

**WANPIPE™**

**Multi-protocol WANPIPE Driver**

**DEBUGGING M A N U A L**

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## Introduction

At the heart of WANPIPE debugging is the 'wanpipemon' debugging program. It is used to display line traces, protocol statistics, hardware statistics and configuration parameters.

```
/usr/sbin/wanpipemon -g
```

## Automated Debugging

The wanrouter operation script can retrieve the most common line error statistics that can give the user a good idea of what is going on with the line.

```
/usr/sbin/wanrouter debug if_name  
or  
/usr/sbin/wanrouter debug if_name > debug_file.txt
```

(where if\_name is the name of wanpipe interface: eg: wp1fr16)

## 'wanpipemon' usage

```
/usr/sbin/wanpipemon
```

```
Wanpipemon Verison 1.0  
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www.sangoma.com  
This may be freely redistributed under the terms of the GNU GPL
```

Usage: (Options in {} brackets are optional)

```
#Command prompt Local debugging  
wanpipemon -i <interface> -c <command> { -p <protocol> }  
  
#Command prompt Remote debugging  
wanpipemon -i <remote IP> -u <port> -c <command> { -p <protocol> }  
  
#GUI interface  
wanpipemon -g { -i <interface|IP> -u <port> -p <protocol> }  
  
#Display usage for each protocol  
wanpipemon -p [fr|ppp|chdlc|x25|adsl]  
  
#Detailed usage for each option  
wanpipemon -h
```

## **Local debugging:**

The 'wanpipemon' utility is located on the same machine as the WANPIPE card.

Thus, the wanpipemon utility needs only the interface name (eg: wp1\_fr16) to reach the driver.

```
/usr/sbin/wanpipemon -i wp1_fr16 -c xm
```

## **Remote debugging:**

The 'wanpipemon' utility is located on a network (LAN or WAN) and must use the UDP protocol to reach the WANPIPE card.

In this case an IP and UDP addresses must be specified, such that the packet will pass through the WANPIPE driver!

Meaning a POINTOPOINT address must be used instead of the LOCAL IP address.

The UDP port was specified in WANPIPE configuration file. (Default=9000)

```
/usr/sbin/wanpipemon -i 201.1.1.2 -u 9000 -c xm
```

## **GUI Mode Operation**

The GUI mode is based on ncurses libraries, thus it will work both in Terminal or Xwindows mode.

```
/usr/sbin/wanpipemon -g
```

Without any other arguments the GUI will offer a list of network interfaces, for local debugging, or will ask for an IP/UDP address, for remote debugging.

Use menu's to navigate through available commands.

## **Common Wanpipemon Statistics**

## **Modem Status (-c xm):**

*wanpipemon -i wp1fr16 -c xm*

Must be DCD=HIGH and CTS=HIGH if not there is either a cable problem or the sync line is not turned ON.

## **Communication Error Stats (-c sc):**

*wanpipemon -i wp1fr16 -c sc*

Check for CRC and Abort errors. If errors are incrementing, there is a line issue.

Possible reasons: CSU/DSU misconfiguration on local or remote side.

Noisy/Bad line.

## **Line trace (-c tr):**

*wanpipemon -i wp1fr16 -c tr*

Make sure there are incoming and outgoing frames.

If frames are outgoing and none incoming:

Frame relay: Check signalling (ANSI, LMI)

Make sure ISP uses IETF or CISCO data encapsulation.

Other prot: Possible CRC errors in TX direction. Contact your ISP.

If frames are both incoming and outgoing but protocol is still down:

Run trace in Interpreted mode (-c ti) and make sure that the incoming protocol is indeed the one you are configured for.

# Wanpipe Debugging

## Wanrouter Log File

```
wanrouter conflogs / cat /var/log/wanrouter
```

All wanpipe configuration file syntax errors will be displayed in wanrouter log file. Thus, if wanrouter command returns a syntax error, the description of the error will be generated in /var/log/wanrouter log file.

## Kernel Log File

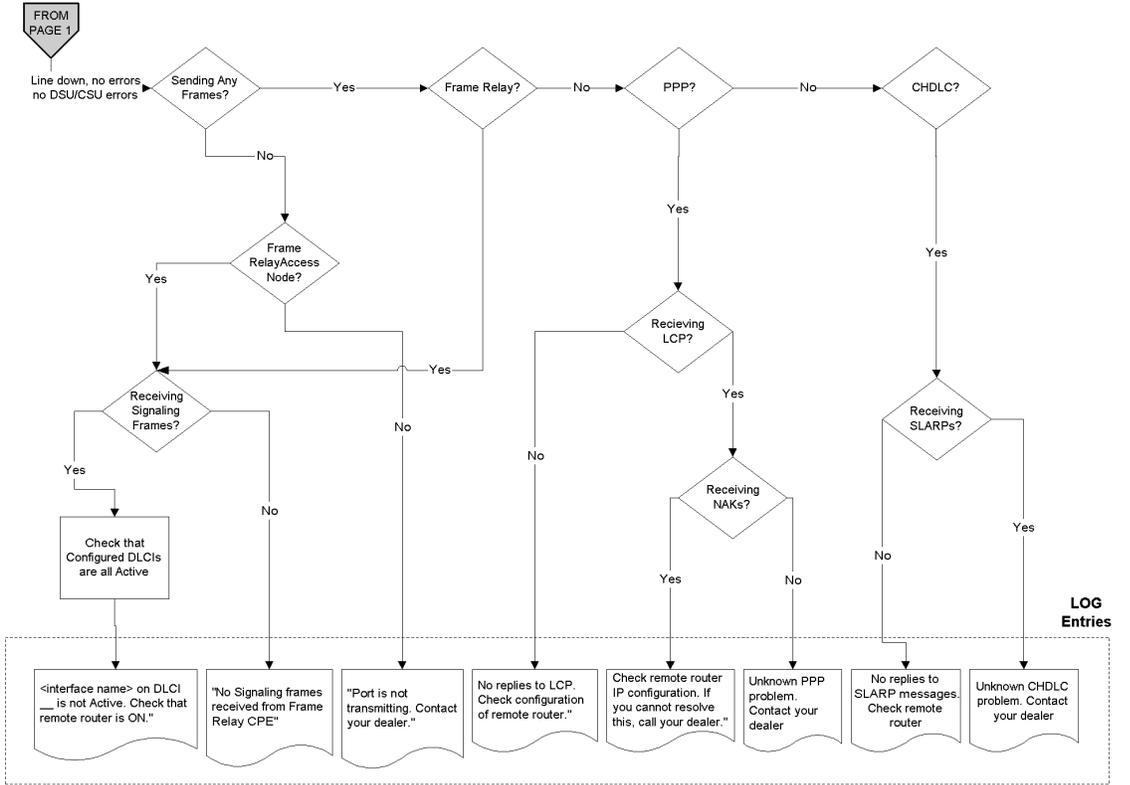
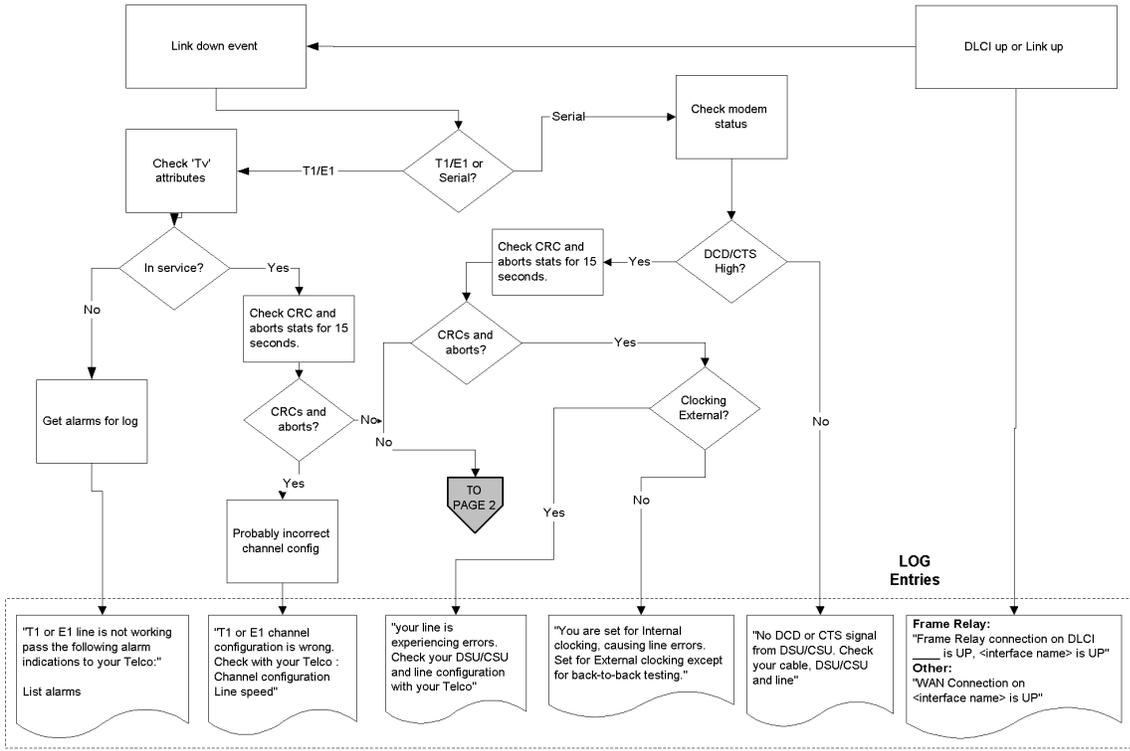
```
wanrouter messages          #Display all wanpipe messages  
or  
tail -f /var/log/messages   #Display last ten lines
```

All wanpipe, kernel module events and errors will be displayed in syslog. The most common syslog file is **/var/log/messags**.

## Sangoma Tech Support

When reporting problems to Sangoma Tech Support please dump the current system debug information into a temporary file and send it via email.

- 1.wanrouter debug wp1fr16 > sangoma\_debug\_file.txt
- 2.Wait for 2-5 minutes
- 3.Stop the debug by pressing ENTER
- 4.Email sangoma\_debug\_file.txt to Sangoma Tech Support



The above diagram displays a Wanpipe line debugging flow chart. Each flow chart command (eg: Tv) is a /usr/sbin/wanpipemon command.

Thus, if the chart indicates that statistics for command **xm** are required, a full command would look like the following:

```
/usr/sbin/wanpipemon -i if_name -c xm
```