Quick Note 35

Configuring SMS alerting on a TransPort

Digi Technical Support

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Contents

1 Introduction 3

1.1 Outline 3

1.2 Assumptions 3

1.3 Corrections 3

1.4 Version & Revision History 3

2 Configuration 4

2.1 Configuring the Event Logcodes 4

2.2 Configuring the Event Settings 9

3 Testing 11

4 Configuration Files 15

4.1 TransPort Configuration Files 15

4.2 TransPort Firmware Versions 18

1 INTRODUCTION

1.1 Outline

This document contains information regarding the configuration and use of syslog alerting.

All Digi TransPort products contain an Event Log. Whenever the TransPort firmware does any significant operation, an event is stored in the Event Log. Each event can be used to trigger an automatic email, SNMP trap, syslog alert, or an SMS message (on products with GPRS/WCDMA).

1.2 Assumptions

This guide has been written for use by technically competent personnel with a good understanding of the communications technologies used in the product, and of the requirements for their specific application.

This Application Note (AN) applies to:

Models shown: Digi TransPort WR21.

Other Compatible Models: All Digi TransPort products.

Firmware versions: 5.146 or newer.

Configuration: This AN assumes that the Digi TransPort product has a PPP instance configured to connect to the Internet. The SIM card in use on the router is activated correctly and supports sending SMS text messages.

Alerts will be configured to notify a mobile phone via SMS when the PPP connection on the WAN interface changes its UP/DOWN status.

1.3 Corrections

Requests for corrections or amendments to this AN are welcome and should be addressed to:

tech.support@digi.com

Requests for new ANs can be sent to the same address.

1.4 Version & Revision History

Version Number	Status
1.0	Published
1.1	Updated screenshots and instructions for new web interface, rebranding (Sept 2016)

2 CONFIGURATION

2.1 Configuring the Event Logcodes

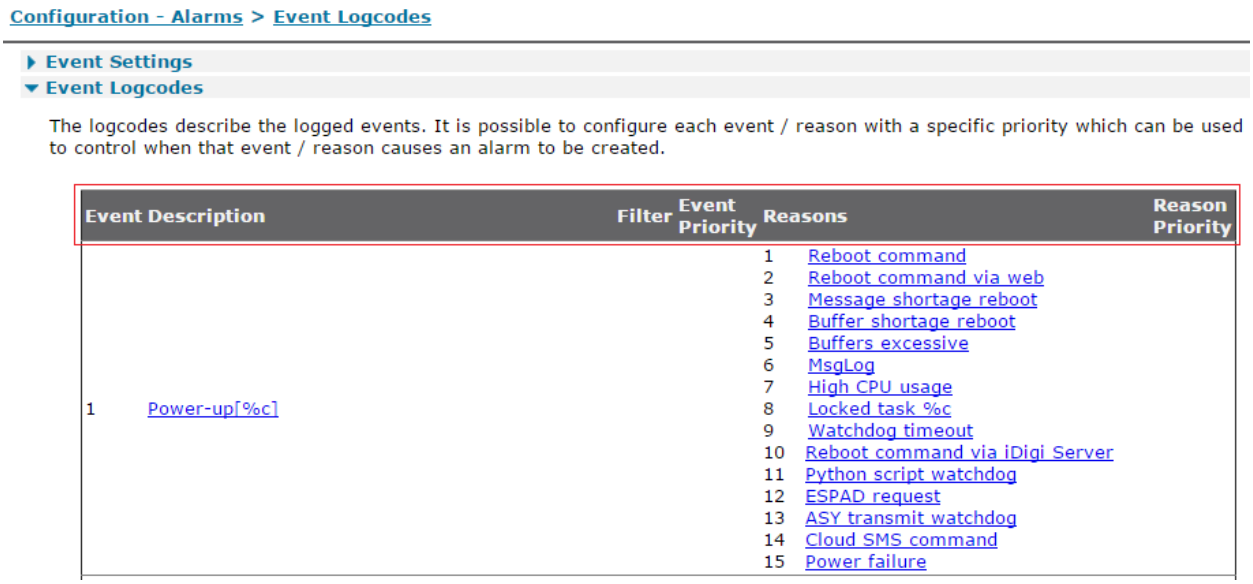
First, it is necessary to choose which events should trigger the SMS alerts.

The Event Logcodes are configured from Configuration - Alarms > Event Logcodes. The list of events and trigger priorities is held in a file called logcodes.txt. When the event logcodes are changed, the changes will not appear in the config.dao or logcodes.txt files, but are stored in the logcodes.dif file once the changes have been saved.

In order to send an SMS alert when a particular event occurs, the Alarm Priority for the event should be changed. There can be a number of reasons for each event. Each event can be configured with a global Alarm Priority which applies to all the reasons. It is also possible to override the global event Alarm Priority with a different Alarm Priority for each reason.

In the example below, the Event 5 "%e %a down" will be used to trigger an SMS alert when PPP 1 is down, and Event 153 "PPP 1 up" will be used to trigger an SMS alert when PPP 1 is up.

Navigate to **Configuration - Alarms > Event Logcodes**



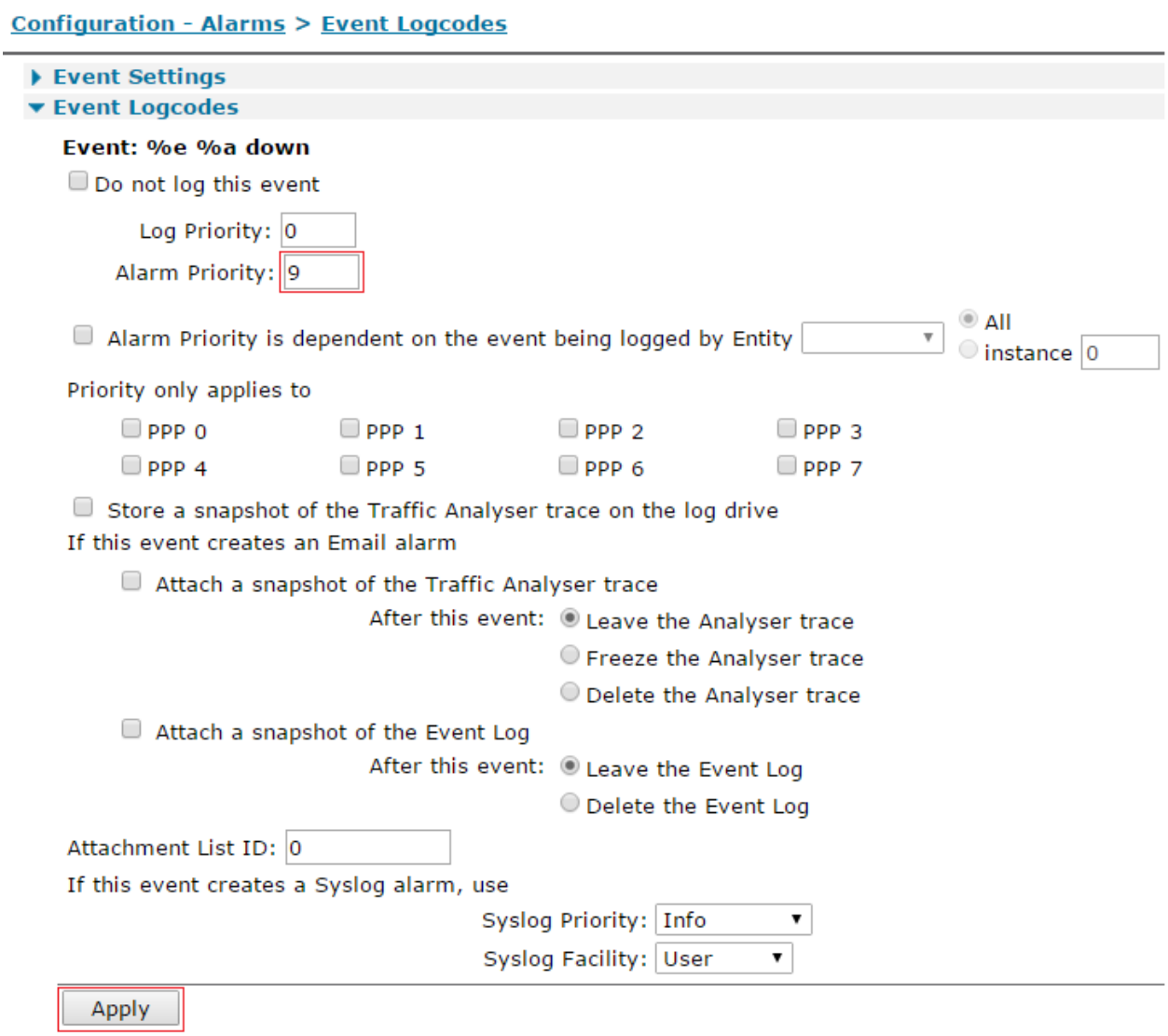
The following table describes the meaning of each column:

Parameter	Description
Event	A numerical value that represents the event.
Description	The main description of the event.
Filter	If the Filter is ON, this event will not be logged.

Event Priority	The priority that the event current has assigned. This is the alarm priority.
Reasons	The reason that the event is triggered.
Reason Priority	The priority that the reason currently has assigned. This is the alarm priority.

Click on the **%e %a down** event (event number 5):

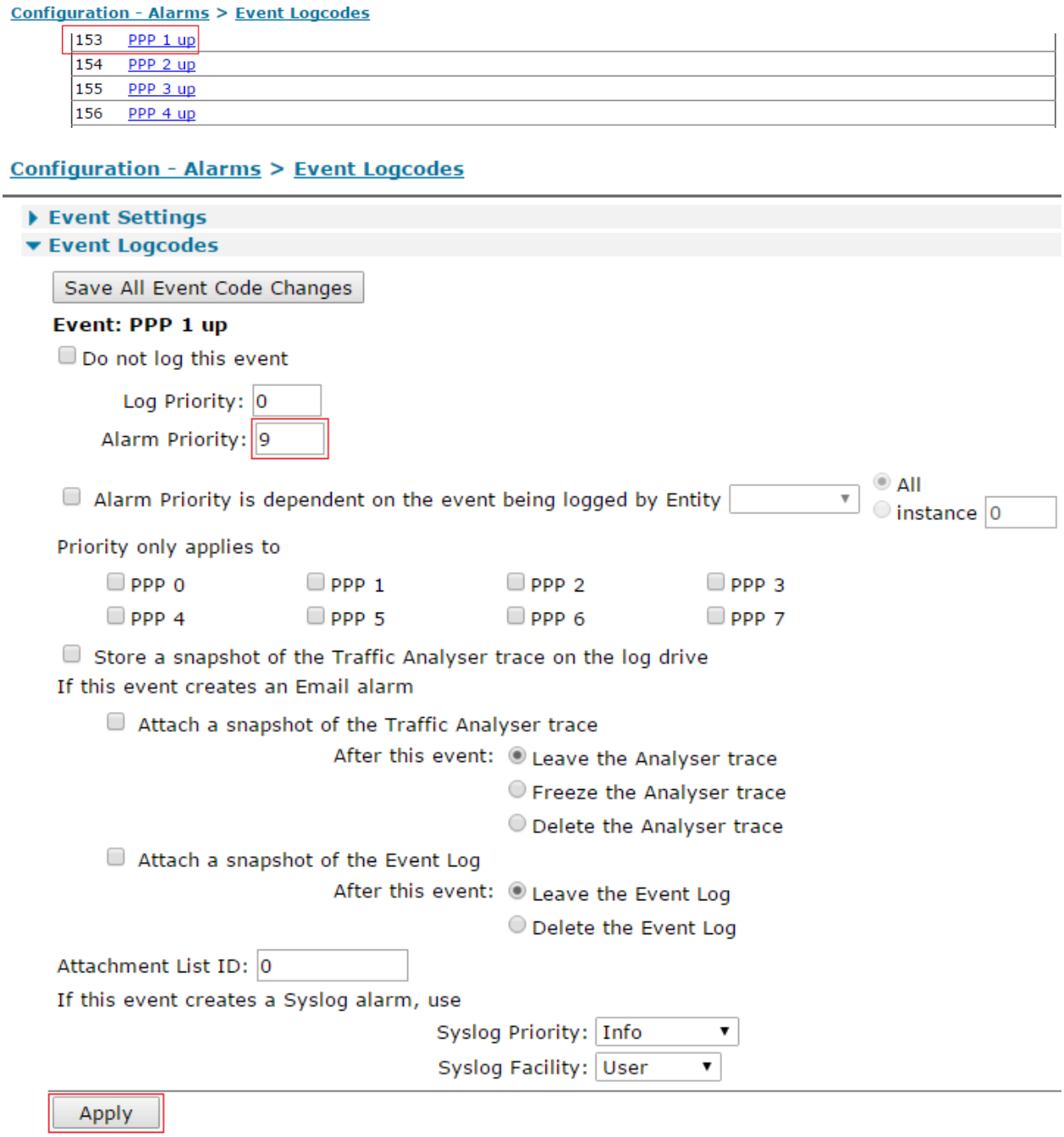
On the following page, configure the Alarm Priority:



Click the "**Apply**" button.

Parameter	Setting	Description
Alarm Priority	9	Change the Alarm Priority to 9; this will be used later.

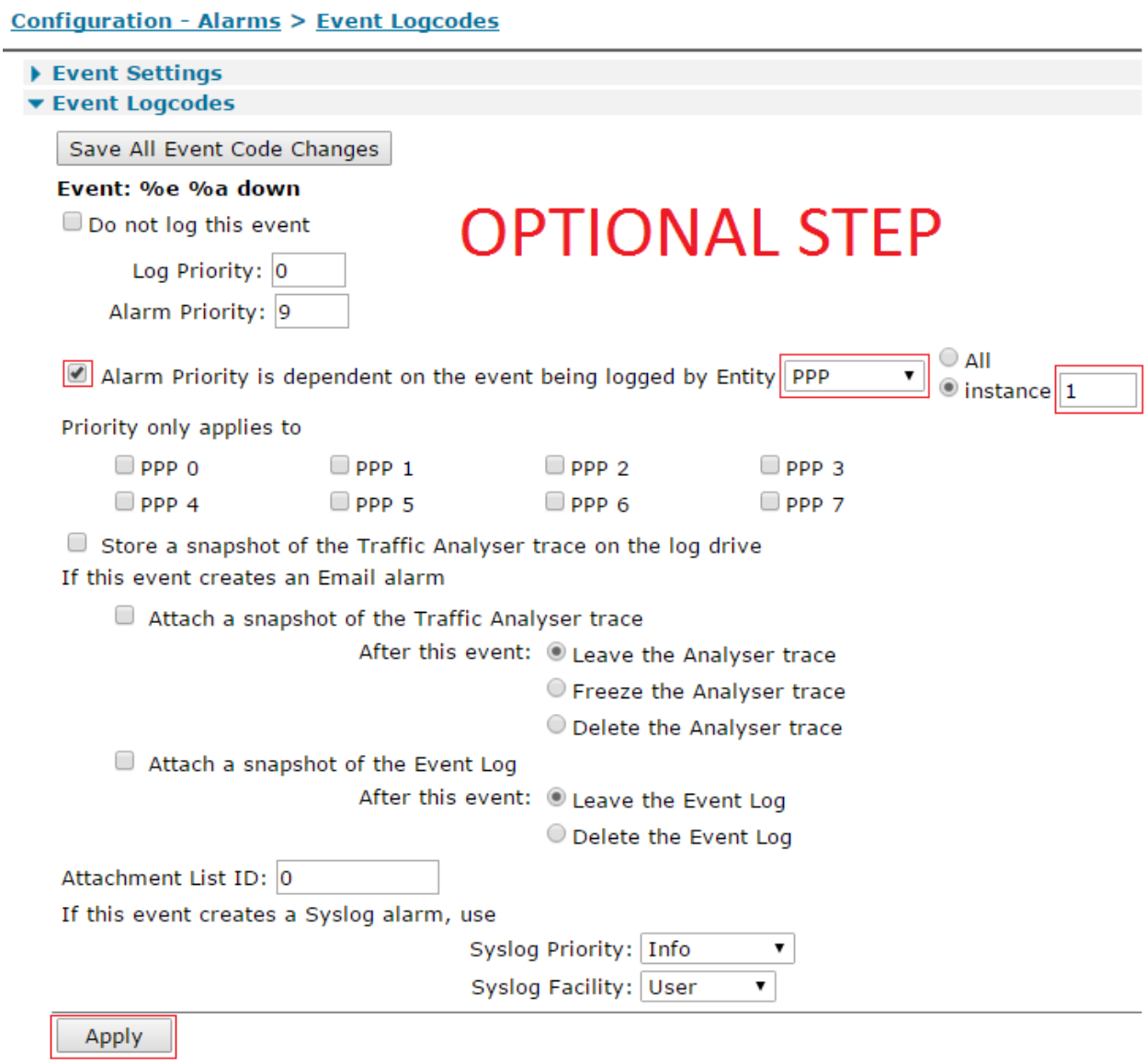
Repeat the process for Event 153, 'PPP 1 up':



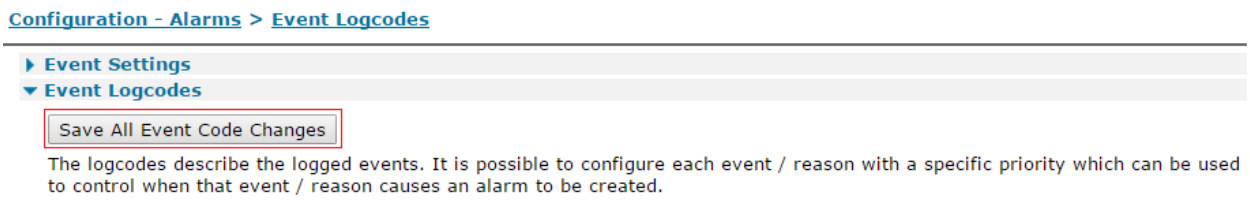
Click the "**Apply**" button.

Optional step:

If required, alerts can be locked to a specific PPP interface by using the parameter "**Alarm Priority is dependent on the event being logged by Entity**" and configuring it as the PPP interface in use.



When all changes to the Logcodes are complete, scroll to the top of the screen, and then click '**Save All Event Code Changes**' to save the changes to the logcodes.dif file.



2.2 Configuring the Event Settings

In the Event Settings, the delay after power up should be long enough for the router to detect and register on the mobile network. Increase this if required.

The mobile number entered to send SMS alerts to should be in MSISDN format. The '+' symbol and/or leading zero should not be used. The Country Code should be included.

UK example: 44xxxyyyyyyy

US example: 1xxxyyyzzzz

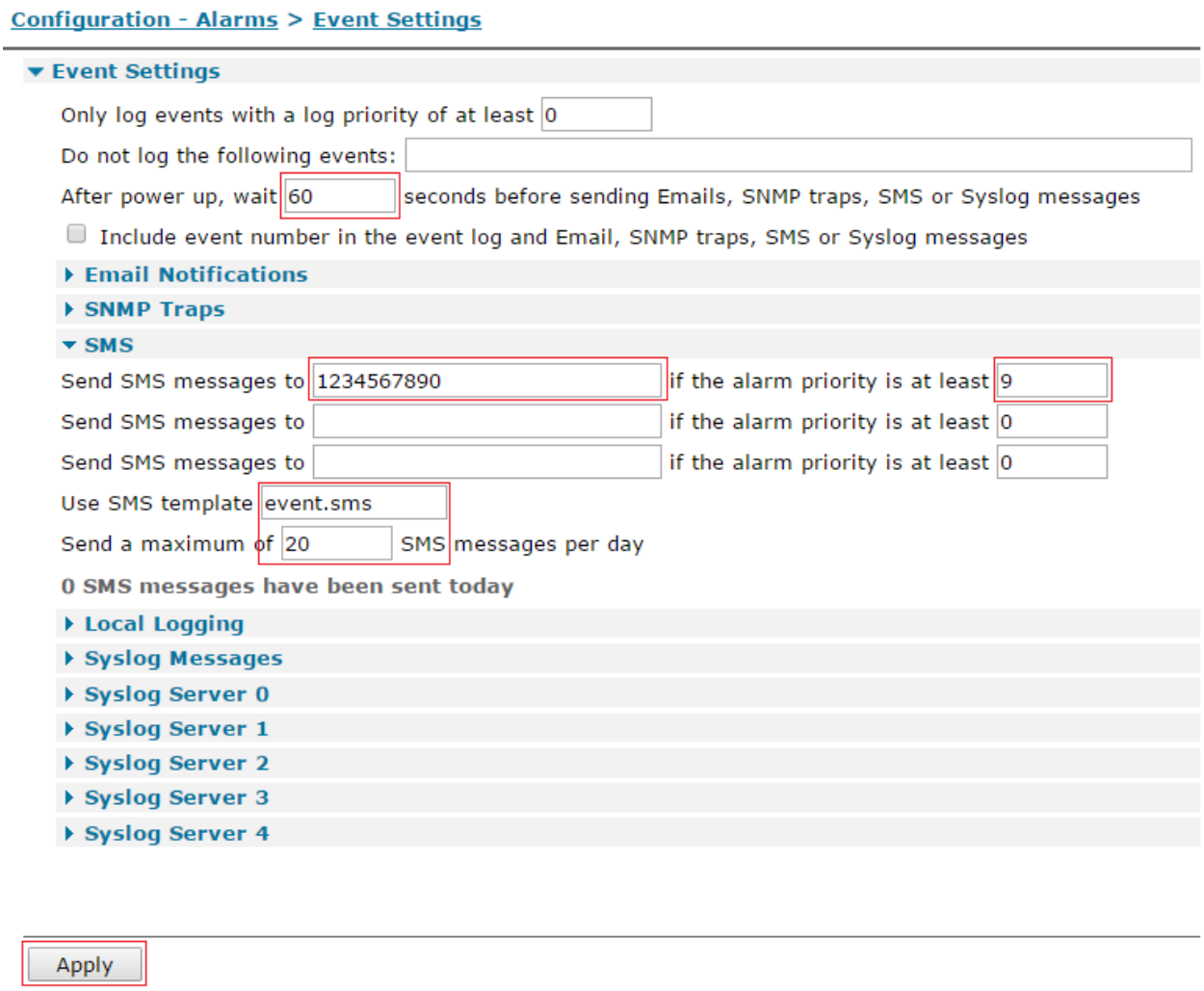
The SMS alarm priority (Send SMS messages to <MSISDN> if the alarm priority is at least <nn>) should be set to a number the same or higher than the alarm priority configured for the event in the previous steps.

If the alarm priority on the Event Settings page is set to 9, then every event (or event reason) with an alarm priority of 9=> will trigger an SMS alert. i.e. 9, 10, 11, 12….

The SMS template should be set to event.sms to use the included factory default template. Custom templates can be created if required.

The maximum number of SMS per day should be configured to take into account the SMS charges on the tariff in use.

Navigate to **Configuration - Alarms > Event Settings > SMS** and configure the following parameters:



Click the "**Apply"** button.

Parameter	Setting	Description
After power up, wait nn seconds before sending Emails, SNMP traps, SMS or Syslog messages	60	Delay in seconds, after power up, before alerts will be sent.
Send SMS messages to…	Mobile phone number	Must be in MSISDN format.
…if the alarm priority is at least nn	9	Events with an alarm priority equal or greater than this number will trigger an alert.
Use SMS template	event.sms	The message template to use.
Send a maximum of nn SMS messages per day	20	The maximum number of alerts to send per day. This counter is reset at midnight.

3 TESTING

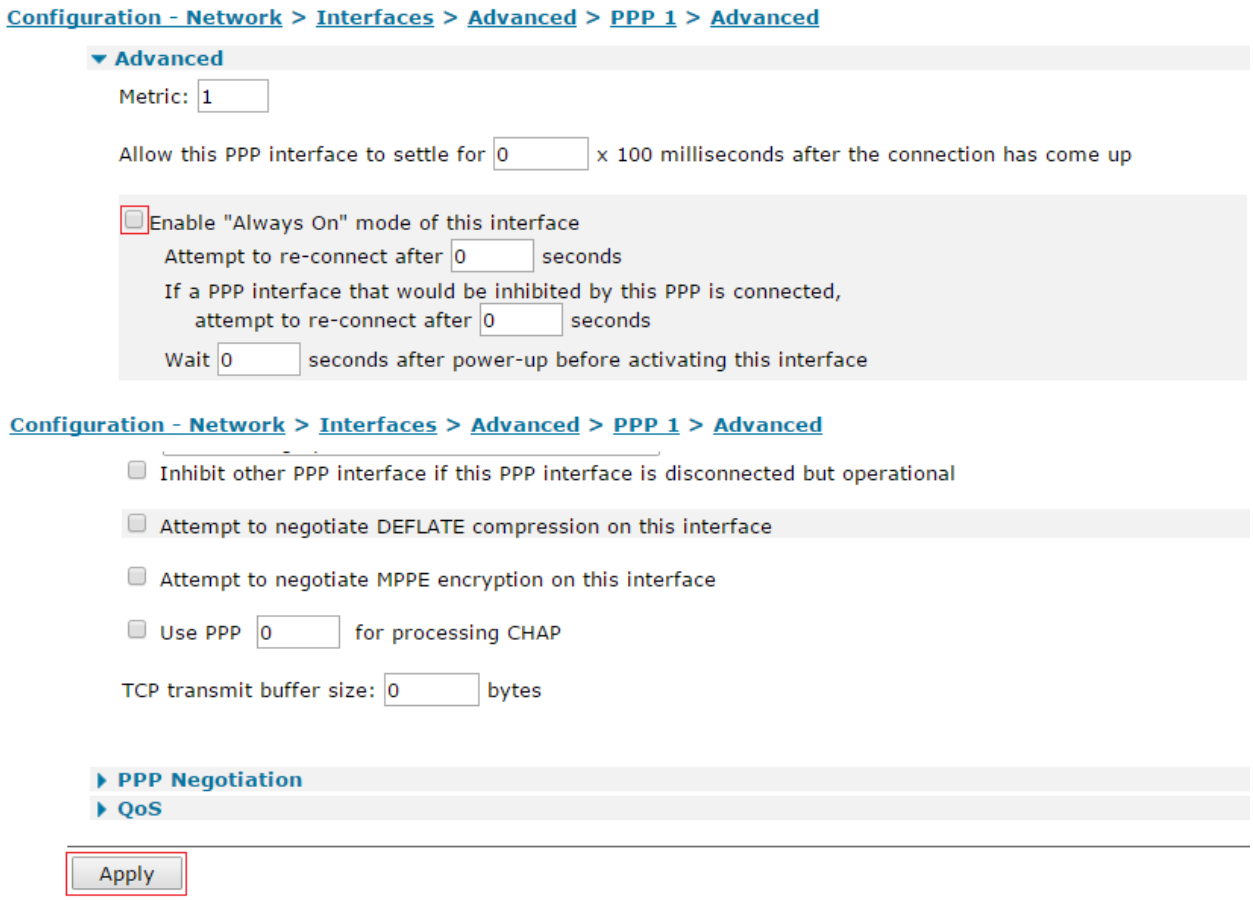
To test that the TransPort is configured correctly and prove that SMS alerts work when PPP is down (PPP status has no effect on SMS functions), the PPP interface should be set so it does not try and re-connect automatically when deactivated. The PPP interface will then be disconnected, when the SMS is received, the PPP interface will be re-activated and a second SMS will be sent when PPP is up.

Only perform this test when connected to the router via the LAN because the WAN connection will now be disconnected and will require a manual re-connect.

Configure the PPP interface to not reconnect automatically:

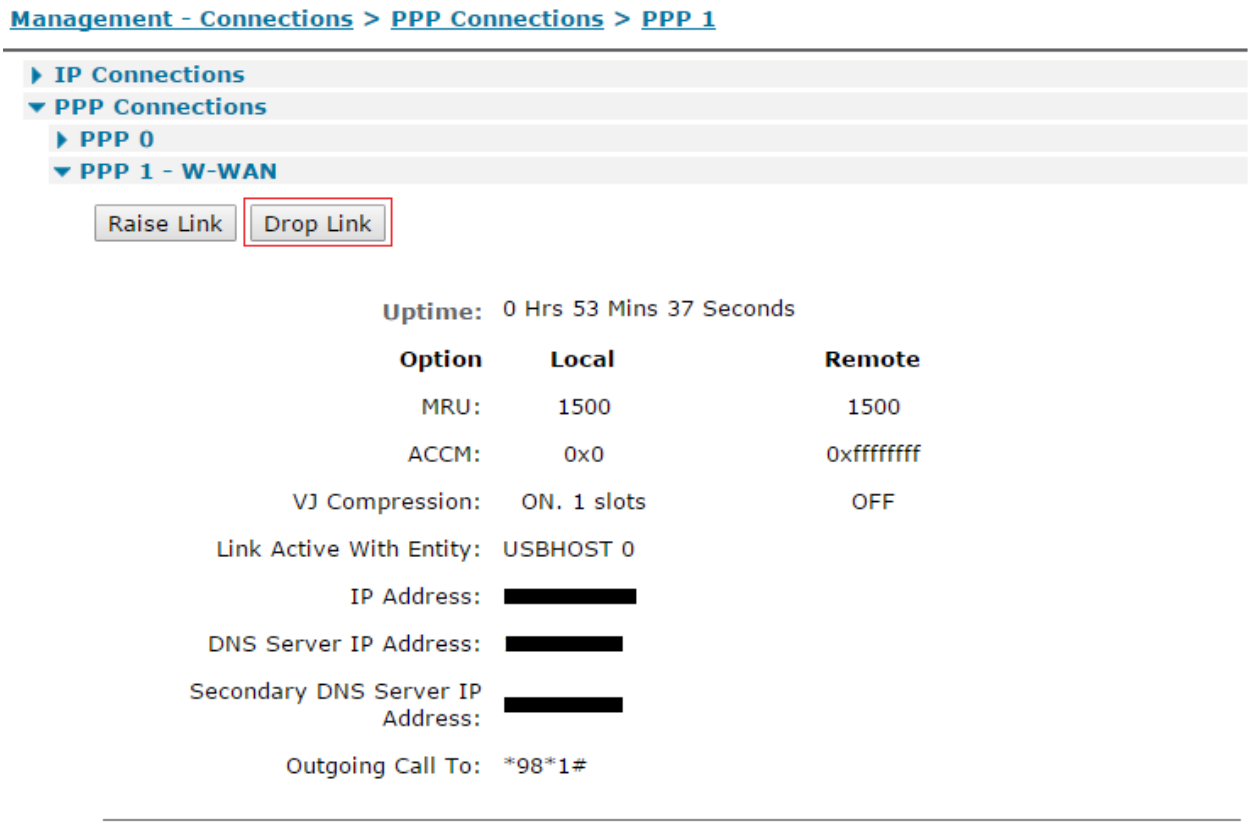
Navigate to **Configuration - Network > Interfaces > Advanced > PPP 1 > Advanced**

Remove the tick from '**Enable "Always On" mode of this interface**' and click the **Apply** button:



Click the "**Apply"** button.

Navigate to **Management - Connections > PPP Connections > PPP 1** and click the **Drop Link** button.
NOTE: The connection to the Internet will disconnect.



When the PPP link is dropped, this will create an event in the Event Log and an SMS will be sent.

The events in **Management - Event Log** will look similar to this:

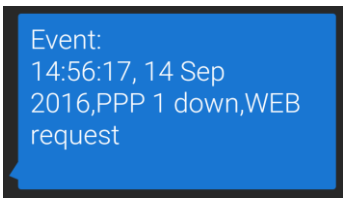
14:56:19, 14 Sep 2016,SMS send,Sent OK

14:56:18, 14 Sep 2016,Modem disconnected on asy 4,1

14:56:17, 14 Sep 2016,PPP 1 down,WEB request

NOTE: The event that triggered the SMS is shown in red for clarification. Colouring of text in the actual Event Log does not happen.

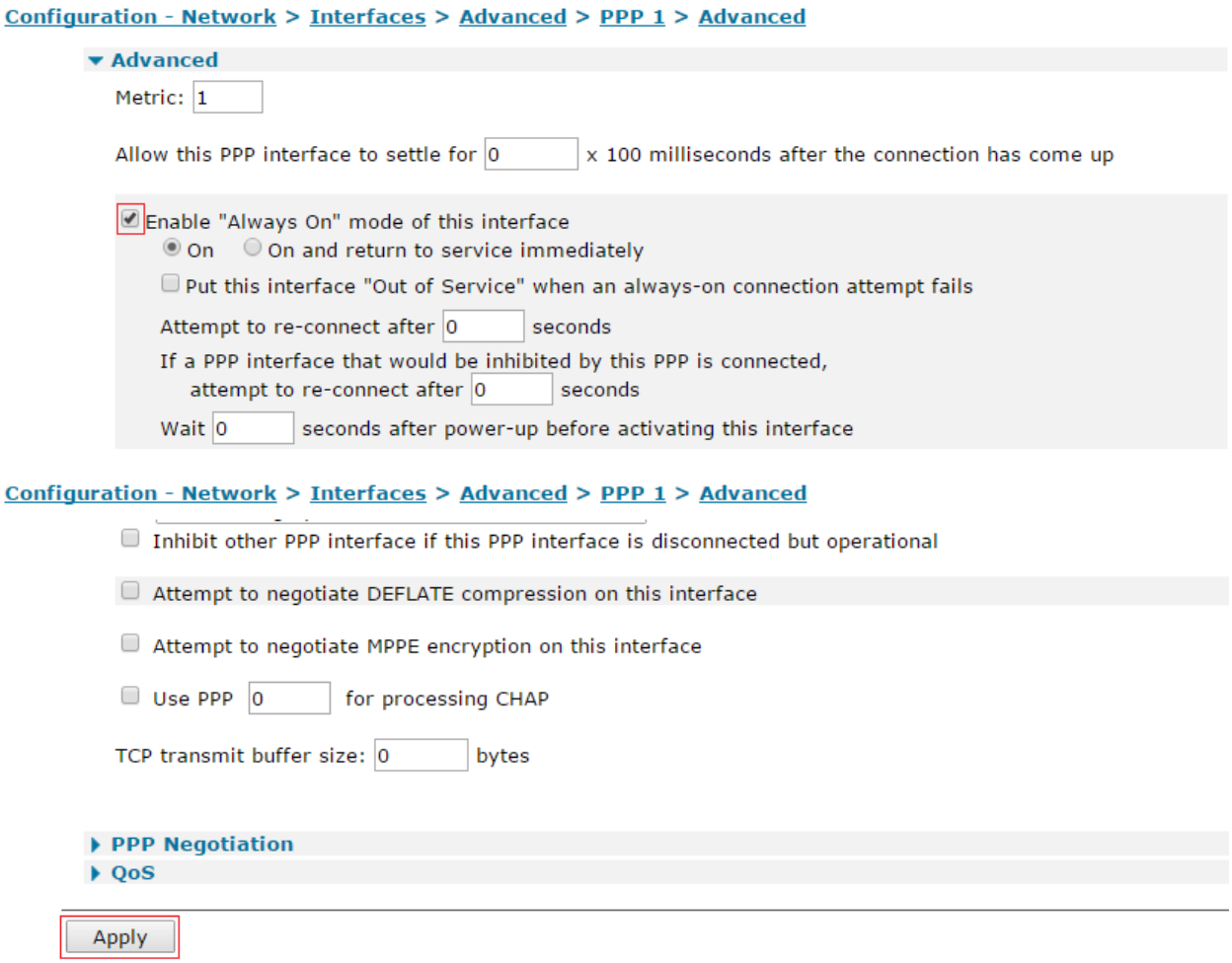
The received SMS is shown here:



Configure the PPP interface to reconnect automatically:

Navigate to **Configuration - Network > Interfaces > Advanced > PPP 1 > Advanced**

Insert the tick in '**Enable "Always On" mode of this interface**'.



Click the "**Apply**" button.

After a few seconds the PPP interface will reconnect. When PPP 1 is up, an SMS will be sent. This can be seen in the Event Log:

14:58:01, 14 Sep 2016,SMS send,Sent OK

14:57:51, 14 Sep 2016,PPP 1 up

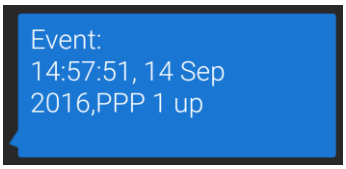
14:57:51, 14 Sep 2016,PPP 1 Start

14:57:51, 14 Sep 2016,Modem connected on asy 4

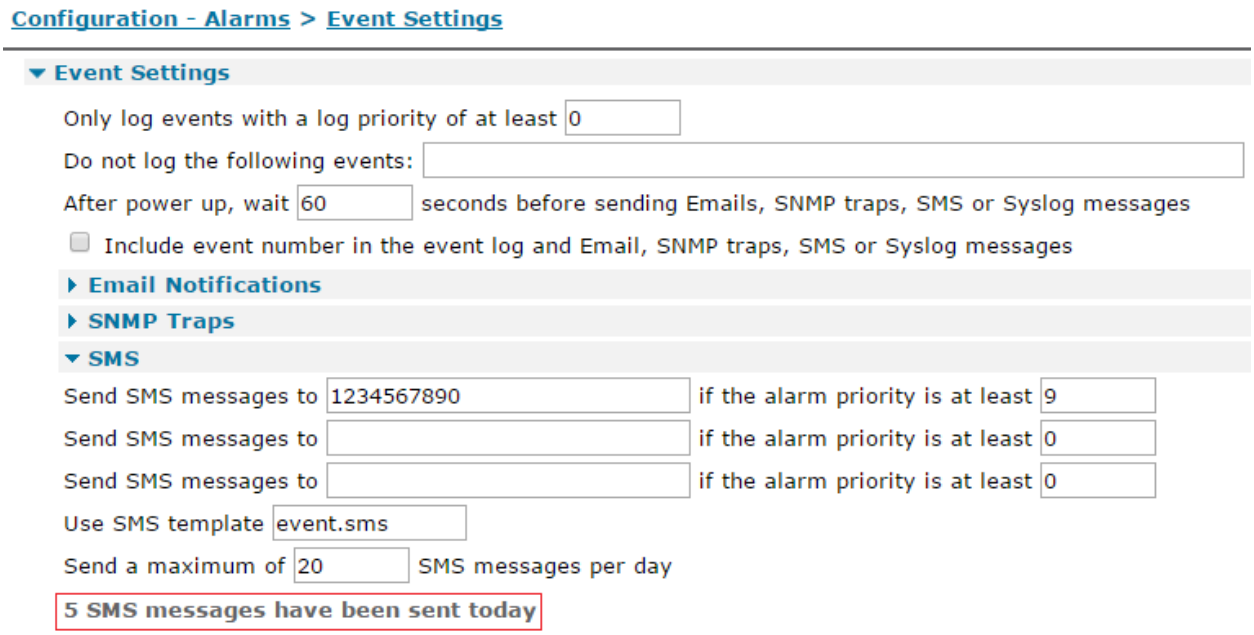
14:57:47, 14 Sep 2016,Modem dialing on asy 4 #:*98*1#

14:57:39, 14 Sep 2016,Par change by username, ppp 1 autoassert to 1

The received SMS is shown here:



The number of SMS messages sent by the router since midnight can be checked by navigating to **Configuration - Alarms > Event Settings**. The number of messages sent is shown in the **SMS** section. This is the total number of alerts sent to all configured mobile numbers.



4 CONFIGURATION FILES

4.1 TransPort Configuration Files

Relevant portions of the configuration are **bold**.

Command: config c show

Command result

eth 0 IPaddr "192.168.1.1"

addp 0 enable ON

lapb 0 ans OFF

lapb 0 tinact 120

lapb 1 tinact 120

lapb 3 dtemode 0

lapb 4 dtemode 0

lapb 5 dtemode 0

lapb 6 dtemode 0

ip 0 cidr ON

def_route 0 ll_ent "ppp"

def_route 0 ll_add 1

dhcp 0 respdelms 500

dhcp 0 mask "255.255.255.0"

dhcp 0 gateway "192.168.1.1"

dhcp 0 DNS "192.168.1.1"

sntp 0 server "time.devicecloud.com"

sntp 0 offset -8

sntp 0 dstonmon 1

sntp 0 dstonday 1

sntp 0 dstoffmon 12

sntp 0 dstoffday 31

dyndns 0 ifent "default"

```
ppp 0 timeout 300
ppp 1 name "W-WAN"
ppp 1 phonenum "*98*1#"
ppp 1 IPaddr "0.0.0.0"
ppp 1 timeout 0
ppp 1 use_modem 1
ppp 1 aodion 1
ppp 1 autoassert 1
ppp 1 r_chap OFF
ppp 1 radiuscfg 0
ppp 3 defpak 16
ppp 4 defpak 16
web 0 prelogin_info ON
modemcc 0 asy_add 4
modemcc 0 info_asy_add 2
modemcc 0 init_str "+CGQREQ=1"
modemcc 0 init_str1 "+CGQMIN=1"
modemcc 0 apn "Your.APN.goes.here"
modemcc 0 link_retries 10
modemcc 0 stat_retries 30
modemcc 0 sms_interval 1
modemcc 0 sms_access 1
modemcc 0 sms_concat 0
modemcc 0 init_str_2 "+CGQREQ=1"
modemcc 0 init_str1_2 "+CGQMIN=1"
modemcc 0 apn_2 "Your.APN.goes.here"
modemcc 0 link_retries_2 10
modemcc 0 stat_retries_2 30
modemcc 0 sms_access_2 1
modemcc 0 sms_concat_2 0
```

```
ana 0 l1on ON
ana 0 lapdon 0
ana 0 asyon 1
ana 0 logsize 45
cmd 0 unitid "ss%s>"
cmd 0 cmdnua "99"
cmd 0 hostname "digi.router"
cmd 0 anonftp ON
cmd 0 tremto 86400
cmd 0 rcihttp ON
user 0 access 0
user 1 name "username"
user 1 epassword "PDZxUxQeFB0="
user 1 access 0
user 2 access 0
user 3 access 0
user 4 access 0
user 5 access 0
user 6 access 0
user 7 access 0
user 8 access 0
user 9 access 0
local 0 transaccess 2
event 0 sms_max 20
event 0 smstemp "event.sms"
event 0 sms_to "12345678901"
event 0 sms_trig 9
event 0 action_dly 60
sslcli 0 verify 10
sslsvr 0 certfile "cert01.pem"
```

```
sslsvr 0 keyfile "privrsa.pem"
ssh 0 hostkey1 "privSSH.pem"
ssh 0 nb_listen 5
ssh 0 v1 OFF
templog 0 mo_autooff ON
qdl 0 fw 7
cloud 0 ssl ON

Power Up Profile: 0
OK
```

Below are the contents of the logcodes.dif file. Manual configuration of the logcodes.dif is outside the scope of this AN; if further instruction is required, please contact tech.support@digi.com

```
E5,9,
E153,9,
```

4.2 TransPort Firmware Versions

Firmware / hardware information from the unit:

```
Command: ati5
Command result
Digi TransPort WR21-U81B-DE1-XX Ser#:xxxxxx HW Revision: 1201a
Software Build Ver5.2.15.6.  Aug 17 2016 17:42:05  WW
ARM Bios Ver 7.56u v43 454MHz B987-M995-F80-O0,0 MAC:00042d042ac6
Power Up Profile: 0
Async Driver          Revision: 1.19  Int clk
Ethernet Port Isolate Driver Revision: 1.11
Firewall              Revision: 1.0
EventEdit             Revision: 1.0
Timer Module          Revision: 1.1
(B)USBHOST            Revision: 1.0
```

L2TP Revision: 1.10

PPTP Revision: 1.00

TACPLUS Revision: 1.00

MODBUS Revision: 0.00

RealPort Revision: 0.00

MultiTX Revision: 1.00

LAPB Revision: 1.12

X25 Layer Revision: 1.19

MACRO Revision: 1.0

PAD Revision: 1.4

X25 Switch Revision: 1.7

V120 Revision: 1.16

TPAD Interface Revision: 1.12

GPS Revision: 1.0

TELITUPD Revision: 1.0

SCRIBATSK Revision: 1.0

BASTSK Revision: 1.0

PYTHON Revision: 1.0

CLOUDSMS Revision: 1.0

TCP (HASH mode) Revision: 1.14

TCP Utils Revision: 1.13

PPP Revision: 5.2

WEB Revision: 1.5

SMTP Revision: 1.1

FTP Client Revision: 1.5

FTP Revision: 1.4

IKE Revision: 1.0

PollANS Revision: 1.2

PPPOE Revision: 1.0

BRIDGE Revision: 1.1

MODEM CC (GOBI UMTS) Revision: 5.2

FLASH Write Revision: 1.2

Command Interpreter Revision: 1.38

SSLCLI Revision: 1.0

OSPF Revision: 1.0

BGP Revision: 1.0

QOS Revision: 1.0

PWRCTRL Revision: 1.0

RADIUS Client Revision: 1.0

SSH Server Revision: 1.0

SCP Revision: 1.0

SSH Client Revision: 1.0

CERT Revision: 1.0

LowPrio Revision: 1.0

Tunnel Revision: 1.2

OVPN Revision: 1.2

TEMPLOG Revision: 1.0

QDL Revision: 1.0

OK