

APPLICATION NOTE: AN-033-WUK

MERLIN Multi-WAN: FTTP with 4G as backup

How to configure the Multi-WAN feature to enable a Westermo Merlin cellular router to use FTTP as the primary connection and 4G as backup.





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Introduction

What is the Merlin Multi-WAN Feature?

By default the Merlin has a single WAN interface configured, which is usually the 4G connection (unless it's a 4708 with a DSL connection). For models that support two SIM cards, a secondary 4G interface can be created to allow failover to a different cellular network. You can also configure an ethernet port as a WAN interface for connectivity through an existing LAN network or to create a dedicated WAN port.

The Multi-WAN feature is used to create multiple WAN interface profiles on the Merlin and set each interface with a different priority according to the preferred primary and backup connection.

It's becoming increasingly common to see fibre to the premise (FTTP) available for installation at industrial locations and while the technology has some reliability improvements, it is still prone to outages caused by the ISP or accidental damage to the fibre infrastructure. A backup 4G connection is always desirable for continuity of communications. The Merlin can be configured for just this type of failure scenario.

If you have an FTTP line the ISP will have supplied an optical network terminal (ONT) which connects the incoming fibre and presents a standard RJ45 ethernet port for the customer to connect their supplied router.

Typically the supplied router is designed for a domestic/office environment and not suited to the environmental challenges of an industrial application and this is where the Merlin comes in. It can be configured to use a dedicated ethernet port for the FTTP WAN connection to the ONT. If that line consequently suffers any outages it can be configured to failover to its 4G interface to maintain connectivity.

The following method details how to achieve this configuration within the Merlin and test the failover is working correctly. It will also describe how to monitor the status of these interfaces and identify the sequence of events in the system log.

Overview

This application note shows how to configure the Multi-WAN function within a Westermo Merlin 4407 Mobile router. However it is applicable to all cellular routers in the Merlin range.

It does not cover the general configuration of the firewall which should be a pre-requisite prior to operational deployment. For information on how to setup the firewall please refer to the following document:

• AN-027-WUK Merlin Firewall Rules

This can be downloaded from the application note section of the <u>westermo.com</u> website.

Router firmware version used for this document: SXL-25.04.16.000

Assumptions

A Merlin-4407 cellular router is the model used in this document and assumes the router has a factory default configuration. The features described can also be applied to the other routers in the Merlin range.

Corrections

Requests for corrections or amendments to this application note are welcome and should be addressed to <u>support.uk@westermo.com</u>

Requests for new Application Notes and Quick Notes can be sent to the same address.

Merlin 4407 Mobile Router Configuration

LAN IP Address

In this application note we will be using the default IP address of 192.168.100.1.

If you need to adjust this IP address for your application you can do this as follows:

Login to the Merlin using the default IP address and enter the following credentials:

Username: **root** Password: **admin**

Browse to **Network > Interfaces**. In the LAN section, click the **EDIT** button.

westermo	FC-We-Merlin4	407	image1/config1 AUTO REFRESH ON 00E0C819399E / SXL-25.04.16.000
	LAN MOBILE		
🕫 Status 🕨 🕨			
△ System ►	Interfaces		
🖲 Security 🕞 🕨			
Management	Interface Overv	iew	
	Network	Status	Actions
BFD BFP	LAN	Uptime: 23h 14m 42s MAC Address: 00:E0:C8:19:39:9E RX: 7.67 MB (101739 Pkts.) TX: 6.67 MB (16090 Pkts.) IPv4: 172.30.1.201/24	CONNECT STOP EDIT DELETE

Next enter the new LAN IP address and subnet mask:

Protocol: Static address

IPv4 address: <enter desired IP address>

IPv4 netmask: <enter desired subnet mask>

westermo	FC-We-Merlin4407 · · · · · · · · · · · · · · · · · · ·
	LAN MOBILE
൙ Status	_
△ System ►	Interfaces - LAN
🕯 Security 🕨 🕨	On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and enter the names of several
Management	network interfaces separated by spaces. You can also use <u>VLAN</u> notation INTERFACE. VLANNR (e.g.; eth0.1).
♣ Network	General Setup Advanced Settings Physical Settings Firewall Settings
Interfaces BFD BGP	Uptime: 23h 17m 36s MAC Address: 00:E0:C8:19:39:9E MTU: 1500 RX: 7.97 MB (102721 Pits, 0 Errors, 0 Drops, 0 Overruns, 0 Frame) TX: 7.04 MB (16993 Pits, 0 Errors, 0 Drops, 0 Overruns, 0 Carrier, 0 Collisions) TX: 7.24 MB (16993 Pits, 0 Errors, 0 Drops, 0 Overruns, 0 Carrier, 0 Collisions)
DHCP and DNS	
DHCP-Forwarder	Protocol Static address
Diagnostics	
Hostnames	IPv4 address 172.30.1.201
ISDN PRI Multi-WAN	IPv4 netmask 255.255.0

Scroll to the bottom of the page and click on the "SAVE & APPLY" button





Creating a new WAN Interface

Scroll down to the bottom of the **Interfaces** page and click on the "ADD NEW INTERFACE" button:



Give the new interface a text description such as "FTTP_Link"

Set the "Protocol of the new interface" to: PPPoE

Now select the ethernet port you want to use for the WAN connection (in this example we will use "portD") and click on the "SUBMIT" button.

FC-We-Merlin4407	
Create Interface	
Name of the new interface	FTTP_Link - The allowed characters are: A-Z, a-z, 0-9 and _
Protocol of the new interface	PPPoE *
Cover the following interface	 Ethernet Adapter: "lo" (loopback) Ethernet Adapter: "MOBILE" (MOBILE) Ethernet Adapter: "dummy0" Ethernet Adapter: "portA" (LAN) Ethernet Adapter: "portB" (LAN) Ethernet Adapter: "nortC" (LAN) Ethernet Adapter: "portD" (LAN) Ethernet Adapter: "rmnet_data0 Ethernet Adapter: "rmnet_data1" Ethernet Adapter: "rmnet_data2" Ethernet Adapter: "rmnet_data3" Custom Interface: Note: If you select an interface in this menu which is also



You should now be at the 'General Setup' page for this interface.

Enter the "PAP/CHAP username" & "PAP/CHAP password" for this interface. These will be the credentials that the ISP supplied. The username may take the form of an email address or just a word. Both the settings must be typed in exactly, as they will be used to authenticate the connection with your ISP.

FC-We-M	erlin4407	1-+	#		1
FTTP_Link L	AN MOBILE				
Interface	s - FTTP_Link				
On this page you INTERFACE.VLANNR	can configure the netwo (<u>e.g.</u> : eth0.1).	rk interfaces. You	u can b	oridge several interfaces by tick	ing the "bridge interf
Common (Configuration				
General Setup	Advanced Settings	Physical Setti	ngs	Firewall Settings	
		Status		Deptime: 0h 0m 0s RX: 1.76 KB (19 Pkts, portD TX: 11.20 KB (103 Pkt	0 Errors, 15 Drops, 0 s, 0 Errors, 0 Drops,
		Protocol	PPF	PoE	*
	PAP/CH	AP username	wes	termo	
	PAP/CH	IAP password	•••••	***	2

Go to the "Advanced Settings" tab and check that the "Bring up on boot" checkbox is ticked.



Finally, go to the "Firewall Settings" tab and assign this interface to the WAN firewall-zone, which should already contain the MOBILE interface.

Now click on the "SAVE & APPLY" button. Click on the "Edit" button for the newly created FTTP_Link interface and double-check the firewall setting now has both interfaces listed as below, otherwise the firewall will not allow traffic through this WAN connection:

FC-We-M	erlin4407	1+	+	
FTTP_Link L	AN MOBILE			
Interface	s - FTTP_Link			
On this page you INTERFACE.VLANNR	can configure the netwo (<u>e.g.</u> : eth0.1).	ork interfaces. You	ı can	bridge several interfaces by ticking
Common (Configuration			
General Setup	Advanced Settings	Physical Settin	ngs	Firewall Settings
	Create / Assign	firewall-zone	0	lan: LAN: J J J
			•	wan: MOBILE: FTTP_Link:
			0	unspecified -or- create:

From the **Interfaces** page click on the "EDIT" button for the Loopback Interface and go to Advanced settings tab. Make the FTTP_Link interface dependant by ticking the box and then click on the "SAVE & APPLY" button.

Dependant interfaces		FTTP_Link: 💼
		LAN: 🖉 🦉 🦉
		MOBILE: 🛅
		loopback: 🗾
	- Ch	eck interfaces which should start

This will make sure that the FTTP interface attempt to connect as soon as the router has finished its boot-up sequence.

Now connect a cable between port D (FTTP WAN port) and the ethernet port of the ONT supplied by the ISP. An example is shown below, but your specific ONT may be a different size/shape depending on what the ISP has fitted during the fibre installation.



The Merlin will now attempt to authenticate its connection and, if successful, the ISP will issue an IP address to the FTTP_Link interface. The time it takes to complete this will vary depending on how quicky the authentication sequence is completed by the ISP. The internet connection will only be active once the ISP has issued the router with an IP address and it is shown in the status field:

FC-We-Merlin4407	1 the
FTTP_Link LAN MOBILE	
Interfaces	
Interface Overview	
Network	Status
FTTP_Link	Uptime: 0h 0m 24s RX: 76.00 B (4 Pkts.) TX: 5.42 KB (94 Pkts.) IPv4: 81.1.2.3/32
	Limburge Ob Eco ESc



Mobile Settings

Browse to **Network > Interfaces**.

In the MOBILE section, click the **EDIT** button.



Enter the appropriate APN (Access Point Name) provided by your mobile network provider.



APN: Enter your APN here APN Username: Only if applicable APN Password: Only if applicable

Click on the "Advanced settings" tab and **deselect** the "Bring up on boot" tick box. This will prevent the 4G interface from automatically connecting to the cellular network.

Finally, scroll to the bottom of the page and click the "SAVE & APPLY" button.



Multi-WAN Settings

Browse to **Network > Multi-WAN**

Under the interfaces section there should already be an entry for the MOBILE interface. To add the new FTTP WAN interface scroll down to the bottom of the page and you will see a blank field next to the ADD button:

State Transition Hook	
	- 1
ADD	

Enter the name of the FTTP WAN interface EXACTLY as it is shown on the interfaces page (in this example: **FTTP_Link**) and click on the "ADD" button to create the new Multi-WAN interface. The text must match your new FTTP interface name exactly, otherwise the settings will not take effect.

Now click on the "SAVE & APPLY" button.

A list of settings for the new interface will now appear and can be edited (refer to next page)

FTT	P	Lir	۱k
	• _ •		

Health Monitor Interval	10 sec. •
Health Monitor ICMP Host(s)	8.8.8.8
Health Monitor Conntrack Test Host(s)	Default -
Health Monitor ICMP Timeout	3 880
Health Monitor ICMP Interval	1 sec. •
Attempts Before WAN Failover	3 ~
Attempts Before WAN Recovery	5 .
Priority	100
	- Higher value is higher priority
Exclusive Group	0
Manage Interface State (Up/Down)	

For the FTTP WAN interface configure the following settings:

Health Monitor Interval: 10 sec

Health Monitor ICMP Host(s): 8.8.8.8

(*Important:* This is an example IP address only. Choose a reliable, always on IP address that responds to pings on **your FTTP WAN interface**. The condition of this interface is assessed deemed to be UP when the router is receiving ping replies.

Health Monitor Conntrack Test: Default

Health Monitor ICMP Timeout: 3 sec

Health Monitor ICMP Interval: 1 sec

Attempts Before WAN Failover: 3

Attempts Before WAN Recovery: 5

Priority: 100

Exclusive Group:0 (Must be the same as the MOBILE Interface Exclusive Group)

Manage Interface State: Disabled (NO tick)

The MOBILE interface will also needs to have its settings adjusted:

MOBILE	1	
	Health Monitor Interval	Disable •
	Health Monitor ICMP Host(s)	Disable
	Health Monitor Conntrack Test Host(s)	Default 👻
	Health Monitor ICMP Timeout	3 sec. 💌
	Health Monitor ICMP Interval	1 sec.
	Attempts Before WAN Failover	3
	Attempts Before WAN Recovery	5 *
	Priority	50
		- Higher value is higher priority
	Exclusive Group	0 - Only one interface in group could be up in the same time
	Manage Interface State (Up/Down)	۵
	Minimum ifup Interval	60 sec. 👻
		- Minimum interval between two successive interface start attempts
	Interface Start Timeout	- Time for interface to startup

For the MOBILE interface configure the following settings:

Health Monitor Interval: Disable Health Monitor ICMP Host(s): Disable Health Monitor Conntrack Test: Default Health Monitor ICMP Timeout: 3 sec Health Monitor ICMP Interval: 1 sec Attempts Before WAN Failover: 3 Attempts Before WAN Recovery: 5 Priority: 50 Exclusive Group:0 (Must be the same as the FTTP_Link Interface Exclusive Group) Manage Interface State: Enabled (Ticked) Minimum ifup interval: 60 sec Interface start Timeout: (custom) 10

Click on the "SAVE AND APPLY" button.

Note: The timers and thresholds set in the FTTP_Link setup shown above may need to be adjusted to suit a particular installation and the values shown in this document should be used as a guide or starting point, rather than the definitive settings for all installations.

Finally, at the top of the page tick the "Enable" and "Preempt" boxes and then click on the "SAVE AND APPLY" button. The preempt setting is used to make sure that if the FTTP connection recovers, the router will fallback to that interface for the primary connection. If this is not selected the router will remain on the 4G connection regardless of the state of the FTTP link.

FC-We-Merlin4407	1. 1
Multi-WAN	
Multi-WAN allows for the use of multiple	e uplinks for failover.
	Enable 🔽
	Preempt 🔽
A	Alternate Mode

Note: It's possible that the Mobile interface will come up before any of the above settings have taken effect, as well as the FTTP port also being active. If this happens you can manually disconnect it by using the "STOP" button on the interfaces page: **Network > Interfaces**



Alternatively, performing a reboot of router will make sure the interfaces start up in the correct sequence for the failover mechanism to assume control.

From the main menu, go to the bottom of the page and click on Reboot

Tick the "Reboot now" option and then click on the "Reboot" button to commence this action.

Testing the Failover

Browse to **Network > Interfaces** and check the FTTP link is up (IP address assigned) and that the mobile interface is down:

FC-We-Merlin4407	1 Att
FTTP_Link LAN MOBILE	
Interfaces	
Interface Overview	
Network	Status
FTTP Link	Uptime: 0h 4m 32s
	RX: 824.00 B (30 Pkts.)
(()	TX: 118.71 KB (1016 Pkts.)
pppoe-FTTP_Link	IPV4: 81.1.2.3/32
	Uptime: 0h 4m 54s
LAN	MAC Address: 00:E0:C8:19:41:2D
8 (J. J. J.)	RX: 224.22 KB (1883 Pkts.)
br-LAN	IPv4: 192 168 100 1/24
MOBILE	
	TX: 0.00 B (0 Pkts.)
3g-MOBILE	
	Uptime: 0h 5m 30s
loopback	MAC Address: 00:00:00:00:00:00
	RX: 35.08 KB (325 Pkts.)
	TX: 35.08 KB (325 Pkts.)
10	IPV4: 127.0.0.1/8
	IF VW



Multi-WAN Web GUI Status

Now browse to **Status > Overview** and scroll to the bottom of the page where the "Multi-WAN Status" is displayed. You should see the FTTP_Link: Up and MOBILE: Down(standby backup)



This is the normal state where FTTP is the primary connection and the 4G interface is the backup.

Failure & Failover Sequence

Disconnect the cable to the ONT and continue to watch the Multi- WAN status page. You will see that the FTTP_Link status begins to indicate that the connection is failing:

Multi-WAN Status		
	BOBILE : Down(standby backup)	<pre>FTTP_Link : Failing(1/3)</pre>
If the host address does not respond after three a the Mobile interface will start up and show "Up"	attempts the FTTP-Link will be when a network connection h	marked as down and

Multi-WAN Status		
	MOBILE : Up	EFTTP_Link : Down

In the background the router will continue to test for connectivity to the host address on the WAN port. If it starts to respond it will show the link is recovering and will need to receive five consecutive replies (configurable setting) before it will return the FTTP_Link to be the primary link and shut down the 4G interface.

Multi-WAN Status		
	SMOBILE : Up	EFTTP_Link : Recovering(1/5)

Once the FTTP link has been restored the mobile interface will remain unavailable for the programmed amount of time (60 secs in this example). This is done to prevent the router from constantly flipping between the two interfaces if the FTTP link is intermittently working.

Multi-WAN Status		
	MOBILE : Down(available in 42 sec)	EFTTP_Link : Up



Multi-WAN CLI Status

The Multi-WAN status on the overview page gives a useful status update, but this page only autorefreshes every 5 seconds which means you can miss some of the key status changes.

If you want to see a snap shot of the status at any time you can also view it from the command line interface using the following command:

mwan_status



If you want to see the status update continuously you can use the CLI command as follows:

watch -n 1 mwan status

This will update every second. Use Ctrl-C to exit this command.

Understanding the System Log

Browse to System > System Log to see the current status of the router.

The log below shows the sequence of the FTTP_Link interface failing and recovering (key moments are annotated and highlighted):

Jan 29 14:45:14 user.warn 00E0C819412D multiwan-0[6961]: FTTP_Link: ping 8.8.8.8(8.8.8.8.8) failed -PING is failing Jan 29 14:45:14 daemon.info 00E0C819412D pppd[3265]: pppoe-FTTP Link: No response to 3 echo-requests -PING failure threshold reached Jan 29 14:45:14 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP_Link: Serial link appears to be disconnected. Jan 29 14:45:15 local0.warn 00E0C819412D iface.20-firewall: conntrack v1.4.6 (conntrack-tools): connection tracking table has been emptied. Jan 29 14:45:19 user.info 00E0C819412D multiwan-0[6961]: FTTP_Link: up->failed -FTTP Interface marked as DOWN Jan 29 14:45:20 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP_Link: Connection pppoe-FTTP_Link terminated. Jan 29 14:45:20 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP_Link: Modem hangup Jan 29 14:45:21 user.info 00E0C819412D multiwan-0[6961]: MOBILE: down->starting -4G Interface starting up Jan 29 14:45:21 user.info 00E0C819412D mobile[5410]: WAN-1 - Disconnecting MOBILE Jan 29 14:45:22 user.info 00E0C819412D mobile[5410]: WAN-1 - Interface MOBILE down Jan 29 14:45:22 user.info 00E0C819412D mobile[5410]: WAN-1 - Already on SIM1 Jan 29 14:45:22 daemon.warn 00E0C819412D dnsmasq[6511]: no servers found in /tmp/resolv.conf.auto, will retry Jan 29 14:45:23 local0.warn 00E0C819412D iface.20-firewall: conntrack v1.4.6 (conntrack-tools): connection tracking table has been emptied. Jan 29 14:45:23 user.info 00E0C819412D mobile[5410]: WAN-1 - Interface MOBILE up on SIM 1 in "vodafone" LTE network, signal quality -85 dBm Jan 29 14:45:24 daemon.info 00E0C819412D dnsmasq[6511]: reading /tmp/resolv.conf.auto Jan 29 14:45:24 daemon.info 00E0C819412D dnsmasq[6511]: using nameserver 10.4.0.240#53 Jan 29 14:45:24 daemon.info 00E0C819412D dnsmasq[6511]: using nameserver 10.4.0.230#53 Jan 29 14:45:24 daemon.info 00E0C819412D dnsmasq[6511]: using only locally-known addresses for lan Jan 29 14:45:24 user.notice 00E0C819412D ifup: Enabling Router Solicitations on MOBILE (rmnet data0) Jan 29 14:45:24 user.info 00E0C819412D firewall: removing MOBILE (rmnet_data0) from zone wan Jan 29 14:45:24 user.info 00E0C819412D firewall: adding MOBILE (rmnet_data0) to zone wan Jan 29 14:45:25 local0.warn 00E0C819412D iface.20-firewall: conntrack v1.4.6 (conntrack-tools): connection tracking table has been emptied. Jan 29 14:45:25 daemon.info 00E0C819412D ifplugd(rmnet data0): started: BusyBox v1.23.2 (long time ago) Jan 29 14:45:25 daemon.info 00E0C819412D ifplugd(rmnet_data0): using IFF_RUNNING detection mode Jan 29 14:45:25 daemon.info 00E0C819412D ifplugd(rmnet_data0): link is up Jan 29 14:45:25 daemon.info 00E0C819412D chronyd[2664]: Selected source 150.254.65.61 Jan 29 14:45:28 user.info 00E0C819412D multiwan-0[6961]: MOBILE: starting->up 4G interface is now UP Jan 29 14:45:50 daemon.info 00E0C819412D pppd[3265]: pppoe-FTTP_Link: PPP session is 7615 Jan 29 14:45:50 daemon.warn 00E0C819412D pppd[3265]: pppoe-FTTP_Link: Connected to 00:04:2D:E3:A7:B6 via interface portD FTTP Comms restoring Jan 29 14:45:50 daemon.info 00E0C819412D pppd[3265]: pppoe-FTTP_Link: Using interface pppoe-FTTP_Link Jan 29 14:45:50 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP_Link: Connect: pppoe-FTTP_Link <--> portD Jan 29 14:45:50 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP_Link: CHAP authentication succeeded Jan 29 14:45:50 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP Link: peer from calling number 00:04:2D:E3:A7:B6 authorized Jan 29 14:45:50 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP_Link: local IP address 81.1.2.3 Jan 29 14:45:50 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP_Link: remote IP address 1.2.3.4 Jan 29 14:45:50 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP_Link: primary DNS address 8.8.8.8 Jan 29 14:45:50 daemon.notice 00E0C819412D pppd[3265]: pppoe-FTTP_Link: secondary DNS address 8.8.4.4 Jan 29 14:45:51 daemon.notice 00E0C819412D ppp: connection "pppoe-FTTP_Link" established with ip "81.1.2.3"/"1.2.3.4" Jan 29 14:45:52 daemon.info 00E0C819412D dnsmasq[6511]: reading /tmp/resolv.conf.auto Jan 29 14:45:52 daemon.info 00E0C819412D dnsmasq[6511]: using nameserver 10.4.0.240#53 Jan 29 14:45:52 daemon.info 00E0C819412D dnsmasq[6511]: using nameserver 10.4.0.230#53 Jan 29 14:45:52 daemon.info 00E0C819412D dnsmasq[6511]: using nameserver 8.8.8.8#53 Jan 29 14:45:52 daemon.info 00E0C819412D dnsmasq[6511]: using nameserver 8.8.4.4#53 Jan 29 14:45:52 daemon.info 00E0C819412D dnsmasq[6511]: using only locally-known addresses for lan Jan 29 14:45:52 user.notice 00E0C819412D ifup: Enabling Router Solicitations on FTTP_Link (pppoe-FTTP_Link) Jan 29 14:45:52 user.info 00E0C819412D firewall: removing FTTP_Link (pppoe-FTTP_Link) from zone wan Jan 29 14:45:52 user.info 00E0C819412D firewall: adding FTTP_Link (pppoe-FTTP_Link) to zone wan Jan 29 14:45:53 local0.warn 00E0C819412D iface.20-firewall: conntrack v1.4.6 (conntrack-tools): connection tracking table has been emptied. Jan 29 14:45:53 kern.err 00E0C819412D kernel: [3369.079656] misc nmea: sz 31 > avail 0 Jan 29 14:46:34 user.info 00E0C819412D multiwan-0[6961]: FTTP_Link: interface recovered Jan 29 14:46:34 user.info 00E0C819412D multiwan-0[6961]: MOBILE goes down: preempted by FTTP_Link Jan 29 14:46:34 user.info 00E0C819412D multiwan-0[6961]: MOBILE: up->down 4G Interface goes back to standy mode Jan 29 14:46:35 daemon.err 00E0C819412D ifplugd(rmnet_data0): exiting Jan 29 14:46:35 user.info 00E0C819412D mobile[5410]: WAN-1 - Disconnecting MOBILE Jan 29 14:46:36 daemon.info 00E0C819412D dnsmasq[6511]: reading /tmp/resolv.conf.auto Jan 29 14:46:36 daemon.info 00E0C819412D dnsmasq[6511]: using nameserver 8.8.8.8#53 Jan 29 14:46:36 daemon.info 00E0C819412D dnsmasq[6511]: using nameserver 8.8.4.4#53 Jan 29 14:46:36 daemon.info 00E0C819412D dnsmasq[6511]: using only locally-known addresses for lan Jan 29 14:46:36 user.info 00E0C819412D multiwan-0[6961]: FTTP_Link: failed->up FTTP_Link is primary connection again Jan 29 14:46:36 user.info 00E0C819412D mobile[5410]: WAN-1 - Interface MOBILE down Jan 29 14:46:36 local0.warn 00E0C819412D iface.20-firewall: conntrack v1.4.6 (conntrack-tools): connection tracking table has been emptied.

Jan 29 14.46.56 localo.waln overce19412D lade.20-lifewall: commade v1.46 (commade for 2) locale help feiture as

Revision History

Revision	Rev by	Revision Notes	Date
00	RM		31/01/2025
01			
02			
03			
04			
05			
06			
07			