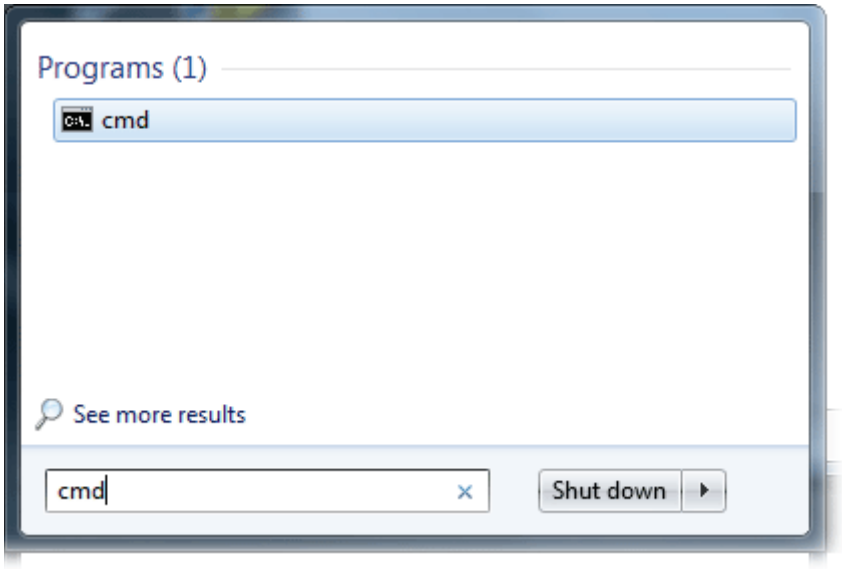
Part X Telnet Commands

Accessing Telnet of Vigor2927

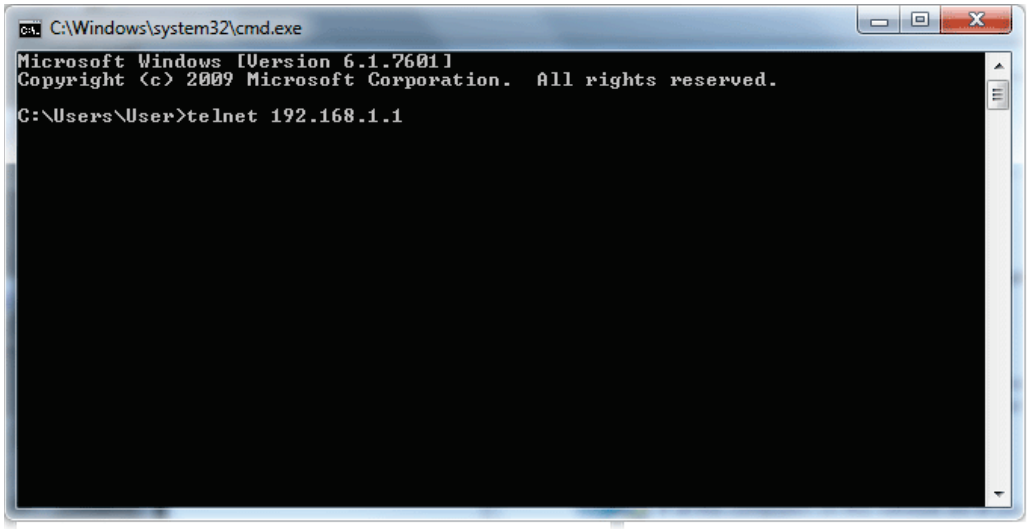
This chapter also gives you a general description for accessing telnet and describes the firmware versions for the routers explained in this manual.

Info	For Windows 7 user, please make sure the Windows Features of Telnet Client has been turned on under **Control Panel>>Programs**.

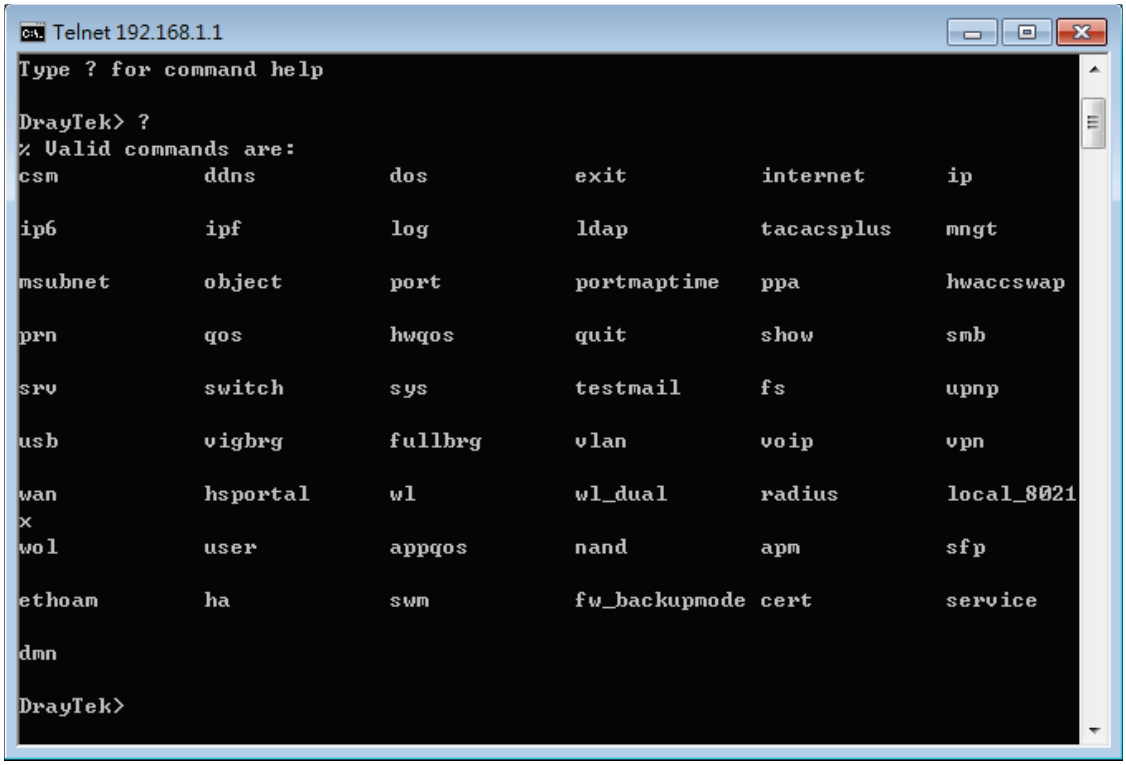
Type **cmd** and press Enter. The Telnet terminal will be open later.



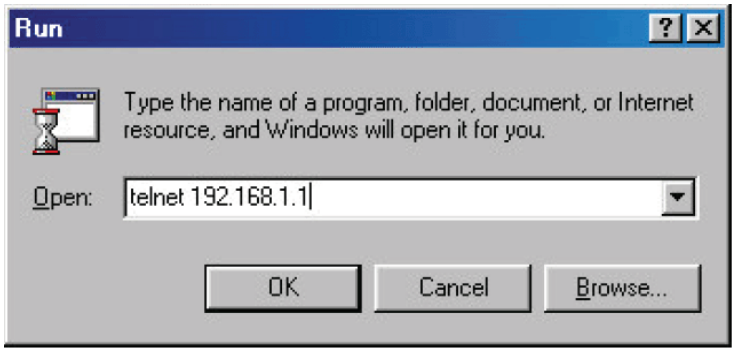
In the following window, type **Telnet 192.168.1.1** as below and press Enter. Note that the IP address in the example is the default address of the router. If you have changed the default, enter the current IP address of the router.



Next, enter admin/admin for Account/Password. Then, enter **?**. You will see a list of valid/common commands depending on the router that your use.



For users using previous Windows system (e.g., 2000/XP), simply click **Start >> Run** and type **Telnet 192.168.1.1** in the Open box as below. Next, type admin/admin for Account/Password. And, type **?** to get a list of valid/common commands.



Telnet Command: csm appe prof

Commands under CSM allow you to set CSM profile to define policy profiles for different policy of IM (Instant Messenger)/P2P (Peer to Peer) application.

“csm appe prof “ is used to configure the APP Enforcement Profile name. Such profile will be applied in **Default Rule** of **Firewall>>General Setup** for filtering.

Syntax

csm appe prof -i *INDEX [-v | -n NAME|setdefault]*

Syntax Description

Parameter	Description
INDEX	It means to specify the index number of CSM profile, from 1 to 32.
- v	It means to view the configuration of the CSM profile.
- n	It means to set a name for the CSM profile.
NAME	It means to specify a name for the CSM profile, less then 15 characters.
setdefault	Reset to default settings.

Example

```
> csm appe prof -i 1 -n games
The name of APPE Profile 1 was setted.
```

Telnet Command: csm appe set

It is used to configure group settings for IM/P2P/Protocol and Others in APP Enforcement Profile.

Syntax

csm appe set *-i INDEX -v GROUP*

csm appe set *-i INDEX -e AP_IDX*

csm appe set *-i INDEX -d AP_IDX*

csm appe set *-i INDEX -p AP_IDX*

csm appe set *-i INDEX -q AP_IDX*

Syntax Description

Parameter	Description
INDEX	Specify the index number of CSM profile, from 1 to 32.
-v GROUP	View the IM/P2P/Protocol and Others configuration of the CSM profile. GROUP - Specify the category of the application. Available options are: IM, P2P, Protocol and Others.
-e AP_IDX	Enable to block specific application. AP_IDX - Specify the index number of the APP.
-d AP_IDX	Disable to block specific application. AP_IDX - Specify the index number of the APP.
-p AP_IDX	Enable the policy route for the action of specific application.

	AP_IDX - Specify the index number of the APP.
-q AP_IDX	Disable the policy route for the action of specific application. AP_IDX - Specify the index number of the APP.
AP_IDX	Each application has independent index number for identification in CLI command. Specify the index number of the application here. If you have no idea of the inex number, do the following (Take IM as an example): Type “csm appe set –I 1 –v IM”, the system will list all of the index numbers of the applications categorized under IM.

Example

```
> csm appe set –i 1 –p 1
The index of APP is not support for Policy Route!
>
```

Telnet Command: csm appe show

It is used to display group (IM/P2P/Protocol and Others) information APP Enforcement Profile.

Syntax

csm appe show *[-a|-i|-p|-t|-m]*

Syntax Description

Parameter	Description
-a	View the configuration status for All groups.
-i	View the configuration status of IM group.
-p	View the configuration status of P2P group.
-t	View the configuration status of protocol group.
-m	View the configuration status of Others group.

Example

```
> csm appe show –t
          Type     Index                  Name        Version
-----------------------------------------------------------------------
      Protocol       43                   BGP              4
      Protocol       44                   DNS
      Protocol       45                   FTP
      Protocol       46                   GIT
      Protocol       47                 H.323
      Protocol       48                  HTTP            1.1
      Protocol       49           IBM Informix
      Protocol       50                IBM DB2
      Protocol       51                  ICMP
      Protocol       52     IMAP/IMAP STARTTLS             4.1
      Protocol       53                   IRC          2.4.0
      Protocol       54          Microsoft SQL
      Protocol       55                  MQTT
```

```
      Protocol       56                MySQL
      Protocol       57                 NNTP
      Protocol       58                NNTPS
      Protocol       59                  NTP
      Protocol       60               Oracle            11g
      Protocol       61     POP3/POP3 STARTTLS
      Protocol       62            PostgreSQL

      Protocol       63                 QUIC           Q025
--- MORE ---     ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page]
```

Telnet Command: csm appe config

It is used to display the configuration status (enabled or disabled) for IM/P2P/Protocol/Other applications.

Syntax

csm appe config -v *INDEX [-i|-p|-t|-m]*

Syntax Description

Parameter	Description
INDEX	Specify the index number of CSM profile, from 1 to 32.
-i	View the configuration status of IM group.
-p	View the configuration status of P2P group.
-t	View the configuration status of protocol group.
-m	View the configuration status of Others group.

Example

```
> csm appe config -v 1 -m
Group            Type    Index               Name        Enable
-------------------------------------------------------------------------
   OTHERS        Tunneling       74          CloudFlare       Disable
   OTHERS        Tunneling       75            DNSCrypt       Disable
   OTHERS        Tunneling       76            DynaPass       Disable
   OTHERS        Tunneling       77            FreeGate       Disable
   OTHERS        Tunneling       78       Hotspot Shield       Disable
   OTHERS        Tunneling       79          HTTP Tunnel       Disable
   OTHERS        Tunneling       80           HTTP Proxy       Disable
   OTHERS        Tunneling       81      LogMeIn Hamachi       Disable
   OTHERS        Tunneling       82            MS Teredo       Disable
   OTHERS        Tunneling       83              OpenDNS       Disable
   OTHERS        Tunneling       84              OpenVPN       Disable
   OTHERS        Tunneling       85               PGPNet       Disable
   OTHERS        Tunneling       86          Ping Tunnel       Disable
   OTHERS        Tunneling       87           RealTunnel       Disable
   OTHERS        Tunneling       88              Skyfire       Disable
   OTHERS        Tunneling       89        SOCKS4/SOCKS5       Disable
   OTHERS        Tunneling       90        SoftEther VPN       Disable
   OTHERS        Tunneling       91              TinyVPN       Disable
   OTHERS        Tunneling       92                 Tor       Disable
   OTHERS        Tunneling       93             UltraVPN       Disable
   OTHERS        Tunneling       94                 VNN       Disable
```

```
    OTHERS        Tunneling       95      Wujie/UltraSurf       Disable
--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page] --
>
```

Telnet Command: csm appe interface

It is used to configure APPE signature download interface.

Syntax

csm appe interface <*AUTO*/*WAN#*>

Syntax Description

Parameter	Description
AUTO	Vigor router specifies WAN interface automatically.
WAN	Specify the WAN interface for signature downloading.

Example

```
> csm appe interface wan1
Download interface is set as "WAN1" now.
> csm appe interface auto
Download interface is set as "auto-selected" now.
```

Telnet Command: csm appe email

It is used to set notification e-mail for APPE signature based on the settings configured in **System Maintenance>>SysLog/Mail Alert Setup (**in which, the box of **APPE Signature** is checkd under **Enable E-Mail Alert**).

Syntax

csm appe email <*-e*|*-d*|*-s*>

Syntax Description

Parameter	Description
-e	Enable notification e-mail mechanism.
-d	Disable notification e-mail mechanism.
-s	Send an example e-mail.

Example

```
> csm appe email -e
Enable APPE email.
```

Telnet Command: csm ucf

It is used to configure settings for URL control filter profile.

Syntax

csm ucf show
csm ucf setdefault
csm ucf msg *MSG*
csm ucf obj *INDEX* <*-n PROFILE_NAME* | *-l [P/B/A]* | *uac* | *wf* >
csm ucf obj *INDEX -n PROFILE_NAME*
csm ucf obj *INDEX -p VALUE*
csm ucf obj *INDEX -l P/B/A*
csm ucf obj *INDEX uac*
csm ucf obj *INDEX wf*

Syntax Description

Parameter	Description
show	It means to display all of the profiles.
setdefault	It means to return to default settings for all of the profile.
msg MSG	It means de set the administration message. MSG means the content (less than 255 characters) of the message itself.
obj	It means to specify the object for the profile.
INDEX	It means to specify the index number of CSM profile, from 1 to 8.
-n	It means to set the profile name.
PROFILE_NAME	It means to specify the name of the profile (less than 16 characters)
-p	Set the priority (defined by the number specified in VALUE) for the profile.

VALUE	Number 0 to 3 represent different conditions. 0: It means Bundle: Pass. 1: It means Bundle: Block. 2: It means Either: URL Access Control First. 3: It means Either: Web Feature First.
-l	It means the log type of the profile. They are: P: Pass, B: Block, A: All,
MSG	It means to specify the Administration Message, less then 255 characters
uac	It means to set URL Access Control part.
wf	It means to set Web Feature part.

Example

```
> csm ucf obj 1 -n game -l B
Profile Index: 1 Profile Name:[game]
> csm ucf show
URL Content Filter Profile Table:
Profile       Name         Profile       Name
-------------------------   -------------------------
[1]     [game          ]   [5]     [             ]
[2]     [              ]   [6]     [             ]
[3]     [              ]   [7]     [             ]
[4]     [              ]   [8]     [             ]
-------------------------   -------------------------

Administration Message (Max 255 characters):
-----------------------------------------------
<body><center><br><p>The requested Web page has been blocked by URL Content
Filt
er.<p>Please contact your system administrator for further
information.</center>
</body>
```

Telnet Command: csm ucf obj INDEX uac

It means to configure the settings regarding to URL Access Control (uac).

Syntax

csm ucf obj *INDEX uac -v*
csm ucf obj *INDEX uac -e*
csm ucf obj *INDEX uac -d*
csm ucf obj *INDEX uac -a P|B*
csm ucf obj *INDEX uac -i E|D*
csm ucf obj *INDEX uac -o KEY_WORD_Object_Index*
csm ucf obj *INDEX uac -g KEY_WORD_Group_Index*

Syntax Description

Parameter	Description
INDEX	It means to specify the index number of CSM profile, from 1 to 8.
- v	It means to view the protocol configuration of the CSM profile.
-e	It means to enable the function of URL Access Control.
-d	It means to disable the function of URL Access Control.
-a	Set the action of specific application, P or B. B: Block. The web access meets the URL Access Control will be blocked. P: Pass. The web access meets the URL Access Control will be passed.
-i	Prevent the web access from any IP address. E: Enable the function. The Internet access from any IP address will be blocked. D: Disable the function.
-o	Set the keyword object.
KEY_WORD_Object_Index	Specify the index number of the object profile.
-g	Set the keyword group.
KEY_WORD_Group_Index	Specify the index number of the group profile.

Example

```
> csm ucf obj 1 uac -i E
Log:[block]
Priority Select : [Either : Url Access Control First]
-----------------------------------------------
URL Access Control
[ ]Enable URL Access Control    Action:[pass]
[v]Prevent web access from IP address.
  No  Obj NO.    Object Name
 --- -------- ---------------------------------

  No  Grp NO.    Group Name
 --- -------- ---------------------------------

> csm ucf obj 1 uac -a B
Log:[block]
Priority Select : [Either : Url Access Control First]
-----------------------------------------------
URL Access Control
[ ]Enable URL Access Control    Action:[block]
[v]Prevent web access from IP address.
  No  Obj NO.    Object Name
 --- -------- ---------------------------------

  No  Grp NO.    Group Name
 --- -------- ---------------------------------
>
```

Telnet Command: csm ucf obj INDEX wf

It means to configure the settings regarding to Web Feature (wf).

Syntax

csm ucf obj *INDEX wf -v*
csm ucf obj *INDEX wf -e*
csm ucf obj *INDEX wf -d*
csm ucf obj *INDEX wf -a P|B*
csm ucf obj *INDEX wf -s WEB_FEATURE*
csm ucf obj *INDEX wf -u WEB_FEATURE*
csm ucf obj *INDEX wf -f File_Extension_Object_index*

Syntax Description

Parameter	Description
INDEX	It means to specify the index number of CSM profile, from 1 to 8.
-v	It means to view the protocol configuration of the CSM profile.
-e	It means to enable the restriction of web feature.
-d	It means to disable the restriction of web feature.
-a P|B	Set the action of web feature, P or B. B: Block. The web access meets the web feature will be blocked. P: Pass. The web access meets the web feature will be passed.
-s WEB_FEATURE	It means to enable the the Web Feature configuration. Features available for configuration are: c: Cookie p: Proxy u: Upload
-u WEB_FEATURE	It means to cancel the web feature configuration.
-f	It means to set the file extension object index number.
File_Extension_Object_index	Enter the index number (1 to 8) for the file extension object.

Example

```
> csm ucf obj 1 wf -s c
-----------------------------------------------
Web Feature
[ ]Enable Restrict Web Feature   Action:[pass]

File Extension Object Index : [0] Profile Name : []

[V] Cookie [ ] Proxy [ ] Upload
```

Telnet Command: csm wcf

It means to configure the settings regarding to web control filter (wcf).

Syntax

csm wcf show
csm wcf look
csm wcf cache
csm wcf server WCF_SERVER

csm wcf msg MSG
csm wcf setdefault
csm wcf obj *INDEX -v*
csm wcf obj *INDEX -a P|B*
csm wcf obj *INDEX -n PROFILE_NAME*
csm wcf obj *INDEX -l P|B|A*
csm wcf obj *INDEX -o KEY_WORD Object Index*
csm wcf obj *INDEX -g KEY_WORD Group Index*
csm wcf obj *INDEX -w E|D|P|B*
csm wcf obj *INDEX -s CATEGORY|WEB_GROUP*
csm wcf obj *INDEX -u CATEGORY|WEB_GROUP*

Syntax Description

Parameter	Description
show	It means to display the web content filter profiles.
Look	It means to display the license information of WCF.
Cache	It means to set the cache level for the profile.
Server WCF_SERVER	It means to set web content filter server.
Msg MSG	It means de set the administration message. MSG means the content (less than 255 characters) of the message itself.
setdefault	It means to return to default settings for all of the profile.
obj	It means to specify the object profile.
INDEX	It means to specify the index number of web content filter profile, from 1 to 8.
- v	It means to view the web content filter profile.
-a P|B	Set the action of web content filter profile, P or B. B: Block. The web access meets the web feature will be blocked. P: Pass. The web access meets the web feature will be passed.
-n	It means to set the profile name.
PROFILE_NAME	It means to specify the name of the profile (less than 16 characters)
-l P|B|A	It means the log type of the profile. They are: P: Pass, B: Block, A: All
-o	Set the keyword object.
KEY_WORD_Object_Index	Specify the index number of the object profile.
-g	Set the keyword group.
KEY_WORD_Group_Index	Specify the index number of the group profile.
-w	It means to set the action for the black and white list. E:Enable, D:Disable, P:Pass, B:Block
-s	It means to choose the items under CATEGORY or WEB_GROUP.
-u	It means to discard items under CATEGORY or WEB_GROUP.
WEB_GROUP	Child_Protection, Leisure, Business, Chating, Computer Internet, Other
CATEGORY	Includes:

	"Advertisement & Pop-Ups", "Alcohol & Tobacco", "Anonymizers", "Arts", "Business", "Transportation", "Chat", "Forums & Newsgroups", "Compromised", "Computers & Technology", "Criminal & Activity", "Dating & Personals", "Down sites", "Education", "Entertainment", "Finance", "Gambling", "Games", "Government", "Hate & Intolerance", "Health & Medicine", "Illegal Drug", "Job Search", "Streaming Media & Downloads", "News", "Non-profits & NGOs", "Nudity", "Persional Sites", "Phishing & Fraud", "Politics", "Pornography & Sexually explicit", "Real Estate", "Religion", "Restaurants & Dining", "Search engines & Portals", "Shopping", "Social Networking", "Spam sites", "Sports", "Malware", "Translators", "Travel", "Violence", "Weapons", "Web-Based Email", "General", "Leisure & Recreation", "Botnets", "Cults", "Fashion & Beauty", "Greeting Cards", "Hacking", "Illegal Softwares", "Image Sharing", "Information Security", "Instant Messaging", "Network Errors", "Parked Domains", "Peer-to-Peer", "Private IP Address", "School Cheating", "Sex Education", "Tasteless", "Child Abuse Images", "Uncategorised Sites"

Example

```
> csm wcf obj 1 -n test_wcf
Profile Index: 1
Profile Name:[test_wcf]
[]White/Black list
Action:[block]
  No  Obj NO.    Object Name
 --- -------- ----------------------------------
  No  Grp NO.    Group Name
 --- -------- ----------------------------------
Action:[block]
Log:[block]
-------------------------------------------------------------------------
Security
  [ ]Anonymizers                  [ ]Compromised                  [ ]Phi
shing & Fraud
  [ ]Spam Sites                   [ ]Malware                      [ ]Bot
nets
  [ ]Network Errors                [ ]Parked Domains
-------------------------------------------------------------------------
Parent Control
  [v]Alcohol & Tobacco             [v]Chat                        [v]Cri
minal & Activity
  [v]Hate & Intolerance            [v]Illegal Drug                  [v]Nud
ity
  [v]Pornography & Sexually Explicit  [v]Violence                    [v]Wea
pons
  [v]Cults                        [v]School Cheating              [v]Sex
 Education
  [v]Tasteless                    [v]Child Abuse Images
-------------------------------------------------------------------------
Productivity
  [ ]Advertisement & Pop-Ups       [ ]Computers & Technology        [ ]Dat
ing & Personals
  [ ]Download Sites                [ ]Finance                      [ ]Gam
bling
  [ ]Games                        [ ]Job Search                   [ ]Str
eaming Media & Downloads
  [ ]Shopping                     [ ]Social Networking             [ ]Spo
rts
  [ ]Hacking                      [ ]Illegal Softwares             [ ]Ima
ge Sharing
  [ ]Instant Messaging             [ ]Peer-to-Peer
-------------------------------------------------------------------------
General Use
  [ ]Arts                         [ ]Business                     [ ]Tra
nsportation
```

```
  [ ]Forums & Newsgroups            [ ]Education                    [ ]Ent
ertainment
  [ ]Government                    [ ]Health & Medicine             [ ]New
s
  [ ]Non-profits & NGOs             [ ]Persional Sites              [ ]Pol
itics & Law
  [ ]Real Estate                   [ ]Religion                     [ ]Res
taurants & Dining
  [ ]Search Engines & Portals       [ ]Translators                  [ ]Tra
vel
  [ ]Web-Based Email                [ ]General                      [ ]Lei
sure & Recreation
  [ ]Fashion & Beauty               [ ]Greeting Cards               [ ]Inf
ormation Security
  [ ]Private IP Address             [ ]Uncategorised Sites
>
```

Telnet Command: csm dnsf

It means to configure the settings regarding to DNS filter.

Syntax

csm dnsf enable *ON|OFF*
csm dnsf syslog *N|P|B|A*
csm dnsf wcf <*INDEX***>**
csm dnsf ucf <*INDEX***>**
csm dnsf cachetime <*CACHE_TIME*>
csm dnsf blockpage *show/on/off*
csm dnsf profile_show
csm dnsf profile_edit *INDEX*
csm dnsf profile_edit *INDEX -n <PROFILE_NAME>*
csm dnsf profile_edit *INDEX -l <P|B|A>*
csm dnsf profile_edit *INDEX -w <WCF_PROFILE>*
csm dnsf profile_edit *INDEX -u <UCF_PROFILE>*
csm dnsf profile_edit *INDEX -c <CACHE_TIME>*
csm dnsf profile_setdefault
csm dnsf local_bw <*e/d/p/b/a/g/o/s/c***>**

Syntax Description

Parameter	Description
enable	Enable or disable DNS Filter. ON: enable. OFF: disable.
syslog	Determine the content of records transmitting to Syslog. P: Pass. Records for the packets passing through DNS filter will be sent to Syslog. B: Block. Records for the packets blocked by DNS filter will be sent to Syslog. A: All. Records for the packets passing through or blocked by DNS filter will be sent to Syslog. N: None. No record will be sent to Syslog.
wcf <INDEX>	Specify a WCF profile (1 to 8) as the base of DNS filtering. Type a number to indicate the index number of WCF profile (1 is first profile, 2 is second profile, and so on ...).
ucf <INDEX>	Specify a UCF profile (1 to 8) as the base of DNS filtering. Type a

	number to indicate the index number of UCF profile (1 is first profile, 2 is second profile, and so on ...).
cachetime <CACHE_TIME>	CACHE_TIME: It means to set the time for cache to live (available values are 1 to 24; 1 is one hour, 2 is two hours, and so on ...) for DNS filter. OFF is no cache ; AUTO is using TTL from pkt.
blockpage <value>	DNS sends block page for redirect port. When a web page is blocked by DNS filter, the router system will send a message page to describe that the page is not allowed to be visisted. ON: Enable the function of displaying message page. OFF: Disable the function of displaying message page. SHOW: Display the function of displaying message page is ON or OFF.
profile_show	Display the table of the DNS filter profile.
profile_edit	Modify the content of the DNS filter profile.
-n <PROFILE_NAME>	PROFILE_NAME: Enter the name of the DNS filter profile that you want to modify.
-l <P/B/A>	Specify the log type of the profile. P: Pass. B: Block. A: All.
-w <WCF_PROFILE>	WCF_PROFILE: Enter the index number of the WCF profile.
-u <UCF_PROFILE>	UCF_PROFILE: Enter the index number of the UCF profile.
-c <CACHE_TIME>	-c means to set the cache time for DNS filter. CACHE_TIME: It means to set the time for cache to live (available values are 1 to 24; 1 is one hour, 2 is two hours, and so on ...) for DNS filter.
profile_setdefault	Reset to factory default setting.
local_bw <e/d/p/b/s/c>	Set the Black/White List of DNS Filter Local Setting. e: Enable the function of black/white list. d: Disable the function of black/white list. p: Set the action as "Pass". b: Set the action as "Block". s: Show the config setting. c: Clear the config setting and reset to factory default settings.
local_bw a <type index> <START_IP><END/MASK_IP>	Set the address type for Black/White List of DNS Filter. type index: Enter 0/1/2/3/4. In which, 0=mask, 1=single, 2=any, 3=range, 4=group and objects <START_IP>: Enter an IP address as a starting point. <END/MASK_IP>: Enter an IP address as an ending point.
local_bw g <item number><group index>	Select the group index for Black/White List of DNS Filter. item_number: 1 or 2 (group 1 or group 2) group_index: 1 to 192
local_bw o <item number><group index>	Select the object index for Black/White List of DNS Filter. item_number: 1 or 2 (object 1 or object 2) object_index: 1 to 32

Example

```
> csm dnsf local_bw e 1
Enable the Block and White List.
> csm dnsf wcf 1
dns service set up!!!
> csm dnsf cachetime auto
use TTL from pkt!!!
> csm dnsf local_bw a 0 192.168.1.20 255.255.255.0
Address Type: 0:mask, 1:single, 2:any, 3:range, 4:object and group
Set the [MASK] Address type
```

```
> csm dnsf profile_edit 1 -n testformarket
Profile Index: 1
Profile Name:[testformarket]

Log:[block]

WCF Profile Index: 0

UCF Profile Index: 0
```

Telnet Command: ddns enable

Enable/disable the DDNS service.

Syntax

ddns enable *<0/1>*

Syntax Description

Parameter	Description
Enable <0/1>	Enable or disable DDNS service. 1: enable. 0: disable.

Example

```
> ddns enable 1
 Enable Dynamic DNS Setup
>
```

Telnet Command: ddns set

This command allows users to set Dynamica DNS account.

Syntax

ddns set *option <value>*

Syntax Description

Parameter	Description
-i <value>	It means index number of Dynamic DNS Account. <value>=1~6
-E <value>	It means to enable /disable Dynamic DNS Account. <value>=0~1 0: Disable 1: Enable
-W <value>	It means to specify WAN Interface. <value>=1~6 1: WAN1 First 2: WAN1 Only 3: WAN2 First 4: WAN2 Only 5: WAN3 First 6: WAN3 Only example: To set WAN Interface: WAN1 First
-L <value>	It means to type Login Name.

	[value]: limit up to 64 characters
-P <value>	It means to type Password. [value]: limit up to 24 characters
-C <value>	It means to enable /disable Wildcards. <value>=0~1 0: Disable 1: Enable
-B <value>	It means to enable / disable Backup MX. <value>=0~1 0: Disable 1: Enable
-M <value>	It means to type Mail Extender. [value]: limit up to 60 characters
-R <value>	It means to type Determine Real WAN IP. <value>=0~1 0: WAN IP, 1: Internet IP
-S <value>	It means to specify Servive Provider. If user want to set User-Defined page, value must select 1. <value>= 1~19 1: User-Defined 2:3322 DDNS (www.3322.org) 3: ChangeIP.com (www.changeip.com) 4:ddns.com.cn (www.ddns.com.cn) 5: DtDNS (www.dtdns.com) 6: dyn.com (www.dyn.com) 7: DynAccess (www.dynaccess.com) 8: dynami.co.za (www.dynami.co.za) 9: freedns.afraid.org (freedns.afraid.org) 10: NO-IP.COM Free (www.no-ip.com) 11: opendns.com (www.opendns.com) 12: OVH (www.ovh.com) 13: Strato (www.strato.eu) 14: TwoDNS (www.twodns.de) 15: TZO (www.tzo.com) 16: ubddns.org (ubddns.org) 17: Viettel DDNS (vddns.vn) 18: vigorddns.com (www.vigorddns.com) 19: ZoneEdit DDNS (dynamic.zoneedit.com)
T <value>	It means to type Servive Type. <value>= 1~3 1: Dynamic 2: Custom 3: Static
-D <Host Name> <sub Domain Name>	It means to type Domain Name. i.e: Account index 1 setting Domain Name for Dynamic Service Type >> ddns set -i 1 -T 1 -D "host ddns.com.cn" i.e: Account index 2 setting Domain Name for Custom Service Type >> ddns set -i 2 -T 2 -D "domain name" i.e: Account index 3 setting Domain Name for Static Service Type

	>> ddns set -i 3 -T 3 -D "domain name"
-H <value>	It means to type User-Defined Provider Host. <value>= limit up to 64 characters
-A <value>	It means to type User-Defined Service API. <value>= limit up to 256 characters
-a <value>	It means to type User-Defined Auth Type. <value>=0~1 0: basic 1: URL
-N <value>	It means to type User-Defined Connection Type. <value>=0~1 0: Http 1: Https
-O <value>	It means to type User-Defined Server Response. <value>: limit up to 32 characters

Example

```
> ddns set -i 1 -S 6 -T 1 -D "hostname dnsalias.net" -L user1 -P pwd1
> Save OK
```

Telnet Command: ddns log

Displays the DDNS log.

Example

```
>ddns log
>
```

Telnet Command: ddns time

Sets and displays the DDNS time.

Syntax

ddns time <*update in minutes*>

Syntax Description

Parameter	Description
Update in minutes	Enter the value as DDNS time. The range is from 1 to 14400.

Example

```
> ddns time
ddns time <update in minutes>
Valid: 1 ~ 1440
%Now: 1440
> ddns time 1000
ddns time <update in minutes>
Valid: 1 ~ 1440
%Now: 1000
```

Telnet Command: ddns forceupdate

This command will update DDNS automatically.

Example

```
> ddns forceupdate
 Now updating DDNS ...
 Please check result by using command "ddns log"
```

Telnet Command: ddns setdefault

This command will return DDS with factory default settings.

Example

```
> ddns setdefault
> Set to Factory Default.
```

Telnet Command: ddns show

This command allows users to check the content of selected DDNS account.

Syntax

ddns show -i <*value*>

Syntax Description

Parameter	Description
-i <value>	Display the content of selected DDNS account by entering the index number of the account. <value>=1~6

Example

```
> ddns show -i 1
-------------------------------------------------
 Index: 1
 [ ] Enable Dynamic DNS Account
 WAN Interface: WAN1 First
 Service Provider: dyn.com (www.dyn.com)
 Service Type: Dynamic
 Domain Name: [].[]
 Login Name:
 [ ] Wildcards
 [ ] Backup MX
 Mail Extender:
 Determine Real WAN IP: WAN IP

>
```

Telnet Command: dos

This command allows users to configure the settings for DoS defense system.

Syntax

dos *-V | D | A*

dos *-s ATTACK_F [THRESHOLD][TIMEOUT]]*

dos *-a | e [ATTACK_F][ATTACK_0] | d [ATTACK_F][ATTACK_0]]*

dos *-o <LOG_TYPE>|p <LOG_TYPE> |l <LOG_TYPE>*

dos *-P <add4/remove4> <type> <value> |<add6/remove6> <type> <value> | <show> | remove4 all |remove6 all>*

dos *-B <add4/remove4> <type> <value> |<add6/remove6> <type> <value> | <show> | remove4 all |remove6 all>*

dos *-o <0/1>*

dos *-p <0/1>*

dos *-l <1/2/3>*

dos *-f <0/1/show>*

dos *-i <1/2/3/4/show>*

Syntax Description

Parameter	Description
-V	It means to view the configuration of DoS defense system.
-D	It means to deactivate the DoS defense system.
-A	It means to activate the DoS defense system.
-s	It means to enable the defense function for a specific attack and set its parameter(s).
ATTACK_F	It means to specify the name of flooding attack(s) or portscan, e.g., synflood, udpflood, icmpflood, or postscan.
THRESHOLD	It means the packet rate (packet/second) that a flooding attack will be detected. Set a value larger than 20.
TIMEOUT	It means the time (seconds) that a flooding attack will be blocked. Set a value larger than 5.
-a	It means to enable the defense function for all attacks listed in ATTACK_0.
-e	It means to enable defense function for a specific attack(s).
ATTACK_0	It means to specify a name of the following attacks: ip_option, tcp_flag, land, teardrop, smurf, pingofdeath, traceroute, icmp_frag, syn_frag, unknow_proto, fraggle.
-d	It means to disable the defense function for a specific attack(s).
*-P <add4/remove4> <type> <value> |<add6/remove6> <type> <value>	<show>	remove4 all |remove6 all>*	Add or remove the IPv4/IPv6 address in the white passing IP list. add4/remove4: Add /remove an IPv4/IPv6 address to/from the whitelist. add6/remove6: Add/remove an IPv6 address to/from the whitelist. Type: Two types, -i and -c. In which, "-i" means the IPv4 address and "-c" means the country object. Value: Enter the IP address for -i; enter the index number of the country object profile. Show: Display the whitelist.
*-B <add4/remove4> <type> <value> |<add6/remove6> <type> <value>	<show>	remove4 all |remove6 all>*	Add or remove the IPv4/IPv6 address in the black blocking IP list. add4/remove4: Add /remove an IPv4/IPv6 address to/from the blacklist. add6/remove6: Add/remove an IPv6 address to/from the blacklist. Type: Two types, -i and -c. In which, "-i" means the IPv4 address and "-c" means the country object. Value: Enter the IP address for -i; enter the index number of the

	country object profile. Show: Display the blacklist.
dos -o <LOG_TYPE>	Enable/Disable dos defense log. <LOG_TYPE>: Enter 0 or 1. 0: Disable 1: Enable
dos -p <LOG_TYPE>	Enable/Disable spoofing defense log. <LOG_TYPE>: Enter 0 or 1. 0: Disable 1: Enable
dos -l <LOG_TYPE>	Enable/Disable dos defense black/white list log. <LOG_TYPE>: Enter 0 to 3. 0: None 1: White list 2: Black List 3: All
dos -f <0/1/show>	Set the priority of whitelist/blacklist. [0/1/show]: 0:WhiteList; 1:BlackList
dos -i <1/2/3/4/show>	Set the time interval to send the whitelist/blacklist log. [1/2/3/4/show]: 1:30; 2:60; 3:180; 4:300 seconds

Example

```
> dos –A

The Dos Defense system is Activated

> dos –s synflood 50 10

Synflood is enabled! Threshold=50 <pke/sec> timeout=10 <pke/sec>

> dos –P add4 –i 192.168.5.89
Add IP in Passing IP List success.
> dos –P show
DoS White Passing IP List:
   Type        IPv4                Type    IPv6
 1. IP         192.168.5.89         IP     ::
 2. IP         0.0.0.0              IP     ::
 3. IP         0.0.0.0              IP     ::
 4. IP         0.0.0.0              IP     ::
 5. IP         0.0.0.0              IP     ::
 6. IP         0.0.0.0              IP     ::
 7. IP         0.0.0.0              IP     ::
 8. IP         0.0.0.0              IP     ::
 9. IP         0.0.0.0              IP     ::
10. IP         0.0.0.0              IP     ::
11. IP         0.0.0.0              IP     ::
12. IP         0.0.0.0              IP     ::
13. IP         0.0.0.0              IP     ::
14. IP         0.0.0.0              IP     ::
15. IP         0.0.0.0              IP     ::
16. IP         0.0.0.0              IP     ::
```

Telnet Command: exit

Type this command will leave telnet window.

Telnet Command: Internet

This command allows you to configure detailed settings for WAN connection.

Syntax

internet *-W n -M n [-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
-W n	It means to selelct WAN interface for configuration. n: 1 to x. The default is WAN1.
-M n	M means to set Internet Access Mode (Mandatory) and n means different modes. n=0: Offline n=1: PPPoE n=2: Dynamic IP n=3: Static IP n=4: PPTP with Dynamic IP, n=5: PPTP with Static IP, n=6: L2TP with Dynamic IP n=7: L2TP with Static IP n=A: 3G/4G USB Modem(PPP mode), n=B: 3G/4G USB Modem(DHCP mode)
<command><parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-S <isp name>	It means to set ISP Name (max. 23 characters).
-P <on/off>	It means to enable PPPoE Service.
-u <username>	It means to set username (max. 49 characters) for Internet accessing.
-p <password>	It means to set password (max. 49 characters) for Internet accessing.
-a n	It means to set PPP Authentication Type and n means different types (represented by 0-1). n=0: PAP/CHAP (this is default setting) n=1: PAP Only
-t n	It means to set connection duration and n means different conditions. n=-1: Always-on n=1 ~ 999: Idle time for offline (default 180 seconds)
-i <ip address>	It means that *PPPoE server* will assign an IP address specified here for CPE (PPPoE client). If you type 0.0.0.0 as the <ip address>, ISP will assign suitable IP address for you. However, if you type an IP address here, the router will use that one as a fixed IP.
-w <ip address>	It means to assign WAN IP address for such connection. Please type an IP address here for WAN port.
-n <netmask>	It means to assign netmask for WAN connection. You have to type 255.255.255.xxx (x is changeable) as the netmask for WAN port.
-g <gateway>	It means to assign gateway IP for such WAN connection.
-s <server ip>	It means to set PPTP/L2TP server IP.
-A <idx>	Set to Always On mode, and <idx> as backup WAN#
-B <mode>	Set to Backup mode. <mode> 0: When any WAN disconnect; 1: When all WAN disconnect.
-V	It means to view Internet Access profile.
-C <sim pin code>	Set (PPP mode) SIM PIN code (max. 15 characters).
-O <init string>	Set (PPP mode) Modem Initial String (max. 47 characters).
-T <init string2>	Set (PPP mode) Modem Initial String2 (max. 47 characters)
-D <dial string>	Set (PPP mode) Modem Dial String (max. 31 characters).
-v <service name>	Set (PPP mode) Service Name (max. 23 characters).
-m <ppp username>	Set (PPP mode) PPP Username (max. 63 characters).

-o <ppp password>	Set (PPP mode) PPP Password (max. 62 characters).
-e n	Set (PPP mode) PPP Authentication Type. n= 0: PAP/CHAP (default), 1: PAP Only
-q n	(PPP mode) Index(1-15) in Schedule Setup-One
-x n	(PPP mode) Index(1-15) in Schedule Setup-Two
-y n	(PPP mode) Index(1-15) in Schedule Setup-Three
-z n	(PPP mode) Index(1-15) in Schedule Setup-Four
-Q <mode>	Set (PPP mode or DHCP mode) WAN Connection Detection Mode. <mode> 0: ARP Detect; 1: Ping Detect
-I <ping ip>	Set (PPP mode or DHCP mode) WAN Connection Detection Ping IP. <ping ip>= ppp.qqq.rrr.sss: WAN Connection Detection Ping IP
-L n	Set (PPP mode) WAN Connection Detection TTL (1-255) value.
-R n	Set (PPP mode) WAN Connection Detection Echo Interval secondes. n= 3 to 60.
-E <sim pin code>	Set (DHCP mode) SIM PIN code (max. 19 characters).
-G <mode>	Set (DHCP mode) Network Mode. <mode> 0: 4G/3G/2G; 1: 4G Only; 2: 3G Only; 3: 2G Only
-N <apn name>	Set (DHCP mode) APN Name (max. 47 characters)
-U <n>	Set the MTU for DHCP mode. n= 1000 to 1440.

Example

```
>internet -M 1 -S tcom -u username -p password -a 0 -t -1  -i 0.0.0.0
 WAN1 Internet Mode set to PPPoE/PPPoA
 WAN1 ISP Name set to tcom
 WAN1 Username set to username
 WAN1 Password set successful
 WAN1 PPP Authentication Type set to PAP/CHAP
 WAN1 Idle timeout set to always-on
 WAN1 Gateway IP set to 0.0.0.0
> internet -V
WAN1 Internet Mode:PPPoE
ISP Name: tcom
Username: username
Authentication: PAP/CHAP
Idle Timeout: -1
WAN IP: Dynamic IP
>
```

Telnet Command: ip pubsubnet

This command allows users to enable or disable the IP routing subnet for your router.

Syntax

ip pubsubnet <*Enable*/*Disable*>

Syntax Description

Parameter	Description
Enable	Enable the function.
Disable	Disable the function.

Example

```
> ip pubsubnet enable
public subnet enabled!
>
```

Telnet Command: ip pubaddr

This command allows to set the **IP routed subnet** for the router.

Syntax

ip pubaddr *?*
ip pubaddr <*public subnet IP address*>

Syntax Description

Parameter	Description
?	Display an IP address which allows users set as the public subnet IP address.
public subnet IP address	Specify an IP address. The system will set the one that you specified as the public subnet IP address.

Example

```
> ip pubaddr ?
% ip addr <public subnet IP address>
% Now: 192.168.0.1

> ip pubaddr 192.168.2.5
% Set public subnet IP address done !!!
```

Telnet Command: ip pubmask

This command allows users to set the mask for IP routed subnet of your router.

Syntax

ip pubmask *?*
ip pubmask <*public subnet mask*>

Syntax Description

Parameter	Description
?	Display an IP address which allows users set as the public subnet mask.

public subnet IP address	Specify a subnet mask. The system will set the one that you specified as the public subnet mask.

Example

```
> ip pubmask ?
% ip pubmask <public subnet mask>
% Now: 255.255.255.0

> ip pubmask 255.255.0.0
% Set public subnet mask done !!!
```

Telnet Command: ip lanalias

This command is used for configuring WAN IP Alias.

Syntax

ip lanalias <*idx*> <*option*>

Syntax Description

Parameter	Description
<*idx*>	It means the index number of the profile. Idx: 1 to 5
<*option*>	The available commands with parameters are listed below.
-e <0/1>	It means to enable / disable the function of IP alias. 0: disable 1: enable
-a <IP address>	It means to set auxiliary IP address.
-w n	It means to add an address for the selected WAN interface. N=0, none N=1, means WAN1 N=2, means WAN2 ...
-r	It means to remove the address of the selected WAN interface.

Example

```
> ip lanalias 1 -r
> ip lanalias 1 -a 192.168.1.2
> ip lanalias
Usage:
%% ip lanalias [idx] [Option]
  idx   :profile index from 1 to 5
  Option:
  -e 1          :1:enable, 0:disable
  -a 192.168.1.2 :IP Address as alias
  -w 1          :WAN number or 0(None)
  -r            :remove this profile

LAN IP Alias Address table:
Index no.      Status  IP address     Prefer Output
-------------------------------------------------
```

```
  1          Disable 192.168.1.2           n/a
  2          Disable 0.0.0.0       n/a
  3          Disable 0.0.0.0       n/a
  4          Disable 0.0.0.0       n/a
  5          Disable 0.0.0.0       n/a
```

Telnet Command: ip addr

This command allows users to set/add a specified LAN IP your router.

Syntax

ip addr <*IP address*>

Syntax Description

Parameter	Description
IP address	It means the LAN IP address.

Example

```
>ip addr 192.168.50.1
% Set IP address OK !!!
```

Info

When the LAN IP address is changed, the start IP address of DHCP server are still the same. To make the IP assignment of the DHCP server being consistent with this new IP address (they should be in the same network segment), the IP address of the PC must be fixed with the same LAN IP address (network segment) set by this command for accessing into the web user interface of the router. Later, modify the start addresses for the DHCP server.

Telnet Command: ip nmask

This command allows users to set/add a specified netmask for your router.

Syntax

ip nmask <*IP netmask*>

Syntax Description

Parameter	Description
IP netmask	It means the netmask of LAN IP.

Example

```
> ip nmask 255.255.0.0
% Set IP netmask OK !!!
```

Telnet Command: ip arp

ARP displays the matching condition for IP and MAC address.

Syntax

ip arp add <*IP address*> <*MAC address*> <*LAN or WAN*>

ip arp del <*IP address*> <*LAN or WAN*>

ip arp flush

ip arp status

ip arp accept <*0/1/2/3/4/5/status*>

ip arp setCacheLife <*time*>

In which, **arp add** allows users to add a new IP address into the ARP table; **arp del** allows users to remove an IP address; **arp flush** allows users to clear arp cache; **arp status** allows users to review current status for the arp table; **arp accept** allows to accept or reject the source /destination MAC address; arp **setCacheLife** allows users to configure the duration in which ARP caches can be stored on the system. If **ip arp setCacheLife** is set with "60", it means you have an ARP cache at 0 second. Sixty seconds later without any ARP messages received, the system will think such ARP cache is expired. The system will issue a few ARP request to see if this cache is still valid.

Syntax Description

Parameter	Description
IP address	It means the LAN IP address.
MAC address	It means the MAC address of your router.
LAN or WAN	It indicates the direction for the arp function.
0/1/2/3/4/5/status	0: disable to accept illegal source mac address 1: enable to accept illegal source mac address 2: disable to accept illegal dest mac address 3: enable to accept illegal dest mac address 4: Decline VRRP mac into arp table 5: Accept VRRP mac into arp table status: display the setting status.
Time	Available settings will be 10, 20, 30,....2550 seconds.

Example

```
> ip arp accept status
Accept illegal source mac arp: disable

Accept illegal dest mac arp: disable

Accept VRRP mac into arp table: disable
> ip arp status
[ARP Table]
 Index IP Address     MAC Address        HOST ID         Interface  VLAN   Port
   1   192.168.1.10   60-A4-4C-E6-5A-4F   A1000381       LAN1       ---    P1
   2   192.168.1.12   00-1D-AA-7C-F5-A4                   LAN1       ---    P3
   3   192.168.1.13   14-49-BC-43-E5-79                   LAN1       ---    P2
   4   192.168.1.100  14-49-BC-0A-8A-B8                   LAN1       ---    P5
>
```

Telnet Command: ip dhcpc

This command is available for WAN DHCP.

Syntax

ip dhcpc *option*
ip dhcpc *option -h|l*
ip dhcpc *option -d <idx>*
ip dhcpc *option -e<1 or 0> -w <wan unmber> -c <option number> -v <option value>*
ip dhcpc *option -e <1 or 0> -w <wan unmber> -c <option number> -x "<option value>"*
ip dhcpc *option -e <1 or 0> -w <wan unmber> -c <option number> -a <option value>*
ip dhcpc *option -u <idx unmber>*
ip dhcpc *release <wan number>*
ip dhcpc *renew <wan number>*
ip dhcpc *status*

Syntax Description

Parameter	Description
option	It is an optional setting for DHCP server. -h: display usage -l: list all custom set DHCP options -d: delete custom dhcp client option by index number -e: enable/disable option feature, 1:enable, 0:disable -w: set WAN number (e.g., 1=WAN1) -c: set option number: 0~255 -v: set option value by string -x: set option value by raw byte (hex) -u: update by index number -r: remove all custom DHCP Client options
release	It means to release current WAN IP address.
renew	It means to renew the WAN IP address and obtain another new one.
status	It displays current status of DHCP client.

Example

```
>ip dhcpc status
=====================================
WAN1:

DHCP Client Status: None active DHCP client!

=====================================
WAN2:

DHCP Client Status: None active DHCP client!

=====================================
WAN3:

DHCP Client Status: None active DHCP client!

=====================================
WAN4:

DHCP Client Status: None active DHCP client!

=====================================
WAN5:

DHCP Client Status: None active DHCP client!

=====================================
WAN6:

DHCP Client Status: None active DHCP client!
...
```

Telnet Command: ip ping

This command allows users to ping IP address of WAN1/WAN2/PVC3/PVC4/PVC5 for verifying if the WAN connection is OK or not.

Syntax

ip ping <*IP address*> <*AUTO/WAN1/WAN2/WAN5/WAN6*> <*Source IP address*>

Syntax Description

Parameter	Description
IP address	It means the WAN IP address.
AUTO/WAN1/WAN2/WAN5/WAN6	It means the WAN port /PVC that the above IP address passes through.
Source IP address	It means the source IP address.

Example

```
> ip ping 172.16.3.229 WAN1

Pinging 172.16.3.229 with 64 bytes of Data:
Receive reply from 172.16.3.229, time=0ms
Receive reply from 172.16.3.229, time=0ms
Receive reply from 172.16.3.229, time=0ms
Packets: Sent = 5, Received = 5, Lost = 0 <0% loss>
```

Telnet Command: ip tracert

This command allows users to trace the routes from the router to the host.

Syntax

ip tracert <*Host/IP address*> <*WAN1/WAN2/WAN3/WAN4/WAN5/WAN6*> <*Udp/Icmp*>

Syntax Description

Parameter	Description
IP address	It means the target IP address.
WAN1/WAN2/WAN3/WAN4/WAN 5/WAN6	It means the WAN port that the above IP address passes through.
Udp/Icmp	It means the UDP or ICMP.

Example

```
>ip tracert 22.128.2.62 WAN1
Traceroute to 22.128.2.62, 30 hops max
1    172.16.3.7    10ms
2    172.16.1.2    10ms
3    Request Time out.
4    168.95.90.66  50ms
5    211.22.38.134 50ms
6    220.128.2.62  50ms
Trace complete
```

Telnet Command: ip telnet

This command allows users to access specified device by telnet.

Syntax

ip telnet <*IP address*><*Port*>

Syntax Description

Parameter	Description
IP address	Enter the WAN or LAN IP address of the remote device.
Port	Type a port number (e.g., 23). Available settings: 0 ~65535.

Example

```
> ip telnet 172.17.3.252 23
>
```

Telnet Command: ip rip

This command allows users to set the RIP (routing information protocol) of IP.

Syntax

ip rip <*0/1/2*>

Syntax Description

Parameter	Description
0/1/2	0 means disable; 1 means first subnet and 2 means second

	subnet.

Example

```
> ip rip 1
%% Set RIP 1st subnet.
```

Telnet Command: ip wanrip

This command allows users to set the RIP (routing information protocol) of WAN IP.

Syntax

ip wanrip <*ifno*> *-e* <*0/1*>

Syntax Description

Parameter	Description
ifno	It means the connection interface. 1: WAN1,2: WAN2, 3: PVC3,4: PVC4,5: PVC5 **Note**: PVC3 ~PVC5 are virtual WANs.
-e	It means to disable or enable RIP setting for specified WAN interface. 1: Enable the function of setting RIP of WAN IP. 0: Disable the function.

Example

```
> ip wanrip ?
 Valid ex:ip wanrip <ifno> -e <0/1>
 <ifno> 1: WAN1,2: WAN2
       3: PVC3,4: PVC4,5: PVC5
 -e <0/1>  0: disable, 1: enable
 Now status:
 WAN[1] Rip Protocol disable
 WAN[2] Rip Protocol disable
 WAN[3] Rip Protocol disable
 WAN[4] Rip Protocol disable
 WAN[5] Rip Protocol disable
 WAN[6] Rip Protocol enable
 WAN[7] Rip Protocol enable
 WAN[8] Rip Protocol enable
 WAN[9] Rip Protocol enable
 WAN[10] Rip Protocol enable
 WAN[11] Rip Protocol enable
 WAN[12] Rip Protocol enable
 WAN[13] Rip Protocol enable
 WAN[14] Rip Protocol enable
 WAN[15] Rip Protocol enable
 WAN[16] Rip Protocol enable
> ip wanrip 5 -e 1
> ip wanrip ?
 Valid ex:ip wanrip <ifno> -e <0/1>
 <ifno> 1: WAN1,2: WAN2
       3: PVC3,4: PVC4,5: PVC5
 -e <0/1>  0: disable, 1: enable
 Now status:
 WAN[1] Rip Protocol disable
 WAN[2] Rip Protocol disable
 WAN[3] Rip Protocol disable
 WAN[4] Rip Protocol disable
 WAN[5] Rip Protocol enable
```

```
...
```

Telnet Command: ip route

This command allows users to set static route.

Syntax

ip route *add <dst><netmask><gateway><ifno><rtype>*
ip route *del <dst><netmask><rtype>*
ip route *status*
ip route *cnc*
ip route *default <wan1/wan2/off/?>*
ip route *clean <1/0>*

Syntax Description

Parameter	Description
add	It means to add an IP address as static route.
del	It means to delete specified IP address.
status	It means current status of static route.
dst	It means the IP address of the destination.
netmask	It means the netmask of the specified IP address.
gateway	It means the gateway of the connected router.
ifno	It means the connection interface. 3=WAN1 5=WAN3,6=WAN4,7=WAN5 However, WAN3, WAN4, WAN5 are router-borne WANs
rtype	It means the type of the route. default : default route; static: static route.
cnc	It means current IP range for CNC Network.
default	Set WAN1/WAN2/off as current default route.
clean	Clean all of the route settings. 1: Enable the function. 0: Disable the function.

Example

```
> ip route add 172.16.2.0 255.255.255.0 172.16.2.4 3 static
> ip route status

Codes: C - connected, S - static, R - RIP, * - default, ~ - private
C~       192.168.1.0/   255.255.255.0 is directly connected, LAN1
S         172.16.2.0/   255.255.255.0 via 172.16.2.4, WAN1
```

Telnet Command: ip igmp_proxy

This command allows users to enable/disable igmp proxy server.

Syntax

ip igmp_proxy *set*
ip igmp_proxy *reset*
ip igmp_proxy *wan*
ip igmp_proxy *query*
ip igmp_proxy *ppp <0/1>*
ip igmp_proxy *status*
ip igmp_proxy *version <v2/v3/auto/show>*
ip igmp_proxy *syslog <0/1>*

Syntax Description

Parameter	Description
set	It means to enable proxy server.
reset	It means to disable proxy server.
wan	It means to specify WAN interface for IGMP service.
query	It means to set IGMP general query interval. The default value is 125000 ms.
ppp <0/1>	0 – No need to set IGMP with PPP header. 1 – Set IGMP with PPP header.
status	It means to display current status for proxy server.
version <v2/v3/auto/show>	It means to set IGMP version fixed on v2 or v3.
syslog <0/1>	It means to set IGMP syslog. 0: disable 1: enable

Example

```
> ip igmp_proxy query 130000
 This command is for setting IGMP General Query Interval
 The default value is 125000 ms
 Current Setting is:130000 ms
>
```

Telnet Command: ip igmp_snoop

This command allows users to enable or disable IGMP snoop function.

Syntax

ip igmp_snoop enable
ip igmp_snoop disable
ip igmp_snoop status
ip igmp_snoop hw_acc *<on/off/status>*
ip igmp_snoop txquery *<on/off>* *<v2/v3>*
ip igmp_snoop chkleave *<on/off>*
ip igmp_snoop separate *<on/off>*
ip igmp_snoop acceptlist *<type><index>*

Syntax Description

Parameter	Description
enable	It means to enable igmp snoop function
disable	It means to disable igmp snoop function.
status	It means to display current igmp configuration.
hw_acc <on/off/status>	It means to enable/disable the multicast hardware accleration.. On: enable the function. Off: disable the function.
txquery <on/off> <v2/v3>	It means to send out IGMP QUERY to LAN periodically. On: enable Off: disable v2: version v2 v3: version v3
chkleave <on/off>	It means to check the leave status. On: enable the IGMP snoop leave checking function. Off: it will drop LEAVE if still clients on the same group.
separate <on/off>	It means to set IGMP packets being separated by NAT/Bridge. On: The packets will be separated. Off: The packets will not be separated by NAT/Bridge.
acceptlist <type><index>	Type: Enter 0 (disable), 1 (ip object) or 2 (ip group). Index: Enter 0 to 192 (for ip object); enter 0 to 32 (for ip group).

Example

```
> ip igmp_snoop enable
%% ip igmp snooping [enable|disable|status], IGMP Snooping is Enabled.
> ip igmp_snoop disable
%% ip igmp snooping [enable|disable|status], IGMP Snooping is Disabled.
```

Telnet Command: ip igmp_fl

This command allows users to enable or disable IGMP Fast Leave function.

Syntax

ip igmp_fl enable
ip igmp_fl disable
ip igmp_fl status

Syntax Description

Parameter	Description
enable	It means to enable IGMP Fast Leave function
disable	It means to disable IGMP Fast Leave function.
status	It means to display current IGMP Fast Leave configuration.

Example

```
> ip igmp_fl enable ?
  If you want to use IGMP fast leave , you "MUST" enable IGMP snooping.
```

```
> ip igmp_snoop enable
% ip igmp snooping [enable|disable|status], IGMP Snooping is Enabled.
>
```

Telnet Command: ip session

This command allows users to set maximum session limit number for the specified IP; set message for exceeding session limit and set how many seconds the IP session block works.

Syntax

ip session *on*
ip session *off*
ip session *default* <*num*>
ip session *defaultp2p* <*num*>
ip session *status*
ip session *show*
ip session *timer* <*num*>
ip session <*block/unblock*> <*IP*>
ip session <*add/del*> <*IP1-IP2*> <*num*> <*p2pnum*>

Syntax Description

Parameter	Description
on	It means to turn on session limit for each IP.
off	It means to turn off session limit for each IP.
default <*num*>	It means to set the default number of session num limit.
Defautlp2p <*num*>	It means to set the default number of session num limit for p2p.
status	It means to display the current settings.
show	It means to display all session limit settings in the IP range.
timer <*num*>	It means to set when the IP session block works. The unit is second.
<*block/unblock*> <*IP*>	It means to block/unblock the specified IP address. Block: The IP cannot access Internet through the router. Unblock: The specified IP can access Internet through the router.
<*add/del*> <*IP1-IP2*> <*num*> <*p2pnum*>	It means to add / delete the session limits in an IP range. <IP1-IP2> - Set the range of IP address specified for this command. <num> - Set the number of the session limits, e.g., 100. <p2pnum> - Set the number of the session limits, e.g., 50 for P2P.

Example

```
> ip session default 100
> ip session add 192.168.1.5-192.168.1.100 100 50
> ip session on
> ip session status

  IP range:
    192.168.1.5 - 192.168.1.100 : 100

  Current ip session limit is turn on
```

```
Current default session number is 100
```

Telnet Command: ip bandwidth

This command allows users to set maximum bandwidth limit number for the specified IP.

Syntax

ip bandwidth *on*
ip bandwidth *off*
ip bandwidth *default* <*tx_rate*><*rx_rate*>
ip bandwidth *status*
ip bandwidth *routing* <*on*/*off*>
ip bandwidth *schedule* <*s1*> <*s2*> <*s3*> <*s4*>
ip bandwidth *show*
ip bandwidth <*add*/*del*><*IP1-IP2*><*tx*><*rx*><*shared*>

Syntax Description

Parameter	Description
on	It means to turn on the IP bandwidth limit.
off	It means to turn off the IP bandwidth limit.
default [tx_rate][rx_rate]	It means to set default tx and rx rate of bandwidth limit. The range is from 0 – 65535 Kpbs.
status	It means to display the current settings.
routing <on/off>	It means to apply to IP Routed Subnet. On: apply to Off: not apply to
schedule <s1> <s2> <s3> <s4>	It means to set schedule profile (1 to 4). S1 ~ S4: Up to four profile can be set. Available schedule profiles from 0 to 16.
show	It means to display all the bandwidth limits settings within the IP range.
add	It means to add the bandwidth within the IP range.
del	It means to delete the bandwidth within the IP range.
IP1-IP2	It means the range of IP address specified for this command.
tx	It means to set transmission rate for bandwidth limit.
rx	It means to set receiving rate for bandwidth limit.
shared	It means that the bandwidth will be shared for the IP range.

Example

```
> ip bandwidth default 200 800
> ip bandwidth add 192.168.1.50-192.168.1.100 10 60
> ip bandwidth status

  IP range:
    192.168.1.50 - 192.168.1.100 : Tx:10K Rx:60K

  Current ip Bandwidth limit is turn off
```

```
Auto adjustment is off
```

Telnet Command: ip dataflowmonitor.

This command allows users to set data flow monitor.

Syntax

ip dataflowmonitor *on*
ip dataflowmonitor *off*
ip dataflowmonitor *status*

Syntax Description

Parameter	Description
on	It means to enable the Data Flow Monitor function.
off	It means to disable the Data Flow Monitor function.
show	It means to display current status of Data Flow Monitor function.

Example

```
> ip dataflowmonitor status
Data Flow Monitor: Off
```

Telnet Command: ip bindmac

This command allows users to set IP-MAC binding for LAN host.

Syntax

ip bindmac *on*
ip bindmac *off*
ip bindmac *strict_on*
ip bindmac *strict_off*
ip bindmac *subnet <all/set LAN_Index/unset LAN_Index/clear/show>*
ip bindmac *add <IP><MAC><omment>*
ip bindmac *del <IP/all>*
ip bindmac *show*

Syntax Description

Parameter	Description
on	It means to turn on IP bandmac policy. Even the IP is not in the policy table, it can still access into network.
off	It means to turn off all the bindmac policy.
strict_on	It means that only those IP address in IP bindmac policy table can access into network.
strict_off	It means to turn off the IP bindmac policy.
subnet <all/set LAN_Index/unset LAN_Index/clear/show>	It means to set LAN subnet to bind strict mode.
show	It means to display the IP address and MAC address of the pair of binded one.

add	It means to add one ip bindmac.
del	It means to delete one ip bindmac.
IP	It means to Enter the IP address for binding with specified MAC address.
MAC	It means to Enter the MAC address for binding with the IP address specified.
Comment	It means to type words as a brief description.
All	It means to delete all the IP bindmac settings.

Example

```
> ip bindmac add 192.168.1.46 00:50:7f:22:33:55 just for test
> ip bindmac show
ip bind mac function is turned OFF
ip bind mac function is STRICT OFF
Show all IP Bind MAC entries.
IP : 192.168.1.46 bind MAC : 00-50-7f-22-33-55 HOST ID :
  Comment : just
```

Telnet Command: ip bgp

Border Gateway Protocol (BGP) is a standardized protocol designed to exchange routing and reachability information among autonomous systems (AS) on the Internet.

Syntax

ip bgp mode *<0/1>*
ip bgp as *<0~4294967295>*
ip bgp hold *<10~65535>*
ip bgp retry *<3~255 >*
ip bgp id *<x.x.x.x>*
ip bgp show
ip bgp neighbor *<idx>* **mode** *<0/1>*
ip bgp neighbor *<idx>* **name** *<max len>*
ip bgp neighbor *<idx>* **ip** *<x.x.x.x>*
ip bgp neighbor *<idx>* **as** *<1~4294967295>*
ip bgp neighbor *<idx>* **weight** *<0~7>*
ip bgp neighbor *<idx>* **prepend** *<0~7>*
ip bgp neighbor *<idx>* **md5** *<0/1>*
ip bgp neighbor *<idx>* **key** *<max len>*
ip bgp neighbor *<idx>* **show**
ip bgp neighbor show all
ip bgp static *<sidx>* *<ip>* *<netmask>*
ip bgp static *<sidx>* **delete**
ip bgp static show

Syntax Description

Parameter	Description
mode <0/1>	Enable or disable the GMP. 0: disable 1: enable
as <0~4294967295>	Set the AS number for local router. <0~4294967295>
hold <10~65535>	Set the time interval (in seconds) to determine the peer is dead when the router is unable to receive any keepalive message from the peer within the time. <10~65535>: Default is 180 sec.
retry <3~255>	Set the BGP conntion retry time. <3~255>: Default is 120 sec
id <x.x.x.x>	Select a enabled local subnet IP as router ID. <x.x.x.x>: Enter an IP address.
show	Display all BGP settings.
neighbor <idx> mode <0/1>	Enable or disable the neighbor profile. <idx>: 1 to 8. Index number of the neighbor profile. 0: disable 1: enable
neighbor <idx> name <max len>	Set a name of the neighbor profile. <idx>: 1 to 8. Index number of the neighbor profile. <max len>: Enter a name (no more than 20 characters).
neighbor <idx> ip <x.x.x.x>	Set the IP address for the specified neighbor profile.

	<idx>: 1 to 8. Index number of the neighbor profile. <x.x.x.x>: Enter an IP address (e.g., 192.168.1.33).
neighbor <idx> as <1~4294967295>	Set an AS number for the specified neighbor profile. <idx>: 1 to 8. Index number of the profile. <1~4294967295>: Enter a number.
neighbor <idx> weight <0~7>	Set the weight value for the specified neighbor profile. <idx>: 1 to 8. Index number of the neighbor profile. <0~7>: higher is better.
neighbor <idx> prepend <0~7>	Set the prepend value for the specified neighbor profile. <idx>: 1 to 8. Index number of the neighbor profile. <0~7>: lower is better.
neighbor <idx> md5 <0/1>	Enable or disable the MD5 authentication for the neighbor profile. <idx>: 1 to 8. Index number of the profile. 0: Disable. 1: Enable.
neighbor <idx> key <max len>	Set the key used for the MD5 authentication. <idx>: 1 to 8. Index number of the neighbor profile. <max len>: Enter a name (no more than 20 characters).
neighbor <idx> show	Display the BGP setting for the specified neighbor profile. <idx>: 1 to 8. Index number of the profile.
neighbor show all	Display the BGP setting of neighbor profiles.
static <sidx> <ip> <netmask>	Set the IP address and subnet mask for specified static network profile. <sidx>: 1 to 16. Index number of the static network profile. <ip>: Enter an IP address. <netmask>: Enter a netmask.
static <sidx> delete	Remove / clear the settings for the selected static network profile. <sidx>: 1 to 16. Index number of the profile.
static show	Display the BGP setting of static network profiles.

Example

```
> ip bgp id 255.255.255.0
Set BGP router id: 255.255.255.0
> ip bgp show
BGP is enable
Local autonomous system number: 33333
Hold time: 180
Connect retry time: 20
Router ID: 255.255.255.0

BGP neighbor:
Idx Mode As Number  Name      IP Addr         Status       weight prepend
---------- ---------- ---------------- ------------- ------ --------
1   En   0                  Empty          None         0      0
2   Dis  0                  Empty          None         0      0
3   Dis  0                  Empty          None         0      0
4   Dis  0                  Empty          None         0      0
5   Dis  0                  Empty          None         0      0
6   Dis  0                  Empty          None         0      0
7   Dis  0                  Empty          None         0      0
8   Dis  0                  Empty          None         0      0

BGP static networks:
Index: 8, IP addr: 192.168.2.56, mask: 255.255.255.254
```

Telnet Command: ip maxnatuser

This command is used to set the maximum number of NAT users.

Syntax

ip maxnatuser *user no*

Syntax Description

Parameter	Description
User no	A number specified here means the total NAT users that Vigor router supports. 0 – It means no limitation.

Example

```
> ip maxnatuser 100
% Max NAT user = 100
```

Telnet Command: ip policy_rt

This command is used to set the IP policy route profile.

Syntax

ip policy_rt *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
<command><parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
General Setup for Policy Route	
-i <value>	Specify an index number for setting policy route profile. Value: 1 to 60. “-1” means to get a free policy index automatically.
-e <0/1>	0: Disable the selected policy route profile. 1: Enable the selected policy route profile.
-o <value>	Determine the operation of the policy route. Value: add – Create a new policy rotue profile. del – Remove an existed policy route profile. edit – Modify an existed policy route profile. flush – Reset policy route to default setting.
-1 <any/range>	Specify the source IP mode. Range: Indicate a range of IP addresses. Any: It means any IP address will be treated as source IP address.
-2 <any/ip_range/ip_subnet/domain>	Specify the destination IP mode. Any: No need to specify an IP address for any IP address will be treated as destination IP address. ip_range: Indicates a range of IP addresses. ip_subnet: Indicates the IP subnet. domain: Indicates the domain name.
-3 <any/range>	Specify the destination port mode. Range: Indicate a range of port number. Any: It means any port number can be used as destination port.

-G <default/specific>	Specify the gateway mode.
-L <default/specific>	Specify the failover gateway mode.
-s <value>	Indicate the source IP start. Value: The type format shall be “xxx.xxx.xxx.xxx”. (e.g, 192.168.1.0)
-S <value>	Indicate the source IP end. Value: The type format shall be “xxx.xxx.xxx.xxx”. (e.g, 192.168.1.100)
-d <value>	Indicate the destination IP start. Value: The type format shall be “xxx.xxx.xxx.xxx”. (e.g, 192.168.2.0)
-D <value>	Indicate the destination IP end. Value: The type format shall be “xxx.xxx.xxx.xxx”. (e.g, 192.168.2.100)
-p<value>	Indicate the destination port start. Value: Type a number (1 ~ 65535) as the port start (e.g., 1000).
-P <value>	Indicate the destination port end. Value: Type a number (1 ~ 65535) as the port end (e.g., 2000).
-y <value>	Indicate the priority of the policy route profile. Value: Type a number (0 ~ 250). The default value is “150”.
-I <value>	Indicate the interface specified for the policy route profile. Value: Available interfaces include, LAN1~LAN16, IP_Routed_Subnet, DMZ_Subnet, VOIP_WAN, WAN1~WAN6, VPN_PROFILE_1~VPN_PROFILE_64,WAN_1_IP_ALIAS_1~WAN_4_IP_ALIAS_32
-g <value>	Indicate the gateway IP address. Value: The type format shall be “xxx.xxx.xxx.xxx”. (e.g, 192.168.3.1)
-l <value>	Indicate the failover IP address. Value: The type format shall be “xxx.xxx.xxx.xxx”. (e.g, 192.168.4.1)
-t <value>	It means “protocol”. Value: Available settings include “TCP”, “UDP”, “TCP/UDP”, “ICMP” and “Any”.
-n <0/1>	Indicates the function of “Force NAT”. 0: Disable the function. 1: Enable the function.
-F <value>	It means "enable failover by MOS". value: 0 or 1
-M <value>	It means "Value of failover MOS". value: 2.0 ~ 4.0
-a <0/1>	Indicates to enable the function of failover. 0: Disable the function. 1: Enable the function.
-f <value>	It means to specify the interface for failover. Value: Avaialbe interfaces include, NO_FAILOVER, Default_WAN, Policy1~Policy50, LAN1~LAN16, IP_Routed_Subnet,DMZ_Subnet, WAN1~WAN6, VPN_PROFILE_1~VPN_PROFILE_64, WAN_1_IP_ALIAS_1 ~ WAN_4_IP_ALIAS_32
-b <value>	It means “failback”. Value: Available settings include, 0: Disable the function of “failback”. 1: Enable the function of “failback”.

-v	View current failback setting.
Diagnose for Policy Route	
-s <value>	It means “source IP”. Value: Available settings include: Any: It indicates any IP address can be used as source IP address. “xxx.xxx.xxx.xxx”: The type format (e.g, 192.168.1.0).
-d <value>	It means “destination IP”. Value : Available settings include: Any: It indicates any IP address can be used as destination IP address. “xxx.xxx.xxx.xxx”: Specify an IP address.
-p <value>	It means “destination port”. Value: Specify a number or type Any (indicating any number).
-t <value>	It means “protocol”. Value: Available settings include “ICMP”, “TCP”, “UDP” and “Any”.

Example

```
> ip policy_rt diagnose -s 192.168.1.100 -d any -p any -t ICMP

   ------------------------------------------------
      Matched Route  (Priority)
   ------------------------------------------------
   * No_Match

   ------------------------------------------------
      Matched Policy (Priority)
   ------------------------------------------------
   * Policy_1 (200)

   * Conclusion:The packet was dropped because the send-to interface of the
mat
ched policy "policy 1" was inactive and there was no failover setting
> ip policy_rt -i -1 -o add -1 range -s 192.168.1.10 -S 192.168.1.20 -2
ip_range -d 202.211.100.10 -D 202.211.100.20 -g 202.211.100.1 -I WAN2
```

Telnet Command: ip lanDNSRes

This command is used to set LAN DNS profiles. With such feature, the user can configure some services (such as ftp, www or database) with domain name which is easy to be accessed.

Syntax

ip lanDNSRes *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
-a <IP Address>	It is used to configure IP address mapping (IPv4/IPv6 Address or multiple subnet addresses). IP Address: type the IP address (e.g., 192.168.1.56).
-c <CNAME>	It is used to set CNAME. CNAME: Enter a string.
-d <address mapping index number>	It means to delete index number with address mapping configured. address mapping index number : type the index number which

	represents the address mapping profile.
-e <0/1>	It means to enable or disable the function of LAN DNS or DNS Forwarding Profile. 0: disable 1: enable
-i <profile setting index number>	It means to create LAN DNS profile with specified domain name. profile setting index number : type the index number which represents the profile with domain name configured.
-l	It means to list detailed information of profile configuration.
-n<domain name>	It means to specify a domain name to be accessed.
-p<profile name>	It means to set name of the LAN DNS profile.
-r	It means to clear specified domain name profile and the address mapping setting.
-R	It means to set to factory default setting.
-s <0/1>	It means to determine all subnet packets or only the packets with the same subnet will be replied for address mapping profile. 0: reply all subnet packets. 1: reply only same subnet packet.
-z	It means to update LAN DNS configuration to DNS cache.

Example

```
> ip lanDNSRes -i 1 -n ftp.drayTek.com
% Configure Set1's DomainName:ftp.drayTek.com
> ip lanDNSRes -i 1 -a 172.16.2.10 -s 1
% Configure Set1's IP:172.16.2.10
% Configure Set1's Idx:1 ReplyOnlySameSubnet:Yes
> ip lanDNSRes -i 1 -a 172.16.3.10 -s 1
% Configure Set1's IP:172.16.3.10
% Configure Set1's Idx:2 ReplyOnlySameSubnet:Yes
> ip lanDNSRes -i 1 -a 172.16.4.10 -s 1
% Configure Set1's IP:172.16.4.10
% Configure Set1's Idx:3 ReplyOnlySameSubnet:Yes
>
```

Telnet Command: ip dnsforward

This command is used to set LAN DNS profile for conditional DNS forwarding.

Syntax

ip dnsforward *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-a <IP Address/Domain Name>	Set forwarded DNS server IP Address or domain name. <IP Address/Domain Name>: Enter an IP address or the domain name.
-d <DNS server mapping index number>	Delete the selected LAN DNS profile. <DNS server mapping index number>: Enter the index number.

-e <0/1>	0: disable this function. 1: enable this function.
-i <profile setting index number>	Type the index number of the profile. <profile setting index number>: Enter the index number.
-l	List the content of LAN DNS profile (including domain name, IP address and message).
-n <domain name>	Set domain name.
-p <profile name>	Set profile name for LAN DNS.
-r	Reset the settings for selected profile.
-R	Set to factory default setting.

Example

```
> ip dnsforward -i 1 -n ftp.drayTek.com
% Configure Set1's DomainName:ftp.drayTek.com
> ip dnsforward -i 1 -a 172.16.1.1
% Configure Set1's IP:172.16.1.1
> ip dnsforward -i 1 -l
% Idx: 1
% State: Disable
% Profile: test
% Domain Name: ftp.drayTek.com
% DNS Server IP: 172.16.1.1
>
```

Telnet Command: ip spoofdef

This command is used to enable/disable the IP Spoofing Defense.

Syntax

ip spoofdef <*WAN/LAN*><*0/1*>

Syntax Description

Parameter	Description
<*WAN/LAN*>	It means to block IP packet from WAN/LAN with inconsistent source IP address.
<*0/1*>	0: Disable the function. 1: Enable the funciton.

Example

```
> ip spoofdef WAN 1
Setting saved:
>
```

Telnet Command: ip6 addr

This command allows users to set the IPv6 address for your router.

Syntax

ip6 addr -s <*prefix*> <*prefix-length*> <*LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2/VPN1/..VPN64*>

ip6 addr -d *<prefix> <prefix-length><LAN1/..LAN8/DMZ/ WAN1/..WAN4/USB1/USB2/VPN1/..VPN64>*

ip6 addr -a*<LAN1/..LAN8/DMZ/ WAN1/..WAN4/USB1/USB2/VPN1/..VPN64> -u*

ip6 addr -v*<LAN1/..LAN8/DMZ/ WAN1/..WAN4/USB1/USB2>*

ip6 addr -t *<old-prefix><old-prefix-length><new-prefix> <new-prefix-length> <LAN1/..LAN8/DMZ/ WAN1/..WAN4/USB1/USB2>*

ip6 addr -o *<1/2>*

ip6 addr -o 3 *<prefix> <prefix-length> <WAN1/WAN2/USB1/USB2>*

ip6 addr -l *<prefix> <prefix-length> <LAN1/..LAN8/DMZ>*

ip6 addr <-*p/-b***>** *<prefix> <prefix-length> <WAN1/..WAN4/USB1/USB2>*

ip6 addr -x *<LAN1/..LAN8/DMZ>*

ip6 addr -c *<LAN1/..LAN8/DMZ>*

ip6 addr -e *<type> < LAN1/..LAN8/DMZ>*

Syntax Description

Parameter	Description
-s <prefix> <prefix-length> < LAN1/..LAN8/DMZ/ WAN1/..WAN4/USB1/USB2/VPN1/..VPN64>	It means to add a static ipv6 address. <prefix>: It means to enter the prefix number of IPv6 address. <prefix-length>: It means to enter a fixed value as the length of the prefix. <LAN1/..LAN8/DMZ/ WAN1/..WAN4/USB1/USB2/VPN1/..VPN64>: It means to specify LAN/WAN/USB/VPN interface for such address.
-d <prefix> <prefix-length> <LAN1/..LAN8/DMZ/ WAN1/..WAN4/USB1/USB2/VPN1/..VPN64>	It means to delete an ipv6 address. <prefix>: It means to enter the prefix number of IPv6 address. <prefix-length>: It means to enter a fixed value as the length of the prefix. <LAN1/..LAN8/DMZ/ WAN1/..WAN4/USB1/USB2/VPN1/..VPN64>: It means to specify LAN/WAN/USB/VPN interface for such address.
-a < LAN1/..LAN8/DMZ/ WAN1/..WAN4/USB1/USB2/VPN1/..VPN64> -u	It means to show current address(es) status. <LAN1/..LAN8/DMZ/ WAN1/.. WAN4/USB1/USB2/VPN1/..VPN64>: It means to specify LAN/WAN/USB/VPN interface. <-u>: It means to show unicast address only.
-v <LAN1/..LAN8/ WAN1/..WAN4/USB1/USB2>	It means to show prefix list status.
-t <old-prefix><old-prefix-length><new-prefix> <new-prefix-length> <LAN1/..LAN8 /WAN1/..WAN4/USB1/USB2>	It means to update WAN static IPv6 address table. <old-prefix>: It means to enter the prefix number of IPv6 address. <old prefix-length>: It means to enter a fixed value as the length of the prefix. <new-prefix>: It means to enter the prefix number of IPv6 address. <new-prefix-length>: It means to enter a fixed value as the length of the prefix. <LAN1/..LAN8/WAN1/..WAN4/USB1/USB2 >: It means to specify LAN/WAN/USB interface for such address.
-o <1/2>	<1>: It means to show old prefix list. <2>: It means to send old prefix option by RA.
-o <3> <prefix> <prefix-length> <WAN1/..WAN4/USB1/USB2>	<3>: It means to set old prefix. <prefix>: It means to enter the prefix number of IPv6 address. <prefix-length>: It means to enter a fixed value as the length of the prefix. <WAN1/..WAN4/USB1/USB2 >: It means to specify a WAN/USB interface for such address.
-l <prefix> <prefix-length> <	It means to add a ULA.

LAN1/..LAN8/DMZ>	<prefix>: It means to enter the prefix number of IPv6 address. <prefix-length>: It means to enter a fixed value as the length of the prefix. <LAN1/..LAN8/DMZ>: It means to specify a LAN interface for such address.
-p/-b <prefix> <prefix-length> <WAN1/..WAN4/USB1/USB2>	It means to add/delete an prefix to/from prefix list. p: Add a prefix to a prefix list. b: Delete a prefix from a prefix list. <prefix>: It means to enter the prefix number of IPv6 address. <prefix-length>: It means to enter a fixed value as the length of the prefix. <WAN1/..WAN4/USB1/USB2 >: It means to specify a WAN/USB interface for such address.
-x <LAN1/..LAN8/DMZ>	It means to generate a ULA automatically. <LAN1/..LAN8/DMZ>: It means to specify a LAN interface.
-c <LAN1/..LAN8/DMZ>	It means to delete a ULA . <LAN1/..LAN8/DMZ>: It means to specify a LAN interface.
-e <type> <LAN1/..LAN8/DMZ>	It means to set ULA type. <type>: 0, disable; 1, static; 2, auto <LAN1/..LAN8/DMZ>: It means to specify a LAN interface.

Example

```
> ip6 addr -a
LAN
Unicast Address:
 FE80::250:7FFF:FE00:0/64 (Link)
Multicast Address:
 FF02::2
 FF02::1:FF00:0
 FF02::1
...
...
```

Telnet Command: ip6 dhcp req_opt

This command is used to configure option-request settings for DHCPv6 client.

Syntax

ip6 dhcp *req_opt <LAN1|..LAN8|DMZ|WAN1|..WAN4|USB1|USB2> <command> <parameter>| ...*

Syntax Description

Parameter	Description
req_opt	It means option-request.
LAN1|..LAN8|DMZ|WAN1|.. WAN4|USB1|USB2	It means to specify LAN or WAN interface for such address.
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-a	It means to show current DHCPv6 status.
-s	It means to ask the SIP.

-S	It means to ask the SIP name.
-d	It means to ask the DNS setting.
-D	It means to ask the DNS name.
-n	It means to ask NTP.
-i	It means to ask NIS.
-I	It means to ask NIS name.
-p	It means to ask NISP.
-P	It means to ask NISP name.
-b	It means to ask BCMCS.
-B	It means to ask BCMCS name.
-r	It means to ask refresh time.
Parameter	1: the parameter related to the request will be displayed. 0: the parameter related to the request will not be displayed.

Example

```
> ip6 dhcp req_opt WAN2 -S 1
> ip6 dhcp req_opt WAN2 -r 1
> ip6 dhcp req_opt WAN2 -a
% Interface WAN2 is set to request following DHCPv6 options:
%    sip name
>
```

Telnet Command: ip6 dhcp client

This command allows you to use DHCPv6 protocol to obtain IPv6 address from server.

Syntax

ip6 dhcp *client <WAN1|...|WAN4|USB1|USB2> [-<command> <parameter>| ...*

Syntax Description

Parameter	Description
client	It means the dhcp client settings.
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-a	It means to show current DHCPv6 status.
-p <IAID>	It means to request identity association ID for Prefix Delegation.
-n <IAID>	It means to request identity association ID for Non-temporary Address.
-t <time>	It means to set solicit interval. <time>: 0 ~ 7 seconds (default value is 0).
-c <parameter>	It means to send rapid commit to server. 1: Enable 0: Disable
-i <parameter>	It means to send information request to server. 1: Enable 0: Disable
-e <parameter>	It means to enable or disable the DHCPv6 client.

	1: Enable 0: Disable
-m <parameter>	It means to enable/disable server DUID set by Link layer and time. 1: Enable 0: Disable
-d	It means to display the client DUID.
-A <parameter>	It means to set authentication protocol. 0: Undefine 2: delayed protocol
-R <parameter>	It means to set realm value (max: 31 characters) in delayed protocol. <parameter>: Enter a string.
-S <parameter>	It means to set shared secret (max: 31 characters) in delayed protocol. <parameter>: Enter a string.
-K <parameter>	It means to set key ID (1~65535) in delayed protocol. <parameter>: Enter a number.

Example

```
> ip6 dhcp client WAN2 -d
 Client DUID = 000300011449bc0a6241
>
```

Telnet Command: ip6 dhcp server

This command allows you to configure DHCPv6 server.

Syntax

ip6 dhcp *server [-<command> <parameter>| ...]*

Syntax Description

Parameter	Description
server	It means the dhcp server settings.
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-a	It means to show current DHCPv6 status.
-b	It means to show current DHCPv6 IP assignment table.
-n <name>	It means to set a pool name.
-c <parameter>	It means to send rapid commit to server. 1: Enable 0: Disable
-e <parameter>	It means to enable or disable the DHCPv6 server. 1: Enable 0: Disable
-t <time>	It means to set prefer lifetime.
-y <time>	It means to set valid lifetime.
-u <time>	It means to set T1 time.
-o <time>	It means to set T2 time.

-i <pool_min_addr>	It means to set the start IPv6 address of the address pool.
-x <pool_max_addr>	It means to set the end IPv6 address of the address pool.
-R	It means to send reconfigure packet to the client.
-r <0/1>	It means to disable (0) or enable (1) the auto range.
-N <0/1>	It means to disable (0) or enable (1) the random address allocation.
-d <addr>	It means to set the first DNS IPv6 address. <addr> : Enter an IPv6 address.
-D <addr>	It means to set the second DNS IPv6 address. <addr> : Enter an IPv6 address.
-m <1/0>	It means to enable(1) or disable (0) the server DUID set by Link Layter and Time.
-q <name>	It means to set DNS domain search list. <name>: Enter a name.
-z <0/1>	It means to disable (0) or enable (1) the DHCP PD.
pdadd <suffix> <prefix_len> <client linklocal><client DUID>	It means to add PD node.
pddel <PD index>	It means to delete PD node. <PD index>: Enter a number.
-A <parameter>	It means to set authentication protocol. <parameter>: Enter 0, 2 or 3. 0: Undefine 2: delayed protocol 3: Reconfigure key
- M <parameter>	It means to set realm value (max: 31 characters) in delayed protocol. <parameter>: Enter a string.
-S <parameter>	It means to set shared secret (max: 31 characters) in delayed protocol. <parameter>: Enter a string.
-K <parameter>	It means to set key ID (1~65535) in delayed protocol. <parameter>: Enter a number.

Example

```
> ip6 dhcp server LAN1 pdadd 11:22:33 64 fe80::e202:1bff:fe65:4084
000100011d2ce39a00e06f25c839
%      Add to PD list success!
%%  PD status : invalid, no prefix available.
>
```

Telnet Command: ip6 internet

This command allows you to configure settings for accessing Internet.

Syntax

ip6 internet *-W n -M n [-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-W n	**W** means to set WAN interface and **n** means different selections. Default is WAN1. n=1: WAN1 n=2: WAN2 n=3: WAN3 . . n=X: WANx
-M n	M means to set Internet Access Mode (Mandatory) and n means different modes (represented by 0 – 5) n= 0: Offline, n=1: PPP, n=2: TSPC, n=3: AICCU, n=4: DHCPv6, n=5: Static n=6: 6in4-Static n=7: 6rd
-m n	It means to set IPv6 MTU. N = any value (0 means “unspecified”).
6rd	
-C <n>	It means to set 6rd connection mode. n=0: Auto n=1: Static
-s <server>	It means to set 6rd IPv4 Border Relay. <server>: Enter a string.
-m <n>	It means to set 6rd IPv4 address mask length. <n>: Enter a number.
-p <prefix>	It means to set IPv6 prefix for 6rd connection. <prefix>: Enter a prefix number of IPv6 address.
-l <n>	It means to set the prefix length for 6rd connection. <n>: It means to enter a fixed value as the length of the prefix.
6in4	
-s <server>	It means to set 6in4 remote endpoint IPv4 address.
-I <IPv6 Addr>	It means to set the IPv6 address for 6in4 connection.
-P <n>	It means to set IPv6 WAN prefix length for 6in4 connection.
-p <prefix>	It means to set 6in4 LAN Routed Prefix.
-l <n>	It means to set 6in4 LAN Routed Prefix length.
-T <n>	It means to set 6in4 Tunnel TTL.
TSPC/AICCU	
-u <username>	It means to set username (max. 63 characters). <username>: Enter a string.
-P <password>	It means to set Password (max. 63 characters). <password>: Enter a password.
-s <server>	It means to set Tunnel Server IP. <server>: Enter an IPv4 Address or URL (max. 63 characters)
AICCU	
-p <prefix>	It means to set Subnet Prefix (AICCU). <prefix>: Enter a prefix number of IPv6 address.
-l <n>	It means to set Subnet Prefix length (AICCU). <n>: Enter a number.
-o <1/0>	It means to set AICCU always on. 1: on 0: off

-f	It means to set AICCU tunnel ID.
Static	
-w <addr>	It means to set Default Gateway. <addr>: Enter an IPv6 address.
Others	
-d <server>	It means to set 1st DNS Server IP. <server>: Enter an IPv6 address.
-D <server>	It means to set 2nd DNS Server IP. <server>: Enter an IPv6 address.
-t <dhcp/ra/none>	It means to set ipv6 PPP WAN test mode for DHCP or RA. <dhcp/ra/none> : Enter dhcp, ra or none.
-V	It means to view IPv6 Internet Access Profile.
-k	It means to dial the Tunnel on the WAN.
-j	It means to drop the Tunnel on the WAN.
-r n	It means to set Prefix State Machine RA timeout.
-c n	It means to set Prefix State Machine DHCPv6 Client timeout.
-q <0/1/2>	It means to set WAN detection mode. 0:NS Detect 1:Ping Detect 2:Always On
-z <value>	It means to set Ping Detect TTL (0-255). <value>: Enter 0~255.
-x <hostname/ IPv6 addr>	It means to set Ping Detect Host (hostname or IPv6 address). <hostname/ipv6 addr> : Enter a hostname or an IPv6 address.
-i <value>	It means to set ipv6 connection interval. <value>: Enter a number (1500-60000 (unit:10ms)).
-b <0/1>	It means to enable DNSv6 based on DHCPv6. 1 = on 0 = off
-R <0/1>	It means to Enable RIPng. 1 = on 0 = off

Example

```
> ip6 internet -W 2 -M 2 -u 88886666 -p draytek123456 -s amsterdam.freenet6.net
 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
> system reboot
```

Telnet Command: ip6 neigh

This command allows you to display IPv6 neighbour table.

Syntax

ip6 neigh *-s <inet6_addr> <eth_addr> <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>*
ip6 neigh *-d <inet6_addr> <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>*
ip6 neigh *-a <inet6_addr> <-N LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>*

Syntax Description

Parameter	Description
-s <inet6_addr> <eth_addr> <LAN1/..LAN8/DMZ/WAN1/ WAN4/USB1/USB2>	It means to add a neighbour. <inet6_addr>: Enter an IPv6 address. <eth_addr>: Enter a submask address. <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>: Specify an interface for the neighbor.
-d <inet6_addr> <LAN1/..LAN8/DMZ/WAN1/. .WAN4/USB1/USB2>	It means to delete a neighbour. <inet6_addr>: Enter an IPv6 address. < LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>: Specify an interface for the neighbor.
-a <inet6_addr> <-N LAN1/..LAN8/DMZ/WAN1/. WAN4/USB1/USB2>	It means to show neighbour status. <inet6_addr>: Enter an IPv6 address. <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>: Specify an interface for the neighbor.

Example

```
> ip6 neigh -s 2001:2222:3333::1111 00:50:7F:11:ac:22:WAN2
% Neighbour 2001:2222:3333::1111 successfully added!
> ip6 neigh -a

I/F  ADDR                                MAC             STATE
-------------------------------------------------------------------------------
 LAN1 ::                                                   NONE
 LAN1 2001:2222:3333::1111                                 FAILED
 LAN1 FE80::D161:4B76:3314:9E59         14-49-bc-0a-8a-b8  STALE
 LAN1 FF02::1                            33-33-00-00-00-01  CONNECTED
NONE
>
```

Telnet Command: ip6 pneigh

This command allows you to add a proxy neighbour.

Syntax

ip6 pneigh *-s <inet6_addr> <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>*

ip6 pneigh *-d <inet6_addr><LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>*

ip6 pneigh *-a <inet6_addr> <-N LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>*

Syntax Description

Parameter	Description
-s <inet6_addr> <LAN1/..LAN8/DMZ/WAN 1/..WAN4/USB1/USB2>	It means to add a proxy neighbour. <inet6_addr>: Enter an IPv6 address. <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>: Specify an interface for the proxy neighbor.
-d <inet6_addr> <LAN1/..LAN8/DMZ/WAN 1/..WAN4/USB1/USB2>	It means to delete a proxy neighbour. <inet6_addr>: Enter an IPv6 address. <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>: Specify an interface for the proxy neighbor.
-a <inet6_addr> <-N LAN1/..LAN8/DMZ/WAN1 /..WAN4/USB1/USB2>	It means to show proxy neighbour status. <inet6_addr>: Enter an IPv6 address. <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2>: Specify an interface for the proxy neighbor.

Example

```
> ip6 neigh -s FE80::250:7FFF:FE12:300 LAN1
%      Neighbour FE80::250:7FFF:FE12:300 successfully added!
```

Telnet Command: ip6 route

This command allows you to IPv6 route policy.

Syntax

ip6 route *-s <prefix> <prefix-length> <gateway> <LAN1/..LAN8/DMZ/WAN1/..WAN4/ USB1/USB2/VPN1/..VPN64> <-D>*

ip6 route -*d <prefix> <prefix-length>*

ip6 route -*a <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2/VPN1/..VPN64>*

ip6 route -*l*

Syntax Description

Parameter	Description
-s <prefix> <prefix-length> <gateway> <LAN1/..LAN8/DMZ/WAN1/WA N4/ USB1/USB2/VPN1/..VPN64> <-D>	It means to add a route. <prefix>: It means to enter the prefix number of IPv6 address. <prefix length>: It means to enter a fixed value as the length of the prefix. <gateway>: It means to enter the gateway of the router. <LAN1/..LAN8/DMZ/WAN1/..WAN4/ USB1/USB2/VPN1/..VPN64>: It means to specify LAN or WAN or VPN interface for such address. <-D>: It means that such route will be treated as the default route.
-d <prefix> <prefix-length>	It means to delete a route. <prefix>: It means to enter the prefix number of IPv6 address. <prefix length>: It means to enter a fixed value as the length of the prefix.

-a <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2/VPN1/..VPN64>	It means to show the route status. <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2/VPN1/..VPN64>: It means to specify LAN or WAN or VPN interface for such address.
-l	It means to clear the routing table.

Example

```
> ip6 route -s FE80::250:7FFF:FE12:500 16 FE80::250:7FFF:FE12:100 LAN1
%      Route FE80::250:7FFF:FE12:500/16 successfully added!
> ip6 route -a LAN1

PREFIX/PREFIX-LEN                    I/F METRIC FLAG NEXT-HOP
------------------------------------------------------------------------------
 ::0.0.0.1/128                       LAN1    0 U ::
 FE80::/128                          LAN1    0 U ::
 FE80::1649:BCFF:FE0A:6240/128       LAN1    0 U ::
 FE80::/64                           LAN1  256 U ::
 FE80::/16                           LAN1 1024 UGS FE80::250:7FFF:FE12:100
 FF00::/8                            LAN1  256 U ::
>
```

Telnet Command: ip6 ping

This command allows you to pin an IPv6 address or a host.

Syntax

ip6 ping *<IPv6 address/Host> <LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2> <send count> <data_size>*

Syntax Description

Parameter	Description
IPV6 address/Host	It means to specify the IPv6 address or host for ping.
LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2	It means to specify an interface for such address.
data_size	Ranges from 1 to 1452.

Example

```
> ip6 ping 2001:4860:4860::8888 WAN2

Pinging 2001:4860:4860::8888 with 64 bytes of Data:

Receive reply from 2001:4860:4860::8888, time=330ms
Receive reply from 2001:4860:4860::8888, time=330ms
Receive reply from 2001:4860:4860::8888, time=330ms
Receive reply from 2001:4860:4860::8888, time=330ms
Receive reply from 2001:4860:4860::8888, time=330ms

Packets: Sent = 5, Received = 5, Lost = 0 <% loss>
>
```

Telnet Command: ip6 tracert

This command allows you to trace the routes from the router to the host.

Syntax

ip6 tracert <*IPV6 address/Host*><*LAN1/..LAN8/DMZ/WAN1/..WAN4/USB1/USB2*>

Syntax Description

Parameter	Description
<*IPV6 address/Host*>	It means to specify the IPv6 address or host for ping.
<*LAN1/..LAN8/DMZ/WAN1/WAN4/USB1/USB2*>	It means to specify an interface for such address.

Example

```
> ip6 tracert 2001:4860:4860::8888
traceroute to 2001:4860:4860::8888, 30 hops max through protocol ICMP
  1 2001:5C0:1400:B::10B8    340 ms
  2 2001:4DE0:1000:A22::1    330 ms
  3 2001:4DE0:A::1           330 ms
  4 2001:4DE0:1000:34::1     340 ms
  5 2001:7F8:1: :A501:5169:1 330 ms
  6 2001:4860::1:0:4B3       350 ms
  7 2001:4860::8:0:2DAF      330 ms
  8 2001:4860::2:0:66E       340 ms
  9 Request timed out.          *
 10 2001:4860:4860::8888     350 ms
Trace complete.
>
```

Telnet Command: ip6 tspc

This command allows you to display TSPC status.

Syntax

ip6 tspc <*ifno*>

Syntax Description

Parameter	Description
ifno	It means the connection interface. Ifno=1 (means WAN1) Info=2 (means WAN2)

Example

```
> ip6 tspc 2
Local Endpoint v4 Address : 111.243.177.223
Local Endpoint v6 Address : 2001:05c0:1400:000b:0000:0000:0000:10b9
Router DNS name : 8886666.broker.freenet6.net
Remote Endpoint v4 Address :81.171.72.11
Remote Endpoint v6 Address : 2001:05c0:1400:000b:0000:0000:0000:10b8
Tspc Prefixlen : 56
Tunnel Broker: Amsterdam.freenet.net

Status: Connected

>
```

Telnet Command: ip6 radvd

This command allows you to enable or disable RADVD server.

Syntax

Ip6 radvd <*LAN1/..LAN8/DMZ*> <-<*command*> <*parameter*>/ ... >

Syntax Description

Parameter	Description
<<*command*> <*parameter*>/…>	The available commands with parameters are listed below. <…> means that you can Enter several commands in one line.
-s <0/1>	It means to enable or disable the default lifetime of the RADVD server. 1: Enable the RADVD server. 0: Disable the RADVD server.
-D <0/1/2>	It means to set RDNSS Disable/Enable/Deploy (0/1/2) when WAN is up.
-d <lifetme>	It means to set RA default lifetime.
-i <lifetme>	It means to set RA min interval time(sec).
-I <lifetme>	It means to set RA MAX interval time(sec).
-h <hoplimit>	It means to set RA hop limit.
-m <mtu/auto>	It means to set RA MTU, 1280-1500. mtu: auto - auto select MTU from WAN,
-e <time>	It means to set reachable time.
-a <time/infinity>	It means to set retransmit timer /infinity.
-p <0/1/2>	It means to set radvd default preference Low/Medium/High. 0-low 1-medium 2-high
-v	It means to view radvd configuration.
-V	It means to view setting in RA.
-L <time/infinity>	It means to set prefix valid lifetime.
-P <time/infinity>	It means to set prefix preferred lifetime.
-r <num>	It means to to set RA test for item. <num>: 0, 121, 124 0: default, 121: logo 121, 124: logo 124..
-R	It means to reload Config and send RA for subnets.
-u	It means to view MTU on all interfaces.

Example

```
> ip6 radvd LAN1 -s 1
% [LAN1] setting !
%   Enable LAN1 radvd OK!
> ip6 radvd LAN1 -d 1800
% [LAN1] setting !
%   Set default lifetime ok: 1800 !
> ip6 radvd LAN1 -V
% [LAN1] setting !
```

```
%   Default Lifetime : 0 seconds
%   min interval time: 200 seconds
%   MAX interval time: 600 seconds
%   Hop limit       : 64
%   MTU            : 0
%   Reachable time   : 0
%   Retransmit time  : 0
%   Preference      : Medium
>
```

Telnet Command: ip6 mngt

This command allows you to manage the settings for access list.

Syntax

ip6 mngt list

ip6 mngt list *add <Index> <IPv6 Object Index>|remove <index>|flush*

ip6 mngt status

ip6 mngt *<internet/ http/telnet/ping/https/ssh/enforce_https> <on/off>*

Syntax Description

Parameter	Description
list	It means to show the setting information of the access list.
add <Index> <IPv6 Object Index> |remove <NO.>|flush	It means to add an IPv6 address which can be used to execute management through Internet. <Index>: 1 to 10. Ten profiles can be set for IPv6 access list. <IPv6 Object Index>: It means the index number of IP object (1 to 64) or keyword object (1 to 64) . remove <Index>: It means to remove (delete) the specified IP/Keyword object.
flush	It means to clear the IPv6 access table.
status	It means to show the status of IPv6 remote management.
internet/ http/telnet/ping/https/ssh /enforce_https	These protocols are used for accessing Internet.
on/off	It means to enable (on) or disable (off) the Internet accessing through http/telnet/ping.

Example

```
> ip6 mngt list add 1 62
%% Set OK.
>
```

Telnet Command: ip6 online

This command allows you to check the online status of IPv6 LAN /WAN.

Syntax

ip6 *online <WAN1/..WAN4/USB1/USB2>*

Syntax Description

Parameter	Description
<WAN1/..WAN4/USB1/USB2>	It means the connection interface.

Example

```
> ip6 online WAN1
 % WAN1 online status :
 % IPv6 WAN1 Disabled
 % Default Gateway : ::
 % Interface : DOWN
 % UpTime : 00:00:00
 % IPv6 DNS Server: :: Static
 % IPv6 DNS Server: :: Static
 % IPv6 DNS Server: :: Static
 % Tx packets = 0, Tx bytes = 0, Rx packets = 0, Rx bytes = 0
 % MTU Onlink: 1280 , Config MTU : 0
```

Telnet Command: ip6 aiccu

This command allows you to set IPv6 settings for WAN interface with connection type of AICCU.

Syntax

ip6 aiccu -i <*ifno*> **-r**

ip6 aiccu -i <*ifno*> **-s**

Syntax Description

Parameter	Description
<*Ifno*>	It means the connection interface. 1=WAN1 2=WAN2
-r	It means to remove (delete) the specified index number with IPv6 settings.
-s	It means to display the interface status.

Example

```
> ip6 aiccu -i 1 -s
Status: Idle
>
```

Telnet Command: ip6 ntp

This command allows you to set IPv6 settings for NTP (Network Time Protocols) server.

Syntax

ip6 ntp -h

ip6 ntp -v

ip6 ntp -p <0/1>

Syntax Description

Parameter	Description
-h	It is used to display the usage of such command.
-v	It is used to show the NTP state.
-p <0/1>	It is used to specify NTP server for IPv6. 0 – Auto 1 – First Query IPv6 NTP Server.

Example

```
> ip6 ntp -p 1
% Set NTP Priority: IPv6 First
```

Telnet Command: ip6 lan

This command allows you to set IPv6 settings for LAN interface.

Syntax

ip6 lan -l n <-<*l:w:d:D:m:o:s*> <*parameter*> / ... >

Syntax Description

Parameter	Description
-h	It is used to display the usage of such command.
-l <n>	It means to selete LAN interface to be set. n= 1: LAN1 n= 2: LAN2, ... x: LANx. Default is LAN1
-w <n>	It means to selete WAN interface to be primary interface. n= 0: None, n=1: WAN1 , n=2: WAN2, ... x: WANx.
-d <server>	It means to set 1st DNS Server IP. <server>: Enter the IPv6 Address.
-D <server>	It means to set 2nd DNS Server IP. <server>: Enter the IPv6 Address.
-m <n>	It means to set ipv6 LAN management. n=0:OFF n=1:SLAAC. Default is SLAAC n=2:DHCPv6
-o <n>	It means to enable Other option(O-bit) flag. (O-bit is redundant when management is DHCPv6) n=0: Disable n=1: Enable.
-e <n>	It means to add an extension WAN. n: 1: WAN1, 2: WAN2, ... x: WANx.
-E <n>	It means to delete an extension WAN. n: 1: WAN1 ,2: WAN2, ... x: WANx.
-b <map>	It means to set bit map(decimal) for extension WAN. <map>: 0: WAN1; 1: WAN2, ... n: WAN(n+1).
-f <n>	It means to disable IPv6. n=1: Disable IPv6, n=0: Enable IPv6.
-R <n>	It means to enable /disable RIPng. n=1: Enable RIPng, n=0: Disable RIPng.
-s <n>	It means to show IPv6 LAN setting. n=0:show all. Default is show all. n=1 to 8: LAN1 to LAN8. n=17: DMZ.

Example

```
> ip6 lan -l 1 -w 1 -d 2001:4860:4860::8888 -o 1 -f 0 -s 2
%   Set LAN1!

%   Set primary WAN1!

%  Set 1st DNS server 2001:4860:4860::8888

%   Set Other Option Enable!

%   [LAN1] support ipv6!
```

```
 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.

% [LAN2] setting:
%  Primary WAN    : WAN1
%  Management     : SLAAC
%  Other Option   : Disable
%  WAN Exten      : None
%  Subnet ID      : 2
%  Static IP(0)   : ::/0
%                 [ifno: 0, enable: 0]
%  Static IP(1)   : ::/0
%                 [ifno: 0, enable: 0]
%  Static IP(2)   : ::/0
%                 [ifno: 0, enable: 0]
%  Static IP(3)   : ::/0
%                 [ifno: 0, enable: 0]
%  DNS1           : 2001:4860:4860::8888
%  DNS2           : 2001:4860:4860::8844
%  ULA Type       : OFF
%  RIPng          : Enable
>
```

Telnet Command: ip6 session

This command allows you to set sessions limit for IPv6 address.

Syntax

ip6 session *on*
ip6 session *off*
ip6 session *default* <*num*>
ip6 session *status*
ip6 session *show*
ip6 session *add* <*IP1-IP2*> <*num*>
ip6 session *del* <*IP1-IP2*> <*num*>

Syntax Description

Parameter	Description
on	It means to turn on session limit for each IP.
off	It means to turn off session limit for each IP.
default <*num*>	It means to set the default number of session num limit. <num>: Enter a number.
status	It means to display the current settings.
show	It means to display all IP range session limit settings.
add <*IP1-IP2*><*num*>	<add>: It means to add the session limit for an IPv6 range. <IP1-IP2> : Specify a range for IPv6 addresses. <num>: Enter a number.
del<*IP1-IP2*><*num*>	<del>: It means to delete the session limit for an IPv6 range. <IP1-IP2> : Specify a range for IPv6 addresses. <num>: Enter a number.

Example

```
> ip6 session on
> ip6 session add 2100:ABCD::2-2100:ABCD::10 100
> ip6 session status

  IPv6 range:
    2100:ABCD::2 - 2100:ABCD::10 : 100

  Current ip6 session limit is turn on

  Current default session number is 100
```

Telnet Command: ip6 bandwidth

This command allows you to set IPv6 settings for bandwidth control.

Syntax

ip6 bandwidth *on*
ip6 bandwidth *off*
ip6 bandwidth *default* <*tx_rate*> <*rx_rate*>
ip6 bandwidth *status*
ip6 bandwidth *show*
ip6 bandwidth *add* <*IP1-IP2*> <*tx*><*rx*><*shared*>
ip6 bandwidth *del* <*IP1-IP2*> <*tx*><*rx*><*shared*>

Syntax Description

Parameter	Description
on	It means to turn on bandwidth limit for each IP.
off	It means to turn off bandwidth limit for each IP.
default <*tx_rate*> <*rx_rate*>	It means to set the default transmission (tx), receiving (rx) rate of bandwidth limit (0-30000 Kbps/Mbps). <tx_rate>: Enter a number. <rx_rate>: Enter a number.
status	It means to display the current settings.
show	It means to display all IP range bandwidth limit settings.
add <*IP1-IP2*> <*tx*><*rx*><*shared*>	<add>: It means to add the bandwidth limit for an IPv6 range. <IP1-IP2> - Specify a range for IPv6 addresses. <tx><rx>: It means the bandwidth limit for transmission and receivign rate. <shared>: It means the bandwidth will be shared for the IPv6 range.
del <*IP1-IP2*> <*tx*><*rx*><*shared*>	<del>: It means to delete the bandwidth limit for an IPv6 range by first IP (IP1) or 'del all'. <IP1-IP2> - Specify a range for IPv6 addresses. <tx><rx>: It means the bandwidth limit for transmission and receivign rate. <shared>: It means the bandwidth will be shared for the IPv6 range.

Example

```
> ip6 bandwidth on
> ip6 bandwidth add 2001:ABCD::2-2001:ABCD::10 512 5M shared
> ip6 bandwidth status

  IPv6 range:
    2001:ABCD::2 - 2001:ABCD::10 : Tx:512K Rx:5M shared

  Current ip6 Bandwidth limit is turn on

  Current default ip6 Bandwidth rate is Tx:2000K Rx:8000K bps
> ip6 bandwidth del 2001:ABCD::2
>
```

Telnet Command: ipf view

IPF users to view the version of the IP filter, to view/set the log flag, to view the running IP filter rules.

Syntax

ipf view *[-VdhrtzZ]*

Syntax Description

Parameter	Description
-V	It means to show the version of this IP filter.
-d	It means to show the running data filter rules.
-h	It means to show the hit-number of the filter rules.
-r	It means to show the running call and data filter rules.
-t	It means to display all the information at one time.
-z	It means to clear a filter rule's statistics.
-Z	It means to clear IP filter's gross statistics.

Example

```
> ipf view -V
ipf: IP Filter: v3.3.1 (1852)
Kernel: IP Filter: v3.3.1
Running: yes
Log Flags: 0x6055af1c = block, nomatch
Default: pass all, Logging: available
```

Telnet Command: ipf set

This command is used to set general rule, filter set and filter rule for firewall.

Syntax

ipf set <*Options*>

ipf set <*SET_NO*><*Options*>

ipf set <*SET_NO*> ***rule*** <*RULE_NO*><*Options*>

Syntax Description

Parameter	Description
ipf set <*Options*>	It means to set the firewall general setup and default rule.
ipf set <*SET_NO*><*Options*>	It means to set the firewall fiter set including comments and next fiter set.
ipf set <*SET_NO*> *rule* <*RULE_NO*> <*Options*>	It means to set the firewall rule in filter set. For detailed information, refer to Telnet Command: ipf rule.
About ipf set <*Options*>	
-v	It means to view the configuration of general set.
-d <p1>	It means to setup Data Filter. <p1>: Specify the index number (1 to 12) of the set profile. To disable the setting, enter "0".

- p <p1><p2>	It means to setup actions for packet not matching any rule and whether record syslog. <p1>: Type “0” to let packets not matching any rule pass; Type “1” to block the packets not matching any rule. <p2>: "0" means the log related to rule matching will not be recorded on Syslog; "1" means the log related to rule matching will be recorded on Syslog. For example, to set pass for packet not matching any rule and enable syslog, ***-p 0 1***.
-R <v4/v6> <Enable/Disable>	It means to accept routing packet from WAN. <v4/v6>: IPv4 or IPv6. <Enable/Disable>: Enter 0 (enable) or 1 (disable). Set Accept routing packet from WAN by IPv4, please enter ***-R v4 0***.
-L <p1>	It means to enable or disable the Strict Security Firewall function. <p1>: Enter 1(enable) or 0 (disable).
-C <p1>	It means to setup Code Page. <p1>: Enter a code page number (0 to 20). For example, ipf set -C 20. 0. None 1. ANSI(1250)-Central Europe 2. ANSI(1251)-Cyrillic 3. ANSI(1252)-Latin I 4. ANSI(1253)-Greek 5. ANSI(1254)-Turkish 6. ANSI(1255)-Hebrew 7. ANSI(1256)-Arabic 8. ANSI(1257)-Baltic 9. ANSI(1258)-Viet Nam 10. OEM(437)-United States 11. OEM(850)-Multilingual Latin I 12. OEM(860)-Portuguese 13. OEM(861)-Icelandic 14. OEM(863)-Canadian French 15. OEM(865)-Nordic 16. ANSI/OEM(874)-Thai 17. ANSI/OEM(932)-Japanese Shift-JIS 18. ANSI/OEM(936)-Simplified Chinese GBK 19. ANSI/OEM(949)-Korean 20. ANSI/OEM(950)-Traditional Chinese Big5
-M <p1><p2>	It means to setup APP Enforcement and Syslog. <p1>: Enter a number (0 to 32). In which, 0 means none; 1 to 32 mens the index number of the profile. <p2>: "0" means the log related to APP Enforcement will not be recorded on Syslog; "1" means the log related to APP Enforcement will be recorded on Syslog.
-U <p1><p2>	It means to setup URL Content Filter for packets not matching any rule. <p1>: Enter a number (0 to 8). In which, 0 means none; 1 to 8 mens the index number of the profile. <p2>: "0" means the log related to URL Content Filter will not be recorded on Syslog; "1" means the log related to URL Content Filter will be recorded on Syslog.
-W <p1><p2>	It means to setup Web Content Filter for packets not matching any rule.

	<p1>: Enter a number (0 to 8). In which, 0 means none; 1 to 8 mens the index number of the profile. <p2>: "0" means the log related to Web Content Filter will not be recorded on Syslog; "1" means the log related to Web Content Filter will be recorded on Syslog.
-D <p1><p2>	It means to setup DNS Filter for packets not matching any rule. <p1>: Enter a number (0 to 8). In which, 0 means none; 1 to 8 mens the index number of the profile. <p2>: "0" means the log related to DNS Filter will not be recorded on Syslog; "1" means the log related to DNS Filter will be recorded on Syslog.
-a <p1>	It means to configure the advanced settings.
-f <p1>	It means to accept large incoming fragmented UDP or ICMP packets. <p1>: Enter 1(enable) or 0 (disable).
-t <p1>	It means to enable or disable the Transparent Mode. <p1>: Enter 1(enable) or 0 (disable).
-E <p1><p2>	It means to set the maximum count for session limitation. <p1>: Enter a number (0 to 50000) <p2>: "0" means the log related to session control will not be recorded on Syslog; "1" means the log related to session control will be recorded on Syslog.
-Q <p1><p2>	It means to set the QoS Class. <p1>: Enter a number (0 to 4). 0: None 1: Class 1 2: Class 2 3: Class 3 4: Default Class <p2>: "0" means the log related to QoS Class will not be recorded on Syslog; "1" means the log related to QoS Class will be recorded on Syslog.
-Y <p1><p2>	It means to set the User Management. <p1>: Enter a number (-1 to 2). -1: None 0: All 1: user object 2: user group <p2>: 1 to 200(if p1 is set with 1, user object) or 1 to 32(if p1 is set with 2, user group)
-y <p1>	It means the log related to User Management will be or be not recorded on Syslog. <p1>: Enter 1(enable) or 0 (disable).
-w <p1>	It means to set the window size of TCP protocol. <p1>: Enter a value (0 to 65535).
-A <p1>	It means to enable or disable the function of packet capture. <p1>: Enter 1(enable) or 0 (disable).
About ipf set <SET_NO><Options>	
-m <Comments>	It means to set comment for a filter set. <Comments>: Enter a description for the filter set.
-v	It means to view the comment and the next filter set.
-n <NEXT_SET_NO>	It means to specify the next filter set of current filter set.

	<NEXT_SET_NO>: Enter a number (1 to 12). For example, ipf set 1 -n 2.

Example

```
> ipf set -R "v4 1"
Setting saved.
> ipf set -R "v6 1"
Setting saved.
> ipf set -v
Data Filter: Enable (Start Filter Set = 1)
Log Flag   : Disable

Actions for packet not matching any rule:
  Pass or Block     : Pass
  CodePage         : ANSI(1252)-Latin I
  Max Sessions Limit: 60000
  Current Sessions  : 0
  Mac Bind IP       : Non-Strict
  QOS Class         : None
  Packet Capture    : Disable
  APP Enforcement   : None
  URL Content Filter: None
  WEB Content Filter: None
  DNS Filter        : None
  Load-Balance policy : Auto-select
  ------------------------------------------------------------------------
  CodePage                : ANSI(1252)-Latin I
  Window size              : 65535
  Session timeout          : 60
  DrayTek Banner           : Enable
  ------------------------------------------------------------------------
  Accept large incoming fragmented UDP or ICMP packets: Enable
  Transparent Mode                                 : Disable
  ------------------------------------------------------------------------
  Block routing packet from WAN:
    [v] IPv4
    [v] IPv6
  ------------------------------------------------------------------------
  [v] Enable Strict Security Firewall l
>
```

Telnet Command: ipf rule

This command is used to set filter rule for firewall.

Syntax

ipf rule ***s r [***-<*command*> <*parameter*> | ...
ipf rule s r -v

Syntax Description

Parameter	Description
s	It means the Filter Set. s: Enter a value (1 to 12).

r	It means Filter Rule r: Enter a value (1~7).
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-e <0/1>	It means to enable or disable the rule setting. 0: disable 1:enable
-v	It is used to show current filter rule settings.
-D <value>	It means to set the direction of packet flow. It is for **Data Filter** only. 0: LAN/DMZ/RT/VPN -> WAN 1: WAN -> LAN/DMZ/RT/VPN 2: LAN/DMZ/RT/VPN -> LAN/DMZ/RT/VPN
-I "<e/d><para1, para2,...>"	It means to set incoming interface. e: Enable the function. d: Disable the function. Para1, para2,...: Available values include all, LAN1, LAN2,...LAN8, RT, VPN, WAN1, WAN2,...WAN9 Example: > ipf rule 3 1 -e 1 -I "e LAN1"
-O "<e/d><para1, para2,...>"	It means to set outgoing interface. e: Enable the function. d: Disable the function. Para1, para2,...: Available values include all, LAN1, LAN2,...LAN8, RT, VPN, WAN1, WAN2,...WAN9 Exampe: > ipf rule 3 1 -e 1 -O "e LAN2"
-s "o|o6|g|g6|c <field> <obj>"	It means to specify source IP object, IP group. o: Indicates “IPv4 object”. o6: Indicates IPv6 object". g: Indicates “IPv4 group”. g6: Indicates “IPv6 group”. c: Indicates country object. field: Indicates the quantity of objects/groups that can be set for this rule at one time. -2 object profiles are allowed for IPv4 -2 group profiles are allowed for IPv4 group -3 object profiles are allowed for IPv6 -1 group profiles is allowed for IPv6 group obj : indicates index number of object or index number of group. -Range for IPv4, from 1 to 192, 0 means none. -Range for IPv4 group, from 1 to 32, 0 means none. -Range for IPv6, from 1 to 64, 0 means none. -Range for IPv6 group, from 1 to 32, 0 means none. -Ranges for country object, from 1 to 32. For example, -s "o 1 2" means IPv4 object profile 1 and 2 are set as souce IP. Exampe: > ipf rule 3 1 -e 1 -s "o 1 2"
-d "o|o6|g|g6|c <field> <obj>"	It means to specify destination IP object, IP group. o: Indicates “IPv4 object”. o6: Indicates IPv6 object". g: Indicates “IPv4 group”. g6: Indicates “IPv6 group”.

	c: Indicates country object. field: Indicates the quantity of objects/groups can be set for this rule at one time. -2 object profiles are allowed for IPv4 -2 group profiles are allowed for IPv4 group -3 object profiles are allowed for IPv6 -1 group profiles is allowed for IPv6 group obj : indicates index number of object or index number of group. -Range for IPv4, from 1 to 192, 0 means none. -Range for IPv4 group, from 1 to 32, 0 means none. -Range for IPv6, from 1 to 64, 0 means none. -Range for IPv6 group, from 1 to 32, 0 means none. -Range for country object, from 1 to 32. For example, -s "o 1 2" means IPv4 object profile 1 and 2 are set as destination IP. Exampe: > ipf rule 3 1 -e 1 -d "o 2 2"
-d "u *<Address Type> <Start IP Address> <End IP Address> | <Address Mask>"*	It means to configure **destination** IP address including address type, start IP address, end IP address and address mask. u : It means “user defined”. *Address Type* : Type the number (representing different address type). 0 : Subnet Address 1 : Single Address 2 : Any Address 3 : Range Address Example: Set Subnet Address => -d "u 0 192.168.1.10 255.255.255.0" Set Single Address => -d "u 1 192.168.1.10 " Set Any Address => -d "u 2 " Set Range Address => -d "u 3 192.168.1.10 192.168.1.15"
-S o|g <obj>	It means to specify Service Type object. o : indicates “object” profile. g: indicates “group” profile. <obj> : indicates index number of object or index number of group. Available settings range from 1-96. For example, -S "o 1" means the first service type object profile.
-S "u <protocol> <source_port_value> <destination_port_vale>"	It means to configure advanced settings for Service Type, such as protocol and port range. u : it means “user defined”. <protocol> : It means TCP(6),UDP(17), TCP/UDP(255), Any(0), ICMP(1), ICMPv6(58), Other(other) <source_port_value> : 1 : Port OP, range is 0-3. 0:= =, 1:!=, 2:>, 3:< 3 : Port range of the Start Port Number, range is 1-65535. 5 : Port range of the End Port Number, range is 1-65535. <destination_port_value>: 2 : Port OP, range is 0-3, 0:==, 1:!=, 2:>, 3:< 4 : Port range of the Start Port Number, range is 1-65535. 6: Port range of the End Port Number, range is 1-65535.
-f <value>	It means to set fragment type. 0 : Don't care. 1 : Unfragmented.

	2 : Fragmented. 3 : Too Short
-F "<Param 0> <Param 1>"	It means the Filter action you can specify. <param 0>: Enter the number to set the filter action. 0 : Pass Immediately. 1 : Block Immediately. 2 : Pass if no further match. 3 : Block if no further match. <Param 1>: Let the log be recorded on Syslog. 0 : Disable Log. 1 : Enable Log.
-m "<Param 0> <Param 1>"	It means to set MAC Bind IP type and the Syslog. <param 0>: Enter the number to choose the type. 0 : Non-Strict. 1 : Strict. <Param 1>: Let the log be recorded on Syslog. 0 : Disable Log. 1 : Enable Log.
-Y <Param 0> <Param 1>	It means to set the User Management. <param 0>: Enter the number to choose the type. -1 : None. 0 : All. 1 : User Object 2 : User group <Param 1>: Let the log be recorded on Syslog if <param 0> is set with None/ALL. 0 : Disable. 1 : Enable. Enter the the user object number (1 to 200) / group number (1 to 32) if <param 0> is set with User Object.
-y <value>	It means the log related to User Management will be or be not recorded on Syslog. <value>: Enter 1(enable) or 0 (disable)
-L <Param 0> <Param 1>	It means to set the maximum count for the session limitation. <param 0>: Enter the number (0 to 60000) to choose the type. <Param 1>: Let the log be recorded on Syslog. 0 : Disable. 1 : Enable.
-q <Param 0> <Param 1>	It means to set the classification for QoS. <Param 0>: 1– Class 1, 2 – Class 2, 3 – Class 3, 4 – Other <Param 1>: Let the log be recorded on Syslog. 0 : Disable. 1 : Enable.
-A "<Param 0>"	It means to enable or disable the packet capture function. <Param 0>: Enter 0 or 1. 0 : Disable. 1 : Enable.

-l <Param 0> <Param 1>	It means load balance policy. Such function is used for “debug” only. <Param 0>: Enter 0, 1, 2, or 3. 0:Auto-Select, 1:WAN 1. 2:WAN 2. 3:WAN 3. <Param 1>: Enter 0 or 1. 0:Disable Log. 1:Enable Log.
-a "<Param 0> <Param 1>"	It means to specify which APP Enforcement profile will be applied. <Param 0> : Available settings range from 0 ~ 32. “0” means no profile will be applied. <Param 1> : Let the log be recorded on Syslog. 0 : Disable. 1 : Enable.
-u <Param 0> <Param 1>	It means to specify which URL Content Filter profile will be applied. <Param 0> : Available settings range from 0 ~ 8. “0” means no profile will be applied. <Param 1> : Let the log be recorded on Syslog. 0 : Disable. 1 : Enable.
-w "<Param 0> <Param 1>"	It means to specify which Web Content Filter profile will be applied. <Param 0> : Available settings range from 0 ~ 8. “0” means no profile will be applied. <Param 1> : Let the log be recorded on Syslog. 0 : Disable. 1 : Enable.
-n "<Param 0> <Param 1>"	It means to specify which DNS Filter profile will be applied. <Param 0> : Available settings range from 0 ~ 8. “0” means no profile will be applied. <Param 1> : Let the log be recorded on Syslog. 0 : Disable. 1 : Enable.
-N <value>	It means to set the Next Filter Set. <value> : Available settings range from 0 ~ 12. “0” means no profile will be applied. 0 : None 1 : Set#1; 2: Set#2, and so on.
-c <0~20>	It means to set code page. Different number represents different code page. 0. None 1. ANSI(1250)-Central Europe 2. ANSI(1251)-Cyrillic 3. ANSI(1252)-Latin I 4. ANSI(1253)-Greek 5. ANSI(1254)-Turkish 6. ANSI(1255)-Hebrew 7. ANSI(1256)-Arabic 8. ANSI(1257)-Baltic 9. ANSI(1258)-Viet Nam 10. OEM(437)-United States

	11. OEM(850)-Multilingual Latin I 12. OEM(860)-Portuguese 13. OEM(861)-Icelandic 14. OEM(863)-Canadian French 15. OEM(865)-Nordic 16. ANSI/OEM(874)-Thai 17. ANSI/OEM(932)-Japanese Shift-JIS 18. ANSI/OEM(936)-Simplified Chinese GBK 19. ANSI/OEM(949)-Korean 20. ANSI/OEM(950)-Traditional Chinese Big5
-C "<Windows Size> <Session_Timeout>"	It means to set Window size and Session timeout (Minute). <Windows Size> - Available settings range from 1 ~ 65535. <Session_Timeout> - Make the best utilization of network resources.
-b <value>	It means to enable or disable the DrayTek Banner. <value>: 0 : Disable; 1 : Enable.
-t "i <Param 0> <Param 1>"	It means to set schedule profile. Totally, there are four sets of schedule profiles can be specified. <param 0>: Enter the index number (1 to 4) for each set. <param 1>: Enter the index number (0 to 15) of the schedule profile for each set. 0 means none. For example, -t "i 1 3" means schedule profile #3 is configured for set #1. Exampe: > ipf rule 3 1 -e 1 -t "i 1 3"
-t "c <value>"	It means to enable or disable the function of clearing sessions when the schedule is ON. <value>: 0 : Disable; 1 : Enable.
-M <Your Comments>	It means to set comments for the fitler rule. <Your Comments>: Enter a brief description.
-U "<up/down>"	It means to move up or move down the order of a filter rule in the filter set. up: It indicates move the filter rule up. down: It indicates move the filter rule down.

Example

```
> ipf rule 2 1 -v
Filter Set 2 Rule 1:

Status  : Disable
Comments: <null>
Index(1-15) in Schedule Setup: <null>, <null>, <null>, <null>

Clear sessions when schedule is ON: Disable

Direction    : LAN/DMZ/RT/VPN -> WAN
Src Interface : LAN1, LAN2, LAN3, LAN4, LAN5, LAN6, LAN7, LAN8, DMZ, Routed,
VPN

Dst Interface : WAN1, WAN2, WAN3, WAN4, WAN5, WAN6, WAN7, WAN8, WAN9
Source IP    : Any
Destination IP: Any
Service Type  : Any
Fragments    : Don't Care
```

```
Pass or Block           : Pass Immediately
Branch to Other Filter Set: None
Max Sessions Limit       : 60000
Current Sessions         : 0
Mac Bind IP             : Non-Strict
Qos Class               : None
Packet Capture           : Disable
APP Enforcement          : None
URL Content Filter       : None
WEB Content Filter       : None
DNS Filter              : None
Load-Balance policy      : Auto-select
Log                     : Disable
------------------------------------------------------------------------
CodePage                : ANSI(1252)-Latin I
Window size              : 65535
Session timeout          : 60
DrayTek Banner           : Enable
  ------------------------------------------------------------------------
  Strict Security Checking
    [ ]APP Enforcement
>
```

Telnet Command: ipf flowtrack

This command is used to set and view flowtrack sessions.

Syntax

ipf flowtrack set <*-r*/*-e*>
ipf flowtrack view <*-f*/*-b*>

Syntax Description

Parameter	Description
-r	It means to refresh the flowtrack.
-e	It means to enable or disable the flowtrack.
-f	It means to show the sessions state of flowtrack. If you do not specify any IP address, then all the session state of flowtrack will be displayed.
-b	It means to show all of IPv6 sessions state.

Example

```
> ipf flowtrack set -r
Refresh the flowstate ok
> ipf flowtrack view -f
Start to show the flowtrack sessions state:

ORIGIN>>  192.168.1.11:59939 ->       8.8.8.8:  53 ,ifno=0
REPLY >>      8.8.8.8:  53 ->   192.168.1.11:59939 ,ifno=3
      proto=17, age=93023180(3920), flag=203
ORIGIN>>  192.168.1.11:15073 ->       8.8.8.8:  53 ,ifno=0
```

```
REPLY >>       8.8.8.8:   53 ->   192.168.1.11:15073 ,ifno=3
       proto=17, age=93025100(2000), flag=203
ORIGIN>>  192.168.1.11: 7247 ->       8.8.8.8:   53 ,ifno=0
REPLY >>       8.8.8.8:   53 ->   192.168.1.11: 7247 ,ifno=3
       proto=17, age=93020100(7000), flag=203
End to show the flowtrack sessions state
> ipf flowtrack set -e
Current flow_enable=0
> ipf flowtrack set -e
Curretn flow_enable=1
>
```

Telnet Command: Log

This command allows users to view log for WAN interface such as call log, IP filter log, flush log buffer, etc.

Syntax

log *[-cfhiptwx?] [-F a| c | f | w]*

Syntax Description

Parameter	Description
-c	It means to show the latest call log.
-f	It means to show the IP filter log.
-F	It means to show the flush log buffer. a: flush all logs c: flush the call log f: flush the IP filter log w: flush the WAN log
-h	It means to show this usage help.
-p	It means to show PPP/MP log.
-t	It means to show all logs saved in the log buffer.
-w	It means to show WAN log.
-x	It means to show packet body hex dump.

Example

```
> log -w
25:36:25.580 ---->DHCP (WAN-5) Len = 548XID = 0x7880fdd4
       Client IP     = 0.0.0.0
       Your IP       = 0.0.0.0
       Next server IP = 0.0.0.0
       Relay agent IP = 0.0.0.0
25:36:33.580 ---->DHCP (WAN-5) Len = 548XID = 0x7880fdd4
       Client IP     = 0.0.0.0
       Your IP       = 0.0.0.0
       Next server IP = 0.0.0.0
       Relay agent IP = 0.0.0.0
25:36:41.580 ---->DHCP (WAN-5) Len = 548XID = 0x7880fdd4
       Client IP     = 0.0.0.0
       Your IP       = 0.0.0.0
```

```
       Next server IP = 0.0.0.0
       Relay agent IP = 0.0.0.0
25:36:49.580 ---->DHCP (WAN-5) Len = 548XID = 0x7880fdd4
       Client IP     = 0.0.0.0
       Your IP       = 0.0.0.0
       Next server IP = 0.0.0.0
       Relay agent IP = 0.0.0.0
25:36:57.580 ---->DHCP (WAN-5) Len = 548XID = 0x7880fdd4
       Client IP     = 0.0.0.0
       Your IP       = 0.0.0.0
--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page] ---
```

Telnet Command: ldap user

This command is used to configure the LDAP profile.

Syntax

ldap user <*INDEX*><*OPTION*>

Syntax Description

Parameter	Description
INDEX	Specify the index number (1 to 8) of the LDAP profile.
OPTION	
-n VALUE	Setup Profile Name.
-b VALUE	Setup Base Distinguished Name.
-a VALUE	Setup Additional Filter.
-g VALUE	Setup Group Distinguished Name.
-c VALUE	Setup Common Name Identifier.
-v	View detail information of the LDAP profile.

Example

```
> ldap user 1 -n LD_user_test1
Profile Name has been updated!
> ldap user 1 -v
Profile Index:1
Profile Name:LD_user_test1
Common Name Identifier:
Base Distinguished Name:
Additional Filter:
Group distinguished Name:
>
```

Telnet Command: ldap set

This command is used to set general settings (e.g., IP address, port number) for LDAP server.

Syntax

ldap set <*Options*><*Value*>

Syntax Description

Parameter	Description
enable <0-1>	Enable or disable LDAP function. 0 : Disable the function. 1 : Enable the function.
type <0-2>	Set the bind type as Simple(0),Anonymous(1), and Regular(2).
ssl <0-1>	Enable or disable LDAP function via SSL tunnel. 0 : Disable the function. 1 : Enable the function.
IP <VALUE>	Set IP address for LDAP server.
port <VALUE>	Set port number for LDAP server.
dn <VALUE>	Set Regular DN value
PWD <VALUE>	Set Regular password value.

Example

```
> ldap set enable 1
LDAP enabled!
> ldap enabled.
> ldap set ssl 1
LDAP with SSL has been enabled!
> ldap set IP 192.168.100.155
LDAP Server IP has been setting.
> ldap set port 389
LDAP Server Port has been setting.
> ldap set dn dc=example,dc=com
LDAP Regular DN has been setting.
> ldap set PWD 123456
LDAP Regular Password has been setting.
```

Telnet Command: ldap view

This command is used to check current status of LDAP settings configuration.

Syntax

ldap view

Example

```
> ldap view ?
LDAP Enable:Disabled.
LDAP Bind Type:Simple
LDAP with SSL:Disabled
LDAP Regular DN:
LDAP Regular Password:
LDAP Server IP:
```

```
LDAP Server Port:389
>
```

Telnet Command: tacacsplus set

This command allows users to configure general settings for TACACS+ server.

Syntax

tacacspluse set <*Options*><*Value*>

Syntax Description

Parameter	Description
enable <0/1>	Disable (0)/enable(1) the TACACS+ server.
IP <VALUE>	Set the IP address of TACACS+ server.
port <VALUE>	Set the port number of TACACS+ server.
shared_secret <VALUE>	Set the Shared Secret value of TACACS+ Server.

Example

```
> tacacsplus set enable 1
TACACS+ enabled!
 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.

> tacacsplus set IP 192.168.1.59
TACACS+ Server IP has been setting.
 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
> tacacsplus view
TACACS+ Enable:Enable.
TACACS+ Server IP:192.168.1.59
TACACS+ Server Port:49
TACACS+ Type:ASCII
TACACS+ Shared Secret:
>
```

Telnet Command: tacacsplus view

This command allows users to check the general settings for TACACS+ server

Syntax

tacacspluse view

Example

```
> tacacsplus view
TACACS+ Enable:Enable.
TACACS+ Server IP:192.168.1.59
TACACS+ Server Port:49
TACACS+ Type:ASCII
TACACS+ Shared Secret:
```

Telnet Command: mngt ftpport

This command allows users to set FTP port for management.

Syntax

mngt ftpport <*FTP port*>

Syntax Description

Parameter	Description
FTP port	It means to Enter the number for FTP port. The default setting is 21.

Example

```
> mngt ftpport 21

% Set FTP server port to 21 done.
```

Telnet Command: mngt httpport

This command allows users to set HTTP port for management.

Syntax

mngt httpport <*Http port*>

Syntax Description

Parameter	Description
Http port	It means to enter the number for HTTP port. The default setting is 80.

Example

```
> mngt httpport 80
% Set web server port to 80 done.
```

Telnet Command: mngt httpsport

This command allows users to set HTTPS port for management.

Syntax

mngt httpsport <*Https port*>

Syntax Description

Parameter	Description
Https port	It means to Enter the number for HTTPS port. The default setting is 443.

Example

```
> mngt httpsport 443
% Set web server port to 443 done.
```

Telnet Command: mngt sslvpnport

This command allows users to set SSL VPN port for management.

Syntax

mngt sslvpnport <*SSL VPN port*>

Syntax Description

Parameter	Description
SSL VPN port	It means to type the number for SSL VPN port. The default setting is 443.

Example

```
> mngt sslvpnport 1010
% Set SSL VPN port to 1010 done.
```

Telnet Command: mngt telnetport

This command allows users to set telnet port for management.

Syntax

mngt telnetport <*Telnet port*>

Syntax Description

Parameter	Description
Telnet port	It means to Enter the number for telnet port. The default setting is 23.

Example

```
> mngt telnetport 23
% Set Telnet server port to 23 done.
```

Telnet Command: mngt sshport

This command allows users to set SSH port for management.

Syntax

mngt sshport <*ssh port*>

Syntax Description

Parameter	Description
ssh port	It means to Enter the number for SSH port. The default setting is 22.

Example

```
> mngt sshport 23
% Set ssh port to 23 done.
```

Telnet Command: mngt noping

This command is used to pass or block Ping from LAN PC to the internet.

Syntax

mngt noping *on*
mngt noping *off*
mngt noping *viewlog*
mngt noping *clearlog*

Syntax Description

Parameter	Description
on	All PING packets will be forwarded from LAN PC to Internet.
off	All PING packets will be blocked from LAN PC to Internet.
viewlog	It means to display a log of ping action, including source MAC and source IP.
clearlog	It means to clear the log of ping action.

Example

```
> mngt noping off
No Ping Packet Out is OFF!!
```

Telnet Command: mngt defenseworm

This command can block specified port for passing through the router.

Syntax

mngt defenseworm *on*
mngt defenseworm *off*
mngt defenseworm <*add port*>
mngt defenseworm <*del port*>
mngt defenseworm <*viewlog*>
mngt defenseworm <*clearlog*>

Syntax Description

Parameter	Description
on	It means to activate the function of defense worm packet out.
off	It means to inactivate the function of defense worm packet out.
add port	It means to add a new TCP port for block.
del port	It means to delete a TCP port for block.
viewlog	It means to display a log of defense worm packet, including source MAC and source IP.
clearlog	It means to remove the log of defense worm packet.

Example

```
> mngt defenseworm add 21
Add TCP port 21
```

```
Block TCP port list: 135, 137, 138, 139, 445, 21
> mngt defenseworm del 21
Delete TCP port 21
Block TCP port list: 135, 137, 138, 139, 445
```

Telnet Command: mngt rmtcfg

This command can allow the system administrators to login from the Internet. By default, it is not allowed.

Syntax

mngt rmtcfg <*status*>

mngt rmtcfg <*enable*>

mngt rmtcfg <*disable*>

mngt rmtcfg <*http/https/ftp/telnet/ssh/tr069/snmp/enforce_https*> <*on/off*>

Syntax Description

Parameter	Description
status	It means to display current setting for your reference.
enable	It means to allow the system administrators to login from the Internet.
disable	It means to deny the system administrators to login from the Internet.
http/https/ftp/telnet/ssh/tr069/snmp/enforce_https	It means to specify one of the servers/protocols for enabling or disabling.
on/off	on – enable the function. off – disable the function.

Example

```
> mngt rmtcfg ftp on
Enable server fail
Remote configure function has been disabled
please enable by enter mngt rmtcfg enable

> mngt rmtcfg enable
%% Remote configure function has been enabled.
> mngt rmtcfg ftp on
%% FTP server has been enabled.
```

Telnet Command: mngt lanaccess

This command allows users to manage accessing into Vigor router through LAN port.

Syntax

mngt lanaccess *-e <0/1> -s <value> -i <value>*

mngt lanaccess *-l*

mngt lanaccess *-E*

mngt lanaccess *-f*

mngt lanaccess *-d*

mngt lanaccess *-v*

mngt lanaccess *-h*

Syntax Description

Parameter	Description
-e <0/1>	It means to enable/disable the function. 0-disable the function. 1-enable the function.
-s <value>	It means to specify service offered. Available values include: FTP, HTTP, HTTPS, ENFORCE_HTTPS,TELNET, SSH, None, All
-i <value>	It means the interface which is allowed to access. Available values include: LAN2~LAN16, DMZ, IP Routed Subnet, None, All **Note**: LAN1 is always allowed for accessing into the router.
-I <value>	It means the IP object index allowed to access. Available values include: 1 to 192.
-E <0/1>	It means to enable the function of specific IP allowed to be access. 0-disable the function. 1-enable the function.
-f	It means to flush all of the settings.
-d	It means to restore the factory default settings.
-v	It means to view current settings.
-h	It means to get the usage of such command.

Example

```
> mngt lanaccess -e 1
> mngt lanaccess -s FTP,TELNET
> mngt lanaccess -i LAN3
>mngt lanaccess -v
Current LAN Access Control Setting:
* Enable:Yes
  - FTP:Yes
  - HTTP:Yes
  - HTTPS:Yes
  - TELNET:Yes
  - SSH:Yes
  - TR069:Yes
  - Enforce HTTPS:No
 Subnet:
    - LAN 1: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 2: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 3: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 4: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 5: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 6: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
```

```
  - LAN 7: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 8: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 9: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 10: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 11: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 12: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 13: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 14: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 15: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - LAN 16: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - DMZ: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
  - IP Routed Subnet: enabled
    - Specific IP(type:IP Object)(index:0) is disabled
>
```

Telnet Command: mngt echoicmp

This command allows users to reject or accept PING packets from the Internet.

Syntax

mngt echoicmp <*enable*>

mngt echoicmp <*disable*>

Syntax Description

Parameter	Description
enable	It means to accept the echo ICMP packet.
disable	It means to drop the echo ICMP packet.

Example

```
> mngt echoicmp enable
%% Echo ICMP packet enabled.
```

Telnet Command: mngt accesslist

This command allows you to specify that the system administrator can login from a specific host or network. A maximum of ten IPs/subnet masks is allowed.

Syntax

mngt accesslist *list*

mngt accesslist *add* <*Index*><*IP Object Index*>

mngt accesslist *remove* <*Index*>

mngt accesslist *flush*

Syntax Description

Parameter	Description
list	It can display current setting for your reference.
add	It means adding a new entry.
<*Index*><*IP Object Index*>	It means to specify the IP object. Available settings: <index> - Enter the index number of the accesslist profile. <IP Object Index> - Enter the index number of the IP object.
No.	A maximum of 10 IP objects are allowed to be assigned.
index	It means the index number (1 to 192) of the IP objects preconfigured.
remove	It means to delete the selected item.
flush	It means to remove all the settings in the access list.

Example

```
> mngt accesslist add 1 1
%% Set OK.
> mngt accesslist list
%% Access list :
  [Index]      [IP Object Index]      [IP/CIDR or StartIP ~ EndIP]
============================================================================
  1           1                   Please setting index=1 for IP Object

>
```

Telnet Command: mngt wanlogin

This command allows you to enable or disable WAN login function.

Syntax

mngt wanlogin *enable*

mngt wanlogin *disable*

Example

```
> mngt wanlogin enable
%% wan login enabled.
>
```

Telnet Command: mngt snmp

This command allows you to configure SNMP for management.

Syntax

mngt snmp *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description

[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-e <1/2>	1: Enable the SNMP function. 2: Disable the SNMP function.
-a <1/2>	1: Enable the SNMPV1 function. 2: Disable the SNMPV1 function.
-b <1/2>	1: Enable the SNMPV2C function. 2: Disable the SNMPV2C function.
-c <1/2>	1: Enable the SNMPV3 function. 2: Disable the SNMPV3 function.
-g <Community name>	It means to set the name for getting community by typing a proper character. (max. 23 characters)
-s <Community name>	It means to set community by typing a proper name. (max. 23 characters)
-m <IP address>	It means to set one host as the manager to execute SNMP function. Please type in IPv4 address to specify certain host. It allows to set 3 IPs, separated by ",".
-t <Community name>	It means to set trap community by typing a proper name. (max. 23 characters)
-n <IP address>	It means to set the notification host. It allows to set 2 IPs, separated by ",".
-T <seconds>	It means to set the trap timeout <0~999>.
-o <username>	It means to set a user account (maximum 23 characters) for user management.
-p <0/1/2>	It means to set the authentication algorithm. 0: No auth 1: MD5_AUTH 2: SHA_AUTH
-q <password>	It means to set the password (maximum 23 characters) for authentication.
-r <0,3/4/6>	It means to set privacy algorithm 0, 3: No_PRIV 4: DES_PRIV 6: AES_PRIV
-u <password>	It means to set the password (maximum 23 characters) for privacy.
-V	It means to list SNMP setting.

Example

```
> mngt snmp -e 1 -g draytek -s DK -m
192.168.1.20,192.168.5.192/26,10.20.3.40/24 -t trapcom -n
192.168.1.20,10.20.3.40 -T 88
SNMP Agent Turn on!!!
 Get Community set to draytek
 Set Community set to DK
 Manager Host IP set to 192.168.1.20,192.168.5.192/26,10.20.3.40/24
 Trap Community set to trapcom
 Notification Host IP set to 192.168.1.20,10.20.3.40
 Trap Timeout set to 88 seconds
>
```

Telnet Command: mngt bfp

This command allows you to configure brute force protect (BFP) for system management.

Syntax

mngt bfp *[<command><parameter>|…]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-e 0/1	Enable / disable the BFP function. 0 – Disable 1 – Enable
-s <service>	It means to enable different service. service - Available types are FTP, HTTP, HTTPS, TELNET, TR069, SSH, VPN, None and All.
-l <failure>	It means to set login failure retry times. failure - Available number is from 1 to 255.
-p <penalty>	It means to set penalty time for BFP. The unit is sec.
-u <IP>	It means to unblock an IP address in list.
-v	It means to view current settings.

Example

```
> mngt bfp -e 1
> mngt bfp -s FTP
> mngt bfp -l 10
> mngt bfp -v
Current Brute Force Protection Setting:
* Enable: yes
* Service:
 - FTP:        yes
 - HTTP:       no
 - HTTPS:      no
 - TELNET:     no
 - TR069:      no
 - SSH:        no
* Maximum login failures: 10
* Penalty period: 0
```

Telnet Command: mngt cert_import

This command allows you to import a certificate to Vigor router.

Syntax

mngt cert_import local_cert <*URL*><*password*>

mngt cert_import trusted_ca <*URL*>

Syntax Description

Parameter	Description
local_cert url <URL>	URL - Enter a URL(http://....) for downloading the certificate.

<password>	The file is encrypted with the file format of "xxxx.p12". Password - Enter the password for decrypting the .p12 certificate.
trusted_ca <URL>	URL - Enter a URL(http://....) for downloading the certificate. The file is encrypted with the file format of "xxxx.p12".

Telnet Command: mngt telnettimeout

This command allows you to configure the timeout for telnet connection.

Syntax

mngt telnettimeout <*value*>

Syntax Description

Parameter	Description
<*value*>	Range from 60 to 300. The default value is 300 (seconds).

Example

```
> mngt telnettimeout 100
% Telnet timeout : 100s

>
```

Telnet Command: mngt sshtimeout

This command allows you to configure the timeout for SSH connection.

Syntax

mngt sshtimeout <*value*>

Syntax Description

Parameter	Description
<*value*>	Range from 60 to 300. The default value is 180 (seconds).

Example

```
> mngt sshtimeout 200
% SSH timeout : 200s
>
```

Telnet Command: mngt ip6_IIDs

This command allows you to configure the IPv6 interfce ID.

Syntax

mngt ip6-IIDs *-e* <*val*>>

mngt ip6_IIDs *-r* <*interface*>

mngt ip6_IIDs *-s*

Syntax Description

Parameter	Description
-e <value>	It is used to determine the way of generating IPv6 interface

	id. val = 0 : Use EUI-64 IIDs as interface id val = 1 : Use Random IIDs as interface id
-r <interface>	It is used to re-generate the random IIDs of the specified interface. interface = LAN1/LAN2/.../WAN1/WAN2/USB1/USB2...
-s	Displays the random IIDs for each interface.

Example

```
> mngt ip6_IIDs -e 1
% Setting success, the change will take effect after router rebooting.
> mngt ip6_IIDs -r LAN1
% Setting success, the change will take effect after router rebooting.
> mngt ip6_IIDs -s
% LAN  IIDs = 9a5d:06c3:c972:f3ad
% WAN1 IIDs = 7651:92cc:6f8b:42c8
% WAN2 IIDs = 79e5:56cd:be43:384a
% WAN3 IIDs = 0193:56a8:5c6e:01e7
% WAN4 IIDs = 47bf:a971:857d:5a07
% LTE  IIDs = e4bf:d21d:f59f:888d
% USB  IIDs = 4c55:260c:e5f5:57b7
>
```

Telnet Command: msubnet switch

This command is used to configure multi-subnet.

Syntax

msubnet switch <*2/3/4/5/6/7/8/dmz*><*On/Off*>

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
On/Off	On means turning on the subnet for the specified LAN interface. Off means turning off the subnet.

Example

```
> msubnet switch 2 On
% LAN2       Subnet On!

 This setting will take effect after rebooting.
```

```
Please use "sys reboot" command to reboot the router.
```

Telnet Command: msubnet addr

This command is used to configure IP address for the specified LAN interface.

Syntax

msubnet addr <*2/3/4/5/6/7/8/dmz*><*IP address*>

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
IP address	Enter the private IP address for the specified LAN interface.

Example

```
> msubnet addr 2 192.168.5.1
% Set LAN2 subnet IP address done !!!

 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
```

Telnet Command: msubnet nmask

This command is used to configure net mask address for the specified LAN interface.

Syntax

msubnet nmask <*2/3/4/5/6/7/8/dmz*><*IP address*>

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
IP address	Enter the subnet mask address for the specified LAN interface.

Example

```
> msubnet nmask 2 255.255.0.0
% Set LAN2 subnet mask done !!!

 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
```

Telnet Command: msubnet status

This command is used to display current status of subnet.

Syntax

msubnet status <*2/3/4/5/6/7/8/dmz*>

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ

Example

```
> msubnet status 2
% LAN2       Off: 0.0.0.0/0.0.0.0, PPP Start IP: 0.0.0.60
% DHCP server: Off
% Dhcp Gateway: 0.0.0.0, Start IP: 0.0.0.10, Pool Count: 50
```

Telnet Command: msubnet dhcps

This command allows you to enable or disable DHCP server for the subnet.

Syntax

msubnet dhcps <*2/3/4/5/6/7/8/dmz*><*On/Off*>

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ

On/Off	On means enabling the DHCP server for the specified LAN interface. Off means disabling the DHCP server.

Example

```
> msubnet dhcps 3 off
% LAN3       Subnet DHCP Server disabled!

 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
```

Telnet Command: msubnet nat

This command is used to configure the subnet for NAT or Routing usage.

Syntax

msubnet nat <*2/3/4/5/6/7/8/dmz*><*On/Off*>

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
On/Off	On – It means the subnet will be configured for NAT usage. Off - It means the subnet will be configured for Routing usage.

Example

```
> msubnet nat 2 off
% LAN2 Subnet is for Routing usage!
% LAN2 Subnet is for Routing usage!
%Note: If you have multiple WAN connections, please be reminded to setup a
Load-Balance policy so that packets from this subnet will be forwarded to the
right WAN interface!

 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
```

Telnet Command: msubnet gateway

This command is used to configure an IP address as the gateway used for subnet.

Syntax

msubnet gateway <*2/3/4/5/6/7/8/dmz*><*Gateway IP*>

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4

	5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
Gateway IP	Specify an IP address as the gateway IP.

Example

```
> msubnet gateway 2 192.168.1.13
% Set LAN2 Dhcp Gateway IP done !!!

 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
```

Telnet Command: msubnet ipcnt

This command is used to defined the total number allowed for each LAN interface.

Syntax

msubnet ipcnt *<2/3/4/5/6/7/8/dmz> <IP counts>*

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
IP counts	Specify a total number of IP address allowed for each LAN interface. The available range is from 0 to 220.

Example

```
> msubnet ipcnt 2 15
 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
```

Telnet Command: msubnet talk

This command is used to establish a route between two LAN interfaces.

Syntax

msubnet talk *<1/2/3/4/5/6/7/8/dmz> <1/2/3/4/5/6/7/8/dmz> <On/Off>*

Syntax Description

Parameter	Description
1/2/3/4/5/6/7/8/dmz	It means LAN interface. 1=LAN1

	2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
On/Off	On – It means to enable the function. Off - It means to disable the function.

Example

```
> msubnet talk 1 2 on
% Enable routing between LAN1       and LAN2      !

 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
> msubnet talk ?
% msubnet talk <1/2/3/4/5/6/7/8/dmz> <1/2/3/4/5/6/7/8/dmz> <On/Off>
% where 1:LAN1, 2:LAN2, 3:LAN3, 4:LAN4, 5:LAN5, 6:LAN6, 7:LAN7, 8:LAN8, dmz:DMZ
Port
% Now:
%            LAN1   LAN2   LAN3   LAN4   LAN5   LAN6   LAN7   LAN8   DMZ Port
% LAN1         V
% LAN2         V      V
% LAN3                       V
% LAN4                              V
% LAN5                                     V
% LAN6                                            V
% LAN7                                                   V
% LAN8                                                          V
% DMZ Port                                                             V

>
```

Telnet Command: msubnet startip

This command is used to configure a starting IP address for DCHP.

Syntax

msubnet startip <*2/3/4/5/6/7/8/dmz*><*Gateway IP*>

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ

Gateway IP	Type an IP address as the starting IP address for a subnet.

Example

```
> msubnet startip 2 192.168.2.90
%Set LAN2 Dhcp Start IP done !!!

 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
> msubnet startip ?
% msubnet startip <2/3/4/5/6/7/8/dmz> <Gateway IP>
% Now: LAN2 192.168.2.90; LAN3 192.168.3.10; LAN4 192.168.4.10; LAN5
192.168.5.10; LAN6 192.168.6.10; LAN7 192.168.7.10; LAN8 192.168.8.10
>
```

Telnet Command: msubnet pppip

This command is used to configure a starting IP address for PPP connection.

Syntax

msubnet pppip *<2/3/4/5/6/7/8/dmz><Start IP>*

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
Start IP	Type an IP address as the starting IP address for PPP connection.

Example

```
> msubnet pppip 2 192.168.2.250
% Set LAN2 PPP(IPCP) Start IP done !!!

 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.

> msubnet pppip ?
% msubnet pppip <2/3/4/5/6/7/8/dmz> <Start IP>
% Now: LAN2 192.168.2.250; LAN3 192.168.3.200; LAN4 192.168.4.200; LAN5
192.168.5.200; LAN6 192.168.6.200; LAN7 192.168.7.200; LAN8 192.168.8.200
```

Telnet Command: msubnet nodetype

This command is used to specify the type for node which is required by DHCP option.

Syntax

msubnet nodetype *<2/3/4/5/6/7/8/dmz><count>*

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
count	Choose the following number for specifying different node type. 1= B-node 2= P-node 4= M-node 8= H-node 0= Not specify any type for node.

Example

```
> msubnet nodetype ?
% msubnet nodetype <2/3/4/5/6/7/8/dmz> <count>
% Now: LAN2 0; LAN3 0; LAN4 0; LAN5 0; LAN6 0; LAN7 0; LAN8 0

% count: 1. B-node 2. P-node 4. M-node 8. H-node

>  msubnet nodetype 2 1
% Set LAN2 Dhcp Node Type done !!!

> msubnet nodetype ?
% msubnet nodetype <2/3/4/5/6/7/8/dmz> <count>
% Now: LAN2 1; LAN3 0; LAN4 0; LAN5 0; LAN6 0; LAN7 0; LAN8 0

% count: 1. B-node 2. P-node 4. M-node 8. H-node
```

Telnet Command: msubnet primWINS

This command is used to configure primary WINS server.

Syntax

msubnet primWINS *<2/3/4/5/6/7/8/dmz><WINS IP>*

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8

	dmz=DMZ
WINS IP	Enter the IP address as the WINS IP.

Example

```
> msubnet primWINS ?
% msubnet primWINS <2/3/4/5/6/7/8/dmz> <WINS IP>
% Now: LAN2 0.0.0.0; LAN3 0.0.0.0; LAN4 0.0.0.0; LAN5 0.0.0.0; LAN6 0.0.0.0;
LAN
7 0.0.0.0; LAN8 0.0.0.0

> msubnet primWINS 2 192.168.3.5
% Set LAN2 Dhcp Primary WINS IP done !!!

> msubnet primWINS ?
% msubnet primWINS <2/3/4/5/6/7/8/dmz> <WINS IP>
% Now: LAN2 192.168.3.5; LAN3 0.0.0.0; LAN4 0.0.0.0; LAN5 0.0.0.0; LAN6 0.0.0.0;
LAN7 0.0.0.0; LAN8 0.0.0.0
```

Telnet Command: msubnet secWINS

This command is used to configure secondary WINS server.

Syntax

msubnet secWINS *<2/3/4/5/6/7/8/dmz> <WINS IP>*

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
WINS IP	Enter the IP address as the WINS IP.

Example

```
> msubnet secWINS ?
% msubnet secWINS <2/3/4/5/6/7/8/dmz> <WINS IP>
% Now: LAN2 0.0.0.0; LAN3 0.0.0.0; LAN4 0.0.0.0; LAN5 0.0.0.0; LAN6 0.0.0.0;
LAN
7 0.0.0.0; LAN8 0.0.0.0
>  msubnet secWINS 2 192.168.3.89
% Set LAN2 Dhcp Secondary WINS IP done !!!

> msubnet secWINS ?
% msubnet secWINS <2/3/4/5/6/7/8/dmz> <WINS IP>
% Now: LAN2 192.168.3.89; LAN3 0.0.0.0; LAN4 0.0.0.0; LAN5 0.0.0.0; LAN6
0.0.0.0; LAN7 0.0.0.0; LAN8 0.0.0.0
```

Telnet Command: msubnet tftp

This command is used to set TFTP server for multi-subnet.

Syntax

msubnet tftp *<2/3/4/5/6/7/8/dmz> <TFTP server name>*

Syntax Description

Parameter	Description
2/3/4/5/6/7/8/dmz	It means LAN interface. 2=LAN2 3=LAN3 4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
TFTP server name	Type a name to indicate the TFTP server.

Example

```
> msubnet tftp ?
% msubnet tftp <2/3/4/5/6/7/8/dmz> <TFTP server name>
% Now: LAN2
         LAN3
         LAN4
         LAN5
         LAN6
         LAN7
         LAN8
> msubnet tftp 2 publish
% Set LAN2 TFTP Server Name done !!!

> msubnet tftp ?
% msubnet tftp <2/3/4/5/6/7/8/dmz> <TFTP server name>
% Now: LAN2 publish
         LAN3
         LAN4
         LAN5
         LAN6
         LAN7
         LAN8
```

Telnet Command: msubnet mtu

This command allows you to configure MTU value for LAN/DMZ/IP Routed Subnet.

Syntax

msubnet mtu <*interface*><*value*>

Syntax Description

Parameter	Description
interface	Available settings include LAN1~LAN6, IP_Routed_Subnet, and DMZ.
value	1000 ~ 1500 (Bytes), default: 1500 (Bytes)

Example

```
> msubnet mtu LAN1 1492
> msubnet mtu ?
Usage:

  >msubnet mtu <interface> <value>

  <interface>: LAN1~LAN6,IP_Routed_Subnet,DMZ
  <value>:    1000 ~ 1508 (Bytes), default: 1500 (Bytes)

  e.x: >msubnet mtu LAN1 1492

Current Settings:

   LAN1 MTU:           1500 (Bytes)
   LAN2 MTU:           1500 (Bytes)
   LAN3 MTU:           1500 (Bytes)
   LAN4 MTU:           1500 (Bytes)
   LAN5 MTU:           1500 (Bytes)
   LAN6 MTU:           1500 (Bytes)
   LAN7 MTU:           1500 (Bytes)
   LAN8 MTU:           1500 (Bytes)
   DMZ MTU:           1500 (Bytes)
   IP Routed Subnet MTU: 1500 (Bytes)
>
```

Telnet Command: msubnet leasetime

This command is used to set leasetime for multi-subnet.

Syntax

msubnet leasetime <*1/2/3/4/5/6/7/8/dmz*> <*Lease Time sec.*>

Syntax Description

Parameter	Description
1/2/3/4/5/6/7/8/dmz	It means LAN interface. 1=LAN1 2=LAN2 3=LAN3

	4=LAN4 5=LAN5 6=LAN6 7=LAN7 8=LAN8 dmz=DMZ
Lease Time sec.	Enter a value (range: 10 to 259200).

Example

```
> msubnet leasetime ?
% msubnet leasetime <1/2/3/4/5/6/7/8/dmz> <Lease Time (sec.)>
% Now:LAN1 86400; LAN2 259200; LAN3 259200; LAN4 259200; LAN5 259200; LAN6 25920
0; LAN7 259200; LAN8 259200; DMZ Port 259200
> msubnet leasetime 8 300
% Set LAN8 lease time: 300
>
```

Telnet Command: object ip obj

This command is used to create an IP object profile.

Syntax

object ip obj setdefault
object ip obj *INDEX -v*
object ip obj *INDEX -n NAME*
object ip obj *INDEX -i INTERFACE*
object ip obj *INDEX -s INVERT*
object ip obj I*NDEX -a TYPE <START_IP><END/MASK_IP>*

Syntax Description

Parameter	Description
setdefault	It means to return to default settings for all profiles.
INDEX	It means the index number of the specified object profile.
-v	It means to view the information of the specified object profile. Example: *object ip obj 1 –v*
-n NAME	It means to define a name for the IP object. NAME: Type a name with less than 15 characters. Example: *object ip obj 9 –n bruce*
-i INTERFACE	It means to define an interface for the IP object. INTERFACE=0, means any INTERFACE=1, means LAN INTERFACE=3, means WAN Example: *object ip obj 8 –i 0*
-s INVERT	It means to set invert seletion for the object profile. INVERT=0, means disableing the function. INVERT=1, means enabling the function. Example: *object ip obj 3 –s 1*
-a TYPE	It means to set the address type and IP for the IP object profile.

	TYPE=0, means Mask TYPE=1, means Single TYPE=2, means Any TYPE=3, means Range TYPE=4, means MAC Example: *object ip obj 3 –a 2*
<START_IP>	When the TYPE is set with 2, you have to type an IP address as a starting point and another IP address as end point. Type an IP address.
<END/MASK_IP>	Type an IP address (different with START_IP) as the end IP address.

Example

```
> object ip obj 1 -n marketing
OK.
> object ip obj 1 -a 1 192.168.1.45
OK.
> object ip obj 1 -v
 IP Object Profile 1
 Name   :[marketing]
 Interface:[Any]
 Address type:[single]
 Start ip address:[192.168.1.45]
 End/Mask ip address:[0.0.0.0]
 MAC Address:[00:00:00:00:00:00]
 Invert Selection:[0]
```

Telnet Command: object ip grp

This command is used to integrate several IP objects under an IP group profile.

Syntax

object ip grp setdefault
object ip grp *INDEX -v*
object ip grp *INDEX -n NAME*
object ip grp *INDEX -i INTERFACE*
object ip grp *INDEX -a IP_OBJ_INDEX*

Syntax Description

Parameter	Description
setdefault	It means to return to default settings for all profiles.
INDEX	It means the index number of the specified group profile.
-v	It means to view the information of the specified group profile. Example: *object ip grp 1 –v*
-n NAME	It means to define a name for the IP group. NAME: Type a name with less than 15 characters. Example: *object ip grp 8 –n bruce*
-i INTERFACE	It means to define an interface for the IP group. INTERFACE=0, means any INTERFACE=1, means LAN INTERFACE=2, means WAN

	Example: *object ip grp 3 –i 0*
-a IP_OBJ_INDEX	It means to specify IP object profiles for the group profile. Example: *:object ip grp 3 –a 1 2 3 4 5* The IP object profiles with index number 1,2,3,4 and 5 will be group under such profile.

Example

```
> object ip grp 2 -n First
 IP Group Profile 2
 Name   :[First]
 Interface:[Any]
 Included ip object index:
 [0:][0]
 [1:][0]
 [2:][0]
 [3:][0]
 [4:][0]
 [5:][0]
 [6:][0]
 [7:][0]
 [8:][0]
 [9:][0]
 [10:][0]
 [11:][0]

> object ip grp 2 -i 1
IP Group Profile 2
 Name   :[First]
 Interface:[Lan]
 Included ip object index:
 [0:][0]
 [1:][0]
 [2:][0]
 [3:][0]
 [4:][0]
 [5:][0]
 [6:][0]
 [7:][0]
 [8:][0]
 [9:][0]
 [10:][0]
 [11:][0]

Set ok!
```

Telnet Command: object ipv6 obj

This comman is used to create an IP object profile.

Syntax

object ip obj setdefault
object ip obj *INDEX -v*
object ip obj *INDEX -n NAME*
object ip obj *INDEX -i INTERFACE*
object ip obj *INDEX -s INVERT*
object ip obj *INDEX -a TYPE <START_IP><END_IP>/<Prefix Length>*

Syntax Description

Parameter	Description
setdefault	It means to return to default settings for all profiles.
INDEX	It means the index number of the specified object profile.
-v	It means to view the information of the specified object profile. Example: *object ip obj 1 -v*
-n NAME	It means to define a name for the IPv6 object. NAME: Type a name with less than 15 characters. Example: *object ip obj 9 -n bruce*
-i INTERFACE	It means to define an interface for the IP object. INTERFACE=0, means any INTERFACE=1, means LAN INTERFACE=3, means WAN Example: *object ip obj 8 -i 0*
-s INVERT	It means to set invert seletion for the object profile. INVERT=0, means disableing the function. INVERT=1, means enabling the function. Example: *object ip obj 3 -s 1*
-e [0/1]	It means to set the match type of the IPv6 object profile. 0: means 128 Bits 1: means suffix 64 bits interface ID.
-a TYPE	It means to set the address type and IP for the IPv6 object profile. TYPE=0, means Mask TYPE=1, means Single TYPE=2, means Any TYPE=3, means Range TYPE=4, means MAC Example: *object ip obj 3 -a 2*
<START_IP><END_IP>	When the TYPE is set with 0, 1,3, you have to type an IP address as a starting point and another IP address as end point. Type the IP address(es) based on the selection of TYPE.
<Prefix Length>	When the TYPE is set with 0, 1 or 3, you have to enter a number as prefix length for the IPv6 address.

Example

```
> obj ipv6 obj 3 -a 3 2607:f0d0:1002:51::4 2607:f0d0:1002:51::4
Setting saved.
> obj ipv6 obj 3 -v
```

```
IPv6 Object Profile 3
 Name   :[]
 Address Type:[range]
 Start IPv6 Address:[2607:F0D0:1002:51::4]
 End IPv6 Address:[2607:F0D0:1002:51::4]
 Prefix Length:[0]
 MAC Address:[00:00:00:00:00:00]
 Invert Selection:[0]
 Match Type:[0]
```

Telnet Command: object ipv6 grp

This command is used to integrate several IP objects under an IP group profile.

Syntax

object ip grp setdefault
object ip grp *INDEX -v*
object ip grp *INDEX -n NAME*
object ip grp *INDEX -a IP_OBJ_INDEX*

Syntax Description

Parameter	Description
setdefault	It means to return to default settings for all profiles.
INDEX	It means the index number of the specified group profile.
-v	It means to view the information of the specified group profile. Example: *object ip grp 1 -v*
-n NAME	It means to define a name for the IP group. NAME: Type a name with less than 15 characters. Example: *object ip grp 8 -n bruce*
-a IP_OBJ_INDEX	It means to specify IP object profiles for the group profile. Example: *:object ip grp 3 -a 1 2 3 4 5* The IP object profiles with index number 1,2,3,4 and 5 will be group under such profile.

Example

```
> object ipv6 grp 1 -n marketingtest
 IP Group Profile 1
 Name   :[marketingtest]
 Included ip object index:
 [0:][0]
 [1:][0]
 [2:][0]
 [3:][0]
 [4:][0]
 [5:][0]
 [6:][0]
 [7:][0]

> object ipv6 grp 1 -a 1 2 3 4 5
IPv6 Group Profile 1
Name   :[marketingtest]
Included ip object index:
[0:][1]
```

```
[1:][2]
[2:][3]
[3:][4]
[4:][5]
[5:][0]
[6:][0]
[7:][0]
```

Telnet Command: object country

This command is used to create country object profile.

Syntax

object country set *INDEX -v*
object country set *INDEX -n NAME*
object country set *INDEX -a COUNTRY_INDEX*
object country activate
object country setdefault
object country list

Syntax Description

Parameter	Description
INDEX	It means the index number of the specified country object profile (1 to 32).
-n NAME	It means to define a name for country object proffile.
COUNTRY_INDEX	It means the code number of a country. To get the detailed information of the code number, use "object country list" to get the one you need.
activate	It means to activate the country object profile.
setdefault	It means to return to default settings for all profiles.
list	Displays a list of country with code number. For example, "222" means "Taiwan"; "241" means "United States".

Example

```
> object country set 1 -n Best
Country object Profile 1
 Name   :[Best]
 Included country index:

Set ok!
> object country set 1 -a 222
Country object Profile 1
 Name   :[Best]
 Included country index:
 [0:][222] Taiwan

Set ok!
```

Telnet Command: object service obj

This command is used to create service object profile.

Syntax

object service obj setdefault
object service obj *INDEX -v*
object service obj *INDEX -n NAME*
object service obj *INDEX -p PROTOCOL*
object service obj *INDEX -s CHK <START_P><END_P>*
object service obj *INDEX -d CHK <START_P><END_P>*

Syntax Description

Parameter	Description
setdefault	It means to return to default settings for all profiles.
INDEX	It means the index number of the specified service object profile.
-v	It means to view the information of the specified service object profile. Example: *object service obj 1 -v*
-n NAME	It means to define a name for the IP object. NAME: Type a name with less than 15 characters. Example: *object service obj 9 -n bruce*
-i PROTOCOL	It means to define a PROTOCOL for the service object profile. PROTOCOL =0, means any PROTOCOL =1, means ICMP PROTOCOL =2, means IGMP PROTOCOL =6, means TCP PROTOCOL =17, means UDP PROTOCOL =58, means ICMPv6 PROTOCOL =255, means TCP/UDP Other values mean other protocols. Example: *object service obj 8 -i 0*
CHK	It means the check action for the port setting. 0=equal**(=)**, when the starting port and ending port values are the same, it indicates one port; when the starting port and ending port values are different, it indicates a range for the port and available for this service type. 1=not equal**(!=)**, when the starting port and ending port values are the same, it indicates all the ports except the port defined here; when the starting port and ending port values are different, it indicates that all the ports except the range defined here are available for this service type. 2=larger**(>)**, the port number greater than this value is available.. 3=less**(<)**, the port number less than this value is available for this profile.
-s CHK <START_P><END_P>	It means to set source port check and configure port range (1~65565) for TCP/UDP. START_P: Enter a port number to indicate the starting source port. END_P: Enter a port number to indicate the ending source port. Example: *object service obj 3 -s 0 100 200*
-d CHK <START_P><END_P>	It means to set destination port check and configure port range (1~65565) for TCP/UDP. START_P: Enter a port number to indicate the starting destination port. END_P: Enter a port number to indicate the ending destination port. Example: *object service obj 3 -d 1 100 200*

Example

```
> object service obj 1 -n limit
> object service obj 1 -p 255
> object service obj 1 -s 1 120 240
> object service obj 1 -d 1 200 220
> object service obj 1 -v
 Service Object Profile 1
 Name   :[limit]
 Protocol:[255]
 Source port check action:[!=]
 Source port range:[120~240]
 Destination port check action:[!=]
 Destination port range:[200~220]
```

Telnet Command: object service grp

This command is used to integrate several service objects under a service group profile.

Syntax

object service grp setdefault
object service grp *INDEX -v*
object service grp *INDEX -n NAME*
object service grp *INDEX -a SER_OBJ_INDEX*

Syntax Description

Parameter	Description
setdefault	It means to return to default settings for all profiles.
INDEX	It means the index number of the specified group profile.
-v	It means to view the information of the specified group profile. Example: *object service grp 1 -v*
-n NAME	It means to define a name for the service group. NAME: Type a name with less than 15 characters. Example: *object service grp 8 -n bruce*
-a SER_OBJ_INDEX	It means to specify service object profiles for the group profile. Example: *:object service grp 3 -a 1 2 3 4 5* The service object profiles with index number 1,2,3,4 and 5 will be group under such profile.

Example

```
>object service grp 1 -n Grope_1
 Service Group Profile 1
 Name   :[Grope_1]
 Included service object index:
 [0:][0]
 [1:][0]
 [2:][0]
 [3:][0]
 [4:][0]
 [5:][0]
 [6:][0]
 [7:][0]
```

```
> object service grp 1 -a 1 2
 Service Group Profile 1
 Name   :[Grope_1]
 Included service object index:
 [0:][1]
 [1:][2]
 [2:][0]
 [3:][0]
 [4:][0]
 [5:][0]
 [6:][0]
 [7:][0]
```

Telnet Command: object kw

This command is used to create keyword profile.

Syntax

object kw obj setdefault
object kw obj show PAGE
object kw obj *INDEX -v*
object kw obj *INDEX -n NAME*
object kw obj *INDEX -a CONTENTS*
object kw obj *INDEX -c*
object kw obj *INDEX -t*

Syntax Description

Parameter	Description
setdefault	It means to return to default settings for all profiles.
show PAGE	It means to show the contents of the specified profile. PAGE: Enter the page number.
show	It means to show the contents for all of the profiles.
INDEX	It means the index number of the specified keyword profile.
-v	It means to view the information of the specified keyword profile.
-n NAME	It means to define a name for the keyword profile. NAME: Type a name with less than 15 characters.
-a CONTENTS	It means to set the contents for the keyword profile. Example: *object kw obj 40 -a test*
-c	It means to clear the content of the keyword object profile.
-t <0/1>	It means to set keyword object type. <0>: normal <1> : domain name

Example

```
> object kw obj 1 -n children
 Profile 1
 Name   :[children]
 Type   :[Normal]
```

```
 Content:[]
> object kw obj 1 -a gambling
 Profile 1
 Name   :[children]
 Type   :[Normal]
 Content:[gambling]

> object kw obj 1 -v
 Profile 1
 Name   :[children]
 Type   :[Normal]
 Content:[gambling]
```

Telnet Command: object fe

This command is used to create File Extension Object profile.

Syntax

object fe show
object fe setdefault
object fe obj *INDEX -v*
object fe obj *INDEX -n NAME*
object fe obj *INDEX -e CATEGORY|FILE_EXTENSION*
object fe obj *INDEX -d CATEGORY|FILE_EXTENSION*

Syntax Description

Parameter	Description
show	It means to show the contents for all of the profiles.
setdefault	It means to return to default settings for all profiles.
INDEX	It means the index number (from 1 to 8) of the specified file extension object profile.
-v	It means to view the information of the specified file extension object profile.
-n NAME	It means to define a name for the file extension object profile. NAME: Type a name with less than 15 characters.
-e	It means to enable the specific CATEGORY or FILE_EXTENSION.
-d	It means to disable the specific CATEGORY or FILE_EXTENSION
CATEGORY|FILE_EXTENSION	CATEGORY: Image, Video, Audio, Java, ActiveX, Compression, Executation Example: *object fe obj 1 -e Image* FILE_EXTENSION: ".bmp", ".dib", ".gif", ".jpeg", ".jpg", ".jpg2", ".jp2", ".pct", ".pcx", ".pic", ".pict", ".png", ".tif", ".tiff", ".asf", ".avi", ".mov", ".mpe", ".mpeg", ".mpg", ".mp4", ".qt", ".rm", ".wmv", ".3gp", ".3gpp", ".3gpp2", ".3g2", ".aac", ".aiff", ".au", ".mp3", ".m4a", ".m4p", ".ogg", ".ra", ".ram", ".vox", ".wav", ".wma", ".class", ".jad", ".jar", ".jav", ".java", ".jcm", ".js", ".jse", ".jsp", ".jtk", ".alx", ".apb", ".axs", ".ocx", ".olb", ".ole", ".tlb", ".viv", ".vrm", ".ace", ".arj", ".bzip2", ".bz2", ".cab", ".gz", ".gzip", ".rar", ".sit", ".zip", ".bas", ".bat", ".com", ".exe", ".inf", ".pif", ".reg", ".scr", "torrent", ".doc", ".docx", ".odp",

	".ods", ".odt", ".pdf", ".ppt", ".pptx", ".xls", ".xlsx" Example: *object fe obj 1 -e .bmp*

Example

```
> object fe obj 1 -n music
> object fe obj 1 -e Audio
> object fe obj 1 -v
Profile Index: 1
Profile Name:[music]

-------------------------------------------------------------------------
Image category:
 [ ].bmp   [ ].dib   [ ].gif   [ ].jpeg  [ ].jpg   [ ].jpg2  [ ].jp2   [ ].pct
 [ ].pcx   [ ].pic   [ ].pict  [ ].png   [ ].tif   [ ].tiff  [ ].ico
-------------------------------------------------------------------------
Video category:
 [ ].asf   [ ].avi   [ ].mov   [ ].mpe   [ ].mpeg  [ ].mpg  [v].mp4   [ ].qt
 [ ].rm    [v].wmv   [ ].3gp   [ ].3gpp  [ ].3gpp2 [ ].3g2  [ ].flv   [ ].swf
-------------------------------------------------------------------------
Audio category:
 [v].aac   [v].aiff  [v].au    [v].mp3   [v].m4a   [v].m4p   [v].ogg   [v].ra
 [v].ram   [v].vox   [v].wav   [v].wma
-------------------------------------------------------------------------
Java category:
 [ ].class [ ].jad   [ ].jar   [ ].jav   [ ].java  [ ].jcm   [ ].js    [ ].jse
 [ ].jsp   [ ].jtk
-------------------------------------------------------------------------
ActiveX category:
 [ ].alx   [ ].apb   [ ].axs   [ ].ocx   [ ].olb   [ ].ole   [ ].tlb   [ ].viv
 [ ].vrm
-------------------------------------------------------------------------
Compression category:
 [ ].ace   [ ].arj   [ ].bzip2 [ ].bz2   [ ].cab   [ ].gz    [ ].gzip  [ ].rar
 [ ].sit   [ ].zip
-------------------------------------------------------------------------
Executation category:
 [ ].bas   [ ].bat   [ ].com   [ ].exe   [ ].inf   [ ].pif   [ ].reg   [ ].scr
-------------------------------------------------------------------------
P2P category:
 [ ].torrent
-------------------------------------------------------------------------
Document category:
 [ ].doc   [ ].docx  [ ].odp   [ ].ods   [ ].odt   [ ].pdf   [ ].ppt   [ ].pptx
 [ ].xls   [ ].xlsx
```

Telnet Command: object sms

This command is used to create short message object profile.

Syntax

object sms show
object sms setdefault
object sms obj *INDEX -v*
object sms obj *INDEX -n NAME*
object sms obj *INDEX -s Service Provider*
object sms obj *INDEX -u Username*
object sms obj *INDEX -p Password*

object sms obj *INDEX -q Quota*
object sms obj *INDEX -i Interval*
object sms obj *INDEX -l URL*

Syntax Description

Parameter	Description
show	It means to show the contents for all of the profiles.
setdefault	It means to return to default settings for all profiles.
<INDEX>	It means the index number (from 1 to 10) of the specified SMS object profile.
-v	It means to view the information of the specified SMS object profile.
-n <NAME>	It means to define a name for the SMS object profile. NAME: Type a name with less than 15 characters.
-s <Service Provider>	It means to specify the number of the service provider which offers the service of SMS. Different numbers represent different service provider. 0 : kotsms.com.tw (TW) 2 : textmarketer.co.uk (UK) 4 : messagemedia.co.uk (UK) 5 : bulksms.com (INT) 6 : bulksms.co.uk (UK) 7 : bulksms.2way.co.za (ZA) 8 : bulksms.com.es (ES) 9 : usa.bulksms.com (US) 10 : bulksms.de (DE) 11 : www.pswin.com (EU) 12 : www.messagebird.com (EU) 13 : www.lusosms.com (EU) 14 : www.vibeactivemedia.com (UK)
-u <Username>	It means to define a user name for the SMS object profile. Type a user name that the sender can use to register to selected SMS provider.
-p <Password>	It means to define a password for the SMS object profile. Type a password that the sender can use to register to selected SMS provider.
-q <Quota>	Enter the number of the credit that you purchase from the service provider. Note that one credit equals to one SMS text message on the standard route.
-l <Interval>	It means to set the sending interval for the SMS to be delivered. Enter the shortest time interval for the system to send SMS.
-l <URL>	It means to set the URL for Custom 1 and Custom 2 profiles. The profile name for Custom 1 and Custom 2 are defined in default and can not be changed.

Example

```
> object sms obj 1 -n CTC
> object sms obj 1 -s 0
> object sms obj 1 -u carrie
> object sms obj 1 -p 19971125cm
> object sms obj 1 -q 2
> object sms obj 1 -i 50
> object sms obj 1 -v
Profile Index: 1
Profile Name:[CTC]
SMS Provider:[kotsms.com.tw (TW)]
Username:[carrie]
Password:[******]
Quota:[2]
Sending Interval:[50(seconds)]
```

Telnet Command: object mail

This command is used to create mail object profile.

Syntax

object mail show
object mail setdefault
object mail obj *INDEX -v*
object mail obj *INDEX -n <Profile Name>*
object mail obj *INDEX -s <SMTP Server>*
object mail obj *INDEX -l <Connection security>*
object mail obj *INDEX -m <SMTP Port>*
object mail obj *INDEX -a <Sender Address>*
object mail obj *INDEX -t <Authentication>*
object mail obj *INDEX -u <Username>*
object mail obj *INDEX -p <Password>*
object mail obj *INDEX -i <Sending Interval>*
object mail obj *INDEX -w <Interface>*
object mail obj *INDEX -x <Alias IP Index>*

Syntax Description

Parameter	Description
show	It means to show the contents for all of the profiles.
setdefault	It means to return to default settings for all profiles.
[INDEX]	It means the index number (from 1 to 10) of the specified mail object profile.
-v	It means to view the information of the specified mail object profile.
-n <Profile Name>	It means to define a name for the mail object profile. *Profile Name*: Type a name with less than 15 characters.
-s <SMTP Server>	It means to set the IP address of the mail server.
-l <Connection security>	It means to set the connection security for the object profile. 0 - (Plaintext) 1 - (SSL) 2 - (StartTLS ,nice to have) 3 - (StartTLS ,MUST)
-m <SMTP Port>	It means to set the port number for SMTP server.
-a <Sender Address>	It means to set the e-mail address (e.g., johnwash@abc.com.tw) of the sender.
-t <Authentication>	The mail server must be authenticated with the correct username and password to have the right of sending message out. 0 – disable

	1 – enable to use the port number.
-u <Username>	Type a name for authentication. The maximum length of the name you can set is 31 characters.
-p <Password>	Type a password for authentication. The maximum length of the password you can set is 31 characters.
-i <Sending Interval>	Define the interval for the system to send the SMS out. The unit is second.
-w <Interface>	Set the interface of the mail server profile.
-x <Alias IP Index>	Set the alias IP of mail server profile (1 to 10).

Example

```
> object mail obj 1 -n buyer
> object mail obj 1 -s 192.168.1.98
> object mail obj 1 -m 25
> object mail obj 1 -t 1
> object mail obj 1 -u john
> object mail obj 1 -p happy123456
> object mail obj 1 -i 25
> object mail obj 1 -v
Profile Index: 1
Interface:[WAN1]
Alias IP Index:[0]
Profile Name:[buyer]
SMTP Server:[192.168.1.98]
SMTP Port:[25]
Sender Address:[carrie@draytek.com]
Connection Security:[StartTLS(Nice to have)]
Authentication:[enable]
Username:[john]
Password:[******]
 Sending Interval:[25(seconds)]
```

Telnet Command: object noti

This command is used to create notification object profile.

Syntax

object noti show
object noti setdefault
object noti obj *INDEX -v*
object noti obj *INDEX -n <Profile Name>*
object mail obj *INDEX -e <Category><Status>*
object mail obj *INDEX -d <Category><Status>*

Syntax Description

Parameter	Description
show	It means to show the contents for all of the profiles.
setdefault	It means to return to default settings for all profiles.
<INDEX>	It means the index number (from 1 to 8) of the specified notification object profile.
-v	It means to view the information of the specified notification object profile.
-n <Profile Name>	It means to define a name for the notification object profile.

	Profile Name: Type a name with less than 15 characters.
-e	It means to enable the status of specified category.
-d	It means to disable the status of specified category.
<*Category*>	Available categories are: 1: WAN; 2: VPN Tunnel; 3: Temperature Alert; 4: WAN Budget; 5: CVM; 6: High Availability; 9:Security
<*status*>	For WAN - 1: Disconnected; 2: Reconnected. For VPN Tunnel - 1: Disconnected; 2: Reconnected. For Temperature Alert - 1: Out of Range. For WAN Budget - 1: Limit Reached. For CVM - 1: CPE Offline; 2: Backup Fail; 3: Restore Fail; 4: FW Update Fail; 5: VPN Profile Setup Fail. For High Availability - 1: Failover Occurred, Config Sync Fail, and Router Unstable For Security - 1 : Web Log-in event occurs. 2 : Telnet Log-in event occurs. 3 : SSH Log-in event occurs. 4 : TR069 Log-in event occurs. 5 : FTP User Log-in event occurs. 6 : Config-Changed event occurs.

Example

```
> object noti obj 1 -n market
> object noti obj 1 -e 1 1
> object noti obj 1 -e 2 1
> object noti obj 1 -e 5 3
> object noti obj 1 -v
Profile Index: 1
Profile Name:[]
    Category                  Status
  WAN                  [v]Disconnected     [ ]Reconnected
  VPN Tunnel           [v]Disconnected     [ ]Reconnected
  Temperature Alert    [ ]USB Temperature Out of Range
  WAN Budget Alert     [ ]Limit Reached
  CVM Alert            [ ]CPE Offline
                       [ ]CPE Config Backup Fail
                       [v]CPE Config Restore Fail
                       [ ]CPE Firmware Fpgrade Fail
                       [ ]CPE VPN Profile Setup Fail
  High Availability    [ ]Failover Occurred
                      Config Sync Fail
                       Router Unstable
  Security             [ ]Web Log-in event occurs
                       [ ]Telnet Log-in event occurs
                       [ ]SSH Log-in event occurs
                       [ ]TR069 Log-in event occurs
                       [ ]FTP User Log-in event occurs
                       [ ]Config-Changed event occurs
```

Telnet Command: object schedule

This command is used to create schedule object profile.

Syntax

object schedule set *INDEX option*
object schedule view
object schedule setdefault

Syntax Description

Parameter	Description
set	It means to set the schedule profile.
<INDEX>	It means the index number (from 1 to 15) of the specified object profile.
option	Available options for schedule.
-e <value>	It means to enable the schedule setup. 0 – disable 1 – enable
-c <comment>	It means to set brief description for the specified profile. The length range of the comment: 0 ~ 32 characters.
-D <year><month><day>	It means to set the starting date of the profile. [year] – Must be between 2000-2049. [month] - Must be between 1-12. [day] - Must be between 1-31. For example: To set Start Date 2015/10/6, type *> object schedule set 1 -D "2015 10 6"*
-T <hour><minute>	It means to set the starting time of the profile. [hour] - Must be between 0-23. [minute] - Must be between 0-59. For example: To set Start Time 10:20, type *> object schedule set 1 -T "10 20"*
-d <hour><minute>	It means to set the duration time of the profile. [hour] - Must be between 0-23. [minute] - Must be between 0-59. For example: To set Duration Time 3:30, type *> object schedule set 1 -d "3 30"*
-a <value>	It means to set the action used for the profile. [value] – 0:Force On, 1:Force Down, 2:Enable Dial-On-Demand, 3:Disable Dial-On-Demand
-I <value>	It means to set idle time. [value] – Must be between 0-255(minute). The default is 0.
-h <option><day>	Set how often the schedule will be applied. [option] – 0: Once, 1: Weekdays, 2:Monthly, 3:Cycle days [day] – Sun, Mon, Tue, Wed, Thu, Fri, Sat If the [option] set Weekdays, then must select which days of Week. example: To select Sunday, Monday, Thursday, type *> object schedule set 1 -h "1 Sun Mon Thu"*
view [INDEX]	It means to show the content of the profile.
setdefault	It means to return to default settings for all profiles.

Example

```
> object schedule set 1 -e 1
> object schedule set 1 -c Working
> object schedule set 1 -D "2021 10 8"
> object schedule set 1 -T "8 1"
> object schedule set 1 -d "2 30"
> object schedule set 1 -a 0
> object schedule set 1 -h "1 Mon Wed"
> object schedule view 1
Index No.1

-----------------------------------------------
[v] Enable Schedule Setup
       Comment [ Working ]
       Start Date (yyyy-mm-dd)  [ 2021 ]-[ 10 ]-[  8 ]
       Start Time (hh:mm)       [  8 ]:[  1 ]
       Duration Time (hh:mm)    [  2 ]:[ 30 ]
       Action                   [ Force On ]
       Idle Timeout             [ 0 ] minute(s).(max. 255, 0 for
                                default)
       ---------------------------------------------------------------
       How Often
        [ ] Once
        [v] Weekdays
            [ ]Sun  [v]Mon  [ ]Tue  [v]Wed  [ ]Thu  [ ]Fri  [ ]Sat
>
```

Telnet Command: port

This command allows users to set the speed for specific port of the router.

Syntax

port <*1, 2, 3, 4, 5, all*> <*AN, 1G, 100F, 100H, 10F, 10H, status*>
port <*wan1, wan2*> <*AN, 1000F, 100F, 100H, 10F, 10H, status*>
port <*enable, disable*> <*1, 2, 3, 4, 5, all*>
port status
port sniff <*on,off,port,txrx,restart,status*>
port 802.1x <*enable,disable,status,addport,delport*>
port jumbo
port wanfc

Syntax Description

Parameter	Description
1, 2, 3, 4, 5, wan1, wan2, all	It means the number of LAN port and WAN port.
AN… 10H	It means the physical type for the specific port. AN: auto-negotiate. 1G: 1G 100F: 100M Full Duplex. 100H: 100M Half Duplex.

	10F: 10M Full Duplex. 10H: 10M Half Duplex.
status	It means to view the Ethernet port status.
sniff <on,off,port,txrx,restart,status>	It means to set settings for sniffer. <on,off,port,txrx,restart,status>: See the following, on - Turn on the sniffer. off - Turn off the sniffer. port - Specify a LAN port (p1, p2, p3, p4, p5 or p6). restart - Restart the system to activate the settings. status - Display current settings. rxrx - Set the transmission and receiving rates for a LAN/WAN port. e.g., > port sniff txrx 30000 p2
802.1x <enable,disable,status,addport,delport>	It means to set settings for 802.1x. <enable,disable,status,addport,delport>: See the following, enable - Enable the function. disable - Disable the function. status - Display current settings. addport - Add a port number (1 to 5). delport - Delete a port number (1 to 5).
jumbo <on/off>	It means to enable (on) or disable (off) the Jumbo frame function.
jumbo size <value>	If jumbo is enabled, set a jumbo size. <value>: 1537 to 9022. Set a number.
wanfc <INDEX> <on/off/status>	It means to set WAN flow control. <INDEX>: Enter the index number (1 to 4) of the WAN interface. <on/off/status>: Enter "on" to enable the function; enter "off" to disable the function; enter "status" to view current settings.

Example

```
> port 1 100F
%Set Port 1 Force speed 100 Full duplex OK !!!
```

Telnet Command: portmaptime

This command allows you to set a time of keeping the session connection for specified protocol.

Syntax

portmaptime *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-t <sec>	It means “TCP” protocol. <sec>: Type a number to set the TCP session timeout.
-u <sec>	It means “UDP” protocol. <sec>: Type a number to set the UDP session timeout.
-i <sec>	It means “IGMP” protocol. <sec>: Type a number to set the IGMP session timeout.

-w <sec>	It means “TCP WWW” protocol. <sec>: Type a number to set the TCP WWW session timeout.
-s <sec>	It means “TCP SYN” protocol. <sec>: Type a number to set the TCP SYN session timeout.
-f	It means to flush all portmaps (useful for diagnostics).
-l <List>	List all settings.

Example

```
> portmaptime -t 86400 -u 300  -i 10
> portmaptime -l
------ Current setting ------
TCP Timeout   : 86400 sec.
UDP Timeout   : 300 sec.
IGMP Timeout  : 10 sec.
TCP WWW Timeout: 60 sec.
TCP SYN Timeout: 60 sec.
```

Telnet Command: ppa

This command allows you to configure PPA mode.

ppa *[-<command> <parameter> | ...]*
ppa n *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-z <1/0>	Enable or disable the PPA hardware acceleration. 1: Enable; 0: Disable
-m <mode>	Specify a mode. 1=auto 2=manual(traffic) 3=manual(qos) 0=disable
-p <proto>	Specify a protocol. proto - 1-TCP; 2-UDP; 3-Both.
-b 1/0	Enable/disable TWO-way hardware acceleration.
-M enable/disable	Enable/disable the multicast hardware acceleration.
-S	Show multicast table in HW accleration
-I <1/0>	Enable or disable IPSec HW accleration. 1: Enable; 0: Disable
-I -T <1/0>	Enable or disable Protocol TCP for IPSec HW accleration. 1: Enable; 0: Disable
-I -U <1/0>	Enable or disable Protocol UDP for IPSec HW accleration. 1: Enable; 0: Disable
-v	Show PPA_WAN_Table and PPA_LAN_Table for reference.
-c	Clean all settings.
-x	Show hardware acceleration information.

-k	Clean the PPA table.
ppa n - used in QoS or specific host	
-l <rule>	Specify an index number of rule profile for QoS mode.
-E -e <1/0>	Eenable/disable the exception list. 1: Enable; 0: Disable
-E -a <mac> <type>	Add exception client. <type> : nat|ipsec
-E -u <index> <option> <value>	Update the information of thet exception client. -m <mac> : Enter MAC address. -t <type> : nat|ipsec. -d <descrption>: Enter a brief description. example: *-m 12:34:56:78:90:00 -t nat|ipsec -d notebook*
-E -d -i <value>	Delete the exception client by specifying an index number.
-E -d -m <value>	Delete the exception client by specifying a mac address.
-E -c	Clear exception list.
-E -v	Display the exception list.

Example

```
> ppa n -E -e 1
> ppa n -E -a 12:34:56:78:90:00 nat|ipsec
> ppa n -E -u 12:34:56:78:90:00 -t nat|ipsec -d notebook
> ppa n -E -v
> ppa -v
%PPA is enabled
%PPA NAT is enabled
%PPA mode is Auto
%PPA Protocol TCP 1, UDP 0
%PPA Multicast is enabled
%PPA IPSec is disabled
%PPA IPSec Protocol TCP disabled
%PPA IPSec Protocol UDP disabled
%PPA two way enable
%PPA time  is 10
%PPA range is 8000
%PAE range is 2048
%MPE range is 5952
%PPA LAN entries 0, working 0
%PPA WAN entries 0, working 0
%PPA statistics interval: 5 sec
>
```

Telnet Command: hwaccswap

Due to the limitation of the sessions accelerated by the Vigor router, this command allows you to exchange the packets session based on the priority of the sessions (rules defined in Bandwidth Management>>Quality of Service) to ensure the sessions with higher priority will be delivered early.

Syntax

hwaccswap status

hwaccswap sessnum *<1 ~ 60000>*

hwaccswap threshold *<xxM/xxK/xx>*

hwaccswap timer *cycle <xxx>/ duration <xxx>/ block <xxx>*

Syntax Description

Parameter	Description
status	Displays current settings for hardware acceleration swap.
sesnum <1 ~ 60000>	Set a valid session number. When the packet sessions reach the number defined here, the swap function will be activated.
threshold <xxM/xxK/xx>	Set a traffic threshold. The unit can be MB, KB and bytes.
timer cycle <xxx>	Set a cycle time to repeat the sessions swap. <xxx> - Enter a time value. The unit is sec.
timer duration <xxx>	Set a duration to perform the sessions swap. <xxx> - Enter a time value. The unit is sec.
timer block <xxx>	Set a time to block the sessions swap. <xxx> - Enter a time value. The unit is sec.

Example

```
> hwaccswap sessnum 5000
 Set max_swap_sess_num: 5000

> hwaccswap status
 HW acc session swap related settings:
 swap_cycle_timer:    1200 ticks
 stat_duration_timer: 0 ticks
 swap_block_time:     0 tick
 traffic_threshold:   3000 bytes
 max_swap_sess_num:   5000

 group_map_method:
Group 0: Always In
Group 1: Sort traffic and swap
Group 2: Sort traffic and swap
Group 3: In Once
Group 4: Always In
>
```

Telnet Command: prn

This command allows you to view current status (interface and driver) of USB printer.

Syntax

prn status
prn debug
prn enable *<0/1>*

Syntax Description

Parameter	Description
enable <0/1>	*It means to enable / disable the function of USB pritner.*

	0: disable *1: enable*

Example

```
> prn status
Interface: USB bus 2.0
Printer: NotReady

> prn debug
conn[0] :
none
conn[1] :
none
conn[2] :
none
conn[3] :
none
LPD_data_total=0

usblp_ptr=0
UsbPrintReady=0, UsbIsPrinting=0
```

Telnet Command: qos setup

This command allows user to set general settings for QoS.

Syntax

qos setup *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-h	Type it to display the usage of this command.
-W <1~6>	It means to select an interface. <1~6>: 1 is WAN1; 2 is WAN2 and etc. The default is WAN1.
-m <mode>	It means to define which traffic the QoS control settings will apply to and eable QoS control. 0: disable. 1: in, apply to incoming traffic only. 2: out, apply to outgoing traffic only. 3: both, apply to both incoming and outgoing traffic. Default is enable (for outgoing traffic).
-i <bandwidth>	It means to set inbound bandwidth in kbps (Ethernet WAN only) The available setting is from 1 to 100000.
-o <bandwidth>	It means to set outbound bandwidth in kbps (Ethernet WAN only). The available setting is from 1 to 100000.
-r <index:ratio>	It means to set ratio for class index, in %.
-u <mode>	It means to enable bandwidth control for UDP. 0: disable 1: enable

	Default is disable.
-p <ratio>	It means to enable bandwidth limit ratio for UDP.
-t <mode>	It means to enable/disable Outbound TCP ACK Prioritize. 0: disable 1: enable
-V	Show all the settings.
-I <bandwidth>	It means the minimum available non-VoIP Inbound Bandwidth when VoIP is detected (Kbps). <bandwidth>: Enter a value. Default value: half of WAN inbound bandwidth.
-O <bandwidth>	It means the minimum available non-VoIP Outbound Bandwidth when VoIP is detected (Kbps). <bandwidth>: Enter a value. Default value: half of WAN outbound bandwidth.
-v <0/1>	It means to adjust to minimum In/Out bandwidth setting (or half QoS bandwidth). 0: Auto bandwidth adjustment. 1: When VoIP detected, QoS In/Out bandwidth will be adjusted to minimum values.
-D	Set all to factory default (for all WANs).

Example

```
> qos setup -W 2 -m 3 -i 9500 -o 8500 -r 3:20 -u 1 -p 50 -t 1
 Setup WAN2 !!!!
 WAN2 QOS mode is both
 inbound bandwidth set to 9500
 outbound bandwidth set to 8500
 WAN2 class 3 ratio set to 20
 WAN2 udp bandwidth control set to enable
 WAN2 udp bandwidth limit ratio set to 50
 WAN2 Outbound TCP ACK Prioritizel set to enable
QoS WAN2 set complete; restart QoS
>
```

Telnet Command: qos class

This command allows user to set QoS class.

Syntax

qos class -c *<no> -<a|e|d <no>>[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-h	Type it to display the usage of this command.
-c <no>	Specify the inde number for the class. Available value for <no> contains 1, 2 and 3. The default setting is class 1.
-n <name>	It means to type a name for the class.

-a	It means to add rule for specified class.
-e <no>	It means to edit specified rule. <no>: Enter the index number for the rule.
-d <no>	It means to delete specified rule. <no>: Enter the index number for the rule.
-m <mode>	It means to enable or disable the specified rule. 0: disable, 1: enable
-l <addr>	Set the local address. *Addr1* – It means Single address. Please specify the IP address directly, for example, "*-l 172.16.3.9*". *addr1:addr2* – It means Range address. Please specify the IP addresses, for example, "*-l 172.16.3.9: 172.16.3.50*." *addr1:subnet* – It means the subnet address with start IP address. Please Enter the subnet and the IP address, for example, "*-l 172.16.3.9:255.255.0.0".0* *any* – It means Any address. Simple type "*-l*" to specify any address for this command.
-r <addr>	Set the remote address. *addr1* – It means Single address. Please specify the IP address directly, for example, "*-l 172.16.3.9*". *addr1:addr2* – It means Range address. Please specify the IP addresses, for example, "*-l 172.16.3.9: 172.16.3.50*." *addr1:subnet* – It means the subnet address with start IP address. Please Enter the subnet and the IP address, for example, "*-l 172.16.3.9:255.255.0.0".0* *any* – It means Any address. Simple type "*-l*" to specify any address for this command.
-l/-r	Set the Address Type to "any". No need to input any IP address.
-p <DSCP id>	Specify the ID.
-s <Service type>	Specify the predefined service type by typing the number. The available types are listed as below: 1:ANY 2:DNS 3:FTP 4:GRE 5:H.323 6:HTTP 7:HTTPS 8:IKE 9:IPSEC-AH 10:IPSEC-ESP 11:IRC 12:L2TP 13:NEWS 14:NFS 15:NNTP 16:PING 17:POP3 18:PPTP 19:REAL-AUDIO 20:RTSP 21:SFTP 22:SIP 23:SMTP 24:SNMP 25:SNMP-TRAPS 26:SQL-NET 27:SSH 28:SYSLOG 29:TELNET 30:TFTP
-u <Service type>	Specify the user defined service type by typing the number (1 to 40).
-S <d/s>	Show the content for specified DSCP ID (0 to 20) /Service type (1 to 40). In which, the DSCP ID means; 0: default, 1: IP precedence 1, 2: IP precedence 2, 3: IP precedence 3, 4: IP precedence 4, 5: IP precedence 5, 6: IP precedence 6, 7: IP precedence 7, 8: AF Class1 (Low Drop), 9: AF Class1 (Medium Drop), 10: AF Class1 (High Drop), 11: AF Class2 (Low Drop), 12: AF Class2 (Medium Drop) 13: AF Class2 (High Drop), 14: AF Class3 (Low Drop), 15: AF Class3 (Medium Drop), 16: AF Class3 (High Drop) 17: AF Class4 (Low Drop), 18: AF Class4 (Medium Drop), 19: AF Class4 (High Drop), 20: EF Class
-V <1/2/3>	Show the rule in the specified class.

Example

```
> qos class -c 2 -n draytek -a -m 1 -l 192.168.1.50:192.168.1.80

 Following setting will set in the class2
 class 2 name set to draytek
 Add a rule in class2
 Class2 the 1 rule enabled
 Set local address type to Range, 192.168.1.50:192.168.1.80
>
```

Telnet Command: qos type

This command allows user to configure protocol type and port number for QoS.

Syntax

qos type *[-a <service name> | -e <no> | -d <no>]*.

Syntax Description

Parameter	Description
-a <name>	It means to add rule.
-e <no>	It means to edit user defined service type. “no” means the index number. Available numbers are 1~40.
-d <no>	It means to delete user defined service type. “no” means the index number. Available numbers are 1~40.
-n <name>	It means the name of the service.
-t <type>	It means protocol type. 6: tcp(default) 17: udp 0: tcp/udp <1~254>: other
-p <port>	It means service port. The typing format must be [start:end] (ex., 510:330).
-l	List user defined types. “no” means the index number. Available numbers are 1~40.

Example

```
> qos type -a draytek -t 6 -p 510:1330

 service name set to draytek
 service type set to 6:TCP
 Port type set to Range
 Service Port set to 510 ~ 1330
>
```

Telnet Command: qos voip

This command allows user to enable or disable the QoS for VoIP and RTP.

Syntax

qos voip *<on/off>*

Syntax Description

Parameter	Description
on/off	On – Enable the QoS for VoIP. Off – Disable th QoS for VoIP.

Example

```
> qos voip off
QoS for VoIP: Disable; SIP Port: 5060
```

Telnet Command: hwqos

This command allows user to configure hardware QoS.

Syntax

hwqos setup *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-W <1/2>	Specify the WAN interface. <1/2> - 1 means WAN1; 2 means WAN2
-P <1/2/3/4>	Specify the LAN interface. <1/2/3/4> - 1 means LAN1, 2 means LAN2, and so on
-e <1/0>	Enable or disable the function. <1/0> - 1 means Enable; 0 means Disable
-o <bandwidth>	Set the bandwidth for outbound traffic (in kbps). *<bandwidth> - Enter a value (>0).*
-r <index:ratio>	Set the ratio of each class (1 ot 3). *<index:ratio> - Index range includes 1 to 3; ratio in %.*
-V	Display current settings.
-D	Reset to the factory default settings of hardware QoS.

Example

```
> hwqos setup -W 2 -e 1 -o 100000 -r 1:60 -r 2:25 -r 3:10
 Setup WAN2 !!!!
 WAN2 QoS mode is enable
 outbound bandwidth set to 100000
 Total ratio exceed 100
>
```

Telnet Command: quit

This command can exit the telnet command screen.

Telnet Command: show lan

This command displays current status of LAN IP address settings.

Example

```
 > show lan
```

```
The LAN settings:
         ip            mask       dhcp  star_ip         pool   gateway
-----------------------------------------------------------------------
[V]LAN1  192.168.1.230   255.255.255.0   V    192.168.1.10    200  192.168.1.230
[X]LAN2  192.168.2.1     255.255.255.0   V    192.168.2.10    100  192.168.2.1
[X]LAN3  192.168.3.1     255.255.255.0   V    192.168.3.10    100  192.168.3.1
[X]LAN4  192.168.4.1     255.255.255.0   V    192.168.4.10    100  192.168.4.1
[X]LAN5  192.168.5.1     255.255.255.0   V    192.168.5.10    100  192.168.5.1
[X]LAN6  192.168.6.1     255.255.255.0   V    192.168.6.10    100  192.168.6.1
[X]LAN7  192.168.7.1     255.255.255.0   V    192.168.7.10    100  192.168.7.1
[X]LAN8  192.168.8.1     255.255.255.0   V    192.168.8.10    100  192.168.8.1
[X]Route 192.168.0.1     255.255.255.0   V    0.0.0.0         0    192.168.0.1
>
```

Telnet Command: show dmz

This command displays current status of DMZ host.

Example

```
> show dmz
%     WAN1 DMZ mapping status:
 Index  Status  WAN1 aux IP    Private IP
-------------------------------------------------
   1    Disable 0.0.0.0

%     WAN2 DMZ mapping status:
 Index  Status  WAN2 aux IP    Private IP
-------------------------------------------------
   1    Disable 0.0.0.0

%     WAN3 DMZ mapping status:
 Index  Status  WAN3 aux IP    Private IP
-------------------------------------------------
   1    Disable 0.0.0.0

%     WAN4 DMZ mapping status:
 Index  Status  WAN4 aux IP    Private IP
-------------------------------------------------
   1    Disable 0.0.0.0

%     WAN5 DMZ mapping status:
 Index  Status  WAN5 aux IP    Private IP
-------------------------------------------------
   1    Disable 0.0.0.0
%     WAN6 DMZ mapping status:
 Index  Status  WAN6 aux IP    Private IP
-------------------------------------------------
   1    Disable 0.0.0.0
>
```

Telnet Command: show dns

This command displays current status of DNS setting

Example

```
> show dns
%%     Domain name server settings:
%  LAN1  Primary DNS: [Not set]
%  LAN1  Secondary DNS: [Not set]

%  LAN2  Primary DNS: [Not set]
%  LAN2  Secondary DNS: [Not set]

%  LAN3  Primary DNS: [Not set]
%  LAN3  Secondary DNS: [Not set]

%  LAN4  Primary DNS: [Not set]
%  LAN4  Secondary DNS: [Not set]

%  LAN5  Primary DNS: [Not set]
%  LAN5  Secondary DNS: [Not set]
..
```

Telnet Command: show openport

This command displays current status of open port setting.

Example

```
> show openport
%%     Openport settings:
Index   Status  Comment        Local IP Address
*********************************************************
                 No data entry.
```

Telnet Command: show nat

This command displays current status of NAT.

Example

```
> show nat
 Port Redirection Running Table:

Index  Protocol  Public Port   Private IP       Private Port
 1          0          0   0.0.0.0                  0
 2          0          0   0.0.0.0                  0
 3          0          0   0.0.0.0                  0
 4          0          0   0.0.0.0                  0
 5          0          0   0.0.0.0                  0
 6          0          0   0.0.0.0                  0
 7          0          0   0.0.0.0                  0
 8          0          0   0.0.0.0                  0
 9          0          0   0.0.0.0                  0
10          0          0   0.0.0.0                  0
11          0          0   0.0.0.0                  0
12          0          0   0.0.0.0                  0
13          0          0   0.0.0.0                  0
14          0          0   0.0.0.0                  0
```

```
15          0          0   0.0.0.0                   0
16          0          0   0.0.0.0                   0
17          0          0   0.0.0.0                   0
18          0          0   0.0.0.0                   0
19          0          0   0.0.0.0                   0
20          0          0   0.0.0.0                   0
--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page]
```

Telnet Command: show portmap

This command displays the table of NAT Active Sessions.

Example

```
> show portmap

------------------------------------------------------------------------

  Private_IP:Port Pseudo_IP:Port Peer_IP:Port [Timeout/Protocol/Flag]

------------------------------------------------------------------------
```

Telnet Command: show pmtime

This command displays the reuse time of NAT session.

Level0: It is the default setting.

Level1: It will be applied when the NAT sessions are smaller than 25% of the default setting.

Level2: It will be applied when the NAT sessions are smaller than the eighth of the default setting.

Example

```
> show pmtime
  Level0 TCP=86400001 UDP=300001 ICMP=10001
  Level1 TCP=600000 UDP=90000 ICMP=7000
  Level2 TCP=60000 UDP=30000 ICMP=5000
```

Telnet Command: show session

This command displays current status of current session.

Example

```
> show session
% Maximum Session Number: 60000
% Maximum Session Usage: 0
% Current Session Usage: 0
% Current Session Used(include waiting for free): 6
% WAN1 Current Session Usage: 0
% WAN2 Current Session Usage: 0
% WAN3 Current Session Usage: 0
% WAN4 Current Session Usage: 0
% WAN5 Current Session Usage: 0
```

```
% WAN6 Current Session Usage: 0
```

Telnet Command: show status

This command displays current status of LAN and WAN connections.

Example

```
> show status

System Uptime:95:4:44
LAN Status
Primary DNS:8.8.8.8          Secondary DNS:8.8.4.4
IP Address:192.168.1.1       Tx Rate:125096    Rx Rate:41045

WAN 1 Status: Disconnected
Enable:Yes      Line:Ethernet    Name:
Mode:DHCP Client Up Time:0:00:00    IP:---          GW IP:---
TX Packets:0         TX Rate(bps):0   RX Packets:0         RX Rate(bps):0

WAN 2 Status: Disconnected
Enable:Yes      Line:Ethernet    Name:
Mode:DHCP Client Up Time:0:00:00    IP:---          GW IP:---
TX Packets:0         TX Rate(bps):0   RX Packets:0         RX Rate(bps):0

WAN 3 Status: Disconnected
Enable:No       Line:Ethernet    Name:
Mode:---        Up Time:0:00:00    IP:---          GW IP:---
TX Packets:0         TX Rate(bps):0   RX Packets:0         RX Rate(bps):0

WAN 4 Status: Disconnected
Enable:No       Line:Ethernet    Name:
...
```

Telnet Command: show traffic

This comman can display traffic graph for WAN1 to WAN4, transmitted bytes, receivied bytes and sessions.

Syntax

show traffic *[wan1/..wan6] [tx/rx] [weekly]*

show traffic *[ipaddr] [tx/rx]*

show traffic session *[weekly]*

Example

```
> show traffic session weekly0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,2 ,1 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,1 ,3 ,0 ,0 ,0 ,0 ,0 ,2 ,15 ,5 ,4 ,1 ,0 ,0 ,
,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 0 ,0 ,0 ,0
> show traffic wan1 tx weekly0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
```

```
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
 0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
```

Telnet Command: show clienttraffic

This command displays packet information for specified external device.

Syntax

show clienttraffic *[device index] [wan# or lan#] [tx/rx] [weekly]*

Syntax Description

Parameter	Description
[device index]	Enter the device index (01 – 30) in double-digit (ex: 01, 02) for external device. Use "switch list" to check which VigorSwitch connects to this router. Then, Enter the index number of this VigorSwitch in this field.
[wan# or lan#]	wan# - Specify WAN interface (WAN1 to WAN2) for Vigor router. lan#- Specify LAN interface (LANA / LANB) for Vigor router.
[tx/rx]	Tx – Inidcate transmitted data. Rx – Indicate receivied data.
[weekly]	Display the transmitted data or receivied data collected weekly.

Example

```
> show clienttraffic 01 lana tx weekly
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,
0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0
```

Telnet Command: show statistic

This command displays statistics for WAN interface.

Syntax

show statistic

show statistic reset <*interface*>

Syntax Description

Parameter	Description
reset	It means to reset the transmitted/received bytes to Zero.
interface	It means to specify WAN1 ~WAN5 (including multi-PVC) interface for displaying related statistics.

Example

```
> show statistic
 WAN1 total TX: 0 Bytes ,RX: 0 Bytes
WAN2 total TX: 0 Bytes ,RX: 0 Bytes
WAN3 total TX: 0 Bytes ,RX: 0 Bytes
WAN4 total TX: 0 Bytes ,RX: 0 Bytes
WAN5 total TX: 0 Bytes ,RX: 0 Bytes
WAN6 total TX: 0 Bytes ,RX: 0 Bytes
WAN7 total TX: 0 Bytes ,RX: 0 Bytes
WAN8 total TX: 0 Bytes ,RX: 0 Bytes
WAN9 total TX: 0 Bytes ,RX: 0 Bytes
 >
```

Telnet Command: smb setting

This command is used to configure file sharing settings for SMB server.

Syntax

smb setting <*enable/disable*>
smb setting *status*
smb setting *set workgroup* <*Workgroup name*>
smb setting *set host* <*host name*>
smb setting *set access* <*LAN / LANWAN*>
smb setting *set version* <*v1v2/v2*>

Syntax Description

Parameter	Description
<*enable/disable*>	Enable or disable the SMB service.
status	Displays current status of SMB service.
Set workgroup <*Workgroup name*>	It means to set a name of workgroup for SMB service.
set host <*host name*>	It means to set a name of the host for SMB service.
set access <*LAN / LANWAN*>	It means to set the access into SMB server by LAN or borth LAN and WAN.
set version <*v1v2/v2*>	It means to set SMB server version.

Example

```
> smb setting enable
SMB service is enabled.

> smb setting set access LAN
Allow SMB access from LAN only.
> smb setting set version v1v2
SMB version: v1 and v2.
```

Telnet Command: srv dhcp dhcp2

This command is used to enable DCHP2 server.

Syntax

srv dhcp dhcp2 *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
-l <enable>	The DHCP server assigns the IP addresses to the clients via LAN port. <enable> : Enter 0 (disable) or 1 (enable).
-m <enable>	The DHCP server assigns the IP addresses to the clients via MAC address configuration. <enable> : Enter 0 (disable) or 1 (enable).
-e <id>	Turn on the flag of LAN 1 or LAN 2 if LAN port is enabled. <id>: Enter 1 or 2.
-d <id>	Turn off the flag of LAN port 1 or LAN port 2. <id>: Enter 1 or 2.
-v	View current status.

Example

```
> srv dhcp dhcp2 -l 1 -e 1,2
> srv dhcp dhcp2 -v
 2nd DHCP server flag status --
   Server works on specified MAC address: ON
   Server works on specified LAN port: ON
   Port 1 flag: ON
   Port 2 flag: ON
>
```

Telnet Command: srv dhcp public

This command allows users to configure DHCP server for second subnet.

Syntax

srv dhcp public *start <IP address>*
srv dhcp public *cnt <IP counts>*
srv dhcp public *status*
srv dhcp public *add <MAC Addr XX-XX-XX-XX-XX-XX>*
srv dhcp public *del <MAC Addr XX-XX-XX-XX-XX-XX/all/ALL>*

Syntax Description

Parameter	Description
start <IP address>	It means the starting point of the IP address pool for the DHCP server. *<IP address>:* Specify an IP address as the starting point in the IP address pool.
cnt <IP counts>	It means the IP count number. *<IP counts>:* Specify the number of IP addresses in the pool. The maximum is 10.
status	It means the execution result of this command.
add <MAC Addr XX-XX-XX-XX-XX-XX>	It means creating a list of hosts to be assigned. <MAC Addr XX-XX-XX-XX-XX-XX>: Specify MAC Address of the host.
del <MAC Addr XX-XX-XX-XX-XX-XX/all/ALL>	It means removing the selected MAC address. <MAC Addr XX-XX-XX-XX-XX-XX>: Specify MAC Address of the host. all/ALL: It means all of the MAC addresses.

Example

```
> ip route add 192.168.1.56 255.255.255.0 192.168.1.12 3 default
> srv dhcp public status
Index   MAC Address
```

Telnet Command: srv dhcp dns1

This command allows users to set Primary IP Address for DNS Server in LAN.

Syntax

srv dhcp dns1 *<lan1/lan2/lan3/lan4/lan5/lan6/lan7/lan8> <DNS IP address>*

Syntax Description

Parameter	Description
<lan1/lan2/lan3/lan4/lan5/lan6/lan7/lan8>	It means to sepcify the LAN interface for setting the DNS server.
<DNS IP address>	It means the IP address that you want to use as DNS1. **Note:** The IP Routed Subnet DNS must be the same as NAT Subnet DNS).

Example

```
> srv dhcp dns1 lan1 168.95.1.1
% srv dhcp dns1 lan1 <DNS IP address>
% Now: 168.95.1.1
(IP Routed Subnet dns same as lan1)
```

Telnet Command: srv dhcp dns2

This command allows users to set Secondary IP Address for DNS Server in LAN.

Syntax

srv dhcp dns2 *<lan1/lan2/lan3/lan4/lan5/lan6/lan7/lan8> <DNS IP address>*

Syntax Description

Parameter	Description
<*lan1/lan2/lan3/lan4/lan5/lan6/lan7/lan8*>	It means to sepcify the LAN interface for setting the DNS server.
<*DNS IP address*>	It means the IP address that you want to use as DNS2. **Note:** The IP Routed Subnet DNS must be the same as NAT Subnet DNS).

Example

```
> srv dhcp dns2 lan3 10.1.1.1
% srv dhcp dns2 lan3 <DNS IP address>
% Now: 10.1.1.1
```

Telnet Command: srv dhcp frcdnsmanl

This command can force the router to invoke DNS Server IP address.

Syntax

srv dhcp frcdnsmanl <*on/off*>

Syntax Description

Parameter	Description
?	It means to display the current status.
on	It means to use manual setting for DNS setting.
off	It means to use auto settings acquired from ISP.

Example

```
> srv dhcp frcdnsmanl on
% Domain name server now is using manual settings!
> srv dhcp frcdnsmanl off
% Domain name server now is using auto settings!
```

Telnet Command: srv dhcp gateway

This command allows users to specify gateway address for DHCP server.

Syntax

srv dhcp gateway <*Gateway IP*>

Syntax Description

Parameter	Description
Gateway IP	It means to specify a gateway address used for DHCP server.

Example

```
> srv dhcp gateway 192.168.2.1
 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
```

Telnet Command: srv dhcp ipcnt

This command allows users to specify IP counts for DHCP server.

Syntax

srv dhcp ipcnt <*IP counts*>

Syntax Description

Parameter	Description
IP counts	It means the number that you have to specify for the DHCP server.

Example

```
> srv dhcp ipcnt ?
% srv dhcp ipcnt <IP counts>
% Now: 150
```

Telnet Command: srv dhcp off

This function allows users to turn off DHCP server. It needs rebooting router, please type "sys reboot" command to reboot router.

Telnet Command: srv dhcp on

This function allows users to turn on DHCP server. It needs rebooting router, please type "sys reboot" command to reboot router.

Telnet Command: srv dhcp relay

This command allows users to set DHCP relay setting.

Syntax

srv dhcp relay servip <*server ip*>

srv dhcp relay 2nd_servip <*server ip*>

srv dhcp relay subnet <*index*>

Syntax Description

Parameter	Description
server ip	It means the IP address that you want to used as DHCP server.
Index	It means subnet 1 or 2. Please type 1 or 2. The router will invoke this function according to the subnet 1 or 2 specified here.

Example

```
> srv dhcp relay servip 192.168.1.46
> srv dhcp relay subnet 2
> srv dhcp relay servip ?
% srv dhcp relay servip <server ip>
% Now: 192.168.1.46
```

Telnet Command: srv dhcp startip

Syntax

srv dhcp startip *<IP address>*

Syntax Description

Parameter	Description
IP address	It means the IP address that you can specify for the DHCP server as the starting point.

Example

```
> srv dhcp startip 192.168.1.53
 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
```

Telnet Command: srv dhcp status

This command can display general information for the DHCP server, such as IP address, MAC address, leased time, host ID and so on.

Syntax

srv dhcp status *<LAN1/2/3/4/5/6/7/8/ip_routed_subnet>*

Syntax Description

Parameter	Description
<LAN1/2/3/4/5/6/7/8 /ip_routed_subnet>	It means to display current status for the selected interface.

Example

```
> srv dhcp status
LAN1      : DHCP Server On    IP Pool: 192.168.1.10 ~ 192.168.1.209
            Default Gateway: 192.168.1.1
IP Routed  : DHCP Server Off
-------------------------------------------------------------------------
Index   IP Address     MAC Address           Leased Time     HOST ID
-------------------------------------------------------------------------
LAN1
1       192.168.1.10    00-1D-AA-0F-2E-68       17:24:58
2       192.168.1.11    00-1D-AA-4F-E2-98       17:54:14
>
```

Telnet Command: srv dhcp leasetime

This command can set the lease time for the DHCP server.

Syntax

srv dhcp leasetime <*Lease Time (sec)*>

Syntax Description

Parameter	Description
Lease Time (sec)	It means the lease time (500 to 1661992960) that DHCP server can use. The unit is second.

Example

```
> srv dhcp leasetime ?
% srv dhcp leasetime <Lease Time (sec.)>
% Now: 86400
>
```

Telnet Command: srv dhcp nodetype

This command can set the node type for the DHCP server.

Syntax

srv dhcp nodetype <*count*>

Syntax Description

Parameter	Description
count	It means to specify a type for node. 1. B-node 2. P-node 4. M-node 8. H-node

Example

```
> srv dhcp nodetype 1
> srv dhcp nodetype ?
%% srv dhcp nodetype <count>
%% 1. B-node 2. P-node 4. M-node 8. H-node
% Now: 1
```

Telnet Command: srv dhcp primWINS

This command can set the primary IP address for the DHCP server.

Syntax

srv dhcp primWINS <*WINS IP address*>
srv dhcp primWINS clear

Syntax Description

Parameter	Description
WINS IP address	It means the IP address of primary WINS server.
clear	It means to remove the IP address settings of primary WINS server.

Example

```
> srv dhcp primWINS 192.168.1.88
> srv dhcp primWINS ?
%% srv dhcp primWINS <WINS IP address>
%% srv dhcp primWINS clear
% Now: 192.168.1.88
```

Telnet Command: srv dhcp secWINS

This command can set the secondary IP address for the DHCP server.

Syntax

srv dhcp secWINS <*WINS IP address*>

srv dhcp secWINS clear

Syntax Description

Parameter	Description
WINS IP address	It means the IP address of secondary WINS server.
clear	It means to remove the IP address settings of second WINS server.

Example

```
> srv dhcp secWINS 192.168.1.180
> srv dhcp secWINS ?
%% srv dhcp secWINS <WINS IP address>
%% srv dhcp secWINS clear
% Now: 192.168.1.180
```

Telnet Command: srv dhcp expRecycleIP

This command can set the time to check if the IP address can be assigned again by DHCP server or not.

Syntax

srv dhcp expRecycleIP <*sec time*>

Syntax Description

Parameter	Description
sec time	It means to set the time (5~300 seconds) for checking if the IP can be assigned again or not.

Example

```
Vigor> srv dhcp expRecycleIP 250
% DHCP expired_RecycleIP = 250
```

Telnet Command: srv dhcp tftp

This command can set the TFTP server as the DHCP server.

Syntax

srv dhcp tftp <*TFTP server name*>

Syntax Description

Parameter	Description
TFTP server name	It means to Enter the name of TFTP server.

Example

```
> srv dhcp tftp TF123
> srv dhcp tftp ?
%% srv dhcp tftp <TFTP server name>
% Now: TF123
```

Telnet Command: srv dhcp tftpdel

This command can remove the name defined for the TFTP server.

Syntax

srv dhcp tftpdel

Example

```
> srv dhcp tftp TF123
> srv dhcp tftp ?
%% srv dhcp tftp <TFTP server name>
% Now: TF123
> srv dhcp tftpdel
% The TFTP Server Name had been deleted !!!
```

Telnet Command: srv dhcp option

This command can set the custom option for the DHCP server.

Syntax

srv dhcp option *-h*
srv dhcp option *-l*
srv dhcp option *-d <idx>*
srv dhcp option *-e <1 or 0> -i <lan number> -s <Next Server IP Address>*
srv dhcp option *-e <1 or 0> -i <lan number> -c <option number> -v <option value>*
srv dhcp option *-e <1 or 0> -i <lan number> -c <option number> -x <option value>*
srv dhcp option *-e <1 or 0> -i <lan number> -c <option number> -a <option value>*
srv dhcp option *-u <idx number>*

Syntax Description

Parameter	Description
-h	It means to display usage of this command.
-l	It means to display all the user defined DHCP options.
-d <idx>	It means to delete the option number by specifying its index number.
-e <1/0>	It means to enable/disable custom option feature. 1: Enable; 0: Disable
-i <lan number>	<lan number> *:* It means to specify the LAN interface. 1: lan1 a: all LAN r: routed subnet d: DMZ
-s <Next Server IP Address>	It means to set the next server IP address. Next Server IP Address: Enter an IP address.
-c <option number>	It means to set option number. Available number ranges from 0 to 255. option number: Enter a number.
-v <option value>	It means to set option number by typing string. option value: Enter a string.
-x <option value>	It means to set option number with the format of Hexadecimal characters. option value: Enter a number (hex).
-a <option value>	It means to set the option value by specifying the IP address. option value: Enter an IP address.
-u <idx number>	It means to update the option value of the sepecified index. idx number: Enter the index number of the option value.
-r	It means to remove all DHCP server options.

Example

```
> srv dhcp option -e 1 -i 1/2 -s 8.8.8.8

> srv dhcp option -l

% state   idx interface         opt type     data


% enable  1   LAN1/2            0   SIAddr   0.0.0.0
```

Telnet Command: srv nat dmz

This command allows users to set DMZ host. Before using this command, please set WAN IP Alias first.

Syntax

srv nat dmz n m *[-<command> <parameter> | …]*

Syntax Description

Parameter	Description
n	It means to map selected WAN IP to certain host. 1: wan1 2: wan2
m	It means the index number (1 to 32) of the DMZ host. Default setting is "1" (WAN 1). It is only available for Static IP mode. If you use other mode, you can set 1 ~ 32 in this field. If WAN IP alias has been configured, then the number of DMZ host can be added more.
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-e	It means to enable/disable such feature. 1:enable 0:disable
-i	It means to specify the private IP address of the DMZ host.
-r	It means to remove DMZ host setting.
-v	It means to display current status.

Example

```
> srv nat dmz 1 1 -i 192.168.1.96
> srv nat dmz -v
%     WAN1 DMZ mapping status:
 Index  Status  WAN1 aux IP    Private IP
-----------------------------------------------------
   1    Disable 0.0.0.0 192.168.1.96

%     WAN2 DMZ mapping status:
 Index  Status  WAN2 aux IP    Private IP
-----------------------------------------------------
   1    Disable 0.0.0.0

%     WAN3 DMZ mapping status:
 Index  Status  WAN3 aux IP    Private IP
-----------------------------------------------------
   1    Disable 0.0.0.0

%     WAN4 DMZ mapping status:
 Index  Status  WAN4 aux IP    Private IP
-----------------------------------------------------
   1    Disable 0.0.0.0
```

```
%     WAN5 DMZ mapping status:
 Index  Status  WAN5 aux IP    Private IP
-------------------------------------------------
   1    Disable 0.0.0.0

%     WAN6 DMZ mapping status:
 Index  Status  WAN6 aux IP    Private IP
-------------------------------------------------

   1    Disable 0.0.0.0
>
```

Telnet Command: srv nat ipsecpass

This command allows users to enable or disable IPSec ESP tunnel passthrough and IKE source port (500) preservation.

Syntax

srv nat ipsecpass <*options*>

Syntax Description

Parameter	Description
<*options*>	The available commands with parameters are listed below.
on	It means to enable IPSec ESP tunnel passthrough and IKE source port (500) preservation.
off	It means to disable IPSec ESP tunnel passthrough and IKE source port (500) preservation.
status	It means to display current status for checking.

Example

```
> srv nat ipsecpass status
%% Status: IPsec ESP pass-thru and IKE src_port:500 preservation is OFF.
```

Telnet Command: srv nat openport

This command allows users to set open port settings for NAT server.

Syntax

srv nat openport n m *[-*<*command*> <*parameter*> | *…]*

Syntax Description

Parameter	Description
n	It means the index number for the profiles. The range is from 1 to 40.
m	It means to specify the sub-item number for this profile. The range is from 1 to 10.
[<*command*> <*parameter*>|*…]*	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-a <*enable*>	It means to enable or disable the open port rule profile. 0: disable 1:enable

-c <comment>	It means to Enter the description (less than 23 characters) for the defined network service.
-l <source ip idx>	It means to set source IP object. 1 to 192: for IP object 1 to 32: for IP group 0: Any For example: srv nat openport 1 1 -l 1 -g 0
-g <source ip type>	It means to set IP type. 0: IP object 1: IP group For example: srv nat openport 1 1 -l 1 -g 0
-i <local ip>	It means to set the IP address for local computer. Local ip: Type an IP address in this field.
-w <widx><ipidx>	widx: Specify the public IP. 1: WAN1 Default, 2: WAN1 Alias 1, …and so on. ipidx: Specify the index number of an alias IP (1 to 32).
-p <protocol>	Specify the transport layer protocol. Available values are TCP, UDP and ALL.
-s<start port>	It means to specify the starting port number of the service offered by the local host. The range is from 0 to 65535.
-e<end port>	It means to specify the ending port number of the service offered by the local host. The range is from 0 to 65535.
-v	It means to display current settings.
-r <remove>	It means to delete the specified open port setting. remove: Enter the index number of the profile.
-f	It means to return to factory settings for all the open ports profiles.

Example

```
> srv nat openport 1 1 -a 1 -c games -i 192.168.1.55 -w 1 1 -p TCP -s 56 -e
83
 Set WAN Port ok!!

> srv nat openport 1 1 -v
%% Status: Enable
%% Comment: games
%% WAN Interface: WAN1
%% Private IP address: 192.168.1.55
Index   Protocal       Start Port     End Port
************************************************************
  1.    TCP           56            83
> srv nat openport 1 1 -f
> srv nat openport 1 1 -v
%% Status: Disable
%% Comment:
%% WAN Interface: WAN1
%% Private IP address: 0.0.0.0
Index   Protocal       Start Port     End Port
```

```
**********************************************************************
>
```

Telnet Command: srv nat portmap

This command allows users to set port redirection table for NAT server.

Syntax

srv nat portmap *add <idx> <serv name> <proto> <pub port> <src ip type> <src ip idx> <pri ip> <pri port> <wan idx> <alias IP>*

srv nat portmap *del <idx>*

srv nat portmap *disable <idx>*

srv nat portmap *enable <idx><proto>*

srv nat portmap *flush*

srv nat portmap *table*

srv nat portmap *view*

Syntax Description

Parameter	Description
add <idx>	It means to add a new port redirection table with an index number. Available index number is from 1 to 40.
<serv name>	It means to type one name as service name.
<proto>	It means to specify TCP or UDP as the protocol.
<pub port>	It means to specify which port (0 to 65535) can be redirected to the specified Private IP and Port of the internal host.
<src ip type>	It means to specify the IP type (object or group). ip type: 0 means IP object; 1 means IP group.
<src ip idx>	It means to specify the index number of the object profile. ip idx: 1 to 192 for IP object profile; 1 to 32 for IP group profile. 0 means any object or group.
<pri ip>	It means to specify the private IP address of the internal host providing the service.
<pri port>	It means to specify the private port number (0 to 65535) of the service offered by the internal host.
<wan idx>	It means to specify WAN interface for the port redirection. Idx: wan1 to wan6, all
<alias IP>	It means to specify an alias IP by entering the index number (1 to 32). ip: 1 to 32.
del <idx>	It means to remove the selected port redirection setting.
disable <idx>	It means to inactivate the selected port redirection setting.
enable <idx>	It means to activate the selected port redirection setting.
flush	It means to clear all the port mapping settings.
table	It means to display Port Redirection Configuration Table.

Example

```
> srv nat portmap add 1 name tcp 100 0 0 192.168.1.10 200 wan1 1
> srv nat portmap table
```

```
NAT Port Redirection Configuration Table:

Index  Service Name         Protocol      Public Port   Private IP
Private Port   ifno
 1     name                 TCP          100   192.168.1.10              20
0      -1
 2                         Disabled         0
  0      -2
 3                         Disabled         0
  0      -2
 4                         Disabled         0
  0      -2
 5                         Disabled         0
  0      -2
 6                         Disabled         0
  0      -2
 7                         Disabled         0
  0      -2
 8                         Disabled         0
  0      -2
 9                         Disabled         0
  0      -2
10                         Disabled         0
  0      -2
11                         Disabled         0
  0      -2
...
```

Telnet Command: srv nat trigger

This command allows users to configure port triggering settings for NAT.

Syntax

srv nat trigger setdefault

srv nat trigger view

srv nat trigger *n [-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
setdefault	Set to factory default settings.
view	Dispaly all of the port triggering settings.
n <command><parameter>|…]	"n" means the rule number. The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-c <XXX>	Type a comment for such rule if required.
-e <0/1>	Enable (1) or disable (0) a rule (specified with rule number).
-s <value>	It means the index number for the source IP. <value> - Any, IP Object (0 to 191); IP Group (0 to 31).
-g <0/1>	It means the source IP type. 0 - IP Object; 1 - IP Group.
-p <1/2/3>	Specify the protocol for such trigger rule. 1 – TCP 2 – UDP 3 - All
-t	Specify the port number (0~65535) for trigger.
-P <1/2/3>	Specify the incoming protocol for such trigger rule. 1 – TCP 2 – UDP 3 - All
-i	Specify the port number (0~65535) for incoming protocol.
-d	Delete the selected trigger rule.
-v	Display the port trigger settings for specified rule.

Example

```
> srv nat trigger 1 -c after_dinner
> srv nat trigger 1 -e 1
> srv nat trigger 1 -p 1
> srv nat trigger 1 -t 2000
> srv nat trigger 1 -P 2
> srv nat trigger 1 -i 3000
> srv nat trigger 1 -v

Port Trigger Rule Index:1

Status:Enable
```

```
Comment:after_dinner2000
Triggering Protocol:TCP
Triggering Port:2000
Incoming Protocol:UDP
Incoming Port:3000
```

Telnet Command: srv nat status

This command allows users to view NAT Port Redirection Running Table.

Example

```
> srv nat status
NAT Port Redirection Running Table:

Index  Protocol  Public Port   Private IP       Private Port
 1          6          80   192.168.1.11             100
 2          0           0   0.0.0.0                    0
 3          0           0   0.0.0.0                    0
 4          0           0   0.0.0.0                    0
 5          0           0   0.0.0.0                    0
 6          0           0   0.0.0.0                    0
 7          0           0   0.0.0.0                    0
 8          0           0   0.0.0.0                    0
 9          0           0   0.0.0.0                    0
10          0           0   0.0.0.0                    0
11          0           0   0.0.0.0                    0
12          0           0   0.0.0.0                    0
13          0           0   0.0.0.0                    0
14          0           0   0.0.0.0                    0
15          0           0   0.0.0.0                    0
16          0           0   0.0.0.0                    0
17          0           0   0.0.0.0                    0
18          0           0   0.0.0.0                    0
19          0           0   0.0.0.0                    0

20          0           0   0.0.0.0                    0

--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page] ---
```

Telnet Command: srv nat showall

This command allows users to view a summary of NAT port redirection setting, open port and DMZ settings.

Example

```
>  srv nat showall ?
Index   Proto   WAN IP:Port               Private IP:Port           Act
**********************************************************************
R01     TCP     0.0.0.0:100               192.168.1.10:200          Y

O01     TCP     0.0.0.0:56~83             192.168.1.55:56~83        Y

D01     All     0.0.0.0                   192.168.1.96              Y
```

```
R:Port Redirection, O:Open Ports, D:DMZ
>
```

Telnet Command: srv nat pseudoctl

This command allows users to check the pseudo port number to prevent from port conflict.

Syntax

srv nat pseudoctl *session <value>*
srv nat pseudoctl *function <0-3>*

Syntax Description

Parameter	Description
session <value>	Set the threshold of the session. <value>: o to 2147483647.
function <0-3>	0: It means "Auto". Check the created pseudo port number automatically when the session number is over the threshold. 1: It means "Not". Create a pseudo port number based on subnet setting. No verification. 2: It means "Must". Check the created pseudo port number if it is used by other client. 3: Create a pseudo port number. No verification.

Example

```
> srv nat pseudoctl function 2
 pesudo port: get hash pseudo port + subnet.
 pseudo port search: check pseudo port(Must).

> srv nat pseudoctl function 3
 pesudo port: get hash pseudo port.

> srv nat pseudoctl function 0
 pesudo port: get hash pseudo port + subnet.
 pseudo port search: check pseudo port(Auto).
```

Telnet Command: srv nat RSTTimeout

This command is used for forwarding RST out via TCP after a period of time.

Syntax

srv nat RSTTimeout *<value>*

Syntax Description

Parameter	Description
<value>	Set the timeout value. <value>: 0 to 10 (one unit is 10msec).

Example

```
>  srv nat RSTTimeout 2
Set timeout 2 unit

> srv nat RSTTimeout ?
%% srv RSTtimeout <value> (unit is 10msec). (0<=value<=10)
--------------------------
now timeout set 2 unit

>
```

Telnet Command: switch -i

This command is used to obtain the TX (transmitted) or RX (received) data for each connected switch.

Syntax

switch -i <*switch idx_no*><*option*>

Syntax Description

Parameter	Description
switch idx_no	It means the index number (1 to 8) of the switch profile.
option	The available commands with parameters are listed below. *cmd* *acc* *traffic <on/off/status/tx/rx>*
cmd	It means to send command to the client.
acc	It means to set the client authentication account and password.
traffic <on/off/status/tx/rx>	It means to turn on/off or display the data transmission from the client.

Example

```
>  switch -i 1 traffic on
External Device NO. 1 traffic statistic function is enable
>
```

Telnet Command: switch status

This command is used to check the status for the auto discovery of external devices.

Example

```
> switch status
External Device auto discovery status : Disable

No Respond to External Device : Enable
```

Telnet Command: switch not_respond

This command is used to detect the external device automatically and display on this page.

Syntax

switch not_respond 0

switch not_respond 1

Syntax Description

Parameter	Description
0	Disable the option of "No Respond to External Device packets".
1	Enable the option of "No Respond to External Device packets".

Example

```
> switch not_respond 1
slave not respond!
>
```

Telnet Command: switch on

This command is used to turn on the auto discovery for external devices.

Example

```
>  switch on
Enable Extrnal Device auto discovery!
```

Telnet Command: switch off

This command is used to turn off the auto discovery for external devices.

Example

```
>  switch off
Disable External Device auto discovery!
```

Telnet Command: switch list

This command is used to display the connection status of the switch.

Example

```
> switch list?
No.      Mac             IP         status   Dur Time   CWMP   ACS_CTL   Mod
el_Name   firmware_version
-------------------------------------------------------------------------
------------------------------
[1]  00-1d-aa-7c-f5-a4  192.168.1.12    On-Line   01:03:57    -1       -1
VigorAP1060C, VigorAP1060C
[2]  14-49-bc-41-33-f4  192.168.1.11    On-Line   01:03:57    -1       -1
G2121
[3]  14-49-bc-43-e5-79  192.168.1.13    On-Line   01:03:57    -1       -1
G2100
```

Telnet Command: switch clear

This command is used to reset the switch table and reboot the router.

Syntax

switch clear <*idx*>

Syntax Description

Parameter	Description
idx	It means the index number of each item shown on the table. The range is from 1 to 8.
-f	It means to clear all of the data.

Example

```
> switch clear 1
Switch Data clear successful

> switch clear -f
Switch Data clear successful
```

Telnet Command: switch query

This command is used to enable or disable the switch query.

Example

```
> switch query on
Extern Device status query is Enable
> switch query off
Extern Device status query is Disable
```

Telnet Command: switch syslog

This command is used to enable or disable the external device syslog.

Example

```
> switch syslog on
Extern Device status is Enable
> switch syslog off
Extern Device status is Disable
```

Telnet Command: sys admin

This command is used for RD engineer to access into test mode of Vigor router.

Telnet Command: sys adminuser

This command is used to create user account and specify LDAP server. The server will authenticate the local user who wants to access into the web user interface of Vigor router.

Syntax

sys adminuser <*option***>**

sys adminuser edit <*index*> *username password*

Syntax Description

Parameter	Description
option	Available options includes: Local <0-1> LDAP <0-1> edit <INDEX> delete <INDEX> view <INDEX>
Local <0-1>	0 – Disable the local user. 1 – Enable the local user.
LDAP <0-1>	0 – Disable the LDAP. 1 – Enable the LDAP.
edit <INDEX> username password	Edit an existed user account or create a new local user account. [INDEX] – 1 ~8. There are eight profiles to be added / edited. Username – Type a new name for local user. Password – Type a password for local user.
delete <INDEX>	Delete a local user account.
view <INDEX>	Show the user account/password detail information.

Example

```
> sys adminuser Local 1
Local User has enabled!
> sys adminuser LDAP 1
LDAP has enabled!
> sys adminuser edit 1 carrie test123
Updated!
> sys adminuser view 1

Index:1
User Name:carrie
User Password:
0F1AD8240CF4F7566E75F78B6113E1A8595977BB9A98633C12D8AFBD1F019854
```

Telnet Command: sys board

This command is used to disable/enable and configure the panel control.

Syntax

sys board button def <*on*/*off*>

sys board button wlan <*on*/*off*>

sys board led control <*on*/*off*>

sys board led sleepMode <*on*/*off*>

sys board led sleepMode time *<minute>*
sys board usb *<p1/p2> <on/off>*

Syntax Description

Parameter	Description
button def <on/off>	The default reset button will be invalid if turn it off. On - The button is valid. Off - The button is invalid.
Button wlan <on/off>	The wireless button will be invalid if turn it off. On - The button is valid. Off - The button is invalid.
led control <on/off>	All LEDs on the front panel will be invalid if turn it off. On - The LEDs are valid. Off - The LEDs are invalid.
led sleepMode <on/off>	All LEDs on the front panel will be set in sleep mode. On - The sleep mode is on. Off - The sleep mode is off. If the sleep mode is on, push the "wireless button" and the "factory reset button" to turn the LED on (even the buttons are disabled).
led sleepMode time <minutes>	After enableing the sleep mode for all LEDs, they will sleep after the minutes configured here. Minutes: Enter the number of the time.
usb <p1/p2> <on/off>	The USB port will be invalid if turn it off. On - The port is valid. Off - The port is invalid.

Example

```
> sys board led sleepMode on
 LEDs Sleep Mode is on now.

> sys board led sleepMode time 10
 Sleep Countdown Time set as 10 minute(s).
 Reset the led sleep timer success..
```

Telnet Command: sys bonjour

This command is used to disable/enable and configure the Bonjour service.

Syntax

sys bonjour *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
-e <enable>	It is used to disable/enable bonjour service (0: disable, 1: enable).
-h <enable>	It is used to disable/enable http (web) service (0: disable, 1: enable).
-t <enable>	It is used to disable/enable telnet service (0: disable, 1: enable).
-f <enable>	It is used to disable/enable FTP service (0: disable, 1: enable).
-s <enable>	It is used to disable/enable SSH service (0: disable, 1: enable).
-p <enable>	It is used to disable/enable printer service (0: disable, 1: enable).

-6 <enable>	It is used to disable/enable IPv6 (0: disable, 1: enable).

Example

```
> sys bonjour -s 1
>
```

Telnet Command: sys cfg

This command reset the router with factory default settings. When a user types this command, all the configuration will be reset to default setting.

Syntax

sys cfg default

sys cfg status

Syntax Description

Parameter	Description
default	It means to reset current settings with default values.
status	It means to display current profile version and status.

Example

```
> sys cfg status
Profile version: 3.0.0    Status: 1 (0x491e5e6c)
> sys cfg default
>
```

Telnet Command: sys cmdlog

This command displays the history of the commands that you have typed.

Example

```
> sys cmdlog
% Commands Log: (The lowest index is the newest !!!)
    [1] sys cmdlog
    [2] sys cmdlog ?
    [3] sys ?
    [4] sys cfg status
    [5] sys cfg ?
```

Telnet Command: sys ftpd

This command displays current status of FTP server.

Syntax

sys ftpd *on*

sys ftpd *off*

Syntax Description

Parameter	Description
on	It means to turn on the FTP server of the system.

off	It means to turn off the FTP server of the system.

Example

```
> sys ftpd on
% sys ftpd turn on !!!
```

Telnet Command: sys domainname

This command can set and remove the domain name of the system when DHCP mode is selected for WAN.

Syntax

sys domainname <*wan1/wan2*> <*Domain Name Suffix*>

sys domainname <*wan1/wan2*> *clear*

Syntax Description

Parameter	Description
wan1/wan2	It means to specify WAN interface for assigning a name for it.
Domain Name Suffix	It means the name for the domain of the system. The maximum number of characters that you can set is 39.
clear	It means to remove the domain name of the system.

Example

```
> sys domainname wan1 clever
> sys domainname wan2 intellegent
> sys domainname ?
% sys domainname <wan1/wan2> <Domain Name Suffix (max. 39 characters)>
% sys domainname <wan1/wan2> clear
% Now: wan1 == clever, wan2 ==intelligent
>
```

Telnet Command: sys iface

This command displays the current interface connection status (UP or Down) with IP address, MAC address and Netmask for the router.

Example

```
> sys iface
Interface 0 Ethernet:
Status: UP
IP Address: 192.168.1.1      Netmask: 0xFFFFFF00 (Private)
IP Address: 0.0.0.0          Netmask: 0xFFFFFFFF
MAC: 00-50-7F-00-00-00
Interface 4 Ethernet:
Status: DOWN
IP Address: 0.0.0.0          Netmask: 0x00000000
MAC: 00-50-7F-00-00-02
Interface 5 Ethernet:
Status: DOWN
IP Address: 0.0.0.0          Netmask: 0x00000000
MAC: 00-50-7F-00-00-03
Interface 6 Ethernet:
```

```
Status: DOWN
IP Address: 0.0.0.0          Netmask: 0x00000000
MAC: 00-50-7F-00-00-04
Interface 7 Ethernet:
Status: DOWN
IP Address: 0.0.0.0          Netmask: 0x00000000
MAC: 00-50-7F-00-00-05
Interface 8 Ethernet:
Status: DOWN
IP Address: 0.0.0.0          Netmask: 0x00000000
MAC: 00-50-7F-00-00-06

Interface 9 Ethernet:
Status: DOWN
IP Address: 0.0.0.0          Netmask: 0x00000000
MAC: 00-50-7F-00-00-07
--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page] ---
>
```

Telnet Command: sys name

This command can set and remove the name for the router when DHCP mode is selected for WAN.

Syntax

sys name <*wan1/wan2*> <*ASCII string*>

sys name <*wan1/wan2*> **clear**

Syntax Description

Parameter	Description
<*wan1/wan2*>	It means to specify WAN interface for assigning a name for it.
ASCII string	It means the name for router. The maximum character that you can set is 39.

Example

```
> sys name wan1 drayrouter
> sys name ?
% sys name <wan1/wan2> <ASCII string (max. 39 characters)>
% sys name <wan1/wan2> clear
% Now: wan1 == drayrouter, wan2 ==
```

Note: *Such name can be used to recognize router's identification in SysLog dialog.*

Telnet Command: sys passwd

This command allows users to set password for the administrator.

sys passwd <*old password*> <*new password*>

Syntax Description

Parameter	Description
old password	Enter the old password.
new password	Enter a string as the new password for administrator. The maximum character that you can set is 83.

Example

```
> sys passwd admin admin123
Password change successful !!!
>
```

Telnet Command: sys reboot

This command allows users to restart the router immediately.

Example

```
> sys reboot
>
```

Telnet Command: sys autoreboot

This command allows users to restart the router automatically within a certain time.

Syntax

sys autoreboot *<on/off/hour(s)>*

Syntax Description

Parameter	Description
on/off	On – It means to enable the function of auto-reboot. Off – It means to disable the function of auto-reboot.
hours	It means to set the time schedule for router reboot. For example, if you type "2" in this field, the router will reboot with an **interval** of two hours.

Example

```
> sys autoreboot on
 autoreboot is ON
> sys autoreboot 2
 autoreboot is ON
 autoreboot time is 2 hour(s)
```

Telnet Command: sys commit

This command allows users to save current settings to FLASH. Usually, current settings will be saved in SRAM. Yet, this command will save the file to FLASH.

Example

```
> sys commit
>
```

Telnet Command: sys tftpd

This command can turn on TFTP server for upgrading the firmware.

Example

```
> sys tftpd
% TFTP server enabled !!!
```

Telnet Command: sys cc

This command can display current country code and wireless region of this device.

Example

```
> sys cc
Country Code       : 0x 0 [International]
Wireless Region Code: 0x30
>
```

Telnet Command: sys version

This command can display current version for the system.

Example

```
> sys version
Router Model: Vigor2927Vac    Version: 4.4.0 English

Profile version: 4.0.0    Status: 1 (0x9de81d8f)

Router IP: 192.168.1.1    Netmask: 255.255.255.0

Firmware Build Date/Time: Apr 19 2022 15:48:29

Router Name: DrayTek

Revision: 3075_6ffc5c5 drayos2015_V2927_440

Router serial no: None

>
```

Telnet Command: sys qrybuf

This command can display the system memory status and leakage list.

Example

```
> sys qrybuf
System Memory Status and Leakage List

Buf sk_buff  ( 200B), used#: 1647, cached#:   30
Buf KMC4088  (4088B), used#:    0, cached#:    8
Buf KMC2552  (2552B), used#: 1641, cached#:   42
Buf KMC1016  (1016B), used#:    7, cached#:    1
Buf KMC504   ( 504B), used#:    8, cached#:    8
Buf KMC248   ( 248B), used#:   26, cached#:   22
Buf KMC120   ( 120B), used#:   67, cached#:   61
Buf KMC56    (  56B), used#:   20, cached#:   44
Buf KMC24    (  24B), used#:   58, cached#:   70
Dynamic memory: 13107200B; 4573168B used; 190480B/0B in level 1/2 cache.

FLOWTRACK Memory Status
# of free = 12000
# of maximum = 0
# of flowstate = 12000
# of lost by siganture = 0
# of lost by list = 0
```

Telnet Command: sys pollbuf

This command can turn on or turn off polling buffer for the router.

Syntax

sys pollbuf <*on*/*off*>

Syntax Description

Parameter	Description
on	It means to turn on pulling buffer.
off	It means to turn off pulling buffer.

Example

```
> sys pollbuf on
% Buffer polling is on!

> sys pollbuf off
% Buffer polling is off!
```

Telnet Command: sys britask

This command can improve triple play quality.

Syntax

sys britask <*on*/*off*>

Syntax Description

Parameter	Description
on	It means to turn on the bridge task for improving the triple play quality.
off	It means to turn off the bridge task.

Example

```
> sys britask on
% bridge task is ON, now
```

Telnet Command: sys tr069

This command can set CPE settings for applying in VigorACS.

Syntax

sys tr069 get <*parm*> <*option*>
sys tr069 set <*parm*> <*value*>
sys tr069 getnoti <*parm*>
sys tr069 setnoti <*parm*> <*value*>
sys tr069 log
sys tr069 debug <*on*/*off*>
sys tr069 save
sys tr069 inform <*event code*>

sys tr069 port *<port num>*
sys tr069 cert_auth*<on/off>*
sys tr069 only_standard_parm *<on/off>*
sys tr069 notify -S
sys tr069 notify -n *<on/off>*
sys tr069 notify -l *<on/off>*
sys tr069 notify -c *<on/off>*
sys tr069 notify -b *<on/off>*
sys tr069 notify -B *"<WAN number> <Medium threthold> <High threthold> <TX Speed>Mb <RX Speed>Mb"*

Syntax Description

Parameter	Description
get <parm> <option>	It means to get parameters for tr-069. option=<nextlevel>: only gets nextlevel for GetParameterNames.
set <parm> <value>	It means to set parameters for tr-069.
getnoti <parm>	It means to get parameter notification value.
setnoti <parm> <value>	It means to set parameter notification value.
log	It means to display the TR-069 log.
debug <on/off>	on: turn on the function of sending debug message to syslog. off: turn off the function of sending debug message to syslog.
save	It means to save the parameters to the flash memory of the router.
Inform <event code>	It means to inform parameters for tr069 with different event codes. [event code] includes: 0-"0 BOOTSTRAP", 1-"1 BOOT", 2-"2 PERIODIC", 3-"3 SCHEDULED", 4-"4 VALUE CHANGE", 5-"5 KICKED", 6-"6 CONNECTION REQUEST", 7-"7 TRANSFER COMPLETE", 8-"8 DIAGNOSTICS COMPLETE", 9-"M Reboot"
port <port num>	It means to change tr069 listen port number.
cert_auth <on/off>	on: turn on certificate-based authentication. off: turn off certificate-based authentication.
only_standard_parm <on/off>	It means to turn on or off to exclude all the Vendor-Specific ("X_") parameters, and only send out standard parameters.
notify -n <on/off>	It means to set CPE notification settings. It means to / not to record the CPE notify log on the Syslog. on: Record on the Syslog. off: Not record on the Syslog.
notify -l <on/off>	It means to / not to record the web login log on the Syslog. on: Record on the Syslog. off: Not record on the Syslog.
notify -c <on/off>	It means to / not to record the web changed log on the Syslog. on: Record on the Syslog.

	off: Not record on the Syslog.
notify -h <on/off>	It means to / not to record the high availability log on the Syslog. on: Record on the Syslog. off: Not record on the Syslog.
notify -b [on/off]	It means to / not to record the bandwidth utilization log on the Syslog. on: Record on the Syslog. off: Not record on the Syslog.
notify -B "<WAN number> <Medium threthold> <High threthold> <TX Speed>Mb <RX Speed>Mb"	It means to set bandwidth utilization setting. <WAN number>: Enter the index number of WAN interface(s). <Medium threthold>: Enter a value. <High threthold>: Enter a value. <TX Speed>Mb: Enter a value. <RX Speed>Mb: Enter a value.
-S	Show the CPE notification settings.

Example

```
> sys tr069 get Int. nextlevel
Total number of parameter is 24
Total content length of parameter is 915
InternetGatewayDevice.LANDeviceNumberOfEntries
InternetGatewayDevice.WANDeviceNumberOfEntries
InternetGatewayDevice.DeviceInfo.
InternetGatewayDevice.ManagementServer.
InternetGatewayDevice.Time.
InternetGatewayDevice.Layer3Forwarding.
InternetGatewayDevice.LANDevice.
InternetGatewayDevice.WANDevice.
InternetGatewayDevice.Services.
InternetGatewayDevice.X_00507F_InternetAcc.
InternetGatewayDevice.X_00507F_LAN.
InternetGatewayDevice.X_00507F_NAT.
InternetGatewayDevice.X_00507F_Firewall.
InternetGatewayDevice.X_00507F_Bandwidth.
InternetGatewayDevice.X_00507F_Applications.
InternetGatewayDevice.X_00507F_VPN.
InternetGatewayDevice.X_00507F_VoIP.
InternetGatewayDevice.X_00507F_WirelessLAN.
InternetGatewayDevice.X_00507F_System.
InternetGatewayDevice.X_00507F_Status.

InternetGatewayDevice.X_00507F_Diagnostics.
--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page] ---
..
> sys tr069 notify -B "1 30 60 100 100"
Please enable the bandwidth utilization notify log.
> sys tr069 notify -n on
> sys tr069 notify -b on
Set OK
> sys tr069 notify -B "1 30 60 100 100"
> sys tr069 notify -S
CPE Notify Settings:
 CPE Notify           Enable
```

```
 -Web Login            Disable
 -Web Changed               Disable
 -High Availability         Disable
 -Bandwidth Utilization     Enable

      Threshold(%)     Speed(Mb)
  WAN1 Med: 0 High:  60 TX:    0 RX:    0
  WAN2 Med:  0 High:  0 TX:    0 RX:    0
  WAN3 Med:  0 High:  0 TX:    0 RX:    0
  WAN4 Med:  0 High:  0 TX:    0 RX:    0
  WAN5 Med:  0 High:  0 TX:    0 RX:    0
  WAN6 Med:  0 High:  0 TX:    0 RX:    0
```

Telnet Command: sys alg

This command can enable or disable ALG (Application Layer Gateway) master switch.

Syntax

sys alg <*1/0*>

Syntax Description

Parameter	Description
1	It means to enable ALG master switch.
0	It means to disable ALG master switch.

Example

```
> sys alg -e 1
 Enable ALG

> sys alg
Usage: sys alg <command> <parameter>
 -e: enable ALG (0:disable, 1:enable)

Current ALG status
 -ALG Master Switch: Enabled
```

Telnet Command: sys sip_alg

This command can turn on/off SIP ALG (Application Layer Gateway) for traversal.

Syntax

sys sip_alg <*command*> <*parameter*>|…

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-e <0/1>	0: Disable the function of SIP ALG. 1: Enable the function of SIP ALG.
-p <parameter>	It means to set the listening port for SIP ALG. <parameter> : Ranges from 1 to 65535.
-u	It means to enable or disable the listen along UDP path setting.

	0: Disable 1: Enable
-t	It means to enable or disable the listen along TCP path setting. 0: Disable 1: Enable

Example

```
> sys sip_alg -e 1
 Enable SIP ALG
> sys sip_alg -p 65535
 Current listening port: 65535
> sys sip_alg ?
Usage: sys sip_alg <command> <parameter>
 -e: enable SIP ALG (0:disable, 1:enable)
 -p: set your listening port for SIP ALG
 -u: enable listen along UDP path (0:disable, 1:enable)
 -t: enable listen along TCP path (0:disable, 1:enable)

Current SIP ALG status
 -ALG Master Switch: Enabled
 -SIP ALG: Enabled
 -Listen along UDP path: Yes
 -Listen along TCP path: Yes
 -Listening Port: 65535
 -Max sipalg session num: 512
 -Remain sipalg session num: 512
```

Telnet Command: sys rtsp_alg

This command can turn on/off RTSP ALG (Application Layer Gateway) for traversal.

Syntax

sys rtsp_alg *[<command> <parameter>|…]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-e <0/1>	0: Disable the function of RTSP ALG. 1: Enable the function of RTSP ALG.
-p <parameter>	It means to set the listening port for RTSP ALG. <parameter> : Ranges from 1 to 65535.
-u	It means to enable or disable the listen along UDP path setting. 0: Disable 1: Enable
-t	It means to enable or disable the listen along TCP path setting. 0: Disable 1: Enable
-v	It displays RTP and RTCP portmap information of RTSP ALG.

Example

```
> sys rtsp_alg -e 1
 Enable RTSP ALG

> sys rtsp_alg -p 60000
 Current listening RTSP Port: 60000

> sys rtsp_alg -v
 Current Open PortMap Number of RTSP ALG: 0

> sys rtsp_alg ?
Usage: sys rtsp_alg <command> <parameter>
 -e: enable RTSP ALG (0:disable, 1:enable)
 -p: set your listening port for RTSP ALG
 -u: enable listen along UDP path (0:disable, 1:enable)
 -t: enable listen along TCP path (0:disable, 1:enable)
 -v: show rtp and rtcp portmap information of RTSP ALG

Current RTSP ALG status
 -ALG Master Switch: Enabled
 -RTSP ALG: Enabled
 -Listen along UDP path: Yes
 -Listen along TCP path: Yes
 -Listening Port: 60000
 -Max RTSP session num: 256
 -Remain RTSP session num: 256
```

Telnet Command: sys license

This command can process the system license.

Syntax

sys license *reset_regser*
sys license *licera*
sys license *licifno <AUTO/WAN#>*
sys license *licalias <index>*
sys license *lic_trigger*
sys license *licelog*
sys lic_https *set <0/1>*

Syntax Description

Parameter	Description
reset_regser	It means the license register server setting or register service in portal.
licera	It means to erase license setting.
licifno <AUTO/WAN#>	It means license and signature download interface setting.
licalias <index>	It means to specify an IP alias by entering the index number of the IP alias profile.
lic_trigger	It means to trigger the license.
licelog	It means to show the authentication log.
lic_https set <0/1>	0 - Set the lic connect type to HTTP. 1 - Set the lic connect type to HTTPs.

Example

```
> sys license licifno wan3
Download interface is set as "WAN3" now.
>
```

Telnet Command: sys diag_log

This command is used for RD debug.

Syntax

sys diag_log <*status*| *enable*| *disable*| *flush*| *lineno* <*w*> | *level* <*x*> | *feature* <*on*|*off*><*y*>| *voip_feature* <*on*|*off*> <*vf_name*>| *log*>

Syntax Description

Parameter	Description
status	It means to show the status of diagnostic log.
enable	It means to enable the function of diag_log.
disable	It means to disenable the function of diag_log.
flush	It means the flush log buffer.
lineno <*w*>	It means the total lines for displaying message. w - Available value ranges from 100 to 50000.
level<*x*>	It determines the level of data displayed. x – Available value ranges from 0 to 12. The larger the number is, the detailed the data is displayed.
feature <*on*/*off*> <*y*>	It is used to specify the function of the log. Supported features include SYS, VoIP and EthOAM.
voip_feature <*on*/*off*> <*vf_name*>	It means VoIP feature. Type on to enable the feature or type off to disable the feature. vf_name: available settings include DRVTAPI, DRVVMMC, DRVMPS, DRVFXO, DRVHAL, PSMPHONE, PSMSUPP, PSM, FXO, PSMISDN, DTMFPSER, CALLERID (Case-Insensitive).
log	It means the dump log buffer.

Example

```
> sys diag_log status
 Status:
 diag_log is Disabled.
 lineno : 10000.
 level : 3.
 Enabled feature: SYS
> sys diag_log log
0:00:02    [DSL] Current modem firmware: AnnexA_548006_544401
0:00:02    [DSL] Modem firmware feature: 5, ADSL_A, VDSL2
0:00:02    [DSL] xtseCfg=04 00 04 00 0c 01 00 07
0:00:02    [DSL] dont have last showtime mode!! set next mode to VDSL!!
0:00:02    [DSL] Status has changed: Stopped(0) -> FwWait(3)
0:00:02    [DSL] Status has changed: FwWait(3) -> Starting(1)
0:00:02    [DSL] Status has changed: Starting(1) -> Running(2)
0:00:02    [DSL] Status was switched: firmwareReady(3) to Init(5)
```

Telnet Command: sys arp_AutoReq

This command is used to enable / disable the function that Vigor router sends ARP request to the connected device(s) periodically.

Syntax

sys arp_AutoReq -d <*value*>

Syntax Description

Parameter	Description
-d [value]	Disable the function of ARP auto request. 0 – Enable 1 – Disable

Example

```
> sys arp_AutoReq -d 1
  Arp auto-request disable.
>
```

Telnet Command: sys daylightsave

This command is used to conifgure day light saving.

Syntax

sys daylightsave *[-*<*command*> <*parameter*> | ... *]*

Syntax Description

Parameter	Description
[<*command*><*parameter*>|… *]*	The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-v	Display the daylight saving settings.
-r	Set to factory default setting.
-e <1/0>	Enable (1) / disable (0) daylight saving.
-t <0/1/2>	Specify the saving type for daylight setting. 0 – Default 1 – Time range 2 - Yearly
-s <*year*> <*month*> <*day*> <*hour*>	Set the detailed settings of the starting day for time range type. year – must be the year after 2013. month - 1 ~ 12 day – 1 ~ 31 hour – 0 ~ 23 e.g., sys daylightsave -s 2014 3 10 12
-d <*year*> <*month*> <*day*> <*hour*>	Set the detailed settings of the ending day for time range type. year – After 2013. month - 1 ~ 12 day – 1 ~ 31 hour – 0 ~ 23 e.g., sys daylightsave -d 2014 9 10 12
-y <*month*> <*th weekday*> <*day in week*> <*hour*>	Set the detailed settings of the starting day for yearly type. month - 1 ~ 12

	th weekday – 1 ~ 5, 9: last week day in week - 0:Sun, 1:Mon, 2:Tue, 3:Wed, 4:Thu, 5: Fri, 6:Sat hour – 0 ~ 23 e.g, sys daylightsave -y 9 1 0 14
-z <month> <th weekday> <day in week> <hour>	Set the detailed settings of the ending day for yearly type. month - 1 ~ 12 th weekday – 1 ~ 5, 9: last week day in week - 0:Sun, 1:Mon, 2:Tue, 3:Wed, 4:Thu, 5: Fri, 6:Sat hour – 0 ~ 23 e.g, sys daylightsave -z 3 1 6 14

Example

```
> sys daylightsave -y 9 1 0 14
% Start: Yearly on Sep 1th Sun 14:00
```

Telnet Command: sys dnsCacheTbl

This command is used to configure TTL settings which will be displayed in DNS Cache table.

Syntax

sys dnsCacheTbl *[<command><parameter>|…]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-l	It means to show DNS IPv4 entry in DNS cache table.
-s	It means to show DNS IPv6 entry in DNS cache table.
-v	It means to show TTL limit value in DNS cache table.
-t <ttl>	It means to set TTL limit value. <ttl>: 0(no limit) or an number greater than 5.
-c	It means to clear the DNS cache table.

Example

```
> sys dnsCacheTbl -t 50
> % Set TTL limit: 50 seconds.
% When TTL larger than 50s , delete the DNS entry in the router's DNS cache
tabl
e.
> sys dnsCacheTbl -v
% TTL limit: 50 seconds
% When TTL larger than 50s , delete the DNS entry in the router's DNS cache
tabl
```

Telnet Command: sys syslog

This command is used to conifgure day light saving.

Syntax

sys syslog *-a <enable> [-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
[<command><parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can type in several commands in one line.
-a <1/0>	Enable (1) or disable (0) Syslog Access Setup.
-s <1/0>	Enable (1) or disable (0) Syslog Save to Syslog Server.
-i <IP address>	Define the IP address of the Syslog server.
-d <port number>	Define the port number (1 ~ 65535) as the destination port.
-u <1/0>	Enable (1) or disable (0) Syslog Save to USB Disk.
-m <1/0>	Enable (1) or disable (0) Mail Syslog.
-f <1/0>	Enable (1) or disable (0) Filewall Log.
-v <1/0>	Enable (1) or disable (0) VPN Log.
-e <1/0>	Enable (1) or disable (0) User Access Log.
-c <1/0>	Enable (1) or disable (0) Call Log.
-w <1/0>	Enable (1) or disable (0) WAN Log.
-l <1/0>	Enable (1) or disable (0) WLAN Log.
-r <1/0>	Enable (1) or disable (0) Router/DSL Information.
-p	Update the server IP address.
-W <1/0>	Set the mode for writing Syslog. 0: overwrite oldest logs; 1: stop logging.
-U <1/0>	Set the unit for the Syslog saved to a USB disk. 0:GB; 1:MB
-S <capacity>	Set the folder capacity for the syslog saved in the USB disk. 1 ~16(GB); 1 ~1024(MB)

Example

```
> sys syslog -a 1 -s 1 -i 192.168.1.25 -d 514
>
```

Telnet Command: sys mailalert

This command is used to configure settings for syslog mail alert.

Syntax

sys mailalert *[-<command> <parameter>]*

Syntax Description

Parameter	Description
[<command><parameter>]	The available commands with parameters are listed below.
-e <0/1>	Enable/disable Mail Alert. 0 – Disable. 1 – Enable.
-w <0/1/2/...>	Set Interface (Physical) Any/WAN1/WAN2/WAN... and etc.
-x <WAN IP Alias index>	Set WAN IP Alias. Index 1 is reserved and must set an interface first.
-i <SMTP Server IP>	Set IP Address for SMTP server.
-o <SMTP Server Port>	Set port number for SMTP server..

-a <Mail Address>	Set E-maiil address for alert mail reciver.
-r <Mail Address>	Set E-mail Address for mail return.
-s <0/1/2/3>	Set Connection Security 0 - Plaintext 1 - SSL 2 - StartTLS 3 - Force StartTLS
-h <0/1>	Enable/disable SMTP Authentication. 0 – Disable. 1 – Enable.
-u <Username>	Set username for SMTP Authentication.
-p <Password>	Set password for SMTP Authentication.
-l <type><0/1>	Enable / disable mail alert for different types. Number 0 ~ 6 represent different types. "0 <0/1>" : Enable/Disable Mail Alert of the DoS Attack. "1 <0/1>" : Enable/Disable Mail Alert of the APPE. "2 <0/1>" : nable/Disable Mail Alert of the VPN Log. "3 <0/1>" : Enable/Disable Mail Alert of the APPE Signature. "6 <0/1>" : Enable/Disable Mail Alert of the Reboot Debug Log. In which, 0 – Disable. 1 – Enable.
-f	Reset Mail Alert setting to factory default.
-v	Show current Mail Alert setting.
-R <0/1>	Set Mail Alert Reboot debug log mode. 0: Limited Mode 1: Unlimited Mode.

Example

```
> sys mailalert -e 1
Set Enable Mail Alert.
> sys mailalert -v
------ Current setting for Mail Alert ------
Mail Alert: Enable
SMTP Server IP Address: 0.0.0.0
SMTP Server Port: 25
Alert Mail Reciver E-maiil Address:
Mail Return E-mail Address:
Use SSL: Disable
SMTP Authentication: Disable
Username for SMTP Authentication:
Password for SMTP Authentication:
Mail Alert for DoS Attack: Enable.
Mail Alert for APPE: Enable.
Mail Alert for VPN Log: Enable.
Mail Alert for APPE Signature: Disable.
Mail Alert for Reboot Debug Log: Disable, Mode: Limited.
-----------------------------------------
```

Telnet Command: sys time

This command is used to configure system time and date.

Syntax

sys time server <*domain*>

sys time inquire
sys time show

sys time wan *<option>*

sys time zone *<index>*

sys time pseudo

Syntax Description

Parameter	Description
server <domain>	Enter the domain name of the time server. <domain> - The maximum length is 39 characters.
inquire	Get the time based on the timer server settting.
show	Displays current server setting.
wan <option>	Set the WAN interface. 0 - Auto 1 - WAN1 2 - WAN2 3 - WAN3 4 - WAN4 5 - WAN5 6 - WAN6
zone <index>	Different number means different time zone. 1 - GMT-12:00 Eniwetok, Kwajalein 2 - GMT-11:00 Midway Island, Samoa 3 - GMT-10:00 Hawaii 4 - GMT-09:00 Alaska 5 - GMT-08:00 Pacific Time (US & Canada) 6 - GMT-08:00 Tijuana 7 - GMT-07:00 Mountain Time (US & Canada) 8 - GMT-07:00 Arizona 9 - GMT-06:00 Central Time (US & Canada) 10 - GMT-06:00 Saskatchewan 11 - GMT-06:00 Mexico City, Tegucigalpa 12 - GMT-05:00 Eastern Time (US & Canada) 13 - GMT-05:00 Indiana (East) 14 - GMT-05:00 Bogota, Lima, Quito 15 - GMT-04:00 Atlantic Time (Canada) 16 - GMT-04:00 Caracas, La Paz 17 - GMT-04:00 Santiago 18 - GMT-03:30 Newfoundland 19 - GMT-03:00 Brasilia 20 - GMT-03:00 Buenos Aires, Georgetown 21 - GMT-02:00 Mid-Atlantic 22 - GMT-01:00 Azores, Cape Verde Is. 23 - GMT Greenwich Mean Time : Dublin 24 - GMT Edinburgh, Lisbon, London 25 - GMT Casablanca, Monrovia 26 - GMT+01:00 Belgrade, Bratislava 27 - GMT+01:00 Budapest, Ljubljana, Prague 28 - GMT+01:00 Sarajevo, Skopje, Sofija 29 - GMT+01:00 Warsaw, Zagreb 30 - GMT+01:00 Brussels, Copenhagen 31 - GMT+01:00 Madrid, Paris, Vilnius 32 - GMT+01:00 Amsterdam, Berlin, Bern 33 - GMT+01:00 Rome, Stockholm, Vienna

	34 - GMT+02:00 Bucharest 35 - GMT+02:00 Cairo 36 - GMT+02:00 Helsinki, Riga, Tallinn 37 - GMT+02:00 Athens, Istanbul, Minsk 38 - GMT+02:00 Jerusalem 39 - GMT+02:00 Harare, Pretoria 40 - GMT+03:00 Volgograd 41 - GMT+03:00 Baghdad, Kuwait, Riyadh 42 - GMT+03:00 Nairobi 43 - GMT+03:00 Moscow, St. Petersburg 44 - GMT+03:30 Tehran 45 - GMT+04:00 Abu Dhabi, Muscat 46 - GMT+04:00 Baku, Tbilisi 47 - GMT+04:30 Kabul 48 - GMT+05:00 Ekaterinburg 49 - GMT+05:00 Islamabad, Karachi, Tashkent 50 - GMT+05:30 Bombay, Calcutta 51 - GMT+05:30 Madras, New Delhi 52 - GMT+06:00 Astana, Almaty, Dhaka 53 - GMT+06:00 Colombo 54 - GMT+07:00 Bangkok, Hanoi, Jakarta 55 - GMT+08:00 Beijing, Chongqing 56 - GMT+08:00 Hong Kong, Urumqi 57 - GMT+08:00 Singapore 58 - GMT+08:00 Taipei 59 - GMT+08:00 Perth 60 - GMT+09:00 Seoul 61 - GMT+09:00 Osaka, Sapporo, Tokyo 62 - GMT+09:00 Yakutsk 63 - GMT+09:30 Darwin 64 - GMT+09:30 Adelaide 65 - GMT+10:00 Canberra, Melbourne, Sydney 66 - GMT+10:00 Brisbane 67 - GMT+10:00 Hobart 68 - GMT+10:00 Vladivostok 69 - GMT+10:00 Guam, Port Moresby 70 - GMT+11:00 Magadan, Solomon Is. 71 - GMT+11:00 New Caledonia 72 - GMT+12:00 Fiji, Kamchatka, Marshall Is. 73 - GMT+12:00 Auckland, Wellington
pseudo -E <1/0>	Enable (1) or disable (0) the pseudo system time.
pseudo -T <year> <month> <day> <hour> <minute>	Set the pseudo time value. <year> - Enter four digits. <month> - Enter 1 t0 12. <day> - Enter the day in a month. <hour> - Enter the number of the hour (1 to 23). <minute> - Enter the number of the minute (1 to 59).
pseudo -S	Displays pseudo system time.

Example

```
> sys time pseudo -E 1
> sys time zone 8
  Set Time Zone OK

> sys time show
  *************** System Time ***************
  Current System Time: [2000 Jan 01 Sat 02:40:41]
  Time Server: [pool.ntp.org]
```

```
  Time Zone Index: [8]. GMT-07:00
  Send NTP Request Through: Auto
  ****************************************
>
```

Telnet Command: sys eap_tls

This command is used to disable or enable EAP-TLS.

You might have to enable EAP-TLS compatibility to avoid compatibility issues with some operating systems. But, please note that enabling EAP-TLS compatibility will lower down the connection security level.

Syntax

sys eap_tls set <*0*/*1*>

Syntax Description

Parameter	Description
0	Disable EAP-TLS compatibility!
1	Enable EAP-TLS compatibility!

Example

```
> sys eap_tls set 1
Enable EAP_TLS compatibility!
```

Telnet Command: sys dashboard

This command is used to display / hide items (such as System Information, Interface…) on dashboard.

Syntax

sys dashboard *[-*<*command*> <*value*> | ... *]*

sys dashboard show

Syntax Description

Parameter	Description
[<*command*> <*value*>|…*]*	The available commands with parameters are listed below. *[…]* means that you can type in several parameters in one line. <command> “0 ~ 9” and “a” represent different sections to be displayed on the dashboard. 0 : Front Panel 1 : System Information 2 : IPv4 LAN Information 3 : IPv4 Internet Access 4 : IPv6 Internet Access 5 : Interface 6 : Security 7 : System Resource 8 : LTE Status 9 : Quick Access a : VoIP

	<value> 1 : Enable 0 : Disable
show	Display current status (enabled /disabled) for each item.

Example

```
> sys dashboard -0 1
  Front Panel enabled
> sys dashboard show
  Front Panel enabled
  System Information enabled
  IPv4 LAN Information enabled
  IPv4 Internet Access enabled
  IPv6 Internet Access enabled
  Interface enabled
  Security enabled
  System Resource enabled
  LTE Status enabled
  Quick Access enabled
  VoIP enabled
```

Telnet Command: sys app_statistic

This command is used to enable/disable the statistics for APP services. To check the traffic for each APP service, access to the VigorACS server for detailed information.

Syntax

sys app_statistic *-v*

sys app_statistic *-e <0/1>*

sys app_statistic *-l*

sys app_statistic *-p <app idx>*

sys app_statistic *-q <app idx>*

Syntax Description

Parameter	Description
-v	Display current status of the function of APP service statistic.
-e <0/1>	Enable or disable the function of APP service statistic.
-l	Display all the applications arranged with index numbers.
-p <app idx>	Enable the statistic function for the specified APP. <app idx> : The applications supported by this CPE might increase in the future. At present, the available range is 0 to 156.
-q <app idx>	Disable the statistic function for the specified APP. <app idx> : The applications supported by this CPE might increase in the future. At present, the available range is 0 to 156.

Example

```
> sys app_statistic -e 1
 App service statistic mechanism : enable
```

Telnet Command: sys webhook

This command is used to send a report (webhook message) including WAN up, down, CPU usage, memory usage and etc. to a monitoring server periodically.

Syntax

sys webhook *send*
sys webhook *status*
sys webhook *enable <0/1>*
sys webhook *url <server_url>*
sys webhook *period <value>*

Syntax Description

Parameter	Description
send	Trigger the webhook report immediately.
status	Display the webhook current setting.
enable <0/1>	Enable (1) or disable (1) the webhook function.
url <server_url>	Specify the webhook server URL. <server_url> - Enter the URL.
period <value>	Set the webhook report period. <value> - Range from 1 to 1440 (minutes).

Example

```
> sys webhook enable 1
Set webhook ok
> sys webhook period 100
Set webhook ok

> sys webhook status
webhook is on
Monitoring Server URL:
Report Period: 100
```

Telnet Command: testmail

This command is used to display current settings for sending test mail.

Example

```
> testmail
Send out test mail
 Mail Alert:[Enable]
 Interface :Any
 WAN_Alias index:[0]
 SMTP_Server:[255.255.255.255]
 SMTP_Port:[25]
 Mail to:[]
 Return-Path:[]
 Connection Security:[Plaintext]
```

Telnet Command: upnp off

This command can close UPnP function.

Example

```
>upnp off
```

```
UPNP say bye-bye
```

Telnet Command: upnp on

This command can enable UPnP function.

Example

```
>upnp on
UPNP start.
```

Telnet Command: upnp nat

This command can display IGD NAT status.

Example

```
> upnp nat ?
*****************  IGD NAT Status  ****************

((0))
InternalClient >>192.168.1.10<<, RemoteHost >>0.0.0.0<<
InternalPort >>21<<, ExternalPort >>21<<
PortMapProtocol >>TCP<<
The tmpvirtual server index >>0<<
PortMapLeaseDuration >>0<<, PortMapEnabled >>0<<
Ftp Example [MICROSOFT]
((1))
InternalClient >>0.0.0.0<<, RemoteHost >>0.0.0.0<<
InternalPort >>0<<, ExternalPort >>0<<
PortMapProtocol >><NULL><<
The tmpvirtual server index >>0<<
PortMapLeaseDuration >>0<<, PortMapEnabled >>0<<
PortMapProtocol >><NULL><<
The tmpvirtual server index >>0<<
PortMapLeaseDuration >>0<<, PortMapEnabled >>0<<
0<<

--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page] ---
```

Telnet Command: upnp service

This command can display the information of the UPnP service. UPnP service must be enabled first.

Example

```
> upnp on
UPNP start.

> upnp service
>>>>> SERVICE TABLE1 <<<<<
  serviceType urn:schemas-microsoft-com:service:OSInfo:1
  serviceId   urn:microsoft-com:serviceId:OSInfo1
  SCPDURL     /upnp/OSInfo.xml
  controlURL  /OSInfo1
  eventURL    /OSInfoEvent1
```

```
  UDN        uuid:774e9bbe-7386-4128-b627-001daa843464

>>>>> SERVICE TABLE2 <<<<<
  serviceType urn:schemas-upnp-org:service:WANCommonInterfaceConfig:1
  serviceId   urn:upnp-org:serviceId:WANCommonIFC1
  SCPDURL     /upnp/WComIFCX.xml
  controlURL  /upnp?control=WANCommonIFC1
  eventURL    /upnp?event=WANCommonIFC1
  UDN        uuid:2608d902-03e2-46a5-9968-4a54ca499148
.
.
.
```

Telnet Command: upnp subscribe

This command can show all UPnP services subscribed.

Example

```
> upnp on
UPNP start.
> upnp subscribe
> upnp subscribe
>>>> (1) serviceType urn:schemas-microsoft-com:service:OSInfo:1

  ----- Subscribtion1 -------

    sid = 7a2bbdd0-0047-4fc8-b870-4597b34da7fb

    eventKey =1, ToSendEventKey = 1

    expireTime =6926

    active =1

    DeliveryURLs
=<http://192.168.1.113:2869/upnp/eventing/twtnpnsiun>

>>>> (2) serviceType
urn:schemas-upnp-org:service:WANCommonInterfaceConfig:1

  ----- Subscribtion1 -------

    sid = d9cd47a5-d9c9-4d3d-8043-d03a82f27983

    eventKey =1, ToSendEventKey = 1
.
.
.
```

Telnet Command: upnp tmpvs

This command can display current status of temp Virtual Server of your router.

Example

```
> upnp tmpvs
******************  Temp virtual server status  ****************

((0))
real_addr  >>192.168.1.10<<, pseudo_addr >>172.16.3.229<<
real_port >>0<<, pseudo_port >>0<<
hit_portmap_index >>0<<
The protocol >>TCP<<
time >>0<<

((1))
real_addr  >>0.0.0.0<<, pseudo_addr >>0.0.0.0<<
real_port >>0<<, pseudo_port >>0<<
hit_portmap_index >>0<<
The protocol >>0<<
time >>0<<
--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page] ---
```

Telnet Command: upnp wan

This command is used to specify WAN interface to apply UPnP.

Syntax

upnp wan <*n*>

Syntax Description

Parameter	Description
n	It means to specify WAN interface (0 to 6) to apply UPnP. n=0, it means to auto-select WAN interface. n=1, WAN1 n=2, WAN2. .. n=6, WAN6

Example

```
> upnp wan 1
use wan1 now.
```

Telnet Command: usb list

This command is use to display the information about the brand name and model name of the USB modems which are supported by Vigor router.

Example

```
> usb list ?
Brand      Module                   Standard
-------------------------           --------
4G system   XSPlug P3                3.5G                    Y
Aiko       Aiko 76E                 3.5G                    Y
Alcatel     Alcatel X500            3.5G                    Y
Alfa       ALFA Flyppp              3.5G                    Y
```

```
Amoi       Amoi H01                3.5G                    Y
BandRich    Bandluxe C321          3.5G                    Y
BandRich    Bandluxe C330          3.5G                    Y
BandRich    Bandluxe C331          3.5G                    Y
BandRich    Bandluxe C502          3.5G                    Y
BigPond     BigPond Next G Wir     3.5G                    Y
BigPond     Broadband USB Mobi     3.5G                    Y
Huawei      Huawei E150            3.5G                    Y
Huawei      Huawei E153            3.5G                    Y
Huawei      Huawei E172            3.5G                    Y
Huawei      Huawei E176c           3.5G                    M
Huawei      Huawei E270            3.5G                    Y
Huawei      Huawei E3131           3.5G                    Y
Huawei      Huawei E3272           3.5G                    Y
Huawei      Huawei E3276s          LTE                     Y
Huawei      Huawei E367            3.5G                    Y
Huawei      Huawei E398            LTE                     Y

Huawei      Huawei EC228           3.5G                    Y
--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page] ---
```

Telnet Command: usb user

This command is used to set profiles for FTP/SMB users.

Syntax Description

usb user add <*Index*> <*Username*> <*Password*> <*Permission*> <*Home path*>
usb user rm <*Index*>
usb user enable <*Index*>
usb user disable <*Index*>
usb user list

Syntax Description

Parameter	Description
add <Index> <Username> <Password> <Permission> <Home path>	Add a new user profile. <Index>: It means the index number of the user profile. There are 16 profiles allowed to be configured. So the range of such option is 1 ~ 16. <Username>: Enter a text (maximum 131 characters) as the username for the user profile. <Password>: Enter a text (maximum 131 characters) as the password for the user profile. <Permission>: Specify the action (RWDLCR) permitted. If one of the actions is not allowed, simple type "-" instead. R - Read File. W - Write File. D - Delete File. L - List directory. C - Create directory. R - Remove selected directory. <Home path>: Set the path (maximum 159 characters) for the USB user profile.
rm <Index>	Delete an existed user profile. <Index>: It means the index number of the user profile.
enable <Index>	Enable a user profile.

	<Index>: It means the index number of the user profile.
disable <Index>	Disable a user profile. <Index>: It means the index number of the user profile.
list	Display all of the user profile.

Example

```
> usb user add 1 root 1234 R-DLCR /usr
> No usb storage is available!!
```

Telnet Command: usb temp

This command is to configure USB temperature.

Syntax Description

usb temp set <*-c*|*-f*|*-a*|*-b*|*-m*|*-u*|*-l*|*-r*>
usb temp show
usb temp all_data

Syntax Description

Parameter	Description
set -c	Set the temperature unit (Celsius).
set -f	Set the temperature unit (Fahrenheit).
set -a	Set the temperature sensor by using a probe or the built-in sensor automatically. The probe will be detected and used first, and fall back to the built-in sensor if the probe is not detected.
set -b	Set to use the built-in sensor.
set -m	Enable or disable the Alarm Setting. 1: Enable 0: Disable
set -u <value>	Set the upper temperature limit. <value>: Enter a value, e.g., 30.35.
set -l <value>	Set the lower temperature limit. <value>: Enter a value, e.g., 10.35.
set -r	Shows the setting of temperature unit and sensor type.
show	Displays current temperature.
all_data	Displays all temperature data.

Example

```
> usb temp set -r
Show setting:temp set -r

Alarm Settings: 1 (0:Disable, 1: Enable.)
upper temperature limit: 30.0 C
lower temperature limit: 18.0 C
unit: 0 (0:Celsius, 1: Fahrenheit.)
sensor: 1 (0:Auto select, 1: built-in.)
> usb temp set -c
Set Celsius.
```

Telnet Command: usb hum

This command is to configure USB humidity.

Syntax Description

usb hum set <*m*|*-u*|*-l*|*-r*>
usb hum show
usb hum all_data

Syntax Description

Parameter	Description
set -m	Enable or disable the Alarm Setting. 1: Enable 0: Disable
set -u <value>	Set the upper humidity limit. <value>: Enter a value, e.g., 80.85.
set -l <value>	Set the lower humidity limit. <value>: Enter a value, e.g., 30.12.
set -r	Shows the setting of the humidity.
show	Displays current humidity.
all_data	Displays all humidity data.

Example

```
> usb hum set –m 1
Enable Alarm Settings.
>
```

Telnet Command: vigbrg set

This command is to configure specified WAN as bridge mode.

Syntax Description

vigbrg set *-v <IP version> -w <WAN_idx> -l <LAN_idx> -e <0/1> -f <0/1>*

Syntax Description

Parameter	Description
-v <IP version>	Indicate the IP version for the IP address. 4 – IPv4. 6 – IPv6.
w <WAN_idx>	WAN_idx – Indicate the WAN interface. 1 – WAN1 2 – WAN2 3 – WAN3 4 – WAN4 5 - WAN5
-l <LAN_idx>	LAN_idx – Indicate the LAN interface. 1 – LAN1 2 – LAN2 3 – LAN3 4 – LAN4 5 - LAN5

	6 - LAN6 .... 15 - LAN15
-e <0/1>	Enable (1) or disable (0) the Vigor Bridge for WAN or/and LAN.
-f <0/1>	Enable (1) or disable (0) the firewall functions.

Example

```
> vigbrg set -v 4 -w 5 -l 1 -e 1
[WAN5] IPv4 bridge is enable. Set subnet[LAN1]
```

Telnet Command: vigbrg closeall

This command can disable vigor bridge function.

Example

```
> vigbrg closeall
Close all bridge and bridge firewall
```

Telnet Command: vigbrg status

This command can show whether the Vigor Bridge Function is enabled or disabled.

Example

```
> vigbrg status
Show gConfig setting of bridge mode

%Wan1 management is disable!
```

Telnet Command: vigbrg cfgip

This command allows users to transfer a bridge modem into ADSL router by accessing into and adjusting specified IP address. Users can access into Web UI of the router to manage the router through the IP address configured here.

Syntax

vigbrg cfgip *<IP Address>*

Syntax Description

Parameter	Description
IP Address	It means to type an IP address for users to manage the router.

Example

```
> vigbrg cfgip 192.168.1.15
> vigbrg cfgip ?
% Vigor Bridge Config IP,
% Now: 192.168.1.15
```

Telnet Command: vigbrg wanstatus

This command can display the existed WAN connection status for the modem (change from ADSL router into bridge modem), including index number, MAC address, Stamp Time, PVC, VLAN port for Vigor Bridge Function..

Example

```
> vigbrg wanstatus

Vigor Bridge: Running

WAN mac table:

Index  MAC Address             Stamp Time    PVC          VLan     Port
```

Telnet Command: vigbrg wlanstatus

This command can display the existed WLAN connection status for the modem (change from router into bridge modem), including index number, MAC address, Stamp Time, PVC, VLAN port for Vigor Bridge Function.

Example

```
> vigbrg wlanstatus

Vigor Bridge: Running

WAN mac table:

Index  MAC Address             Stamp Time    PVC      VLan     Port
```

Telnet Command: fullbrg

The command is used to enable Full Bridge Mode so that the router will work as a bridge modem which is able to forward incoming packets with VLAN tags.

Syntax

fullbrg status

fullbrg set -i <*WAN index*> **-n** <*Subnet index*> **-b** <*Bridge mode*>

Syntax Description

Parameter	Description
-i <WAN index>	WAN index: Ranges from 1 to 16. 1: WAN1, 2: WAN2, ...etc., In which, WAN3 and WAN 4 are USB WAN.
-n <Subnet index>	Subnet index: Ranges from 1 to 8. 1: Subnet 1, 2: Subnet 2, ...etc.
-b <Bridge mode>	It means to enable / disable Bridge mode. 0: OFF 1: ON

Example

```
> fullbrg status ?
Show gConfig setting of full bridge
WAN 1 full bridge to LAN 1, mode=OFF.
WAN 2 full bridge to LAN 1, mode=OFF.
WAN 3 full bridge to LAN 1, mode=OFF.
WAN 4 full bridge to LAN 1, mode=OFF.
```

```
WAN 7 full bridge to LAN 1, mode=OFF.
WAN 8 full bridge to LAN 1, mode=OFF.
WAN 9 full bridge to LAN 1, mode=OFF.
WAN10 full bridge to LAN 1, mode=OFF.
WAN11 full bridge to LAN 1, mode=OFF.
WAN12 full bridge to LAN 1, mode=OFF.
WAN13 full bridge to LAN 1, mode=OFF.
WAN14 full bridge to LAN 1, mode=OFF.
WAN15 full bridge to LAN 1, mode=OFF.
WAN16 full bridge to LAN 1, mode=OFF.
> fullbrg set -i 2 -n 5 -b 1
Configure OK! Please reboot device to make it effective.
> fullbrg status
Show gConfig setting of full bridge
WAN 1 full bridge to LAN 1, mode=OFF.
WAN 2 full bridge to LAN 5, mode=ON.
WAN 3 full bridge to LAN 1, mode=OFF.
WAN 4 full bridge to LAN 1, mode=OFF.
WAN 7 full bridge to LAN 1, mode=OFF.
WAN 8 full bridge to LAN 1, mode=OFF.
WAN 9 full bridge to LAN 1, mode=OFF.
WAN10 full bridge to LAN 1, mode=OFF.
WAN11 full bridge to LAN 1, mode=OFF.
WAN12 full bridge to LAN 1, mode=OFF.
WAN13 full bridge to LAN 1, mode=OFF.
WAN14 full bridge to LAN 1, mode=OFF.
WAN15 full bridge to LAN 1, mode=OFF.
WAN16 full bridge to LAN 1, mode=OFF.
>
```

Telnet Command: voip debug

This command can display debug message on the screen.

Syntax

voip debug <*flush*>
voip debug <*showmsg*>

Syntax Description

Parameter	Description
flush	It means to clear current log.
showmsg	It means to show current log.

Example

```
> voip debug showmsg
-->Send Message to 192.168.1.2:5060 <02:35:16>
INVITE sip:192.168.1.2 SIP/2.0
Via: SIP/2.0/UDP 192.168.1.1:5060;branch=z9hG4bK-YMa-3630;rport
From:  <sip:change_me@192.168.1.1>;tag=WLJ-11782
To: <sip:192.168.1.2>
Call-ID: PbU-25312@192.168.1.1
CSeq: 1 INVITE
```

```
Contact: <sip:change_me@192.168.1.1>
Max-Forwards: 70
supported: 100rel, replaces
User-Agent: DrayTek UA-1.2.3 DrayTek Vigor2910
Allow: INVITE, ACK, CANCEL, OPTIONS, BYE, INFO, REFER, NOTIFY, PRACK
Content-Type: application/sdp
Content-Length:   264

v=0
o=change_me 5972727 56415 IN IP4 192.168.1.1
```

Telnet Command: voip dialplan

This command allows users to set phone book settings.

Syntax

voip dialplan block *n [-<command><parameter>]*
voip dialplan phonebook *n [-<command><parameter>]*
voip dialplan region *[-<command><parameter>]*
voip dialplan local *<1/0>*

Syntax Description

Parameter	Description
voip dialplan block	
n	It means the index number of the VoIP settings. n=1 ~ 20
-<command><parameter>	The available commands with parameters are listed below.
-m 0/1	It means to enable or disable the block mode. 0 – Disable 1 - Enable
-p <path>	Determines the block path. 1:in_url, 2:in_number 3:out_url, 4:out_number 5:(in & out)_url, 6:(in & out)_number))
-n <number>	Determines the block number (maximum 29 characters).
-d <domain>	Block the specified domain.
-i <inf>	Block the specified interface(s) or All interfaces.
-s <Schedule>	Specify schedule profiles by indicating the index number of the schedule profile. Four schedule profiles can be used at one time.
-w	Delete the selected entry. N=null (clear all)
-v	List current settings.
voip dialplan phonebook	
n	It means the index number of the VoIP settings. n=1 ~ 60
-<command><parameter>	The available commands with parameters are listed below.
-d <number>	Specify the speed dial number.
-c <url>	Contact SIP URL l(max. 59 characters)

-n <name>	Contact name (max. 23 characters)
-a <enable>	Enable/disable the specify entry.
-m <mode>	Specify backup number mode. 0 – none 2 - PSTN
-b <number>	Spedify the backup number.
-o <acc num>	Specify the dial out account. 0 – default 1 - acc1, 2 - acc2... ~ 12:=acc12
-z <enable>	Enable/disable ZRTP/SRTP VoIP security. 1 – enable 0 - disable
-l	Delete the specify entry.
-V	List current VoIP settings.
voip dialplan region	
-e	Dnable or disable the regional function. 1 – enable 0 - disable
-m <number>	Return the last miss call.
-l <number>	Return the last incoming call.
-o <number>	Return the last outgoing call.
-F <number>	Hotkey to enable call forwarding (all) function.
-f <number>	Hotkey to enable call forwarding (busy) function.
-C <number>	Hotkey to enable call forwarding (no answer) function.
-c <number>	Hotkey to disable call forwarding function.
-W <number>	Hotkey to enable call waiting function.
-w <number>	Hotkey to disable call waiting function.
-H <number>	Hotkey to enable hide caller ID function.
-h <number>	Hotkey to disable hide caller ID function.
-D <number>	Hotkey to enable DND function.
-d <number>	Hotkey to disable DND function.
-A <number>	Hotkey to enable block anonymous calls function.
-a <number>	Hotkey to disable block anonymous calls function.
-U <number>	Hotkey to enable block unknow domain calls function.
-u <number>	Hotkey to disable block unknow domain calls function.
-P <number>	Hotkey to disable block IP calls function.
-p <number>	Hotkey to disable block IP calls function.
-l <number>	Hotkey to block last incoming call.
-v	List current status for Regional settings.
voip dialplan local	
enable/disable	Enable or disable the local calls. 1 – enable 0 - disable

Example

```
> voip dialplan phonebook 1 -d 1125
> voip dialplan region -l 8
```

```
> voip dialplan region -v
 Your Setting for Regional
 Regional Function is: Enable
 Return the Last Miss Call: 20
 Return the Last Incoming Call: *12
 Return the Last Outgoing Call: 1
 Hotkey to enable call forwarding (all) function: 0
 Hotkey to enable call forwarding (busy) function: *90
 Hotkey to enable call forwarding (no answer) function: *92
 Hotkey to disable call forwarding function: 12
 Hotkey to Enable Call Waiting Function: *56
 Hotkey to Disable Call Waiting Function: *57
 Hotkey to Enable Hide Caller ID Function: *67
 Hotkey to Disable Hide Caller ID Function: *68
 Hotkey to Enable DND Function: *78
 Hotkey to Disable DND Function: *79
 Hotkey to Enable Block Anonymous Calls Function: *77
 Hotkey to Disable Block Anonymous Calls Function: *87
 Hotkey to Enable Block Unknow Domain Calls Function: *40
 Hotkey to Disable Block Unknow Domain Calls Function: *04
 Hotkey to Enable Block IP Calls Function: *50
 Hotkey to Disable Block IP Calls Function: *05
 Hotkey to Disable Block The Last Incoming Call Function: 8
```

Telnet Command: voip dsp

Syntax

voip dsp countrytone *[channel] [value]*
voip dsp dialtonepwr *[channel] [AbsoluteValue]*
voip dsp EchoCanceller *[type] [w_size] [nlp]*
voip dsp cidtype *[channel] [value]*
voip dsp micgain *[channel] [value/(1~10)]*
voip dsp spkgain *[channel] [value/(1~10)]*
voip dsp jb *[port] [mode] [value]*
voip dsp timer *[Timer]*
voip dsp dtmfDetset *[nLevel] [nTwist]*
voip dsp dtmftonepwr *[Level]*
voip dsp cwtonepwr *[ch] [value]*
voip dsp pstnringfxs *[1|2] [on|off]*
voip dsp relaydbounce *[on|off]*
voip dsp setRingPat *[ring_pattern_index] [patten_num]*
voip dsp *setFaxECmode*
voip dsp ***setDtmfCidlevel -l*** *[value]*
voip dsp ***setDtmfCidlevel -h*** *[value]*
voip dsp ***setDtmfCidlevel -r 0***
voip dsp *setfxoCY*
voip dsp ***cidplusdigit*** *[1/0] [channel] [value]*
voip dsp *setfxoringl*
voip dsp *setfxoCid*
voip dsp *cidplusdigit*
voip dsp *setRingThres*

voip dsp *setCidDetGain*
voip dsp *UnlimitedRing*

Syntax Description

Parameter	Description
voip dsp countrytone	
[channel] [value]	This command allows users to set the region for the tone settings. Different regions usually need different tone settings. Channel – 1 or 2. Value – displayed as follows: [2] UK, [3] USA, [4] Denmark, [5] Italy, [6] Germany, [7] Netherlands, [8] Portugal, [9] Sweden, [10] Australia, [11] Slovenia, [12] Czech, [13] Slovakia, [14] Hungary, [15] Switzerland , [16] France , [17] Malta
voip dsp dialtonepwr	
channel	This setting is used to adjust the loudness of the dial tone. The smaller the number is, the louder the dial tone is. It is recommended for you to use the default setting. Channel - Available channel number: 1 – 2
AbsoluteValue	AbsoluteValue - In -1 dB increments, with 1 corresponding to 6 dBm. Range - 1 to 30
voip dsp EchoCanceler	
type	This command is used to set the type of echo reduction. 0 - Disable the LEC processing. 1 - Cancel using the fixed window. 2 - Cancel using the fixed and moving window. 3 - Cancel using fixed window + Echo Suppressor.
w_size	The Line Echo Canceller (LEC) window size is 4, 6, 8 or 16 (ms).
nlp	Nlp - Non-linear processing (NLP) for more smooth transitions. 1 - disable 0 - enable
voip dsp cidtype	
channel	Set the caller ID type for FXS 1 (Channel 1) or FXS 2 (Channel 2). 1 – FXS 1 2 – FXS 2
value	Each number (1 to 6) represents different type. 1 – FSK_ETSI 2 - FSK_ETSI(UK) 3 - FSK_BELLCORE(US/AU) 4 - DTMF 5 - DTMF(Dk) 6 - DTMF(SE,NL,FIN) For example : Vigor> voip dsp cidtype 2 6 channel=2, current cidType: 6 That means the caller ID type for FXS2 (Channel2) is DTMF (SE, NL, FIN).
voip dsp micgain	
channel	Adjust the volume of microphone by entering number from 1- 10 for FXS 1 or FXS 2. 1 – FXS 1

	2 – FXS 2
value/(1~10)	The larger the number is, the louder the volume will be.
voip dsp spkgain	
channel	Adjust the volume of speaker by entering number from 1- 10 for FXS 1 or FXS 2. 1 – FXS 1 2 – FXS 2
value/(1~10)	The larger the number is, the louder the volume will be.
voip dsp jb	
port	Set the size of jitter buffer. Available settings are 0 (FXS1) and 1 (FXS2).
mode	Available settings are **Fixed** and **Adaptive** (default setting).
value	Available settings are 1 ~ 180 (unit: msec). e.g., Vigor> voip dsp jb 1 FIXED 100
voip dsp timer	
[Timer]	Set the waiting time for dialing out. It means to set the timer settings. The unit is mini-second. The range is from 1 to 255. Value “1” is corresponding to 500ms. That is to say, Value “6” is corresponding 3000ms (i.e., 3 seconds) Timer: 1 ~ 20. Vigor> voip dsp timer 20 Set the timer:20
Voip dsp debugMsg	
?	Avaible settings include: clrev - clear phone hook status. getev - get phone hook status. clrfskcid - clear fsk data for caller-ID from PSTN line. getfskcid - get fsk data for caller-ID from PSTN line. clrdtmfcid - clear dtmf data for caller-ID from PSTN line. getdtmfcid - get dtmf data for caller-ID from PSTN line. voicebuf - get message for available voice buffer pool. clrint - clear status for interrupt. getint - get status for interrupt. Vigor> voip dsp debugMsg getint the interrupt status for ad0 = 21 the interrupt status for ad1 = 0 the interrupt status for vc = 0
voip dsp dtmfDetset	
nLevel	Set minimal signal level in dB, for DTMF detection. Range – (-96 ~ -1)
nTwist	Maximum allowed signal twist in dB, for DTMF detection. Range – (0 ~ 12)
voip dsp dtmftonep	
Level	Set power level for DTMF frequency. Level – 0 ~ 100. Power level for dtmf frequency in 0.3 dB steps. 0 map to 0dB 1 map to -0.3dB .... 100 map to -30dB
voip dsp cwtonepwr	
ch	Set the call waiting tone power level. 1 – FXS 1

	2 – FXS 2.
value	1 ~ 30, in -1 dB increments, with 1 corresponding to 8 dBm.
voip dsp pstnringfxs	
1|2	Enable or disable PSTN ring on FXS 1/FXS 2. 1 meansFXS1; 2 means FXS2.
on|off	On means enable; off means disable.
voip dsp relaydbounce	
on|off	on: Enable relay filter noise. But it maybe ignore the caller-id!!! off: Disable relay filter noise. But the noise will cause the relay to switch to PSTN!!!
voip dsp setRingPat	
ring_pattern_index	This command can change the ring pattern at Index(2)~Index(6). ring_pattern_index – Index (1) was locked for your country.
patten_num	It's the ring pattern number (1~12) for a country. ---------- *patten_num=1 Australia Ring Pattern:* *cadenceOneOn=400, cadenceOneOff=200* *cadenceTwoOn=400, cadenceTwoOff=2000* *patten_num=2 Denmark Ring Pattern:* *cadenceOneOn=1000, cadenceOneOff=4000* ……
voip dsp setFaxECmode -s	
ch	Set the FAX error correction mode. ch : range (0 ~ 1)
mode	mode : EC(error correction) ch(x) mode(0) : REDUNDANCY EC(error correction) ch(x) mode(1) : FEC
voip dsp setDtmfCidlevel -l / voip dsp setDtmfCidlevel -h *[value]* ***voip dsp setDtmfCidlevel -r 0***	
value	"setDtmfCidLevel" is used to configure the signal strength for transferring to FXS DTMF caller ID. value - 0 ~ 64 voip dsp setDtmfCidLevel -l [value] voip dsp setDtmfCidLevel -h [value] voip dsp setDtmfCidLevel -r 0/1 r - reset low/high DTNF level to default setting. 0 means Disable; 1 means Enable. Note: This function is supported only by special mode.
voip dsp setfxoCY	
value	It is used to apply FXO country settings. 0: "use system country" 1: "Taiwan" 2: "Germany" 3: "Sweden" 4: "France" 5: "Switzerland" 6: "Holland" 7: "Finland" 8: "Denmark" 9: "UK" 10: "Australia" 12: "Italy" 14: "Red_China"

	15: "Singapore" 17: "Spain" 18: "Portugal" 20: "Poland" 21: "Czech" 22: "Hungary" 23: "Slovenia" 25: "Slovakia" 37: "Brasil" 61: "US"
voip dsp setfxoringl	
value	It is used to configure detection ring voltage threshold to apply to FXO. Available setting include: 0 : use driver default value 1 : Minimum voltage threshold: 25V 2 : Minimum voltage threshold: 35V 3 : Minimum voltage threshold: 45V Note: This function is supported only by special mode.
voip dsp setfxoCid	
value	Set FXO detect caller ID type. It is available only for the model with FXO port.
voip dsp cidplusdigit	
[1/0] [channel] [value]	Set the substitution (0~9) for '+' digit in caller ID. 1 – enable the substitution. 0 – disable the substitution. channel – 0 (FXS 1) -1 (FXS 2) value – 0 – 9
voip dsp setRingThres	
port	Set the threshold for ring signal. Port setting is “0” only.
value	Available settings 0-250. Unit is ms. The time is an approximate value.
voip dsp setCidDetGain	
tx|rx gain	Set the gain value of caller ID detected. Tx gain – Available settings -24 ~ 12. Default is 0. Rx gain – Available settings -24 ~ 12. Default is -6.

Example

```
> voip dsp countrytone ?
VoIP has been disable. Please enable VoIP first.
> voip sip misc -D 0
System reboot now!
> voip dsp countrytone ?
> Vigor> voip dsp countrytone?
usage:
 voip dsp countrytone [channel][value]
 [channel]: 1-2
 [value]: ( [2] UK, [3] USA, [4] Denmark, [5] Italy, [6] Germany, [7] Netherland
s, [8] Portugal, [9] Sweden, [10] Australia, [11] Slovenia, [12] Czech, [13]
Slovakia, [14] Hungary, [15] Switzerland , [16] France , [17] Malta)
============  Channel=1  ====================
```

```
 current country tone: user defined

----------- ( Dial tone ) --------------------
 Feq1=425, Feq2=0, OneOn=0, Off=0, TwoOn=0, TwoOff=0
----------- ( Ringing tone ) -----------------
 Feq1=425, Feq2=0, OneOn=1500, OneOff=3000, TwoOn=0, TwoOff=0
----------- ( Busy tone ) --------------------
 Feq1=425, Feq2=0, OneOn=200, OneOff=200, TwoOn=0, TwoOff=0

============  Channel=2  ====================
 current country tone: user defined
> voip dsp dialtonepwr 1 20
Current power level of dialtone:20 (-13 db), channel=1
> voip dsp setCidDetGain tx 1
 Current CID Detect Tx Gain [1], Rx Gain [-6]
> voip dsp setCidDetGain rx 3
 Current CID Detect Tx Gain [1], Rx Gain [3]
```

Telnet Command: voip rtp

Syntax

voip rtp codec *[sip acc index][type|size|vad|one][value]*
voip rtp dtmf *[index] [mode|payloadtype][value]*
voip rtp port *[start|end] [value]*
voip rtp symmetric *[value]*
voip rtp tos ?

Syntax Description

Parameter	Description
voip rtp codec	
[sip acc index][type|size|vad|one][value]	Set the voice coding. sip acc index –SIP account index number. Available number, 1 ~ 12. type – Available settings include 0. G.711MU 1. G.711A 2. G.729A/B 3. G.723 4. G.726_32 size - Five options, 0 means 10ms 1 means 20ms 2 means 30ms 3 means 40ms 5 means 60ms Vad - 0 means to Disable the function of Voice Active Detector (vad); 1 means to Enable the function of Voice Active Detector (vad). One – 0 means to Disable the function of single codec; 1 means to Enable the function of single codec.
voip rtp dtmf	
[index] [mode | payloadtype][value]	Set the DTMF mode and Payload type for DTMF. Index – SIP account index number. Available number, 1 ~ 12. Mode – Four options to be selected.

	0. Inband 1. Outband 2. SIP INFO (cisco) 3. SIP INFO (nortel) Payloadtype – Available settings 96~127. Value – Type 0~3 or 96~127 based on the mode specified. For example, > voip rtp dtmf 1 mode 1
voip rtp port	
start|end	Specifies the start/end port for RTP stream.
value	The default value is 10050/15000.
voip rtp symmetric	
value	Make the data transmission going through on both ends of local router and remote router not misleading due to IP lost. 1 – Enable 0 - Disable
voip rtp tos	
value	Set the type of service (TOS) setting for RTP packets. For example, > voip rtp tos 0x899 Set TOS: 0x899

Example

```
> voip rtp codec 1 type 3
> voip rtp dtmf 2 mode 3
> voip rtp port start 10070 end 14400
Set start port: 10070
> voip rtp port end 14400
Set end port: 14400
> voip rtp symmetric 1
Set symmetric rtp to Enable
```

Telnet Command: voip sip

This command allows users to set SIP account.

Syntax

voip sip acc n *[-<command> <parameter> | ...]*
voip sip alias *[-<command> <parameter> | ...]*
voip sip calllog
voip sip ep n *[-<command> <parameter> | ...]*
voip sip misc*[-<command> <parameter> | ...]*
voip sip nat *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
voip sip acc - Allows users to set SIP account.	
n	n = 1 to 12 It means the index number of the VoIP settings.
-P [profile]	It means the name of the account profile (maximum 11 characters).

-r [reg mode]	Set registration mode for SIP account. 0 – none 1 – auto 2 - wan1 only 3 - wan2 only 4 - lan/vpn 5 – PVC 6 - wan3 only 7 - wan4 only 8 - wan1 first 9 - wan2 first 10 - wan3 first 11 - wan4 first
-o [port]	Set the port number for sending/receiving SIP message for building a session. The default value is 5060.
-d [domain]	Set the domain name or IP address of the SIP Registrar server. The maximum is 63 characters.
-y [proxy]	Set domain name or IP address of SIP proxy server. The maximum is 63 characters.
-b [enable]	Enable / disable outbound proxy by SIP account. 0 – disable 1 - enable
-s [enable]	Enable / disable to locate SIP server (rfc 3263). 0 – disable 1 - enable
-N [name]	Set SIP account display name. Name - max. 23 characters.
-n [number]	Set SIP account number. Number - max. 63 characters.
-a [id]	Set SIP authentication ID. Id - max. 63 characters.
-A [enable]	Enable /disable to use SIP authentication ID. 0 – disable 1 - enable
-p [passwd]	Set SIP account password (max. 63 characters).
-e [sec]	Set expiry time (default 3600) for SIP account.
-w [enable]	Enable to make phone call without registering.
-m [mode]	Set NAT traversal mode. 0 – disable 1 – stun 2 – manual 3 - nortel
-F [mode]	Set call forwarding mode. 0 – disable 1 – always 2 – busy 3 - no answer 4 - busy or no answer
-u [url]	Set SIP URL for call forwarding (max. 63 characters).
-t [sec]	Set call forwarding timer. For example, voip sip acc 1 –t 30

-g [port]	Set the ring port for incoming call. For example, Port - r1 means FXS1; r2 means FXS2.
-z [pattern]	Set account ring pattern (1 ~ 6).
-i [enable]	Remove all bindings while they are un-registered. 0 means Disable; and 1 means Enable.
-B <enable>	Enable / disable the function of Broadsoft Call Control. 0 – disable 1 - enable
-S [idx]	Enable and use alias IP to register. idx - 1 to 31. If 0 is used, such function will be disabled.
-k [num1 num2...]	Set backup wan list (first wan, second wan...). range: 1 to 4.
-v	View current status for account settings.
voip alias	
n	n = 1 to 30
-e <enable>	Enable or disable this alias profile. 0:Disable. 1:Enable.
-a <username>	Set the alias name (max 23 characters).
-n <number>	Set the alias number (max 63 characters).
-t <account idx>	Set the alias of SIP account. (range: 1~12)
-v <idx>	show alias list information.
voip sip calllog	Display current status for SIP call log.
voip sip ep	
n	The index number of the VoIP settings. n – 1, 2.
-o [acc]	Available dial out account (1 ~ 12).
-L [url]	Set SIP URL (max. 63 characters) for hot line.
-l [enable]	Enable / disable the function of hot line. 0 – disable 1 - enable
-W [enable]	Enable / disable the function of warm line. 0 – disable 1 - enable
-w [enable]	Enable / disable the function of call waiting enable. 0 – disable 1 - enable
-E [enable]	Enable / disable the function of call waiting enable but only remind one time. 0 – disable 1 - enable
-x <enable>	Enable / disable the function of call transfer. 0 – disable 1 - enable
-d [enable]	Enable / disable the function of DND (Do Not Disturb) 0 – disable 1 - enable
-s [id]	Indicate DND schedule.

	Id - s1, s2, s3, s4 (max. 4 schedule)
-h [enable]	Enable / disable the function of calling line identification restriction (CLIR). 0 – disable 1 - enable
-u [mode]	Set CLIR mode. 0 - means “draft-ietf-sip-privacy” 1 – means “rfc 3323/3325)”
-z [enable]	Enable / disable playing dial tone when registered on sip server. 0 – disable 1 - enable
-n [enable]	Enable / disable session timer. 0 – disable 1 - enable
-m [sec]	Set the value for session timer (unit: sec).
-R [min,max]	Set the flash hook time range 100~2000 (unit: ms).
-8 [enable]	Enable or disable T.38 fax relay feature. 0 – disable 1 - enable
-v	View current settings.
voip sip misc - Allows users to set miscellaneous settings for the device.	
-c [enable]	Enable compact header to shorten the packet (0: disable, 1: enable).
-s [enable]	Change “#” into digit number. 0 - disable 1 - enable
-e [enable]	Enable Europe style flash hook operation mode. 0 - disable 1 - enable
-h [enable]	Enable/disable call hold mode based on protocol RFC2543 (0: disable, 1:enable).
-i [enable]	Enable CODEC change without Re-INVITE. 0 - disable 1 - enable
-p [enable]	Enable PRACK message. 0 – Not support PRACK. 1 – Support PRACK.
-P [enable]	Enable IP Call. 0 – Disable IP call. 1 – Enable IP call.
-H [enable]	SIP INFO packet will be sent out when encounting hook flash event. 0 - disable 1 - enable
-t [val]	Set the mode of User-Agent (e.g., phone, software, and device) for SIP packet. 0 - Hide SIP header "User-Agent". 1 - Show SIP header "User-Agent". 2 - Use default "User-Agent" value. 3 - Use user-defined "User-Agent" value.
-u UAValue	For every SIP user agent identifies itself with a string, this command allows you to set the value (e.g, IP address, phone number, e-mail address) of User-Agent. The length of the string

	must be less than 64 characters.
-D [disable]	Disable VoIP Service. 1 – disable VoIP service. 0 – enable VoIP service. System will automatic reboot to activate voip service
-v	View current status for miscellaneous settings.
voip sip nat - Allows users to set NAT Traversal Setting.	
-s [server]	Set the IP address for STUN server.
-t [sec]	Set ping interval for SIP account. Sec – 6 ~ 600
-i [ip]	Indicate external IP address.
-v	View current settings for SIP NAT.

Example

```
> voip sip misc -t 1
includes User-Agent header

> voip sip misc -u 91704688carrie
user-defined User-Agent:91704688carrie
> voip sip acc 1 -P carrie_1 -r 1 -d 172.16.3.133
> voip sip acc 1 -t 30
> voip sip misc -h 1
> voip sip acc 1 -v
index        :  1
profile      :  carrie_1
reg mode     :  1 | reg. [No]
alias_ip_idx      :  0
backup list       :
domain       :  172.16.3.133
proxy        :   | outbound [No] | DNS-SRV [No]
noreg call   :  No
disp. Name   :
acc number   :  ---
auth. ID     :   | [disable]
expiry       :  3600
NAT mode     :  0
ring ports   :  0
ring pat.    :  1
call fwd mode     :  0
call fwd url      :
call fwd timer    :  30
Broadsoft    :  disable
Italian ITSP modification: disable
```

Telnet Command: voip secure

This command allows users to enable or disable secure phone feature, and SAS voice prompt.

Syntax

voip secure general *[-<command> <parameter> | ...]*

Syntax Description

Parameter	Description
-e <0/1>	Enable / disable secure phone feature. 0 - disable 1 - enable
-p <0/1>	Enable /disable SAS voice prompt. 0 - disable 1 - enable
-v	view only secure phone general settings

Example

```
> voip secure general -v
secure phone feature is disabled
SAS voice prompt is enabled
> voip secure general -p  0
SAS voice prompt is disabled
```

Telnet Command: vlan group

This command allows you to set VLAN group. You can set four VLAN groups. Please run *vlan restart* command after you change any settings.

Syntax

vlan group *id <set/set_ex> <p1/p2/p3/p4/p5/s1/s2/s3/s4/5gs1/5gs2/5gs3/5gs4>*

Syntax Description

Parameter	Description
id	It means the group 0 to 7 for VLAN.
set	It indicates each port can join more than one VLAN group.
set_ex	It indicates each port can join one VLAN group at one time.
p1/p2/p3/p4/p5	It indicates LAN port 1 to LAN port 5. To group LAN1, LAN2, LAN3, LAN4 and/or LAN5 under one VLAN group, please type the port number(s) you want.
s1/s2/s3/s4	It is only available for WALN models.
5gs1/5gs2/5gs3/5gs4	It is only available for WALN n plus models.

Example

```
> vlan group 3 set p1 s3 s4
 VLAN   p1   p2   p3   p4   s1   s2   s3   s4  5gs1  5gs2  5gs3  5gs4
 ------------------------------------------------------------------
   3    V                         V    V
>
```

Telnet Command: vlan off

This command allows you to disable VLAN function.

Syntax

vlan off

Example

```
> vlan off
```

```
 VLAN  is Disable!
  Force subnet LAN2/3/4/5/6/7/8/9/10/11/12/13/14/15/16 to be disabled!!
```

Telnet Command: vlan on

This command allows you to enable VLAN function.

Syntax

vlan on

Example

```
> vlan on
 VLAN is Enable!
```

Telnet Command: vlan pri

This command is used to define the priority for each VLAN profile setting.

Syntax

vlan pri *n pri_no*

Syntax Description

Parameter	Description
n	It means VLAN ID number. n=VLAN ID number (from 0 to 7).
pri_no	It means the priority of VLAN profile. pri_no=0 ~7 (from none to highest priority).

Example

```
> vlan pri 1 2
 VLAN1: Priority=2
```

Telnet Command: vlan restart

This command can make VLAN settings restarted with newest configuration.

Syntax

vlan restart

Example

```
> vlan restart ?
 VLAN restarts!!!
```

Telnet Command: vlan status

This command display current status for VLAN.

Syntax

vlan status

Example

```
> vlan status
VLAN  is Disable :
```

```
-------------------------------------------------------------------------
------
VLAN Enable VID  Pri   p1 p2 p3 p4 p5 s1 s2 s3 s4 5gs1 5gs2 5gs3 5gs4  subnet
-------------------------------------------------------------------------
------
 0     OFF    0   0                                                2:LAN2
 1     OFF    0   0                                                1:LAN1
 2     OFF    0   0                                                1:LAN1
 3     OFF    0   0    V                 V  V                     1:LAN1
 4     OFF    0   0                                                1:LAN1
 5     OFF    0   0                                                1:LAN1
 6     OFF    0   0                                                1:LAN1
 7     OFF    0   0                                                1:LAN1
 8     OFF    0   0                                                1:LAN1
 9     OFF    0   0                                                1:LAN1
10     OFF    0   0                                                1:LAN1
11     OFF    0   0                                                1:LAN1
12     OFF    0   0                                                1:LAN1
13     OFF    0   0                                                1:LAN1
14     OFF    0   0                                                1:LAN1
15     OFF    0   0                                                1:LAN1
-------------------------------------------------------------------------
------
 Note: they are only untag for s1/s2/s3/s4/5gs1/5gs2/5gs3/5gs4, but they can
joi
n tag vlan with lan ports.
 Permit untagged device in P1 to access router: ON....
```

Telnet Command: vlan subnet

This command is used to configure the LAN interface used by the VLAN group.

Syntax

vlan subnet group_id <*1/2/3/4/5/6/7/8*>

Syntax Description

Parameter	Description
<*1/2/3/4/5/6/7/8*>	It means interfaces, LAN1 ~ LAN8.

Example

```
> vlan subnet group_id 2
% Vlan Group-0 using LAN2      !

 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
```

Telnet Command: vlan submode

This command changes the VLAN encapsulation mechanisms in the LAN driver.

Syntax

vlan submode <*on/off/status*>

Syntax Description

Parameter	Description
on	It means to enable the promiscuous mode.
off	It means to enable the normal mode.
status	It means to display if submode is normal mode or promiscuous mode.

Example

```
> vlan submode status
% vlan subnet mode : normal mode
> vlan submode on
% vlan subnet mode modified to promiscuous mode.
> vlan submode status
% vlan subnet mode : promiscuous mode
```

Telnet Command: vlan tagged

This command is used to enable or disable the incoming of untagged packets.

Syntax

vlan tagged <*n*> <*on/off*>
vlan tagged <*unlimited*> <*on/off*>
vlan tagged <*p1_untag*> <*on/off*>

Syntax Description

Parameter	Description
<*n*>	It means VLAN number. The ranage is from 0 to 15.
<*on/off*>	It means to enable/disable the tagged VLAN.
<*unlimited*> <*on/off*>	unlimited on: It allows the incoming of untagged packets even all VLAN are tagged. unlimited off: It does not allows the incoming of untagged packets.
<*p1_untag*> <*on/off*>	P1_untag on: It allows the incoming of untagged packets form LAN port 1. P1_untag off: It does not allow the incoming of untagged packets from LAN port 1.

Example

```
> vlan tagged unlimited on
 Unlimited mode is ON
>
```

Telnet Command: vlan vid

This command is used to configure VID number for each VLAN channel.

Syntax

vlan vid <*n*> <*vid_no*>

Syntax Description

Parameter	Description
<*n*>	It means VLAN channel.

	The ranage is from 0 to 7.
<*vid_no*>	It means the value of VLAN ID. Type the value as the VLAN ID number. The range is form 0 to 4095.

Example

```
> vlan vid 1 4095
 VLAN1, vid=4095
```

Telnet Command: vlan sysvid

This command is used to modify and show the scope (reserved 78) of the VLAN IDs used internally by the system.

Syntax

vlan sysvid <*show* / *n*>

Syntax Description

Parameter	Description
show	It means to show the scope of VLAN ID used internally.
n	It means the value to be set as VLAN ID. The range is from 0 to 3980.

Example

```
> vlan sysvid 100
 You have set system VLAN ID to range: 100 ~ 215,
 We recommend that you reboot the system now.

> vlan sysvid 200
 You have set system VLAN ID to range: 200 ~ 315,
 We recommend that you reboot the system now.
> vlan sysvid show
 The system VLAN ID is in range: 200 ~ 263
```

Telnet Command: vpn l2lset

This command allows users to set advanced parameters for LAN to LAN function.

Syntax

vpn l2lset <*list index*> **peerid** <*peerid*>
vpn l2lset <*list index*> **localid** <*localid*>
vpn l2lset <*list index*> **main** <*auto/proposal index*>
vpn l2lset <*list index*> **aggressive** <*desg1/desg2/aesg1/aesg2/aesg5/aesg14*>
vpn l2lset <*list index*> **pfs** <*on/off*>
vpn l2lset <*list index*> **phase1** <*lifetime*>
vpn l2lset <*list index*> **phase2** <*lifetime*>
vpn l2lset <*list index*> **x509localid** <*0/1*>
vpn l2lset <*list index*> **compress** <*0/1/2/3*>

Syntax Description

Parameter	Description

<list index>	It means the index number of L2L (LAN to LAN) profile.
peerid <peerid>	It means the peer identity for aggressive mode.
localid <localid>	It means the local identity for aggressive mode.
main <auto/proposal index>	It means to choose proposal for main mode. <auto>: Choose default proposals. <proposal index>: choose specified proposal.
aggressive <desg1/desg2/aesg1/aesg2/ aesg5/aesg14>	It means the chosen DH group for aggressive mode.
pfs <on/off>	It means “perfect forward secrete”. <on/off>: Turn on or off the PFS function.
phase1 <lifetime> / *phase2 <lifetime>*	It means phase 1 or 2 of IKE. <lifetime>: Set the lifetime value (in second) for phase 1 and phase 2.
x509localid <0/1>	It means to enable (1) or disable (0) the X509 local ID.
compress <0/1/2/3>	Select a method to compress the packets to reduce the bandwidth usage while transferring the compressed packets. <0/1/2/3> - Available values are: 0 : Disable the function of compression. 1 : No . Use the Adaptive method for packet compression. 2 : LZ4. Use the algorithm of LZ4 for packet compression. 3 : LZO. For future use.

Example

```
> VPN l2lset 1 peerid 10226
```

Telnet Command: vpn l2lDrop

This command allows users to terminate current LAN to LAN VPN connection.

Syntax

vpn l2lDrop *l2lname <name>*
vpn l2lDrop *l2lidx <idx>*
vpn l2lDrop *h2lname <name>*
vpn l2lDrop *h2idx <idx>*
vpn l2lDrop *<ifno>*
vpn l2lDrop

Syntax Description

Parameter	Description
l2lname <name>	It means to drop VPN connection by specifying the name of the LAN to LAN profile.
l2lidx <idx>	It means to drop VPN connection by specifying the index number of LAN to LAN profile.
h2lname <name>	It means to drop VPN connection by specifying the name of the remote dial-in user profile.
h2idx <idx>	It means to drop VPN connection by specifying the index number of the remote dial-in user profile.
<ifno>	It means to drop VPN connection by using VPN ifno.
l2lDrop	It means to drop all VPN connections.

Example

```
> vpn l2lDrop
 Drop all VPN
```

Telnet Command: vpn l2lDialout

This command allows users to terminate current LAN to LAN VPN connection (dial-out).

Syntax

vpn l2lDialout <*idx*>
vpn l2lDialout *list*

Syntax Description

Parameter	Description
l2lDialout <*idx*>	It means to build VPN connection by specifying the index number of dial-out LAN to LAN profile. <idx>: Enter an index number (1 to 64).
list	It means to display LAN to LAN profiles (enabled).

Example

```
> vpn l2lDialout list
 List LAN to LAN profiles of the status as Enable
Index  Profile    Status
```

Telnet Command: vpn dinset

This command allows users to configure setting for remote dial-in VPN profile.

Syntax

vpn dinset <*list index*>
vpn dinset <*list index*> <*on/off*>
vpn dinset <*list index*> **username** <*USERNAME*>
vpn dinset <*list index*> **password** <*PASSWORD*>
vpn dinset <*list index*> **motp** <*on/off*>
vpn dinset <*list index*> **pin_secret** <*pin*> <*secret*>
vpn dinset <*list index*> **timeout** <*0~9999*>
vpn dinset <*list index*> **dintype** <*Type*> <*on/off*>
vpn dinset <*list index*> **subnet** <*0~8*>
vpn dinset <*list index*> **assignip** <*on/off*>
vpn dinset <*list index*> **srnode** <*on/off*>
vpn dinset <*list index*> **remoteip** <*Remote_Client_IP_Address*>
vpn dinset <*list index*> **peer** <*Peer_ID*>
vpn dinset <*list index*> **naming** <*pass/block*>
vpn dinset <*list index*> **multicastvpn** <*pass/block*>
vpn dinset <*list index*> **prekey** <*on/off*>
vpn dinset <*list index*> **assignkey** <*Pre_Shared_Key*>
vpn dinset <*list index*> **digsig** <*on/off*>
vpn dinset <*list index*> **ipsec** <*Method*> <*on/off*>
vpn dinset <*list index*> **localid** <*Local_ID*>

Syntax Description

Parameter	Description
<list index>	It means the index number of the profile.
<list index> <on/off>	It means to enable or disable the profile. <list index> - Enter the index number of the VPN profile. <on/off> - on: Enable; off: Disable.
<list index> motp <on/off>	It means to enable or disable the authentication with mOTP function. <list index> - Enter the index number of the VPN profile. <on/off> - on: Enable; off: Disable.
<list index> pin_secret<pin> <secret>	It means to set PIN code with secret. <list index> - Enter the index number of the VPN profile. <pin> - Type the code for authentication (e.g, 1234). <secret> - Use the 32 digit-secret number generated by mOTP in the mobile phone (e.g., e759bb6f0e94c7ab4fe6)
<list index> timeout <0~9999>	It means to set idle timeout. The default is 300 (seconds). <list index> - Enter the index number of the VPN profile. <0~9999> - Enter a value.
<list index> dintype <Type> <on/off>	It means to enable/disable the allowed dial-in type. <list index> - Enter the index number of the VPN profile. <Type> - 0 to 3. In which, 0 means PPTP; 1 means IPsec Tunnel; 2 means L2TP with IPsec Policy; 3 means SSL Tunnel. <on/off> - on: Enable; off: Disable.
vpn dinset <list index> subnet <0~8>	It means to set the LAN subnet for the selected VPN profile. <list index> - Enter the index number of the VPN profile. <0~8> - Enter a number to specify the LAN subnet. In which, 0 means LAN1 1 means LAN2 2 means LAN3 3 means LAN4 4 means LAN5 5 means LAN6 6 means LAN7 7 means LAN8 8 means DMZ
vpn dinset <list index> assignip <on/off>	It means to enable or disable the function of assigning the static IP address. <list index> - Enter the index number of the VPN profile. <on/off> - on: Enable; off: Disable.
vpn dinset <list index> srnode <on/off>	It means to enable or disable the function of specifying the remote node. <list index> - Enter the index number of the VPN profile. <on/off> - on: Enable; off: Disable.
vpn dinset <list index> remoteip <Remote_Client_IP_Address >	It means to enable or disable the function of assigning remote client IP. <list index> - Enter the index number of the VPN profile. <Remote_Client_IP_Address> - Set the IP address of the remote client.
vpn dinset <list index> peer	It means to assign the peer ID.

<Peer_ID>	<list index> - Enter the index number of the VPN profile. <Peer_ID> - Enter the string of the peer ID.
vpn dinset <list index> naming <pass/block>	It means to set the Netbiod Naming Packet for the VPN profile. <list index> - Enter the index number of the VPN profile. <pass/block> - Let the packet pass or block the packet.
vpn dinset <list index> multicastvpn <pass/block>	It means to set the multicast via VPN for IGMP, IP-CAM, DHCP relay, and etc. <list index> - Enter the index number of the VPN profile. <pass/block> - Let the packet pass or block the packet.
vpn dinset <list index> prekey <on/off>	It means to enable/disable the Pre-Shared Key setting for IKE Authentication Method. <list index> - Enter the index number of the VPN profile. <on/off> - on: Enable; off: Disable.
vpn dinset <list index> assignkey <Pre_Shared_Key>	It means to set the Pre-Shared Key for IKE Authentication Method. <list index> - Enter the index number of the VPN profile. <Pre_Shared_Key> - Enter a string as PSK.
vpn dinset <list index> digsig <on/off>	It means to enable/disable the digital signature (X.509) for IKE Authentication Method. <list index> - Enter the index number of the VPN profile. <on/off> - on: Enable; off: Disable.
vpn dinset <list index> ipsec <Method> <on/off>	It means to enable / disable and set the protocol for IPsec security method. <list index> - Enter the index number of the VPN profile. <Method> - Enter a number (0 to 3) to specify the protocol. 0 means Medium(AH) High(ESP), 1 means DES 2 means 3DES 3 means AES <on/off> - on: Enable; off: Disable.
vpn dinset <list index> localid <Local_ID>	It means to set local ID (optional) for IPsec Security Method. <list index> - Enter the index number of the VPN profile. <local_ID> - Enter the string of local ID.

Example

```
> vpn dinset 1
Dial-in profile index 1
Profile Name: ???
Status: Deactive
Mobile OTP: Disabled
Password:
Idle Timeout: 300 sec
> vpn dinset 1 on
% set profile active
> vpn dinset 1 motp on
% Enable Mobile OTP mode!>
> vpn dinset 1 pin_secret 1234 e759bb6f0e94c7ab4fe6
> vpn dinset 1
Dial-in profile index 1
Profile Name: ???
Status: Active
Mobile OTP: Enabled
PIN: 1234
Secret: e759bb6f0e94c7ab4fe6
Idle Timeout: 300 sec
```

Telnet Command: vpn subnet

This command allows users to specify a subnet selection for the specified remote dial-in VPN profile.

Syntax

vpn subnet <*index*><*1/2/3/4/5/6/7/8*>

Syntax Description

Parameter	Description
<*index*>	It means the index number of the VPN profile.
<*1/2/3/4/5/6/7/8*>	1 – it means LAN1 2 – it means LAN2. 3 – it means LAN3 4 – it means LAN4. 5 – it means LAN5 6 – it means LAN6. 7 – it means LAN7. 8 – it means LAN8.

Example

```
> vpn subnet 1 2
>
```

Telnet Command: vpn setup

This command allows users to setup VPN for different types.

Syntax

Command of PPTP Dial-Out

vpn setup <*index*> <*name*> **pptp_out** <*ip*> <*usr*> <*pwd*> <*nip*> <*nmask*>

Command of IPSec Dial-Out

vpn setup <*index*> <*name*> **ipsec_out** <*ip*> <*key*> <*nip*> <*nmask*>

Command of L2Tp Dial-Out

vpn setup <*index*> <*name*> **l2tp_out** <*ip*> <*usr*> <*pwd*> <*nip*> <*nmask*>

Command of Dial-In

vpn setup <*index*> <*name*> **dialin** <*ip*> <*usr*> <*pwd*> <*key*> <*nip*> <*nmask*>

Command of 6in4

vpn setup <*index*> <*name*> **6in4** <*enable*> <*lan*> <*rem_lan_ip*> <*lan_pfx*> <*pfx_len*><*rem_pfx*> <*pre_len*> <*ttl*>

Syntax Description

Parameter	Description
For PPTP Dial-Out	
<*index*>	It means the index number of the profile.
<*name*>	It means the name of the profile.
<*ip*>	It means the IP address to dial to.

<*usr*> <*pwd*>	It means the user and the password required for the PPTP connection.
<*nip*> <*nmask*>	It means the remote network IP and the mask. e.g., vpn setup 1 name1 pptp_out 1.2.3.4 vigor 1234 192.168.1.0 255.255.255.0
For IPsec Dial-Out	
<*index*>	It means the index number of the profile.
<*name*>	It means the name of the profile.
<*ip*>	It means the IP address to dial to.
<*key*>	It means the value of IPsec Pre-Shared Key.
<*nip*> <*nmask*>	It means the remote network IP and the mask. e.g., vpn setup 1 name1 ipsec_out 1.2.3.4 1234 192.168.1.0 255.255.255.0
For L2TP Dial-Out	
<*index*>	It means the index number of the profile.
<*name*>	It means the name of the profile.
<*ip*>	It means the IP address to dial to.
<*usr*> <*pwd*>	It means the user and the password required for the L2TP connection.
<*nip*> <*nmask*>	It means the remote network IP and the mask. e.g.,, vpn setup 1 name1 l2tp_out 1.2.3.4 vigor 1234 192.168.1.0 255.255.255.0
For Dial-In	
<*index*>	It means the index number of the profile.
<*name*>	It means the name of the profile.
<*ip*>	It means the IP address allowed to dial in.
<*usr*> <*pwd*>	It means the user and the password required for the PPTP/L2TP connection.
<*key*>	It means the value of IPsec Pre-Shared Key.
<*nip*> <*nmask*>	It means the remote network IP and the mask. e.g., vpn setup 1 name1 dialin 1.2.3.4 vigor 1234 abc 192.168.1.0 255.255.255.0
For 6in4	
<*index*>	It means the index number of the profile.
<*name*>	It means the name of the profile.
<*enable*>	It means to enable (1) or disable (0) the profile.
<*lan*>	Choose the LAN interface (0 to 16) or DMZ (17).
<*rem_lan_ip*>	It means to specify the remote LAN IP address.
<*lan_pfx*>	It means to set the LAN IPv6 prefix.
<*pfx_len*>	It means to set the IPv6 prefix length (32 to 128).
<*rem_pfx*>	It means to set remote IPv6 prefix.
<*pre_len*>	It means to set remote IPv6 prefix length (32 to 128).
<*ttl*>	It means to set the tunnel TTL (1 to 255). Ex. vpn setup 1 name1 6in4 1 1 192.168.10.1 193:: 64 192:: 64 255

Example

```
> vpn setup 1 name1 dialin 1.2.3.4 vigor 1234 abc 192.168.1.0 255.255.255.0
% Profile Change Log ...

% Profile Index : 1
% Profile Name : name1
% Username : vigor
% Password : 1234
% Pre-share Key : abc
% Call Direction : Dial-In
% Type of Server :  ISDN PPTP IPSec L2TP
% Dial from : 1.2.3.4
% Remote NEtwork IP : 192.168.1.0
% Remote NEtwork Mask : 255.255.255.0
>
```

Telnet Command: vpn option

This command allows users to configure settings for LAN to LAN profile.

Syntax

vpn option <*index*> <*cmd1*>=<*param1*> *[*<*cmd2*>=<*para2*> | ... *]*

Syntax Description

Parameter	Description
<*index*>	It means the index number of the profile. Available index numbers: 1 ~ 32
For Common Settings	
<*index*>	It means the index number of the profile.
pname	It means the name of the profile.
ena	It means to enable or disable the profile. on - Enable off - Disable
thr	It means the way that VPN connection passes through. Available settings are wlf, wlo, w2f, w2o and .... w1f - WAN1 First. w1o - WAN1 Only. w2f - WAN2 First. w2o - WAN2 Only. w1oB - WAN1 Only (Only establish VPN if WAN2 down) w2oB - WAN2 Only (Only establish VPN if WAN1 down)
thr_ai	It means connection through wan IP alias. 0 - do not use alias. 1/2/.../31 - Use the allias IP (index number 1 to 31).
nnpkt	It means the NetBios Naming Packet. on - Enable the function to pass the packet. off - Disable the function to block the packet.
dir	It means the call direction. Available settings are b, o and i. b - Both o - Dial-Out

	i – Dial-In.
idle	It means Always on and Idle Time out. Available values include: -1 – it means always on for dial-out. 0 – it means always on for dial-in. Other numbers (e.g., idle=200, idle=300, idle=500) mean the router will be idle after the interval (seconds) configured here.
palive	It means to enable PING to keep alive. -1 – disable the function. 1,2,3,4 – Enable the function and PING IP 1.2.3.4 to keep alive.
monitor	It means to enable Quality Monitoring. On - Turn on Quality Monitoring. Off - Turn off Quality Monitoring.
For Dial-Out Settings	
ctype	It means “Type of Server I am calling”. ctype=t means PPTP. ctype=s means IPSec. ctype= l means L2TP(IPSec Policy None). ctype= l1 means L2TP(IPSec Policy Nice to Have). ctype= l2 means L2TP(IPSec Policy Must). ctype= c means SSL Tunnel ctype=o [0/1/2/3/4/5] [0/1/2/3] means Openvpn TCP Tunnel[AES128/AES256/NONE/AES128_GCM/AES192_GCM/AES256_GCM] [SHA1/SHA256/NONE/SHA512] ctype= u[0/1/2/3/4/5][0/1/2/3] means Openvpn UDP Tunnel[AES128/AES256/NONE/AES128_GCM/AES192_GCM/AES256_GCM][SHA1/SHA256/NONE/SHA512]
dialto	It means Server IP/Host Name for VPN. (such as draytek.com or 123.45.67.89).
ltype	It means Link Type. “ltype=0” means “Disable”. “ltype=1” means “64kbps”. “ltype=2” means “128kbps”. “ltype=3” means “BOD”.
oname	It means Dial-Out Username. “oname=admin” means to set Username = admin.
opwd	It means Dial-Out Password “opwd=1234” means to set Password = 1234.
pauth	It means PPP Authentication. “pauth=pc” means to set PPP Authentication = PAP&CHAP. “pauth=p” means to set PPP Authentication = PAP Only
ovj	It means VJ Compression. “ovj=on/off” means to enable/disable VJ Compression.
okey	It means IKE Pre-Shared Key. “okey=abcd” means to set IKE Pre-Shared Key = abcd.
ometh	It means IPSec Security Method. “ometh=ah[a/s/S]” means AH auto/sha1/Sha2. “ometh=espd/espda[a/s/S/” means ESP DES without/with Authentication auto/sha1/Sha2 “ometh=esp3/esp3a[a/s/S]/” means ESP 3DES without/with Authentication auto/sha1/Sha2 “ometh= espa[1/9/2]/espaa[a/s/S][1/9/2] ” means ESP AES[128/192/256] without/with Authentication auto/sha1/Sha2

	(AES128/192/256).
tls_auth	It means to Turn off/on tls-auth option.
tls_auth_key	It means to set OpenVPN tls-auth option key. tls-auth_key=<1/2/3> Enter the number to select the PSK.
tls_key_show	It means to show the selected PSK.
sch	It means Index(1-15) in Schedule Setup. sch=1,3,5,7 Set schedule 1->3->5->7
ikemode	It means IKE phase 1 mode. ikemode=m, Main mode. ikemode=a, Aggressive mode.
ikeid	It means IKE Local ID. “ikeid=vigor” means Set Local ID = vigor.
oport	It means OpenVPN Dial-Out Port. oport=1194. Set OpenVPN Dial-Out Port = 1194
For Dial-In Settings	
itype	It means Allowed Dial-In Type. Available settings include: “itype=t” means PPTP. “itype=s” means IPSec. “itype=L”means L2TP (None). “itype=l1” means L2TP(Nice to Have). “itype=l2” means L2TP(Must). “itype=c” means SSL Tunnel “itype=i” means Openvpn UDP/TCP “itype=i[0/1/2][0/1/2]" means Tunnel[AES128/AES256/NONE][SHA1/SHA256/NONE]/ “itype=o[0/1/2][0/1/2]” means Openvpn TCP Tunnel[AES128/AES256/NONE][SHA1/SHA256/NONE]/ “itype=u[0/1/2][0/1/2]” means Openvpn UDP Tunnel[AES128/AES256/NONE][SHA1/SHA256/NONE]
peer	It means specify Peer VPN Server IP for Remote VPN Gateway. Type “203.12.23.48” means to allow VPN dial-in with IP address of 203.12.23.48. Type “off” means any remote IP is allowed to dial in.
peerid	It means the peer ID for Remote VPN Gateway. Type “draytek” means the word is used as local ID.
iname	It means Dial-in Username. “iname=admin” means to set username as “admin”.
ipwd	It means Dial-in Password. “ipwd=1234” means to set password as “1234”.
ivj	It means VJ Compression. “ivj=on/off” means to enable /disable VJ Compression.
ikey	It means IKE Pre-Shared Key. “ikey=abcd” means to set IKE Pre-Shared Key = abcd.
imeth	It means IPSec Security Method “imeth=h” means “Allow AH”. “imeth=d” means “Allow DES”. “imeth=3” means “Allow 3DES”. “imeth=a” means “Allow AES.
For TCP/IP Settings	
mywip	It means My WAN IP.

	“mywip=1.2.3.4” means to set My WAN IP as “1.2.3.4”.
rgip	It means Remote Gateway IP. “rgip=1.2.3.4” means to set Remote Gateway IP as “1.2.3.4”.
rnip	It means Remote Network IP. “rnip=1.2.3.0” means to set Remote Network IP as “1.2.3.0”.
rnmask	It means Remote Network Mask. “rnmask=255.255.255.0” means to set Remote Network Mask as “255.255.255.0”.
lnip	It means Local Network IP. "lnip=1.2.3.0" means to set Local Network IP as "1.2.3.0".
lnmask	It means Local Network Mask. "lnmask=255.255.255.0" means to set Local Network Mask as "255.255.255.0".
rip	It means RIP Direction. “rip=d” means to set RIP Direction as “Disable”. “rip=t” means to set RIP Direction as “TX”. “rip=r” means to set RIP Direction as “RX”. “rip=b” means to set RIP Direction as “Both”.
mode	It means the option of “From first subnet to remote network, you have to do”. “mode=r” means to set Route mode. “mode=n” means to set NAT mode.
droute	It means to Change default route to this VPN tunnel (Only single WAN supports this). droute=on/off means to enable/disable the function.

Example

```
> vpn option 1 idle=250
% Change Log..

% Idle Timeout = 250
```

Telnet Command: vpn mroute

This command allows users to list, add or delete static routes for a certain LAN to LAN VPN profile.

Syntax

vpn mroute <*index*> **list**

vpn mroute <*index*> **add** <*network ip*>/<*mask*>

vpn mroute <*index*> **del** <*network ip*>/<*mask*>

Syntax Description

Parameter	Description
list	It means to display all of the route settings.
add	It means to add a new route.
del	It means to delete specified route.
<*index*>	It means the index number of the profile. Available index numbers: 1 ~ 32

<network ip>/<mask>	Enter the IP address with the network mask address.

Example

```
> vpn mroute 1 add 192.168.5.0/24
% 192.168.5.0/24
% Add new route 192.168.5.0/24 to profile 1
```

Telnet Command: vpn list

This command allows users to view LAN to LAN VPN profiles.

Syntax

vpn list <*index*> **all**
vpn list <*index*> **com**
vpn list <*index*> **out**
vpn list <*index*> **in**
vpn list <*index*> **net**

Syntax Description

Parameter	Description
all	It means to list configuration of the specified profile.
com	It means to list common settings of the specified profile.
out	It means to list dial-out settings of the specified profile.
in	It means to list dial-in settings of the specified profile.
net	It means to list Network Settings of the specified profile.
<index>	It means the index number of the profile. Available index numbers: 1 ~ 32

Example

```
> vpn list 32 all
% Common Settings

% Profile Name            : ???
% Profile Status          : Disable
% Netbios Naming Packet   : Pass
% Call Direction          : Both
% Idle Timeout            : 300
% PING to keep alive      : off

% Dial-out Settings

% Type of Server          : PPTP
% Link Type:              : 64k bps
% Username                : ???
% Password                :
% PPP Authentication      : PAP/CHAP
% VJ Compression          : on
% Pre-Shared Key          :
% IPSec Security Method   : AH
% Schedule                : 0,0,0,0
```

```
% Remote Callback          : off
% Provide ISDN Number      : off
% IKE phase 1 mode         : Main mode
% IKE Local ID             :


% Dial-In Settings

--- MORE ---   ['q': Quit, 'Enter': New Lines, 'Space Bar': Next Page] ---
> vpn list 1 com
% Common Settings

% Profile Name        : ???
% Profile Status        : Disable
% Netbios Naming Packet    : Pass
% Call Direction      : Both
% Idle Timeout        : 300
% PING to keep alive  : off
>
```

Telnet Command: vpn remote

This command allows users to enable or disable *PPTP/IPSec/L2TP* VPN service.

Syntax

vpn remote <*PPTP/IPsec/L2TP/SSLVPN*> <*on/off*>

Syntax Description

Parameter	Description
PPTP/IPSec/L2TP/SSLVPN	There are four types to be selected.
on/off	on - enable VPN remote setting. off - disable VPN remote setting.

Example

```
> vpn remote PPTP on
Set PPTP VPN Service : On

Please restart the router!!
```

Telnet Command: vpn trunk

This command allows users to configure VPN Backup, VPN load balance, GRE over IPsec, and Binding tunnel policy.

vpn trunk show_usable

vpn trunk backup *<add/del> <name> <Member#1> <Member#2>*

vpn trunk backup more_syslog *<ON/OFF>*

vpn trunk backup ERD *<name> <Normal/Recover/Resume><second>*

vpn trunk lb *<add/del> <name> <Member#1> <Member#2>*

vpn trunk lb more_syslog *<ON/OFF>*

vpn trunk lb algorithm *<name> <RR>*

vpn trunk lb algorithm *<name><W-RR><Auto> <AccordingRatio> <Member1:Member2>*

vpn trunk lb algorithm *<name><Fastest>*

vpn trunk bind usage *<BindIndex>*

vpn trunk bind show *<LoadBalanceName>*

vpn trunk bind reset_default

vpn trunk bind more_syslog *<ON/OFF>*

vpn trunk bind set *<BindIndex> <ACT> <TrunkName> <Member> <SrcIp:A~B> <DstI p:A~B> <DstPort:A~B> <Proto> <Frag>*

vpn trunk bind insert *<After_BindIndex> <ACT> <TrunkName> <Member> <SrcIp:A~B> <DstIp:A~B> <DstPort:A~B> <Proto> <Frag>*

vpn trunk SetGre show *<Dialout_Index>*

vpn trunk SetGre *<Active/In-active><Dialout_Index><GRE_MyIP><GRE_PeerIP><Logical_Traffic>*

vpn trunk An_Gre GreIPsecAnalyze *<ON/OFF>*

Syntax Description

Parameter	Description
show_usable	Display a list of LAN to LAN dial out profiles.
backup <add/del> <name> <Member#1> <Member#2>	Set multiple VPN tunnels (LAN to LAN profiles) as backup tunnel. add/del - Add or delete a profile for used in VPN Trunk. name – Specify the name of the VPN trunk. Member#1 – Indicate the first LAN to LAN profile. Member#2 – Indicate the second LAN to LAN profile.
backup more_syslog <ON/OFF> *lb more_syslog <ON/OFF>* *bind more_syslog <ON/OFF>*	These commands are used for RD debug.
backup ERD <name> <Normal/Recover/Resume> <second>	ERD means Environment Recovers Detection. name – Specify the name of the VPN trunk. Normal – Indicate the Normal mode. All dial-out VPN TRUNK backup profiles will be activated alternatively. Recover – Indicate the duration of VPN backup operation. Resume – When VPN connection breaks down or disconnects, Member 1 will be the top priority for the system to do VPN connection. Second – “0” means to dial each six seconds automatically. “60 ~ 2147483647” means to early handle for less than 30 seconds within designated time.
lb <add/del> <name> <Member#1> <Member#2>	It means to create VPN trunk with load balance. add/del - Add or delete a profile for used in VPN Trunk. name – Specify the name of the VPN trunk.

	Member#1 – Indicate the first LAN to LAN profile. Member#2 – Indicate the second LAN to LAN profile.
lb algorithm <name> <RR/W-RR/Fastest>	Set multiple VPN tunnels for using as traffic load balance tunnel. Such command is to configure the algorithm (with round robin mode) of Load Balance. name – Specify the name of the VPN trunk. RR – It means round robin mode. All of the dial-out profiles will be taken turns equally.
lb algorithm <name><W-RR><Auto> <AccordingRatio> <Member1:Member2>	Such command is to configure the algorithm (with round robin mode) of Load Balance. name – Specify the name of the VPN trunk. W-RR – It means weighted round robin mod based on speed ratio. ● *Auto - the speed must be based on Lay2.* ● *AccordingRatio – the speed must be based on given ratio.* Member#1 – Inidcate the first LAN to LAN profile. Member#2 – Indicate the second LAN to LAN proifle.
lb algorithm <name><Fastest>	Such command is to configure the algorithm (with fastest mode) of Load Balance. Most of traffics will be led to the channel with the fastest connection. name – Specify the name of the VPN trunk.
bind usage <BindIndex>	Display detailed information for VPN Load Balance Tunnel Bind. BindIndex – Indicate the index number of the tunnle bind.
bind show <LoadBalanceName>	Display the bind information for VPN Load Balance profile. LoadBalanceName – type the name of VPN Load Balance profile
bind reset_default	Reset the bind tunnel for VPN load balance to factory reset settings.
bind set <BindIndex> <ACT> <TrunkName> <Member> <SrcIp:A~B> <DstI p:A~B> <DstPort:A~B> <Proto> <Frag>	Set the binding tunnel policy. BindIndex – Indicate the index number (1 ~ 64) for the tunnel to be bound. `vpn trunk bind set 1 y vpnlb 1 192.168.10.1~192.168.10.2 192.168.99.1~192.168.99.254 1~65535 0 OFF` ACT – Specify the action. “y” means active; “n” means inactive or delete. TrunkName - TrunkName - Specify the name of the VPN trunk created by using “vpn trunk lb” command. Member – Specify the index number of the LAN to LAN (dial-out) profile to be bound. SrcIp:A~B – Specify the source IP range (e.g., 192.168.10.0~192.168.10.255. DstI p:A~B - Specify the destination IP range (e.g., 192.168.1.0~192.168.1.255. DstPort:A~B – Specify the destination port range (1~65535). Proto – Specify the protocol. 0 – any 1 – ICMP 2 – IGMP 6 – TCP 17 – UDP 255 – TCP/UDP Frag – “ON” means to bind the fragmented packet; “OFF” means not to care. It is the default setting.
bind insert <After_BindIndex> <ACT> <TrunkName> <Member>	It is used to insert additional load balance policy into an existing policy. After_BindIndex - Specify an index number that new additional

<SrcIp:A~B> <DstIp:A~B> <DstPort:A~B> <Proto> <Frag>	policy should be inserted before. See the following example: *vpn trunk bind insert 1 y vpnlb 2 192.168.10.3~192.168.10.200 192.168.99.200~192.168.99.200 80~80 TCP OFF* ACT – Specify the action. “y” means active; “n” means inactive or delete. TrunkName - Specify the name of the VPN trunk. Member – Specify the index number of the LAN to LAN (dial-out) profile to be bound. SrcIp:A~B – Specify the source IP range (e.g., 192.168.10.0~192.168.10.255. DstI p:A~B - Specify the destination IP range (e.g., 192.168.1.0~192.168.1.255. DstPort:A~B – Specify the destination port range (1~65535). Proto – Specify the protocol. 0 – any 1 – ICMP 2 – IGMP 6 – TCP 17 – UDP 255 – TCP/UDP Frag – “ON” means to bind the fragmented packet; “OFF” means not to care. It is the default setting.
SetGre show <Dialout_Index>	Display the GRE over IPSec settings in specified LAN to LAN profile. Dialout_Index – Index number of the LAN to LAN (dial-out) profile.
SetGre <Active/In-active><Dialout_Index><GRE_MyIP><GRE_PeerIP><Logical_Traffic>	Active/In-active - Specify the action. “y” means active; “n” means inactive. Dialout_Index – Index number of the LAN to LAN (dial-out) profile. GRE_MyIP –Enter the virtual IP for router itself for verified by peer. GRE_PeerIP –Enter the virtual IP of peer host for verified by router. Logical_Traffic - Specify the action for RFC2890. “y” means active; “n” means inactive.
An_Gre GreIPsecAnalyze *<ON/OFF>*	These commands are used for RD debug.

Example

```
> vpn setup 1 name1 pptp_out 1.2.3.4 vigor 1234 192.168.1.0 255.255.255.0
% Profile Change Log ...

% Profile Index : 1
% Profile Name : name1j
% Username : vigor
% Password : 1234
% Call Direction : Dial-Out
% Type of Server : PPTP
% Dial to : 1.2.3.4
% Remote NEtwork IP : 192.168.1.0
% Remote NEtwork Mask : 255.255.255.0
> vpn setup 2 market pptp_out 5.6.7.8 vigor 5678 192.168.1.31 255.255.255.0
% Profile Change Log ...

% Profile Index : 2
% Profile Name : market
% Username : vigor
% Password : 5678
```

```
% Call Direction : Dial-Out
% Type of Server : PPTP
% Dial to : 5.6.7.8
% Remote NEtwork IP : 192.168.1.31
% Remote NEtwork Mask : 255.255.255.0
> vpn trunk lb add comp 1 2
%% Combination VPN Load Balance profile list :
  <Index>   <    Name    >     <    Member1(Active)Type    >    <
Member2(Act
ive)Type    >
    1        comp                    1(YES)PPTP                    2(YES)PPTP

%% Note: <Active: NO> The LAN-to-LAN Profile is disable or under Dial-In(Call
Direction) at present.
==========================================================================


%  Setting OK.
> vpn trunk bind set 1 y comp 2 192.168.10.1~192.168.10.2
192.168.99.1~192.168.99.254 1~65535 0 OFF
% VPN Load Balance Tunnel Bind Table Index[1] detail:
============================================================
 Action              = ACTIVE
 Trunk Profile(000) Name= comp
 Binding Dial Out Index = 2
 Binding Src IP        = 192.168.10.1 ~ 192.168.10.2
 Binding Dest IP       = 192.168.99.1 ~ 192.168.99.254
 Binding Dest Port     = 1 ~ 65535
 Binding Fragmented    = NO
 Binding Protocol      = ANY Protocol
>
```

Telnet Command: vpn NetBios

This command allows users to enable or disable NetBios for Remote Access User Accounts or LAN-to-LAN Profile.

Syntax

vpn NetBios set <*H2l/L2l*> <*index*> <*Block/Pass*>

Syntax Description

Parameter	Description
<*H2l/L2l*>	H2l means Remote Access User Accounts. L2l means LAN-to-LAN Profile. Specify which one will be applied by NetBios.
<*index*>	The index number (1 to 48) of the profile.
<*Block/Pass*>	**Pass** – Have an inquiry for data transmission between the hosts located on both sides of VPN Tunnel while connecting. **Block** – When there is conflict occurred between the hosts on both sides of VPN Tunnel in connecting, set it block data transmission of Netbios Naming Packet inside the tunnel.

Example

```
> vpn NetBios set H2l 1 Pass
% Remote Dial In Profile Index [1] :
% NetBios Block/Pass: [PASS]
```

Telnet Command: vpn mss

This command allows users to configure the maximum segment size (MSS) for different TCP types.

Syntax

vpn mss show

vpn mss default

vpn mss set <*connection type*> <*TCP maximum segment size range*>

Syntax Description

Parameter	Description
show	It means to display current setting status.
default	TCP maximum segment size for all the VPN connection will be set as 1360 bytes.
set	Use it to specify the connection type and value of MSS.
<*connection type*>	1~4 represent various type. 1 – PPTP 2 – L2TP 3 – IPSec 4 – L2TP over IPSec 5 - vpn 2ndsubnet on 6 - SSL Tunnel
<*TCP maximum segment size range*>	Each type has different segment size range.

	PPTP - 1 ~ 1412 L2TP - 1 ~ 1408 IPSec - 1 ~ 1381 L2TP over IPSec - 1 ~ 1361 GRE over IPsec - 1 ~ 1365 SSL Tunnel - 1 ~ 1360

Example

```
>vpn mss set 1 1400
% VPN TCP maximum segment size (MSS) :
  PPTP  = 1400
  L2TP  = 1360
  IPSec = 1360
  L2TP over IPSec  = 1360
  GRE over IPsec   = 1360
  SSL Tunnel  = 1260
>vpn mss show
 VPN TCP maximum segment size (MSS) :
 PPTP  = 1400
 L2TP  = 1360
 IPSec = 1360
 L2TP over IPSec  = 1360
 GRE over IPsec   = 1360
 SSL Tunnel  = 1260
```

Telnet Command: vpn ike

This command is used to display IKE memory status and leakage list.

Syntax

vpn ike -q

vpn ike -s

Example

```
> vpn ike -q
IKE Memory Status and Leakage List

# of free L-Buffer=95, minimum=94, leak=1
# of free M-Buffer=529, minimum=529 leak=3
# of free S-Buffer=1199, minimum=1198, leak=1
# of free Msgid-Buffer=1024, minimum=1024
```

Telnet Command: vpn Multicast

This command allows users to pass or block the multi-cast packet via VPN.

Syntax

vpn Multicast set <*H2L/L2L*> <*index*> <*Block/Pass*>

Syntax Description

Parameter	Description

<*H2L/L2L*>	H2l means Host to LAN (Remote Access User Accounts). L2l means LAN-to-LAN Profile.
<*index*>	The index number (1 to 64) of the profile.
<*Block/Pass*>	Set Block/Pass the Multicast Packets. The default is Block.

Example

```
> vpn Multicast set L2l 1 Pass
% Lan to Lan Profile Index [1] :
% Status Block/Pass: [PASS]
```

Telnet Command: vpn pass2nd

This command allows users to determine if the packets coming from the second subnet passing through current used VPN tunnel.

Syntax

vpn pass2nd <*on/off*>

Syntax Description

Parameter	Description
on/off	on - the packets can pass through NAT. off - the packets cannot pass through NAT.

Example

```
> vpn pass2nd on
% 2nd subnet is allowed to pass VPN tunnel!
```

Telnet Command: vpn pass2nat

This command allows users to determine if the packets passing through by NAT or not when the VPN tunnel disconnects.

Syntax

vpn pass2nat <*on/off*>

Syntax Description

Parameter	Description
on/off	on - the packets can pass through NAT. off - the packets cannot pass through NAT.

Example

```
> vpn pass2nat on
% Packets would go through by NAT when VPN disconnect!!
```

Telnet Command: vpn sameSubnet

This command allows users to build VPN between clients via virtual subnet.

Syntax

vpn sameSubnet *-i <value>*
vpn sameSubnet *-E <0/1>*
vpn sameSubnet *-e <value>*
vpn sameSubnet *-I <Virtual Subnet>*
vpn sameSubnet *-o <add/del>*
vpn sameSubnet *-v*
vpn sameSubnet *-m*

Syntax Description

Parameter	Description
-i <value>	Specify the index number of VPN profile.
-E <0/1>	Enable or disable the IPsec with the same subnet. 1 – enable. 0 – disable.
-e <value>	Translate specified LAN to virtual subnet. 1 – LAN1 2 – LAN2 3 – LAN3 …
-I <Virtual Subnet>	Set the virtual subnet (e.g., 172.16.3.250).
-v	Display current status of virtual subnet.
-m <1/2>	Set the Translated Type. <*1/2*> - 1 for Whole Subnet, 2 for Specific IP.

Example

```
> vpn sameSubnet  -i 1 -e 1 -E 1 -e 1 -I 10.10.10.0 -o add
Enable IPsec with Same Subnet !!

 Add entry Succcess!!
> vpn sameSubnet -v
IPsec with the same subnet:
VPN profile 1 enable,
  Whole Subnet:
    translated LAN1 to Virtual subnet: 10.10.10.0
    translated LAN1 to Virtual subnet: 10.10.10.0
    translated LAN1 to Virtual subnet: 10.10.10.0
>
```

Telnet Command: vpn ovpn

This command allows users to build VPN between clients via OpenVPN.

Syntax

vpn ovpn *mode* <0/1>
vpn ovpn *show*
vpn ovpn *udp_mode* <0/1>
vpn ovpn *tcp_mode* <0/1>
vpn ovpn *udp_port* <1-65535>
vpn ovpn *tcp_port* <1-65535>

vpn ovpn *cert* <0/1>
vpn ovpn *replay* <0/1>
vpn ovpn *certmode* <0/1/2>
vpn ovpn *hmacmode* <0/1/2>
vpn ovpn *ca <0/1/2/3>*
vpn ovpn *tlsauth_del <1/2/3>*

Syntax Description

Parameter	Description
mode <0/1>	Enable or disable the OpenVPN function. 1 – enable. 0 – disable.
show	Displays current OpenVPN settings.
udp_mode <0/1>	Enable or disable the UDP mode. 1 – enable. 0 – disable.
tcp_mode <0/1>	Enable or disable the TCP mode. 1 – enable. 0 – disable.
udp_port <1-65535>	Enter a port number (1-65535) for UDP mode.
tcp_port <1-65535>	Enter a port number (1-65535) for TCP mode.
replay <0/1>	Enable or disable the replay option. 1 – enable. 0 – disable.
certmode <0/1/2>	Set the Cipher Algorithm Mode. 0:AES128, 1:AES256, 2:None
hmacmode <0/1/2>	Set the Cipher HMAC Mode. 0:SHA1, 1:SHA256, 2:None
ca <0/1/2/3>	Set the Trust CA certificate.
tlsauth_del <1/2/3>	Delete the first, second or the third TLS-auth key.

Example

```
> vpn ovpn mode 1
Enable openvpn
> vpn ovpn show

 Openvpn: Enable
 support UDP: Enable
 UDP port: 1194
 support TCP: Enable
 TCP port: 1194
 Use certificate authentication: Enable
 replay option: Enable
 Cipher Algorithm: AES256
 HMAC Algorithm: SHA256
 Certificate uid: 65535
 Trust CA uid: 0
```

Telnet Command: wan ppp_mru

This command allows users to adjust the size of PPP LCP MRU. It is used for specific network.

Syntax

wan ppp_mru <*WAN interface number*> <*MRU size*>

Syntax Description

Parameter	Description
<*WAN interface number*>	Type a number to represent the physical interface. For Vigor130, the number is 1 (which means WAN1).
<*MRU size* >	It means the number of PPP LCP MRU. The available range is from 1400 to 1600.

Example

```
>wan ppp_mru 1 ?
% Now: 1492

> wan ppp_mru 1 1490
>
> wan ppp_mru 1 ?
% Now: 1490

> wan ppp_mru 1 1492
> wan ppp_mru 1 ?
% Now: 1492
```

Telnet Command: wan mtu / wan mtu2

This command allows users to adjust the size of MTU for WAN1/WAN2.

Syntax

wan mtu <*value*>
wan mtu2 <*value*>

Syntax Description

Parameter	Description
value	It means the number of MTU for PPP. The available range is from 1000 to 1500. For Static IP/DHCP, the maximum number will be 1500. For PPPoE, the maximum number will be 1492. For PPTP/L2TP, the maximum number will be 1460.

Example

```
> wan mtu 1100

> wan mtu ?

Static IP/DHCP (Max MSS: 1500)

PPPoE(Max MSS: 1492)

PPTP/L2TP(Max MSS: 1460)
```

```
% wan ppp_mss <MSS size: 1000 ~ 1500>
% Now: 1100
```

Telnet Command: wan dns

This command allows users to configure primary and / or secondary DNS server.

Syntax

wan dns <*wan_no*> <*dns_select*> <*ipv4_addr*>

Syntax Description

Parameter	Description
<*wan_no*>	Select WAN interface. 1 ~4 - WAN1 ~ WAN4.
<*dns_select*>	Specify primary and / or secondary DNS server. pri – It means primary DNS server. sec – It means secondary DNS server.
<*ipv4_addr*>	Enter the IP address of DNS server.

Example

```
> wan dns 1 pri 168.95.1.1
% Set WAN1 primary DNS done.
% Now: 168.95.1.1
```

Telnet Command: wan DF_check

This command allows you to enable or disable the function of DF (Don't fragment)

Syntax

wan DF_check <*on/off*>

Syntax Description

Parameter	Description
on/off	It means to enable or disable DF.

Example

```
> wan DF_check on
%DF bit check enable!
> wan DF_check off
%DF bit check disable (reset DF bit)!
```

Telnet Command: wan disable

This command allows you to disable WAN connection.

Example

```
> wan disable WAN
%WAN disabled.
```

Telnet Command: wan enable

This command allows you to disable wan connection.

Example

```
> wan enable WAN
%WAN1 enabled.
```

Telnet Command: wan wan2lan

When WAN2 is disabled or WAN2 is set as wireless physical mode, the ethernet port is configured as LAN port.

Syntax

wan wan2lan <*wan*> <*on / off / status*>

Syntax Description

Parameter	Description
<*wan*>	Select a WAN interface (1 to 4). Currently, only WAN2 is available.
<*on / off / status*>	0n - Enable WAN to LAN port mode. Off - Disable WAN to LAN port mode. Status - Display current mode.

Example

```
> wan wan2lan 2 status
% Current WAN2 is WAN mode
% Usage: show the WAN to LAN setting, currently only support WAN2
% When WAN2 is disabled or WAN2 is set wireless physical mode, eth port
is configured as LAN
% Current WAN2 eth port is WAN mode
> wan wan2lan 2 on
% WAN2 convert to LAN6, WAN2 interface will disable
% Usage: show the WAN to LAN setting, currently only support WAN2
% When WAN2 is disabled or WAN2 is set wireless physical mode, eth port
is configured as LAN
% Current WAN2 eth port is LAN mode
```

Telnet Command: wan forward

This command allows you to enable or disable the function of WAN forwarding. The packets are allowed to be transmitted between different WANs.

Syntax

wan forward <*on/off*>

Syntax Description

Parameter	Description
on/off	It means to enable or disable WAN forward.

Example

```
> wan forward ?
%WAN forwarding is Disable!

> wan forward on
%WAN forwarding is enable!
```

Telnet Command: wan status

This command allows you to display the status of WAN connection, including connection mode, TX/RX packets, DNS settings and IP address.

Example

```
> wan status
WAN1: Offline, stall=N
 Mode: ---, Up Time=00:00:00
 IP=---, GW IP=---
 TX Packets=0, TX Rate(Bps)=0, RX Packets=0, RX Rate(Bps)=0
 Primary DNS=0.0.0.0, Secondary DNS=0.0.0.0

PVC_WAN3: Offline, stall=N
 Mode: ---, Up Time=00:00:00
 IP=---, GW IP=---
 TX Packets=0, TX Rate(Bps)=0, RX Packets=0, RX Rate(Bps)=0

PVC_WAN4: Offline, stall=N
 Mode: ---, Up Time=00:00:00
 IP=---, GW IP=---
 TX Packets=0, TX Rate(Bps)=0, RX Packets=0, RX Rate(Bps)=0

PVC_WAN5: Offline, stall=N
 Mode: ---, Up Time=00:00:00
 IP=---, GW IP=---
 TX Packets=0, TX Rate(Bps)=0, RX Packets=0, RX Rate(Bps)=0
```

Telnet Command: wan modem / wan modem2

This command, wan modem, allows you to configure 3G/4G USB Modem (PPP mode) of WAN3.

The command, wan modem2, allows you to configure 3G/4G USB Modem (PPP mode) of WAN4.

Syntax

wan modem <*init*/*init2*/*dial*/*pin*><*string*>

wan modem paponly <*on*/*off*>

wan modem backup_wait <*value*>

wan modem pipe <*Int*><*Din*><*Dout*> *(for USB WAN3 only)*

wan modem wakeup <*on*/*off*/*value*> *(for USB WAN3 only)*

wan modem vid <*id*>

wan modem pid <*id*>

wan modem status

Syntax Description

Parameter	Description
init	Set initial modem AT command (default value is "AT&FE0V1X1&D2&C1S0=0").
Init2	Set the second initial modem AT command.
dial <string>	Set dial modem AT command (default value is "ATDT*99#").
pin <0>	Set PIN code for SIM card. "0":disable
paponly <on/off>	It means PAP Only. Set the PPP authentication of the USB WAN. on: None. off: PAP or CHAP.
backup_wait <value>	Set waiting time after boot if USB WAN is in backup mode. This waiting time is reserved for the dial of main WANs so that the backup USB WAN will not go up first. Available setting is from 1 to 255. Unit is second.
pipe	It is for RD debug only. Please don't use it without our advice.
wakeup <on/off/value>	It is for RD debug only. Please don't use it without our advice.
vid	Set VID of VID/PID match to bind the USB modem to specify WAN interface. By default, this match is not set (0x0/0x0) and the router specifies WAN interface by USB port.
pid	Set PID of VID/PID match to bind the USB modem to specify WAN interface. By default, this match is not set (0x0/0x0) and the router specifies WAN interface by USB port.
status	Display current status of USB modem.

Example

```
> wan modem pin 0000
> wan modem status
 Modem Link Speed=0
 Current Signal Strength=0
 Last Fail Message:
 Current Connect Stage:
```

Telnet Command: wan lte

This command allows you to configure LTE WAN (for L model only).

Syntax

wan lte auth *<0/1>*
wan lte band
wan lte del *<index #/all>*
wan lte pass *<string>*
wan lte pre_band
wan lte quota *[-<command><parameter>l…]*
wan lte read *<index #/all>*
wan lte reboot *[-<command><parameter>l…]*
wan lte reply *[-<command><parameter>l…]*
wan lte send *<number><message>*

wan lte sms *[-<command><parameter>l…]*
wan lte scan *[-<command><parameter>l…]*
wan lte set *[-<command><parameter>l…]*
wan lte stus
wan lte tag <*index #/all***>**
wan lte user *<string>*
wan lte wms *<send<cdma/gwpp>/recv<cdma/gwgw>/setting>*

Syntax Description

Parameter	Description
auth <0/1>	Set PPP authentication of LTE WAN. 0: None. 1: PAP or CHAP.
band	Display working band information for LTE network connection.
del <index #/all>	Delete an SMS from the LTE SIM card by specifying the index number. Use “all” to delete all.
pass <string>	Set the password of LTE WAN.
quota [-<command><parameter>l…]	Set settings of SMS Quota Limit function. Available commands with parameter are listed below: [...] means that you can Enter several commands in one line. -a <0/1>: Set whether to send an e-mail alert when SMS quota exceeded. (0: no 1: yes) -c <cycle>: Set the order of today in refresh cycle. -d <day>: Set the refresh day. -e <0/1>: Enable or disable SMS Quota Limit function. (0: disable 1: enable) -h <hour>: Set the refresh hour. -m <0/1/2>: Set SMS quota refresh mode. (0: None 1: monthly 2: periodically) -n <number>: Set SMS quota. The avaible number is between 1 and 1000000. -s <0/1>: Set whether to stop sending SMS after SMS quota exceeded. (0: no 1: yes)
read <index #/all>	Display information of an SMS in the LTE SIM card by specifying the index number. Use "all" to display all.
reboot	Set settings of Reboot on SMS Message function. <command> <parameter> | ... The available commands with parameters are listed below. [...] means that you can Enter several commands in one line. -a <0/1>: Enable or disable Access Control List. (0: disable 1: enable) -e <0/1>: Enable or disable Reboot on SMS Message function. (0: disable 1: enable) -p <password>: Set the Password / PIN. This setting is necessary if this function is enabled. -x <number>: Set the first phone number in Access Control List. -y <number>: Set the second phone number in Access Control List. -z <number>: Set the third phone number in Access Control List.
reply	Set settings of Reply with Router Status Message function. <command> <parameter> | ...

	The available commands with parameters are listed below. [...] means that you can Enter several commands in one line. -a <0/1>: Enable or disable Access Control List. (0: disable 1: enable) -c <0/1>: Set whether to reply with MAC address. (0: no 1: yes) -e <0/1>: Enable or disable Reboot on SMS Message function. (0: disable 1: enable) -f <0/1>: Set whether to reply with WAN1 IP address. (0: no 1: yes) -g <0/1>: Set whether to reply with WAN2 IP address. (0: no 1: yes) -h <0/1>: Set whether to reply with LTE WAN IP address. (0: no 1: yes) -i <0/1>: Set whether to reply with WAN4 IP address. (0: no 1: yes) -j <0/1>: Set whether to reply with WAN1 data usage. (0: no 1: yes) -k <0/1>: Set whether to reply with WAN2 data usage. (0: no 1: yes) -l <0/1>: Set whether to reply with LTE WAN data usage. (0: no 1: yes) -m <0/1>: Set whether to reply with WAN4 data usage. (0: no 1: yes) -n <0/1>: Set whether to reply with Router name. (0: no 1: yes) -p <password>: Set the Password / PIN. This setting is necessary if this function is enabled. -u <0/1>: Set whether to reply with Router system uptime. (0: no 1: yes) -v <0/1>: Set whether to reply with Router firmware version. (0: no 1: yes) -x <number>: Set the first phone number in Access Control List. -y <number>: Set the second phone number in Access Control List. -z <number>: Set the third phone number in Access Control List.
send <number><message>	Send an SMS message to the specified phone number through the LTE SIM card.
sms	It means to set advanced settings for SMS. -a <0/1> : Alerts admin with e-mail when SMS inbox is full. -d <0/1> : Delete oldest read SMS when SMS inbox is full. -f <0/1> : Forward new SMS by e-mail to admin. -s <0/1> : Store SMS outbox cache with USB disk. (0: disable 1: enable)
scan <all/4g/3g/2g/show>	It means to scan visible networks. [all/4g/3g/2g]: Scan all, 4g, 3g or 2g network. Show: Display the scanning result.
set	It means to set APN name, keep alive time and so on. apn <apn_name> : Set a string as APN. pin <pin_code>: Set a pin code. power_recycle <backoff_time(0~20)>: Set the power recycle time (seconds) for redialing after power off. dial_on: Turn of the dialing function. It is used for RD debug. dial_off: Turn off the dialing function. It is used for RD debug. keep_alive_on <IP>: Turn of the function of Keep Alive On. Specify the IP address (x.x.x.x). keep_alive_off: Turn off the function of Keep Alive On. dhcp<on/off>: Turn on or off the DHCP server, depending on your ISP configuration. fixed <IP>: Specify an IP address if DHCP is set as "off". Also, it depends on your ISP configuration. manual_dns <on/off>: On, set the DNS server manually; Off, use the default DNS server setting. The default is "off".

	primary_dns <IP>: Set the primary DNS IP (x.x.x.x) address obtained from your ISP if manual_dns is set as "on". secondary_dns <ip): Set the secondary DNS IP (x.x.x.x) address obtained from your ISP if manual_dns is set as "on". specific_mccmnc <on/off>: Turn on or off the specific MCC and MNC. mcc <mcc_value> : Set the value (0~999) for MCC (Mobile Country Code) mnc <mnc_value>: Set the value(0~999) for MNC (Mobile Network Code). timeout <value>: Set the time out interval (50 to 255 seconds). fail_threshold: Set the times (2 ~ 20 times) of trying connection via LTE.
stus	Display status of LTE connection.
tag	Set an SMS in the LTE SIM card as read state by specifying the index number. Use "all" to set all SMS as read state.
user	Set the UserName of LTE WAN.
wms	This command is for RD debug only. We use it to test new USB modems. Please don't use it without our advice.

Example

```
> wan lte band

Access technology : LTE
Access band information : E-UTRA Op Band 3
Interfere with 2.4G WLAN : NO
Active channel: 1725
>wan lte stus
Status: Operational. (Online)
Access Tech: LTE
Band: E-UTRA Op Band 3
ISP: Chunghwa
MCC: 466, MNC: 92, LAC: 65534, Cell ID: 81023501
Max Channel TX Rate: 50000000 bps
Max Channel RX Rate: 100000000 bps
IMEI: 356318040749422
IMSI: 466924200859808
RSSI: -61 dBm
Unread SMS: 4
SMSC address: +886932400821
SMS service status : Ready
Number of SMS sent : 0
```

Telnet Command: wan sim2

This command allows you to configure settings for SIM2. It is available for LTE model.

Syntax

wan sim2 *auth <0/1>*

wan sim2 *user <username>*

wan sim2 *pass <password>*

wan sim2 *set apn <apn_name>*

wan sim2 *set pin <pin_code>*

wan sim2 *set mode <0~3>*

wan sim2 *set keep_alive_on <IP>*

wan sim2 *set keep_alive_off*

wan sim2 *set timeout <50~255 sec>*

wan sim2 *set fail_threshold <2~20 times>*

Syntax Description

Parameter	Description
auth <0/1>	Set the LTE authentication for connection. 0 - PAP or CHAP. 1 - PAP only.
user <username>	Set the username for SIM2. <username> - Enter a string.
pass <password>	Set the password for SIM2. <password> - Enter a string.
set apn <apn_name>	Set the APN name for the SIM2. <apn_name> - Enter a string as APN name.
set pin <pin_code>	Set the PIN code for the SIM2.
set mode <0~3>	Set the network mode for the SIM2. 0- 4G/3G/2G; 1- 4G Only; 2- 3G Only; 3- 2G Only
set keep_alive_on <IP>	IP - Specify an IP address.
set keep_alive_off	Disable the function of Keep Alive On.
set timeout <50~255 sec>	Enter a value (50 to 255, unit is second) as the timeout.
set fail_threshold <2~20 times>	Set the maximum times (2 to 20) of failed dial-ups. After that, the system will stop dial-up and use another SIM card for dial-up instead.

Example

```
> wan sim2 set timeout 100
Set dial up timeout: 100
>
```

Telnet Command: wan detect

This command allows you to configure WAN connection detection. When Ping Detection is enabled (for Static IP or DHCP or PPPoE mode), Router pings specified IP addresses to detect the WAN connection.

Syntax

wan detect *<wan1/../wan9><on/off/strict/always_on>*

wan detect *<wan1/../wan9><on/off>***-t***<time>*

wan detect *<wan1/../wan9> <on/off>* **-i***<interval>*

wan detect *<wan1/../wan9>* **target <***ip addr>*

wan detect *<wan1/../wan9>* **target2 <***ip addr>*

wan detect *<wan1/../wan9>* **target_gw <***1/0>*

wan detect <*wan1/../wan9*> **ttl** <*value*>
wan detect <*wan1/../wan9*> **interval** <*interval*>
wan detect <*wan1/../wan9*> **retry** <*retry*>
wan detect status

Syntax Description

Parameter	Description
<*on/off/strict/always_on*>	On: Enable ping detection. The IP address of the target shall be set. Off: Enable ARP detection (default). Time and interval should be set. strict: Enable the strict ARP detection. Time and interval should be set. always_on: Disable link detect, always connected(only support static IP)
-t <time>	Set the time for ARP detect or strict ARP detection.
-i <interval>	Set the interval for ARP detect or strict ARP detection.
target <ip addr>	Set the ping target. <ip addr>: It means the IP address used for detection. Type an IP address (e.g., 192.168.1.10) in this field.
target2<ip addr>	Set the secondary ping target. <ip addr>: It means the IP address used for detection. Type an IP address (e.g., 192.168.1.10) in this field.
target_gw <1/0>	Set whether to use gateway as ping target. 1: yes 0: no Note that USB WAN (PPP mode) cannot support PING gateway
ttl <1-255>	It means to set the ping TTL value (work as trace route) If you do not set any value for ttl here or just type 0 here, the system will use default setting (255) as the ttl value.
interval <interval>	Set the interval between each ping operation. Available setting is between 1 and 3600. The unit is second. <*interval*>: Type a value.
retry <retry>	Set how many ping operations are retried before the Router judges that the WAN connection is disconnected. Available setting is between 1 and 255. The unit is times. <retry>: Type a number.
status	It means to show the current status.

Example

```
> wan detect status
 WAN1: arp detect, send time=30, Interval = 5
 WAN2: arp detect, send time=30, Interval = 5
 WAN3: arp detect, send time=30, Interval = 5
 WAN4: arp detect, send time=30, Interval = 5
 WAN5: arp detect, send time=30, Interval = 5
 WAN6: arp detect, send time=30, Interval = 5
 WAN7: ping detect, Target=0.0.0.0, TTL=255, Target2=0.0.0.0, TargetGW=off,
Interval=1, Retry=10
 WAN8: ping detect, Target=0.0.0.0, TTL=255, Target2=0.0.0.0, TargetGW=off,
Interval=1, Retry=10
 WAN9: ping detect, Target=0.0.0.0, TTL=255, Target2=0.0.0.0, TargetGW=off,
Interval=1, Retry=10>
```

Telnet Command: wan lb

This command allows you to Enable/Disable the load balance mode for each WAN.

Syntax

wan lb <*wan1/wan2/...*> *on*
wan lb <*wan1/wan2/...*> *off*
wan lb <*IP/session*>
wan lb status

Syntax Description

Parameter	Description
wan1 to wanx	Specify which WAN will be applied with load balance.
on	Make WAN interface as the member of load balance.
off	Cancel WAN interface as the member of load balance.
ip/session	Set the load balance in IP-based or session-based mode.
status	Show the current status.

Example

```
> wan lb status
 WAN1: on
 WAN2: on
 WAN3: on
 WAN4: on
 WAN5: on
 WAN6: on
 WAN7: on
 WAN8: on
 WAN9: on
 Load balance mode is IP based
```

Telnet Command: wan lbel

This command allows you to set load balance exception list.

Syntax

wan lbel <*idx*> <*enable*> <*protocol*> <*ip type*> <*obj_grp idx*> <*port*> <*port_end*> <*comment*>
wan lbel status <*idx*>

Syntax Description

Parameter	Description
Idx	Enter the index number (1 to 32) for the exception list.
enable	Enter 1 (enable) or 0 (disable) the selected profile.
protocol	<protocol>: Enter TCP, UDP, TCP+UDP.
ip type	Set the IP type (0, 1 or 2) for the selected profile. 0: Any 1: IP object 2: IP group
obj_grp idx	Enter the index number (1 to 32 for IP group; 1 to 192 for IP object).

	If it is set with "0", then the IP type will be set as "Any".
port	Enter a number (0 to 65535) as starting port. It it is set with "0", then the port range (1 to 65535) will not be applied with load balance.
port_end	Enter a number (0 to 65535) as ending port (must be greater than starting port).
comment	Enter a string (less than 11 characters) as a comment.
status	Show the current status.

Example

```
> wan lbel 1 1 tcp 0 1 0 300 testforload
> wan lbel status 1
 list[1] status:enable, protocol:tcp, IP type:any, IP idx:0, port:0~300, comment
:testforload
 list[2] status:enable, protocol:udp, IP type:any, IP idx:0, port:19302~19302, c
omment:Google STUN
 list[3] status:enable, protocol:tcp+udp, IP type:any, IP idx:0, port:5060~5060,
 comment:SIP
 list[4] status:disable, protocol:tcp, IP type:any, IP idx:0, port:80~80, commen
t:HTTP
 list[5] status:disable, protocol:tcp, IP type:any, IP idx:0, port:443~443, comm
ent:SSL
...
```

Telnet Command: wan mvlan

This command allows you to configure multi-VLAN for WAN and LAN. It supports pure bridge mode (modem mode) between Ethernet WAN and LAN port 2~4.

Syntax

wan mvlan <*pvc_no*/*status*/*save*/*enable*/*disable*> <*on*/*off*/*clear*/*tag tag_no*> <*service type*/*vlan priority*> <*px ...* >

wan mvlan *keeptag* <*pvc_no*> <*on*/*off*>

Syntax Description

Parameter	Description
pvc_no	It means index number of PVC. There are 8 PVC, 0(Channel-1) to 7(Channel-8) allowed to be configured. However, bridge mode can be set on PVC number 2 to 7.
status	It means to display the whole Bridge status.
save	It means to save the configuration into flash of Vigor router.
enable/*disable*	It means to enable/disable the Multi-VLAN function.
on/*off*	It means to turn on/off bridge mode for the specific channel.
clear	It means to turn off/clear the port.
tag tag_no	It means to tag a number for the VLAN. -1: No need to add tag number. 1-4095: Available setting numbers used as tagged number.
service type	It means to specify the service type for VLAN. 0: Normal. 1: IGMP.

vlan priority	It means to specify the priority for the VALN setting. Range is from 0 to 7.
px	It means LAN port. Available setting number is from 2 to 4. Port number 1 is locked for NAT usage.
keeptag	It means Multi-VLAN packets will keep their VLAN headers to LAN.

Example

PVC 7 will map to LAN port 2/3/4 in bridge mode; service type is Normal. No tag added.

```
> wan mvlan 7 on p2 p3 p4
PVC  Bridge  p1 p2 p3 p4 p5   Service Type    Tag     Priority    Keep Tag
 ---------------------------------------------------------------------
   7  ON      0  0  1  1  0  0      Normal      0(OFF)      0       OFF
>
```

Telnet Command: wan multifno

This command allows you to specify a channel (in Multi-PVC/VLAN) to make bridge connection to a specified WAN interface.

Syntax

wan multifno <*channel #*><*WAN interface #*>

wan multifno *status*

Syntax Description

Parameter	Description
channel #	There are several channels including VLAN and PVC. Available settings are: 7 to 16 Available settings are: 7=Channel 7 ... 16=Channel 16
WAN interface #	Type a number to indicate the WAN interface. *1=WAN1* *2=WAN2*
status	It means to display current bridge status.

Example

```
> wan multifno 5 1
> wan multifno 7 1
% Configured channel 7 uplink to WAN1
> wan multifno status
% Channel 7 uplink ifno: 3
% Channel 8 uplink ifno: 3
% Channel 9 uplink ifno: 3
% Channel 10 uplink ifno: 3
% Channel 11 uplink ifno: 3
% Channel 12 uplink ifno: 3
% Channel 13 uplink ifno: 3
% Channel 14 uplink ifno: 3
```

```
% Channel 15 uplink ifno: 3
>
```

Telnet Command: wan vlan

This command allows you to configure the VLAN tag of WAN1 or WAN2.

Syntax

wan vlan wan <#> **tag** <*value*>
wan vlan wan <#> <*enable*/*disable*>
wan vlan stat

Syntax Description

Parameter	Description
wan <#>	Specify which WAN interface will be tagged.
tag <*value*>	Type a number for tagging on WAN interface.
enable/*disable*	Enable: Specified WAN interface will be tagged. Disable: Disable the function of tagging on WAN interface.
stat	Display current VLAN status.

Example

```
> wan vlan stat
% Interface     Pri      Tag     Enabled
% ======================================
% WAN1          0        0
% WAN2          0        0
% WAN3          0        0
% WAN4          0        0
>
```

Telnet Command: wan phyvlan

This command is used to set VLAN tag insertion for outer tag (service) for WAN interface.

WAN interfaces must be configured first before setting VLAN encapsulation.

Syntax

wan phyvlan wan <#> **tag** <*value*>
wan phyvlan wan <#> **pri** <*value*>
wan phyvlan wan <#> <*enable*/*disable*>
wan phyvlan stat

Syntax Description

Parameter	Description
<#>	It means WAN interface. 1 ~4 - WAN1 ~ WAN4
tag <*value*>	It means to tag a value (1 to 4095) onto the selected WAN interface.
pri <*value*>	It means to set value (0 to 7) for priority for such VLAN tag.
<*enable*/*disable*>	It means to enable / disable the VLAN tag.
stat	Display the setting status.

Example

```
> wan phyvlan wan 1 tag 22
% Set physical port tag to 22 for WAN1
% Set physical port tag to 22 for WAN1
% You need to reboot router making config effective
> wan phyvlan wan 1 enable
% Set physical port tag to 22 for WAN1
% Set physical port tag to 22 for WAN1
% You need to reboot router making config effective
> wan phyvlan stat ?

% Interface    Pri     Tag    Enabled
% ======================================
% WAN1         0       0
% WAN2         0       0
% WAN3         0       0
% WAN4         0       0
>
```

Telnet Command: wan budget

This command allows you determine the data *traffic volume* for each WAN interface respectively to prevent from overcharges for data transmission by the ISP.

Syntax

wan budget wan <#> **rdate** <*day*><*hour*>
wan budget wan <#> <*enable*/*disable*>
wan budget wan <#> **thres** <*budget limit (MB)*>
wan budget wan <#> **gthres** <*budget limit (GB)*>
wan budget wan <#> **mode** <*monthly*|*periodic*|*none*>
wan budget wan <#> **psday** <*th day in periodic*>
wan budget wan <#> **custom_mode** <*0*/*1*>
wan budget wan <#> **custom_mode_reset_hour** <*hour*>
wan budget wan <#> **action** <*action bitmap*>
wan budget status

Syntax Description

Parameter	Description
wan <#> *rdate* <*day*><*hour*>	wan <#>: Specify the WAN interface. *rdate* <*day*><*hour*>: Specify the WAN budget refresh time. day – Available settings are from 1 to 30. hour – Available settings are from 1 to 23. E.g., `wan budget wan 1 rdate 5 10` If monthy mode is selected: WAN budget will be refreshed on 5th day at 10:00 in each month. If periodic mode is selected: WAN budget will be refreshed every 5 days and 10 hours.
<*enable*|*disable*>	enable - Enable the function of wan budget. disable - Disable the function of wan budget.
thres <*budget limit (MB)*>	Specify the maximum value for WAN budget limit. (Unit: MB) budget limit – Type a number.
gthres <*budget limit (GB)*>	Specify the maximum value of wan budget limit. (Unit: GB)

	budget limit – Type a number.
mode <monthly|periodic|none>	Specify the calculation mode (monthly, periodically, or none) for WAN budget.
psday <th day in periodic>	It is used only when mode is set with “periodic”. Specify the order of “today” in the cycle. E.g., `wan budget wan 5 psday` → It means “today” is the 5th day in the billing cycle.
custom_mode <0/1>	Set the custom mode (cycle in hours or in days). 0: cycle_in_hours 1: cycle_in_days
custom_mode_reset_hour <hour>	Set the reset hour value. hour: Enter 1 to 23.
action <action bitmap>	Determine the action to be performed when it reaches the WAN budget limit. *action bitmap* – Type a total number of actions to be executed. Different numbers represent different actions. 1: shotdown wan 2: send mail alert 4: send sms alert For example, if you type “5” (5=1+4), the system will send SMS alert when WAN shotdown is detected.
status	Display current configuration status of WAN budget.

Example

```
> wan budget wan 1 action 5
% WAN 1 budget action set to 5
> wan budget wan 1 gthres 10
% WAN 1 budget limit set to 10 GB
```

Telnet Command: wan detect_mtu

This command allows you to run a WAN MTU Discovery. The user can specify an IPv4 target to ping and find the suitable MTU size of the WAN interface.

Syntax

wan detect_mtu *-i <Host/IP address> -s <mtu_size> -d <decrease size> -w <WAN number> -c <1~10>*

Syntax Description

Parameter	Description
-i <Host/IP address>	Specify the IPv4 target to detect. If can be an IPv4 address or domain name. Host/IP address: Enter the IP address/domain name of the target.
-s <mtu_size>	Set the MTU size base for Discovery. base_size: Available setting is 1000 ~ 1500.
-d <decrease size>	Set the MTU size to decrease between detections. decrease size: Available setting is 1 ~ 100.
-w <wan number>	Specify the WAN interface. Value: Enter the number of WAN interface. 1: WAN1; 2:WAN2….and etc.
-c <value>	Set the maximum times of ping failure during a Discovery. count: Available settings are 1 ~ 10. Default value is 3.

Example

```
> wan detect_mtu -w 2 -i 8.8.8.8 -s 1500 -d 30 -c 10
 detecting  mtu size:1500!!!

 mtu size:1470!!!
```

Telnet Command: wan detect_mtu6

This command allows you to run a WAN MTU Discovery. The user can specify an IPv6 target to ping and find the suitable MTU size of the WAN interface.

Syntax

wan detect_mtu6 *-i <Host/IP address> -s <mtu_size> -w <WAN number>*

Syntax Description

Parameter	Description
-I <host/IPv6 address>	Specify the IPv6 target to detect. It must be an IPv6 IP address or host name. IPv6 address: Type the IPv6 address of the target.
-s <base_size>	Specify the size of MTU. base_size: Available setting is 1280 ~ 1500.
-w <number>	Specify the WAN interface number: Enter the number of WAN interface. 1: WAN1; 2:WAN2….and etc.

Example

```
> wan detect_mtu6 -w 2 -i 2404:6800:4008:c06::5e -s 1500
>
```

Telnet Command: wan failover

This command is used to configure failover WAN.

Syntax

wan failover off *<index>*
wan failover on *<1><2><3><4><5><6>*
wan failover show *<index>*
wan failover newlb *<index><arg>*

Syntax Description

Parameter	Description
failover off <index>	Set specified WAN interface to always on. index – Ranges from 1 to 6.
failover on <1><2><3><4><5><6>	There are six fields which represent different options. Field 1 – Specify WAN interface as failover WAN by typing 1 to 4. Field 2 – Enable / disable the action for the failover WAN. Such action is “Active When selected WAN [disconnect/reached traffic threshold]”. 0 – Disable

	1 - Enable Field 3 - Enable / disable the action for the failover WAN. Such action is “Active When [any/all] of selected WAN disconnect or reached traffic threshold”. 0 – Disable 1 - Enable Field 4 – Specify main WAN by typing 1 to 4. The main WAN will be set to always on. Field 5 – Specify traffic threshold [Download threshold(Kbps)]. Field 6 - Specify traffic threshold [Upload threshold (Kbps)]. For example, WAN 2 will be set as failover, and will be active when any of selected WANs has reached traffic threshold. WAN 4 is the selected WAN. Download threshold : 50 Kbpsl; Upload threshold : 20 Kbps. You can type as follows: *wan failover on 2 1 0 4 50 20*
show <index>	Display parameters settings for WAN interface. index – Ranges from 1 to 6.
newlb <index><arg>	Set the latency, jitter, packet loss threshold of the WAN interface. index - 1 to 6 arg - lists as follows: -a [all] : 0=any meet, 1=all meet. -u [check] : 0=n/a, 1=check upload. -d [check] : 0=n/a, 1=check download. -l [check] : 0=n/a, 1=check latency. -j [check] : 0=n/a, 1=check jitter. -p[check] : 0=n/a, 1=check packet loss. -m[value] : upload threshold value. -n [value] : download threshold value. -x [value] : latency threshold value. -y [value] : jitter threshold value. -z [value] : packet loss threshold value.

Example

```
> wan failover on 2 1 0 4 50 20
> wan failover show 2
  wan2 Active Mode : Failover
      Active when : Any of the selected WANs reached the Traffic
Threshold, any
 followed meet:
>
```

Telnet Command: hsportal setup

This command is used to configure a profile (Hotspot Web Portal) with specified URL for accessing into or display a message when a wireless/LAN user connects to Internet through this router.

Syntax

hsportal setup -p <*profile*> *[-l <lan>] [-s <ssid>] ...*

hsportal setup -p <*profile*> *-c*

Syntax Description

Parameter	Description
-p <profile>	Indicate available profile to be configured. <profile>: Enter the index number (1 to 4) of the profile.
-l	Apply to LAN interfaces (1 to 8). For example: hsportal setup -p 1 -l 1, 2 (apply LAN1 and LAN2)
-s	Apply to WLAN interfaces (1 to 4). For example: hsportal setup -p 1 -s 1, 2 (apply SSID1 and SSID2)
-a	Apply to WLAN5G interfaces (1 to 4). For example: hsportal setup -p 1 -a 1, 2 (apply SSID1 and SSID2)
-m	Select login mode. 0: skip 1: click 2: social 3: pin 4: social or pin For example: hsportal setup -p 1 -m 0
-f <0/1>	It menas to enable or disable the function of Configure facebook login. 0: disable. 1: enable.
-g <0/1>	It menas to enable or disable the function of Configure google login. 0: disable. 1: enable.
-h <0/1>	It menas to enable or disable the function of HTTPS redirection. 0: disable. 1: enable.
-v <0/1>	It menas to enable or disable the function of portal detection. 0: disable. 1: enable.
-i <string>	It means to set APP ID. <string>: Enter a string as APP ID. For example, to configure facebook APP id, you can type: > hsportal set -p 1 -f 1 -i this_is_app_id Profile 1 set facebook login enabled ... [OK] Profile 1 set API ID ... [OK]
-k <string>	It means to set APP key. <string>: Enter a string as APP key. For example, to configure google APP key, you can type: > hsportal set -p 1 -g 1 -k keyforapp Profile 1 set google login enabled ... [OK] Profile 1 set API KEY ... [OK]
-r <0/1/2>	It means to set landing page mode. 0: fixed URL. 1: user request. 2: bulletin. For example, > hsportal set -p 1 -r 0 Profile 1 set landing page mode 0 ... [OK]
-e	Enable the specified profile.

-d	Disable the specified profile.
-c <1/2/3/4>	Reset the specified profile. <1/2/3/4>: Enter the index number of profile. For example, > hsportal set -p 1 -c Reset profile 1 ... [OK]
-o	Clear profiles for all clients.
-t <value>	Set the expire time for the specified profile. <value>: Enter a number of time period (unit: minutes). For example, k> hsportal setup -p 1 -t 300 Profile 1 set expire time 300 mins ... [OK]

Example

```
> hsportal setup -p 1 -c
Reset profile 1 ... [OK]
> hsportal setup -p 1 -r 0
Profile 1 set landing page mode 0 ... [OK]
> hsportal setup -p 2 -g 1 -k app_key_google
Profile 2 set google login enabled ... [OK]
Profile 2 set API KEY  ... [OK]
>
```

Telnet Command: hsportal info

This command allows the user to configure settings for hotspot database.

Syntax

hsportal info <*-e /-c /-n /-a /-m /-s*>

Syntax Description

Parameter	Description
-e <0/1>	It means to enable or disable the database to record information. 0: disable. 1: enable.
-c	It means to clear User information database.
-n <0/1>	It means to enable or disable the notification for user information. 0: disable. 1: enable.
-a <0/1>	It means to enable or disable the function of auto backup and start a new record for user information. 0: disable. 1: enable.
-m <value>	It means to set email notification object. <value>: Enter the index number (1 to 10) of email notification objects.
-s <value>	It means to set SMS provider object. <value>: Enter the index number (1 to 10) of the SMS server object for sending mail out when the database storage exceeded.

Example

```
> hsportal info -e 1
Enabled database to record information ... [OK]
> hsportal info -n 1
Enabled notification for user information ... [OK]
> hsportal info -a 1
Enabled auto backup and start a new record for user information ... [OK]
> hsportal info -m 1
Email notification object set ok.
>
```

Telnet Command: hsportal level

This command allows the user to configure bandwidth and sessions quota which is only applicable to the web portal clients.

Syntax

hsportal level *-p <index> [-e <enable>] [-t <mins>] ...*

Syntax Description

Parameter	Description
-p <index>	It means to specify (add) a quota policy profile. <index>: Enter the index number (1 to 20) of the quota policy profile.
-e <0/1>	It means to enable or disable the quota policy profile. 0: disable. 1: enable.
-t <value>	It means to set expired time for quota policy. <value>: Enter a number (unit:minutes).
-i <0/1> -o <value>	It means to enable or disable the function of idle timeout 0: disable. 1: enable. If enabled, -o <value>: Set the idle timeout (unit:minutes) if idle timeout is enabled. For example: hsportal level -p 1 -e 1 -i 1 -o 300
-d <value>	It means to set the maximum number of devices that can be connected to the network using the same account. <value>: Enter a number (0 to 100). "0" means unlimited. For example: hsportal level -p 1 -e 1 -d 0
-b <0/1>	It means to enable or disable the function of bandwidth limit. 0: disable. 1: enable.
-ru <0/1>	It means to specify the bandwidth limit download unit. 0: kbps 1: mbps
-tu <0/1>	It means to specify the bandwidth limit upload unit. 0: kbps. 1: mbps.
-s <0/1>	It means to enable or disable the session limit. 0:disable.

	1:enable.
-n <value>	It means to set a maximum session limit. <value>: Enter a value (0 to 6000). For example: hsportal level -p 1 -s 1 -n
-U <kbps/mbps>	It means to specify the bandwidth upload limit. kbps mbps
-D <kbps/mbps>	It means to specify the bandwidth download limit. kbps mbps
-c <index>	It means to delete a quota policy profile. <index>: Enter the index number (1 to 20) of the quota policy profile.
-r <0/1>	It means to enable or disable the function of reconnection time restriction. 0:disable. 1:enable.
-f <value>	It means to set a period of time to block the same user reconnecting to the network. <value>: Enter a number (1 to 1439 minutes). For example: hsportal level -p 1 -e 1 -r 1 -f 300
-g <value>	It means to set a reconnection time to block the same user from reconnecting before the set time. <value>: Enter the hour (01 to 23) and the minutes (0~59) (unit: minutes). For example: hsportal level -p 1 -e 1 -r 1 -f 23:15 (The same user can reconnect after 23:15 every day)

Example

```
> hsportal level -p 1 -e 1 -r 1 -f 30000
>
```

Telnet Command: hsportal pin_gen

This command is for future use.

Telnet Command: hsportal json_pin_gen

This command allows the user to configure JSON settings for getting the PIN code.

Syntax

json_pin_gen <*enable/disable/status*>

json_pin_gen authCode <*authCode*>

json_pin_gen ipFilter <*enable/disable/status*>

json_pin_gen ipv4Filter <*FilterIdx*> <*obj*> <*ObjIndex*>

json_pin_gen ipv6Filter <*FilterIdx*> <*obj*> <*ObjIndex*>

json_pin_gen ipv4Filter <*FilterIdx*> *clear*

json_pin_gen ipv6Filter <*FilterIdx*> *clear*

json_pin_gen AccFromInternet <*enable/disable/status*>

Syntax Description

Parameter	Description
json_pin_gen <enable/disable/status>	It means to enable/disable the function of JSON get pin code.
json_pin_gen authCode <authCode>	It means to set authentication code for JSON pin code mechanism. <authCode> - Enter a string as identity authentication.
json_pin_gen ipFilter <enable/disable/status>	It means to enable/disable the authentication based on the IPv4 or IPv6 object.
json_pin_gen ipv4Filter <FilterIdx> <obj> <ObjIndex>	It means to set IPv4 object for authentication. <Filteridx> - Specify the index number of the IPv4 object profile. <obj> - Ranges from 1 to 10. Ten objects can be set. <ObjIndex> - Enter the index number of the IPv4 object profile.
json_pin_gen ipv6Filter <FilterIdx> <obj> <ObjIndex>	It means to set IPv6 object for authentication. <Filteridx> - Specify the index number of the IPv6 object profile. <obj> - Ranges from 1 to 10. Ten objects can be set. <ObjIndex> - Enter the index number of the IPv6 object profile.
json_pin_gen ipv4Filter <FilterIdx> clear	It means to clear IPv4 object filter. <Filteridx> - Specify the index number of the IPv4 object profile.
json_pin_gen ipv6Filter <FilterIdx> clear	It means to clear IPv6 object filter. <Filteridx> - Specify the index number of the IPv6 object profile.
json_pin_gen AccFromInternet <enable/disable/status>	It means to set Generate pin code From Internet mechanism.

Example

```
> hsportal json_pin_gen enable
 json get pincode mechanism : enable
> hsportal json_pin_gen authCode passcode1
 Set the authCode
```

Telnet Command: wl acl

This command allows the user to configure wireless access control settings.

Syntax

wl acl enable *<ssid1 ssid2 ssid3 ssid4>*

wl acl disable *<ssid1 ssid2 ssid3 ssid4>*

wl acl add *<MAC><ssid1 ssid2 ssid3 ssid4><comment><isolate>*

wl acl del *<MAC>*

wl acl mode *<ssid1 ssid2 ssid3 ssid4><white/black>*

wl acl show

wl acl showmode

wl acl clear

Syntax Description

Parameter	Description
enable <ssid1 ssid2 ssid3 ssid4>	It means to enable the settings for SSID1, SSID2, SSID3 and SSID4.
disable <ssid1 ssid2 ssid3 ssid4>	It means to disable the settings for SSID1, SSID2, SSID3 and SSID4.
add <MAC><ssid1 ssid2 ssid3 ssid4><comment><isolate>	It means to associate a MAC address to certain SSID interfaces' access control settings. The isolate setting will limit the wireless client's network capabilities to accessing the wireless LAN only. [MAC] format: xx-xx-xx-xx-xx-xx or xx:xx:xx:xx:xx:xx or xx.xx.xx.xx.xx.xx
del<MAC>	It means to delete a MAC address entry defined in the access control list.
mode <ssid1 ssid2 ssid3 ssid4><white/black>	It means to set white/black list for each SSID.
show	It means to show access control status.
showmode	It means to show the mode for each SSID.
clear	It means to clean all access control setting.

Example

```
> wl acl showmode
 ssid1: none
 ssid2: none
 ssid3: none
 ssid4: none
> wl acl add 14:49:BC:0D:8F:00 ssid1 ssid2 test isolate
 Set Done !!
> wl acl show
----------Mac Address Filter Status---------
 SSID1: Disable
 SSID2: Disable
 SSID3: Disable
 SSID4: Disable

 ----------MAC Address List----------
 Index   Attribute      MAC Address        Associated SSIDs        Comment
   1       s          14:49:bc:0d:8f:00   SSID1 SSID2            test

 s: Isolate the station from LAN
>
```

Telnet Command: wl config

This command allows users to configure general settings and security settings for wireless connection.

Syntax

wl config mode *<value>*

wl config mode show
wl config channel *<number>*
wl config channel show
wl config preamble *<enable>*
wl config txburst *<enable>*
wl config ssid *<ssid_num enable ssid_name <hidden_ssid>>*
wl config security *<SSID_NUMBER><mode>*
wl config ratectl *<ssid_num enable upload download >*
wl config isolate *<ssid_num lan member>*
wl config dtim *<value>/ show*
wl config beaconperiod *<value> / show*
wl config radio *<1/0>/show*
wl config frag *<value>/ show*
wl config rts *<value> / show*
wl config rate_alg *<value> / show*
wl config country *<value> / show*

Syntax Description

Parameter	Description
mode <value>	It means to select connection mode for wireless connection. Available settings are: "11bgn", "11gn", "11n", "11bg", "11g", or "11b".
mode show	It means to display what the current wireless mode is.
channel <number>	It means the channel of frequency of the wireless LAN. The available settings are 0,1,2,3,4,5,6,7,8,9,10,11,12 and 13. number=0, means Auto number=1, means Channel 1 …. number=13, means Channel 13.
preamble <enable>	It means to define the length of the sync field in an 802.11 packet. Most modern wireless network uses short preamble with 56 bit sync field instead of long preamble with 128 bit sync field. However, some original 11b wireless network devices only support long preamble. 0: disable to use long preamble. 1: enable to use long preamble.
txburst <enable>	It means to enhance the performance in data transmission about 40%* more (by enabling **Tx Burst**). It is active only when both sides of Access Point and Station (in wireless client) invoke this function at the same time. 0: disable the function. 1: enable the funciton.
ssid <ssid_num enable ssid_name <hidden_ssid>>	It means to set the name of the SSID, hide the SSID if required. *ssid_num:* Type 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. *ssid_name*: Give a name for the specified SSID. *hidden_ssid*: Type 0 to hide the SSID or 1 to display the SSID
security <SSID_NUMBER><mode><key ><index>	It means to configure security settings for the wirelesss connection. *SSID_NUMBER*: Type 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. *mode*: Available settings are: disable: No security.

	wpa1x: WPA/802.1x Only wpa21x: WPA2/802.1x Only wpamix1x: Mixed (WPA+WPA2/802.1x only) wep1x: WEP/802.1x Only wpapsk: WPA/PSK wpa2psk: WPA2/PSK wpamixpsk: Mixed (WPA+WPA2)/PSK wep: WEP *key, index*: Moreover, you have to add keys for *wpapsk, wpa2psk, wpamixpsk* and *wep*, and specify index number of schedule profiles to be followed by the wireless connection. WEP keys must be in 5/13 ASCII text string or 10/26 Hexadecimal digit format; WPA keys must be in 8~63 ASCII text string or 64 Hexadecimal digit format.
ratectl <ssid_num enable upload download>	It means to set the rate control for the specified SSID. *ssid_num:* Choose 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. *enable*: It means to enable the function of the rate control for the specified SSID. 0: disable and 1:enable. *upload*: It means to configure the rate control for data upload. The unit is kbps. *download*: It means to configure the rate control for data download. The unit is kbps.
isolate <ssid_num lan member>	It means to isolate the wireless connection for LAN and/or Member. *lan* – It can make the wireless clients (stations) with remote-dial and LAN to LAN users not accessing for each other. *member* – It can make the wireless clients (stations) with the same SSID not accessing for each other.
dtim <value> / show	Set the DTIM value. value: 1 to 255 show: Display the DTIM setting.
beaconperiod <value> / show	Set the beaconperiod value. value: 20 to 1023 (milli-second) show: Display the beaconperiod etting.
radio <1/0>/show	Enble or disable the wireless radio. 1/0: Type 1 to enable; 0 to disable. show: Display the radio setting.
frag <value>/ show	Set the fragment value. value: 256 to 2346 show: Display the fragment setting.
rts <value> / show	Set the RTS value. value: 1 to 2347 show: Display the RTS setting.
rate_alg <value>/ show	Set the algorithm for ALG rate. value: 0 for old algorithm; 1 for new algorithm. show: Display the ALG rate setting.
country <value>/ show	Set the country code for a country. value: two capital letters, e.g., TW, UK show: Display the country cod setting.

Example

```
> wl config mode 11bgn
```

```
 Current mode is 11bgn
% <Note> Please restart wireless after you set the channel
> wl config channel 13
 Current channel is 13
% <Note> Please restart wireless after you set the channel.
> wl config preamble 1
 Long preamble is enabled
% <Note> Please restart wireless after you set the parameters.
> wl config ssid 1 enable dray
 SSID  Enable  Hide_SSID  Name
 1     1       0         dray
% <Note> Please restart wireless after you set the parameters.
> wl config security 1 wpa1x
%% Configured Wlan Security Setting:
% SSID1
%%  Mode: wpa1x
%% Wireless card must be reset for configurations to take effect
%% (Telnet Command: wl restart)
> wl config country TW
 Set wireless country code TW
% <Note> Please restart wireless after you set the parameters.
```

Telnet Command: wl set

This command allows users to configure basic wireless settings.

Syntax

wl set <*SSID*><*CHAN[En]*>
wl set txburst <*enable*>

Syntax Description

Parameter	Description
SSID	It means to Enter the SSID for the router. The maximum character that you can use is 32.
CHAN[En]	It means to specify required channel for the router. *CHAN:* The range for the number is between 1 ~ 13. *En*: type *on* to enable the function; type *off* to disable the function.
txburst <*enable*>	It means to enhance the performance in data transmission about 40%* more (by enabling **Tx Burst**). It is active only when both sides of Access Point and Station (in wireless client) invoke this function at the same time. 0: disable the function. 1: enable the function.

Example

```
> wl set MKT 2 on
% New Wlan Setting is:
% SSID=MKT
% Chan=2
% Wl is Enable
```

Telnet Command: wl act

This command allows users to activate wireless settings.

Syntax

wl act <*En*>

Syntax Description

Parameter	Description
En	It means to enable or disable the function of VPN isolation. 0: diable 1: enable

Example

```
> wl act on
% Set Wlan to Enable.
```

Telnet Command: wl scan

This command allows users to perform AP scanning.

Syntax

wl scan <*start*>
wl scan *set* <*wlist/blist*> <*MAC*>
wl scan *set* < *stime*> <*time*>
wl scan *del* <*wlist/blist*><*MAC*>
wl scan *filter* <*ssid/channel/mac*>
wl scan *show* <*0/1/2/3/4/5*>

Syntax Description

Parameter	Description
start	It means to start AP scanning.
set <*wlist/blist*> <*MAC*>	Set white list/block list/scan time. *wlist* – It means to set white list for passing. MAC address must be added in the end. e.g., *wl scan set wlist 001122aabbcc* *blist* – It means to set black list for blocking. MAC address must be added in the end.
set <*stime*> <*time*>	Set the scan time. stime – It means to set scanning time. time - Time value (2~5 second) must be added in the end. e.g., *wl scan set time 5*
del <*wlist/blist*><*MAC*>	Remove white list/block list. e.g., *wl scan del wlist 001122aabbcc*
filter <*ssid/channel/mac*>	Set which filter you want. *ssid* - scanning the AP based on SSID setting. *channel* - scanning the AP based on channel setting. *mac* - scanning the AP based on MAC address setting..
show <*0/1/2/3/4/5*>	It is used to show AP list. 0 - display white list

	1 - display block list, 2 - display gray/unknown list, 3 - display all list 4. white list(in config) 5. block list(in config) Note : 0~3 is the list router scan, 4~5 is the list stored in config.

Example

```
> wl scan set wlist 001122aabbcc
> wl scan start
> wl scan show 3
>
```

Telnet Command: wl stamgt

This command is used to configure connection time and reconnection time for each SSID that wireless client used for accessing into Internet.

Syntax

wl stamgt <*enable/disable*> <*ssid_num*>

wl stamgt *show* <*ssid_num*>

wl stamgt *set* <*ssid_num*> <*c*> <*r*>

wl stamgt *reset* <*ssid_num*>

Syntax Description

Parameter	Description
enable/disable	It means to enable/disable the station management control.
ssid_num	It means channel selection. Available channel for 2.4G: 0/1/2/3 Available channel for 5G: 4/5/6/7.
show	It means to display status or configuration of the selected channel.
c	It means connection time. The unit is minute.
r	It means reconnection time. The unit is minute.

Example

```
> wl stamgt enable 1
% Station Management Status: enabled
> wl stamgt set 1 60 60
> wl stamgt show 1
NO. SSID           BSSID              Connect time  Reconnect time
1.  Draytek      00:11:22:aa:bb:cc  0d:0:58:26      0d:0:0
```

Telnet Command: wl iso_vpn

This command allows users to activate the function of VPN isolation.

Syntax

wl iso_vpn <*ssid*> <*En*>

Syntax Description

Parameter	Description
ssid	It means the number of SSID. 1: SSID1 2: SSID2 3: SSID3 4: SSID4
En	It means to enable or disable the function of VPN isolation. 0: disable 1: enable

Example

```
> wl iso_vpn 1 on
% ssid: 1 isolate vpn on :1
```

Telnet Command: wl wmm

This command allows users to set WMM for wireless connection. It defines the priority levels for four access categories derived from 802.1d (prioritization tabs).

Syntax

wl wmm ap *QueIdx Aifsn Cwmin Cwmax Txop ACM*
wl wmm bss *QueIdx Aifsn Cwmin Cwmax Txop ACM*
wl wmm ack *Que0_Ack Que1_Ack Que2_Ack Que3_Ack*
wl wmm enable *SSID0 SSID1 SSID2 SSID3*
wl wmm apsd *value*
wl wmm show

Syntax Description

Parameter	Description
ap	It means to set WMM for access point.
bss	It means to set WMM for wireless clients.
ack	It means to map to the Ack policy settings of AP WMM.
enable	It means to enable the WMM for each SSID. 0: disable 1: enable
apsd <value>	It means to enable / disable the ASPD(automatic power-save delivery) function. 0: disable 1: enable
show	It displays current status of WMM.
QueIdx	It means the number of the queue which the WMM settings will be applied to. There are four queues, best effort, background, voice, and video.
Aifsn	It controls how long the client waits for each data transmission.
Cwmin/ Cwmax	**CWMin** means contention Window-Min and **CWMax** means contention Window-Max. Specify the value ranging from 1 to 15.
Txop	It means transmission opportunity. Specify the value ranging from 0 to 65535.
ACM	It can restrict stations from using specific category class if it is

	enabled. 0: disable 1: enable

Example

```
> wl wmm ap 0 3 4 6 0 0
 QueIdx=0: APAifsn=3,APCwmin=4,APCwmax=6, APTxop=0,APACM=0
> wl wmm enable 1 0 1 0
 WMM_SSID0 =1, WMM_SSID1 =0,WMM_SSID2 =1,WMM_SSID3 =0
> wl wmm show
 Enable WMM: SSID0 =1, SSID1 =0,SSID2 =1,SSID3 =0
 APSD=0
 QueIdx=0: APAifsn=3,APCwmin=4,APCwmax=6, APTxop=0,APACM=0
 QueIdx=1: APAifsn=7,APCwmin=4,APCwmax=10, APTxop=0,APACM=0
 QueIdx=2: APAifsn=1,APCwmin=3,APCwmax=4, APTxop=94,APACM=0
 QueIdx=3: APAifsn=1,APCwmin=2,APCwmax=3, APTxop=47,APACM=0
 QueIdx=0: BSSAifsn=3,BSSCwmin=4,BSSCwmax=10, BSSTxop=0,BSSACM=0
 QueIdx=1: BSSAifsn=7,BSSCwmin=4,BSSCwmax=10, BSSTxop=0,BSSACM=0
 QueIdx=2: BSSAifsn=2,BSSCwmin=3,BSSCwmax=4, BSSTxop=94,BSSACM=0
 QueIdx=3: BSSAifsn=2,BSSCwmin=2,BSSCwmax=3, BSSTxop=47,BSSACM=0
 AckPolicy[0]=0: AckPolicy[1]=0,AckPolicy[2]=0,AckPolicy[3]=0
```

Telnet Command: wl ht

This command allows you to configure wireless settings.

Syntax

wl ht bw *value*
wl ht gi *value*
wl ht badecline *value*
wl ht autoba *value*
wl ht rdg *value*
wl ht msdu *value*
wl ht txpower *value*
wl ht antenna *value*
wl ht greenfield *value*

Syntax Description

Parameter	Description
bw value	The value you can type is 0 (for BW_20) and 1 (for BW_40).
gi value	The value you can type is 0 (for GI_800) and 1 (for GI_4001)
badecline value	The value you can type is 0 (for disabling) and 1 (for enabling).
autoba value	The value you can type is 0 (for disabling) and 1 (for enabling).
rdg value	The value you can type is 0 (for disabling) and 1 (for enabling).
msdu value	The value you can type is 0 (for disabling) and 1 (for enabling).
txpower value	The value you can type ranges from 1 – 6 (level).
antenna value	The value you can type ranges from 0-3. 0: 2T3R 1: 2T2R

	2: 1T2R 3: 1T1R
greenfield value	The value you can type is 0 (for mixed mode) and 1 (for green field).

Example

```
> wl ht bw value 1
 BW=0
 <Note> Please restart wireless after you set new parameters.
> wl restart
 Wireless restart.................
```

Telnet Command: wl restart

This command allows you to restart wireless setting.

Example

```
> wl restart
 Wireless restart.................
```

Telnet Command: wl wds

This command allows you to configure WDS settings.

Syntax

wl wds mode *[value]*
wl wds security *[value]*
wl wds ap *[value]*
wl wds hello *[value]*
wl wds status
wl wds show
wl wds mac *[value]*
wl wds flush

Syntax Description

Parameter	Description
mode [value]	It means to specify connection mode for WDS. [value]: Available settings are : d: Disable b: Bridge r: Repeapter
security [value]	It means to configure security mode with encrypted keys for WDS. *mode*: Available settings are: disable: No security. wep: WEP wpapsk [key]: WPA/PSK wpa2psk [key]: WPA2/PSK *key*: Moreover, you have to add keys for *wpapsk*, *wpa2psk*, and *wep*, and specify index number of schedule profiles to be followed by the wireless connection. WEP keys must be in 5/13 ASCII text string or 10/26 Hexadecimal digit format; WPA keys must be in 8~63 ASCII text string or 64 Hexadecimal digit format. e.g.,

	wl dual wds security disable *wl dual wds security wep 12345* *wl dual wds security wpa2psk 12345678*
ap [value]	It means to enable or disable the AP function. Value: 1 – enable the function. 0 – disable the function.
hello [value]	It means to send hello message to remote end (peer). Value: 1 – enable the function. 0 – disable the function.
status	It means to display WDS link status for 2.4GHz connection.
show	It means to display current WDS settings.
mac add [index addr]	add *[index addr]* - Add the peer MAC entry in Repeater/Bridge WDS MAC table.
mac clear/disable/enable [index/all]	clear/disable/enable *[index/all]*- Clear, disable, enable the specifed or all MAC entries in Repeater/Bridge WDS MAC table. e.g, *wl dual wds mac enable 1*
flush	It means to reset all WDS setting.

Example

```
> wl wds status
Please enable WDS hello function first.

> wl wds hello 1
% <Note> Please restart router after you set the parameters.

> wl wds status
```

Telnet Command: wl apcli

This command allows users to configure AP client mode for wireless connection (2.4GHz).

Syntax

wl apcli show
wl apcli enable <*1/0*>
wl apcli security <*mode*>
wl apcli ssid <*ssid_name*>
wl apcli bssid <*mac address*>

Syntax Description

Parameter	Description
show	Display current status of wireless AP client.
enable <1/0>	It means to enable wireless 2.4GHz AP client mode. 1 – enable 0 – disable
security <mode>	There are several modes to be selected: Disable – disable the security settings. wpapsk [key] – WPA Pre-shared Key will be used. Keys must start with 0x to be identified as a Hexadecimal number key. WPA keys must be in 8~63 ASCII string or 64 Hexadecimal digit format. wpa2psk [key] – WPA2 Pre-shared Key will be used. Keys must start

	with 0x to be identified as a Hexadecimal number key. WPA keys must be in 8~63 ASCII string or 64 Hexadecimal digit format. wpamixpsk [key] – WPA Mixed Pre-shared Key will be used. Keys must start with 0x to be identified as a Hexadecimal number key. WPA keys must be in 8~63 ASCII string or 64 Hexadecimal digit format. wep [key] [index] – WEP key will be used. You need to Enter the key string and specify the index number of the profile to be applied. WEP keys must be in 5/13 ASCII string or 10/26 Hexadecimal digit format.
ssid <ssid_name>	Specify the SSID for wireless 2.4GHz AP client.
bssid <mac address>	Enter the MAC address for wireless 2.4GHz AP client.

Example

```
> wl apcli enable 1
Wireless AP-Clinet is enabled
> wl apcli show
% Wireless AP-Clinet is enabled
% Current SSID is test
%%  Security Mode: disable
% Wireless client is disconnected
%% data rate=---, mode=---, signal=0%
```

Telnet Command: wl btnctl

This command allows you to enable or disable wireless button control.

Syntax

wl btnctl <*value*>

Syntax Description

Parameter	Description
value	0: disable 1: enable

Example

```
> wl btnctl 1
Enable wireless botton control
Current wireless botton control is on
>
```

Telnet Command: wl iwpriv

This command is reserved for RD debug. Do not use them.

Telnet Command: wl ce_cert

For sharing the wireless network, the WiFi clients can be authenticated by Vigor router with specific certificate.

Syntax

wl ce_cert <*on/off*>*[*<*command*><*parameter*>|*…**]*

wl ce_cert performance

wl ce_cert *R61* <*value*>

wl ce_cert *R61 show*

Syntax Description

Parameter	Description
<on/off>	Enable or disable the certificate. on - Enable. off - Disable.
[<command><parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line. There are ten parameters; TxBurst HT_RDG HT_AutoBA HT_BADecline EDCCA_AP_STA_TH EDCCA_AP_AP_TH EDCCA_FALSE_CCA_TH EDCCA_ED_TH <value> - EDCCA_BLOCK_CHECK_TH EDCCA_AP_RSSI_TH
TxBurst <0/1>	Enable or disable the TxBurst feature. 1 - Enable; 0 - Disable
HT_RDG <0/1>	Enable or disable the HT_RDG feature. 1 - Enable; 0 - Disable
HT_AutoBA <0/1>	Enable or disable the HT_AutoBA feature. 1 - Enable; 0 - Disable
HT_BADecline <0/1>	Enable or disable the HT_BADecline feature. 1 - Enable; 0 - Disable
EDCCA_AP_STA_TH <value	Set a number for EDCCA_AP_STA_TH. <value> - Ranges from 1 to 255.
EDCCA_AP_AP_TH <value>	Set a number for EDCCA_AP_AP_TH. <value> - Ranges from 1 to 255.
EDCCA_FALSE_CCA_TH <value>	Set a number for EDCCA_FALSE_CCA_TH. <value> - Any number greater than 0 (integer).
EDCCA_ED_TH <value>	Set a number for EDCCA_ED_TH. <value> - Ranges from 1 to 255.
EDCCA_BLOCK_CHECK_TH <value>	Set a number for EDCCA_BLOCK_CHECK_TH. <value> - Any number greater than 0 (integer).
EDCCA_AP_RSSI_TH <value>	Set a number for EDCCA_AP_RSSI_TH. <value> - Ranges from 0 to 25.
performance	Show the parameters with the values for getting the best performance.
R61 <value>	Set a number for BBP_R61. <value> - Ranges from 1 to 10.
R61 show	Display R61 setting status.

Example

```
> wl ce_cert on 0 1 1 0 255 255 3000 90 8 -80
<Note> Please restart wireless after you set new parameters.
```

```
ED_CERT is enabled
TxBurst           :0 (default :0)
HT_RDG            :1 (default :0)
HT_AUTO_BA    :1 (default :1)
HT_BA_DECLINE     :0 (default :0)
EDCCA_AP_STA_TH       :255
EDCCA_AP_AP_TH        :255
EDCCA_FALSE_CCA_TH    :3000
EDCCA_ED_TH           :90
EDCCA_BLOCK_CHECK_TH  :8
EDCCA_AP_RSSI_TH      :-80
> wl ce_cert performance
Parameters for best performance :
ED_CERT is enabled
TxBurst      :0
HT_RDG       :1
HT_AUTO_BA   :1
HT_BA_DECLINE :0
EDCCA_AP_STA_TH    :20
EDCCA_AP_AP_TH     :20
EDCCA_FALSE_CCA_TH  :180
EDCCA_ED_TH        :90
EDCCA_BLOCK_CHECK_TH:2
EDCCA_AP_RSSI_TH   :-80
<Note> Please restart wireless.
>
```

Telnet Command: wl stalist

This command is used to display the wireless station which accessing Internet via Vigor router.

Syntax

wl stalist

Example

```
> wl stalist
wl stalist show    : show station list
wl stalist num     : show number of stations
wl stalist neighbor : show neighbor station list
```

Telnet Command: wl set8021x

This command allows you to configure the external or internal server used by Vigor router for wireless authentication.

Syntax

wl set8021x -t <*0/1*>

wl set8021x -v

Syntax Description

Parameter	Description
-t	Specify the type (external or internal) of wireless authentication server. 0 – Indicate the external RADIUS server. 1- Indicate the local 802.1x server.
-v	View the settings of 802.1x.

Example

```
> wl set8021x -t 1
% <Note> Please restart wireless after you set the parameters.
> wl set8021x -v
 802.1X type is : Local 802.1X
>
```

Telnet Command: wl bndstrg

This command allows users to configure settings for Band Steering (2.4GHz).

Syntax

wl bndstrg show

wl bndstrg enable <*1/0*>

wl bndstrg chk_time <*value*>

Syntax Description

Parameter	Description
show	Display current status for Band Steering function.
enable<1/0>	It means to enable wireless 2.4GHz AP client mode. 1 – enable 0 – disable
chk_time <value>	If the wireless station does not have the capability of 5GHz network connection, the system shall wait and check for several seconds (15 seconds, in default) to make the 2.4GHz network connection. Specify the time limit for Vigor router to detect the wireless client. *[value] – 1 to 60 seconds.*

Example

```
> wl bndstrg show
band steering: disable
chk_time: 15 sec
> wl bndstrg chk_time 50 30
argv[0]:chk_time, argv[1]:50, argv[2]:30

%% Wireless card must be reset for configurations to take effect
%% (Telnet Command: wl restart)
```

Telnet Command: wl artfns

This command allows users to configure airtime fairness function for wireless (2.4GHz) connection.

Syntax

wl artfns enable <*value*>

wl artfns trg_num <*value*>

wl artfns show

Syntax Description

Parameter	Description
enable <value>	It means to enable wireless airtime fairness function. 1 – enable 0 – disable
trg_num <value>	Set a threshold when the active station number achieves this number, the airtime fairness function will be applied. Available values will be 2 to 64.
show	Display current status (enable or disable) and triggering client number for airtime fairness function.

Example

```
> wl artfns enable 1
> wl artfns trg_num 3
> wl artfns show
airtime fairness: enable
trg_num: 3
>
```

Telnet Command: wl drayrs

This command allows the user to configure settings for Roaming for wireless clients.

Syntax

wl drayrs *set <mode><rs_low><rs_low_security><delta>*
wl drayrs *restart*
wl drayrs *show*

Syntax Description

Parameter	Description
set <mode> <rs_low> <rs_low_security><delta>	Select a mode for roaming. 0 - disable 1 - Strictly Minimum RSSI 2 - Minimum RSSI rs_low – Set a value of Strictly Minimum RSSI (62~86). rs_low_security – Set a value of Minimum RSSI (62~86). delta – Set a value of Adjacent AP RSSI (1~20).
restart	Restart to activate roaming function.
show	Dispaly current configuration of roaming function.

Example

```
> wl drayrs show
% Mode : Disable
%  rs_low         : -73
%  rs_low_secure  : -66
%  delta          : 5
>
```

Telnet Command: wl_dual acl

This command allows the user to configure wireless (5GHz) access control settings.

Syntax

wl_dual acl enable <*ssid1 ssid2 ssid3 ssid4*>
wl_dual acl disable <*ssid1 ssid2 ssid3 ssid4*>
wl_dual acl add <*MAC*><*ssid1 ssid2 ssid3 ssid4*> <*comment*> *isolate*
wl_dual acl del <*MAC*>
wl_dual acl mode <*ssid1 ssid2 ssid3 ssid4*> <*white/black*>
wl_dual acl show
wl_dual acl showmode
wl_dual acl clear

Syntax Description

Parameter	Description
enable <ssid1 ssid2 ssid3 ssid4>	It means to enable the settings for SSID1, SSID2, SSID3 and SSID4.
disable <ssid1 ssid2 ssid3 ssid4>	It means to disable the settings for SSID1, SSID2, SSID3 and SSID4.
add <MAC><ssid1 ssid2 ssid3 ssid4><comment>	It means to associate a MAC address to certain SSID interfaces' access control settings. The isolate setting will limit the wireless client's network capabilities to accessing the wireless LAN only. [MAC] format: xx-xx-xx-xx-xx-xx or xx:xx:xx:xx:xx:xx or xx.xx.xx.xx.xx.xx
Isolate	It means to isolate the wireless connection of the wireless client (identified with the MAC address) from LAN.
del <MAC>	It means to delete a MAC address entry defined in the access control list. [MAC] format: xx-xx-xx-xx-xx-xx or xx:xx:xx:xx:xx:xx or xx.xx.xx.xx.xx.xx
mode <ssid1 ssid2 ssid3 ssid4> <white/black>	It means to set white/black list for each SSID.
show	It means to display current status of access control.
showmode	It means to show the mode for each SSID.
clear	It means to clear all of the access control settings.

Example

```
> wl_dual acl showmode
 SSID1: None
 SSID2: None
 SSID3: None
 SSID4: None
> wl_dual acl add 14-49-BC-0D-8F-00 ssid1 ssid2 tet111 isolate
Set Done !!
> wl_dual acl show
 ---------- Mac Address Filter Status ---------
 SSID1: Disable SSID2: Disable SSID3: Disable SSID4: Disable
 ---------- MAC Address List ----------
 Index   Attribute      MAC Address        Associated SSIDs        Comment
   1       s          14:49:bc:0d:8f:00   SSID1 SSID2            tet111
```

```
 s: Isolate the station from LAN
```

Telnet Command: wl_dual apscan

This command is used to scan Access Point installed near the location of Vigor router.

Syntax

wl_dual apscan *start*
wl_dual apscan *show*

Syntax Description

Parameter	Description
start	It means to execute the AP scanning.
show	It means to display the content of the AP list.

Example

```
> wl_dual apscan start
> wl_dual apscan show
 AP scan is ongoing.
> wl_dual apscan ?
% wl_dual apscan [start/show]
% start: do AP scan
% show: show AP list

> wl_dual apscan show
5G Access Point List :
BSSID            Channel   SSID
```

Telnet Command: wl_dual config

This command allows users to configure general settings and security settings for wireless connection (5GHz).

wl_dual config enable <*value*>
wl dual config enable show
wl_dual config mode <*value*>
wl_dual config mode show
wl_dual config channel <*number*>
wl_dual config channel show
wl_dual config preamble <*enable*>
wl_dual config preamble show
wl_dual config bw <*value*>
wl_dual config ssid <*ssid_num enable ssid_name*>
wl_dual config ssid hide <*ssid_num enable*>
wl_dual config ssid show
wl_dual config ratectl <*ssid_num enable upload download*>
wl_dual config ratectl show
wl_dual config isolate lan <*ssid_num enable*>
wl_dual config isolate member <*ssid_num enable*>
wl_dual config isolate vpn <*ssid_num enable*>
wl_dual config isolate show
wl_dual config frag <*value*>
wl_dual config frag show
wl_dual config rts <*value*>
wl_dual config rts show
wl_dual config rate_alg <*value*>
wl_dual config country <*value*>
wl_dual config txpower <*value*>
wl_dual config nss <*value*>

Syntax Description

Parameter	Description
enable <value>	It means to enable/disable the 5GHz wireless function. 1: enable 0: disable
show	It means to display if 5G wireless function is enabled or not.
mode <value>	It means to select connection mode for wireless connection. Available settings are: "11a", "11n_5g", "11n" and "11an".
mode show	It means to display what the current wireless mode is.
channel <number>	It means the channel of frequency of the wireless LAN. The available settings are: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136 and 140. number=0, means Auto number=36, means Channel 36 …. Number=52, means Channel 52.
channel show	It means to display what the current channel is.
preamble <enable>	It means to define the length of the sync field in an 802.11 packet. Most modern wireless network uses short preamble with 56 bit sync

	field instead of long preamble with 128 bit sync field. However, some original 11b wireless network devices only support long preamble. 0: disable to use long preamble. 1: enable to use long preamble.
preamble show	It means to display if preamble is enabled or not.
bw <value>	It means to select the channel bandwidth for WLAN for data transmission and reception between the router and wireless stations. value - 0, 1, 2 0 means BW_20, 1 means BW_20_40; 2 means BW20_40_80.
ssid <ssid_num enable ssid_name>	It means to set the name of the SSID, hide the SSID if required. *ssid_num:* Type 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. *ssid_name*: Give a name for the specified SSID.
ssid hide <ssid_num enable>	It means to hide the name of the SSID if required. *ssid_num:* Type 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. enable: Type 0 to hide the SSID or 1 to display the SSID.
ssid show	It means to display a table of SSID configuration.
ratectl <ssid_num enable upload download>	It means to set the rate control for the specified SSID. *ssid_num:* Choose 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. *enable*: It means to enable the function of the rate control for the specified SSID. 0: disable and 1:enable. *upload*: It means to configure the rate control for data upload. The unit is kbps. *download*: It means to configure the rate control for data download. The unit is kbps. (example: `wl dual config ratectl 1 1 25 25`)
ratectl show	It means to display the data transmission rate (upload and download) for SSID1, SSID2, SSID3 and SSID4.
isolate lan <ssid_num enable>	It means to isolate the wireless connection from LAN. It can make the wireless clients (stations) with remote-dial and LAN to LAN users not accessing for each other. *ssid_num:* Choose 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. *enable*: It means to enable such function. 0: disable and 1:enable
isolate member <ssid_num enable>	It means to isolate the wireless connection from Member. It can make the wireless clients (stations) with the same SSID not accessing for each other. *ssid_num:* Choose 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. *enable*: It means to enable such function. 0: disable and 1:enable.
isolate vpn <ssid_num enable>	It means to isolate the wireless connection from VPN. *ssid_num:* Choose 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. *enable*: It means to enable such function. 0: disable and 1:enable.
isolate show	It means to display the status of wireless isolation.
frag <value>	It means to set the fragment threshold. value: Enter a number (256 to 2346).
frag show	It means to display current value of fragment threshold.
rts <value>	It means to set the RTS threshold. value: Enter a number (1 to 2347).
rts show	It means to display current value of RTS threshold.
rate_alg <value>	It means to select the wireless transmission rate. Usually,

	performance of “new” algorithm is better than “old”. 0 - old algorithm, 1 - new algorithm
country <value>	It means to set the country code. Each country will be represented with two digits. value: Enter two capital letters (e.g., TW, UK, CN..)
txpower <value>	It means to set TX power. Value: Enter a number (1 to 6).
nss <value>	It means to set NSS. Value: Enter a number (0 to 4).

Example

```
> wl_dual config mode 11a
 Current mode is 11a
% <Note> Please restart 5G wireless after you set the channel
> wl_dual config channel 60
 Current channel is 60
% <Note> Please restart 5G wireless after you set the channel.
> wl_dual config preamble 1
Long preamble is enabled
% <Note> Please restart 5G wireless after you set the parameters.
> wl_dual config ssid 1 enable dray
SSID  Enable  Hide_SSID  Name
 1     1       0         dray
% <Note> Please restart 5G wireless after you set the parameters.
> wl_dual config ssid show
 SSID  Enable  Hide_SSID  Name
 1     1       0         dray
 2     0       0         DrayTek_5G_Guest
 3     0       0
 4     0       0
```

Telnet Command: wl_dual restart

This command allows you to restart wireless setting (5GHz).

Example

```
> wl_dual restart

 5G wireless restart.................
```

Telnet Command: wl_dual security

This command allows users to configure security settings for the wireless connection (5GHz).

Syntax

wl_dual security <*SSID_NUMBER***><***mode***><***key***><***index***>**

wl_dual security show

Syntax Description

Parameter	Description
security <SSID_NUMBER> <mode> <key> <index>	*SSID_NUMBER*: Type 1, 2, 3 or 4 to specify SSID1, SSID2, SSID3 or SSID4. *mode*: Available settings are:

	disable: No security. wpa1x: WPA/802.1x Only wpa21x: WPA2/802.1x Only wpamix1x: Mixed (WPA+WPA2/802.1x only) wep1x: WEP/802.1x Only wpapsk: WPA/PSK wpa2psk: WPA2/PSK wpamixpsk: Mixed (WPA+WPA2)/PSK wpa3sae: WPA3/SAE wpa3mixsae: Mixed (WPA2+WPA3)/SAE wep: WEP *key, index*: Moreover, you have to add keys for *wpapsk, wpa2psk, wpamixpsk* and *wep*, and specify index number of schedule profiles to be followed by the wireless connection. WEP keys must be in 5/13 ASCII text string or 10/26 Hexadecimal digit format; WPA keys must be in 8~63 ASCII text string or 64 Hexadecimal digit format.
show	It means to display current mode selection for each SSID.

Example

```
> wl_dual security 1 wpa2psk 123456789e
% <Note> Please restart 5G wireless after you set the parameters.

> wl_dual security show
%% 5G Wireless LAN Security Settings:
% SSID1
%%  Mode: WPA2/PSK
% SSID2
%%  Mode: Disable
% SSID3
%%  Mode: Disable
% SSID4
%%  Mode: Disable
```

Telnet Command: wl_dual stalist

This command is used to display the wireless station which accessing Internet via Vigor router.

Syntax

wl_dual stalist show
wl_dual stalist num
wl_dual stalist neighbor
wl_dual stalist validtime <*time*>
wl_dual stalist maxmum <*num*>

Syntax Description

Parameter	Description
validtime <*time*>	Set the valid time of the neighbor station list. <time> - 0 to 300000.
Maxnum <*num*>	Set the maximum number of neighbor station list.

	<value> - 10 to 512

Example

```
> wl_dual stalist neighbor
5G Wireless Neighbor Station List :
MAC Address     |Vendor Name    |RSSI(%)|RSSI(dbm)|SSID|time(ms)
F2:C6:DB:2B:25:E0|             |24     |-84      |none|20
D6:FC:CB:DC:C1:E8|             |24     |-84      |none|0
80:00:0B:04:CE:5A|Intel         |11     |-88      |none|7230880
00:1D:AA:80:FE:D6|DrayTek       |15     |-87      |none|7210610
A6:99:E2:27:7F:A0|             |50     |-76      |none|20
0A:32:AB:06:88:2C|             |40     |-79      |none|0
F8:63:3F:56:06:C6|             |15     |-87      |none|881950
1E:B9:C9:03:04:52|             |87     |-62      |none|20
8E:DF:E3:0A:F4:02|             |3      |-92      |none|20
E2:41:8F:4B:1A:11|             |50     |-76      |none|20
BA:96:81:7D:11:BD|             |24     |-84      |none|10
7C:2A:31:10:1B:11|             |2      |-93      |none|0
```

Telnet Command: wl_dual wds

This command allows users to configure WDS for wireless connection (5GHz).

Syntax

wl_dual wds mode <*value*>
wl_dual wds security <*value*>
wl_dual wds ap <*value*>
wl_dual wds hello <*value*>
wl_dual wds status
wl_dual wds show
wl_dual wds mac add <*index addr*>
wl_dual wds mac clear/disable/enable <*index*/*all*>
wl_dual wds flush

Syntax Description

Parameter	Description
mode <*value*>	It means to specify connection mode for WDS. [value]: Available settings are : d: Disable b: Bridge r: Repeapter
security <*value*>	It means to configure security mode with encrypted keys for WDS. *mode*: Available settings are: disable: No security. wep: WEP wpapsk [key]: WPA/PSK wpa2psk [key]: WPA2/PSK *key*: Moreover, you have to add keys for *wpapsk*, *wpa2psk*, and *wep*, and specify index number of schedule profiles to be followed by the wireless connection.

	WEP keys must be in 5/13 ASCII text string or 10/26 Hexadecimal digit format; WPA keys must be in 8~63 ASCII text string or 64 Hexadecimal digit format. e.g., *wl_dual wds security disable* *wl_dual wds security wep 12345* *wl_dual wds security wpa2psk 12345678*
ap <value>	It means to enable or disable the AP function. Value: 1 – enable the function. 0 – disable the function.
hello <value>	It means to send hello message to remote end (peer). Value: 1 – enable the function. 0 – disable the function.
status	It means to display WDS link status for 5GHz connection.
show	It means to display current WDS settings.
mac add <index addr>	**add** *[index addr]* - Add the peer MAC entry in Repeater/Bridge WDS MAC table.
mac clear/disable/enable <index/all>	**clear/disable/enable** *[index/all]*- Clear, disable, enable the specifed or all MAC entries in Repeater/Bridge WDS MAC table. e.g, *wl_dual wds mac enable 1*
flush	It means to reset all WDS setting.

Example

```
> wl_dual wds status
Please enable WDS hello function first.

> wl_dual wds hello 1
% <Note> Please restart router after you set the parameters.
> wl dual wds mode b
> wl dual wds security wep
> wl_dual wds show
5G Wireless WDS Setting

Mode : Bridge
Security : WEP
AP Function : Enable
Send Hello Function : Enable

Bridge :
Index  Enable  MAC Address
  1      0     00:00:00:00:00:00
  2      0     00:00:00:00:00:00
  3      0     00:00:00:00:00:00
  4      0     00:00:00:00:00:00

Repeater :
Index  Enable  MAC Address
  5      0     00:00:00:00:00:00
  6      0     00:00:00:00:00:00
  7      0     00:00:00:00:00:00
  8      0     00:00:00:00:00:00
> wl_dual wds wep 12345
% <Note> Please restart router after you set the parameters.
```

Telnet Command: wl_dual wps

This command allows users to configure WPS for wireless connection (5GHz).

Syntax

wl_dual wps enable <*value*>
wl dual wps pbc
wl_dual wps pin <*code*>
wl_dual wps show

Syntax Description

Parameter	Description
enable <value>	It means to enable WPS. 1 – enable 0 – disable
pbc	It means to start WPS by pressing the WLAN ON/OFF WPS button on Vigor router.
pin <code>	It means to start WPS by using client PIN code. [code]: Client PIN code (digit number).
show	It means to display current WPS settings.

Example

```
> wl_dual wps enable 1
 WPS is enabled.
> wl_dual wps pin 88563337
 WPS has triggered by PIN code.
 The AP will wait for WPS request from your client for 2 minutes...
```

Telnet Command: wl_dual set8021x

This command allows you to configure the external or internal server used by Vigor router for wireless authentication (5GHz).

Syntax

wl_dual set8021x -t <*0/1*>
wl_dual set8021x -v

Syntax Description

Parameter	Description
-t	Specify the type (external or internal) of wireless authentication server. 0 – Indicate the external RADIUS server. 1- Indicate the local 802.1x server.
-v	View the settings of 802.1x.

Example

```
> wl_dual set8021x -t 1
% <Note> Please restart 5G wireless after you set the parameters.
> wl_dual set8021x -v
 802.1X type is : Local 802.1X
>
```

Telnet Command: wl_dual apcli

This command allows users to configure AP client mode for wireless connection (5GHz).

Syntax

wl_dual apcli show
wl_dual apcli enable <*value*>
wl_dual apcli security <*mode*>
wl_dual apcli ssid <*ssid_name*>
wl_dual apcli bssid <*MAC address*>

Syntax Description

Parameter	Description
show	Display current status of wireless AP client.
enable <*value*>	It means to enable wireless 5GHz AP client mode. 1 – enable 0 – disable
aecurity <*mode*>	There are several modes to be selected: Disable – disable the security settings. wpapsk [key] – WPA Pre-shared Key will be used. Keys must start with 0x to be identified as a Hexadecimal number key. WPA keys must be in 8~63 ASCII string or 64 Hexadecimal digit format. wpa2psk [key] – WPA2 Pre-shared Key will be used. Keys must start with 0x to be identified as a Hexadecimal number key. WPA keys must be in 8~63 ASCII string or 64 Hexadecimal digit format. wpamixpsk [key] – WPA Mixed Pre-shared Key will be used. Keys must start with 0x to be identified as a Hexadecimal number key. WPA keys must be in 8~63 ASCII string or 64 Hexadecimal digit format. wep [key] [index] – WEP key will be used. You need to Enter the key string and specify the index number of the profile to be applied. WEP keys must be in 5/13 ASCII string or 10/26 Hexadecimal digit format.
ssid <*ssid_name*>	Specify the SSID for wireless 5GHz AP client.
bssid <*MAC address*>	Enter the MAC address for wireless 5GHz AP client.

Example

```
> wl_dual apcli enable 1
Wireless 5G AP-Clinet is enabled
Vigor> wl_dual apcli show
% Wireless 5G AP-Clinet is enabled
% Current SSID is
%%  Security Mode: disable
% Wireless 5G client is disconnected
%% data rate=---, mode=---, signal=0%
> wl_dual apcli ssid carrie
% <Note> Please restart wireless 5g after you set the parameters.
 Current SSID is carrie
```

Telnet Command: wl_dual artfns

This command allows users to configure airtime fairness function for wireless (5GHz) connection.

Syntax

wl_dual artfns enable *<value>*
wl_dual artfns trg_num *<value>*
wl_dual artfns show
wl_dual artfns status

Syntax Description

Parameter	Description
enable <value>	It means to enable wireless airtime fairness function. 1 – enable 0 – disable
trg_num <value>	Set a threshold when the active station number achieves this number, the airtime fairness function will be applied. Available values will be 2 to 64.
show	Display current status (enable or disable) and triggering client number for airtime fairness function.
status	Display whether the function of airtime fairness is enabled or disabled.

Example

```
> wl_dual artfns show
airtime fairness for 5G: disable
trg_num: 2
> wl_dual artfns status
airtime fairness for 5G is disabled !!!

> wl_dual artfns enable 0
> wl_dual artfns trg_num 2
> wl_dual artfns show
airtime fairness for 5G: disable
trg_num: 2
> wl_dual artfns status
airtime fairness for 5G is disabled !!!
```

Telnet Command: wl_dual drayrs

This command allows the user to configure settings for Roaming for wireless clients.

Syntax

wl_dual drayrs *set <mode> <rs_low> <rs_low_security> <delta>*
wl_dual drayrs *restart*
wl_dual drayrs *show*

Syntax Description

Parameter	Description
set <mode> <rs_low> <rs_low_security> <delta>	Select a mode for roaming. 0 - disable 1 - Strictly Minimum RSSI 2 - Minimum RSSI rs_low – Set a value of Strictly Minimum RSSI (62~86). rs_low_security – Set a value of Minimum RSSI (62~86). delta – Set a value of Adjacent AP RSSI (1~20).

restart	Restart to activate roaming function.
show	Dispaly current configuration of roaming function.

Example

```
> wl_dual drayrs show
% Mode : Disable
%  rs_low         : -73
%  rs_low_secure  : -66
%  delta          : 5
>wl_dual drayrs set 1 68 66 2
> wl_dual drayrs show
% Mode : Strictly Minimun RSSI
%  rs_low         : -68
%  rs_low_secure   : -66
%  delta          : 2
```

Telnet Command: radius

This command allows you to configure detailed settings for RADIUS server

Syntax

radius enable <*0/1*>
radius authport <*port number*>
radius set_auth_method <*method idx*>
radius client *add* <*idx*> *-i* <*address*> *-m* <*mask*> *-p* <*prefix*> *-l* <*length*> *-s* <*secret*>
radius client *del* <*idx*>
radius show
radius enable_dot1x <*0/1*>
radius set_dot1x_method -e <*method_idx*>
radius set_dot1x_method -d <*method_idx*>

Syntax Description

Parameter	Description
enable <0/1>	Enable (1) or disable (0) the RADIUS server.
authport <port number>	Configure the port number for authentication. Port number: Available range is from 0 to 65535. Default value is “1812”.
set_auth_method <method idx>	Specify which method will be used for authentication. Method idx: “0” is “Only PAP”; “1” is “PAP/CHAP/MS-CHAP/MS-CHAPv2”.
client add <idx> -i <address> -m <mask> -p <prefix> -l <length> -s <secret>	Specify a client to be authenticated by RADIUS server by typing required information as follows: -i <address>: client IPv4 address(domain) -m <mask>: client IPv4 mask -p <prefix>: client IPv6 prefix -l <length>: client IPv6 prefix length -s <secret>: shared secret ex: radius client add 1 -i 192.168.1.1 -m 255.255.255.0 -s 123
client del <idx>	*del* - Delete related settings for selected client. *Idx* - Specify the index number of client profiles.
show	Display the status of RADIUS server.

enable_dot1x <0/1>	Enable (1) or disable (0) the 802.1X Authentication function of RADIUS Server. Default is disabled.
set_dot1x_method -e <method_idx>	Set a method for 802.1X authentication of RADIUS server. "-e" means to set method for dot1x_phase1 or dot1x_phase2. Method idx: 1 to 4. 1: EAP_PEAP/MSCHAPv2 2: EAP_TTLS/PAP 3: EAP_TTLS/MSCHAP 4: EAP_TTLS/MSCHAPv2
set_dot1x_method -d <method_idx>	Delete the method for 802.1X authentication of RADIUS server. "-d" means to delete method for dot1x_phase1 or dot1x_phase2. Method idx: 1 to 4. 1: EAP_PEAP/MSCHAPv2 2: EAP_TTLS/PAP 3: EAP_TTLS/MSCHAP 4: EAP_TTLS/MSCHAPv2

Example

```
> radius client add 1 -i 192.168.1.1 -m 255.255.255.0 -s 123
 Set radius server client OK
>
```

Telnet Command: radius external

This command allows you to configure detailed settings for external RADIUS server.

Syntax

radius external <*options*>...

Syntax Description

Parameter	Description
<*options*>...	The available commands with parameters are listed below. *[...]* means that you can type in several parameters in one line.
-V	Displays current settings of external RADIUS server.
-v <index>	It means to display current setting of RADIUS server. <index>: Enter the index number (1).
-l <index>	It means to display the log of the external RADIUS server. <index>: Enter the index number (1).
-c "<index><comment>"	It means to set a comment for the external RADIUS server. <index>: Enter the index number (1). <comment>: Enter a brief description (less than 23 characters).
-f <index>	Set the selected profile as the default external RADIUS profile. <index>: Enter the index number of the profile.
-t <param>	Set the timeout value. <param>: Enter a value.
-e "<index><param>"	Enable or disaBle the external RADIUS profile. <index>: Enter the index number of the profile. <param>: 0 or 1. 0 is disable; 1 is enable. ex: -e "2 1" to enable the profile 2
-i "<index><index2>	Set the hostname or IP address for the selected RADIUS server

<hostname/ip>"	profile. <index>: Enter the index number of the profile. <index2>: 0 or 1. 0 means the primary server; 1 means the secondary server. ex: -i "1 0 192.168.1.1" or -i "2 1 www.google.com"
-p "<index><index2> <port_number>"	Set the destination port for the selected RADIUS server. <index>: Enter the index number of the profile. <index2>: 0 or 1. 0 means the primary server; 1 means the secondary server. <port_number>: 1 ~ 65535. ex : -p "1 1 1812"
-s "<index><index2><secret>"	Set the shared secret for the selected RADIUS server. <index>: Enter the index number of the profile. <index2>: 0 or 1. 0 means the primary server; 1 means the secondary server. <secret>: 1 ~ 65535. ex : -s "3 0 123"
-r "<index><index2><retry>"	Set the retry number for the selected RADIUS server. <index>: Enter the index number of the profile. <index2>: 0 or 1. 0 means the primary server; 1 means the secondary server. <retry>: 1 to 3. ex : -s "3 0 2"
-a "<index><param>"	Enable or disable the accounting port for the selected RADIUS server. <index>: Enter the index number of the profile. <param>: 0 or 1. 0 is disable; 1 is enable.
-b "<index><index2> <port_number>"	Set the accounting port for the selected RADIUS server. <index>: Enter the index number of the profile. <index2>: 0 or 1. 0 means the primary server; 1 means the secondary server. <port_number>: 1 ~ 65535. ex : -b "1 0 1813"
-d "<index><index2> <port_number>"	Disconnect the message port for the selected RADIUS server. <index>: Enter the index number of the profile. <index2>: 0 or 1. 0 means the primary server; 1 means the secondary server. <port_number>: 1 ~ 65535. ex : -d "1 1 3799"
-u "<index> <index2> <update interval>"	Set the accounting interim interval for the selected RADIUS server. <index>: Enter the index number of the profile. <index2>: 0 or 1. 0 means the primary server; 1 means the secondary server. <port_number>: 10 ~ 1440 (minutes) ex : -u "1 0 10"

Example

```
> radius external -i "1 0 192.168.1.1"
 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
> radius external -V
Profile default enable comment
% 1      v
RADIUS timeout: 2 seconds
```

Telnet Command: local_8021x

The command is used to configure general settings for Local 802.1X server built in Vigor router.

Syntax

local_8021x enable <*0/1*>

local_8021x set_localdot1x_method -e <*method number*>

local_8021x set_localdot1x_method -d <*method number*>

local_8021x show

Syntax Description

Parameter	Description
enable	Enable or disable the configuration. 0: disable. 1: enable.
set_localdot1x_method -e <method number>	Add the method. -e [method number]: Set the method. The method index number are: 1 - EAP_PEAP/MSCHAPv2 2 - EAP_TTLS/PAP 3 - EAP_TTLS/MSCHAP 4 - EAP_TTLS/MSCHAPv2 e.g, local_8021x set_localdot1x_method-e 1
set_localdot1x_method -d <method number>	Delete the method. -d [method number]: Delete the method. The method index number are: 1 - EAP_PEAP/MSCHAPv2 2 - EAP_TTLS/PAP 3 - EAP_TTLS/MSCHAP 4 - EAP_TTLS/MSCHAPv2 e.g, local_8021x set_localdot1x_method-d 3
show	Display current settings of local 802.1x server.

Example

```
> local_8021x set_localdot1x_method -e 3
 This setting will take effect after rebooting.
 Please use "sys reboot" command to reboot the router.
>
```

Telnet Command: wol

This command allows Administrator to set the white list of WAN IP addresses/Subnets, that the magic packet from these IP addresses/Subnets will be eligible to pass through NAT and wake up the LAN client. You also need to set NAT rule for LAN client.

Syntax

wol up <*MAC Address*> / <*IP Address*>

wol fromWan <*on/off/any*>

wol fromWan_Setting <*idx*><*ip address*><*mask*>

Syntax Description

Parameter	Description
<MAC Address>	It means the MAC address of the host.
<IP address>	It means the LAN IP address of the host. If you want to wake up LAN host by using IP address, be sure that that IP address has been bound with the MAC address (IP BindMAC).
<on/off/any>	It means to enable or disable the function of WOL from WAN. on: enable off: disable any: It means any source IP address can pass through NAT and wake up the LAN client. This command will allow the user to choose whether WoL packets can be passed from the Internet to the LAN network from a specific WAN interface.
<idx><ip address><mask>	It means the index number (from 1 to 4). These commands will allow the user to configure the LAN clients that the user may wake up from the Internet through the use of the WoL packet. *ip address* - It means the WAN IP address. *mask* - It means the mask of the IP address.

Example

```
> wol fromWan on
> wol fromWan_Setting 1 192.168.1.45 255.255.255.0
>
```

Telnet Command: user

The command is used to create new user account profiles.

Syntax

user set *<-a|-b|-c|-d|-e|-l|-o|-q|-r|-s|-u>*

user edit *<PROFILE_IDX>*
<-a|-d|-e|-f|-i|-o|-m|-n|-p|-q|-r|-s|-t|-u|-v|-w|-x|-A|-H|-T|-P|-l|-L|-D>

user account *<USER_NAME><-t|-d|-q|-r|-w>*

user setdefault

Syntax Description

Parameter	Description
set	It means to configure general setup for the user management.
edit	It means to modify the selected user profile.
account	It means to set time and data quota for specified user account.
setdefault	It means to reset to factory default settings.
User Set	
-a <Profile idx> <User name><IP_Address>	It means to pass an IP Address. Profile idx- type the index number of the selected profile. User name- type the user name that you want it to pass. IP_Address- type the IP address that you want it to pass.
-b <user name>	Block specifies user or IP address.

-b ip <ip address>	*user name* - type the user name that you want to block. *ip address* -- type the IP address that you want to block.
-c <user name> *-c all*	Clear the user record. *user name* - type the user name that you want to get clear corresponding record. *all* - all of the records will be removed.
-d	Enable the User management in Rule-Based mode.
-e	Enable the User management in User-Based mode.
-l all *-l user* *-l ip*	Show online user. *all* - all of the users will be displayed on the screen. *user name* - type the user name that you want to view on the screen. *ip* - type the IP address that you want to view on the screen.
-o	It means to show user account information. e.g.,*-o*
-q	It means to trigger the alert tool to do authentication.
-r <user name / all>	Remove the user record. *user name* - type the name of the user profile. *all* - all of the user profile settings will be removed.
-s <0/1>	It means to set login service. 0:HTTPS 1:HTTP e.g.,*-s 1*
-u user <user name> *-u ip <ip address>*	Unblock specifies user or IP address. *user name* - type the user name that you want to unblock. *ip address* -- type the IP address that you want to unblock.
User edit	
PROFILE_IDX	Type the index number of the profile that you want to edit.
-a <0/1>	Enable(1) or disable(0) the internal RADIUS.
-d	Disable User profile function.
-e	Enable User profile function.
-f <0/1>	Enable(1) or disable(0) the local 802.1x user.
-i <0-255>	It means to set idle time (from 0 to 255, 0 means unlimited). e.g., *-i 60*
-o <0-65535>	It means to set auto-logout (from 0 to 65535, 0 means unlimited).
-m <0-2000>	It means to set the maximum (from 0 to 2000) login user number. e.g., *-m 200*
-n <param>	It means to set a user name for a profile. Param: Enter a string, e.g.,*-n fortest*.
-p <param>	It means to configure user password. Param: Enter a string, e.g., *-p 60fortest*.
-q <param>	It means to set time quota (0-65535) of the user profile. Param: Enter a value, e.g., *-q 200*.
-r <param>	It means to set data quota. Param: Enter a value, e.g., *-r 1000*.
-s <sch_idx1,sch_idx2,sch_idx3	It means to set schedule index. Available settings are" sch_idx1,sch_idx2,sch_idx3, and sch_idx4.

, and sch_idx4>	
-t <0/1>	It means to enable /disable time quota limitation for user profile 0:Disable 1:Enable
-u <0/1>	It means to enable /disable data quota limitation for user profile 0:Disable 1:Enable
-v	It means to view user profile(s).
-w <MB/GB>	It means to specify the data quota unit (MB/GB). e.g., -w MB
-x <0-3>	It means to set external server authentication 0: None 1: LDAP 2: Radius 3: TACAS e.g., *-x 2*
-l <0-3>	It means to set log type. 0:None 1:Login 2:Event 3:All
-P <0/1>	It means to enable /disable pop browser tracking window for user profile 0:Disable 1:Enable
-T <0/1>	It means to enable /disable authentication by telnet. 0:Disable 1:Enable
-H <0/1>	It means to enable /disable authentication by web page. 0:Disable 1:Enable
-A <0/1>	It means to enable /disable authentication by alert tool. 0:Disable 1:Enable
-L <index>	It means to set active directory / LDAP profiles. Index: Specify the index number (profile_idx1 to profile_idx8) of the profile.
-D	It means to list all active directory / LDAP profiles.
-O <0/1>	It means to reset the quota automatically. 0:Disable 1:Enable
-Q <param>	It means to set the default time quota. param: Enter a number (1 to 65535).
-R <param>	It means to set the default data quota. param: Enter a number (1 to 65535).
-M <param>	It means to set the default quota type. 0: when login permission schedule expired. 1: at the start time of schedule.

I <param>	It means to specify the default quota schedule index to perform the job at the start time.
-S	It means to display the reset default quota type and the schedule index.
User account	
USER_NAME	It means to type a name of the user account.
-d<0/1>	It means to enable /disable data quota limitation for user account. 0:Disable 1:Enable
-q	It means to set account time quota. e.g., *-q 200*
-r	It means to set account data quota. e.g., *-r 1000*
-t <0/1>	It means to enable /disable time quota limitation for user account. 0:Disable 1:Enable
-w	It means to set data quota unit (MB/GB).

Example

```
> user account admin -d 1

 Enable the [admin] data quota limited
```

Telnet Command: appqos

The command is used to configure QoS for APP.

Syntax

appqos view
appqos enable <*0/1*>
appqos traceable <*-v | -e AP_INDEX CLASS | -d AP_INDEX*>
appqos untraceable <*-v | -e AP_INDEX CLASS | -d AP_INDEX*>

Syntax Description

Parameter	Description
view	It means to display current status of APP QoS.
enable <0/1>	It means to enable or disable the function of APP QoS.
traceable/ untraceable	The APPs are divided into traceable and untraceable based on their properties.
-v	It means to view the content of all traceable APs. Use “appqos traceable –v” to display all of the traceable APS with speficed index number. Use “appqos untraceable –v” to display all of the untraceable APS with speficed index number.
-e	It menas to enable QoS for application(s) and assign QoS class.
AP_INDEX	Each index number represents one application. Index number: 50, 51, 52, 53, 54, 58, 60, 62, 63, 64, 65, 66, 68 are used for 13 traceabel APPs. Index number: 0~49, 55~59, 61, 67, 69, and 70~123 are used for 125 untraceable AP.

CLASS	Specifies the QoS class of the application, from 1 to 4 1:Class 1, 2:Class 2, 3:Class 3, 4:Other Class
-d	It means to disable QoS for application(s).

Example

```
> appqos enable 1

APP QoS set to Enable.
> appqos traceable -e 68 2

TELNET: ENABLED, QoS Class 2.
```

Telnet Command: nand bad /nand usage

"NAND usage" is used to display NAND Flash usage; "nand bad" is used to display NAND Flash bad blocks.

Syntax

nand bad

nand usage

Example

```
>nand usage
Show NAND Flash Usage:
Partition    Total          Used          Available      Use%
cfg          4194304        7920          4186384         0%
bin_web      33554432       11869493      21684939        35%
cfg-bak      4194304        7920          4186384         0%
bin_web-bak 33554432       11869493      21684939        35%
> nand bad
Show NAND Flash Bad Blocks:
Block   Address        Partition
1020    0x07f80000     unused
1021    0x07fa0000     unused
1022    0x07fc0000     unused
1023    0x07fe0000     unused
```

Telnet Command: apm enable/disable/show/clear/discover/query

The apm command(s) is use to display, remove, discover or query the information of VigorAP registered to Vigor2927.

Syntax

apm enable

apm disable

apm show

apm clear

apm discover

apm query

Syntax Description

Parameter	Description
enable	It means to enable APM function.
disable	It means to disable APM function.
show	It displays current information of APM profile.
clear	It is used to remove all of the APM profile.
discover	It is used to search VigorAP on LAN.
query	It is used to query any VigorAP which has been registered to APM (Central AP Management) in Vigor2927. Information related to the registered AP will be send back to Vigor2927 for updating the web page of Central AP Management.

Example

```
> apm clear ?
Clear all clients ... done
```

Telnet Command: apm profile

This command allows to configure wireless profiles to be used in Central AP Management.

Syntax

apm profile clone <*from index*><*to index*><*new name*>
apm profile del <*index*>
apm profile reset
apm profile summary
apm profile show <*profile index*>
apm profile apply <*profile index*> <*client index1 index2 .. index5*>

Syntax Description

Parameter	Description
clone	It is used to copy the same parameters settings from one profile to another APM profile.
del	It is used to delete a specified APM profile. The default (index #1) should not be deleted.
reset	It is used to reset to factory settings for WLAN profile.
summary	It is used to list all of the APM profiles with required information.
show	It is used to display specified APM profile.
apply	It is used to apply the selected APM profile onto specified VigorAP.
<*from index*>	Type an index number in this field. It is the original APM profile to be cloned to other APM profile.
<*to index*>	Type an index number in this file. It is the target profile which will clone the parameters settings from an existed APM profile.
<*new name*>	Type a name for a new APM profile.
<*profile index*>	Enter the index number of existed profile.
<*client index1 index2 .. index5*>	It is useful for applying the selected APM profile to the specified VigorAP.

Example

```
> apm profile clone 1 2 forcarrie
```

```
(Done)

> apm profile summary
# Name           SSID           Security     ACL     RateCtrl(U/D)
- ---------------- ---------------- ------------ ------- ------
0 Default       DrayTek-LAN-A    WPA+WPA2/PSK x          - /     -
                DrayTek-LAN-B    WPA+WPA2/PSK x          - /     -

1 -              -              -           -                 -
2 forcarrie       DrayTek         Disable     x          - /     -

3 -              -              -           -                 -
4 -              -              -           -                 -
```

Telnet Command: apm cache

This command is used to display or remove the information of registered VigorAP, including MAC address, name, and authentication. Up to 30 entries of registered information can be stored and displayed.

Syntax

apm cache <*show*>

apm cache clear

Syntax Description

Parameter	Description
show	It means to display the information related to VigorAP registered Vigor2927.
clear	It means to remove the information related to VigorAP registered Vigor2927.

Example

```
> apm cache show
MAC         Name               Auth
------------ -------------------- --------------------


>
```

Telnet Command: apm lbcfg

This command allows to set parameters related to AP management control.

Syntax

apm lbcfg set <*value*>

apm lbcfg show

Syntax Description

Parameter	Description
set	It means to set the load balance configuration file for APM.
Show	It shows the configuration value.
<*value*>	You need to type 10 numbers in this field. Each number represents

	different setting value. [1] – The first number means the load balance function. Type 1 – enable load balance, 0 – disable load balance. [2] – The second number means the station limit function. Type 1 –enable station limit, 0 – disable station limit. [3] – The third number means the traffic limit function. Type 1 – enable traffic limit, 0 – disable traffic limit. [4] – The forth number means the limit num of station. Available range is 3~64. [5] – The fifth number means the upload limit function. Type 1 – enable upload limit, 0 – disable upload limit. [6] – The sixth number means the download limit function. Type 1 – enable download limit, 0 – disable download limit. [7] – The seventh number means disassociation by idle time. Type 1 – enable disassociation, 0 – disable disassociation. [8] – The eighth number means to enable or disable disassociation by signal strength. Type 1 – enable disassociation, 0 – disable disassociation. [9] – The ninth number means to determine the unit of traffic limit (for upload) 1 – Mbps 0 – kbps [10] – The tenth number means to determine the unit of traffic limit (for download) 1 – Mbps 0 – kbps [11] - The eleventh number means to set the RSSI threshold. Available range is -200 ~ -50 dbm.

Example

```
> apm lbcfg show
apm LoadBalance Config :
1. Enable LoadBalance : 0
2. Enable station limit : 0
3. Enable traffic limit : 0
4. limit Number : 64
5. Upload limit : 0
6. Download limit : 0
7. Enable disassociation by idle time : 0
8. Enable disassociation by Signal strength : 0
9. Traffic limit unit (upload)   : 0
10.Traffic limit unit (download) : 0
11.RSSI threshold : 0
flag : 0
> apm lbcfg set 1 1 0 15 0 0 0 0 1 1 -100
```

```
> apm lbcfg show
apm LoadBalance Config :
1. Enable LoadBalance : 1
2. Enable station limit : 1
3. Enable traffic limit : 0
4. limit Number : 15
5. Upload limit : 0
6. Download limit : 0
7. Enable disassociation by idle time : 0
8. Enable disassociation by Signal strength : 0
9. Traffic limit unit (upload)   : 1
10.Traffic limit unit (download) : 1
11.RSSI threshold : -100
flag : 49
>
```

Telnet Command: apm apsyslog

This command is used to display the AP syslog data coming form VigorAP.

Syntax

apm apsyslog <*AP_Index*>

Syntax Description

Parameter	Description
AP_Index	Specify the index number (1 to 20) which represents VigorAP.

Example

```
> apm apsyslog 1
8d 02:46:09  syslog: [APM] Send Rogue AP Detection data.
8d 02:53:04  syslog: [APM] Run AP Detection / Discovery.
8d 02:56:09  syslog: [APM] Send Rogue AP Detection data.
8d 03:00:42  kernel: 60:fa:cd:55:f5:ea had disassociated.
8d 03:03:12  syslog: [APM] Run AP Detection / Discovery.
8d 03:06:09  syslog: [APM] Send Rogue AP Detection data.
8d 03:13:21  syslog: [APM] Run AP Detection / Discovery.
8d 03:16:10  syslog: [APM] Send Rogue AP Detection data.
8d 03:16:41  kernel: 60:fa:cd:55:f5:ea had associated successfully
8d 03:16:55  kernel: 60:fa:cd:55:f5:ea had disassociated.
```

Telnet Command: apm syslog

This command is used to display related syslog data from central AP management.

Syntax

apm syslog

Example

```
> apm syslog
"2015-11-04 12:24:21", "[APM] [VigorAP900_01daa902080] Get Rogue AP Detection
Data from AP"
2015-11-04 12:24:56", "[APM] [VigorAP900_01daa902080] Get Rogue AP Detection
Data from AP Success"
2015-11-04 12:34:21", "[APM] [VigorAP900_01daa902080] Get Rogue AP Detection
Data from AP"
```

```
2015-11-04 12:34:57", "[APM] [VigorAP900_01daa902080] Get Rogue AP Detection
Data from AP Success"
```

Telnet Command: apm stanum

This command is used to display the total number of the wireless clients, no matter what mode of wireless connection (2.4G WLAN or 5G WLAN) used by wireless clients to access into Internet through VigorAP.

Syntax

apm stanum <*AP_Index*>

Syntax Description

Parameter	Description
AP_Index	Specify the index number which represents VigorAP.

Example

```
> apm stanum

% Show the APM AP Station Number data.
% apm stanum AP_Index.
%     ex : apm stanum 1
%          Idx Nearby(2.4/5G) Conn(2.4/5G)
%           1   2   5          0   0
%           2   2   5          1   0
%           3   2   5          1   0
```

Telnet Command: ha set

This command can be used to configure HA settings for Vigor routers.

Syntax

ha set *[-<command> <parameter>| ...]*

Syntax Description

Parameter	Description
[<command> <parameter>|…]	The available commands with parameters are listed below. *[…]* means that you can Enter several parameters in one line.
-e <1/0>	1: Enable the function of High Availability (HA). 0: Disable the function of High Availability (HA).
-l <1/0>	1: Enable the function of recording the operation record of HA in Syslog. 0: Disable the function of recording the operation record of HA in Syslog.
-M <1/0>	Specify the Redundancy Method for HA. 1: Active-Standby 0: Hot-Standby
-v <1-255>	Specify the group ID (VHID) 1- 255: Setting range.
-R	Set HA settings to Factory Default.
-p <1-30>	Specify the Priority ID. 1-30: Setting range.
-k <key>	Specify the Authentication Key.

	Key: Max. 31 Characters.
-u <1/0>	Enable or disable the function of Update DDNS. 1: Enable. When a router changes HA status to primary, it will update DDNS automatically. 0: Disable.
-m <interface>	Specify the management interface. Interface: LAN1 ~ LAN6, DMZ.
-s	It means to get the newest status of other router (except the local router).
-y	It means sync local config to other router. Primary can executes this command. Secondary can not execute this commad.
-c <1/0>	Enable or disable the function of Config Sync. 1: Enable. 0: Disable.
-i -<E|S> <value>	Specify the config inherit setting. -E <1/0> - Enable/Disable Config Inherit -S <min> - Config Inherit Resync Time(1-60 min) ex: ha set -i -S 15
-I -<M/H/D> <interval>	Set the Config Sync Interval for HA. Minimum interval is 15 minutes. -M: Minute. Setting range is 0/15/30/45. (e.g., ha set -I -M 30) -H: Hour. Setting range is from 0 to 23. (e.g., ha set -I -H 12) -D: Day. Setting range is from 0 to 30. (e.g., ha set -I -D 15)
-h -<4/6><Subnet> <Virtual IP>	Enable and set virtual IP to the subnet. 4: IPv4; 6: IPv6. Subnet: LAN1 to LAN6, DMZ. Virtual IP: The type format shall be “xxx.xxx.xxx.xxx”. (e.g, 192.168.1.0) For example, to enable a virtual IP to the sunet, simply type: *ha set -h LAN1 192.168.1.5*
-d -<4/6><Subnet>	Disable a virtual IP to the subnet. 4: IPv4; 6: IPv6. Subnet: LAN1 to LAN8, DMZ. For example, to disable a virtual IP to the subnet, just type: *ha set -h LAN1*
-o <1/0>	Run DARP protocol on IPv4 or IPv6. 0: IPv4 1: IPv6

Example

```
>  ha set -h -4 LAN1 192.168.1.1

% Enable IPv4 Virtual IP on LAN1

% Virtual IP can not be same as router IP (192.168.1.1)!!!

>
```

Telnet Command: ha show

This command can be used to show the *settings information* about config sync and general setup.

Syntax

ha show -c

ha show -g

Syntax Description

Parameter	Description
-c	Show the settings of config sync.
-g	Show the settings of general setup.

Example

```
> ha show -g
%  High Availability   : Disable
%  Redundancy Method   : Active-Standby
%  Group ID           : 1
%  Priority ID         : 10
%  Update DDNS         : Disable
%  Protocol           : IPv4
%  Management Interface : LAN1
%  Authentication Key   : draytek
%  Syslog             : OFF
%
%  [ Index | Enable | Virtual IP ]
%    LAN1    -       192.168.1.2
%    LAN2    -       192.168.2.2
%    LAN3    -       192.168.3.2
%    LAN4    -       192.168.4.2
%    LAN5    -       192.168.5.2
%    LAN6    -       192.168.6.2
%    LAN7    -       192.168.7.2
%    LAN8    -       192.168.8.2
%    DMZ     -       192.168.254.2
%
%  [ Index | Enable | Virtual IPv6 ]
%    LAN1     On     FE80::200:5EFF:FE00:101
%    LAN2     On     FE80::200:5EFF:FE00:101
%    LAN3     On     FE80::200:5EFF:FE00:101
%    LAN4     On     FE80::200:5EFF:FE00:101
%    LAN5     On     FE80::200:5EFF:FE00:101
%    LAN6     On     FE80::200:5EFF:FE00:101
%    LAN7     On     FE80::200:5EFF:FE00:101
%    LAN8     On     FE80::200:5EFF:FE00:101
%    DMZ      On     FE80::200:5EFF:FE00:101
>
```

Telnet Command: ha status

This command is used to display *HA status information*.

Syntax

ha status -a <*Detail Level*>
ha status -m <*Detail Level*>

Syntax Description

Parameter	Description
-a	Show the status for all of the routers in HA group.
-m	Show the status of local router only.
<*Detail Level*>	0: Important status. 1: Important status, plus some information. 2: Show settings

Example

```
> ha status -m 2
%   [Local Router] DrayTek
%   IP               : 192.168.1.230 (FE80::C3F7:BAD:C1EF:CC4E)
%   Status           : !
%   High Availability   : ! Disable
%   Redundancy Method   : Active-Standby
%   Group ID         : 1
%   Priority ID       : 10
%   Update DDNS       : Disable
%   Protocol         : IPv4
%   Management Interface: LAN1
%   Authentication Key  : draytek
%   Virtual IP: (Max. 9 Virtual IPs)
%     ! OFF
%   Virtual IPv6: (Max. 9 Virtual IPv6s)
%     ON       LAN1  FE80::200:5EFF:FE00:101
%     ON       LAN2  FE80::200:5EFF:FE00:101
%     ON       LAN3  FE80::200:5EFF:FE00:101
%     ON       LAN4  FE80::200:5EFF:FE00:101
%     ON       LAN5  FE80::200:5EFF:FE00:101
%     ON       LAN6  FE80::200:5EFF:FE00:101
%     ON       LAN7  FE80::200:5EFF:FE00:101
%     ON       LAN8  FE80::200:5EFF:FE00:101
%     ON       DMZ   FE80::200:5EFF:FE00:101
%   Config Sync           : Disable
%   Config Sync Interval    : 0 Day 0 Hour 15 Minute
%   Cached Time       : 0 (s)
%
>
```

Telnet Command: swm show

This command is used to display general setting of of VigorSwitch which connecting to Vigor router in LAN.

Syntax

swm show <*LAN_port*>

Syntax Description

Parameter	Description
LAN_port	Specify the LAN port number (1 to 6).

Example

```
DrayTek> swm show

** If you want to display SWM debug log : "swm show debug log"
** Enable/Disable SWM console debug log : "swm show console log en/dis"
** Enable/Disable SWM syslog debug log  : "swm show syslog log en/dis"

** If you connected a VigorSwitch but does not display here.
** Please check the LLDP is enabled and VLAN ID is matched on VigorSwitch.
```

```
************************************************************************
****************************************
LAN Port  Level    UP - Link Model   UP - MAC    UP - Port Model Name    MA
C         IP Address     Down - Port
--------- --------- ----------------  ------------ --------- -----------
---------- --------------- ------------------
2        1        Router                      6        G2100           1
449BC43E579 192.168.1.13
------------------------------------------------------------------------
-----------------------------------------

*** Warning Message: The External Switch Change Detected
************************************************************************

Internal VLAN is [Disable]
LAN (2) parse config fail
------------------------------------------------------------------------

No VigorSwitch VLAN settings.
************************************************************************

************************************************************************
****************************************
LAN Port  Level    UP - Link Model   UP - MAC    UP - Port Model Name   MA
C         IP Address     Down - Port
--------- --------- ----------------  ------------ --------- -----------
---------- --------------- ------------------
4        1        Router                      2        G2121           1
449BC4133F4 192.168.1.11
------------------------------------------------------------------------
-----------------------------------------

*** Warning Message: The External Switch Change Detected
************************************************************************

Internal VLAN is [Disable]
LAN (4) parse config fail
------------------------------------------------------------------------

No VigorSwitch VLAN settings.
************************************************************************

(Total 0 Switch)
```

Telnet Command: swm get

This command is used to **get** configuration information of VigorSwitch which connecting to Vigor router in LAN. Before using such command, make sure VigorSwitch has been managed under Vigor router (refer to Telnet Command: swm profile for adding a VigorSwitch device onto Vigor router).

Syntax

swm get <*MAC*>

Syntax Description

Parameter	Description
MAC	Enter the MAC address (e.g., 001DAA0CCD08) of the VigorSwitch.

Example

```
> swm get 001DAA0CCD08
Start get cfg from 001daa0ccd08 external switch

Please wait a few seconds...

Result: [OK].

>
```

Telnet Command: swm post

This command is used to transfer switch configuration to VigorSwitch which connecting to Vigor router in LAN.

Syntax

swm post <*MAC*>

Syntax Description

Parameter	Description
MAC	Enter the MAC address (e.g., 001DAA0CCD08) of the VigorSwitch.

Example

```
> swm post 001DAA0CCD08
Start post cfg to 001daa0ccd08 external switch with currect settings.
Please wait a few seconds...
Result: [OK].
>
```

Telnet Command: swm enable / disable

This command is used to enable / disable the external device.

Example

```
> swm enable
```

Telnet Command: swm group

This command is used to add, edit or display the switch management group.

Syntax

swm group *set <IDX> <NAME> <1> <PASSWD>*
swm group *set <IDX> <NAME> <0>*
swm group *show*
swm group *add <IDX> <MAC>*
swm group *delete <IDX> <MAC>*

Syntax Description

Parameter	Description
set <IDX> <NAME> <1> <PASSWD>	It means to set group name and group password. <IDX>: Enter the index number (1 to 10) of the group. <NAME>: Enter the name of the group. <1>: It means the password flag. <PASSWD>: Enter a string as the password.
show	It means to display switch group status.
add <IDX> <MAC>	It means to add a switch into the group as a member switch. <IDX>: Enter the index number (1 to 10) of the group. <MAC>: Enter the MAC address of VigorSwitch.
delete <IDX> <MAC>	It means to delete a switch from the group. <IDX>: Enter the index number (1 to 10) of the group. <MAC>: Enter the MAC address of VigorSwitch.

Example

```
> swm group set 10 pease 1 jpsword
> swm group show
Index    Group Name  asswd Flag    Member Switch
------ ------------ -----------  ------------------------------------
---------------------
1       Default            0
2                         0
3                         0
4                         0
5                         0
6                         0
7                         0
8                         0
9                         0
10      pease              1

Name            IP Address      MAC
---------------- ---------------- ------------
---             192.168.1.13    1449bc43e579
---             192.168.1.11    1449bc4133f4 >
```

Telnet Command: swm profile

This command is used to add, edit or display the switch management profile.

Syntax

swm profile *add/delete <MAC>*
swm profile *show*
swm profile *enable_all/disable_all <MAC>*

Syntax Description

Parameter	Description
add/delete <MAC>	It means to add or delete a member switch from the profile. <MAC>: Enter the MAC address of the switch.
show	It means to display switch profile.

enable_all/disable_all <MAC>	It means to enable or disable all LAN ports of the specified switch managed by Vigor router. <MAC>: Enter the MAC address of the member switch.

Example

```
> swm profile show
Name            IP Address      MAC          Model  Group
--------------- --------------- ------------  ------

IP Address      MAC          Model
--------------- ------------  ------
192.168.1.13    1449bc43e579 G2100
192.168.1.11    1449bc4133f4 G2121

>
```

Telnet Command: swm detail

This command is used to configure general settings (e.g., switch name, password) and port settings for VigorSwitch.

Syntax

swm detail *comment <MAC> <COMMENT>*
swm detail *name <MAC> <NAME>*
swm detail *passwd <MAC> <PASSWD>*
swm detail *config <MAC> <config>*
swm detail *show*
swm detail *port show <MAC>*
swm detail *port <MAC> <PORT> <FLAG> <SCHED1> <SCHED2> <DESCRIPTION>*
swm detail *rate <MAC> <PORT> <i/e> <e/d>*
swm detail *rate <MAC> <PORT> <i/e> <ratelimit>*

Syntax Description

Parameter	Description
comment <MAC> <COMMENT>	It means to set a comment for VigorSwitch. <MAC>: Enter the MAC address of the VigorSwitch to be modified. <COMMENT>: Add an additional explanation for the switch.
name <MAC> <NAME>	It means to set a name for VigorSwitch. <MAC>: Enter the MAC address of the VigorSwitch to be modified. <NAME>: Enter the name of VigorSwitch.
passwd <MAC> <PASSWD>	It means to set a login password for VigorSwitch. <MAC>: Enter the MAC address of the VigorSwitch to be modified. <NAME>: Enter the login password of VigorSwitch.
config <MAC> <config>	It means to apply the configuration of VigorSwitch B to other Vigorswitch A. <MAC>: Enter the MAC address of the VigorSwitch A to be modified. <config>: Enter the index number of the profile set in VigorSwitch B.
show	It means to display comment, MAC and connection status of the switch.
port show <MAC>	It means to display a list of LAN ports of the VigorSwitch. <MAC>: Enter the MAC address of the VigorSwitch to be modified.

port <MAC> <PORT> <FLAG> <SCHED1> <SCHED2> <DESCRIPTION>	It means to set a description and schedule profile for each port of VigorSwitch. <MAC>: Enter the MAC address of the VigorSwitch to be modified. <PORT>: Enter the index number (e.g., 1 to 28) of the VigorSwitch LAN port. The number of LAN ports will vary according to the Switch to be modified. <SCHED1> <SCHED2>: Determine and type two index numbers of the schedule profiles you want. <DESCRIPTION>: Enter a desription for each port of VigorSwitch.
rate <MAC> <PORT> <i/e> <e/d>	It means to enable / disable the rate limit for each port of VigorSwitch. <MAC>: Enter the MAC address of the VigorSwitch to be modified. <PORT>: Enter the index number (e.g., 1 to 28) of the VigorSwitch LAN port. The number of LAN ports will vary according to the Switch to be modified. <i/e>: "i" means Ingress Rate; "e" means Egress Rate. <e/d>" "e" means enable; "d" means disable the setting.
rate <MAC> <PORT> <i/e> <ratelimit>	It means to modify the rate limit for each port of VigorSwitch. <MAC>: Enter the MAC address of the VigorSwitch to be modified. <PORT>: Enter the index number (e.g., 1 to 28) of the VigorSwitch LAN port. The number of LAN ports will vary according to the Switch to be modified. <i/e>: "i" means Ingress Rate; "e" means Egress Rate. <ratelimit>: Enter a value.

Example

```
> swm detail rate 1449bc43e579 6 i 3000
> swm detail rate 1449bc43e579 6 e 5000
> swm detail show
Idx  Name            MAC         Comment          Config         Status
---- ---------------- ------------  ---------------- ------------ --------
1    G2100          1449bc43e579               0  None         Connect
>
```

Telnet Command: swm maintain

This command is used to reboot or reset the switch to factory default setting.

Syntax

swm maintain *reboot <MAC>*

swm maintain *reset <MAC>*

swm maintain *show*

Syntax Description

Parameter	Description
reboot <MAC>	It means to reboot VigorSwitch with current settings. <MAC>: Enter the MAC address of the VigorSwitch to be modified.
reset <MAC>	It means to reset VigorSwitch with factory default settings. <MAC>: Enter the MAC address of the VigorSwitch to be modified.
show	It means to display comment, MAC and connection status of the switch.

Example

```
> swm maintain show
Name           IP Address      MAC          Model
```

```
---------------- ---------------- ------------  ------
G2100          192.168.1.13    1449bc43e579 G2100
>
```

Telnet Command: swm search

This command is used to search Vigor Switch by MAC / IP address / specific description and display information.

Syntax

swm search *mac <MAC>*

swm search *ip <IP>*

swm search *description <Input>*

Syntax Description

Parameter	Description
mac <MAC>	<MAC>: Enter the MAC address of the VigorSwitch to be searched.
ip <IP>	<IP>: Enter the IP address of the VigorSwitch to be searched.
description <input>	<input>: Enter the model name of the VigorSwitch to be searched.

Example

```
> swm search mac 1449bc43e579
Type    IP Address      MAC             Description / Name         Lan Port
 UpLink Port     Level   Port
------- ---------------- ----------------- ----------------------------
--------
 ----------------- ----- -------
Switch  192.168.1.13    14:49:BC:43:E5:79 G2100                       P2
   Vigor Router    0    2

>
```

Telnet Command: swm db

This command is used to enable/disable database to record switch management information.

Syntax

swm db *ctl en/dis*

swm db *ctl show*

swm db *alert notify <N/S>*

swm db *alert action <S/B>*

swm db *alert sms<IDX>*

swm db *alert mail <IDX>*

Syntax Description

Parameter	Description
ctl en/dis	It means to enable or disable the function of displaying database control status. en: Enable the function. dis: Disable the function.
ctl show	It means to show the the database control status.
alert notify <N/S>	It means to set alert notification (N or S) condition when storage exceeded. N:Don't send notification.

	S: Send notification.
alert action <S/B>	It means to set the alert action (S or B) condition when storage exceeded. S: Stop recording urser information. B: Backup and clean up all user info, and start a new record.
alert sms <IDX>	It means to set SMS object which will get the information from Vigor router if something wrong with VigorSwitch. <IDX>: Enter the index number of the mail object.
alert mail <IDX>	It means to set mail object which will get the information from Vigor router if something wrong with VigorSwitch. <IDX>: Enter the index number of the mail object.

Example

```
> swm db ctl en
Enable database to recoard SWM information.
```

Telnet Command: swm alert

This command is used to define the name of alert, level of alert (in color), and determine to record the data in the database, or send a notification message to the user based on the level.

Syntax

swm alert *enable/disable*
swm alert *show*
swm alert *en/dis <Idx>*
swm alert *set <Idx> log <e/d>*
swm alert *set <Idx> name <name>*
swm alert *set <Idx> color <O/R/N>*
swm alert *set <Idx> notif <e/d>*
swm alert *set <Idx> obj <object idx> <object value>*
swm alert *display*
swm alert *en/dis <sw/port> <mac>*
swm alert *sw show <mac>*
swm alert *set sw <mac> <incident idx> <level idx>*
swm alert *port show <mac>*
swm alert *set port <mac> <port num><incident idx> <level idx>*

Syntax Description

Parameter	Description
enable/disable	It means to enable/disable Alert mechanism. enable: Enable the mechanism. disable: Disable the mechanism.
show	It means to display a list of all alert setup.
en/dis <Idx>	It means to enable / disable the Alert Action settings. en: Enable the settings. dis: Disabel the settings. <Idx>: Enter the index number (1 to 8) of the alert action item.
set <Idx> log <e/d>	It means to enable / disable the function of creating log of alert.

	e: Enable the settings. d: Disabel the settings. <Idx>: Enter the index number (1 to 8) of the alert action item. Note that No Log for index 1; and log for index 2 is enabled in default.
set <Idx> name <name>	It means to set level name of each alert. <Idx>: Enter the index number (1 to 8) of the alert action item. <name>: Enter a short description of the alert.
set <Idx> color <O/R/N>	It means to define the color for each level of alert. The color of index 1 is No color and unable to be changed. <Idx>: Enter the index number (2 to 8) of the alert action item. <O/R/N>: "O" means orange; "R" means red; "N" means no color.
set <Idx> notif <e/d>	It means to enable or disable the function of sending notifiction to specified phone number via SMS. <Idx>: Enter the index number (3 to 8) of the alert action item. e: Enable the settings. d: Disabel the settings.
set <idx> obj <object idx> <object value>	It means to specify SMS/Email service object(s) for the alert item. Each alert can be set with up to four objects. <Idx>: Enter the index number (3 to 8) of the alert action item. <object idx>: Enter the queue number (1 to 4) for specifying an object profile. <object value>: Enter the index number (1 to 10) of the SMS/Email service object profile.
display	It means to display all switches with port alert state.
en/dis <sw/port> <mac>	It means to enable or disable the Switch Alert /Port Alert action. en: Enable the function. dis: Disable the function. <sw/port>: "sw" means Switch Alert; "port" means Port Alert. <mac>: Enter the MAC address of the VigorSwitch.
sw show <mac>	It means to display incident and alert type of the VigorSwitch. <mac>: Enter the MAC address of the VigorSwitch.
set sw <mac> <incident idx> <level idx>	It means to set incident and alert type of the VigorSwitch. <mac>: Enter the MAC address of the VigorSwitch. <incident idx>: Range 1 - 4. <level idx>: 1 - 8.
port show <mac>	Display Port Incident Alert. <mac>: Enter the MAC address of the VigorSwitch.
set port <mac> <port num> <incident idx> <level idx>	Set Port Incident Alert. <mac>: Enter the MAC address (e.g., 001DAA0EB0DB) of the VigorSwitch. <port num>: Range 1 - 28. <incident idx>: Range 1 - 4. <level idx>: 1 - 8.

Example

```
> swm alert enable
> swm alert set 2 color N
> swm alert show
Idx En/Dis   Level            Color     Create    Log       Send Notification(1-4)
--- -----   ---------------- -------- --------- -----------  -------------
1    En     No Alert         No Color  Disable   Disable   0  , 0  , 0  , 0
2    En     Minor Alert      No Color  Enable    Disable   0  , 0  , 0  , 0
3    En     Moderate Alert   Orange    Enable    Disable   0  , 0  , 0  , 0

4    En     Major Alert      Red       Enable    Disable   0  , 0  , 0  , 0
```

```
5    Dis                    No Color  Disable   Disable   0 , 0 , 0 , 0
6    Dis                    No Color  Disable   Disable   0 , 0 , 0 , 0
7    Dis                    No Color  Disable   Disable   0 , 0 , 0 , 0
8    Dis                    No Color  Disable   Disable   0 , 0 , 0 , 0
>
```

Telnet Command: swm log

This command is used to display switch managent log.

Syntax

swm log *show filter*
swm log *show day*
swm log *show week*
swm log *set level <idx> on/off*
swm log *set type <idx> on/off*
swm log *set switch <mac> on/off*

Syntax Description

Parameter	Description
show filter	It means to display the log filter setup.
show day	It means to display the quantity of day log.
show week	It means to display the quantity of week log.
set level <idx> on/off	It means to turn on or turn off the alert level. <idx>: 1 to 8. on/off: Set the status (on or off) of the alert.
set type <idx> on/off	It means to turn on or turn off the port alert/switch alert. <idx>: 1 to 2. "1" means Port Alert; "2" means Switch Alert. on/off: Set the status (on or off) of the alert.
set switch <mac> on/off	It means to set Switch Filter: <mac>: Enter the MAC address of the VigorSwitch. on/off: Set the status (on or off) of the alert.

Example

```
> swm log show filter
Index Status Level          En/Dis
----- ------ --------------- --------
1     off    No Alert       En
2     off    Minor Alert         En
3     off    Moderate Alert      En
4     off    Major Alert    En
5     off                   Dis
6     off                   Dis
7     off                   Dis
8     off                   Dis

Index Status Type
----- ------ -------------
1     on     Port Alert
2     off    Switch Alert

Index Status Switch Name    Model  Mac Address
----- ------ --------------- ------ --------------
1     off    G2100            G2100  1449bc43e579
> swm log set level 8 on
```

Telnet Command: swm snmp

This command is used to display switch information via SNMP query.

Syntax

swm snmp *sys <MAC>*
swm snmp *iftbl <MAC> <port_num>*
swm snmp *poe <MAC>*
swm snmp *trpcom show <MAC>*
swm snmp *trpcom set <MAC> <name>*

Syntax Description

Parameter	Description
sys <MAC>	It means to show the system information. <MAC>: Enter the MAC address of the VigorSwitch.
iftbl <MAC> <port_num>	It means to show port interface information. <MAC>: Enter the MAC address of the VigorSwitch. <port_num>: Enter the index number (e.g., 1 to 28) of the VigorSwitch LAN port. The number of LAN ports will vary according to the Switch to be modified.
poe <MAC>	It means to show snmp POE interface information. <MAC>: Enter the MAC address of the VigorSwitch.
trpcom show <MAC>	It means to show Trap Community. <MAC>: Enter the MAC address of the VigorSwitch.
trpcom set <MAC> <name>	It means to set Trap Community. <MAC>: Enter the MAC address of the VigorSwitch. <name>: Enter a string as tramp community.

Example

```
> swm snmp sys 1449BC43E579
sysDescr:
sysObjectID:1.3.6.1.4.1.7367
sysUpTime:988 hr 19 m 39 s
sysContact:Default
sysName:G2100
sysLocation:Default
sysServices:79
ifNumber:0
>
```

Telnet Command: swm tr069

This command allows the user to configure TR-069 settings for Vigor router to communicate with VigorACS server.

Syntax

swm tr069 show
swm tr069 user <*xxx*>
swm tr069 password <*xxx*>

swm tr069 <*https/http*>
swm tr069 port <*xxx*>
swm tr069 poll <*xxx*>

Syntax Description

Parameter	Description
show	Displays the switch management TR069 server settings.
user <*xxx*>	Set a username for switch management TR069 server. <xxx> - Enter a string (max. 31 characters)
password <*xxx*>	Set a password for switch management for TR069 server. <xxx> - Enter a password (max. 31 characters).
<*https/http*>	Set the protocol for switch management for TR069 server. <https/http> - Choose https or http.
port <*xxx*>	Set the port number for switch management for TR069 server. <xxx>- Range from 1 to 65535.
poll <*xxx*>	Set the poll interval for switch management for TR069 server. <xxx>- Range from 1 to 999999.

Example

```
> swm tr069 show

SWM TR069 via HTTP
SWM TR069 server port: 8003
SWM TR069 username: acs
SWM TR069 HTTP password: password
SWM TR069 poll_interval: 600

> swm tr069 poll 710
Set SWM TR069 poll interval to 710
```

Telnet Command: fw_backupmode

This command is used to backup the firmware to the router. The firmware will be retrieved for rebooting Vigor router after it crashes over three times.

Syntax

fw_backupmode *[*<*command*><*parameter*>|*…]*

Syntax Description

Parameter	Description
[<*command*><*parameter*>|*…]*	The available commands with parameters are listed below. *[…]* means that you can Enter several commands in one line.
-t n	Set the backup time. n : 1 ~ 168 hours
-m n	Set the firmware backup mode. 1: Backup after timeout. 0: Backup after upgrade.
-b	Backup the firmware manually and immediately.
-r n	Set the firmware recovery mode.

	1: the firemware will be recovered when the system crash. 0: No recovery.

Example

```
> backupmode -b
 Do Firmware backup now!!!.
```

Telnet Command: service

This command is used to display information about Myvigor service. In addition, it allows to transfer MyVigor service from the original account to other account.

Syntax

service -s

service -r

service -l *<account><password>*

service -i *<new_owner><new_owner_email>*

service -t *<yes>/<no>*

service -c

Syntax Description

Parameter	Description
-s	Display the service status.
-r	Refresh the service status
-l <account><password>	Login to MyVigor server. Enter the account and password registered to MyVigor server account - Enter the name of the account. Password - Enter the password of the account.
-i <new_owner> <new_owner_email>	Enter the name and the e-mail address of the new owner for service transfer. New_owner - Enter the account name of the new owner. New_owner_email - Enter the e-mail address of the new owner.
-t <yes>/<no>	Transfer this Vigor device to a new owner.
-c	Clear current owner's account information.

Example

```
> service
> service -l carrieni ttt0016ttt5
Login Account:carrieni, Pw:ttt0016ttt5
Login Success! Please check Service Status again!
> service -s
Show service status.
Now state is [SS_STATE_REG_ACC_VALID]
Service Status:
Model Name   : Vigor2927 Series
Serial Number: 2019053108580701
MAC Address  : 00:1D:AA:73:4A:78
Owner Account: carrieni
E-mail       : ca******i@draytek.com

Device service support status:
Service WCF, ID = [1]
    Service Provider [Cyren]
    Licese Start_date [2019-09-26]
    Licese Exp_date [2019-10-26]
```

```
Service APPE, ID=[4]
   Service Provider [Not Activated]
   Licese Start_date []
   Licese Exp_date []

Service DDNS, ID=[6]
   Service Provider [Not Activated]
   Licese Start_date []
   Licese Exp_date []
```

Telnet Command: dmn

This command is used to set configuration related to mesh network, status display or trigger the mesh actions.

Syntax

dmn enable <*1*/*0*>
dmn reset_group
dmn loglevel <*1*/*0*>
dmn search <*start*/*show*>
dmn status
dmn mynode
dmn discover <*start*/*show*>
dmn acs
dmn table <*0*/*1*/*2*/*3*>
dmn disconnect
dmn auto_reselect
dmn reselect

Syntax Description

Parameter	Description
enable <*1*/*0*>	Enable or disable the mesh function. 1 - Enable. 0 - Disable.
reset_group	Reset the group list and group key.
loglevel <*1*/*0*>	Set the mesh log level. 1 - detailed information. 0 - basic information.
search start *search show*	Search for **available** mesh nodes in the environment to join the Mesh Network. start - Begin to search. show - Display the searching result.
status	Display the group status.
mynode	Display the local status of this device. For example, DrayTek> dmn mynode % [dmn_cmd] my node: Preferred Wireless Uplink : Auto Operation Mode : MeshNode(Wired) Root MAC : 00:00:00:00:00:00 Hop : 0 Uplink : none Downlink (0) :

	Model : Vigor2927 Device Name : DrayTek MAC : 00:1D:AA:70:33:E0 State : Mesh Node (Wired Uplink) - Isolate Status : New
discover start *discover show*	Search for mesh devices (including mesh root and mesh node) around this router. start - Begin to search. show - Dispaly the searching result.
acs	Obtain information by sending requests to Mesh auto-configuration server. Available sub-commands include: (g)et - get mynode and station list (s)et - set all parameter prin(t) - print all list (c)lear - clear all method (p)ause - pause acs (r)esume - resume acs st(a)tus - acs group status sta(l)ist - print all node station list (u)p_sta_status - print update station list status r(e)set - reset dmn acs
table <0/1/2>	Display a device table of the mesh network. 0 - Originator table 1 - Local client table 2 - Remote client table
disconnect <mac>	Disconnect an online wireless mesh node. In general, the mesh node will reconnect to Mesh Network later. <mac> - Enter the MAC address of the mesh node in a Mesh Group. (Ex. dmn disconnect 00:1d:aa:22:33:44)
auto_reselect	Enable (1) or disable (0) the auto reselection function. If enabled, the Mesh Root starts a Mesh Reselect automatically after the Mesh Network changed.
reselect	Start a Mesh Reselect immediately. An online Wireless Mesh Node may reconnect to a better Wireless uplink.

Example

```
> dmn refresh 2
% Delete [2] node and let it recover automatically
> dmn set rssi 50
> dmn
```