

How to configure apcli0 memory hot spots via Telnet

1. Telnet Communication Process Brief Introduction

TCP Client

TCP Server
(port == 23)

(1) Establish standard TCP Socket connection



(2) Server Echo string "ralink login:" the connection is established, need to authenticate the user



(3) Client sending user name of device, to "\ r \ n" end: "admin \ r \ n"



(4) Server Echo enter a user name and prompt for authentication password:
"admin \ r \ nPassword:"



(5) Client sending login password to "\ r \ n" end: "admin \ r \ n"



(6) Server echo some tips, if you receive a "#" (# spaces) that shows the authentication is successful server states that in order to wait



(7) For example, Client sends a commands of viewing device process to "\ r \ n" end: "ps \ r \ n"



(8) Server Echo input command: "ps \ r \ n"



(9) Server echo command execution effect "... " + Equipment Command line waiting state "#" (# spaces)



Client can enter simply "\ r \ n" to detect the server if it is in command waiting state, if server returns "#" (# spaces), said server in command waiting state. Only the command line in a waiting state that input commands can be executed, the command directive to "\ r \ n" to the end of the flag.

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Specific data package icon:

```

Telnet
Data: \r\r\n
Data: ralink login: TCP server->TCP client (2)

0000 50 af 73 16 4d 75 00 17 13 17 6e 90 08 00 45 00 P.s.Mu.. .n...E.
0010 00 45 2a 78 40 00 40 06 91 86 c0 a8 fe fe c0 a8 .E*x@.@. ....
0020 fe 64 00 17 10 62 3c e7 c3 18 aa ec b4 7a 80 18 .d...b<. ....z..
0030 0b 50 43 b8 00 00 01 01 08 0a 00 11 e9 ad 00 02 .PC.....
0040 9f b8 0d 0d 0a 72 61 6c 69 6e 6b 20 6c 6f 67 69 ...ral ink logi
0050 6e 3a 20 n:
  
```

```

Telnet
Data: admin\r\n
TCP client -> TCP server (3)

0000 00 17 13 17 6e 90 50 af 73 16 4d 75 08 00 45 00 ....n.P. s.MU
0010 00 3b 94 bd 40 00 40 06 27 4b c0 a8 fe 64 c0 a8 ;...@.@. 'K..
0020 fe fe 10 62 00 17 aa ec b4 7a 3c e7 c3 29 80 18 ...b.... .z<.
0030 7f fc 7e e2 00 00 01 01 08 0a 00 02 a0 13 00 11 ..~.....
0040 e9 ad 61 64 6d 69 6e 0d 0a ..admin.
  
```

```

Telnet
Data: admin\r\n
Data: Password: TCP server->TCP client (4)

0000 50 af 73 16 4d 75 00 17 13 17 6e 90 08 00 45 00 P.s.Mu.. .n...E.
0010 00 45 2a 7a 40 00 40 06 91 84 c0 a8 fe fe c0 a8 .E*z@.@. ....
0020 fe 64 00 17 10 62 3c e7 c3 29 aa ec b4 81 80 18 .d...b<. .).....
0030 0b 50 d9 ff 00 00 01 01 08 0a 00 11 f2 bd 00 02 .P.....
0040 a0 13 61 64 6d 69 6e 0d 0a 50 61 73 73 77 6f 72 ..admin. .Passwor
0050 64 3a 20 d:
  
```

```

Telnet
Data: admin\r\n
TCP client -> TCP server (5)

0000 00 17 13 17 6e 90 50 af 73 16 4d 75 08 00 45 00 ....n.P. s.Mu..E.
0010 00 3b 94 c6 40 00 40 06 27 42 c0 a8 fe 64 c0 a8 ;...@.@. 'B...d..
0020 fe fe 10 62 00 17 aa ec b4 81 3c e7 c3 3a 80 18 ...b.... .<.....
0030 7f f9 7e e2 00 00 01 01 08 0a 00 02 a0 4e 00 11 ..~.....N..
0040 f2 bd 61 64 6d 69 6e 0d 0a ..admin.
  
```

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Telnet
Data: \r\n
Data: \r\n
Data: BusyBox v1.12.1 (2014-06-06 16:46:21 CST) built-in shell (ash)\r\n
Data: Enter 'help' for a list of built-in commands.\r\n
Data: \r\n
Data: # TCP server->TCP client (6), "# "
0020 fe 64 00 17 10 62 3c e7 c3 3c aa ec b4 88 80 18 .d...b< .<.....
0030 0b 50 4d 51 00 00 01 01 08 0a 00 11 f8 a1 00 02 .PMQ....
0040 a0 51 0d 0a 0d 0a 42 75 73 79 42 6f 78 20 76 31 .Q....Bu syBox v1
0050 2e 31 32 2e 31 20 28 32 30 31 34 2d 30 36 2d 30 .12.1 (2 014-06-0
0060 36 20 31 36 3a 34 36 3a 32 31 20 43 53 54 29 20 6 16:46: 21 CST)
0070 62 75 69 6c 74 2d 69 6e 20 73 68 65 6c 6c 20 28 built-in shell (
0080 61 73 68 29 0d 0a 45 6e 74 65 72 20 27 68 65 6c ash)..En ter 'hel
0090 70 27 20 66 6f 72 20 61 20 6c 69 73 74 20 6f 66 p' for a list of
00a0 20 62 75 69 6c 74 2d 69 6e 20 63 6f 6d 6d 61 6e built-i n comman
00b0 64 73 2e 0d 0a 0d 0a 23 20 ds.....#
  
```

```

Telnet
Data: ps\r\n TCP client ->TCP server (7)
0000 00 17 13 17 6e 90 50 af 73 16 4d 75 08 00 45 00 ....n.P. s.Mu..E.
0010 00 38 94 cd 40 00 40 06 27 3e c0 a8 fe 64 c0 a8 .8*}@.@. '>...d..
0020 fe fe 10 62 00 17 aa ec b4 88 3c e7 c3 b3 80 18 ...b.... .<.....
0030 7f ea 7e df 00 00 01 01 08 0a 00 02 a0 8b 00 11 ...~.....
0040 f8 a1 70 73 0d 0a ..ps..
  
```

```

Telnet
Data: ps\r\n TCP server->TCP client (8)
0000 50 af 73 16 4d 75 00 17 13 17 6e 90 08 00 45 00 P.s.Mu...n...E.
0010 00 38 2a 7d 40 00 40 06 91 8e c0 a8 fe fe c0 a8 .8*}@.@. ....
0020 fe 64 00 17 10 62 3c e7 c3 b3 aa ec b4 8c 80 18 .d...b<.....
0030 0b 50 5f 9c 00 00 01 01 08 0a 00 11 fe 66 00 02 .P.....f..
0040 a0 8b 70 73 0d 0a ..ps..
  
```

```

Data: 161 admin 0 SW [kw
Data: 708 admin 0 SW [Rtr
Data: 4790 admin 1508 S udhc
Data: 4824 admin 1164 S vnet
Data: 4827 admin 1172 S vnet TCP server ->TCP client (9)
Data: 16502 admin 1500 S udhc
Data: 19367 admin 1504 S -sh
Data: 19446 admin 1504 R ps `
Data: #
  
```

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```

Telnet
Data: \r\n
0000 00 17 13 17 6e 90 50 af 73 16 4d 75 08 00 45 00  . . . . n . P . s . M u . . E .
0010 00 36 80 14 40 00 40 06 3b f9 c0 a8 fe 64 c0 a8  . 6 . . @ . @ . ; . . . . d . .
0020 fe fe 0c f1 00 17 54 cf f2 1c 27 ef 36 86 80 18  . . . . . T . . . ' . 6 . . . .
0030 7f ea 7e dd 00 00 01 01 08 0a 00 02 69 85 00 0c  . . . . . . . . . . . i . . . .
0040 9f 49 0d 0a                                     . I . .

TCP client->TCP server , check link status

Telnet
Data: \r\n
Data: #
0000 50 af 73 16 4d 75 00 17 13 17 6e 90 08 00 45 00  P . s . M u . . . . n . . . . E .
0010 00 38 ac 51 40 00 40 06 0f ba c0 a8 fe fe c0 a8  . 8 . @ . @ . . . . . . . . . .
0020 fe 64 00 17 0c f1 27 ef 36 86 54 cf f2 1e 80 18  . d . . . . . ' . 6 . T . . . . .
0030 0b 50 00 ff 00 00 01 01 08 0a 00 0c 9f 84 00 02  . P . . . . . . . . . . . . . . .
0040 69 85 0d 0a 23 20                               i . . #

TCP server ->TCP client , link success
    
```

2.Hot Configure apli0 memory hot spots command

Save associated memory NV value of WIFI hot spots :

- "ApCliCount" memory hot spots amount, value <=10
- "ApcliCnt" With "ApCliCount", the values are equal
- "ApCliSsid%d" Memory hot spot SSID,% d represents the memory hot spot index, starting from 0, (%d)<10
- "ApCliBssid%d" memory hot spot BSSID is MAC address
- "Channel%d" memory hot spots channel, 1 <= value <= 14
- "WirelessMode%d" wireless mode: 0(11b/g) 1(11b) 4(11g) 9(11b/g/n) 6(11n)
- "HT_EXTCHA%d" 0(BELOW) 1(ABOVE)
- "ApCliAuthMode%d" NONE/SHAREDWEP/OPENWEP/WPAPSK/WPA2PSK/WPAPSKWPA2PSK
- "ApCliEncrypType%d" TKIP/AES/TKIPAES/OPENWEP/SHAREDWEP
- "ApCliWPAPSK%d" WIFI access password
- "ApCliDefaultKeyID%d" refer to OPENWEP Encryption
- "ApCliKeyType%d" refer to OPENWEP Encryption
- "ApCliKeyStr%d" WIFI access password
- "ApcliSynRepeater%d" Whether synchronous repeater : 0 (NO) 1 (YES)
- "RepeaterSSID%d" repeater SSID

Current Hotspots Info	
SSID	VONETS_17FEA4
MAC Address	00:17:13:17:fe:a4 ApcliBssidXd

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ApCliSsid%#	Channel%#	Signal	ApcliAuthMode%#	ApCliEncrypType%#	Wifi Mode	ExtCH
VONETS_WXS	7	15	WPA2-PSK	AES	11b/g/n	ABOVE
VONETS_17FEA4	7	15	WPA2-PSK	AES	11b/g/n	ABOVE

Security Settings

Security Mode	WPA2-PSK	ApCliAuthMode%#
WPA Algorithms	AES	ApCliEncrypType%#
Pass Phrase	12345678	ApCliWPAPSK%#
<input checked="" type="checkbox"/> Automatic connect to memory hotspots	must select	
<input checked="" type="checkbox"/> The repeater parameter and the hotspots synchronization	ApCliSynRepeater%#	
WiFi Repeater SSID	VONETS_17FEA4_90	RepeaterSSID%#

Security Mode ApCliAuthMode%# OPEN-WEP WEP is enabled, so 11n rate will turn off.

WEP

Default Key	ApCliDefaultKeyID%#	Key 1	(5 or 13 ASCII characters)
WEP Keys	WEP Key 1		ASCII
	WEP Key 2		ASCII
	WEP Key 3		ASCII
	WEP Key 4		ASCII

ApCliKeyType%#

For example, add a WIFI memory list (with the understanding shown):

ApCliSsid%#	Channel%#	Signal	ApcliAuthMode%#	ApCliEncrypType%#	Wifi Mode	ExtCH
VONETS_183590	7	15	WPA2-PSK	AES	11b/g/n	ABOVE

Security Settings

Security Mode	WPA2-PSK
WPA Algorithms	AES
Pass Phrase	12345678
<input checked="" type="checkbox"/> Automatic connect to memory hotspots	
<input checked="" type="checkbox"/> The repeater parameter and the hotspots synchronization	
WiFi Repeater SSID	VONETS_183590_90

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```
# nvram_get 2860 ApCliCount
1
# nvram_get 2860 ApcliCnt
1
# nvram_get 2860 ApCliSsid0
UONETS_183590
# nvram_get 2860 ApCliBssid0
00:17:13:18:35:90
# nvram_get 2860 Channel0
7
# nvram_get 2860 WirelessMode0
9
# nvram_get 2860 HT_EXTCHA0
1
# nvram_get 2860 ApCliAuthMode0
WPA2PSK
# nvram_get 2860 ApCliEncryptType0
AES
# nvram_get 2860 ApCliWPAPSK0
12345678
# nvram_get 2860 ApCliDefaultKeyID0
1
# nvram_get 2860 ApCliKeyType0
1
# nvram_get 2860 ApCliKeyStr0

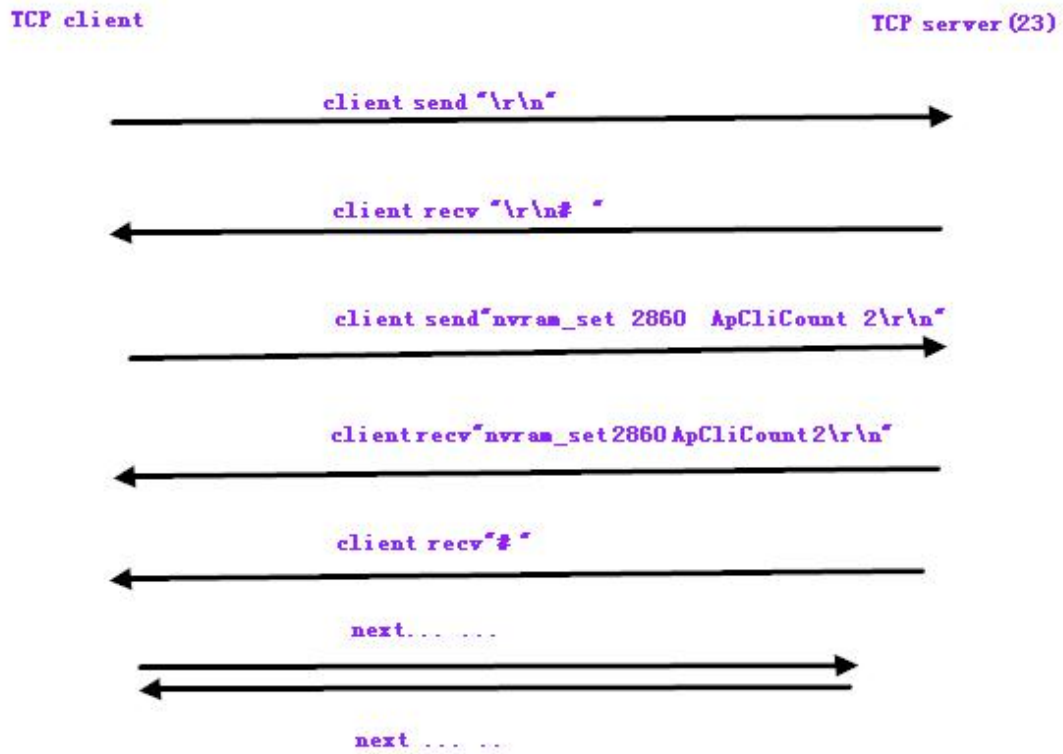
# nvram_get 2860 ApcliSynRepeater0
1
# nvram_get 2860 RepeaterSSID0
UONETS_183590_90
#
```

3. Telnet set command format

“nvram_set 2860 nv_name nv_value\r\n” set NV parameter

“nvram_get 2860 nv_name \r\n” get NV parameter

Specific operations please do as the ps example introduction in telnet communication flow of beginning of the article



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2014.11.28