# V51 R2

# Configuration Guide

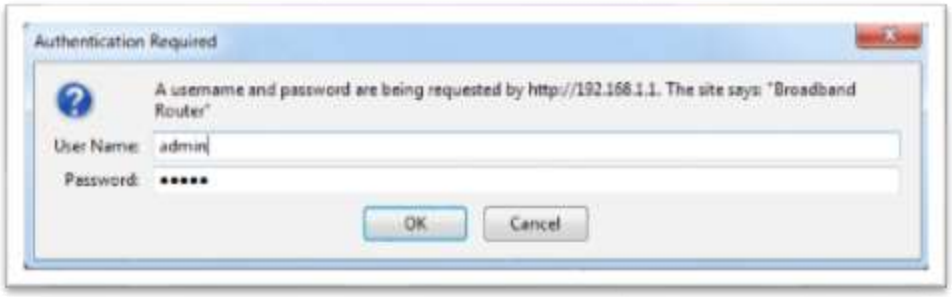

## Contents

# 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.

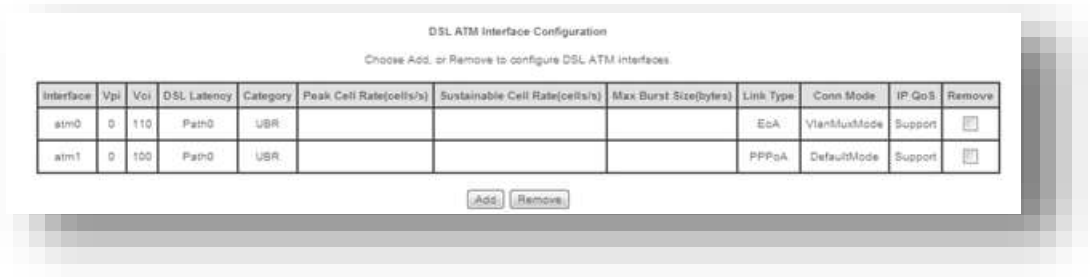
| Security Level | Username: | Password: |
|---|---|---|
| **Low level User** (view status, modify some parameters) | **user** | **user** |
| **Power User** (add modify Layer 2, VoIP, and some admin parameters) | **poweruser** | **poweruser** |
| **Administrator User** - (full user admin rights) | **admin**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



# 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**".

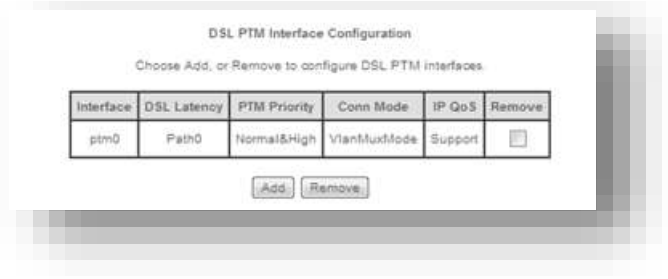
**Completed L2 Interfaces**




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

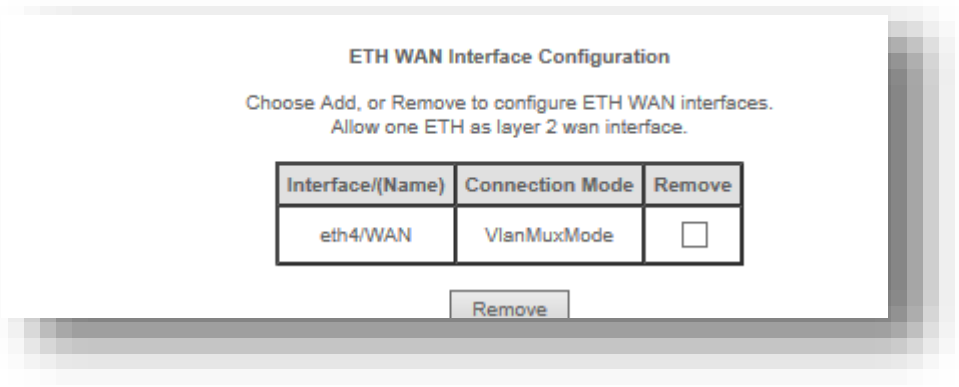
1.2. And Click "**Apply Save**".

**Completed L2 PTM Interface**



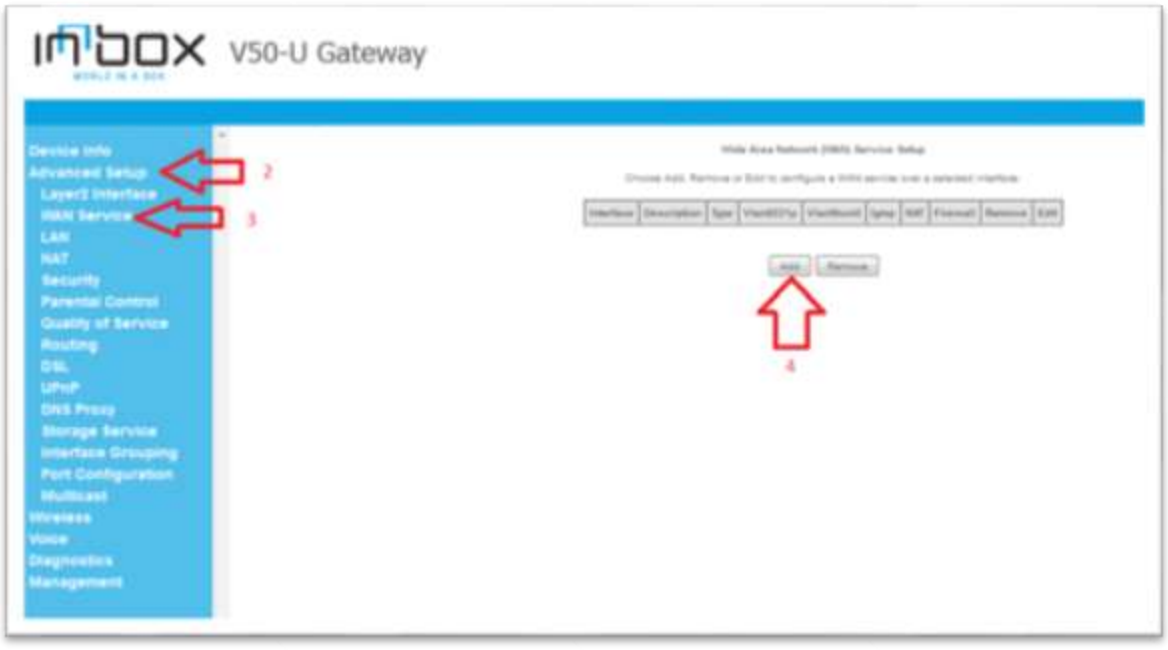

5. To Setup **UFB** L2 Interface click on "**ETH Interface**" and click "**Add**"
   1.1. Select "**Eth4/WAN**" from the Drop down Menu and click "**Apply Save".**


**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.




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.


5. 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.

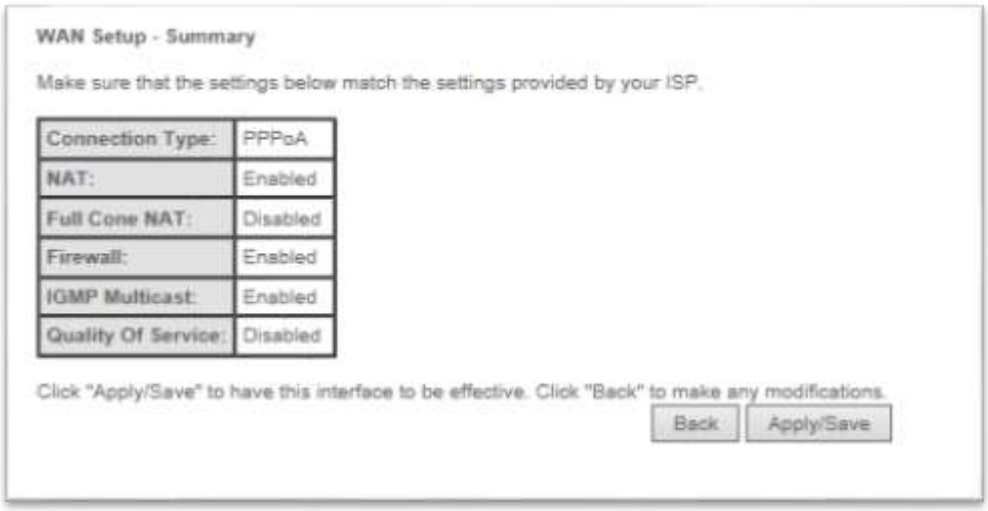

6. The following screen will open, and you are required to type in your username and password provided by your Internet Provider. If you don’t know your internet Credentials then you will need to contact your Internet Provider. Scroll down and Check the “Enable IGMP Multicast Proxy” and if IPv6 is enabled,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


**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.

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.

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




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


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.**


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.


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.


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.

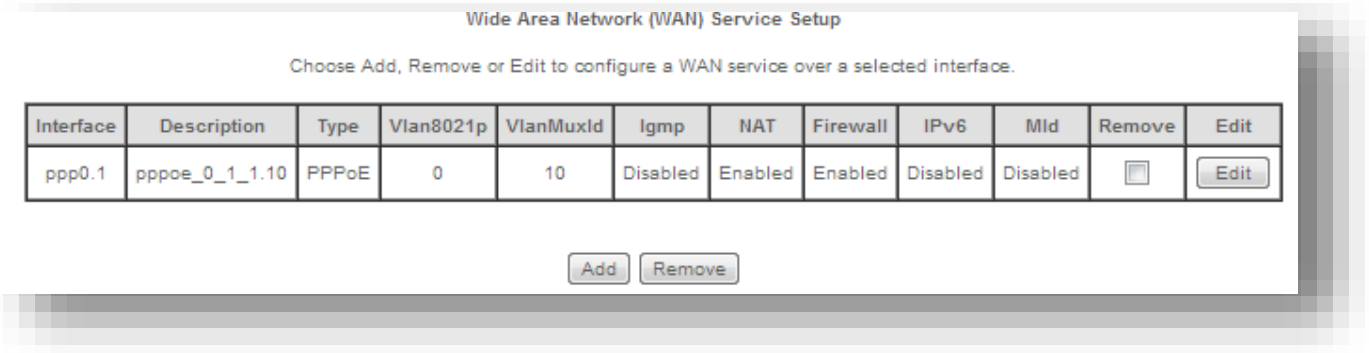

**NOTE**: If IPV6 is not Enabled “Enable MLD Multicast Proxy” won’t be an option.

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

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.

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


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




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.**

## 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.

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.

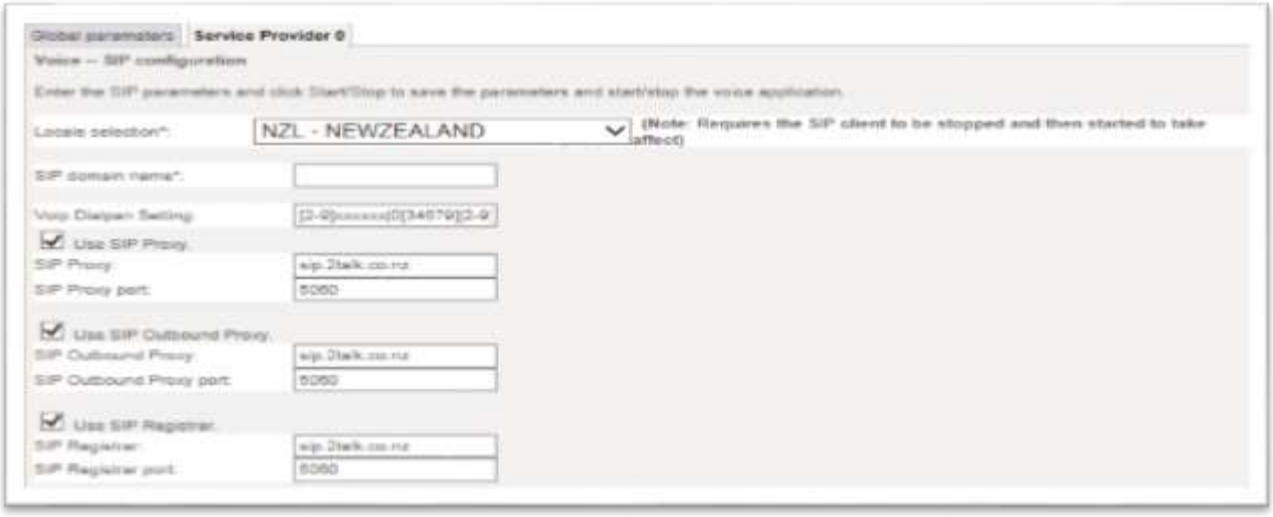
# VoIP SIP Proxy / Credential Setup

## 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>




## 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

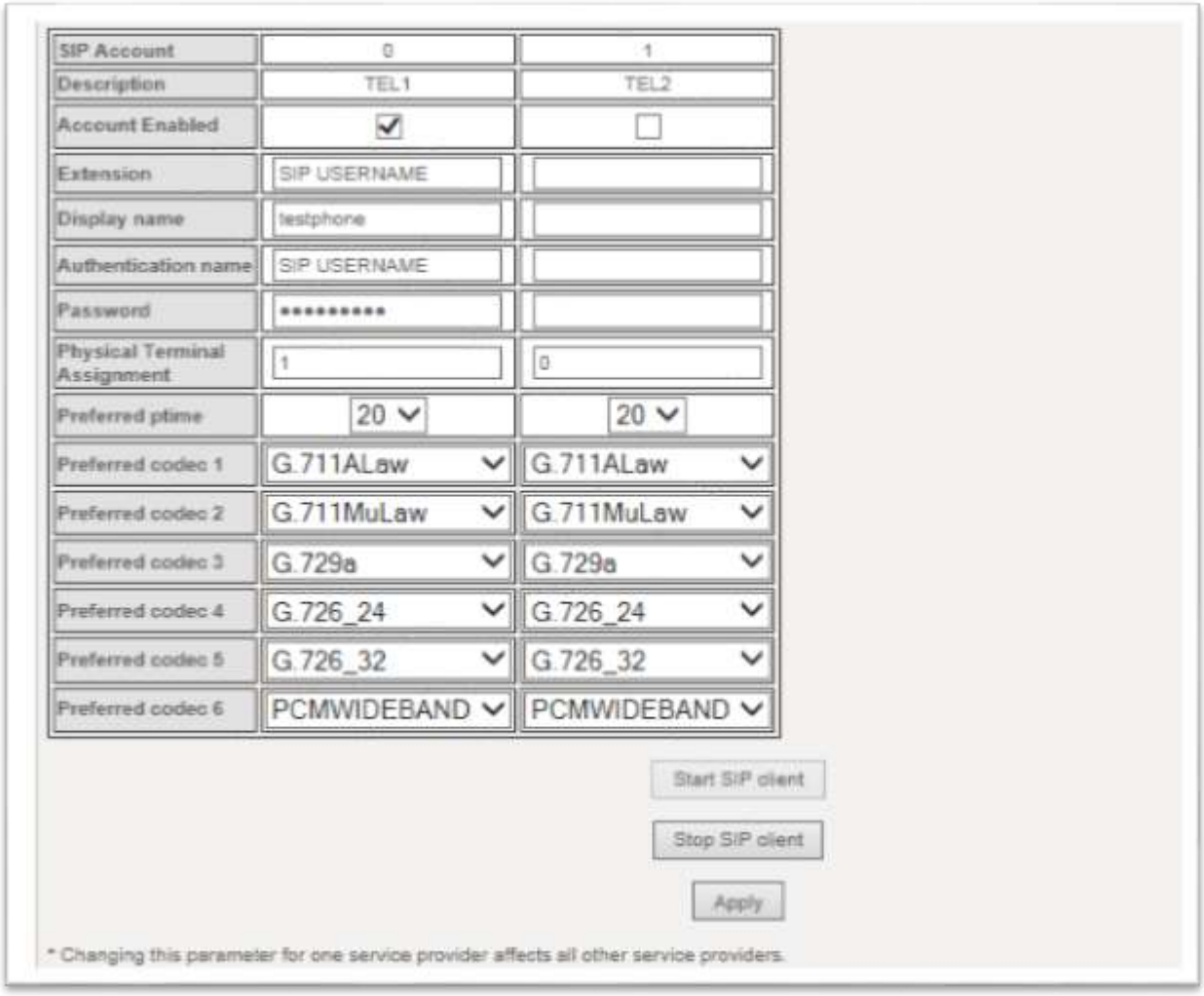



Figure 2

## 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>

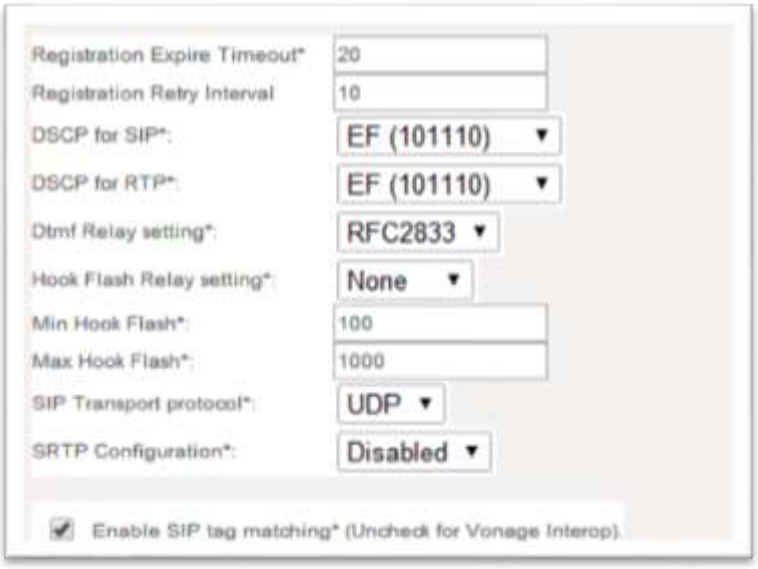



Figure 3

## SIP Information

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

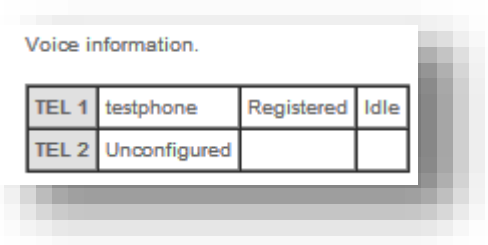



Figure 4

# 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.

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”


Figure 4

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

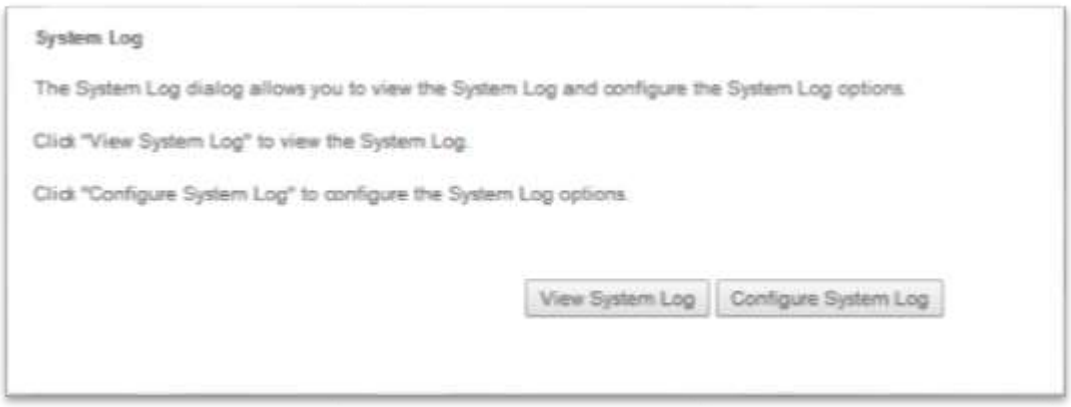



Figure 5

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”
7. Click on “System Log” again and click on “View System log” to see the Innbox log and also SIP log’s


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.

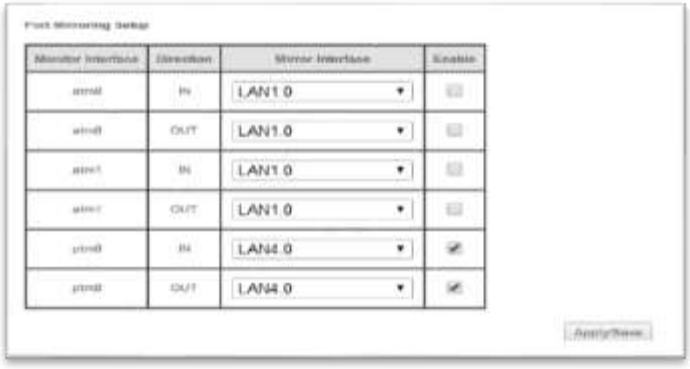



Figure 7 below shows capturing traffic on LAN port 4 on a VDSL Connection

# CLI Terminal Packet Filtering

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
https://www.connectplay.co.nz/forum