GEM420 Command Line Format

Introduction

The CLI parameters nearly always take the following format. There are only a few exceptions.

Entity	Instance	Parameter	Values	Description

And need apply to alter.

Current support apply
parameter. lan_ip
wan_interne
routing
phy_type
wps
wifi_conf
nb_conf
vs
vc
nb_alg
ap
nb_dmz
nb_dr
dn
ddns
fix_map

Enter command will show the supported parameters.

ex:

```
# ppp
usage:ppp instance parameter
values support parameters:
    userna
    me
    passwor
    d ipaddr
    mask
    gateway
    ppp_server_ip_na
    me conn_id
    username
```

1. basic network

1.1. WAN

1.1.1. physical interface

Entity	Instance	Parameter	Values	Description
eth	n	phy_iface	0/1/2	0: ethernet 1: 3g/4g 2: usb 3g/4g
eth	n	op_mode	0/1	0: disable 1: always
eth	n	failover	m	n: wan interface (failover wan) m: wan interface (main wan)
eth	n	dis_failover	m	disable failover

				n : wan interface (failover wan) m: wan interface (main wan)
eth	n	seamless	on/off	need failover on
~~eth~~	~~n~~	~~line_speed_ul_m~~	~~value~~	~~Mbps~~
~~eth~~	~~n~~	~~line_speed_dl_m~~	~~value~~	~~Mbps~~
eth	n	line_speed_ul	value	Kbps
eth	n	line_speed_dl	value	Kbps
eth	n	vlan_tag	on/off	
eth	n	vid	vlan_id	1~4095
apply	phy_type	n		apply the physical interface alter

1.1.2. internet setup

Entity	Instance	Parameter	Values	Description
eth	n	wan_type	0/1/2/3/4	0: static ip 1: dynamic ip 2: pppoe 3: pptp 4: l2tp
eth	n	conn_ctl	0/1/2	0: auto 1: demand 2: manual in dynamic ip, pppoe, l2tp, pptp wan type
eth	n	max_idle_time		

wan_type: static ip

Entity	Instance	Parameter	Values	Description
eth	n	ipaddr	valid ip address	
eth	n	mask	valid subnet mask	
eth	n	gateway	ip address	
eth	n	dnsserver	ip address	
eth	n	secdns	ip address	
eth	n	mtu	value	0: auto
eth	n	do_nat	0/1/2	0: disable 1: ip 2: ip and port

network monitoring

Entity	Instance	Parameter	Values	Description
eth	n	nm	on/off	
eth	n	nm_mode	0/1	0: dns query: 1: icmp checking
eth	n	loading_check	on/off	
eth	n	check_interval val		second
eth	n	timeout		second
eth	n	latency_threshold		ms
eth	n	fail_threshold		times
eth	n	target1	1/2/3/4	1: dns1 2: dns2 3: gateway 4: other host
eth	n	target2	1/2/3/4	
eth	n	other_host1	ip	
eth	n	other_host2	ip	

eth	n	igmp	0/1/2/3/4	0: disable 1: auto 2: igmp v1 3: igmp v2 4: igmp v3
eth	n	wan_ip_alias	on/off	
eth	n	wan_ip_alias_ip	ip	
eth	n	hostname	name	
eth	n	isp_reg_mac	mac	

wan_type: pppoe

Entity	Instance	Parameter	Values	Description
eth	n	ipv6_dual_stack	on/off	
ppp	n	username	str_username	
ppp	n	password	str_pwd	
eth	n	service_name	name	
etn	n	assigned_ip	ip	

wan_type: pptp

Entity	Instance	Parameter	Values	Description
eth	n	ip_mode	0/1	0: dynamic ip address 1: static ip address

pptp/static ip address

Entity	Instance	Parameter	Values	Description
ppp	n	IPaddr	ip	
ppp	n	mask	mask	
ppp	n	gateway	ip	
ppp	n	server_ip_na	str_ip_nam	
ppp	n	connection_id	conn_id	

wan type : 3g/4g

Entity	Instance	Parameter	Values	Description
sim	n	preferred_sim	0/1/2/3	0: sim a first 1: sim b first 2: sim a only 3: sim b only
sim	n	profile_a	0/1	0: auto-detection 1: Manual-configuration
sim	n	profile_b	0/1	0: auto-detection 1: Manual-configuration

auto-detection

Entity	Instance	Parameter	Values	Description
sim	n	pin_code_a	pin_code	
sim	n	pin_code_b	pin_code	

Manual-configuration

Entity	Instance	Parameter	Values	Description
~~sim~~	~~n~~	~~country_a~~	~~0 ~ N~~	~~0 ~ N maps to support country~~
~~sim~~	~~n~~	~~service_provider_a~~	~~0 ~ N~~	~~0 ~ N map to support Service Provider~~
sim	n	apn_a	str_apn	
sim	n	dial_num_a	dial_num	
sim	n	account_a	account	3g/4g

sim	n	password_a	passwd	3g/4g
sim	n	auth_a	0/1/2	0: auto 1: pap 2: chap
sim	n	dns1_a	ip	
sim	n	dns2_a	ip	

table 1 sim A

Entity	Instance	Parameter	Values	Description
~~sim~~	~~n~~	~~country_b~~	~~0 ~ N~~	~~0 ~ N maps to support country~~
~~sim~~	~~n~~	~~service_provider_b~~	~~0 ~ N~~	~~0 ~ N map to support Service Provider~~
sim	n	apn_b	str_apn	
sim	n	dial_num_b	dial_num	
sim	n	account_b	account	3g/4g
sim	n	password_b	passwd	3g/4g
sim	n	auth_b	0/1/2	0: auto 1: pap 2: chap
sim	n	dns2_a	ip	
sim	n	dns2_b	ip	

table 2 sim B

Entity	Instance	Parameter	Values	Description
sim	n	connection_control	0/1/2	0: auto-reconnect 1: connect-on-demand 2: connect-manual
sim	n	max_idle_time	value	second

1.2. LAN & VLAN

1.2.1. Ethernet LAN

Entity	Instance	Parameter	Values	Description
eth	n	ipaddr	valid ip address	
eth	n	mask	valid subnet mask	

Entity	Instance	Parameter	Values	Description
apply	lan_ip			apply LAN IP alter

1.3. WiFi

1.3.1. Configuration

Basic Configuration

Entity	Instance	Parameter	Values	Description
wifi	0	wps	on/off	
wifi	0	conf_status	0/1	0: set 1: release
wifi	0	conf_mode	0/1	0: registrar 1: enrollee
wifi	0	generate_pin_code	on	
wifi	0	allow_sta_pin_code		
wifi	0	wps_trigger	on	
wifi	0	wps_status	?	
apply	wps			

2.4G WiFi Configuration

Entity	Instance	Parameter	Values	Description
wifi	0	enable	on/off	
wifi	0	op_mode	0/1/2	0: ap router 1: wds only 2: wds hybird
wifi	0	lazy_mode	on/off	
wifi	0	green_ap	on/off	
wifi	n	ap_enable	on/off	n: 1 ~ 8 1: VAP 1 2: VAP 2 … 8: VAP 8
wifi	n	ap_max_enable	on/off	
wifi	n	ap_max	num	1 ~ 16
wifi	0	schedule	index	
wifi	n	ssid		
wifi	n	ssid_broadcast	on/off	
wifi	n	wlan_partition	on/off	
wifi	0	channel	0 ~ 11	0: auto 1: channel 1 … 11: channel 11
wifi	0	wifi_system	0 ~ 5	0: 802.11b 1: 802.11g 2: 802.11n 3: 802.11 b/g 4: 802.11 g/n 5: 802.11 b/g/n
wifi	n	auth	0~8	0: open 1: shared 2: auto 3: wpa-psk

				4: wpa 5: wpa2-psk 6: wpa2 7: wpa-psk/ wpa2-psk 8: wpa/wpa2
wifi	n	en_8021x	on/off	only Authentication is: open auto
wifi	n	encrypt	0 ~ 4	0: none 1: WEP 2: TKIP 3: AES 4: TKIP/AES
wifi	n	wepkey_type	0/1	0: HEX 1: ASCII
wifi	n	wepkey		HEX: 10 or 26 ASCII: 5 or 13
wifi	n	pskey		length: 8 ~ 63
wifi	n	radisu_server_ip		
wifi	n	radisu_server_port		1 ~ 65535
wifi	n	radisu_server_key		
apply	wifi_conf			

1.3.2. Wireless Client List

Entity	Instance	Parameter	Values	Description
wifi	0	wc_list	0 ~ 8	list wireless clients 0: all 1: vap1 … 8: vap8

1.3.3. Advanced Configuration

Entity	Instance	Parameter	Values	Description
~~wifi~~	~~0~~	~~op_band~~	~~0~~	~~0: 2.4g~~
wifi	0	beacon_interval		1 ~ 1000 msec
wifi	0	dtim_interval		1~255
wifi	0	rts_threshold		1 ~ 2347
wifi	0	frag		256 ~ 2346
wifi	0	wmm	on/off	
wifi	0	short_gi	0/1	0: 800 ns 1: 400 ns
~~wifi~~	~~0~~	~~tx_rate~~	~~0~~	~~0: best~~
wifi	0	rf_bandwidth	0/1/2	0: ht20 1: ht40 2: auto
wifi	0	transmit_power	0/1/2/3	0: 100% 1: 50% 2: 25% 3: 12%
apply	wifi_conf			

1.4. IPV6

Current ipv6 has no alter command, after enter ipv6 command, need reboot.

1.4.1. Configuration

Entity	Instance	Parameter	Values	Description
ipv6	0	enable	on/off	
ipv6	0	wan_conn_type	0/1/2/3/4/5	0: static ipv6 1: dhcpv6 2: pppoev6 3: 6to4 4: 6in4

static ipv6

Entity	Instance	Parameter	Values	Description
ipv6	0	ipaddr		
ipv6	0	prefix_len		
ipv6	0	gateway		
ipv6	0	dnsserver		
ipv6	0	secdns		
ipv6	0	mld_snooping	on/off	
ipv6	0	ds_lite	on/off	
ipv6	0	ds_lite_opt	0/1	0: dynamic 1: static
ipv6	0	ds_lite_sip	ip_addr	ds_lite_opt: static
ipv6	0	g_addr		
ipv6	0	auto_conf_en	on/off	
ipv6	0	auto_conf_type	0/1	0: stateless 1: stateful
ipv6	0	ar_start	str	
ipv6	0	ar_end	str	
ipv6	0	ad_lifetime		seconds

dhcpv6

Entity	Instance	Parameter	Values	Description
ipv6	0	dnsfrom	0/1	0: from server 1: specific dns
ipv6	0	dhcp_dns1		
ipv6	0	dhcp_dns2		

pppoev6

Entity	Instance	Parameter	Values	Description
ipv6	0	username		
ipv6	0	password		
ipv6	0	service_name		
ipv6	0	mtu		

6to4

Entity	Instance	Parameter	Values	Description
ipv6	0	6to4dns1		
ipv6	0	6to4dns2		
ipv6	0	6to4_g_addr		

6in4

Entity	Instance	Parameter	Values	Description
ipv6	0	r_ipv4_addr		
ipv6	0	l_ipv6_addr		
ipv6	0	6in4_dns1		
ipv6	0	6in4_dns2		

1.5. NAT/Bridging

1.5.1. Configuration

Entity	Instance	Parameter	Values	Description
nb	0	loop_back	on/off	
apply	nb_conf			

1.5.2. Virtual server & Virtual Computer

Virtual Server List

Entity	Instance	Parameter	Values	Description
nb	0	vs_list	?	
nb	n	vs_public_port		
nb	n	vs_server_ip		
nb	n	vs_private_port		
nb	n	vs_protocol	0/1/2	0: BOTH 1: TCP 2: UDP
nb	n	vs_schedule	index	
nb	n	vs_enable	on/off	
nb	0	vs_del	n	
apply	vs			

Virtual Computer List

Entity	Instance	Parameter	Values	Description
nb	0	vc_list	?	
nb	n	vc_global_ip		
nb	n	vc_local_ip		
nb	n	vc_enable	on/off	
nb	0	vc_del	n	
apply	vc			

1.5.3. Special AP & ALG

Configuration

Entity	Instance	Parameter	Values	Description
nb	0	alg_enable	on/off	
apply	nb_alg			

Special AP Rule Configuration

Entity	Instance	Parameter	Values	Description
nb	0	ap_list	?	
nb	n	ap_trigger_port		
nb	n	ap_income_port		
nb	n	ap_schedule	index	
nb	n	ap_enable	on/off	
nb	0	ap_del	n	
apply	ap			

1.5.4. DMZ

DMZ

Entity	Instance	Parameter	Values	Description
nb	0	dmz_enable	on/off	
nb	0	dmz_ip		
apply	nb_dmz			

dhcp relay

Entity	Instance	Parameter	Values	Description
nb	0	dr_enable	on/off	
nb	0	dr_server_ip		
apply	nb_dr			

1.6. Routing

1.6.1. Static Routing

Entity	Instance	Parameter	Values	Description
routing	0	static_route	on/off	

Entity	Instance	Parameter	Values	Description
routing	n	dip		
routing	n	mask		
routing	n	gw		
routing	n	iface	0 ~ 7	0: auto 1: wan-1 2: wan-2 3: wan-3 4: lan 5: vlan-1 6: vlan-2 7: vlan-3
routing	n	rule_en	on/off	
routing	0	del	n	
routing	0	rs_list	?	list static routing rules
apply	routing			apply rule list

1.6.2. Dynamic Routing

rip

Entity	Instance	Parameter	Values	Description
routing	0	rip_op	0/1/2	0: disable 1: rip v1 2: rip v2

ospf

Entity	Instance	Parameter	Values	Description
routing	0	ospf_en	on/off	
routing	0	ospf_backbone_subnet		
routing	n	ospf_area_subnet		
routing	n	ospf_area_id		
routing	n	ospf_area_en	on/off	
routing	0	ospf_del	n	
routing	0	ospf_list	?	list ospf rules

bgp

Entity	Instance	Parameter	Values	Description
routing	0	bgp_en	on/off	
routing	0	bpg_self_id		
routing	n	bpg_nb_ip		
routing	n	bgp_nb_id		
routing	n	bgp_nb_en	on/off	
routing	n	bgp_del	n	
routing	0	bpg_list	?	list bgp rules
apply	bgp_del			

1.6.3. Routing Information

Entity	Instance	Parameter	Values	Description
routing	0	routing_table	?	
routing	0	routing_info	?	

Entity	Instance	Parameter	Values	Description
apply	routing			apply routing alter

1.7. Client/Server/Proxy

1.7.1. Dynamic DNS

Pre-defined Domain Name List

Entity	Instance	Parameter	Values	Description
dydns	0	dn_list	?	
dydns	n	dn		
dydns	n	dn_ip		
dydns	n	dn_en	on/off	
dydns	0	del	n	
apply	dn			

Dynamic DNS

Entity	Instance	Parameter	Values	Description
dydns	0	enable	on/off	
dydns	0	provider	0/1/2/3/4	0: DynDNS.org (Dynamic) 1: DynDNS.org (Custom) 2: No-IP.com 3: TZO.com 4: dhs.org
dydns	0	hostname		
dydns	0	username		
dydns	0	password		
apply	ddns			

1.7.2. DHCP Server

Entity	Instance	Parameter	Values	Description
dhcp	0	list	?	
dhcp	n	server_name		
dhcp	n	lan_ip		
dhcp	n	mask		
dhcp	n	ip_start		
dhcp	n	ip_end		
dhcp	n	lease_time		300 ~ 604800 seconds
dhcp	n	domain_name		
dhcp	n	dns1		
dhcp	n	dns2		
dhcp	n	wins1		
dhcp	n	wins2		
dhcp	n	gw		
dhcp	n	enable	on/off	
dhcp	0	del	2/3/4	
dhcp	0	fix_map_list	?	
dhcp	n	fix_map_mac		
dhcp	n	fix_map_ip		
dhcp	n	fix_map_en	on/off	
dhcp	0	fix_map_del	n	
apply	fix_map			