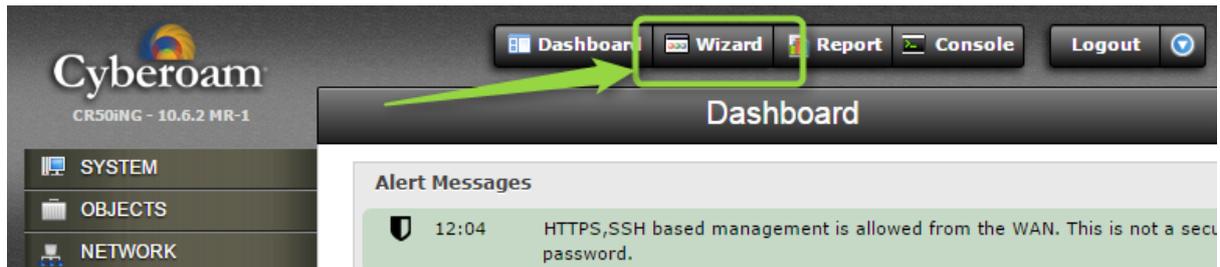


Cyberoam UFB VLAN Configuration

Sample setup for PPPoE over VLAN ID = 10.

Background: 802.1Q VLANs in this context are virtual interfaces on the router that are built on top of a physical network interface. If the underlying physical interface is not configured the Cyberoam OS will not 'start' it, therefore the virtual sub interfaces also won't start. The idea is to create a dummy address & zone for the physical interface so that it is configured & will start

NOTE: It is assumed that the firewall 'Wizard' has already been run beforehand. This is highly recommended. Set your UFB connected port to either WAN or DMZ at this stage if you want as it will be changed in the later steps of this guide.



1. Create a DMZ based Zone to use later.

Base it on DMZ & make sure there's no services enabled.

Interface	IP Tunnel	Zone
Add Zone		
Name *	<input type="text" value="UFB_Physical"/>	
Type *	<input type="radio"/> LAN <input checked="" type="radio"/> DMZ	
Members	None	
Description	<input type="text" value="Dummy interface to allow VLAN interface to run."/>	
Appliance Access	Admin Services	
	<input type="checkbox"/> HTTP <input type="checkbox"/> HTTPS <input type="checkbox"/> TELNET <input type="checkbox"/> SSH	
	Authentication Services	
	<input type="checkbox"/> Windows/Linux Client <input type="checkbox"/> Captive Portal <input type="checkbox"/> NTLM	
	<input type="checkbox"/> Radius SSO	
	Network Services	
	<input type="checkbox"/> DNS <input type="checkbox"/> Ping/Ping6	
	Other Services	
	<input type="checkbox"/> Web Proxy <input type="checkbox"/> SSL VPN	
	<input type="button" value="OK"/>	<input type="button" value="Cancel"/>

2. Configure the physical port that you are connecting to the telco ONT with a placeholder dummy address as below.

Use the previously configured network zone & if required drop the MTU down to 1492 to allow for PPPoE overhead of 8 bytes.

A placeholder IP address is used in the example but this could be anything that doesn't clash with your internal network. Make it a /32 to reduce broadcast traffic.

The screenshot shows a network configuration window with two tabs: "Interface" (selected) and "Zone". The "General Settings" section includes:

- Physical Interface: PortB
- Network Zone: UFB_Physical
- IPv4 Configuration
 - IP Assignment: Static PPPoE DHCP
 - IPv4 / Netmask *: 172.20.20.255 / /32 (255.255.255.255)
 - Gateway Detail
 - Gateway Name: []
 - IP Address: []
- IPv6 Configuration

The "Advanced Settings" section includes:

- Interface Speed: Auto Negotiation
- MTU: 1492 (576 - 1500)
- Override MSS: 1452 (536 - 1460)
- Use Default MAC Address: 00:02:B6:44:64:D5
- Override Default MAC Address: []

Buttons for "OK" and "Cancel" are located at the bottom.

3. Create the VLAN sub interface

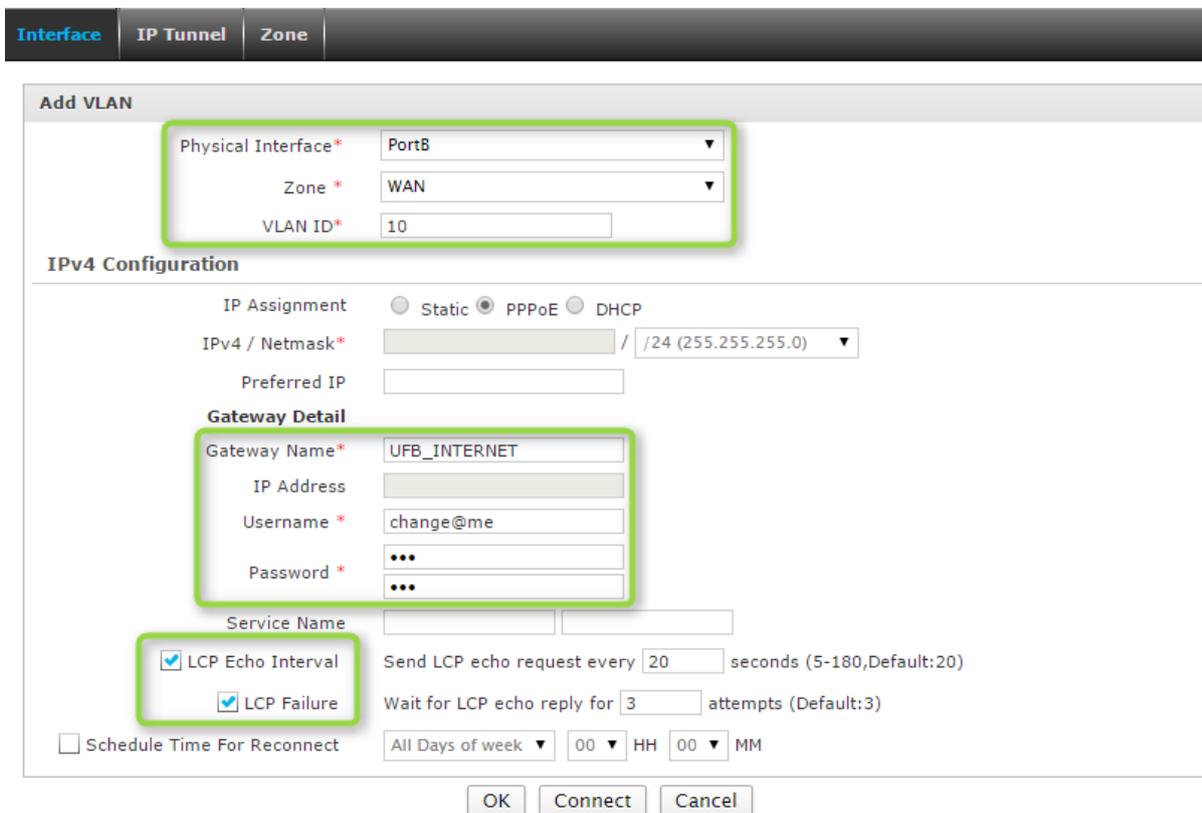
Interface | IP Tunnel | Zone

Add Bridge | Add Alias | Add VLAN | Add LAG | Delete

<input type="checkbox"/>	Interface Name	Interface Type	Status	IP Address
				IP
<input type="checkbox"/>	PortA	Physical	Connected, 1000 Mbps - Full Duplex	10.13.0.199/255.25
<input type="checkbox"/>	PortB	Physical	Connected, 1000 Mbps - Full Duplex	172.20.20.255/255.
<input type="checkbox"/>	PortC	Physical	Disabled	N/A
<input type="checkbox"/>	PortD	Physical	Disabled	N/A
<input type="checkbox"/>	PortE	Physical	Disabled	N/A
<input type="checkbox"/>	PortF	Physical	Disabled	N/A
<input type="checkbox"/>	PortG	Physical	Disabled	N/A
<input type="checkbox"/>	PortH	Physical	Disabled	N/A

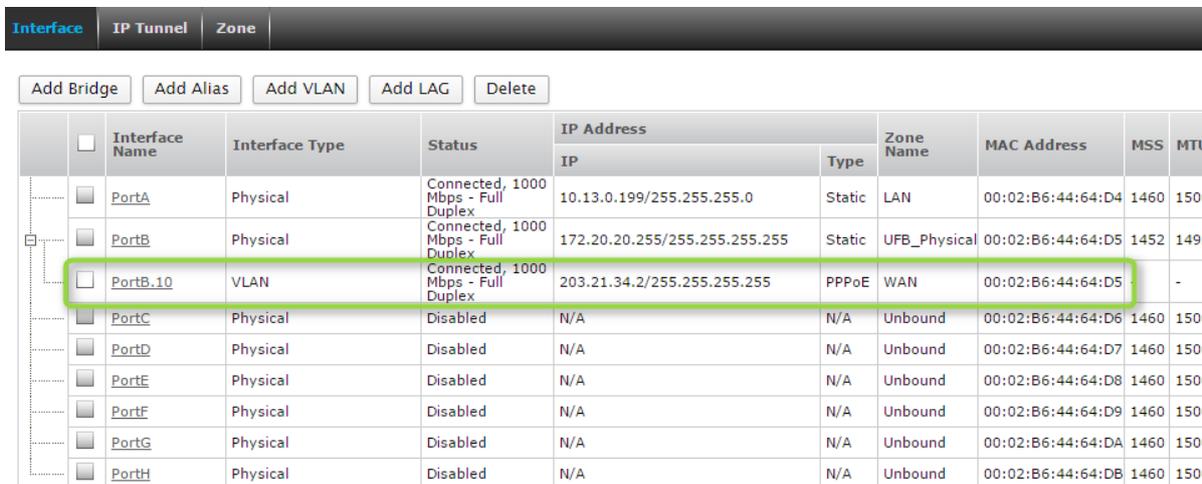
Add Bridge | Add Alias | Add VLAN | Add LAG | Delete

4. Configure as below with correct PPPoE credentials



5. Note that some ISP PPPoE servers don't honour LCP requests. If this is the case you will see disconnects every few minutes and should switch off LCP echo detection.

Your networks section overview will show if the circuit is successful or not.

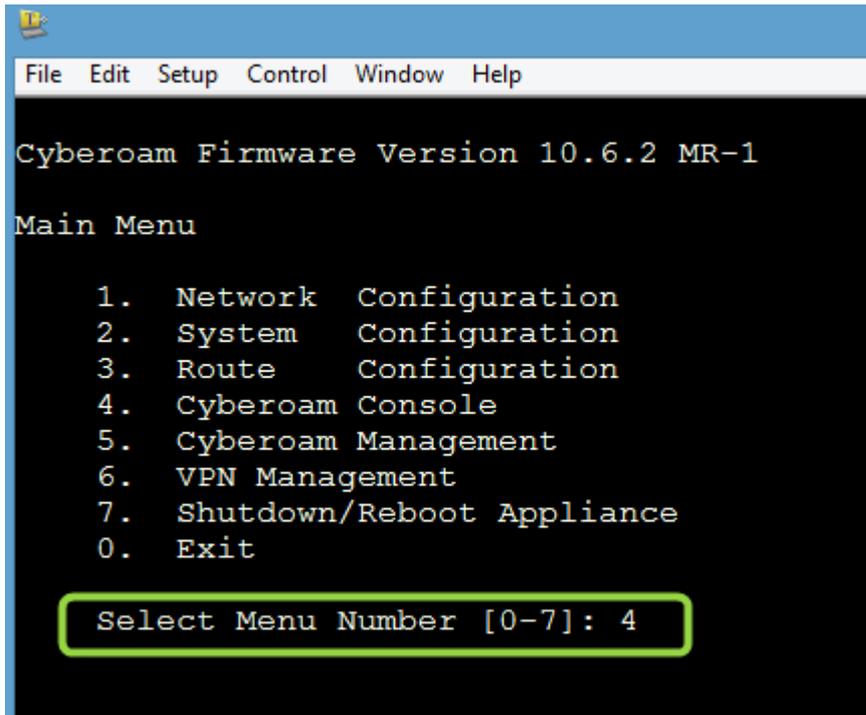


	Interface Name	Interface Type	Status	IP Address		Zone Name	MAC Address	MSS	MTU
				IP	Type				
<input type="checkbox"/>	PortA	Physical	Connected, 1000 Mbps - Full Duplex	10.13.0.199/255.255.255.0	Static	LAN	00:02:B6:44:64:D4	1460	1500
<input type="checkbox"/>	PortB	Physical	Connected, 1000 Mbps - Full Duplex	172.20.20.255/255.255.255.255	Static	UFB_Physical	00:02:B6:44:64:D5	1452	1492
<input type="checkbox"/>	PortB.10	VLAN	Connected, 1000 Mbps - Full Duplex	203.21.34.2/255.255.255.255	PPPoE	WAN	00:02:B6:44:64:D5	-	-
<input type="checkbox"/>	PortC	Physical	Disabled	N/A	N/A	Unbound	00:02:B6:44:64:D6	1460	1500
<input type="checkbox"/>	PortD	Physical	Disabled	N/A	N/A	Unbound	00:02:B6:44:64:D7	1460	1500
<input type="checkbox"/>	PortE	Physical	Disabled	N/A	N/A	Unbound	00:02:B6:44:64:D8	1460	1500
<input type="checkbox"/>	PortF	Physical	Disabled	N/A	N/A	Unbound	00:02:B6:44:64:D9	1460	1500
<input type="checkbox"/>	PortG	Physical	Disabled	N/A	N/A	Unbound	00:02:B6:44:64:DA	1460	1500
<input type="checkbox"/>	PortH	Physical	Disabled	N/A	N/A	Unbound	00:02:B6:44:64:DB	1460	1500

Appendix A: What to do if there's no connectivity

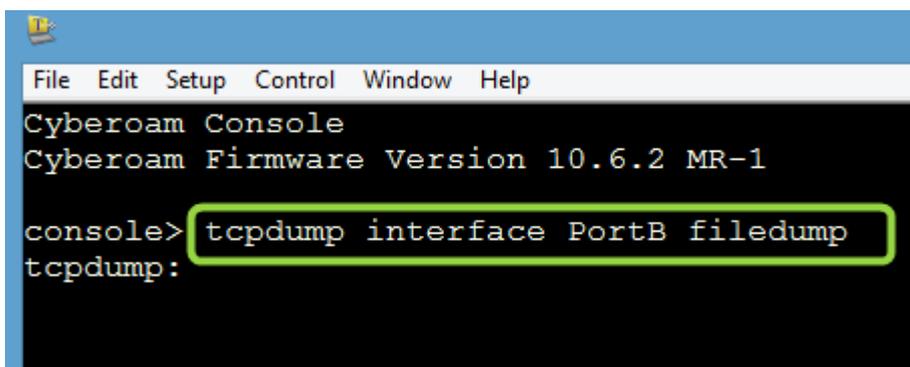
If you have problems there are a number of ways to fault find. By far the easiest is to packet capture & inspect in Wireshark.

SSH into the device with admin credentials & choose option 4 to get to the CLI.



```
File Edit Setup Control Window Help
Cyberoam Firmware Version 10.6.2 MR-1
Main Menu
1. Network Configuration
2. System Configuration
3. Route Configuration
4. Cyberoam Console
5. Cyberoam Management
6. VPN Management
7. Shutdown/Reboot Appliance
0. Exit
Select Menu Number [0-7]: 4
```

Run tcpdump to listen on the physical port that is connected to the ONT E.g. for PortB run the command 'tcpdump interface PortB filedump'

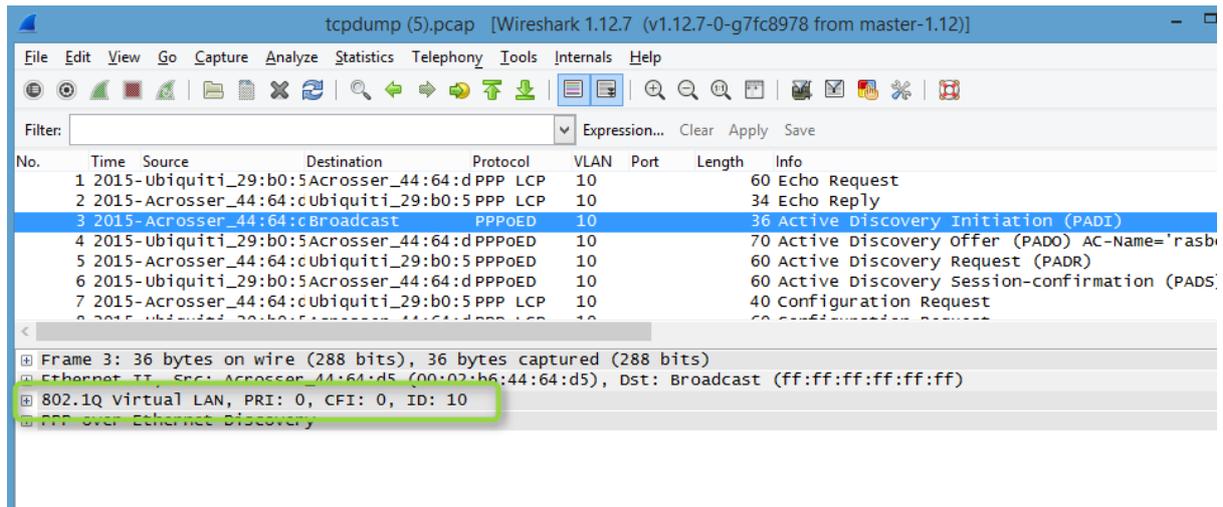


```
File Edit Setup Control Window Help
Cyberoam Console
Cyberoam Firmware Version 10.6.2 MR-1
console> tcpdump interface PortB filedump
tcpdump:
```

CTRL-C to break the operation.

You can then retrieve a pcap file from the web UI of the firewall by appending /documents/tcpdump.pcap to the IP address e.g. <http://172.16.16.16/documents/tcpdump.pcap>. Download & inspect in Wireshark

Look for PADI packets, this is the firewall broadcasting for a PPPoE server to respond. Check the VLAN ID is present in the details & Appendix B below.



Appendix B: What to do if there's still no connectivity

If you confirm the 802.1Q VLAN tags are present in the capture but it's still not working try switching off firewall acceleration at the command line.

```

console>
console>
console> cyberoam firewall-acceleration disable
Firewall Acceleration Disabled Successfully.
console>
console>
console>

```

Re-enable if there's no affect as it will detriment performance. **However if it does resolve the issue talk to Snapper Tech support about further options.**