# V51 R2

# **Configuration Guide**



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## Web Login

Open up your internet browser (Google Chrome, Mozilla Firefox, Internet Explorer, or Safari) and type in the following address into your website address bar 192.168.1.1

The following pop up screen will appear, type in the following username and password for the security level you require.

Security Level	Username:	Password:
<b>Low level User</b> (view status, modify some parameters)	user	user
<b>Power User</b> (add modify Layer 2, VoIP, and some admin parameters)	poweruser	poweruser
Administrator User - (full user admin rights)	admin	2Qk5pTPeWdbm9Mq

0	A username and password are being requested by http://192.168.1.1. The site says "Broadband Routes"
lser Name	admin
Password	

# Connectplay

## Layer 2 Interface Setup for ADSL2+, VDSL2, UFB

- 1. On the left hand menu, select 'Advance Setup' button
- 2. Then the following **'Layer2 Interfaces'** button in the sub menu.
  - 1.1. ATM Interface = L2 Interfaces for ADSL2+ (VPI 0 VCI 100) and EUBA (VPI 0 VCI 110)
  - 1.2. **PTM Interface** = Proprietary VDSL2 Interface
  - 1.3. **ETH Interface** = Ethernet Interface for UFB/FTTH
- 3. To Setup ADSL2+ or EUBA L2 Interface click on "ATM Interface" and click "Add".
  - 1.1. **ADSL2+ =VPI** = 0, **VCI** = 100
  - 1.2. EUBA =VPI= 0 , VCI=110
  - 1.3. Select DSL Latency = Path 0
  - 1.4. Select DSL Line Type = PPPOA for ADSL2+
  - 1.5. Select DSL Line Type = EoA for EUBA
  - 1.6. And click "Apply Save".

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#### **Completed L2 Interfaces**

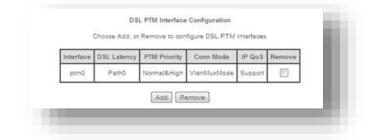
nterface	Vpi	Voi	<b>OSL</b> Latency	Category	Peak Cell Rate(cells/s)	Sustainable Cell Rate(cells/s)	Max Burst Size(byles)	Link Type	Conn Mode	IP.QoS	Remove
stm0	0	110	Path0	UBR				EcA	Vientifuitifice	Support	E
atm1	0	100	Patro	USR.				PPPOA	DefaultMode	Support	(23)

- 4. To Setup VDSL2 L2 Interface click on "PTM Interface" and click "Add".
  - 1.1. Select DSL Latency = Path 0



1.2. And Click "Apply Save".

#### Completed L2 PTM Interface

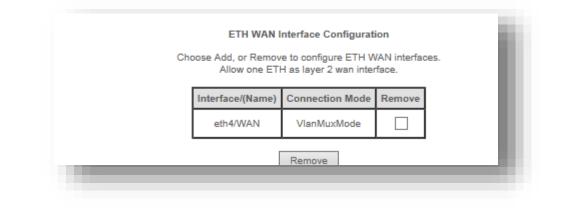


To Setup UFB L2 Interface click on "ETH Interface" and click "Add"
 1.1. Select "Eth4/WAN" from the Drop down Menu and click "Apply Save".

This so	reen allows you to configure a ETH port.
	Select a ETH port
	eth4/WAN 🗸

#### **Completed L2 ETH Interface**





### ADSL2+ Setup

- 1. On the left hand menu, select 'Advance Setup' button
- 2. Then the following 'Wan Service' button in the sub menu.
- 3. Click Add to start the ADSL2+ setup.

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4. From the main display screen click on add and select "**ATM1 (0\_0\_100)**" from the drop down menu. Click '**Next**' to continue to the next screen.



1040	Service Interface Configuration
Selec	1 a layer 2 interface for this service
For PTM interfu When por low k Ng	terface, the descriptor string is (portid_vpi_vo)) ace, the descriptor string is (portid_high_low) a portid=0 -> DSL Latency PATH1 string=1 -> DSL Latency PATH1 string=1 -> DSL Latency PATH05.1 *0 -> Low PTM Priority not set to +1 -> Low PTM Priority set 1=0 -> High PTM Priority not set pt =1 -> High PTM Priority set
	atm1/(0_0_100)
	Each Next

 The following screen will open up, you may name this connection as you like, (such as ADSL2+ internet connection), or use the default name "pppoa\_0\_0\_100". click the 'Next' button to continue.

guration	
ption pppoa_0_0_100	
lection:	
	Beck .

6. The following screen will open, and you are required to type in your username and password provided by your Internet Provider. If you don't know your internet Credentials then you will need to contact your Internet Provider. Scroll down and Check the "Enable IGMP Multicast Proxy" and if IPv6 is enabled, also check "Enable MLD Multicast Proxy" under Multicast Proxy settings.



PPP useful require the	were au have a user name and password to establish your connection. In the boxes below, entar the user name and password that your tUP has provided to p	ian i
FFP Userame FFP Passion Automication Method		
E Enable Fulleme (	r	
🖹 Daronaenano)	D. Idla (meaul. Smel)	
E behechte		

**NOTE**: If IPV6 is not Enabled "Enable MLD Multicast Proxy" won't be an option.



- 7. Once complete click on the '**next**' button at the bottom of the screen to continue.
- 8. Now you are presented with the following screen, make sure the ADSL2+ interface we setup is in the left column before clicking on the '**next**' button.

¥ +		
etus prove, metas le prinale Iong Phe IAR narias a prinade	Note 1997 real-sectors and a speen sets. If patients but only one will be used assessing is the prunty with the free being the right and the Notify order set for diarged by removing all and adding them bad in again.	a lad one b
Marchael Default Salescep MarCasery	Acadhatin Recievel (1940) Interfacers	
Mbrag -	2	
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9. Again make sure the ADSL2+ interface we created is in the left column before clicking the '**next'** button at the bottom of the page.



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10. Please review configuration and select **Apply/Save** to complete the ADSL2+ setup.

Connection Type:	PPPoA		
NAT:	Enabled		
Full Cone NAT:	Disabled		
Firewall:	Enabled		
IGMP Multicast:	Enabled		
Quality Of Service:	Disabled		

Once complete you will return to the main **'Wan Service'** webpage were you can confirm service setup.

Intertace	Description	Type	Wan9021p	Manthactel	- itmir	NAT	Frewall	IPv8	T(BAA)	Remove	Edil
popoad	ppppa_0_0_100	PPP:::A	1414	MANA.	Disabled	Enepled	Enabled	Displet.	Disibled.	10	East

Your ASDL2+ service is now configured; wait a few seconds and try opening a new webpage in your browser to confirm your connection is active. The LED on the front of the device labelled Internet, will light up green to indicate you have a connection to the internet.



### VDSL2+ Setup

1. In the left side menu, click on the 'Advance Setup' tab and then click on the submenu 'Wan Service' to open up the configuration window. Then click the 'Add' button on the opened window to start activation of the VDSL interface.

		1									-
nterface	Description	Type	Vlan0621p	VienMunid	igmp	NAT	Firewall	0.648	Mid	Remove.	Edit.

2. From the main display screen click on add and select "**ptm (0\_1\_1)**" from the drop down menu. Click '**Next**' to continue to the next screen.

WAN Service Interface Configuration
. Select a layer 2 interface for this service
ATM interface, the descriptor string is (portid_vpi_vol) Linterface, the descriptor string is (portid_high_low) Where portid=0 → DSL Latency PATH0 portid=1 → DSL Latency PATH1 portid=4 → DSL Latency PATH0&1 low =0 → Low PTM Priority sot set low =1 → Low PTM Priority not set high =0 → High PTM Priority not set high =1 → High PTM Priority set
ptm0/(0_1_1)
Back Next

3. Select the PPP over Ethernet (PPPOE) option.

(Optional) If you want you can customise your VDSL interface Name in the next field called 'Enter service description'

For Chorus VDSL2 Service enter

Priority: 802.11P = 0

VLAN: 802.1Q = 10

Click 'Next' to continue to the next screen.



conta una visua consignionania	
Select VAN service type:	
PPP over Ethemel (PPPoE)	
C 1P over Ethernet	
O Bridging	
Enter Service Description: [pppoe_0_1_1	1
For lagged service, enter valid 802 1P Privaty and 802 10 For unlagged service, set -1 to both 802 1P Privaty and 80	
Enter 802 1P Priority (0-7)	0
Enter 802 1Q VLAN (0(0.4084)	12
Network Protocal Selection	
IPV4 Only	
	(ilen.) [.hen.]

4. In the following section you will need to type in your Internet Service Provider credentials to activate you Internet connection.

(The username and password provided to you when you signed up to the service). Scroll down and Check the "Enable IGMP Multicast Proxy" and if IPv6 is enabled, also check "Enable MLD Multicast Proxy" under Multicast Proxy settings.

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E dinasta fullera a	LAT .
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C THE PARAMET	

**NOTE**: If IPV6 is not Enabled "Enable MLD Multicast Proxy" won't be an option.

Multi	ticast Proxy	
$\checkmark$	Enable IGMP Multicast Proxy	
$\checkmark$	Enable MLD Multicest Proxy	
	8	ack: Next
	land the second s	- A Second Second



5. On this next section make sure your newly configured VDSL2 interface is in the left column before clicking next

staut gate-sy markes lat tan nava muto navy it the 2000 meteors is corrected. Pro-	na vicio mankana anna an ipany katan'i pinono toto mu no no na na nanzeriy isina many orbito toto na barang ta mpakani ta ian na tonan Miy many an na daripat isi namoviy al'ani adarg tani aga magan.
winemed Default Galaxiesy defaures	Available Maxwel VAB
J000 1 -	

6. Again make sure the VDSL2 interface we created is in the left column before clicking the '**next'** button at the bottom of the page.

this area: # solves and the extend IS Server interfaces can new multice and	in metals Of arts data 202 area: P address to the plant. In 4756 mills, if only a angle PVC will PUA scalars PuE posted is temporal. Take In metals would also plant the series for the take agence is to be putting with the first being the toped and the last are the laster plants of a schedule 1.5 are able to plants also a space.
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D the Re following Rate DRE P address for any DNI server associaty DNI server	

7. Please review configuration and select **Apply/Save** to complete the VDSL2 setup.



Connection Type:	PPPoE
AT:	Enabled
uli Cone NAT:	Disabled
Firewall:	Enabled
GMP Multicast	Enabled
Juality Of Service:	Disabled

Once complete you will return to the main **'Wan Service'** webpage were you can confirm service setup.

Interface	Description	Туре	Vlan8021p	VlanMuxId	lgmp	NAT	Firewall	IPv6	MId	Remove	Edit
ppp0.1	pppoe_0_1_1.10	PPPoE	0	10	Disabled	Enabled	Enabled	Disabled	Disabled		Edit

Your VSDL2+ service is now configured; try opening a new webpage in your browser to confirm your connection is active. The LED on the front of the device labelled Internet, will light up green to indicate you have a connection to the internet

### VDSL2/UFB Full Bridge Setup

- 1. From the VDSL2+ Setup instruction repeat steps 1 to 2.
- 2. Select the Bridging option.

(Optional) If you want, you can customise your VDSL interface Name in the next field called 'Enter service description'

For Chorus VDSL2 Service enter

Priority: 802.11P = 0



#### VLAN: 802.1Q = 10

Click 'Next' to continue to the next screen.



3. Review your setup and Click Apply Save.

place that the set	tings below metal	the petitings principle by your 12th
Connection Type	Bridge	
447	Classified .	
Fatt Care NAT	Deather	
FirminalS	Distint	
GRP Hoteast	Net Application	
Quality CK Service	Clienting	

### **VDSL2/UFB Half Bridge**

- 1. From the VDSL2+ Setup instruction repeat steps 1 to 3.
- 2. In the following section you will need to type in your Internet Service Provider credentials to activate you Internet connection.

(The username and password provided to you when you signed up to the service)

3. Check the "PPP IP Extension" check box and scroll down and Click Next.

PPP Usename PPP Passont PPPoE Selvice Name			
Authentication Method	AUTO		
[] Enable Fultome N	АT		
Dial on demand (v	(h (die triacut triar)		
2 PPP IP antennium			
III Use Static IPv4 Ad			

- 4. Continue with "VDSL2+ Setup Instructions" from steps 5 7.
- 5. Once Completed, Any Device that is connected first to any of the LAN Switch Port Will Receive the WAN (Public) IP Address, any other Device connected after the first device will receive the Default Private IP Address range issued by the Innbox.

## **VoIP SIP Proxy / Credential Setup**

### **Proxy Realm Setup**

- 1. On the left hand menu, select 'Voice' button
- 2. Select Service Provider Tab to configure your SIP the Provider's Proxy, Registrar settings.
  - SIP Proxy : <SIP Proxy URL>
  - Use Outbound Proxy: <SIP Proxy URL>
  - Use SIP Registrar <SIP Proxy URL>

Fichel parameters Serv	lee Provider 0	
Voice - SP configuration		
Order the DIP parameters	and slick StartShip to save the parameter	ers and start/stop five voice application.
Labele selector*:	NZL - NEWZEALAND	(Note: Flequares the SIP client to be stopped and then started to take affect)
S# somen neme*:		
Voip Dialpan Setting	[[2-9]commu[0[34679][2-9]]	
Use SIP Prov		
SIP Prony	eip 2telk co.ru	
SIF Provy pert.	5060	
Use SIP Outbound I	Proven	
5P Outname Pressy	eign.Otaelk.com.na/	
SIP Outbound Prexy part	0000	
Use SP Repeter.		
Sill' Registrer	wip. Dielk.com.rsz	
SIP Registrar port	6360	

### **Proxy SIP User Credential Setup**

- 3. Follow screen capture below (Figure 2) to configure your SIP credentials supplied by your SIP provider.
  - Extension : <SIP Username>
  - Display Name: <SIP username>

- Authentication name: <SIP username>
   NOTE: leave this field empty if you're SIP Provide uses the Kazoo platform.
- Password: <SIP Password>

### Scroll down and select "APPLY

Description Account Enabled	TEL1		TEL2	
			I ELZ	
	~			
Extension SIP USE	RNAME			
Display name testphone	8			
Authentication name	RNAME			
Password	**			
Physical Terminal 1			0	
Preferred ptime	20 🗸		20 🗸	
Preferred codec 1 G.711A	Law	~	G.711ALaw	~
Preferred codec 2 G.711N	luLaw	~	G.711MuLaw	~
Preferred codec 3 G. 729a	0	~	G.729a	~
Preferred codec 4 G.726_	24	~	G.726_24	~
Preferred codec 5 G.726_	32	~	G.726_32	~
Preferred codec 6 PCMWI	DEBAND	~	PCMWIDEBAND	~



## **SIP Retry / Expiry Setup**

- 4. On the left hand menu, select 'Voice-SIP Advanced Setting' button
- 5. Scroll down to the bottom and configure retry and expiry timer (Figure 3), you may use the recommended interval timer supplied by your SIP provider, if you don't get one, the default settings are fine.
  - Registration Expire Timeout: <Default = 20>
  - Registration Retry Interval: <Default = 10>



Registration Expire Timeout*	20
Registration Retry Interval	10
DSCP for SIP*:	EF (101110) •
SCP for RTP*	EF (101110) •
tmf Relay setting*:	RFC2833 *
look Flash Relay setting*:	None •
Min Hook Flash*:	100
Aax Hook Flash*:	1000
IP Transport protocol*	UDP •
RTP Configuration*:	Disabled *

Figure 3

### **SIP Information**

- 6. On the left hand menu, select 'Device Info' button
- 7. Scroll to the Bottom and see SIP Registration Information , (Figure 4)

TEL 1	testphone	Registered	ldle
TEL 2	Unconfigured		

Figure 4

## **SIP Debug**

To capture and debug SIP information, you have three methods of achieving this.

- System Log Level Innbox Logging mechanism
- WAN Port Mirroring Mirror the WAN interface to a LAN port and capture egress & ingress traffic.
- From Innbox CLI Terminal tcpdump packet filtering.

We will demonstrate how all three debugging methods used and how to set it up. System log being low level debug to terminal CLI as being very advance and powerful debugging method.

### System Log Level Setup.

Connectplay

- 1. Navigate to "Voice-SIP Debug Settings"
- 2. Click on "Global Parameters" tab.
- 3. And set the LOG level to "DEBUG" (Figure 4) and click "Apply"

3lobal parameters	
/odst Console Log Level: Debug 🔻	
	Start SIP client
	Stop SIP client
	Apply

Figure 4

4. Navigate to "Management – System log" (Figure 5)

# Connectplay

The System Log dialog	allows you to view the System	Log and configure the	e System Log options.
Click "View System Log	to view the System Log.		
Click "Configure System	Log" to configure the System	Log options.	
		View System Log	Configure System Log



- 5. Click on "Configure System Log" (Figure 6)
  - a. Log = Enable (Radial Button)
  - b. Log Level = Debugging
  - c. Display Level = Debugging
  - d. Mode = local (here you can also set up a remote log server, which we won't go into )
- 6. Click "Apply Save"
- Click on "System Log" again and click on "View System log" to see the Innbox log and also SIP log's

loggest. For the Dis	olay Lavel, all logged a	larger to log all the selected events. For the Log Lands, all events above or essaid to the selected lawer will be reach above or equal to the selected favoir will be displayed. If the selected mode is "Research whereas P part of the events will be reacted in the local
memory.		
Select the desired of	where and stick Apply?	Sever to configure the system log optims
ing 0	Dantin @ Enable	
	/ Drastile @ Erustrie	
Log Level.	Debugging	•
Diplay Level	Debugging	
Marche	Local 🔻	
		AnniwEnver

Figure 6

### **WAN Port Mirroring**

Note: This packet capture method involves a third party tool such as "Wireshark".

1. In your browser address bar type in your Innbox gateway IP address followed by

### "engdebug.html"

- a. Eg http://192.168.1.1/engdebug,html
- 2. Look for your WAN interface and select a LAN port from the Drop down Menu, (Select the LAN port your PC is connected to). And tick the check box next to it to enable it.
- 3. Click "Apply Save"
- 4. Now the WAN uplink interface is now mirrored to the selected LAN port, you may now open up Wireshark and capture SIP traffic leaving and entering the Innbox gateway.

Manufor Intertool	Deschon	Starne Inne	lase .	Simethia-	
arrenda	ête -	LAN1 0	•	42	
alcolu.	OUT.	LAN1.0	•]		
attres.	814	LANT 0	•	422.	
wine);	OUT	LAN1.0	•	63	
provid	.84	1,AN4.0		~	
hands.	50/F	LANH.0	•	×	

Figure 7 below shows capturing traffic on LAN port 4 on a VDSL Connection

### **<u>CLI Terminal Packet Filtering</u>**

This method requires you to "Telnet" or "SSH" into the Innbox Terminal Interface. We will be using "Putty" to telnet into our Innbox Gateway and run "TCPDUMP" to capture any SIP traffic entering and leaving the Innbox Gateway WAN interface.

- 1. Open up Putty and type in your Innbox Default Gateway IP address .
- 2. Login into the Innbox with the Above Login Credentials.
- 3. Execute "ifconfig" to determine your WAN uplink interface.





4. Now execute "tcpdump -nqt -i ppp0.1 -s 0 -A -vvv port 5060"



- 1. Note: ppp0.1 is my VDSL WAN interface
- 2. Now everything entering and leaving port 5060 will be displayed back to you in the terminal console.

For Further Assistance please call (09) 5891350 During office hours 9am - 5pm Or Visit the Support Forum <u>https://www.connectplay.co.nz/forum</u>