DrayTek

VigorAPM

Simple and Scalable Wi-Fi Access Point Device Management

User's Guide

V1.0

VigorAP Management User's Guide

Version: 1.0

Firmware Version: V0.9.7

(For future update, please visit DrayTek web site)

Date: October 17, 2016

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Please read the license screen in the installation wizard. You must accept the terms of the license in order to install VigorAPM.

Be a Registered Owner

Web registration is preferred. You can register your Vigor router via http://www.DrayTek.com.

Firmware & Tools Updates

Due to the continuous evolution of DrayTek technology, all routers will be regularly upgraded. Please consult the DrayTek web site for more information on newest firmware, tools and documents.

More update, please visit www.draytek.com.

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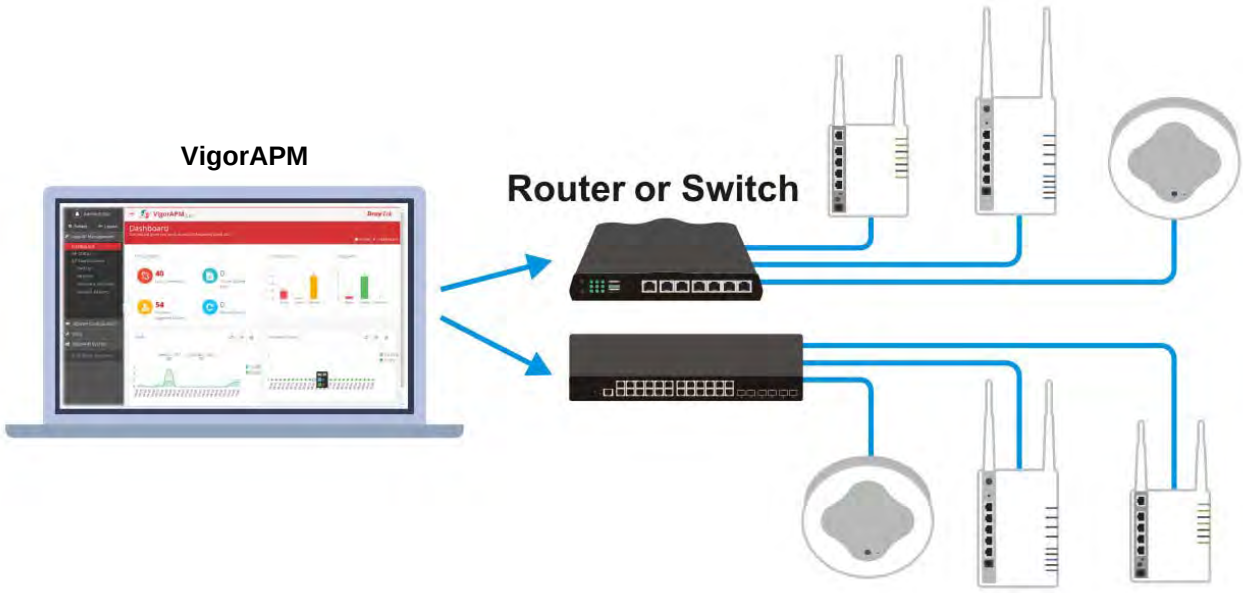
Part I Installation

This part will introduce VigorAPM and guide to install the software on your host.

I-1 Introduction

VigorAPM, a central AP management software, is able to manage VigorAPs connected to Switch/Router. With VigorAPM, an administrator can modify the wireless settings, perform firmware upgrade, backup / restore settings related to VigorAP via a PC easily without accessing into the web page of VigorAPs one by one.

The following figure shows how VigorAPM manages VigorAPs via switch or router:



Support Model	Firmware Version
VigorAP 900	FW:V1.1.8.2
VigorAP 902	FW:V1.1.7.3
VigorAP 810	FW:V1.1.7.2
VigorAP 910C	FW:V1.1.7.2

System Requirements for VigorAPM:

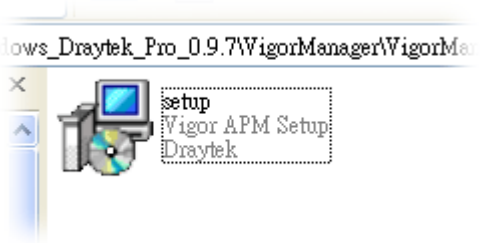
- OS: Windows / Linux
- CPU: Intel Core i3-6300 Processor (4M Cache, 3.80 GHz)
- Memory: 3 G memory (DDR4)
- HDD: 400 G HD (STAT3 128MB Cache)
- Switch or Router
- VigorAP

VigorAPM can manage VigorAP more than 100 devices.

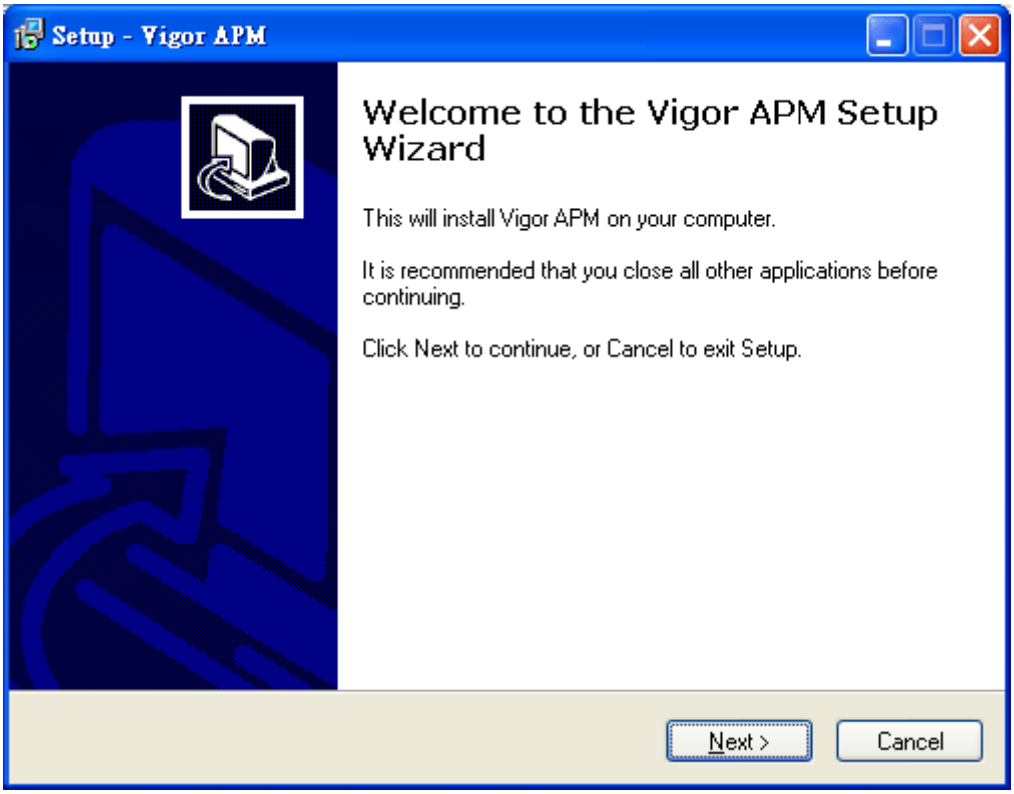
I-2 Installation for VigorAPM

Follow the steps below.

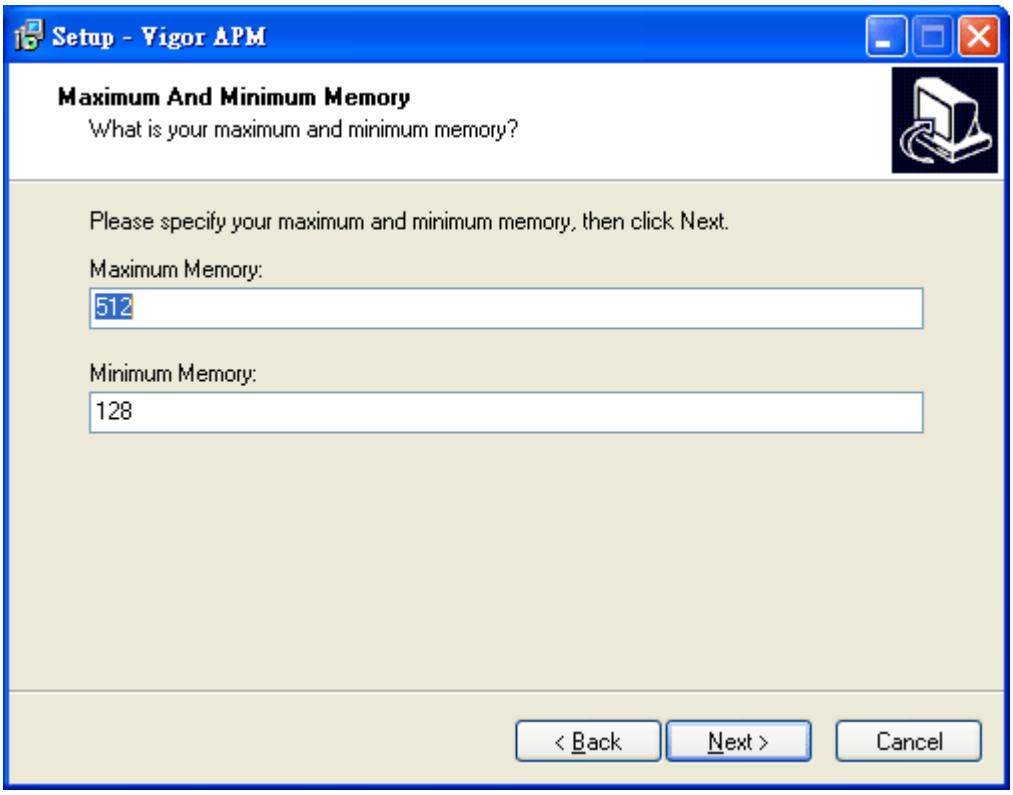
1. Click **Setup** to run VigorAPM setup wizard.



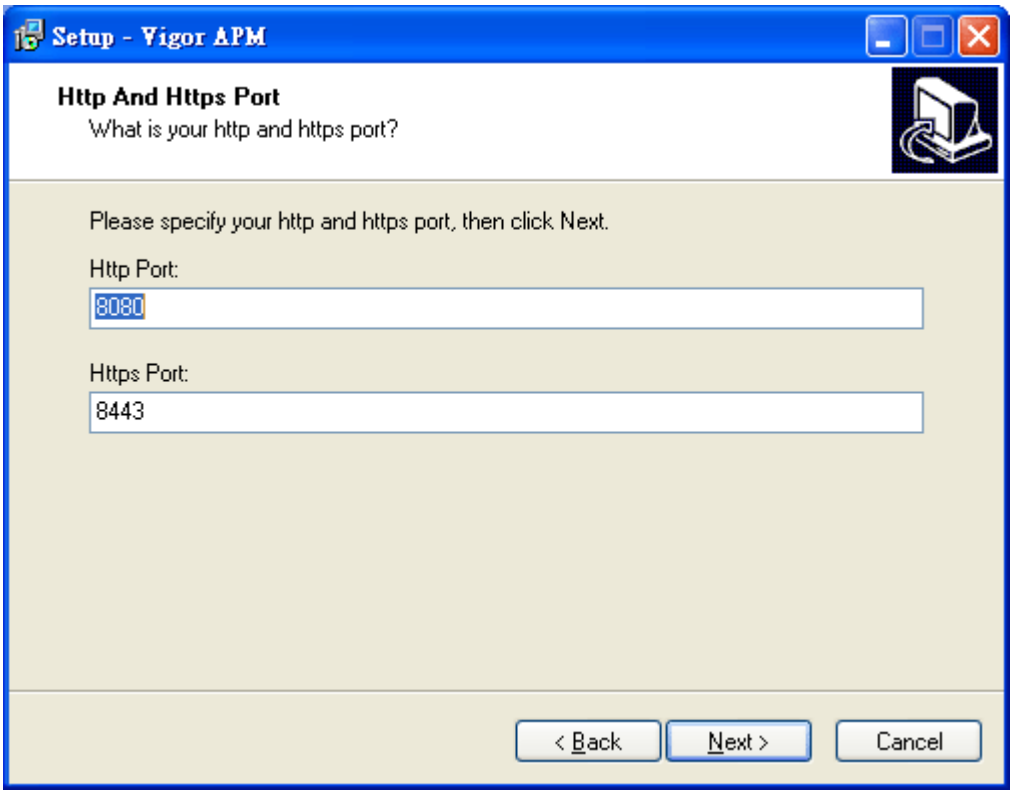
2. When the following dialog appears, click **Next**.



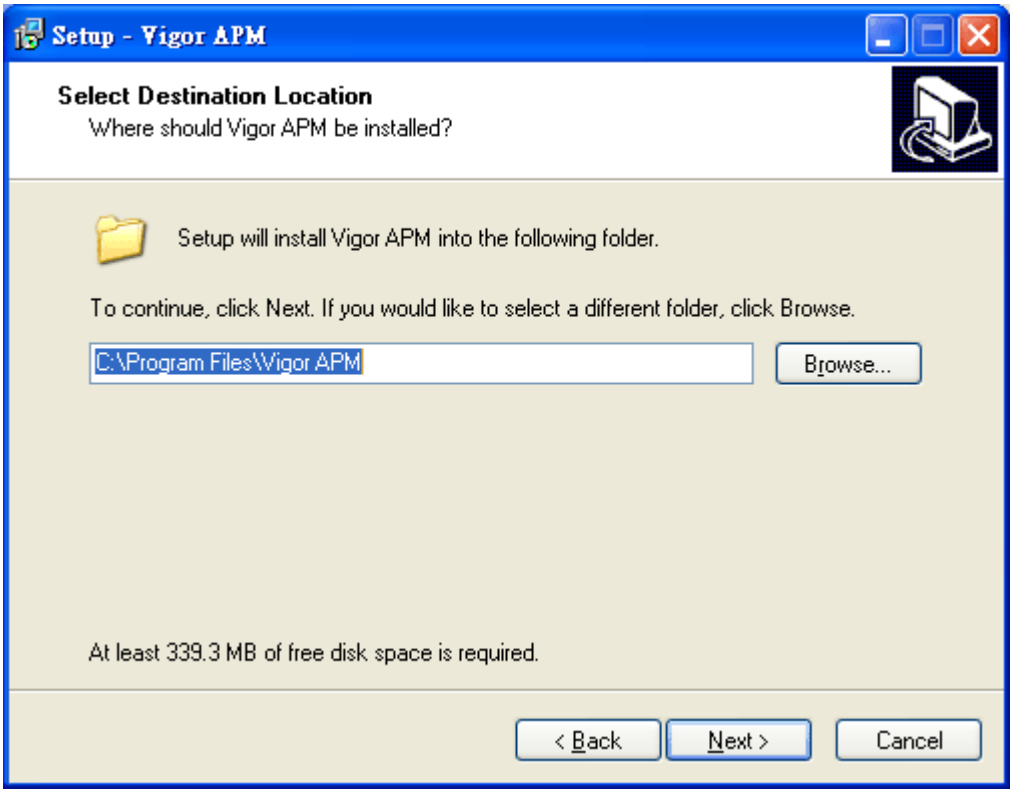
3. Set the maximum memory and minimum memory based on the physical installation for guaranteeing JAVA operation. Default settings are “512” and “128”.



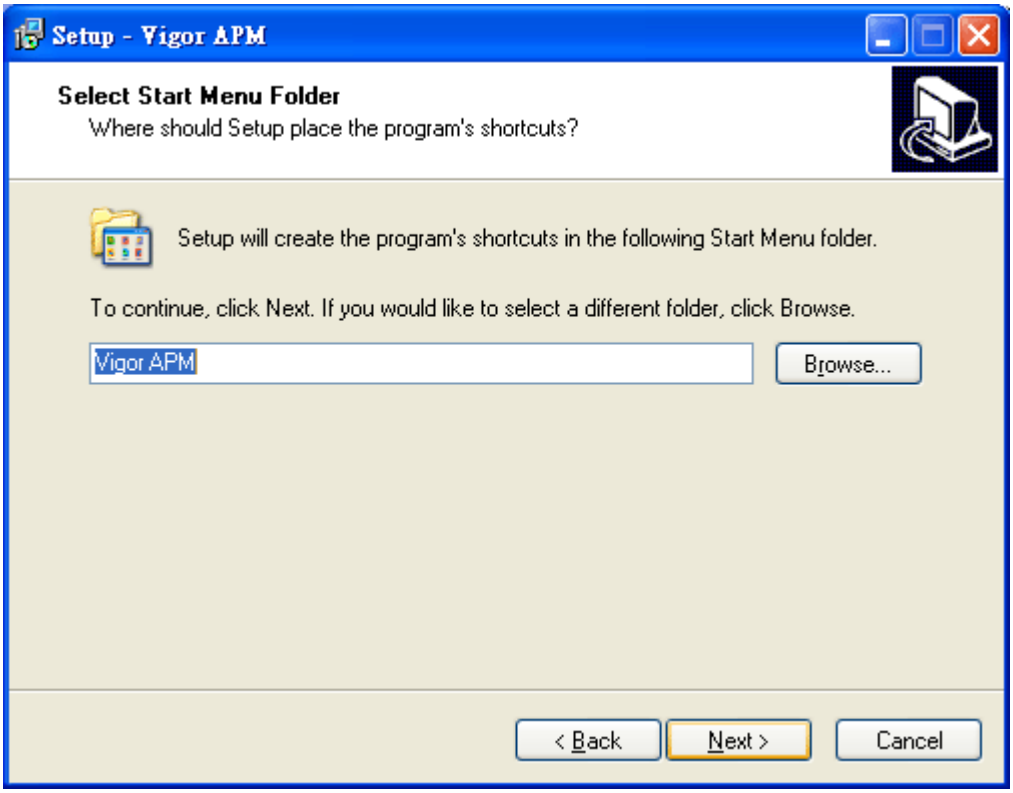
4. Setup HTTP port and HTTPS port, we'll suggest using other port number instead of common ports (80 and 443) to prevent conflict.



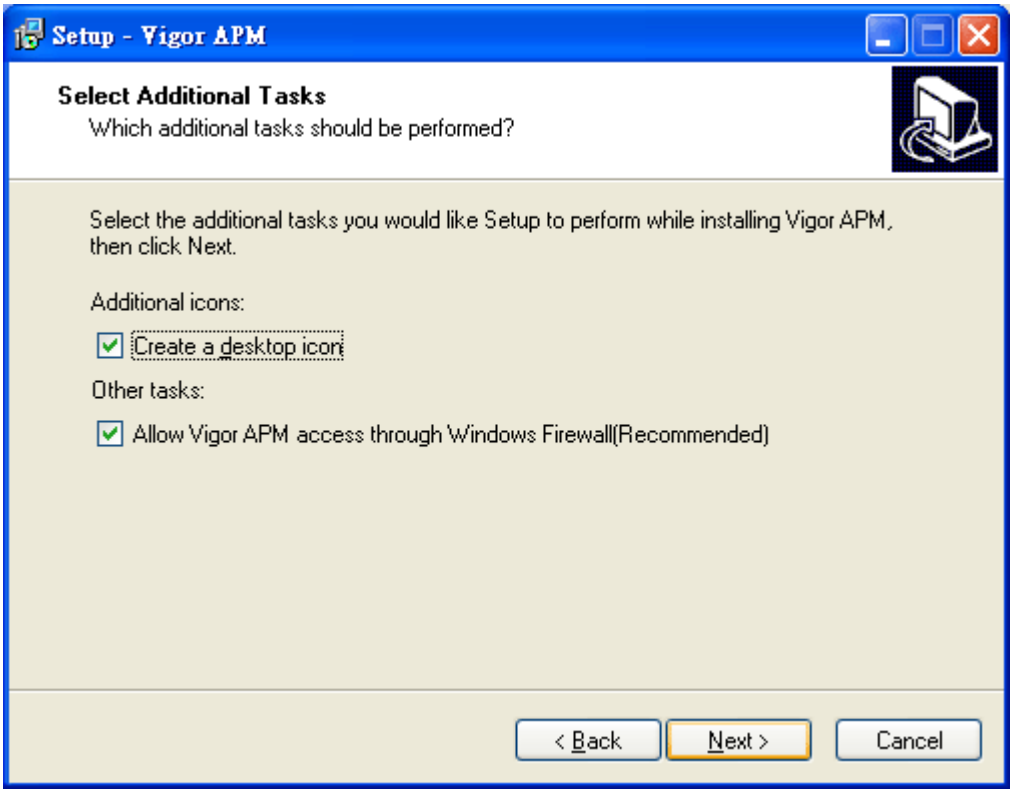
5. Select the directory that VigorAPM should be installed and click **Next.**



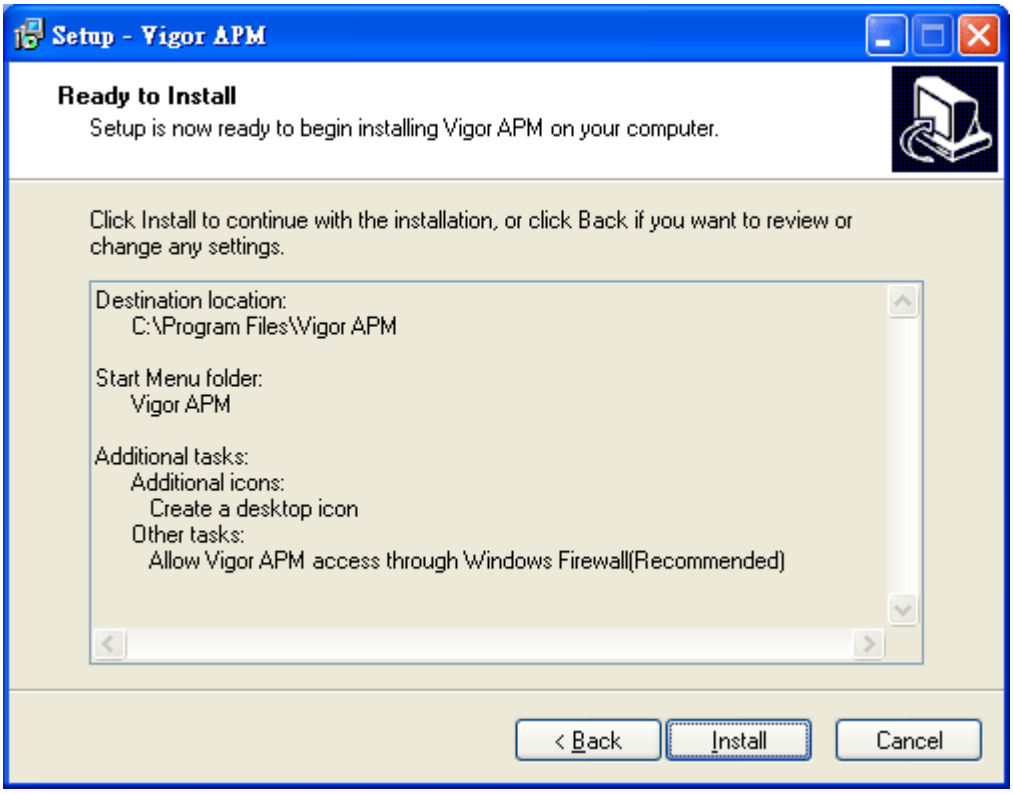
6. Determine the program name of VigorAPM for you to start up. Then click **Next**.



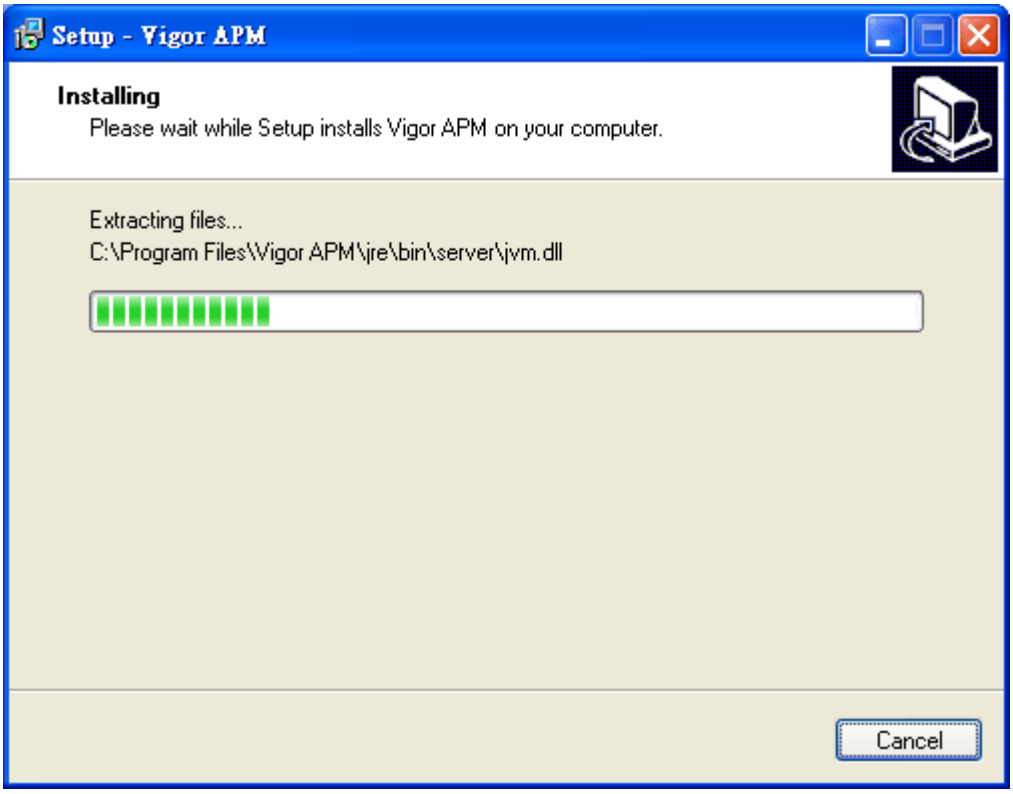
7. In this dialog, check the box of "**Create a desktop icon**" for your necessity. Click **Next**.



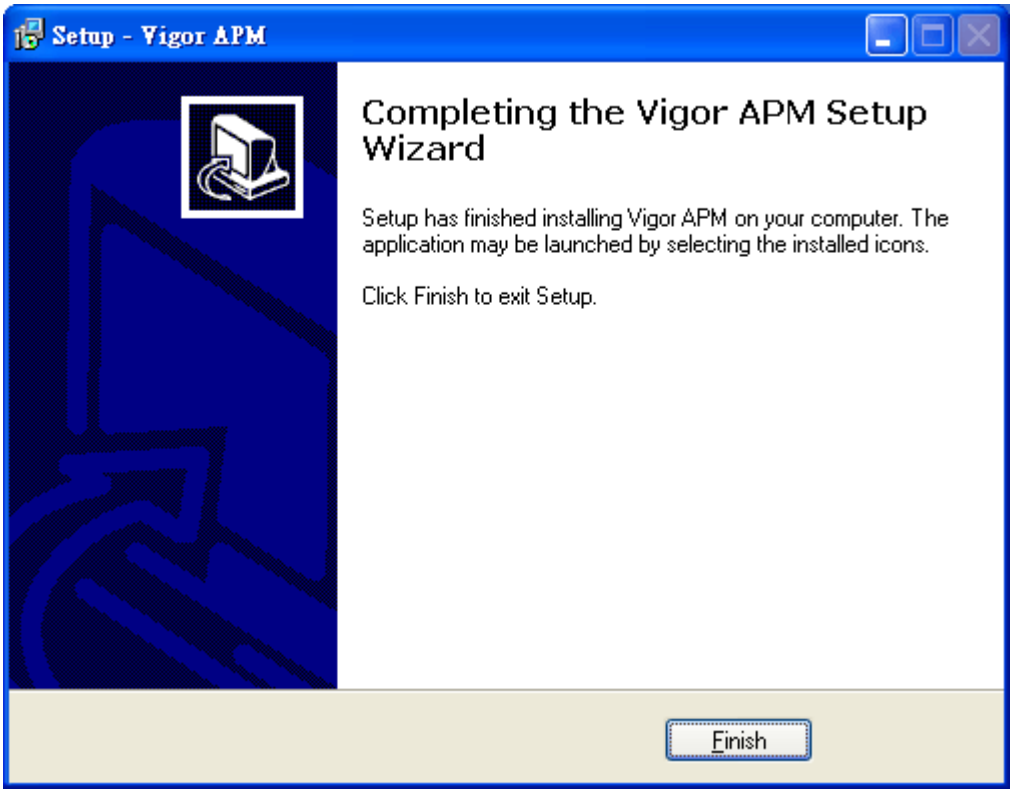
8. Now, the program is ready to install necessary features and files to your computer. Please click **Install** to start.



9. Please wait for a while to complete the installation.



10. Now the program has completed the installation of VigorAPM. Click **Finish** to exit it.

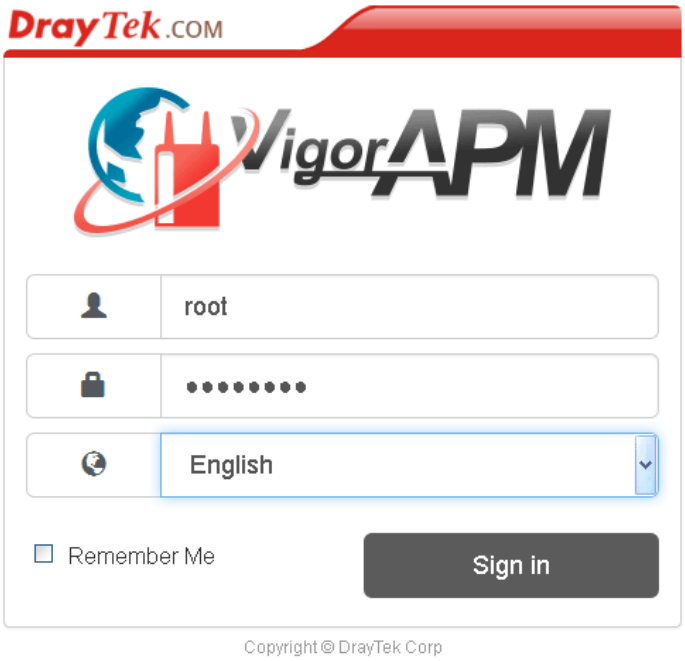


I-3 Registering VigorAPM

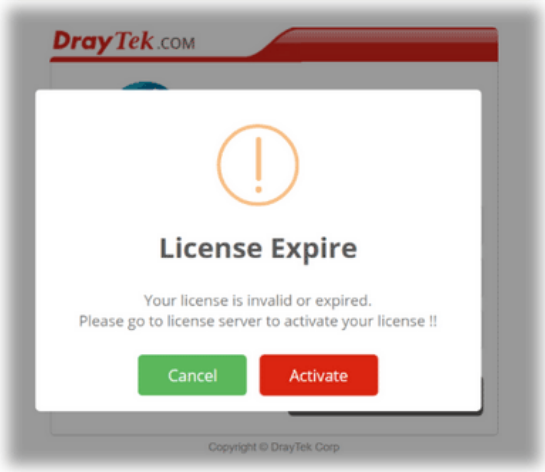
Before making configuration for VigorAPM, the system will guide you to register VigorAPM in MyVigor web site first.

1. Open any browser (e.g., Firefox) and type “localhost:port number” as URL; or double click the shortcut of VigorAPM from your desktop.

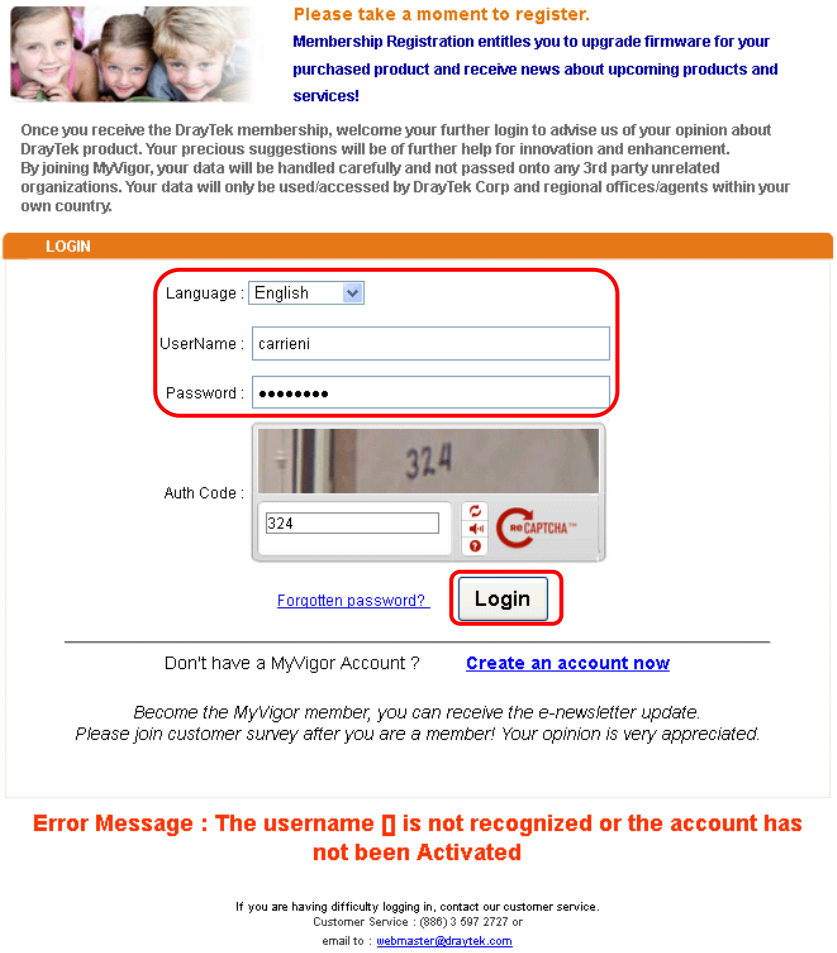
2. The login page of VigorAPM will be shown as the following:



3. Please type “**root”** as user name and “**admin123”** as password. Then click **Sign in**.
4. When the following page appears, click **Activate.**

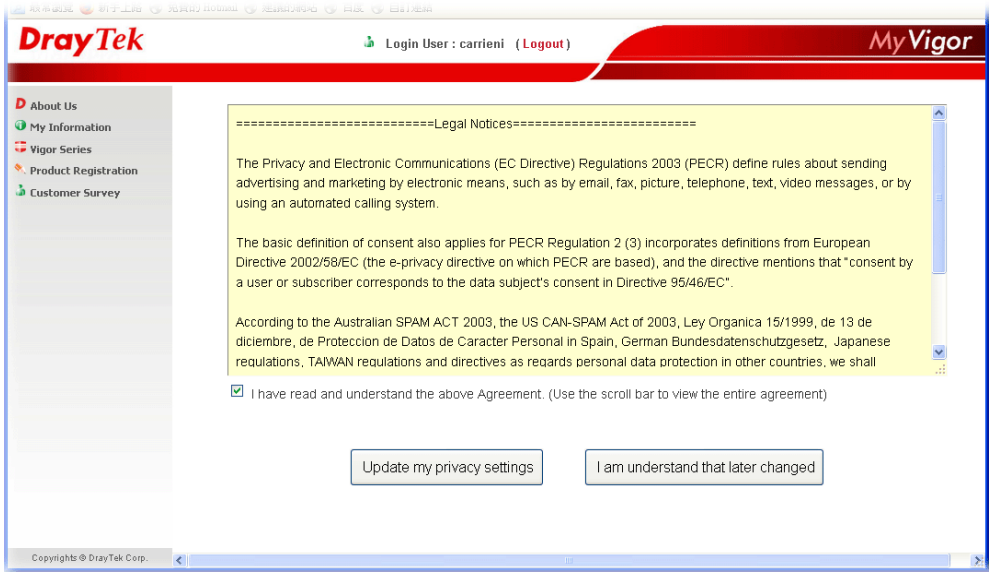


5. A login page for MyVigor web site will pop up automatically.

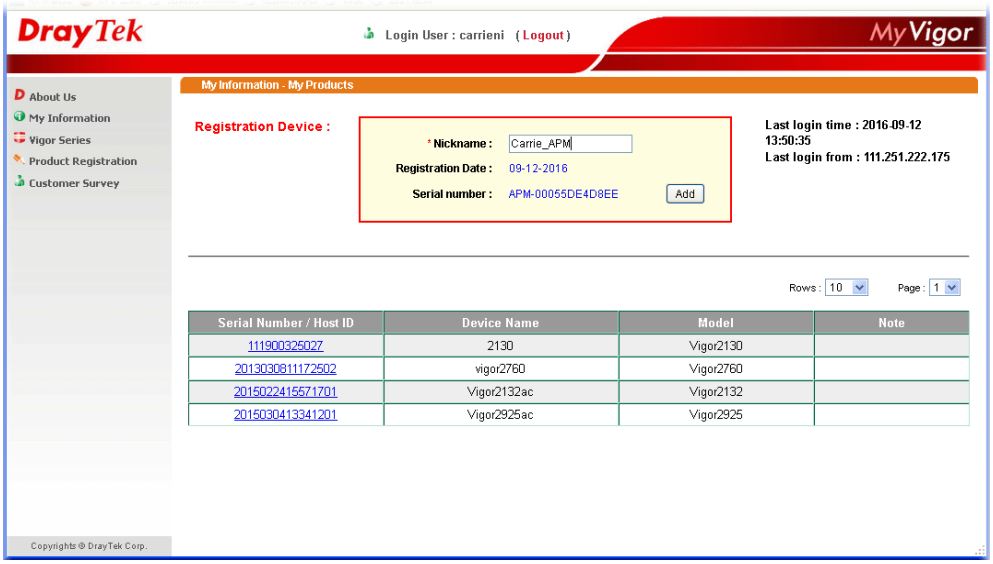


Info	If you do not have any account, simply click Create an account now to create a new one for using the service provided by MyVigor web site.

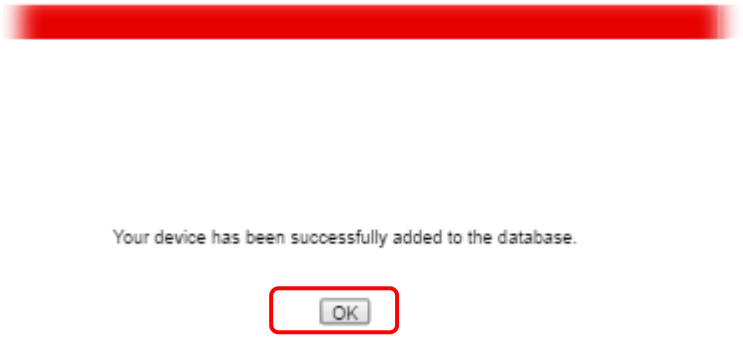
6. MyVigor will verify and authenticate if the user account you typed is allowed to access into the web site. If yes, the following screen will appear. Check the box of "I have read and understand the above Agreement" and click "I am understand that later changed".



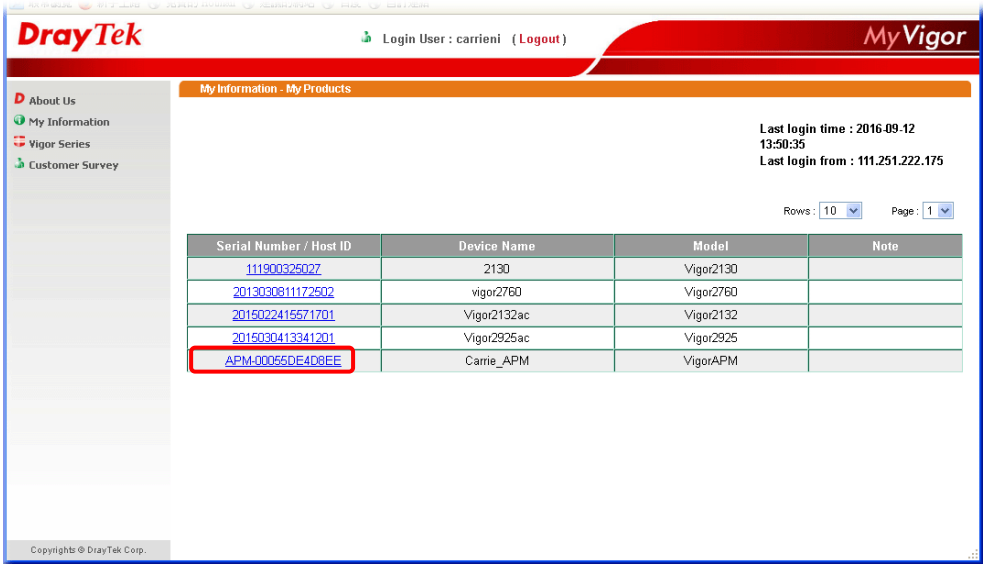
7. Type a nickname for VigorAPM and click **Add**.



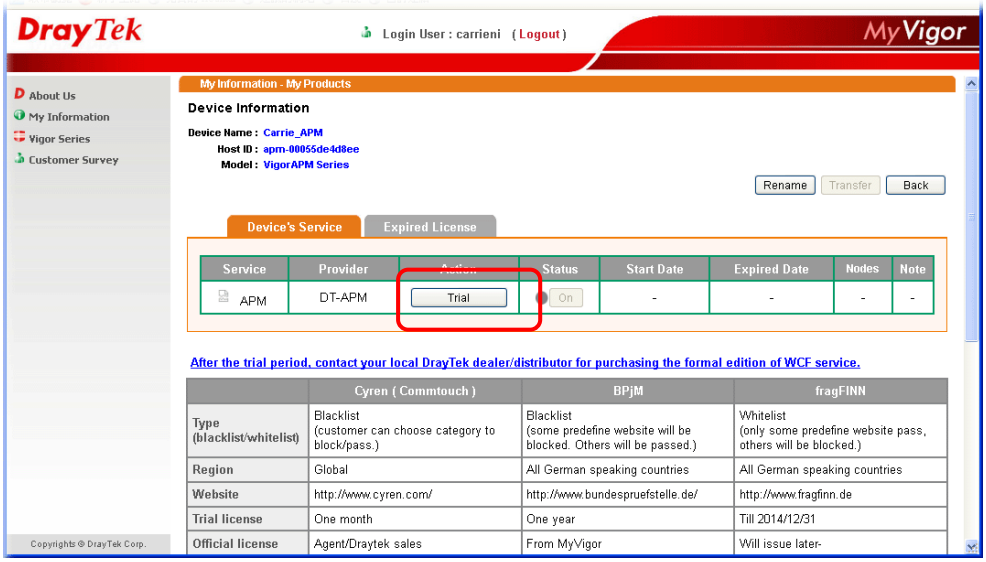
8. Type a name for identification in the field of **Nickname** and click **Submit**. You can see the following screen. Click **OK**.



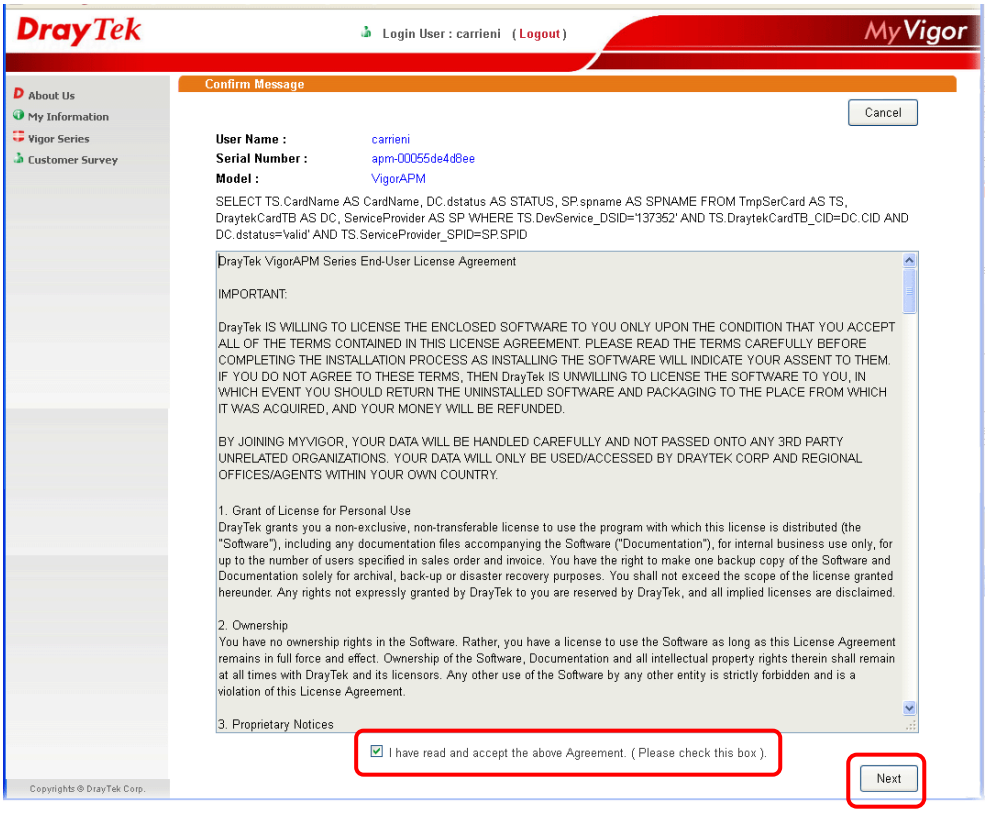
9. In this page, click the serial number link (in this case, it is APM-xxxxxxxxxxxx).



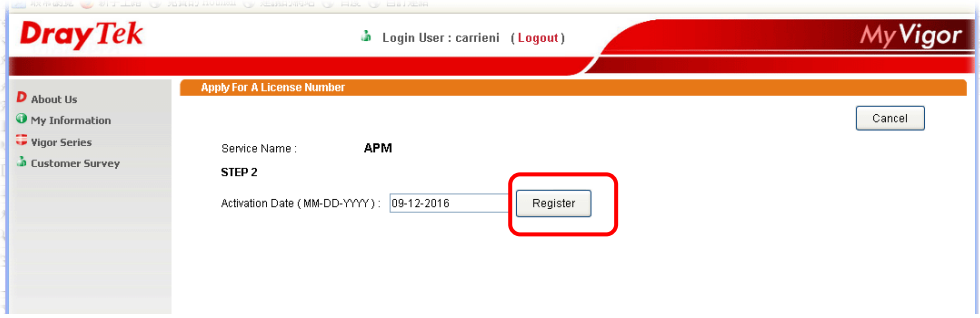
10. You will get a device information page as shown below. If you are the new user of VigorAPM, you can get a free charge of **one year** service of VigorAPM. Simply click the **Trial** button.



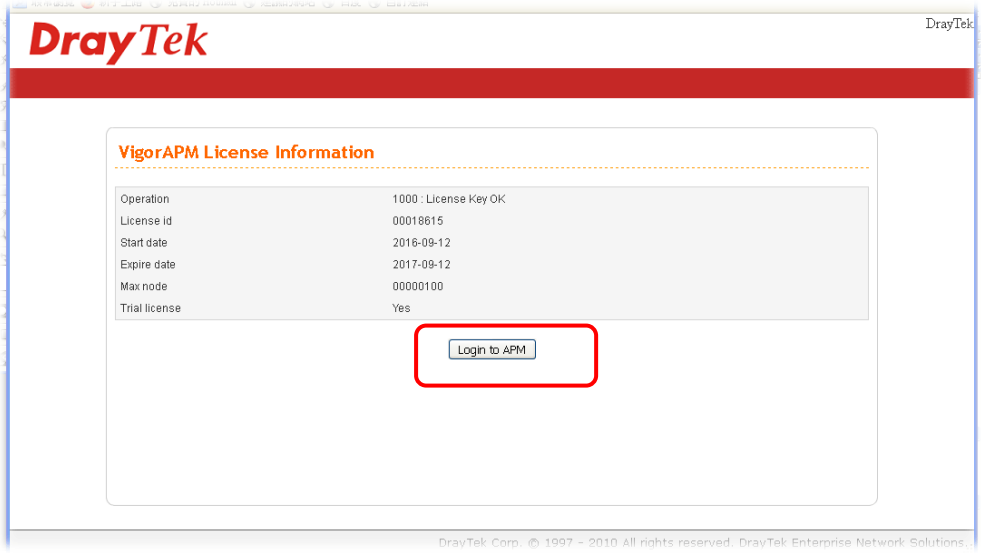
11. Form the following screen, check the box of "**I have read and accept the above….**" and click **Next**.



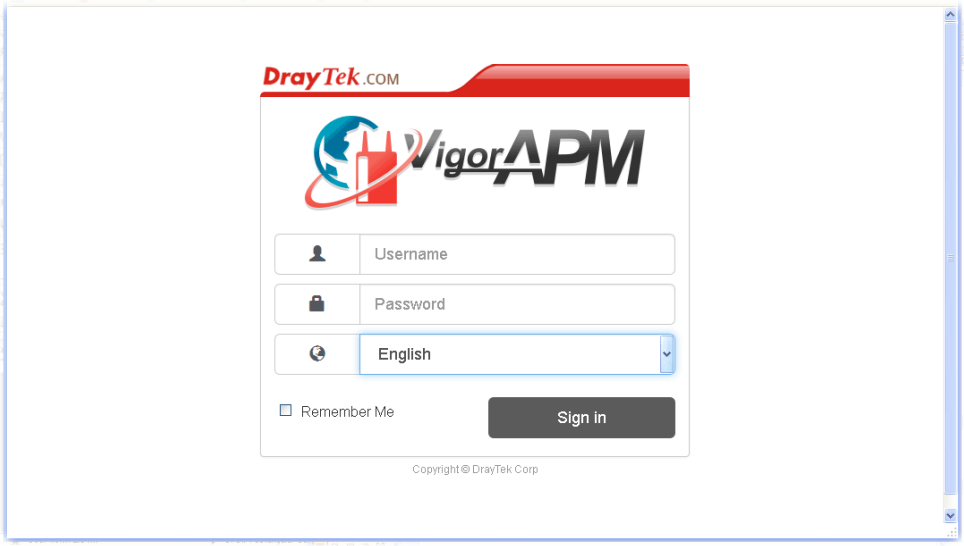
12. In the page below, click **Register**.



13. When the VigorAPM License Information page appears, the service is ready for you to use. Click **Login to APM** to use VigorAPM service.

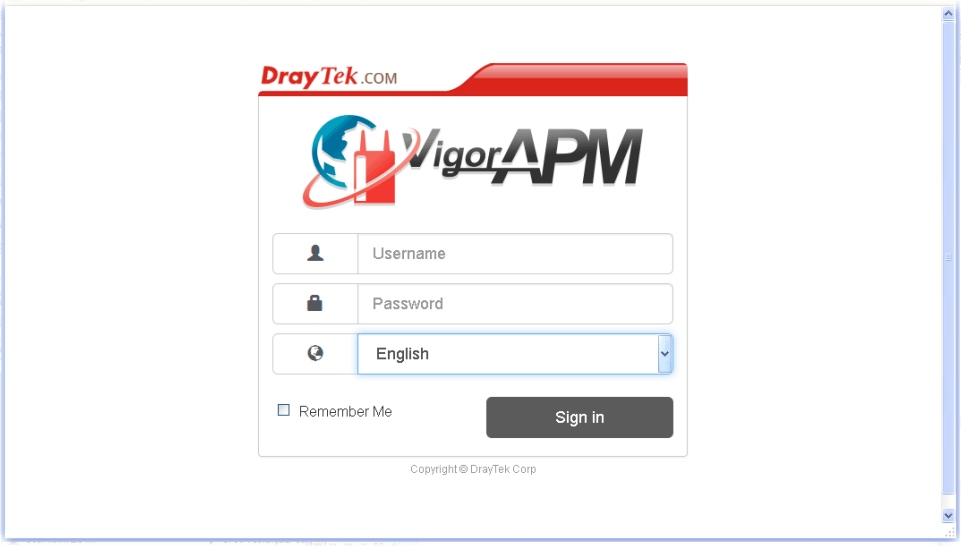


14. The login page will appear as follows.

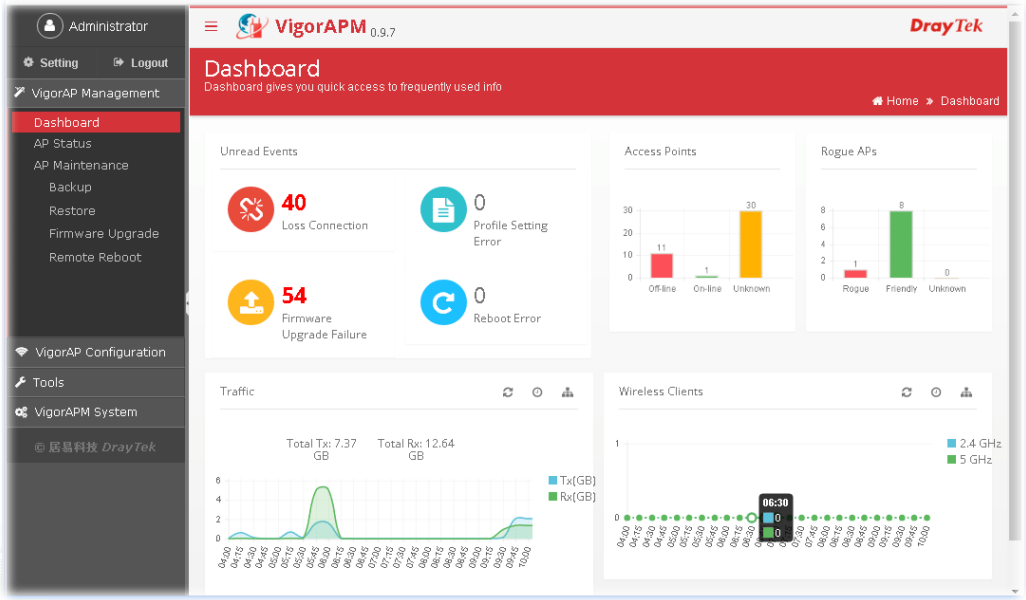


I-4 Accessing Web Page of VigorAPM

1. Open any browser (e.g., Firefox) and type “localhost:8080” as URL; or double click the shortcut of VigorAPM from your desktop.
2. Please type “root/admin123” as the Username/Password and click **Sign In**.



3. Now, the **Main Screen** will appear.



I-5 Start / Shutdown VigorAPM Service

After installing VigorAPM on your computer, you will have the following icons displayed on your desktop.

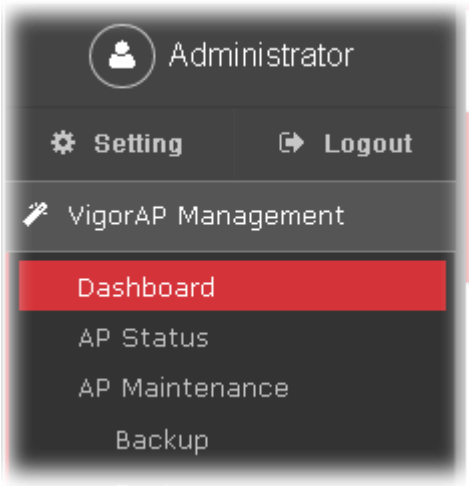
Click such icon to start up VigorAPM service without accessing into web page of VigorAPM.

Click such icon to terminate VigorAPM service. The network connection among VigorAPM and APs managed by VigorAPM will be terminated immediately.

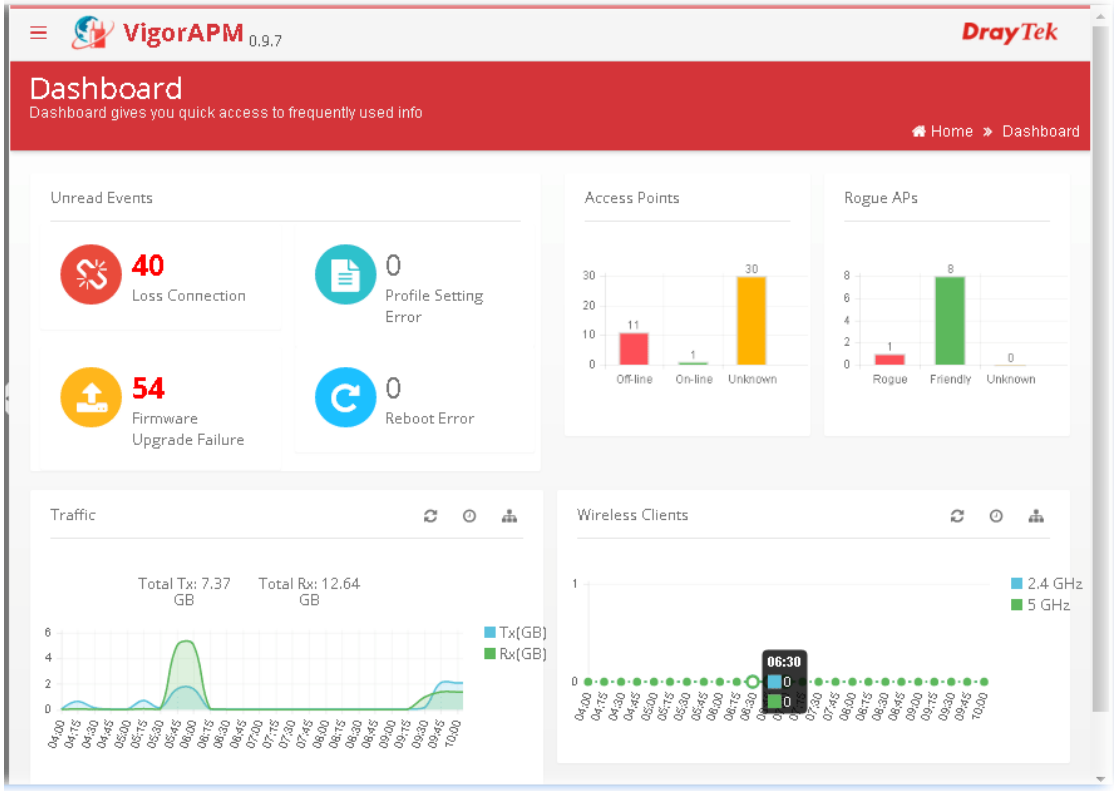
I-6 Dashboard

Dashboard shows the statistics of unread events, access points, rogue APs, traffic and wireless clients.

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



A web page with default selections will be displayed on the screen. Refer to the following figure:



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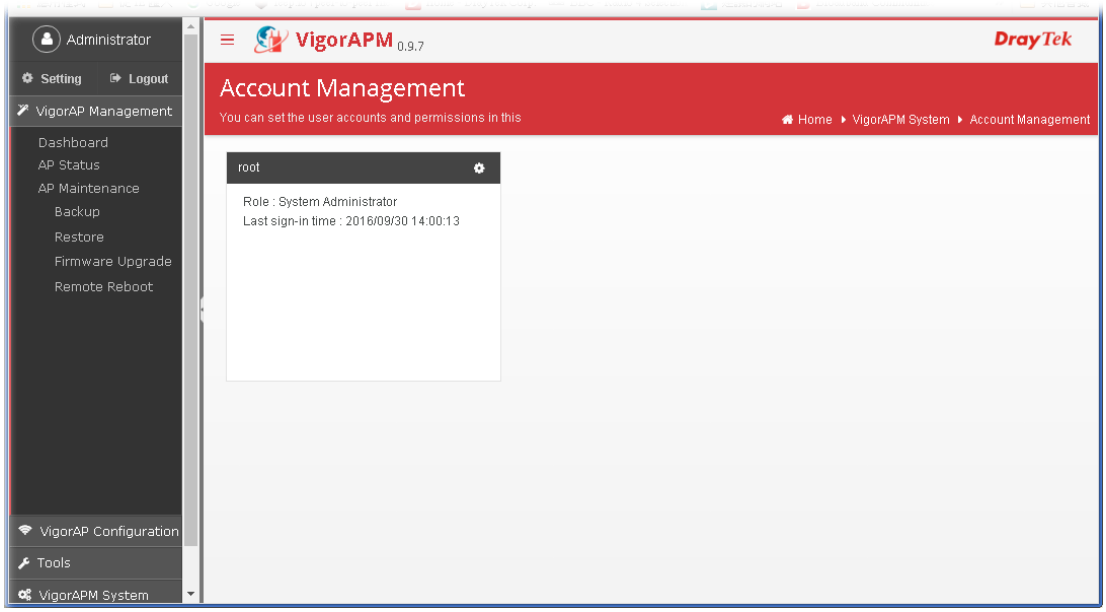
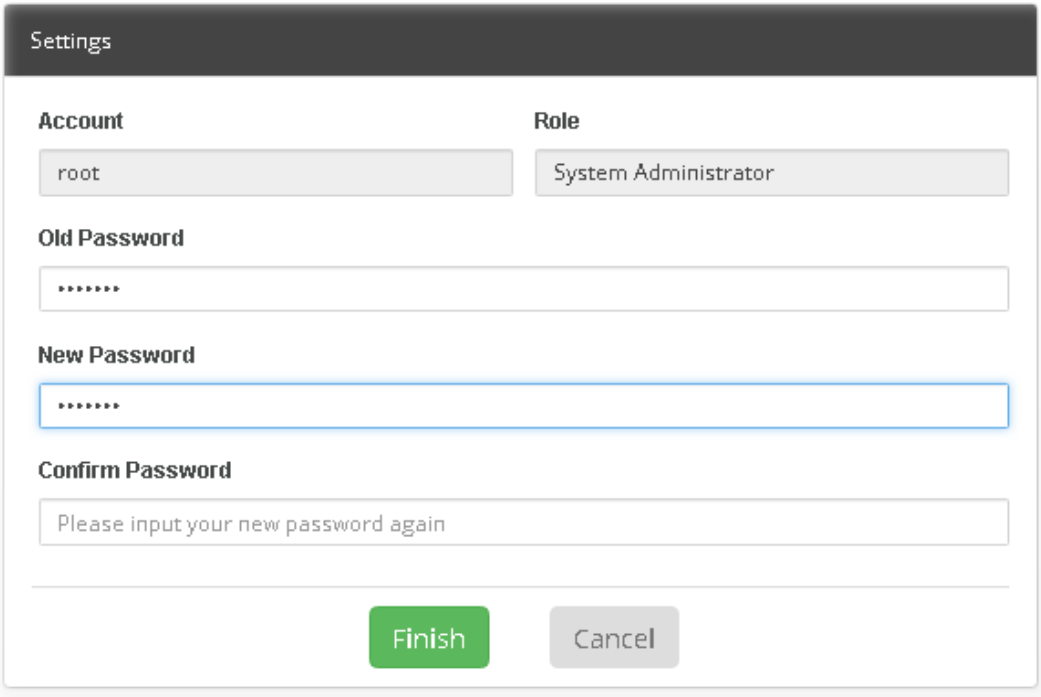
Part II System Configuration

II-1 Account Management

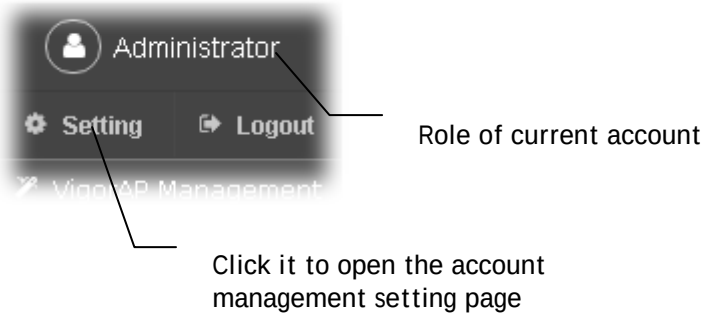
This page allows you to configure account and password which will be used to access into VigorAPM.



Click the icon on top right of **root** window to display **Settings** window. The account name and role are fixed. Only the password can be changed.

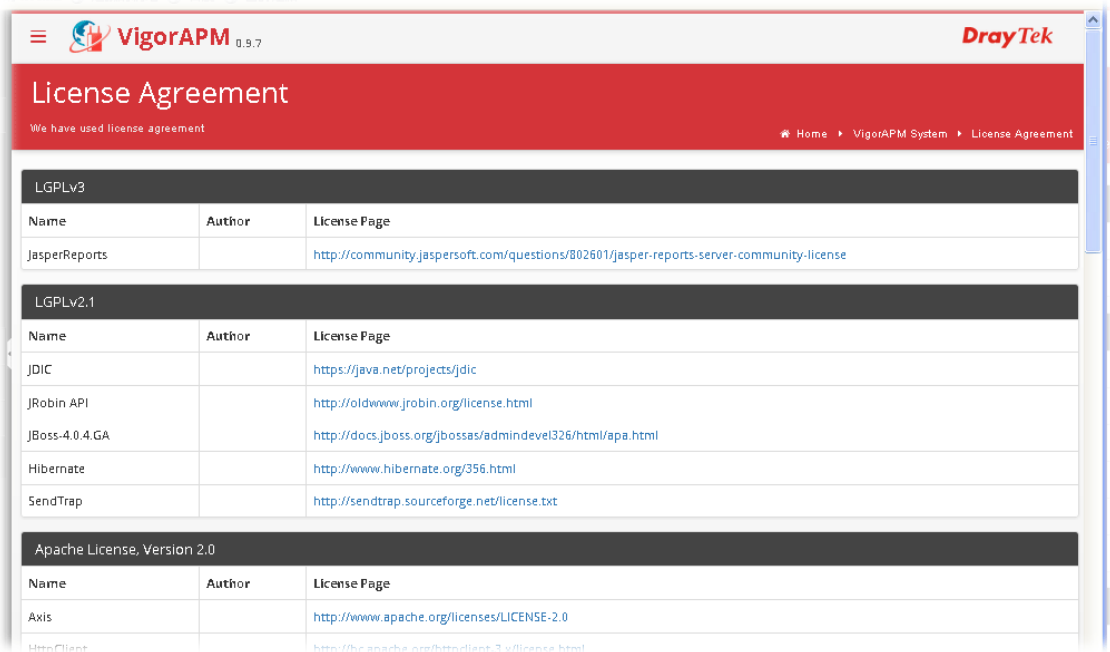


Current account will be displayed with an icon on the top-left corner of the window.



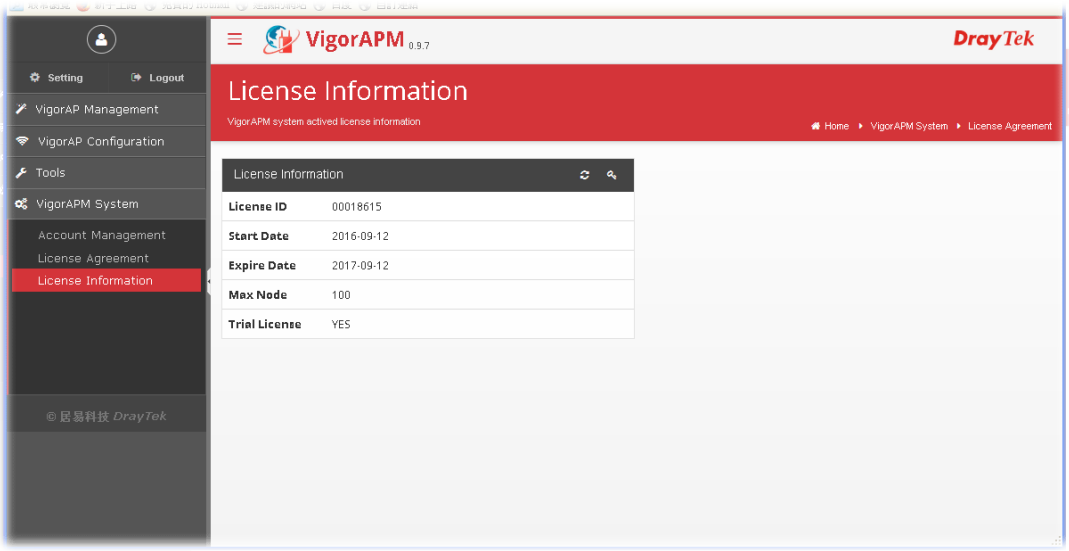
II-2 License Agreement

This page displays general information of name, author, and license page for current used licenses for LGPL, Apache License, MIT, Eclipse Public License, and so on.



II-3 License Information

Information for VigorAPM can be checked by opening **VigorAPM System>>License Information**.



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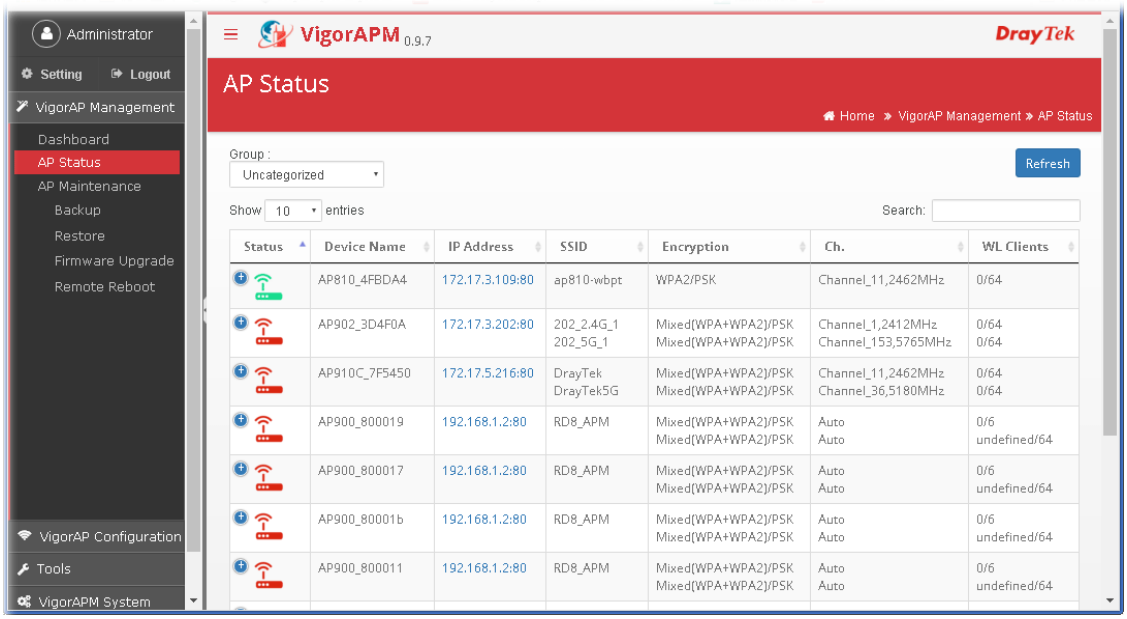
Part III VigorAP Management

III-1 AP Status

Such page displays basic information for VigorAP discovered by VigorAPM, including status, device name, IP address, SSID, encryption, channel and wireless clients allowed.



Available settings are explained as follows:

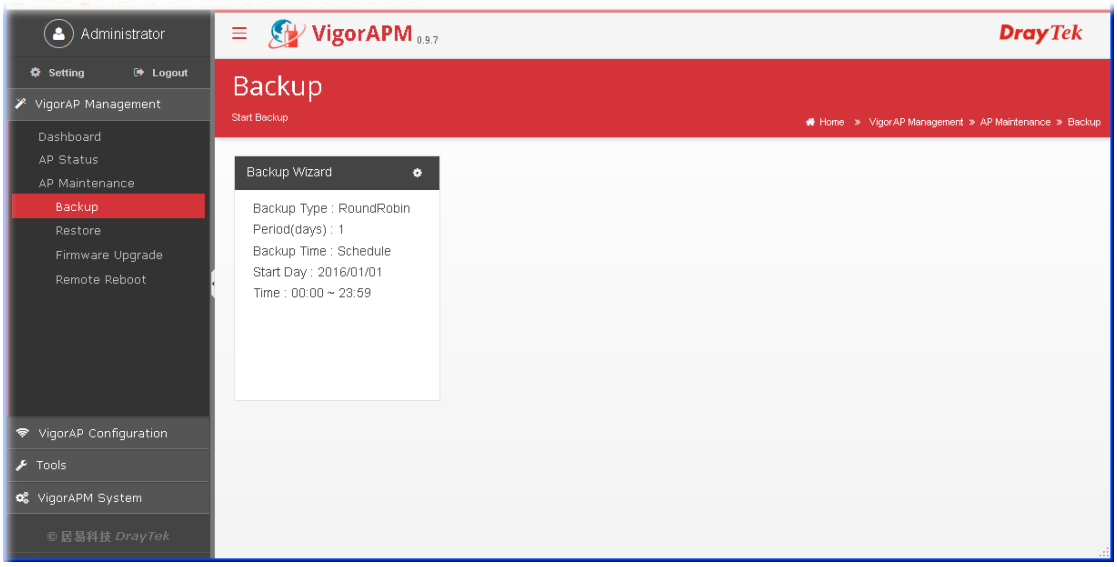
Item	Description
Group	Display all AP groups. Use the drop down list to specify one group. The AP under that group will be displayed on this web page.
Show… entries	Choose a number in this field. Such page will display the number (you specified) of entries at one page.
Refresh	Refresch current page.
Satus	**means the AP is online.** **means the AP is offline.** Click “+” to display the firmware version of the VigorAP.
Device Name	Display the name of the device.
IP Address	Display the WAN IP address of VigorAP.
SSID	Display the SSSID representing VigorAP.
Encryption	Display the encryption method used in VigorAP.
Ch.	Display the channel (for 2.4G, 5G) used in VigorAP.
WL Clients	Display the total number of wireless clients allowed to be connected to VigorAP.

III-2 AP Maintenance

VigorAPMr can execute configuration backup, configuration restoration, firmware upgrade and remote reboot for the APs managed by VigorAPM. It is very convenient for the administrator to process maintenance without accessing into the web user interface of the access point.

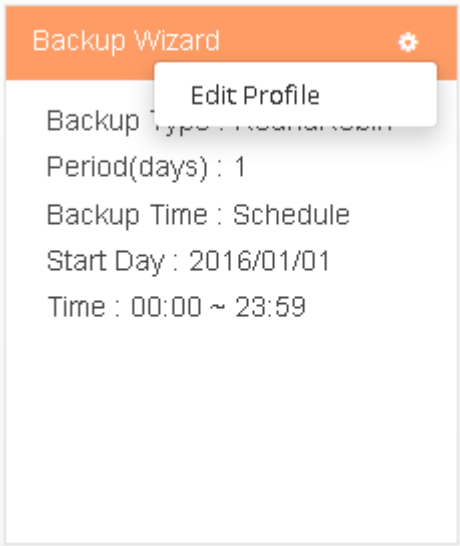
III-2-1 Backup

VigorAPM can **backup** the configuration of the selected AP.

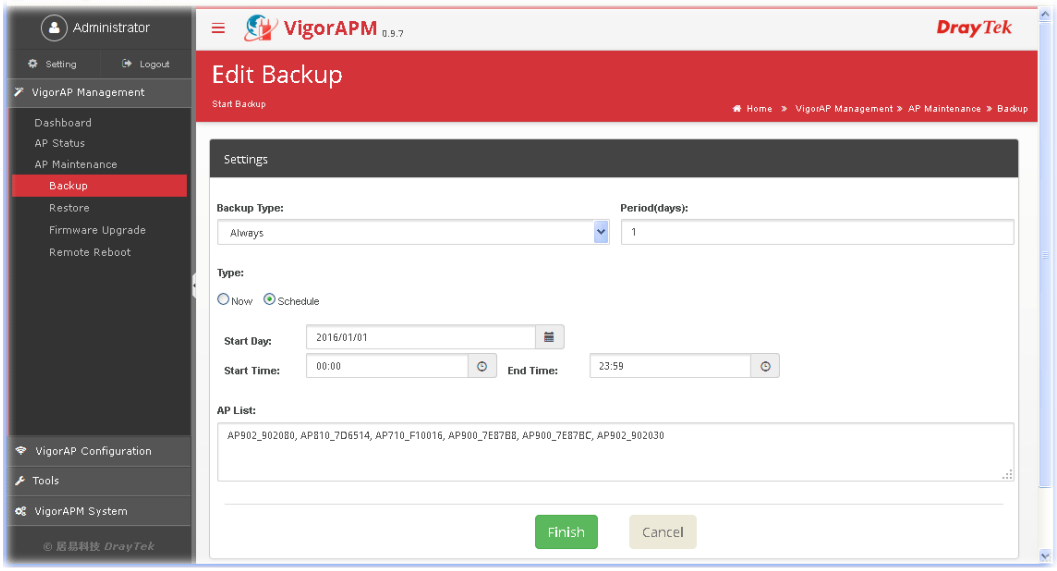


How to configure backup profile for VigorAP?

1. Click the icon on top right of **Backup Wizard** window to display **Edit Profile** option.



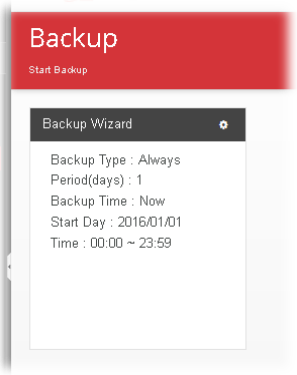
2. Click **Edit Profile** to display the **Settings** page for Edit Backup.



Available settings are explained as follows:

Item	Description
Backup Type	**RoundRobin** – The file name will be tagged between 1 ~ 20. The system can store 20 files at most; the 21th file will overwrite the first file. **Always** – The file name will be set by date. There is no limit of the total amount for saving files.
Period(days)	If you type "1" here, the backup configuration will be performed every day. If you type "2" here, the backup configuration will be performed one time every two days.
Type	There are two options: **Now** – The configuration backup for VigorAPs will be performed after clicking **Finish**. **Schedule** –The configuration backup for VigorAPs will be performed in certain day and time after clicking **Finish**. ● **Start Day** – Specify the execution date. ● **Start Time / End Time** – Specify the starting time and ending time. VigorAPM will perform configuration backup for VigorAP specified in AP List at the specified day and time.
AP List	Click AP List to pop up VigorAP group window. Specify the one(s) you want to backup operation and click **Finish**. All of the selected VigorAP will be displayed in this field.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

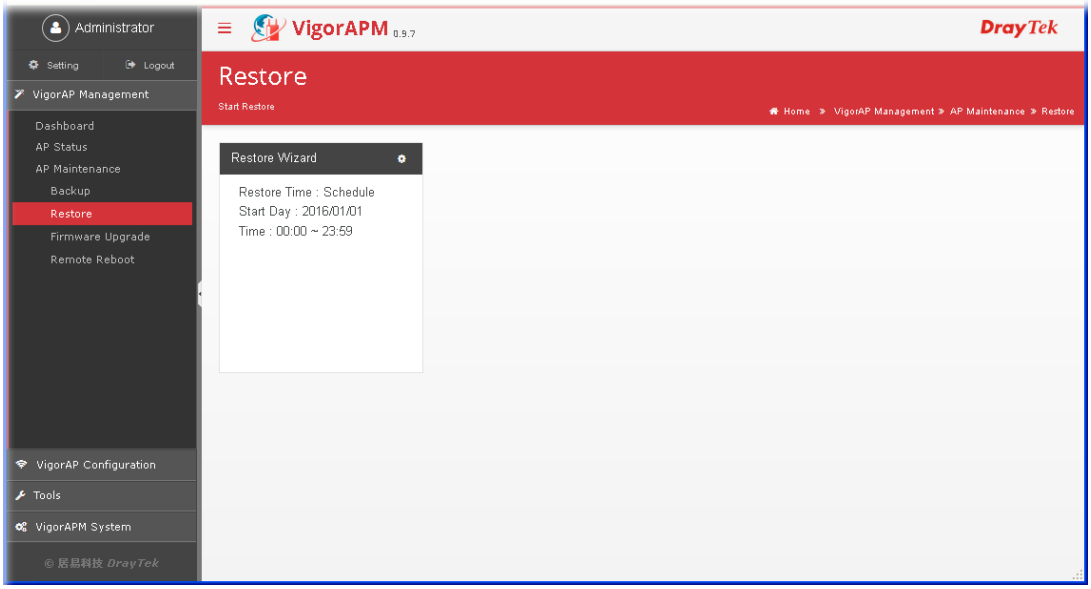
3. After completing the configuration, click **Finish** to save the setting.



4. Now, VigorAPM will perform backup according to the profile configured in this page.

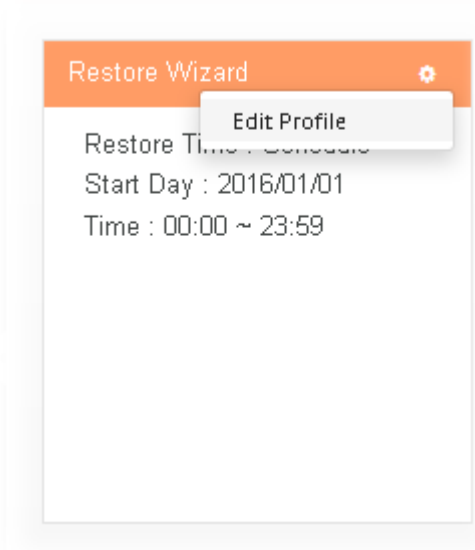
III-2-2 Restore

VigorAPM can **restore** the configuration for selected AP.

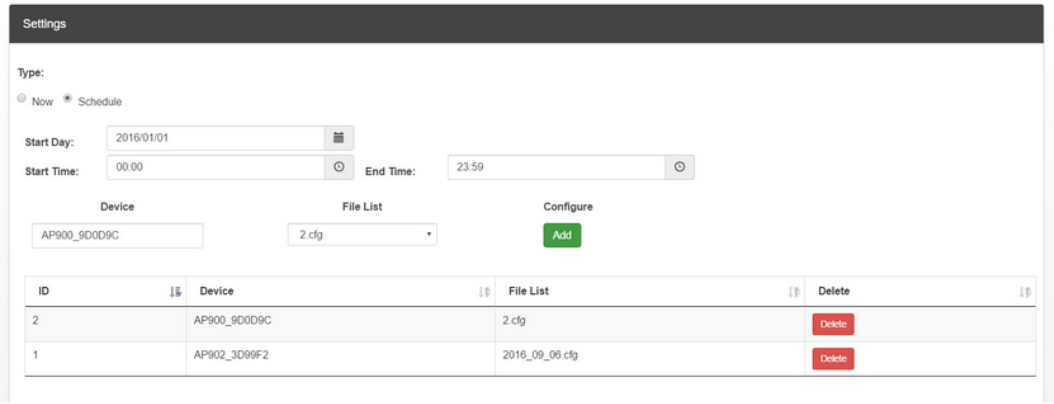


How to configure restore profile for VigorAP?

1. Click the icon on top right of **Restore Wizard** window to display **Edit Profile** option.



2. Click **Edit Profile** to display the **Settings** page for Restore.



Available settings are explained as follows:

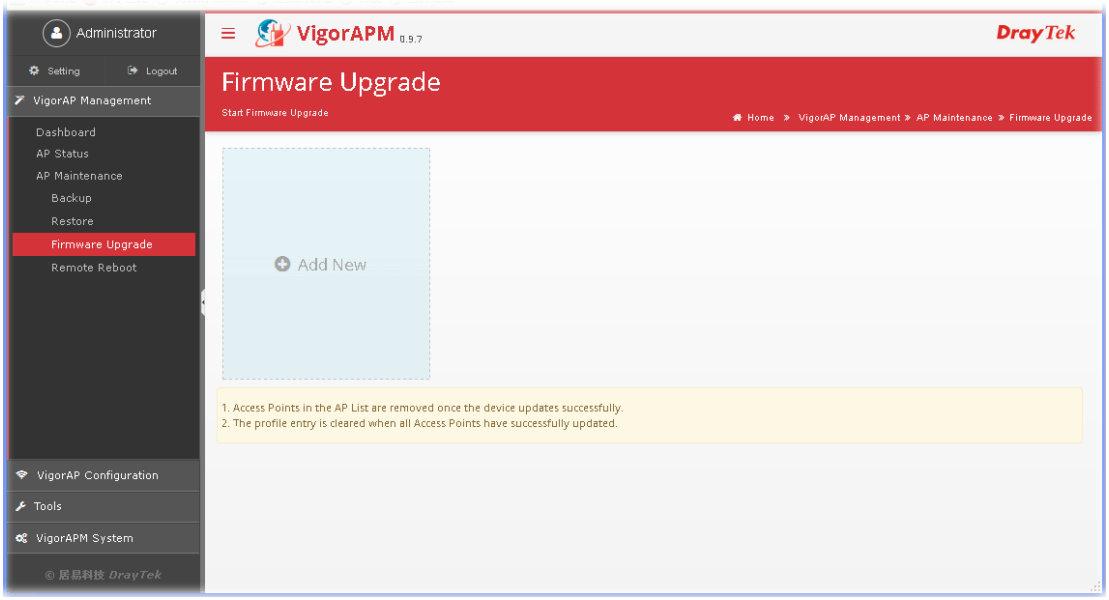
Item	Description
Type	There are two options: **Now** – The configuration backup for VigorAPs will be performed after clicking **Finish**. **Schedule** –The configuration backup for VigorAPs will be performed in certain day and time after clicking **Finish**. ● **Start Day** – Specify the execution date. ● **Start Time / End Time** – Specify the starting time and ending time. VigorAPM will perform configuration restoration for VigorAP specified in AP List at the specified day and time.
Device	Click it to open VigorAP group window for selecting an AP.
File List	Use the drop down list to choose the configuration file to be restored.
Configure	**Add** – Click it to add the device (typed in Device) and related configuration file (typed in File List) onto this web page below. Not that a restore profile can execute configuration restoration for different devices at one time.
Finish	Click it to save the configuration.

Cancel	Click it to discard the configuration.

3. After completing the configuration, click **Finish** to save the setting.
4. Now, VigorAPM will perform restoration according to the profile configured in this page.

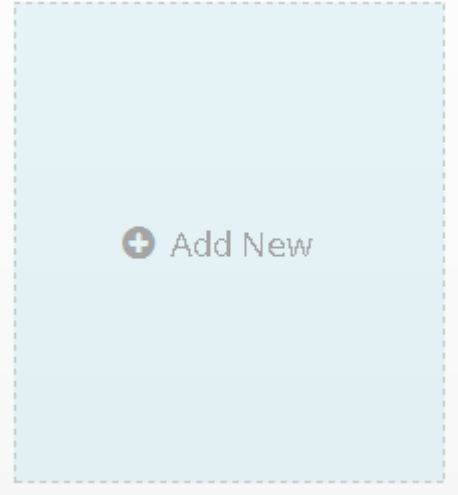
III-2-3 Firmware Upgrade

VigorAPM can perform the **firmware upgrade** of the selected AP.

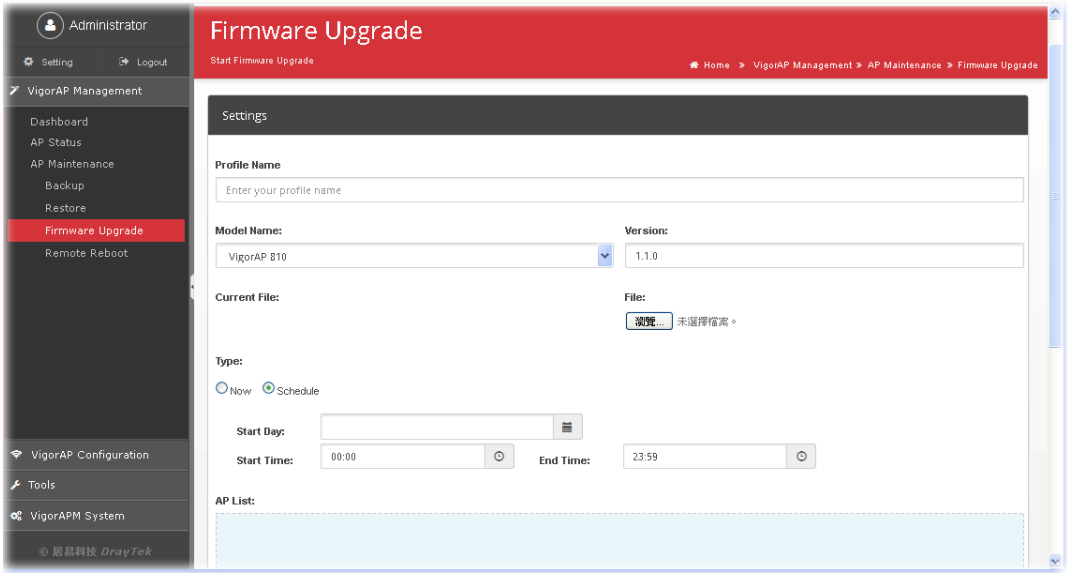


How to create firmware upgrade profile for VigorAP?

1. Click **+Add New**.



2. The **Settings** page is shown as follows:



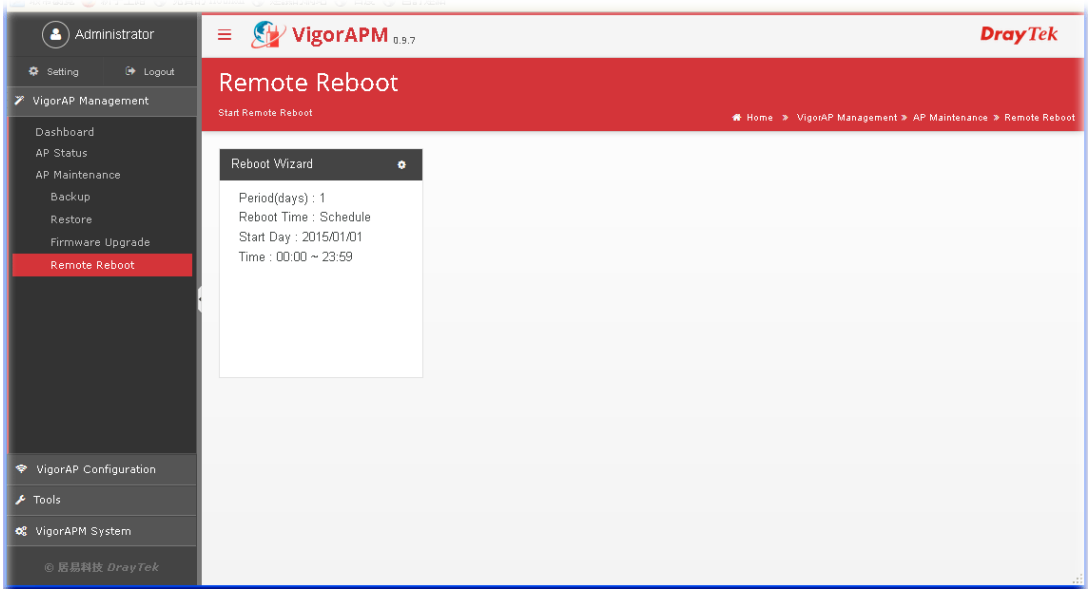
Available settings are explained as follows:

Item	Description
Profile Name	Type a name for such firmware upgrade profile.
Model Name	Use the drop down list to choose the model of VigorAP for firmware upgrade.
Version	Type the available firmware version for VigorAP selected in Model Name.
Current File	**File** – For the firt time using VigorAPM, nothing will be displayed in this field. After creating a new firmware upgrade profile by specifying the required firmware, you can save the profile and exit the web page. Next time, when you want to modify such profile and choose Edit Profile menu item, the name of the firmeware (driver) will be shown immediately.
Type	There are two options: **Now** – The firmware upgrade for VigorAPs will be performed after clicking **Finish**. **Schedule** –The firmware upgrade for VigorAPs will be performed in certain day and time after clicking **Finish**. ● **Start Day** – Specify the execution date. ● **Start Time / End Time** – Specify the starting time and ending time. VigorAPM will perform firmware upgrade for VigorAP specified in AP List at the specified day and time.
AP List	Click it to open VigorAP group window for selecting an AP.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After completing the configuration, click **Finish** to save the setting.
4. Now, VigorAPM will perform firmware upgrade according to the profile configured in this page.

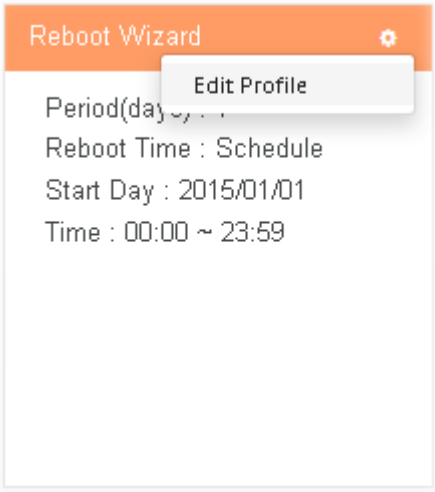
III-2-4 Remote Reboot

VigorAPM can perform the **remote reboot** for the selected AP.

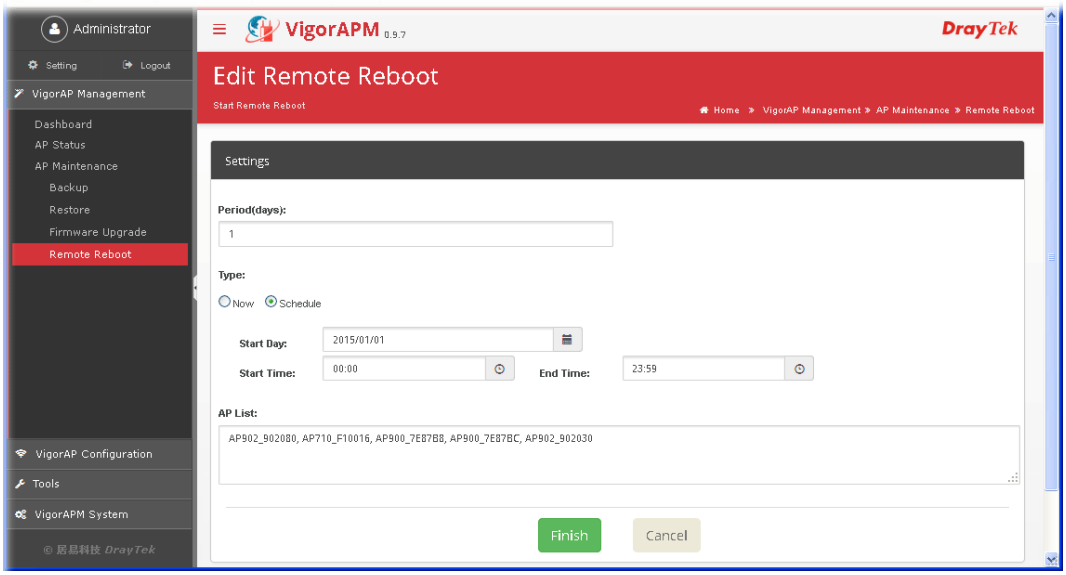


How to create remote reboot profile for VigorAP?

1. Click the icon on top right of **Reboot Wizard** window to display **Edit Profile** option.



2. The **Settings** page is shown as follows:



Available settings are explained as follows:

Item	Description
Period(days)	If you type “1” here, the backup configuration will be performed every day. If you type “2” here, the backup configuration will be performed one time every two days.
Type	There are two options: **Now** – The remote reboot for VigorAPs will be performed after clicking **Finish**. **Schedule** –The remote reboot for VigorAPs will be performed in certain day and time after clicking **Finish**. ● **Start Day** – Specify the execution date. ● **Start Time / End Time** – Specify the starting time and ending time. VigorAPM will perform remote reboot for VigorAP specified in AP List at the specified day and time.
AP List	Click it to open VigorAP group window for selecting an AP.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After completing the configuration, click **Finish** to save the setting.
4. Now, VigorAPM will perform remote reboot according to the profile configured in this page.

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Part IV VigorAP Configuration

VigorAPM can manage the access points through VigorAP Configuration.

AP Map

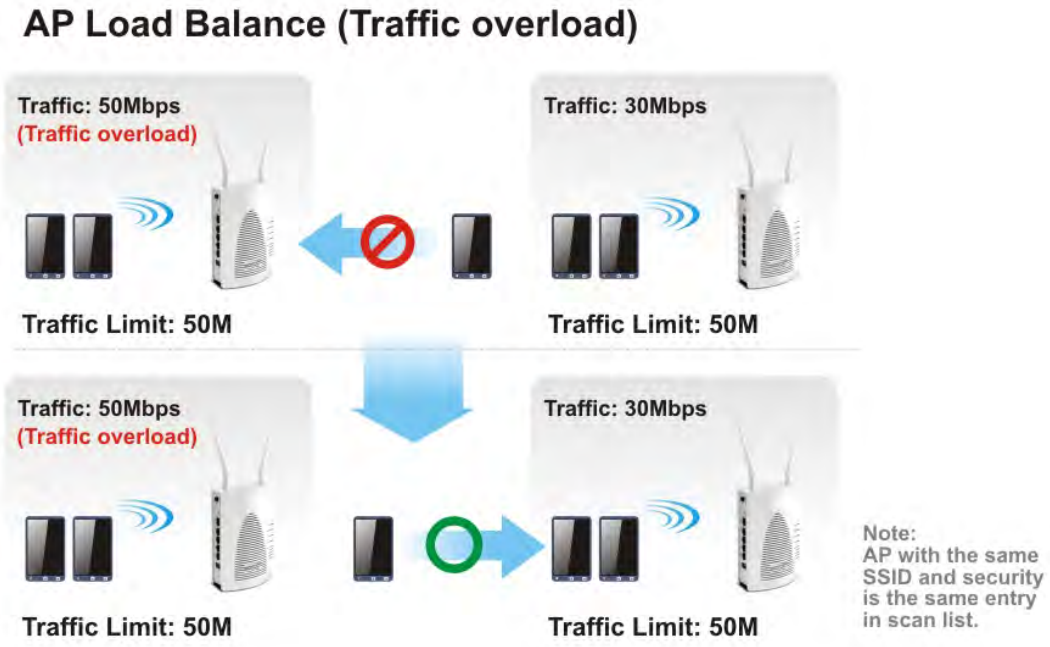
AP Map is helpful to determine the best location for VigorAP in a room. A floor plan of a room is required to be uploaded first. By dragging and dropping available VigorAP icon from the list to the floor plan, the placement with the best wireless coverage will be clearly indicated through simulated signal strength

AP Maintenance

Vigor router can execute configuration backup, configuration restoration, firmware upgrade and remote reboot for the APs managed by the router. It is very convenient for the administrator to process maintenance without accessing into the web user interface of the access point.

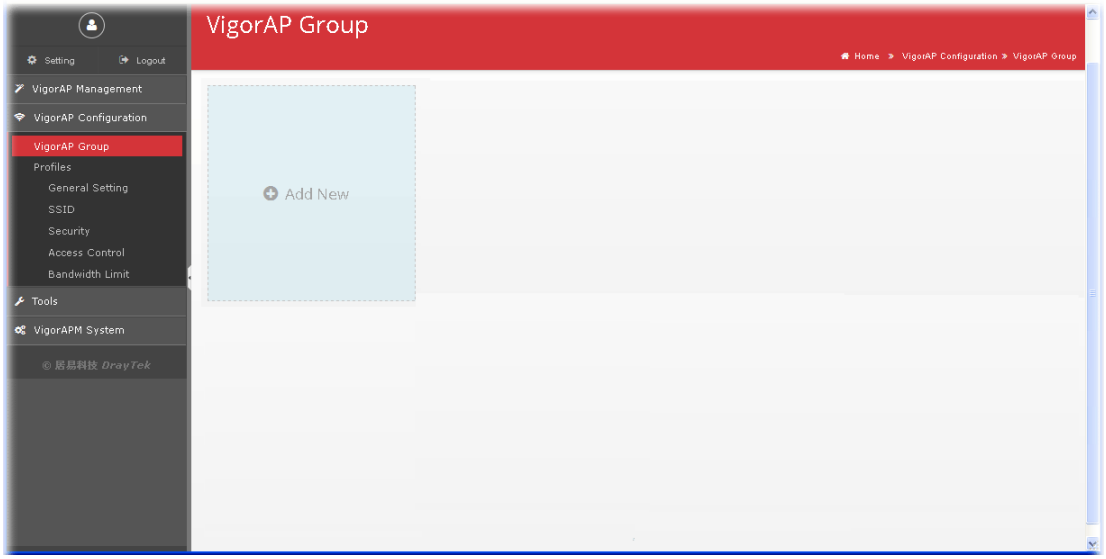
Load Balance for AP

The parameters configured for Load Balance can help to distribute the traffic for all of the access points registered to Vigor router. Thus, the bandwidth will not be occupied by certain access points.

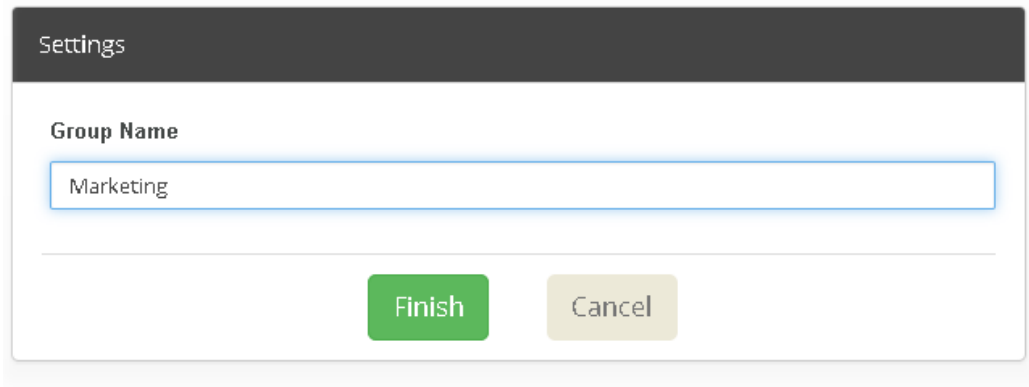


IV-1 VigorAP Group

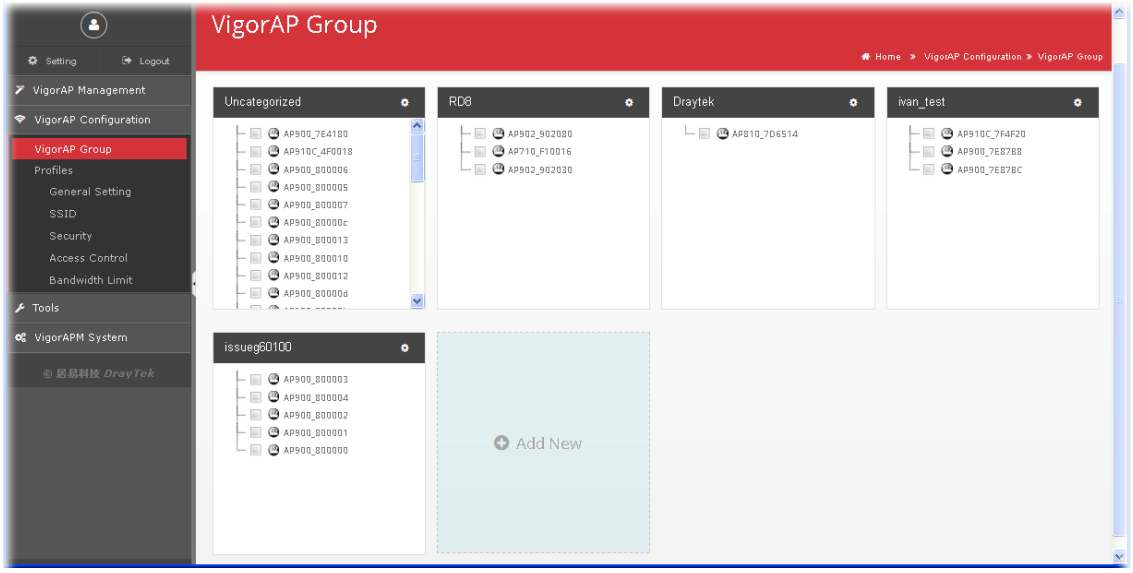
VigorAPM not only can manage VigorAP one by one; but also manage multiple VigorAPs at one time. Administrator can specify several VigorAP devices and group them. Later, various profiles configured for general settings, SSID, security, access control, bandwidth limit respectively can be selected and applied to the VigorAP group. Thus, all of the VigorAP devices within the same group will be written with new setting values.



Click **Add New** to get the following screen.

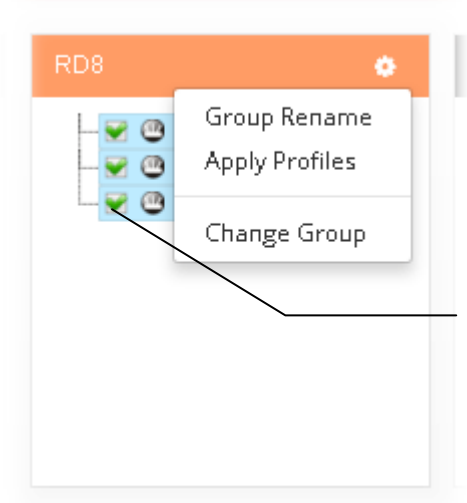


In the **Group Name** filed, type a name (e.g, marketing) for the new group. Next, click **Finish** to save and exit this page. Below shows an example page with several groups:



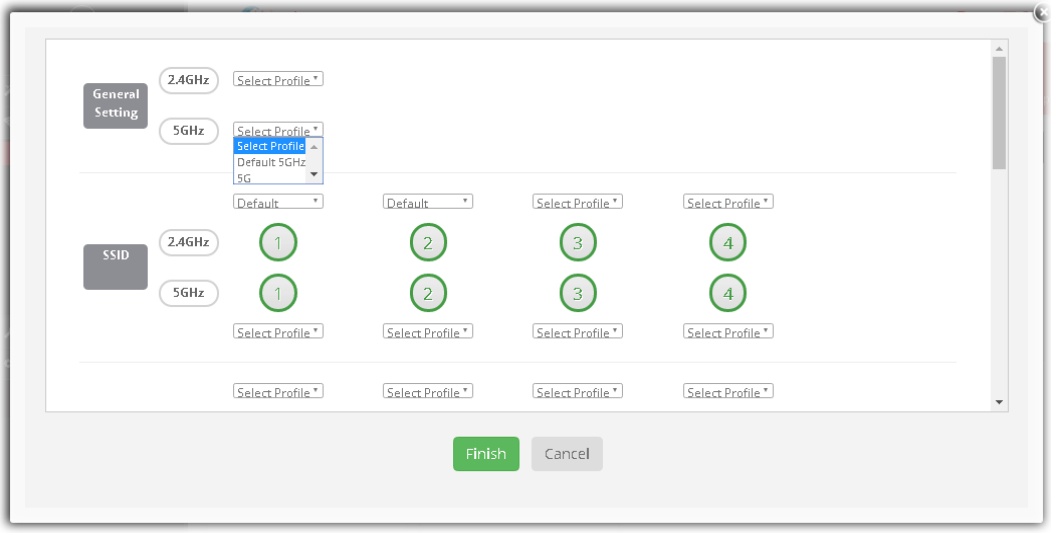
How to apply profiles to specified VigorAP?

1. Select the group for applying profiles and click the icon on the top right of the group window.



The profile can be applied to one group of VigorAPs; also can be applied to a specified VigorAP within a group.

2. Choose **Apply Profiles** to open the following page. This page contains all of the setting profiles (including general settings, SSID, security, access control, bandwidth limit).



Available settings are explained as follows:

Item	Description
General Setting	**Select Profile** - Simply specify a profile related to general settings from the drop down list. Specify profiles for 2.4GHz / 5GHz and for SSIDs, separately.
SSID	**Select Profile** - The number (1~4) within a green circle means SSID (1~4). You need to specify SSID profile from the drop down list for such profile. Specify profiles for 2.4GHz / 5GHz and for SSIDs, separately. A number with Green circle – Such SSID is enabled. A number with Grey circle – Such SSID is disabled.
Security	**Select Profile** - Simply specify a profile related to security settings from the drop down list. Specify profiles for 2.4GHz / 5GHz and for SSIDs, separately.
Access Control	**Select Profile** - Simply specify a profile related to access control settings from the drop down list. Specify profiles for 2.4GHz / 5GHz and for SSIDs, separately.
Bandwidth Limit	**Select Profile** - Simply specify a profile related to bandwidth limit settings from the drop down list. Specify profiles for 2.4GHz / 5GHz and for SSIDs, separately.
Load Balance	**Select Profile** - Simply specify a profile related to load balance from the drop down list.
AP Password	**Select Profile** - Simply specify a profile related to AP password from the drop down list.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

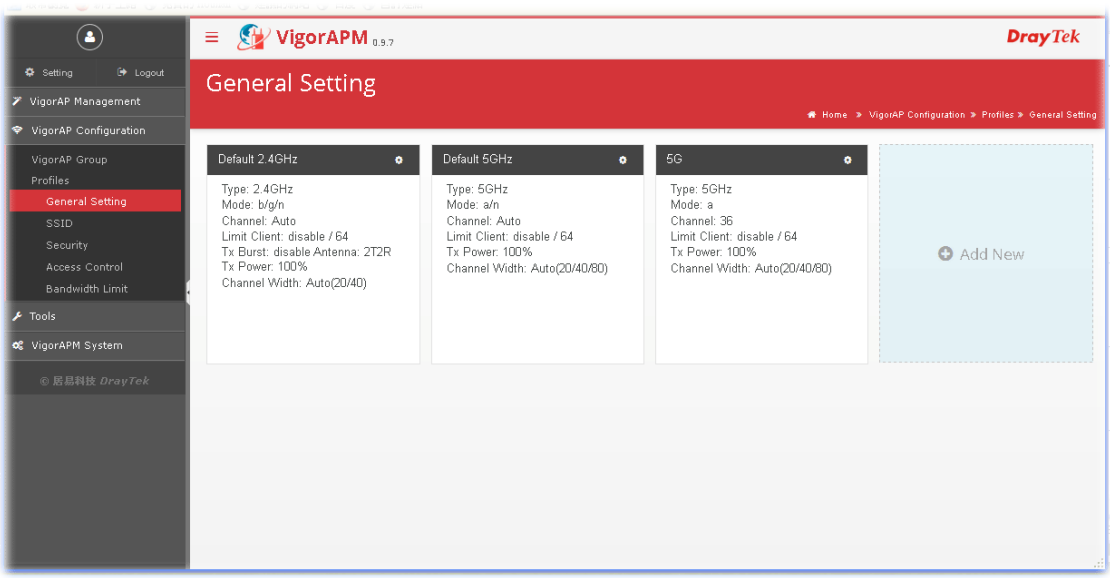
3. Once apply the profile(s) to the specified group, VigorAPM will automatically write the settings values in the profile(s) onto VigorAP devices under the group.

IV-2 Profiles

Functions such as SSID, security, access control, bandwidth limit related to VigorAP device can be configured and saved as a profile. VigorAPM can apply these profiles to the managed VigorAP through VigorAP group. Thus, it is not necessary for the administrator to access into VigorAP respectively to change the settings. It is convenient and greatly saves your time.

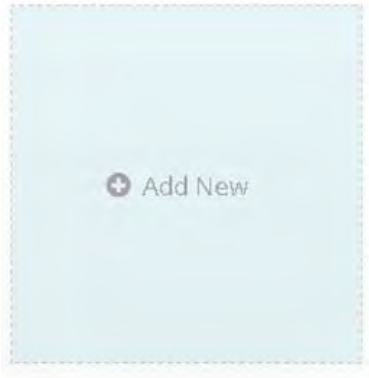
IV-2-1 General Setting

Common settings such as wireless type, mode, channel, channel width, TX power and TX Burst can be configured and saved as general setting profile.

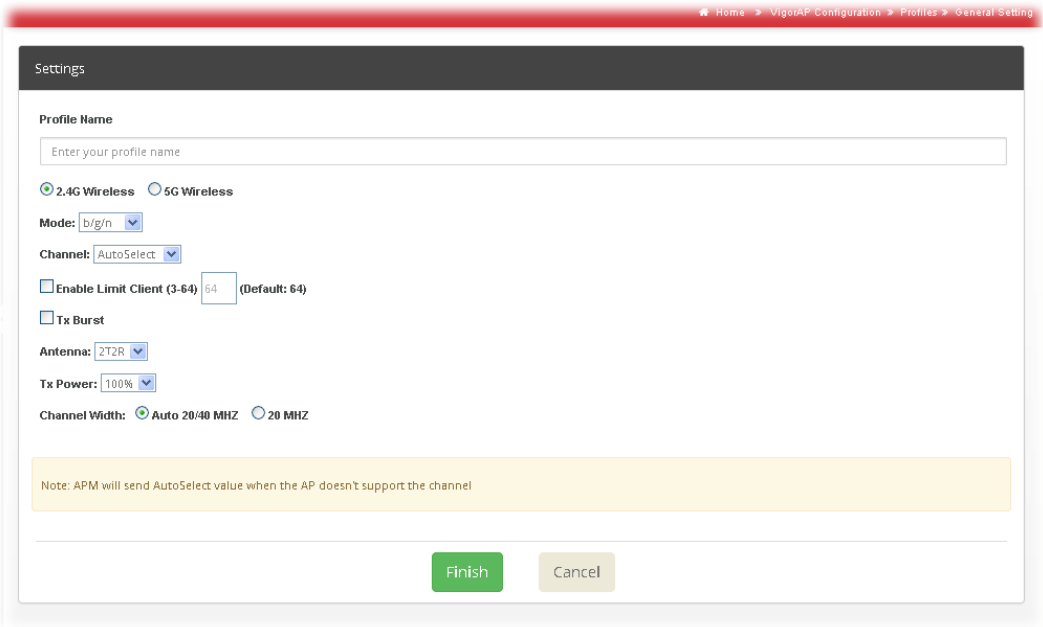


How to configure general settings for VigorAP proifles?

1. Click **Add New**.



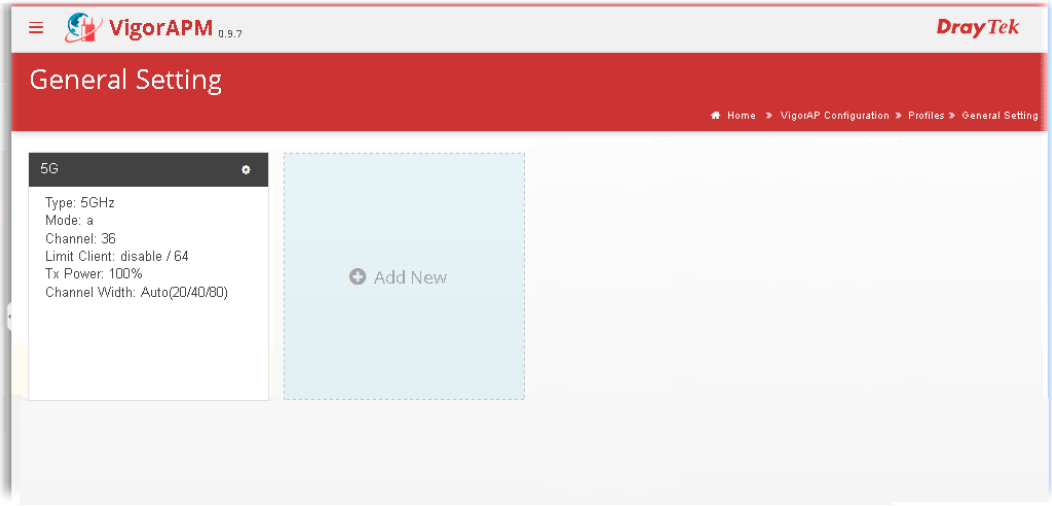
2. The **Settings** page will be shown as follows:



Available settings are explained as follows:

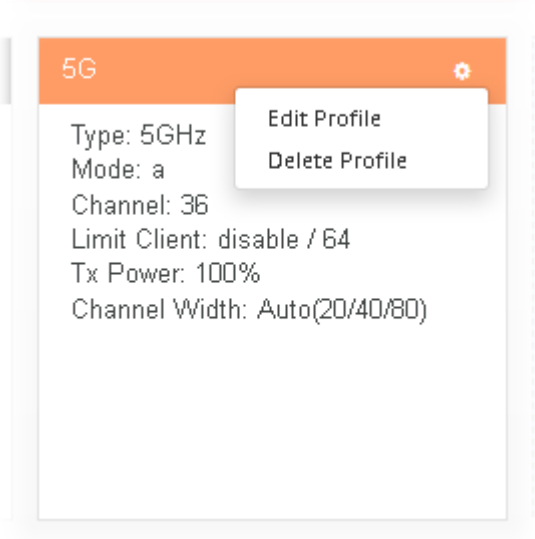
Item	Description
Profile Name	Type a name of the profile.
2.4G Wireless / 5G Wireless	Specify which bandwith will be applied to such profile.
Mode	Use the drop down list to select one connection mode for such profile.
Channel	Select one channel for such profile. The default channel is "AutoSelect" which means Vigor system will choose the suitable mode for VigorAP automatically.
Enable Limit Client	After checking the box, VigorAPM will limit the total number of wireless client accessing into Internet.
Tx Burst	This feature can enhance the performance in data transmission about 40%* more (by checking **Tx Burst**). It is active only when both sides of Access Point and Station (in wireless client) invoke this function at the same time. That is, the wireless client must support this feature and invoke the function, too.
Antenna	Vigor router can be attached with two antennas to have good data transmission via wireless connection. However, if you have only one antenna attached, please choose 1T1R.
Tx Power	Set the power percentage for transmission signal of access point. The greater the value is, the higher intensity of the signal will be.
Channel Width	**20-** the router will use 20Mhz for data transmission and receiving between the AP and the stations. **Auto 2-/40 MHZ -** the router will use 20Mhz or 40Mhz for data transmission and receiving according to the station capability. Such channel can increase the performance for data transit.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After finished the configuration and click **Finish,** a new created profile will be displayed on the page of General Setting.



How to edit VigorAP profiles for general settings?

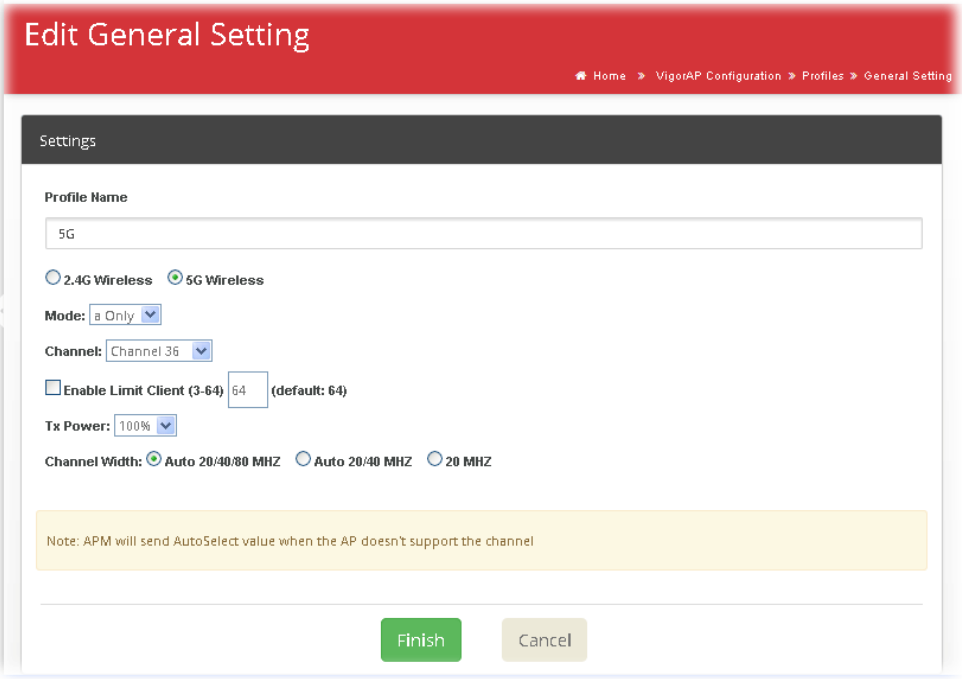
1. Move your mouse cursor on the profile icon that you want to edit. Click the mouse cursor on the top right of the profile icon. Then you will a drop down menu items.



Available settings are explained as follows:

Item	Description
Edit Profile	Click it to open **Settings** dialog again to modify the profile.
Delete Profile	The selected profile will be removed from current web page.

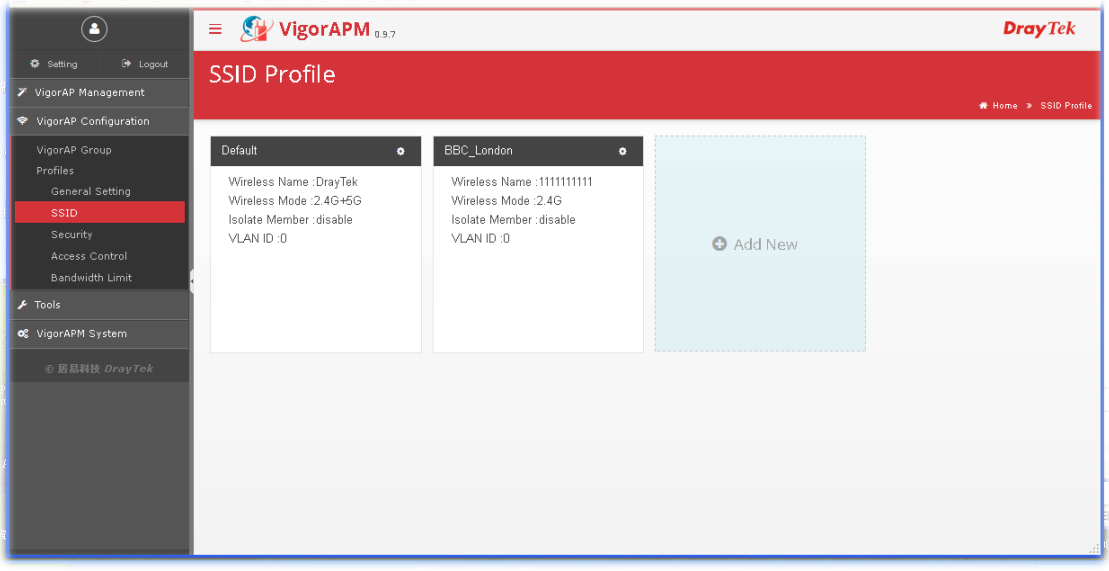
2. Choose and click **Edit Profile** to open the following page for modifying the settings.



3. After finished the modification, click **Finish**.

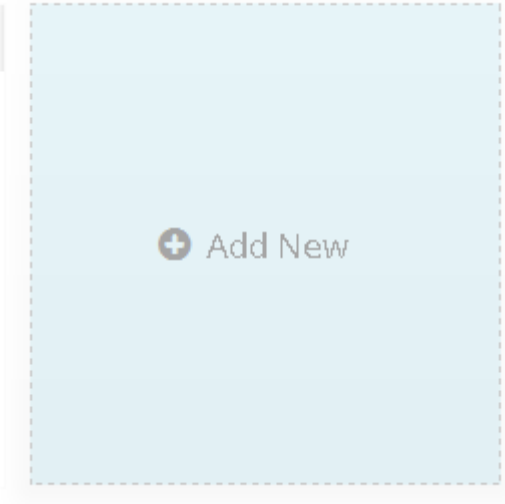
IV-2-2 SSID

SSID Profile is mainly used to configure wireless mode (2.4G or 5G), enable or disable the function of isolate member, and specify VLAN ID value for VigorAP managed by VigorAPM.

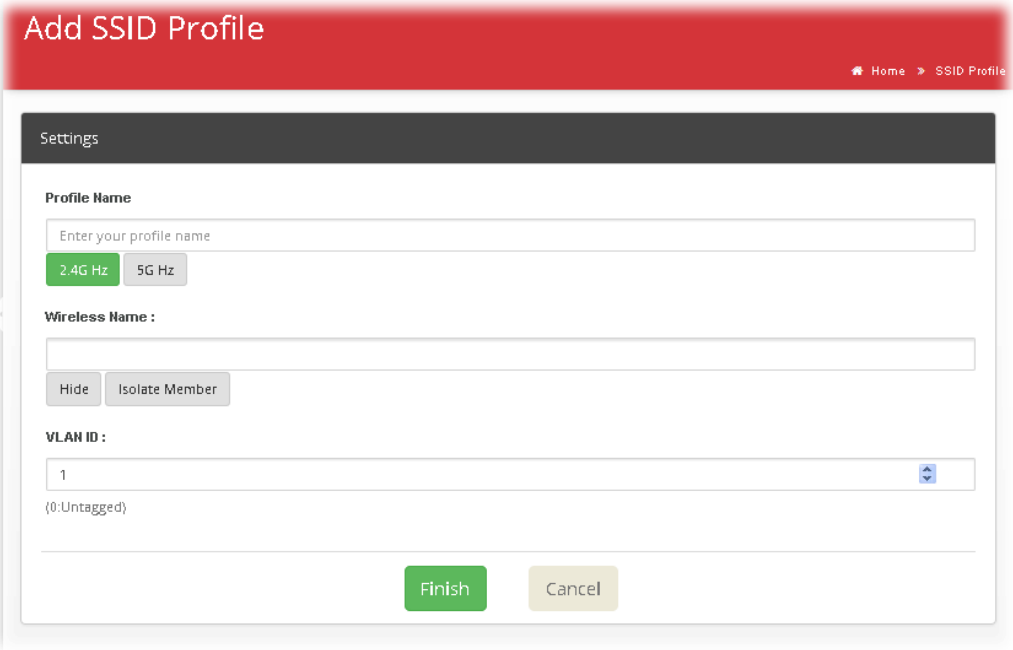


How to configure SSID Profile?

1. Click **Add New** to get the **Settings** dialog.



2. The **Settings** page will be shown as follows:

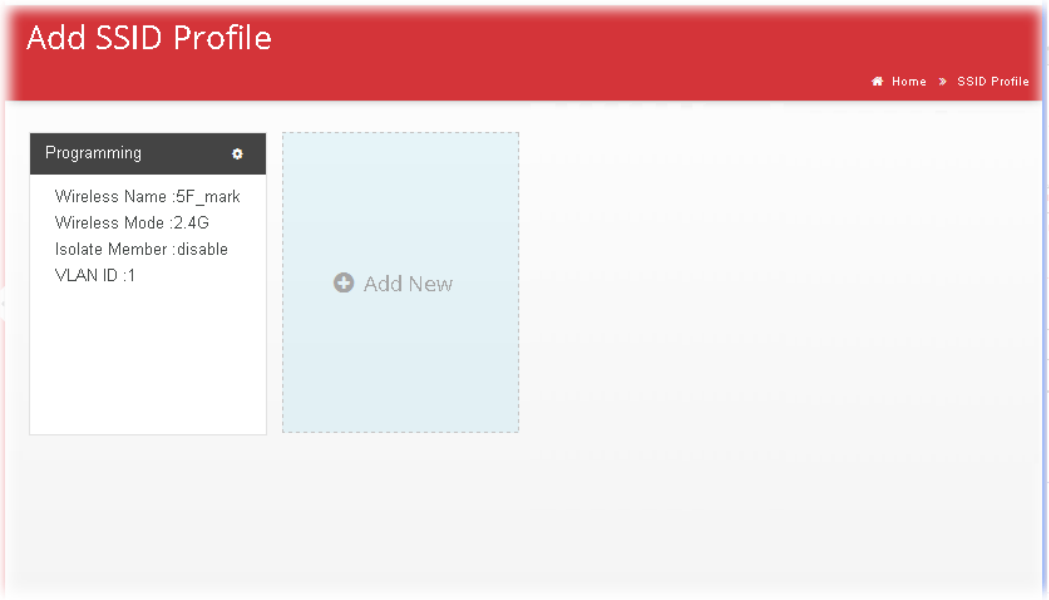


Available settings are explained as follows:

Item	Description
Profile Name	Type a name for such profile.
2.4G Hz / 5G Hz	Press to enable 2.4GHz and/or 5GHz wireless channel.
Wireless Name	Type a name for such SSID profile. Such name is used for identification.
Hide	Press the button to prevent from wireless sniffing and make it harder for unauthorized clients or STAs to join your wireless LAN. Depending on the wireless utility, the user may only see the information except SSID or just cannot see any thing about Vigor wireless router while site surveying. The system allows you to set four sets of SSID for different usage. In default, the first set of SSID will be enabled. You can hide it for your necessity.
Isolate Member	Press the button to make the wireless clients (stations) sharing

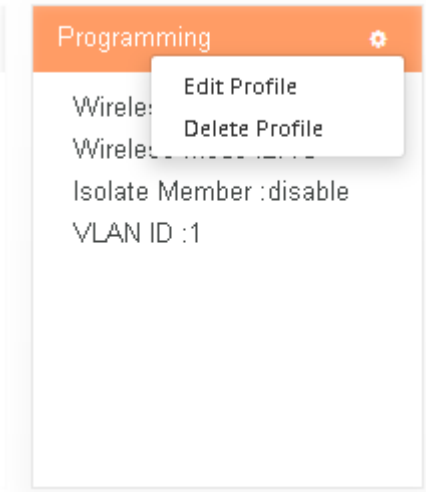
	with such SSID not accessing for each other.
VLAN ID	Specify the value as the VLAN ID number. The range is from 0 to 4095. After you specify a VLAN ID in such field, VigorAP will add specific VLAN number to all packets on the WAN while sending them out.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After finished the modification, click **Finish**. A new created profile will be shown on the screen.



How to edit SSID profiles?

1. Move your mouse cursor on the profile icon that you want to edit. Click the mouse cursor on the top right of the profile icon. Then you will a drop down menu items.

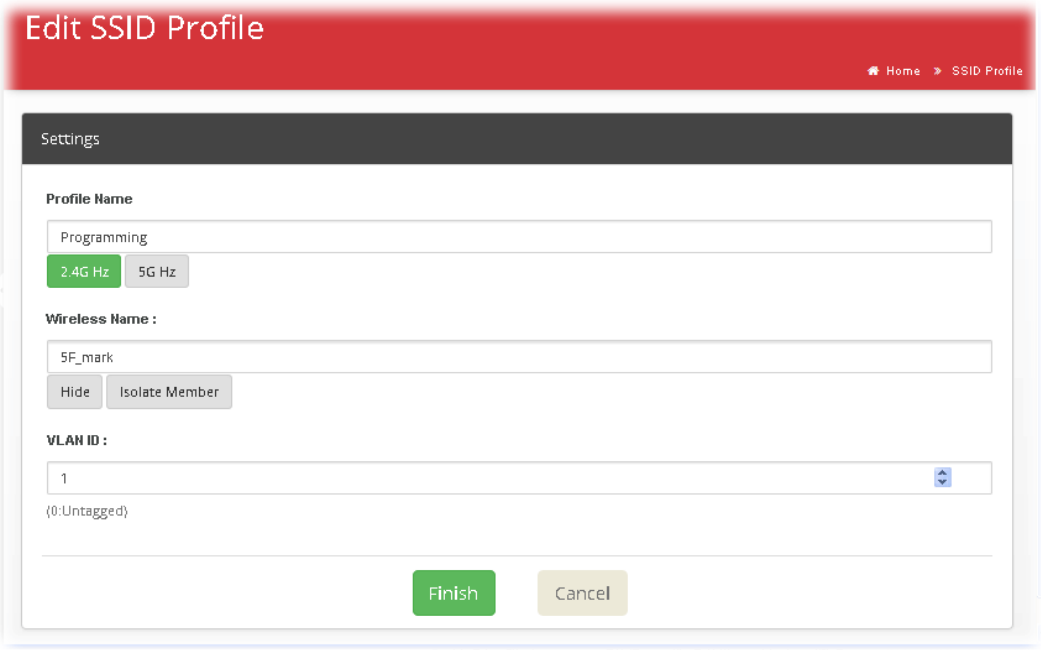


Available settings are explained as follows:

Item	Description

Edit Profile	Click it to open **SSID** profile again for modification.
Delete Profile	The selected profile will be removed from current web page.

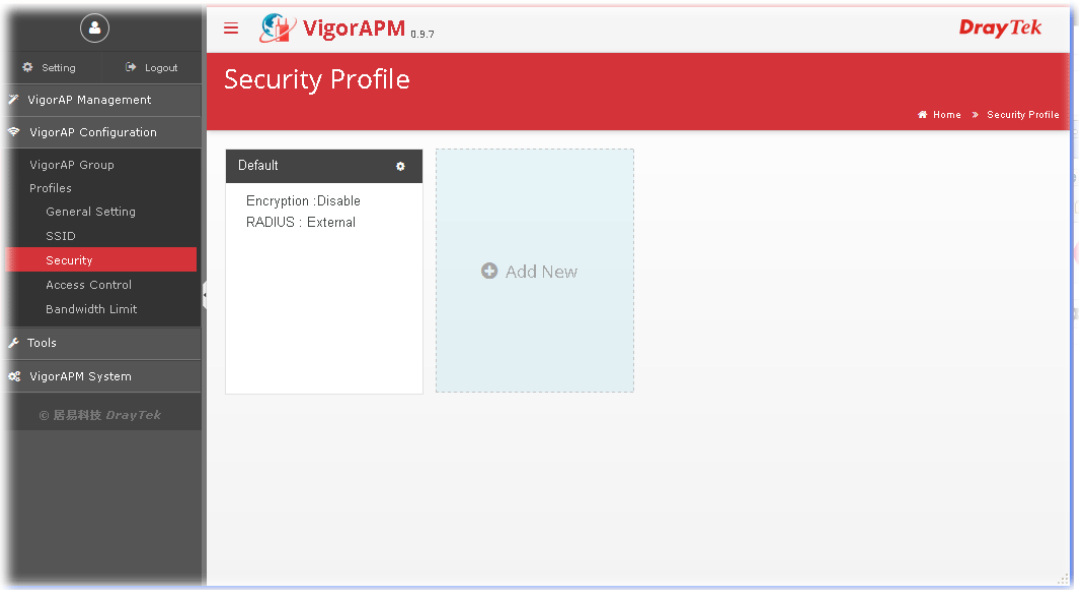
2. Choose and click **Edit Profile** to open the following page for modifying the settings.



3. After finished the modification, click **Finish**.

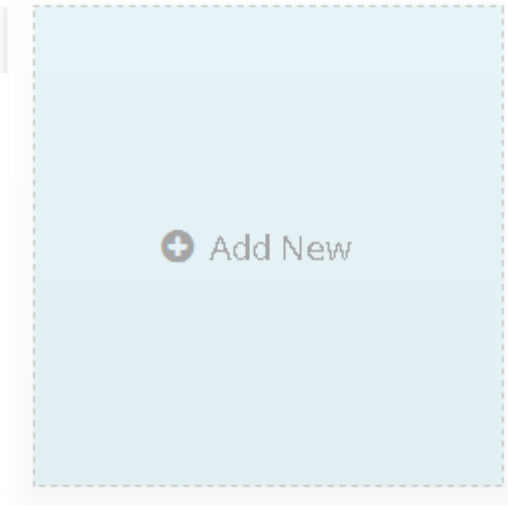
IV-2-3 Security

This page allows you to set security with different modes for SSID 1, 2, 3 and 4 respectively. After configuring the correct settings, please click **Finish** to save it.

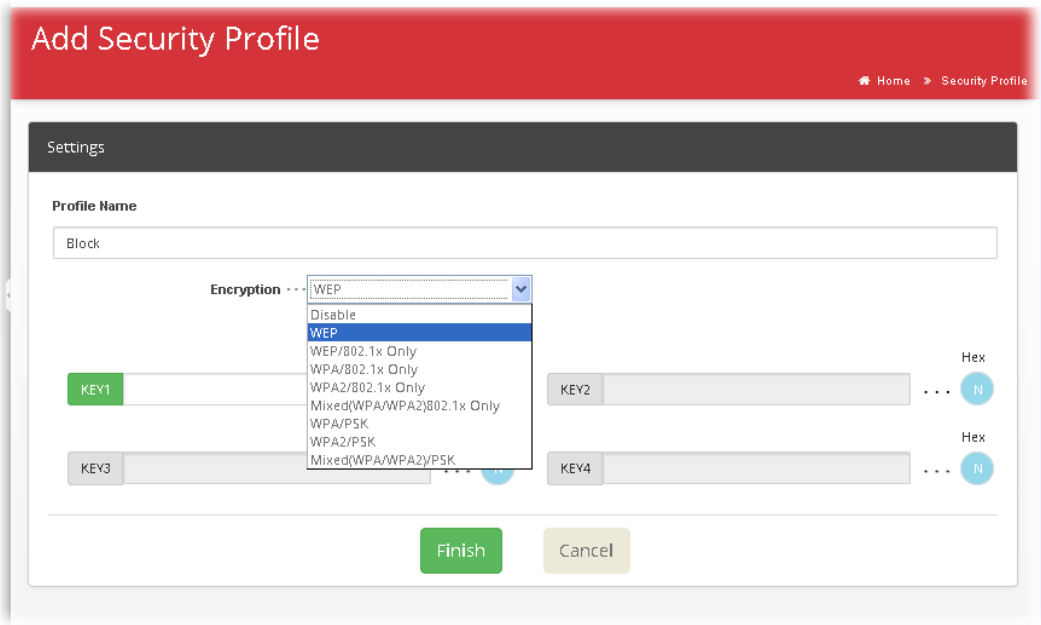


How to configure security profile?

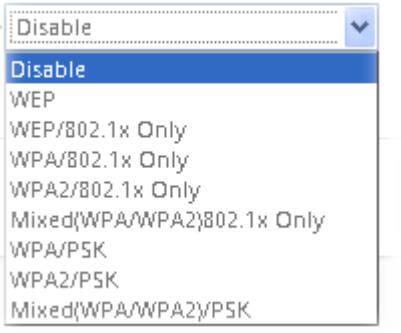
1. Click **Add New** to get the **Settings** dialog.



2. The **Settings** page will be shown as follows:



Available settings are explained as follows:

Item	Description
Profile Name	Type a name for such profile.
Encryption	Choose one of the encryption mode for such profile.  **Disable** - Turn off the encryption mechanism.

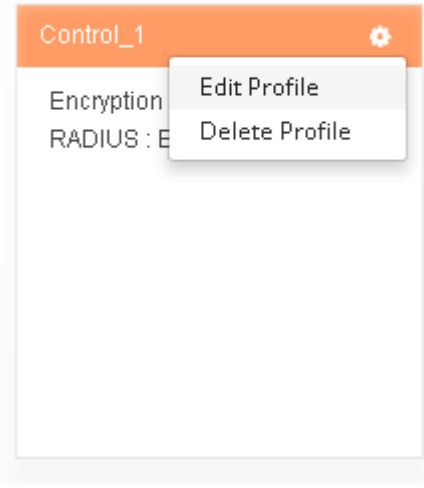
	WEP-Accepts only WEP clients and the encryption key should be entered in WEP Key. **WEP/802.1x Only -** Accepts only WEP clients and the encryption key is obtained dynamically from RADIUS server with 802.1X protocol. **WPA/802.1x Only-** Accepts only WPA clients and the encryption key is obtained dynamically from RADIUS server with 802.1X protocol. **WPA2/802.1x Only-** Accepts only WPA2 clients and the encryption key is obtained dynamically from RADIUS server with 802.1X protocol. **Mixed (WPA+WPA2/802.1x only) -** Accepts WPA and WPA2 clients simultaneously and the encryption key is obtained dynamically from RADIUS server with 802.1X protocol. **WPA/PSK-**Accepts only WPA clients and the encryption key should be entered in PSK. **WPA2/PSK-**Accepts only WPA2 clients and the encryption key should be entered in PSK. **Mixed (WPA+ WPA2)/PSK -** Accepts WPA and WPA2 clients simultaneously and the encryption key should be entered in PSK.
WEP	**KEY1 – KEY4** – For there is only one key will be used for such profile. Click the key button you want to enable it and type the encryption information. All wireless devices (accessing into Internet via the same VigorAP) must support the same WEP encryption bit size and have the same key. **Four keys** can be entered here, but only one key can be selected at a time. Hex - The keys can be entered in ASCII. Hex - The keys can be entered in Hexadecimal.
WEP/802.1x Only	Settings for such encryption are available for external RADIUS only. **802.1X WEP –** Click this button to enable the function**.** **Shared Secret** – Specify a string as the encryption content for such profile. Such key will be used as a verification code for the authentication server (RADIUS) to authenticate the request coming from VigorAP. That is, the encryption information typed here must be that same as the content specified on RADIUS server. **Session Time** – Specify a value (default: 3600 seconds) of the connection time which will be assigned to the client. The default setting is 3600. That means the network connection will be terminated if the client is idle until timeout. **IP Address** – Specify the IP address of the authentication server. **Port Number** –Type a port number for authentication, ranging from 0 ~65535. The default value is 1812.
WPA/802.1x Only / WPA2/802.1x Only / Mixed(WPA/WPA2)8	Settings for such encryption are available for external RADIUS only. **TKIP / AES** – Click the button to enable the encryption

02.1x Only	function. **Shared Secret** – Specify a string as the encryption content for such profile. Such key will be used as a verification code for the authentication server (RADIUS) to authenticate the request coming from VigorAP. That is, the encryption information typed here must be that same as the content specified on RADIUS server. **Session Time** – Specify a value (default: 3600 seconds) of the connection time which will be assigned to the client. The default setting is 3600. That means the network connection will be terminated if the client is idle until timeout. **IP Address** – Specify the IP address of the authentication server. **Port Number** – Type a port number for authentication, ranging from 0 ~65535. The default value is 1812. **Renewal** - WPA uses shared key for authentication to the network. However, normal network operations use a different encryption key that is randomly generated. This randomly generated key that is periodically replaced. Enter the renewal security time (seconds) in the column. Smaller interval leads to greater security but lower performance. Default is 3600 seconds. Set 0 to disable re-key.
WPA/PSK / WPA2/PSK / Mixed(WPA/WPA2)/ PSK	**Pass Phrase** – Either **8~63** ASCII characters, such as 012345678..(or 64 Hexadecimal digits leading by 0x, such as "0x321253abcde..."). **Renewal** - WPA uses shared key for authentication to the network. However, normal network operations use a different encryption key that is randomly generated. This randomly generated key that is periodically replaced. Enter the renewal security time (seconds) in the column. Smaller interval leads to greater security but lower performance. Default is 3600 seconds. Set 0 to disable re-key.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After finished the modifivation, click **Finish**. A new created profile will be shown on the screen.

How to edit security profiles ?

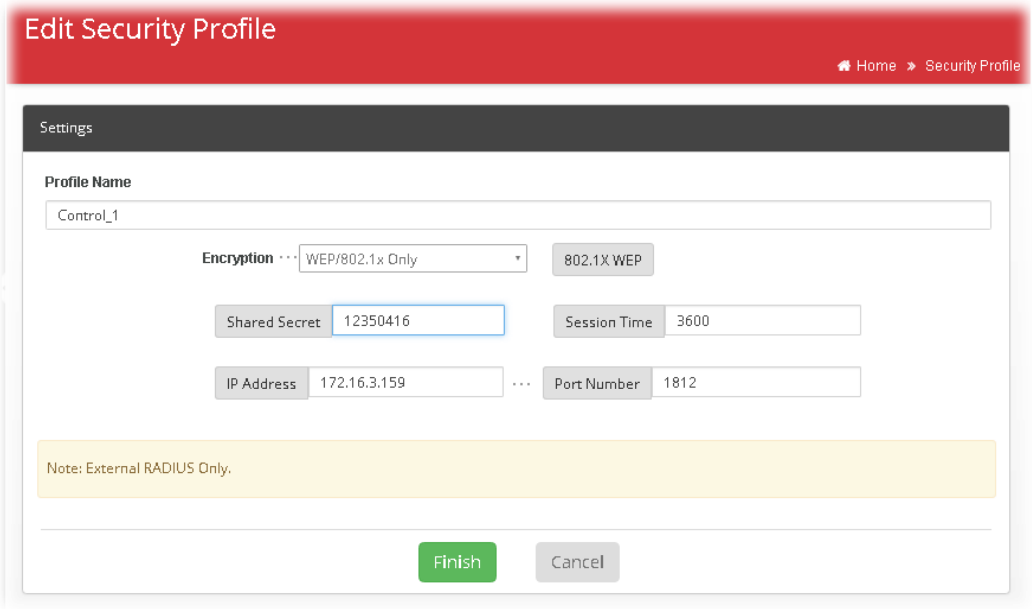
1. Move your mouse cursor on the profile icon that you want to edit. Click the mouse cursor on the top right of the profile icon. Then you will a drop down menu items.



Available settings are explained as follows:

Item	Description
Edit Profile	Click it to open access control profile again for modification.
Delete Profile	The selected profile will be removed from current web page.

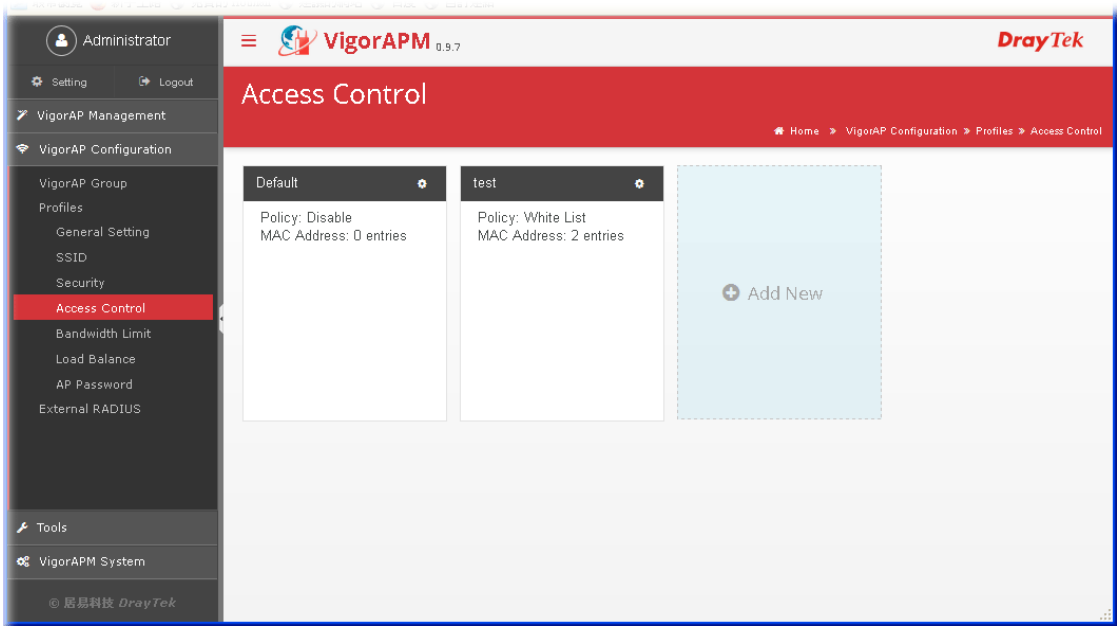
2. Choose and click **Edit Profile** to open the following page for modifying the settings.



3. After finished the modification, click **Finish**.

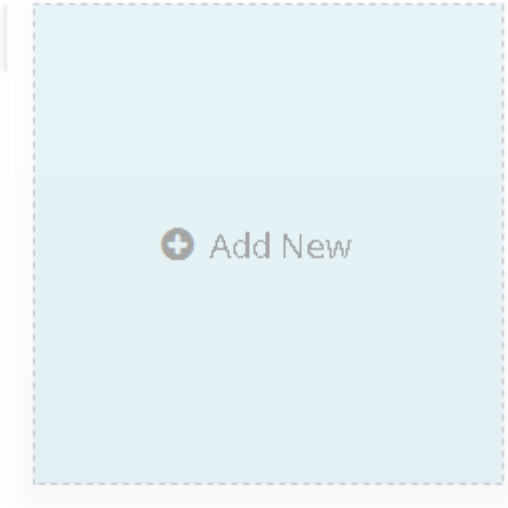
IV-2-4 Access Control

For additional security of wireless access, the **Access Control** facility allows you to restrict the network access right by controlling the wireless LAN MAC address of client. Only the valid MAC address that has been configured can access the wireless LAN interface. By clicking the **Access Control**, a new web page will appear, as depicted below, so that you could edit the clients' MAC addresses to control their access rights (deny or allow).

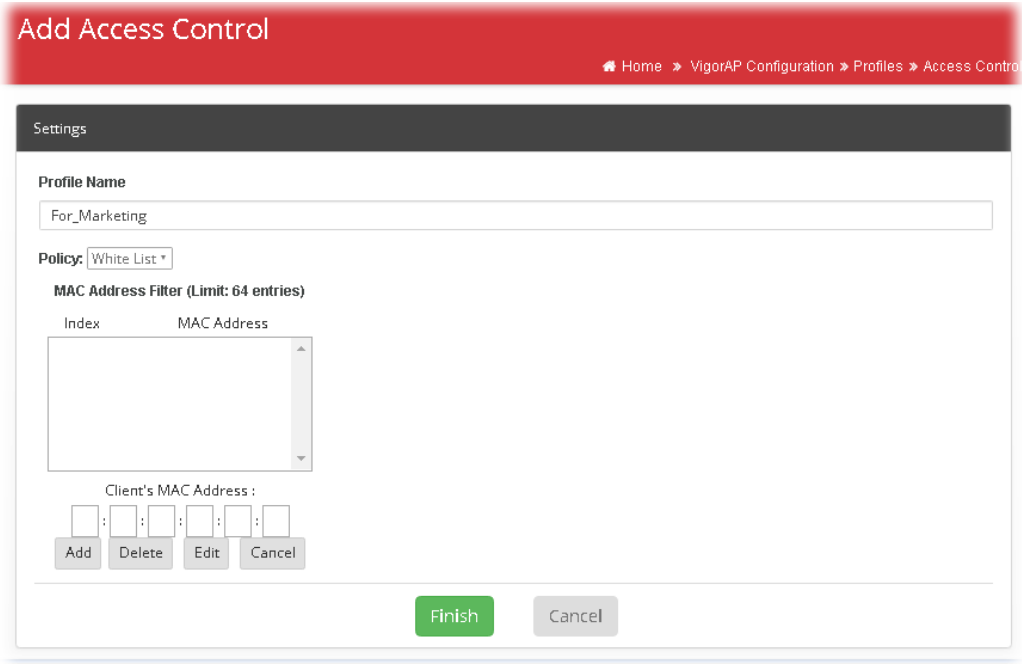


How to configure Access Control profile?

1. Click **Add New** to get the **Settings** dialog.



2. The **Settings** page will be shown as follows:



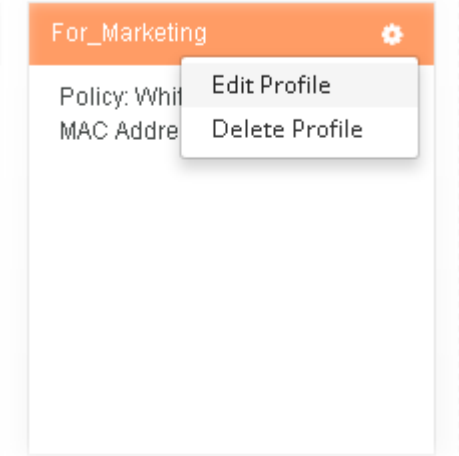
Available settings are explained as follows:

Item	Description
Profile Name	Type a name for such profile.
Policy	Select to enable any one of the following policy or disable the policy. Choose **White List** to type in the MAC addresses for other clients in the network manually. Choose **Black List,** so that all of the devices with the MAC addresses listed on the MAC Address Filter table will be blocked and cannot access into VigorAP. Any client outside the White List is not allowed to access into the Internet.
Mac Address Filter	Display all MAC addresses that are edited before.
Client's MAC Address	Manually enter the MAC address of wireless client.
Add	Add a new MAC address into the list.
Delete	Delete the selected MAC address in the list.
Edit	Edit the selected MAC address in the list.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After finished the modifivation, click **Finish**. A new created profile will be shown on the screen.

How to edit Access Control profile?

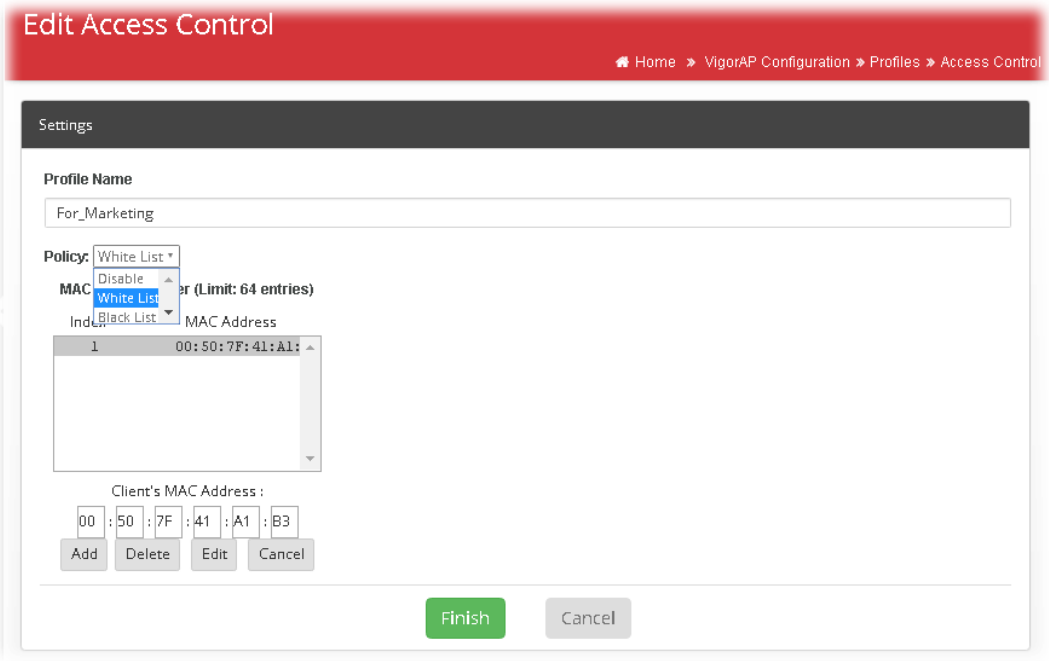
1. Move your mouse cursor on the profile icon that you want to edit. Click the mouse cursor on the top right of the profile icon. Then you will a drop down menu items.



Available settings are explained as follows:

Item	Description
Edit Profile	Click it to open access control profile again for modification.
Delete Profile	The selected profile will be removed from current web page.

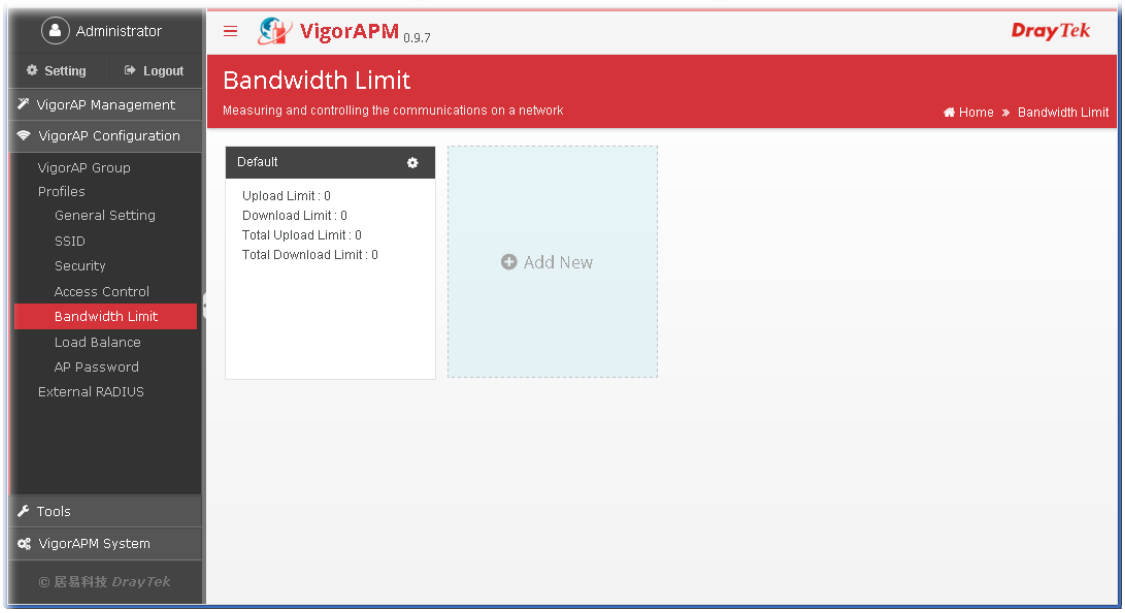
2. Choose and click **Edit Profile** to open the following page for modifying the settings.



4. After finished the modification, click **Finish**.

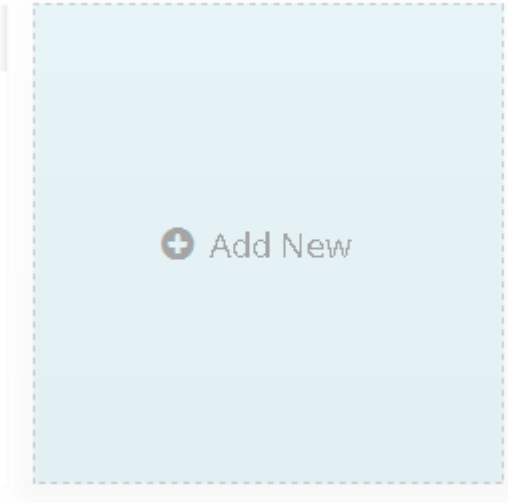
IV-2-5 Bandwidth Limit

The downstream or upstream from FTP, HTTP or some P2P applications will occupy large of bandwidth and affect the applications for other programs. Please use Bandwidth Limit to make the bandwidth usage more efficient.

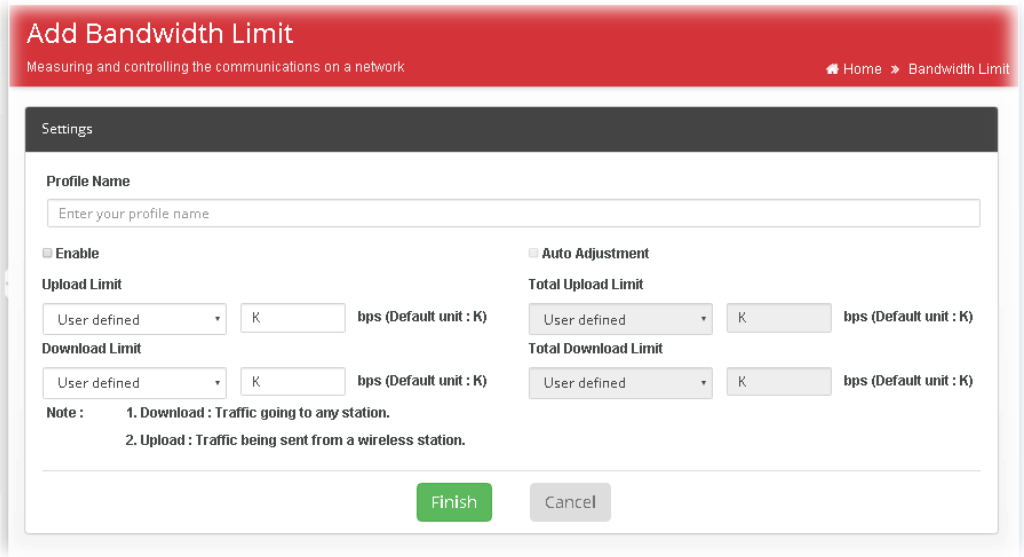


How to configure bandwidth limit profile?

1. Click **Add New** to get the **Settings** dialog.



2. The **Settings** page will be shown as follows:



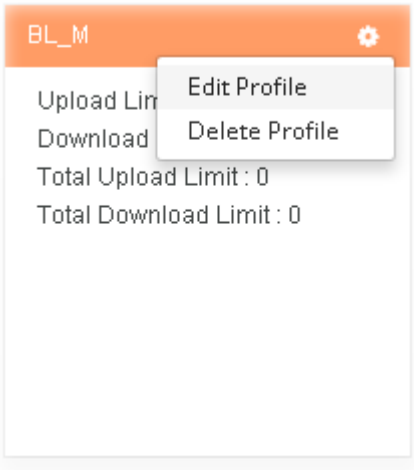
Available settings are explained as follows:

Item	Description
Profile Name	Type a name for such profile.
Enable	Check the box to configure upload limit and downlimit manually.
Upload Limit	Define the maximum speed of the data uploading which will be used for the wireless stations connecting to VigorAP with the same SSID. Use the drop down list to choose the rate. If you choose **User defined**, you have to specify the rate manually.
Download Limit	Define the maximum speed of the data downloading which will be used for the wireless station connecting to VigorAP with the same SSID. Use the drop down list to choose the rate. If you choose **User defined**, you have to specify the rate manually.
Auto Adjustment	Check this box to have the bandwidth limit determined by the system automatically. **Total Upload/Download Limit –** VigorAPM will dynamically assign the bandwith to all of managed VigorAP based on the values specifed here. Use the drop down list to choose the rate. If you choose **User defined**, you have to specify the rate manually.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After finished the modifivation, click **Finish**. A new created profile will be shown on the screen.

How to edit bandwidth limit profile?

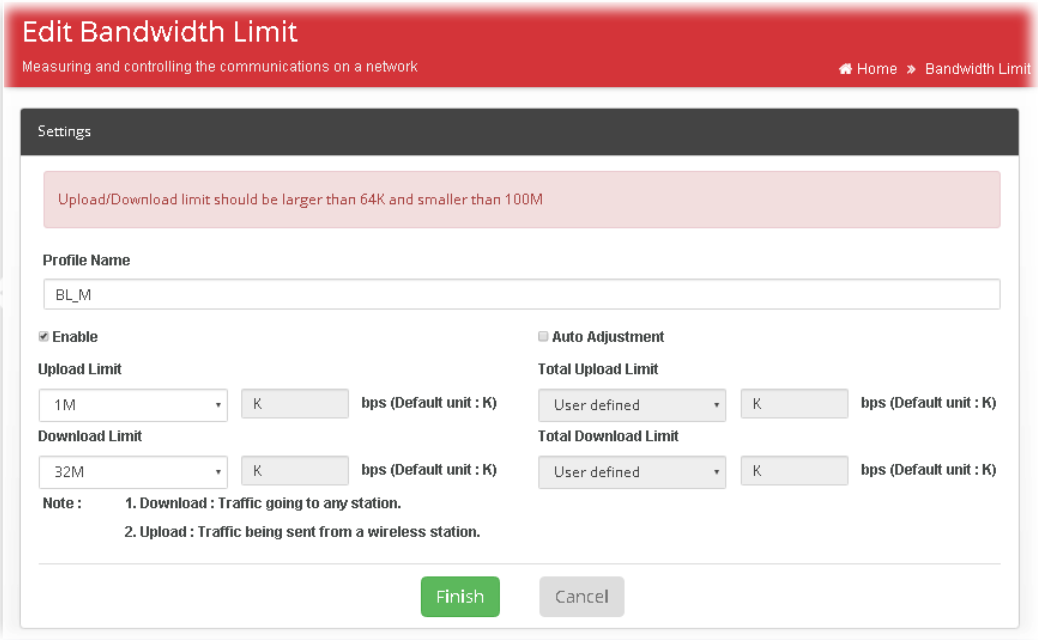
1. Move your mouse cursor on the profile icon that you want to edit. Click the mouse cursor on the top right of the profile icon. Then you will a drop down menu items.



Available settings are explained as follows:

Item	Description
Edit Profile	Click it to open access control profile again for modification.
Delete Profile	The selected profile will be removed from current web page.

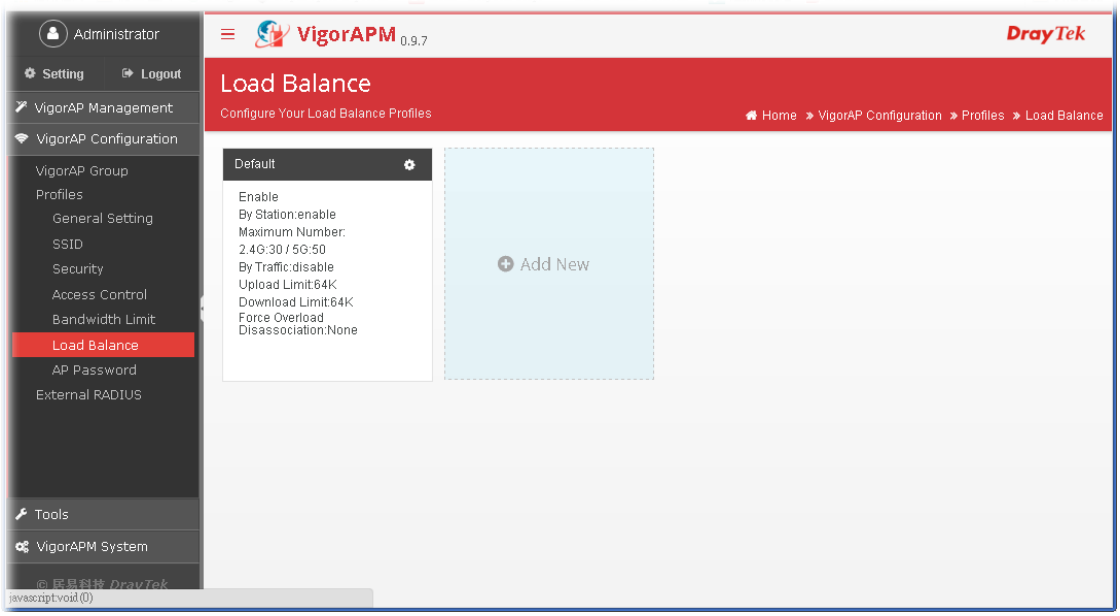
2. Choose and click **Edit Profile** to open the following page for modifying the settings.



3. After finished the modification, click **Finish**.

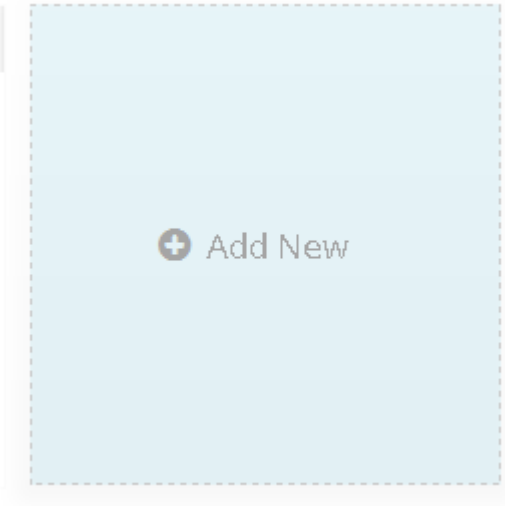
IV-2-6 Load Balance

Load Balance can help to distribute the traffic for all of the access points (e.g., VigorAP 902) registered to VigorAPM. Thus, the bandwidth will not be occupied by certain access points.

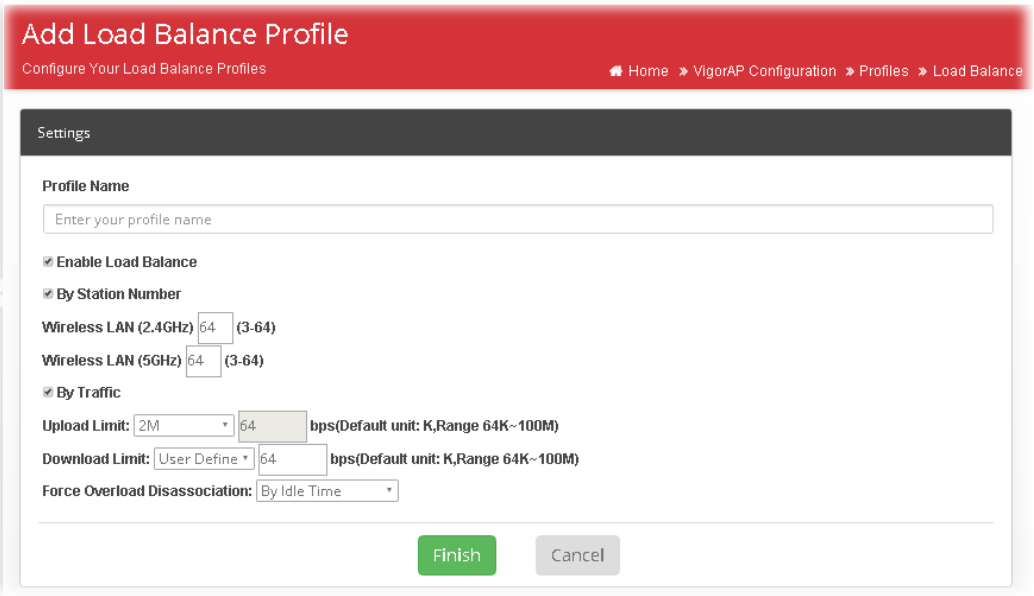


How to configure load balance profile?

1. Click **Add New** to get the **Settings** dialog.



2. The **Settings** page will be shown as follows:



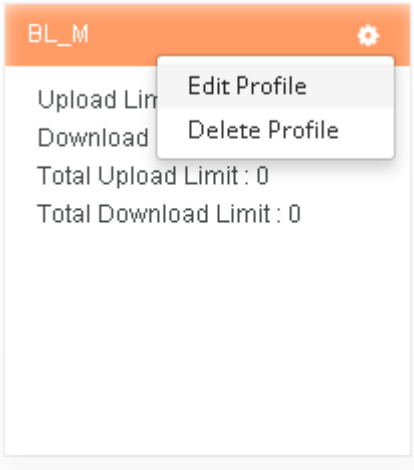
Available settings are explained as follows:

Item	Description
Profile Name	Type a name for such profile.
Enable Load Balance	Check the box to enable such function for tbe profile.
By Station Number	Limit the number of the wireless clients to reach load balance. It can avoid too many clients accessing Internet and resulting network congestion. **Wireless LAN (2.4GHz) / Wireless LAN (5GHz) -** Limit the total number of wireless client (2.4GHz/5GHz).
By Traffic	Traffic load balance can be controlled through limitation in upload and download. **Upload/Download Limit –** Define the maximum speed of the data uploading/downloading which will be used for the wireless stations connecting to Vigor device with the same SSID. Use the drop down list to choose the rate. If you choose **User defined**, you have to specify the rate manually. **Force Overload Disassociation –** Traffic overload might be occurred if too many wireless stations connected to VigorAP for data incoming and outgoing. Therefore, "Force Overload Disassociation" is required to terminate the network connection of the client's station to release network traffic. ● **None** – Nothing will be done. ● **By Idle Time** – When VigorAP is overloaded and there is a new connection request, VigorAP will end the connection with the wireless station which idle the longest. Later, the bandwith will be available for new connection request. ● **By Signal Strength** – When VigorAP is overloaded (e.g., reaching the limit of station number or limit of network traffic), it will terminate the network connection of the client's station with the weakest signal.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After finished the modifivation, click **Finish**. A new created profile will be shown on the screen.

How to edit load balance profile?

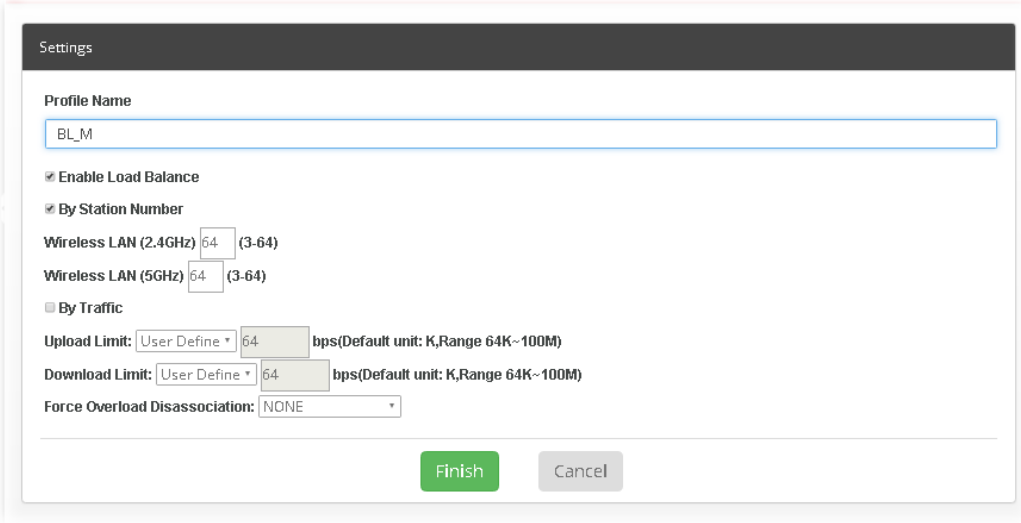
1. Move your mouse cursor on the profile icon that you want to edit. Click the mouse cursor on the top right of the profile icon. Then you will a drop down menu items.



Available settings are explained as follows:

Item	Description
Edit Profile	Click it to open access control profile again for modification.
Delete Profile	The selected profile will be removed from current web page.

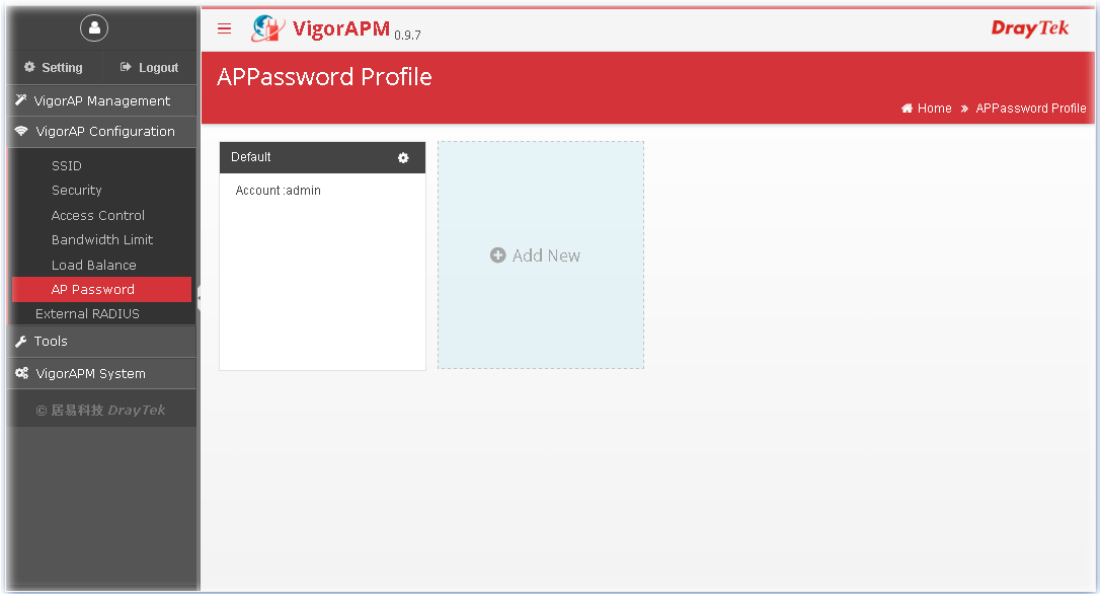
2. Choose and click **Edit Profile** to open the following page for modifying the settings.



3. After finished the modification, click **Finish**.

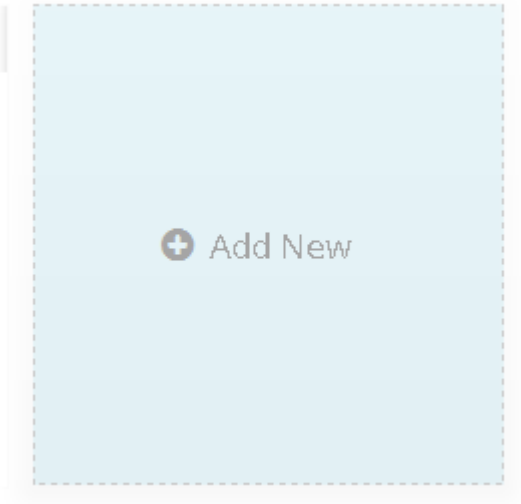
IV-2-7 AP Password

Such page is used to change the administrator account/password for accessing into web user interface of VigorAPM.

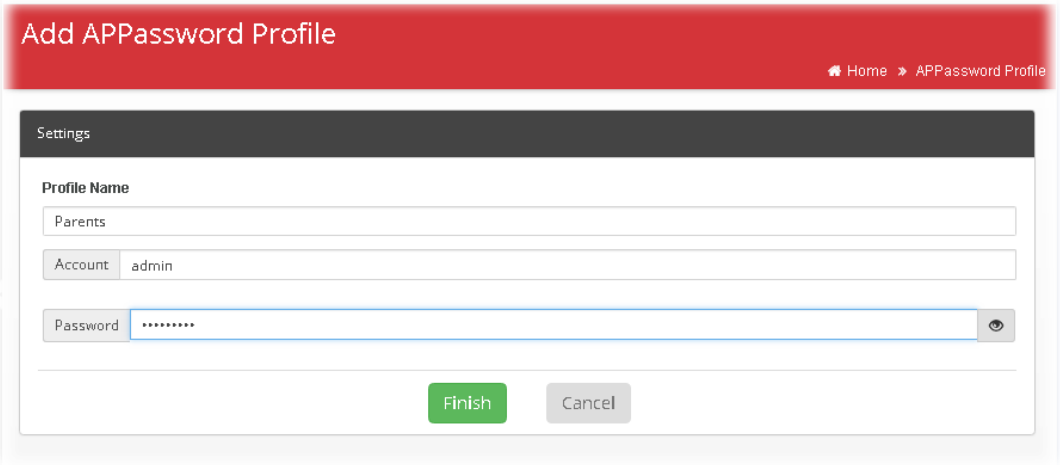


How to configure AP Password profile?

1. Click **Add New** to get the **Settings** dialog.



2. The **Settings** page will be shown as follows:



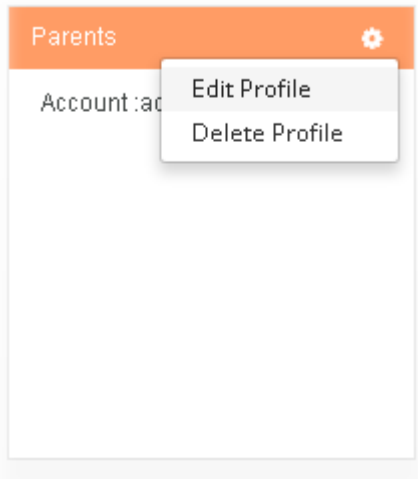
Available settings are explained as follows:

Item	Description
Profile Name	Type a name for such profile.
Account	Type the name of the account which will be used for accessing into Internet through VigorAP.
Password	Type the password for the account which will be used for accessing into Internet through VigorAP.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After finished the modification, click **Finish**. A new created profile will be shown on the screen.

How to edit AP password profile?

1. Move your mouse cursor on the profile icon that you want to edit. Click the mouse cursor on the top right of the profile icon. Then you will a drop down menu items.



Available settings are explained as follows:

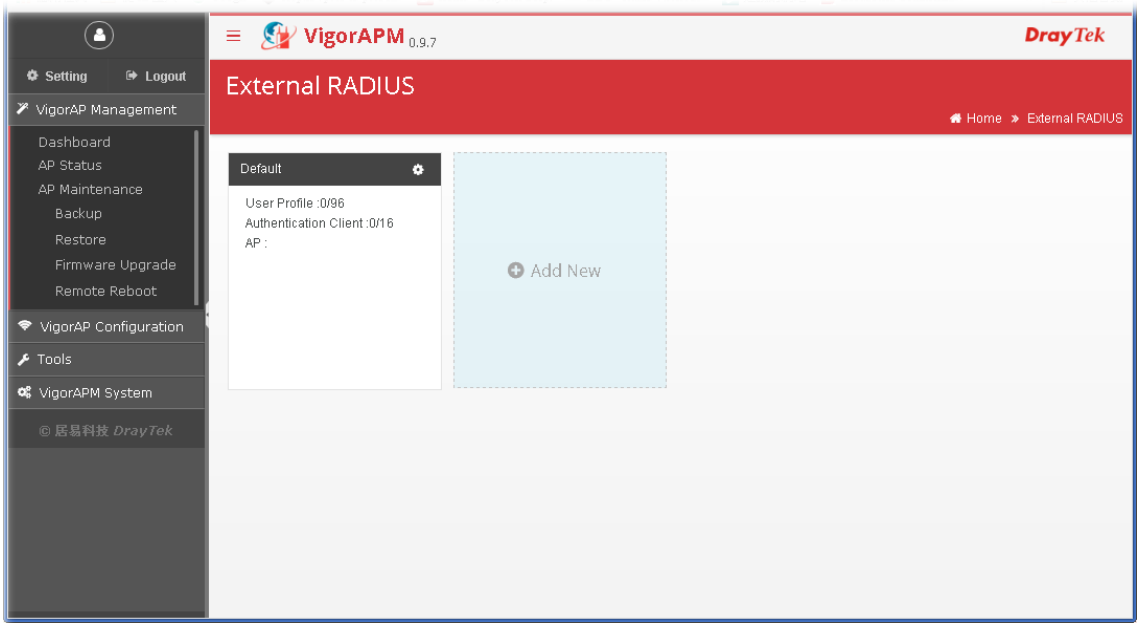
Item	Description
Edit Profile	Click it to open access control profile again for modification.
Delete Profile	The selected profile will be removed from current web page.

2. Choose and click **Edit Profile** to open the following page for modifying the settings.

3. After finished the modification, click **Finish**.

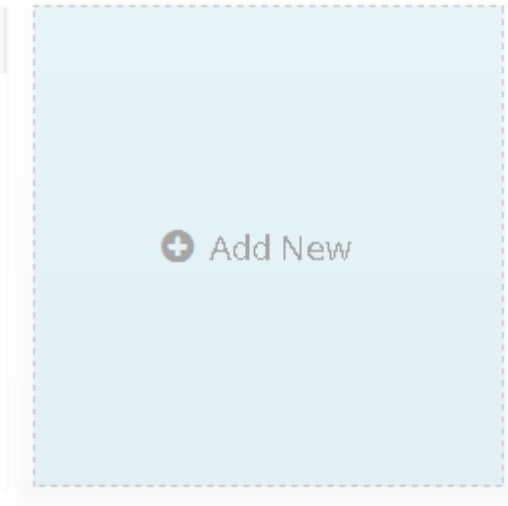
IV-3 External RADIUS

This page can specify certain VigorAP (with built-in RADIUS server) managed by VigorAPM to perform the job of external RADIUS server for other wireless clients.

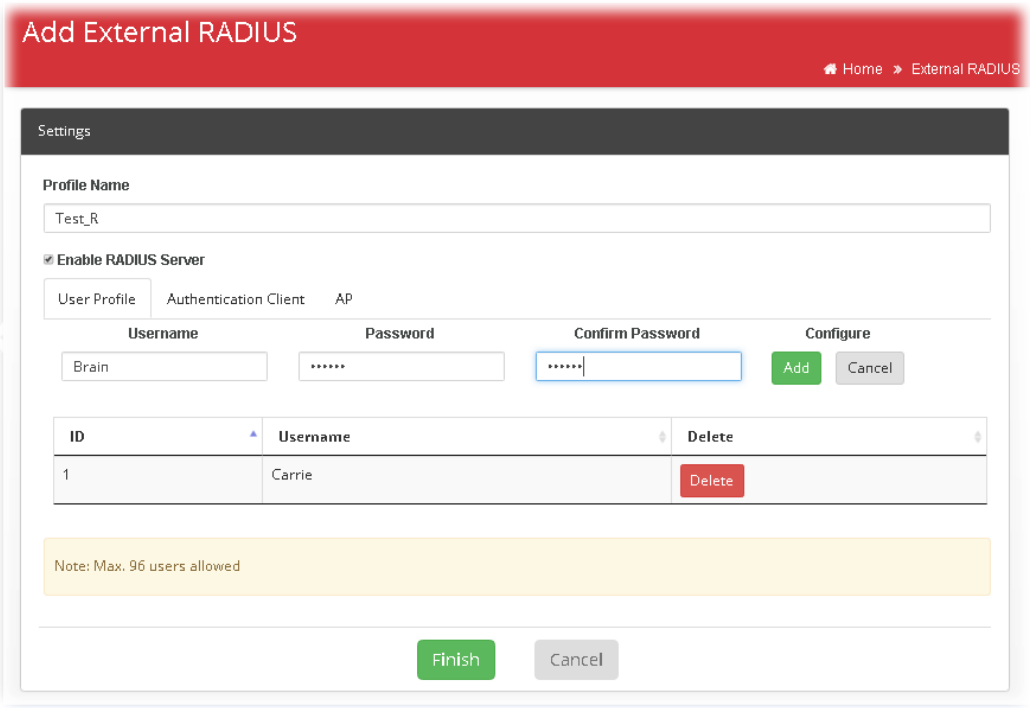


How to configure external RADIUS profile?

1. Click **Add New** to get the **Settings** dialog.



2. The **Settings** page will be shown as follows:



Available settings are explained as follows:

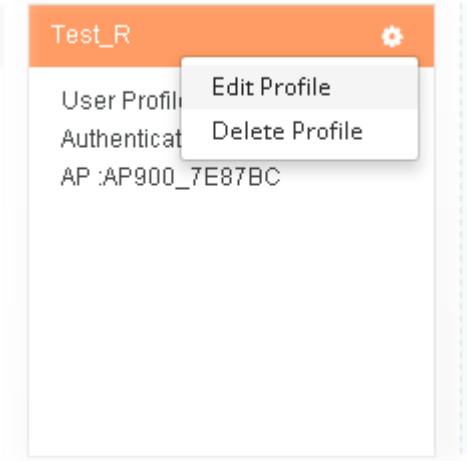
Item	Description
Profile Name	Type a name for such profile.
Enable RADIUS Server	Check it to enable external RADIUS server.
User Profile	**Username** – Type a new name for the user profile. **Passoword/Confirm Password** –Type a new password for such new user profile. **Configure** ● **Add** – Make a new user profile with the name and password specified on the left boxes. ● **Cancel** – Clear current settings for user profile. **ID** – Display the index number of the profile. **Username** – Display the user account name. **Delete** – Click it to remove the selected profile.
Authentication Client	The internal RADIUS server of VigorAP can be treated as the **external RADIUS server** for other clients. Specify the client IP and secret key to make the wireless client choosing VigorAP as its external RADIUS server. **Client IP** – Type the IP address of the client to be authenticated by VigorAP when the user tries to use VigorAP as the external RADIUS server. **Secret Key/Confirm Secret Key** – Type the password for the wireless client to be authenticated by VigorAP while the client tries to use VigorAP as the external RADIUS server. **Configure** – ● **Add** – Make a new client with IP and secret key specified on the left boxes. ● **Cancel** – Clear current settings for the client.

	ID – Display the index number of the profile. **Username** – Display the user account name. **Delete** – Click it to remove the selected profile.
AP	**Select Aceess Points** – Click here to select a VigorAP. The internal RADIUS server of the selected AP will be treated as the External Server for other clients.
Finish	Click it to save the configuration.
Cancel	Click it to discard the configuration.

3. After finished the modifivation, click **Finish**. A new created profile will be shown on the screen.

How to edit external RADIUS profile?

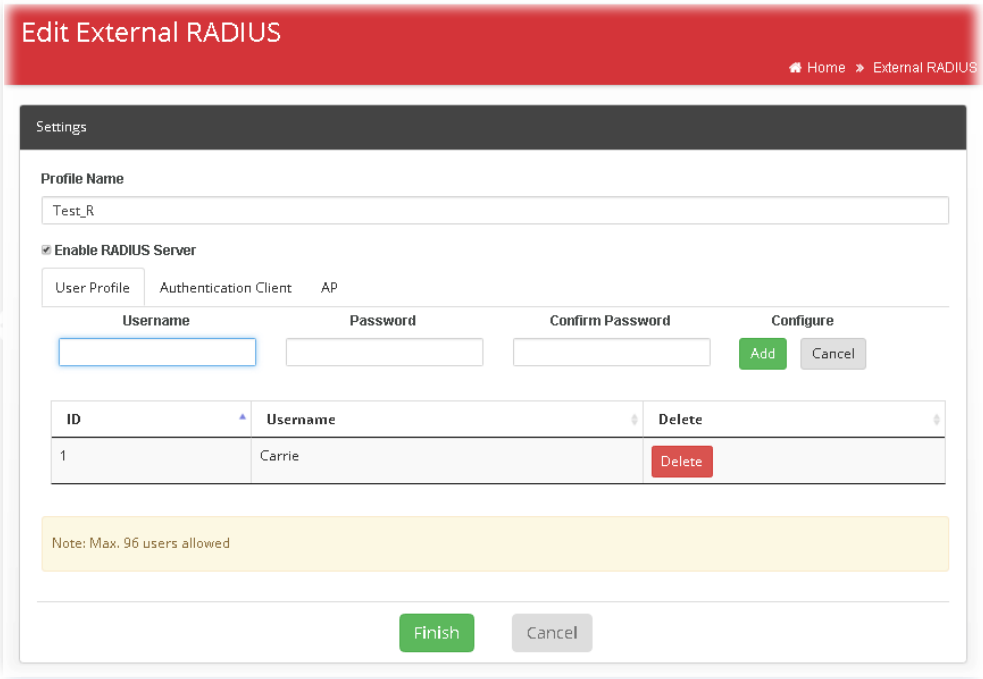
1. Move your mouse cursor on the profile icon that you want to edit. Click the mouse cursor on the top right of the profile icon. Then you will a drop down menu items.



Available settings are explained as follows:

Item	Description
Edit Profile	Click it to open access control profile again for modification.
Delete Profile	The selected profile will be removed from current web page.

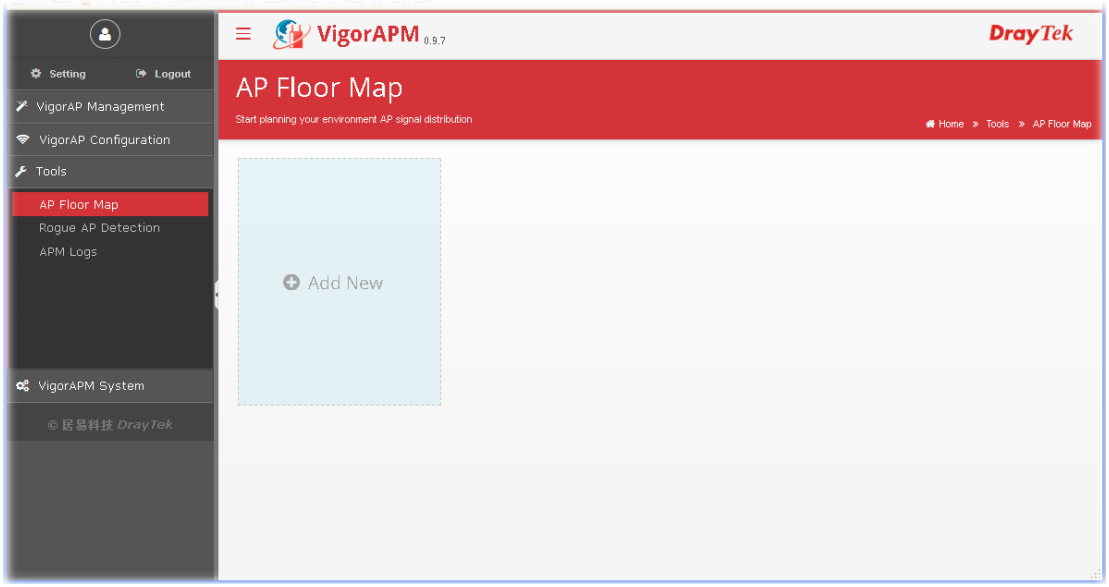
2. Choose and click **Edit Profile** to open the following page for modifying the settings.



3. After finished the modification, click **Finish**.

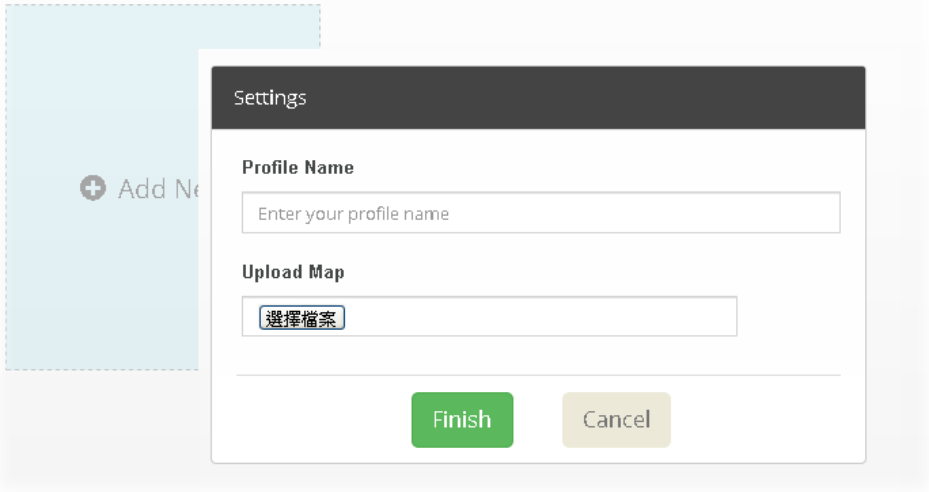
IV-4 AP Floor Map

This function is helpful to determine the best location for VigorAP in a room. A floor plan of a room is required to be uploaded first. By dragging and dropping available VigorAP icon from the list to the floor plan, the placement with the best wireless coverage will be clearly indicated through simulated signal strength.

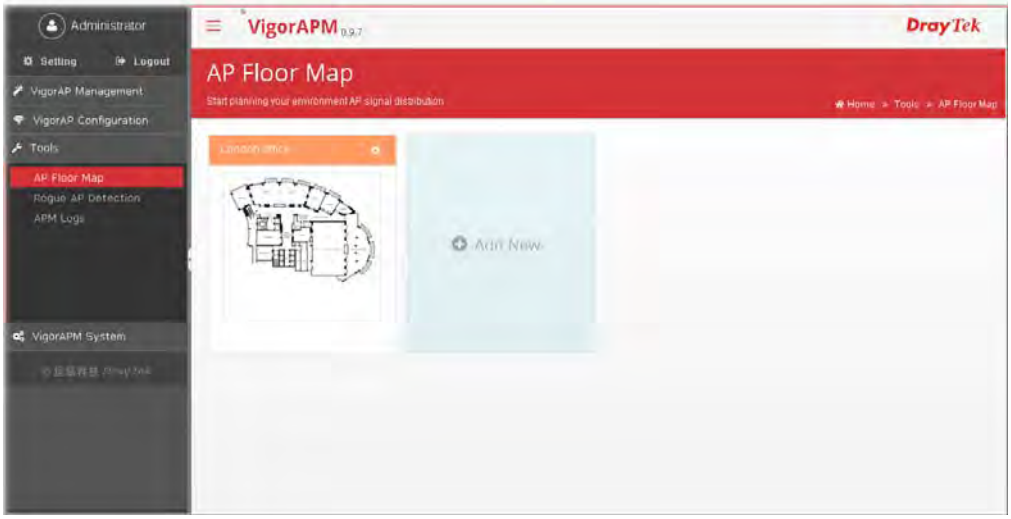


How to determine the best location for VigorAP in a room?

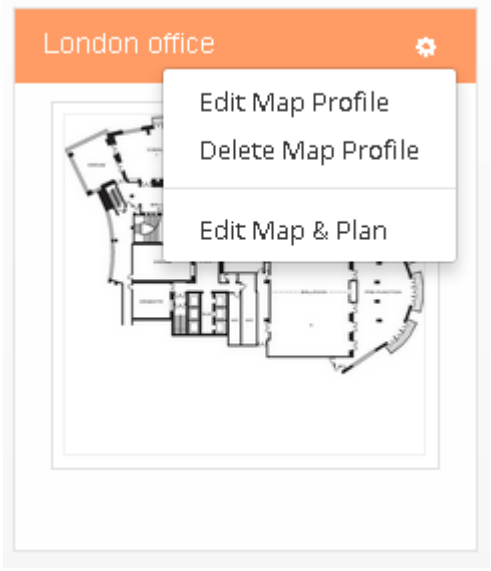
1. Click **Add New** to get the **Settings** dialog.



2. Type a name for the floor map (e.g., London Office) in **Profile Name** and click **Select** in **Upload Map** to specify the correct map file. After clicking **Finish**, the image icon will be displayed on the screen.



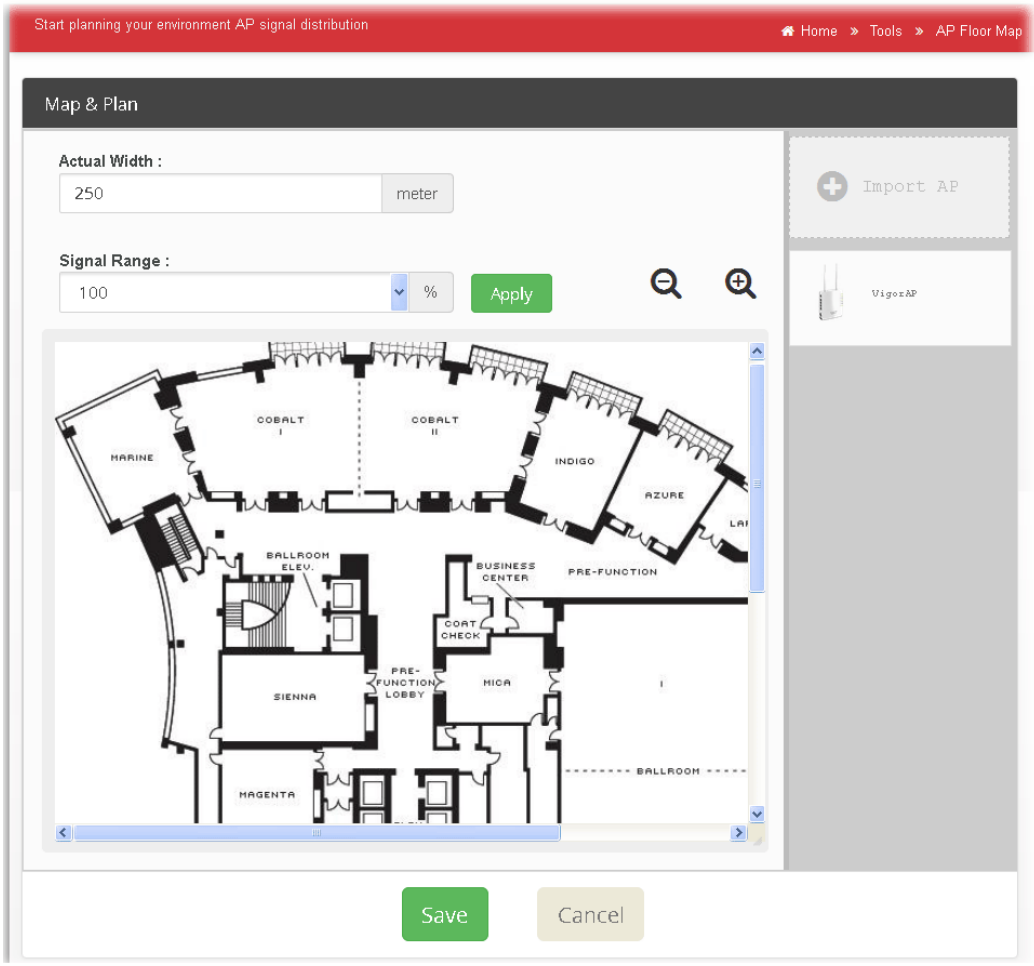
3. Click the iocn on top right to display a drop down menu.



Available settings are explained as follows:

Item	Description
Edit Map Profile	Click it to open **Settings** dialog again to modify the map profile.
Delete Map Profile	The selected map profile will be removed from current web page.
Edit Map & Plan	To deploy VigorAP(s) in proper position, click **Edit Map and Plan** to get Map & Plan window.

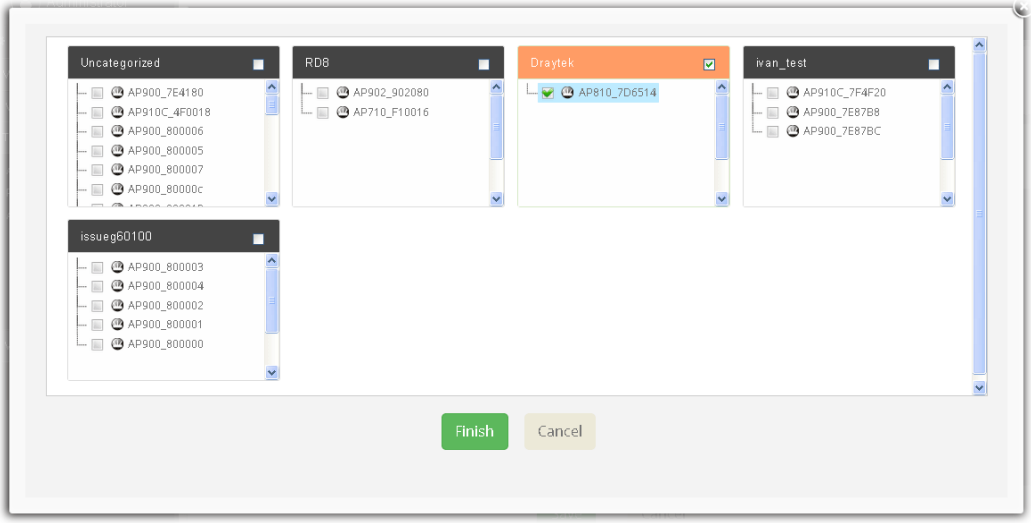
4. Chooe **Edit Map & Plan** to get the following web page.



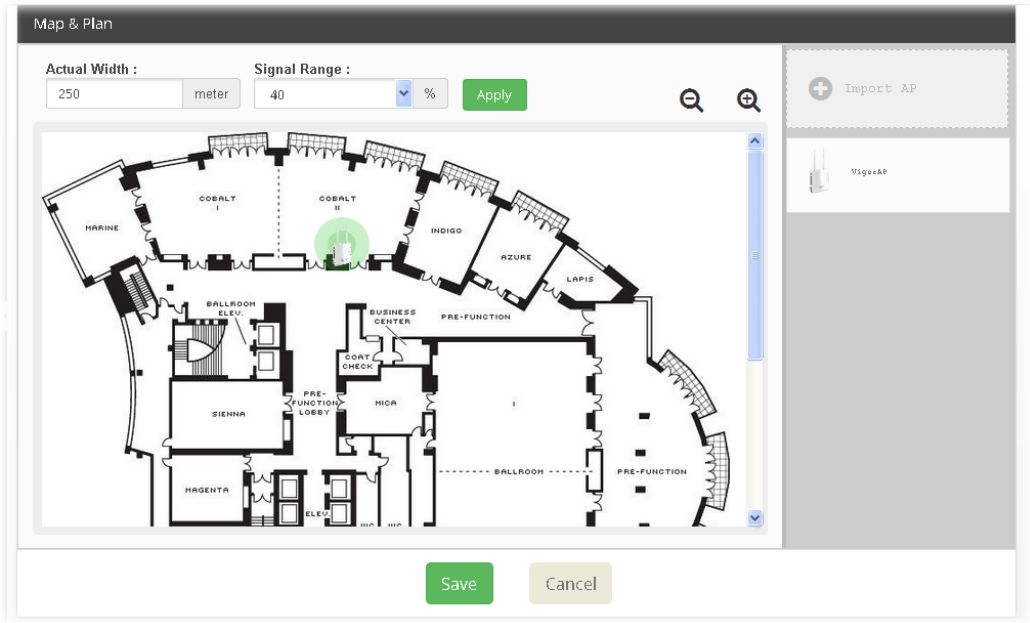
Available settings are explained as follows:

Item	Description
Actual Width	Type the correct width to meet the actual width of the place (displayed by the map).
Signal Range	Choose the signal strength (e.g., 100 in this case) from **User Define** drop down list.
Apply	Click it to confirm the signal range.
Save	Click it to save the configuration.
Cancel	Click it to discard the configuration.
Import	Import VigorAP for placing on the map.

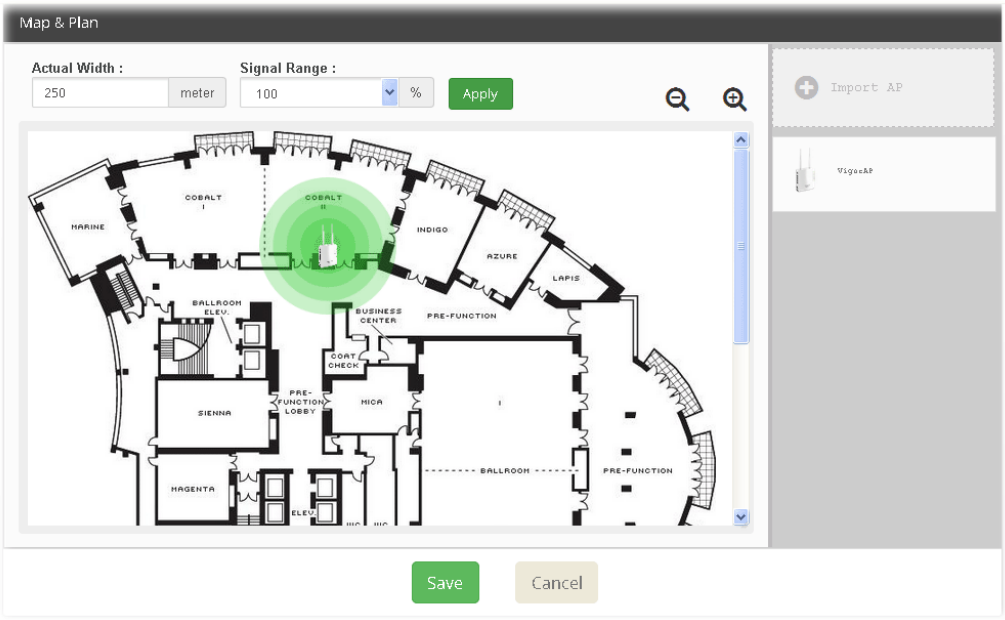
5. Click “+ Import AP” icon to pick VigorAP. A pop up window appears with several VigorAP groups. Choose one of the device and Click **Finish**.



6. The selected device will be shown on the AP list. Drag and drop an AP icon from **AP List** to the map on the left side.

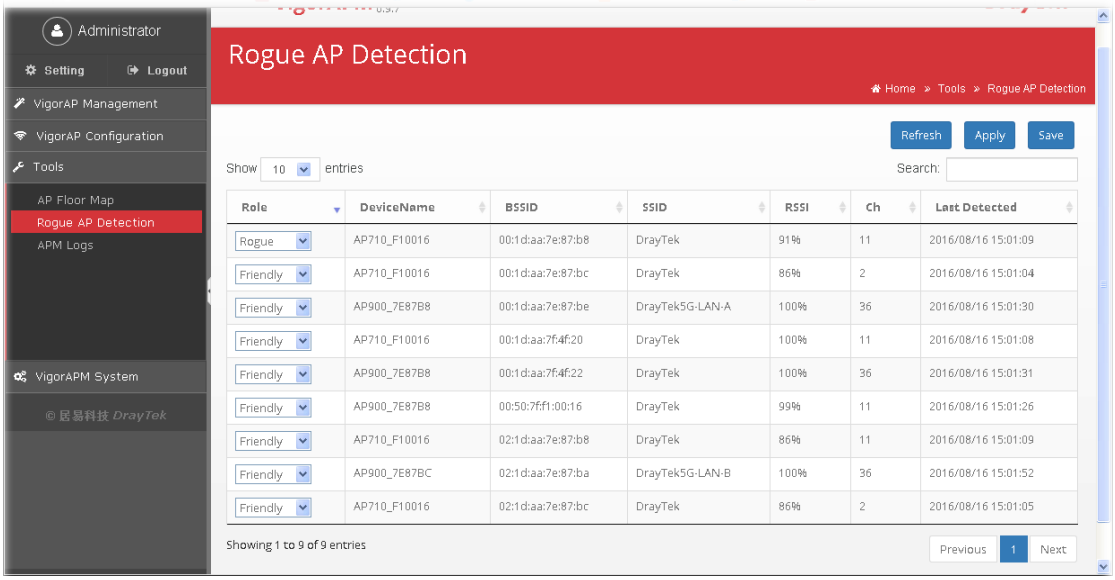


7. Change the signal strength (e.g., 100% in this case) from **Signal Range** drop down list. Click **Apply.**


Map & Plan
Actual Width :
250
meter
Signal Range :
100
%
Apply
Import AP
VigorAP
COBALT
COBALT
MARINE
INDIGO
AZURE
LAPIS
BALLROOM ELEV.
BUSINESS CENTER
PRE-FUNCTION
COAT CHECK
PRE-FUNCTION LOBBY
SIENNA
MICA
BALLROOM
PRE-FUNCTION
MAGENTA
ELEV.
Save
Cancel

IV-5 Rogue AP Detection

It displays the access point scanned by Vigor router. In which, the APs will be classified with friendly APs, rogue APs and unknown APs in different colors. Below shows the detected APs.

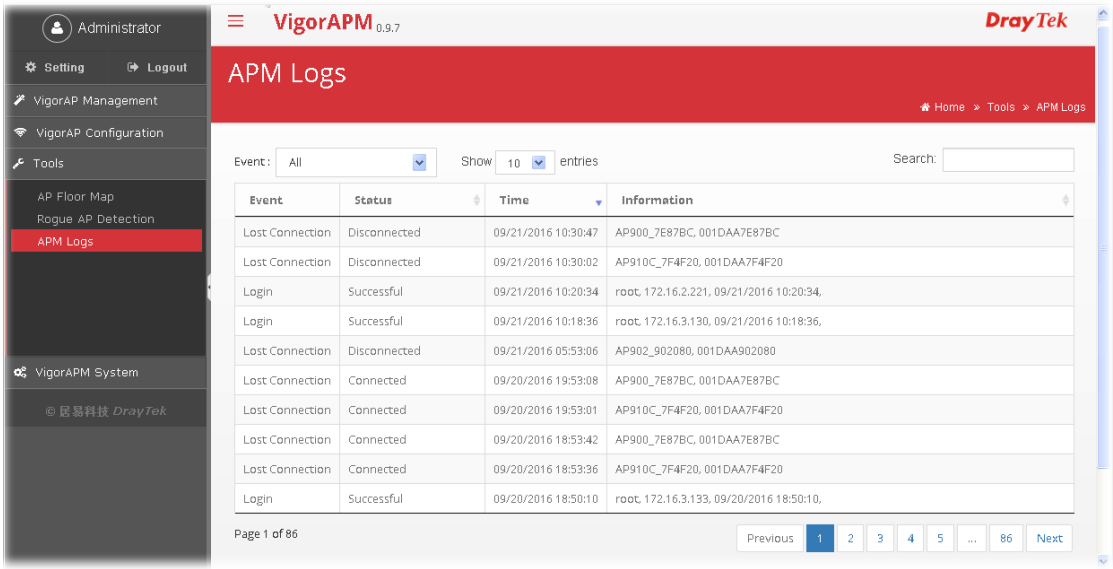


Available settings are explained as follows:

Item	Description
Refresh	Click such link to refresh the web page immediately.
Apply	Click it to open AP selection window to specify an Access Point. After selecting, click Finish. The selected AP will detect/scan the wireless APs near around. Later, information for the detected access points will be displayed on this page.
Save	Click it to save the configfuration.
Search	Type the name of the device you want to search.
Role	Specify the type that the access points are classified to it. Later, click the Save button on the top to save the configuration.
DeviceName	Display the default name of the Access Point detected by selected VigorAP.
BSSID	Display the MAC address of the detected access point.
SSID	Display the SSID specified for the detected access point.
RSSI	Display the RSSI specified for the detected access point.
Ch	Display the channel used by the detected access point.
Last Detected	Display the date and time that such access point was detected by Vigor router.

IV-6 APM Logs

Time and event log for all of the APs managed by VigorAPM will be shown on this page. It is userful for troubleshooting if required.



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