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Vigor 160 series

100 00 00 000



USER'S GUIDE

Vigor 167

35b Modem

User's Guide

Version: 1.1

Firmware Version: V5.1.1

Date: May 25, 2022

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Safety Instructions and Approval

Safety Instructions	 Read the installation guide thoroughly before you set up the modem. The modem is a complicated electronic unit that may be repaired only be authorized and qualified personnel. Do not try to open or repair the modem yourself. Do not place the modem in a damp or humid place, e.g. a bathroom. The modem should be used in a sheltered area, within a temperature range of +5 to +40 Celsius. Do not expose the modem to direct sunlight or other heat sources. The housing and electronic components may be damaged by direct sunlight or heat sources. Do not deploy the cable for LAN connection outdoor to prevent electronic shock hazards. Keep the package out of reach of children. When you want to dispose of the modem, please follow local regulations on conservation of the environment.
Warranty	We warrant to the original end user (purchaser) that the modem will be free from any defects in workmanship or materials for a period of two (2) years from the date of purchase from the dealer. Please keep your purchase receipt in a safe place as it serves as proof of date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, we will, at our discretion, repair or replace the defective products or components, without charge for either parts or labor, to whatever extent we deem necessary tore-store the product to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal value, and will be offered solely at our discretion. This warranty will not apply if the product is modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions. The warranty does not cover the bundled or licensed software of other vendors. Defects which do not significantly affect the usability of the product will not be covered by the warranty. We reserve the right to revise the manual and online documentation and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.
Be a Registered Owner	Web registration is preferred. You can register your Vigor router via https://myvigor.draytek.com.
Firmware & Tools Updates	Due to the continuous evolution of DrayTek technology, all modems will be regularly upgraded. Please consult the DrayTek web site for more information on newest firmware, tools and documents. https://www.draytek.com

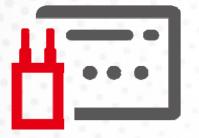
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5 Contacting DrayTek 116

Chapter I Installation



I-1 Introduction

This is a generic International version of the user guide. Specification, compatibility and features vary by region. For specific user guides suitable for your region or product, please contact local distributor.

I-1-1 LED Indicators and Connectors

Before you use the Vigor modem, please get acquainted with the LED indicators and connectors first.



LED	Status	Explanation
ACT	Off	The system is not ready or is failed.
	Blinking	The system is ready and can work normally.
P1/P2	On	A normal connection is through its corresponding port.
	Off	LAN is disconnected.
	Blinking	Data is transmitting (sending/receiving).
DSL	On	xDSL connection synchronized.
	Blinking	xDSL connection is synchronizing.

	ON Factory				
PWR	LOFF Reset	P2	P1	DSL	

Interface	Explanation
PWR	Connecter for a power adapter.
ON/OFF	ON/OFF: Power switch.
Factory Reset	Restore the default settings. Usage: Turn on the modem. Press the button and keep it for more than 10 seconds. Then the modem will restart with the factory default configuration.
P2-P1	Connecter for local networked devices.
DSL	Connecter for accessing the Internet through xDSL.



Remove the protective film from the router before use to ensure ventilation.

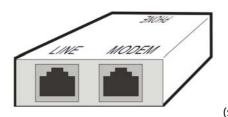
I-2 Hardware Installation

This section will guide you to install the Vigor167 through a hardware connection and configure the device's settings through the web browser.

Before starting to configure Vigor167, you have to connect your devices correctly.

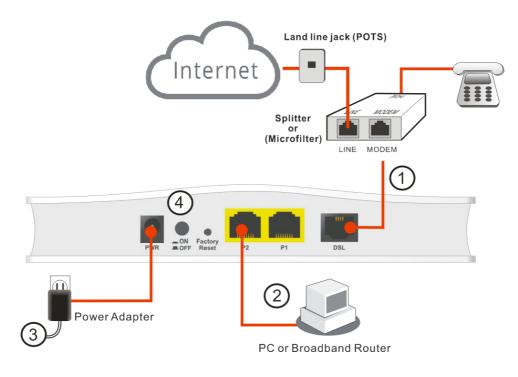
I-2-1 Network Connection

1. Connect the DSL interface to the MODEM port of the external splitter with a DSL line cable.



(splitter)

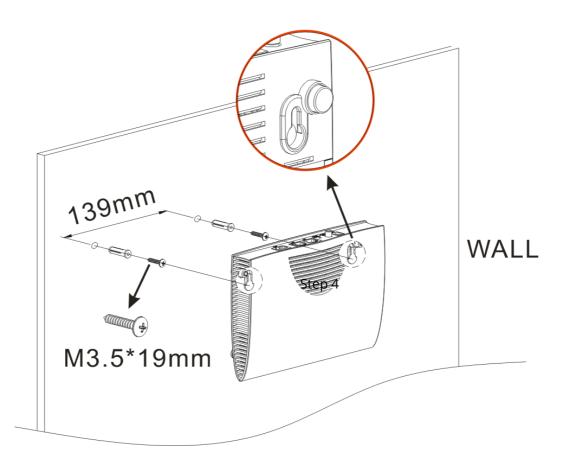
- 2. Connect the LAN port to your computer with an RJ-45 cable.
- 3. Connect one end of the power adapter to the Power port of this device. Connect the other end to the wall outlet of electricity.
- 4. Power on the modem.
- 5. Check the POWER, ACT, LAN, DSL, and INTERNET LEDs to assure network connections.



(For the detailed information of LED status, please refer to section 2.)

I-2-2 Wall-Mounted Installation

- 1. Drill the holes on the wall according to the recommended instruction.
- 2. Fit screws into the wall using the appropriate type of wall plug.



(i) Note

The recommended drill diameter shall be 6.5mm (1/4").

3. When you finished the above procedure, the modem has been mounted on the wall firmly.

I-3 Accessing to Web User Interface

All functions and settings of this access point must be configured via the web user interface. Please start your web browser (e.g., Firefox).

- 1. Make sure your PC connects to the Vigor router correctly.
- 2. Open a web browser on your PC and type **http://192.168.1.1.** A pop-up window will open to ask for a username and password. Pease type "admin/admin" on Username/Password and click **Login.**

	ter 🕲	glish 🗸	
Dray Tek Vigor167	Username admin Password	©	
	Login		

(i) Note:

If you fail to access the web configuration, please go to "Trouble Shooting" for detecting and solving your problem.

Dray Tek	Vigor167							D System Time : 2021-01-09 03	rayTek 3:30:55	a admin
Search Q	Dashboard									C Refrest
 Pashboard Operation Mode Configuration Monitoring Multity System Maintenance 	PORT STATUS	PWR •	таату Р 2 Р 10М/ 100М/ АС		DSL //VDSL			SYSTEM Device Name LAN MAC System Uptime Firmware Build Date/Time Web Version Core Version ACS Server	DrayTek 14:49:BC: 8d 3h 31r 5.1.1 Tue May 1 2022 3.3.2 DrayOS5	n 285 8 10:03:10 CST
	Name [LAN] LAN1 WAN STATUS Name	IP Address 192.168.1.150 MAC Address	Subnet Mask 255:255:255:0 Connection	DHCP off	Primary DNS	Secon	dary DNS	DSL INFORMATION Status Mode Profile Annex DSL Version	Idle DSL 5.12.24.0	B_A60901
	[WAN] WAN1	14:49:BC:4C:7E:D1	PPPoE	- 100	Warden strengt	Jaconaj	00:00:00	Line Uptime Downstream Line Ra Upstream Line Rate	<mark>Od Oh Om</mark> ite	0s

4. The web page can be logged out by clicking **Log Out** on the top right of the web page. Or, logout the web user interface according to the chosen condition. The default setting is **Auto Logout**, which means the web configuration system will log out after 5 minutes without any operation. Change the setting of auto-logout if you want.

AP	Admin 💛				
Auto logout	~	Auto Lo	ogout	off	~
🔒 Set Pa	assword			1 min	
\rightarrow Log O	ut			5 min	,
	Auto logout	AP Auto logout	AP Auto Information Auto Lo	AP Auto logout Auto Logout Auto Logout Set Password	AP Auto logout Auto logout Set Password 1 min 3 min

(i) Note:

For using the device properly, it is necessary for you to change the password of web configuration for security and adjust primary basic settings.

I-5 Changing Password

- 1. Please change the password for the original security of the modem.
- 2. Go to **System Maintenance** page and choose **Account.** Click **Edit** to open the modification page.

stem Maintenanc	e / Account			
ocal Admin Accou	unt			C Refresh
				×
Account	Role	Last Login at	Account	admin
admin	Administrator	2021-01-01 22:44:35	Current Password	
			New Password	
				Medium
			Confirm New Password	
			Role	Administrator 🗸
				Cancel Apply

- 3. Enter the new login password on the fields of **New Password** and **Confirm New Password**. Then click **Apply** to continue.
- 4. Now, the password has been changed. Next time, use the new password to access the Web User Interface for this modem.

	Φ 6	nglish V
Dray Tek Vigor167	Username admin Password 	۵
Vigor167	Login	-

I-6 Dashboard

Dashboard shows port status, LAN status, system status, LAN/WAN Usage and DSL information. Click **Dashboard** from the main menu on the left side of the main page.

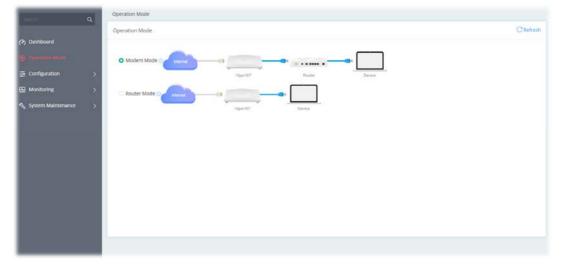
Dashboard	C Refresh
PORT STATUS	SYSTEM
YALADJC	Device Name DrayTek
	LAN MAC 14:49:BC:4C:7E:D0
	System Uptime 8d 3h 31m 28s
	Firmware 5.1.1
PWR P2 P1 DSL	Build Date/Time Tue May 3 10:03:10 CST 2022
10M/ 100M/ ADSL IG/ VDSL	Web Version 3.3.2
	Core Version DrayOS5_5
LAN STATUS	ACS Server
Name IP Address Subnet Mask DHCP Primary DNS Secondary DNS	DSL INFORMATION
[LAN] LAN1 192.168.1.150 255.255.255.0 Off	Status Idle
	Mode DSL
WAN STATUS	Profile
WAN STATUS	Annex
Name MAC Address Connection Type IP Address Gateway Uptime	DSL Version 5.12.24.0_B_A60901
[WAN] WAN1 14:49:BC:4C:7E:D1 PPPoE 00:00:00	Line Uptime 0d 0h 0m 0s
	Downstream Line Rate
	Upstream Line Rate

Chapter II Connectivity



II-1 Operation Mode: Modem Mode

This page provides available modes for you to choose for different conditions. Choose the one (e.g., Modem Mode) you want. The system will configure the required settings automatically.



Available settings are explained as follows:

ltem	Description
Modem Mode	This mode allows wireless clients to connect to the access point and exchange data with the devices connected to the wired network.
Router Mode	The built-in DHCP server can assign different IPs to the devices connecting to this router.

Click the **Modem Mode** to configure advanced settings.

Step 1: Set the System Time.

Operation Mode					
1 System Time	2 Internet Connection	3	4 Apply & Reboot	C Refresh	
Operation Mode Changing fr	rom Router to Modem				
Set Time	Automatically with Time Server	Manually			
Time Zone	(UTC) Greenwi 🗸				
Date	2021-01-01				
Time	00 ~ : 00	\sim			
Synchronize with Browser	Sync now				
Cancel Next					

Or,

Operation Mode	2					
					C	Refresh
	1	2	3	4		
5	System Time	Internet Connection	LAN	Apply & Reboot		
Operation Mod	le Changing from	n Modem to Router				
Set Time		Automatically with Time Server	Manually			
Time Zone		(UTC) Greenwi 🗸				
Time Server		pool.ntp.org				
Interface		Auto 🗸				
Daylight Saving						
Cancel	ext					

Operation Mode				
0		2		C Refresh
Curture Time	Internet Connection	LAN	4	
System Time	Internet Connection	LAN	Apply & Reboot	
Operation Mode Changing f	from Router to Modem			
operation mode enanging i				
General				~
Physical Interface	DSL			
DSL Mode	Auto 🗸			
ADSL Setting				~
Annex				
	Auto ~			
VPI (0-255)	0			
VCI (32-65535)	32			
Customer VLAN				
VDSL2 Setting				~
Customer VLAN				
Service VLAN				
Back Cancel Next				
Dack Cancel Next				

Available settings are explained as follows:

Item	Description			
General				
Physical Interface	Displays the physical interface used for the network connection.			
DSL Mode	Select the DSL connection mode.			
	Auto - The router will first attempt to connect using VDSL2, and will fall back to ADSL# if VDSL2 is unavailable.			
	ADSL Setting			
Annex Specifies the modulation standard used for the ADSL connection.				
VPI / VCI	Set values for Virtual Path Identifier(VPI) and Virtual Channel Identifier(VCI).			
Customer VLAN	Enabled - Switch the toggle to enable or disable the function. If enabled, enter the values for the tag and priority.			
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.			
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.			
	VDLS2 Setting			
Customer VLAN	Enabled - Switch the toggle to enable or disable the function. If enabled, enter the values for the tag and priority.			
	Tag - Enter the value as the VLAN ID number. The range is from 0 to			

4094.

	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
Service VLAN	Enabled - Switch the toggle to enable or disable the function. If enabled, enter the values for the tag and priority.
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
Back	Return to previous setting page.
Cancel	Discard current settings and return to the previous page.
Next	Get into the next setting page.

Step 3: Configure the LAN settings.

Operation Mode				0
0	2	3	4	C Refre
System Time	Internet Connection	LAN	Apply & Reboot	
Operation Mode Changing fro	m Modem to Router			
Network Configuration				
Usage	NAT			
IP Address	192.168.1.1			
Subnet Mask	255.255.255.0/ ∨			
DHCP Server Configuration				
DHCP Server	On Off Relay]		
Start IP Address	192.168.1.10			
IP Pool Counts (1-253)	100			
Gateway IP Address	192.168.1.1			
Lease Time (Sec, 120-2592000)	86400			

Step	4: After	finishing	the confi	iguration,	click A	8 vlaa	Reboot.
Step	1. / 1. 001		cire corrit	garacion,	chiefe a	PP'J 0	

0	2			C Refre
System Time	Internet Connection	LAN	Apply & Reboot	
	Congratulations			
Please n	eboot router to apply new operat	tion mode settings.		
Cancel Apply & F				

II-1-1 Physical Interface

Configure the general settings for LAN/WAN interface. Open **Configuration >> Physical Interface**.

Configuration / Physical Interface				
Setup the interfa	ace			
		421 AD.		
	PWR	P2 P1	DSL	
DSL	-	10M/ 100M/ ADSL	IG/ VDSL	
Interface	Function	Status	Modem Code	
DSL	WAN1		Default: 5.12.24.0 \vee	
Ethernet				
Interface	Function	Status	Speed	
P1	LAN		Auto negotiation \smallsetminus	
P2	LAN		Auto negotiation \smallsetminus	

Available settings are explained as follows:

ltem	Description
	DSL

Interface	Displays the interface (DSL, ADSL or xDSL and etc.) used for WAN connection.
Function	Displays the WAN# of the WAN connection.
Status	Switch the toggle to enable or disable the function.
Modem Code	Use the default one. Consult your ISP to select the one matching the country in which the router is installed.

Modem Code
Default: 5.12.24.0 $^{\smallsetminus}$
Default: 5.12.24.0
5.12.18.16
5.12.23.5
opeca

Ethernet

Interface	Displays the interface (P1, P2) used for LAN connection.		
Function	Displays the LAN# of the LAN connection.		
Status	Switch the toggle to enable or disable the function.		
Speed	Set the LAN port speed capabilities: Modem Code Auto negotiation 10M half duplex 10M full duplex 100M half duplex 100M full duplex Port speed capabilities: Auto negotiation: Auto speed with all capabilities. 10M half duplex: Force speed with 10M ability. 10M full duplex: Force speed with 10M ability. 100M half duplex: Force speed with 100M ability. 100M half duplex: Force speed with 100M ability.		

Selecting Auto (auto-negotiation) allows one port to negotiate with a peer port automatically to obtain the connection speed and duplex mode that both ends support. When auto-negotiation is turned on, a port on the switch negotiates with the peer automatically to determine the connection speed and duplex mode. If the peer port does not support auto-negotiation or turns off this feature, the switch determines the connection speed by detecting the signal on the cable and using half duplex mode. When the switch's auto-negotiation is turned off, a port uses the pre-configured speed and duplex mode when making a connection, thus requiring you to make sure that the settings of the peer port are the same in order to connect.

(i) Note:

Switch these two icons by click the mouse cursor on them.

- means "Enable".

II-1-2 WAN

When the operation mode is configured as Modem Mode, the **Configuration>>WAN** page will be shown as the following page.

This page is to configure the general settings for WAN connection.

Search .	a,	Configuration / WAN			
		WAN Connections			C Refresh
(?) Dashboard					
Operation Mode		Name	Physical Mode		Option
	*	WAN1	DSL		/ Edit
Physical Interface					
LAN					
Routing					
Monitoring	>				
🐁 System Maintenance	>				

Available settings are explained as follows:

ltem	Description		
Name	Displays the name of the interface.		
Physical Mode	Displays the physical mode (e.g., ADSL, VDSL, and etc.) used by the WAN interface.		
Option	Edit - Click to modify the interface name and physical mode.		

To configure the detailed settings for the selected WAN interface, click the **Edit** link to the right side of the WAN interface.

Configuration / WAN			
WAN Connections			C Refresh
			×
Name	Physical Mode		Show Advanced Mode
WAN1	DSL	Enabled	
		Name	WAN1
		DSL Mode	Auto 🗸
		ADSL Setting	\sim
		Annex	Auto 🗸
		VPI (0~255)	0
		VCI (32~65535)	32
		Customer VLAN	
		VDSL2 Setting	\sim
		Customer VLAN	
		Service VLAN	
			Cancel Apply

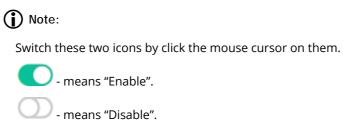
Available settings are explained as follows:

ltem	Description	
Show / Hide Advanced Mode	Click to show or hide the advanced settings for the WAN interface. The advanced settings include Encapsulation and QoS. Encapsulation - RFC 1483 Bridged RFC 1483 Bridged RFC 1483 Routed	
Name	QoS - Be explained later. Displays current WAN interface.	
Enabled	Switch the toggle to enable or disable the function.	
DSL Mode	Specify which DSL mode (e.g., VDSL2, ADSL2, ADSL2 multimode, ADSL2+, T1.413, G.DMT) can be used for such WAN connection. Auto – The system will choose the suitable one automatically.	
	ADSL Setting	
Annex	Choose the correct modem version of the device, e.g., Annex A, Anne B, Annex A/B/M, Annex A/B/J and etc.	
VPI	Enter the value provided by ISP.	
VCI	Enter the value provided by ISP.	
Customer VLAN Enabled - Switch the toggle to enable or disable the function or		

	with tag. If enabled, enter the values for the tag and priority.
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
	VDSL2 Setting
Customer VLAN	Switch the toggle to enable or disable the function of VLAN with tag. I enabled, enter the values for the tag and priority.
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
Service VLAN	Switch the toggle to enable or disable the function of VLAN with tag. I enabled, enter the values for the tag and priority.
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
	QoS
ATM QoS	Configure the Quality of Service (QoS) of the ATM circuit.
	Select a proper QoS type for the interface.

	UBR Without PCR UBR With PCR CBR
	nrtVBR rtVBR
	UBR Without PCR- Unspecified Bit Rate.
	UBR With PCR - Unspecified Bit Rate. Enter the value for PCR (Peak Cell Rate, 0_5500) if select UBR With PCR .
	CBR - Constant Bit Rate.
	nrtVBR - Non-real-time Variable Bit Rate.
	rtVBR - Real-time Variable Bit Rate.
Cancel	Discard current settings and return to previous page.
Apply	Save the current settings and exit the page.

After finishing this web page configuration, please click **Apply** to save the settings.



II-1-3 LAN

Local Area Network (LAN) is a group of subnets regulated and ruled by modem.

Open **Configuration>>LAN** to open the following page.

Search	Configuration / L	NN .		
	LAN Networks			
 Dashboard 				
Operation Mode	Name	IP Address	Subnet Mask	Option
	LAN1	192.168.1.150	255,255,255,0/24	@ Edit
Physical Interface				
WAN				
Routing				
E Monitoring	>			
🖏 System Maintenance	>			

Available settings are explained as follows:

ltem	Description
Name	Displays the number of LAN interface.
IP Address	Displays the IP address of the LAN interface.
Subnet Mask	Displays the subnet mask of the LAN interface.
Option	Edit - Click to modify the name, IP address, and subnet mask settings.

To configure the detailed settings for the selected WAN interface, click the **Edit** link to the right side of the LAN interface.

Configuration / LA	AN			
LAN Networks				
				×
Name	IP Address	(Name	LAN1
LAN1	192.168.1.150	:	IP Address	192.168.1.150
			Subnet Mask	255.255.255.0/ ~
				255.255.252.0/22
				255.255.254.0/23
				255.255.255.0/24
				255.255.255.128/25
				255.255.255.192/26
				Cancel Apply

Available settings are explained as follows:

ltem	Description
Name	Enter a brief comment for the LAN interface.
IP Address	Enter the IP address of the LAN interface.
Subnet Mask	Select a subnet mask of the LAN interface.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

After finishing this web page configuration, please click **Apply** to save the settings.

(i) Note:

Switch these two icons by click the mouse cursor on them.

- means "Enable".

🕖 - means "Disable".

II-1-4 Routing

Static routing is an alternative to dynamic routing. It is a process that the system network administrator can configure network routers with all the required information for packet forwarding.

Seath. Q	Configuratio	on / Routing						
	IPv4 Static	Route						D Reset
 Dashboard 	+ Add					Search		Max: 10
Operation Mode	Name	Enabled	Destination IP Address	Subnet Mask	Interface	Gateway	Option	
				No Records Foundi				
Physical Interface								
WAN								
LAN								
🖼 Monitoring >								
🖏 System Maintenance 💦 🗧 🗧 🗧								

Open Configuration >> Routing.

To add a new IPv4 static route, click the **+Add** link to get the following page.

Otadio	Route				🕚 Res
+ Add					>
Name	Enabled	Destination IP Address	Sub	Name	LAN1_Floor
			No Records	Enabled	
				Destination IP Address	0.0.0.1
				Subnet Mask	255.255.255.2
				Interface	[LAN] LAN1
				Gateway	0.0.0.0

Available settings are explained as follows:

ltem	Description
Name	Enter a name as the profile name.

Enabled	Switch the toggle to enable or disable the function.
Destination IP Address	Enter the IP address as the destination IP address.
Subnet Mask	Select a subnet mask of this static route.
Interface	Use the drop-down list to specify an interface for this static route.
Gateway	Enter an IP address as the gateway.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

After finishing this web page configuration, please click **Apply** to save the settings.

(i) Note:

Switch these two icons by click the mouse cursor on them.

🔵 - means "Enable".

D - means "Disable".

II-2 Operation Mode: Router Mode

Operation Mode	
Operation Mode	C Refresh
Modem Mode @	
Router Mode Heart Heart	
Viport67 Denice	
Cancel Next	

Click the **Router Mode** and click **Next** to configure advanced settings.

Step 1: Set the System Time.

				C Refr
0	2	3	4	0
System Time	Internet Connection	LAN	Apply & Reboot	
peration Mode Changing fi	rom Modem to Router			
t Time	Automatically with Time Server	Manually		
me Zone	(UTC) Greenwi 🗸			
ate		Ť.		
ne		~		
		~		
nchronize with Browser	Sync now			
Cancel				

Or,

Internet Connection LAN Apply & Reboot Operation Mode Changing from Modem to Router Set Time Automatically with Time Server Manually Time Zone (UTC) Greenwi ~ Time Server pool.ntp.org Interface Auto Daylight Saving Image: Content of the server						
System Time Internet Connection LAN Apply & Reboot Operation Mode Changing from Modem to Router Set Time Automatically with Time Server Manually Time Zone (UTC) Greenwi ~ Time Server pool.ntp.org Interface Auto	1	2		4	(C Re
Automatically with Time Server Manually Time Zone (UTC) Greenwi Time Server pool.ntp.org Interface Auto	System Time	Internet Connection		Apply & Reboot		
Automatically with Time Server Manually Time Zone (UTC) Greenwi \ Time Server pool.ntp.org Interface Auto						
Automatically with Time Server Manually Time Zone (UTC) Greenwi Time Server pool.ntp.org Interface Auto		Madam ta Davitar				
Time Zone (UTC) Greenwi ∨ Time Server pool.ntp.org nterface Auto	se changing from			1		
Time Server pool.ntp.org			Manually			
Interface Auto ~						
Daylight Saving (D)		Auto				
			System Time Internet Connection de Changing from Modern to Router Automatically with Time Server (UTC) Greenwi ~ pool.ntp.org	System Time Internet Connection LAN de Changing from Modern to Router Automatically with Time Server Manually (UTC) Greenwi \vee pool.ntp.org	System Time Internet Connection LAN Apply & Reboot de Changing from Modern to Router Automatically with Time Server Manually (UTC) Greenwi ~ pool.ntp.org	System Time Internet Connection LAN Apply & Reboot de Changing from Modem to Router Automatically with Time Server Manually (UTC) Greenwi v pool.ntp.org

Step 2: Configure the settings for Internet connection.

1	2	3	4	C Refree
System Time	Internet Connection	LAN	Apply & Reboot	
ode Changing fro	m Modem to Router			
				\sim
ace	DSL			
	Auto 🗸			
				\sim
	Auto 🗸			
	0			
)	32			
Ν				
g				\sim
	ode Changing fro	Dode Changing from Modem to Router	DSL Auto Auto Auto Auto Auto Auto Auto Auto	System Time Internet Connection LAN Apply & Reboot ode Changing from Modern to Router

Available settings are explained as follows:

Description
General
Displays the physical interface used for the network connection.
Select the DSL connection mode. Auto - The router will first attempt to connect using VDSL2, and will fall back to ADSL# if VDSL2 is unavailable.
-

Annex	Specifies the modulation standard used for the ADSL connection.
VPI / VCI	Set values for Virtual Path Identifier(VPI) and Virtual Channel Identifier(VCI).
Customer VLAN	Enabled - Switch the toggle to enable or disable the function. If enabled, enter the values for the tag and priority.
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
	VDLS2 Setting
Customer VLAN	Enabled - Switch the toggle to enable or disable the function. If enabled, enter the values for the tag and priority.
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
Service VLAN	Enabled - Switch the toggle to enable or disable the function. If enabled, enter the values for the tag and priority.
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
	IPv4

IF	v4
11	'V 4

IPv4 Connection Type	Specify the Internet Access Type (PPPoE, PPPoA, Static IP, DHCP).
Username	Enter the username provided by the ISP if PPPoE / PPPoA is selected as IPv4 Connection Type.
Password	Enter the password provided by the ISP if PPPoE / PPPoA is selected as IPv4 Connection Type.
IP Address	Enter the WAN IP address of the router if Static IP is selected as IPv4 Connection Type.
Subnet Mask	Enter the subnet mask of the router if Static IP is selected as IPv4 Connection Type.
Gateway IP	Enter the IP address of the remote gateway if Static IP is selected as IPv4 Connection Type.

DNS

IPv4 Primary Server	Enter the IP address of the primary DNS server.
IPv4 Secondary Server	Enter the IP address of the secondary DNS server.
Back	Return to previous setting page.
Cancel	Discard current settings and return to the previous page.
Next	Get into the next setting page.

Step 3: Configure the LAN settings.

Operation Mode				
1			4	C Refres
System Time	Internet Connection	LAN	Apply & Reboot	
Operation Mode Changing from	m Modem to Router			
Network Configuration				
Usage	NAT			
IP Address	192.168.1.1			
Subnet Mask	255.255.255.0/ ∨			
DHCP Server Configuration				
DHCP Server	On Off Relay			
Start IP Address	192.168.1.10			
IP Pool Counts (1-253)	100			
Gateway IP Address	192.168.1.1			
Lease Time (Sec, 120-2592000)	86400			

Available settings are explained as follows:

Item	Description		
Network Configurat	ion		
Usage	The current is for NAT.		
IP Address	This is the IP address of the router. (Default: 192.168.1.1).		
Subnet Mask	The subnet mask, together with the IP Address field, indicates the maximum number of clients allowed on the subnet. (Default: 255.255.255.0/ 24).		
DHCP Server Configu	uration		
DHCP Server	DHCP stands for Dynamic Host Configuration Protocol. The router by factory default acts a DHCP server for your network so it automatically dispatches related IP settings to any local user configured as a DHCP client. It is highly recommended that you leave the router enabled as a DHCP server if you do not have a DHCP serve for your network.		
	If you want to use another DHCP server in the network other than the Vigor Router's, you can let Relay Agent help you to redirect the DHCP request to the specified location.		
	On - Enables the built-in DHCP server on the router.		
	Off - Disables the built-in DHCP server on the router.		
	Relay - When selected, all DHCP requests are forwarded to a DHCP server outside of the LAN subnet, and whose address is specified in the DHCP Server IP Address field.		
Start IP Address	It is available when the DHCP server is on .		
	The beginning LAN IP address that is given out to LAN DHCP clients.		
IP Pool Counts	It is available when the DHCP server is on .		
	The maximum number of IP addresses to be handed out by DHCP.		

	The default value is 100. Valid range is between 1 and 253. The actual number of IP addresses available for assignment is the IP Pool Counts or 253 minus the last octet of the Start IP Address, whichever is smaller.
Gateway IP Address	The IP address of the gateway, which is the host on the LAN that relays all traffic coming into and going out of the LAN. It is available when the DHCP server is on .
Lease Time	The maximum duration DHCP-issued IP addresses can be used before they have to be renewed. It is available when the DHCP server is on .
Primary DNS	Specify a DNS server IP address. It is available when the DHCP server is on .
Secondary DNS	Specify secondary DNS server IP address here because your ISP often provides you more than one DNS Server. It is available when the DHCP server is on .
Interface for 1st DHCP Server	It is available when the DHCP server is set as Relay . Specify a WAN interface for the first DHCP Server.
1st DHCP Server IP Address	It is available when the DHCP server is set as Relay . Enter the IP Address of the DHCP server to which DHCP requests from LAN clients are forwarded.
Interface for 2nd DHCP Server	It is available when the DHCP server is set as Relay . The secondary DHCP server is an optional setting. If required, specify a WAN interface for the second DHCP Server as a backup server.
2nd DHCP Server IP Address	It is available when the DHCP server is set as Relay . Enter the IP Address of the DHCP server to which DHCP requests from LAN clients are forwarded.
	Return to providue setting page
Back	Return to previous setting page.
Back Cancel	Discard current settings and return to the previous page.

Step 4: After finishing the configuration, click Apply & Reboot.

Operation M	lode				2
	0				C Refresh
	System Time	Internet Connection	LAN	Apply & Reboot	
		Congratulations			
	Diagon and	boot router to apply new operat	tion mode estimat		
	Please rei	boot router to apply new operation	tion mode settings.		
Back	Cancel Apply & Re	eboot			

II-2-1 Physical Interface

Configure the general settings for LAN/WAN interface. Open **Configuration >> Physical Interface**.

Configuration / I	Physical Interface			
Setup the interfa	ace			
		721 AD.		
	PWR Factory	P2 P1	DSL	
DSL		0M/ 100M/ ADSL	IG/ VDSL	
DSL				
Interface	Function	Status	Modem Code	
DSL	WAN1		Default: 5.12.24.0 V	
Ethernet				
Interface	Function	Status	Speed	
P1	LAN		Auto negotiation ~	
P2	LAN		Auto negotiation ~	

ltem	Description			
DSL				
Interface	Displays the interface (DSL, ADSL or xDSL and etc.) used for WAN connection.			
Function	Displays the WAN# of the WAN connection.			
Status	Switch the toggle to enable or disable the function.			
Modem Code	Use the default one. Consult your ISP to select the one matching the country in which the router is installed.			

Modem Code
Default: 5.12.24.0 🗸
Default: 5.12.24.0
5.12.18.16
5.12.23.5
opeca

Ethernet

Interface	Displays the interface (P1, P2) used for LAN connection.			
Function	Displays the LAN# of the LAN connection.			
Status	Switch the toggle to enable or disable the function.			
Speed	Set the LAN port speed capabilities: Modern Code Auto negotiation 10M half duplex 10M full duplex 100M half duplex 100M full duplex Port speed capabilities:			
	Auto negotiation: Auto speed with all capabilities.			
	10M half duplex: Force speed with 10M ability.			
	10M full duplex: Force speed with 10M ability.			
	100M half duplex: Force speed with 100M ability.			
	100M full duplex: Force speed with 100M ability.			

Selecting Auto (auto-negotiation) allows one port to negotiate with a peer port automatically to obtain the connection speed and duplex mode that both ends support. When auto-negotiation is turned on, a port on the switch negotiates with the peer automatically to determine the connection speed and duplex mode. If the peer port does not support auto-negotiation or turns off this feature, the switch determines the connection speed by detecting the signal on the cable and using half duplex mode. When the switch's auto-negotiation is turned off, a port uses the pre-configured speed and duplex mode when making a connection, thus requiring you to make sure that the settings of the peer port are the same in order to connect.

(i) Note:

Switch these two icons by click the mouse cursor on them.

- means "Enable".

II-2-2 WAN

When the operation mode is configured as Router Mode, the **Configuration>>WAN** page will be shown as the following page.

II-2-2-1 WAN Connections

This page is to configure the general settings for WAN connection.

SHITL:	۹	Configuratio	on / WAN					
 (グ) Dashboard (の) Operation Mode 	I	WAN Conne WAN Conne		WAN Dynamic DNS				C Refresh
		Name	Enabled	Physical Interface	IPv4 Connection Type	IPv4 Address	IPv4 Primary DNS	Option
Physical Interface		WANI	Enabled	DSL	PPPoE		8.8.8.8	Ø Edit
Routing								
IGMP								
Objects Certificates								
	>							
B2 Utility	>							
🖏 System Maintenance	>							

Available settings are explained as follows:

ltem	Description		
Name	Displays the name of the interface.		
Physical Interface	Displays the physical mode (e.g., ADSL, VDSL, and etc.) used by the WAN interface.		
IPv4 Connection Type	Displays the connection type (e.g., PPPoE, DHCP, and etc.).		
IPv4 Address	Displays the IP address used by the WAN interface.		
IPv4 Primary DNS	Displays the primary DNS server address.		
Option	Edit - Click to modify the interface name and physical mode.		

To configure the detailed settings for the selected WAN interface, click the **Edit** link to the right side of the WAN interface.

Configuration / WAN			
WAN Connections	Virtual WAN	Dynamic DNS	CRefresh
			×
			Hide Advanced Mode
Name	WAN1		
Enabled			
General Setup			~
DSL Mode	Auto	\sim	
ADSL Setting			~
Annex	Annex	в ~	
VPI (0~255)	0		
VCI (32~65535)	32		
Customer VLAN			
Encapsulation	RFC 14	83 Brid 🗸	
Multiplexing		VC-Mux	•
Cancel Apply			

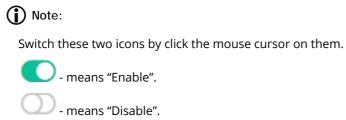
ltem	Description
Show / Hide Advanced Mode	Click to show or hide the advanced settings for the WAN interface.
Name	Displays current WAN interface.
Enabled	Switch the toggle to enable or disable the function.
	General Setup
DSL Mode	Specify which DSL mode (e.g., VDSL2, ADSL2, ADSL2 multimode, ADSL2+, T1.413, G.DMT) can be used for such WAN connection.
	Auto – The system will choose the suitable one automatically.
	ADSL Setting
Annex	Choose the correct modem version of the device, e.g., Annex A, Annex B, Annex A/B/M, Annex A/B/J and etc.
VPI Enter the value provided by ISP.	
VCI	Enter the value provided by ISP.
Customer VLAN	Click to enable the function of VLAN with tag. If enabled,
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
	VDSL2 Setting
Customer VLAN	Click to enable the function of VLAN with tag. If enabled,

 ${\bf Tag}$ - Enter the value as the VLAN ID number. The range is from 0 to

	4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
Service VLAN	Click to enable the function of VLAN with tag. If enabled, for what?
	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.
	IPv4
IPv4 Connection Type	There are four types:
	• PPPoE
	• PPPoA
	• DHCP
	Static IP
Username/Password	It is available when PPPoE/PPPoA is selected as IPv4 Connection Type
	Enter the username and password as the primary user account for network connection.
IP Address	It means the WAN IP address assigned by the ISP.
	It is available when Static IP is selected as IPv4 Connection Type.
Subnet Mask	It means the WAN subnet mask.
	It is available when Static IP is selected as IPv4 Connection Type.
Gateway IP	It means the IP address of the WAN Gateway.
	It is available when Static IP is selected as IPv4 Connection Type.
	DNS
IPv4 Primary / Secondary DNS	Enter the primary IP address for the router if you want to use Static I mode. If necessary, Enter secondary IP address for necessity in the future.
	Primary IP Address - IP address of primary DNS server.
	Secondary IP Address - IP address of secondary DNS server.
	WAN Connection Detection
Mode	Configures how the WAN connection is monitored.
	Choose Always On , ARP Detect or Ping Detect for the system to execute for WAN detection.
	ARP Detect - The router broadcasts an ARP request every 5 seconds. If no response is received within 30 seconds, the WAN connection is deemed to have failed.
	Ping Detect - The router sends an ICMP (Internet Control Message Protocol) echo request every second to the host, whose address is specified in the Ping IP field, to verify the WAN connection. If the remote host does not respond within 30 seconds, the WAN
	connection is deemed to have failed. If you choose Ping Detect as the detection mode, you have to enter required settings for the following items.
TTL	It is available when Ping Detect is selected as WAN Connection
	Detection Mode.

	destination. Valid values range from 1 to 255.		
Ping Interval	It is available when Ping Detect is selected as WAN Connection Detection Mode.		
	Enter the interval for the system to execute the PING operation.		
Ping Retry	It is available when Ping Detect is selected as WAN Connection Detection Mode.		
	Enter the number of times that the system is allowed to execute the PING operation before WAN disconnection is judged.		
	PPPoE Pass-through		
To Wired LAN	Switch the toggle to enable or disable the function. If enabled, the wired LAN clients can initiate PPPoE dial-up connections to the WAN		
	The router offers PPPoE dial-up connection. Besides, you also can establish the PPPoE connection directly from local clients to your ISP via the Vigor router. When PPPoA protocol is selected, the PPPoE package transmitted by PC will be transformed into PPPoA package and sent to WAN server. Thus, the PC can access Internet through such direction.		
Options under the	Advanced Mode		
ADSL Setting	Below shows the additional options for ADSL Setting:		
	RFC 1483 Bridged RFC 1483 Bridged RFC 1483 Routed Multiplexing - Encapsulating type of the ADSL connection. Available values are LLC (Logical Link Control) and VC-Mux (Virtual Circuit Multiplexing). Contact your ISP for the correct encapsulating type.		
	QoS		
ATM QoS	Configure the Quality of Service (QoS) of the ATM circuit. Select a proper QoS type for the interface.		
	UBR With PCR - Unspecified Bit Rate. Enter the value for PCR (Peak		
	Cell Rate, 0_5500) if select UBR With PCR .		

IPv4	- Below shows the additional options for IPv4 Setting:
Service Name	It is available when PPPoA/PPPoE is selected as IPv4 Connection Type
(Optional)	Sets the PPP service name tag. Required by some ISPs. Leave blank
	unless instructed otherwise by your ISP.
Fallback Account	It is available when PPPoA/PPPoE is selected as IPv4 Connection Type
	Switch the toggle to enable or disable the function.
	Once the primary user account fails to set a network connection, use the fallback account instead.
	Username - Enter a string as a username of the fallback account.
	Password - Enter a string as the password.
Separate Account for	It is available when PPPoA/PPPoE is selected as IPv4 Connection Type
ADSL	In default, WAN1 supports VDSL2/ADSL and uses the same PPPoE
	account and password for connection. If ADSL mode requires a separate user name and password, enable this function and fill out
	the Username and Password fields below.
	Switch the toggle to enable or disable the function.
	Username - Enter a string as the username.
	Password - Enter a string as the password.
PPP Authentication	It is available when PPPoA/PPPoE is selected as IPv4 Connection Type
	It means the protocol used for PPP authentication.
	Both PAP and CHAP (Challenge-Handshake Authentication Protocol)
	can be used for PPP authentication. Router negotiates with the PPTP
	or L2TP server to determine which protocol to use.
IP Assignment	It is available when PPPoA/PPPoE is selected as IPv4 Connection Type
	DHCP - WAN IP address is dynamically allocated.Static IP - ISP has assigned a fixed WAN IP address.
	 IP Address - Enter the IP address offered by your ISP.
IP Alias	+Add - Click to enter multiple WAN IPv4 addresses assigned by your ISP.
	MTU
МТИ	Maximum Transmission Unit, the size of the largest packet, in bytes,
	that can be transmitted to the WAN. The maximum value is 1500. For
	PPPoE connections, there is always an 8-byte overhead, so the
	maximum valid MTU value for PPPoE is 1492.
	WAN MAC Address
Mode	Default - Use the default MAC address for the WAN Ethernet port.
	Customized - Select this option if your ISP authenticates by MAC addresses.
	• MAC - Specify a MAC address for the WAN Ethernet port.
Cancel	Discard current settings and return to previous page.
Apply	Save the current settings and exit the page.
· · · ·	



II-2-2-2 Virtual WAN

Up to five virtual WAN profiles can be set for applying to different applications.

Each profile can be specified with ATM QoS, VLAN, and binding interfaces according to the requirement of the practical network environment.

Sern-	Q.	Configuration / WAN							
		WAN Connections	Virtual WAN	Dynamic DNS					③Reset C Refresh
 Dashboard 		Virtual WAN							
Operation Mode		+ Add							Maic 5
		Name	Enabled		Port Bridge	IPv4	Connection Type		Option
Physical Interface									
Routing									
IGMP									
Objects									
🖽 Monitoring	>								
88 Utility	>								
🖏 System Maintenance	>								

To add a new virtual WAN, click the **+Add** link to get the following page.

Configuration / WAN		
WAN Connections	Virtual WAN Dynamic DNS	🕲 Reset 📿 Refresh
		×
		Show Advanced Mode
Name	LAN1_TEST	
Enabled		
General		\sim
Physical Interface	DSL	
ADSL Setting		~
VPI (0~255)	0	
VCI (32~65535)	32	
Customer VLAN		
VDSL2 Setting		~
Tag (0~4094)	0 Note: Tag value "0" will set the VLAN ID to "zero" instead of untagged.	
Priority (0~7)	0	
Port-Based Bridge		~
Cancel Apply		

ltem	Description
Show / Hide Advanced Mode	Click to show or hide the advanced settings for virtual WAN.
Name	Enter a name as the profile name.
Enabled	Switch the toggle to enable or disable the function.

General

Physical Interface	Displays the WAN type (e.g., DSL) of the physical interface.		
ADSL Setting	VPI - Enter the value provided by ISP.		
	VCI - Enter the value provided by ISP.		
	Customer VLAN - Click to enable the function of VLAN with tag. If enabled,		
	• Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.		
	 Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7. 		
VDSL2 Setting	Tag - Enter the value as the VLAN ID number. The range is from 0 to 4094.		
	Priority - Enter the packet priority number for such VLAN. The range is from 0 to 7.		
	Port-Based Bridge		
Port Bridge	Switch the toggle to enable or disable the function.		
	Binding Interface - Click +Add to add an interface for binding.		

IPv4

Enabled	Switch the toggle to enable or disable the function.				
IPv4 Connection Type	There are four types for network connection:				
	• PPPoE				
	PPPoA				
	• DHCP				
	Static IP				
Username/Password	It is available when PPPoE/PPPoA is selected as IPv4 Connection Type.				
IP Address	It means the WAN IP address assigned by the ISP.				
	It is available when Static IP is selected as IPv4 Connection Type.				
Subnet Mask	It means the WAN subnet mask.				
	It is available when Static IP is selected as IPv4 Connection Type.				
Gateway IP	It means the IP address of the WAN Gateway.				
	It is available when Static IP is selected as IPv4 Connection Type.				

Options under the Advanced Mode

ADSL Setting	Below shows the additional options for ADSL Setting: Encapsulation - Encapsulating type of the ADSL connection.
	RFC 1483 Bridged 🗸
	RFC 1483 Bridged
	RFC 1483 Routed
	Multiplexing - Encapsulating type of the ADSL connection. Available values are LLC (Logical Link Control) and VC-Mux (Virtual Circuit Multiplexing). Contact your ISP for the correct encapsulating type.

QoS

ATM QoS	Configure the Quality of Service (QoS) of the ATM circuit.					
	Select a proper QoS type for the interface.					
	UBR Without PCR					
	UBR With PCR					
	CBR					
	nrtVBR					
	rtVBR					
	UBR Without PCR - Unspecified Bit Rate.					
	UBR With PCR - Unspecified Bit Rate. Enter the value for PCR (Peak Cell Rate, 0_5500) if select UBR With PCR .					
	CBR - Constant Bit Rate.					
	nrtVBR - Non-real-time Variable Bit Rate.					
	rtVBR - Real-time Variable Bit Rate.					

Cancel	Discard current settings and return to previous page.
Apply	Save the current settings and exit the page.

II-2-2-3 Dynamic DNS

Most ISPs assigns dynamic WAN IP addresses to their customers. Dynamic IP addresses presents challenges to users who would like to accept remote connections to their LANs from the Internet, as service could be disrupted due to the IP address changing without notice. By setting up service with a Dynamic DNS (DDNS) provider, and configuring Dynamic DNS updates on the Vigor router, you can have reliable access to your network by means of an easy-to-remember domain address that resolves to the most current WAN IP address.

The Vigor router supports a wide range of DDNS providers. Please contact the DDNS provider of your choice to set up service before configuring DDNS on the router.

Sheith	Configuration / W/				
	WAN Connections	Wirtual WAN Dynamic I	2NS		③Reset C Refresh
🝘 Dashboard	Dynamic DNS				
Operation Mode	+ Add C) Force	thidata			Search Max 6
	Name	Enabled	Service Provider	Domain Name	Option
	100000				
IGMP					
Objects					
Certificates					
D Monitoring >					
8 utility >					
System Maintenance >					

ltem	Description
Reset	Click to clear all profiles to factory settings.
+Add	Click to bring up the configuration page of the DDNS profile (max. 6).
Force Update	Click to connect immediately to DDNS servers to update IP address information.

To add a new DDNS profile, click the **+Add** link to get the following page.

Configuration / WAN		
WAN Connections Vir	tual WAN Dynamic DN5	③Reset C Refresh
		×
Name		
Enabled		
Service Provider	DrayDDNS 💛	
Service Status		
	Accurate To use DrayDDNS, activate license and set up domain name on MyWgor. Use Activate button to link to MyWgor page.	
Expire Date	to use unayound, econese econe and set up domain name on nyvigor, use notivate dutton to link to nyvigor page.	
Domain Name	. drayddns.com Refresh this page to update domain name.	
Let's Encrypt Certificate		
Scature .		
	Let's Encrypt Certificate is valid for 90 days and it will be auto renewed before expire date.	
More settings 😔		
Cancel Apply		

Item	Description			
Name	Enter a name as the profile name.			
Enabled	Switch the toggle to enable or disable the function.			
Service Provider	 Select the DDNS provider. If your DDNS provider is not listed, select User-Defined and manually configure the profile. DrayDDNS NO-IP User-Defined 			
If DrayDDNS is	Service Status - Click Activate to activate the service.			
selected as Service Provider	Expire Date - Display the expired date of the service.Domain Name - Display the domain and sub-domain to be updated			
If NO-IP is selected as Service Provider	 Domain Name - The domain and sub-domain to be updated. Account Name - Enter the login name of the DDNS account. Password - Enter the password of the DDNS account. 			
lf User-Defined is selected as Service Provider	Provider Host URL - Enter the IP address or the domain name of the host which provides related service. Service API - Enter the IP address or the domain name of the host			
	which provides related service.			
	Server Response - Enter any text that you want to receive from the DDNS server.			
	Account Name - Enter the login name of the DDNS account.			
	Password - Enter the password of the DDNS account.			
	Auth Type - Two types can be used for authentication.			
	• Basic – Username and password defined later can be shown from the packets captured.			
	• URL - Username and password defined later can be shown in URL.			

Let's Encrypt	Display the information related to Let's Encrypt certificate.		
Certificate	Activate - Click it to generate a certificate issued by Let's Encrypt for applying to such DDNS account.		
	More settings		
Update DDNS with	If a Vigor router is installed behind any NAT router, you can enable such function to locate the real WAN IP.		
	When the WAN IP used by Vigor router is private IP, this function can detect the public IP used by the NAT router and use the detected IP address for DDNS update.		
	There are two methods offered for you to choose:		
	• WAN IP - The IP address of the router's WAN interface will be used.		
	 Internet IP – The real public IP address will be used. Select this option if the IP address assigned to the router's WAN interface is not the actual external IP address. 		
Auto Update Interval	The frequency, in minutes, at which the router connects to DDNS servers to update IP address information.		
	The default is 14400.		
Cancel	Discard current settings and return to previous page.		
Apply	Save the current settings and exit the page.		

II-2-3 LAN

Local Area Network (LAN) is a group of subnets regulated and ruled by modem.

II-2-3-1 LAN Networks

To configure the general settings the LAN network, select **Configuration>>LAN** to open the following page.

Martha	Q. Conf	iguration / LAN				
		Networks Bind IP to MAC	DHCP Options			
(?) Dashboard	LAN	Networks				
Operation Mode						
	S Nat	ie IP Address	Subret Mask	DHCP Server	Primary DNS	Option
Physical Interface	LAN	1 192,168.1.150	255.255.255.0/24	0#		Plat
Routing						
Objects						
Certificates						
	2					
88 Utility	2					
System Maintenance						
-						

Available settings are explained as follows:

ltem	Description
Name	Displays the number of LAN interface.
IP Address	Displays the IP address of the LAN interface.
Subnet Mask	Displays the subnet mask of the LAN interface.
Option	Edit - Click to modify the name, IP address, and subnet mask settings.

To configure the detailed settings for the selected WAN interface, click the **Edit** link to the right side of the LAN interface.

Configuration / LAN		
LAN Networks Bind	IP to MAC DHCP Options	
		×
Name	LAN1	
General Setup		
Usage	NAT	
IPv4		~
IP Address	192.168.1.150	
Subnet Mask	255.255.255.0/	
DHCP Server Configurat	lon	
DHCP Server	On Off Relay	
More settings \sim		
· · · · · · · · · · · · · · · · · · ·		
Cancel Apply		

ltem	Description	
Name	Enter a brief comment for the LAN interface.	
	IPv4	
IP Address Enter the IP address of the LAN interface.		
Subnet Mask	Select a subnet mask of the LAN interface.	
	DHCP Server Configuration	
DHCP Server	DHCP stands for Dynamic Host Configuration Protocol. The router by factory default acts a DHCP server for your network so it automatically dispatches related IP settings to any local user configured as a DHCP client. It is highly recommended that you leave the router enabled as a DHCP server if you do not have a DHCP serve for your network.	
	If you want to use another DHCP server in the network other than the Vigor Router's, you can let Relay Agent help you to redirect the DHCP request to the specified location.	
	On - Enables the built-in DHCP server on the router.	
	Off - Disables the built-in DHCP server on the router.	
	Relay - When selected, all DHCP requests are forwarded to a DHCP server outside of the LAN subnet, and whose address is specified in the DHCP Server IP Address field.	
lf On is selected as DHCP Server	Start IP Address - The beginning LAN IP address that is given out to LAN DHCP clients.	
	IP Pool Counts - The maximum number of IP addresses to be handed out by DHCP. The default value is 200. Valid range is between 1 and 1021. The actual number of IP addresses available for assignment is the IP Pool Counts, or 1021 minus the last octet of the Start IP Address, whichever is smaller.	
	Gateway IP Address - The IP address of the gateway, which is the	

	host on the LAN that relays all traffic coming into and going out of the LAN. The gateway is normally the router, and therefore the Gateway IP Address should be identical to the IP Address in the IPv4 section above.
	Lease Tim e - The maximum duration DHCP-issued IP addresses can be used before they have to be renewed.
	Primary DNS - DNS stands for Domain Name System. Every Internet host must have a unique IP address, also they may have a human-friendly, easy to remember name such as www.yahoo.com. The DNS server converts the user-friendly name into its equivalent IP address.
	You must specify a DNS server IP address here because your ISP should provide you with usually more than one DNS Server.
	Secondary DNS - You can specify secondary DNS server IP address here because your ISP often provides you more than one DNS Server.
lf Relay is selected as DHCP Server	When selected, all DHCP requests are forwarded to a DHCP server outside of the LAN subnet, and whose address is specified in the DHCP Server IP Address field.
	Interface for 1st DHCP Server - Specify a WAN interface for the first DHCP Server.
	1st DHCP Server IP Address - Enter the IP Address of the DHCP server to which DHCP requests from LAN clients are forwarded.
	Interface for 2nd DHCP Server - The secondary DHCP server is an optional setting. If required, specify a WAN interface for the second DHCP Server as a backup server.
	2nd DHCP Server IP Address - Enter the IP Address of the DHCP server to which DHCP requests from LAN clients are forwarded.

More settings

Force DNS Redirection	Switch the toggle to enable or disable the function. It allows all outgoing DNS lookups to be intercepted and redirected to the router's built-in DNS server, improving the domain lookup performance by caching DNS queries and results.
Virtual Interface	 Switch the toggle to enable or disable the function. The virtual interface is a routing interface that can be used for routing packets to specified domain. IP Address - Enter an IP address. Subnet Mask - Select a subnet mask. After configuring this option, set a Bind IP to MAC profile (based on the IP address and subnet mask set above) or specify a static IP for the clients.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

II-2-3-2 Bind IP to MAC

This function is used to bind the IP and MAC address in LAN to have a strengthening control in network. With the Bind IP to MAC feature you can reserve LAN IP addresses for LAN clients. Each reserved IP address is associated with a Media Access Control (MAC) address.

Second Q	Configuration / LAN				
(?) Dashboard	LAN Networks dind IP to MA	DHCP Options			
	Bind IP to MAC				
Operation Mode	+ Add			Search	Max: 300
	Comment	MAC Address	IP Address		Option
Physical Interface					
Камр					
Objects					
Certificates					
표 Monitoring >					
S utility >					
🗞 System Maintenance 💦					

To add a new profile, click the **+Add** link to get the following page.

N Networks Bind IP to MAC	DHCP Options		
nd IP to MAC			×
Add		Comment	[]
omment	MAC Address	MAC Address (Input formatis FF:SF:FF:FF:FF:FF)	
		IP Address	

ltem	Description
Comment	Enter a brief comment to identify this IP Address – MAC Address pair.
MAC Address	Enter the MAC address of the LAN client's network interface.
IP Address	Enter the IP address to be associated with a MAC address.
Cancel	Discard current settings and return to the previous page.

Apply	Save the current settings and exit the page.
-------	--

II-2-3-3 DHCP Options

DHCP packets can be processed by adding option number and data information when such function is enabled and configured.

bern. Q	Configuration / LAN			
Destroit The	LAN Networks Bind IP to MAC DHCP Option	5		
Distributed	DHCP Options			
Operation Mode	+ Add		Search	Mar: 255
	Option Number	Date Type	Data	Option
Physical Interface		Na Récords Found		
WAN				
Routing				
NAT IGMP				
Objects				
Certificates				
Monitoring	>			
BS Utility	>			
System Maintenance	8			

To add an option, click the **+Add** link to get the following page.

AN Networks Bind IP to MAC DHCP Option	5		
HCP Options			
+ Add		Option Number (0-255)	0
Option Number	Date Type	Date Type	ASCII Character
	Na Records Found	Date Note: 1. DHCP Option does NOT take affect when with LAN or WAN settings.	the configured option number confi
			Cancel App

ltem	Description
Option Number	Enter a number for this function.

Data Type	Choose the type (ASCII or Hex or Address List) for the data to be stored.				
Data	 Enter the data in the Data field based on the data type selected. ASCII Character - A text string. Example: /path. Hexadecimal Digital - A hexadecimal string. Valid characters are from 0 to 9 and from a to f. Example: 2f70617468. Address List - One or more IPv4 addresses, delimited by commas. 				
CancelDiscard current settings and return to the previous page.					
Apply	Save the current settings and exit the page.				

II-2-4 Routing

Static routing is an alternative to dynamic routing. It is a process that the system network administrator can configure network routers with all the required information for packet forwarding.

Open Configuration >> Routing.

II-2-4-1 IPv4 Static Route

	IPV4 St	atic Route RIP					3 Rest
) Dashboard	IPv4 St	atic Route					
) Operation Mode	+ Add					Search	Max 10
	Name	Enabled	Destination IP Address	Subnet Mask	Interface	Gateway	Option
Physical Interface							
WAN							
LAN							
IGMP							
IGMP							
IGMP Objects Certificates	*						
IGMP Objects Certificates Monitoring	> >						
IGMP Objects Certificates Monitoring Utility							
IGMP Objects	>						

To add a new IPv4 static route, click the **+Add** link to get the following page.

Configuration	Configuration / Routing								
IPv4 Static Ro	ute RIP				🖰 Reset				
IPv4 Static Ro	oute				×				
+ Add				Name					
Name	Enabled	Destination IP Address	Subnet Ma	Enabled					
			No Records Foun	Destination IP Address	0.0.0.1				
				Subnet Mask	255.255.255.2 ∨				
				Interface	None 🗸				
				Gateway	0.0.0.0				
					Cancel Apply				

Item	Description
Name	Enter a name as the profile name.
Enabled	Switch the toggle to enable or disable the function.
Destination IP Address	Enter the IP address as the destination IP address.
Subnet Mask	Select a subnet mask of this static route.
Interface	Use the drop-down list to specify an interface for this static route.
Gateway	Enter an IP address as the gateway.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

II-2-4-2 RIP

The Routing Information Protocol (RIP) is the most popular interior routing protocol used by a router.

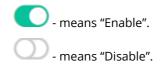
Physical interface WAN LNN Physical interface WAN LNN Notified NAT icMP Objects Objects Objects Update Timer (1-65535) 20 Monitoring 20 8< Utility System Maintenance System Maintenance	Search.	Configuration / Routing			
Operation Mode. Condition Mode. Chabled Physical Interface WAN Physical Interface WAN LNN Nation Nation Nation Nation Nation Nation Nation Objects Update Timer (1-65535) 20 Monitoring 21 Monitoring 22 Monitoring 23 Utility 24 Monitoring 25 System Maintenance 26 System Maintenance					
Configuration Rubled Physical Interface Rub Version VAN Imabled Networks Inabled Networks Imabled Networks	(?) Dashboard	RIP			
Corriguinterface Physical Interface wAN wAN LAN Ruff LAN Ruff NAT ICMP objects Update Timer (1-65535) 20 certificates Immosited Timer (1-65535) 20 Rufficer 20 8 Utility > System Maintenance	Operation Mode	Enabled			
Physical Interface wAN LAN Floating NAT iGMP Objects Update Timer (1-65535) 2ertificates Timeout Timer (1-65535) 2monitoring 2 Utility System Maintenance 2 Connected					
WAN Preface LAN No Becords Found Notifier No Becords Found NAT Immes IGMP Timers Objects Update Timer (1-65535) Objects Timeout Timer (1-65535) Certificates Timeout Timer (1-65535) Monitoring Setting Timer (1-65535) System Maintenance Connected	Physical Interface	Enabled Networks			
LN No Becords Found Notifie No Becords Found NAT Immes IGMP Timers Objects Update Timer (1-65535) 30 Certificates Timeout Timer (1-65535) 180 Monitoring Garbage Timer (1-65535) 120 Stitlity Redistribute System Maintenance Connected	WAN	Endured reservers	Interface		
NAT Immers bCMP Timers objects Update Timer (1-65535) certificates Timeout Timer (1-65533) Monitoring Carabage Timer (1-65535) Utility Redistribute System Maintenance Connected	LAN				
ICMP Timers objects Update Timer (1-65535) 30 certificates Timeout Timer (1-65533) 180 Monitoring Carbage Timer (1-65535) 120 Vutility Redistribute System Maintenance Connected					
objects Update Timer (1-65535) 30 certificates Timeout Timer (1-65535) 180 Monitoring Garbage Timer (1-65535) 120 & Utility > Redistribute \$ System Maintenance > Connected	NAT				
Certificates Timeout Timer (1-65533) 180 Monitoring Garbage Timer (1-65535) 120 & Utility Redistribute & System Maintenance Connected	IGMP	Timers			
Monitoring Garbage Timer (1-65535) 120 & Utility > Redistribute & system Maintenance > Connected	Objects	Update Timer (1~65535)	30		
8 Utility > Redistribute § system Maintenance > Connected	Certificates	Timeout Timer (1-65533)	180		
System Maintenance > Connected	표 Monitoring	Garbage Timer (1-65535)	120		
	88 Utility	> Redistribute			
Kernel	🗞 System Maintenance	> Connected			
		Kernel			

Available settings are explained as follows:

Item	Description
Enabled	When Enabled, the router will attempt to exchange routing information with neighbouring routers using the Routing Information Protocol.
RIP Version	Specify the version number (V1/V2) for RIP protocol.
Enabled Networks	+Add - Specify an interface (LAN/WAN) for applying the RIP.
	Timers
Update Timer	Enter a value as the update timer.
	When the time is up, the Vigor router will send a message containing the complete routing table to all neighboring routers for exchanging the routing information.
Timeout Timer	The routing information will be valid (but not removed) till the time expiration set in this field.
	The information will be kept in the routing table temporarily. At the same time, the neighbors will be notified that the route has been dropped.
Garbage Timer	The route will be removed from the routing table upon the expiration set in Garbage Timer.
	Redistribute
Connected	Redistribute connected routes into the RIP tables.
Kernel	Redistribute kernel routes into the RIP tables.
Apply	Save the current settings and exit the page.

(i) Note:

Switch these two icons by click the mouse cursor on them.



II-2-5 NAT

Most ISPs allocate one WAN IP address to each subscriber. In order to simultaneously connect multiple devices to the Internet, a technique called Network Address Translation is employed.

Usually, the router serves as an NAT (Network Address Translation) router. NAT is a mechanism that one or more private IP addresses can be mapped into a single public one. Public IP address is usually assigned by your ISP, for which you may get charged. Private IP addresses are recognized only among internal hosts.

When the outgoing packets destined to some public server on the Internet reach the NAT router, the router will change its source address into the public IP address of the router, select the available public port, and then forward it. At the same time, the router shall list an entry in a table to memorize this address/port-mapping relationship. When the public server response, the incoming traffic, of course, is destined to the router's public IP address and the router will do the inversion based on its table. Therefore, the internal host can communicate with external host smoothly.

The benefit of the NAT includes:

- Save cost on applying public IP address and apply efficient usage of IP address. NAT allows the internal IP addresses of local hosts to be translated into one public IP address, thus you can have only one IP address on behalf of the entire internal hosts.
- Enhance security of the internal network by obscuring the IP address. There are many attacks aiming victims based on the IP address. Since the attacker cannot be aware of any private IP addresses, the NAT function can protect the internal network.

II-2-5-1 Port Forwarding

This function allows inbound traffic from specific ports on WAN interfaces to be forwarded to LAN clients.

It allows you to open a range of ports for the traffic of special applications.

Seatt.	۹	Configuration / NAT					
		Port Forwarding	DMZ Port Trigger	ing ALG UPnP			3 Reset
(?) Dashboard		Port Forwarding					
Operation Mode		+ Add				Search	Max: 20
		Name	Enabled	WAN Interface	Source IP	Private IP	Option
Physical Interface							
WAN							
Routing							
IGMP							
Objects							
Certificates							
	>						
88 Utility	>						
🖏 System Maintenance	>						

To add a new port forwarding profile, click the **+Add** link to get the following page.

Configuration / NAT								
Port Forwarding	DMZ	Port Triggering	ALG	UPnP				🕲 Reset
								×
Name								
Enabled								
Network								
WAN Interface		None ~						
Source IP		Any ~						
Private IP		Single ~						
Port Forwarding								
+Add								Max: 10
Protocol		Public Port	Start	Publi	ic Port End	Private Port Start	Private Port End	Option
TCP UDP	TCP/UD	P 0		0		0	0	⑪ Delete
Cancel Apply								

Item Description				
Name	Enter a name that identifies the rule.			
Enabled	Switch the toggle to enable or disable the function.			
	Network			
WAN Interface	The WAN port(s) whose incoming traffic will be forwarded to a LAN client. Select from a specific WAN interface WAN# to apply the rule to			

	the WAN interface.			
Source IP	Any - Any data traffic coming from the source IP will be forwarded to a LAN.			
	IP Address - Set a range of IP addresses. Any data traffic coming from the IP addresses within the range will be forwarded to a LAN.			
	IP Object - Use the drop down list to specify an IP object profile.			
	IP Group - Use the drop down list to specify an IP group profile.			
Private IP	Specify a LAN IP address or a range of LAN IP addresses to which the traffic will be forwarded.			
	Single - Specify a destination LAN IP address that will receive the forwarded traffic.			
	Range - Specify a range of destination LAN IP addresses that will receive the forwarded traffic.			
	Port Forwarding			
+Add	Click to set port numbers for the specified protocol (TCP, UDP, or TCP/UDP) for a port forwarding profile.			
	Protocol - The protocol to which this rule applies, TCP, UDP or TCP/UDP.			
	Public Port Start - Specify which port can be redirected to the specified Private IP and Port of the internal host. Enter the required number as the starting port.			
	Public Port End - Enter the required number as the ending port.			
	Private Port Start - The port on each LAN client to which the traffic will be directed to. Enter the required number as the starting port.			
	Private Port End - Enter the required number as the ending port.			
	Options - Click Delete to remove the selected entry.			
Cancel	Discard current settings and return to the previous page.			
cancer				

II-2-5-2 DMZ

Vigor router provides a facility **DMZ Host** that maps ALL unsolicited data on any protocol to a single host in the LAN. Regular web surfing and other such Internet activities from other clients will continue to work without inappropriate interruption. **DMZ Host** allows a defined internal user to be totally exposed to the Internet, which usually helps some special applications such as Netmeeting or Internet Games etc.

	Configuration / NAT					
		OMZ Port Triggering ALG	UPnP			🕲 Rese
Dashboard	DMZ					
Operation Mode	+ Add				Search	Max: 9
	Enabled	Interface a	WAN IP	Private IP	1	Option
Physical Interface	-					
WAN						
Routing						
IGMP						
Objects						
Certificates						
Monitoring)						
Utility)						
System Maintenance						

To add a new DMZ profile, click the **+Add** link to get the following page.

Port Forwarding	DMZ	Port Triggering	ALG	UPnP				۹ 🕑 ۱	Res
DMZ									>
+ Add						Enabled			
Enabled 👳		Interface 🖕			WAN IP $\prescript{\oplus}$	Interface		[WAN] WAN1	
					No Records Foun	WAN IP		None	
						Private IP			
							SUGGESTIONS		\subset
							192.168.1.10 (60:/	A4:4C:E6:5A:4F)	
							192.168.1.1 (14:49	BC:02:36:50)	

ltem	Description
------	-------------

Enabled	Switch the toggle to enable or disable the function.		
Interface	Allows WAN traffic to be sent to a specific LAN IP address.		
WAN IPEnable the function of applying WAN alias IP. Then, select a WAN IP from the available IPv4 alias settings set on Configuration >> V >> WAN Connections.			
Private IP	Select one private IP address in the list to be the DMZ host.		
Cancel	Discard current settings and return to the previous page.		
Apply	Save the current settings and exit the page.		

II-2-5-3 Port Triggering

If you run programs that function as server applications where they expect to receive unsolicited traffic from the WAN, you can set up rules in Port Triggering to detect LAN-to-WAN traffic initiated by those programs, and automatically open up WAN ports to accept incoming traffic and forward it to the LAN client running the server applications.

The duration that these ports are opened depends on the type of protocol used. The "default" values are shown below and these duration values can be modified via telnet commands.

TCP: 86400 sec. UDP: 180 sec. IGMP: 10 sec.

TCP WWW: 60 sec.

TCP SYN: 60 sec.

	Configuration / NAT				
	Port Forwarding DMZ	Port Triggering ALG UPnP			3 Reset
ງ Dashboard	Port Triggering				
) Operation Mode	+ Add			Search	
	Service Name	Enabled	Schedule	Source IP	Option
Physical Interface	provide a reason				
WAN					
LAN					
Routing					
IGMP					
Objects					
Certificates					
Monitoring >					
Utility					
System Maintenance					

To add a new port triggering profile, click the **+Add** link to get the following page.

Port Forwarding	DMZ Port Triggering ALG UPnP
Add Service	Manually Preset
Service Name	
Enabled	
Schedule	Always On Scheduled On
Triggering Source	
Source IP	Any 🗸
	+Add Max 5
Protocol & Port	
	Triggering Protocol Triggering Port Start Triggering Port End
	No Records Found!
Incoming Services	
Protocol & Port	+Add Max: 5

Available settings are explained as follows:

Item	Description		
Add Service	Select from list of predefined service, or manually configure triggering and incoming protocols and ports.		
	Manually - If selected, self-define the service name.		
	Preset - If selected, various services will be offered for you to choose as the service name.		
Enabled	Switch the toggle to enable or disable the function of port triggering.		
Schedule	Vigor router can perform the port triggering all the time or on a certain date and time.		
	Always On - The function of port triggering is running all the time.		
	Scheduled On - The function of port triggering is activated based on the schedule profile.		
	Triggering Source		
Source IP	Any - Any source IP will be forwarded to a LAN.		
	IP Address - Set a range of IP addresses forwarded to a LAN.		
	IP Object - Use the drop down list to specify an IP object profile.		
	IP Group - Use the drop down list to specify an IP group profile.		
Protocol & Port	+Add - Click to set port numbers (start and end) for the specified protocol (TCP, UDP or TCP/UDP) for the outgoing data (that this rule monitors).		
	Incoming Services		
Protocol & Port	+Add - Click to set port numbers (start and end) for the specified protocol (TCP, UDP or TCP/UDP) for the incoming data.		
	Incoming Protocol - The protocol(s) of the incoming traffic.		
	• TCP -open port(s) to TCP traffic.		

	• UDP - open port(s) to UDP traffic.
	• TCP/UDP - open port(s) to both TCP and UDP traffic.
	Select the protocol (TCP, UDP or TCP/UDP) for the incoming data of such triggering profile.
	Incoming Port - Incoming traffic from the WAN destined for these port numbers be forwarded to the LAN client that triggered the rule.
	Enter the port or port range for the incoming packets.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

II-2-5-4 ALG

ALG means **Application Layer Gateway**. There are two methods provided by Vigor router, RTSP (Real Time Streaming Protocol) ALG and SIP (Session Initiation Protocol) ALG, for processing the packets of voice and video.

RTSP ALG makes RTSP message, RTCP message, and RTP packets of voice and video be transmitted and received correctly via NAT by Vigor router.

However, SIP ALG makes SIP message and RTP packets of voice be transmitted and received correctly via NAT by Vigor router.

Search	٩	Configuration / NAT Port Forwarding D	MZ Port Triggering ALG UPni	D		() Reset
 Dashboard 		Application Layer Gate				Onches
Operation Mode						
🚔 configuration		Protocol	Enabled	Listen Port		
Physical Interface		SIP		5060	(1~65535)	
WAN		RTSP		554	(1-65535)	
LAN						
Routing						
hat						
IGMP						
Objects						
Certificates						
🖽 Monitoring	>					
BS Utility	>					
🐁 System Maintenance	>					

Available settings are explained as follows:

ltem	Description		
Enabled	Switch the toggle to enable or disable the function.		
Listen PortEnter a port number for SIP or RTSP protocol.			
Apply	Save the current settings and exit the page.		

II-2-5-5 UPnP

The Vigor supports UPnP (Universal Plug and Play), which is a suite of network protocols that simplifies network configuration. Applications and network devices on the LAN, that support UPnP, may request the router to modify its settings to allow NAT Traversal, so that WAN hosts can connect to them directly.

Examples of applications and devices that support UPnP include file-sharing applications such as uTorrent, Vuze and eMule, gaming consoles such as the Sony PlayStations 3 and 4 Xbox 360 and Xbox One, media streaming applications such as Plex and XBMC, and messaging and calling applications such as Skype. To find out if a certain application or network device supports or requires UPnP, please consult its user manual or check with its vendor.

Search.	۹	Configuration / NAT					
		Port Forwarding	DMZ Port Triggering	ALG UPnP			C Refresh
(🔊 Dashboard		UPnP					
③ Operation Mode		Enabled					
😄 Contigonation	4	WAN Interface	None	~			
Physical Interface							
WAN		Status					
		()The following is the dis	splay historical data, if you wan	t to receive new information	please turn on the switch		
Routing		WAN Interface	Source	Public Port	Private IP	Private Port	Protocol
IGMP							
Objects							
Certificates							
🖼 Monitoring	>						
88 Utility	>						
🖏 System Maintenance	>						
		Cancel Apply					
		Cancel Apply					

Available settings are explained as follows:

ltem	Description		
UPnP			
Enabled	Switch the toggle to enable or disable the function. UPnP is required for some applications such as PPS, Skype, eMuleand etc. If you are not familiar with UPnP, it is suggested to turn off this function for security.		
WAN Interface	Select the WAN port on which ports will be opened in response to UPnP commands.		
Status	Displays the historical data.		
Cancel	Discard current settings and return to the previous page.		
Apply	Save the current settings and exit the page.		

II-2-6 IGMP

Internet Group Management Protocol (IGMP) is an IPv4 communication protocol for establishing multicast group memberships.

II-2-6-1 IGMP Setup

Search_	Q,	Configuration / IGMP	
(?) Dashboard		IGMP Setup IGMP Proxy	3) Reset
 Operation Mode Configuration 		IGMP Proxy	Enable IGMP Proxy to issue multicast membership messages between LAN host and specified interface. Router will forward multicast packets by the group membership information. This feature may not work when WAN is in PPPOA mode.
Physical Interface WAN LAN Routing		Interface. Query Interval (sec.) IGMP encapsulation in PPPoE	None ~ 125
NAT KGMIP Objects		IGMP Snooping	Enable: Forwards multicast traffic only to ports that are members of that group. Disable: Treats multicast traffic the same as broadcast traffic.
Certificates Monitoring B Utility	> >	IGMP Fast Leave	Conception of the second state of the second s
🖏 System Maintenance	>		
		Apply	

ltem	Description
	IGMP Proxy
IGMP Proxy	Switch the toggle to enable or disable the function. The application of multicast will be executed through WAN /PVC/VLAN port. In addition, such function is available in NAT mode.
Interface	Specify an interface for packets passing through.
Query Interval	Vigor router will periodically check which IP obtaining IPTV service by sending query. It might cause inconvenience for client. Therefore, set a suitable time (unit: second) as the query interval to limit the frequency of query sent by Vigor router.
IGMP encapsulation in PPPoE	Enable this function if the interface type for IGMP is PPPoE. It depends on the specifications regulated by each ISP. If you have no idea to enable or disable, simply contact your ISP providers.
	IGMP Snooping
IGMP Snooping	Select to enable IGMP Snooping so that multicast traffic are forwarded to IGMP clients that have joined a multicast group.
IGMP Fast Leave	This option is shown only when IGMP Snooping is enabled. Select to enable IGMP Fast Leave.
	Normally when the router receives a "leave" message from an IGMP host, it will send a last member query message to see if there are still

	members within the multicast group. When Fast Leave is enabled, multicast for a group is immediately terminated when the last host in that group sends a "leave" message.
Apply	Save the current settings and exit the page.

II-2-6-2 IGMP Status

Displays a list of active multicast groups.

seirdu. Q	Configuration / IGMP			CRefresh
 Dashboard 	Multicast Group Table			Ontrical
Operation Mode				
	Group Address	P1	P2	
Physical Interface				
WAN				
Routing				
NAT				
Objects				
Certificates				
G Monitoring >				
88 Utility >				
🖏 System Maintenance 💦 👌				

ltem	Description
Group ID	ID port of the multicast group, which is within the IP range reserved for IGMP, 224.0.0.0 through 239.255.255.254.
P1 to P2	LAN ports that have IGMP hosts joined to this multicast group.

II-2-7 Objects

II-2-7-1 IP Object

For IPs in a range and service ports in a limited range usually will be applied in configuring router's settings, therefore we can define them with *objects* and bind them with *groups* for using conveniently. Later, we can select that object/group for applying it. For example, all the IPs in the same department can be defined with an IP object (a range of IP address).

	IP Object. IP Group Sc	hedule			③ Rese
Dashboard	IP Object				
Operation Mode	+ Add			Search	🗿 Max: 192
	Object Name	IPv4 Address	Invert a	Used in	Option
Physical Interface	E24 ACCOUNTER 24 MIL				
WAN					
Routing					
IGMP					
Certificates					
Monitoring					
Utility ;					

To add a new IP object profile, click the **+Add** link to get the following page.

Configuration / Objects				
IP Object IP Group Sched	ule			🕄 Reset
IP Object				×
+ Add			Object Name	
Object Name 🖕	IPv4 Address 🖕		Address Type	IP Subnet
		No Records Foun	IPv4 Settings Start IP Address End IP Address Invert	
				Cancel Apply

Item	Description
Object Name	Enter the name that identifies this profile.
Address Type	Select the type (IP or Subnet) of address.
	IPv4 Settings
Start IP Address	Enter the beginning IP address, if the Address Type is IP. To set a range of IP addresses, enter the different IP addresses as start IP address and end IP address.

End IP Address	Enter the ending IP address, if Address Type is IP.
IP Address	Enter an IP address if Address Type is Subnet Mask.
Subnet Mask	Enter subnet mask, if Address Type is Subnet Mask.
Invert	If enabled, all addresses except the ones entered above will be used.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

II-2-7-2 IP Group

Multiple IP Objects can be placed into an IP Group.

	Q Configura	t IP Group Schedule			3 Rese
Dashboard	IP Group	,			
Operation Mode	+ Add			Search	Max: 32
	- Add	Group Name	Objects Included	Search	Option
Physical Interface		Group Name	No Records Found!	Used in	Option
WAN					
LAN					
Routing					
NAT					
IGMP					
IGMP Objects Certificates					
olgens. Certificates	>				
Olgons Certificates Monitoring	>				
Diserts Certificates A Monitoring	>				
Certificates 2 Monitoring 3 Utility					
	>				
Certificates 2 Monitoring 3 Utility	>				

To add a new IP group profile, click the **+Add** link to get the following page.

Configuration / Objects						
IP Object IP Group	Schedule					🕚 Reset
			Available	Object		\times
Group Name			Select Obj	ects	Search	
Selected Objects	+ Add	Max: 12		Object Name	IPv4 Address	
	Object Name IPv4 Add	ress Option		Object_1	192.168.1.88	
	No Record			Object_2	192.168.1.0/24	
Cancel Apply						Close

ltem	Description				
Group Name	Enter a name that identifies this profile.				
Selected Objects	+Add - Click to open the page with available objects.				
	Available Object				
Selected Objects	Search - Enter the IP object name or the IPv4 address to display related information.				
Object Name / IPv4 Address	Select the object(s) to be grouped under the current IP group. The selected one will be shown under the Selected Objects on the left side.				
Cancel	Discard current settings and return to the previous page.				
ApplySave the current settings.					

II-2-7-3 Schedule

Time schedules can be created and used with router features that support them, so that those features can be turned on and off automatically at preconfigured times.

	contragorer	ion / Objects							
	IP Object	IP Group	Schedul	e					🙂 Rese
) Dashboard	Schedule								
) Operation Mode	+ Add							Search	Max: 20
	Name	Enabled	Date	Start Time (Hr: Min.)	End Time (Hr. Min.)	Repeat -	Used in a	In Use	Option
Physical Interface	100 1000								
WAN									
Routing									
IGMP									
Certificates									
Monitoring >									
) Utility >									
System Maintenance									

To add a new schedule profile, click the **+Add** link to get the following page.

Configuration	on / Objects									
IP Object	IP Group	Schedul	e						5	Reset
Schedule										×
+ Add					Name					
Name	Enabled	Date	Start Time (Hr: Min.)	End Time (Hr: Min.)	Enabled					
				No Records Foun	Date			2022-04	4-27	ē
					Start Time (Hr: Min.)					
						15	~:	12	~ : 32	~
					End Time (Hr: Min.)					
						00	~:	00	~ : 00	~
					Repeat				Once	\sim
									Once	
									Daily	
									Weekly	
									Monthly	
									Cycle	
									Cancel	Apply

Item Description			
NameEnter the name of the schedule profile.			
Enabled Switch the toggle to enable or disable this schedule profil			

Date	Select the date when the entry comes into effect.
Start Time	Set the time when the schedule is triggered.
End Time	Set the time for the schedule to be ended.
Repeat	Once - The schedule is triggered once based on Date , Start Time and End Time .
	Daily - The schedule is triggered everyday based on Start Time and End Time .
	 End Repeat - If enabled, the schedule will be triggered every day till the date defined in the End Repeat Date.
	• End Repeat Date - The schedule will be ended on the specified date.
	Weekly - The schedule will be triggered, starting at the Start Time and ending at the End Time, on the selected days of the week.
	• Every - Select the day for triggering the schedule.
	 End Repeat - If enabled, the schedule will be triggered every week till the date defined in the End Repeat Date
	• End Repeat Date - The schedule will be ended on the specified date.
	Monthly - The schedule will be triggered monthly based on the Date setting. For example, choose 2022-04-27 as the date set. Later, this schedule will be triggered on the 27th of every month.
	 End Repeat - If enabled, the schedule will be triggered every month till the date defined in the End Repeat Date.
	• End Repeat Date - The schedule will be ended on the specified date.
	Cycle - Any action applied this schedule will be executed per several days.
	 Every (days) - Enter a number as cycle duration. Then, any action applied this schedule will be executed per several days. For example, "3" is set as cycle duration. That means, the action applied this schedule will be executed every three days since the date defined on the Start Date.
	 End Repeat - If enabled, the schedule will be triggered every month till the date defined in the End Repeat Date.
	• End Repeat Date - The schedule will be ended on the specified date.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

Configuration	n / Objects								
IP Object	IP Group	Schedule							🕚 Reset
Schedule									
+ Add							Search		Max: 20
Name	Enabled 🖕	Date	Start Time (Hr: Min.) $_{\oplus}$	End Time (Hr: Min.) \Leftrightarrow	Repeat 🖕	Used In 🖕	In Use 🖕	Option	
Game_on	Enabled	2022-04-27	15:12	17:00	Cycle		No	🖉 Edit	前 Delete

II-2-8 Certificates

A digital certificate is an electronic document issued by a certification authority (CA) to an entity to prove ownership of a public key. It contains identifying information including the issued-to party's name, a serial number, expiration dates etc., and the digital signature of the certificate-issuing authority so that a recipient can verify that the certificate is real. Vigor router supports digital certificates that conform to the X.509 standard.

In this section, you can generate and manage local digital certificates, and import trusted CA certificates. Be sure that the system time is correct on the router so that certificates will not be erroneously considered to be invalid because of an incorrect system time falling outside of the certificate's valid time period. The easiest way to accomplish this is by periodically synchronizing the system time to a Network Time Protocol (NTP) server.

II-2-8-1 Local Certificates

You can generate, import or view local certificates on this page.

Sear()	Q Configuration / Cer	tificates					
 Dashboard 	Local Certificates	-	ocal Services	Backup & Restore			
③ Operation Mode	+ Add						Max: 20
Configuration	Certificate Name	Status o	Source ::	CA Imported	Valid From	Valid Until	Option
Physical Interface WAN LAN Routing NAT IGMP Objects Certification	Default_Certificate	Expired	Internal .	~	1970/01/01 00:00:07	1971/01/31 00:60:67	۵ View (
G Monitoring	>						
88 Utility	>						
🗞 System Maintenance							

To check detailed information of the selected certificate, click **View**.

	tes					
ocal Certificates	rusted CA L	ocal Services	Backup & Restore			
ocal Certificates						×
+ Add					Certificate Name	Default_Certificate
Certificate Name 🖕	Status 👳	Source 🖕	CA Imported 👙	Valio	Version	V3
Default_Certificate	Expired	Internal	\checkmark	197	Status	Expired
					Source	Interna
					CA Imported	~
					Subject_Name	~
					Country (C)	ТИ
					State (ST)	Hsinchu
					Location (L)	Hsinchu
					Organization (O)	DrayTel
					Organization Unit (UO)	DrayTel
					Common Name (CN)	www.draytek.com
					Email (E)	
					lssuer	~
					Common Name (CN)	www.draytek.com
						Cancel Apply

To add a new local certificate profile, click the **+Add** link to get the following page.

Local Certificates Tr	usted CA Local Services Backup & Restore	
		×
Certificate Name		
Method	Generate CSR Import Certificate & Keys	
Кеу Туре	RSA-2048 Bit	
Algorithm	SHA-256	
Subject Alternative Nam	le	\sim
Туре	IP Address Domain Name Email	
IP Address		
Subject Name		\sim
Country (C)		
State (ST)		
Location (L)		
Organization (O)		
Organization Unit (OU)		
Common Name (CN)		

Available settings are explained as follows:

ltem	Description
Certificate Name	Enter the name that identifies the certificate.
Method	Generate CSR - Generate a new local certificate.
	Import Certificate & Keys - Vigor router allows you to generate a

	certificate request and submit it the CA server, then import it as "Loca Certificate". If you have already gotten a certificate from a third party, you may import it directly. The supported types are PKCS12 Certificate and Certificate with a private key.
	Method - Generate CSR
Кеу Туре	Displays the key type used by the certificate.
Algorithm	Displays the algorithm for generating the certificate.
Туре	 Select the type of Subject Alternative Name and enter its value. IP Address Domain Name Email
Country (C)	Enter the country name (code) in which your organization is located.
State (ST)	Enter the state or province where your organization is located.
Location (L)	Enter the city where you're your organization is located.
Organization (O)	Enter the legal name of your organization.
Organization Unit (OU)	Enter the department within your organization that you wish to be associated with this certificate.
Common Name (CN)	Enter the fully-qualified domain name / WAN IP that will be used to reach your server.
Email (E)	Enter the email address of the entry.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.
	Method - Import Certificate & Keys
File Type	Vigor router allows you to generate a certificate request and submit it the CA server, then import it as "Local Certificate". If you have already gotten a certificate from a third party, you may import it directly. The supported types are PKCS12 Certificate and Certificate with a private key. Certificate Only - Local certificate.
	 Upload Certificate - Click Choose a file to select a local certificate file.
	PKCS12 - Users can import the certificate whose extensions are usually .pfx or .p12. And these certificates usually need passwords.

usually .pfx or .p12. And these certificates usually need passwords. PKCS12 is a standard for storing private keys and certificates securely. It is used in (among other things) Netscape and Microsoft Internet Explorer with their import and export options.

- Upload PKCS12 File Click **Choose a file** to select a PKCS12 certificate file.
- Password Enter the password associated with the certificate and key files.

Certificate & Keys - It is useful when users have separated certificates and private keys. And the password is needed if the private key is encrypted.

- Upload File Click **Choose a file** to select a local certificate file.
- Upload Key Click **Choose a file** to select a key file.
 - Password Enter the password associated with the certificate

	and key files.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

After finishing this web page configuration, please click **Apply** to save the settings.

II-2-8-2 Trusted CA

The user can build RootCA certificates (up to three) if required.

Trusted CA certificate lists three sets of trusted CA certificate. In addition, you can build a RootCA certificate if required.

When the local client and remote client are required to make certificate authentication (e.g., IPsec X.509) for data passing through SSL tunnel and avoiding the attack of MITM, a trusted root certificate authority (Root CA) will be used to authenticate the digital certificates offered by both ends.

However, the procedure of applying digital certificate from a trusted root certificate authority is complicated and time-consuming. Therefore, Vigor router offers a mechanism which allows you to generate root CA to save time and provide convenience for general user. Later, such root CA generated by DrayTek server can perform the issuing of local certificate.

search	Configuration / Cer	rtificates					
	Local Certificates	Trusted CA	Local Services	Backup & Restore			
(?) Dashboard	Trusted Certificat	e Authorities					
Operation Mode	+ Add						Masc 20
	Certificate Name		Status	Common Name	Valid From	Valid Until ()	Option
Physical Interface	Root CA		Expired				2 Create
WAN							
LAN							
Routing							
IGMP							
Objects							
표 Monitoring	>						
X Utility	>						
🖏 System Maintenance	>						

To create a new RootCA, click **Create** to get the following page.

Configuration / Certi	ficates							
Local Certificates	Trusted CA	Local Services	Backup & Restore					
Trusted Certificate	Authorities							\times
+ Add				Кеу Туре			F	SA-2048 Bit
Certificate Name 👳		Status 🖕	Common Name 🕤	Algorithm				SHA-256
Root CA		Expired		Subject Alternative Na	ame			
				Туре				
					None	IP Address	Domain Name	Email
				IP Address				
				Subject Name				\sim
				Country (C)			TW	
				Common Name (CN)				
				State (ST)				
				Location (L)				
				Organization (O)				
				Organization Unit (OU)				
				Email (E)				
							Cancel	Apply

Available settings are explained as follows:

Item	Description							
Кеу Туре	Displays the key type (set to RSA).							
Algorithm	Displays the algorithm.							
Subject Alternative Name								
Туре	Select the type of Subject Alternative Name and enter its value.							
	Subject Name							
Country (C)	Enter the country name (code) in which your organization is located.							
Common Name (CN)	Enter the fully-qualified domain name / WAN IP that will be used to reach your server.							
State (ST)	Enter the state or province where your organization is located.							
Location (L)	Enter the city where you're your organization is located.							
Organization (O)	Enter the legal name of your organization.							
Organization Unit (OU)	Enter the department within your organization that you wish to be associated with this certificate.							
Email (E)	Enter the email address of the entry.							
Cancel	Discard current settings and return to the previous page.							
Apply	Click to submit generate request to the CA server.							

Configuration / Cert	ficates			
Local Certificates	Trusted CA	Local Services	Backup & Restore	
				×
Upload Certificate				
Cancel Apply				

To upload a certificate, click the **+Add** link to get the following page.

Available settings are explained as follows:

ltem	Description
Upload Certificate	Choose a file - Select a local certificate file.
Cancel	Discard current settings and return to the previous page.
Apply	Click to import selected certificate file to the router.

II-2-8-3 Local Services

This page allows you to set different categories and services for the local certificate(s) to prevent security warning messages popped up due to using different browsers.

Configuration / Certific	ates		
Local Certificates	Trusted CA Local Service	s Backup & Restore	C Refres
Local Services			
Categories	Services	Local Certificate	
Web Server	HTTPS	Default_Certifi ∨	
Web Server	TR069	Default_Certifi 🗸	

Available settings are explained as follows:

ltem	Description
Local Certificate	Select a local certificate (has been imported to Vigor device) with full key and authentication information.
	Certificate without key phrase or CSR (certificate signing request) file cannot be selected as local certificate.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings.

II-2-8-4 Backup & Restore

You can back up or restore the Local and Trusted CA certificates on the router to a file.

Search	Configuration / Certificates	
	Local Certificates Trusted	ICA Local Services Backup & Restore
 Dashboard 	Backup & Restore	
Operation Mode		
	Backup	
Physical Interface	Selected Item	Select All
WAN		Local Certificates
		Trusted Certificate Authorities
Routing	Password Protection	
NAT	Password	æ
IGMP	Confirm Password	Ø
Objects		Beckup
	Restore	
🔂 Monitoring >	Restore from Backup File	j Restore
😰 Utility >	File has Password Protection	
System Maintenance >	Password	۵

Available settings are explained as follows:

ltem	Description			
Backup				
Selected Item	Select the certification type (local, trusted or all certificate).			
Password Protection	 Enabled - Switch the toggle to enable or disable the function. Password - Enter the password with which you wish to encrypt the certificate. Confirm Password - Enter the password again. Backup - Click to download the certificate. 			
	Restore			
Restore from Backup fileClick to select the backup file you wish to restore.Restore - Click to retrieve the certificate.				
File has Password Protection	 Enabled - Switch the toggle to enable or disable the function. Password - Enter the password that was used to encrypt the certificates. 			

This page is left blank.

Chapter III Management



III-1 System Maintenance

For the system setup, there are several items that you have to know the way of configuration: Device Settings, Management, Firmware, Backup & Restore, Accounts and Reboot System, and Firmware Upgrade.

III-1-1 Device Settings

The user can modify the time, device name, and Syslog for the device.

III-1-1-1 Time

Open System Maintenance>>Device Settings and click the Time tab.

It allows you to specify where the time of Vigor device should be inquired from.

Search	System Maintenance / Device Settings	
	Time Device Name Syslog	③Reset C Refresh
 Dashboard 	Time and Date	
Operation Mode		
호 Configuration >	System Time	
🔂 Monitoring >	System Time 2021-01-09 05:07:04	
BS utility >	Time Setting	
System Multidearane Couver Setting: Management. Firmware Backup & Restore Account System Reboot Registration & Services	Set Time Automatcally with Time Server Manually Time Zone (UTC) GreenwL., ~ Time Server boolingLorg Interface Auto ~ Daylight Saving Update Time Connection Status More settings ~	

Available parameters are explained as follows:

Item	Description			
System Time				
Current System Time Display current time.				
	Time Setting			
Set Time	 Determine the method (automatically or manually) to set the time. Automatically with Time Server - Set the system time by retrieving time information from the specified network time server using the Network Time Protocol (NTP). Manually - Set the system time using the time reported by the web browser. 			
When Automatically with Time Server isTime Zone - Select the time zone where the router is located.				

selected as Set Time	Time S	Serve	r - En	ter th	e weł	o site	of the	e prim	ary time server.
	Interface - Renew the time through the selected WAN/LAN interface. If Auto is selected, the Vigor system will renew the time through WAN or LAN.								
		Daylight Saving - Enable Daylight Saving Time (DST) if it is applicable to your location.							
	-			orce t	o ren	ew cu	rrent	times	setting.
									-
	Connection Status - Displays last update time status.More Settings - Click to open advanced settings for the time server.								
			•						e interval (30min or e system time periodically
			-				-		ip time server, please Secondary Server.
	۲ م	 enter the URL/IP address in the field of Secondary Server. Secondary Interface - Renew the time through the selected WAN/LAN interface. If Auto is selected, the Vigor system will renew the time through WAN or LAN. This is an optional setting and is used as the interface for the backup time server. If the primary time server fails to renew the time setting, the Vigor system will use the secondary time server instead. 							
	e		ed. En	iter a	custo				when Daylight Saving is nable the DST - Default,
When Manually is selected as Set Time									router is located. y correct date.
Selected dy Set Time									, ,
	2	2021-04	1-26						
			1-26 1 APR	•		Ē	<	>	
				▼ ⊤	W	T	< F	> S	~
		202	1 APR		W		Ť	Ŧ	
		202 [,] S	1 APR		₩	т	F	S	
		202' S APR	M	Т		T 1	F 2	S 3	
		202' s APR 4	1 APR	т 6	7	T 1 8	F 2 9	s 3 10	
		202' S APR 4 11	1 APR M 5 12	⊤ 6 13	7 14	⊤ 1 8 15	F 2 9 16	s 3 10 17	
	Time -	202 S APR 4 11 18 25 - Set tl	1 APR M 5 12 19 26 he tim e wit	T 6 13 20 27 ne by h Bro	7 14 21 28 speci	⊤ 1 15 22 29 fying	F 2 9 16 23 30	s 3 10 17 24 ;, minu	utes, and seconds. to sync the time setting
Apply	Time - Synch with th	202 S APR 4 11 18 25 - Set th roniz	1 APR M 5 12 19 26 he tin e wit	T 6 13 20 27 ne by h Bro .	7 14 21 28 speci	⊤ 1 8 15 22 29 fying - Click	F 2 9 16 23 30 hours	s 3 10 17 24 5, minu	

After finishing this web page configuration, please click **Apply** to renew the system time.

III-1-1-2 Device Name

Display the router name. Change the name if you want.

Open System Maintenance>>Device Settings and click the Device Name tab.

same Q	System Maintenance / Device Settings Time Device Name Syslog	3 Reset
 Dashboard 	Device Name	
Operation Mode	Device Name DrayTek	
🖼 Monitoring >		
路 Utility >		
🔩 System Maintenance 🖉 👳		
Management		
Firmware		
Backup & Restore Account		
System Reboot		
Registration & Services		

III-1-1-3 Syslog

SysLog function is provided for users to monitor the router.

Open System Maintenance>>Device Settings and click the Syslog tab.

Search	System Maintenance / Devi	ce Settings		
111111 (11 11 11 11 11 11 11 11 11 11 1	Time Device Name	Syslog		() Reset
 Dashboard 	Syslog Settings			
Operation Mode	Logging Destinations	External Server		
章 Configuration >	Log Message	User Access Log		
🔂 Monitoring >	and a second a	All Interface Log		
BS Utility >		WAN Log		
🔩 System Maintenance 🔍		🗹 LAN Log		
George Settings		System Log		
Management	More settings 😒			
Firmware	Syslog Servers			
Backup & Restore	Systop Servers			
Account	+Add			
System Reboot	Server IP	Port	Option	
Registration & Services	192.168.1.10	514	1 Delete	
	Apply			

Available parameters are explained as follows:

ltem	Description
	Syslog Settings

Logging Destinations	Select External Server to display Log Message and Syslog Servers for			
	detailed configuration.			
Log Message	Select to send the corresponding message of user access, interfa and system information to Syslog.			
	Syslog Servers			
+Add	Click to display new entry boxes for creating a new Syslog server profile.			
	The maximum number of Syslog servers to be added is "3".			
Server IP	Enter the IP address of the Syslog Server.			
Port	Enter the port number of the Syslog Server.			
Option	Delete - Click it to remove the selected server profile.			
Apply	Save the current settings and exit the page.			
Cancel	Discard current settings and return to the previous page.			

After finishing this web page configuration, please click **Apply** to save the settings.

III-1-2 Management

III-1-2-1 Service Control

This page allows you to manage the general settings, management services, and TLS/SSL Encryption setup.

	Service Con	trol TR-069					🛈 Res
Dashboard	General						
Operation Mode	Auto Logout		12m				
Configuration >	Auto Logout		off	~			
Monitoring >	Manageme	nt Services					
	Enforce HTT	PS Access					
Utility >	Allow PING fr	rom LAN					
System Maintenance 👘 🗸 🗸	Allow PING f	om internet					
Device Settings		Port		(default)	LAN Access	IPv4 WAN Access	
Managemiene	HTTP	80		(80)	۵		
Firmware							
Backup & Restore	HTTPS	443		(443)			
Account	SSH	22		(22)			
System Reboot	Teinet	23		(23)			
Registration & Services							
	TLS/SSL En	ryption					\sim
	TLS 1.3						
	TLS 1.2		-				

Available settings are explained as follows:

Item Description						
	General					
Auto Logout	If "off" is selected, the function of auto-logout for the web user interface will be disabled. The web user interface will be open until you click the Logout icon					

m	nanually.
	off \checkmark
	off
	1 min
	3 min
or	rt 5 min
0	10 min ^{.80}
	Management Services

	Management Services
Enforce HTTPS Access	Enable the checkbox to allow system administrators to login Vigor router via HTTPS.
Allow PING from LAN	Allow all PING packets from LAN.
Allow PING from Internet	Allow all PING packets from the Internet. For increased security, this setting is disabled by default.
Port	Specify user-defined port numbers for the HTTP, HTTPS,SSH and Telnet servers.
LAN Access	Select the checkbox to allow system administrators to login from LAN interface.
IPv4 WAN Access	Select the checkbox to allow system administrators to login from IPv4 WAN interface.
	TLS/SSL Encryption
TLS 1.3/TLS 1.2/	Switch the toggle to enable or disable the function.
TLS 1.1/TLS 1.0/SSL 3.0	Enable SSL 3.0 and / or TLS 1.3/1.2/1.1/1.0 – Check the box to enable the function of SSL 3.0 and/or TLS 1.3/1.2/1.1/1.0 if required.
	Due to security consideration, the router's built-in HTTPS and SSL VPN server had upgraded to TLS1.x protocol. If you are using an old browser(eg. IE6.0) or an old SmartVPN Client, you may still need to enable SSL 3.0 to make sure you can connect, however, it's not recommended.



Switch these two icons by click the mouse cursor on them.

🔾 - means "Enable".

🕖 - means "Disable".

III-1-2-2 TR-069

Vigor device supports the TR-069 standard for remote management of customer-premises equipment (CPE) through an Auto Configuration Server, such as VigorACS.

Sairch	System Maintenance / Management	
	Service Control TR-069	③ Reset C Refresh
 Dashboard 	ACS and CPE Settings	
③ Operation Mode		
	TR-009	
	ACS Server	
🔂 Monitoring >	ACS Server On None V	
BS Utility >	URL http:// Wizard	
🗞 hyter Matterana 🕓 😞	Username	
Device Settings	Password @	
Management	Event Code PERIODIC Y	
Firmware	Test With inform	
Backup & Restore	Last Inform Response Time	
Account	More settings 🗸	
System Reboot		
Registration & Services		
	Apply Cancel	

Available settings are explained as follows:

Item	Description
TR-069	Switch the toggle to enable or disable the function.
	ACS Server
ACS Server On	Choose the interface for connecting the router to the Auto Configuration Server.
URL	Enter the URL for connecting to the ACS.
	Wizard - Click it to enter the IP address of VigorACS server, port number and the handler.
Username/Password	Enter the credentials required to connect to the ACS server.
Event Code	Use the drop down menu to specify an event to perform the test.
	Test With Inform - Click it to send a message based on the event code selection to test if such CPE is able to communicate with VigorACS server.
Last Inform Response Time	Display the time that VigorACS server made a response while receiving Inform message from CPE last time.
	More settings
CPE Client	This section specifies the settings of the CPE Client.
	Protocol - Select Https if the connection is encrypted; otherwise select Http.
	Port - In the event of port conflicts, change the port number of the CPE.
	Username / Password - Enter the username and password that the VigorACS will use to connect to the CPE.
Periodic Inform	Enable / Disable - Switch the toggle to enable or disable the function.

Settings	The default setting is Enable, which means the CPE Client will periodically connect to the ACS Server to update its connection parameters at intervals specified in the Interval Time field.
	Time Interval - Set interval time or schedule time for the router to send notification to CPE.
STUN Settings	Enable / Disable - Switch the toggle to enable or disable the function. The default is Disable. If select Enable, please enter the relational settings listed below:
	Server Address - Enter the IP address of the STUN server.
	Server STUN Port - Enter the port number of the STUN server.
	Minimum Keep Alive Period - If STUN is enabled, the CPE must send binding request to the server for the purpose of maintaining the binding in the Gateway. Please type a number as the minimum period. The default setting is "60 seconds".
	Maximum Keep Alive Period - If STUN is enabled, the CPE must send binding request to the server for the purpose of maintaining the binding in the Gateway. Please type a number as the maximum period. A value of "-1" indicates that no maximum period is specified.
Apply	Save the current settings and exit the page.
Cancel	Discard current settings and return to the previous page.

III-1-3 Firmware

Before firmware upgrade, please **download** the newest firmware from the DrayTeks website or FTP site **first**. The DrayTek website is www.draytek.com (or local DrayTeks website) and the FTP site is ftp.draytek.com.

Open **System Maintenance>>Firmware**. The following web page will guide you to upgrade firmware by using an example. Note that this example is running over Windows OS (Operating System).

arm. Q	2	System Maintenance / Firmwa	re		
	1	Firmware			
Dashboard		Firmware for upload		t i	Upload
Operation Mode					
Configuration	>				
Monitoring	>				
Utility	>				
	4				
Device Settings					
Management					
Backup & Restore					
System Reboot					
Registration & Services					
	Dashboard Operation Mode Configuration Monitoring Utility Device Settings Management Temperg Backup & Restore Account System Reboot	Dashboard Operation Mode Configuration >> Monitoring >> Utility >> System Maintentence >> Device Settings Management Jernwarg Backup & Restore Account System Reboot	Configuration C	Dashboard Firmware for upload Operation Mode Fermware for upload Configuration > Monitoring > Utility > System Maintenance > Device Settings > Management > Temmerg > Backup & Restore > Account >	Annu A Dashboard Firmware Operation Mode Image: Im

Then click **Upload** and wait for a few seconds.

System Maintenance / Firm	are	
Firmware		
Firmware for upload	v167_50.rst 🕕 Upload	
_	File un legalize	
	File uploading	
	100% Complete File upload is in progress It must NOT be interrupted!	

When the upload is finished, please click the **Restart** button.

-		×
	Congratulations	
	File Uploaded	
	Please restart to apply changes.	
	Restart	

Wait for a while until the system finishes the rebooting.

	Rebooting
Web page will be r	edirected in few secondsWeb page will be redirected in few seconds
	4 ⁵ SECONDS
	Or Access Now \rightarrow

III-1-4 Backup and Restore

This function can be used to backup/restore the Vigor167 settings.

	۹	System Maintenance / Backup &	Restore		
		Download Configuration Back	чр		
 Dashboard 					
Operation Mode		Download Configuration Back	qu		
🚆 Configuration	>	Plassword Protection			
	>	Password		Φ	
		Download	Download		
88 Utility	>	Restore from a Configuration I	Backup		
	8	Restore from Backup File		Ţ	Restore
Device Settings		Restore except the login password			
Management		File has Password Protection			
Firmware		Restore Password		Φ	
Account System Reboot					
Registration & Services					
Regoriation & Services					

Available settings are explained as follows:

Item Description						
	Download Configuration Backup					
Password Protection	For the sake of security, the configuration file for the access point can be encrypted. Switch the toggle to enable or disable the function.					
Password	Enter several characters as the password for encrypting the configuration file.					
Download	Click it to backup the configuration file.					
	Restore from a Configuration Backup					
Restore from Backup File	- Click to locate the file for restoring. Restore - Click to execute the restoration.					
Restore except the login password	Switch the toggle to enable or disable the function.					
File has Password Protection	Switch the toggle to enable or disable the function. If enabled, a password will be required for restoring the configuration.					
Restore Password	Enter a password for configuration restoration.					

(i) Note:

Switch these two icons by click the mouse cursor on them.

💽 - means "Enable".

🕖 - means "Disable".

III-1-5 Accounts

	Local Admin Ac	count			C Refres
Dashboard					
Operation Mode	Account	Role	Last Login at	Last Login IP	Max: 1 Option
Configuration	admin	Administrator	2021-01-08 23:56:32	192.168.1.10	@ Edit
Monitoring ;					
Utility					
Device Settings					
Management					
Firmware					
Backup & Restore					
System Reboot					
Registration & Services					

This page allows you to modify current administration account and password.

To change the administration account, click the **+Edit** link to get the following page.

Search	۹	System Maintena	ince / Account			
		Local Admin Acc	ount			C Refresh
 Dashboard 						×
Operation Mode	(Account	Role	Last Login at	Account	admin
n Configuration	>	admin	Administrator	2021-01-08 23:56:32	Current Password	 0
E Monitoring	>				New Password	 0
						 Medium
B Utility	>				Confirm New Password	 Φ
System Mantena	ike ×				Role	Administrator 😪
Device Settings						Administrator
Management						
Firmware						
Backup & Restore						
System Reboot						
Registration & Sen	vices					
						Cancel Apply

Available settings are explained as follows:

ltem	Description							
Local Admin Account								
Account	Display the name of the account.							
Current Password	Enter the current password in this field.							
New Password	Enter a new password in this field. The length of the password is limited to 31 characters.							

Confirm New Password	Enter the new password again.
Role	Specify the role of the account. At present, only Administrator is available for selection.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

Click **Apply** to save the settings.

III-1-6 System Reboot

The Web user interface may be used to restart your router. Open **System Maintenance >> System Reboot** to get the following page.

	۹	System Maintenance / System Reboot
		System Reboot
 Dashboard 		Reboot With Current Configuration Factory Default
Operation Mode		Reboot
🖽 Monitoring		
88 Utility		
🗞 System Maintenance		
Device Settings		
Management		
Firmware		
Backup & Restore		
Account		
Syntem Briddon		
Registration & Services		

Available settings are explained as follows:

ltem	Description
Reboot With	Select one of the following options, and press the Reboot button to reboot the router.
	Current Configuration – Select this option to reboot the router using the current configuration.
	Factory Default – Select this option to reset the router's configuration to the factory defaults before rebooting.

III-1-7 Registration & Services

Register your Vigor router to MyVigor website for getting more services.

III-1-7-1 Registration & Services

1. Open System Maintenance >> Registration & Service.

Dray Te	k Vigo	r167		System Time : 2022-05-16	DrayTek 6 15:38:32 admin 🗸
Operation Mode		System Maintenance / Regist	ration & Services		
🔹 Configuration))	Registration & Services	Service Status		CRefresh
🔂 Monitoring		Registration & Services			
88 Utility					
	÷.	Status	Username	Serial Number	Option
Device Settings		Not Registered			Ø Register
Management					
Firmware					
Backup & Restore					
Account & Permission	12				
System Reboot					
	в				



Before registration, make sure the Vigor router has been set to access the Internet. Then, the link to **Register** will be shown under Option. If not, the link to **Login** will appear instead.

2. Click Register.

3. A **Login** page will be shown on the screen. Please enter the account and password that you created previously. And click **Login**.

The MyVigor website d	loes not record any personal identifiable info	ormation with the exception of your IP Address which is recorded after login for security purposes.
		ENGLISH
	Dray Tek ^{MyVigor}	Usename carrieni Password Login Create Account / Get Help
	Copyright@DrayTek Corp	Terms of Service / Privacy Policy

If you haven't an accessing account, please refer to section **Create Account** for MyVigor to create your own one. Please read the articles on the Agreement regarding user rights carefully while creating a user account.

4. The following page will be displayed after you logging in MyVigor. Type a nickname for the router, then click **Submit**.

Produ	ct register (Add Device)
Device Name	Vigor167
Model	Vigor167
MAC	001DAA9A7D90
Serial Number	2021120616120001
	Cancel Submit

5. When the following page appears, your router has been registered to *myvigor* website successfully. However, the DrayDDNS service has not been activated yet.

	Dray Tek MyVIgor	
My Product > Vigor16	67 > Service Status	i
	DrayDDNS	
	License Status	
	License Action Activate License Force Sync	
	\sim	
	License History	

6. Clicking **MY PRODUCT** for viewing the general information of the registered router on MyVigor website.

Dray Tek MyViger	MY PROD	ICT HEGH AV	ALABILITY SE	ETTING CUSTOMER	SURVEY	AGENT 💛							draytekfa
ly Product													
		Found 333 device	1.3								AL.		
how 10 - entries									1	1 3	4 5 .	24	нн
Device Name		Model		Register Date		MAC	Serial Number	4		j.	iervice Status		1.
Viger167		Nigor167		2022-05-16		001DAA8A7D90	2021120616120001		e	DT-CONI	• 305Dex		2
										beys.			
RDD-Immy				2022-05-11		00104408FE40	2020130216300001			Cynen o derti			5

7. Return to the **System Maintenance >> Registration & Service** page. Click the **Login** link under the Option to load the registration information.

Search	Q.	System Maintenance / Reg	istration & Services			
		Registration & Services	Service Status			CRefresh
(?) Dashboard		Registration & Services				
Operation Mode						
Configuration	>	Status		Usemame	Serial Number	Option
Monitoring	>	Not Logged in				Ø Logn
88 Utility	>					
🔦 System Maintenance	×					
Device Settings						
Management						
Firmware						
Backup & Restore						
Account						
System Reboot						
Registration & Services						

8. Now the registered information of Vigor167 has been shown on this page.

۲	Operation Mode	System Maintenance / Regi	stration & Services		
17	Configuration >	Registration & Services	Service Status		C Refresh
8	Monitoring >	Registration & Services			
88	Utility >				
2		Status	Username	Serial Number	Option
	Device Settings	Registered	draytekfae	2021120616120001	@ Logout
	Management				
	Firmware				
	Backup & Restore				
	Account & Permission				
	System Reboot				
-					

III-1-7-2 Services Status

This page displays the current status (including the license name, the start date, and the expiration date) for the license service.

After registering the Vigor router, the type of license (at present, only DrayDDNS) available for this router will be shown on this page.

۲	Operation Mode	System Maintenance / F	tegistration & Services			
\$	Configuration >	Registration & Services	Service Status		C	Refresh
≌	Monitoring >	Service Status				
88	Utility	+Manage Licenses & S	ervices		Last Update Time: 2022-05-16	14:38:18
2		License	Status	Start Date	Expire Date	
	Device Settings	DrayDDNS	Inactive			
	Management					
	Firmware					
	Backup & Restore					
	Account & Permission					
	System Reboot					

To activate the DrayDDNS service:

1. Open **Configuration>>WAN>>Dynamic DNS** to create a DrayDDNS server profile. For example, the name is defined as *mkvigor167* in this case.

Configuration / WAN		
WAN Connections Virtual WA	N Dynamic DNS	🕄 Reset 🔿 Refresh
		×
Name	mkvigor167	
Enabled		
Service Provider	DrayDDNS \vee	
Service Status		
	Activate To use DrayDDNS, activate license and set up domain name on MyVigor. Use Activate button to link to MyVigor page.	
Expire Date		
Domain Name	.drayddns.com	
	Refresh this page to update domain name.	
Let's Encrypt Certificate		
Status		
	Let's Encrypt Certificate is valid for 90 days and it will be auto renewed before expire date.	
More settings \checkmark		
Cancel Apply		

2. Open the page of **System Maintenance>>Registration & Services>>Service Status**.

System Maintenance / Re	egistration & Services		
Registration & Services	Service Status		C Refresh
Service Status			
+Manage Licenses & Se	rvices		Last Update Time: 2022-05-16 14:38:18
License	Status	Start Date	Expire Date
DrayDDNS	Inactive		

- 3. Click +Manage Licenses & Services to access MyVigor website.
- 4. Enter the account and password that you created previously. And click **Login**.
- 5. Open the **Service Status** page and click **Activate License**.

	Dray Tek MyVigor	
My Product > Vigor	r167 🏷 Service Status	j.
	DrayDDNS	
	License Status 🛛 🐵	
	License Action Activate License Force Sync	
	\sim	
	License History	

6. After the license has been activated, the following page will be shown on your screen.

	Dray		
Service Statu	5		
License	Start Date	Expire Date	
DrayDDNS	2022-05-16	2023-05-16	
	Log	gin	

7. Click Login. Later, enter the DDNS domain name for DrayDDNS service.

	Dray Te	₽ <mark>₭</mark> MyVigor		
Lice	se Period 2023-05-16			•
Lice	se Action Renew Licen:			i
000		days before the license e	xpires. ayddns.com 🥑 🛞	
	Current IP	uic	yuuns.com	
	\sim			
	License H	istory		

8. Return to the **System Maintenance >> Registration & Service >>Service Status** page. The activated license with start/expire date information will be shown on the screen.

Search	۹	System Maintenance / Regi	stration & Services		
		Registration & Services	Service Status		C Refresh
🝘 Dashboard		Service Status			
Operation Mode		+ Manage Licenses & Servi	ces		Last Update Time: 2022-05-16 14:41:03
E Configuration	>	License	Status	Start Date	Expire Date
Monitoring	>	DrayDDNS	 Active 	2022-05-16	2023-05-16
🗴 Utility	>				
Device Settings					
Management					
Firmware					
Backup & Restore					
Account & Permission					

(i) Note:

If there is no license information, please go to **System Maintenance>>Registration & Services>>Registration & Service** and click **Login (**III-1-7-1 , step 7) to load the license information from MyVigor website.

Chapter IV Others



IV-1 Monitoring

IV-1-1 DSL Status

IV-1-1-1 DSL Information

The DSL information (packets) of this router can be broadcasted periodically. The information can be received by the routers under LAN.

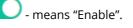
	Monitoring / DSL Status		
	DSL Information Tone In	formation	C Refres
🕉 Dashboard	DSL Information		
Operation Mode			
E Configuration	ATU-R Information		
	Broadcast DSL Status to LAN	Note: Broadcast the DSL Status to another router which is connected LAN ports.	
	Status	Idle	
Route Table	Mode	DSL	
DHCP Table	Profile		
ARP Table	Annex		
DNS Cache Table	OSL Version	5.12.24.0_A_A60901	
Session Table	Power Management Mode		
Web Syslog	Vendor ID	fe004452 41590000	
8 utility ;	ATU-C Information		
System Maintenance	Vendor ID	Card Card	
	Line Statistics		
	Downstream	Upstream	

Available settings are explained as follows:

ltem	Description
Broadcast DSL Status to LAN	Switch the toggle to enable or disable the function.

(i) Note:

Switch these two icons by click the mouse cursor on them.



- means "Disable".

IV-1-1-2 Tone Information

This web page displays the DSL line quality and bin usage.

Search_	٩	Monitoring / DSL Status		
		DSL information Tone information		CRefresh
(?) Dashboard		Tone Information		
Operation Mode			Upstream Downstream	
n Configuration	>	10 7		
🖽 Monitoring	~	0.9 -		
and damas		0.0-		
Route Table				
DHCP Table		0.7-		
ARP Table		0.0 -		
DNS Cache Table				
Session Table				
Web Syslog		0.4 -		
BS Utility	>	0.3		
🖏 System Maintenance	>			
		02+		
		0.1-		
		-00		
			BIN	

Click **Refresh** to reload this page with the most up-to-date information.



The above figure shows the bandwidth shared between Upstream (Red) and Downstream (Blue).

IV-1-2 Route Table

sero.	٩	Monitoring / Route T	able			
	258	IPv4 Route Table	C Refresh			
(?) Dashboard						Search
Operation Mode		Interface	Destination	Mask g	Gateway	Flags (
	>	[LAN] LAN1	192.168.1.0	255-255-255.0	Directly Connected	U
🖽 Mantoring						
DSL Status						
Heatin Anton						
DHCP Table						
ARP Table						
DNS Cache Table						
Session Table						
Web Syslog						
88 Utility						
🖏 System Maintenance	>					

Click **Refresh** to reload this page with the most up-to-date information.

IV-1-3 DHCP Table

This page provides information on IP address assignments. This information is helpful in diagnosing network problems, such as IP address conflicts, etc.

Click **Refresh** to reload this page with the most up-to-date information.

IV-1-3-1 IPv4 DHCP Subnet

Search-	۹	Monitoring / DHCP Ta	ble					
		IPv4 DHCP Subnet	IPv4 DHCP Lease					C Refres
ව Dashboard		IPv4 DHCP Subnet						
Operation Mode								
E Configuration	3	Name (DHCP Server Status	IP Range	IP Pool	Used IP	Utilization ()	
	4	[LAN] LAN1	Disabled					0%
DSL Status								
Route Table								
ARP Table								
DNS Cache Table								
Session Table								
Web Syslog								
} Utility	>							
System Maintenance	>							

IV-1-3-2 IPv4 DHCP Lease

Dashboard	IPv4 DHCP L	ease					
Operation Mode	Subnet	IP Address	MAC Address	Host Name	Comment		Leased Time
Configuration		IP Address	MAC Address	Host Name	Comment	Type	Leased time
	93						
DSL Status							
Route Table							
ARP Table							
DNS Cache Table							
Session Table							
Web Syslog							
	>						
System Maintenance	>						

IV-1-4 ARP Table

The table shows the contents of the ARP (Address Resolution Protocol) cache held in the router and shows the mappings between Ethernet hardware addresses (MAC Addresses) and IP addresses.

IV-1-4-1 LAN

Click **Refresh** to reload this page with the most up-to-date information.

seven	Monitoring / ARP	Table			CRefres
න Dashboard	LAN WAN	IP Table			C Refres
Operation Mode	ⓒ Clear All				Search
Configuration >	Interface	IP Address	MAC Address	Comment a	Port :
	LAN1	192.168.1.10	60:A4:4C:E6:5A:4F		P2
DSI, Status	LANI	192.168.1.1	14:49:8C:02:36:50		P2
Route Table DHCP Table					
ART TURE					
DNS Cache Table					
Session Table					
Web Syslog					
Utility >					
System Maintenance >					

IV-1-4-2 WAN

SearchQ	Monitoring / ARP Table	•		C Refrest
 Dashboard 	WAN Ethernet ARP Ta	able		
Operation Mode	Clear All			Search
		IP Address	MAC Address	Comment
DSL Status				
Route Table				
DHCP Table				
DNS Cache Table				
Session Table				
Web Syslog				
g Utility >				
System Maintenance >				

Click **Refresh** to reload this page with the most up-to-date information.

IV-1-5 DNS Cache Table

The router can function as a DNS server which allows LAN clients to look up DNS information by sending DNS requests to the router. Such DNS information is temporarily cached on the router and can be viewed on this page. Click **Refresh** to reload this page with the most up-to-date information.

	Monitoring / DNS Cache Table			
	IPv4 DNS Cache Table			C Refresh
Dashboard	1 Clear All			Search
③ Operation Mode	Domain Name	IP Address	TTL (sec.)	
a Configuration				
DSL Status				
Route Table				
DHCP Table				
ARP Table				
Session Table Web Syslog				
BS Utility >				
System Maintenance				
System mantenance ;				

IV-1-6 Session Table

This screen shows the 200 newest entries in the NAT sessions table. Click **Refresh** to reload this page with the most up-to-date information.

Search	Monitoring / 1	Session Table							
	NAT Session								C Refresh
ල Dashboard							Search		Max: 200
Operation Mode	Interface -	Source IP	Source Port	Pseudo Port	Destination IP	Destination Port	Protocol :	State c	TTL
Configuration >					No Records Found				
DSL Status									
Route Table									
DHCP Table									
ARP Table									
DNS Cache Table									
Web Syslog									
3 Utility >									
System Maintenance >									

IV-1-7 Web Syslog

Log related to setting configuration and/or actions performed by this device can be stored on web Syslog.

Seron.	۹	Monitoring / Web Syslog						
		Web Syslog					(C Refresh
 Dashboard 		Enabled Web Syslog						
Operation Mode		Loop Logging Option		when Full				
	>							
🔁 Monitoring	~	Le Export ClearAll	Filter: All	туре 🗸	Search	Max: 200		
DSL Status		Time	Type :	Conter	nt.			
Route Table								
DHCP Table								
ARP Table								
DNS Cache Table Session Table								
www.spices								
88 Utility	>							
🔦 System Maintenance	>							
		Cancel Apply						
		CALIFY TO A PARTY OF A						

Available settings are explained as follows:

Item	Description
Enabled Web Syslog	Switch the toggle to enable or disable the function.
Loop Logging Option	Override Oldest Logs - Vigor router system will backup all existed information on the USB disk onto the host and clean up the information from USB disk. Later, it will start a new record.
	Stop when Full - Vigor router system will stop to record the user information onto USB disk.

Export	Click it to export the configuration as a file (.json).
Clear All	Click it to clear all settings on this page and return to the factory settings.
Filter	Select the type of log to display on this page.
Cancel	Discard current settings and return to the previous page.
Apply	Save the current settings and exit the page.

Click **Apply** to save the settings.

IV-2 Utility

IV-2-1 Ping Tool

The user can perform the ping job for specified IP (host) to diagnose if the data transmission via the Vigor system is well or not.

Pashbaard Image: Decration Mode Image: Configuration Image: Configuration Image: Decration Mode Image: Configuration Image: Configuration Image: Decration Mode Image: Decration Mode <	Search-	۹	Utility / Ping Tool	
Ping from Auto Image: Configuration Ping to Host/IP Address Image: Configuration Packet Size (byte) Image: Monitoring Ping Count Image: Face Image: Face			Ping Tool	
Operation Mode Ping to Host/IP Address Image: Configuration Packet Size (byte) Plag Count 4 Ping Count 4 Ping Interval (sec.) 1 Image: Text Clear	 Dashboard 		Ping from	Auto 🗸 🗸
Image: Monitoring Ping Count 4 Ping Interval (sec.) 1 Ping Tabl Clear	Operation Mode		Ping to Host/IP Address	
Monitoring Ping Interval (sec.) 1 Ping Table	Configuration	>	Packet Size (byte)	64 🗸
Clear Run Ing Tool		>		4 ~
Hing Tool	PR Unity		Ping Interval (sec.)	
PS NUMPERADO TRANSPORT				Clear Run
	and a second second second	100		
	🍕 System Maintenance	>		

Available settings are explained as follows:

Item	Description
Ping from	Select an interface (LAN or WAN) from drop down list to through which you want to perform the ping operation, or choose Auto to be let the router select the WAN interface.
Ping to Host/IP Address	Enter the IP address of the Host/IP that you want to ping.
Packet Size (byte)	Determine the packet size for the ping job.
Ping Count	Determine the quantity of the packet being pinged.
Ping Interval (sec.)	Set a time interval (unit:second) for the system to ping the IP address specified above.
Clear	Remove the settings and return to the factory settings.
Run	Perform the ping job.

This page is left blank.

Chapter V Troubleshooting



V-1 Checking the Hardware Status

Follow the steps below to verify the hardware status.

- 1. Check the power line and cable connections. Refer to "**I-2 Hardware Installation**" for details.
- 2. Power on the modem. Make sure the **POWER** LED, **ACT** LED and **LAN** LED are bright.
- 3. If not, it means that there is something wrong with the hardware status. Simply back to **"I-2 Hardware Installation"** to execute the hardware installation again. And then, try again.

V-2 Checking the Network Connection Settings

Sometimes the link failure occurs due to the wrong network connection settings. After trying the above section, if the link is stilled failed, please do the steps listed below to make sure the network connection settings is OK.

V-2-1 For Windows

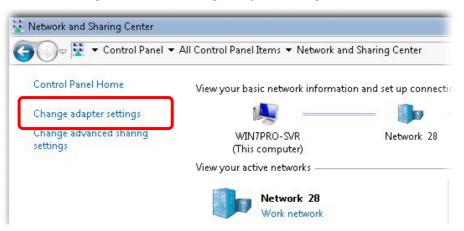
(Note:

The example is based on Windows 7 (Professional Edition). As to the examples for other operation systems, please refer to the similar steps or find support notes in **www.draytek.com**.

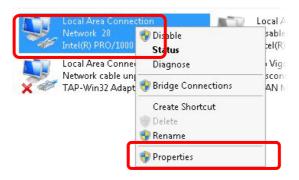
1. Open All Programs>>Getting Started>>Control Panel. Click Network and Sharing Center.



2. In the following window, click **Change adapter settings**.



3. Icons of the network connection will be shown on the window. Right-click on **Local Area Connection** and click on **Properties**.



4. Select Internet Protocol Version 4 (TCP/IP) and then click Properties.

Connect using:	000 MT Network Conne	ection
		Configure
This connection uses	the following items:	
Client for Mic		
 ✓ ➡ Privacyware ✓ ➡ QoS Packet 		
	er Sharing for Microsoft	Networks
	scol Version C (TCP/IP	8
	col Version 4 (TCP/IP)	40

5. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Finally, click **OK**.

neral Alternate Configuration					
ou can get IP settings assigned a his capability. Otherwise, you ne or the appropriate IP settings.					
Obtain an IP address autom	atically	ר			
-C. Use the following IR address					
IP address:		1.1			
Subnet mask:					
Default gateway:					
Obtain DNS server address a	automati	cally	٦		
C Use the following DNS some	- oddroe		J		
Preferred DNS server:					
Alternate DNS server:		33	1		
🔲 Validate settings upon exit				٨d	anced

V-2-2 For Mac Os

- 1. Double click on the current used Mac Os on the desktop.
- 2. Open the **Application** folder and get into **Network**.
- 3. On the **Network** screen, select **Using DHCP** from the drop-down list of Configure IPv4.

€ € ○	Network	\bigcirc
Show All Displays Sou	and Network Startup Disk	
L	ocation: Automatic	
ТСР	/IP PPPoE AppleTalk Proxies Ethernet	
Configure IPv4:	Using DHCP	
IP Address:	192.168.1.10 (Renew DHCP Lease	
Subnet Mask:	(If required)	
Router:	192.168.1.2	
DNS Servers:	(Optio	onal)
Search Domains:	(Optic	onal)
IPv6 Address:	fe80:0000:0000:0000:020a:95ff:fe8d:72e4	
	Configure IPv6	?
Click the lock to p	revent further changes. Assist me Apply N	low

V-3 Pinging the Device

The default gateway IP address of the modem is 192.168.1.1. For some reason, you might need to use "ping" command to check the link status of the modem. **The most important thing is that the computer will receive a reply from 192.168.1.1.** If not, please check the IP address of your computer. We suggest you setting the network connection as **get IP automatically**. (Please refer to the section V-2)

Please follow the steps below to ping the modem correctly.

V-3-1 For Windows

- 1. Open the **Command** Prompt window (from **Start menu> Run**).
- 2. Type **cmd**. The DOS command dialog will appear.

🖼 Command Prompt	- 🗆 🗙
1icrosoft Windows XP [Version 5.1.2600] (C) Copyright 1985–2001 Microsoft Corp.	_
D:\Documents and Settings\fae>ping 192.168.1.1	
Pinging 192.168.1.1 with 32 bytes of data:	
Reply from 192.168.1.1: bytes=32 time<1ms ITL=255 Reply from 192.168.1.1: bytes=32 time<1ms ITL=255 Reply from 192.168.1.1: bytes=32 time<1ms ITL=255 Reply from 192.168.1.1: bytes=32 time<1ms ITL=255	
Ping statistics for 192.168.1.1: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Mininum = Oms, Maximum = Oms, Average = Oms	
D:\Documents and Settings\fae>_	

- 3. Type ping 192.168.1.1 and press [Enter]. If the link is OK, the line of **"Reply from 192.168.1.1:bytes=32 time<1ms TTL=255"** will appear.
- 4. If the line does not appear, please check the IP address setting of your computer.

V-3-2 For Mac Os (Terminal)

- 1. Double click on the current used Mac Os on the desktop.
- 2. Open the **Application** folder and get into **Utilities**.
- 3. Double click **Terminal**. The Terminal window will appear.
- 4. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of **"64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=xxxx ms**" will appear.

$\Theta \Theta \Theta$	Terminal — bash — 80x24	
Last login: Sat Jan Welcome to Darwin!	n 3 02:24:18 on ttyp1	S
Vigor10:~ draytek\$	ping 192.168.1.1	
PING 192.168.1.1 (1	.92.168.1.1): 56 data bytes	
64 bytes from 192.1	.68.1.1: icmp_seq=0 ttl=255 time=0.755 ms	
64 bytes from 192.1	.68.1.1: icmp_seq=1 ttl=255 time=0.697 ms	
64 bytes from 192.1	.68.1.1: icmp_seq=2 ttl=255 time=0.716 ms	
64 bytes from 192.1	.68.1.1: icmp_seq=3 ttl=255 time=0.731 ms	
64 bytes from 192.1 ^C	68.1.1: icmp_seq=4 ttl=255 time=0.72 ms	
192.168.1.1 pin	ng statistics	
5 packets transmitt	ed, 5 packets received, 0% packet loss /max = 0.697/0.723/0.755 ms	

V-4 Backing to Factory Default Setting

Sometimes, a wrong connection can be improved by returning to the default settings. Try to reset the modem by software or hardware.

(i) Warning:

After using the factory default settings, you will lose all settings you did before. Make sure you have recorded all useful settings before you pressing.

V-4-1 Software Reset

You can reset the modem to factory default via Web page.

Go to **System Maintenance** and choose **System Reboot** on the web page. The following screen will appear. Choose **Factory Default** and click **Reboot**.

After few seconds, the modem will return all the settings to the factory settings.

System Maintenance / System Re	eboot	
System Reboot		
Reboot With	Current Configuration	Factory Default
Reboot With	Current Configuration	Factory Default

V-4-2 Hardware Reset

While the modem is running, press the **Factory Reset** button and hold for more than 5 seconds. When you see the **ACT** LED blinks rapidly, please release the button. Then, the modem will restart with the default configuration.

				1111	
•					
	- O Factor			in a set	
PWR	■OF Factor	P2	P1	DSL	

After restore the factory default setting, you can configure the settings for the modem again to fit your personal request.

V-5 Contacting DrayTek

If the modem still cannot work correctly after trying many efforts, please contact your dealer for further help right away. For any questions, please feel free to send an e-mail to support@draytek.com.