33  
 User Name: admin

## Vega 100 Configuration

**Management**  
[Logging](#)  
[Maintenance](#)  
[LAN](#)  
[DSL](#)  
[Dial Plan](#)  
[Media Channels](#)  
[Tones](#)  
[SIP](#)  
[Users](#)  
[QoS](#)  
[Advanced](#)

DTMF Termination Char: \*  
 DTMF Dial Timeout: 2  
 Setup Mapping: 0  
 Cause Mapping: 0  
 Submit

**CAS Configuration**

Dial Format String: .  
 Digit Dial Timeout: 6  
 Info: dtmf  
 Signal: em\_wink  
 Tone Delay: 50  
 Submit

**Groups**

Group ID	Interface ID	Cost Index	DN	First Channel	Last Channel	Alloc Channel	Tunnel Mode	Chg?
1	01	1	*	1	auto	default	off	<a href="#">Modify</a>

Delete Add

Save  
 Log off  
 Help  
 Reboot System

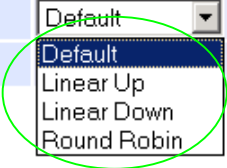
Done Internet

In the **Groups** in this DSL section:

- Select [Modify](#)

[DSL](#) > [Port 1](#) > Group 1

Modify Port Group	
Group ID	1
Port ID	1
Interface ID	<input type="text" value="01"/>
Cost Index	<input type="text" value="1"/>
DN	<input type="text" value="*"/>
First Channel	<input type="text" value="1"/>
Last Channel	<input type="text" value="auto"/>
Alloc Channel	<input type="text" value="Default"/>
Tunnel Mode	<input type="text" value="Default"/>
<input type="button" value="Submit"/>	



- Select the desired channel allocation strategy from the Alloc Channel pull down.
- select  and then click "[here](#)" to return
  
- Save and reboot system to activate the change

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