Auto-Configuration Server User's Guide

Version: 1.2

Date: 2008/08/08

VigorACS License

Version History

Version Number	Version Date	Version Editor	Changes
1.0	November 2007	Carrie Ni	Version 1.0
1.1	April 2008	Carrie Ni	Global firmware upgrade modified Auto configuration and dynamic service provision
1.2	August 2008	Hoham Liu	UI description modified Interface screenshots recaptured

Table of Contents

Chapter 1 Introduction

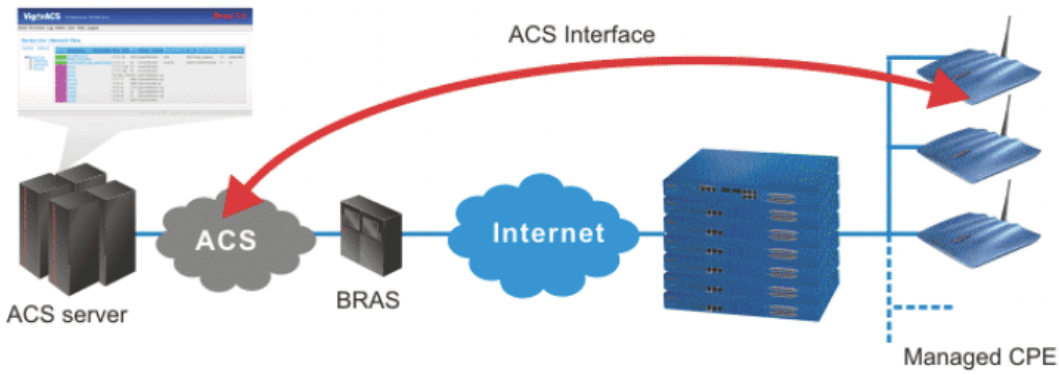
VigorACS is a software which provides centralized device management for TR-069 based CPEs such as broadband gateway, XDSL router, VoIP gateway and wireless AP. VigorACS monitor and display status of devices, or perform scheduling tasks such as firmware upgrade, configuration backup/restore parameter profile for numerous CPE devices. It is easy to use through intuitive Web-based GUI with security management. VigorACS is capable of different kinds of platform e.g., Windows, Linux, Sun Solaris and so on.

1.1 Main Features and Benefit

- Manage all kinds of devices complied with TR-069 specification such as broadband gateway, XDSL router/modem, VoIP phone, wireless AP and Set-Top Box.
- VigorACS server can be installed in Windows, Linux and Sun Solaris.
- Intuitive Web-based GUI can be executed on all browsers like IE, Firefox, Mozilla and so on.
- Support scheduling firmware upgrade, configuration backup/restore and parameter profile deployment.
- Support auto-discovery to survey all TR-069 devices.
- Provide device inform management.
- Support security management

1.2 System Architecture

The following figure shows an overview for the application between VigorACS and CPE devices. With TR-069 protocol, VigorACS can communicate and manage devices easily.



1.3 Web Service

Web service is a software system identified by a URI, whose public interfaces and bindings are defined and described using XML. Its definition can be discovered by other software systems. These systems may then interact with the Web service in a manner prescribed by its definition, using XML based messages conveyed by internet protocols.

The basis for Web Services contains: XML, WSDL (Web Services Description Language），SOAP (Simple Object Access Protocol), UDDI(Universal Description, Discovery and Integration). The procedure for the structure of bottom layer: transform Web Service information into XML file format, use WSDL statement to describe the objects for service. The remote end can get required information through such description. It carries out transformation job to search or register from UDDI by means of SOAP communication bottom layer.

- For the designers of Java program: you can write java program to control VigorACS. Also, VigorACS will offer some API for you to write and call it. For example, you can get all the connected CPE devices controlled VigorACS through web service.

  Corresponding files are placed in - ***WebServices_TR069API.zip***

  The documentation for web services api is placed in - ***WebServices_TR069API/doc/***

  Sample program is placed in - ***WebServices_TR069API/example/src/tw/com/draytek/acs/test/TestMain.java***

- For the designers with other program language: you can define WSDL to control VigorACS through SOAP(Simple Object Access Protocol)

Chapter 2 Installation

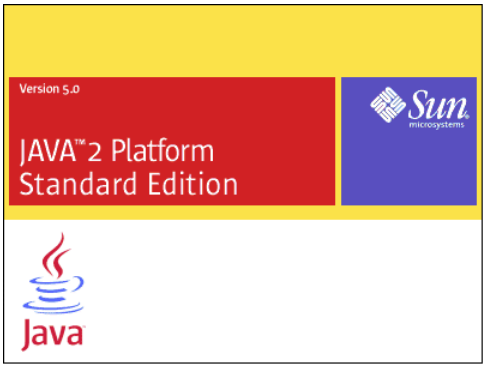
Please follow the procedure listed below to install VigorACS. The installation for different platforms might be different.

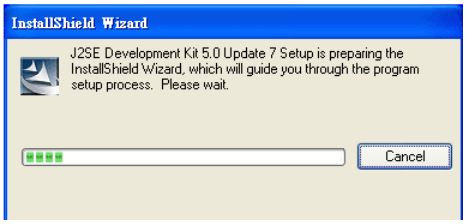
2.1 For Windows 2000 or XP

There are three programs needed to be installed for operating VigorACS.

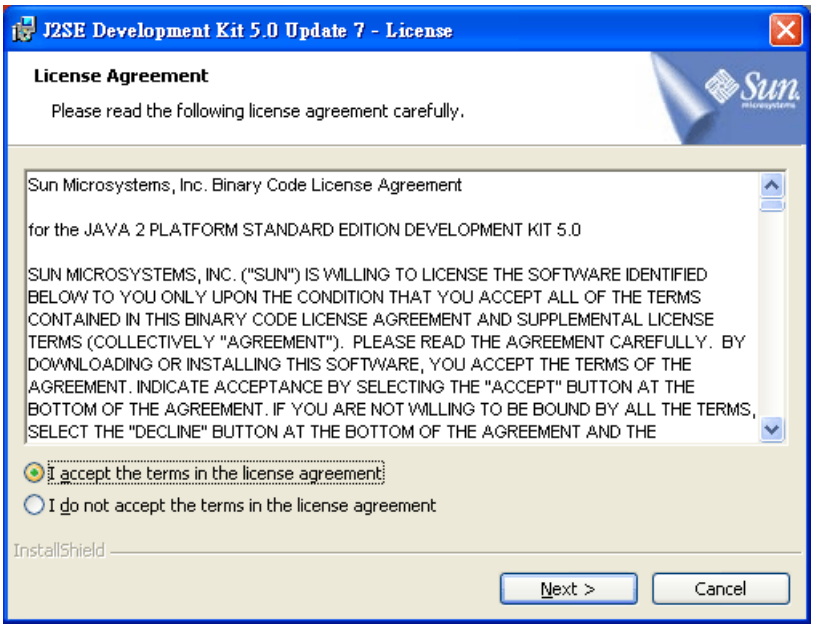
2.1.1 Installation for Java

1. Locate ACS\Software\jdk-1_5_0_07-windows-i586-p.exe from CD and double click on it to execute the installation.

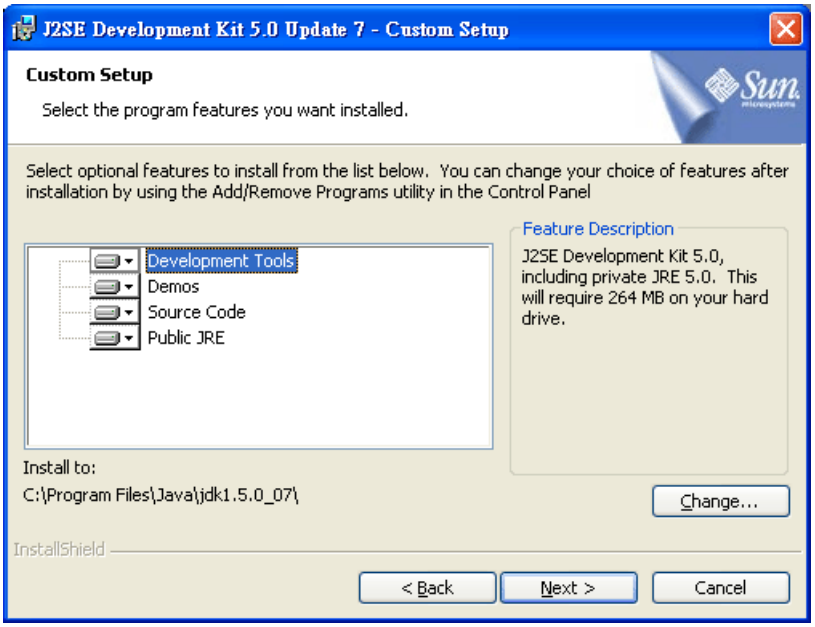




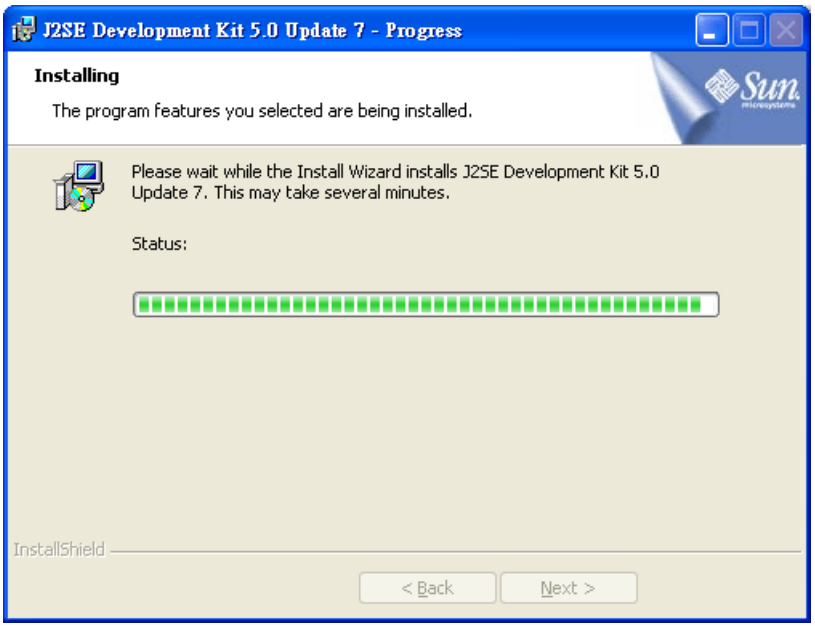
2. A license agreement dialog box will appear. Choose **"I accept the …**" and click **Next**.



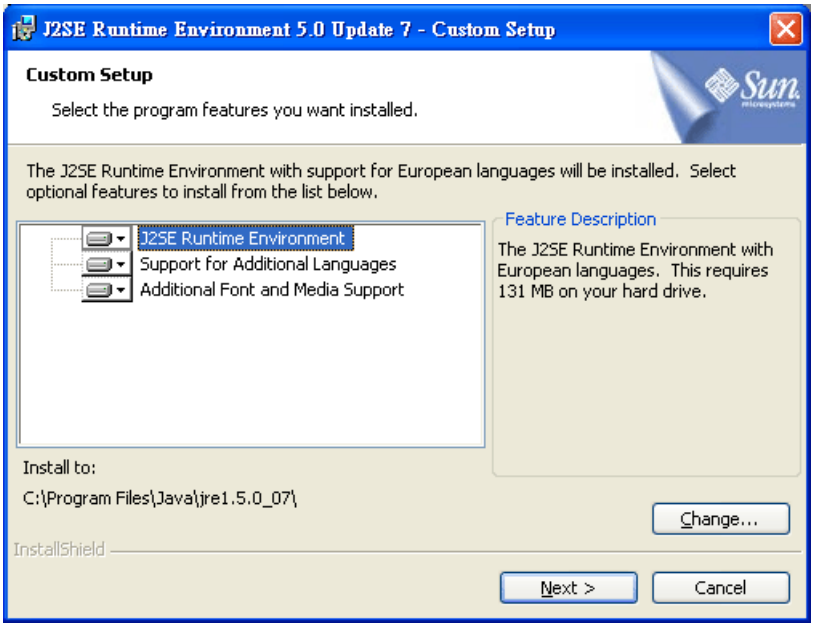
3. In this dialog box, optional features will be listed, choose the one you need and click **Next**.



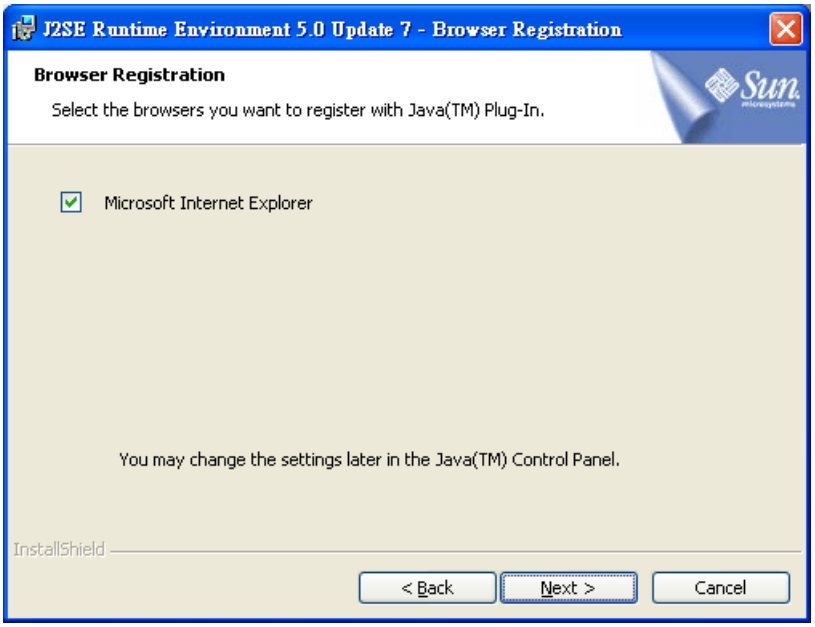
4. Wait for a while to install the selected feature.



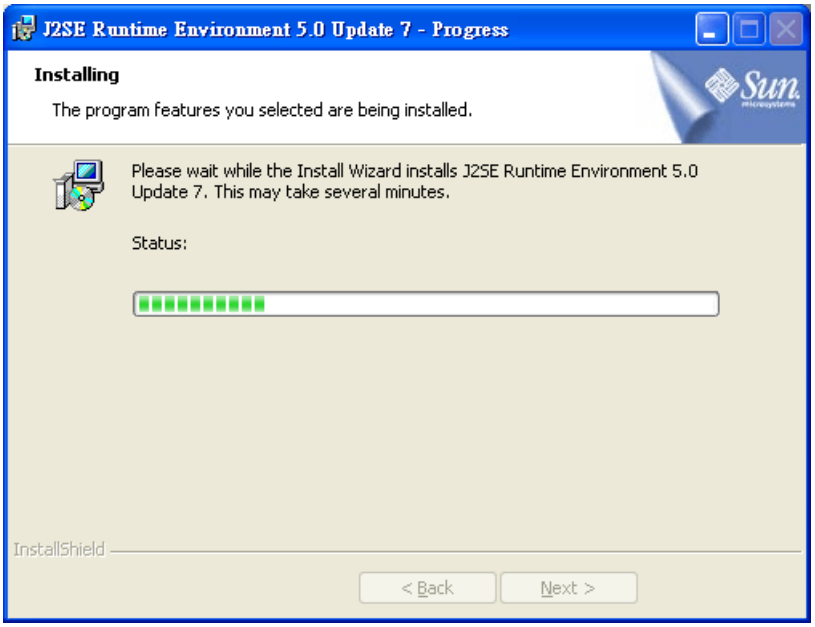
5. When this dialog box appears, please click **Next**.



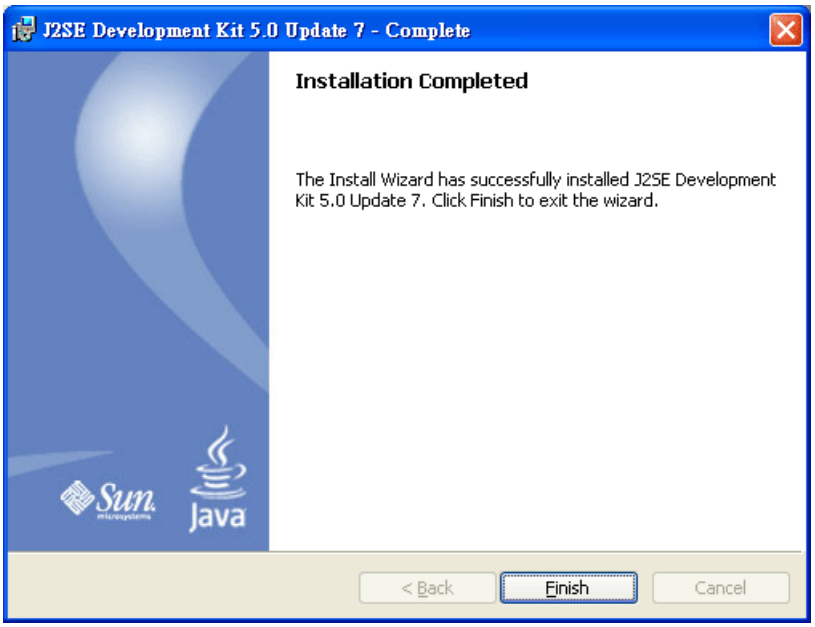
6. You have to choose the browser for configuring VigorACS later, and then click **Next**.



7. Wait for a while to install the required features.



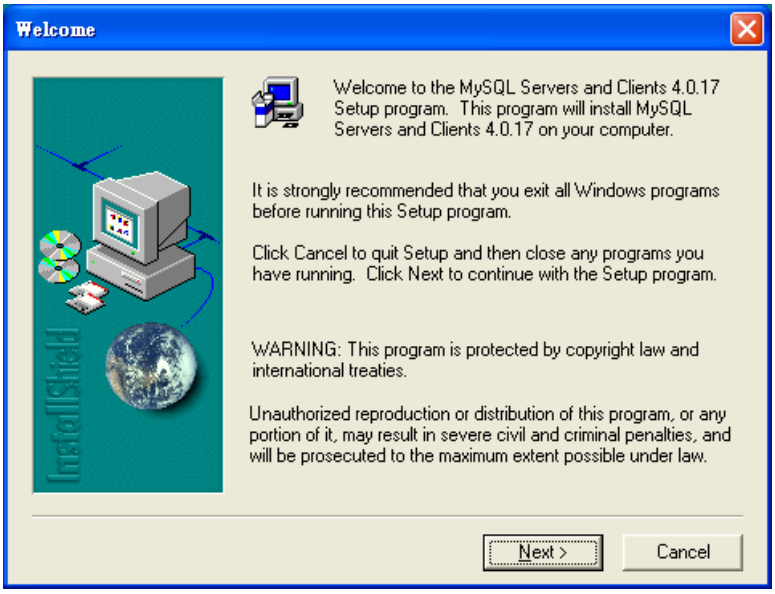
8. Now the installation is completed. Click **Finish** to exit the installing program.



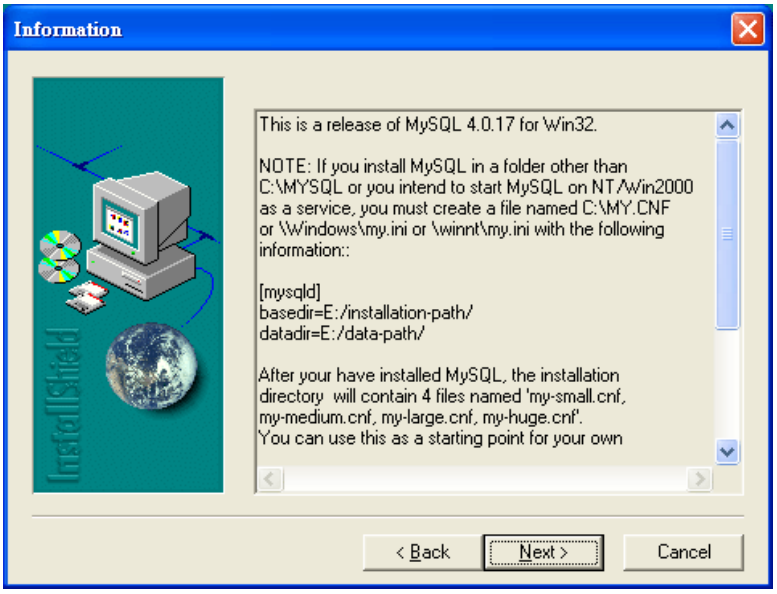
2.1.2 Installation for MySQL

Follow the steps below to install MySQL.

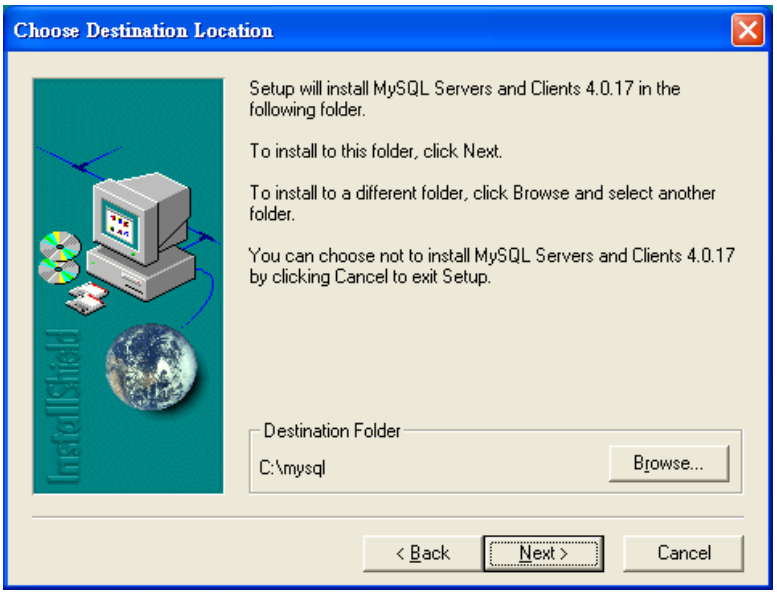
1. Locate ACS\Software\mysql-4.0.17-win\Setup.exe from CD and double click on it to execute the installation.
2. When the welcome screen appears, please click **Next** for next step.



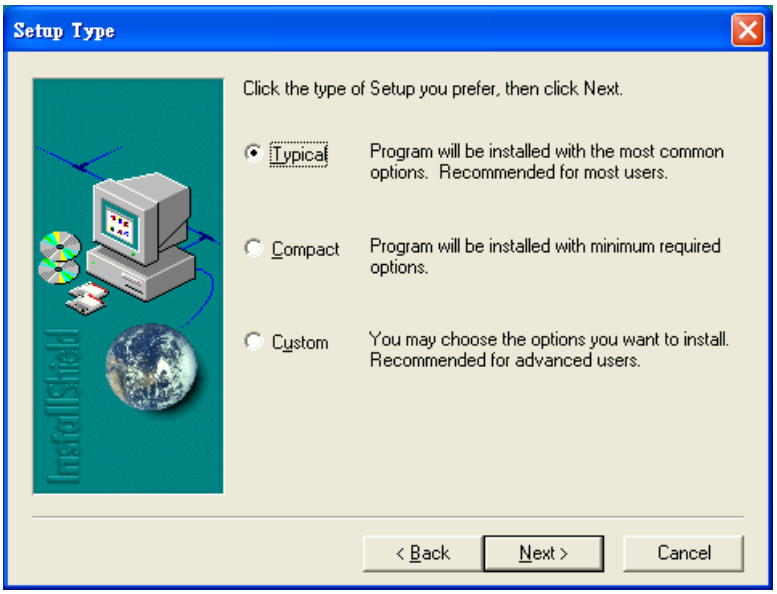
3. On this dialog box, click **Next**.



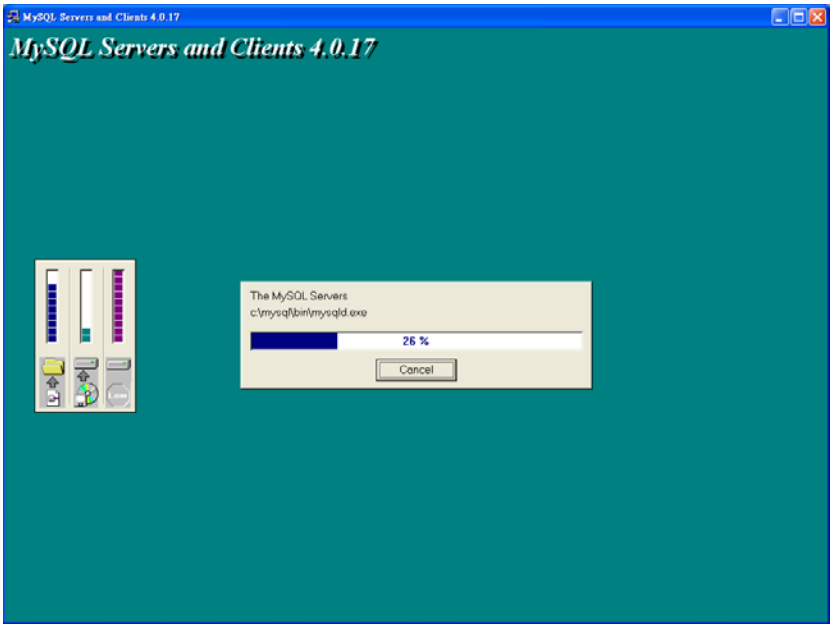
4. Determine the destination folder and click **Next**. The default directory used by this program is *c:\mysql*. You can modify it if you want and please make sure the name of directory should not be over 100 characters, otherwise you might encounter problem of VigorACS in installation.



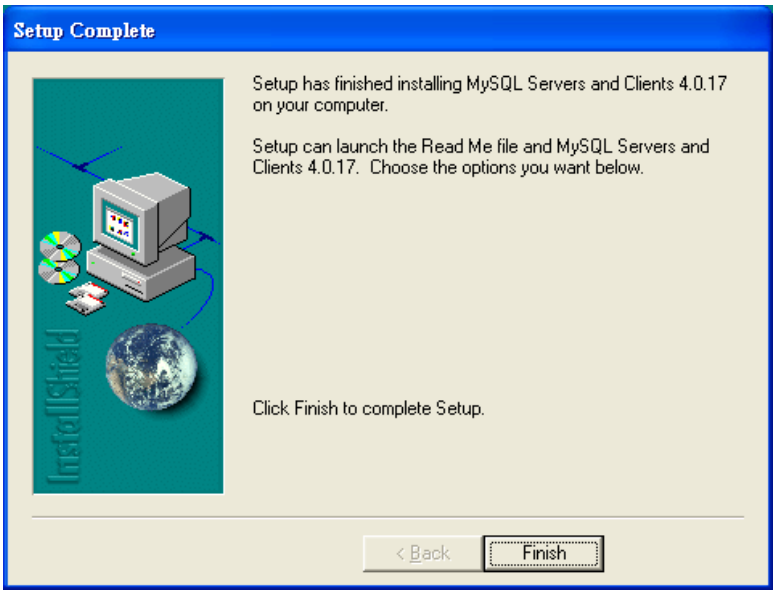
5. On this dialog box, choose the type of setup you want and click **Next**.



6. The installation program starts to install required files for MySQL to your computer. Wait for several seconds.



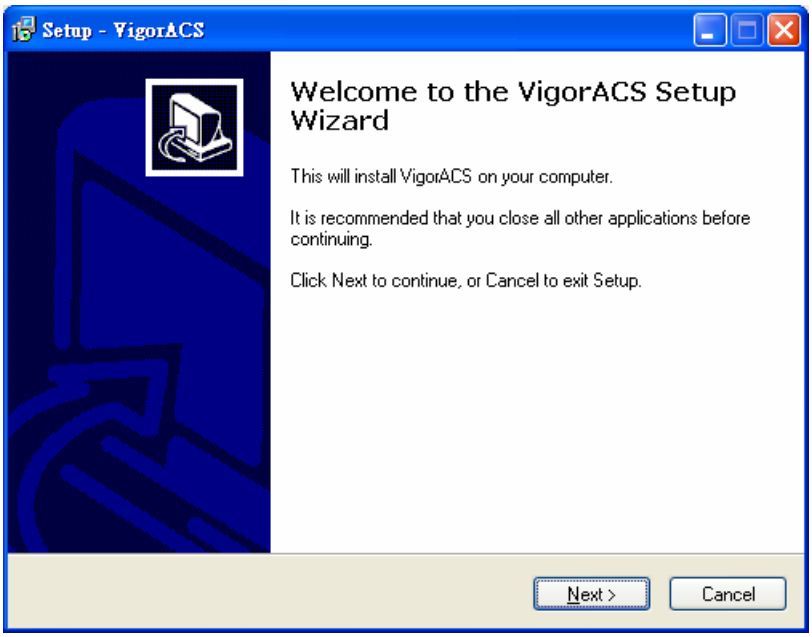
7. When the program finishes the installation, the following dialog box will appear. Please click Finish to finish MySQL installation.



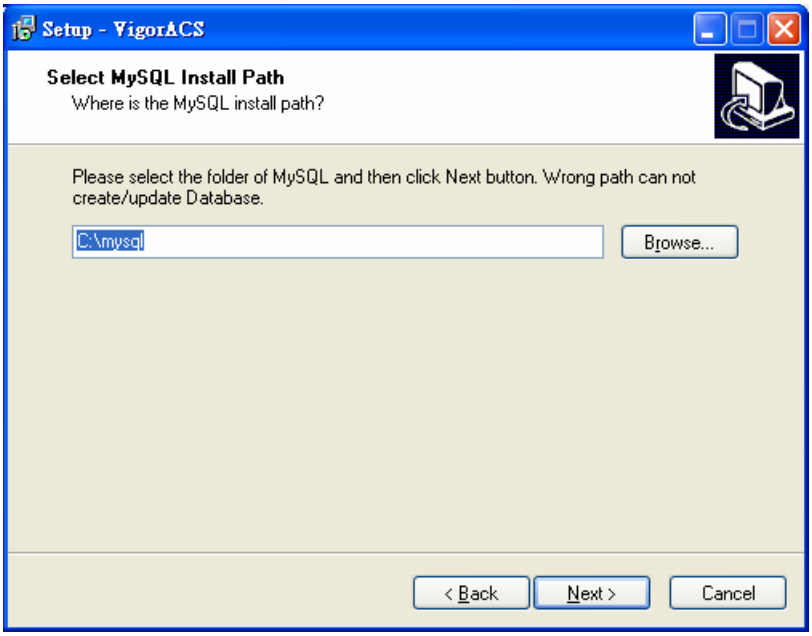
2.1.3 Installation for VigorACS

It is time to install VigorACS. Follow the steps below.

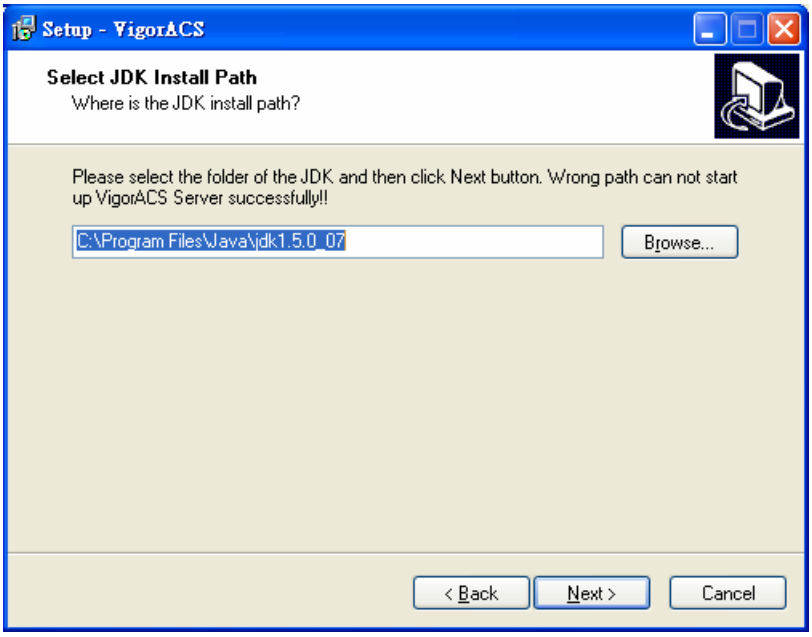
1. Locate ACS\ACS\setup.exe from CD and double click on it to execute the installation.



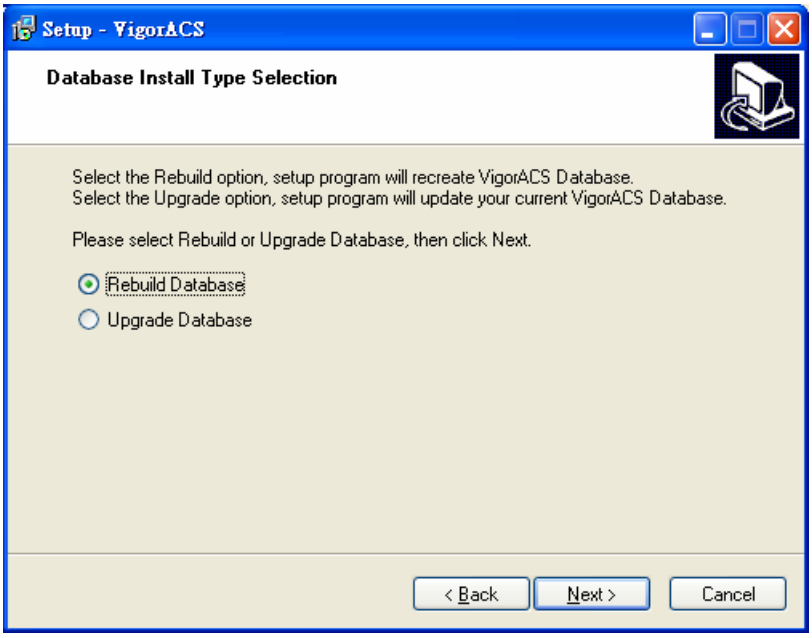
2. Select the directory that MySQL being installed (done in 1.1.2) and click **Next**.



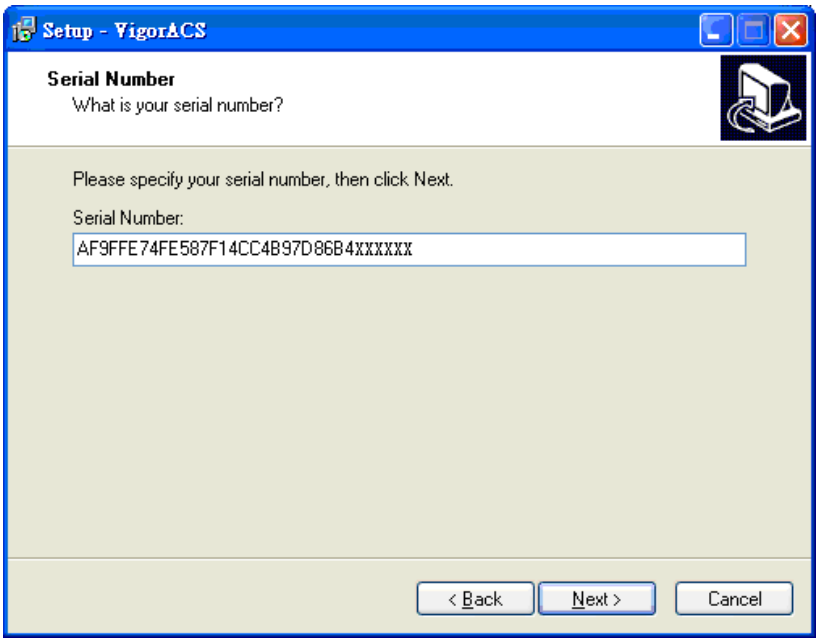
3. Select the directory that JDK being installed (done in 1.1.1) and click **Next**.



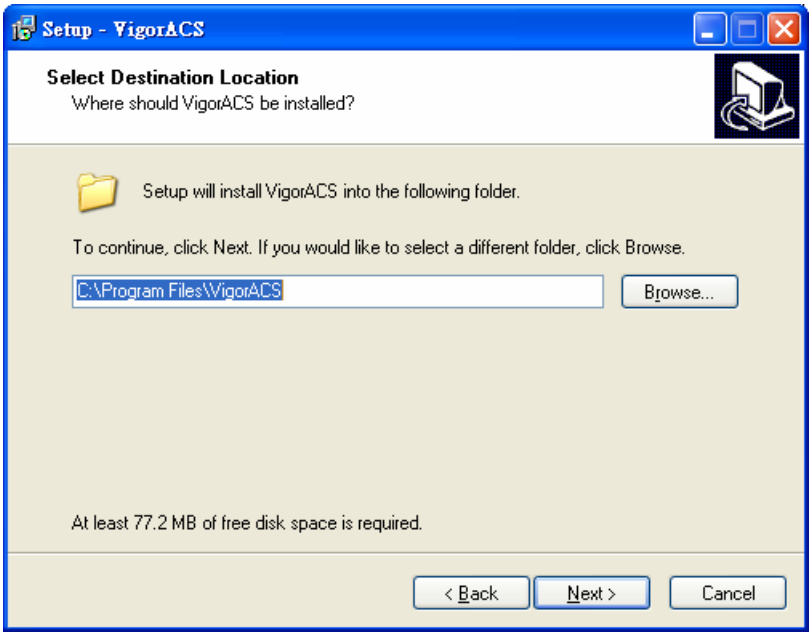
4. In this dialog box, choose **Rebuild Database** (for rebuilding the VigorACS database) or **Upgrade Database** (for upgrading the database) and click **Next**.



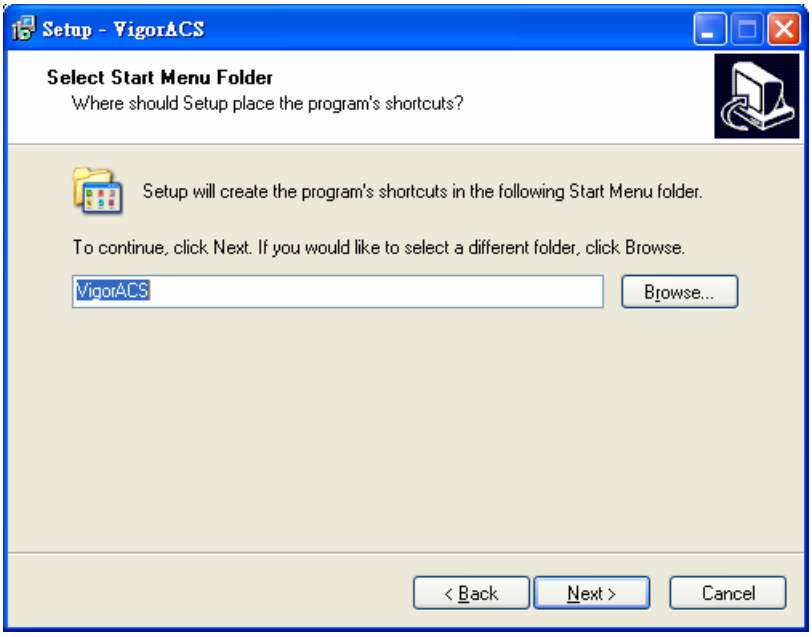
5. In the following dialog, type the serial number of VigorACS and then click **Next**. Please contact with your dealer to obtain the number.



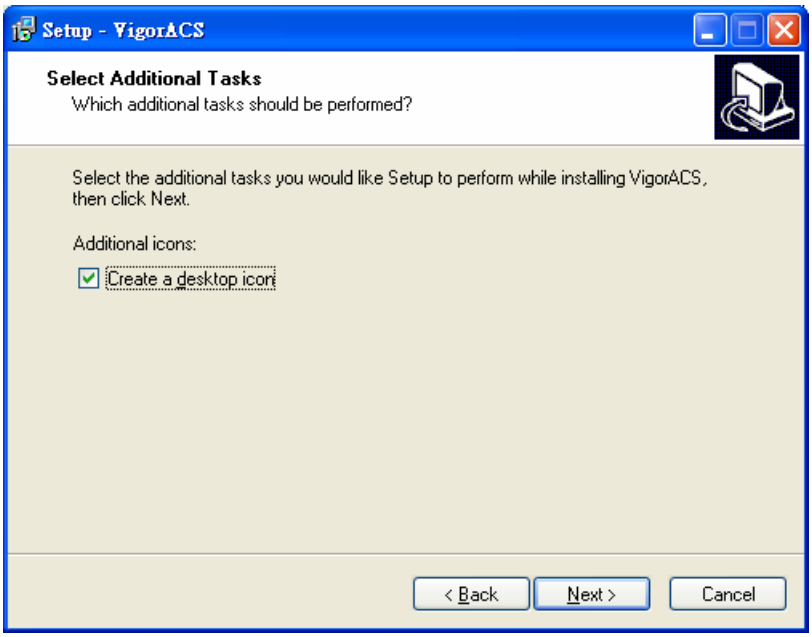
6. Determine the destination folder and click **Next**. The default directory is *c:\Program Files\VigorACS*. You can modify it if you want and please make sure the name of directory should not be over 100 characters, otherwise you might encounter problem of VigorACS in installation.



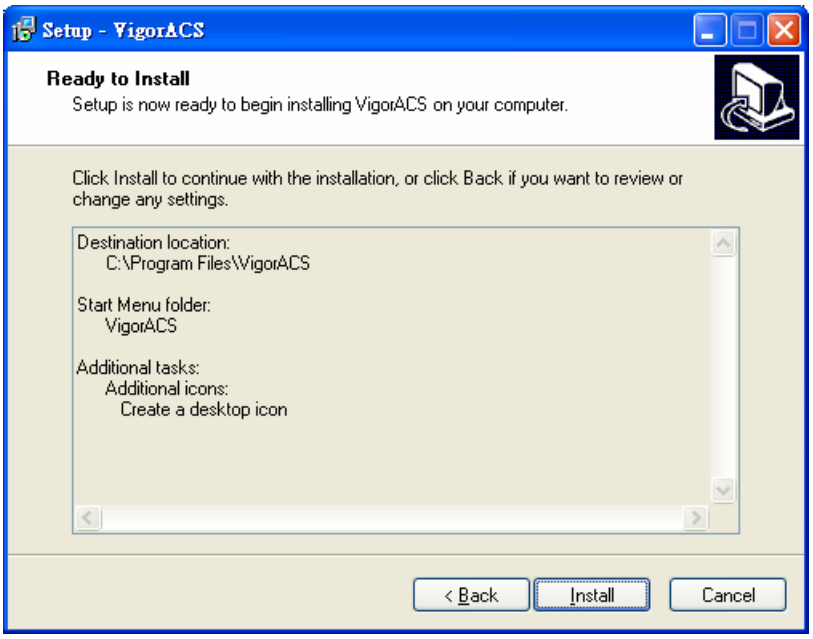
7. Determine the program name of VigorACS for you to start up. Then click **Next**.



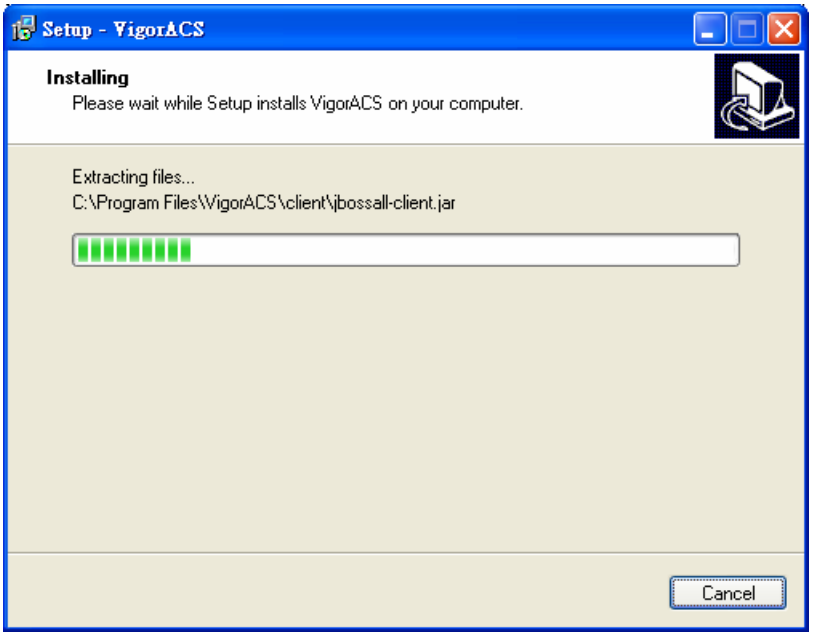
8. In this dialog, check the box of "**Create a desktop icon**" for your necessity. Click **Next**.



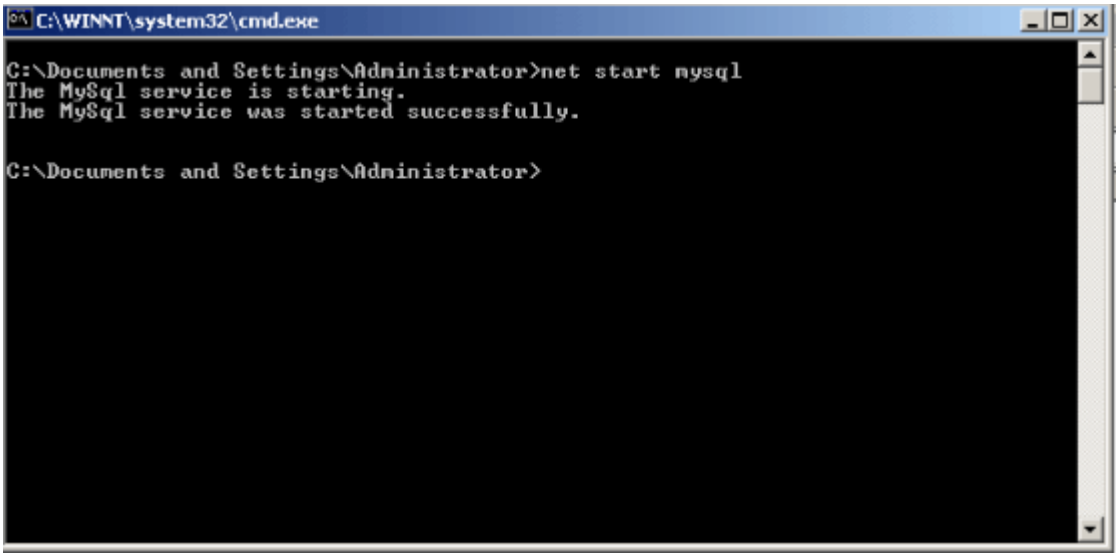
9. Now, the program is ready to install necessary features and files to your computer. Please click **Install** to start.



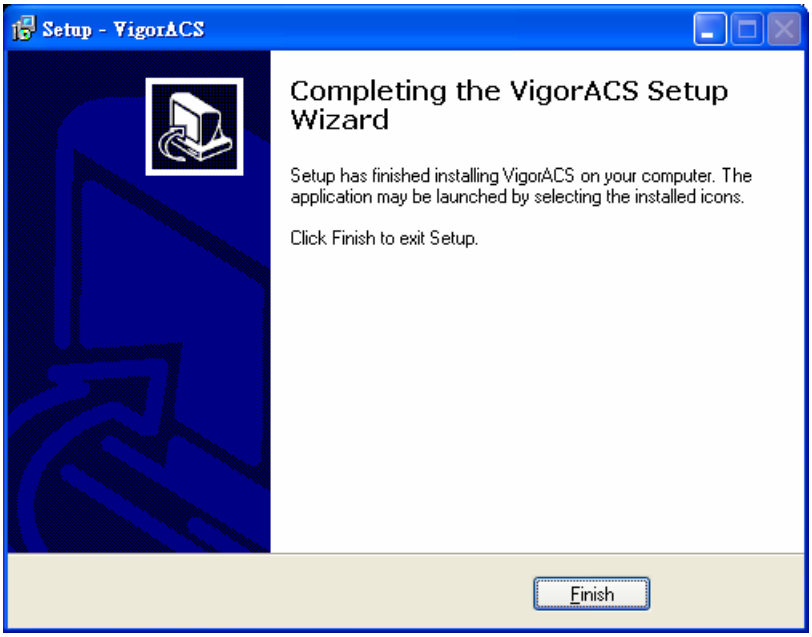
10. Please wait for a while to complete the installation.



11. While installing, the following screen will appear to show that MySQL has been activated. Please wait for next dialog appearing.



12. Now the program has completed the installation of VigorACS. Click **Finish** to exit it.



2.2 Platform for Linux or Solaris

Follow the steps listed below.

1. Login Linux or Solaris with root or the root privilege.
2. Locate **VigorACS_Unix_Like_xxxxxx_xxxxx.tar.gz** from CD and copy it to your hard disk.
3. Decompress the setup packages
   `gzip -cd VigorACS_Unix_Like_xxxxxx_xxxxx.tar.gz |tar xvf –`

```
drwxr-x---   17 root     root         4096
drwxr-xr-x    2 root     root         8192
drwxr-xr-x    3 root     root         4096
drwxrwxrwt   18 root     root         4096
drwxr-xr-x   16 root     root         4096
drwxr-xr-x   28 root     root         4096
-rw-r--r--    1 root     root    185348096
[root@localhost /]# rm vigoracs
rm: remove regular file `vigoracs' ? y
[root@localhost /]# ls
bin  boot  dev  etc  home  initrd  lib  lost+found  misc  mnt  opt  proc  root  sbin  tftpboot  tmp  usr  var
[root@localhost /]# cd home/
[root@localhost home]# cd robin/
[root@localhost robin]# ls
vigoracs
[root@localhost robin]# cd vigoracs/
[root@localhost vigoracs]# ls
0.0.1.3  0.0.1.3.1
[root@localhost vigoracs]# cd 0.0.1.3.1/
[root@localhost 0.0.1.3.1]# ls
VigorACS_Unix_Like_Draytek_Pro_0.0.1.3.tar  VigorACS_Unix_Like_Draytek_Pro_0.0.1.3.tar.gz
[root@localhost 0.0.1.3.1]# ls
VigorACS_Unix_Like_Draytek_Pro_0.0.1.3.tar  VigorACS_Unix_Like_Draytek_Pro_0.0.1.3.tar.gz
[root@localhost 0.0.1.3.1]# ls
VigorACS_Unix_Like_Draytek_Pro_0.0.1.3.tar  VigorACS_Unix_Like_Draytek_Pro_0.0.1.3.tar.gz
[root@localhost 0.0.1.3.1]# gzip -cd VigorACS_Unix_Like_Draytek_Pro_0.0.1.3.tar.gz |tar xvf -
```

4. Change the permissions mode of **install.sh** and **uninstall.sh**.
   `chmod 755 ./install.sh`

   `chmod 755 ./uninstall.sh`

```
linux/my.cnf
linux/mysql-standard-4.0.24-pc-linux-gnu-i686.tar.gz
solaris_8/coreutils-4.5.4-sol8-sparc-local.gz
solaris_8/jdk-1_5_0_07-solaris-sparc.tar.Z
solaris_8/jdk-1_5_0_07-solaris-sparcv9.tar.Z
solaris_8/libgcc-3.3-sol8-sparc-local.gz
solaris_8/libiconv-1.8-sol8-sparc-local.gz
solaris_8/my.cnf
solaris_8/mysql-4.0.21-sol8-sparc-local.gz
solaris_8/ncurses-5.4-sol8-sparc-local.gz
solaris_8/unzip-5.50-sol8-sparc-local.gz
solaris_9/coreutils-4.5.4-sol9-sparc-local.gz
solaris_9/jdk-1_5_0_07-solaris-sparc.tar.Z
solaris_9/jdk-1_5_0_07-solaris-sparcv9.tar.Z
solaris_9/libgcc-3.3-sol9-sparc-local.gz
solaris_9/libiconv-1.8-sol9-sparc-local.gz
solaris_9/my.cnf
solaris_9/mysql-4.0.21-sol9-sparc-local.gz
solaris_9/ncurses-5.4-sol9-sparc-local.gz
solaris_9/unzip-5.50-sol9-sparc-local.gz
uninstall.sh
vigoracs
vigoracsmysqld
[root@localhost 0.0.1.3.1]# chmod 755 ./install.sh
[root@localhost 0.0.1.3.1]# chmod 755 ./uninstall.sh
[root@localhost 0.0.1.3.1]#
```

5. Please make sure you have **/usr/bin/sh** first. If not, please enter:
   `ln -s /bin/sh /usr/bin/sh`

6. Execute the installation by entering the following.

```
./install.sh
```

```
solaris_8/libiconv-1.8-sol8-sparc-local.gz
solaris_8/my.cnf
solaris_8/mysql-4.0.21-sol8-sparc-local.gz
solaris_8/ncurses-5.4-sol8-sparc-local.gz
solaris_8/unzip-5.50-sol8-sparc-local.gz
solaris_9/coreutils-4.5.4-sol9-sparc-local.gz
solaris_9/jdk-1_5_0_07-solaris-sparc.tar.Z
solaris_9/jdk-1_5_0_07-solaris-sparcv9.tar.Z
solaris_9/libgcc-3.3-sol9-sparc-local.gz
solaris_9/libiconv-1.8-sol9-sparc-local.gz
solaris_9/my.cnf
solaris_9/mysql-4.0.21-sol9-sparc-local.gz
solaris_9/ncurses-5.4-sol9-sparc-local.gz
solaris_9/unzip-5.50-sol9-sparc-local.gz
uninstall.sh
vigoracs
vigoracsmysqld
[root@localhost 0.0.1.3.1]# chmod 755 ./install.sh
[root@localhost 0.0.1.3.1]# chmod 755 ./uninstall.sh
[root@localhost 0.0.1.3.1]# ./install.sh

entering /home/robin/vigoracs/0.0.1.3.1/linux......

Please create /usr/local/vigoracs
Create it now? (y/n)
y_
```

7. Click **y** to create *vigoracs* folder for storing necessary files.
8. Next, please select the item number which you want to execute. Be aware that VigorACS supports both Solaris and Linux OS. The program will detect the system you have in your computer.

   For **Solaris** System

   ```
   1. Install library: libgcc coreutils libiconv ncurses install
   (required by MySQL installation)
   2. Install mysql
   3. Install java
   4. Install VigorACS (It will build one mysql database: tr069)
   5. Upgrade VigorACS (It will upgrade tr069 database)
   6. Exit
   input select num:
   ```

   For **Linux** System

   ```
   1. Install mysql
   2. Install java
   3. Install VigorACS (It will build one mysql database: tr069)
   4. Upgrade VigorACS (It will upgrade tr069 database)
   5. Exit
   input select num :
   ```

   Note: *For Linux OS owns the library that required by MySQL installation, so the item of "Install library" is not shown on the screen.*

9. If your computer has installed MySQL or java previously, just skip the installation. Otherwise, install all the required applications (MySQL, Java and VigorACS) for your system. option number 4 is used to upgrade VigorACS, so it is not necessary to execute for the first time of installation.
10. Select the item of Exit to finish the installation.

Chapter 3 Getting Start

3.1 Overview

The procedures of starting up VigorACS:

- Start MySQL Database
- Configure IP setting(Set or change Binded IP of Vigor ACS)
- Start VigorACS

Configuration is different depending on the operation system you use.Please follow the steps listed below for each platform.

3.2 For Windows 2000 or XP

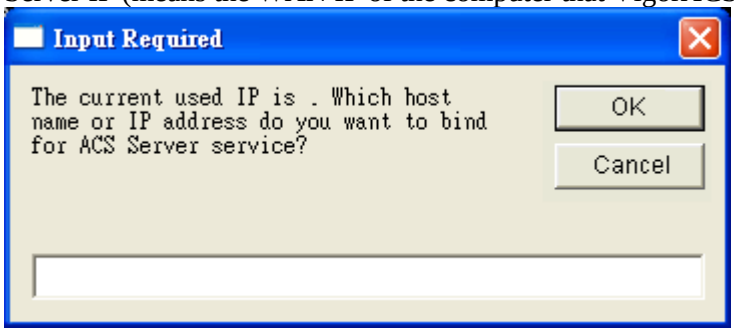
3.2.1 Start MySQL Database

After installing VigorACS, installing program will register MySQL as Windows Service. MySQL will startup automatically after installing VigorACS or rebooting. Normally, you don't need to worry about this step on Windows. But, if you find any problem on VigorACS, you should check MySQL first. Please go to **Start >Setup >Control Panel >Administrative Tools >Service** to check if the MySQL Service has been activate or not. If not, please double click it to enable.

3.2.2 Start VigorACS

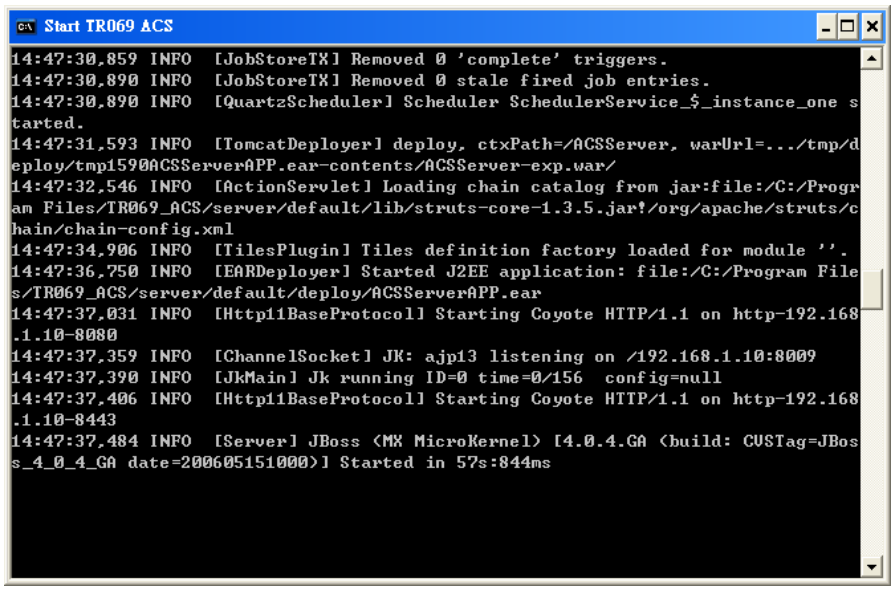
Click **Programs-> VigorACS ->Start VigorACS** to startup VigorACS.

When starting the VigorACS at first time on Windows, the startup program will ask you input Server IP (means the WAN IP of the computer that VigorACS installed.

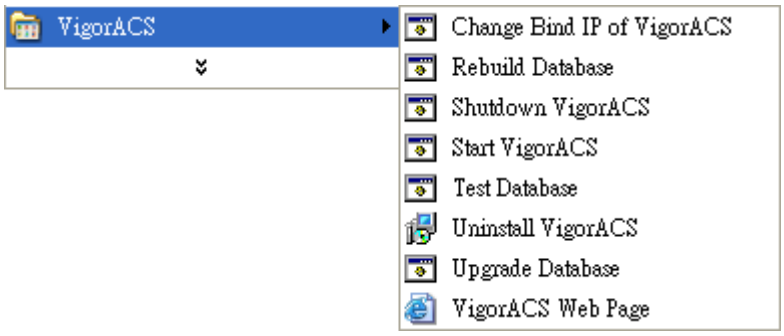


Please type the server IP and click **OK**.

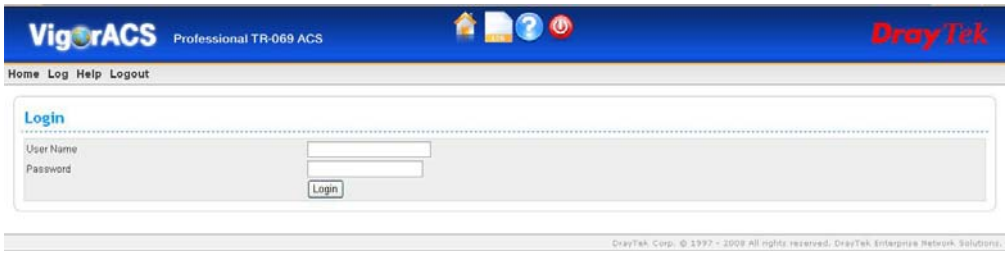
When the following screen is shown, VigorACS is initiated successfully.



Now please click **Programs->VigorACS-> VigorACS Web Page** to start the application.



The login page of VigorACS will be shown as the following:

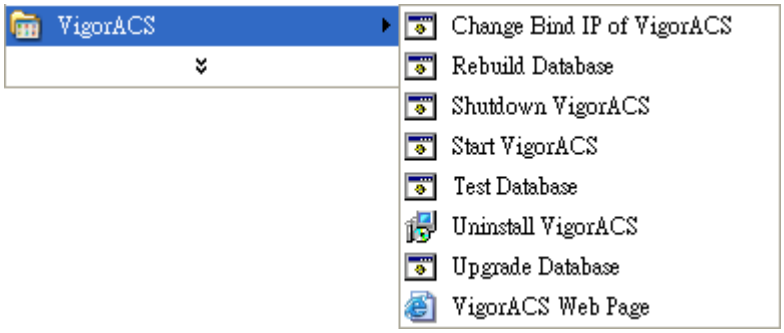


Please type "**root"** as user name and "**admin123"** as password. Then click **Login**.

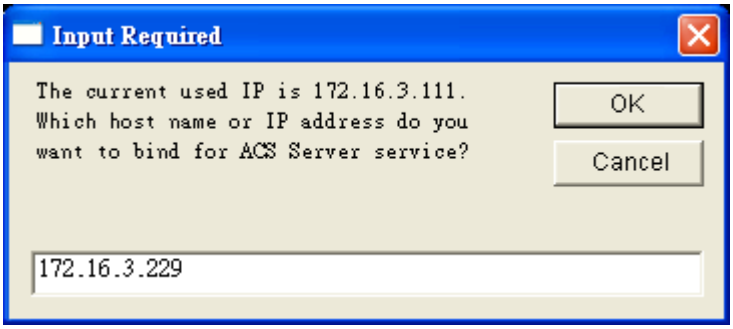
3.2.3 Change Bind IP of VigorACS

Once you input this IP at the first time of starting VigorACS, the system will keep it on *bindip.txt*. However, if you want to change the server bind IP, please follow the steps below:

1. Choose **Programs->VigorACS->Shutdown VigorACS** to stop VigorACS. This would make sure the IP change setting take effect.



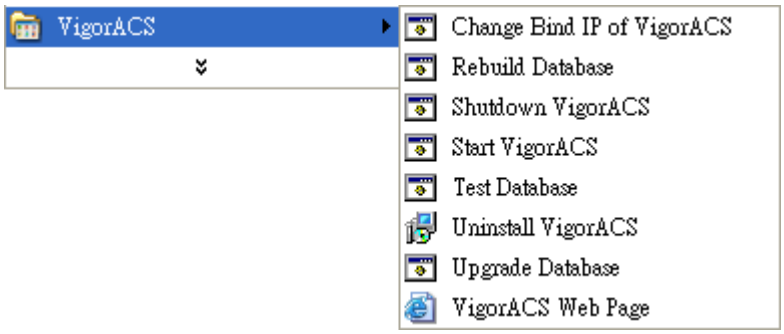
2. Select **Programs->VigorACS->Change Bind IP of VigorACS** to open the Input dialog.
3. Current used IP will be displayed. Please enter the IP address you would like to change and click **OK**.



4. Choose **Programs->VigorACS->Start VigorACS** to initiate VigorACS server again.

3.2.4 Shutdown VigorACS

Choose **Programs->VigorACS->Shutdown VigorACS** to stop VigorACS.



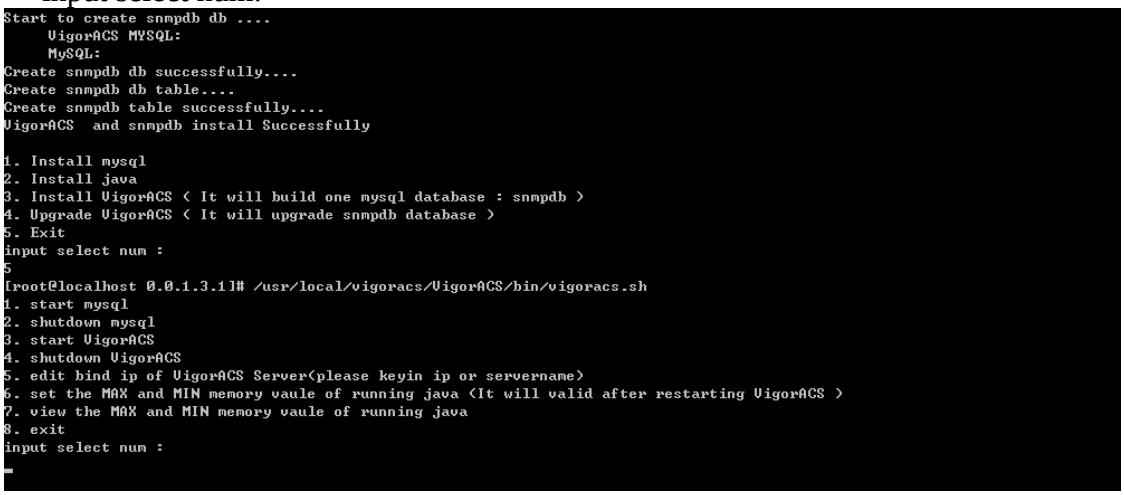
3.3 For Linux or Solaris

3.3.1 Start/Shutdown MySQL Database

Execute **"/usr/local/vigoracs/VIGORACS/bin/Vigoracs.sh"** instruction. The following menu will appear.

1. start mysql
2. shutdown mysql
3. start VigorACS

4. shutdown VigorACS
5. edit bind ip of VigorACS Server(please keying IP or server name)
6. set the MAX and MIN memory value of running java (It will valid after restarting VigorACS)
7. view the MAX and MIN memory value of running java
8. exit
input select num:

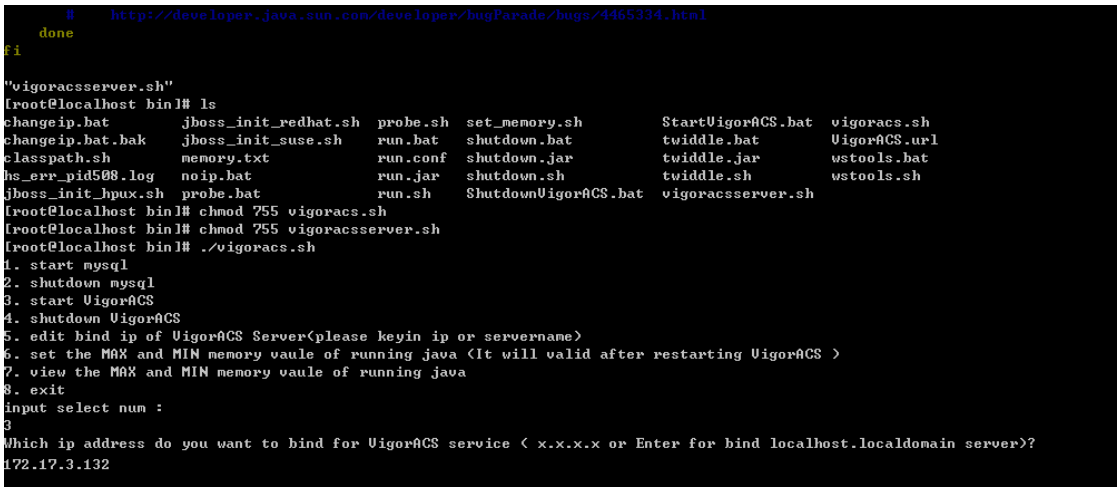


Type item number **1** to start MySQL database if necessary. Usually MySQL daemon will start automatically after installing VigorACS server.

Note: *You can type "ps -ef|grep mysql" to view the content of MySQL. If you want to shutdown MySQL database, simply type the menu item 2 to close MySQL.*

3.3.2 Start/Shutdown VigorACS

For the first time of starting the VigorACS on Solaris or Linux system, the startup program will need you to input Server IP. Select item number **3** for starting VigorACS. And type the required IP address used for initiating.



The system will start VigorACS with the specified IP address.

If you ever reboot machine after installing VigorACS, please execute **/usr/local/Vigoracs/VIGORACS/bin/Vigoracs.sh** again and select item number **1** to start MySQL first. Later, select item **3** to start VigorACS. Then, login Linux or Solaris with your account and password. If the user wants to operate VigorACS on the desktop of Linux/Solaris, please initiate the desktop of Linux/Solaris.

3.3.3 Edit VigorACS IP

Once you input the IP address, VigorACS will keep it on *startway.txt*. However, if you want to change the server bind IP, please follow the steps below:

1. Execute "/usr/local/vigoracs/VIGORACS/bin/Vigoracs.sh" instruction.
2. Stop VigorACS by selecting item number 4 to shutdown VigorACS. Such action can make sure the new changed IP setting being effective.
3. Then select item number 5 to edit *startway.txt* by using *vi* editor.
4. When you finished the change of bind IP, please select item number 3 to start VigorACS again.
5. Open your browser, and enter the following URL to get into ACS login page

   http://{IP address of VigorACS}:8080/ACSServer/tr069servlet

3.4 Logout VigorACS

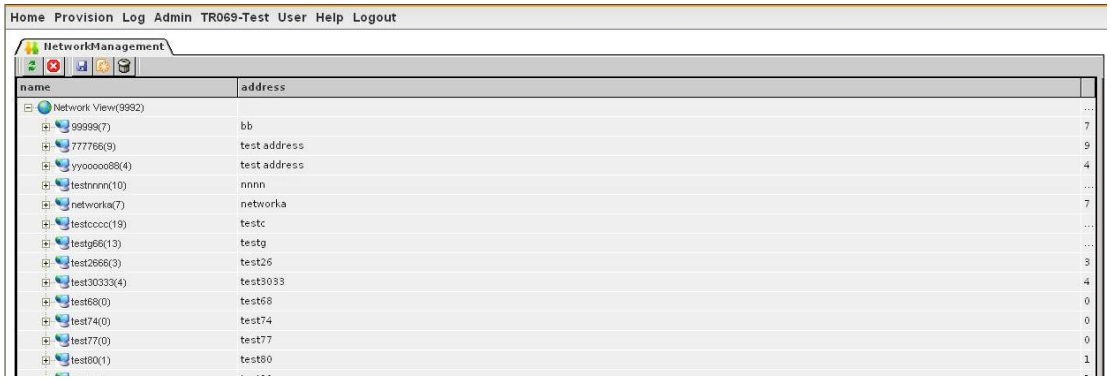
Simply click Logout menu to logout.

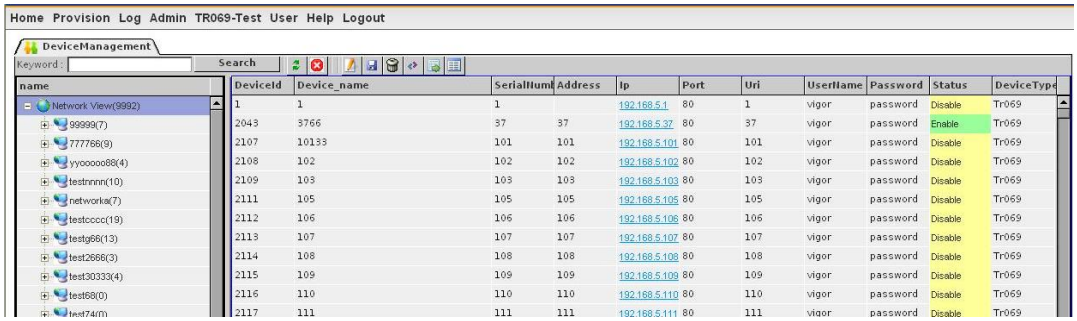
Chapter 4 Admin Operation

This menu can display detailed information for the CPE on network. You can modify the IP, PORT, URI, Device Name or Device Status to fit your request.

4.1 Networks/Devices Management

To edit, change or delete devices under different network, please open **Admin->Network/Device Management** for advanced operation. A Network/Devices table view will be shown as the following:





Network View Click **"+"** to expand the first layer for network.

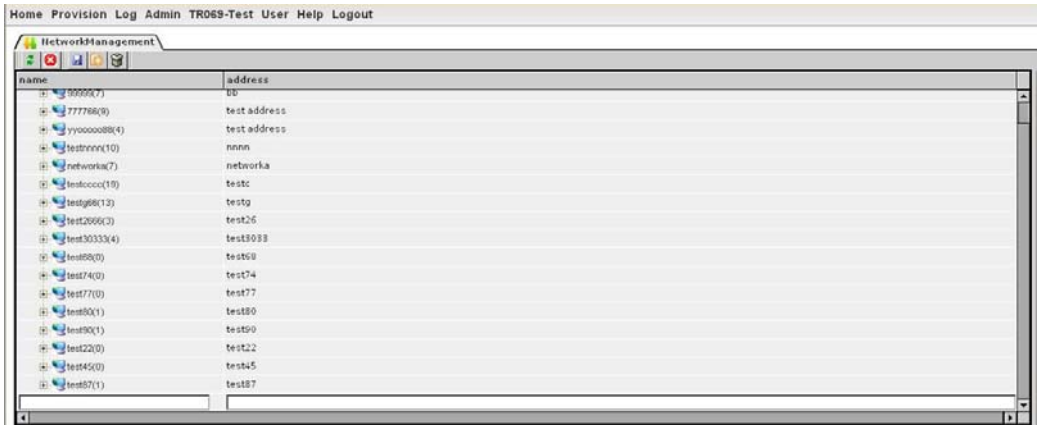
Click this icon to refresh network display.

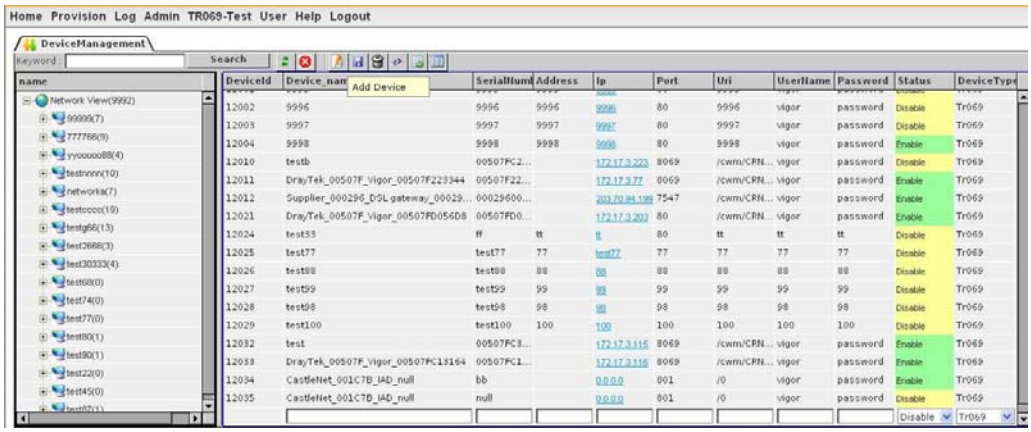
Click this icon to cancel network devices setting change.

	Click this icon to create new device.
	Click this icon to create new sub-network.
	Click this icon to save network device setting.
	Click this icon to delete the selected sub-network/device.
	Click this icon to change the network for selected CPE device.
	Click this icon to export network devices settings to a .xls file.
	Click this icon to view PD128 Test of CPE.

4.1.1 Create Networks/Devices

Click **Admin->Network Management/Device Management** to get into network or device configuration page. VigorACS allows administrator to build several different Networks/CPE devices. To create a Network/CPE setting, please click this icon  for a new network setting, or  for a new device setting. The following grids will be shown. Enter the configuration., then click  to save settings.





4.1.2 Delete Networks/Devices

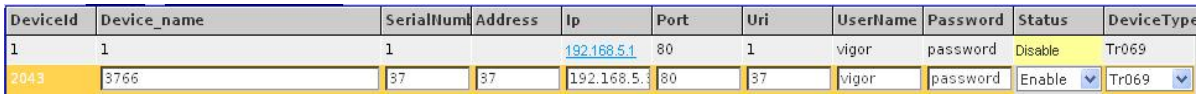
To delete a network/device, click **Admin->Network Management/Device Management** select the network/device grid displayed under **Network View** and click  .

VigorACS will ask you to confirm the deletion. You can click **OK** to execute the action, or click **No** to cancel.

If there is still one device grouped under a sub-network/network, such network cannot be deleted until that device is removed.

4.1.3 Edit Device

Basically, all the connected CPE will be scanned by VigorACS automatically and shown on the screen. Simply choose the one you want to view and double click on the grid. The corresponding information for the selected CPE will be shown on the bottom of right side. You can modify the settings if necessary. See the following graphic for an example.



DeviceId	Device_name	SerialNum	Address	Ip	Port	Uri	UserName	Password	Status	DeviceType
1	1	1		192.168.5.1	80	1	vigor	password	Disable	Tr069
2043	3766	37	37	192.168.5.3	80	37	vigor	password	Enable	Tr069

DeviceId — The number displayed here is specified by VigorACS automatically.

Device_name — The original name will be displayed here. To change it, simply enter a new name

SerialNumber. — The factory default Mac address of the CPE.

Address — The original address will be displayed here. To change it, simply address a new address for replacing.

IP — Enter the IP address of the CPE.

PORT — Enter the port number of the CPE, e.g. 80.

URI — Enter URI (Uniform Resource Identifiers) in this field. For example, the URL set on CPE's TR-069 web page is http://172.17.3.9:8080/ACSServer/services/ACSServlet, then the URI will be :/ACSServer/services/ACSServlet.

User Name — Enter the username that displayed on the web page of TR-069 for that CPE.

Password — Enter the password that displayed on the web page of TR-069 for that CPE.

Status — Choose **Enable** to make the CPE be controlled by VigorACS.
Choose **Disable** to make the CPE be not controlled by VigorACS.

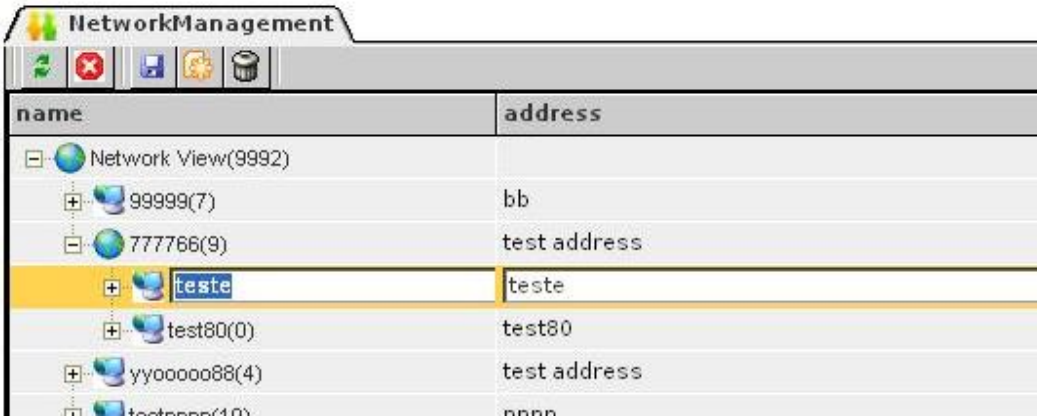
SAVE — When you finish the modification, click **SAVE** to invoke the settings.

4.1.4 Edit Network

The Administrator can create several networks for different CPEs. Also, the administrator can edit the network for the CPE.

1. Click **Admin->Network Management** to get into network configuration page.

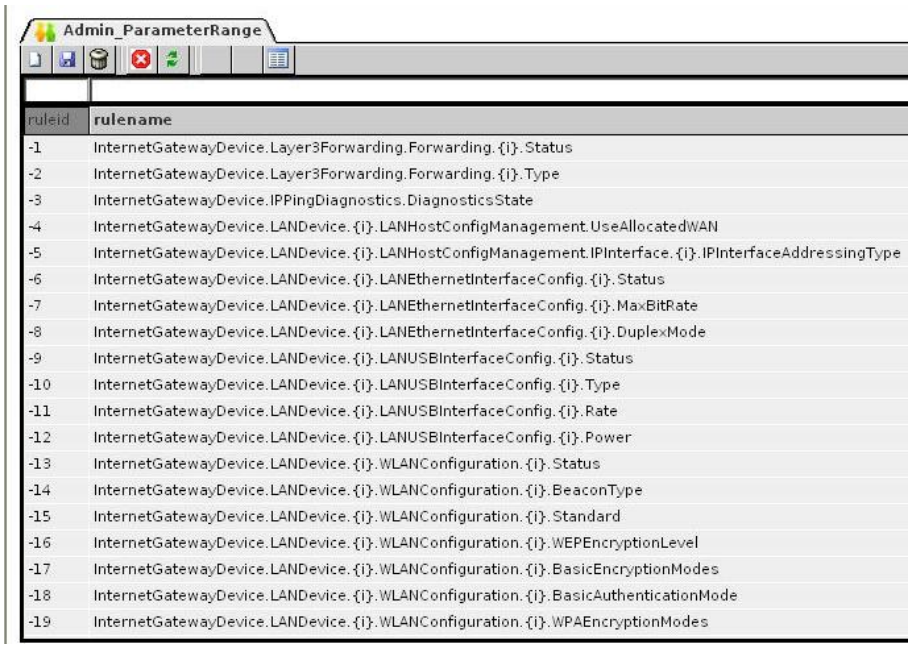
2. Click the grid of network that you want change, enter the information you want change in name and address field.



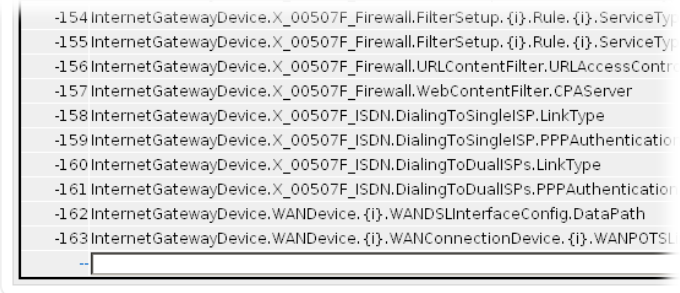
3. Click  to save network setting.

4.2 Parameter Range

You can adjust range of parameters for using in CPE.



Click this icon to create new record. After clicking this icon, an empty field will be appeared on the bottom for you to enter the new parameter.



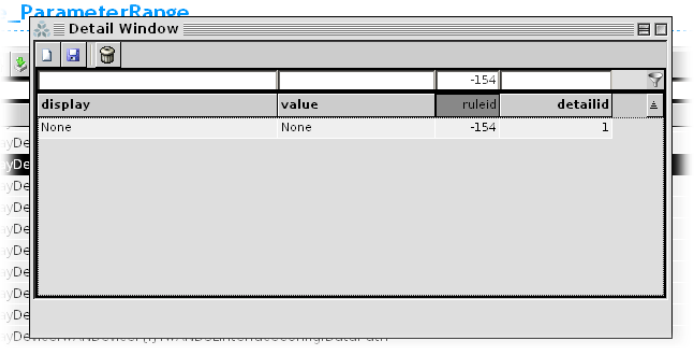
Click this icon to save current settings.

Click this icon to delete the selected parameter rule.

Click this icon to cancel the editing.

Click this icon to refresh display of current parameter setting.

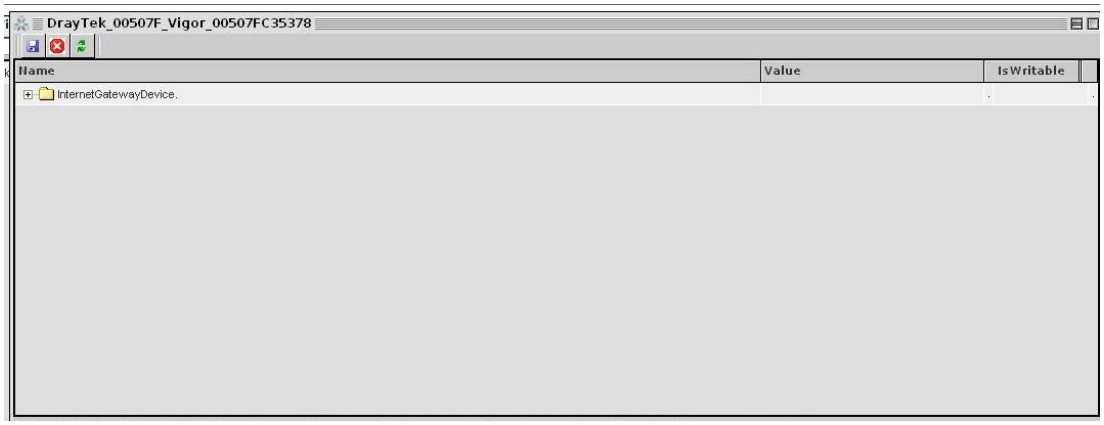
Click this icon to view/add/modify detailed information for the **selected** parameter rule.



Example:

You are going to add addressing type - **DHCP** for CPE managed by VigorACS.

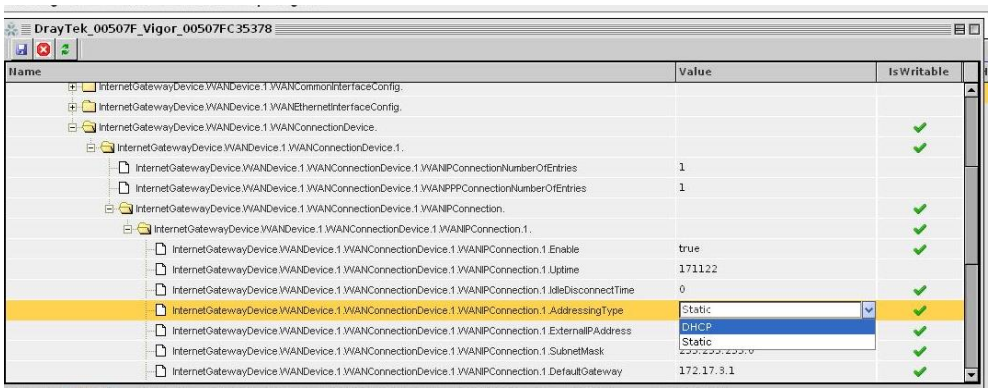
1. Click **Home->Table View,** then click on the grid of the device that you want edit parameter range, the parameter range window would pop as below..



2. Click “+” to expand folder tree and find the parameter.

3. The parameter path can be found by expanding the folder tree:

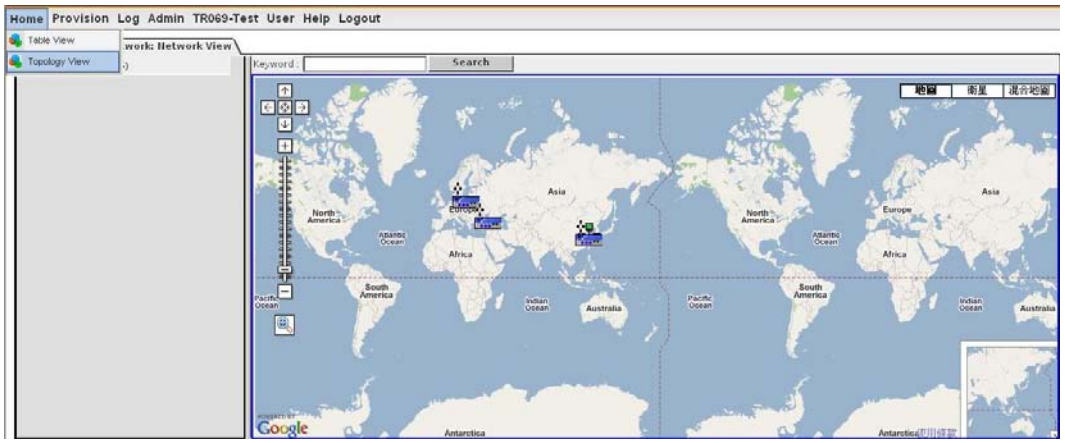
   InternetGatewayDevice-> InternetGatewayDevice.WANDevice.1-> InternetGatewayDevice.WANDevice.1.WANConnectionDevice.1-> InternetGatewayDevice.WANDevice.1.WANConnectionDevice.1.WANIPConnection.1->InternetGatewayDevice.WANDevice.1.WANConnectionDevice.1.WANIPConnection.1.AddressingType.



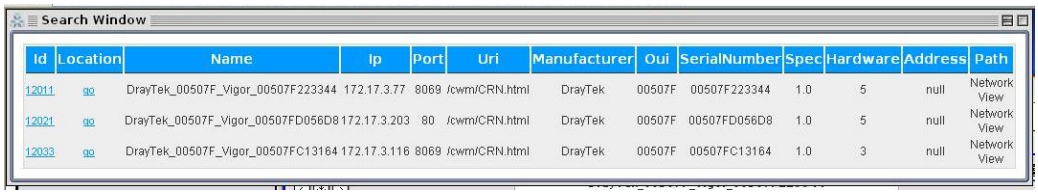
4. Choose **DHCP** from the list, then Click  to save parameter change.

4.3 VPN Setting

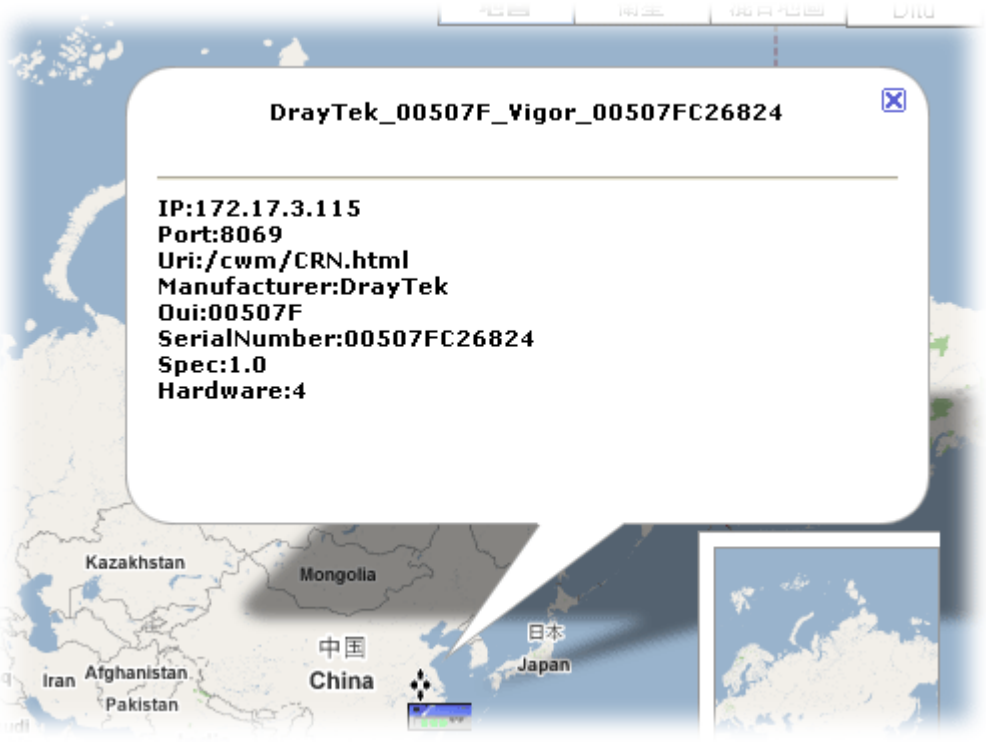
Click **Home->Topology View**. A map is provided for you to build VPN channel between two CPEs with easy operation.



Please type keyword and click **Search**. The searching result will be shown with a popup window on current screen.



You can click the **go** link to know relational information for the router. See the following example.



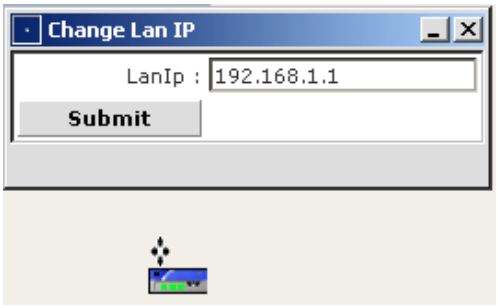
To zoom in one point on the map, please click  and use the mouse to drag a frame (it will be shown with red rectangle). After releasing the mouse cursor, the detailed information for the area within the frame will be shown immediately.

4.3.1 Change LAN IP

To change LAN IP address for selected CPE:

1. Right click the CPE icon and choose **Change LanIP**.

2. A drop down menu will appear as the following.



3. Type a new IP address in the field of LanIP and click **Submit**.
4. After several seconds, the new IP address will be saved.

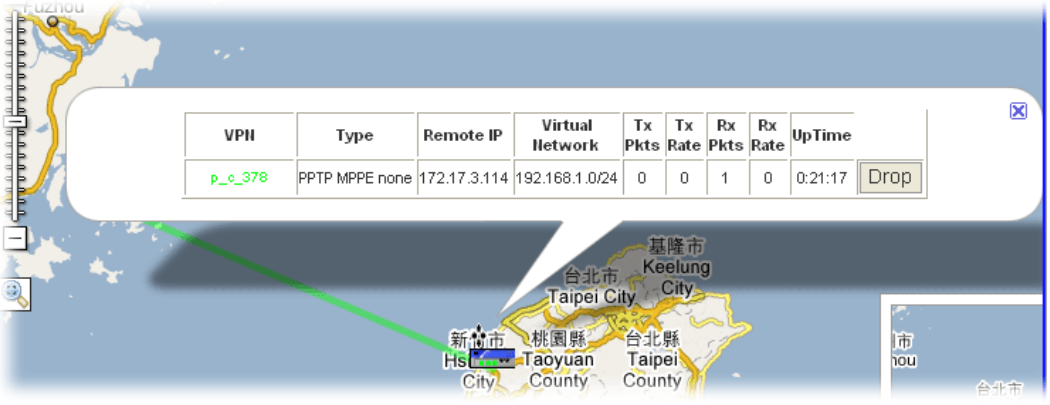
4.3.2 Reboot the CPE

When you finish any configuration, please right click the CPE icon and choose **Reboot t**o make the new settings enabled**.**

4.3.3 View the Status

To view successful VPN connection Status for CPEs, please right click the CPE icon and choose **VPN Status**.

A dialog box with detailed information of VPN connection will appear.



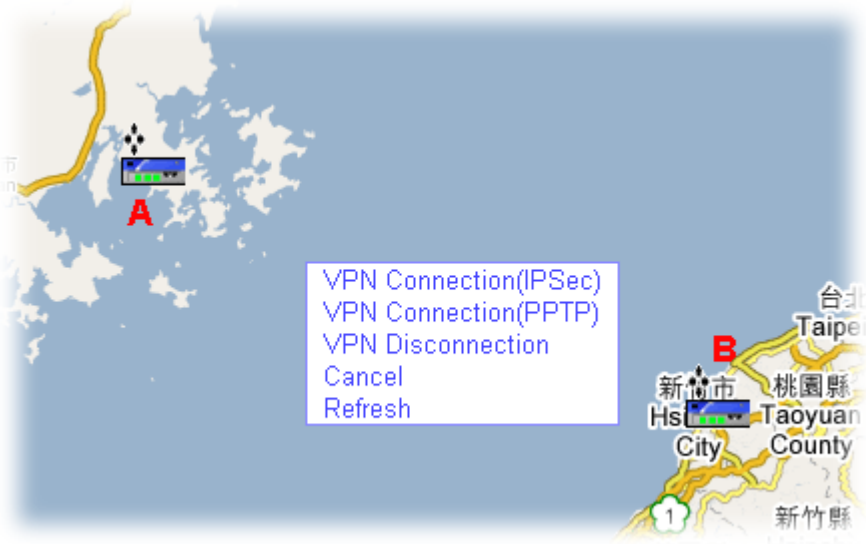
To clear the VPN Status, please right click the CPE icon and choose **Clear VPN Status**.

4.3.4 Build VPN Connection (IPSec)/(PPTP)

Before you build VPN connection between two CPEs, you have to make sure both CPEs are set with different LAN IP (with different subnet, e.g., one side is 192.168.**1**.5; the other side is 192.168.**2**.5) to avoid conflict.

The map can assist you to build VPN Connection with brief operation – drag and hold the mouse, and release the mouse. Below shows an example of building VPN connection.

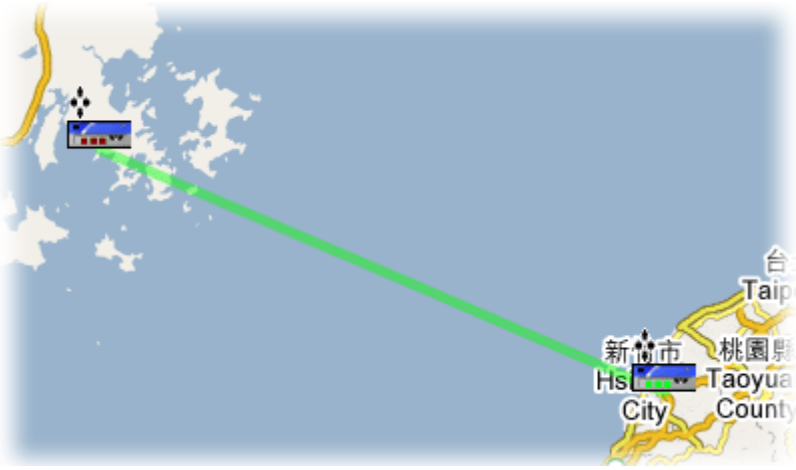
1. Right click any point on the map to display **VPN Connection(IPSec)/(PPTP)** link.
2. Choose **VPN Connection**.



3. Move your mouse to one (A) of the CPEs on both sides. Click and drag you mouse cursor to the other side (B) of the CPE.

4. VigorACS server will build VPN connection between A and B devices. Please wait for several seconds.

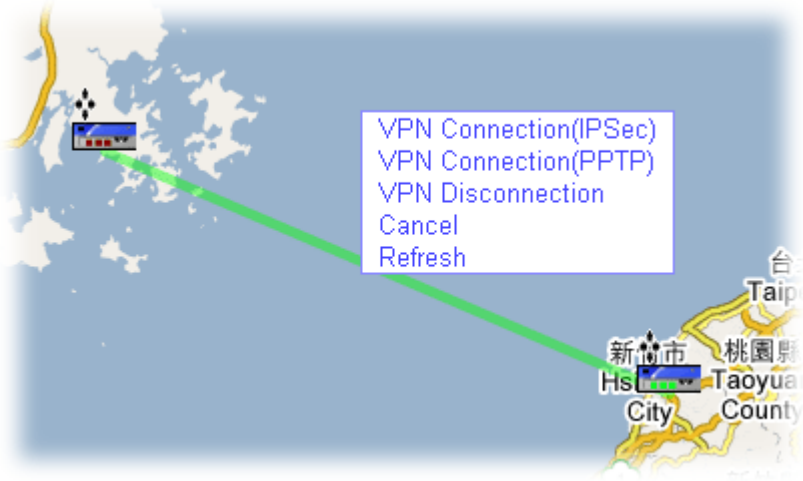
5. When a VPN connection is built, a green line (for PPTP) or blue line (for IPSec) will appear to indicate a successful VPN connection between A and B has been established.



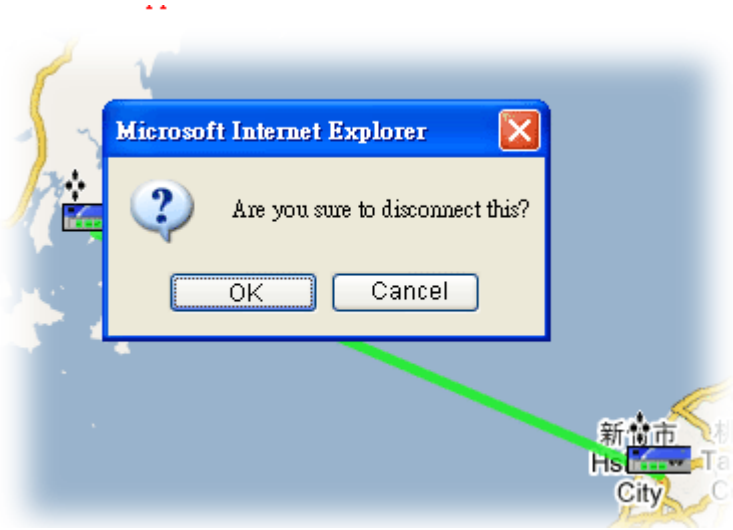
4.3.5 Disconnect VPN

A connected VPN channel will be displayed on the map with green line. If you want to disconnect that VPN, please follow the steps below:

1. Right click any point on the map to display **VPN Disconnection** link.



2. Select VPN Disconnection and click on the green connection line. A confirmation dialog box will appear.



3. Click **OK**.

The VPN connection will be disconnected after several seconds.

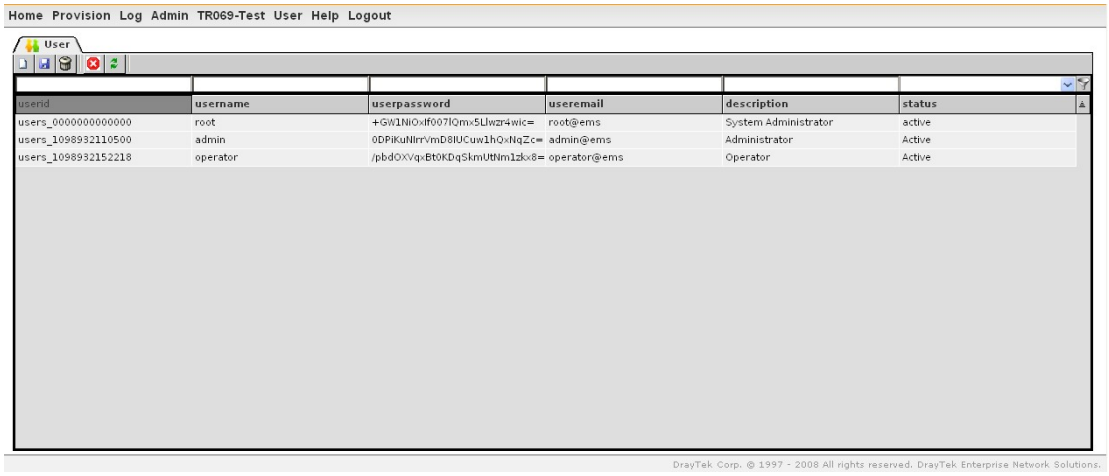
Chapter 5 User Operation

Users who want to control CPE through VigorACS server can access VigorACS with user name and password. This menu allows a user to set name, password, e-mail address as identification in VigorACS system.

Each time, when the user wants to access into VigorACS, he/she can type the name and password that been set in this page. Other people also can set different name and password for accessing VigorACS. However, the password will be displayed with codes for prevent peeping by other users. Please keep your password well.

5.1 Insert/Update/Delete a User

To insert/update/delete a user, choose **User** item from **User** menu. The following web page will be shown on the screen.



userid — Display the identification number generated by VigorACS server.

username — Display the name that users created.

userpassword — Display the password that users entered. It will be displayed with random codes. If you forget the password, simply click the item and click Update for changing the password manually.

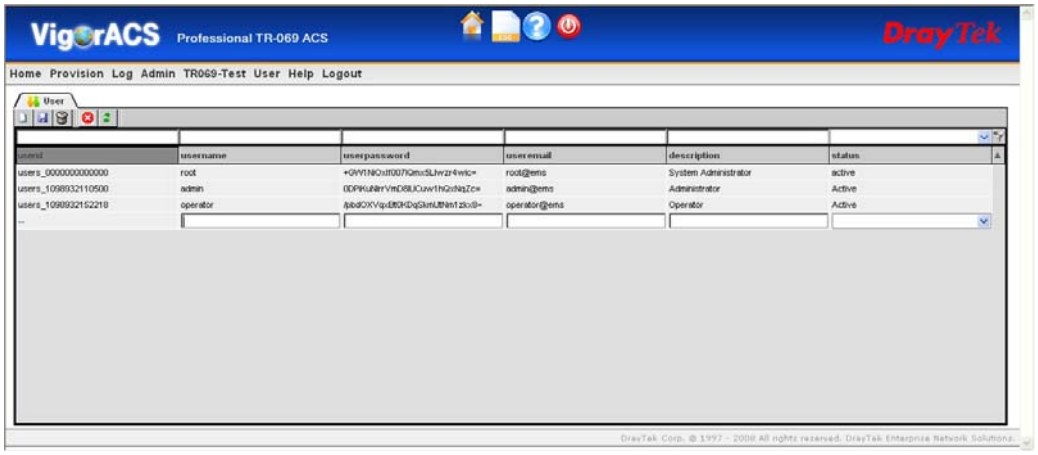
useremail — Display email address of the user.

description — Display the authority of the user. There are three levels –system administrator, administrator, and operator.

status — Display current status of the user. “Active” means the user is on the network.

5.1.1 Create new user account

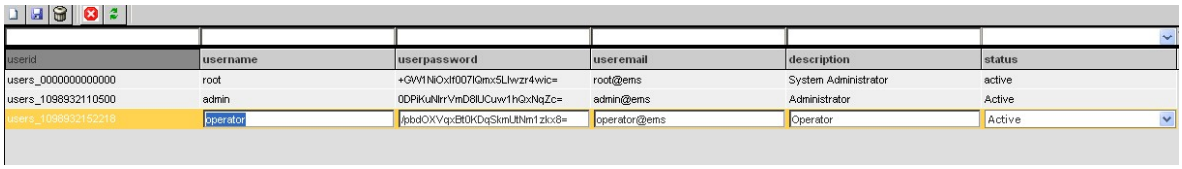
To create a user account, click **New Record**  to add a new user profile. An empty grid would show under the user information grid.



User Name	Enter the name used by the user.
Password	Enter the password of the user.
Email	Enter the e-mail for communication between the user and VigorACS server.
Description	Description for the user.
Status	Choose **Active** to authorize access privilege to the user, **Inactive** to limit the access privilege.
Save	After editing user information, click **Save**  to save the setting.
Cancel	Click **Cancel**  to discard the setting.

5.1.2 Edit User Information

Users can modify the user information stored in VigorACS if necessary. Double click on the user information grid, the grid would become highlight and can be modified, after modifying the user information, click **Save**  to save the setting.

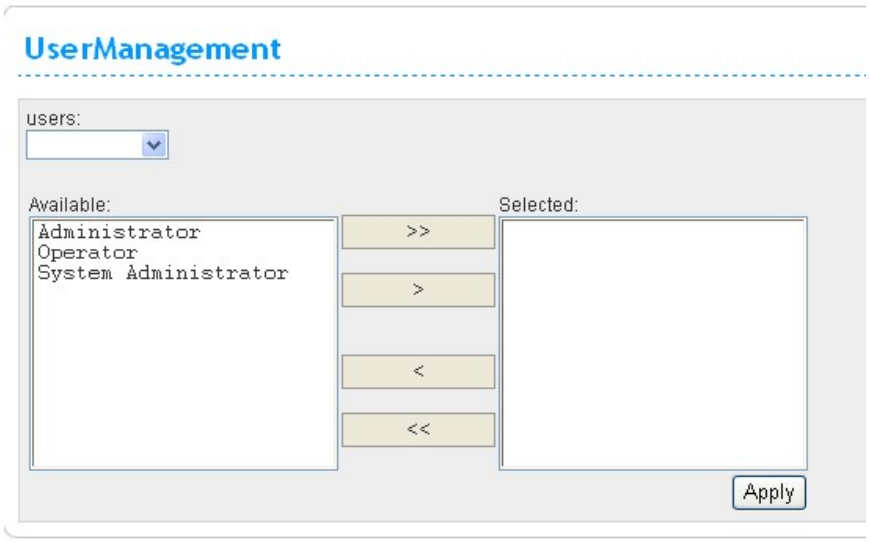


5.1.3 Delete User Account

To delete a user setting, please click on the grid that you want to delete, the grid would become highlight, click **Delete**  , a window would pop and ask if you want delete the user setting, click yes to apply the deletion or no to cancel.

5.2 User Management

This page allows you to set the access privilege of VigorACS.



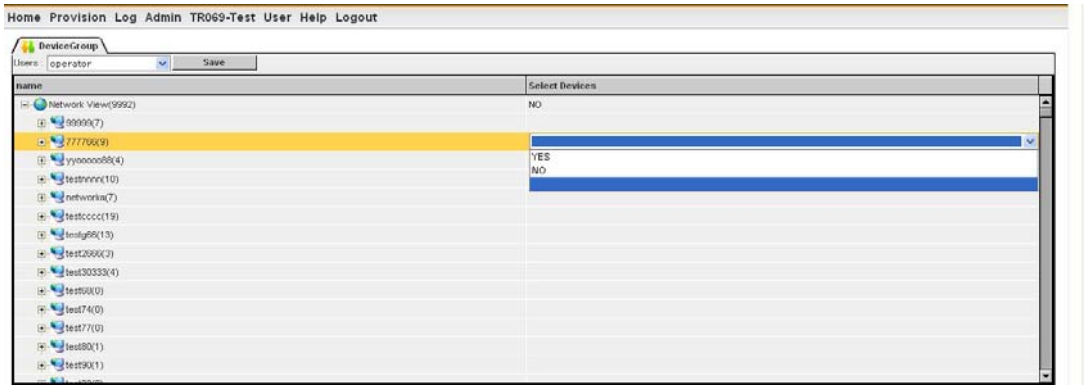
Users Use the drop-down list to choose user that to be modified his/her access privilege..

Available Display the available privileges on this box. Click >> to grant the user all access privileges or click > for certain privilege. The selected privileges would be shown on the selected box and the privileges setting would be applied to the selected user. There are three types of access privileges. **System Administrator** – grant highest authority. One with

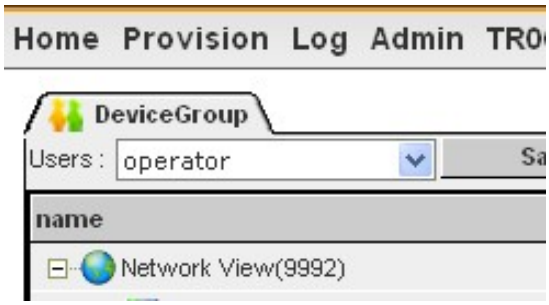
	this authority can do all of the jobs in VigorACS without any limitation. **Administrator** –One with this authority cannot use the functions under **Admin** and **User** editing pages, but can view and modify parameters of CPE. **Operator** – One with this authority cannot use the functions under **Admin**, **User** and **Provision** editing page, neither to modify parameters of CPE; only allow to check and view parameters of CPE.
Apply	Click this button to apply the settings.

5.3 Device Group

The feature allows administrator (user) to manage networks and devices.

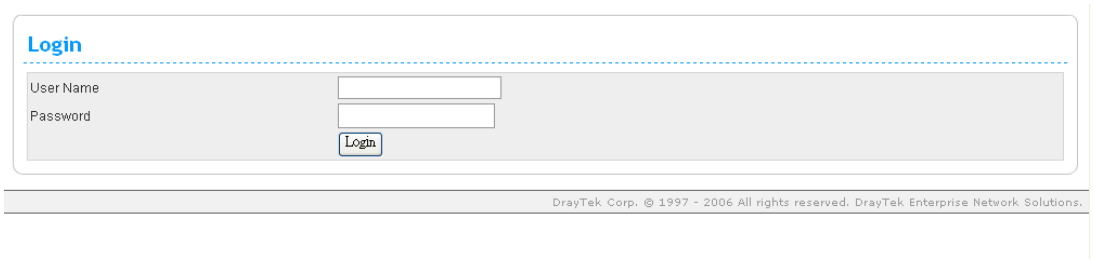


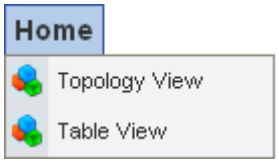
Use the drop down list to choose a user. Then you can assign devices or networks be managed by the selected user. Click the "+" to expand the **Network View** and select sub-network or device, the selected one would become highlight, then click **Save** to apply the setting.



Chapter 6 Home Page Operation

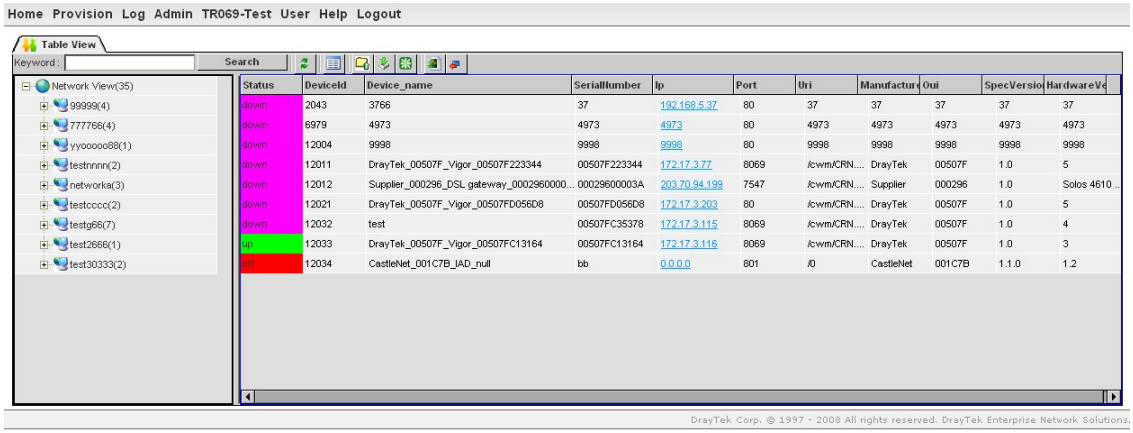
When you build all the network groups for the devices with different user names, you can start to manage the devices at any time. This chapter will guide you how can you manage the devices.





6.1 Table View

Please type "**root"** as the user name and "**admin123"** as the password at the login page, then click **Login**. The default page shows in Table View.

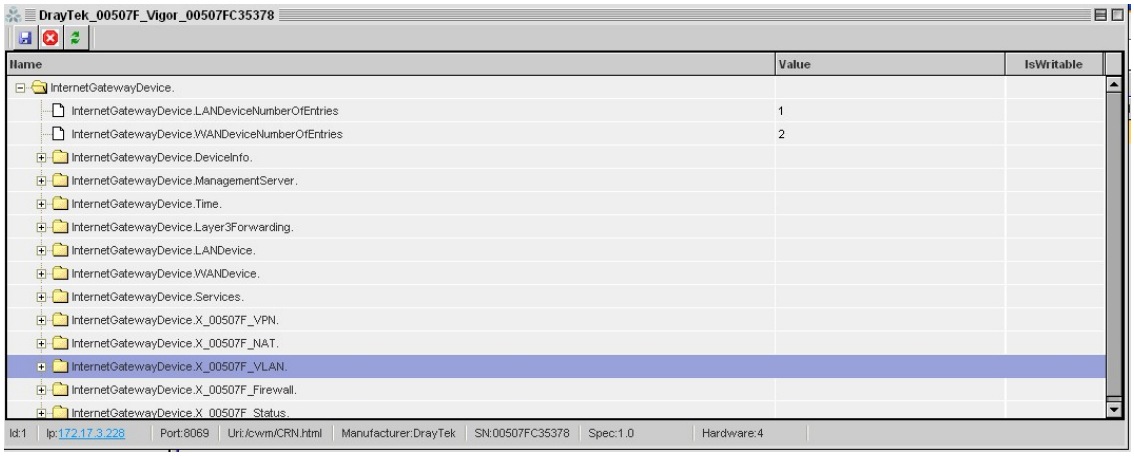


The device List will be displayed as above. For the first time, there might be no device listed here. However, if you have enabled device(s) under **Admin** page and have set the authority for the user in **User->DeviceGroup** page, device(s) would scanned by VigorACS and been displayed in this page. The detail of list fields show as below:

Status Display the status of the CPE under Network View.
Down – Means the device (CPE) is closed and VigorACS cannot manage it.
Up- Means the device (CPE) is open and allows VigorACS managing it.
Off – Means the device (CPE) has not detected by VigorACS yet.

DeviceId	The number displayed here is specified by VigorACS automatically.
Device_name	Display the name of the device.
Serial Number	Display the number that CPE offers automatically. Each CPE will have different serial number.
IP	Display the IP address for the connected CPE.
Port	Display the port number for the connected CPE.
URI	Display the URI for the connected CPE.
Manufacturer	Display the manufacturer of the connected CPE.
OUI	Display the OUI (Organizationally Unique Identifier) for the connected CPE.
SpecVersion	Display the software version of CPE.
HardwareVersion	Display the hardware version of CPE.

To manage CPE through VigorACS, double click the device grid, the detail information would show as follow:



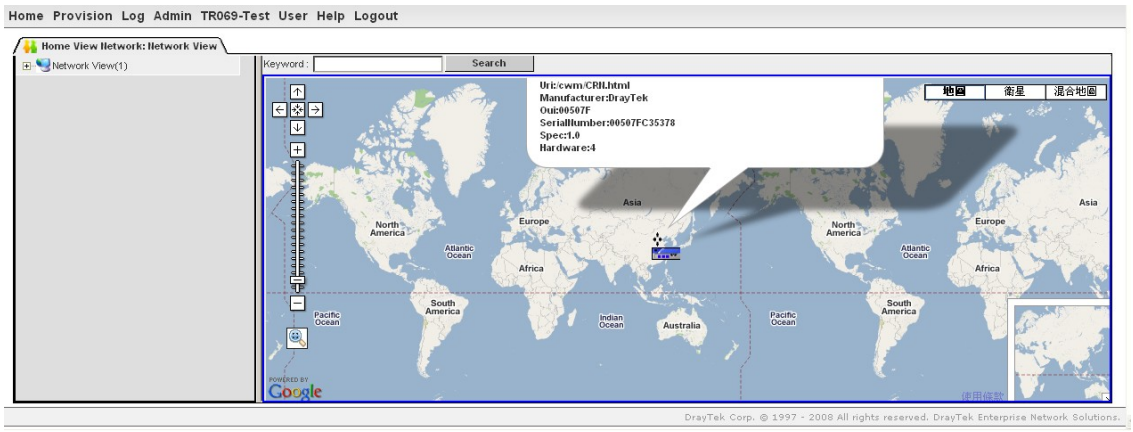
Name	Display the name of CPE parameters.
Value	Display the value of CPE parameters.
IsWritable	If the parameter can be modify, the IsWritable field would be shown in  .

The administrator can access the CPEs through VigorACS and make changes to the remote CPEs easily.

6.2 Topology View

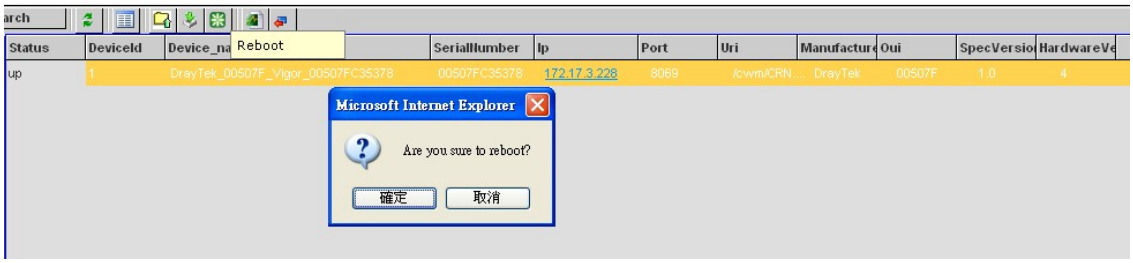
To see the device Topology, please click **Home->Topology View**.

On the world map, you will see the position of the CPE managed under VigorACS. Simply click on that point, a brief description for that CPE will be shown on the screen.



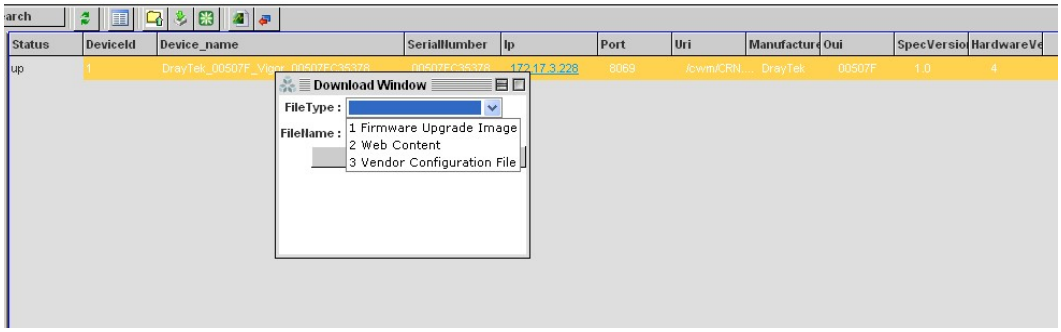
6.3 Reboot the CPE

If you have done changes to the selected device (CPE) and want to reboot it, switch to the **Table View(Home->Table View)** , select a device under T**able View**, the selected device would become highlight, then click **Reboot**  , VigorACS will ask you to confirm the rebooting, click Yes to reboot the device, or Cancel to cancel the rebooting.



6.4 Download File to CPE

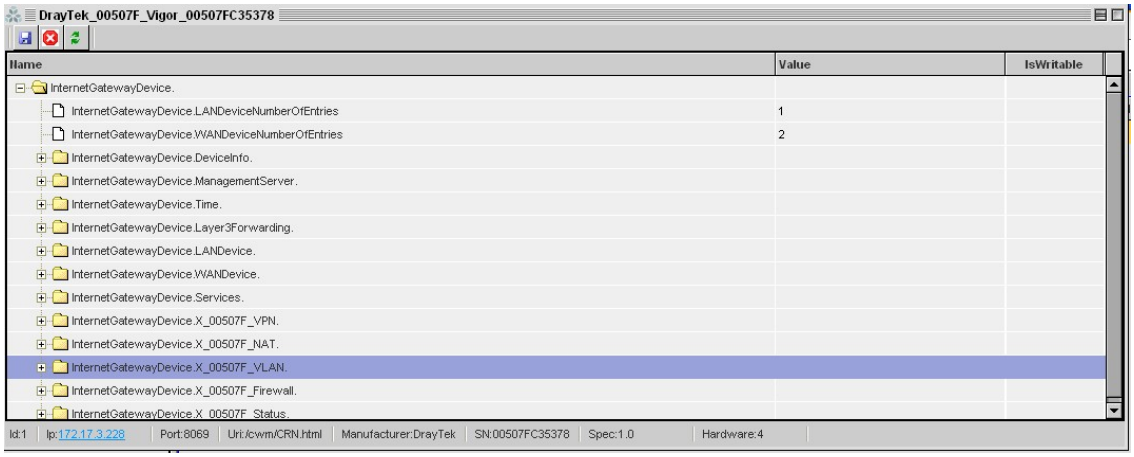
VigorACS allows administrator download files to selected devices (CPEs). Select a device under **Table View** and click click **Download**  , The following page would be shown.



FileType	There are three file types for you to choose for VigorACS to download.**Firmware Upgrade Image** –for downloading firmware.**Web Content** –to load web content filter.**Vendor Configuration File** –to load configuration file from vendor.
Filename	Enter the filename or use **Browse,** choose the file you want to apply to the device.
Apply	Apply the downloading.
Reset	Clear all field and cancel downloading.

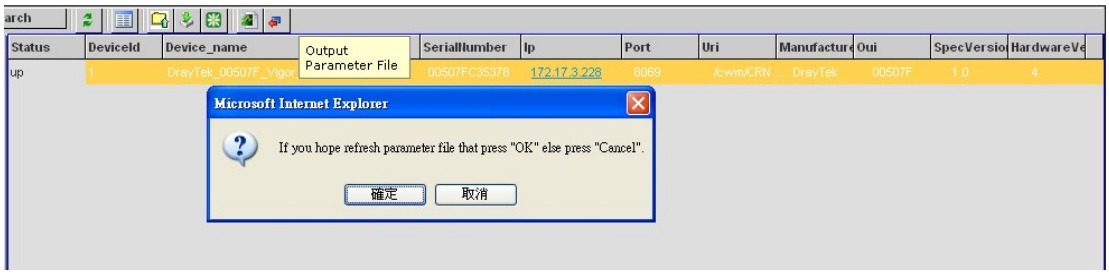
6.5 Parameter Settings

VigorACS will scan the parameters used in the CPE. The parameter scanning is simultaneously with CPE. While you click the parameter folder tree, VigorACS would scan the CPE parameter settings through connection and save it**.**



6.6 Output Parameter File

Switch to **Table View** and select the device you want to output its parameter file, click **Output Parameter File**  , a dialog box will pop as below:

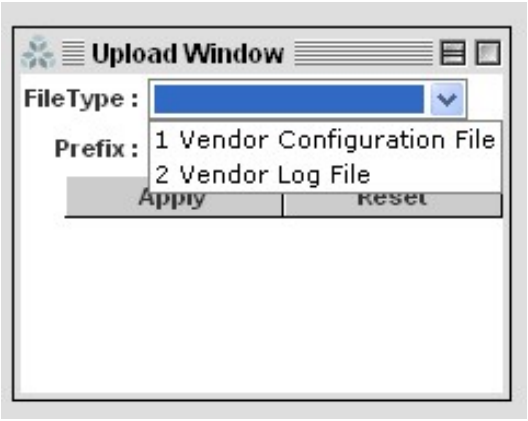


Click Yes to scan and get the parameter settings simultaneously from CPE, or Cancel to download the parameter settings stored in VigorACS.

The file store in Xml format and can be viewed with any text editor, administrator can check what parameters values set in the device (CPE). With this feature, the administrator can export parameter settings to other CPE.

6.7 Upload Parameter File

Select the CPE that you want upload parameter settings to it, and click **Upload**  under **Table View(Home->Table View),** a window would pop as below:



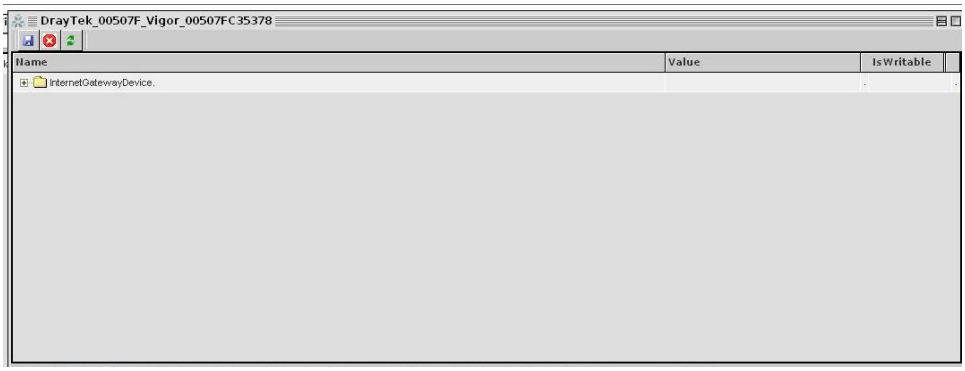
FileType	There are two kinds of files you can choose. **Vendor Configuration File** –to load configuration file from vendor. **Vendor Log File** – to upload log file from Vendor.
Prefix	Enter any characters for users to identify. It will be appeared in the beginning of the filename that you want to upload.
Apply	Click this button to apply the uploading..
Reset	Click this button to clear all field and cancel the uploading..

After clicking Apply, please wait for several seconds. The result will be shown as the following:

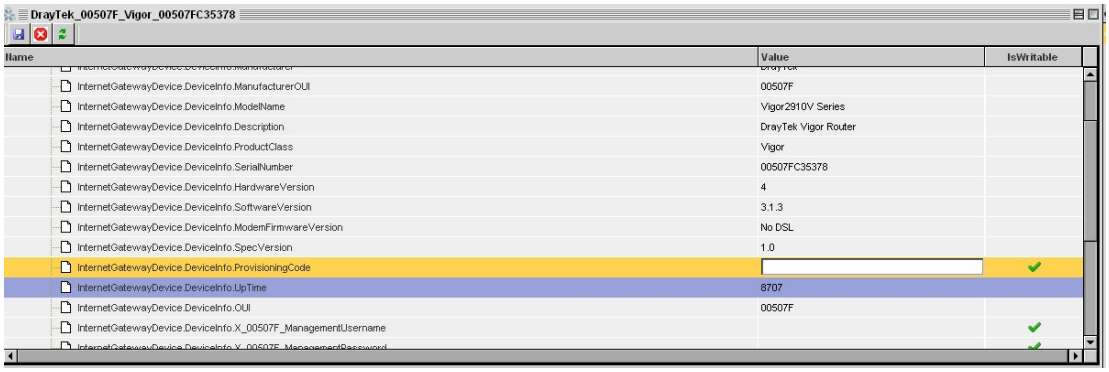
```
Status=1
StrartTime=Sat Jan 01 00:00:01 CST 1
CompleteTime=Sat Jan 01 00:00:02 CST 1
```

6.8 Edit the Parameter Value

The administrator can edit the parameter value for selected device. Double click the device grid that you want to edit under **Table View** to open parameter setting page. Usually, **InternetGatewayDevice** will be shown on box of parameter setting.



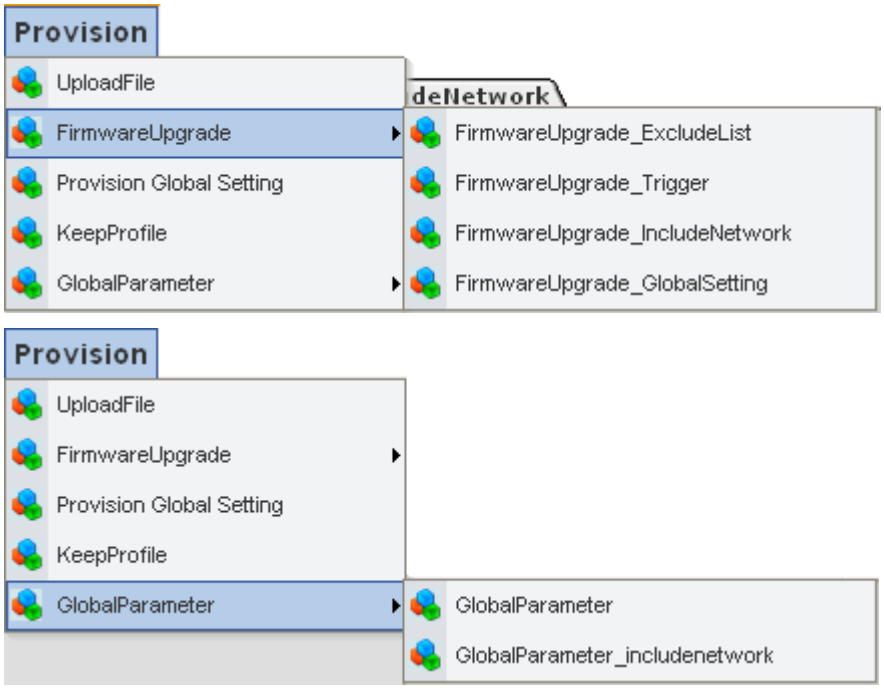
For example, InternetGatewayDevice->InternetGatewayDevice.Deviceinfo->ProvisioningCode can be edited. Click on the grid, an empty input box would show, enter information you want to edit.Click **Save**  to save parameter setting to CPE.



Note: Some of the parameters cannot be modified. Therefore the corresponding box and field will be dimmed and no  *icon be shown.*

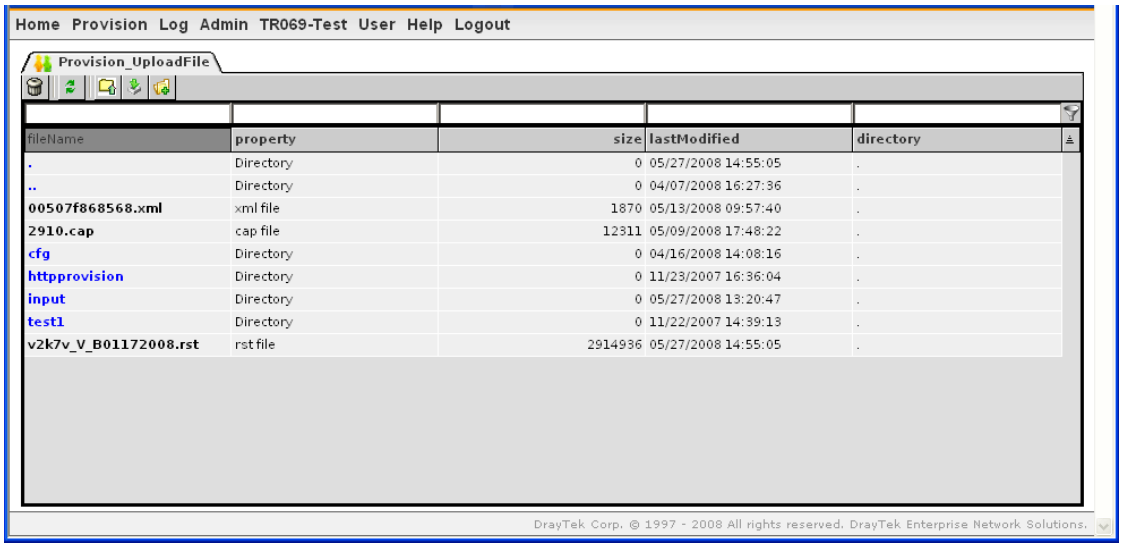
Chapter 7 Provision Operation

Provision operation can help administrator to set provision profiles for different TR-069 specific CPEs with little settings instead of configuring different routers one by one.



7.1 UploadFile

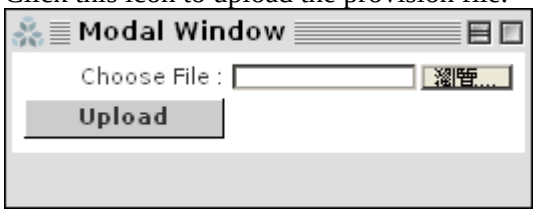
This feature allows administrator to upload the file to VigorACS at any time.



Delete Click this icon to delete the selected provision file.

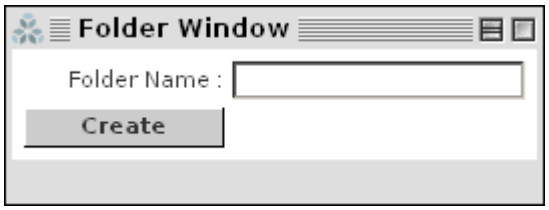
Refresh Click this icon to refresh current status.

Upload Click this icon to upload the provision file.



Download Click this icon to download any provision file selected from the file list to such CPE.

Create Folder Click this icon to create a new folder. It will be displayed under filename field.



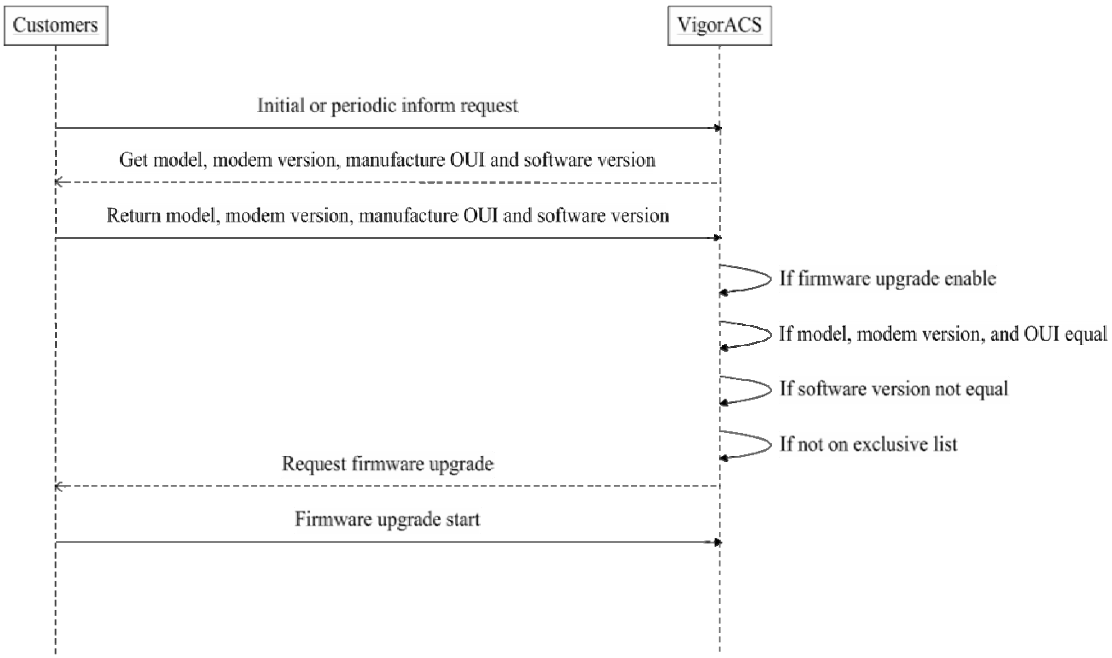
7.2 FirmwareUpgrade

FirmwareUpgrade web pages allow you to upgrade firmware for specified CPE device.

When VigorACS receives information from CPE about firmware upgrade, VigorACS server will check if **model name**, **modem firmware version**, **parameter of manufacturer OUI** and **software version** correspond to the information stored in VigorACS server. If everything can match but software version not, VigorACS will execute firmware upgrade with the file stored in server database automatically.

Principle

Refer to the following graphic:



1. VigorACS will get ModelName, ModemFirmwareVersion, ManufactureOUI and software version from CPE while CPE contacting with VigorACS.
2. VigorACS will check ModelName, ModemFirmwareVersion, ManufactureOUI on CPEs with information of CPEs stored in database to make sure the firmware is compatible for CPEs while administrator enables firmware upgrade.
3. If the ModelName, ModemFirmwareVersion, ManufactureOUI are fit CPEs to be upgraded firmware but software version is different(meaning there are a new firmware release), VigorACS will issue firmware upgraded to CPEs.
4. The CPEs start to firmware upgrade. When it finishes, CPE reboot by itself.
5. Network administrator can add devices to excluded list on VigorACS. Those devices on excluded list will be skipped from the firmware upgrade, even the model, modem version, and manufacture OUI are fit the CPEs.

Once network administrator has set up VigorACS , all devices with same ModelName, ModemFirmwareVersion, ManufactureOUI would upgrade the same firmware without other configuration.

Preparation

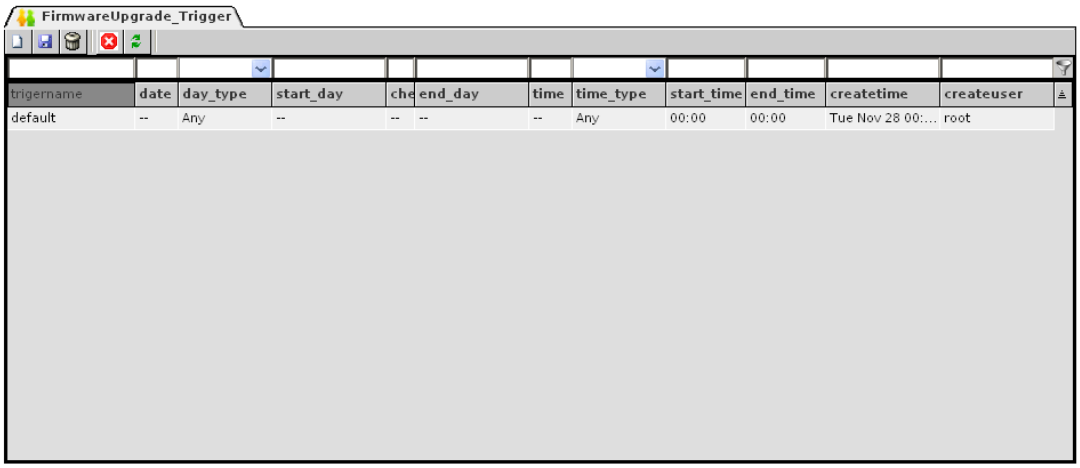
To upgrade the firmware, please:

1. Upload the required firmware from vendor for the CPE that you want to upgrade to VigorACS server. (Refer to *7.1 UploadFile*).
2. Set triggering time for the firmware upgrade (Refer to *7.2.1 FirmwareUpgrade_Trigger*). Such mechanism can help VigorACS to execute firmware upgrade automatically.
3. Choose suitable firmware for the CPE that you want to upgrade (Refer to *7.2.2 FirmwareUpgrade_GlobalSetting*). You can set lots of GlobalSetting profiles to be used in different CPE devices. In this step, you must specify which firmware to be applied in the CPE device requiring to firmware upgrade.
4. Choose which CPE device required to execute firmware upgrade. Refer to 7.*2.3 FirmwareUpgrade_IncludeNetwork*.
5. Set excluded CPE devices for firmware upgrade. Refer to 7.*2.4 FirmwareUpgrade_ExcludeList*.

After finishing step 1 to step 5, VigorACS will upgrade firmware at the planned time with correct firmware for the specified CPE devices automatically. It is not necessary for you to click any button to execute firmware upgrade.

7.2.1 FirmwareUpgrade_Trigger

This page allows administrator to set special time to trigger the provision. You can specify a name for it.



New Record Click this icon to create a new record.

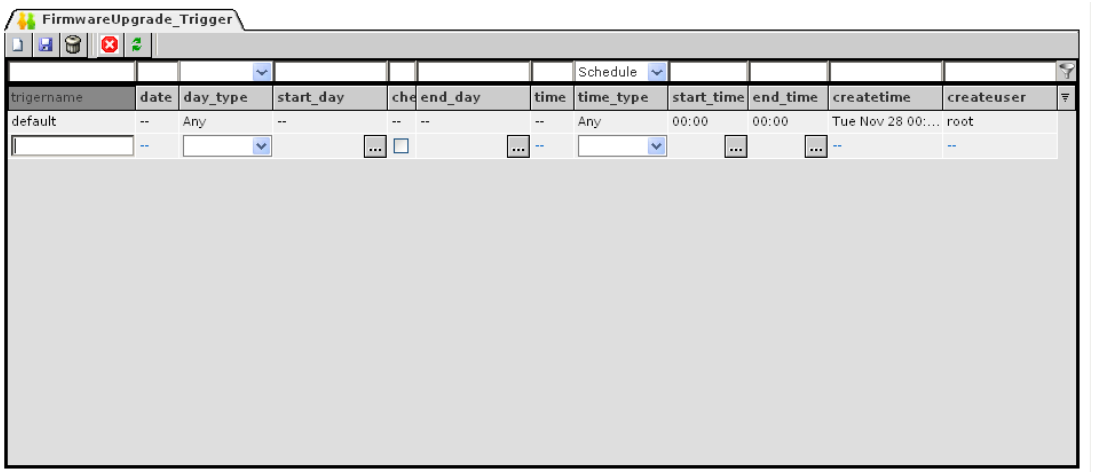
Save Click this icon to save the record.

Delete Click this icon to delete the selected provision file.

Cancel Click this icon to cancel the operation.

Refresh Click this icon to refresh this page.

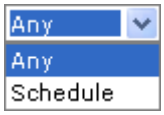
When you click **New Record**, a new line will appear as follows.



TriggerName Type a special and easy to identify name for the time trigger. After you click **Save**, the new name will be displayed on the drop down list to the right side.

date Mean the following items to be configured is date.

day_type Choose **Any** to let VigorACS update the CPE firmware at any day.
Choose **Schedule** to let VigorACS update the CPE firmware according to the date set in this page.



start_day

Use the pop-up calendar window to set the starting day for CPE firmware update. Move your mouse cursor to choose one day and click the mouse. The selected date will be shown on the entry box.

check_end_day

Check this box to let VigorACS check the end of the schedule automatically.

end_day

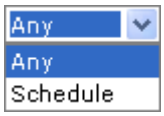
Use the pop-up calendar window to set the ending day for CPE firmware update. Move your mouse cursor to choose one day and click the mouse. The selected date will be shown on the entry box.

Time

Mean the following items to be configured is time.

time_type

Choose **Any** to let VigorACS update the CPE firmware at any time.
Choose **Schedule** to let VigorACS update the CPE firmware according to the time set in this page.



start_time

Use the pop-up calendar window to set the starting day for CPE firmware update. Move your mouse cursor to choose one day and click the mouse. The selected date will be shown on the entry box.

end_time

Use the pop-up calendar window to set the ending day for CPE firmware update. Move your mouse cursor to choose one day and click the mouse. The selected date will be shown on the entry box.

createtime

Display the time of such time trigger created.

createuser

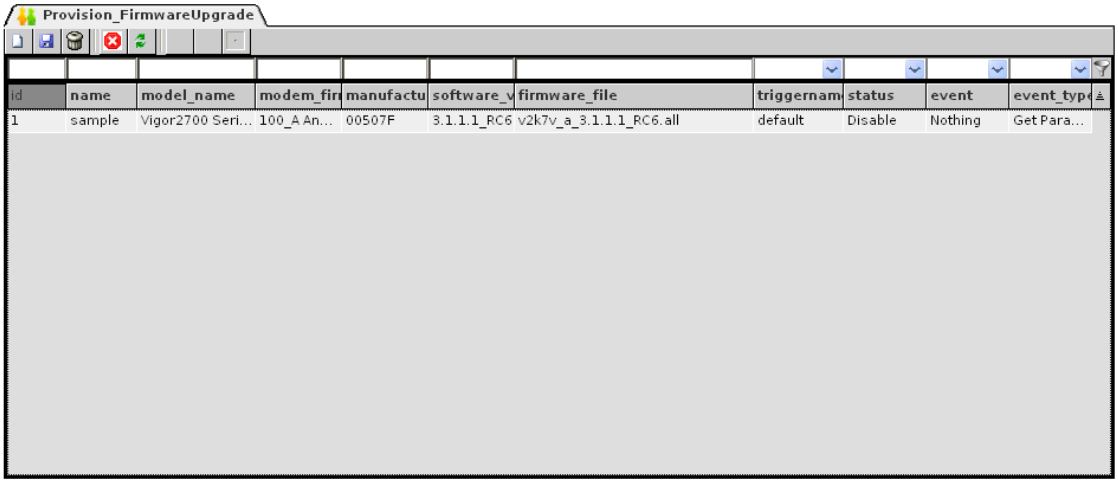
Display the name of the user/administrator who made such time triggering.

7.2.2 FirmwareUpgrade_GlobalSetting

This web page allows you to **specify** required information for matching with the CPE device. The profiles created here will be regarded as a basis that VigorACS server uses to compare information coming from CPE router with the information stored in VigorACS server's database.

When VigorACS server receives information from CPE about firmware upgrade, it will check if the received model name, modem firmware version, parameters of manufacturer OUI and software version correspond to the information recorded in VigorACS server. If everything

can match but software version not, VigorACS will judge that the remote CPE requiring firmware upgrade. Next, VigorACS server will execute firmware upgrade with the file listed in FirmwareFile field automatically at specified time.



New Record Click this icon to create a new record.

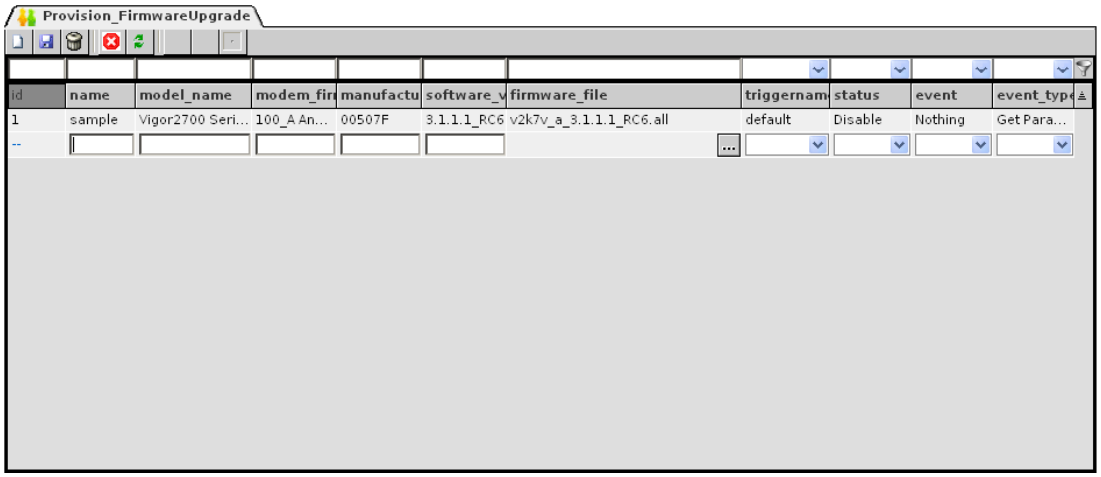
Save Click this icon to save the record.

Delete Click this icon to delete the selected provision file.

Cancel Click this icon to cancel the operation.

Refresh Click this icon to refresh this page.

When you click **New Record** , a new line will appear as follows.



id Display the number of the global setting.

name Type a name for such setting file.

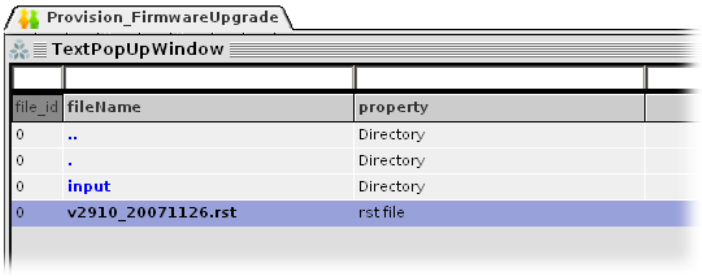
model_name Type the model of the CPE device that needs to upgrade firmware.

modem_firmware_version Type the firmware version of the CPE device, e.g., Annex A, Annex B, and etc.

manufacturer_oui Type the characters of OUI. OUI means “organizationally unique identifier” of the device manufacturer.

software_version Type the version of the firmware.

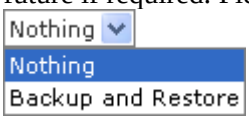
firmware_file Click  to choose one file for this profile.



triggername Choose one of the trigger profile from the drop down list.

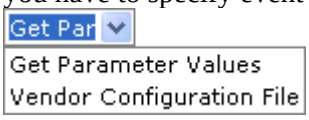
status Click **disable** to give up the upgrade procedure or click **enable** to activate the upgrade procedure after clicking **Save**.

event While upgrading firmware for CPE device, the required parameters (e.g, WAN, LAN, VPN…) on CPE device can be backup in VigorACS server and can be restored in the future if required. Please choose the one you need.



Nothing – All the parameters configured in CPE device will not be saved/restored and will be written after VigorACS server executes firmware upgrade for it.
Backup and Restore – All the parameters configured in CPE device will be saved and restored in a place before VigorACS server executes firmware upgrade for it.

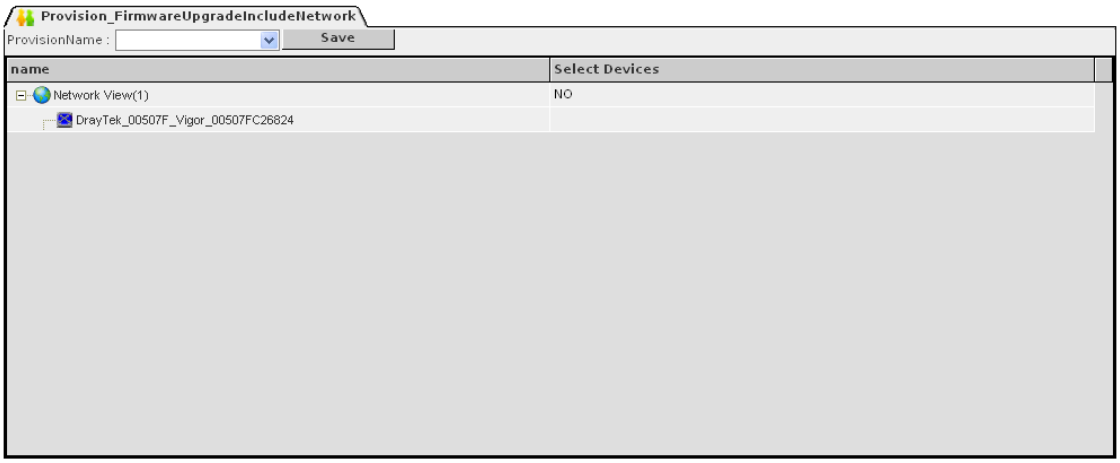
event-type If you choose **Backup and Restore** as the event selection, you have to specify event type additionally.



Get Parameter Values – Generally, VigorACS server will scan all the parameters configured in CPE device while connecting CPE device. You can choose this item to use current configured parameters obtained from CPE device as the basis for parameters backup and restore.
Vendor Configuration File – Choose this time to use the parameters recorded in cfg file of CPE device as the basis for back and restore.

7.2.3 FirmwareUpgrade_IncludeNetwork

This page displays the quantities of profiles created in FirmwareUpgrade_GlobalSetting. You can specify which CPE device required to execute firmware upgrade.

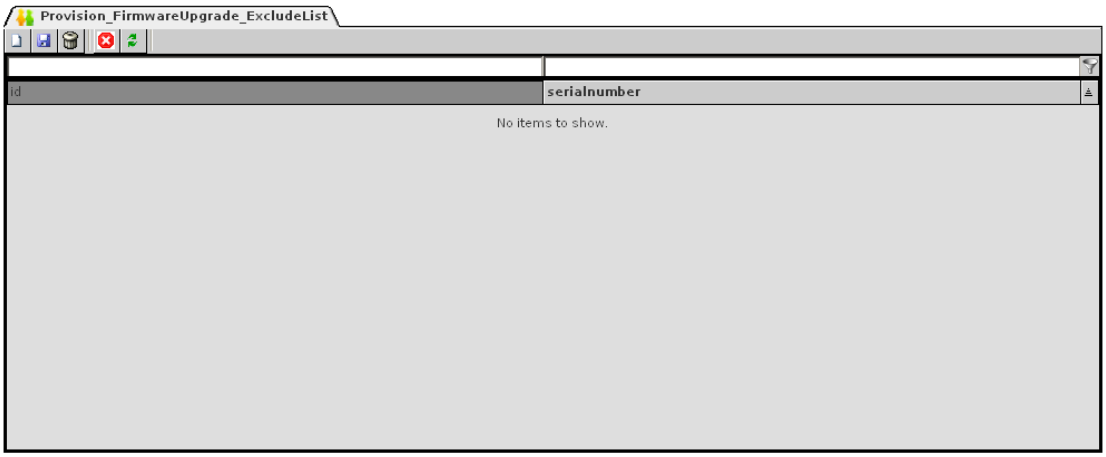


Move your mouse to the tree view of Network View. Select the ones (representing CPE devices) that needed to have firmware upgrade. Next, choose **YES** in the field of Select Devices.

Later, VigorACS server will judge the necessity of firmware upgrade for the selected CPE devices specified here to upgrade firmware by comparing the parameters settings stored in VigorACS server with the information received from the selected CPE device.

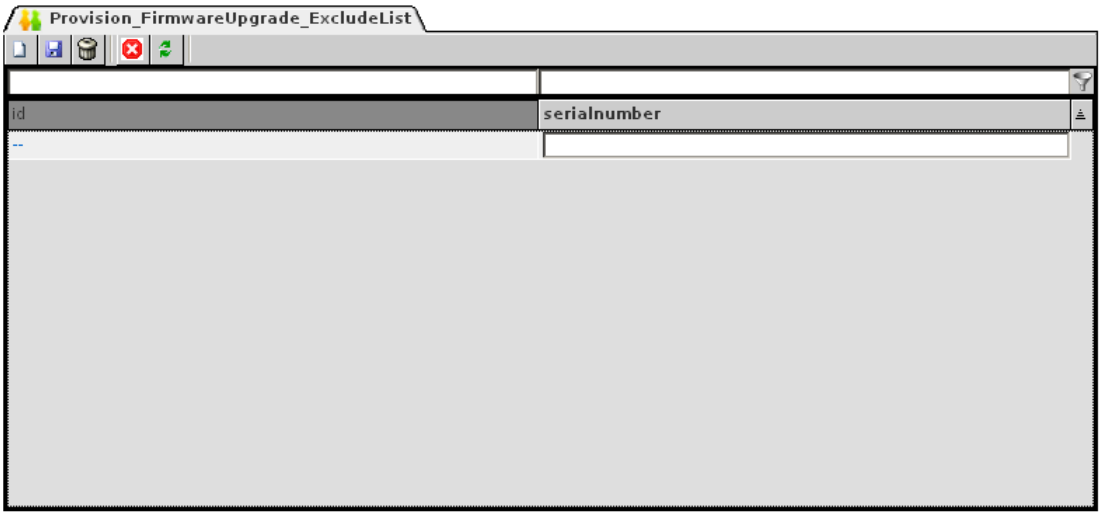
7.2.4 FirmwareUpgrade_ExcludeList

Not all the CPEs controlled by VigorACS need to upgrade firmware at any time. VigorACS provides excluding mechanism for the CPEs that do not need to upgrade firmware. This web page allows you to set excluded CPEs for firmware upgrade. Simply type the serial number of the CPE on SerialNumber field and click **Save**. The one will be shown on the list. Next time, if you want to upgrade firmware for the specified CPE, simple open this page and remove the item.



New Record	Click this icon to create a new record.
Save	Click this icon to save the record.
Delete	Click this icon to delete the selected provision file.
Cancel	Click this icon to cancel the operation.
Refresh	Click this icon to refresh this page.

When you click **New Record** , a new line will appear as follows.



SerialNumber	Type the serial number of the CPE that does not need to upgrade firmware.

7.3 Provision Global Setting

Provision Global Setting allows you to IMPORT existed profile. The CPE will send message to VigorACS server for an interval, for restarting and for the fist time initiating. VigorACS Server will check the database to find out the request of configuration for that CPE. If yes, VigorACS server will configure the parameters of that CPE directly according to the profile set previously.

For several CPEs can be assigned in the profile and the serial numbers of those CPEs will be recorded in the profile (with file format of XML), when you choose a profile and click **Upload**, all the configuration recorded in that file will be applied to the CPEs that listed on the profile.

You can modify XML file manually. Please use any text editor to open the profile.

The content of XML file will be similar to the following example:

```
<?xml version="1.0" encoding="UTF-8"?>
<tr069 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="tr069">
<items>
<item id="1" name="InternetGatewayDevice.Services.VoiceService.1.VoiceProfile.1.Line.1.SIP.AuthPassword"/>
<item id="2" name="InternetGatewayDevice.Services.VoiceService.1.VoiceProfile.1.Line.1.SIP.AuthUserName"/>
</items>
<devices>
<device serialnumber="00507F3331FC" name="DrayTek_Test_00507FD9C2C0" isreboot="false" network="networkname">
<parameter id="1" value="12345678"/>
<parameter id="2" value="test5678"/>
</device>
</devices>
</tr069>
```

<items>: define which parameters needed to be configured.

id: index number

name: name of the parameter

<devices>: specify how many devices will be applied and configured.

serialnumber: serial number of the CPE

name: name of the CPE that can be changed.

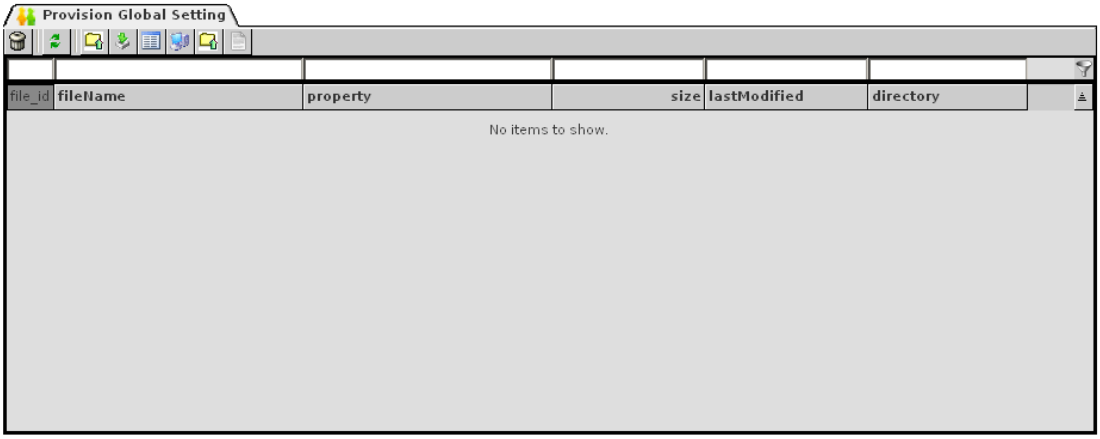
isreboot: decide if CPE needs to reboot or not after setting parameters

network: explain the CPE belonging to which network

<parameter>: the value that you want to set/change/modify

id: indicate the index of the number used in item

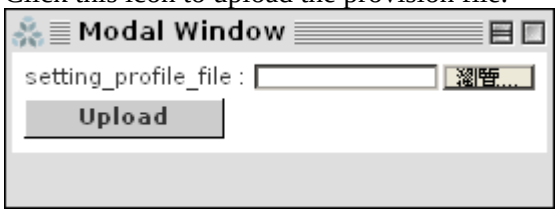
value: characters for that parameter



Delete Click this icon to delete the selected provision file.

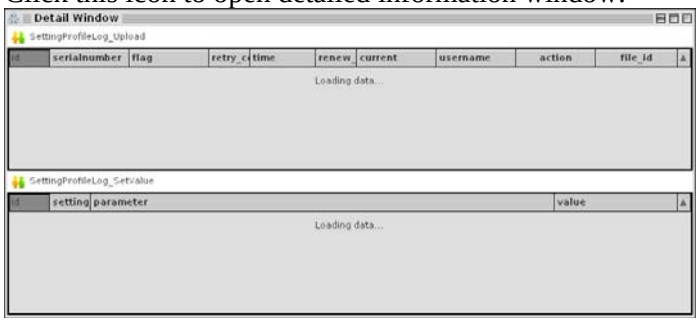
Refresh Click this icon to refresh current status.

Upload Click this icon to upload the provision file.

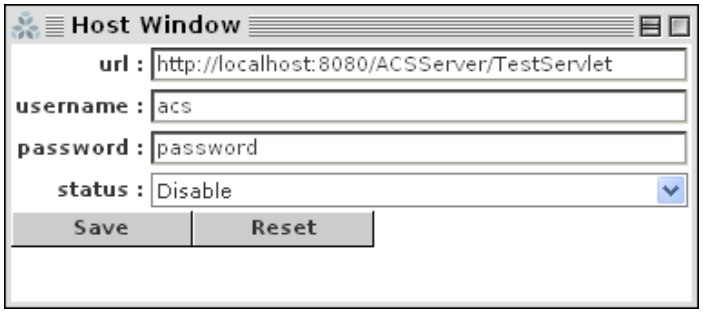


Download Click this icon to download current used provision file from VigorACS server to your host.

Detail Click this icon to open detailed information window.

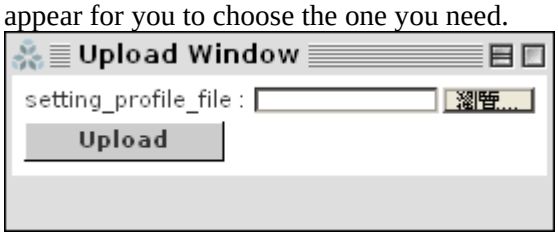


Host For the request of customers, you can connect VigorACS with remote server. Please specify the remote server by typing URL on this page. After clicking **Save**, the remote server will receive notification from VigorACS. When VigorACS executes setting_profile to the connected CPE according to the content of the profile, it also will inform remote host. Click this icon to open host window.



URL - Type the URL of the remote host.
Username - Type the name of the remote host.
Password - Type the password of the remote host.
Status - The default setting is **Enable**. VigorACS can notify remote host easily. Choose **Disable** if there is no remote host existed or you don't want to inform remote host.
Reset – Clear current settings.

Upload Text File — Click this icon to upload a text file. A pop up window will appear for you to choose the one you need.



Show Text File — There are two types – Text and XML for the profiles of CPE parameters. This icon allows you to switch viewing between text file and XML file

File Name — List the name of the provision profile.

Property — Describe the meaning of the file format.

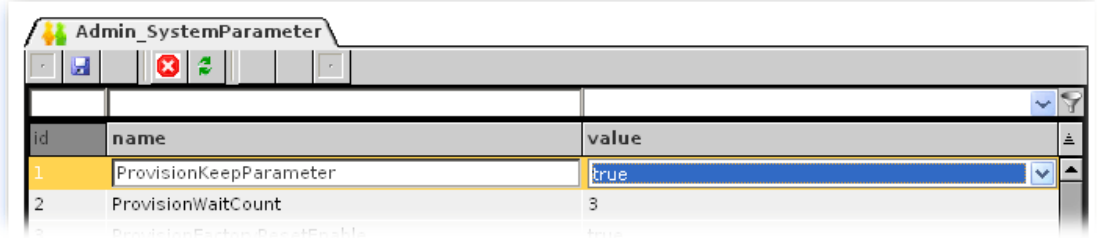
Size — List the size of the file.

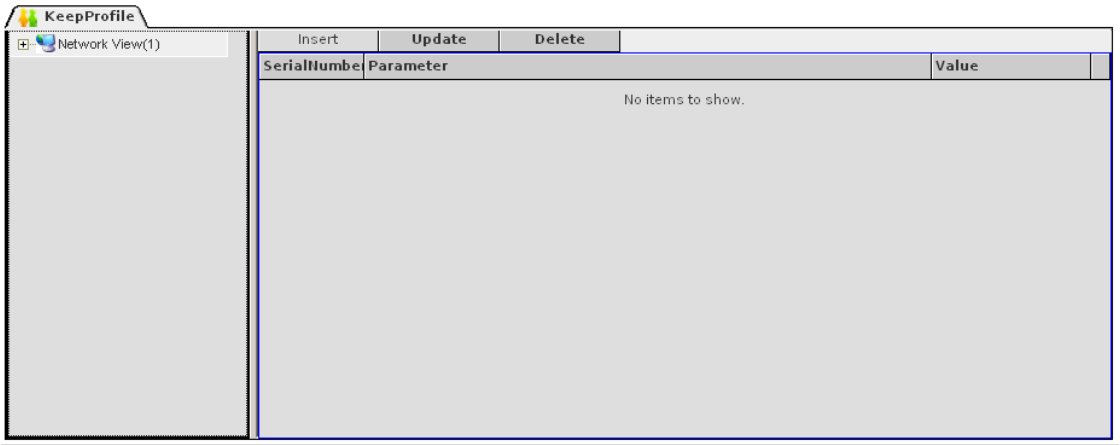
Last Modified — List the modification date for the last time.

7.4 KeepProfile

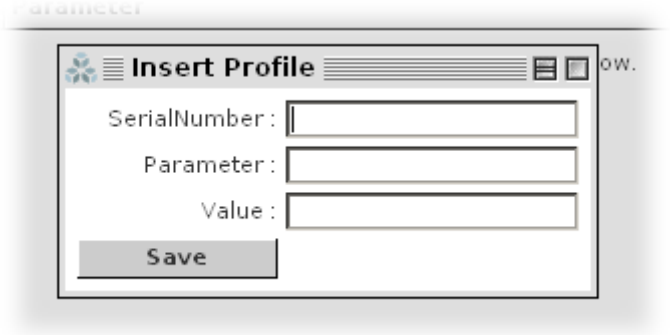
Some ISPs do not wish CPE client changing the parameters of CPE device. If the parameters of CPE device were modified by the users, VigorACS (the administrator) server could use the parameters listed in this web page to restore the original parameters.

Note: To enable KeepProfile setting, please go to Admin>>SystemParameter and set value to "**true**" for the item of ProvisionKeepParameter first.





Insert Click **Insert** tab to open the following dialog.



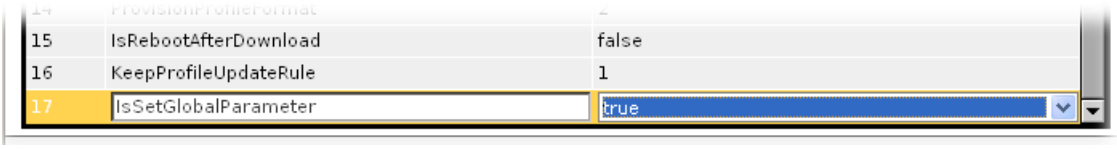
SerialNumber – Type the MAC address of the CPE device.
Parameter – Type the name of the parameters. If you forget the correct name, please go to Home page to check it, next return here and type it.
Value – Based on the parameters set above, type the required value. If you do not know how to define correct value, please go to Home page to check.

Update Update the parameters for the selected item (CPE device).

Delete Click this tab to remove current chosen item.

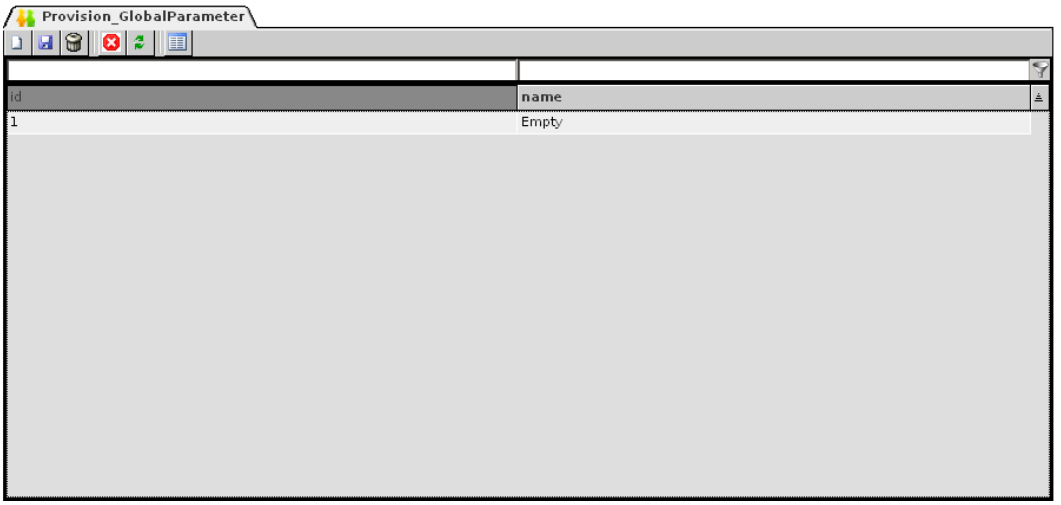
7.5 GlobalParameter

To enable GlobalParameter setting, please go to **Admin>>SystemParameter** and set value to "**true**" for the item of IsSetGlobalParameter first.



7.5.1 GlobalParameter

This web page allows users to set profiles which will be used to configure parameters of lots of selected CPE devices at one time.



New Record Click this icon to create a new record.

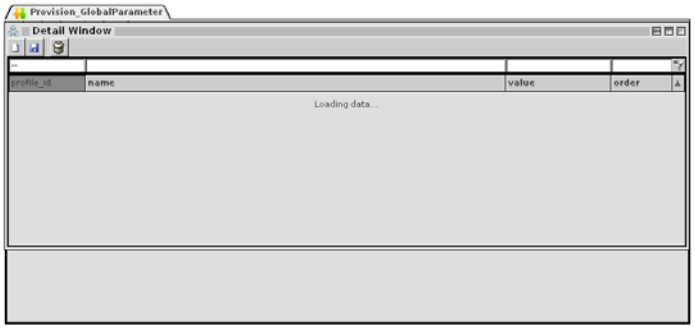
Save Click this icon to save the record.

Delete Click this icon to delete the selected provision file.

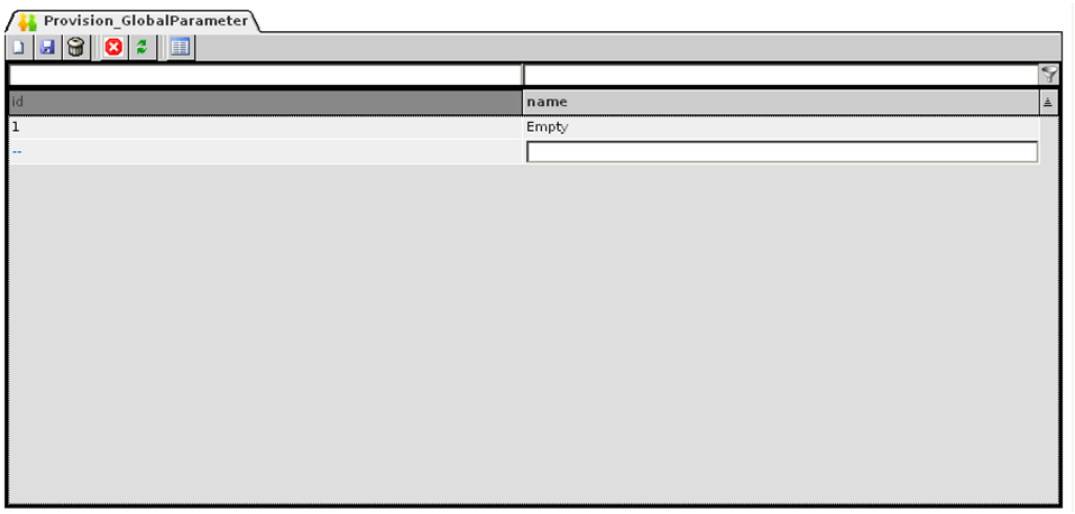
Cancel Click this icon to cancel the operation.

Refresh Click this icon to refresh this page.

Detail Click this icon to open detailed information window. You can type the parameters values to be applied in CPE device.



When you click **New Record** , a new line will appear as follows.



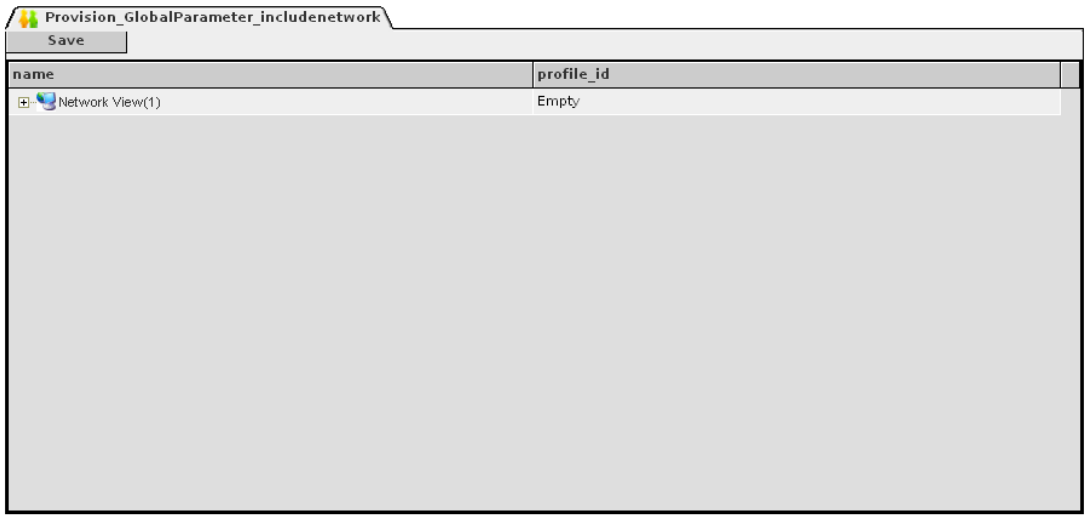
id Display the number of the profile.

name Type the name for the global parameter profile, which will be applied in GlobalParameter_includenetwork.

7.5.2 GlobalParameter_includenetwork

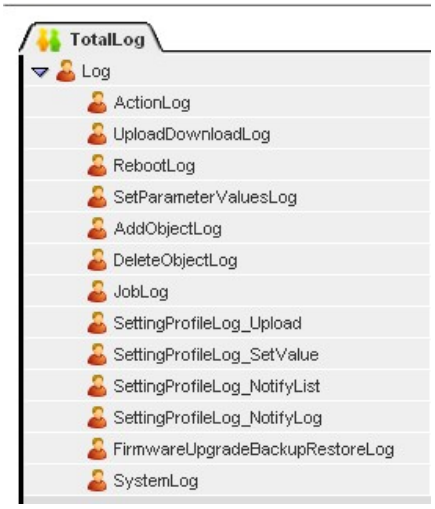
If you have created several profiles in GlobalParameter, you can specify which CPE device to be applied with the new created profile. If you do not specify any profile for the connected CPE device, the default profile configuration is “Empty”(displayed in the field of profile_id). No parameters will be applied to the connected CPE device.

Specify certain profile (globalparameter) to be applied in selected network, selected CPE device by clicking on the tree view structure.



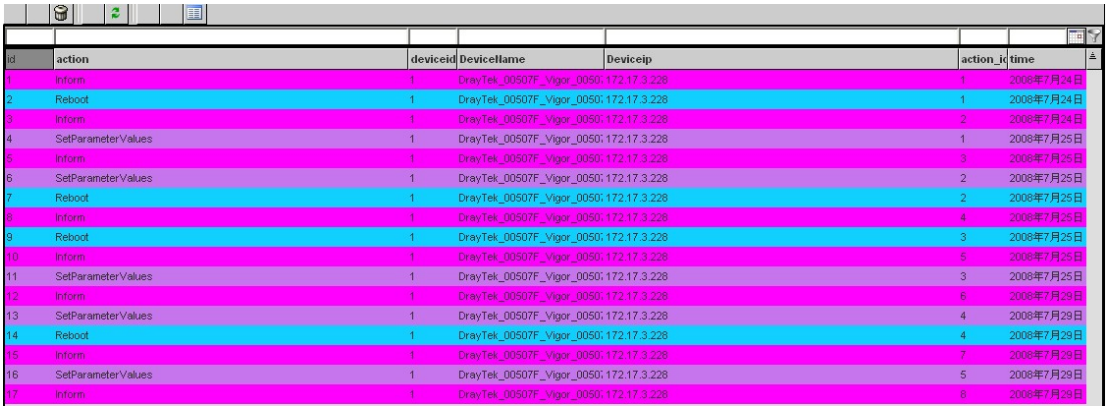
Chapter 8 Log View

Log menu provides administrator records for manipulation, download, reboot, parameter values, object adding and deleting executed by VigorACS.



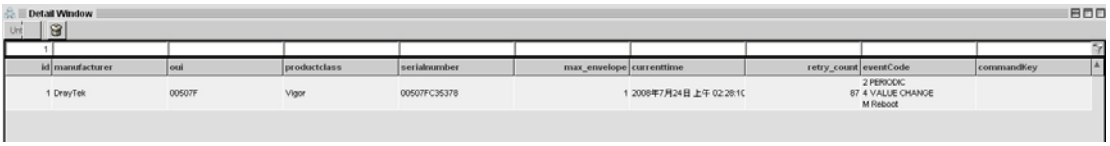
8.1 Action Log

This page displays all the activities executed by VigorACS.



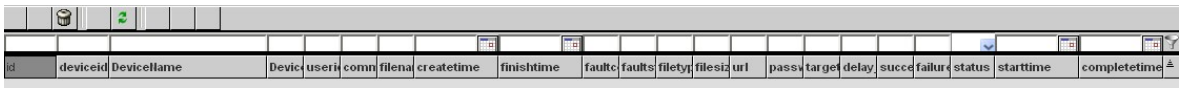
id	action	deviceid	Devicellame	Deviceip	action_ic	time
1	Inform	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	1	2008年7月24日
2	Reboot	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	1	2008年7月24日
3	Inform	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	2	2008年7月24日
4	SetParameterValues	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	1	2008年7月25日
5	Inform	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	3	2008年7月25日
6	SetParameterValues	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	2	2008年7月25日
7	Reboot	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	2	2008年7月25日
8	Inform	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	4	2008年7月25日
9	Reboot	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	3	2008年7月25日
10	Inform	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	5	2008年7月25日
11	SetParameterValues	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	3	2008年7月25日
12	Inform	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	6	2008年7月29日
13	SetParameterValues	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	4	2008年7月29日
14	Reboot	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	4	2008年7月29日
15	Inform	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	7	2008年7月29日
16	SetParameterValues	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	5	2008年7月29日
17	Inform	1	DrayTek_00507F_Vigor_0050:	172.17.3.228	8	2008年7月29日

All the actions will be listed one by one. To view the detail, simply double click on the action. A popup window will show device name, device IP, user ID, parameter key, create time, finish time, status, fault code, fault string, name, value and so on.



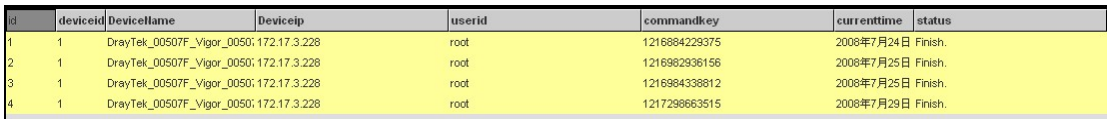
8.2 UploadDownload Log

This page displays upload/download actions that VigorACS did for certain CPEs.



8.3 Reboot Log

This page displays all the reboot actions initiated by VigorACS.



id	deviceid	DeviceName	Deviceip	userid	commandkey	currenttime	status
1	1	DrayTek_00507F_Vigor_0050	172.17.3.228	root	1216884229375	2008年7月24日	Finish.
2	1	DrayTek_00507F_Vigor_0050	172.17.3.228	root	1216982936156	2008年7月25日	Finish.
3	1	DrayTek_00507F_Vigor_0050	172.17.3.228	root	1216984338812	2008年7月25日	Finish.
4	1	DrayTek_00507F_Vigor_0050	172.17.3.228	root	1217298663515	2008年7月29日	Finish.

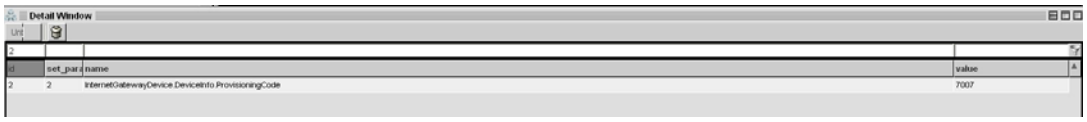
Commandkey — A string sent by VigorACS to the selected CPE for rebooting. After rebooting, the CPE will return this string to VigorACS to inform the administrator/user that the rebooting has been finished.

8.4 Set Parameter Values Log

This page displays all values of parameters of CPE devices controlled by VigorACS.

id	deviceid	DeviceName	Deviceip	userid	parameterkey	createtime	finishtime	status	faultcode	faultstring
1	1	DrayTek_00507F_Vigor_0050	172.17.3.228	root	--	2008年7月25日	2008年7月25日	Parameter changes ha	0	--
2	1	DrayTek_00507F_Vigor_0050	172.17.3.228	root	--	2008年7月25日	2008年7月25日	Parameter changes ha	0	--
3	1	DrayTek_00507F_Vigor_0050	172.17.3.228	root	--	2008年7月25日	2008年7月25日	Parameter changes fail	0	Result Error: FaultCode: 9007 FaultString: Invalid par
4	1	DrayTek_00507F_Vigor_0050	172.17.3.228	root	--	2008年7月29日	2008年7月29日	Parameter changes fail	0	SOAP Message: <soap:Envelope xmlns: Result Error: FaultCode: 9007 FaultString: Invalid par
5	1	DrayTek_00507F_Vigor_0050	172.17.3.228	root	--	2008年7月29日	2008年7月29日	Parameter changes fail	0	SOAP Message: <soap:Envelope xmlns: Result Error: FaultCode: 9007 FaultString: Invalid par SOAP Message: <soap:Envelope xmlns:

Select and click any one of the items. A pop-up window with detailed information for that device will be displayed.

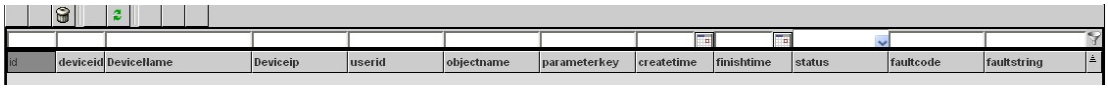


8.5 Add Object Log

This page displays all the objects added by VigorACS.

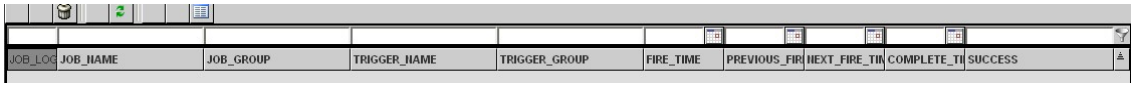
8.6 Delete Object Log

This page displays all the objects deleted by VigorACS.



8.7 Job Log

After applying provision to the selected CPE, VigorACS will store log of execution in VigorACS server. You can check JobLog.



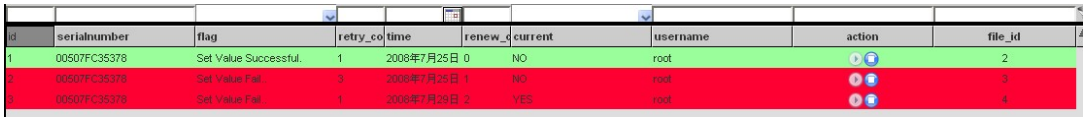
For detail of the job, simply select and click the item number. A pop-up window with detailed information for that job will be displayed.

8.8 Setting Profile Log Upload

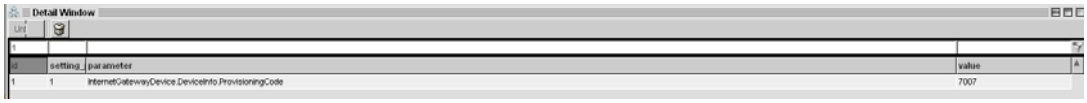
After uploading the profile to the selected CPE (you have done configuration on **Provision>>Provision Global Setting** page), VigorACS will query database to find the proper configuration to the specified CPE while the CPE tries to connect to VigorACS server. If the specified CPE receives the configuration, it will return confirmation information to VigorACS server.

This page will list **current** status of the returning message of the CPE to VigorACS server.

You can open SettingProfileLog_Upload to check such information.

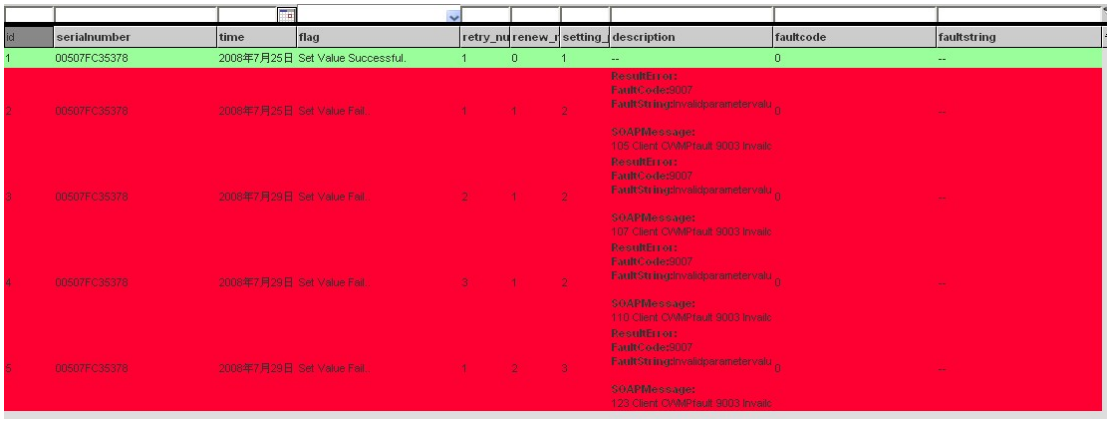


For the content of the profile that you uploaded, simply select and click the item number. A pop-up window with detailed information will be displayed.

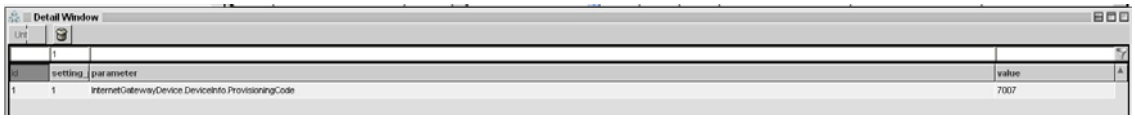


8.9 Setting ProfileLog SetValue

After uploading the profile to the selected CPE (you have done configuration on **Provision>>Provision Global Setting** page), VigorACS will list **all of attempts (one by one)** of applying the profile to the specified CPE when the CPE connects to VigorACS server. In general, VigorACS server will try three times to applying the profile.

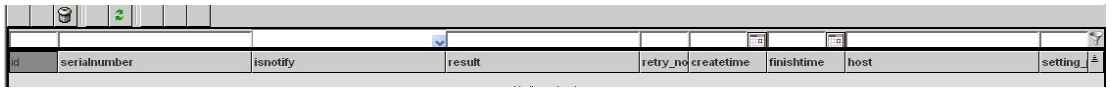


For the content of the profile, simply select and click the item number. A pop-up window with detailed information for that file will be displayed.



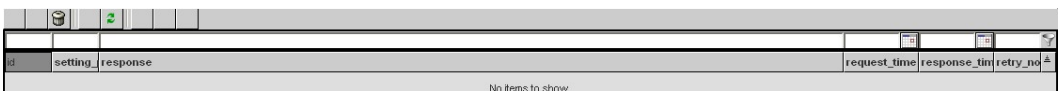
8.10 Setting ProfileLog NotifyList

VigorACS will notify other servers that set in **Provision->Provision Global Setting->Host** what it had done to the connected CPE. The execution log will wait for sent to the remote host by VigorACS. This page will display current status (notified or not notified) of notification for each job.



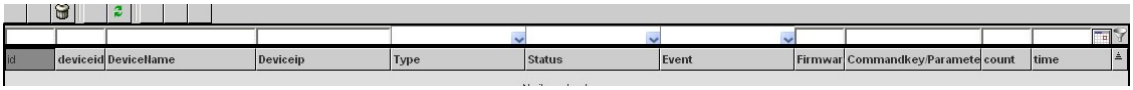
8.11 Setting ProfileLog NotifyLog

VigorACS will notify other servers that set in **Provision->Provision Global Setting->Host** what it had done to the connected CPE. The execution log will wait for sent to the remote host by VigorACS. VigorACS server will try to send the notification to specified hosts continuously till it succeeds. No matter the notification is sent out or not, it will be recorded and listed in this page.



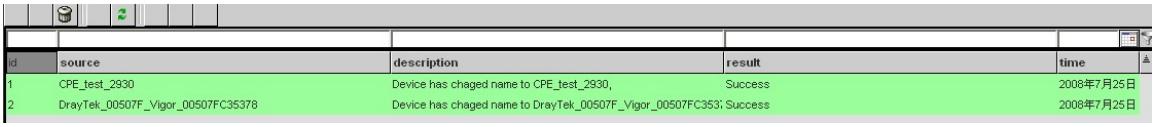
8.12 FirmwareUpgradeBackeupRestoreLog

The page shows firmware update/backup/restore information.



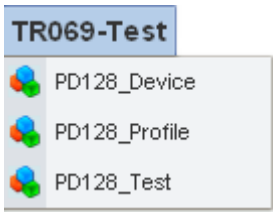
8.13 SystemLog

The page shows CPE events.



Chapter 9 TR069-Test

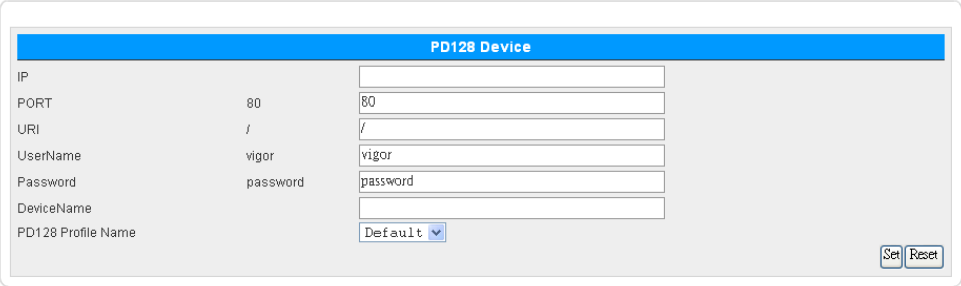
PD128 is a test standard for verifying if the selected CPE fits the regulation of TR069. If the selected device cannot pass through the PD128 test, it cannot communication with the ACS server



9.1 PD128_Device

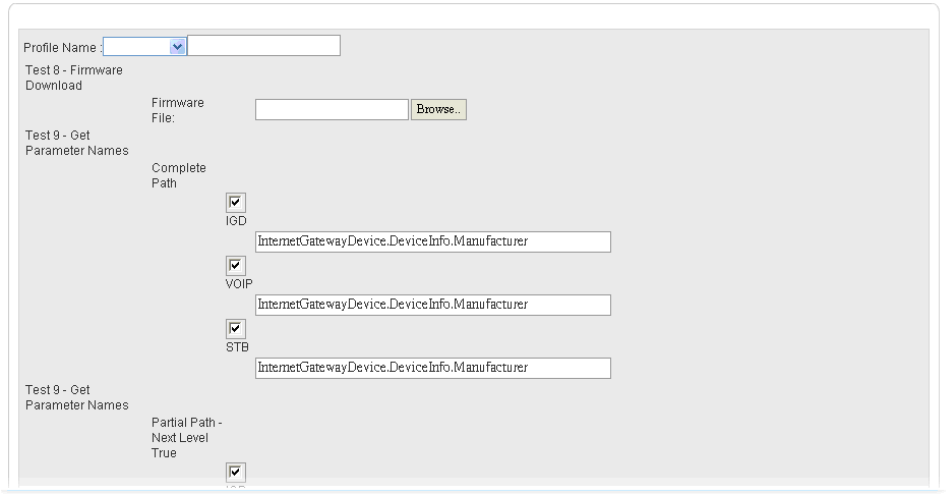
If you had configured the TR-069 device and save the basic information on the database of VigorACS, you can invoke them by clicking **Admin**. Choose the device you want to test under Network View. On the bottom of the left side, a link of PD128 test will appear. Click that link to open PD128 Device. The relational information will be displayed on the page automatically. You can click the **Set** button to confirm that the selected CPE would be tested.

Specify the IP and DeviceName for the selected CPE to do PD128 test. When you finish the configuration, click **Set** to save it.



9.2 PD128_Profile

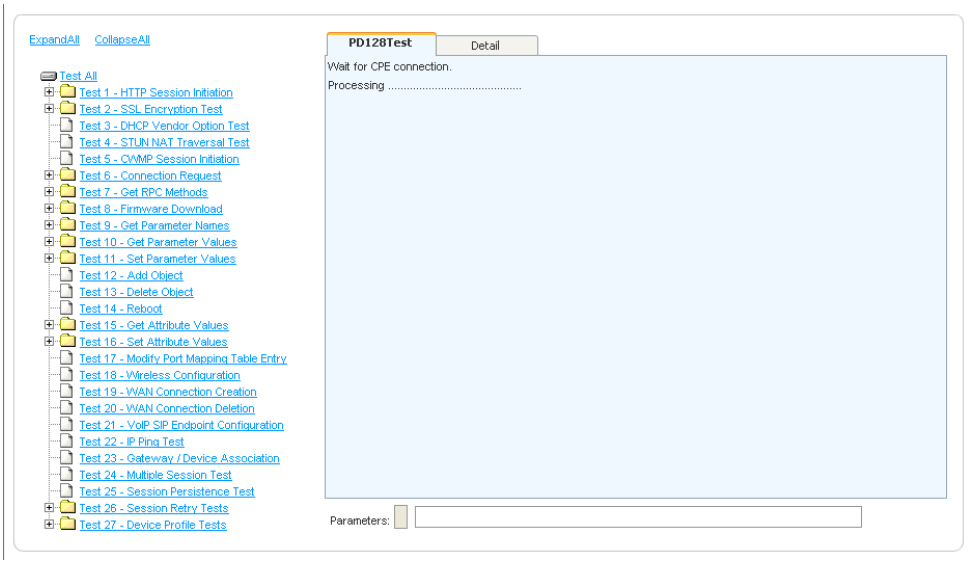
Though PD128 Test contains 27 items, yet you can set a profile to specify which test you will do to the specified CPE device. Click **TR069-Test>>PD128_Profile** to open the following page. Here we just capture short part of the page for your reference. To see the whole page, please use the scroll bar to scroll the page.



If selected device (CPE) does not support the parameters that provided by VigorACS, please modify the configuration on this page directly to fit the parameters owned by selected CPE.

9.3 PD128_Test

There are 27 types of PD128 Test in the page. Each CPE searched by VigorACS must be checked with these tests one by one.



The filed under PD128 Test will show current test status for your reference. If you do not know the test well, simply click Detail for getting online help.

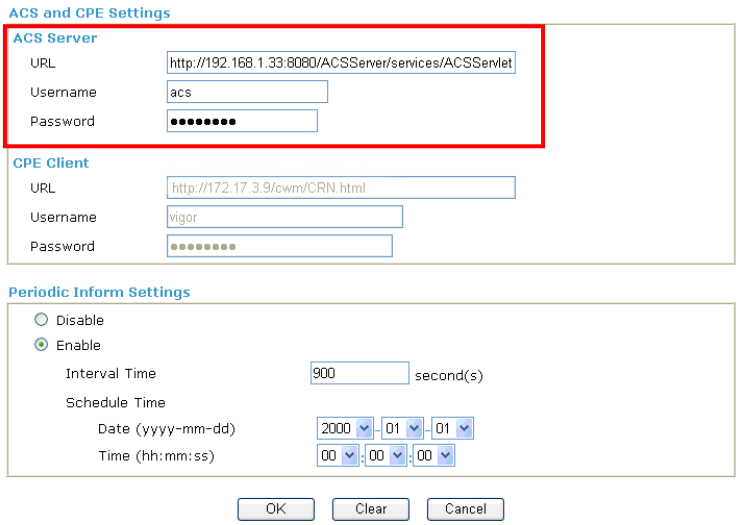
Appendix A Configuration on CPE Device

A.1 Set ACS URL on CPE

To manage CPEs through VigorACS, you have to set ACS URL on CPE first and set username and password for VigorACS.

1. Connect one CPE (e.g., Vigor2700 series).
2. Open a web browser (for example, **IE**, **Mozilla Firefox** or **Netscape**) on your computer and type **http://192.168.1.1.**
3. Please type username and password on the window. If you don't know the correct username and password, please consult your dealer to get them. In this section, we take the figures displayed on Windows as examples.

4. Go to **System Maintenance -> TR-069**.



- If the connected CPE needs to be authenticated, please set URL as the following and type username and password for ACS server:
  http://{IP address of VigorACS}:8080/ACSServer/services/ACSServlet
- If the connected CPE does not need to be authenticated please set URL as the following:

http://{ IP address of VigorACS}:8080/ACSServer/services/UnAuthACSServlet

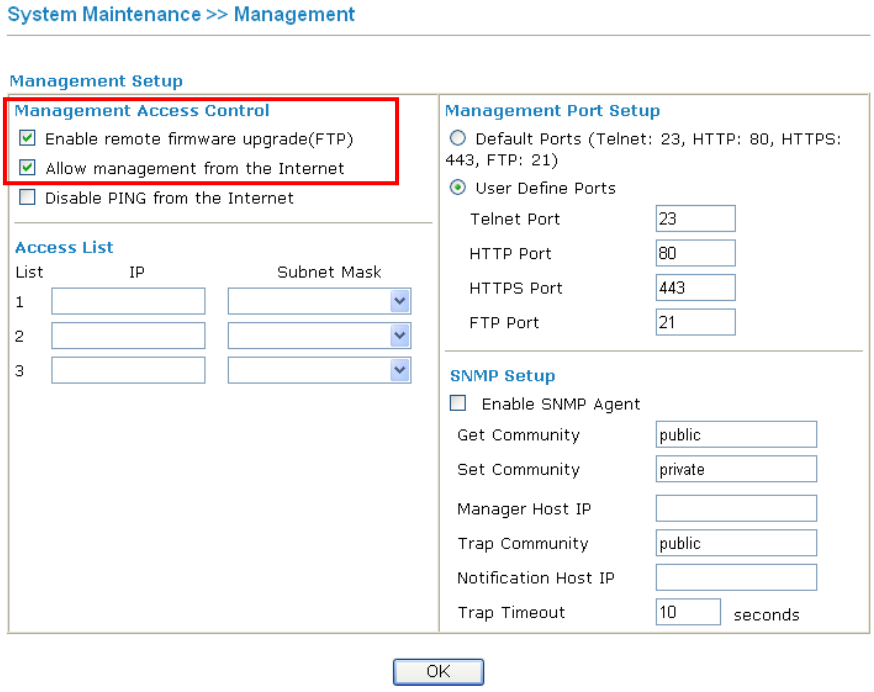
- If the connected CPE needs to be authenticated and the data transmission between CPE and VigorACS needs to be encrypted (SSL), please set URL as the following:
  https://{IP address of VigorACS}:8443/ACSServer/services/ACSServlet
- If the connected CPE needs not to be authenticated but the data transmission between CPE and VigorACS needs to be encrypted (SSL), please set URL as the following:
  https://{IP address of VigorACS}:8443/ACSServer/services/UnAuthACSServlet

5. Fill Username and Password for VigorACS Server for authentication. Please type as the following:
   Username*: acs*
   Password*: password*
6. For the username and password of CPE client, it is not necessary for you to type them. Refer to section 3.2 for detailed information.

A.2 Invoke Remote Management for CPE

You have to make sure that the CPE device you want to connect supports VigorACS features. Please consult your dealer if you have no idea in it.

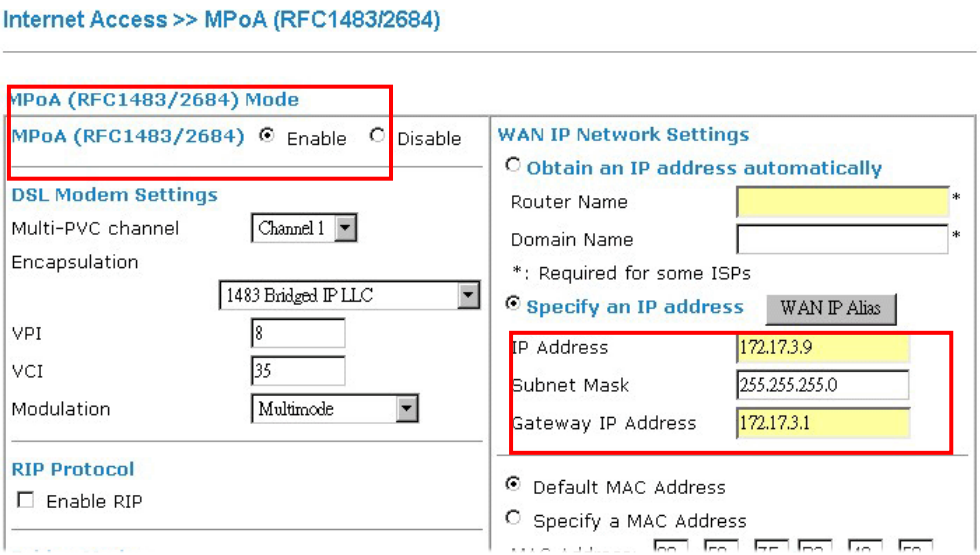
1. Suppose WAN IP of CPE device has been setup successfully. And you can access into Internet without difficulty.
2. Login the device by web.
3. Go to **System Maintenance->Management Setup.**
4. Check **Enable remote firmware upgrade (FTP)** and **Allow management from the Internet** to set management access control.



A.3 Enable WAN Connection on CPE

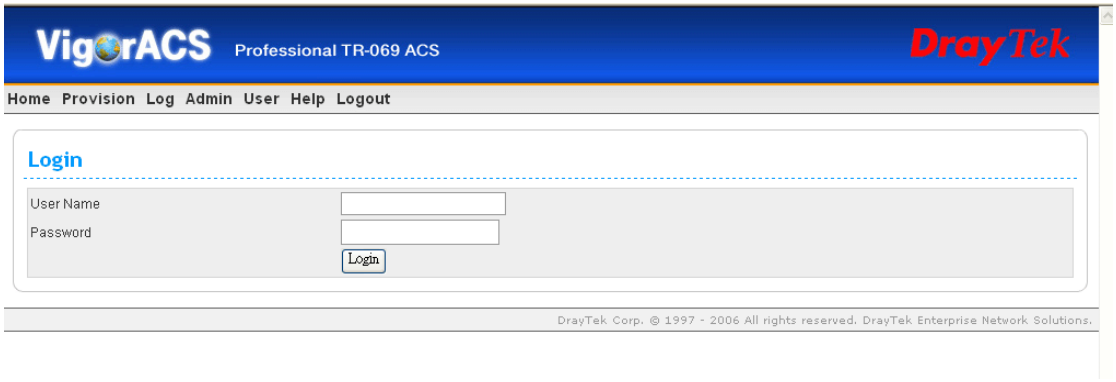
You have to make sure the CPE device you want to connect has configured properly, and are able to access Internet.

1. Login the device by web.
2. Go to **Internet Access->MPoA**.
3. Click **Enable** for MPoA.
4. Click **Specify an IP address**. Type correct WAN IP address, subnet mask and gateway IP address for your CPE. Then click **OK**.

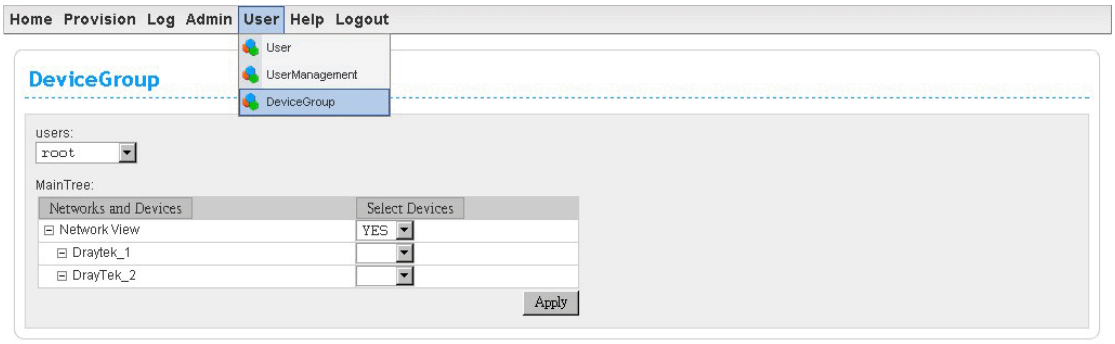


A.4 Set Authority for CPE on ACS

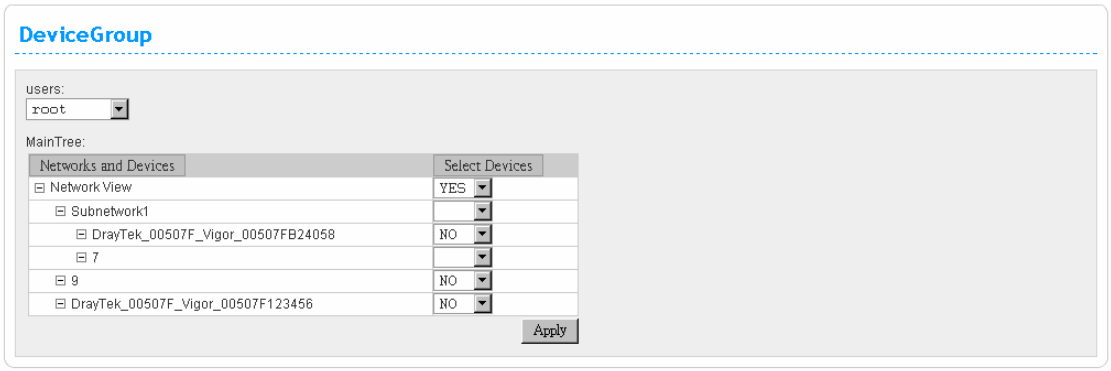
1. Please login VigorACS by entering username and password. The default values are:
   User Name: root
   Password: admin123



2. Go to **User->DeviceGroup**.

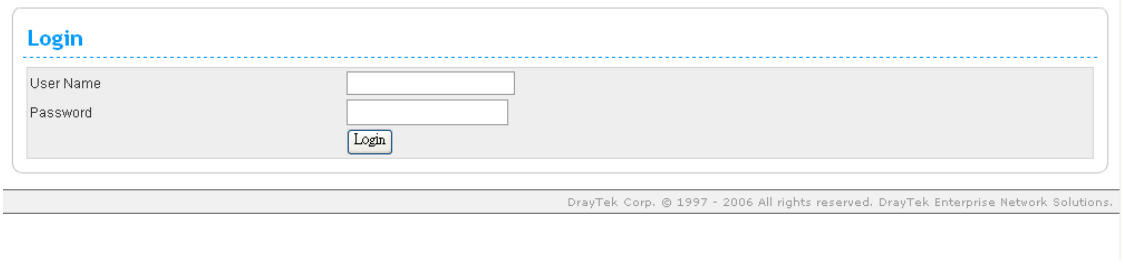


3. Use the drop down list to choose a user. Then you can select devices or networks under **Networks and Devices** field to be managed by the selected user.

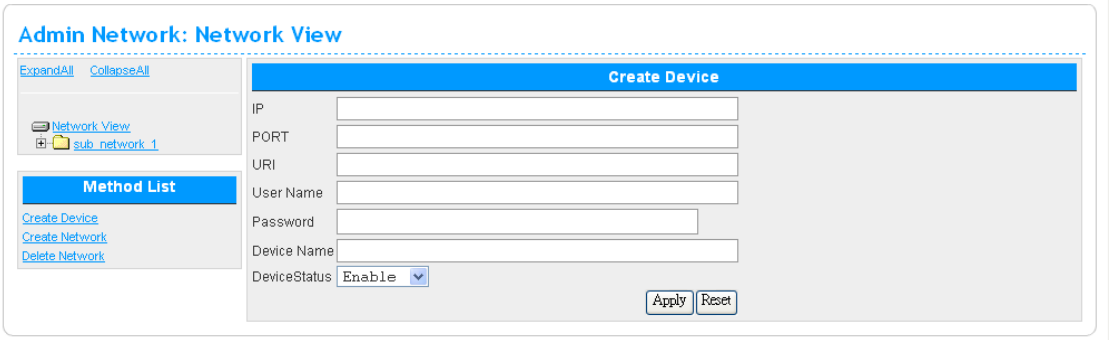


A.5 Set Username and Password for CPE on ACS

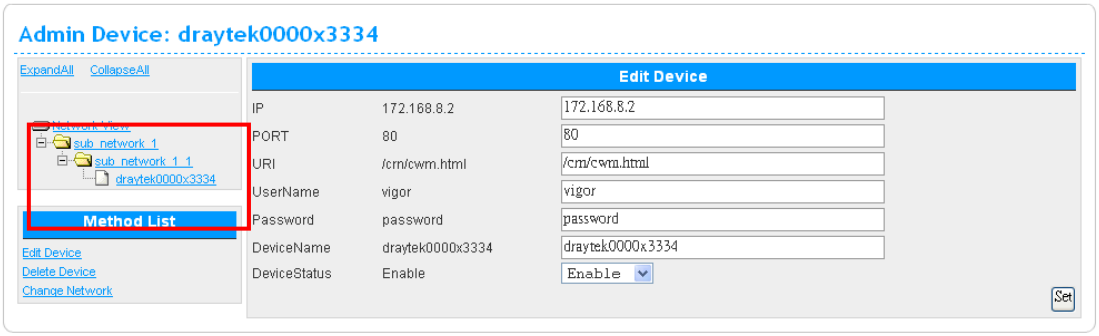
1. Please login VigorACS by entering username and password. The default values are:
   User Name: root
   Password: admin123



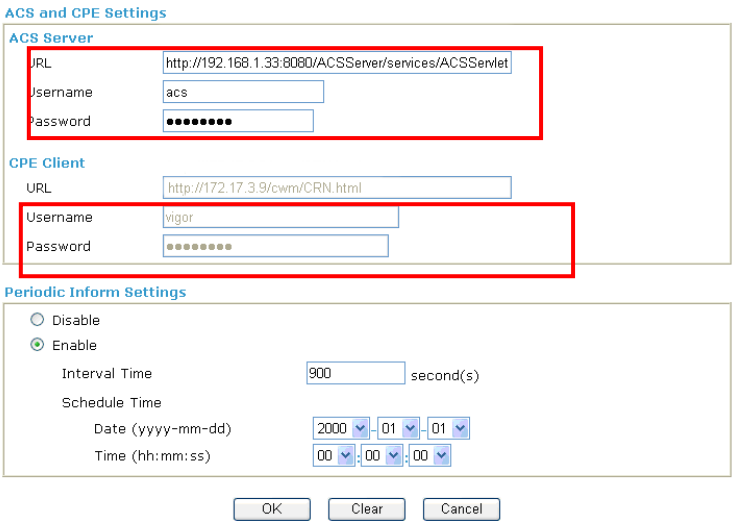
2. Click **Admin** tab.



3. Select device listed on left side that you want to manage. The relational device information will be shown on the screen of the right side. Please change the user name and password, then choose **Enable** from the drop down list of **DeviceStatus**.

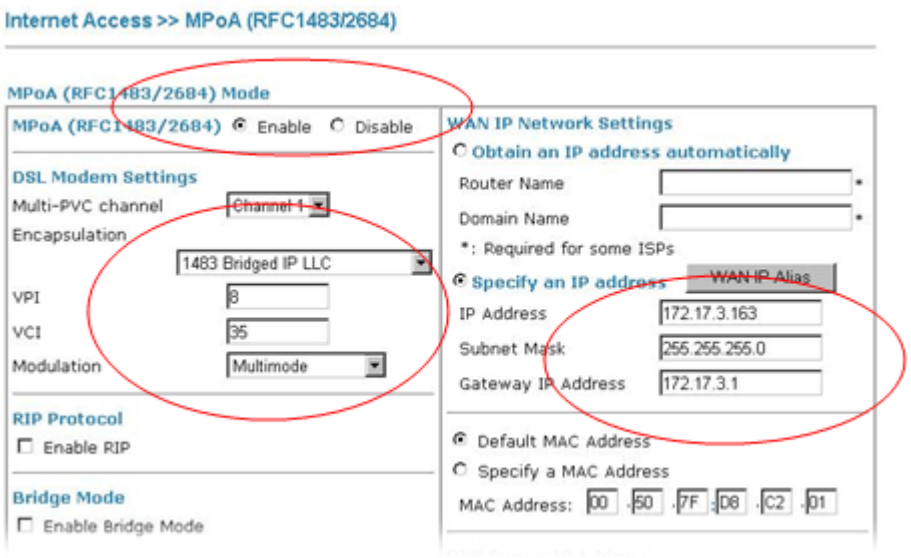


4. The UserName and Password specified for the device will be shown automatically. Such name and password will be used in the WEB page of the device. See the following figure for of device WEB page as an example.

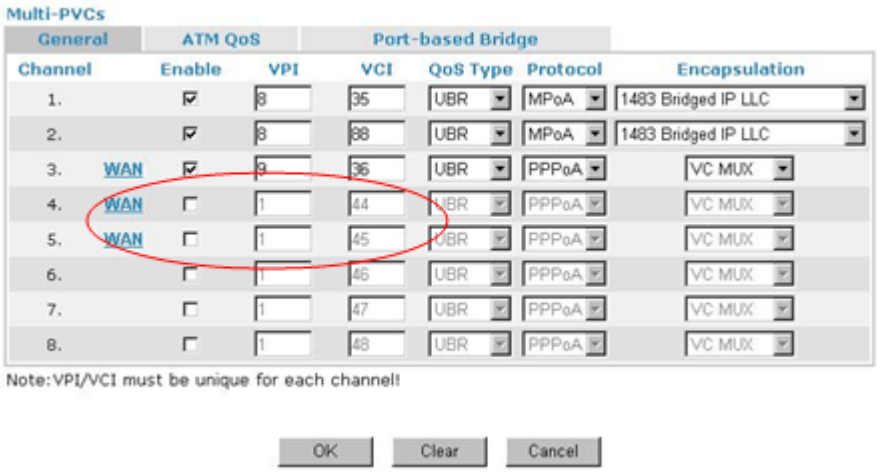


A.6 Connect to ACS Server through PVC Channel

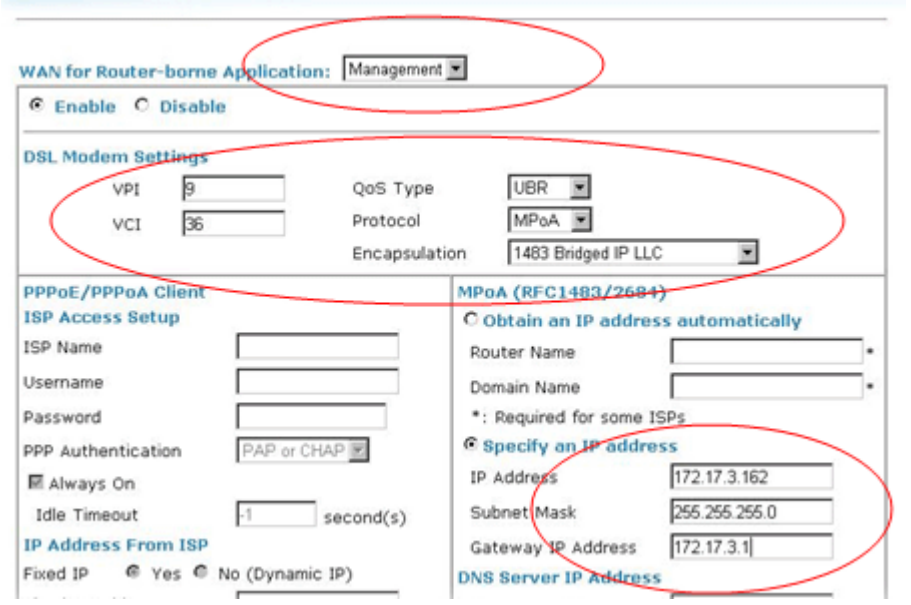
1. Login the device by web.
2. Go to **Internet Access->MPoA**.
3. Click **Enable** for MPoA.
4. Choose 1483 Bride IP LLC as encapsulation. And set VPI and VCI with 8 and 35.
5. Click **Specify an IP address**. Type correct WAN IP address, subnet mask and gateway IP address for your CPE. Then click **OK**.



6. Go to **Internet Access->Multi-PVCs**. Enable Channel 3 WAN check box and set VPI and VCI as 9 & 36.

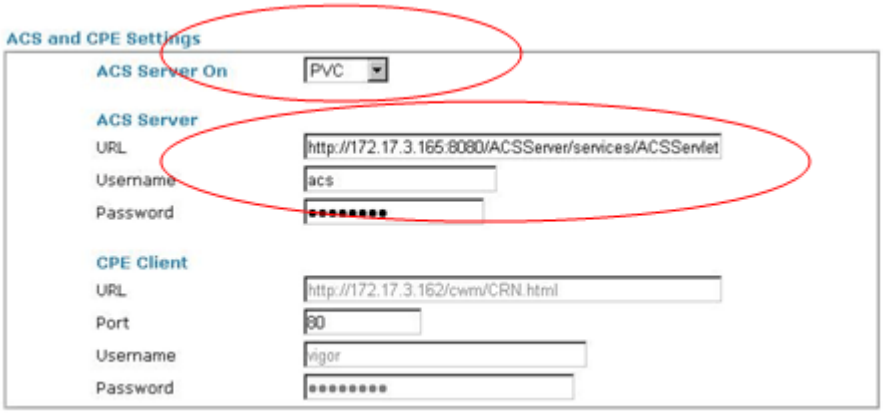


7. Click **WAN** link to open the following page for configuring in details.

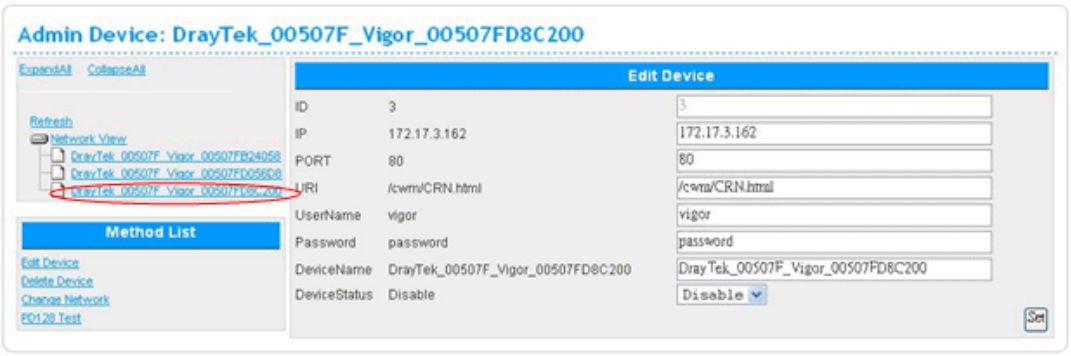


8. Set **WAN for Router-borne Application** as **Management**. And set VPI and VCI with 9 & 36. Choose **MPoA** as the protocol and choose **1483 Bridge IP LLC** as Encapsulation. Finally set a static IP address. Click **Ok**.

9. Open **System Maintenance >>TR-069**. Choose **PVC** for ACS Server On. Type correct URL for the ACS server. Type username and password for ACS Server.



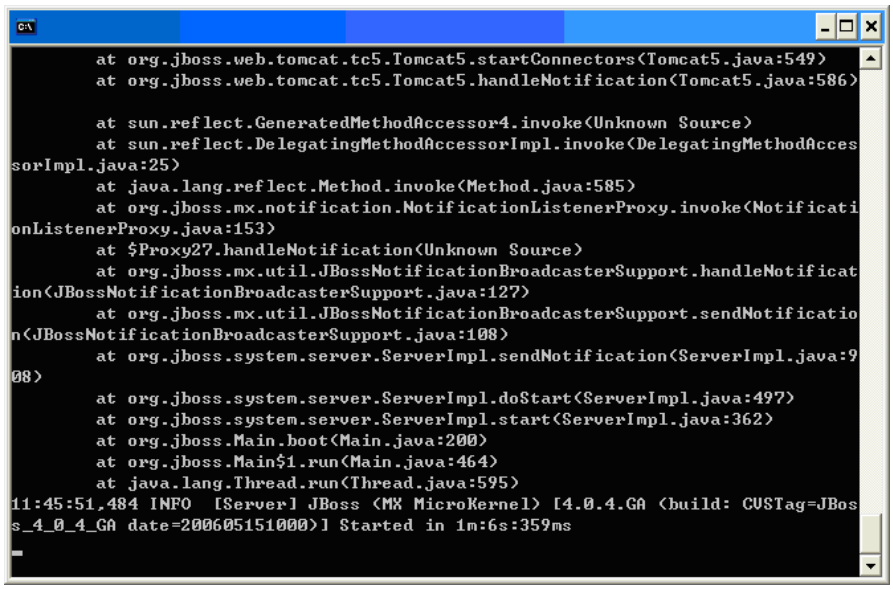
10. Return to VigorACS server web page. The CPE that you adjusted above should be displayed on the web page of ACS Server.



Appendix B Trouble Shooting

This appendix will guide you to solve abnormal situations if you cannot access into the Internet after installing the router and finishing the web configuration. Please follow sections below to check your basic installation status stage by stage.

When you try to invoke VigorACS and get the following error message, please locate the file of "*server.log*" from **C:/Program Files/ VigorACS /server/default/log** and send the file to your dealer for further assistance.



B.1 Contacting Your Dealer

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

Appendix C Reference

C.1 For Linux System

Corresponding files on Linux system required for VigorACS will be stored in the following paths:

```
java: /usr/local/jdk1.5.0_07
mysql: /usr/local/mysql-standard-4.0.24-pc-linux-gnu-i686
vigoracs: /usr/local/vigoracs/VigorACS/

log: /usr/local/vigoracs/VigorACS/server/default/log/server.log
license key: /usr/local/vigoracs/VigorACS/version/license.key
bind ip: /usr/local/vigoracs/VigorACS/bin/startway.txt
mysql data: /var/lib/mysql/tr069
start/stop vigoracs : /usr/local/vigoracs/VigorACS/bin/vigoracs.sh
```

To check the current process of VigorACS, please use the following commands to inquire

```
ps(vigoracs): ps -ef | grep "/usr/javase/bin/java -server" |grep -v grep
ps(mysql): ps -ef | grep safe_mysqld|grep -v grep
or
        ps -ef | grep mysqld_safe|grep -v grep
```

Some link files are required for VigorACS running under Linux system properly. If any one of them is missed, unexpected problems might be happened.

```
ln(sh): /usr/bin/sh -> /bin/sh
ln(java): /usr/javase -> /usr/local/jdk1.5.0_07/
ln(mysql): /usr/local/mysql -> /usr/local/mysql-standard-4.0.24-pc-linux-gnu-i686/
ln(mysql): /tmp/mysql.sock -> /var/lib/mysql/mysql.sock
```

C.2 For Solaris System

Corresponding files on Solaris system required for VigorACS will be stored in the following paths:

```
java: /usr/jdk/jdk1.5.0_07/
mysql: /usr/local/mysql-standard-4.0.24-pc-linux-gnu-i686
vigoracs: /usr/local/vigoracs/VigorACS/

log: /usr/local/vigoracs/VigorACS/server/default/log/server.log
license key: /usr/local/vigoracs/VigorACS/version/license.key
bind ip: /usr/local/vigoracs/VigorACS/bin/startway.txt
mysql data: /var/lib/mysql/tr069
start/stop vigoracs : /usr/local/vigoracs/VigorACS/bin/vigoracs.sh
```

To check the current process of VigorACS, please use the following commands to inquire

```
ps(vigoracs): ps -ef | grep "/usr/javase/bin/java -server" |grep -v grep
ps(mysql): ps -ef | grep safe_mysqld|grep -v grep
or
        ps -ef | grep mysqld_safe|grep -v grep
```

Some link files are required for VigorACS running under Linux system properly. If any one of them is missed, unexpected problems might be happened.

```
ln(sh): /usr/bin/sh -> /bin/sh
ln(java): /usr/javase -> /usr/local/jdk1.5.0_07/
ln(mysql): /usr/local/mysql -> /usr/local/mysql-standard-4.0.24-pc-linux-gnu-i686/
ln(mysql): /tmp/mysql.sock -> /var/lib/mysql/mysql.sock
```

C.3 For Windows XP System

Corresponding files on Windows XP system required for VigorACS will be stored in the following paths:

```
java: C:\Program Files\Java\jdk1.5.0_07
mysql: C:\mysql
vigoracs: C:\Program Files\VigorACS

log: C:\Program Files\VigorACS\server\default\log\server.log
license key: C:\Program Files\VigorACS\version\license.key
bind ip: C:\Program Files\VigorACS\bin\bindip.txt
mysql data: C:\mysql\data\tr069
start vigoracs : C:\Program Files\VigorACS\bin\StartVigorACS.bat
stop vigoracs : C:\Program Files\VigorACS\bin\ShutdownVigorACS.bat
```