Teldat Router

Loopback Interface

INDEX

Chapter 1
Introduction

1. The loopback interface

The loopback interface is a virtual interface that does not physically exist in the device, however it carries out all the functions of a normal interface. As many loopback interfaces as required can be configured.

A loopback interface has the following characteristics:

- It is always active (UP), unless it has been specifically disabled with the DISABLE command. (Please see the DM704-I "Configuration and Monitoring" manual).

- Packets destined for the loopback interface are locally processed.

- Packets routed through the loopback interface (i.e. not destined for the interface) are simply dropped. This does not provoke any type of error.

- Traffic is never received through a loopback interface.

Chapter 2
Configuration

1. Creating a loopback interface

The loopback interface must be created through the **ADD DEVICE** command in the general configuration menu. In order to do this, enter:

```
Config>ADD DEVICE LOOPBACK
Interface Id[9999-1]? 1
Config>
```

The interface identifier can be either manually selected or simply not entering a value in which case you can accept the identifier offered by default.

2. Deleting a loopback interface

To delete a loopback interface, use the **DELETE DEVICE** command in the general configuration menu. In order to do this, enter:

```
Config>DELETE DEVICE <interface>
Config>
```

Where *<interface>* is the identifier of the interface to be deleted. E.g.:

```
Config>DELETE DEVICE LOOPBACK1
Config>
```

3. Configuring the loopback interface

The loopback interface does not have any specific type of configuration.

```
Config>NETWORK LOOPBACK1

Loopback configuration unavailable
Config>
```

Chapter 3
Monitoring

1. Monitoring the loopback interface

The loopback interface does not have any specific type of monitoring.

```
+NETWORK LOOPBACK1

Loopback monitoring unavailable
+
```

In order to know the interface status and the statistics, we need to go to the generic monitoring commands. These are described in the following sections and in more detail in the DM704-I "Configuration and Monitoring" manual.

2. Interface status

The interface status can be discovered through the **CONFIGURATION** command from the monitoring menu:

```
+CONFIGURATION

Teldat's Router, ATLAS 2 8  S/N: 403/00222
Boot ROM release:
 BIOS CODE VERSION: 01.05.01   Jun 28 2002 18:13:30
  gzip  Jun  6 2002 07:48:40
  io1  Jun 28 2002 16:28:21
  io2  Jun  6 2002 07:47:49
  io3  Jun 28 2002 15:19:00
 START FROM FLASH    Watchdog timer Enabled
Software release: 9.2.0.1.15 Aug  5 2002 08:33:12
Compiled by  EGAMORENA on  EAMORENA2
Hostname:                    Active user:
Date: Wednesday, 09/16/02    Time: 04:49:16


Num  Name       Protocol
0    IP         DOD-IP
3    ARP        Address Resolution Protocol
6    DHCP       Dynamic Host Configuration Protocol
11   SNMP       SNMP


8 interfaces:
Conn    Interface       MAC/Data-Link        Hardware              Status
LAN1    ethernet0/0     Ethernet/IEEE 802.3  Fast Ethernet Interface Up
WAN1    serial0/0       X25                  SCC Serial Line- X25   Down
WAN2    serial0/1       X25                  SCC Serial Line- X25   Down
WAN3    serial0/2       X25                  SCC Serial Line- X25   Down
ISDN1   bri0/0          BRI Net              ISDN Basic Rate Int    Up
---     x25-node        internal             Router->Node           Up
SLOT 3  atm3/0          ATM                  FireStream             Down
---     loopback1       Null device          Loopback               Up
+
```

The possible interface states are:

- Up: the interface is active.
- Disabled: the interface has been manually disabled through the **DISABLE** monitoring command.
- Available: this interface is the secondary in a WAN configuration and the main interface is active.

3. Interface statistics

Through the **STATISTICS** command found in the monitoring menu, you can check how many packets have been transmitted (dropped) by the interface and the number of corresponding bytes.

```
+STATISTICS

                  Unicast   Multicast      Bytes      Packets         Bytes
Interface        Pqts Rcv    Pqts Rcv    Received   Transmitted   Transmitted
ethernet0/0            0         295      197820             0             0
serial0/0              0           0           0             0             0
serial0/1              0           0           0             0             0
serial0/2              0           0           0             0             0
bri0/0                 0           0           0             0             0
x25-node               0           0           0             0             0
atm3/0                 0           0           0             0             0
loopback1              0           0           0             3          4284
+
```

Logically the reception statistics remain at zero while those for the transmission display the data corresponding to the packets that have been transmitted by the interface and therefore dropped without notification.

4. Loopback interface events

There is only one event directly related with the loopback interface: the GW subsystem event number 16. This provides information on the packets which have been dropped without notification.

```
GW.061      C-INFO    Nt %d int %s/%d dsc pkt prt %d
```

GW.061

Level: Common informational comment, INFO-N/C-INFO

Syntax:

GW.061 Nt *interface_number* int *interface/occurance_type* dsc pkt prt *protocol_number*

Description:

Data is sent to an interface (from which the number, the type and the interface number of this type is given), which is dropped without informing the sending agent. The data protocol number is also given complying with the following table:

Number	Initials	Name
0	IP	Internet Protocol
1	X.28	X.28
2	IPv6	IP version 6 (IPng)
3	ARP	Address Resolution Protocol
4	H.323	H.323
6	DHCP	Dynamic Host Configuration Protocol
11	SNMP	Simple Network Management Protocol
12	OSPF	Open Shortest Path First
13	RIP	Routing Information Protocol
15	DEP	Dataphone Protocol
23	ASRT	Adaptive Source Routing Transparent Enhanced Bridge
26	DLS	Data Link Switching