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EN-1000[™] Reference Manual Document 8

Monitoring the EN-1000

This document provides information for monitoring the EN-1000 router's configuration and performance. Screens specifically for monitoring the EN-1000 are discussed in this document.

Note: You can also monitor information and performance by viewing configuration screens. On those screens, you can make changes in the configuration if they are needed. See *Configuring the EN-1000 for its Network Functions*.

 Caution: Always consult your network administrator before changing settings in the EN-1000. If you have any problems when monitoring the EN-1000, contact the vendor or distributor.

After log-in, the Status Overview Screen displays information on the EN-1000's connections (Figure 8-1). (For log-in details, see *Logging In*, on page 2 of *Using the EN-1000's Management System*.)

encorenetworks	ailover n		Chan
Status System Network Logout Quickstan			
Overview Routes System Log Realtime Graphs			
Status			Uptime: 3h 11m 5
System Device Name	EN1000		
Device Name Device Model Firmware Version Local Time	EN1000 EN1000 17229 01 10 Mon Sep 22 23:36:56 :	014	
Cellular Information			
Cell Signal IMEI SIM ID	-125 dBm 359692051010438		
Network			
Network	Status		
CELL 2 eth2	Uptime: 0h 0m 0s MAC-Address: 94:85 Protocol: dhcp RX: 9.57 KB (184 Pktz TX: 1.50 MB (3819 Pk	.)	
LAN A eth0	Uptime: 3h 10m 43s MAC-Address: 04:F0 Protocol: static RX: 5.56 MB (24617 P TX: 34.78 MB (37421 IPv4: 192.168.10.12	kts.) Pkts.)	
WAN All eth1	Uptime: 3h 8m 23s MAC-Address: 04:F0 Protocol: dhcp RX: 35.54 MB (49551 TX: 5.72 MB (34362 P IPv4: 192.168.1.151/	Pkts.) kts.)	
DHCP Leases Hostname IPv4-A	ddress	MAC-Address	Leasetime remaining
	3.10.198	38:60:77:82:55:1a	11h 28m 6s

Figure 8-1. Status Overview Screen

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On screens for the EN-1000 management system, the top row of tabs indicates the management area, and the second row indicates configuration areas—items to configure or monitor within the selected management area.

Note: The EN-1000 senses its hardware configuration and displays tabs to represent that configuration.

In each management area, you can select items you wish to manage on the EN-1000.

- **1** To monitor the EN-1000, do the following:
 - a Select a management area tab.
- **b** Then select a configuration area tab.
- **c** Occasionally there will be a third row of tabs, for details. If so, select a detail tab.
 - The selected screen is displayed.

8.1 Graphs

The EN-1000 management system includes graphs that provide visual depictions of trends. The EN-1000 displays graphs that start at the current time (that is, at the time display of the graph is selected).

To view graphs of EN-1000 traffic statistics beginning at the current second and updating through three-second intervals (in real time), do the following on the EN-1000 management screens.

- 1 Select the Status management area.
- 2 Select the **Realtime Graphs** configuration area.
- 3 If necessary, select the Load detail tab.
 - ♦ The Realtime Load Performance Graph is displayed (Figure 8-2).

Charges: Provide Router Phone/MTN: Device Mode: cell Falouer Cell Falouer Cell Falouer Cell Falouer Device Mode: cell Falouer Cell Falo

Figure 8-2. Realtime Load Performance Graph

This screen depicts all traffic through the EN-1000 in real time (that is, as that traffic occurs). Below the graph, labels (underscored with colors corresponding to areas in the graph) provide quick information for the current **Load**, the mean **Average**, and the **Peak** traffic for:

- The past **one minute** (sometimes displayed as pink; sometimes displayed as dark orange)
- The past five minutes (usually displayed as medium orange)
- The past fifteen minutes (usually displayed as light orange, almost yellow)
- 4 Select the Traffic detail tab.
 - The Realtime Performance Graph of All EN-1000 Traffic is displayed (Figure 8-3).

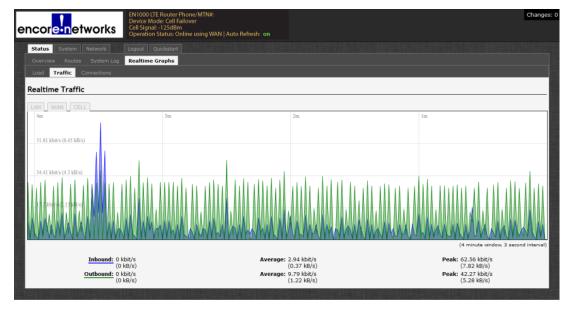


Figure 8-3. Realtime Performance Graph of All EN-1000 Traffic

- a On this same screen, select the LAN detail area.
 - The Realtime Performance Graph of the EN-1000's LAN Port Traffic is displayed (Figure 8-4).



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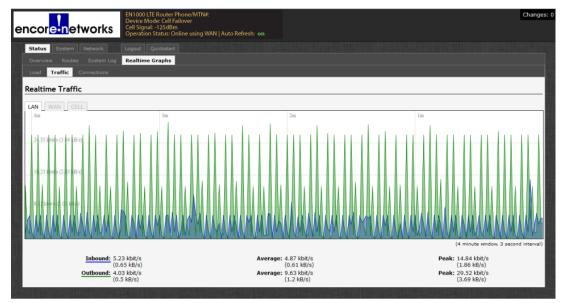


Figure 8-4. Realtime Performance Graph of the EN-1000's LAN Port Traffic

- **b** On this same screen, select the **WAN** detail area.
 - The Realtime Performance Graph of the EN-1000's WAN Port Traffic is displayed (Figure 8-5).

Figure 8-5. Realtime Performance Graph of the EN-1000's WAN Port Traffic

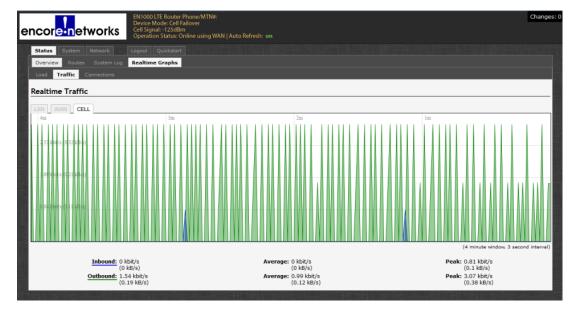
ncoronotworks	00 LTE Router Phone/MTN#: :e Mode: Cell Failover ignal: -125dBm ation Status: Online using WAN Auto F	efresh: on	Change
	t Quickstart		
Overview Routes System Log Real	time Graphs		
Realtime Traffic			
LAN WAN CELL			
4m	3m	2m	lm
29.17 kbit/s (3.65 kB/s)			
19,43 kbit/s (2,43 kB/s)			
 2.12660/s (1.22 kB/s) 			
			(4 minute window, 3 second interval)
Inbound: 0.39 kbit/	s	Average: 0.87 kbit/s	Peak: 35.36 kbit/s
(0.05 kB/s Outbound: 1.17 kbit/		(0.11 kB/s) Average: 1.08 kbit/s	(4.42 kB/s) Peak: 6.6 kbit/s
(0.15 kB/s		(0.13 kB/s)	(0.83 kB/s)

- **c** On this same screen, select the **CELL** detail area.
 - The Realtime Performance Graph of the EN-1000's Cellular Wireless Traffic is displayed (Figure 8-6).

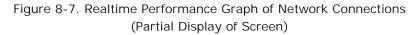
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Figure 8-6. Realtime Performance Graph of the EN-1000's Cellular Wireless Traffic



- **5** Select the **Connections** detail tab.
 - The Realtime Performance Graph of Network Connections is displayed (Figure 8-7).



	works Cell Si Opera	tion Status: Online using WAN Auto Refi	resh; on	
tus System				
	System Log Realti	me Graphs		
ad Traffic Co	onnections			
Itime Conne	ctions			
page gives an o	verview over currently	active network connections.		
ctive Connecti	ons			
		3m	2m	1m
	-N			
V6 VV	V '			
				a contra a service de la contra d
25				
25				
25				(3 minute window, 3 second inte
25	UDP: 73		Average: 73	(3 minute window, 3 second inte Peak: 93
25	UDP: 73 TCP: 10		Average: 73 Average: 10	
25				Peak: 93
25	TCP: 10		Average: 10	Peak: 93 Peak: 12
Network	TCP: 10 Other: 7 Protocol	Source	Average: 10 Average: 6 Destination	Peak: 93 Peak: 12 Peak: 7 Transfer
Network IPV4	TCP: 10 Other: 7 Protocol UDP	HP-p6-2016.lan:63882	Average: 10 Average: 6 Destination 192.166.101.29:161	Peak: 93 Peak: 12 Peak: 7 Transfer 100.02 Kb (974 Pkts.)
Network IPV4 IPV4	TCP: 10 Other: 7 Protocol UDP TCP	HP-p6-2016.lan:63882 HP-p6-2016.lan:49567	Average: 10 Average: 6 Destination 192.169.101.29:161 outlook.apptixemail.net:443	Peak: 93 Peak: 12 Peak: 7 Transfer 100.82 KB (97-Pits.) 72.55 KB (440 Pits.)
Network IPV4	TCP: 10 Other: 7 Protocol UDP	HP-p6-2016.lan:63882	Average: 10 Average: 6 Destination 192.166.101.29:161	Peak: 93 Peak: 12 Peak: 7 Transfer 100.02 Kb (974 Pkts.)

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8.2 Routing Information

Figure 8-8 (Status, Routes) displays the Address Resolution Protocol (ARP) Table and the IP routes for ports on the EN-1000.

Figure 8-8. Status Routes Screen

Dreinetworks			
tus System Network Logout Quick			
erview Routes System Log Realtime Graph	15		
tes			
ollowing rules are currently active on this system.			
RP			
IPv4-Address		MAC-Address	Interface
192.168.10.198		38:60:77:82:55:1a	ethO
192.168.1.1		00:a0:eb:03:59:16	eth 1
ctive IPv4-Routes	Target	IPv4-Gateway	Metric
wan	0.0.0/0	192.168.1.1	10
wan	192.168.1.0/24	0.0.0.0	10
lan	192.168.10.0/24	0.0.0.0	0

8.3 Pings and Other Network Diagnostics

The EN-1000 can use a ping, route tracing, or nslookup to test or resolve connections. Do the following to test a connection:

- 1 On the EN-1000 management system, select the **Network** tab.
- 2 Under Networks, select the Diagnostics tab.

The Diagnostics Screen is displayed (Figure 8-9).

Figure 8-9. Diagnostics Screen

corenetworks	1000 LTE Router Phone/MTN#: vice Mode: Cell Fallover 15 Januar: USABm eration Status: Online using WAN			Chan
Interfacias Heatnamas Static Ro	utus Failuver Firewall Diagnostics QuS	VPN VRRP		
Diagnostics				
Network Utilities				
encorenetworks.com	encorenetworks.co	vm	encorenetworks.com	

3 Look at the ping set-up area on the left of the screen, under the heading **Network Utilities** (Figure 8-10).

Figure 8-10. Ping Set-Up Area (Detail of Diagnostics Screen)

Metwork Utilities	5
encorenetworks.com	m
🔟 Ping	

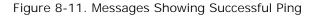
4 In the top field, enter the ping destination.

Note: The destination can be entered as an IP address or as a URL (a website path and name). If you type an IP address, use IP version 4 (IPv4). In Figure 8-10, the destination is **encorenetworks.com**.

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- **5** In the action box below the field, select the **Ping** button.
 - If the ping is successful, the screen displays ping statistics, indicating that the VPN tunnel is active (Figure 8-11).



Coronotworks Cell Signal -1			Chan
Statua System Network Cogout	Quickatart Novar Firewall Diagnostics Org. VPN VRRP	oopenika internationalise internationalise internationalise internationalise internationalise internationalise	Ay Dian 124
Diagnostics			
- Network Utilities		excention or	
Frie UP Pro		1 Teleskup	
	Install iputils treceroute/ for JPv6 tracer	cuto	
PING international to the (DALMAR) St bytes from 74.50.20.147; seg D	ct1 04 time 100.950 me		
66 bytes from 74.52.25.143; seg 1 64 bytes from 74.52.15.143; seg 1 64 bytes from 74.52.15.143; seg 4	111-54 .imc=171.014 mm		
encorenetworks.com ping statis 5 technic: Linear Linea, 4 pacerta a mound trip min/leg/max = 150.945/3	stationard, 200 manhold incar-		

If the ping is unsuccessful, the screen indicates that no acknowledgments were returned. That means that there is no communication (Figure).

Message Showing Unsuccessful Ping

encore-networks	Failover	Ounges
Status System Network Lopout Qui		
Diagnostics	er Finavall Diagnostics QaS VPN VEEP	
Network Utilities		
encorenetworks.com	encorenetworks.com	encorenetworks.com
I Ping	Traceroute	Nsloekup
7235 google.com (74.125.227.38): 56 data bytes		
google.com ping statistics 8 packets transmitted, 0 packets received, 1004 pack	et loss	

6 If the ping is unsuccessful, check the connections and IP address, and repeat Step 4 through Step 5.

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8.4 Logs

You can review information logged by the system. See Figure 8-12, System Log.

Figure 8-12. System Log (Sample; Partial Listing)

encor <mark>e n</mark> etworks	EN1000 TE Flouter Phonon(MNe: Chang Device Mode: Col Balover Cell Signal: 125 dbit Operation Status, Chillio uning WAN Operation Status, Chillio uning WAN
Status System Network	
Overview Routes System	Ing. Realiting Granhs
	erg incentine external
System Log	
Oct 27 18:01:24 EN1000 use	r.info gysinit: "M rinfo gysinit: 19660201010438"M
Oct 27 18:01:34 EN1000 use	
Oct 27 10:01:34 EN1000 use	
Oct 27 18:01:26 EN1000 use	r.info sysinit: uci: Entry not found
	mon.info syslog: 10[IKE] retransmit 1 of request with message ID 0
	mon.info syslog: 10[NET] sending packet: from 192.168.1.151[500] to 1.1.1.2[500] (972 bytes)
Oct 27 18:01:36 EN1000 use Oct 27 18:01:26 EN1000 use	
	r.info sysinit: "M r.info sysinit: +C30: 99,99"M
Oct 27 18:01:36 EN1000 use	
Oct 27 10:01:36 EN1000 use	r.info sysinit: OK'M
	r.info sysinit: uci: Entry not found
Oct 27 18:01:29 EN1000 use	
Oct 27 18:01:39 EN1000 use	r.info sysinis: "M r.info sysinis: "Color 99.99"M
Oct 27 18:01:39 EN1000 use	
Oct 27 18:01:39 EN1000 use	
	rinfo sysinit: uci: Entry not found
	r.info sysinit: /etc/en_scripts/ipsec_auto_restart: line 41: can't create /etc/en_scripts/output/ipsec_restart_last.log: nonexistent directory
	r.info sysinit: /etc/en_scripts/ipsec_auto_restart: line 41: can't create /etc/en_scripts/output/ipsec_restart_last.log: nonexistent directory
	r.info sysinit: /etc/en_scripts/ipsec_auto_restart: line 41: can't create /etc/en_scripts/output/ipsec_restart_last.log: nonexistent directory
	r.info sysinit: /etc/en_scripps/lpsec_subo_cestart: line %1: can'to craste /etc/en_scripts/output/syslog: nonexistent directory mon.info syslog: 00100%1 signal of type 3130HT ceceived. Shutting down
	mon.info systeg: volume; Signal or type addate fetered, anatoking down mon.info systeg: volume; Signal or type addate fetered, anatoking down
Oct 27 18:01:41 EN1000 use	
Oct 27 18:01:41 EN1000 use	
	z.info sysinit: +CSQ: 99,99°M
Oct 27 18:01:41 EN1000 use Oct 27 18:01:41 EN1000 use	
	r.info sysinit: UK:W response found
Oct 27 18:01:42 EN1000 use	
Oct 27 18:01:42 EN1000 use	r.info sysinit: "M
	r.info sysinis: +CSQ: 99,99°M
Oct 27 18:01:43 EN1000 use	
Oct 27 18:01:42 EN1000 use Oct 27 18:01:42 EN1000 use	
Oct 27 18:01:43 EN1000 use	
	r. info systanto: m r. inf
Oct 27 18:01:42 EN1000 use	r.info sysinit: "M
Oct 27 18:01:42 EN1000 use	
	r.info sysinis: uci: Enbry not found
Oct 27 18:01:46 EN1000 use Oct 27 18:01:46 EN1000 use	
	r.anco sysand: "# .info sysand: ALTIOD 04 05 06 00 89 TF"M
Oct 27 18:01:46 EN1000 use	
Oct 27 18:01:46 EN1000 use	
	r.info sysinit: uci: Entry not found
Oct 27 18:01:48 EN1000 use	r.info syminib: uci: Entry not found
	hpriv.info ipsec_starter[12215]: starter_stop_charon(): charon does not respond, sending KILL hpriv.info ipsec_starter[12213]: charon stooped after \$200 ms
	hpriv.info ipee_starter[12313]; charon stopped after 0200 me hpriv.info ipee_starter[12313]; ipee starter stopped