ZyXEL VMG1312 Broadband Router
CLI Reference Manual

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Table of Contents

Overview

The CLI is available from the serial console, telnet login, and ssh logins. It is enabled via the make menuconfig option “Enable Command Line Interface” in the “Management Protocols and User Interface

Selection" section. The CLI is part of the Configuration Management System (CMS), so CMS must also be enabled make menuconfig in order to have the CLI.

The CLI has a ">" prompt character. If you type "sh", you will enter the busybox shell, which has the "#" prompt character. This document describes the commands available from the CLI (">"), not the busybox shell.

To see a list of available CLI commands, type "help". Many of the newer, updated commands support a help message. To see the help message for a command, type the command name and then -h or --help.

In order to use commands which modify the configuration, you must be logged into the CLI as either "Admin" or "Support".

The following is a list of commands that are available, but are not listed by typing "help". These are refered to as hidden commands.

dumpmem
ebtables
iptables
logread
setmem
sh

Only the Admin and Support users are allowed to use the hidden commands.

Similar to the WebUI, all commands take effect immediately (without requiring reboot). In accordance to the CMS architecture, all commands which modify the configuration will modify the MDM (shared memory configuration database). Most commands will automatically save the changes to the configuration file. If the command does not save the changes to the configuration file, the user must use the "save" command to save the changes. The table below summarizes the CLI commands.

Control Key Support

1. Command history scrolling (maximum 15 commands in history):
   UP: UP arrow key, or CTL+p
   DOWN: DOWN arrow key, or CTL+n

2. Move cursor:
   a. LEFT: LEFT arrow key, or CTL-b
   b. RIGHT: RIGHT arrow key, or CTL-f
   c. Beginning of line: CTL+a
   d. End of line: CTL+e

3. Clear screen: CTL+l (lowercase letter of L)

4. Clear to the beginning of line: CTL+u

5. Clear to the end of line: CTL+k

6. Delete: DEL key, or CTL+h

7. Terminate CTL-c (can ‘t terminate certain running application such as ping)

The rest of the document describes each command in detail. Examples are also provided.

ADSL

NAME

adsl – allow a user to control the Broadcom BCM63xx ADSL driver

SYNOPSIS

adsl start [options]
adsl stop
adsl connection [options]
adsl configure [options]
adsl bert [options]
adsl info [options]
adsl afelb [options]
adsl qlnmntr [options]
adsl inm [options]
adsl diag [options]
adsl snrclamp [options]
adsl info [options]
adsl nlnm [options]
adsl --version
adsl –help

DESCRIPTION

Adsl is used to control the Broadcom BCM63xx ADSL driver. This utility can:

- start and stop the driver
- activate, deactivate and control ADSL connection
- configure ADSL driver and connection parameters
- start, stop and monitor Bit Error Rate Test (BERT)
- display status and information of ADSL driver and connection
- display statistics for ADSL driver and connection

All information is displayed to stdout. A program or shell script that calls this utility can redirect stdout

COMMANDS

start:

Starts the Broadcom ADSL driver. This command calls BcmAdsl_Initialize to initialize the driver and BcmAdsl_ConnectionStart to start ADSL PHY connection if [--up] is specified. This command takes parameters that can specify various connection modes. These parameters are the same as in "configure" command.

stop:

Stops ADSL connection and Broadcom ADSL driver. This command calls BcmAdsl_Uninitialize.

configure :

Configures ADSL connection parameters. These command takes the same parameters as "start" command except for [--up] . This command will cause ADSL PHY to retrain.

connection :

Controls ADSL connection modes, such as up and down and several special test modes. This command can also be used to specify tone selection for upstream and downstream..

bert :

Controls ADSL bit error rate test (BERT). This command can start/stop
the BERT test and monitor its results.

afelb :

Starts, sets control parameters such as test time, signal type for AFE loopback test.

qlnmntr :

Starts, sets control parameters such as total monitor time,reporting frequency for QLN monitoring test mode.

inm :

To configure inm parameters and Start inm, Stop monitoring, and show inm results

info :

Display information about ADSL driver and PHY status.

diag :

Log statuses locally. It is useful when DslDiags is not available

snrclamp :

Command to configure shape of snrclamping mask.

info :

About the adsl link information.

nlnm :

To show the “NonLinearityFlag”,“NumberOfAffectedBins” and “Echo-to-Noise Ratio (ENR)”.

--version:
Show current version.

--help:
Show the adsl support commands.

OPTIONS
Options for the start and configure commands :

adsl start [--up] [--mod <a|d|l|t|2|p|e|m|v>] [--lpair <(i)nner|(o)uter>]
[--trellis <on|off>] [--snr <snrQ4>] [--bitswap <on|off>][--sesdrop <on|off>][--sra <on|off>][--CoMinMgn<on|off>][--i24k<on|off>][--phyReXmt <0xBitMap-UsDs>][--TpsTc <0xBitMap-AvPvAaPa>][--profile <0x00 – 0x7F> | <”8a |8b |8c |8d |12a |12b |17a |30a”>] [--us0 <on|off>][--forceJ43 <on|off>][--toggleJ43B43 <on|off>]

or for AnnexC:
[--bm <(D)BM|(F)BM>] [--ccw]
adsl configure [--mod <a|d|l|t|2|p|e|m>] [--lpair <(i)nner|(o)uter>]
[--trellis <on|off>] [--snr <snrQ4>] [--bitswap <on|off>]

or for AnnexC:
[--bm <(D)BM|(F)BM>] [--ccw]

--up :
Will call BcmAdsl_ConnectionStart to start ADSL PHY connection

--mod <a|d|l|t|2|p|e|m|v> :
a – all modulations allowed.
d – G.DMT enabled
l – G.Lite enabled
t – T1.413 enabled
2 – ADSL2 (G.992.3) enabled
p – ADSL2+ (G.992.5) enabled
e – Reach extended ADSL (AnnexL) enabled
m – Double upstream (Annex M) enabled
v – VDSL2 enabled
More than one mode letter can be given to enable several modes.

--lpair <(i)nner|(o)uter>:
(i)nner –inner loop pair is used
(o)uter – outer loop pair is used

--trellis <on|off> :
Enabled or disables trellis coding

--snr <snrQ4> :
Specify SNR margin as Q4 number

--bitswap <on|off> :
Enables or disables ADSL bitswap

--sesdrop <on|off>:
Enables or disables SESdrop

--sra <on|off> :
Enables or disables SRA

--CoMinMgn <on|off> :
Enables or disables Co Minimum Margin Drop

--i24k <on|off> :
Enables or disables i24k

[--phyReXmt <0xBitMap-UsDs>] :
Enables or disables phy Re-transmit feature in US and DS

--TpsTc <0xBitMap-AvPvAaPa> :
Enable or disable ATM and PTM modes in VDSL (AvPv) and Adsl (AaPa)

--profile <0x00 – 0x7F> | <"8a |8b |8c |8d |12a |12b |17a 30a"> :
VDSL profile selection. More than one profile to enable several profiles

[--us0 <on|off>] :
Enable/disable UpStream0 in VDSL2 mode

--forceJ43 <on|off> :
Enable or disable forceJ43

--toggleJ43B43 <on|off> :
Enable or disable toggleJ43B43
The following options apply to AnnexC only

--bm <(D)BM|(F)BM> :
(D)BM - DBM mode
(F)BM - FBM mode

--ccw :
Enables special CRC workaround for Centillium modems

Options for the stop command

adsl stop :

Options for the connection command

adsl connection [--up] [--down] [--loopback] [--reverb]
[--medley] [--noretrain] [--L3][--diagMode][--Lo]
[--tones <xmtStart xmtNum xmtMap rcvStart rcvNum rcvMap>]
[--normal][--freezeReverb][--freezeMedley]

--up :
Starts ADSL connection in normal mode
--down :
Puts ADSL PHY in idle mode

--loopback :
Puts ADSL PHY in ATM cell loopback mode. In this modem ADSL PHY will not try to establish connection .

--reverb :
Puts ADSL PHY in test mode in which it only sends REVERB signal

--medley :
Puts ADSL PHY in test mode in which it only sends MEDLEY signal

--noretrain :
In this mode ADSL PHY will be trying to establish connection as in normal mode, but once the connection is up it will not retrain even if the signal is lost.

--L3 :
Puts ADSL modem in L3 power state

--diagmode :
Puts modem in diagnostic test mode

--L0 :
Puts modem in L0 mode

--tones :
Specifies tones which can be used by ADSL PHY.
Tone ranges should be given separated by commas. For example, to select tones 0 to 100 and 200 to 300 use:

--tones 0-100,200-300 :

Tone configuration command does not cause ADSL PHY retrain automatically. To experience the effect of this command ADSL connection must be restarted using for example adsl connection –down followed by adsl connection –up command.
Tone selection is not affected by adsl configure commands and has to be changed explicitly.

--normal :
Puts modem in Normal mode

--freezeReverb :
Puts modem in freeze reverb mode

--freezeMedley :
Puts modem in freeze medley mode

Options for the bert command

adsl bert [--start <seconds>] [--stop] [--show]

--start :
Starts Bit Error Rate Test (BERT)
seconds – duration of BERT test in seconds

--stop :
Stops the BERT test.

--show :
Display BERT results to stdout in the following format:
BERT Status = [NOT] RUNNING
BERT Total Time = 10 sec
BERT Elapsed Time = 10 sec
BERT Bits Tested = 0x00000000045A6380 bits
BERT Err Bits = 0x0000000000000002 bits

BERT Status indicates whether or not the BERT test is currently running. It can be used to monitor when the BERT test is complete after it is started. The numbers of total bit tested and errorred bits are displayed as 64 bit hexadecimal numbers.

Options for the info command

adsl info [--state] [--show] [--stats] [--SNR] [--QLN] [--Hlog] [--Hlin] [--HlinS] [--Bits][--pbParams][--linediag][--linediag1][--reset][--vendor][--cfg]

--state :
Displays the shortest message about ADSL PHY connection state, e.g.
adsl: ADSL driver and PHY status
Status: Showtime Channel: FAST, Upstream rate = 8064 Kbps, Downstream rate = 1024 Kbps

--show :
Displays more statistics about ADSL connection.

--stats :
Displays all available statistics about ADSL connection.

--SNR :
Displays signal to noise ratio (SNR) per tone in dB

--QLN :
Displays Quiet Line Noise (QLN) per tone in dBm/Hz

--Hlog :
Displays Hlog (Channel Response) per tone in dB

--Hlin :
Displays Hlin (Channel Respose linear)

--HlinS :
Displays Hlin Scaled and corresponding Scaling Factors

--Bits :
Display Bit Allocation per tone

--pbParams :
Displays Per Band Parameters in VDSL2 mode. This includes Band plan information, Net Data rate, TxPwr, per band LATN, SATN, SNRM.

--linediag :
Used in ADSL mode. Displays Line Diagnostic Results for ADSL mode including aggregate PMD parameters such as SNRM, LATN, SATN, TxPwr, ATTNDR and per tone SNR, QLN, Hlog, HlinS

Example:
> adsl info --linediag

adsl: ADSL driver and PHY status
Status: G.992 Started
Retrain Reason: 0

	Down	Up
SNRM(dB):	0.0	0.0
LATN(dB):	0.0	0.0
SATN(dB):	0.0	0.0
TxPwr(dBm):	0.0	13.0
ATTNDR(Kbps):	0	0

Tone number SNR
0 -180.0000
1 -180.0000
2 -180.0000
. . .
Tone number QLN
0 -90.0000
1 -142.0000
2 -143.0000
3 -144.0000
. . .
Tone number Hlog
0 0.0000
1 0.0000
2 0.0000
3 0.0000
. . .
Hlin scale factor: DS = 0 US = 0

Tone number Hlin
0 0 0
1 0 0
2 0 0
. . .

--linediag1 :
Used in VDSL2 mode. Displays Line Diagnostic Results for VDSL2 mode. Displayed items include Net Data Rate, Tx Power, Per Band PMD parameters and per-tone Hlog,QLN,SNR,HlinS

Example:
> adsl info --linediag1

adsl: ADSL driver and PHY status
Status: Showtime
Retrain Reason: 0
Max: Upstream rate = 50971 Kbps, Downstream rate = 118860 Kbps
Path: 0, Upstream rate = 20011 Kbps, Downstream rate = 79895 Kbps
VDSL Port Details Upstream Downstream
Attainable Net Data Rate: 50971 kbps 118860 kbps
Actual Aggregate Tx Power: 13.4 dBm 14.4 dBm
==========

VDSL Band Status	U0	U1	U2	U3	D1	D2	D3
Line Attenuation:	N/A	17.2dB	29.0dB	N/A	7.7dB	19.1dB	32.2dB
Signal Attenuation:	N/A	16.9dB	29.8dB	N/A	7.7dB	19.1dB	32.2dB
SNR Margin:	N/A	27.2dB	27.3dB	N/A	15.4dB	14.4dB	15.1dB

Line 0 DS HLOG (dB) (grouped by 8 tones):
0 : -96.0 -96.0 -96.0 -96.0 -96.0 -8.4 -7.1 -6.1 -5.5 -5.2
10 : -4.9 -4.8 -4.6 -4.5 -4.5 -4.4 -4.4 -4.5 -4.6 -4.7
. . .
Line 0 US HLOG (dB) (grouped by 8 tones):
0 : -96.0 -96.0 -96.0 -96.0 -96.0 -96.0 -96.0 -96.0 -96.0 -96.0
. . .
Line 0 DS QLN (dBm/Hz) (grouped by 8 tones):
0 : -160.0 -160.0 -160.0 -160.0 -160.0 -121.5 -119.5 -119.0 -118.0 -119.0
. . .
Line 0 US QLN (dBm/Hz) (grouped by 8 tones):
0 : -160.0 -160.0 -160.0 -160.0 -160.0 . . .
Line 0 DS SNR (dBm/Hz) (grouped by 8 tones):
0 : 0.0 0.0 0.0 0.0 0.0 53.4 54.4 56.2 56.7 . . .
Line 0 US SNR (dBm/Hz) (grouped by 8 tones):
0 : 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 . . .

--reset :
Clears all statistic counters in ADSL driver

--vendor :
Display Chipset Vendor Details

--cfg :
Display AdslCfgProfile values in MIB

Options for the afelb command
adsl afelb [--time] [--tones] [--signal]

--time :
Sets the time in seconds the test would take to return the result.

--tones :
Optional parameter - Sets the test tone range
Example –—tones 0-20,25-30

--signal :
Sets the test signal to be used
1 Reverb
2 Medley
8 High Crest factor Signal
Result will be available in SNR Mib info and seen using
adsl info –SNR

Options for the qlnmntr command

adsl qlnmntr [--time] [--freq]

--time :
Sets the time in seconds for which QLN monitoring is to be done. If set to 0 , monitoring will be done for ever.

--freq :
Sets the frequency in milli-seconds of QLN reporting.
At the end of monitoring time , the result is available in the QLN MIB info and can be seen using

adsl info --QLN :
Also, during the monitoring period the updated results is being updated in MIB and can be seen every "--freq" milli-seconds.

Guidelines and description for inm command
adsl inm [--start <BB_THRESH 10*dB> <INMIATO> <INMIATS>] [--stop] [--show]

Starting INM

adsl inm --start <BB_THRESH 10*dB> <INMIATO> <INMIATS> :
Broadband Threshold value expressed as 10*dB (range [-361 to 120]), inter-arrival time offset INMIATO (range [3-511]) and inter-arrival time step in log2 format INMIATS (range [0-7]) are the required parameters to be specified in start command

Stopping impulse noise monitoring

adsl inm --stop :
Displaying INM configuration and results

adsl inm –show :
This will print inm state (Active/Not) , mode, configuration and results in the following format. The actual Inter Arrival Time Step in IAT histogram is displayed as INMIATS

INM State:ACTIVE BB_THLD=-10.0dB INM_INPEQ_MODE=0 INMCC=0 INMAITO=2 INMIATS=16
INMAME (BB Counter)= 8777
INPEQ1: 0
INPEQ2: 0
INPEQ3: 0
. . .
. . .
INPEQ17: 0
Inter Arrival Histogram:
[2-2]: 0
[3-18]: 0
. . .

. . .
[99-INF]: 0

Guidelines and description for diag command
adsl diag [--logstart < nBytes to store statuses >] [--logpause] [--logstop] [--loguntilbufferfull] [--loguntilretrain]

adsl --logstart :
Start logging statues locally and will wrap around when the buffer is full

adsl --logpause :
Pause logging

adsl --logstop :
Stop logging session.

adsl --loguntilbufferfull :
Log statuses until the buffer is full

adsl --loguntilretrain :
Log until the modem retrain
To retrieve the logged statuses, connect DslDiags and issue “dbgcmd=25 4”

Guidelines and description for snrclamp command
adsl snrclamp [--shape <shapeId>] [--bpshape [bpIndex-bpLevel,]
--shape :
Set one of the pre-defined shapes shapeIds in [0,1,2]

--bpshape :
Set shape as defined by the bpIndex-bpLevel pairs

Example

>adsl snrclamp --bpshape 1-1,128-32,512-128

EXIT CODES
Exit codes less than 100 are assigned by the ADSL driver. Exit codes of 100 or greater are assigned by the adsl utility.
BCMADSL_STATUS_SUCCESS 0
BCMADSL_STATUS_ERROR 1
ADSL_GENERAL_ERROR 100
ADSL_ALLOC_ERROR 101
ADSL_INVALID_COMMAND 102
ADSL_INVALID_OPTION 103
ADSL_INVALID_PARAMETER 104
ADSL_INVALID_NUMBER_OF_OPTIONS 105

ADSL_INVALID_NUMBER_OF_PARAMETERS 106

EXAMPLES

° A simple initialization.

> adsl start [--up]
or
> adsl start
> adsl connection --up

° A more complex initialization.
> adsl start --up --mod d l--lpair I
or
> adsl start
> adsl connection --up --mod dl --lpair I

° Getting in and out of the test modes
> adsl connection –-reverb
…
> adsl connection --up

° Selecting tones
> adsl connection --tones 0 32 0xFEFFFF7F 32 224 0xFEFFFFFFFFFFFF7F

selects tones from 1 to 31 for upstream and from 33 to 95 for downstream

° Starting and monitoring BERT
> adsl bert –start 60

to run BERT test for 60 seconds. After about 20 seconds of BERT running the results will look like:

> adsl bert –show

adsl: BERT results:
BERT Status = RUNNING
BERT Total Time = 60 sec
BERT Elapsed Time = 20 sec
BERT Bits Tested = 0x0000000008B4C700 bits
BERT Err Bits = 0x0000000000000067 bits
After 60 seconds when the BERT has completed the results of –show command will be:

> adsl bert –show

adsl: BERT results:
BERT Status = NOT RUNNING

BERT Total Time = 60 sec
BERT Elapsed Time = 60 sec
BERT Bits Tested = 0x000000001A1E5500 bits
BERT Err Bits = 0x0000000000000067 bits

° Display minimal ADSL state.
> adsl info –-state

adsl: ADSL driver and PHY status
Status: Showtime Channel: FAST, Upstream rate = 8064 Kbps, Downstream rate = 1024 Kbps

° Display complete ADSL driver and PHY status.
> adsl info –-show

adsl: ADSL driver and PHY status
Status: Showtime Channel: FAST, Upstream rate = 8064 Kbps, Downstream rate = 1024 Kbps
Mode: G.DMT
Channel: Fast
Trellis: ON
Line Status: No Defect
Training Status: Showtime

	Down	Up
SNR (dB):	16.1	7.0
Attn(dB):	0.0	5.5
Pwr(dBm):	6.5	7.8
Max(Kbps):	11040	1088
Rate (Kbps):	0	0
K:	0(0)	0
R:	0	0
S:	1	1
D:	1	1
SF:	25288	25286
SFErr:	1	0
RS:	0	0
RSCorr:	0	0
RSUnCorr:	0	0
HEC:	1	0
OCD:	0	0
LCD:	0	0
ES:	1	0

Guidelines and description for nlnm **command**
adsl nlnm [--show] [--setThld <Thld_Num_Tones>]

--show :
To show the “NonLinearityFlag”,“NumberOfAffectedBins” and “Echo-to-Noise Ratio (ENR)”.
--setThld :
To setting “NumberOfAffectedBins”

Guidelines and description for --version **command**
adsl --version
Show current version.

Guidelines and description for --help **command**
adsl --help
Show the adsl support commands.

EXAMPLES

> adsl nlnm –show

NonLinearityFlag 0
NumberOfAffectedBins -1
ThresholdNumberOfBins 60
Echo-to-Noise Ratio (ENR) 0

ARP

NAME

arp – manipulate modem‟s ARP (Address Resolution Protocol) table

SYNOPSIS

arp add <IP address> <MAC address>
arp delete <IP address>
arp show
arp --help

DESCRIPTION

Arp is used to manipulate modem‟s ARP table. Note that ARP entries added by this command are not saved in the flash memory by the save command. After system reboot, ARP entries need to be re-added.

EXAMPLES

° Add a static ARP entry for IP address 192.168.1.2 with MAC address 00:11:22:33:44:55.

> arp add 192.168.1.2 00:11:22:33:44:55

° Show ARP table.
> arp show

IP address HW type Flags HW address Mask Device
192.168.1.3 0x1 0x2 00:01:03:E3:4F:F9 * br0
192.168.1.2 0x1 0x6 00:11:22:33:44:55 * br0
° Delete ARP entry for IP address 192.168.1.2.

> arp delete 192.168.1.2

BRCTL

NAME

brctl – bridge administration utility

SYNOPSIS

brctl [command]

DESCRIPTION

brctl is used to set up, maintain, and inspect the bridge configuration.
A bridge is a device commonly used to connect different networks (Ethernet, USB, 802.11x wireless network or ATM) together, so that these networks will appear as one network to the participants.
Each of the networks being connected corresponds to one physical interface (port) in the bridge. These individual networks are bundled into one bigger ('logical') network, this bigger network corresponds to the bridge network interface such as “br0”.

COMMANDS

addbr <bridge>
Creates a new instance of the bridge. The network interface corresponding to the bridge will be called <bridge>.

delbr <bridge>
Deletes the instance <bridge> of the bridge. The network interface corresponding to the bridge must be down before it can be deleted.

show <bridge>
Shows the instance <bridge> of the bridge.

show
Shows all current instances of the bridge.

addif <bridge> <device>

Makes the interface <device> a port of the bridge <bridge>. This
means that all frames received on <device> will be processed as if destined for the bridge. Also, when sending frames on <bridge>, <device> will be considered as a potential output interface.

delif <bridge> <device>
Detaches the interface <device> from the bridge <bridge>.

showmacs <bridge>
Shows a list of learned MAC addresses for this bridge.

showstp <bridge>
Shows the STP (Spanning Tree Protocol) status of this bridge.

setageing <bridge> <time>
Sets the MAC address ageing time, in seconds. After <time> seconds of not having seen a frame coming from a certain address, the bridge will time out (delete) that address from the Forwarding DataBase (fdb).

setbridgeprio <bridge> <priority>
Sets the bridge's priority to <priority>. The priority value is an unsigned 16-bit quantity (a number between 0 and 65535), and has no dimension. Lower priority values are 'better'. The bridge with the lowest priority will be elected 'root bridge'.

setfd <bridge> <time>
Sets the bridge's 'bridge forward delay' to <time> seconds.

setgcint <bridge> <time>
Sets the garbage collectioninterval for the bridge <bridge> to <time> seconds. This means that the bridge will check the forwarding database for timed out entries every <time> seconds.

sethello <bridge> <time>
Sets the bridge's 'bridge hello time' to <time> seconds.

setmaxage <bridge> <time>
Sets the bridge's 'maximum message age' to <time> seconds.

setpathcost <bridge> <port> <cost>
Sets the port cost of the port <port> to <cost>. This is a dimensionless metric.

setportprio <bridge> <port> <prio>
Sets the port <port>'s priority to <priority>. The priority value is an unsigned 8-bit quantity (a number between 0 and 255), and has no dimension. This metric is used in the designated port and root port selection algorithms.

setportsnooping <bridge> <port> <addr>
Adds an entry for a port <port> in the port snooping table of the bridge <bridge>. The format of the

<addr> is group_mac_address/src_mac_address.

clearportsnooping <bridge> <port> <addr>

Removes an entry for a port <port> from the port snooping table of the bridge <bridge>. The format of the <addr> is group_mac_address/src_mac_address.

showportsnooping <bridge>

Display the current contents of the port snooping table.

enableportsnooping <enable>

Enable/Disable the port snooping feature. Enable by “enableportsnooping 1”,and disable by “enableportsnooping 0”.

stp <bridge> <state>

Controls this bridge instance's participation in the spanning tree protocol. If <state> is "on" or "yes" the STP will be turned on, otherwise it will be turned off. When turned off, the bridge will not send or receive BPDUs, and will thus not participate in the spanning tree protocol. If your bridge isn't the only bridge on the LAN, or if there are loops in the LAN's topology, DO NOT turn this option off. If you turn this option off, please know what you are doing.

OPTIONS

None

EXAMPLES

° Display all the learned MAC addresses on br0

> brctl showmacs br0

° Set the ageing timer value to be 400 seconds on br0

> brctl setageing br0 400

° Turn off STP

> brctl stp br0 off

CAT

NAME

cat – concatenates FILE(s) and prints them to standard output

SYNOPSIS

cat [FILE] ...

DESCRIPTION

Concatenates FILE(s) and prints them to standard output

COMMANDS

None.

OPTIONS

None.

EXAMPLES

° Display system memory
> cat /proc/meminfo

DEFAULTGATEWAY

NAME

defaultgateway – configure or show the default gateway or default route

SYNOPSIS

defaultgateway config [<interface(s) sperated by ',' with NO SPACE.
eg. ppp0 OR for multiple interfaces ppp0,ppp1>]
defaultgateway show
defaultgateway --help

DESCRIPTION

The primary use of defaultgateway command is to set up a static default gateway or default route, or to retrieve the default gateway information automatically from remote ISPs through DHCP protocol for a IPOE interface or through PPP protocol for a PPPoA or PPPoE interface. A PPPoA or PPPoE interface will always retrieve remote gateway information automatically. This command will save configuration to the Permanent Storage.

If the default gateway is configured with static data, it will override any remote gateway address received automatically from some WAN interface and become effective immediately in the runtime system. Ipaddress is optional if the default route is en route a PPPoE, PPPoA or IPoA interface. If the default gateway is en route a IPOE interface, ipaddress must be configured and the interface parameter is optional. If there is only one IPoA WAN interface, you must configure static default gateway or default route since

IPoA does not support DHCP.
If the default gateway is configured with the "auto" option, the system needs to be rebooted before it can take effect. If there are multiple WAN interfaces with DHCP or PPP enabled, multiple remote gateway addresses may be received and the first received will be chosen to be the default gateway.

OPTIONS

None

EXAMPLES

o Set up a static default gateway to WAN interface ptm0.1. It should be effective right away and is saved to Permanent Storage on the flash memory.

> defaultgateway config ptm0.1

DF

NAME

df – print the filesystem used space and available space

SYNOPSIS

df [OPTION]... [FILESYSTEM]...

DESCRIPTION

df displays the amount of disk space available on the file system of each filesystem name argument. If no file system name is given, the space available on all currently mounted filesystems is shown. Disk space is shown in 1 kb blocks by default.

COMMANDS

None.

OPTIONS

-P use the POSIX output format
-k print sizes in kilobytes (default)

EXAMPLES

° Display the space available on all the mounted file systems

> df

° Display the space available on the flash root file system

df /dev/mtdblock0

DHCPSERVER

NAME

dhcpserver – allow a user to configure, or show the DHCP Server data

SYNOPSIS

dhcpserver config <start IP address> <end IP address> <leased time (hour)>
dhcpserver show
dhcpserver --help

DESCRIPTION

dhcpserver is used to configure, or show the DHCP server data. This utility can:
° configure the DHCP server on the primary LAN interface.
° show the DHCP server configuration data.
° display usage.

All information is displayed to stdout. A program or shell script that calls this utility can redirect stdout to a file and then parse the file in order to interpret the displayed output.
This command only configures the settings of the DHCP server. To enable or disable the DHCP server, use the lan config command.

COMMANDS

config
configure the DHCP server with the given data.
Notice: the command saves the configuration data to the flash but does not take effect until the system is rebooted.
show
show the DHCP server configuration data.

--help
display usage.

OPTIONS

Options for the config command

dhcpserver config <start IP address> <end IP address> <leased time (hour)>.

<start IP address>
The IP address of the first address in the range. The value of range start must be less than or equal to the value of range end.
Valid values: any valid IP address.
Default value: 192.168.1.2.

<end IP address>
The IP address of the last address in the range. The value of range end must be greter than or equal to the value of range start.
Valid values: any valid IP address.
Default value: 192.168.1.254.

<leased time (hour)>
The lease period for which the server assigsn an IP address to the client in case the client does not request for the specific lease period itself.
Valid values: 0 - 8760.
Default value: 24 hours (this equals a day).

Options for the show command
dhcpserver show

Options for the --help command
dhcpserver --help

EXAMPLES

° Configure DHCP server.
> dhcpserver config 192.168.1.2 192.168.1.254 24

° Display DHCP server configuration data.
> dhcpserver show

start 192.168.1.2
end 192.168.1.254
interface br0
option lease 86400
option min_lease 30
option subnet 255.255.255.0
option router 192.168.1.1
option dns 192.168.1.1

° Display usage.

Dhcpserver --help

Usage: dhcpserver config <start IP address> <end IP address> <leased time (hour)>
dhcpserver show
dhcpserver –help

DUMPCFG

NAME

dumpcfg – displays the system's configuration

SYNOPSIS

dumpcfg [dynamic]

DESCRIPTION

dumpcfg displays the system's configuration which is in text XML format.

COMMANDS

None.

OPTIONS

None.

EXAMPLES

° Display the system's configuration which is saved in flash memory.

> dumpcfg

Display the system's configuration would be written to the flash if the user types "save". This is useful for debugging inconsistencies between the MDM and what is saved to flash.

> dumpcfg dynamic

ECHO

NAME

echo – display a line of text or an environment variable's value

SYNOPSIS

echo [OPTION]... [STRING]...

DESCRIPTION

echo displays a line of text, or an environment variable's value.
Notice that "ls" command is not supported in the CLI. Echo can be used to display files and subdirectories using wildcard „*".

COMMANDS

None.

OPTIONS

-n suppress trailing newline
-e interpret backslash-escaped characters (i.e., \t=tab)
-E disable interpretation of backslash-escaped characters

EXAMPLES

° Display a string
> echo "Hello, world"

° Display the vaule of the environment variable $TERM
> echo $TERM

° Display all files or subdirectories

> echo /etc/*
> echo *
> echo /var/*

EXITONIDLE

NAME

exitonidle – get or set the CLI's exit-on-idle timeout

SYNOPSIS

exitonidle get
exitonidle set [seconds]

DESCRIPTION

By default, the CLI will automatically log you out after 600 seconds of inactivity. To set the exit-on-idle timeout to a different value, use exitonidle set [number of seconds]. To disable exit-on-idle, set the number of seconds to 0.
The exit-on-idle value is only effective for the current session. It cannot be saved to configuration flash memory. To modify the exit-on-idle value permanently, you must change some constants in the system image and rebuild.

COMMANDS

None.

EXAMPLES

° Set exit-on-idle to 1 day (86400 seconds)
> exitonidle set 86400

HELP

NAME

help – list all of available CLI commands that the Broadband Router supports

SYNOPSIS

Help | ?

DESCRIPTION

list all of available CLI commands that the Broadband Router supports.

OPTIONS

None

EXAMPLES

To display available commands:
> help

IFCONFIG

NAME

ifconfig – configure a network interface

SYNOPSIS

ifconfig [interface]
ifconfig interface [aftype] options | address ...

DESCRIPTION

Ifconfig is used to configure the kernel-resident network interfaces. It is used at boot time to set up interfaces as necessary. After that, it is usually only needed when debugging or when system tuning is needed.
If no arguments are given, ifconfig displays the status of the currently active interfaces. If a single interface argument is given, it displays the status of the given interface only; if a single -a argument is given, it displays the status of all interfaces, even those that are down. Otherwise, it configures an interface.

COMMANDS

None.

OPTIONS

interface
The name of the interface. This is usually a driver name followed by a unit number, for example eth0 for the first Ethernet interface.

address
The IP address to be assigned to this interface.

up
This flag causes the interface to be activated. It is implicitly specified if an address is assigned to the interface.

down
This flag causes the driver for this interface to be shut down.

[-]arp
Enable or disable the use of the ARP protocol on this interface.

[-]promisc
Enable or disable the promiscuous mode of the interface. If selected, all packets on the network will be received by the interface.

[-]allmulti
Enable or disable all-multicast mode. If selected, all multicast packets on the network will be received by the interface.

metric N
This parameter sets the interface metric.

mtu N
This parameter sets the Maximum Transfer Unit (MTU) of an interface.

dstaddr addr
Set the remote IP address for a point-to-point link (such as PPP). This keyword is now obsolete; use the pointopoint keyword instead.

netmask addr
Set the IP network mask for this interface. This value defaults to the usual class A, B or C network mask (as derived from the interface IP address), but it can be set to any value.

irq addr
Set the interrupt line used by this device. Not all devices can dynamically change their IRQ setting.

io_addr addr
Set the start address in I/O space for this device.

mem_start addr
Set the start address for shared memory used by this device. Only a few devices need this.

[-]broadcast [addr]
If the address argument is given, set the protocol broadcast address for this interface. Otherwise, set (or clear) the IFF_BROADCAST flag for the interface.

[-]pointopoint [addr]
This keyword enables the point-to-point mode of an interface, meaning that it is a direct link between two machines with nobody else listening on it. If the address argument is also given, set the protocol address of the other side of the link, just like the obsolete dstaddr keyword does. Otherwise, set or clear the IFF_POINTOPOINT flag for the interface.

[-]trailers
Set or clear the IFF_NOTRAILERS flag for the interface.

[-]dynamic
Set or clear the IFF_DYNAMIC flag for the interface.

hw class address
Set the hardware address of this interface, if the device driver supports this operation. The keyword must be followed by the name of the hardware class and the printable ASCII equivalent of the hardware address. Hardware classes currently supported include ether (Ethernet) only.

multicast
Set the multicast flag on the interface. This should not normally be needed as the drivers set the flag correctly themselves.

outfill N
This parameter sets the interface outfill timeout.

keepalive N
This parameter sets the interface keepalive timeout.

txqueuelen length
Set the length of the transmit queue of the device. It is useful to set this to small values for slower devices with a high latency (modem links, ISDN) to prevent fast bulk transfers from disturbing interactive traffic like telnet too much.

EXAMPLES

° Display all the active interfaces

> ifconfig

° Set interface eth0‟s IP address to be 192.168.1.1, netmask to be 255.255.255.0

> ifconfig eth0 192.168.1.1 netmask 255.255.255.0

KILL

NAME

kill – send a signal to the specified process(es)

SYNOPSIS

kill [-signal] pid ...
kill -l [signal]

DESCRIPTION

kill sends the specified signal to the specified process or process group. If no signal is specified, the TERM signal is sent. The TERM signal will kill processes which do not catch this signal. For other processes, it may be necessary to use the KILL (9) signal, since this signal cannot be caught.

COMMANDS

None.

OPTIONS

pid... Specify the list of processes that kill should sigal.
-signal given as a signal name or number.
-l List all signal names and numbers.

EXAMPLES

° Terminate the process with pid 120

> kill 120

° Send KILL signal to the process with pid 120
> kill –SIGKILL 120

° List all signal names and numbers

> kill -l

LAN

NAME

lan – allow a user to configure the IP layer for the LAN interfaces

SYNOPSIS

lan config [--ipaddr <primary|secondary> <IP address> <subnet mask>]
[--dhcpserver <enable|disable>]
[--dhcpclient <enable|disable>]
lan delete –ipaddr <primary|secondary>
lan show [<primary|secondary>]
lan --help

DESCRIPTION

Lan is used to configure the IP layer data for the primary and secondary LAN interfaces. A LAN interface is a logic interface toward IP stack from the Bridge module. Both primary and secondary LAN interfaces share the same MAC address from the physical Ethernet port. This utility can:

° Configure the IP address and subnet mask for the primary LAN interface. It Can be either a private or a public IP address.

° Configure the IP address and subnet mask for the secondary LAN interface. NAT is not supported on the secondary LAN interface. Only public IP address is allowed.

° Enable or disable the DHCP server on the primary LAN interface. DHCP server is not supported on the secondary LAN interface.

° Enable or disable the DHCP client on the primary LAN interface. When DHCP client is enabled, the user must first disable DHCP server. The software does not automatically do this, so users must be sure to disable the DHCP server before enabling the DHCP client. When this option is used, the Broadband router must not have a WAN connection configured.

° Display configuration data for the primary and secondary LAN interfaces.
° Display usage.

All information is displayed to stdout. A program or shell script that calls this utility can redirect stdout to a file and then parse the file in order to interpret the displayed output.

COMMANDS

config
configure IP layer for the primary or secondary LAN interface.
delete
delete the primary or secondary LAN interface configuration.
show
show configuration data for the primary and secondary LAN interfaces.
--help
display usage.

OPTIONS

Options for the config command

lan config [--ipaddr <primary|secondary> <IP address> <subnet mask>]
[--dhcpserver <enable|disable>]

--ipaddr <primary|secondary> <IP address> <subnet mask>
primary|secondary – specify which LAN interface will be configured.
Valid values: primary or secondary.
IP address - The IP address of the LAN interface.
Valid values: any valid IP address.
Default value: 192.168.1.1.
Subnet mask – The subnet mask of the LAN interface.
Valid values: 0.0.0.1 - 255.255.255.255.
Default value: 255.255.255.0

--dhcpserver <enable|disable>
enable|disable – specify DHCP server should be enabled or disabled. This option is only valid for the primary LAN interface.
Valid values: enable or disable.

Default value is enable for the primary LAN interface.

--dhcpclient <enable|disable>

Options for the delete command
lan delete --ipaddr <primary|secondary>

--ipaddr <primary|secondary>
primary|secondary – specify which LAN interface will be deleted.
Valid values: primary or secondary.

Options for the show command
lan show [<primary|secondary>]
primary|secondary – specify which LAN interface will be shown.
Valid values: primary or secondary.
If it is omitted, all LAN interfaces are displayed.

EXAMPLES
° Configure a primary LAN interface.
> lan config –ipaddr primary 192.168.1.1 255.255.255.0

° Remove a secondary LAN interface.
> lan delete –ipaddr secondary

° Display all LAN interfaces.

> lan show
br0 Link encap:Ethernet HWaddr 02:10:18:01:00:01
inet addr:192.168.1.1 Bcast:192.168.1.255 Mask:255.255.255.0
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:42083 errors:0 dropped:0 overruns:0 frame:0
TX packets:107786 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:7412118 (7.0 MiB) TX bytes:34445874 (32.8 MiB)
br0:0 Link encap:Ethernet HWaddr 02:10:18:01:00:01
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1

° Configure primary lan interface for DHCP client mode:

> lan config --dhcpserver disable
> lan config --dhcpclient enable
> save

LOGLEVEL

NAME

loglevel – get or set the CMS logging levels for applications that support this feature

SYNOPSIS

loglevel get appname
loglevel set appName [Debug|Notice|Error]
appname is the name of an app that supports CMS loglevels. Currently, this is httpd, tr69c, smd, ssk, telnetd, sshd, consoled, upnp, dnsproxy.

DESCRIPTION

Use loglevel get appname to get the current CMS logging level of the specified app.
Use loglevel set appname loglevel to set the CMS logging level of the specified app. The logging level takes effect immediately. However, the log level setting is not automatically saved to the config file. If you want to save the setting, you must type save.
In order to use this command, the system software must be compiled with "Enable CMS Debug Logging" and "Enable Debug Tools" (from the Debug selection section of make menuconfig). You must also be logged in as Admin or Support.

EXAMPLES

°Get current loglevel of tr69c
> loglevel get tr69c

°To set the loglevel of tr69c to Debug (must capitalize the first letter of Debug, Notice, and Error)
> loglevel set tr69c Debug

LOGOUT

NAME

logout – log out current user console

SYNOPSIS

logout

DESCRIPTION

logout is used to log out current user console. After logout command is executed, a bye bye message appears. Hit return to see a new Login prompt.

EXAMPLES

° Logout user admin.

Login: admin
Password:

> logout
Bye bye. Have a nice day!!!

MEMINFO

NAME

meminfo – display various information about memory usage by various applications and also the CMS shared memory. This command is useful for diagnosing memory leaks.

SYNOPSIS

meminfo [appname] [command]

DESCRIPTION

meminfo has two variants.

The first variant (stats) displays basic shared memory and heap memory usage statistics. In order to use this first variant, ENABLE_DEBUG_TOOLS must be enabled in the Debug selection section of make menuconfig. All profiles in the reference software SDK, except for the 96338R, have this option enabled.
The second variant (traceall, trace50, traceclones) displays detail memory leak tracing information. In order to use this variant, ENABLE_CMS_MEMORY_LEAK_TRACING must be enabled in the Debug selection section of make menuconfig. The profiles in the reference software SDK do not have this option enabled.

Note this meminfo is different from cat /proc/meminfo, which displays system memory usage from the kernel‟s point of view.

This command does not do any error checking of inputs. If there is an input which it does not recognize, it is silently ignored.

If appname is not specified, then appname will default to the current app running the CLI. The current app may be consoled, telnetd, or sshd. (These are the 3 apps that log into the CLI).

If command is not specified, then command will default to “stats”, which will dump the shared memory usage statistics and the private heap memory usage statistics of the current app.

You can also request certain other apps to dump their memory stats or trace info by specifying an appname. The CLI will send a message to the specified app. Currently, only httpd, tr69c, and ssk supports receiving of these messages and dumping the requested info. Please note that if you enter an unrecognized app name, it will be silently ignored and the appname will be the current app.

For the most up-to-date usage info on meminfo, type meminfo –h
For more details on how to use the meminfo command, please see the CMS Devlopement and Porting Guide, available from DocSafe.

EXAMPLES

Display basic memory statistics for the current app:
> meminfo

Display basic memory statistics for tr69c:
> meminfo tr69c

Display memory leak trace information for the current app:
> meminfo traceAll

Display memory leak trace information for ssk:
> meminfo ssk traceClones

PASSWD

NAME

passwd – allow a user to change password

SYNOPSIS

passwd <admin|support|user> <password>

DESCRIPTION

passwd is a CLI command used to change password for user account admin, support or user.
The Admin user can change the passwords for the admin, support, and user accounts.
The Support user can only change the password for the support account.
The User user can only change the password for the user account.

EXAMPLES

° Change password for user admin to broadcom.

> passwd admin Broadcom

PING

NAME

ping – send ICMP echo requests to target host

SYNOPSIS

ping [OPTIONS] host

DESCRIPTION

Ping sends out ICMP echo requests over the ICMP protocol to a host on the network. The default number of the ICMP echo request packets ping sends out is four. To continually send out packets without stop, use "-c 0" option.

OPTIONS

-4, -6	Force IP or IPv6 name resolution
-c CNT	Send only CNT pings
-s SIZE	Send SIZE data bytes in packets (default:56)
-I IFACE/IP	Use interface or IP address as source
-W SEC	Seconds to wait for the first response (default:10) (after all -c CNT packets are sent)
-w SEC	Seconds until ping exits (default:infinite) (can exit earlier with -c CNT)
-q	Quiet, only displays output at start and when finished
-b SEC	Wait for response time
-d DSCP	Chage DSCP value

EXAMPLES

> ping -c 8 192.168.0.5
Send eight ICMP echo requests to 192.168.0.5.

PPP

NAME

ppp – allow a user to bring up or bring down a ppp connection

SYNOPSIS

ppp config <ppp interface name (eg. ppp0)> up|down
ppp --help

DESCRIPTION

ppp is used to control the ppp interfaces. Ppp command brings up the ppp connection with "up" option, and brings down the connection with "down" option. For ppp connection in on-demand mode, in addition to the "up" option, traffic to the ppp interface needs to be initiated to bring the connection up.

<ppp interface name (eg. ppp0)>
“wan show” command can be used to get ppp interface name

EXAMPLES

o Bring down the ppp connection on the ppp0 interface,

“ppp config ppp0 down”. Bring it up, “ppp config ppp0 up”.

PS

NAME

ps – report process status

SYNOPSIS

ps

DESCRIPTION

ps gives a snapshot of the current processes. The output consists of six columns:

PID	The process ID
TTY	The terminal device the process attaches to, such as /dev/ttyp0
Uid	The user ID of the process owner
Size	The amount of virtual memory taken by the process (kilobytes)
State	The state of the process. (S-Sleeping, R-Running, W-Waiting)
Command	The command that launches the process

COMMANDS

None.

OPTIONS

None.

EXAMPLES

° Report process status

> ps

PSP

NAME

psp – various operations on the persistent scratch pad

SYNOPSIS

psp [command]
psp [command token]

DESCRIPTION

psp allows you to perform various operations on the persistent scratch pad area of the flash memory. Commands are:

list:	list all the entries in the psp (identified by their names/"tokens")
dump <token>:	dump the contents of the specified token.
delete <token>:	delete the specified token
clearall:	delete all tokens
help:	print out help message

COMMANDS

None.

OPTIONS

None.

EXAMPLES

° List all entries in the psp

> psp list
Dump the contents of a token called "tr69c_acsState"

> psp dump tr69c_acsState
Erase all tokens

> psp clearall

PWD

NAME

pwd – print name of current working directory

SYNOPSIS

pwd

DESCRIPTION

pwd is a CLI command used to display name of current working directory.

EXAMPLES

° To see current working directory.
>pwd

REBOOT

NAME

reboot – reboot the system

SYNOPSIS

reboot

DESCRIPTION

Reboot the system.

COMMANDS

None.

OPTIONS

None.

EXAMPLES

° Reboot the system
> reboot

RESTOREDEFAULT

NAME

restoredefault – restore modem configuration to factory defaults

SYNOPSIS

restoredefault

DESCRIPTION

restoredefault is a CLI command used to erase all configurations made by user, and restore the modem back to factory default configuration. Once this command is executed, modem reboots automatically with default configuration.

EXAMPLES

° Restore configuration to factory defaults.
> restoredefault

ROUTE

NAME

route – show / manipulate the IP routing table

SYNOPSIS

route add <ipaddress> <subnetmask> <[<gateway>] [<interface>]>
route delete <ipaddress> <subnetmask>
route show
route --help

DESCRIPTION

route manipulates the IP routing table. Its primary use is to set up static routes to specific hosts or networks via an interface.
When the add or delete options are used, route modifies the routing tables. Show option displays the current contents of the routing tables.

Note default gateway route should use another “defaultgateway” command.
If 0.0.0.0 is entered using route add command, it is treated the same as a static default gateway where a subnetmask must be entered.

COMMANDS

add add a new route entry
delete delete a route entry
show show current content of routing table including static and dynamic route entries

OPTIONS

ipaddress
the destination network or host IP address in dotted decimal notation.

subnetmask
when adding a network route, the netmask must be specified. Target address must have zero matching with the zero portion in NM. Otherwise,
command will fail and display message “netmask doesn't match route address”

gateway
route packets via a gateway. NOTE: The specified gateway must be reachable first. This usually means that you have to set up a static route to the gateway beforehand. If you specify the address of one of your local interfaces, it will be used to decide about the interface to which the packets should be routed to.

interface
force the route to be associated with the specified device, as the kernel will otherwise try to determine the device on its own by checking already existing routes and devices.

EXAMPLES

o add a route to the network 192.56.76.x via "br0" interface.
> route add 192.56.76.0 255.255.255.0 br0

o add route to to gateway 10.6.33.129 for network 192.57.66.x.
> route add 192.57.66.0 255.255.255.0 10.6.33.129

OUTPUT

The output of the kernel routing table is organized in the following columns

Destination
The destination network or destination host.

Gateway
The gateway address or * if none set.

Genmask

The netmask for the destination net; 255.255.255.255 for a host destination and 0.0.0.0 for the default route.

Flags Possible flags include
U (route is up)
H (target is a host)
G (use gateway)
R (reinstate route for dynamic routing)
D (dynamically installed by daemon or redirect)
M (modified from routing daemon or redirect)

FILES
/proc/net/route
/proc/net/rt_cache

SAVE

NAME

save – save current configuration to the flash memory

SYNOPSIS

save

DESCRIPTION

save is a CLI command used to save current configuration to flash memory.

EXAMPLES

° Save all current configuration to flash memory.
> save

SNTP

NAME

sntp – synchronize automatically router time with Internet time servers with a timezone.

SYNOPSIS

sntp -s server [-s server2] -t "timezone"
sntp disable
sntp date
sntp zones
sntp --help

DESCRIPTION

sntp command synchronizes automatically the router‟s time with the specified internet timer servers.

OPTIONS

disable
If SNTP is enable, disable it (require reboot).

date
Show the current date and time of the routeer.

zones
Show the list of the supported zones.

EXAMPLES

To set up sntp server with “Pacific Time, Tijuana” zone

> sntp –s time.nist.gov –t “Pacific Time, Tijuana”

To disable sntp (require reboot to be effective)
> sntp disable

To show the current date and time
> sntp date

To show a list of supported time zone
> Sntp zones

To get a help
> sntp –help

SWVERSION

NAME

swversion – display current running software version

SYNOPSIS

usage: swversion
[-b | --buildtimestamp]
[-c | --cfe]
[-d | --dsl]

[-m | --model]

DESCRIPTION

swversion is a CLI command used to view the current running software version.

EXAMPLES

Display current software version.
> swversion
4.04L.01

Display build timestamp
> swversion -b
091104_1517

Display DSL phy and driver version
> swversion –d
A2pB026.d22f

Display CPE Model name
> swversion -m
VMG1312-B10B

Display Bootloader (CFE) version
> swversion -c
1.0.38-112.118

SYSINFO

NAME

sysinfo – display the general system information

SYNOPSIS

sysinfo

DESCRIPTION

sysinfo displays the number of processes in the system, system time, system uptime, the average system load in the past 1, 5 and 15 minutes, and the system memory consumption. The figures in the memory consumption table are in 1kb unit.

COMMANDS

None.

OPTIONS

None.

EXAMPLES

° Display the system information
> sysinfo

TFTP

NAME

tftp – tftp client to update software or retrieve and backup the configuration data.

SYNOPSIS

Usage: tftp [OPTION]... tftp_server_ip_address

DESCRIPTION

Tftp client is used for transferring files to and from a remote site. Broadcom extend its capacity to update the software and configuration data from a remote tftp server as well as backup the configuration to the remote tftp server. You can use still tftp as what you expected before.

COMMANDS

None.

OPTIONS

-f remote file name.
-t i for image and c/f for configuration data.
-l FILE Local FILE
-r FILE Remote FILE
-g Get file. (Update image/configuration data)
-p Put file (backup configuration data)
-g -t i -f filename server_ip Get (flash) broadcom or whole image to modem
-g -t c -f filename server_ip Get (flash) config file to modem
-p -t f -f filename server_ip Put (backup) config file to tftpd server

EXAMPLES

1). To backup configuration data:
> tftp -p -t f -f mdm.config 192.168.1.2

2). To restore configuration data:
> tftp -g -t c -f mdm.config 192.168.1.2

3). To update software:
> tftp -g -t i -f bcm96345_fs_kernel 192.168.1.2

4). To transmit and retrieve files:
> tftp -p -r remote_file -l local_file 192.168.1.2
> tftp -g -r remote_file -l local_file 192.168.1.2

Where the file name after "-f" should be the real file to be retrieved or backuped from tftp server.

WAN

NAME

wan – allow a user to add/delete/show the WAN interfaces and connection sevice for the xDSL router
NOTE: "wan" command only supports xDSL (atm/ptm) layer 2 interface. Currently configuration of VlanMux, MSC and QoS from cli are not supported.

SYNOPSIS

wan add interface <atm|ptm>
wan add service <interfacename> --protocol <bridge|ipoe|pppoe|ipoa|pppoa>
wan delete interface atm <port.vpi.vci>
wan delete interface ptm <port> --priority <normal|high|both>
wan delete service L3IfName
wan show interface
wan show [<port.vpi.vci>]
wan --help <bridge|pppoe|pppoa|ipoe|ipoa>

DESCRIPTION

wan is used to configure the networking protocols for each WAN interface. Currently each WAN interface occupies one ATM PVC or one PTM layer 2 interface. To create a wan connections service, a layer 2 WAN interface must be added first by using the "wan add interface" command and then "wan add service" command to add the WAN connection service with WAN protocol (bridge/pppoe/ipoe/pppoa/ipoa).
All information is displayed to stdout. A program or shell script that calls this utility can redirect stdout to a file and then parse the file in order to interpret the displayed output. Note that special characters are supported in all options of character string type

COMMANDS

wan add interface
add a layer 2 xDSL interface.

wan add service
add a service layer 3 WAN interface – such as pppoe, ipoe, bridge and pppoa and ipoa connection based on a layer 2 interface.

wan show interface
displays the current layer 2 interfaces configured in the system with information on xDSL type (ATM/PTM) and port, link type andncapsulation
service category

wan show
displays the layer 3 wan services configured in the system with information on WAN interface service name, WAN interface name, WAN protocol, WAN connection status, and WAN IP address.

wan delete service
delete the layer 3 WAN connection service.

wan delete interface
delete the layer 2 xDSL interface.

wan --help
display usage for WAN commands.

OPTIONS

Options for the add interface command

Usage:
wan add interface <atm|ptm>
wan add interface atm <port.vpi.vci>
--linktype [EoA|PPPoA|IPoA] [--encap <llc|vcmux>]
[--atmcat UBR | --atmcat UBRwPCR <pcr> | --atmcat CBR <pcr>
[--atmcat nrtVBR <pcr> <scr> <mbs> | --atmcat rtVBR <pcr> <scr> <mbs>]
wan add interface ptm <port> [--priority <normal|high|both>]

<port.vpi.vci> (atm)
port: port number of the ATM VCC to add.
Valid values: 0.
vpi: VPI of the VCC to add.
Valid values: 0 - 255.
Default value: 0
Vci: VCI of the VCC to add.
Valid values: 32 - 65535.
Default value: 35.

<port> <--priority> (ptm)
port: port number of the PTM VCC to add.
Valid values: 0-1.
Priority: normal/high/both.

Options for the add service command

Usage:
wan add service <interfacename> --protocol <bridge|ipoe|pppoe|ipoa|pppoa>
wan add service <L2interfacename> --protocol bridge
[--service <servicename>]
wan add service <L2interfacename> --protocol ipoe
[--firewall <enable|disable>] [--nat <enable|disable>]
[--igmp <enable|disable>]
[--ipaddr <wanipaddress> <wansubnetmask]
[--dhcpclient <enable|disable>]
[--gatewayifname <L2interfacename>] [--dnsifname <L2interfacename>]
wan add service <L2interfacename> --protocol pppoe
[--firewall <enable|disable>] [--nat <enable|disable>]
[--igmp <enable|disable>]
[--username <username> --password <password>]
[--pppidletimeout <timeout>] [--pppipextension <disable|enable>]
[--gatewayifname <pppinterfacename>] [--dnsifname <pppinterfacename>]
wan add service <L2interfacename> --protocol ipoa
--ipaddr <wanipaddress> <wansubnetmask
[--service <servicename>]
[--firewall <enable|disable>] [--nat <enable|disable>]
[--igmp <enable|disable>]
wan add service <L2interfacename> --protocol pppoa
[--service <servicename>]
[--firewall <enable|disable>] [--nat <enable|disable>]
[--igmp <enable|disable>]
[--username <username> --password <password>]
[--pppidletimeout <timeout>] [--pppipextension <disable|enable>]

--protocol <bridge|pppoe|pppoa|ipoe|ipoa>
The protocol of the WAN interface.
Valid values: bridge, pppoe, pppoa, ipoe, or ipoa.
Default value: bridge.

--encap <llc|vcmux>
The encapsulation type over the ATM PVC.
Valid values: llc or vcmux.
llc -
For ipoe, pppoe or bridge, it‟s RFC2684 bridged encapsulation
For pppoa, it‟s RFC2364 LLC/NLPID encapsulation

Vcmux - RFC2684 VC-MUX (null encapsulation).

Default value:
llc for bridge, pppoe, ipoe, or ipoa.
Vcmux for pppoa.

--service <servicename>
The service name of the WAN interface.
Valid values: strings of 32 characters.
Default value: <protocol>_<vpi>_<vci>.

--firewall <enable|disable>
The firewall state of the IPOE or IPoA interface.
Notice that firewall is always enabled on a PPPoE or a PPPoA interface.
Valid values: enable or disable.
Default value: enable.

--nat <enable|disable>
The NAT state of the IPOE or IPoA interface.
Notice that NAT is always enabled on a PPPoE or a PPPoA interface.
Valid values: enable or disable.
Default value: enable.

--username <username>
The login name of the PPPoE or PPPoA interface.
This option is only applied to a PPPoE or PPPoA interface.
The -–password option is also needed when this option is used.
Valid values: string of 32 characters.

--password <password>
The password of the PPPoE or PPPoA interface.
This option is only applied to a PPPoE or PPPoA interface.
The -–username option is also needed when this option is used.
Valid values: string of 256 characters.

--pppidletimeout <timeout>
The PPP timeout of a PPPoE or PPPoA interface.This option is only applied to a PPPoE or PPPoA interface.
Valid values: 0 – 1090 (minutes).
0:
PPP connection is always-on.
Greater than 0:
WAN traffic will be monitored and

PPP connection will be torn down when there is no user data activity over the WAN interface for more than this idle time period.

Default value: 30 minutes.

--pppipextension <disable|enable>
The PPP IP extension mode of a PPPoE or PPPoA interface.
This option is only applied to a PPPoE or PPPoA interface.
Valid values: disable or enable.
Default value: disable.

--ipaddr <wanipaddress> <wansubnetmask>
The WAN IP address and WAN subnet mask of a IPOE or IPoA interface.
This option should only be used for a IPOE or IPoA interface. PPPoE and PPPoA interface always receives the IP address, submask and DNS addresses automatically from the ISP through the PPP protocol. If this option is used and the dhcpclient value is "enable", DHCP client will be disabled on this interface. In general principle, static configuration overwrites dynamically assigned data.

<wanipaddress> - the WAN IP address.
Valid values: any valid IP address.

<wansubnetmask> - the WAN subnet mask.
Valid values: 0.0.0.1 - 255.255.255.255.

--dhcpclient <enable|disable>
The DHCP client state of the IPOE interface. This option is only valid to a IPOE interface. DHCP client is not supported over any other type of WAN interface.
Valid values: enable or disable.
Default value: enable.

Options for the wan delete (interface/service) command

Usage:
wan delete interface atm <port.vpi.vci>
wan delete interface ptm <port> --priority <normal|high|both>
wan delete service Layer3InterfaceName

Note: A WAN service need to be deleted first before a corresponding wan interface can be deleted.

Options for the show (interface) command
wan show [<port.vpi.vci>]
<port.vpi.vci>
port: port number of the VCC to add.
Valid values: 0.
vpi: VPI of the VCC to add.

Valid values: 0 - 255.
Default value: 0
vci: VCI of the VCC to add.
Valid values: 32 - 65535.
Default value: 35

If <port.vpi.vci> is obmitted then it will display summary state of all existing WAN services.

Options for the --help command
wan –help [<bridge|pppoe|pppoa|ipoe|ipoa>]
<bridge|pppoe|pppoa|ipoe|ipoa>
Display only valid options for the specified protocol.
If it is obmitted then the help for all protocols is diplayed.

EXAMPLES

° Configure a PPPoE interface
ATM interface:
To add:
> wan add interface atm 0.0.35 --linktype eoa
> wan add service atm0/0.0.35 --protocol pppoe --username script --password script --firewall > enable --nat enable --service ppp --dnsifname ppp0 --gatewayifname ppp0
To delete:
> wan delete service ppp0
> wandelete interface atm 0.0.35
PTM interface:
To add:
> wan add interface ptm 0 --priority normal
> wan add service ptm0/0 --protocol pppoe --username username --password password --service ppp --dnsifname ppp0 --gatewayifname ppp0
To delete:
> wan delete service ptm0
> wan delete interface ptm 0 --priority normal

° Configure a IPOE configuration using DHCP client
ATM interface:
To add:
> wan add interface atm 0.2.35 --linktype eoa
> wan add service atm0/0.2.35 --protocol ipoe --firewall enable --nat enable --dhcpclient enable --dnsifname atm0 --gatewayifname atm0
To delete:
> wan delete service atm0
> wan delete interface atm 0.2.35
PTM interface:
To add:
> wan add interface ptm 0 --priority normal

> wan add service ptm0/0 --protocol ipoe --dhcpclient enable --nat enable --firewall enable --dnsifname ptm0 --gatewayifname ptm0

To delete:

> wan delete service ptm0
> wan delete interface ptm 0 --priority normal

° Configure a bridge configuration

ATM interface:

To add:

> wan add interface atm 0.2.35 --linktype eoa
> wan add service atm0/0.2.35 --protocol bridge

To delete:

> wan delete service atm0
> wan delete interface atm 0.2.35

PTM interface:

> wan add interface ptm 0 --priority normal
> wan add service ptm0/0 --protocol bridge

To delete:

> wan delete service ptm0
> wan delete interface ptm 0 --priority normal

° Configure a IPoA configuration with fireware and NAT

ATM interface only:

To add:

> wan add interface atm 0.0.40 --linktype ipoa --encap llc
> wan add service ipoa0/0.0.40 --protocol ipoa --ipaddr 10.6.33.229 255.255.255.192 --nat enable --firewall enable
dns config static 10.6.33.1
Note: Normally, need to config a static dns ip address for this wan connection to work

To delete:

> wan delete service ipoa0
> wan delete interface atm 0.0.40

° Configure a PPPoA interface

ATM interface only:

To add:

> wan add interface atm 0.0.36 --linktype pppoa --encap vcmux
> wan add service atm0/0.0.36 --protocol pppoa --username script --password script --dnsifname pppoa0 --gatewayifname pppoa0

To delete:

> wan delete service pppoa0
> wan delete interface atm 0.0.36

° Display all WAN interfaces

wan show (PTM):

VCC	Con. ID	Service Name	Interface Name	Proto.	IGMP	Status	IP address
N/A	0	ipoe_0_0_1	ptm0	IPoE	Disable	Connected	10.6.37.15

Wan show (ATM):
All services associated with atm2 is activated.

VCC	Con. ID	Service Name	Interface Name	Proto.	IGMP	Status	IP address
0.0.35	0	pppoe_0_0_35	ppp0	PPPoE	Disable	Connected	10.6.33.155
0.0.36	0	pppoa_0_0_36	pppoa1	PPPoA	Disable	Connected	10.6.33.156
0.2.35	0	ipoe_0_2_35	atm2	IPoE	Disable	Connected	10.6.33.197

° **Display help usage for bridge/ipoe/pppoe/ipoa/pppoa**

wan –help bridge
Usage: wan config <port.vpi.vci>
[--protocol <bridge|pppoe|pppoa|mer|ipoa>] [--encap <llc|vcmux>]
[--state <enable|disable>] [--service <servicename>]
wan delete <port.vpi.vci>
wan show [<port.vpi.vci>]
wan --help <bridge|pppoe|pppoa|ipoe|ipoa>

wan –help ipoe
Usage:
wan add service <L2interfacename> --protocol ipoe
[--firewall <enable|disable>] [--nat <enable|disable>]
[--igmp <enable|disable>]
[--ipaddr <wanipaddress> <wansubnetmask]
[--dhcpclient <enable|disable>]
[--gatewayifname <L2interfacename>] [--dnsifname <L2interfacename>]
wan delete interface atm <port.vpi.vci>
wan delete interface ptm <port> --priority <normal|high|both>
wan delete service L3IfName
wan show interface
wan show [<port.vpi.vci>]
wan --help <bridge|pppoe|pppoa|ipoe|ipoa>>

wan –help pppoe
Usage:
wan add service <L2interfacename> --protocol pppoe
[--firewall <enable|disable>] [--nat <enable|disable>]
[--igmp <enable|disable>]
[--username <username> --password <password>]
[--pppidletimeout <timeout>] [--pppipextension <disable|enable>]
[--gatewayifname <pppinterfacename>] [--dnsifname <pppinterfacename>]
wan delete interface atm <port.vpi.vci>
wan delete interface ptm <port> --priority <normal|high|both>

wan delete service L3IfName
wan show interface
wan show [<port.vpi.vci>]
wan --help <bridge|pppoe|pppoa|ipoe|ipoa>

wan –help ipoa
Usage:
wan add service <L2interfacename> --protocol ipoa
--ipaddr <wanipaddress> <wansubnetmask
[--service <servicename>]
[--firewall <enable|disable>] [--nat <enable|disable>]
[--igmp <enable|disable>]
wan delete interface atm <port.vpi.vci>
wan delete interface ptm <port> --priority <normal|high|both>
wan delete service L3IfName
wan show interface
wan show [<port.vpi.vci>]
wan --help <bridge|pppoe|pppoa|ipoe|ipoa>

wan –help pppoa
Usage:
wan add service <L2interfacename> --protocol pppoa
[--service <servicename>]
[--firewall <enable|disable>] [--nat <enable|disable>]
[--igmp <enable|disable>]
[--username <username> --password <password>]
[--pppidletimeout <timeout>] [--pppipextension <disable|enable>]
wan delete interface atm <port.vpi.vci>
wan delete interface ptm <port> --priority <normal|high|both>
wan delete service L3IfName
wan show interface
wan show [<port.vpi.vci>]
wan --help <bridge|pppoe|pppoa|ipoe|ipoa>

EXIT

NAME

exit – log out current user console

SYNOPSIS

exit

DESCRIPTION

exit is used to log out current user console. After exit command is executed, a bye bye message appears. Hit return to see a new Login prompt.

EXAMPLES

° Logout user admin.
Login: admin
Password:

> exit
Bye bye. Have a nice day!!!

QUIT

NAME

quit – log out current user console

SYNOPSIS

quit

DESCRIPTION

quit is used to log out current user console. After quit command is executed, a bye bye message appears. Hit return to see a new Login prompt.

EXAMPLES

° Logout user admin.
Login: admin
Password:

> quit
Bye bye. Have a nice day!!!

SYSLOG

NAME

syslog – display the general system log information

SYNOPSIS

syslog

DESCRIPTION

syslog can displays or delete the log message and messages is create by system or application debug mode then the messages contains errors and alerts.

COMMANDS

syslog dump
syslog clear
syslog help

OPTIONS

None.

EXAMPLES

° Display the system log information
> syslog

DUMPMDM

NAME

dumpmdm – displays the system's date model configuration

SYNOPSIS

dumpmdm

DESCRIPTION

dumpcfg displays the system's date model configuration which is in text XML format and dump entire contents of the MDM, this is not what would be written to the config flash.

COMMANDS

None.

OPTIONS

None.

EXAMPLES

° Display the system's date model configuration not saved in flash memory.
> dumpmdm

DUMPSYSINFO

NAME

dumpsysinfo – displays all system's configuration information.

SYNOPSIS

dumpsysinfo

DESCRIPTION

dumpsysinfo will displays all system's configuration information including "MDM","config","sysinfo","psp","CPE","version","network","Wireless","kernel","memory","modules".

COMMANDS

None.

OPTIONS

None.

EXAMPLES

° Display the system's date model configuration not saved in flash memory.
> dumpsysinfo

UPTIME

NAME

uptime - Tell how long the system has been running.

SYNOPSIS

uptime

DESCRIPTION

uptime gives a one line display of the following information. The current time, how long the system has been running, how many users are currently logged on, and the system load averages for the past 1, 5, and 15 minutes.

This is the same information contained in the header line displayed by w(1).

System load averages is the average number of processes that are either in a runnable or uninterruptable state. A process in a runnable state is either using the CPU or waiting to use the CPU. A process in uninterruptable state is waiting for some I/O access, eg waiting for disk. The averages are taken over the three time intervals. Load averages are not normalized for the number of CPUs in a system, so a load average of 1 means a single CPU system is loaded all the time while on a 4 CPU system it means it was idle 75% of the time.

EXAMPLES

FILES
> cat /var/run/utmp
information about who is currently logged on

SAVE_DEFAULT

NAME

save_default – This command can be use in “save”,”clean” the customer settings.

SYNOPSIS

save_default

DESCRIPTION

save_default can be use in “save”,”clean” the customer settings, when customer used any command in CLI mode to configure CEP then use save_default command to save or restore to default.

COMMANDS

save_default save
save_default clean
save_default show

OPTIONS

None.

EXAMPLES

° Display the system log information
> save_default show

° Save the settings information
> save_default save

° Delete the settings information
> save_default clean

CELLD

NAME

celld –Celld is used to handle the 3G process. after the 3G dongle is inserted or disconnected, celld will get the message and celld will decide if 3G needs to be dial up or down, celld will communicate with pppd by sending CMS message to pppd, and after pppd is dial up or down, it will send CMS message back to celld to let celld know the 3G status.

SYNOPSIS

celld

DESCRIPTION

celld is used to handle the 3G process. after the 3G dongle is inserted or disconnected, celld will get the message and celld will decide if 3G needs to be dial up or down, celld will communicate with pppd by sending CMS message to pppd, and after pppd is dial up or down, it will send CMS message back to celld to let celld know the 3G status.

Cell daemon (celld) will fork two child operator loop and scheduler loop. The job of operator loop is handling events and dialing up ppp connection.

Scheduler loop checks 3G connection for nail-up and the signals with all slots every 1 minute.

Cell daemon can handle all of cellular events and dial to WAN.

COMMANDS

celld <loglevel>
loglevel is one of "Error", "Notice", or "Debug"

celld checkingTime <time>

celld powerUpTimeout <time>**OPTIONS**
None.

EXAMPLES

° Setting the celld debug level
> celld loglevel Error

° Setting the celld check time
> celld checkingTime 5

°Setting the celld power up timeout
> celld powerUpTimeout 5

XDSLCLI

NAME

xdslcli – allow a user to control the Broadcom BCM63xx ADSL driver

SYNOPSIS

xdslcli start [options]
xdslcli stop
xdslcli connection [options]
xdslcli configure [options]
xdslcli bert [options]
xdslcli info [options]
xdslcli afelb [options]
xdslcli qlnmntr [options]
xdslcli inm [options]
xdslcli diag [options]
xdslcli snrclamp [options]
xdslcli info [options]
xdslcli nlnm [options]
xdslcli --version
xdslcli–help

DESCRIPTION

xdslcli is used to control the Broadcom BCM63xx XDSL driver. This utility can:

° start and stop the driver
° activate, deactivate and control XDSL connection
° configure XDSL driver and connection parameters
° start, stop and monitor Bit Error Rate Test (BERT)

° display status and information of XDSL driver and connection
° display statistics for XDSL driver and connection

All information is displayed to stdout. A program or shell script that calls this utility can redirect stdout

COMMANDS

start:
Starts the Broadcom XDSL driver. This command calls BcmXdsl_Initialize to initialize the driver and BcmXdsl_ConnectionStart to start XDSL PHY connection if [--up] is specified. This command takes parameters that can specify various connection modes. These parameters are the same as in "configure" command.

stop:
Stops XDSL connection and Broadcom XDSL driver. This command calls BcmXdsl_Uninitialize.

configure :
Configures XDSL connection parameters. These command takes the same parameters as "start" command except for [--up] . This command will cause XDSL PHY to retrain.

connection :
Controls XDSL connection modes, such as up and down and several special test modes. This command can also be used to specify tone selection for upstream and downstream..

bert :
Controls XDSL bit error rate test (BERT). This command can start/stop
the BERT test and monitor its results.

afelb :
Starts, sets control parameters such as test time, signal type for AFE loopback test.

qlnmntr :
Starts, sets control parameters such as total monitor time,reporting frequency for QLN monitoring test mode.

inm :
To configure inm parameters and Start inm, Stop monitoring, and show inm results

info :
Display information about XDSL driver and PHY status.

diag :
Log statuses locally. It is useful when DslDiags is not available

snrclamp :

Command to configure shape of snrclamping mask.

info :
About the xdsl link information.

nlnm :
To show the “NonLinearityFlag”,“NumberOfAffectedBins” and “Echo-to-Noise Ratio (ENR)”.

--version:
Show current version.

--help:
Show the xdsl support commands.

OPTIONS

Options for the start and configure commands :

xdsl start [--up] [--mod <a|d|l|t|2|p|e|m|v>] [--lpair <(i)nner|(o)uter>]
[--trellis <on|off>] [--snr <snrQ4>] [--bitswap <on|off>][--sesdrop <on|off>][--sra <on|off>][--CoMinMgn<on|off>][--i24k<on|off>][--phyReXmt <0xBitMap-UsDs>][--TpsTc <0xBitMap-AvPvAaPa>][--profile <0x00 – 0x7F> | <”8a |8b |8c |8d |12a |12b |17a |30a”>] [--us0 <on|off>][--forceJ43 <on|off>][--toggleJ43B43 <on|off>]

or for AnnexC:
[--bm <(D)BM|(F)BM>] [--ccw]
xdsl configure [--mod <a|d|l|t|2|p|e|m>] [--lpair <(i)nner|(o)uter>]
[--trellis <on|off>] [--snr <snrQ4>] [--bitswap <on|off>]

or for AnnexC:
[--bm <(D)BM|(F)BM>] [--ccw]

--up :
Will call BcmxdsI_ConnectionStart to start XDSL PHY connection
--mod <a|d|l|t|2|p|e|m|v> :
a – all modulations allowed.
d – G.DMT enabled
l – G.Lite enabled
t – T1.413 enabled
2 – XDSL2 (G.992.3) enabled
p – XDSL2+ (G.992.5) enabled
e – Reach extended XDSL (AnnexL) enabled
m – Double upstream (Annex M) enabled
v – VDSL2 enabled
More than one mode letter can be given to enable several modes.

--lpair <(i)nner|(o)uter>:
(i)nner –inner loop pair is used
(o)uter – outer loop pair is used

--trellis <on|off> :
Enabled or disables trellis coding

--snr <snrQ4> :
Specify SNR margin as Q4 number

--bitswap <on|off> :
Enables or disables XDSL bitswap

--sesdrop <on|off>:
Enables or disables SESdrop

--sra <on|off> :
Enables or disables SRA

--CoMinMgn <on|off> :
Enables or disables Co Minimum Margin Drop

--i24k <on|off> :
Enables or disables i24k

[--phyReXmt <0xBitMap-UsDs>] :
Enables or disables phy Re-transmit feature in US and DS

--TpsTc <0xBitMap-AvPvAaPa> :
Enable or disable ATM and PTM modes in VDSL (AvPv) and Xdsl (AaPa)

--profile <0x00 – 0x7F> | <"8a |8b |8c |8d |12a |12b |17a 30a"> :
VDSL profile selection. More than one profile to enable several profiles

[--us0 <on|off>] :
Enable/disable UpStream0 in VDSL2 mode

--forceJ43 <on|off> :
Enable or disable forceJ43

--toggleJ43B43 <on|off> :
Enable or disable toggleJ43B43
The following options apply to AnnexC only

--bm <(D)BM|(F)BM> :

(D)BM - DBM mode
(F)BM - FBM mode

--ccw :
Enables special CRC workaround for Centillium modems

Options for the stop command

xdsl stop :

Options for the connection command

xdsl connection [--up] [--down] [--loopback] [--reverb]
[--medley] [--noretrain] [--L3][--diagMode][--Lo]
[--tones <xmtStart xmtNum xmtMap rcvStart rcvNum rcvMap>]
[--normal][--freezeReverb][--freezeMedley]

--up :
Starts XDSL connection in normal mode
--down :
Puts XDSL PHY in idle mode

--loopback :
Puts XDSL PHY in ATM cell loopback mode. In this modem XDSL PHY will not try to establish connection .

--reverb :
Puts XDSL PHY in test mode in which it only sends REVERB signal

--medley :
Puts XDSL PHY in test mode in which it only sends MEDLEY signal

--noretrain :
In this mode XDSL PHY will be trying to establish connection as in normal mode, but once the connection is up it will not retrain even if the signal is lost.

--L3 :
Puts XDSL modem in L3 power state

--diagmode :
Puts modem in diagnostic test mode

--L0 :
Puts modem in L0 mode

--tones :

Specifies tones which can be used by XDSL PHY.
Tone ranges should be given separated by commas. For example, to select tones 0 to 100 and 200 to 300 use:

--tones 0-100,200-300 :
Tone configuration command does not cause XDSL PHY retrain automatically. To experience the effect of this command XDSL connection must be restarted using for example xdsl connection –down followed by xdsl connection –up command.
Tone selection is not affected by xdsl configure commands and has to be changed explicitly.

--normal :
Puts modem in Normal mode

--freezeReverb :
Puts modem in freeze reverb mode

--freezeMedley :
Puts modem in freeze medley mode

Options for the bert command
xdsl bert [--start <seconds>] [--stop] [--show]

--start :
Starts Bit Error Rate Test (BERT)
seconds – duration of BERT test in seconds

--stop :
Stops the BERT test.

--show :
Display BERT results to stdout in the following format:
BERT Status = [NOT] RUNNING
BERT Total Time = 10 sec
BERT Elapsed Time = 10 sec
BERT Bits Tested = 0x00000000045A6380 bits
BERT Err Bits = 0x0000000000000002 bits

BERT Status indicates whether or not the BERT test is currently running. It can be used to monitor when the BERT test is complete after it is started. The numbers of total bit tested and errorred bits are displayed as 64 bit hexadecimal numbers.

Options for the info command
xdsl info [--state] [--show] [--stats] [--SNR] [--QLN] [--Hlog] [--Hlin] [--HlinS] [--Bits][--pbParams][--linediag][--linediag1][--reset][--vendor][--cfg]

--state :

Displays the shortest message about XDSL PHY connection state, e.g.
xdsl: XDSL driver and PHY status
Status: Showtime Channel: FAST, Upstream rate = 8064 Kbps, Downstream rate = 1024 Kbps

--show :
Displays more statistics about XDSL connection.

--stats :
Displays all available statistics about XDSL connection.

--SNR :
Displays signal to noise ratio (SNR) per tone in dB

--QLN :
Displays Quiet Line Noise (QLN) per tone in dBm/Hz

--Hlog :
Displays Hlog (Channel Response) per tone in dB

--Hlin :
Displays Hlin (Channel Respose linear)

--HlinS :
Displays Hlin Scaled and corresponding Scaling Factors

--Bits :
Display Bit Allocation per tone

--pbParams :
Displays Per Band Parameters in VDSL2 mode. This includes Band plan information, Net Data rate, TxPwr, per band LATN, SATN, SNRM.

--linediag :
Used in XDSL mode. Displays Line Diagnostic Results for XDSL mode including aggregate PMD parameters such as SNRM, LATN, SATN, TxPwr, ATTNDR and per tone SNR, QLN, Hlog, HlinS

LOGDEST

NAME

logdest – Can be displays a application debug level

SYNOPSIS

logdest

DESCRIPTION

logdest will displays a application debug level, where appname is one of: httpd, http_ssl, tr69c, smd, ssk, telnetd, sshd, consoled, upnp, dnsproxy
loglevel is "Standard Error", "Syslog" or "Telnet".

COMMANDS

usage:
logdest get appname
logdest set appname logdest

OPTIONS

None.

EXAMPLES

° Display the httpd debug level information.
> logdest get httpd

DNS

NAME

dns – configure or show the default dns server

SYNOPSIS

dns config auto
[<interface(s) sperated by ',' with NO SPACE. eg. ppp0 OR for multiple interfaces ppp0,ppp1>]
dns config static
[<primary DNS> [<secondary DNS>]]
dns show
dns --help

DESCRIPTION

The primary use of dns command is to set up a static default dns server or static dns, or to retrieve the default dns information automatically from remote ISPs through DHCP protocol for a IPOE interface or through PPP protocol for a PPPoA or PPPoE interface. A PPPoA or PPPoE interface will always retrieve remote gateway information automatically. This command will save configuration to the Permanent Storage.

If the default dns is configured with the "auto" option, the system needs to be rebooted before it can take effect. If there are multiple WAN interfaces with DHCP or PPP enabled, multiple remote gateway addresses may be received and the first received will be chosen to be the default dns.

OPTIONS

None

EXAMPLES

o Set up a static default dns to WAN interface ptm0.1. It should be effective right away and is saved to Permanent Storage on the flash memory.

> dns config auto ptm0.1

o To show current dns get by Which WAN interface.

> dns show

VIRTUALSERVER

NAME

virtualserver – enable or disable and show the default virtual server rule

SYNOPSIS

usage:

virtualserver show
virtualserver enable|disable num

DESCRIPTION

The virtualserver command can be used to cortrol port mapping table rule “enable”,”disable” the port mapping table is add by ZyXEL Gui → NAT → application field.

Port mapping table : This table MUST contain all NAT port mappings associated with this connection, including static and dynamic port mappings programmatically created via local control protocol, such as UPnP.This table MUST NOT contain dynamic NAT binding entries associated with the normal operation of NAT. At most one entry in an instance of this table can exist with all of the same values for RemoteHost, ExternalPort, and PortMappingProtocol. If the ACS attempts to set the parameters of an existing entry such that this requirement would be violated, the CPE MUST reject the request.

OPTIONS
None

EXAMPLES

o Display the current Port mapping rule(virtual server)
> virtualserver show

o Disable the current Port mapping rule(virtual server)
> virtualserver disable 1-xxx

WLCTL

NAME

wlctl –This command available in the Broadcom WLAN client utility.
(refer by WLTool-80211-TI300-R.pdf)

SYNOPSIS

The command syntax is as follows:
wlctl [-a|i <adapter>] [-h] [-d|u|x] <command> [arguments]

usage:
-h is this message and command descriptions.
-h [cmd] is the command description for cmd.
-a, -i is the adapter name or number.
-d is the output format signed integer.
-u is the output format unsigned integer.
-x is the output format hexadecimal.

The [h,u] option is used only to print out the Help topic, and the [a|] option is needed only if you have multiple adapters.

DESCRIPTION

Before you can begin using the utility to start a build, you must have the following tools available/installed on your Linux build machine:

- New version of the Broadcom client driver Bills 4.10.47 or later
- The latest Broadcom BCM43XX WLAN adapter
- WindowsR or LinuxRoperating system

OPTIONS

ver
Returns the version information of the utility.

Syntax:
> wlctl ver
Example: 4.150 RC6.0 wl0: May 8 2007 20:35:49 version 4.150.6.0

cmds
Generates a short list of available commands.

Syntax:
> wlctl cmds
Example:
a_rate counters nvset set_pmk
a_mrate csscantimer nvget scan
ap closed nvram_get spect
atten closednet noise scanresults

list
Lists all installed wireless adapters.

Syntax:
> wlctl list
Example:
1: wl1 MAC: 00:90:4B:7A:7A:AC

xlist
Lists all installed network adapters.

Syntax:
> wlctl xlist
Example:
0: ??0 802.3 0035 {0159A4F2-4EC8-4F75-8DB8-A74547B9D1A5} MAC:
00:0F:1F:CE:91:AB
1: wl1 wireless 0012 {2611C167-BB4F-40FA-A6A7-890348F9E104} MAC:
00:90:4B:7A:7A:AC

join
Joins a specified network.

Syntax:
> join <name|ssid> [key xxxxx] [imode bss|ibss] [amode
open|shared|auto|wpa|wpapsk|wpanone|wpa2|wpa2psk]

Example: join Broadcom imode infra amode open

If the AP is not configured with Wired Equivalent Privacy (WEP) security, no WEP key is required. Otherwise, specify either
wep xxxx

-or
wepkey xxxx

The amode or authentication mode choices are open or shared.

up

Reinitializes and marks the adapter up (operational).
Syntax:
> wlctl up

This command makes the interface operational. It does all the necessary initialization to bring up the interface. Some of the tasks associated with this command are:

- Configure PCI/PCMCIA here to allow manufacturer hot-swap: down, hot-swap (chip power cycle), up.
- Read the PHY revision.
- Set the soft interrupt mask.
- Bring the interface up in each frequency band.
- Initialize the default rate, channel, and type-dependent information.
- Initialize the basic rate look-up.
- Save, suspend, disable interrupts, and turn the radio off.
- Start a one-second watchdog.
- Start the activity LED timer.

down
Resets and marks the adapter down (disabled).

Syntax:
> wlctl down

This command disables the interface. Some of the tasks associated with this command are:

- Disassociate.
- Turn the radio off.
- Cancel the watchdog timer.
- Cancel the activity timer.
- Cancel any active scan.
- Cancel any IBSS timer.
- Cancel any association timer.
- Flush the TX control queue.
- Reclaim the SCBS.
- If an AP, flush PS-POLL response (MSDU) packet queues and also flush PSPOLL.
- Response (MPDU) packet queues.

- Restore to a known good default state.

out

Marks the adapter down, but does not reset the hardware (disabled).

Syntax:
> wlctl out

On dual-band cards, the card must be band-locked before use.

restart

Restarts the driver.

Syntax:
> wlctl restart

The driver must already be down (you should do a wlctl down before restarting the driver). Otherwise, the following message is returned:

> wlctl restart

radio

Turns the radio on or off using a software switch.

Syntax:
> wlctl radio on/off

Typing wlctl radio returns the current state of the radio. For example, 0x0000 when ON or 0x0005 when OFF, and so on.

eventing

Set/get the 128-bit hexadecimal filter bitmask for MAC event reporting up to application layer.

event_msgs

Sets/gets the 128-bit hexadecimal filter bit mask for MAC event reporting (through packet indications).
Default: 0
Takes a 128-bit vector, which selectively enables or disables the reporting of MAC events through the packet data path. For example, setting bit locations 0 and 3 would enable the reporting of WLC_E_SET_SSID and WLC_E_AUTH event
messages, and so on.

Syntax:

> wlctl event_msgs

Event messages bit vector:
WLC_E_SET_SSID 0 /* indicates status of set SSID */
WLC_E_JOIN 1 /* differentiates join IBSS from found (WLC_E_START) IBSS */
WLC_E_START 2 /* STA founded an IBSS or AP started a BSS */
WLC_E_AUTH 3 /* 802.11 AUTH request */

counters

Returns the driver counter values.

Syntax:
> wlctl counters

Example return:
txframe 92289 txbyte 7637260 txretrans 830936 txerror 0 rxframe 90957 rxbyte 665 3890 rxerror 17
txprshort 4398 txdmawar 0 txnobuf 0 txnoassoc 0 txchit 116 txcmiss 92173
reset 14926 txserr 0 txphyerr 1 txphycrs 0 txfail 689
d11_txfrag 509883 d11_txmulti 12 d11_txretry 267653 d11_txretrie 266858
d11_txrts 0 d11_txnocts 0 d11_txnoack 829661 d11_txfrmsnt 284515
rxcrc 3824120 rxnobuf 0 rxnondata 0 rxbadds 0 rxbadcm 0 rxdup 1017 rxfragerr 0
rxrunt 14 rxgiant 0 rxnoscb 0 rxbadproto 0 rxbadsrcmac 3

staname

Gets/sets the station name.

Syntax:
> wlctl staname

Returns your machine name. If the STA name has not been set by the operating system, a get staname command returns a NULL string. The maximum STA name length (set/get) is 15 bytes.

apname

Gets the current associated AP name. If the client is not associated to an AP, a stale AP name might be returned. The maximum AP name length is 15 bytes.

Syntax:
> wlctl apname

dump

Prints the driver software state and chip registers to STDOUT.

Syntax:
> wlctl dump

Example return:
wl0: May 8 2007 20:35:49 version 4.150.6.0
……
……

srdump

Prints the contents of SPROM to STDOUT (dumps 64 16-bit words of the SROM present on-board). For details of the individual locations, check the Broadcom SROM memory map for that specific design. Memory maps are different, depending on the type of the design (for example, Mini PCI, Cardbus, PCMCIA, and so on).

Syntax:
> wlctl srdump

Example return:
0x3001 0x0000 0x046d 0x14e4 0x4329 0x8000 0x0002 0x0000
srom[008]: 0x1000 0x1800 0x0000 0x0000 0xffff 0xffff 0xffff 0xffff
……

clk

set board clock state. return error for set_clk attempt if the driver is not down
0: clock off
1: clock on

srclear

Clears first 'len' bytes of the srom, len in decimal or hex
Usage: srclear <len>

srwrite

Write the srom: srwrite byteoffset value

srcrc

Get the CRC for input binary file

ciswrite

Write specified <file> to the SDIO CIS source (either SROM or OTP)

cisupdate

Write a hex byte stream to specified byte offset to the CIS source (either SROM or OTP)
--preview
option allows you to review the update without committing it
<byte offset> <hex byte stream> [--preview]

cisdump

Display the content of the SDIO CIS source
-b <file> -- also write raw bytes to <file>
<len> -- optional count of bytes to display (must be even)

cis_source
Display which source is used for the SDIO CIS

cisconvert
Print CIS tuple for given name=value pair

rdvar
Read a named variable to the srom

wrvar
Write a named variable to the srom

nvram_source
Display which source is used for nvram

nvram_dump
print nvram variables to stdout

nvset
set an nvram variable
name=value (no spaces around '=')

nvget
get the value of an nvram variable

nvram_get
get the value of an nvram variable

revinfo
get hardware revision information

customvar1
print the value of customvar1 in hex format

msglevel
set driver console debugging message bitvector
type 'wlctl msglevel ?' for values

phymsglevel
set phy debugging message bitvector
type 'wlctl phymsglevel ?' for values

PM
set driver power management mode:
0: CAM (constantly awake)

1: PS (power-save)
2: FAST PS mode

wake
set driver power-save mode sleep state:
0: core-managed
1: awake

promisc
set promiscuous mode ethernet address reception
0 - disable
1 - enable

monitor
set monitor mode
0 - disable
1 - enable active monitor mode (interface still operates)

frag
Deprecated. Use fragthresh.

rts
Deprecated. Use rtsthresh.

cwmin
Set the cwmin. (integer [1, 255])

cwmax
Set the cwmax. (integer [256, 2047])

srl
Set the short retry limit. (integer [1, 255])

lrl
Set the long retry limit. (integer [1, 255])

rate
force a fixed rate:
valid values for 802.11a are (6, 9, 12, 18, 24, 36, 48, 54)
valid values for 802.11b are (1, 2, 5.5, 11)
valid values for 802.11g are (1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54)
-1 (default) means automatically determine the best rate

mrate
force a fixed multicast rate:

valid values for 802.11a are (6, 9, 12, 18, 24, 36, 48, 54)
valid values for 802.11b are (1, 2, 5.5, 11)
valid values for 802.11g are (1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54)
-1 (default) means automatically determine the best rate

a_rate force a fixed rate for the A PHY:
valid values for 802.11a are (6, 9, 12, 18, 24, 36, 48, 54)
-1 (default) means automatically determine the best rate

a_mrate force a fixed multicast rate for the A PHY:
valid values for 802.11a are (6, 9, 12, 18, 24, 36, 48, 54)
-1 (default) means automatically determine the best rate

bg_rate force a fixed rate for the B/G PHY:
valid values for 802.11b are (1, 2, 5.5, 11)
valid values for 802.11g are (1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54)
-1 (default) means automatically determine the best rate

bg_mrate
force a fixed multicast rate for the B/G PHY:
valid values for 802.11b are (1, 2, 5.5, 11)
valid values for 802.11g are (1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54)
-1 (default) means automatically determine the best rate

infra
Set Infrastructure mode: 0 (IBSS) or 1 (Infra BSS)

ap
Set AP mode: 0 (STA) or 1 (AP)

bssid
Get the BSSID value, error if STA and not associated

bssmax
get number of BSSes

channel
Set the channel:
valid channels for 802.11b/g (2.4GHz band) are 1 through 14
valid channels for 802.11a (5 GHz band) are:
36, 40, 44, 48, 52, 56, 60, 64,
100, 104, 108, 112, 116,120, 124, 128, 132, 136, 140,
149, 153, 157, 161,
184, 188, 192, 196, 200, 204, 208, 212, 216

cur_mcsset

Get the current mcs set

chanspecs
Get all the valid chanspecs (default: all within current locale):
-b band (5(a) or 2(b/g))
-w bandwidth, 10,20 or 40
[-c country_abbrev]

chanspec
Set <channel>[a,b][n][u,l]
channel number (0-224)
band a=5G, b=2G, default to 2G if channel <= 14
bandwidth, n=10, none for 20 & 40
ctl sideband, l=lower, u=upper

OR Set channel with legacy format:
-c channel number (0-224)
-b band (5(a) or 2(b/g))
-w bandwidth, 10,20 or 40
-s ctl sideband, -1=lower, 0=none, 1=upper

dfs_channel_forced
Set <channel>[a,b][n][u,l]
channel number (0-224)
band a=5G, b=2G, default to 2G if channel <= 14
bandwidth, n=10, non for 20 & 40
ctl sideband, l=lower, u=upper

tssi
Get the tssi value from radio

txpwr
Set tx power in milliwatts. Range [1, 84].

txpwr1
Set tx power in in various units. Choose one of (default: dbm):
-d dbm units
-q quarter dbm units
-m milliwatt units

Can be combined with:
-o turn on override to disable regulatory and other limitations Use wlctl txpwr -1 to restore defaults

txpathpwr
Turn the tx path power on or off on 2050 radios

txpwrlimit
Return current tx power limit

powerindex
Set the transmit power for A band(0-63).
-1 - default value

atten
Set the transmit attenuation for B band. Args: bb radio txctl1.
auto to revert to automatic control
manual to supspend automatic control

phyreg
Get/Set a phy register:
offset [value] [band]

radioreg
Get/Set a radio register:
offset [value] [band/core]
HTPHY:
Get a radio register: wlctl radioreg [offset] [cr0/cr1/cr2]
Set a radio register: wlctl radioreg [offset] [value] [cr0/cr1/cr2/all]

ucflags
Get/Set ucode flags 1, 2, 3(16 bits each)
offset [value] [band]

shmem
Get/Set a shared memory location:
offset [value] [band]

macreg
Get/Set any mac registers(include IHR and SB):
macreg offset size[2,4] [value] [band]

ucantdiv
Enable/disable ucode antenna diversity (1/0 or on/off)

gpioout
Set any GPIO pins to any value. Use with caution as GPIOs would be assigned to chipcommon
Usage: gpiomask gpioval

devpath print device path

pllreset

set the pll to reset value
Usage: wlctl pllreset

pcieserdesreg
g/set SERDES registers: dev offset [val]

ampdu_activate_test
actiate

ampdu_tid
enable/disable per-tid ampdu; usage: wlctl ampdu_tid <tid> [0/1]

ampdu_retry_limit_tid
Set per-tid ampdu retry limit; usage: wlctl ampdu_retry_limit_tid <tid> [0~31]

ampdu_rr_retry_limit_tid
Set per-tid ampdu regular rate retry limit; usage: wlctl ampdu_rr_retry_limit_tid <tid> [0~31]

ampdu_send_addba
send addba to specified ea-tid; usage: wlctl ampdu_send_addba <tid> <ea>

ampdu_send_delba
send delba to specified ea-tid; usage: wlctl ampdu_send_delba <tid> <ea>

ampdu_clear_dump
clear ampdu counters

dpt_deny
adds/removes ea to dpt deny list
usage: wlctl dpt_deny <add,remove> <ea>

dpt_endpoint
creates/updates/deletes dpt endpoint for ea
usage: wlctl dpt_endpoint <create, update, delete> <ea>

dpt_pmk
sets DPT pre-shared key

dpt_fname
sets/gets DPT friendly name

dpt_list
gets status of all dpt peers

actframe
Send a Vendor specific Action frame to a channel

usage: wlctl actframe <Dest Mac Addr> <data> channel dwell-time <BSSID>

antdiv
Set antenna diversity for rx
0 - force use of antenna 0
1 - force use of antenna 1
3 - automatic selection of antenna diversity

txant
Set the transmit antenna
0 - force use of antenna 0
1 - force use of antenna 1
3 - use the RX antenna selection that was in force during
the most recently received good PLCP header

plcphdr
Set the plcp header.
"long" or "auto" or "debug"

phytype
Get phy type

rateparam
set driver rate selection tunables
arg 1: tunable id
arg 2: tunable value

wepstatus
Set or Get WEP status
wepstatus [on|off]

primary_key
Set or get index of primary key

addwep
Set an encryption key. The key must be 5, 13 or 16 bytes long, or
10, 26, 32, or 64 hex digits long. The encryption algorithm is
automatically selected based on the key size. keytype is accepted
only when key length is 16 bytes/32 hex digits and specifies
whether AES-OCB or AES-CCM encryption is used. Default is ccm.
WAPI is selected if key len is 32 and arguments contain wapi.
addwep <keyindex> <keydata> [ocb | ccm | wapi] [notx] [xx:xx:xx:xx:xx:xx]

rmwep
Remove the encryption key at the specified key index.

keys
Prints a list of the current WEP keys

tsc
Print Tx Sequence Couter for key at specified key index.

wsec_test
Generate wsec errors
wsec_test <test_type> <keyindex|xx:xx:xx:xx:xx:xx>
type 'wlctl wsec_test ?' for test_types

tkip_countermeasures
Enable or disable TKIP countermeasures (TKIP-enabled AP only)
0 - disable
1 - enable

wsec_restrict
Drop unencrypted packets if WSEC is enabled
0 - disable
1 - enable

eap
restrict traffic to 802.1X packets until 802.1X authorization succeeds
0 - disable
1 - enable

cur_etheraddr
Get/set the current hw address

perm_etheraddr
Get the permanent address from NVRAM

authorize
restrict traffic to 802.1X packets until 802.1X authorization succeeds

deauthorize
do not restrict traffic to 802.1X packets until 802.1X authorization succeeds

deauthenticate
deauthenticate a STA from the AP with optional reason code (AP ONLY)

wsec
wireless security bit vector
1 - WEP enabled
2 - TKIP enabled
4 - AES enabled

8 - WSEC in software
0x80 - FIPS enabled
0x100 - WAPI enabled

auth
set/get 802.11 authentication type. 0 = OpenSystem, 1= SharedKey, 2=Open/Shared

wpa_auth
Bitvector of WPA authorization modes:
1 WPA-NONE
2 WPA-802.1X/WPA-Professional
4 WPA-PSK/WPA-Personal
64 WPA2-802.1X/WPA2-Professional
128 WPA2-PSK/WPA2-Personal
0 disable WPA

wpa_cap
set/get 802.11i RSN capabilities

set_pmk
Set passphrase for PMK in driver-resident supplicant.

scan
Initiate a scan.
Default to an active scan across all channels for any SSID.
Optional arg: SSIDs, list of [up to 10] SSIDs to scan (comma or space separated).
Options:
-s S, --ssid=S SSIDs to scan
-t ST, --scan_type=ST [active|passive|prohibit] scan type
--bss_type=BT [bss/infra|ibss/adhoc] bss type to scan
-b MAC, --bssid=MAC particular BSSID MAC address to scan, xx:xx:xx:xx:xx:xx
-n N, --nprobes=N number of probes per scanned channel
-a N, --active=N dwell time per channel for active scanning
-p N, --passive=N dwell time per channel for passive scanning
-h N, --home=N dwell time for the home channel between channel scans
-c L, --channels=L comma or space separated list of channels to scan

iscan_s
Initiate an incremental scan.
Default to an active scan across all channels for any SSID.
Optional arg: SSIDs, list of [up to 10] SSIDs to scan (comma or space separated).
Options:
-s S, --ssid=S SSIDs to scan
-t ST, --scan_type=ST [active|passive|prohibit] scan type
--bss_type=BT [bss/infra|ibss/adhoc] bss type to scan
-b MAC, --bssid=MAC particular BSSID MAC address to scan, xx:xx:xx:xx:xx:xx

```
        -n N, --nprobes=N          number of probes per scanned channel
        -a N, --active=N           dwell time per channel for active scanning
        -p N, --passive=N          dwell time per channel for passive scanning
        -h N, --home=N             dwell time for the home channel between channel scans
        -c L, --channels=L         comma or space separated list of channels to scan

iscan_c
        Continue an incremental scan.
        Default to an active scan across all channels for any SSID.
        Optional arg: SSIDs, list of [up to 10] SSIDs to scan (comma or space separated).
        Options:
        -s S, --ssid=S             SSIDs to scan
        -t ST, --scan_type=ST      [active|passive|prohibit] scan type
        --bss_type=BT              [bss/infra|ibss/adhoc] bss type to scan
        -b MAC, --bssid=MAC        particular BSSID MAC address to scan, xx:xx:xx:xx:xx:xx
        -n N, --nprobes=N          number of probes per scanned channel
        -a N, --active=N           dwell time per channel for active scanning
        -p N, --passive=N          dwell time per channel for passive scanning
        -h N, --home=N             dwell time for the home channel between channel scans
        -c L, --channels=L         comma or space separated list of channels to scan

scancache_clear
        clear the scan cache

escan
        Start an escan.
        Default to an active scan across all channels for any SSID.
        Optional arg: SSIDs, list of [up to 10] SSIDs to scan (comma or space separated).
        Options:
        -s S, --ssid=S             SSIDs to scan
        -t ST, --scan_type=ST      [active|passive|prohibit] scan type
        --bss_type=BT              [bss/infra|ibss/adhoc] bss type to scan
        -b MAC, --bssid=MAC        particular BSSID MAC address to scan, xx:xx:xx:xx:xx:xx
        -n N, --nprobes=N          number of probes per scanned channel
        -a N, --active=N           dwell time per channel for active scanning
        -p N, --passive=N          dwell time per channel for passive scanning
        -h N, --home=N             dwell time for the home channel between channel scans
        -c L, --channels=L         comma or space separated list of channels to scan

escanabort
        Abort an escan.
        Default to an active scan across all channels for any SSID.
        Optional arg: SSIDs, list of [up to 10] SSIDs to scan (comma or space separated).
        Options:
        -s S, --ssid=S             SSIDs to scan
        -t ST, --scan_type=ST      [active|passive|prohibit] scan type
```

```
        --bss_type=BT              [bss/infra|ibss/adhoc] bss type to scan
        -b MAC, --bssid=MAC        particular BSSID MAC address to scan, xx:xx:xx:xx:xx:xx
        -n N, --nprobes=N          number of probes per scanned channel
        -a N, --active=N           dwell time per channel for active scanning
        -p N, --passive=N          dwell time per channel for passive scanning
        -h N, --home=N             dwell time for the home channel between channel scans
        -c L, --channels=L         comma or space separated list of channels to scan
```

passive

Puts scan engine into passive mode

regulatory

Get/Set regulatory domain mode (802.11d). Driver must be down.

spect Get/Set 802.11h Spectrum Management mode.

0 - Off
1 - Loose interpretation of 11h spec - may join non-11h APs
2 - Strict interpretation of 11h spec - may not join non-11h APs
3 - Disable 11h and enable 11d
4 - Loose interpretation of 11h+d spec - may join non-11h APs

scanabort

Abort a scan.

scanresults

Return results from last scan.

iscanresults

Return results from last iscan. Specify a buflen (max 8188)
to artificially limit the size of the results buffer.
iscanresults [buflen]

assoc

Print information about current network association.
(also known as "status")

status

Print information about current network association.
(also known as "assoc")

disassoc

Disassociate from the current BSS/IBSS.

chanlist

Deprecated. Use channels.

channels
Return valid channels for the current settings.

channels_in_country
Return valid channels for the country specified.
Arg 1 is the country abbreviation
Arg 2 is the band(a or b)

curpower
Return current tx power settings.
-q (quiet): estimated power only.

curppr
Return current tx power per rate offset.

txinstpwr
Return tx power based on instant TSSI

scansuppress
Suppress all scans for testing.
0 - allow scans
1 - suppress scans

evm
Start an EVM test on the given channel, or stop EVM test.
Arg 1 is channel number 1-14, or "off" or 0 to stop the test.
Arg 2 is optional rate (1, 2, 5.5 or 11)

rateset
Returns or sets the supported and basic rateset, (b) indicates basic
With no args, returns the rateset. Args are
rateset "default" | "all" | <arbitrary rateset> -m <arbitrary mcsset>
default - driver defaults
all - all rates are basic rates
arbitrary rateset - list of rates
arbitrary mcsset - list of mcs rates octets, each bit representing corresponding mcs
List of rates are in Mbps and each rate is optionally followed
by "(b)" or "b" for a Basic rate. Example: 1(b) 2b 5.5 11
At least one rate must be Basic for a legal rateset.

roam_trigger
Get or Set the roam trigger RSSI threshold:
Get: roam_trigger [a|b]
Set: roam_trigger <integer> [a|b|all]

integer - 0: default
1: optimize bandwidth
2: optimize distance
[-1, -99]: dBm trigger value

roam_delta
Set the roam candidate qualification delta. roam_delta [integer [, a/b]]

roam_scan_period
Set the roam candidate qualification delta. (integer)

suprates
Returns or sets the 11g override for the supported rateset
With no args, returns the rateset. Args are a list of rates,
or 0 or -1 to specify an empty rateset to clear the override.
List of rates are in Mbps, example: 1 2 5.5 11

scan_channel_time
Get/Set scan channel time

scan_unassoc_time
Get/Set unassociated scan channel dwell time

scan_home_time
Get/Set scan home channel dwell time

scan_passive_time
Get/Set passive scan channel dwell time

scan_nprobes
Get/Set scan parameter for number of probes to use per channel scanned

prb_resp_timeout
Get/Set probe response timeout

channel_qa
Get last channel quality measurment

channel_qa_start
Start a channel quality measurment

country
Select Country Code for driver operational region
For simple country setting: wlctl country <country>
Where <country> is either a long name or country code from ISO 3166; for example "Germany" or "DE"

For a specific built-in country definition: wlctl country <built-in> [<advertised-country>]
Where <built-in> is a country country code followed by '/' and regulatory revision number.
For example, "US/3".
And where <advertised-country> is either a long name or country code from ISO 3166.
If <advertised-country> is omitted, it will be the same as the built-in country code.

Use 'wlctl country list [band(a or b)]' for the list of supported countries

country_ie_override
To set/get country ie

autocountry_default
Select Country Code for use with Auto Contry Discovery

join
Join a specified network SSID.
Usage: join <ssid> [key <0-3>:xxxxx] [imode bss|ibss] [amode open|shared|openshared|wpa|wpapsk|wpa2|wpa2psk|wpanone] [options]
Options:
-b MAC, --bssid=MAC BSSID (xx:xx:xx:xx:xx:xx) to scan and join
-c CL, --chanspecs=CL chanspecs (comma or space separated list)

ssid
Set or get a configuration's SSID.
wlctl ssid [-C num]|[--cfg=num] [<ssid>]
If the configuration index 'num' is not given, configuraion #0 is assumed and
setting will initiate an assoication attempt if in infrastructure mode,
or join/creation of an IBSS if in IBSS mode,
or creation of a BSS if in AP mode.

mac
Set or get the list of source MAC address matches.
wlctl mac xx:xx:xx:xx:xx:xx [xx:xx:xx:xx:xx:xx ...]
To Clear the list: wlctl mac none

macmode
Set the mode of the MAC list.
0 - Disable MAC address matching.
1 - Deny association to stations on the MAC list.
2 - Allow association to stations on the MAC list.

wds
Set or get the list of WDS member MAC addresses.
Set using a space separated list of MAC addresses.
wlctl wds xx:xx:xx:xx:xx:xx [xx:xx:xx:xx:xx:xx ...]

lazywds
Set or get "lazy" WDS mode (dynamically grant WDS membership to anyone).

noise
Get noise (moving average) right after tx in dBm

fqacurcy
Manufacturing test: set frequency accuracy mode.
freqacuracy syntax is: fqacurcy <channel>
Arg is channel number 1-14, or 0 to stop the test.

crsuprs
Manufacturing test: set carrier suppression mode.
carriersuprs syntax is: crsuprs <channel>
Arg is channel number 1-14, or 0 to stop the test.

longtrain
Manufacturing test: set longtraining mode.
longtrain syntax is: longtrain <channel>
Arg is A band channel number or 0 to stop the test.

band
Returns or sets the current band
auto - auto switch between available bands (default)
a - force use of 802.11a band
b - force use of 802.11b band

bands
Return the list of available 802.11 bands

phylist
Return the list of available phytypes

shortslot
Get current 11g Short Slot Timing mode. (0=long, 1=short)

shortslot_override
Get/Set 11g Short Slot Timing mode override. (-1=auto, 0=long, 1=short)

shortslot_restrict
Get/Set AP Restriction on associations for 11g Short Slot Timing capable STAs.
0 - Do not restrict association based on ShortSlot capability
1 - Restrict association to STAs with ShortSlot capability

ignore_bcns

AP only (G mode): Check for beacons without NONERP element(0=Examine beacons, 1=Ignore beacons)

pktcnt
Get the summary of good and bad packets.

upgrade
Upgrade the firmware on an embedded device

gmode
Set the 54g Mode (LegacyB|Auto||GOnly|BDeferred|Performance|LRS)

gmode_protection
Get G protection mode. (0=disabled, 1=enabled)

gmode_protection_control
Get/Set 11g protection mode control alg.(0=always off, 1=monitor local association, 2=monitor overlapping BSS)

gmode_protection_override
Get/Set 11g protection mode override. (-1=auto, 0=disable, 1=enable)

protection_control
Get/Set protection mode control alg.(0=always off, 1=monitor local association, 2=monitor overlapping BSS)

legacy_erp
Get/Set 11g legacy ERP inclusion (0=disable, 1=enable)

scb_timeout
AP only: inactivity timeout value for authenticated stas

assoclist
AP only: Get the list of associated MAC addresses.

isup
Get driver operational state (0=down, 1=up)

rssi
Get the current RSSI val, for an AP you must specify the mac addr of the STA

rssi_event
Set parameters associated with RSSI event notification
usage: wlctl rssi_event <rate_limit> <rssi_levels>
rate_limit: Number of events posted to application will be limited to 1 per this rate limit. Set to 0 to disable rate limit.

rssi_levels: Variable number of RSSI levels (maximum 8) in increasing order (e.g. -85 -70 -60). An event will be posted each time the RSSI of received beacons/packets crosses a level.

fasttimer
Deprecated. Use fast_timer.

slowtimer
Deprecated. Use slow_timer.

glacialtimer
Deprecated. Use glacial_timer.

radar
Enable/Disable radar

radarargs
Get/Set Radar parameters in
order as version, npulses, ncontig, min_pw, max_pw, thresh0,
thresh1, blank, fmdemodcfg, npulses_lp, min_pw_lp, max_pw_lp,
min_fm_lp, max_span_lp, min_deltat, max_deltat,
autocorr, st_level_time, t2_min, fra_pulse_err, npulses_fra,
npulses_stg2, npulses_stg3, percal_mask, quant,
min_burst_intv_lp, max_burst_intv_lp, nskip_rst_lp, max_pw_tol, feature_mask

radarargs40
Get/Set Radar parameters for 40Mhz channel in
order as version, npulses, ncontig, min_pw, max_pw, thresh0,
thresh1, blank, fmdemodcfg, npulses_lp, min_pw_lp, max_pw_lp,
min_fm_lp, max_span_lp, min_deltat, max_deltat,
autocorr, st_level_time, t2_min, fra_pulse_err, npulses_fra,
npulses_stg2, npulses_stg3, percal_mask, quant,
min_burst_intv_lp, max_burst_intv_lp, nskip_rst_lp, max_pw_tol, feature_mask

radarthrs
Set Radar threshold for both 20 & 40MHz BW:
order as thresh0_20_lo, thresh1_20_lo, thresh0_40_lo, thresh1_40_lo
thresh0_20_hi, thresh1_20_hi, thresh0_40_hi, thresh1_40_hi

dfs_status
Get dfs status

interference
Get/Set interference mitigation mode. Choices are:
0 = none
1 = non wlan
2 = wlan manual

3 = wlan automatic
4 = wlan automatic with noise reduction

interference_override
Get/Set interference mitigation override. Choices are:
0 = no interference mitigation
1 = non wlan
2 = wlan manual
3 = wlan automatic
4 = wlan automatic with noise reduction
-1 = remove override, override disabled

frameburst
Disable/Enable frameburst mode

pwr_percent
Get/Set power output percentage

toe
Enable/Disable tcpip offload feature

toe_ol
Get/Set tcpip offload components

toe_stats
Display checksum offload statistics

toe_stats_clear
Clear checksum offload statistics

arpoe
Enable/Disable arp agent offload feature

arp_ol
Get/Set arp offload components

arp_peerage
Get/Set age of the arp entry in minutes

arp_table_clear
Clear arp cache

arp_hostip
Add a host-ip address or display them

arp_hostip_clear

Clear all host-ip addresses

arp_stats
Display ARP offload statistics

arp_stats_clear
Clear ARP offload statistics

wet
Get/Set wireless ethernet bridging mode

bi
Get/Set the beacon period (bi=beacon interval)

dtim
Get/Set DTIM

wds_remote_mac
Get WDS link remote endpoint's MAC address

wds_wpa_role_old
Get WDS link local endpoint's WPA role (old)

wds_wpa_role
Get/Set WDS link local endpoint's WPA role

authe_sta_list
Get authenticated sta mac address list

autho_sta_list
Get authorized sta mac address list

measure_req
Send an 802.11h measurement request.
Usage: wlctl measure_req <type> <target MAC addr>
Measurement types are: TPC, Basic, CCA, RPI
Target MAC addr format is xx:xx:xx:xx:xx:xx

quiet
Send an 802.11h quiet command.
Usage: wlctl quiet <TBTTs until start>, <duration (in TUs)>, <offset (in TUs)>

csa
Send an 802.11h channel switch anouncement with chanspec:
<mode> <count> <channel>[a,b][n][u,l]
mode (0 or 1)

count (0-254)
channel number (0-224)
band a=5G, b=2G
bandwidth n=10, non for 20 & 40
ctl sideband, l=lower, u=upper, default no ctl sideband

constraint
Send an 802.11h Power Constraint IE
Usage: wlctl constraint 1-255 db

rm_req
Request a radio measurement of type basic, cca, or rpi
specify a series of measurement types each followed by options.
example: wlctl rm_req cca -c 1 -d 50 cca -c 6 cca -c 11
Options:
-t n numeric token id for measurement set or measurement
-c n channel
-d n duration in TUs (1024 us)
-p parallel flag, measurement starts at the same time as previous

Each measurement specified uses the same channel and duration as the
previous unless a new channel or duration is specified.

rm_rep
Get current radio measurement report

join_pref
Set/Get join target preferences.

assoc_pref
Set/Get association preference.
Usage: wlctl assoc_pref [auto|a|b|g]

wme
Set WME (Wireless Multimedia Extensions) mode (0=off, 1=on, -1=auto)

wme_ac
wlctl wme_ac ap|sta [be|bk|vi|vo [ecwmax|ecwmin|txop|aifsn|acm <value>] ...]

wme_apsd
Set APSD (Automatic Power Save Delivery) mode on AP (0=off, 1=on)

wme_apsd_sta
Set APSD parameters on STA. Driver must be down.
Usage: wlctl wme_apsd_sta <max_sp_len> <be> <bk> <vi> <vo>
<max_sp_len>: number of frames per USP: 0 (all), 2, 4, or 6

<xx>: value 0 to disable, 1 to enable U-APSD per AC

wme_dp
Set AC queue discard policy.
Usage: wlctl wme_dp <be> <bk> <vi> <vo>
<xx>: value 0 for newest-first, 1 for oldest-first

wme_counters
print WMM stats

wme_clear_counters
clear WMM counters

wme_tx_params
wlctl wme_tx_params [be|bk|vi|vo [short|sfb|long|lfb|max_rate <value>] ...]

wme_maxbw_params
wlctl wme_maxbw_params [be|bk|vi|vo <value> ....]

lifetime
Set Lifetime parameter (milliseconds) for each ac.
wlctl lifetime be|bk|vi|vo [<value>]

reinit
Reinitialize device

sta_info
wlctl sta_info <xx:xx:xx:xx:xx:xx>

cap
driver capabilities

malloc_dump
Deprecated. Folded under 'wlctl dump malloc

chan_info
channel info

add_ie
Add a vendor proprietary IE to 802.11 management packets
Usage: wlctl add_ie <pktflag> length OUI hexdata
<pktflag>: Bit 0 - Beacons
Bit 1 - Probe Rsp
Bit 2 - Assoc/Reassoc Rsp
Bit 3 - Auth Rsp
Bit 4 - Probe Req

Bit 5 - Assoc/Reassoc Req
Example: wlctl add_ie 3 10 00:90:4C 0101050c121a03
to add this IE to beacons and probe responses

del_ie
Delete a vendor proprietary IE from 802.11 management packets
Usage: wlctl del_ie <pktflag> length OUI hexdata
<pktflag>: Bit 0 - Beacons
Bit 1 - Probe Rsp
Bit 2 - Assoc/Reassoc Rsp
Bit 3 - Auth Rsp
Bit 4 - Probe Req
Bit 5 - Assoc/Reassoc Req
Example: wlctl del_ie 3 10 00:90:4C 0101050c121a03

list_ie
Dump the list of vendor proprietary IEs

rand
Get a 2-byte Random Number from the MAC's PRNG
Usage: wlctl rand

otpw
Write an srom image to on-chip otp
Usage: wlctl otpw file

nvotpw
Write nvram to on-chip otp
Usage: wlctl nvotpw file

bcmerrorstr
errorstring

freqtrack
Set Frequency Tracking Mode (0=Auto, 1=On, 2=OFF)

eventing
set/get 128-bit hex filter bitmask for MAC event reporting up to application layer

event_msgs
set/get 128-bit hex filter bitmask for MAC event reporting via packet indications

counters
Return driver counter values

delta_stats_interval

set/get the delta statistics interval in seconds (0 to disable)

delta_stats
get the delta statistics for the last interval

assoc_info
Returns the assoc req and resp information [STA only]

autochannel
auto channel selection:
1 to issue a channel scanning;
2 to set chanspec based on the channel scan result;
without argument to only show the chanspec selected;
ssid must set to null before this process, RF must be up

csscantimer
auto channel scan timer in minutes (0 to disable)

closed
hides the network from active scans, 0 or 1.
0 is open, 1 is hide

pmkid_info
Returns the pmkid table

abminrate
get/set afterburner minimum rate threshold

bss
set/get BSS enabled status: up/down

closednet
set/get BSS closed network attribute

ap_isolate
set/get AP isolation

eap_restrict
set/get EAP restriction

diag
diag testindex(1-interrupt, 2-loopback, 3-memory, 4-led); precede by 'wlctl down' and follow by 'wlctl up'

reset_d11cnts
reset 802.11 MIB counters

staname
get/set station name:
Maximum name length is 15 bytes

apname get
AP name

otpdump
Dump raw otp

otpstat
Dump OTP status

nrate
-r legacy rate (CCK, OFDM)-m mcs index-s stf mode (0=SISO,1=CDD,2=STBC(not supported),3=SDM)-w Override mcs only to support STA's with/without STBC capability

mimo_txbw
get/set mimo txbw (2=20Mhz(lower), 3=20Mhz upper, 4=40Mhz, 5=40Mhz dup<mcs32 only)

cac_addts
add TSPEC, error if STA is not associated or WME is not enabled
arg: TSPEC parameter input list

cac_delts
delete TSPEC, error if STA is not associated or WME is not enabled
arg: TSINFO for the target tspec

cac_delts_ea
delete TSPEC, error if STA is not associated or WME is not enabled
arg1: Desired TSINFO for the target tspec
arg2: Desired MAC address

cac_tslist
Get the list of TSINFO in driver
eg. 'wlctl cac_tslist' get a list of TSINFO

cac_tslist_ea
Get the list of TSINFO for given STA in driver
eg. 'wlctl cac_tslist_ea ea' get a list of TSINFO

cac_tspec
Get specific TSPEC with matching TSINFO
eg. 'wlctl cac_tspec 0xaa 0xbb 0xcc' where 0xaa 0xbb & 0xcc are TSINFO octets

cac_tspec_ea
Get specific TSPEC for given STA with matching TSINFO
eg. 'wlctl cac_tspec 0xaa 0xbb 0xcc xx:xx:xx:xx:xx:xx'
where 0xaa 0xbb & 0xcc are TSINFO octets and xx is mac address

phy_txpwrindex
usage: (set) phy_txpwrindex core0_idx core1_idx core2_idx core3_idx (get) phy_txpwrindex, return format: core0_idx core1_idx core2_idx core3_idxSet/Get txpwrindex

phy_test_tssi
wlctl phy_test_tssi val

phy_test_tssi_offs
wlctl phy_test_tssi_offs val

phy_rssiant
wlctl phy_rssiant antindex(0-3)

phy_rssi_ant
Get RSSI per antenna (only gives RSSI of current antenna for SISO PHY)

lpphy_papdepstbl
print papd eps table; Usage: wlctl lpphy_papdepstbl

rifs set/get the rifs status; usage: wlctl rifs <1/0> (On/Off)

rifs_advert
set/get the rifs mode advertisement status; usage: wlctl rifs_advert <-1/0> (Auto/Off)

phy_rxiqest
Get phy RX IQ noise in dBm:
-s # of samples (2^n)
-a antenna select, 0,1 or 3
-r resolution select, 0 (coarse) or 1 (fine)
-f lpf hpc override select, 0 (hpc unchanged) or 1 (overridden to lowest value)
-g gain-correction select, 0 (disable) or 1 (enable)

phy_txiqcc
usage: phy_txiqcc [a b]
Set/get the iqcc a, b values

phy_txlocc
usage: phy_txlocc [di dq ei eq fi fq]
Set/get locc di dq ei eq fi fq values

phytable

usage: wlctl phytable table_id offset width_of_table_element [table_element]
Set/get table element of a table with the given ID at the given offset
Note that table width supplied should be 8 or 16 or 32
table ID, table offset can not be negative

pavars Set/get temp PA parameters
usage: wlctl down
wlctl pavars pa2gw0a0=0x1 pa2gw1a0=0x2 pa2gw2a0=0x3 ...
wlctl pavars
wlctl up

erride the PA parameters after driver attach(srom read), before diver up These override values will be propogated to HW when driver goes up PA parameters in one band range (2g, 5gl, 5g, 5gh) must all present if one of them is specified in the command, otherwise it will be filled with 0

povars
Set/get temp power offset
usage: wlctl down
wlctl povars cck2gpo=0x1 ofdm2gpo=0x2 mcs2gpo=0x3 ...
wlctl povars
wlctl up

override the power offset after driver attach(srom read), before diver up These override values will be propogated to HW when driver goes up power offsets in one band range (2g, 5gl, 5g, 5gh) must all present if one of them is specified in the command, otherwise it will be filled with 0 cck(2g only), ofdm, and mcs(0-7) for NPHY are supported

fem
Set temp fem2g/5g value
usage: wlctl fem (tssipos2g=0x1 extpagain2g=0x2 pdetrange2g=0x1 triso2g=0x1 antswctl2g=0)
(tssipos5g=0x1 extpagain5g=0x2 pdetrange5g=0x1 triso5g=0x1 antswctl5g=0)

antgain
Set temp ag0/1 value
usage: wlctl antgain ag0=0x1 ag1=0x2

maxpower
Set temp maxp2g(5g)a0(a1) value
usage: wlctl maxpower maxp2ga0=0x1 maxp2ga1=0x2 maxp5ga0=0xff maxp5ga1=0xff
maxp5gla0=0x3 maxp5gla1=0x4 maxp5gha0=0x5 maxp5gha1=0x6

phy_antsel
get/set antenna configuration
set: -1(AUTO), 0xAB(fixed antenna selection)
where A and B is the antenna numbers used for RF chain 1 and 0 respectively
query: <utx>[AUTO] <urx>[AUTO] <dtx>[AUTO] <drx>[AUTO]

where utx = TX unicast antenna configuration
urx = RX unicast antenna configuration
dtx = TX default (non-unicast) antenna configuration
drx = RX default (non-unicast) antenna configuration

txcore
Usage: wlctl txcore -k <CCK core mask> -o <OFDM core mask> -s <1..4> -c <core bitmap>
-k CCK core mask
-o OFDM core mask
-s # of space-time-streams
-c active core (bitmask) to be used when transmitting frames

txcore_override
Usage: wlctl txcore_override
get the user override of txcore

txchain_pwr_offset
Usage: wlctl txchain_pwr_offset [qdBm offsets]
Get/Set the current offsets for each core in qdBm (quarter dBm)

sample_collect
Optional parameters HTPHY/(NPHY with NREV >= 7) are:
-f File name to dump the sample buffer (default "sample_collect.dat")
-t Trigger condition (default now)
now, good_fcs, bad_fcs, bad_plcp, crs, crs_glitch, crs_deassert
-b PreTrigger duration in us (default 10)
-a PostTrigger duration in us (default 10)
-m Sample collect mode (default 1)
HTPHY: 0=adc, 1..3=adc+rssi, 4=gpio
NPHY: 1=Dual-Core adc[9:2], 2=Core0 adc[9:0], 3=Core1 adc[9:0], gpio=gpio
-g GPIO mux select (default 0)
use only for gpio mode
-d Downsample enable (default 0)
use only for HTPHY
-e BeDeaf enable (default 0)
-i Timeout in units of 10us (default 1000)

Optional parameters (NPHY with NREV < 7) are:
-f File name to dump the sample buffer (binary format, default "sample_collect.dat")
-u Sample collect duration in us (default 60)
-c Cores to do sample collect, only if BW=40MHz (default both)

For (NREV < 7), the NPHY buffer returned has the format:
In 20MHz [(uint16)num_bytes, <I(core0), Q(core0), I(core1), Q(core1)>]
In 40MHz [(uint16)num_bytes(core0), <I(core0), Q(core0)>,
(uint16)num_bytes(core1), <I(core1), Q(core1)>]

txfifo_sz
set/get the txfifo size; usage: wlctl txfifo_sz <fifonum> <size_in_bytes>

rate_histo
Get rate hostrogram

pkteng_start
start packet engine tx usage: wlctl pkteng_start <xx:xx:xx:xx:xx:xx> <tx|txwithack> [(async)|sync] [ipg] [len] [nframes] [src]
start packet engine rx usage: wlctl pkteng_start <xx:xx:xx:xx:xx:xx> <rx|rxwithack> [(async)|sync] [rxframes] [rxtimeout]
sync: synchronous mode
ipg: inter packet gap in us
len: packet length
nframes: number of frames; 0 indicates continuous tx test
src: source mac address
rxframes: number of receive frames (sync mode only)
rxtimeout: maximum timout in msec (sync mode only)

pkteng_stop
stop packet engine; usage: wlctl pkteng_stop <tx|rx>

pkteng_stats
packet engine stats; usage: wlctl pkteng_stats

wowl
Enable/disable WOWL events
0 - Clear all events
Bit 0 - Wakeup on Magic Packet
Bit 1 - Wakeup on NetPattern (use 'wlctl wowl_pattern' to configure pattern)
Bit 2 - Wakeup on loss-of-link due to Disassociation/Deauth
Bit 3 - Wakeup on retrograde tsf
Bit 4 - Wakeup on loss of beacon (use 'wlctl wowl_bcn_loss' to configure time)

wowl_bcn_loss
Set #of seconds of beacon loss for wakeup event

wowl_pattern
usage: wowl_pattern [[clr | [[add | del] offset mask value]]]
No options -- lists existing pattern list
add -- Adds the pattern to the list

del -- Removes a pattern from the list
clr -- Clear current list
offset -- Starting offset for the pattern
mask -- Mask to be used for pattern. Bit i of mask => byte i of the pattern
value -- Value of the pattern

wowl_wakeind
usage: wowl_wakeind [clear]
Shows last system wakeup event indications from PCI and D11 cores
clear - Clear the indications

wowl_status
usage: wowl_status [clear]
Shows last system wakeup setting

wowl_pkt
Send a wakeup frame to wakup a sleeping STA in WAKE mode
Usage: wlctl wowl_pkt <len> <dst ea | bcast | ucast <STA ea>>[magic [<STA ea>] | net <offset> <pattern>]
e.g. To send bcast magic frame -- wlctl wowl_pkt 102 bcast magic 00:90:4c:AA:BB:CC

To send ucast magic frame -- wlctl wowl_pkt 102 ucast 00:90:4c:aa:bb:cc magic
To send a frame with L2 unicast - wlctl wowl_pkt 102 00:90:4c:aa:bb:cc net 0 0x00904caabbcc

NOTE: offset for netpattern frame starts from "Dest EA" of ethernet frame.So dest ea will be used only when offset is >= 6

wme_apsd_trigger
Set Periodic APSD Trigger Frame Timer timeout in ms (0=off)

wme_autotrigger
Enable/Disable sending of APSD Trigger frame when all ac are delivery enabled

reassoc Initiate a (re)association request.
Usage: wlctl reassoc <bssid> [options]
Options:
-c CL, --chanspecs=CL chanspecs (comma or space separated list)

send_nulldata
Sed a null frame to the specified hw address

btc_params
g/set BT Coex parameters

btc_flags
g/set BT Coex flags

obss_scan_params

set/get Overlapping BSS scan parameters

Usage: wlctl obss_scan a b c d e ...; where
a-Passive Dwell, {5-1000TU}, default = 100
b-Active Dwell, {10-1000TU}, default = 20
c-Width Trigger Scan Interval, {10-900sec}, default = 300
d-Passive Total per Channel, {200-10000TU}, default = 200
e-Active Total per Channel, {20-1000TU}, default = 20
f-Channel Transition Delay Factor, {5-100}, default = 5
g-Activity Threshold, {0-100%}, default = 25

keep_alive

Send specified "keep-alive" packet periodically.

Usage: wlctl keep_alive <period> <packet>
period: Re-transmission period in milli-seconds. 0 to disable packet transmits.
packet: Hex packet contents to transmit. The packet contents should include the entire ethernet packet (ethernet header, IP header, UDP header, and UDP payload) specified in network byte order.

e.g. Send keep alive packet every 30 seconds:
wlctl keep_alive 30000 0x0014a54b164f000f66f45b7e08004500001e000040004011c52a0a8830700a88302513c413c4000a00000a0d

srchmem

g/set ucode srch engine memory

pkt_filter_add

Install a packet filter.
Usage: wlctl pkt_filter_add <id> <polarity> <type> <offset> <bitmask> <pattern>
id: Integer. User specified id.
type: 0 (Pattern matching filter).
offset: Integer. Offset within received packets to start matching.
polarity: Set to 1 to negate match result. 0 is default.
bitmask: Hex bitmask that indicates which bits of 'pattern' to match. Must be same size as 'pattern'. Bit 0 of bitmask corresponds to bit 0 of pattern, etc. If bit N of bitmask is 0, then do *not* match bit N of the pattern with the received payload. If bit N of bitmask is 1, then perform match.
pattern: Hex pattern to match.

pkt_filter_clear_stats

Clear packet filter statistic counter values.

Usage: wlctl pkt_filter_clear_stats <id>

pkt_filter_enable
Enable/disable a packet filter.
Usage: wlctl pkt_filter_enable <id> <0|1>

pkt_filter_list
List installed packet filters.
Usage: wlctl pkt_filter_list [val]
val: 0 (disabled filters) 1 (enabled filters)

pkt_filter_mode
Set packet filter match action.
Usage: wlctl pkt_filter_mode <value>
value: 1 - Forward packet on match, discard on non-match (default).
0 - Discard packet on match, forward on non-match.

pkt_filter_delete
Uninstall a packet filter.
Usage: wlctl pkt_filter_delete <id>

pkt_filter_stats
Retrieve packet filter statistic counter values.
Usage: wlctl pkt_filter_stats <id>

seq_start
Initiates command batching sequence. Subsequent IOCTLs will be queued until seq_stop is received.

seq_stop
Defines the end of command batching sequence. Queued IOCTLs will be executed.

seq_delay
Driver should spin for the indicated amount of time.
It is only valid within the context of batched commands.

seq_error_index
Used to retrieve the index (starting at 1) of the command that failed within a batch

bmac_reboot
Reboot BMAC

txmcsset
get Transmit MCS rateset for 11N device

rxmcsset

get Receive MCS rateset for 11N device

mimo_ss_stf
get/set SS STF mode.
Usage: wlctl mimo_ss_stf <value> <-b a | b>
value: 0 - SISO; 1 - CDD
-b(band): a - 5G; b - 2.4G

assoclistinfo
AP only: Get the list of yet another form of associated station info

scblist AP only: Get STA list

assertlog
get external assert logs
Usage: wlctl assertlog

assert_type
set/get the asset_bypass flag; usage: wlctl assert_type <1/0> (On/Off)

ledbh
set/get led behavior
Usage: wlctl ledbh [0-3] [0-15]

obss_coex_action
send OBSS 20/40 Coexistence Mangement Action Frame
Usage: wlctl obss_coex_action -i <1/0> -w <1/0> -c <channel list>
-i: 40MHz intolerate bit; -w: 20MHz width Req bit;
-c: channel list, 1 - 14
At least one option must be provided

chanim_state
get channel interference state
Usage: wlctl chanim_state channel
Valid channels: 1 - 14
returns: 0 - Acceptable; 1 - Severe

chanim_mode
get/set channel interference measure (chanim) mode
Usage: wlctl chanim_mode <value>
value: 0 - disabled; 1 - detection only; 2 - detection and avoidance

ledbh
set/get led behavior
Usage: wlctl ledbh [0-3] [0-15]

led_blink_sync
set/get led_blink_sync
Usage: wlctl led_blink_sync [0-3] [0/1]

cca_get_stats
Usage: wlctl cca_stats [-c channel] [-s num seconds][-a]
-c channel: Optional. specify channel. 0 = All channels. Default = current channel
-s num_seconds: Optional. Default = 10, Max = 60
-i: list individual measurements in addition to the averages
-curband: Only recommend channels on current band

itfr_get_stats
get interference source information

itfr_enab
get/set STA interference detection mode(STA only)
0 - disable
1 - enable maual detection
2 - enable auto detection

itfr_detect
issue an interference detection request

smfstats
get/clear selected management frame (smf) stats wlctl smfstats [-C num]|[--cfg=num]
[auth]|[assoc]|[reassoc]|[clear]
clear - to clear the stats

manfinfo
show chip package info in OTP

rrm_nbr_req
send 11k neighbor report measurement request
Usage: wlctl rrm_nbr_req [ssid]

wnm_bsstq
send 11v BSS transition management query
Usage: wlctl wnm_bsstq [ssid]

pm_dur
Retrieve accumulated PM duration information (GET) or clear accumulator (SET)
Usage: wlctl pm_dur <any-number-to-clear>

mpc_dur
Retrieve accumulated MPC duration information in ms (GET) or clear accumulator (SET)
Usage: wlctl mpc_dur <any-number-to-clear>

chanim_acs_record
get the auto channel scan record.
Usage: wlctl acs_record

dngl_wd
Enable or disable dongle watchdog timer
Usage: wlctl dngl_wd <on/off>(to turn on\off) <exptime in sec>

tsf
set/get tsf register
Usage: wlctl tsf [<high> <low>]

tpc_mode
Enable/disable AP TPC.
Usage: wlctl tpc_mode <mode>
0 - disable, 1 - BSS power control, 2 - AP power control, 3 - Both (1) and (2)

tpc_period
Set AP TPC periodicity in secs.
Usage: wlctl tpc_period <secs>

tpc_lm
Get current link margins.

mfp_config
Config PMF capability
usage: wlctl mfp 0/disable, 1/capable, 2/requred

mfp_sha256
Config SHA256 capability
usage: wlctl sha256 0/disable, 1/enable

mfp_sa_query
Send a sa query req/resp to a peer
usage: wlctl mfp_sa_query flag action id

mfp_disassoc
send bogus disassoc
Usage: wlctl mfp_disassoc

mfp_deauth

send bogus deauth
Usage: wlctl mfp_dedauth

mfp_assoc
send assoc
Usage: wlctl mfp_assoc

mfp_auth
send auth
Usage: wlctl mfp_auth

mfp_reassoc
send reassoc
Usage: wlctl mfp_reassoc

monitor_lq
Start/Stop monitoring link quality metrics - RSSI and SNR
Usage: wlctl monitor_lq <0: turn off / 1: turn on

monitor_lq_status
Returns averaged link quality metrics - RSSI and SNR values

scb_probe
Set probing parameters for inactive clients.
<timout in seconds> <activity_time in seconds> <max number of probes>

rpmt rpmt <pm1-to> <pm0-to>

spatial_policy
set/get spatial_policy
Usage: wlctl spatial_policy <-1: auto / 0: turn off / 1: turn on>
to control individual band/sub-band use
wlctl spatial_policy a b c d e
where a is 2.4G band setting
where b is 5G lower band setting
where c is 5G middle band setting
where d is 5G high band setting
where e is 5G upper band setting

ratetbl_ppr
Usage: For get: wlctl ratetbl_ppr
For set: wlctl ratetbl_ppr <rate> <ppr>

EXAMPLES

None

DHCPCONDSERV

NAME

dhcpcondserv –configure DHCP conditional serving pool

SYNOPSIS

Usage: dhcpcondserv add pool
dhcpcondserv del pool <pool index>|all
dhcpcondserv set pool <pool index>
[--enable <1|0>]
[--vendorclassidmode <0:Exact|1:Prefix|2:Suffix|3:Substring>]
[--vendorclassid <id1,id2,...>]
[--clientid <client-id type field1 field2,...>]
[--vsi <Enterprise Number> <Manufacturer OUI> <Product class> <Model Name> <Serial Number>]
[--sourceinterface <eth0.0, eth1.0,wl0,...>]
[--minaddress <start address>]
[--maxaddress <end address>]
[--subnetmask <IP subnet mask>]
[--dnsservers <dns1,dns2>]
[--iprouters <gateway IP address>]
[--dhcpleasetime <seconds>]

dhcpcondserv add option <pool index>
dhcpcondserv del option <pool index> <option index>
dhcpcondserv set option <pool index> <option index>

[--enable <1|0>]
[--tag <128|134|135|240|241|242|243|244|245>]
[--value <option value string>]
[--value64 <option base64 string>]

dhcpcondserv show

DESCRIPTION

1. pool and option index will be updated if previous one deleted.
2. vendorclassid and sourceinterface can be multiple choices with comma separated.
3. clientid type has four type,llt,en,ll and other.

    llt has three fields -- Hardware type, Time and Link-layer address.
    en has two fields -- Enterprise number and Identifier.
    ll has two fields -- Hardware type and Link-layer address.
    other has one field -- DUID.

OPTIONS

None

EXAMPLES

None

IGMPCMD

NAME

igmpcmd –configure IGMP behavior

SYNOPSIS

Usage:

    igmpcmd qi <0-255 sec>
    igmpcmd qri <0-25 sec>
    igmpcmd lmqi
    igmpcmd show

DESCRIPTION

This command can be used to configure IGMP “Query Interval”,” Query Response Interval”,” Last Member Query Interval”.

OPTIONS

None

EXAMPLES

° Display the IGMP information
> igmpcmd show

° Setting the IGMP Query Interval
> igmpcmd qi 10

LANHOSTS

NAME

lanhosts –Show hosts on LAN side.

SYNOPSIS

Usage:
lanhosts show all
lanhosts show brx
lanhosts help

DESCRIPTION

This command can be used to find LAN side PC or NB or some work station and bridge interface.

OPTIONS
None

EXAMPLES

° Display the IGMP information
> lanhosts show all

MAC Addr **IP Addr** **Lease Time Remaining** **Hostname**

WLAN

NAME

lanhosts –Config wireless lan related variables.

SYNOPSIS

Usage: wlan config
[--ssid <primary|secondary:1|secondary:2|secondary:3> <ssid value>]
[--channel <0(Auto) 1 2 3 4 5 6 7 8 9 10 11 >]
[--status <primary|secondary:1|secondary:2|secondary:3> <enable|disable>]
[--security <primary|secondary:1|secondary:2|secondary:3>
<open|wep|psk|wpa|psk2|wpa2|psk-psk2|wpa-wpa2>]
[--mbssisolate <enable|disable>]

[--bandwidth <20MHZ|40MHZ>]

wlan get chquality

wlan show
[<primary|secondary:1|secondary:2|secondary:3>]

wlan --help <wep|psk|wpa|psk2|wpa2|psk-psk2|wpa-wpa2>

DESCRIPTION

This command can be used to get and setting wireless interface parameter then save to config. Allow a user to add/delete/show the LWAN interfaces and connection sevice for the xDSL router. WLAN is used to configure the wireless networking protocols for each LWAN interface. Currently each WLAN interface occupies one layer 2 interface. To create a wlan connections service.

All information is displayed to stdout. A program or shell script that calls this utility can redirect stdout to a file and then parse the file in order to interpret the displayed output.

OPTIONS

None

EXAMPLES

None

UDPECHOD

NAME

udpechod – when CEP udpechod is enable then specify an IP address for your UDP connection.

SYNOPSIS

Usage: udpechod set enable <0|1>
udpechod set interface <interface name|all>
udpechod set sourceip <ip address>
udpechod set port <port number>
udpechod set enabledudpplus <0|1>
udpechod set supportedudpplus <0|1>
udpechod show
udpechod help

DESCRIPTION

This command can be used to get and setting udpecho service.You can specify some “Port”,”IP Address”,”Interface”.

OPTIONS

None

EXAMPLES

° Display the udpechod information
> udpechod show

° Setting the udpechod connection destination
> udpechod set sourceip 172.21.1.1

° Setting the udpechod destination port
> udpechod set port 1172

XTM

NAME

xtm –Linux command line utility that controls the Broadcom BCM6368 ATM/PTM driver.

SYNOPSIS

```
Usage: xtmctl start
        [--rq0 <size>]
        [--rq1 <size>]
        [--intf allint|allext|intext [negedge]]
        [--bondingenable]
    xtmctl stop
    xtmctl restart
    xtmctl operate tdte
        [--add ubr|ubr_pcr <pcr>|cbr <pcr>|rtvbr <pcr> <scr> <mbs>|nrtvbr <pcr> <scr> <mbs>
                |mbr <scr> [<mcr>]]
        [--delete <index>]
        [--show [<index>]]
    xtmctl operate intf
        [--state <port_id> enable|disable]
        [--show [<port_id>]]
        [--stats [<port_id>] [reset]]
    xtmctl operate conn
        [--add <port_mask.vpi.vci> aal5
            llcsnap_eth|llcsnap_rtip|llcencaps_ppp|vcmux_eth|vcmux_ipoa|vcmux_pppoa
```

<mpaal_priority> <mpaal_weight> [<tdte_index>]]
[--add <port_mask.vpi.vci> aal0pkt|aal0cell [<tdte_index>]]
[--add <port_mask.ptmpri_mask> <mpaal_priority> <mpaal_weight> [<tdte_index>]]
[--delete <port_mask.vpi.vci>|<port_mask.ptmpri_mask>]
[--addq <port_id.vpi.vci>|<port_id.ptmpri_id> <size> <priority> [wrr|wfq <weight>]]
[--deleteq <port_id.vpi.vci>|<port_id.ptmpri_id> <qid>]
[--state <port_mask.vpi.vci>|<port_mask.ptmpri_mask> enable|disable]
[--show [<port_mask.vpi.vci>|<port_mask.ptmpri_mask>]]
[--sendoam <port_id.vpi.vci> f5seg|f5end|f4seg|f4end]
[--createnetdev <port_mask.vpi.vci>|<port_mask.ptmpri_mask> <netdevname>]
[--deletenetdev <port_mask.vpi.vci>|<port_mask.ptmpri_mask>]

port_mask: bit mask of one or more port ids
port_id:
0x01 = PORT_PHY0_LATENCY0
0x02 = PORT_PHY0_LATENCY1
0x04 = PORT_PHY1_LATENCY0
0x08 = PORT_PHY1_LATENCY1
ptmpri_mask: bit mask of one or both PTM priority ids
ptmpri_id:
0x01 = PTM_PRI_LOW
0x02 = PTM_PRI_HIGH

DESCRIPTION

This command is Linux command line utility that controls the Broadcom BCM6368 ATM/PTM driver. It does the following:

starts and stops the driver
restarts the XTM driver with its own pre-configuration & SAR reinitialization actions.
activates and deactivates an ATM/PTM interface (port)
adds and removes traffic descriptor table entries
adds and removes ATM/PTM connections
displays the configuration for traffic descriptor table entries, ATM/PTM interfaces and ATM/PTM connections.
displays statistics for ATM/PTM interfaces
sends an ATM OAM F5 or OAM F4 cell
creates and deletes an ATM/PTM network device instance

OPTIONS

None

EXAMPLES

None

TR69C

NAME

tr69c –this command is setting connection Request Port.

SYNOPSIS

Usage:
tr69c ConnReqPort <Port>
tr69c show

DESCRIPTION

Tr69c this command is setting connection Request Port by CPE CLI mode.The tr69 protocol is a DSL Forum (which was later renamed as Broadband Forum) technical specification entitled CPE WAN Management Protocol (CWMP). It defines an application layer protocol for remote management of end-user devices. The TR-069 standard was developed for automatic configuration of these devices with Auto Configuration Servers (ACS).

OPTIONS

None

EXAMPLES

° Display the tr69c req port number
> tr69c show

° Setting tr69c req port number
> tr69c ConnReqPort 1700

WEBSTYLE

NAME

webstyle–this command is setting Web gui display type.

SYNOPSIS

Usage:

webstyle <Brick|Original|Brick_ODM>

DESCRIPTION

User can be change the Web gui style by this command. But in VMG1312 the Web gui style are fixed Brick Style.

OPTIONS

None

EXAMPLES

None

RADVDCONF

NAME

radvdconf – this command is to configure the radvd DNSSL feature.

SYNOPSIS

Usage: radvdconf [commands]
commands:

enablednssl	<value>	- To enable 1 or disable 0
setsuffix	<suffix(s)>	- Set DNSSL suffix
cleansuffix		- Clean DNSSL suffix
setdnssllifetime	<time>	- Set DNSSL life time

DESCRIPTION

This command is to configure IPv6 Router Advertisement options to allow IPv6 routers to advertise a list of DNS recursive server addresses and a DNS Search List to IPv6 hosts. DNS search list (dnssl) sections provide domain search suffixes as defined in RFC6106. A minimal dnssl section contains the corresponding interface and at least one domain suffix.

OPTIONS

None

EXAMPLES

None

VCAUTOHUNT

NAME

vcautohunt – this command is to configure the vcautohunt feature.

SYNOPSIS

Usage:

vcAutoHunt help
vcAutoHunt show
vcAutoHunt send
vcAutoHunt save

service(hex) :
bit0: PPPoE/VC (1),bit1:PPPoE/LLC (2) ,bit2:PPPoA/VC (4),
bit3: PPPoA/LLC (8), bit4:Enet/VC (10), bit5 :Enet/LLC (20)

vcAutoHunt add
<PvcId 0~1> <RuleId 0~6> <vpi> <vci> <service(hex)>
vcAutoHunt remove
<PvcId 0~1> <RuleId 0~6>

vcAutoHunt set
<param> <arg1> <arg2>.. - set a provisionable parameter

List of vcAutoHunt set params and args:
active
<1|0: On|Off> - To activate hunting mechanism when system reboot
again
<1|0: On|Off> - to hunt whenever ADSL line up
debug
<1|0: On|Off> - Turn on Debug flag to see the debug message
sendPeriod
<seconds> - The period of sending test pattern
testExpire
<seconds> - the expire time for each case

DESCRIPTION

This command is to configure vcAutoHunt feature . belong to Broadcom linux command line utility that controls the SPU driver will be starts and stops the SPU subsystem.

OPTIONS

None

EXAMPLES

° Display the vcAutoHunt information
> vcAutoHunt show

TR064

NAME

tr064 –this command is setting tr064 enable or disable behavior.

SYNOPSIS

Usage:
tr064 config [--auth <enable|disable>]
tr064 show

DESCRIPTION

tr064 this command is setting enable or disable behavior by CPE CLI mode.The tr064 protocol is a working text will specify the method for configuring DSL CPE through software on PCs inside the LAN.

OPTIONS

None

EXAMPLES

° Display the tr064 information
> tr064 show

° Setting tr064 active the authentication
> tr064 config --auth enable

SYS

NAME

sys –this command is bootloader command.

SYNOPSIS

Usage: sys <atsh|atwz|atsn|ledctl|btt|wanset|gphytest|usbtest|atmt|atse|aten>[sys command option]
sys show

sys help

DESCRIPTION

OPTIONS

atsh

This option will show the CPE firmware information.
Example as below:
> sys atsh

```
MLD Version            : V1.00(AABQ.0)20121017
Bootbase Version       : V1.57 | 12/21/2012 19:52:59
Vendor Name            : ZyXEL Communications Corp.
Product Model          : DSL-401HNU-B1Bv2
Serial Number          : S120Y48000039
First MAC Address      : FCF52836B30B
Last MAC Address       : FCF52836B314
MAC Address Quantity   : 10
Default Country Code   : FF
Boot Module Debug Flag : 00
RootFS Checksum        : 4190a136
RomFile Checksum       : 2fa25ffe
ImageDefaultChecksum   : bcf2ff2e
Main Feature Bits      : 00
Other Feature Bits     :
        4d 53 40 13 00 00 00 00-00 00 00 00 00 00 00 00
        00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00
```

atwz

This option will show the CPE information.
Example as below:
> sys atwz

```
MAC Address            : FCF52836B30B
Default Country Code   : FF
Boot Module Debug Flag : 00
Main Feature Bits      : 00
Number of MAC Address  : 0A
```

atsn

This option will show the CPE Serial Number.
Example as below:
> sys atsn

Serial Number: S120Y48000039

ledctl

This option will be control the CPE LED on|off.
Example as below:
> sys ledctl WLAN 0

Wireless LED OFF

btt

This option will be control CPE Button status as “Reset Button Status”,” WL Button Status”,” WL EN Button Status”.

Example as below:
> sys btt show

Button Test Status '0'
Reset Button Status '0'
WL Button Status '0'
WL EN Button Status '-1'

wanset

This option will be setting the CPE WAN config as “<ip> <mask> <gateway>”.

gphytest

This option can be test the CPE LAN Status as “<eth port0 ~ port3>”.
Example as below:
> sys gphytest mod1

GPHY Test Start with Mode 1
mii (phy addr 0x4) register 0 is 0x0140
mii (phy addr 0x4) register 9 is 0x2300
mii (phy addr 0x1) register 0 is 0x0100
mii (phy addr 0x1) register 9 is 0x0000
mii (phy addr 0x2) register 0 is 0x0100
mii (phy addr 0x2) register 9 is 0x0000
mii (phy addr 0x3) register 0 is 0x0100
mii (phy addr 0x3) register 9 is 0x0000
mii (phy addr 0x18) register 0 is 0xffff
mii (phy addr 0x18) register 9 is 0xffff
> eth1 Link DOWN.
eth1 Link UP 10 mbps full duplex

usbtest

This option can be test the CPE USB Status.

Example as below:
> sys usbtest S

USB Test Start At Port 1 and Port 2

atmt

This option will be setting the CPE reduce bootup time But haven't CSM system in CPE.

EXAMPLES

None