DrayTek

VigorSwitch V1281

Gigabit Network Switch

Your reliable networking solutions partner

User's Guide

UK & Ireland Version

V1.0

VigorSwitch V1281

24 Ports + 4 Combo UTP/SFP Ports

A/V Video Switch

User's Guide

Version: 1.0

Firmware Version: V2.3.0

(For future update, please visit DrayTek web site)

Date: Jun 2018

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Copyrights

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Safety Instructions and Approvals

Safety Instructions

- Read the installation guide thoroughly before you set up the switch.
- The switch should only be repaired by authorized and qualified personnel. Do not try to open or repair the switch yourself; doing so is hazardous and will void your warranty.
- Do not place the switch in a damp or humid place, e.g. a bathroom.
- Do not stack the switches directly on top of one another.
- The switch should be used in an indoor location, within a temperature range of +5 to +40 Celsius (including when placed inside a rack).
- Do not expose the switch to direct sunlight or other heat sources. The housing and electronic components may be damaged by direct sunlight or heat sources.
- Do not deploy network or power connections outdoors to prevent electronic shock hazards.
- Keep the packaging out of reach of children for safety.
- When you dispose of the switch, please follow local regulations.

Warranty

DrayTek Corp. warrants to the original end user (purchaser) that the router will be free from any defects in workmanship or materials for a period of two (2) years from the date of purchase from a DrayTek authorized dealer in the UK/Ireland. Keep your purchase receipt 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 labour, 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 external factors, used with unapproved accessories or subjected to abnormal working conditions. Warranty applies to hardware only, not software or firmware. 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.

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To download source codes please visit: http://gplsource.draytek.com
GNU GENERAL PUBLIC LICENSE: https://gnu.org/licenses/gpl-2.0
Version 2, June 1991

Regulatory Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device may accept any interference received, including interference that may cause undesired operation.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Join the UK mailing list	Users in the UK & Ireland can sign up to our mailing list which goes out approximately 4 times per year with products news, updates, hints & tips and offers. For details, please visit **www.draytek.co.uk/list**
Firmware & Tools Updates	Due to the continuous evolution of DrayTek technology and emerging risks, router firmware updates may be issued. You should keep the firmware/software of all equipment up to date. Please consult the DrayTek web site for more information on newest firmware, tools and documents: www.draytek.co.uk (For UK/Ireland)

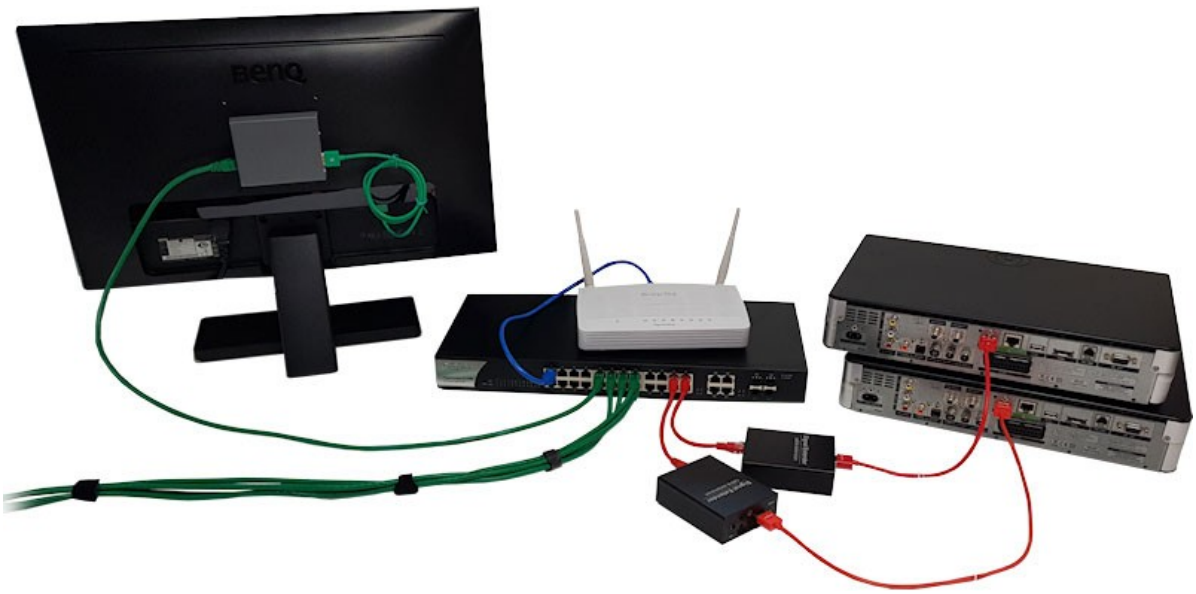
Table of Contents

Part I Introduction

I-1 Introduction

The VigorSwitch V1281 is a Gigabit Ethernet switch optimized for the switching of A/V signals over IP. The V1281 is designed with an intuitive and easy to use interface for both installers and the end users who will be using the product.

As a Gigabit switch, as well as handling your A/V switching, it can also be used for your networking (Data/LAN) requirements, connecting regular LAN components at full Gigabit speed, isolated from the A/V signals so that there is no performance impact.



I-1-1 Specifications

Physical Interfaces:

- 24 10/100/1000BaseT Ethernet Ports (RJ-45 IEEE 802.3/3u/ab)
- Ports Can be set to video input (source), video stream output or data LAN
- Port No. 1 is always set for data/LAN only
- 4 Additional Selectable Ports (Nos. 25-28), use as either:
  - 10/100/1000BaseT (Gigabit) Ethernet or
  - SFP (802.3z)

Video Feed Control:

- Configure ports as 'source', 'output' or 'data' (LAN)
- Select source per output using app (iOS/Android) or browser
- Select presets from browser
- Sources/Outputs can be restricted per user

Management:

- Responsive Web Design to suit multiple browser sizes/devices
- Multiple users (admin or standard user)
- Firmware Upgrade/Backup by HTTP/HTTPS

- Configuration Upgrade/Backup
- Web Interface uses TLS1.2/SSL
- Telnet / SSH for CLI control & 3rd party integration (API)

Diagnostics:

- Port Status & usage display
- Port Bandwidth usage display
- CPU/RAM Usage display
- Port-based cable test

IGMP Snooping – Multicast:

- Up to 256 multicast groups
- IGMP Snooping V2/V3 (BISS)
- IGMP V2/V3 Querier
- Immediate Leave
- Note : Usage of IGMP may interfere with normal AV switching functions

General IEEE Standards Compliance:

- 802.3 10Base-T
- 802.3u 100Base-T
- 802.3ab 1000Base-T
- 802.3x Flow Control Capability
- 802.3 Auto-negotiation

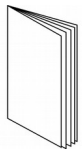
Physical Specifications:

- Power Requirements: 220-240VAC
- 802.3az Energy Efficient Ethernet
- Environment: Operation Temperature: 0°C~40°C
  Storage Temperature: -10°C~70°C
- Dimensions: 441 x 270 x 45 mm (W x D x H).
- Rack mountable: 1U. Brackets included.
- Power: 110-250VAC
- Weight: 4.4Kg (excluding SFP modules/cables)

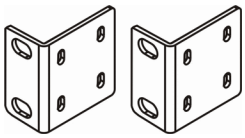
I-2 Package Contents

Before you start installing the switch, verify that the package contains the following:

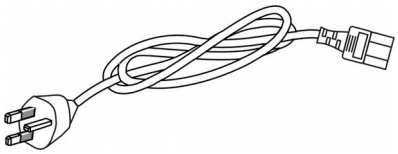
VigorSwitch V1281
Main Unit



Quick Start Guide



Rack Mount Kit (brackets) & screws
Also Rubber Feet (not shown)

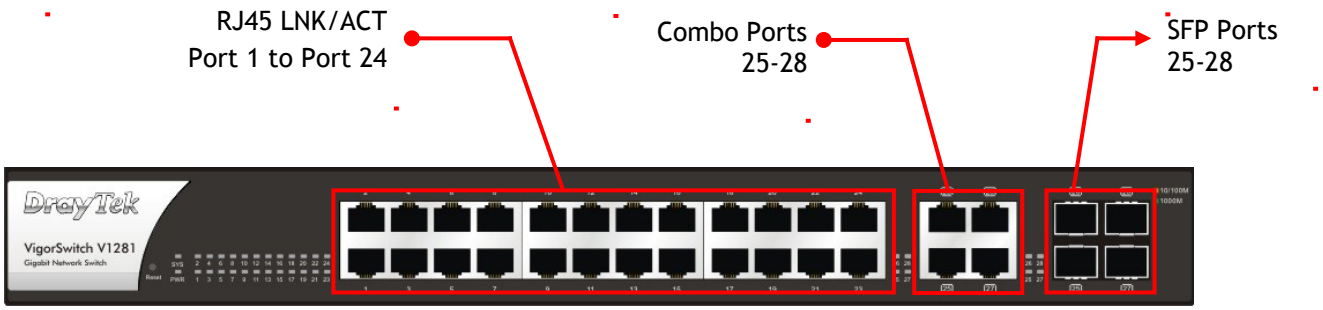


UK-type Power Cord

If any of these items is missing or damaged when you receive the product, please immediately contact your supplier.

You will also need HDMI-to-IP extenders/convertors – one for each A/V source or output. These are not supplied with the VigorSwitch (see Section I-3 for more information).

I-3 LED Indicators and Connectors



LED	Status	Explanation
SYS	On (Green)	The switch finishes system booting and the system is ready.
	Blinking (Green)	The switch is starting up (booting)
	Off	The switch is not ready or there is an error.
PWR	On (Green)	The device is powered and running normally.
	Off	The device is powered off.
RJ-45 LNK/ACT Port 1 ~ 28	On (Green)	The device is connected at 1000Mbps.
	On (Amber)	The device is connected at 10/100Mbps.
	Blinking	The port is sending or receiving data.
	Off	The port is not connected.

Interface / Port	Description
RJ-45 LNK/ACT Ports 1 ~ 24	Port 1 to Port 24 are standard RJ-45 Ethernet ports supporting Gigabit speed.
RJ-45 **or** SFP Ports 25 ~ 28	Port 25 to Port 28 are used either as Fibre ports or RJ-45 ports. If you use, for example, Port 25 as RJ-45, you cannot use the corresponding SFP Port 25 and vice-versa.
 IEC/C24 Socket on Rear	Power inlet: AC 100~240V/AC, 50/60Hz.

I-3 Principles of Operation

Although you may have used DrayTek switches for regular networking applications previously, the V1281 is different because it's designed for switching A/V.

Sources and Outputs

Throughout this Quick Setup Guide and also within the V1281's admin interface we will refer to **sources** and **outputs**.

- A **source** is any device which is providing a video or audio output – most commonly a DVD/Blu-ray player, a satellite receiver or other set-top box or a CCTV system.
- An **output** is what you'll be watching or listening on, such as a TV, a projector or an amplifier/receiver.

Also, in our setup guides and in the switch GUI we will generally colour code **sources in red** and **outputs in green** to aid with illustration and clarity.

> If you are reading the printed version of this guide in Black & White, you may prefer to download the colour PDF version from our web site.

HDMI vs. Ethernet Cabling

Like any Ethernet switch, the V1281 has RJ-45 sockets on the front, not HDMI. Although native HDMI switches do exist, cable lengths are limited and the cables themselves are more costly and complex to wire up.

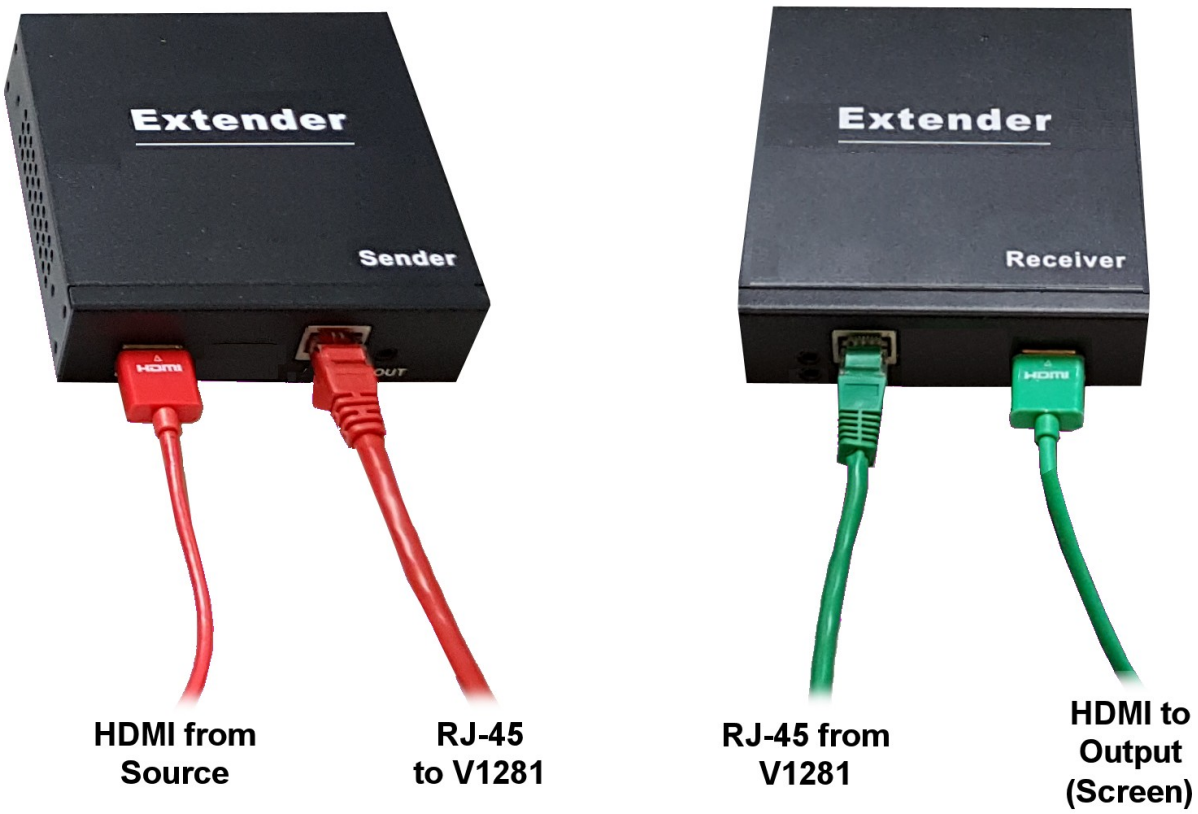
Using Ethernet means you use low cost CAT5e (or higher) cable which often already exists in a location. If you use fibre optic cable, Ethernet can carry for many kilometers if needed; the VigorSwitch can support up to 4 SFP fibre modules.

Using CAT5e also means that the V1281 is very scalable – you can add as many or few sources or outputs as you need up to the maximum number of ports whereas with a native HDMI switch, it will have a fixed number of ports, which you pay for whether you need them or not. With the V1281 your AV signals can also share the network or networking infrastructure with your data networking for PCs or other devices.

Converting HDMI to IP – Using Extenders

The source's HDMI output has to be converted into a TCP/IP stream which can be handled by the V1281 and to connect to CAT5e RJ-45 connections (or CAT6). For this you need an **HDMI to IP adaptor (or 'extender).** These are available from many vendors, either as pairs or sender and receiver units individually. Prices vary considerable depending on features, brand/quality and resolution or picture quality.

A VigorSwitch V1281 might, for example, have two sources (e.g. two satellite receivers) and eight TVs around the premises, or it might have ten sources and just two screens – you can have any combination, providing just the right number of converters/extenders so you're not paying for HDMI ports you don't need – you just purchase the right number of HDMI-to-IP convertors.

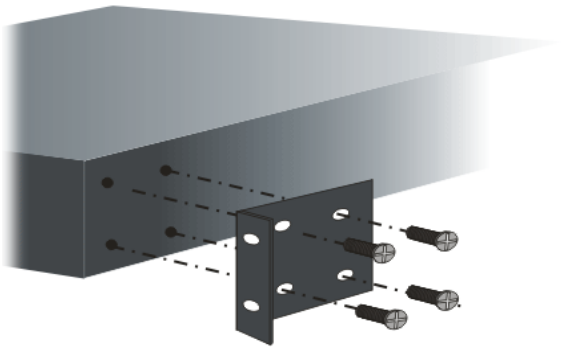


As there are many similar looking products, it is essential is that the HDMI-to-IP adaptor/extender that you use supports IP. Some devices can send an HDMI signal over CAT5/CAT6 cable, but using a proprietary method, and not IP or Ethernet. That type of device will **not** work with the VigorSwitch V1281 and may even cause damage so please be sure that the device you connect uses IP **and** Ethernet (10/100/1000BaseT). Any additional functions or features, such as IR (infra-red) pass-through, RS-232 pass-through, HDMI loop-through, maximum resolution or the type of codec used will depend on your requirements and budget. Also consider how the extenders are powered and whether you need to rack mount them.

I-4 VigorSwitch Installation

Physical Installation – Rack or Desktop Fitting

The VigorSwitch V1281 can sit on a desk or shelf; please fit the rubber feet (supplied) only if you will be using it in that way. If you will be mounting the switch in a standard 19" rack, attach the rack mount 'ears' to each side of the switch using the screws provided. Do not use any other screws. Tighten securely.



You can then fit the switch to your rack. Mounting hardware for that is not supplied and will depend on your rack type.

Installing Network Cables

Crossover or straight-through cable: All the ports on the switch support Auto-MDI/MDI-X functionality. Both straight-through or crossover cables can be used as the media to connect the switch with PCs as well as other devices like switches, hubs or router.

Category 3, 4, 5 or 5e, 6 UTP/STP cable: To make a valid connection and obtain the optimal performance, an appropriate cable that corresponds to different transmitting/receiving speed is required. To choose a suitable cable, please refer to the following table.

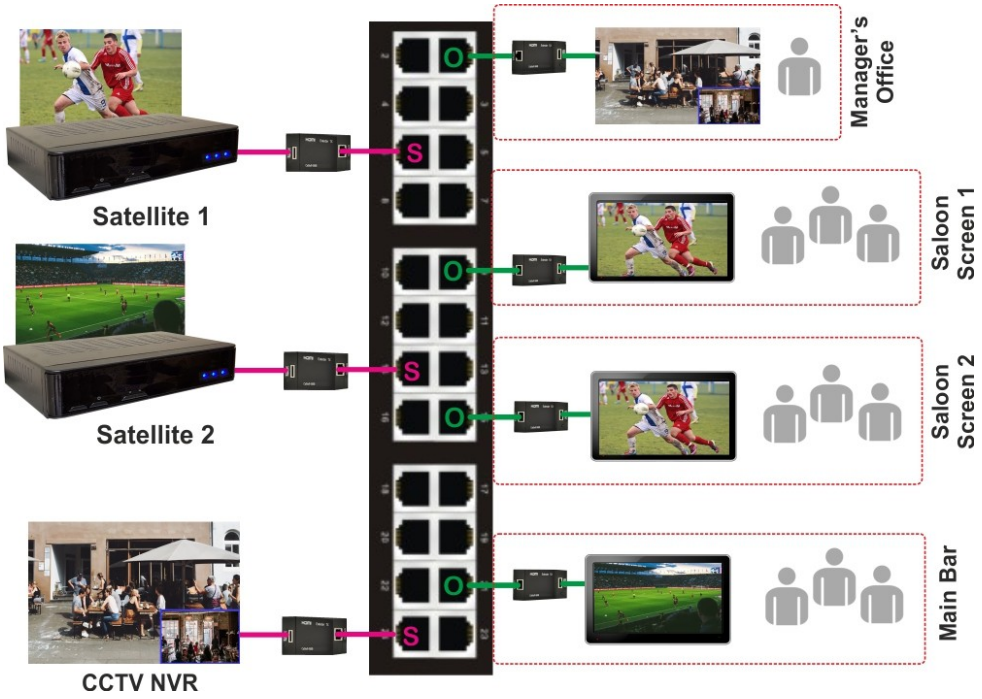
Media	Speed	Wiring
10/100/1000 Mbps copper	10 Mbps	Category 3,4,5 UTP/STP
	100Mbps	Category 5 UTP/STP
	1000 Mbps	Category 5e, 6 UTP/STP

I-5 Topology and Hardware Installation

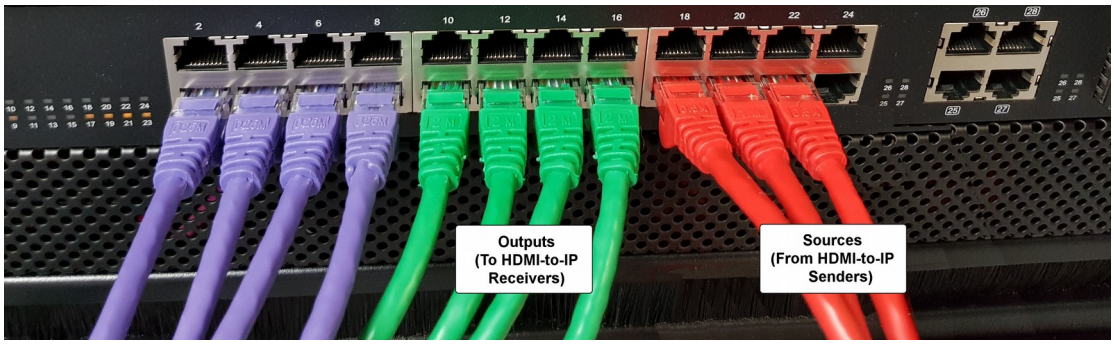
Installing and configuring your VigorSwitch V1281 should be very straightforward if you plan carefully and are clear about your network/AV topology.

Before starting, ensure that you know how many **sources** (Satellite Receivers, Blu-Ray, DVD, STB etc.) you will have and how many **outputs** (screens/projectors) you'll be feeding to. You will need an HDMI-to-IP sender for each source and a receiver for each output (see previous section).

In the example below, a pub has with three source devices on the left and four output screens on the right:



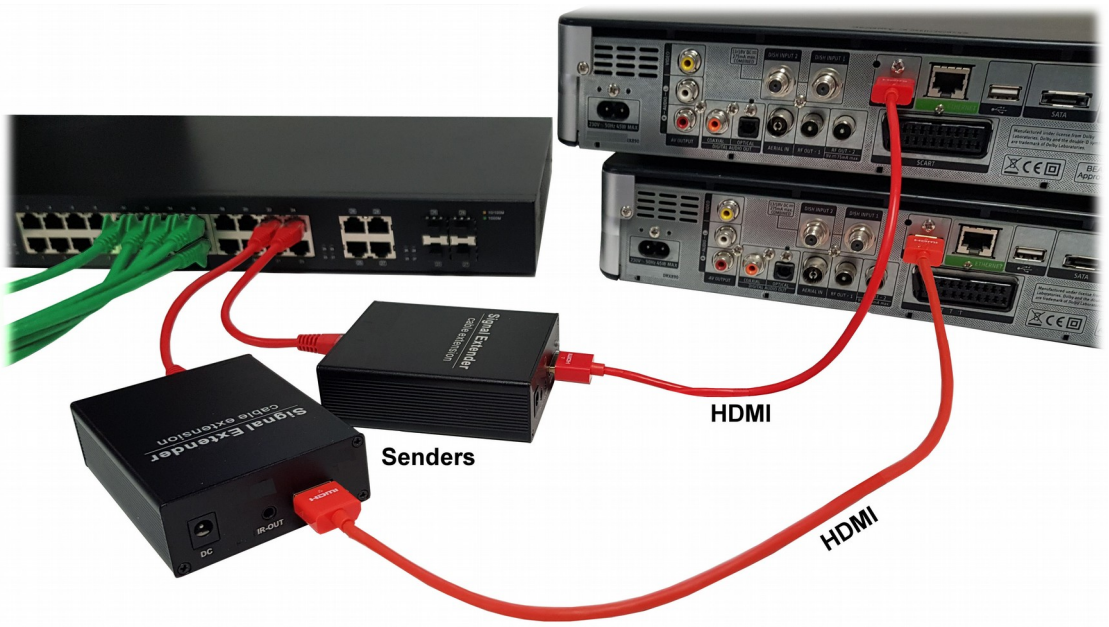
For this example, you would need three HDMI-over-IP senders and four receivers. Any port on the V1281 can be defined as one of three modes (source, output or LAN) so it doesn't matter which port you select for your sources or outputs. Later, when you configure the V1281, you will allocate each port's function.



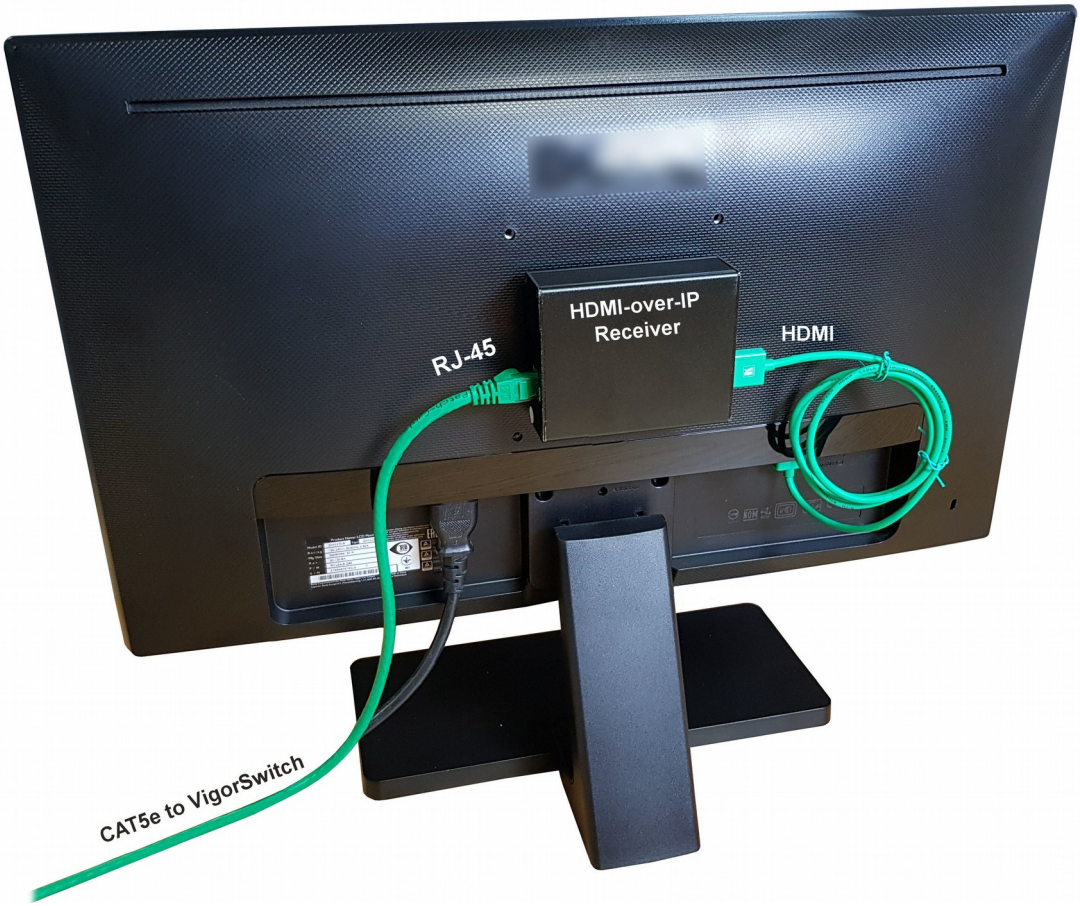
Coloured cables are used only for illustration – **Red** are our **sources**, **Green** our **outputs** and the **Purple** cables are LAN (networking connections) for PCs, routers, uplinks, wireless bases etc. Remember, any port can be set to any of those functions but we've grouped them in this photograph because it's simpler (and looks pretty). Also, you won't necessarily have 4+4+3 – you can have any combination.

Device Connection

Connect an HDMI-to-IP **sender** unit to each **source** device (Set-top boxes, DVD players etc.). The sender units will also need power (not shown). Connect the Ethernet end of the sender to your VigorSwitch V1281. In the example photo below, we have used two satellite TV receivers as the sources:



Connect an HDMI-to-IP **receiver** unit to all **output** devices (TVs or Projectors) and connect an Ethernet cable from the receiver unit to the VigorSwitch V1281 (via your structured cabling or RJ-45 sockets around the building etc.). Receiver units will also need power (not shown):



HDMI-to-IP **senders** and **receivers** look alike so double check you have them the right way around. **Senders** connect to your **source** (e.g. DVD player) and **receivers** connect to your **output** (e.g. television).

Connect your VigorSwitch V1281 to your computer network (we suggest using port 1). You can connect a PC to the VigorSwitch if you want to use that for configuration, or you can use a wireless laptop if you have WiFi on your LAN.

Note down what is connected to each port on the V1281, especially if you won't be able to see the switch from where you're going to configure it. We also recommend that you label all cables and HDMI extenders which will make changes easier later.

I-6 Initial Switch Configuration

Your VigorSwitch V1281 is configured and controlled from its web interface.

The web interface is 'responsive' which means it will dynamically adapt to different browsers, devices and screen sizes (e.g. phones, PCs or tablets). For the initial configuration it's quicker and easier to use a PC with a keyboard/mouse.

If you connected the VigorSwitch V1281 to your network (see earlier), the V1281 will obtain its own IP address from your network DHCP server (your router or other device providing DHCP). You will now need to locate the IP address that the switch has been given in order to access its web interface.

I-6-1 Locate the VigorSwitch's IP Address

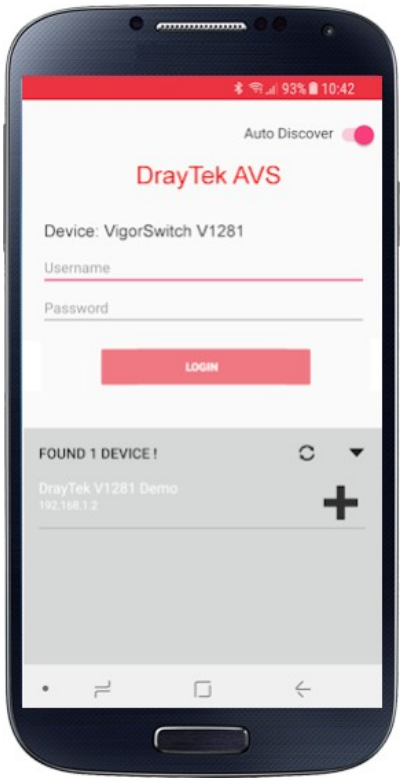
If you have Wireless LAN (WiFi) on your network, you can use the companion app for iOS or Android (Search for "DrayTek AV Switch" on the app stores).

Ensure that your phone is connected to the correct WiFi network.

Click the 'Discover' button in the app and will locate the V1281 and tell you its IP address (the app won't do anything else yet).

You can also use the Windows "DrayTek Device Finder" utility (download from our web site) which will locate the switch on the network.

Either way, note down the V1281's IP address.



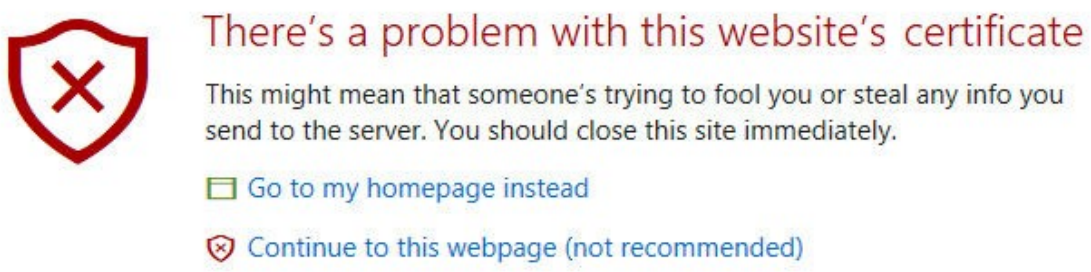
If you can't use the app and your router acts as your DHCP server, you can check the router's 'DHCP table' to locate the switch (the VigorSwitch's MAC address will start 00-1D-AA…). The DHCP table is typically under a diagnostics menu on most routers. If you are using a DrayTek router, you can also use the "External Device" menu to discover and show the switch's IP address.

If your V1281 switch cannot get an address by DHCP, it will assume a default address of 192.168.1.224. A PC connected directly to the switch, with a fixed/static IP address in the same subnet (e.g. 192.168.1.10) will be able to access the switch's GUI in order to set its IP address manually.

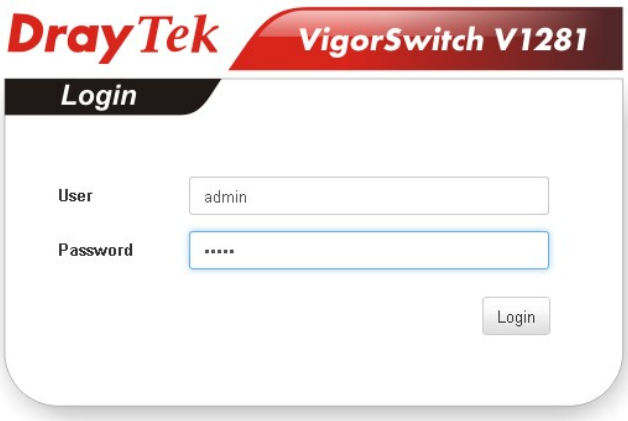
I-6-2 Access the VigorSwitch's Web Interface (GUI)

Once you know the switch's IP address you can access its web interface. Open your browser (Firefox, Edge, Chrome, Safari etc.) and in the address bar, type **https://192.168.1.50** (replace that address with your actual address located earlier). Note that we prefix with **https** to force a TLS encrypted connection. We recommend always using encryption to access network devices.

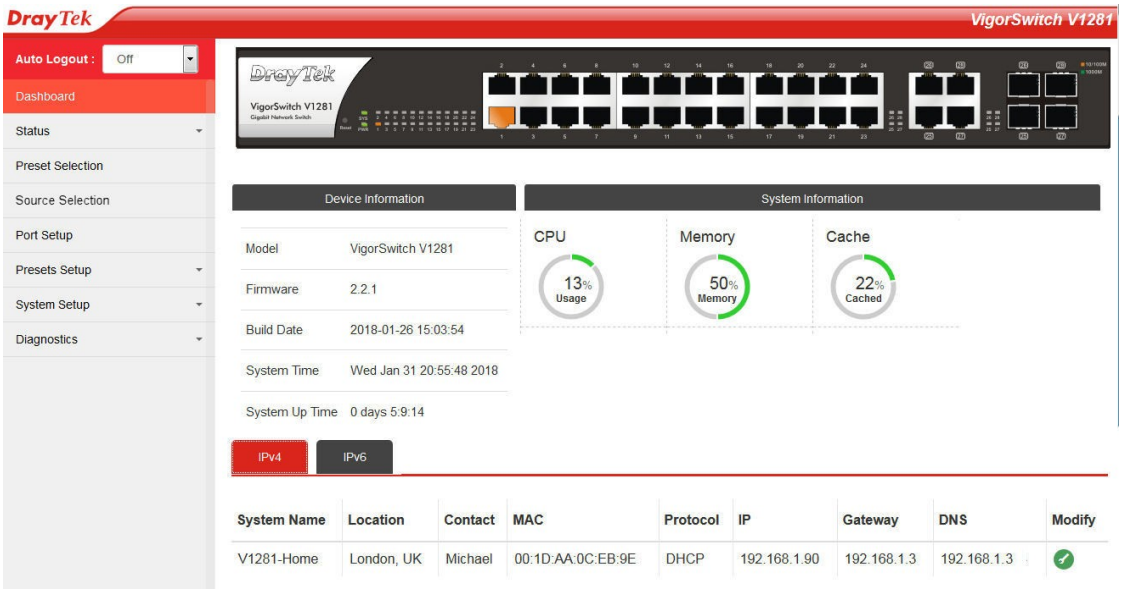
Note: As you are requesting an https (TLS encrypted) connection, your browser will try to validate the certificate against your switch's dynamic LAN IP address, which will fail. If you've entered the correct address for the switch, you can proceed past this message (which will vary depending on your browser). You may need to press 'Advanced' to get to the 'continue' link and then permit access or add an exception. If you can't use https, use http in the address bar instead.



The Login screen should now appear for your VigorSwitch. The default admin username is '**admin**' and the password is also '**admin**'. **You should change this immediately** (you will be invited to do so by the switch). Remember your new admin password – there is no way to recover it or access the switch otherwise.



After logging in, the main dashboard of the VigorSwitch V1281 will be shown:



I-6-3 Define your Port Functions

The first task in configuration is to tell the switch what each port will be used for. You have 28 ports in total and any port can serve one of three functions:

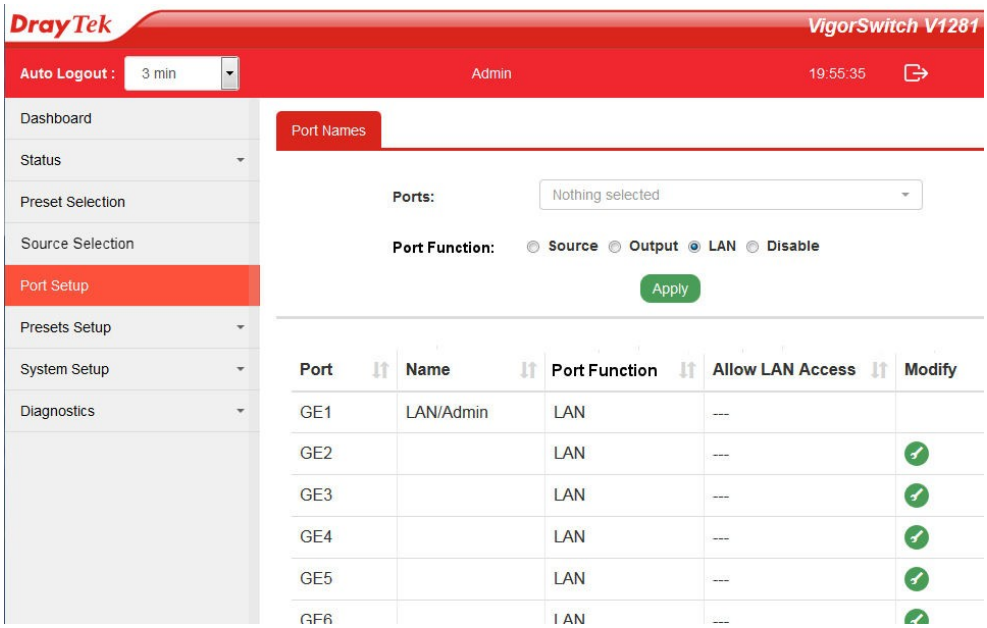
Source **Output** **LAN (Data)**

When you receive a new V1281, all ports are set by default to be LAN/Data ports. The port(s) to which you have connected a PC, or the uplink to your LAN must always be set as LAN ports. Port 1 on the V1281 is always a data port.

For our example, we are going to have 4 sources and 3 inputs set as follows:

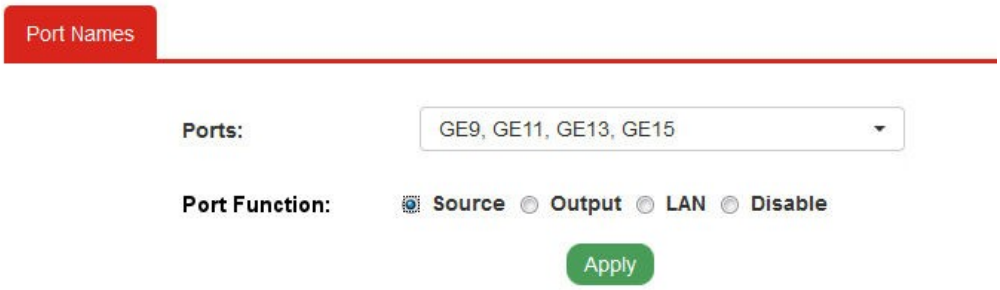
Port No.	Function	Device/Purpose
Port 1 (GE1)	LAN	Network (WiFi Router)
Port 9 (GE9)	Source	Sky+HD 1
Port 11 (GE11)	Source	Sky+HD 2
Port 13 (GE12)	Source	Blu-Ray
Port 15 (GE15)	Source	Fire TV
Port 17 (GE17)	Output	Lounge
Port 19 (GE19)	Output	Playroom
Port 21 (GE21)	Output	Master Bed

On the left hand side of the router's GUI, click the 'Port Setup' menu.

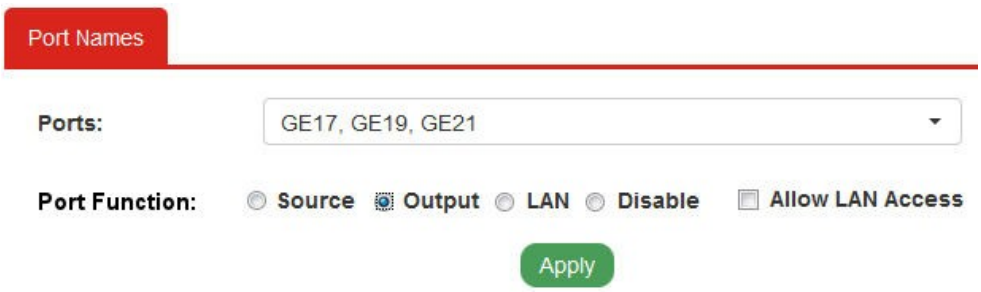


For each port we want to use, we need to specify its function and give it a name. To edit each port's properties individually, you can click the green spanner (wrench) icon to the right of the appropriate port.

We need to set the function of the ports, but rather than having to edit each individually, the top pulldown 'Ports' box allows you to select multiple ports and apply the same function to them all at once, so here we select ports 9, 11, 13 and 15, select the 'Source' button and click 'apply'.



Now you can do the same for the outputs 17, 19 and 21. Select those, select 'Output' and click 'apply':



You may notice the 'Allow LAN Access' checkbox for output ports. Do not click this unless you need to share the output's Ethernet cable with a data device.

Remember that the port numbers used in these images correspond to our example as shown in the original table. Your port numbers and the function of each will, of course, be completely different.

Now you can edit the ports individually to give them corresponding names.

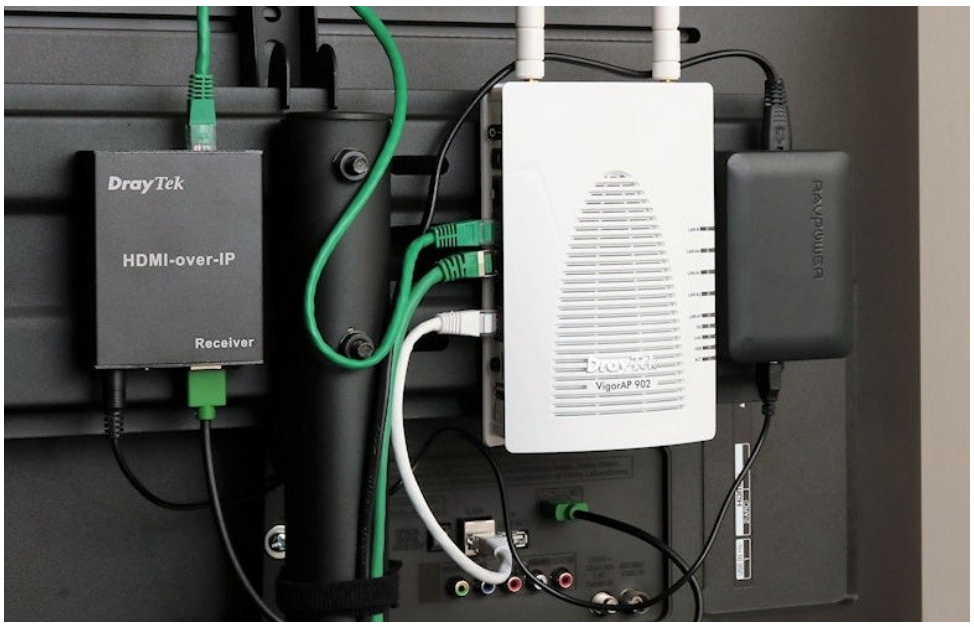
Click the green spanner icon next to each of the 7 ports and name them all. The example on the right is for Port 9, your Sky+HD box.

I-6-3-1 Setting up Output ports for LAN/Internet access

In standard usage, a port on the V1281 configured as an **Output** will receive only the video feed from the currently selected source.

In some circumstances, where there is only one CAT5/CAT6 ethernet cable available to the output (screen) location, you may also want to provide Internet or LAN (data) connectivity down the same cable.

The V1281 has a feature whereby LAN data (can be added to the video feed) - you then need a small Ethernet switch at the output end to provide Ethernet outputs for your HDMI-to-IP receiver and then to the LAN devices you wish to connect, for example a hard-wired IP TV, Wireless (WiFi) access point, PC etc.

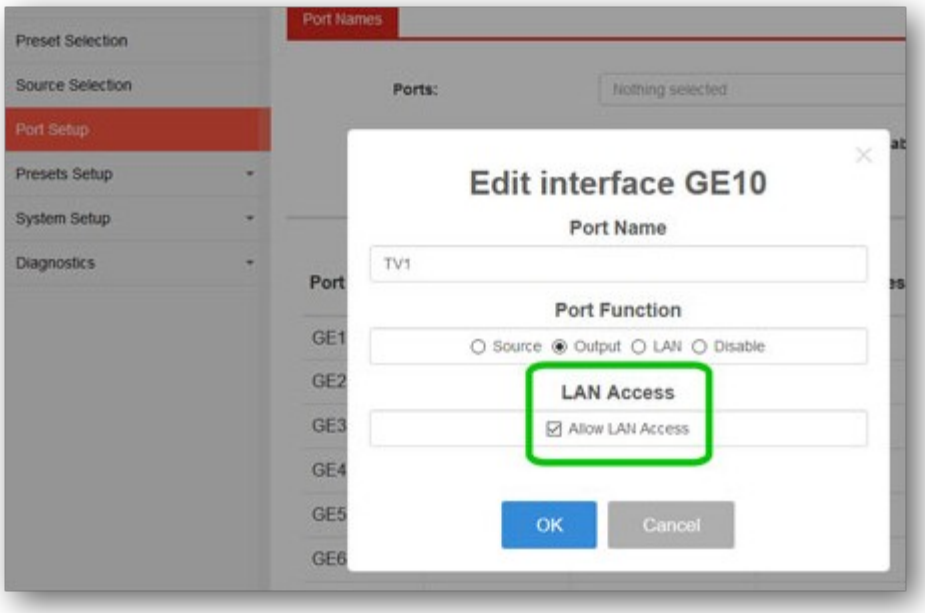


In the photo above, we're using a DrayTek Vigor access point which has a built-in 5 port Ethernet switch so it can provide Ethernet connectivity to the TV directly (for IP-TV or other Smart-TV services), the video feed to the HVE290 adaptor and also create a local wireless LAN for WiFi devices to access the Internet.

Note : WiFi devices connected to a wireless access point (as in the photo above) will not be able to use the DrayTek AVS app to control source selection. For that, the device needs to connect to an access point or router connected directly to the LAN (Allowing that is something that may be selectable in later firmware).

To enable the feature, go to the **[Port Setup]** menu on the V1281's web interface and click on the Modify icon for the **Output port** that the network switch or access point will be connected to.

Just click the "Allow LAN Access option" and click OK to apply the change:



I-7 User Operation

If the ports have been set up and all of your sources, output devices are connected, the VigorSwitch V1281 is ready to use. Remember to select the correct HDMI input on your screens/TVs/monitors.

You can now select any of your sources from any output device – your TVs or projectors around your home, office or other premises.

You can select sources either from the web interface (the same GUI which you used to configure the switch) or by using the DrayTek AVS app on a phone or other compatible mobile device.

Within the VigorSwitch GUI, you can use the **[Source Selection]** menu:

If you are using the DrayTek AVS app on your mobile device, that has the same function, allowing you to select your source for each output (room/TV).

Regular (non-admin) users should be given a username and password which does not have administrator privileges, otherwise they can log in and change the switch configuration. Only admins can disable a port temporarily (e.g. if it's bedtime!). Users can share the same non-admin login, or you can set different logins for each user. Users can be restricted to controlling only specific outputs or be able to select only certain sources.

User Accounts configured on the VigorSwitch V1281 have access to ***either***:

1. **[Preset Selection]** – when this option is enabled for a User Account, the user can select any of the configured presets
   or
2. **[Source Selection]** – Available when Preset Selection is not enabled for the User Account.
   This can be limited to control only specified **Sources** & **Outputs** for individual user accounts

Creation and management of user-level accounts is performed from
[System Setup] > [User Management], which is detailed in Section III-5 of this manual.

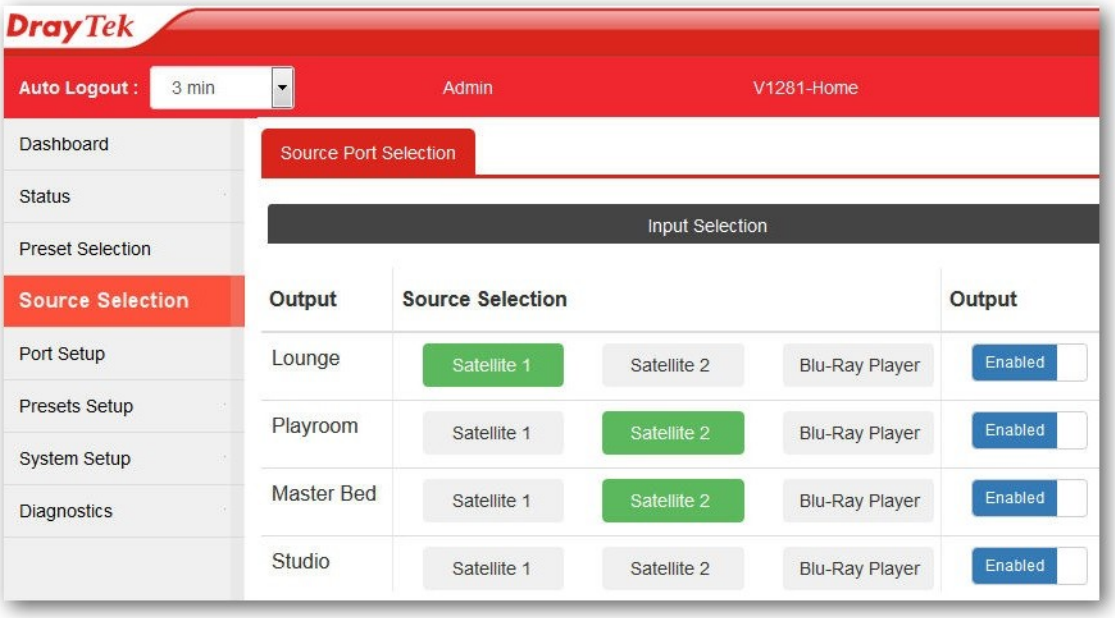
I-7-1 [Preset Selection]

The [Preset Selection] menu is used to select the active Preset, which controls the selection of multiple **Sources & Outputs**, simply press the desired Preset option to activate it.

- **Presets 1-11** can be configured from the [Presets Setup] section
  (see Section II-2 [Presets Setup] for more details)
- **Preset 12** turns off all Outputs

I-7-2 [Source Selection]

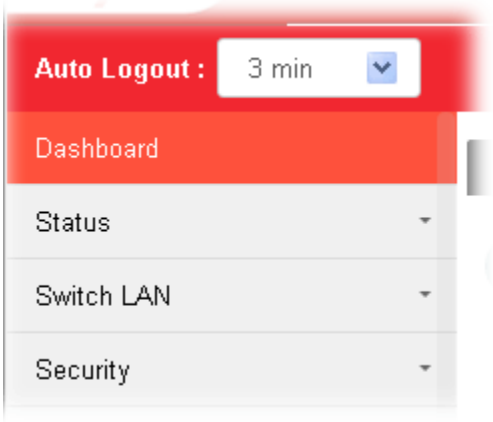
To select Sources for Outputs individually, go to [Source Selection] and click on the desired **Source Selection** option for an **Output**.



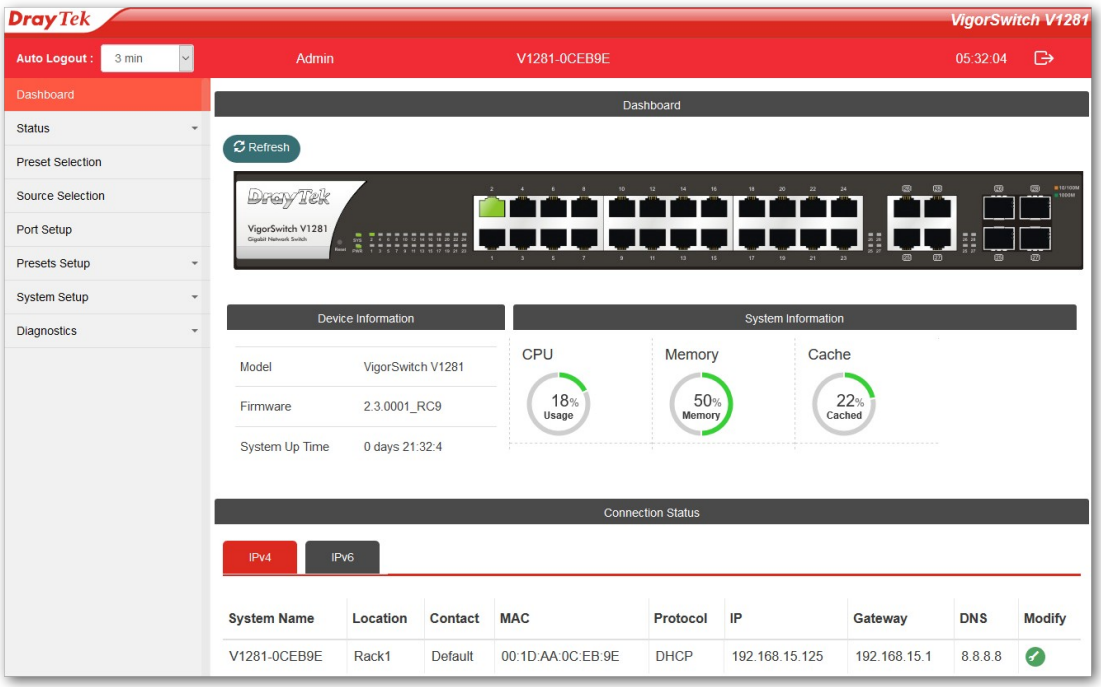
- On larger screens, all available options are displayed in a table
- On smaller displays, press the ⊕ button for an **Output** to select the available **Sources**
- To turn an **Output** on or off, press the Enabled/Disabled button

I-8 [Dashboard]

Click **Dashboard** from the main menu on the left side of the main page.



The Dashboard displays a summary of important information for the VigorSwitch, such as the ports that are active, the firmware version and the switch's IP address / location details:



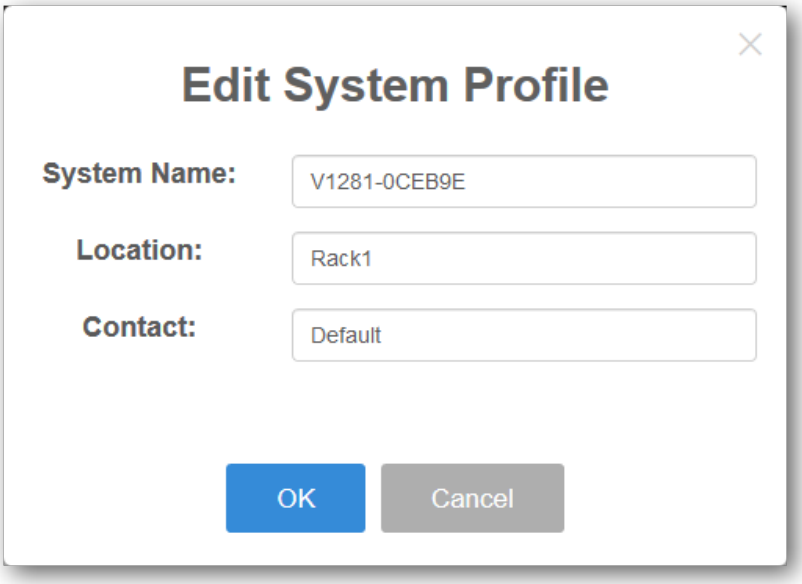
Item	Description
Ports	- Indicates a port operating at 1000mb/s - indicates a port operating at 100mb/s
Model	The model name of the VigorSwitch
Firmware	The operating firmware version of the VigorSwitch
System Up Time	The time that the switch has been active for since power on / boot

CPU	An indicator of the VigorSwitch's current CPU usage
Memory	An indicator of the current memory usage
Cache	An indicator of the cache currently in use
System Name	The specified name of the VigorSwitch, this defaults to the product name and the latter 3 octets of the MAC address
Location	The manually specified location for the VigorSwitch
Contact	The manually specified contact details for the VigorSwitch
MAC	MAC address of the VigorSwitch
Protocol	Method used to determine IP address (DHCP/Static/Auto Configuration)
IP	The current IP address of the VigorSwitch
Link-Local (IPv6 only)	The VigorSwitch's Link Local address
Gateway	Network Gateway used to access addresses outside of the VigorSwitch's LAN subnet
DNS	DNS servers used by the VigorSwitch
 **Modify**	Click this to modify these details: • System Name • Location • Contact

I-8-1 Configure Switch Name & Location

To modify the Switch Name and Location details, go to the [Dashboard] and click the **Modify** button in the lower right:

This will bring up a window to edit the switch naming information:

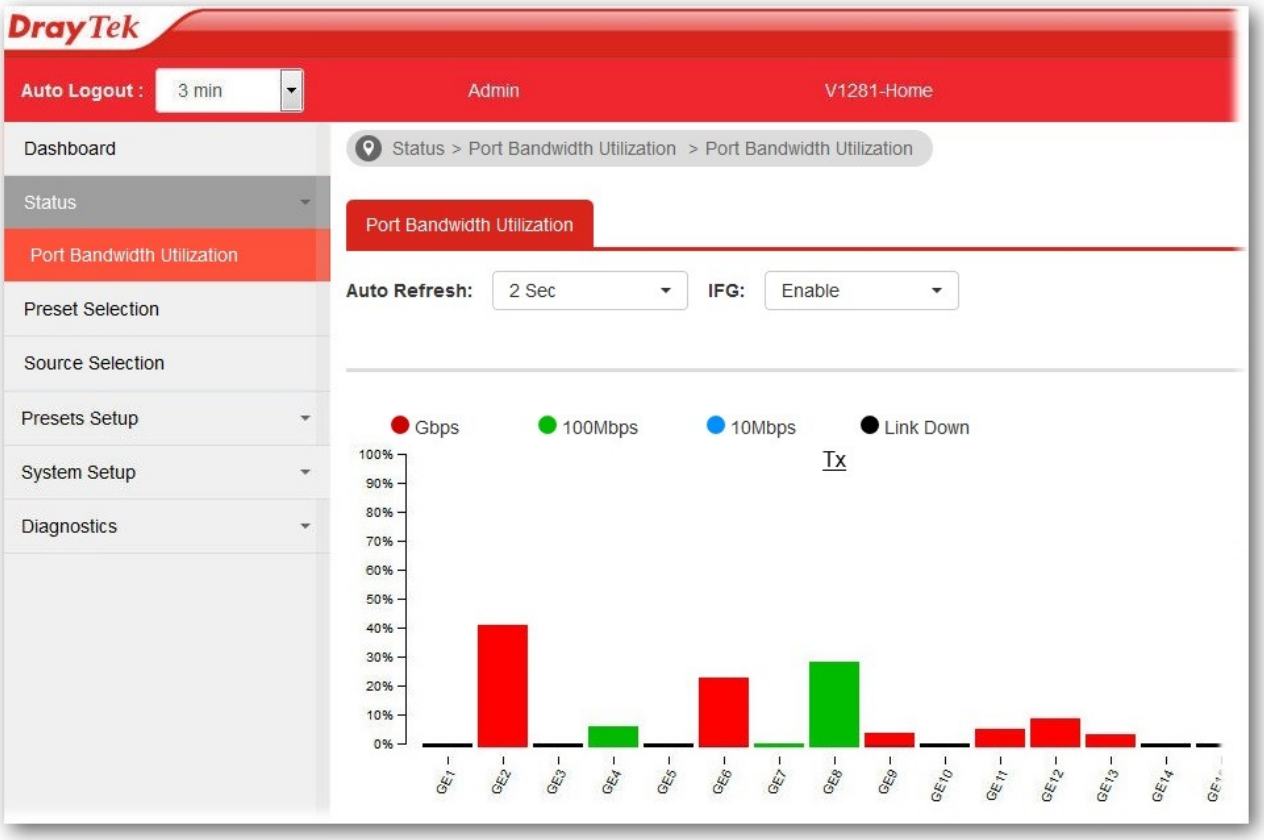


Click the **OK** button to save and apply these details on the VigorSwitch, which can be viewed from the [Dashboard].

I-9 [Status]

I-9-1 [Port Bandwidth Utilization]

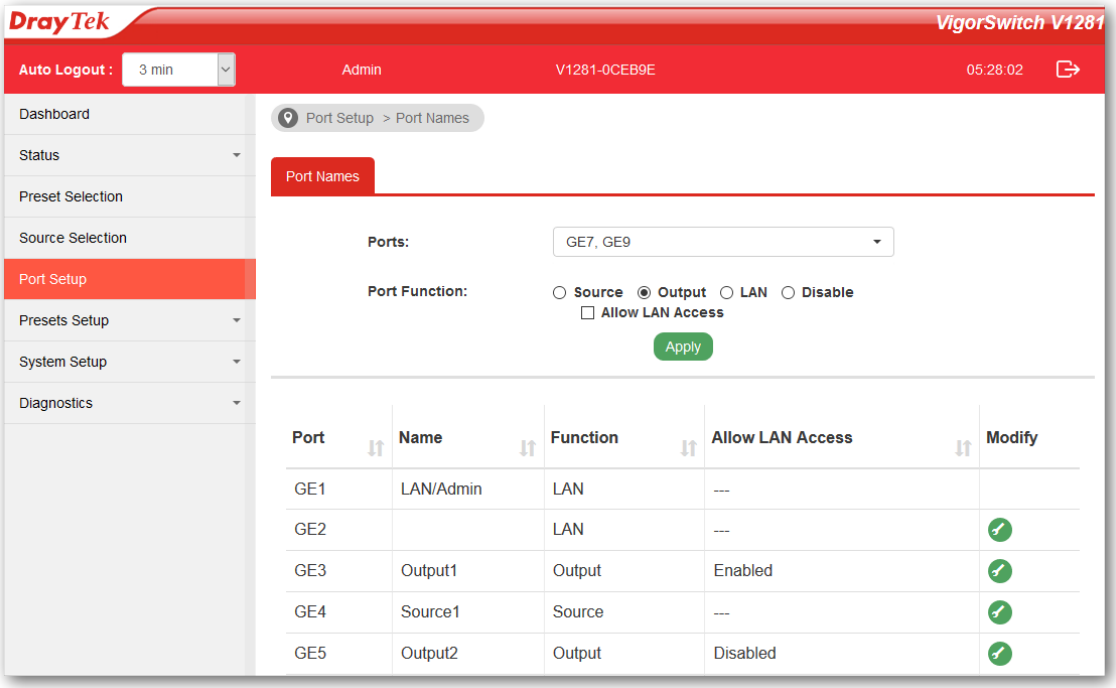
This page offers the traffic statistics inlcuding data information and data of interframe gap for each port (GE1 to GE28). In which, data of interframe gap can be displayed or hidden by choose **Enable / Disable** for IFG.



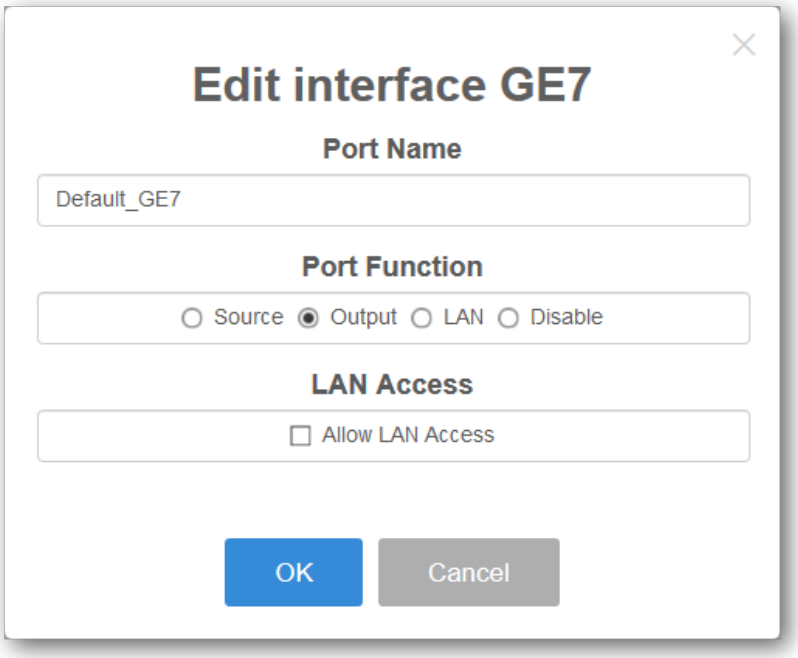
Part II A/V Switch Configuration

II-1 [Port Setup]

The Port Setup defines the purpose of each port, see **Section I-6-3 Define your Port Functions** for guidance on the initial configuration and definitions.



Item	Description
Ports	Select one or many Ports to modify the settings for the select Port(s) GE(*n*) – Signifies Gigabit-Ethernet port number.
Name	The Name of a Port can be modified by editing with the Modify button.
Port Function	Select the mode that the port will operate in: **Source** - Used for HDMI-over-IP Transmitters connected to HDMI video sources i.e. IPTV. **Output** – Used for HDMI-over-IP Receivers connected to screens & projectors **LAN** – Standard LAN port, no A/V switch functionality. **Disable** – The port is disabled and can not pass network traffic.
Allow LAN Access	*Only available for ports with **Output** function* Enable this option to allow LAN access on the selected port(s) in addition to A/V Source/Output functionality.
Apply	Save the changes to the selected Port(s).
Modify	Click this to modify settings for an individual Port



Port Name – The displayed **Name** of the port, which is displayed in [Source Selection] for Source & Output ports.

Port Function - Select the operating mode of the port (see Port Function definitions on previous page).

LAN Access - Allow LAN Access
*Only available for ports with **Output** function*

Enable this option to allow LAN access on the selected port(s) in addition to A/V Source/Output functionality.

OK - Save the setting for the Port.

Cancel - Close the Edit Interface window without saving changes.

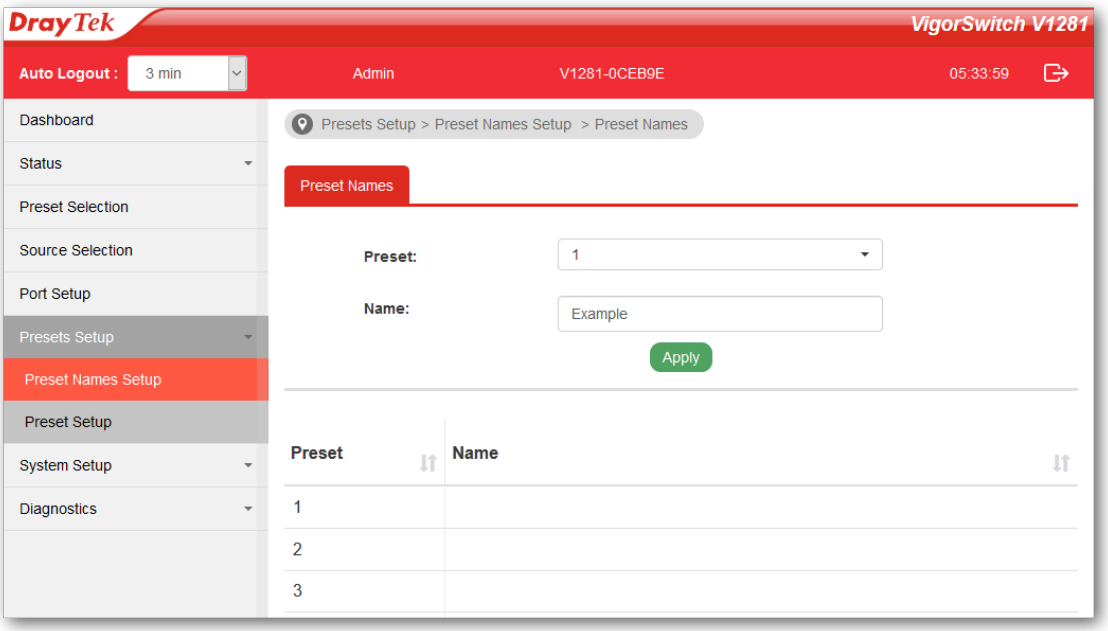
II-2 [Presets Setup]

Presets can be used to select previously set configurations of **Sources** & **Outputs** from the [Preset Selection] menu.

Configuring a preset requires selecting the desired Source & Output configurations in a table, shown in **Section II-2-2 [Preset Setup]** and specifying a display name for the preset, configured in **Section II-2-1 [Preset Names Setup]**.

II-2-1 [Preset Names Setup]

Configure the displayed name of a Preset to be shown in [Preset Selection]



Available settings are explained as follows:

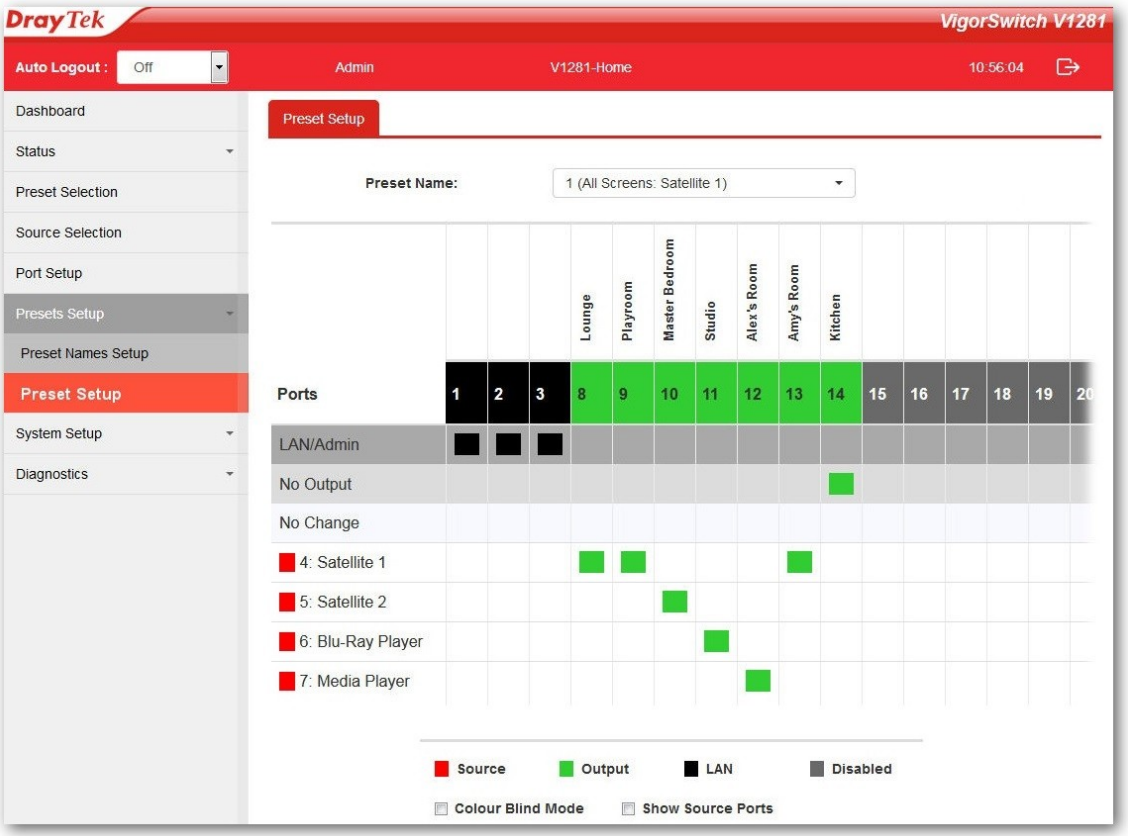
Item	Description
Preset (1 to 11)	Select the Preset to modify.
Name:	Enter the display name for the Preset
Apply	Save the setting changes to the switch.

II-2-2 [Preset Setup]

Configure the desired Port configurations for a Preset.

The port configurations are displayed in a table, which shows all LAN / Output ports on the X axis and Sources / output settings on the Y axis.

Select a Preset to modify, click/press on a Source row for each of the desired Output columns and click **Apply** to save the changes.



Available settings are explained as follows:

Item	Description
Preset Name (1-11)	Select the preset to modify it. Upon selection, the preset configuration will be displayed in the table.
Ports (labelled 1-28)	Each column represents a port on the VigorSwitch that is either an Output port or is used for LAN access ■ - LAN/Admin ports, these can not be modified by presets ■ - Unconfigured ports, these can not be modified by presets ■ - Output ports ■ - Source ports (only displayed when **"Show Source Ports"** is enabled
LAN/Admin	The selected port is used for LAN/Admin access and is not managed by the [Preset Setup] configuration

No Output	The select **Output** port's HDMI-over-IP display will be turned off when the preset is activated.
No Change	The Port setting is not modified by this Preset and will retain its previous configuration.
■ *Source Name*	The selected Output port's HDMI-over-IP display will switch to this **Source**
Allow HDMI Video Output	Enable/Disable this setting to allow or disallow HDMI Video Output on the switch port. Changing this setting affects all Presets.
Colour Blind Mode	When enabled, this switches the [Preset Setup] table to an alternative colour palette.
Show Source Ports	When enabled, this displays the Source ports on the X-axis.
Apply	Save the selected Preset configuration to the switch.

Part III [System Setup]

III-1 [Multicast]

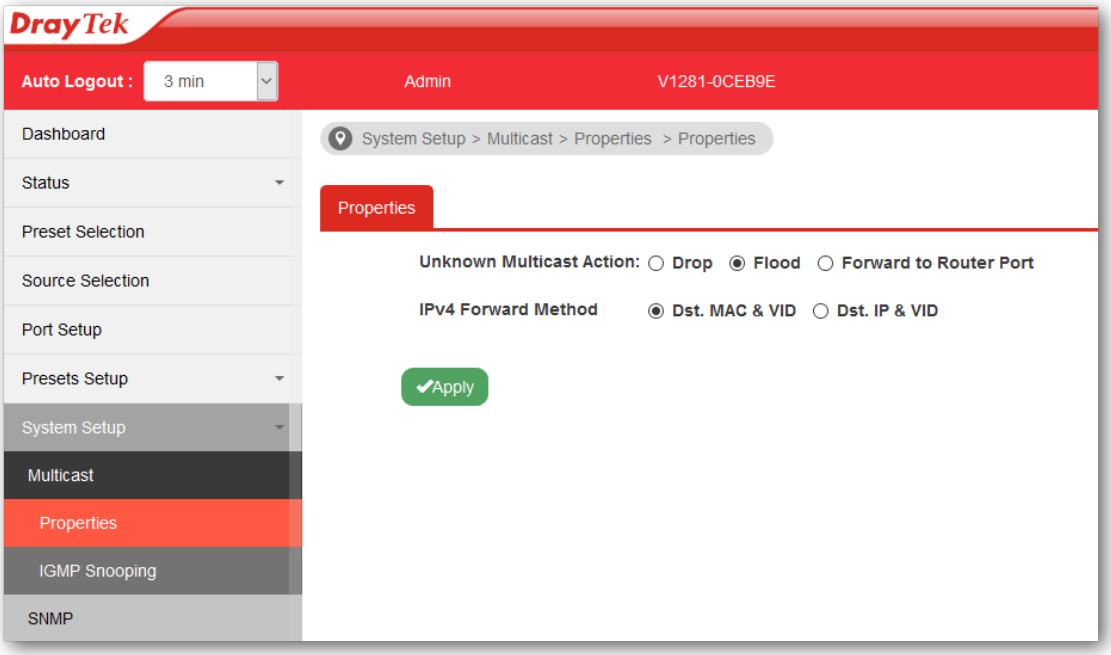
IP Multicast is a one-to-many transmission method used by some types of HDMI-over-IP transmitters & receivers to communicate. The [Multicast] menu configures how multicast packets are handled by the VigorSwitch V1281, with facilities such as IGMP Snooping, which can be utilised to control multicast packet propagation.

All of the settings in this section should typically be left with their default configuration, the way that the VigorSwitch V1281 operates, keeps the HDMI-over-IP devices separate from the LAN network. This negates the need for IGMP Snooping, as in its default configuration with no IGMP Snooping in use, HDMI-over-IP multicast packets are not sent out to the LAN segment.

Changing the Multicast configuration of the VigorSwitch V1281 from its default settings, may stop multicast based HDMI-over-IP devices from communicating through the VigorSwitch, or cause unexpected behaviour.

III-1-1 [Properties]

This page allows the administrator to choose actions for processing the unknown mulitiicast packets and for handling known packets with MAC address, IP address and VLAN ID.



Available settings are explained as follows:

Item	Description
Unknown Multicast Action	Defines how multicast packets not being managed by IGMP Snooping are handled by the VigorSwitch **Drop:** Drop the unknown multicast data. **Flood:** Flood the unknown multicast data. **Forward to Router port:** Forward the unknown multicast data to router port. **Default Setting:** Flood
IPv4 Forward Method	Set the IPv4 multicast forward method.

	Dst. MAC & VID: Forward using destination multicast MAC address and VLAN IDs. **Dst. IP & VID:** Forward using destination multicast IP address and VLAN ID. **Default Setting:** Dst. MAC & VID
Apply	Save the settings or changes to the switch.

III-1-2 [IGMP Snooping]

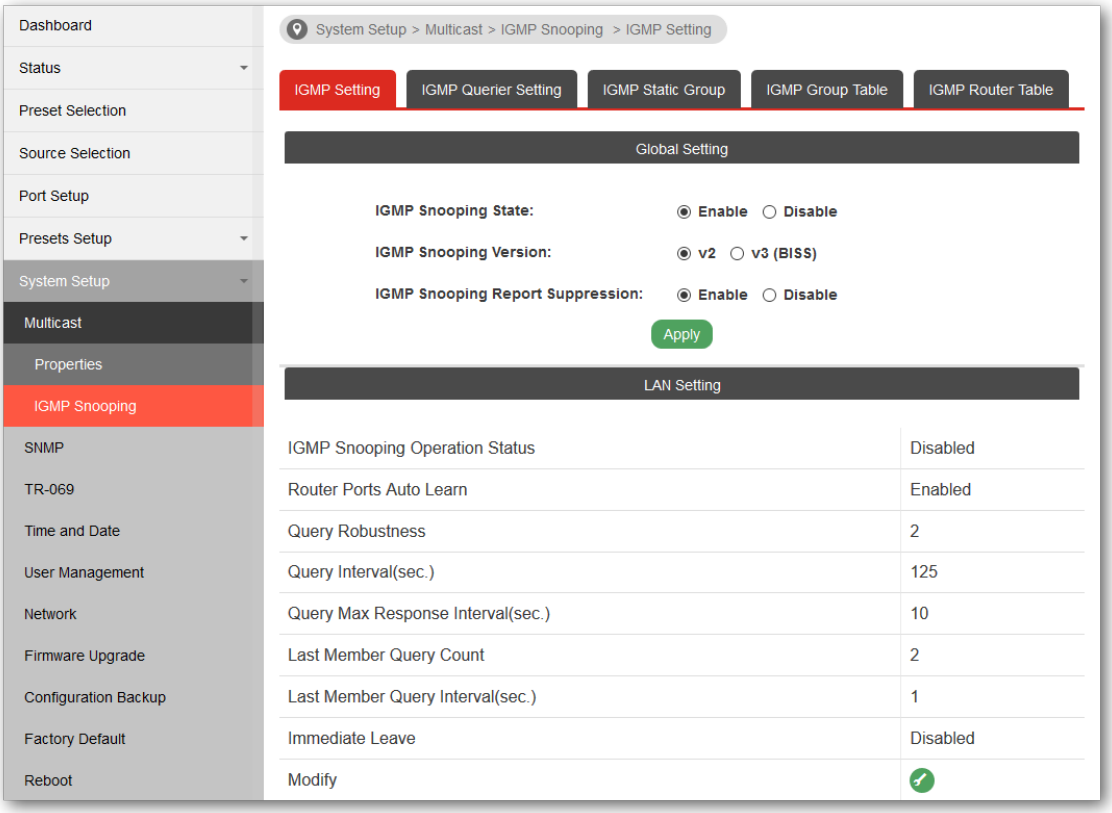
IGMP snooping is the process of listening to Internet Group Management Protocol (IGMP) network traffic. The feature allows a network switch to listen in on the IGMP conversation between hosts and routers. By listening to these conversations the switch maintains a map of which links need which IP multicast streams. Multicasts may be filtered from the links which do not need them and thus controls which ports receive specific multicast traffic.

HDMI-over-IP devices that communicate through Multicast packets can be used with the VigorSwitch V1281 without enabling IGMP Snooping.

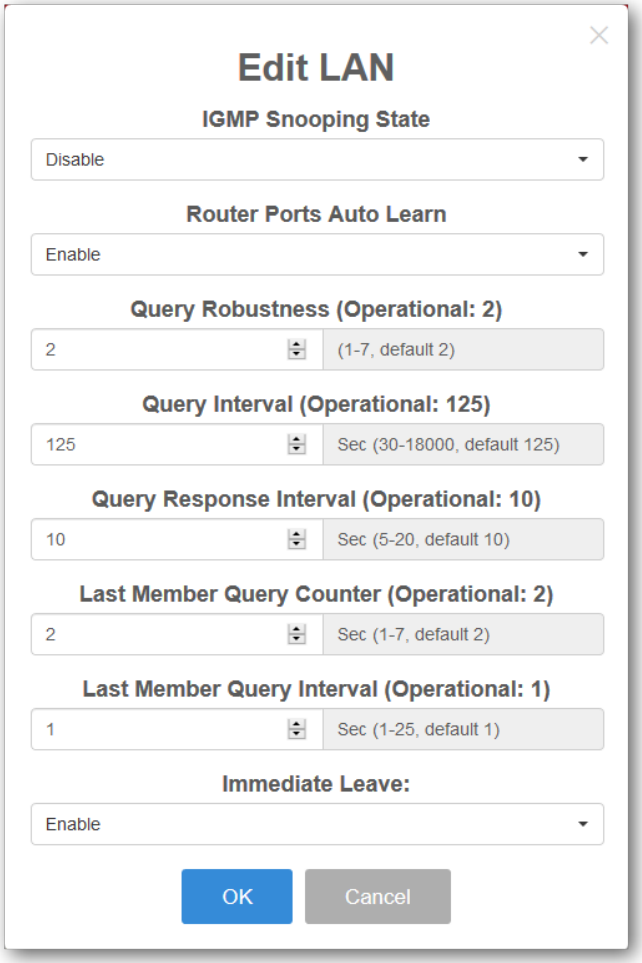
IGMP Snooping may be used in networks that have significant multicast traffic on the “LAN” ports of the VigorSwitch V1281 as configured in the [Port Setup] menu. IGMP Snooping would have no effect on the Source or Output ports.

III-1-2-1 [IGMP Setting]

This page allows you to enable/disable IGMP function, select snooping version, and enable/disable snooping report suppression.



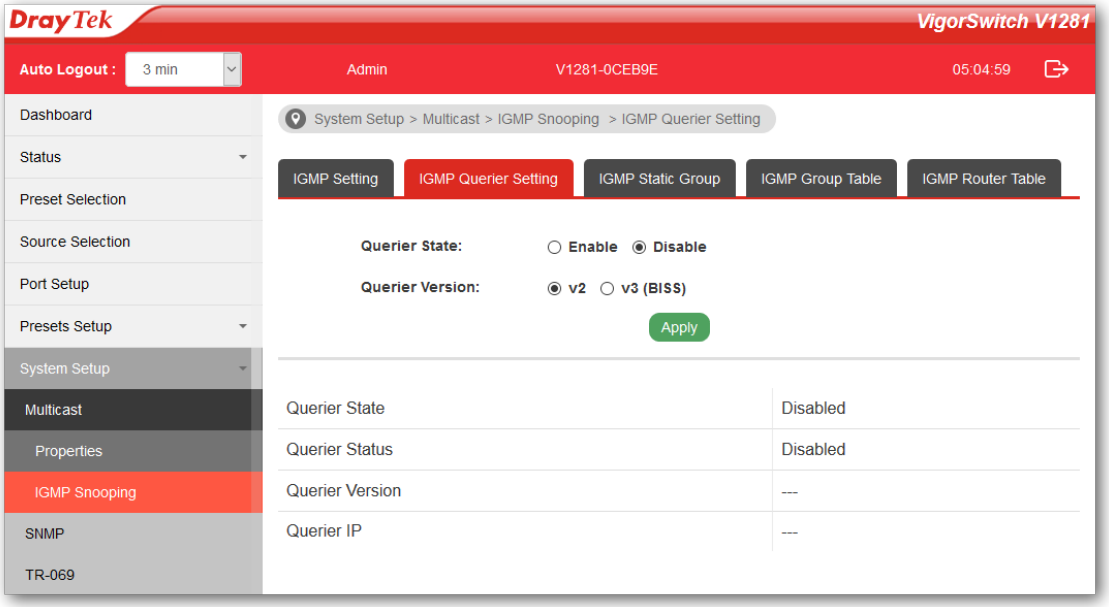
Available settings are explained as follows:

Item	Description
IGMP Snooping State	**Enable** – Enable IGMP Snoop service **Disable** – Disable IGMP Snoop service **Note** – This does not enable IGMP Snooping operation, which can be enabled with the **IGMP Snooping State** setting below
IGMP Snooping Version	Set the IGMP snooping version. **v2** - Only support process IGMP v2 packet. **v3** - Support v3 basic and v2.
IGMP Snooping Report Suppression	Click **Enable** to allow the switch to handle IGMP reports between router and host, suppressing bandwidth used by IGMP.
Apply	Save the settings or changes to the switch.
Modify	Click this to modify IGMP settings  **IGMP Snooping State** -Choose **Enable** to enable IGMP snooping function. **Router Ports Auto Learn** - Set the enabling status of IGMP router port learning. Choose Enable to learn router port by IGMP query.

	Query Robustness – Set a number which allows tuning for the expected packet loss on a subnet. **Query Interval** – Set the interval of querier send general query. **Query Response Interval** – It specifies the maximum allowed time before sending a responding report in units of 1/10 second. **Last Member Query Counter** – After quering for specified times (defined here) and still not receiving any response from the subscribed member, VigorSwitch will stop transmitting data to the related GE port(s). **Last Member Query Interval** – The maximum time interval between counting each member query message with no responses from any subscribed member. **Immediate Leave** – Leave the multicast group immediately on the port & VLAN where leave message is sent from, regardless there is still a subscribed member or not. Click Enable to enable Fastleave function. **OK** - Save the settings or changes to the switch. **Cancel** - Close the page and return to previous page.

III-1-2-2 [IGMP Querier Setting]

This page allows a user to configure querier settings on specific VLAN of IGMP Snooping.

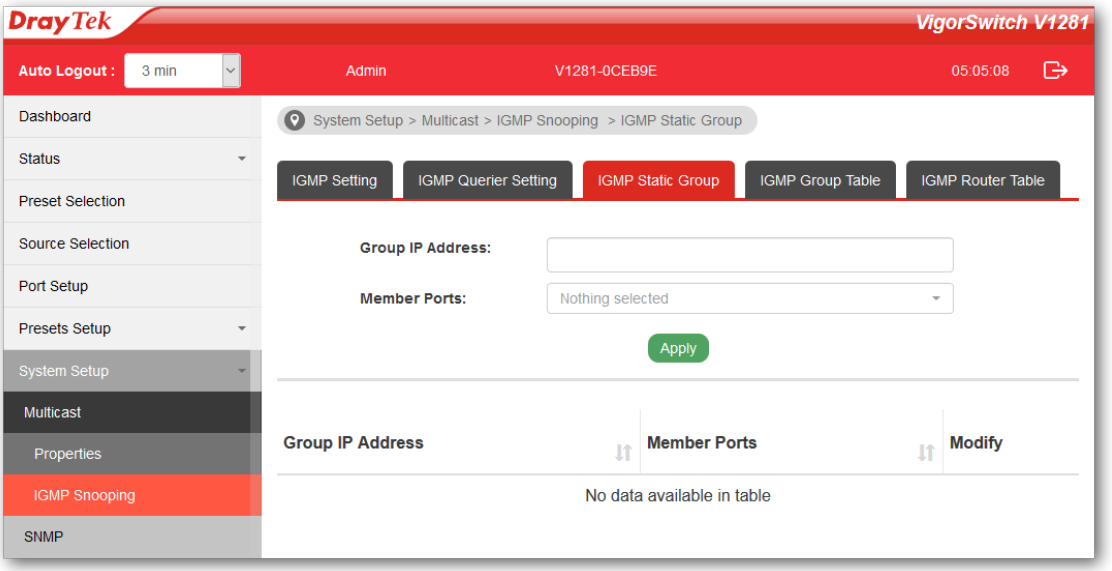


Available settings are explained as follows:

Item	Description
VLAN ID	Use the drop down list to specify a VLAN profile as IGMP Snooping querier.
Querier State	**Enable** - Click **Enable** to set the enabling status of IGMP Querier on the chosen VLAN profile. **Disable** - Click it to disable the function.
Querier Version	Set the query version of IGMP Querier Election on the chosen VLANs. **v2**: Querier version 2. **v3**: Querier version 3. **Note:** For maximum compatibility, it is suggested to use querier version lower than IGMP snooping version, for there is possibile network mixed with IGMP v2/v3 client and v2 query message is widerly understandable for those clients.
Apply	Save the settings or changes to the switch.

III-1-2-3 [IGMP Static Group]

The IGMP static group is allowed to assign a VLAN/port as a specific IPv4 multicast member. Every IPv4 multicast stream that belongs to the specified group IP address will be forwarded to the specified port/VLAN member.

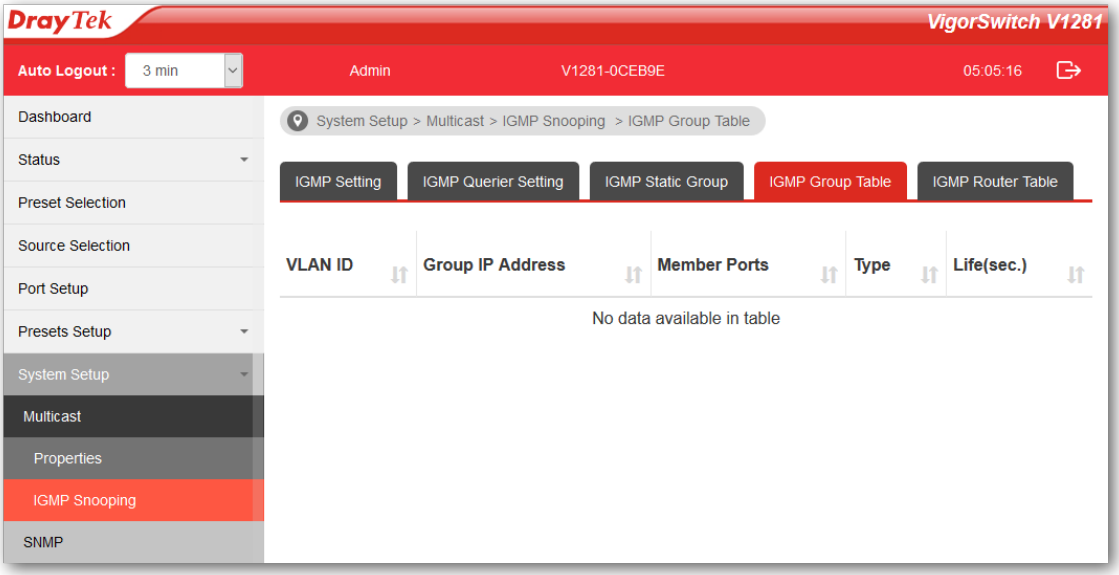


Available settings are explained as follows:

Item	Description
VLAN ID	Use the drop down list to specify a VLAN profile as IGMP Static Group.
Group IP Address	Specify the IPv4 multicast address you wish to assign for the static group (defined in VLAN ID).
Member Ports	Specify the port(s) that static group with given IPv4 multicast address shall include.
Apply	Save the settings or changes to the switch.

III-1-2-4 [IGMP Group Table]

This page shows currently known and dynamically learned by IGMP snooping or shows the assigned IPv4 multicast address group in operation.

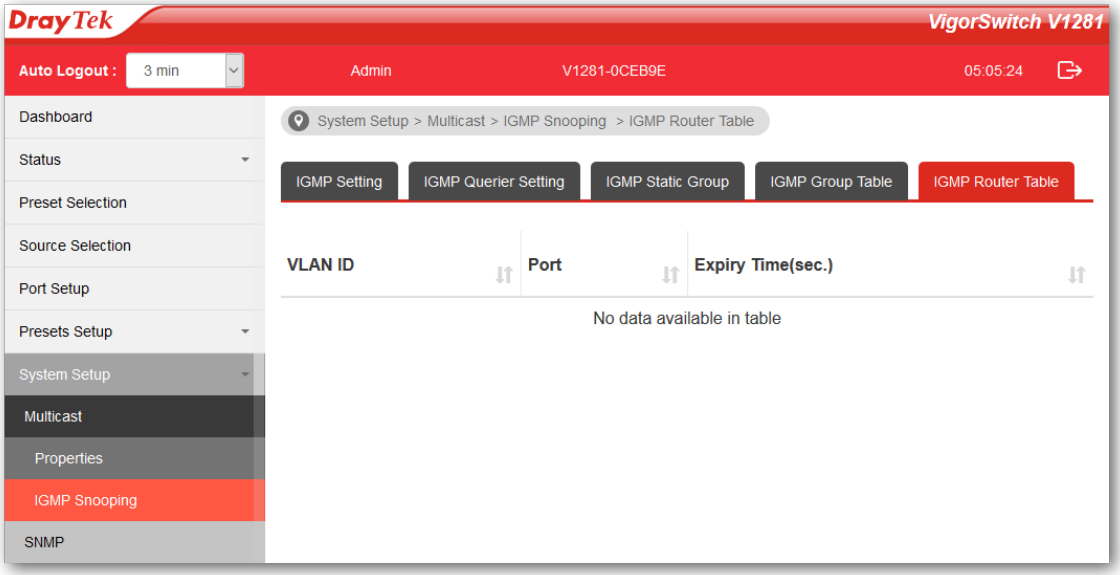


Available settings are explained as follows:

Item	Description
VLAN ID	Display the VLAN of this multicast group belongs to.
Group IP Address	Display the multicast address of this multicast group.
Member Ports	Display the port(s) where subscribing member of this multicast group belongs to.
Type	Display if it is dynamically learned or statically assigned.
Life(sec.)	Display the life time of this multicast member left if no membership report sent again.

III-1-2-5 [IGMP Router Table]

This page shows the IGMP querier router known to this switch.



Available settings are explained as follows:

Item	Description
VLAN ID	Display the VLAN profile that the IGMP querier belongs to.
Port	Display the uplink ports where querier router exists.
Expire Time (sec.)	Display the time before querier is considered no longer existed.

III-2 [SNMP]

Simple Network Management Protocol (SNMP) is an "Internet-standard protocol for managing devices on IP networks". Devices that typically support SNMP include routers, switches, servers, workstations, printers, modem racks and more.

SNMP is used mostly in network management systems to monitor network-attached devices for conditions that warrant administrative attention.

SNMP is a component of the Internet Protocol Suite as defined by the Internet Engineering Task Force (IETF). It consists of a set of standards for network management, including an application layer protocol, a database schema, and a set of data objects.

An SNMP-managed network consists of three key components:

- Managed device
- Agent - software which runs on managed devices
- Network management station (NMS) - software which runs on the manager

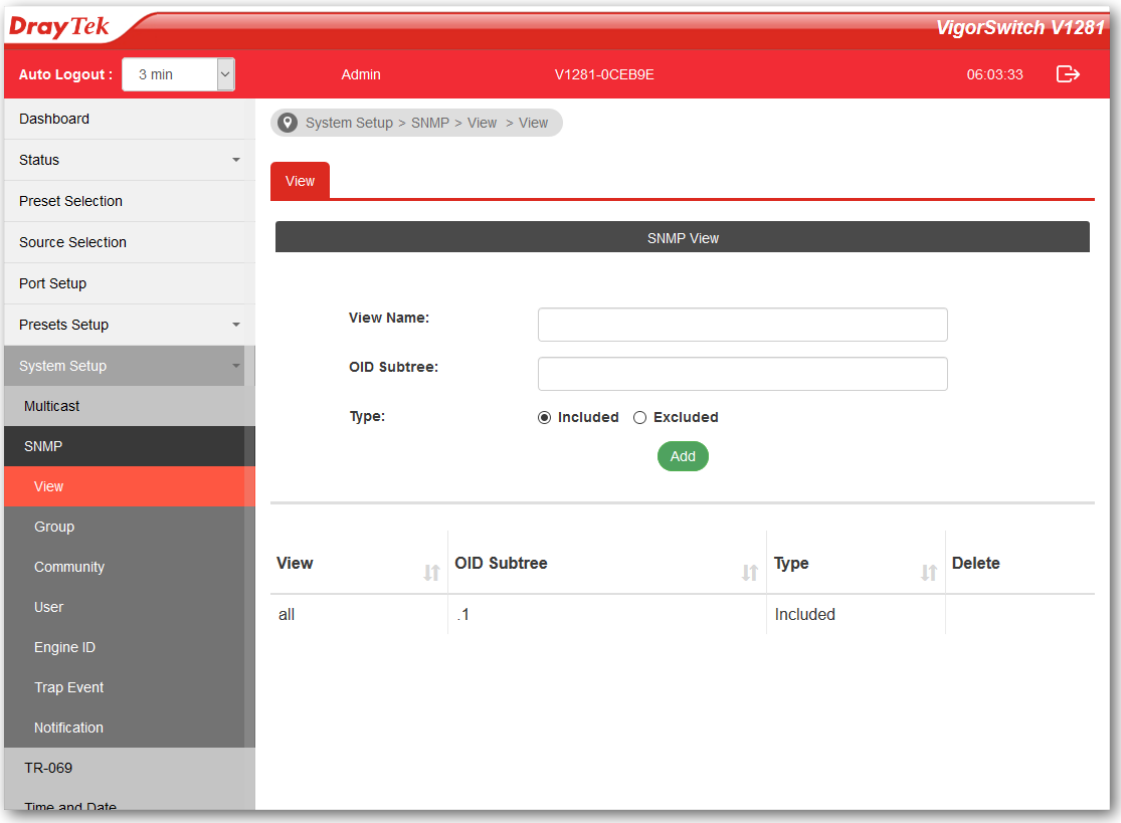
A managed device is a network node that implements an SNMP interface that allows unidirectional (read-only) or bidirectional (read and write) access to node-specific information. Managed devices exchange node-specific information with the NMSs. Sometimes called network elements, the managed devices can be any type of device, including, but not limited to, routers, access servers, switches, bridges, hubs, IP telephones, IP video cameras, computer hosts, and printers.

An agent is a network-management software module that resides on a managed device. An agent has local knowledge of management information and translates that information to or from an SNMP-specific form.

A network management station (NMS) executes applications that monitor and control managed devices. NMSs provide the bulk of the processing and memory resources required for network management. One or more NMSs may exist on any managed network.

III-2-1 [View]

Create MIB views (Management information base) and then include or exclude OID (Object Identifier) in a view.

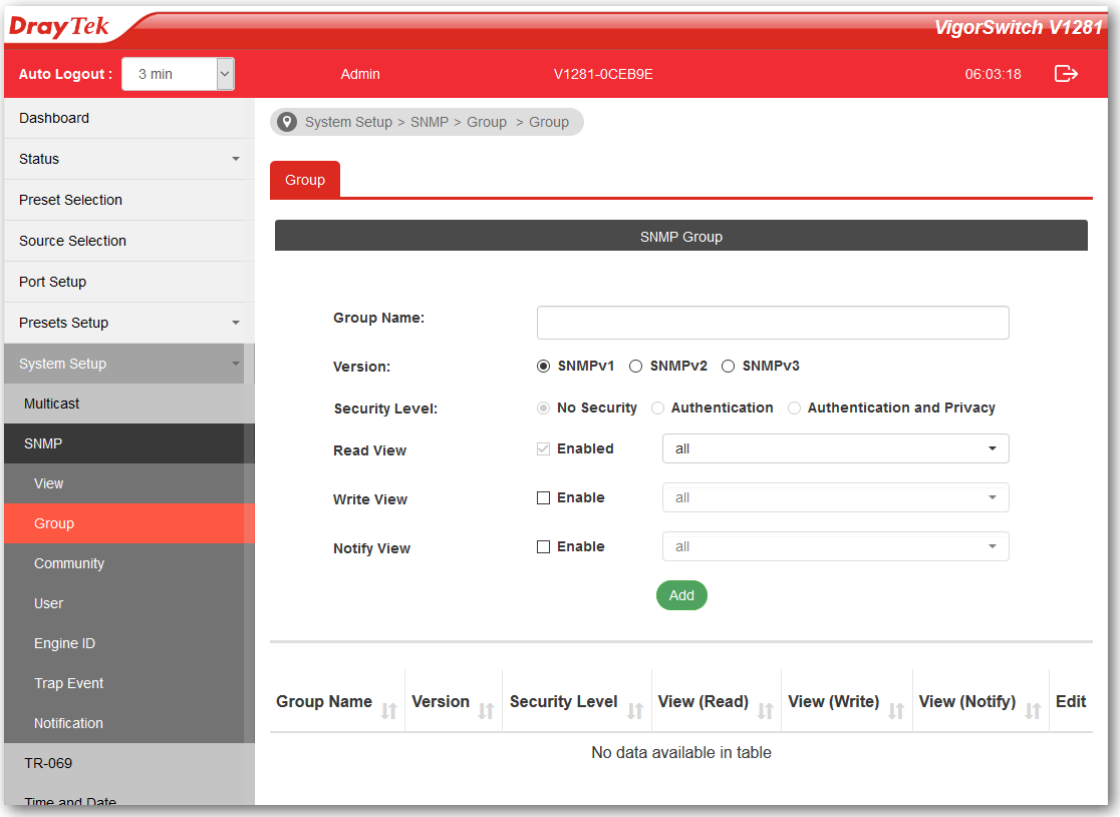


Available settings are explained as follows:

Item	Description
View Name	Enter a name for the MIB view.
OID Subtree	Enter an OID string to be included or excluded from the MIB view.
Type	Determine to include or exclude the selected MIBs.
Apply	Save the settings or changes to the switch.

III-2-2 [Group]

Group SNMP users and assign different authorization and access privileges.

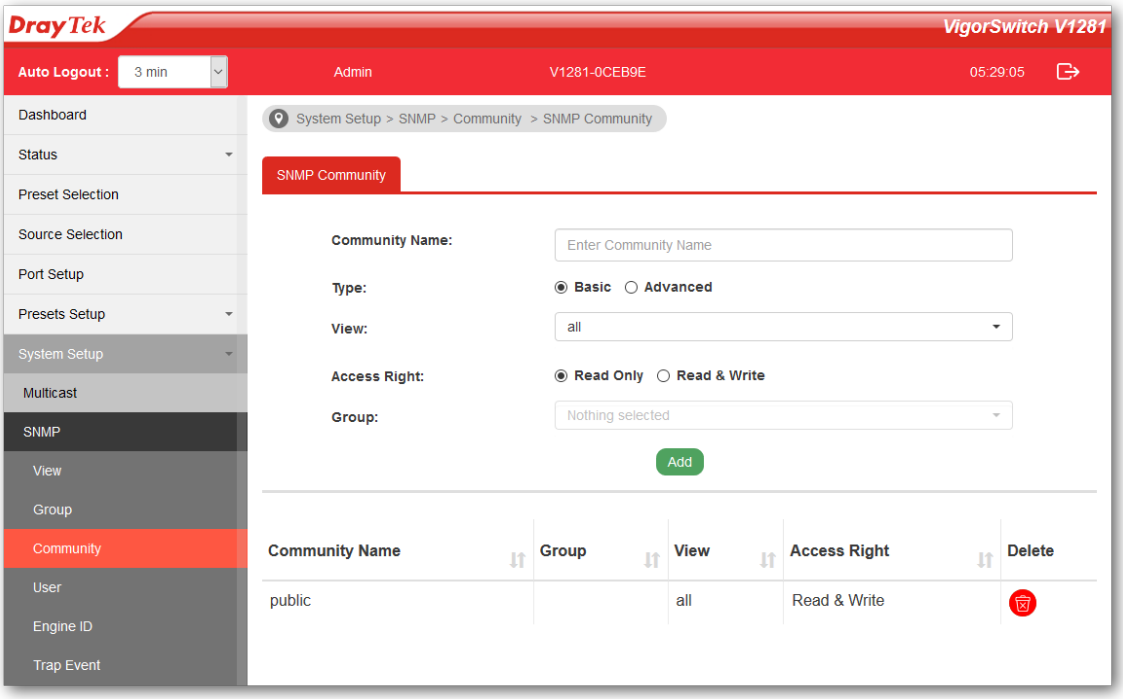


Available settings are explained as follows:

Item	Description
Group Name	Enter a name for the group.
Version	Specify SNMP version.
Security Level	Specify SNMP security level for the group. It is available when SNMPv3 is selected. **No Security** – No authentication and no encryption. **Authentication** – Requires authentication but no encryption. **Authentication and Privacy** –Requires authentication and encryption.
Read View	**Enabled** – Users of this group have the right to read the selected MIB view. Use the drop down list to select one of the views. The default is “all”, which means the group user can read all MIB views.
Write View	**Enabled** – Users of this group have the right to write the selected MIB view. Use the drop down list to select one of the views. The default is “all”, which means the group user can write all MIB views.
Notify View	**Enabled** – Users of this group have the right to send notification for the selected MIB view. Use the drop down list to select one of the views. The default is “all”, which means the group user have the right to send notification for all MIB views.
Add	Click it to create a new group profile.
Edit	Click to modify the settings for the selected group.
	Click to remove the selected group.

III-2-3 [Community]

Add / remove multiple SNMP communities.

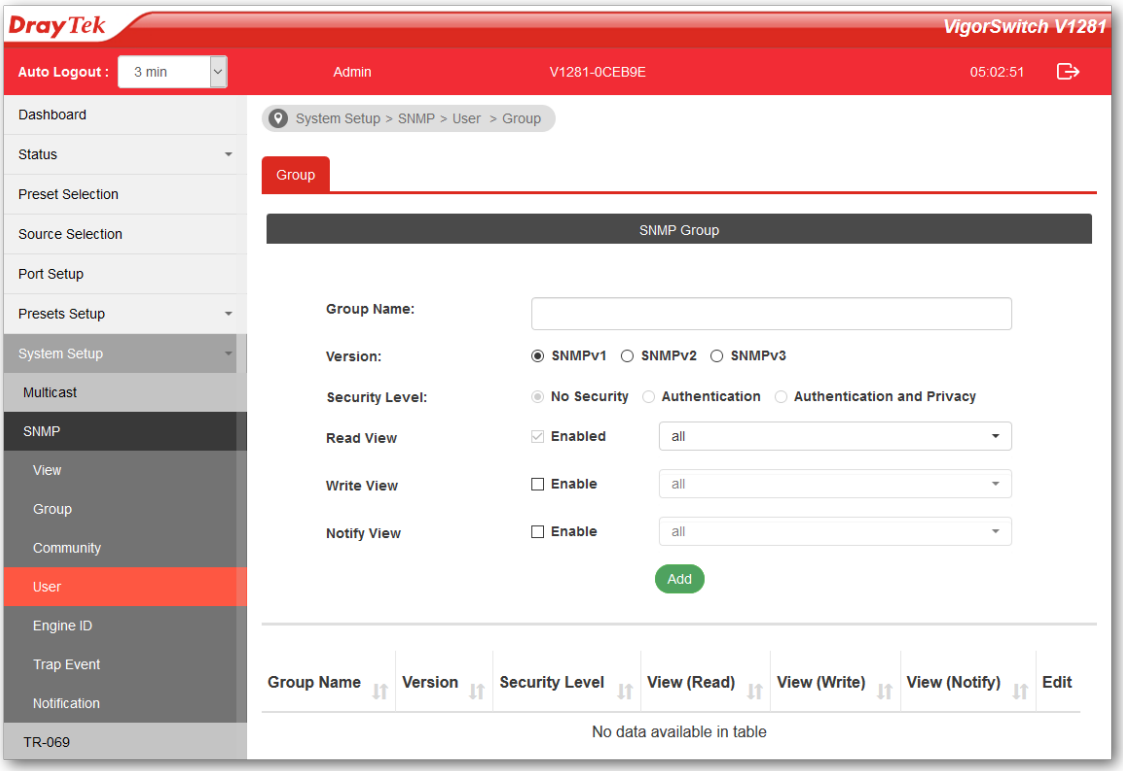


Available settings are explained as follows:

Item	Description
Community Name	Enter a name as community name. The maximum length of the text is limited to 23 characters.
Type	**Basic** – View and access right can be specified for such SNMP community profile. **Advanced** – Specify one of the SNMP groups for such SNMP community profile.
View	Simply specify one of the view profiles (created in **SNMP>>View**) from the drop down list.
Access Right	**Read Only** – It allows unidirectional access to node-specific information. **Read & Write** - It allows bidirectional access to node-specific information.
Group	Specify the SNMP group configured by user (**SNMP>>Group**) to define the object available to the community.
Add	Click it to add a new community.
Edit	Click the icon under Edit to remove the selected community strings.

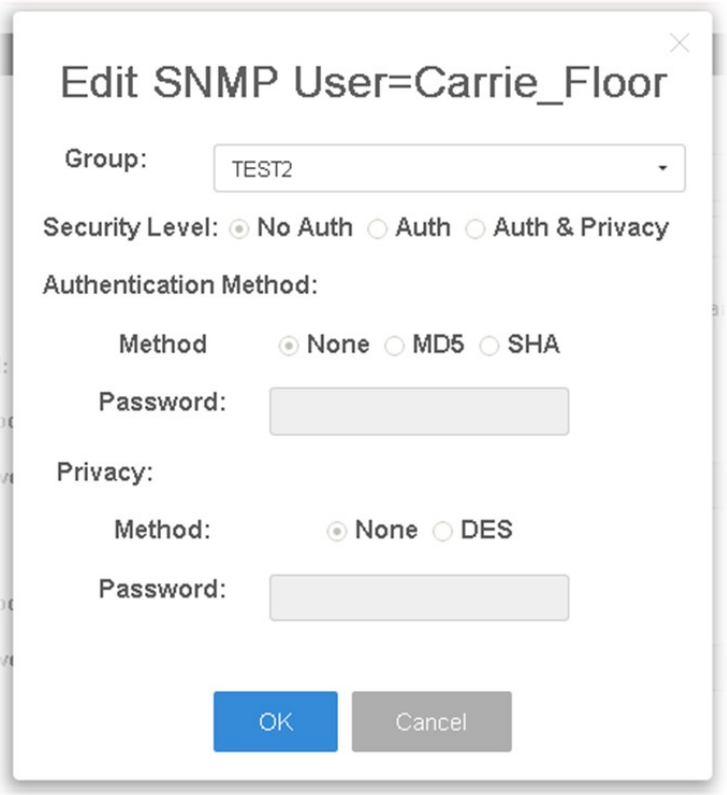
III-2-4 [User]

Configure SNMP user profiles – this requires configuration of an SNMP Group for the user profile to be assigned to, before proceeding with User profile configuration.



Available settings are explained as follows:

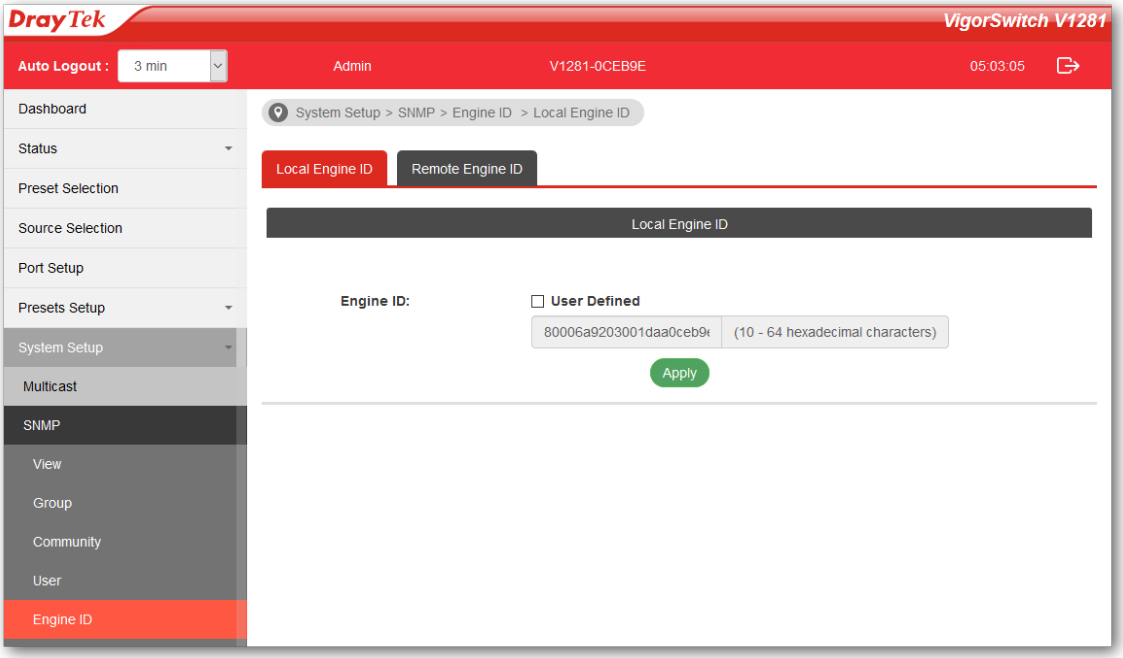
Item	Description
User Name	Enter a name for creating new SNMP user.
Group	Choose one of the SNMP group from the drop down list. Then, this user profile will be grouped under the selected SNMP group.
Security Level	Specify SNMP security level for the group. It is available when SNMPv3 is selected. **No Security** – No authentication. **Authentication** – Authentication without encryption will be performed for packets. **Authentication and Privacy** – Authentication with encryption will be performed for packets.
Authentication Method	It is available when **Authentication** or **Authentication and Privacy** is selected as security level. **Method** – At present, available methods include None, MD5 and SHA. **Password** – Enter a password for the selected method.
Privacy	It is available when **Authentication** or **Authentication and Privacy** is selected as security level. **Method** –At present, available methods include DES and None. **Password** - Enter a password for the selected method.

Add	Click to add a new user profile.
Edit	Click to modify the settings for the selected profile. 
	Click to remove the selected entry.

III-2-5 [Engine ID]

III-2-5-1 [Local Engine ID]

Configure and display SNMP local engine ID.

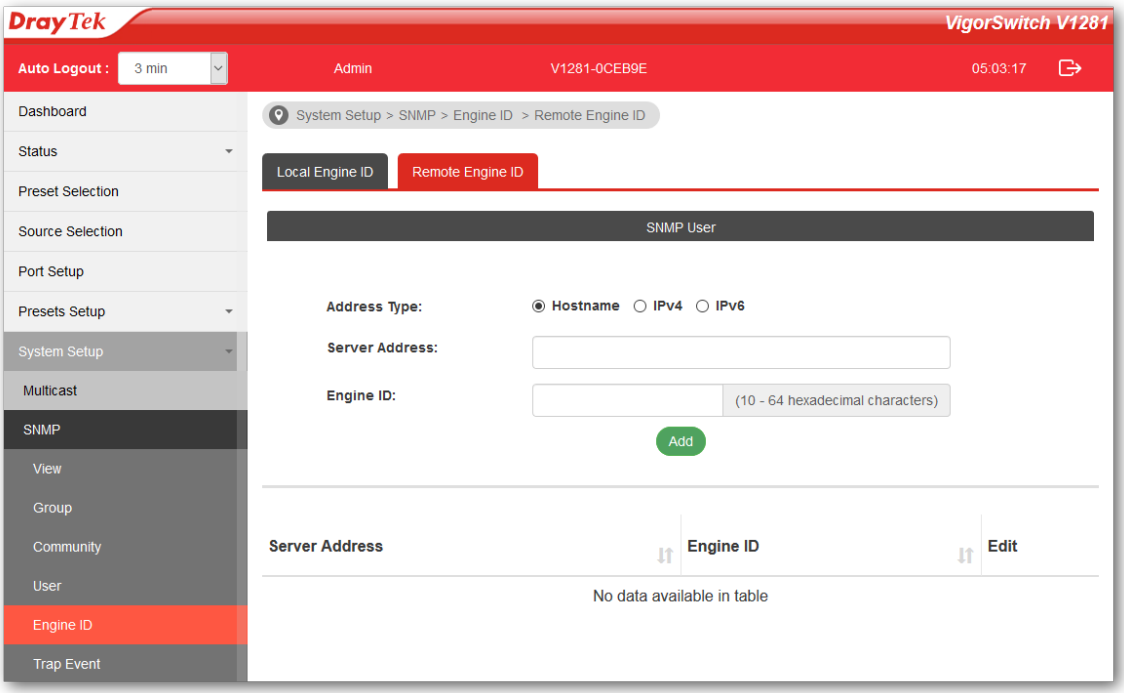


Available settings are explained as follows:

Item	Description
Engine ID	The user defined engine ID is range 10 to 64 hexadecimal characters, and the hexadecimal number must be divided by "2". **User Defined** - If it is checked, the local engine ID will be configured manually. If not, the default Engine ID which is made up of MAC and Enterprise ID will be used instead.
Apply	Apply the settings to the switch.

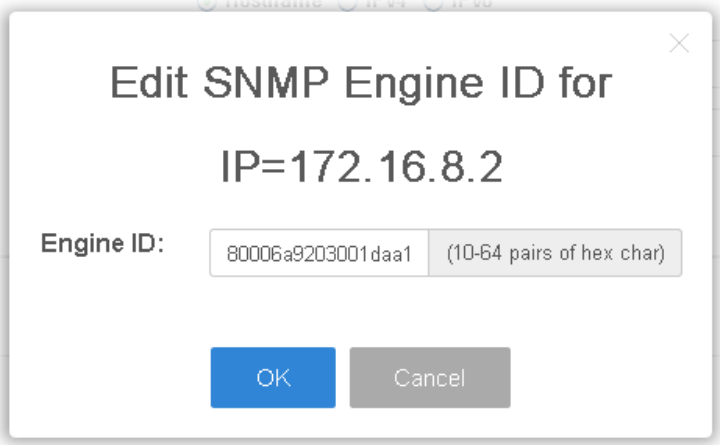
III-2-5-2 [Remote Engine ID]

Configure and display SNMP remote engine ID.



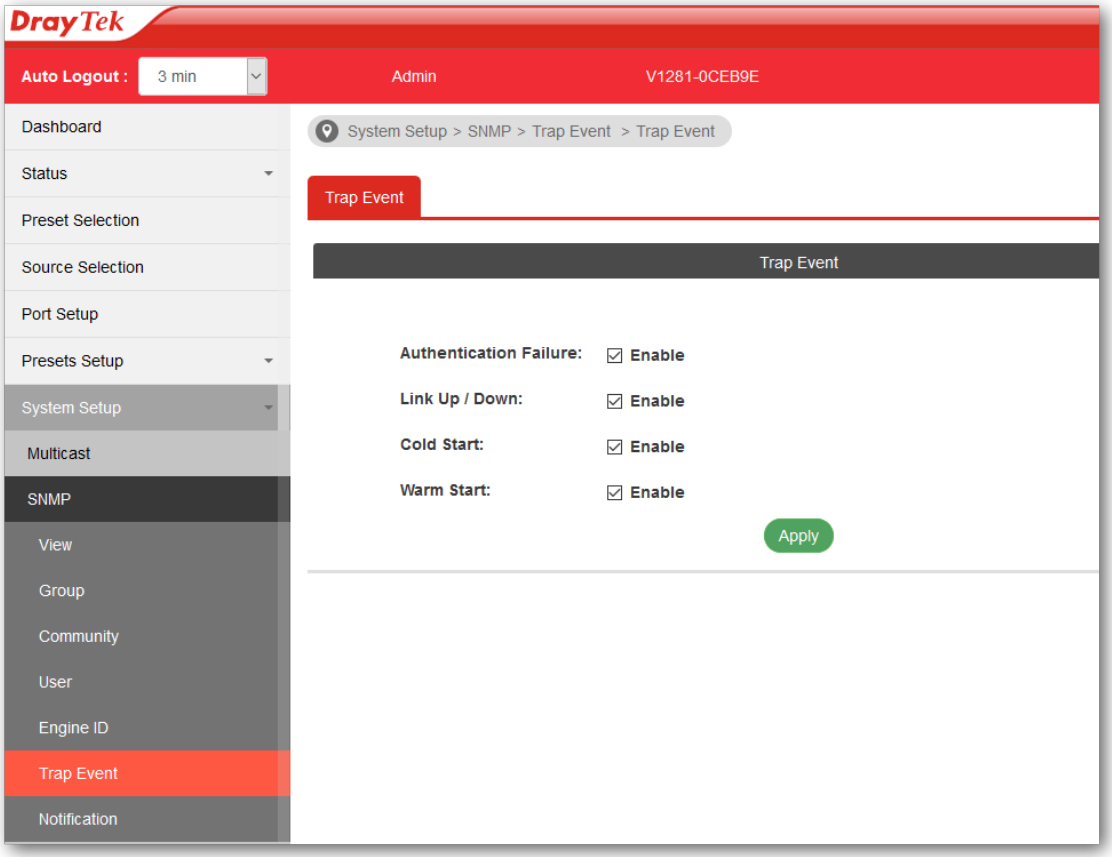
Available settings are explained as follows:

Item	Description
Address Type	Specify the address type for entering hostname or IPv4/IPv6 address.
Server Address	Enter the IP address or the host name of the SNMP server.
Engine ID	Specify the engine ID for remote SNMP server. The engine ID is range10 to 64 hexadecimal characters, and the hexadecimal number must be divided by 2.

Add	Click it to create a new profile.
Edit	Click to modify the settings for the selected server profile. 
	Click it to remove the selected entry.

III-2-6 [Trap Event]

Add or delete SNMP trap receiver IP address and community name.

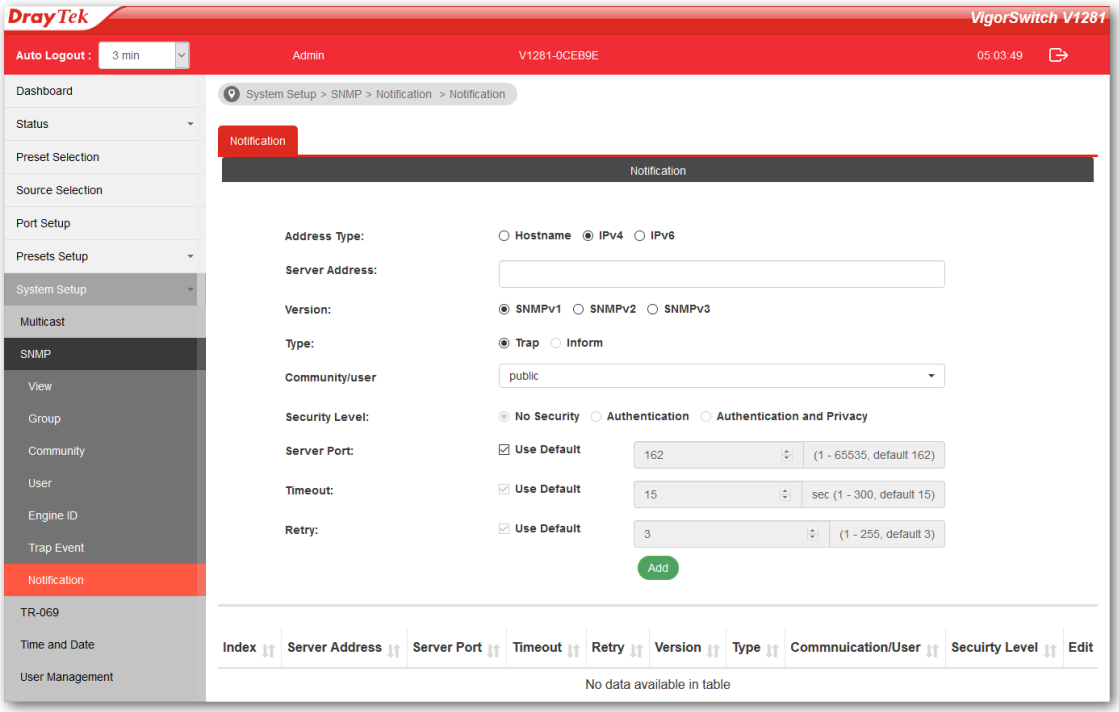


Available settings are explained as follows:

Item	Description
Authentication Failure	**Enable** - VigorSwitch will reboot when encountering authentication failure (including community not match or user password not match).
Link Up / Down	**Enable** - VigorSwitch will reboot while encountering port link up or down trap.
Cold Start	**Enable** - VigorSwitch will reboot while encountering user trap.
Warm Start	**Enable** - VigorSwitch will reboot while encountering power down trap.
Apply	Apply the settings to the switch.

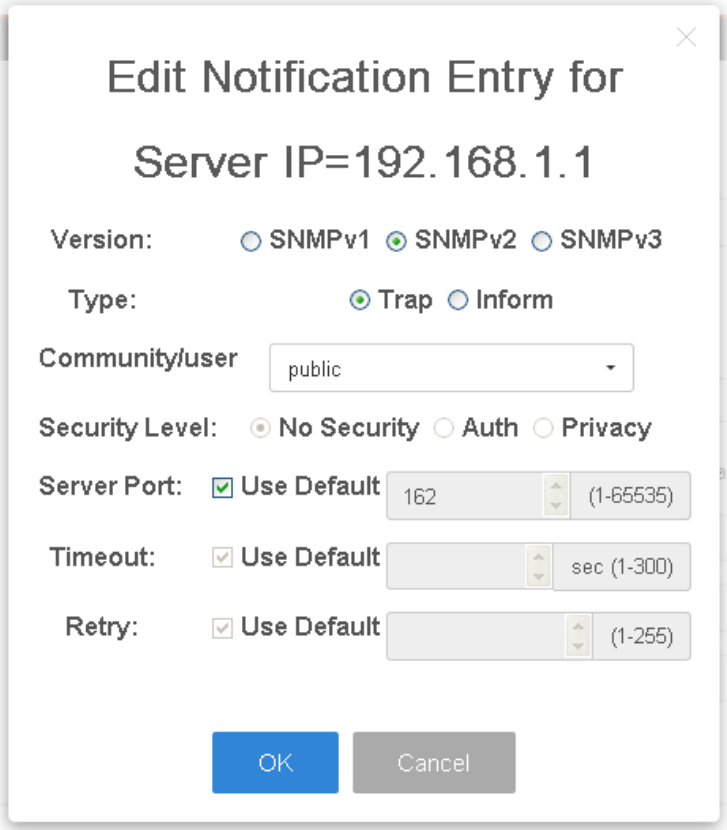
III-2-7 [Notification]

Configure hosts to receive SNMP v1/v2/v3 notifications.



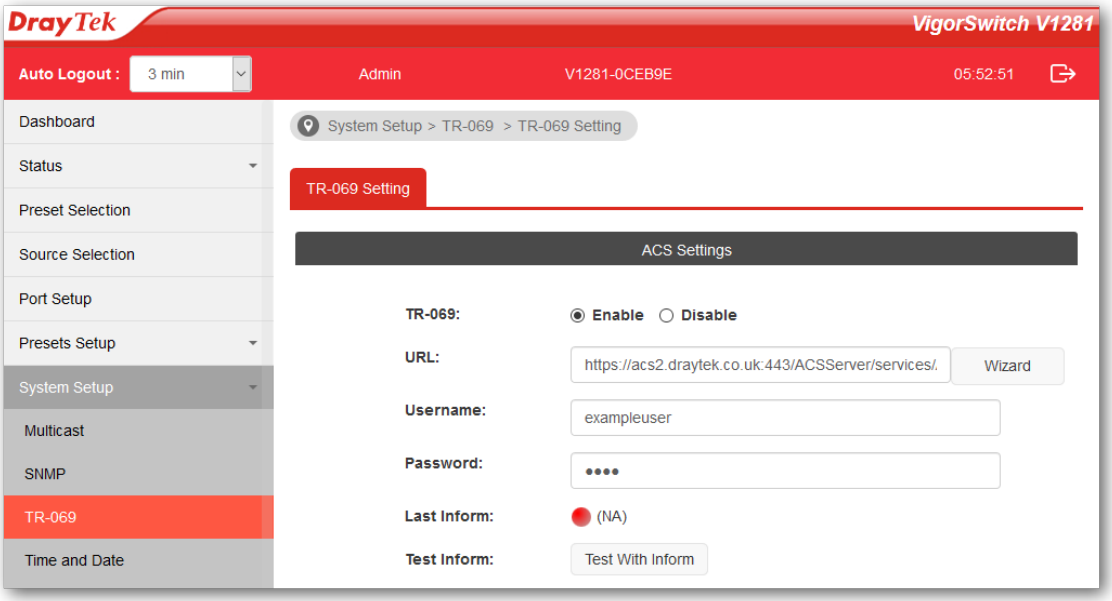
Available settings are explained as follows:

Item	Description
Address Type	Choose IPv4/IPv6/Hostname to specify IP address or the hostname of the SNMP trap recipients.
Server Address	Enter the IP address of SNMP server based on the address type selected above.
Version	Specify SNMP notification version (SNMPv1/v2/v3).
Type	Specify Notification Type. **Trap** -Send SNMP traps to the host. **Inform** - Send SNMP informs to the host. If it is used, Timeout and Retry also shall be defined.
Community/user	Use the drop down list to choose one of the community profiles.
Security Level	Specify SNMP security level for SNMP notification packet. It is available when SNMPv3 is selected. **No Security** - No authentication. **Authentication** - Authentication without encryption will be performed for packets. **Authentication and Privacy** - Authentication with encryption will be performed for packets.
Server Port	Specify the UDP port number for the recipient's server. **Use Default** - If it is checked, the default number (162) will be used automatically.
Timeout	Specify the SNMP informs timeout. It is available when

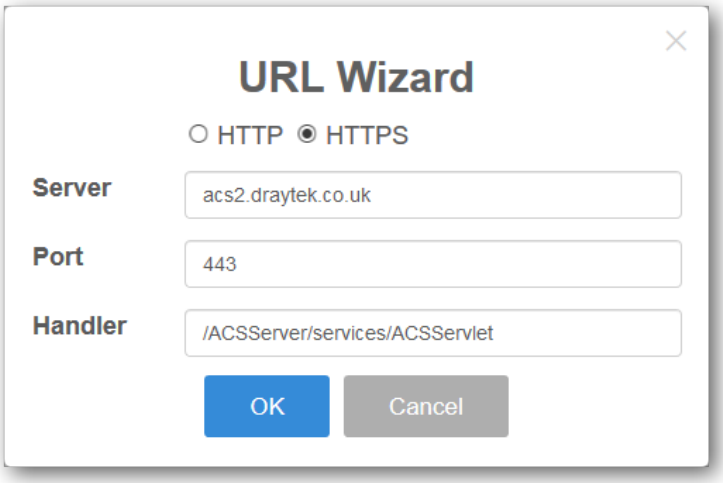
	Inform is selected as **Type**. **Use Default** - If it is checked, the default number (15) will be used automatically.
Retry	Specify the SNMP informs retry count. It is available when Inform is selected as Type. Use Default - If it is checked, the default number (3) will be used automaticallty.
Add	Click it to create a new notification profile.
Edit	Click to modify the settings for the selected server profile. 
	Click to remove the selected entry.

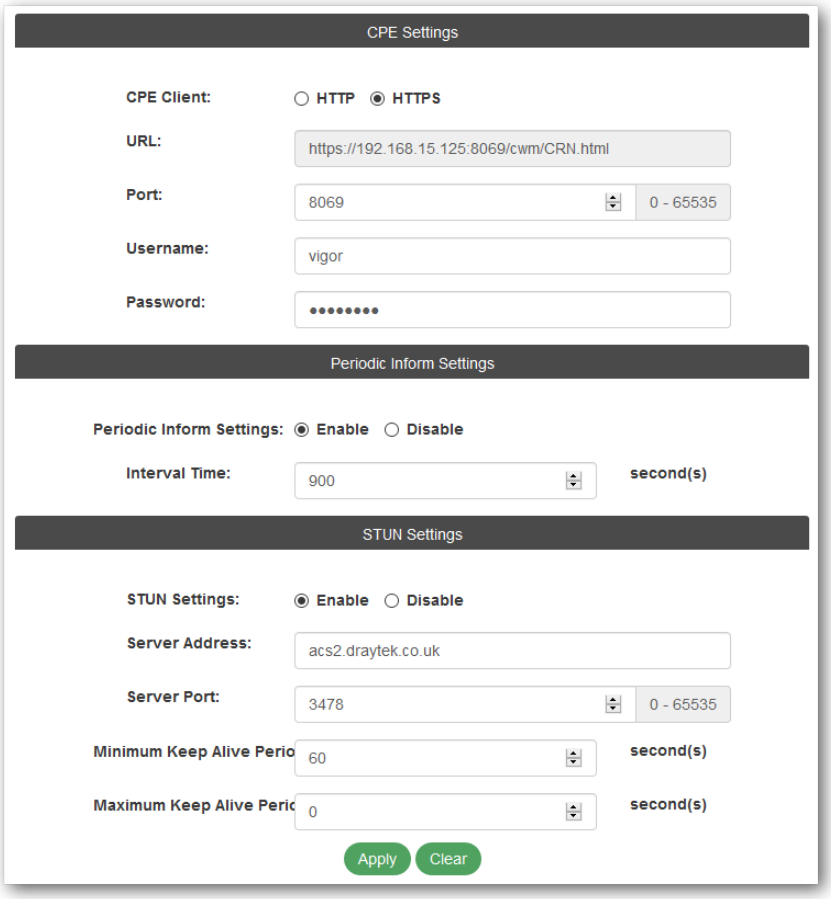
III-3 [TR-069]

Configure TR-069 settings to connect the VigorSwitch to a VigorACS server for remote management.



Available settings are explained as follows:

Item	Description
ACS Server	**URL/Username/Password** - Please refer to your VigorACS / Auto Configuration Server user's manual for detailed information. **Wizard** - Click this button to open the wizard, which is used to generate the full URL for connection to your VigorACS server, with the IP/Hostname and port number.  **Last Inform** - Displays connection status and the time of the most recent connection to the VigorACS server. **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.

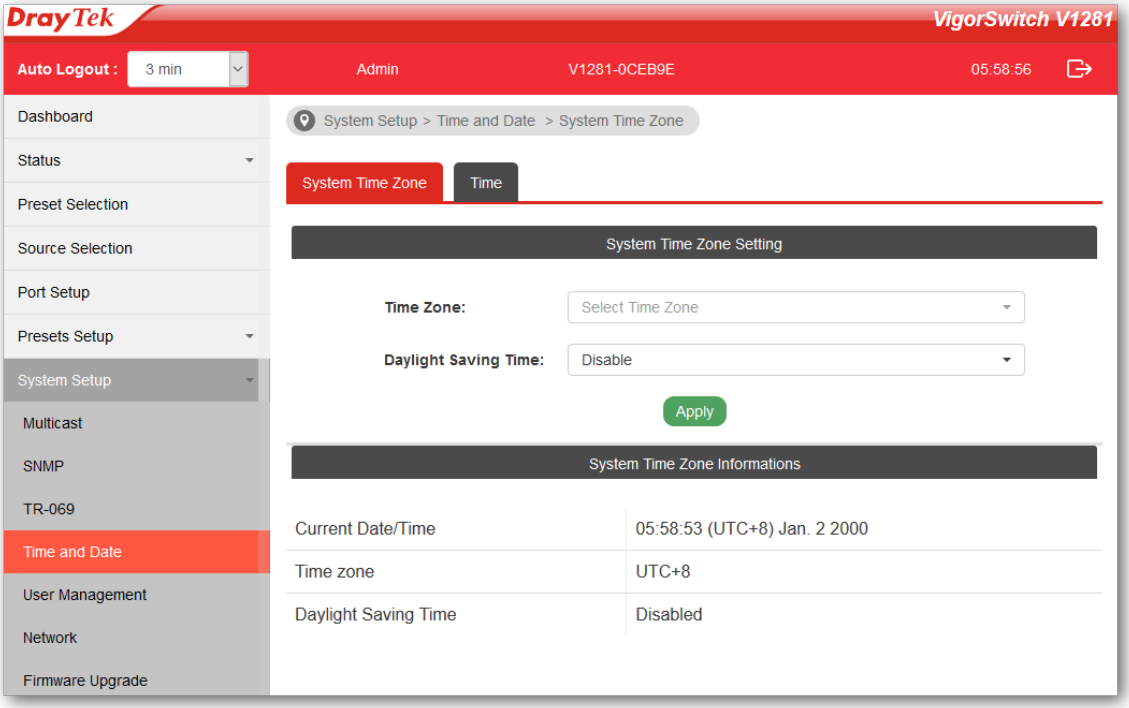


CPE Client	Such information is useful for Auto Configuration Server. **Enable/Disable** – Allow/Deny the CPE Client to connect with Auto Configuration Server. **Port** – Sometimes, port conflict might be occurred. To solve such problem, you might change port number for CPE. **Username** and **Password** – Type the username and password that VigorACS can use to access into such CPE.
Periodic Inform Settings	The default setting is **Enable**. Please set interval time or schedule time for the router to send notification to CPE. Or click **Disable** to close the mechanism of notification.
STUN Settings	Session Traversal Utilities for NAT (STUN) assists the VigorSwitch in passing through a network connection with NAT (Network Address Translation). This should typically be **enabled**. **Server IP** - Type the IP address of the ACS server. **Server Port** - Type the port number of the STUN server, typically 3489 **Minimum Keep Alive Period** - 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 “0” indicates that no maximum period is specified.
Appl	Apply the settings to the switch.

III-4 [Time and Date]

III-4-1 [System Time Zone]

This page allows a user to specify where the time of VigorSwitch should be inquired from.



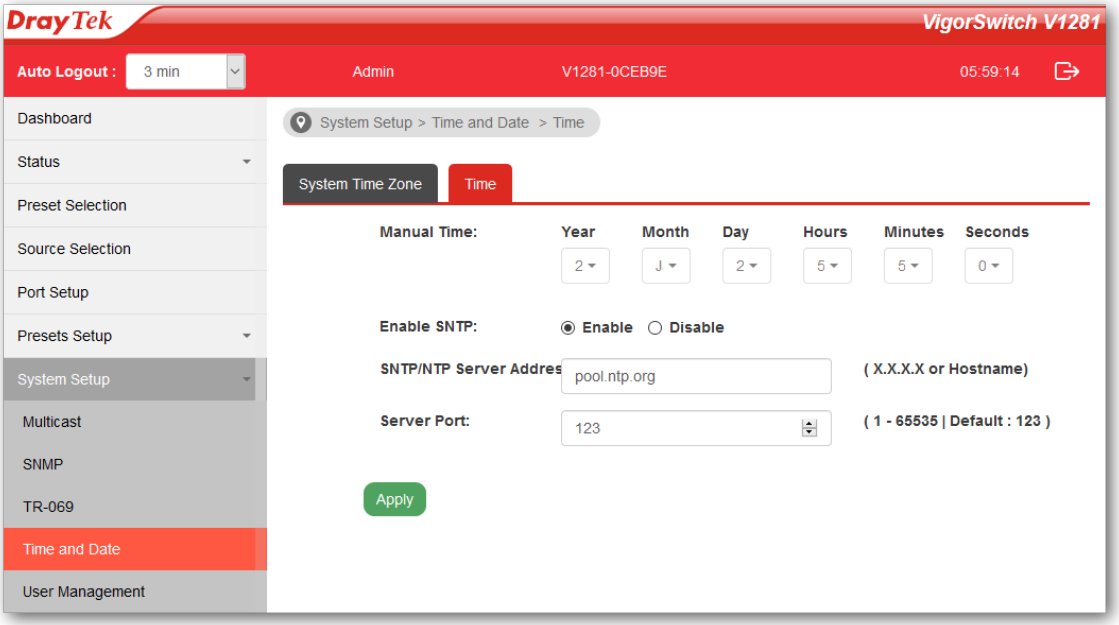
Available settings are explained as follows:

Item	Description
System Time Zone Setting	
Time Zone	Use the drop down menu to select a time zone that VigorSwitch is located.
Daylight Saving Time	Select the mode of daylight saving time. **Disable** –Disable daylight saving time. **Recurring** - Using recurring mode of daylight saving time. **Non-Recurring** – Using non-recurring mode of daylight saving time. **USA** –Using daylight saving time in the United States that starts on the second Sunday of March and ends on the first Sunday of November. **European** - Using daylight saving time in the Europe that starts on the last Sunday.
Daylight Saving Time Offse	It is available when **Recurring** is selected as Daylight Saving Time. Specify the adjust offset of daylight saving time.
Recurring From / To	It is available when **Recurring** is selected as Daylight Saving Time. **From** - Specify the starting time of recurring daylight saving time.

	To - Specify the ending time of recurring daylight saving time.
Non-recurring From / To	It is available when **Non-Recurring** is selected as Daylight Saving Time. **From** - Specify the starting time of non-recurring daylight saving time. **To** - Specify the ending time of recurring daylight saving time.
Apply	Save the settings or changes to the switch.
System Time Zone Informations	Display the status of system time zone.

III-4-2 [Time]

Configure the Time and Date on the VigorSwitch manually, or specify an NTP (Network Time Protocol) server for the VigorSwitch to fetch the time from the specified server.

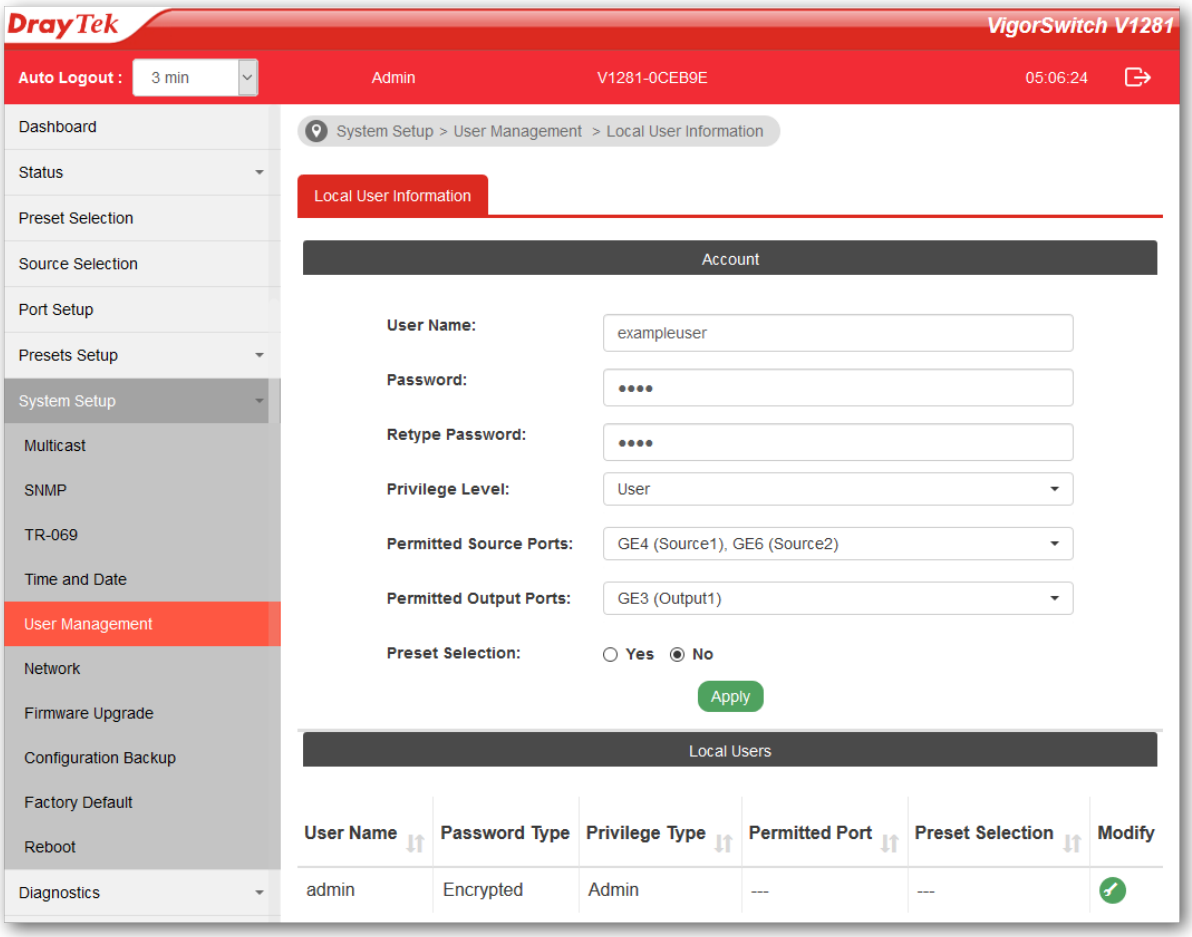


Available settings are explained as follows:

Item	Description
Manual Time	Specify static time (year, month, day, hours, miniutes and seconds) manually.
Enable SNTP	**Enable** – Click it to enable SNTP time server. **Disable** – Click to disable the time server.
SNTP/NTP Server Address	Enter the web site of the time server or the IP address of the server.
Server Port	Enter the port number use by the time server.
Apply	Save the settings or changes to the switch.

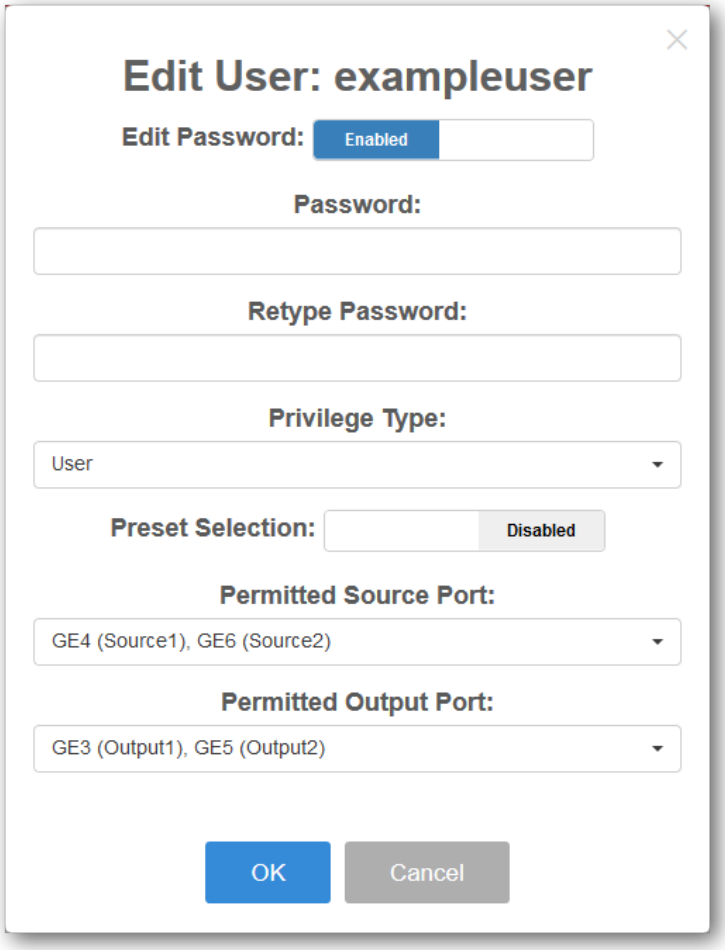
III-5 [User Management]

The User Management interface can create and manage both **Admin** and **User** level accounts.



Available settings are explained as follows:

Item	Description
User Name	Enter a username for new account. This can not be changed after account creation. If you want to modify an existing user account, simply enter the same string in this field. Then, modify the password and choose privilege level. After clicking **Apply**, the existing user name will be modified with different values.
Password	Enter a password for new account.
Retype Password	Retype password to make sure the password is exactly you typed before in “Password” field.
Privilege Level	Use the drop down list to select privilege level (Admin/User) for new account. **Admin** - Allow to change switch settings. **User** – Can select Presets or Sources.

Apply	Save the settings or changes to the switch.
Modify	- Click this to modify the settings for an existing account.  **Edit Password** – Enable this option to show the Password fields. **Password** – If Edit Password is enabled, enter a new password for the account. **Retype Password** – If Edit Password is enabled, re-enter the new password for the account. **Privilege Type** – Select Admin/User privileges for the account. **Preset Selection** (Users only) – Enable this to allow the account to select the Preset active on the VigorSwitch. Enabling this option disables the *Permitted Source/Ouput Port* options. **Permitted Source Port** (Users only) – Select the Source ports that the account is allowed to view and modify the settings with. **Permitted Output Port** (Users only) – Select the Output ports that the account is allowed to view and modify the settings with. Click **OK** to save the settings, or **Cancel** to cancel editing.

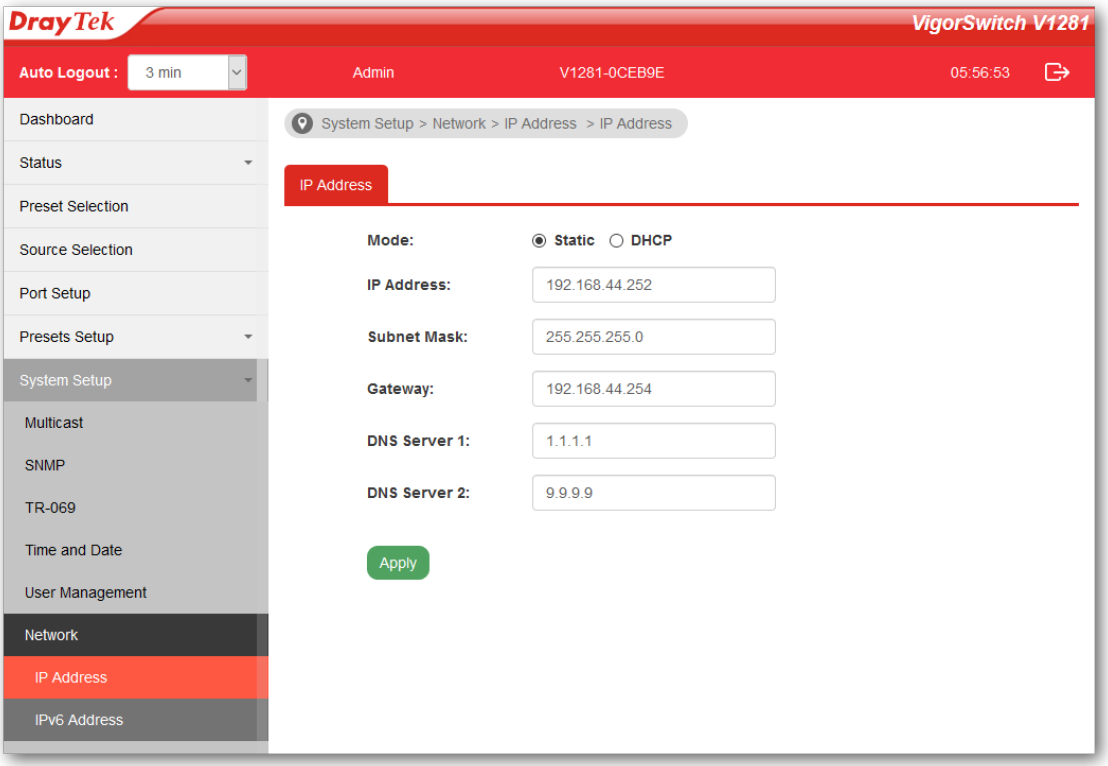
III-6 [Network]

III-6-1 [IP Address]

Use the IP Address screen to configure the switch IP address and the default gateway device. The gateway field specifies the IP address of the gateway (next hop) for outgoing traffic.

The switch needs an IP address for it to be managed over the network. The factory default IP address is 192.168.1.224. The subnet mask specifies the network number portion of an IP address. The factory default subnet mask is 255.255.255.0.

Info	If VigorSwitch has connected to Vigor router, it will use the IP address obtained from the DHCP server on Vigor router. Thus, the user must type the assigned IP as URL for accessing into the web user interface of VigorSwitch. If not, 192.168.1.224 shall be the default IP.



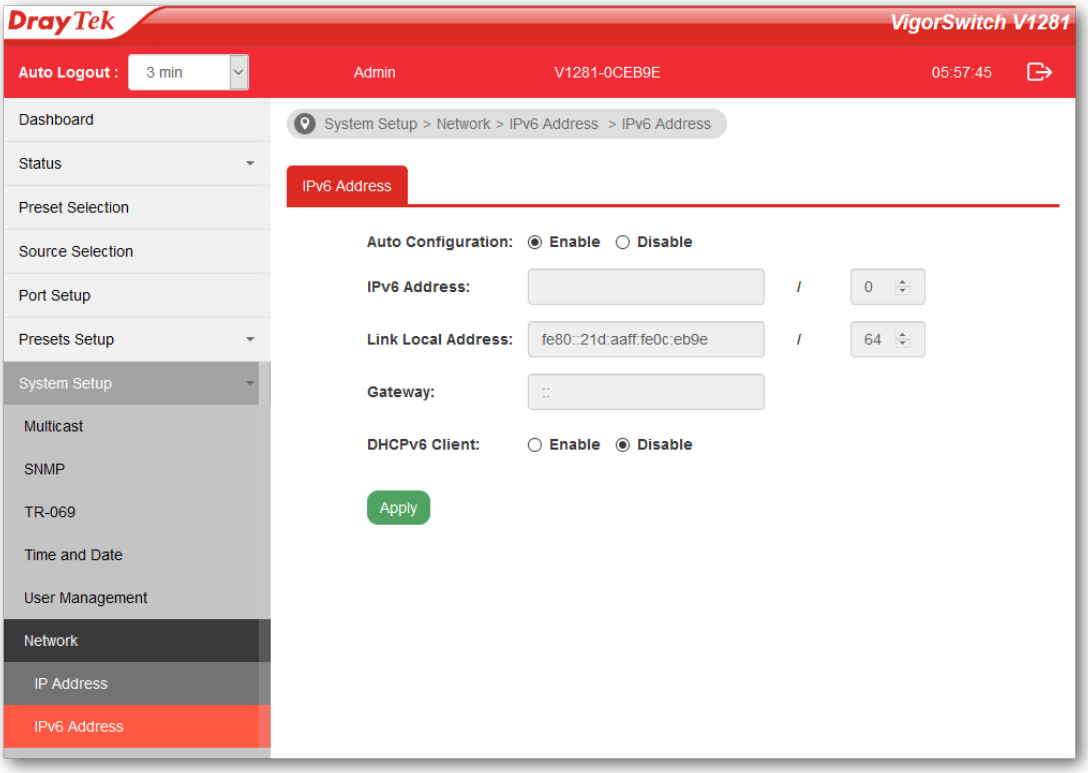
Available settings are explained as follows:

Item	Description
Mode	Select the mode of network connection. **Static**- Use static IPv4 address. **DHCP** – Use DHCP provisioned IP address and Gateway if feasible.
IP Address	*Only available when **Static** is selected as **Mode**.* Enter the IP address of your switch in dotted decimal notation for example 192.168.1.224. If static mode is enabled, enter IP address in this field.
Subnet Mask	*Only available when **Static** is selected as **Mode**.*

	Enter the IP subnet mask of your switch in dotted decimal notation for example 255.255.255.0. If static mode is enabled, enter subnet mask in this field.
Gateway	*Only available when **Static** is selected as **Mode**.* Enter the IP address of the gateway in dotted decimal notation. If static mode is enabled, enter gateway address in this field.
DNS Server 1	*Only available when **Static** is selected as **Mode**.* If static mode is enabled, enter primary DNS server address in this field.
DNS Server 2	*Only available when **Static** is selected as **Mode**.* If static mode is enabled, enter secondary DNS server address in this field.
Apply	Save the settings or changes to the switch.

III-6-2 [IPv6 Address]

Use the IPv6 Address screen to configure the switch IPv6 address and the default gateway device. The gateway field specifies the IPv6 address of the gateway (next hop) for outgoing traffic.

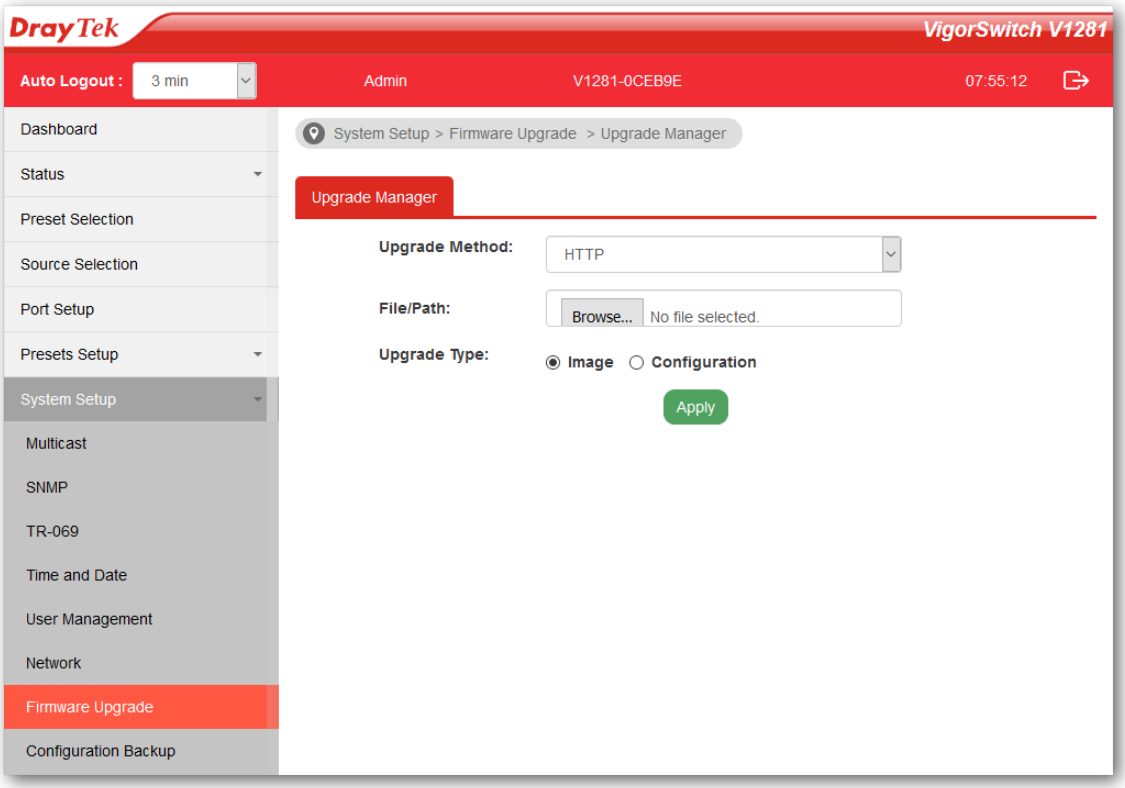


Available settings are explained as follows:

Item	Description
Auto Configuration	**Enable** - Check it to let switch automatically configure IPv6 address.
IPv6 Address	It is available when **Auto Configuration** is **Disable**. Enter the IPv6 address of your switch. If auto configuration mode is disabled, enter IPv6 address in this field.
Link Local Address	It is available when **Auto Configuration** is **Disable**. Type
Gateway	It is available when **Auto Configuration** is **Disable**. Enter the IPv6 address of the router as your default IPv6 gateway to access IPv6 Internet or other IPv6 network.
DHCPv6 Client	Enable this feature if there is a DHCPv6 server on your network for assigning IPv6 Address, instead of using Router Advertisement.
Apply	Save the settings or changes to the switch.

III-7 [Firmware Upgrade]

Backup Manager allows a user to upgrade the firmware image or configuration file on the switch to remote TFTP server or host file system through HTTP protocol.

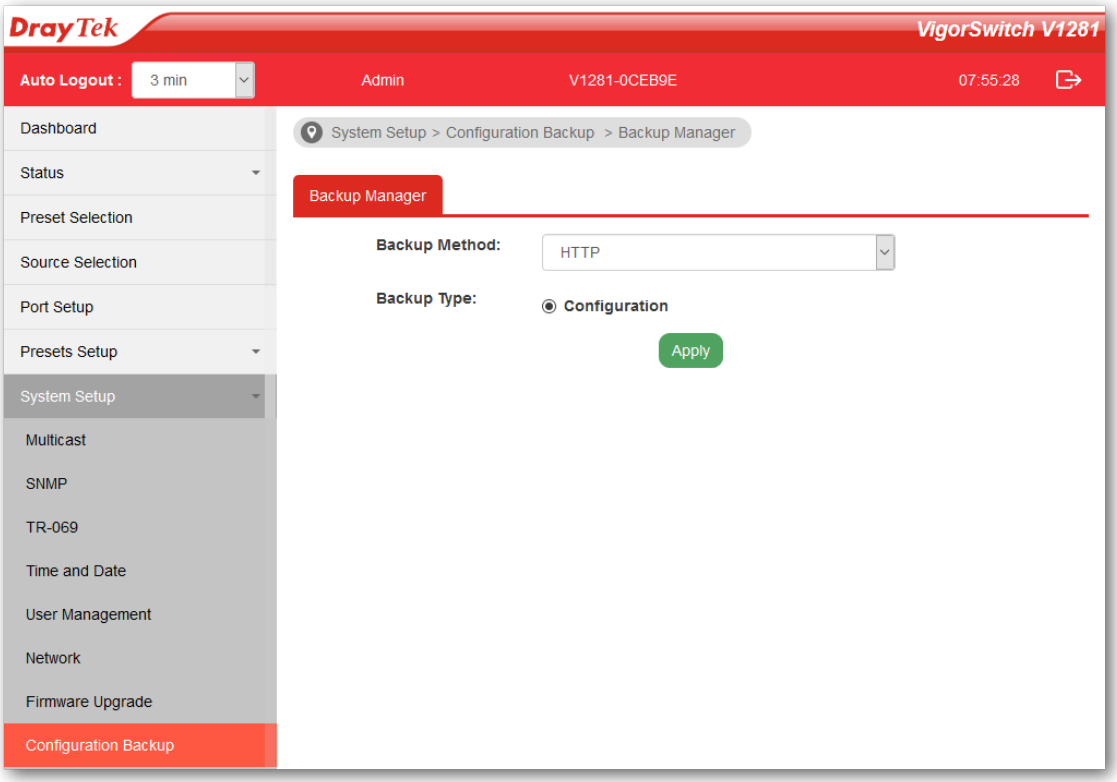


Available settings are explained as follows:

Item	Description
Upgrade Method	Select Upgrade method: **TFTP** - Using TFTP to upgrade firmware. **HTTP** - Using WEB browser to upgrade firmware.
Server IP	*Available when TFTP is selected as Upgrade Method.* Enter the IPv4/IPv6 address for the TFTP server.
File Name	*Available when TFTP is selected as Upgrade Method.* Enter the firmware image or configuration file name on the TFTP server.
File/Path	*Available when **HTTP** is selected as Upgrade Method.* Choose the firmware file located in your computer.
Upgrade Type	*Available when TFTP is selected as Upgrade Method.* **Image** – Click it to upgrade the firmware image. **Configuration** – Click to upload a configuration file to VigorSwitch.
Apply	Start the Firmware Upgrade process.

III-8 [Configuration Backup]

Backup Manager allows a user to backup the firmware image or configuration file on the switch to remote TFTP server or host file system through HTTP protocol.



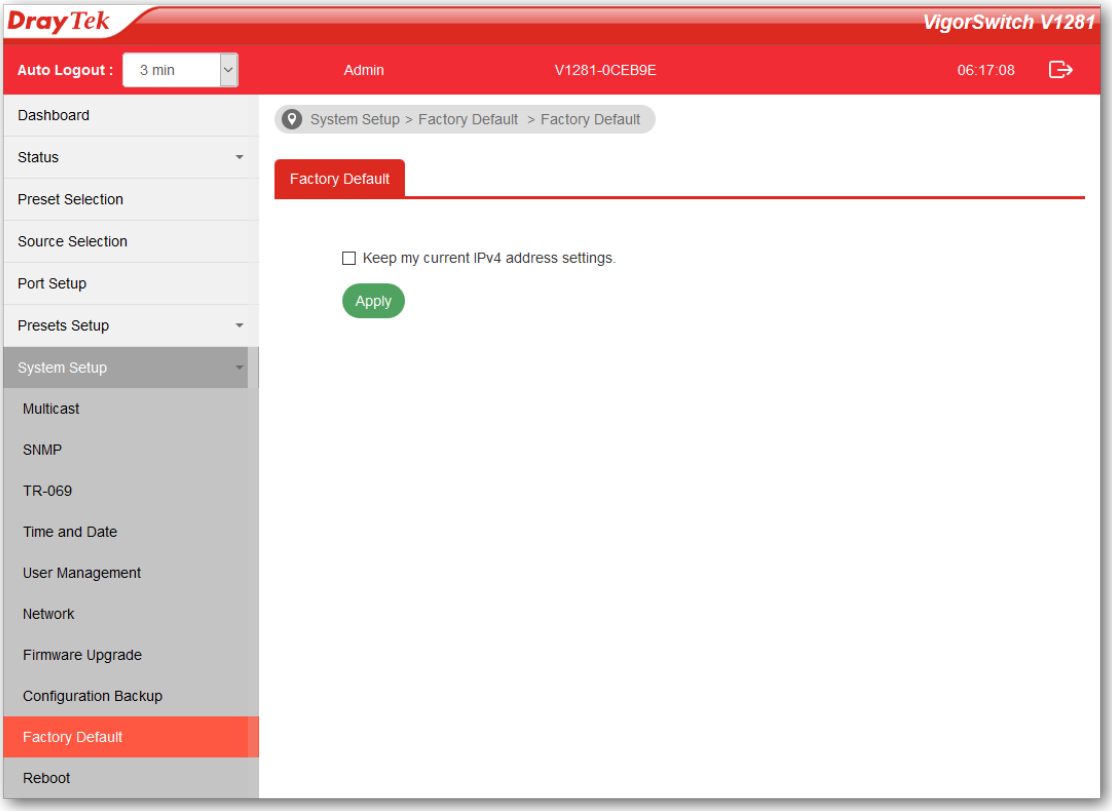
Available settings are explained as follows:

Item	Description
Backup Method	Select Backup method. **TFTP** - Using TFTP to backup the VigorSwitch configuration. **HTTP** - Using WEB browser to backup the VigorSwitch configuration.
Server IP	*Available when TFTP is selected as Backup Method.* Enter the IPv4/IPv6 address for the TFTP server.
Backup Type	**Configuration** – Make a backup copy of the VigorSwitch configuration.
Apply	Click **Apply** to start the configuration backup process – if HTTP is selected, the browser will prompt to download and save the configuration file.

III-9 [Factory Default]

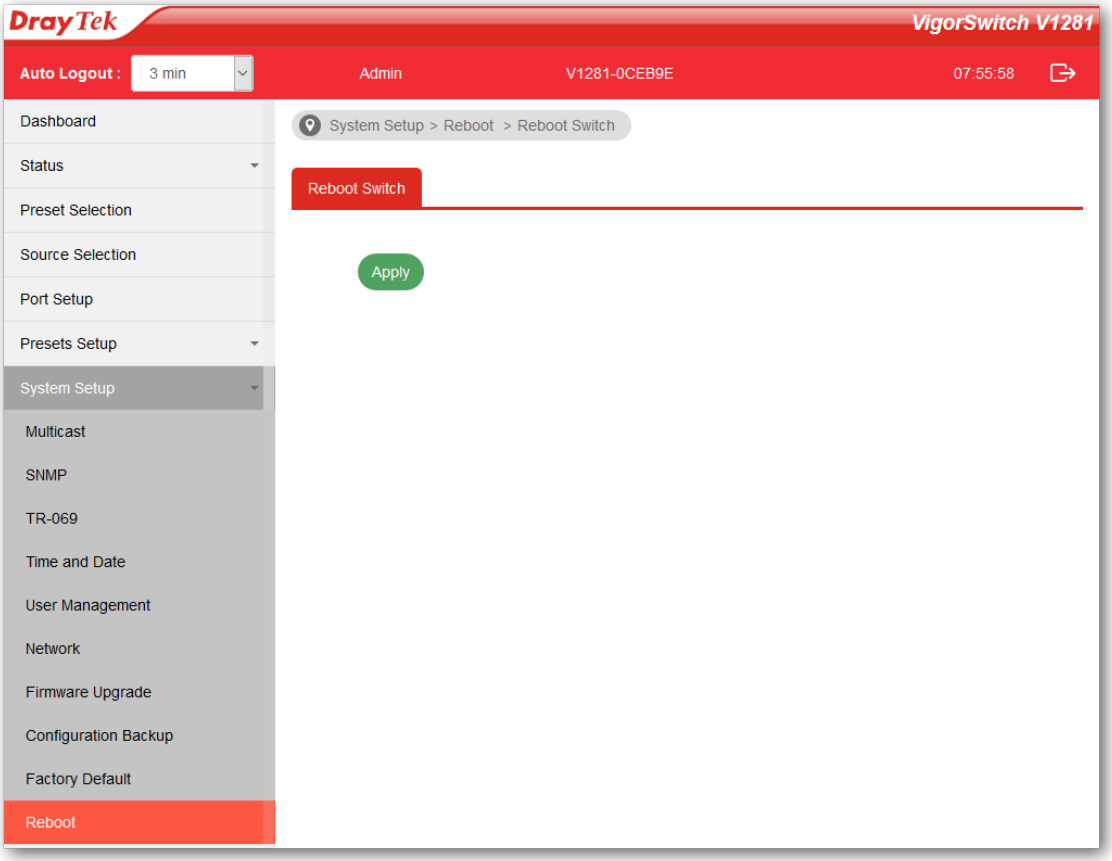
Click **Apply** to return to factory default settings for VigorSwitch.

Tick the **Keep my current IPv4 address settings** option to retain the current static/ DHCP IP address configuration of the VigorSwitch when performing the factory reset.



III-10 [Reboot]

Click **Apply** to reboot VigorSwitch with current settings.

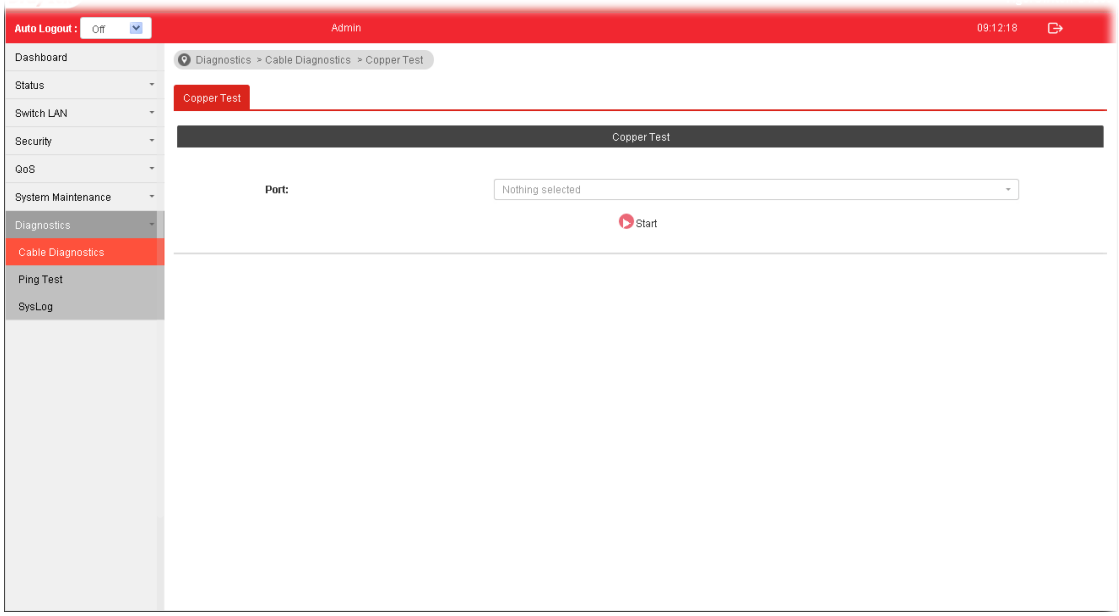


Part IV Troubleshooting

IV-1 [Diagnostics]

IV-1-1 [Cable Diagnostics]

After finished copper test, the results will be shown on the lower side of this web page.

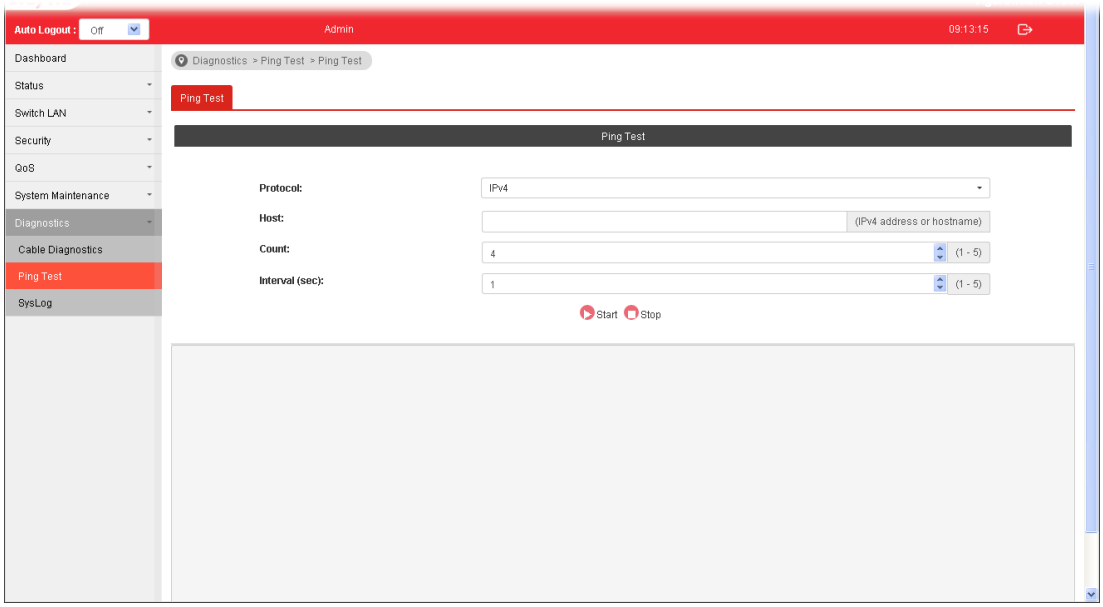


Available settings are explained as follows:

Item	Description
Port	Use the drop down list to select the port (GE1 to GE28) or ports for performing cable diagnostics.
Start	Perform the copper test action.

IV-1-2 [Ping Test]

After finished the ping test, the results will be shown on the lower side of this web page.



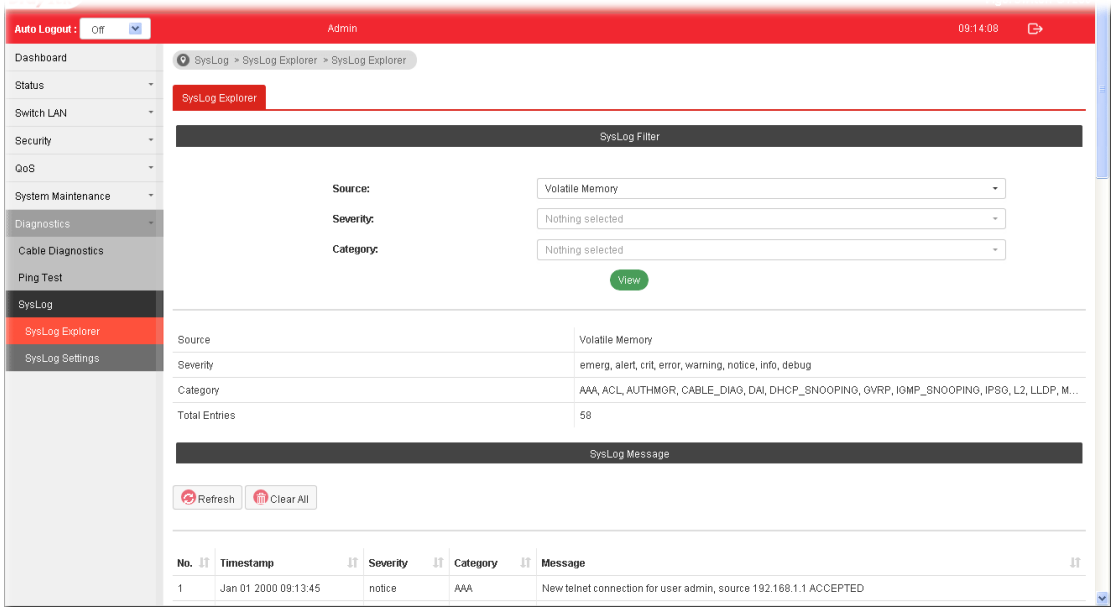
Available settings are explained as follows:

Item	Description
Protocol	Choose IPv4/IPv6 to specify IP address for sending ping to check if network path is ok.
Host	Enter the IP address of SNMP server based on the protocol selected above.
Count	It means how many times to send ping request packet. Enter a number between 1 and 5 as the count and the default configuration is 4.
Interval(sec)	Define the interval to perform ping action. For example, “1” means the ping action will be performed per second.
Start	Perform ping action.
Stop	Terminate ping action.

IV-1-3 [SysLog]

IV-1-3-1 [SysLog Explorer]

After clicking View, the results will be shown on the lower side of this web page.



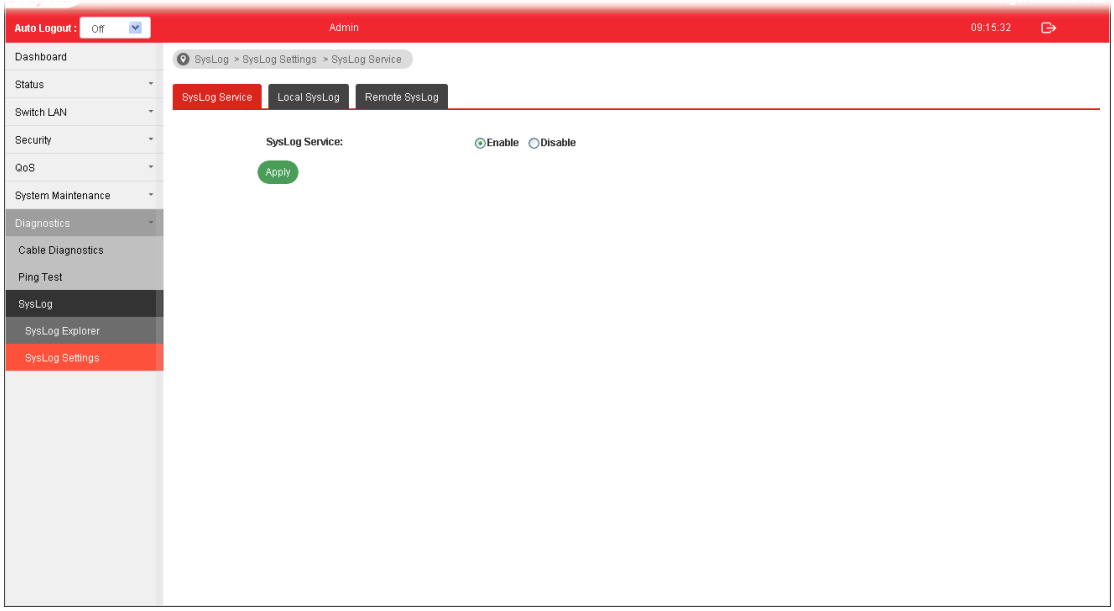
Available settings are explained as follows:

Item	Description
Source	**Volatile Memory** – Explore the logs contained in volatile memory (also known as RAM). **Non-Volatile Memory** - Explore the logs contained in non-volatile memory (also known as Flash).
Severity	Select severity (emerg, alert, crit, error, warning, notice, info and debug) of log messages which you wish to filter out for review.
Category	Select the categories (related features) of logs you wish to review. Category contains AAA, ACL, AUTHMGR, CABLE_DIAG, DAI, DHCP_SNOOPING, GVRP, IGMP_SNOOPING, IPSG, L2, LLDP, Mac-based VLAN, Mirror, MLD_SNOOPING, Platform, PM, Port, PORT_SECURITY, QoS, Rate, SNMP, STP, Security suite, System, Surveillance VLAN, Trunk, UDLD and VLAN.
View	Click it to display logs based on the settings configured above.
Refresh	Click it to refresh the log.
Clear All	Clear it to remove all logs displayed in this page.

IV-1-3-2 [SysLog Settings]

SysLog Service

This page allows user to enable system logging into local syslog and specific remote syslog server for storage.

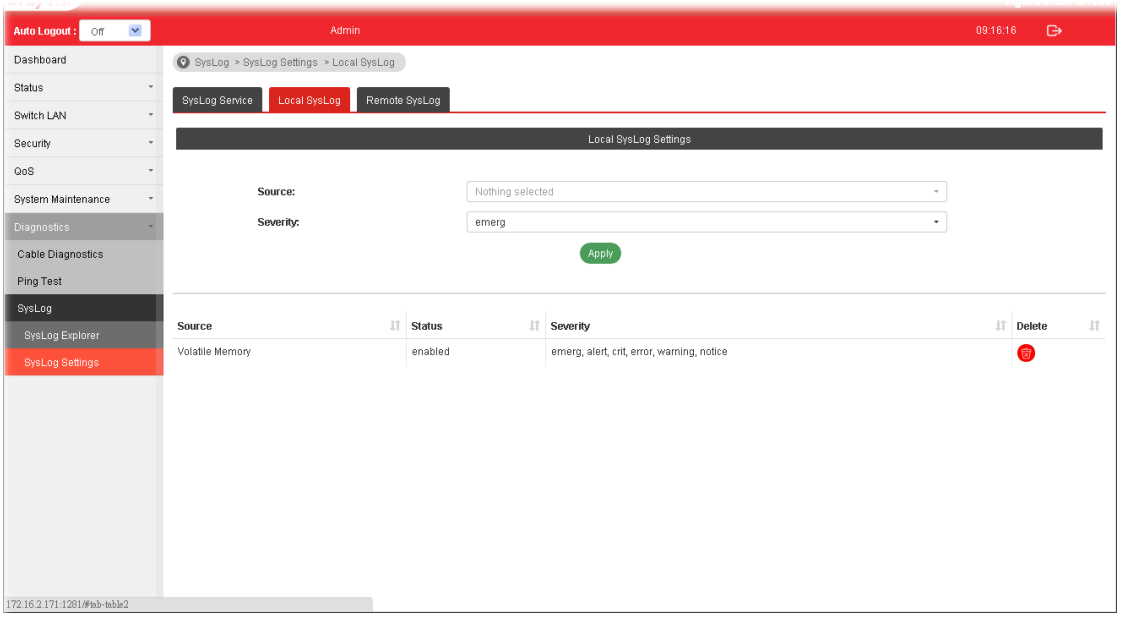


Available settings are explained as follows:

Item	Description
SysLog Service	**Enable** – Click it to activate function of syslog. **Disable** – Click it to inactivate the function.
Apply	Save the settings or changes to the switch.

Local SysLog

This page allows user to enable logging into volatile memory or non-volatile memory.



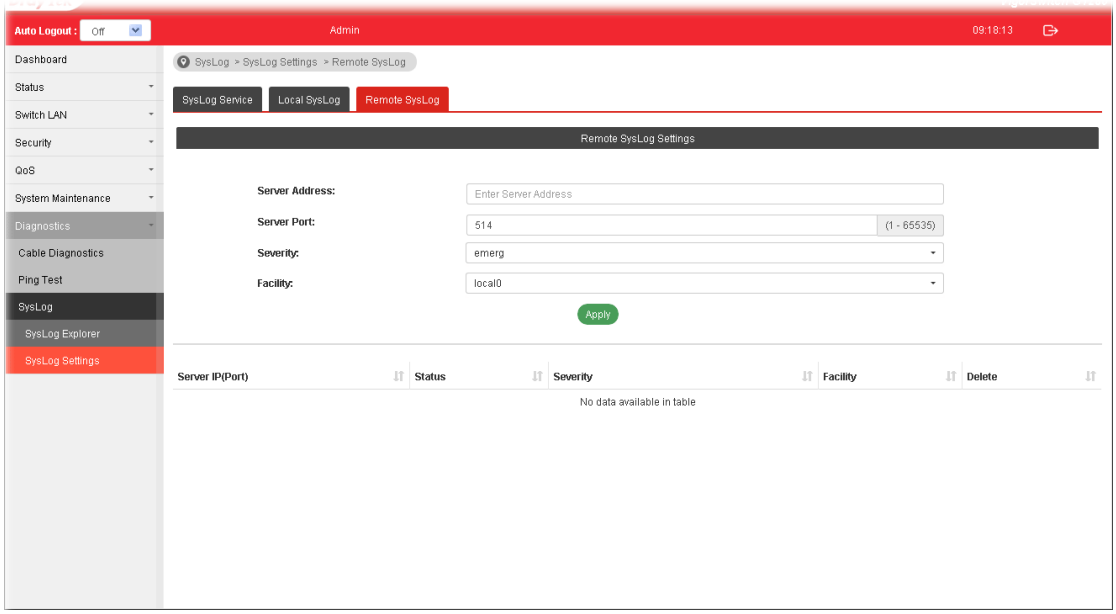
Available settings are explained as follows:

Item	Description
Source	**Volatile Memory** – Select the volatile memory for saving local log. Volatile memory does not hold the log after reboot or power off. **Non-Volatile Memory** - Select the non-volatile memory for saving. If you want to modify **Volatile Memory / Non-Volatile Memory**, select **Volatile Memory / Non-Volatile Memory** in this field. Then, use the drop down list of severity to specify type of log message. After clicking **Apply**, the **Volatile Memory / Non-Volatile Memory** will be modified with new configured severity level.
Severity	Select severity (emerg, alert, crit, error, warning, notice, info and debug) of log messages which will be stored.
Apply	Save the settings or changes to the switch.
Delete	Remove all logs displayed in this page.

Remote SysLog

This page allows user to enable system logging into specific remote syslog server for storage.

After clicking **Apply**, the results will be shown on the lower side of this web page.



Available settings are explained as follows:

Item	Description
Server Address	Enter the IP address of Syslog server.
Server Port	Specify the port that syslog should be sent to.
Severity	Select severity (emerg, alert, crit, error, warning, notice, info and debug) of log messages which will be stored.
Facility	One device supports multiple facilities (represented with facility ID, local0 to local7) of remote Syslog server. For each facility ID contains different syslog server configuration, please choose a facility ID for such Syslog server.
Apply	Save the settings or changes to the switch.
Delete	Remove specific remote syslog entry.

IV-2 Contacting DrayTek

Getting further help

If the VigorSwitch does not appear to be operating correctly or if you're looking for additional information on how to configure the switch, please visit our web site (www.draytek.co.uk) for further troubleshooting advice or to contact our support technicians. Always have your serial number to hand.

Users in the UK/Ireland using qualifying products should visit for support options including email support, telephone support, our help knowledgebase and access to the UK user support forums.

If you are outside of the UK/Ireland, please contact your own local supplier, email to support@draytek.com or visit www.draytek.com/support

For warranty service, in the first instance, please contact the support services, as listed above, for help in diagnosing or eliminating the problem or issue. The support department can arrange repair or service if then deemed necessary.

You should keep your proof of purchase (original invoice) safely in case warranty or other service is ever required.

Additional Feature Setup

These are covered in the main user manual, which is available on the Downloads page:

https://www.draytek.co.uk/support/downloads

The online knowledgebase has additional information on how to configure the VigorSwitch's more advanced features:

https://www.draytek.co.uk/support/product-knowledgebase

Keep up to date with our mailing list

Now that you have your DrayTek product, you should keep up to date with product updates (firmware), security advisories and other product news, advice or special offers. Users in the UK/Ireland can subscribe to our mailing list. For details and to subscribe, please visit

In other countries or regions, please contact your local distributor/supplier for local options.

Firmware Updates

It is strongly recommended that you keep your switch firmware up to date with the latest version in order to have all of the latest security and feature improvements.

Always obtain firmware from official sources, i.e. (for UK/Ireland users).

It is recommended to take a configuration backup prior to upgrading the firmware.