



### 1. Configure and use the Packet Capture functionality to generate a .pcap trace from a selected network interface.

Objective: Configure and use the Packet Capture functionality integrated in the firmware of the Digi Connect Wan 3G to generate a .pcap trace from a selected network interface to analyze traffic or for troubleshooting purposes.

#### 1.1 Software Requirements

- Digi Device Discovery
- PuTTY or any Terminal application
- Wireshark
- Latest 2.15.X firmware

#### 1.2 Hardware Requirements

- Digi Connect Wan 3G.

### 2. Pcap command details

The "pcap" command is used to obtain a packet capture from a selected network interface. At most one capture can be running at any time. The configuration selections for "pcap" are not saved in NVRAM as settings, as is done for many CLI commands. The state and configuration of "pcap" must be reselected after each boot of the device.

Packet captures can be obtained locally to the device from the CLI, with the output written to a local file in the flash filesystem or to a USB drive for devices that provide such support. Captures also can be obtained by connecting to the configured PCAP capture port of the device, when the network capture capability is enabled by the user. This permits programs such as "netcat" to connect to the device and capture the packet stream.



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#### 3. Configuring pcap trace for mobile0 and generate a .pcap file to use with Wireshark.

- 1) Configure pcap options using the “configure” command. Follow options are available. Type **pcap ?**:

```
configure
  Configure the packet capture capability. Available options (see below):
  interface=(interface name)
  file=(capture file name)
  addname=(on | off)
  adddirection=(on | off)
  access=(local | network)
  port=(TCP port)
  climode=(background | interactive | verbose)
  maxpackets=(number of packets to capture, 0 is unlimited)
  maxtime=(maximum capture time in seconds, 0 is unlimited)
```

- a. for this configuration, use :

```
pcap conf inter=mobile0 adddir=on maxtime=360 file=tracefile.pcap
```

- b. the following output should be printed to confirm the command was accepted :

```
#> pcap conf inter=mobile0 adddir=on maxtime=360 file=tracefile.pcap
Configuration accepted. Current values are:

Selected interface      : mobile0
Append interface name   : off
Append direction flag   : on
Access mode             : local
Access port             : 7227
CLI mode                : background
CLI capture file        : tracefile.pcap
Maximum packet count    : unlimited
Maximum capture time    : 00:06:00 (360 seconds)

#>
```

4. Enable pcap trace to run and start it :

```
#> pcap enable
Enabling packet capture capability.

#>pcap start
Capture start requested.
Capturing interface mobile0 packets to file tracefile.pcap.
Starting background capture thread.
Enter "pcap stop" to terminate the capture.

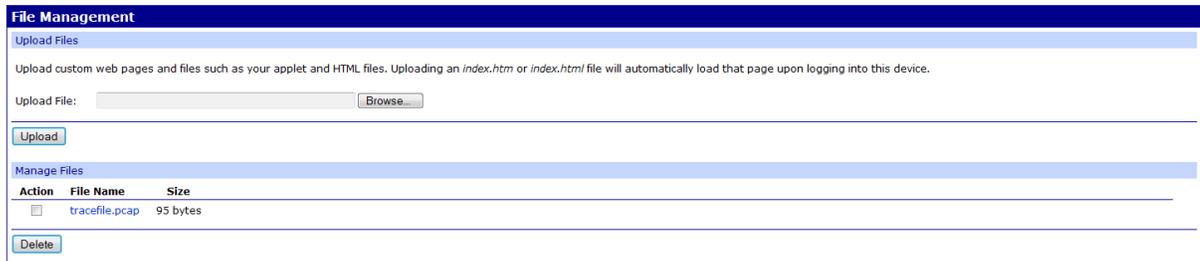
#>
```



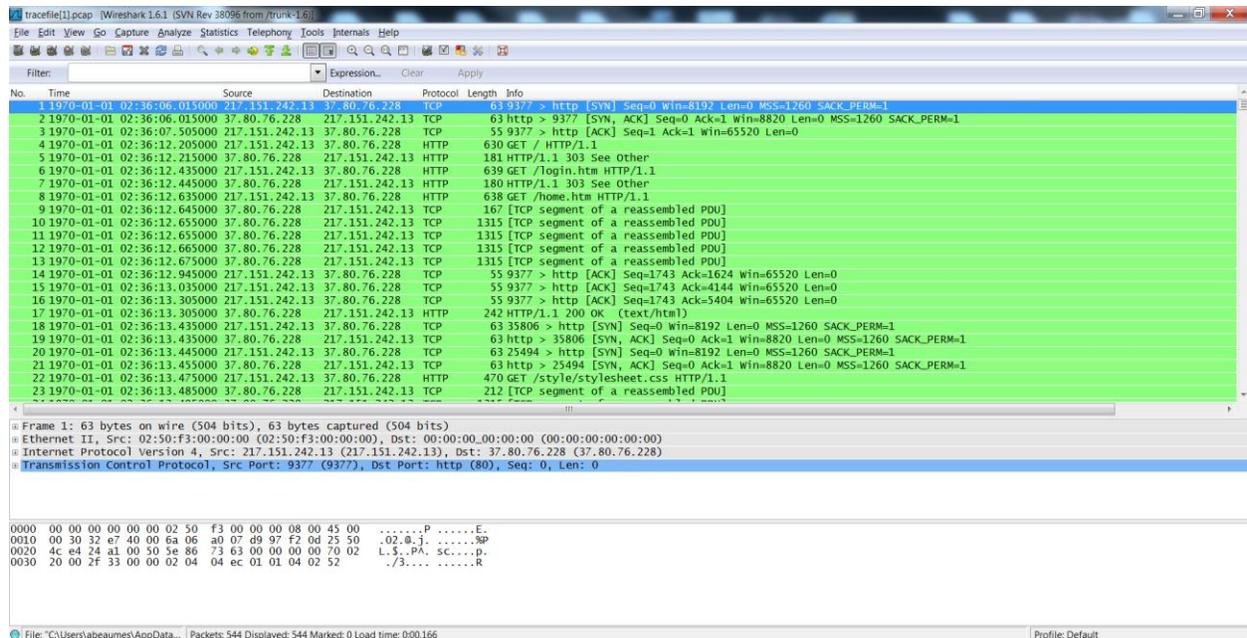
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- Once the packet capture reach the maximum capture time limit or if you issue **pcap stop**, the file will be available under **Administration>File Management**



- The file can be opened using Wireshark :



*Note: It is also possible to display the pcap output to the cli using the **climode** command.*

Further information can be found in the help section of this command by issuing **“pcap ?”**