

CLI Tips/Hints/Shortcuts

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CLI Keystrokes

?

Context sensitive help, not case sensitive.

ubr10k#?

Exec commands:

<1-99>	Session number to resume
access-enable	Create a temporary Access-List entry
access-profile	Apply user-profile to interface
access-template	Create a temporary Access-List entry
aps	Modify APS parameters
archive	Manage archive files
attach	Attach via if-console
cable	Cable commands

Tab Key

Finishes a command.

After an alias, hit space and tab will write out entire command. Aliases defined later.

ubr10k#cab “hit tab key”

ubr10k#cable

ubr10k#cable ?

clock	Clock card
device	Cable modem or host commands
host	Cable host (behind modem) commands
modem	Cable modem commands
power	Cable line cards power on/off commands

Up & Down Arrow Repeats the last few commands entered.

Can change buffer size with:

ubr10k#terminal history size ?

<0-256> Size of history buffer

Terminal Window Size

Change Size of terminal window output.

ubr10k#term length ?

<0-512> Number of lines on screen (0 for no pausing)

Control (A, E, B, F, C, Z, R, L, P, N)

Control A takes the cursor to the beginning of the line that was typed.

Control E takes the cursor to the end of the line that was typed.

Control B takes the cursor back one character at a time.

Control F takes the cursor forward one character at a time.

Control C quits the command typed without activating.

Control Z quits the command typed, but activates if the command is completed.

Control R, I, & L repeat the command if debugs make you lose your place.

Control P equivalent to up arrow.

Control N equivalent to down arrow.

Control T transposes the last 2 characters.

Control H goes back 1 character and deletes.

Control X clears the entire line.

Control K clears characters after the cursor.

Esc (A, E, B, F, C, Z, R, L, P, N)

Esc, B	Back word	Moves the cursor back one word.
Esc, F	Forward word	Moves the cursor forward one word.

Space Bar Continues the terminal display a page at a time.

Enter Key Continues the terminal display a line at a time and finishes commands.

Do Allows show commands to be done while in config mode.

Note: Commands won't parse out with tab when using DO command and no help with ?.

```
ubr10k#conf t
```

Enter configuration commands, one per line. End with CNTL/Z.

```
ubr10k(config)#do sh cab modem c5/0/0
```

MAC Address	IP Address	I/F	MAC State	Prim Sid	RxPwr (dB)	Timing Offset	Num CPE	BPI Enb
0013.7113.f8be	10.150.100.53	C5/0/0/U0	online (pt)	1	0.75	1836	0	Y
0013.7115.dfec	10.150.100.107	C5/0/0/U0	online (pt)	2	0.50	1837	0	Y

Terminal Monitor Needed when telnetting into a CMTS. Used to see debugs and warnings.

```
ubr10k#term mon
```

ubr10k#term no mon Used to disable terminal monitoring.

Using the "Pipe" Command The, "|", pipe command is used for filtering.

This can be done to include, exclude or begin at the filtered word. This is case sensitive.

| include

```
ubr10k#sh run | include filter
```

```
cable arp filter request-send 3 2
cable arp filter reply-accept 3 2
cable arp filter request-send 3 2
cable arp filter reply-accept 3 2
cable arp filter request-send 3 2
cable arp filter reply-accept 3 2
cable arp filter request-send 3 2
cable arp filter reply-accept 3 2
cable arp filter request-send 3 2
```

| begin

```
ubr10k#sh run | begin filter
```

```
cable arp filter request-send 3 2
cable arp filter reply-accept 3 2
```

!

```
interface Cable5/0/2
```

```
no ip address
no cable packet-cache
cable downstream channel-id 2
cable downstream annex B
cable downstream modulation 64qam
cable downstream interleave-depth 32
cable downstream rf-shutdown
```

```

cable upstream max-ports 4
cable upstream 0 connector 8
cable upstream 0 docsis-mode tdma
cable upstream 0 channel-width 1600000 1600000
cable upstream 0 minislot-size 4
cable upstream 0 range-backoff 3 6
cable upstream 0 modulation-profile 21
--More--

```

| exclude

```
ubr10k#show cable modem | exclude online
```

MAC Address	IP Address	I/F	MAC State	Prim Sid	RxPwr (dB)	Timing Offset	Num CPE	BPI Enb
0007.0e00.563b	10.150.100.137	C5/0/0/U2	init(o)	364	-0.75	2678	0	N
0007.0e00.568b	10.150.100.136	C5/0/0/U1	init(io)	373	0.00	2677	0	N
0007.0e00.5691	10.150.100.138	C5/0/0/U1	init(o)	459	-0.75	2679	0	N
0012.c9df.4c5e	10.150.100.83	C5/0/0/U0	init(t)	464	0.00	1602	0	N

```
ubr10k#sh proc cpu | exclude 0.00% 0.00% 0.00%
```

CPU utilization for five seconds: 1%/0%; one minute: 0%; five minutes: 0%

PID	Runtime(ms)	Invoked	uSecs	5Sec	1Min	5Min	TTY	Process
5	86128	12019	7165	1.27%	0.16%	0.08%	0	Check heaps
64	57536	901611	63	0.00%	0.03%	0.05%	0	C10K BPE IP Enqu
122	31044	95529	324	0.00%	0.03%	0.02%	0	c10k_periodic_st
140	13116	48830	268	0.00%	0.01%	0.00%	0	DHCPD Receive
195	4660	1662665	2	0.00%	0.29%	0.46%	3	Virtual Exec

| sec

```
ubr10K#sh run | sec 6/1
```

```
card 6/1 ubr10k-clc-3g60 license 72X60
```

```
member subslot 6/1 working
```

```
member subslot 5/1 protect config 6/1
```

```
controller Modular-Cable 6/1/0
```

```
rf-channel 0 cable downstream channel-id 1
```

```
rf-channel 0 frequency 135000000 annex B modulation 256qam interleave 32
```

```
rf-channel 0 depi-tunnel bne tsid 135
```

```
rf-channel 0 rf-power 45.0
```

```
no rf-channel 0 rf-shutdown
```

```
rf-channel 1 cable downstream channel-id 2
```

```
rf-channel 1 frequency 141000000 annex B modulation 256qam interleave 32
```

```
rf-channel 1 depi-tunnel bne tsid 141
```

```
no rf-channel 1 rf-shutdown
```

```
rf-channel 2 cable downstream channel-id 3
```

```
rf-channel 2 frequency 147000000 annex B modulation 256qam interleave 32
```

```
rf-channel 2 depi-tunnel bne tsid 147
```

```
no rf-channel 2 rf-shutdown
```

```
rf-channel 3 cable downstream channel-id 4
```

```
rf-channel 3 frequency 153000000 annex B modulation 256qam interleave 32
```

```
rf-channel 3 depi-tunnel bne tsid 153
```

```
no rf-channel 3 rf-shutdown
```

```
rf-channel 4 cable downstream channel-id 77
```

```
rf-channel 5 cable downstream channel-id 78
```

```
rf-channel 6 cable downstream channel-id 79
```

```
rf-channel 7 cable downstream channel-id 80
```

```
rf-channel 8 cable downstream channel-id 81
```

```
--More--
```

Multiple Pipes –Boolean Logic OR Function

Can do two or more simultaneously.

```
ubr10k#sh contr | include Offset|Cable
Interface Cable5/0/0
Cable5/0/0 JIB hardware status:
  Cable5/0/0 Upconverter is Enabled Output is Enabled
  Timing Offset = 0x0
  Cable5/0/0 Downstream is up
  Cable5/0/0 Upstream 0 is up
    Nominal Input Power Level 0 dBmV, Tx Timing Offset 1624
  Cable5/0/0 Upstream 1 is up
    Nominal Input Power Level 0 dBmV, Tx Timing Offset 2680
  Cable5/0/0 Upstream 2 is up
    Nominal Input Power Level 0 dBmV, Tx Timing Offset 2679
  Cable5/0/0 Upstream 3 is up
    Nominal Input Power Level 0 dBmV, Tx Timing Offset 1621
```

Using Unix-Type of Filtering

Can filter after terminal window stops.

```
ubr10k#sh run
```

Building configuration...

```
Current configuration : 24828 bytes
!
! Last configuration change at 11:11:18 EST Tue Aug 1 2006
! NVRAM config last updated at 13:38:54 EST Mon Jul 31 2006
!
version 12.3
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
service internal
!
hostname ubr10k-2
!
boot-start-marker
boot system flash disk0:ubr10k2-k9p6u2-mz.2006-07-23.123BC_P14
boot-end-marker
!
logging buffered 64000 debugging
no logging console
enable secret 5 $1$006T$/nKCE7vswKot/it3m9aIb0
enable password cisco
!
clock timezone EST -4
facility-alarm intake-temperature major 49
facility-alarm intake-temperature minor 40
facility-alarm intake-temperature critical 67
facility-alarm core-temperature major 53
facility-alarm core-temperature minor 45
facility-alarm core-temperature critical 85
card 1/0 1gigetheretnet-1
card 2/1 2cable-tccplus
card 5/0 5cable-mc520u-d
card 5/1 5cable-mc520u-d
card 6/1 5cable-mc520s-d
cable application-type 1 priority 1
cable application-type 1 include packetcable normal
cable application-type 1 include packetcable priority
```

```

cable application-type 1 include sched-type UGS
cable application-type 2 priority 2
cable application-type 2 include sched-type UGS-AD
cable application-type 3 priority 3
cable application-type 3 include sched-type RTPS
cable application-type 4 priority 4
- - more -

```

When the terminal window says - -more-, type “/” and the word to filter on;

```

/ filter
filtering...
  cable arp filter request-send 3 2
  cable arp filter reply-accept 3 2
!
interface Cable5/0/2
  no ip address
  no cable packet-cache
  cable downstream channel-id 2
  cable downstream annex B
....

```

Aliases Simple shortcuts for frequently used commands.

```

ubr10k(config)alias exec scm show cable modem
ubr10k(config)alias exec scr show cable modem remote-query

```

Troubleshooting Commands

Term exec prompt timestamp Attaches Date/Time and CPU to all show command outputs.

```

ubr10k#show cable modem offline
Load for five secs: 0%/0%; one minute: 0%; five minutes: 0%
Time source is NTP, 11:22:45.950 EST Tue Aug 1 2006
Interface MAC address      Prim Previous      Offline      Rx      Rx      SM
                          Sid  State      Time      Power  SNR    Exhaust
C5/0/0/U0 0013.7186.54cc 409  online(pt)  Aug 1  11:22:41  0.00  34.34  5

```

line vty 0 4 Automatically attaches Date/Time and CPU to all show commands outputs when using telnet access.

```

exec prompt timestamp

```

line con 0 Used so console access never times out. Note: this could be a security concern if the console never times out and you walk away from your computer.

```

exec-timeout 0 0

```

Ping Ping from CMTS to CM or PC.

Doesn't include 18-B Ethernet hdr. Can force a quit with **control shift 6**. Verifies layer 3 connectivity.

```

ubr10k#ping
Protocol [ip]:
Target IP address: 10.50.100.181
Repeat count [5]: 100
Datagram size [100]: 1500
Timeout in seconds [2]: 1
Extended commands [n]: y
Source address or interface:
Type of service [0]:
Set DF bit in IP header? [no]:

```

Validate reply data? [no]:
 Data pattern [0xABCD]:
 Loose, Strict, Record, Timestamp, Verbose[none]:
 Sweep range of sizes [n]:
 Type escape sequence to abort.
 Sending 100, 1500-byte ICMP Echos to 10.50.100.181, timeout is 1 seconds:
 !!!
 !!!
 Success rate is 100 percent (100/100), round-trip min/avg/max = 8/10/16 ms

Ping DOCSIS Station maintenance ping from CMTS to CM.

Can force a quit with **control shift 6**. Verifies layer 1 connectivity.

```
ubr10k#ping docsis 10.50.100.181 5 ver
Queueing 1000 MAC-layer station maintenance intervals, timeout is 25 msec:
Reply from 00d0.59e1.0f7c: 50 ms, tadj=0, padj=0, fadj=-79
Reply from 00d0.59e1.0f7c: 46 ms, tadj=0, padj=0, fadj=-40
Reply from 00d0.59e1.0f7c: 46 ms, tadj=0, padj=0, fadj=-59
Reply from 00d0.59e1.0f7c: 46 ms, tadj=1, padj=0, fadj=-49
Reply from 00d0.59e1.0f7c: 50 ms, tadj=1, padj=0, fadj=-59
```

Show Cable Modem Offline Can see last state modems were able to get to before going completely offline.

```
ubr10k#show cable modem offline
```

Interface	MAC address	Prim	Previous	Offline	Rx	Rx	SM
		Sid	State	Time	Power	SNR	Exhaust
C5/0/0/U0	0013.7186.54cc	409	online(pt)	Aug 1 11:22:41	0.00	34.34	5

Control Shift 6 Used to stop a ping or traceroute.

Control Shift 6 X Used to stop a telnet session.

Control Shift 6 6 X Used to stop a telnet session.

When consoled into a CMTS and then telnetting from the CMTS to another box, this sequence of keys will stop the telnet session without going all the way back to the CommServer.

No IP Domain-Lookup Eliminates looking up everything you type incorrectly such as wrong aliases, etc.

```
ubr10k(config)#no ip domain-lookup
```

Cable Power On/Off Can power off a subslot on the uBR10K.

```
ubr10k#cable power off ?
<slot>/<card> Slot [5-8] Card [0/1]
```

sh archive config differences Shows the changes made in the config.

This is in 12.4, but unfortunately we don't have it on 12.3.

```
c7200-2#sh archive config differences
Contextual Config Diffs:
interface FastEthernet0/0
-description Backbone connection
```

Service Internal Used to activate hidden commands.

```
gnboncgl-n-10k1#sh int cable 5/0/0 service-flow | inc dyn\ (S\ )
US.*d|Dir|State
```

Sfid	Sid	Mac Address	QoS Prov	Param Adm	Index Act	Type	Dir	Curr State	Active Time
28873	3315	0015.cef2.506b	0	49	49	dyn(S)	US	act	2d23h
29381	3341	0015.cef2.506b	0	45	45	dyn(S)	US	act	2d22h
30045	3484	0015.9622.09b0	0	49	49	dyn(S)	US	act	2d8h28m