



Multi-Homing Security Gateway MH-2000, MH-4000

User's Manual

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CE mark Warning

This is a class B device, in a domestic environment; this product may cause radio interference, in which case the user may be required to take adequate measures.



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

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For information on customer service and support for the Multi-Homing Security Gateway, please refer to the following Website URL:

<http://www.planet.com.tw>

Before contacting customer service, please take a moment to gather the following information:

- ◆ Multi-Homing Security Gateway serial number and MAC address
- ◆ Any error messages that displayed when the problem occurred
- ◆ Any software running when the problem occurred
- ◆ Steps you took to resolve the problem on your own

Revision

User's Manual for PLANET Multi-Homing Security Gateway

Model: MH-2000, MH-4000

Rev: 4.0 (September, 2005)

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Chapter 1: Introduction

As Internet become essential for your business, the only way to prevent your Internet connection from failure is to have more than one connection. PLANET's Multi-Homing Security Gateways (MH-2K/4K, in the following section) reduce the risk of potential shutdown if one of the Internet connections should fail. In addition, they allow you to perform load-balancing by distributing the traffic through two WAN connections. With embedded DNS server of MH-4000, connections from Internet are given the IP address of two WAN ports to balance the traffic over the links.

Not only a multi-homing device, PLANET's MH-2K/4K also provides a complete security solution in a box. The policy-based firewall, Intrusion detection and prevention, content filtering function and VPN connectivity with 3DES and AES encryption make it a perfect product for your network security. No more complex connection and settings for integrating different security products on the network is required.

Bandwidth management function is also supported on MH-2K/4K to offers network administrators an easy yet powerful means to allocate network resources based on business priorities, and to shape and control bandwidth usage.

1.1 Features

- ◆ **WAN Backup:** MH-2K/4K can monitor the each WAN link status and automatically activate backup links when a failure is detected. The detection is based on the configurable target Internet addresses.
- ◆ **Outbound Load Balancing:** The network sessions are assigned based on the user configurable load balancing mode, including "Auto", "Round-Robin", "By Traffic", "By Session" and "By Packet". User can also configure which IP or TCP/UDP type of traffic use which WAN port to connect.
- ◆ **Inbound Load Balancing with Embedded DNS Server:** In order to direct traffic to hosted servers through two links and provide inbound loading balancing, the MH-4000 provides a built-in DNS server for the hosted servers.
- ◆ **Policy-based Firewall:** The built-in policy-based firewall prevents many known hacker attack, including SYN attack, ICMP flood, UDP flood, Ping of Death, etc. The access control function allowed only specified WAN or LAN users to use only allowed network services on specified time.
- ◆ **VPN Connectivity:** The security gateway supports PPTP and IPSec VPN. With DES, 3DES and AES encryption and SHA-1 / MD5 authentication, the network traffic over public Internet is secured.
- ◆ **Content Filtering:** The security gateway can block network connection based on URLs, Scripts (The Pop-up, Java Applet, cookies and Active X), P2P (eDonkey, Bit Torrent and WinMX), Instant Messaging (MSN, Yahoo Messenger, ICQ, QQ and Skype) and Download blocking.
- ◆ **Dynamic Domain Name System (DDNS):** The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname.
- ◆ **Multiple NAT:** Multiple NAT allows local port to set multiple subnetworks and connect with the Internet through different WAN IP Addresses.

- ◆ **Server Load Balancing:** Up to 4 group virtual servers are supported for server load balancing
- ◆ **Dynamic Host Control Protocol (DHCP) client and server:** In the WAN site, the DHCP client can get an IP address from the Internet Server Provider (ISP) automatically. In the LAN site, the DHCP server can allocate up to 253 client IP addresses and distribute them including IP address, subnet mask as well as DNS IP address to local computers. It provides an easy way to manage the local IP network.
- ◆ **Web based GUI:** supports web based GUI for configuration and management. It also supports multiple language including English, Traditional Chinese and Simplified Chinese.
- ◆ **Bandwidth Management:** Network packets can be classified based on IP address, IP subnet and TCP/UDP port number and give guarantee and burst bandwidth with three levels of priority.
- ◆ **User Authentication:** User database can be configured on the devices, MH-4000 also supports the authenticated database through external RADIUS, POP3 and LDAP server.

1.2 Package Contents

The following items should be included:

MH-2000

- Multi-Homing Security Gateway
- User's Manual CD-ROM
- This Quick Installation Guide
- Power Adapter

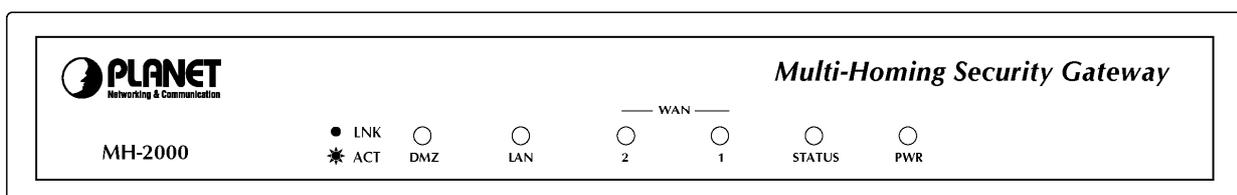
MH-4000

- Multi-Homing Security Gateway
- User's Manual CD-ROM
- This Quick Installation Guide
- Power Cord
- Rack-mounting kit
- RS-232 console cable

If any of the contents are missing or damaged, please contact your dealer or distributor immediately.

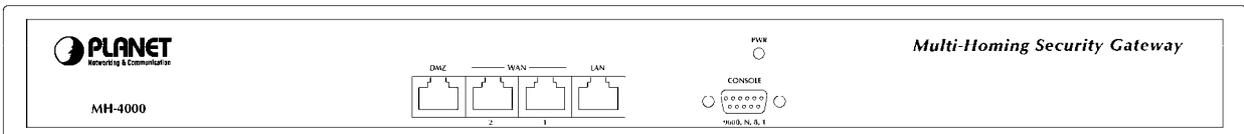
1.3 MH-2K/4K Front View

MH-2000 Front Panel



LED	Description
PWR	Power is supplied to this device.
STATUS	Blinks to indicate this device is being turned on and booting. After one minute, this LED indicator will stop blinking, it means this device is now ready to use.
WAN1, WAN2, LAN, DMZ	Steady on indicates the port is connected to other network device. Blink to indicates there is traffic on the port

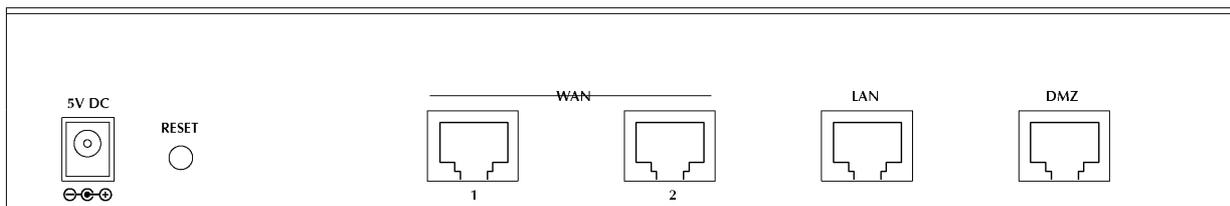
MH-4000 Front Panel



LED	Description	
PWR	Power is supplied to this device.	
WAN1, WAN2, LAN, DMZ	Green	Steady on indicates the port is connected to other network device. Blink to indicates there is traffic on the port
	Orange	Steady on indicates the port is connected at 100Mbps speed

1.4 MH-2K/4K Rear Panel

MH-2000 Rear Panel



Port or button	Description
RESET	Press this button to restore to factory default settings.
WAN 1, WAN2	Connect to your xDSL/Cable modem or other Internet connection devices
LAN	Connect to your local PC, switch or other local network device
DMZ	Connect to your server or other network device

Chapter 2: Hardware Installation

2.1 Installation Requirements

Before installing MH-2K/4K, make sure your network meets the following requirements.

- Mechanical Requirements

MH-2K/4K is installed between your Internet connection and local area network. You can place it on the table or rack, and locate the unit near the power outlet.

- Electrical Requirements

MH-2K/4K is a power-required device, that means, it will not work until it is powered. If your network PCs will need to transmit data all the time, please consider use an UPS (Uninterrupted Power Supply) for your MH-2K/4K. It will prevent you from network data loss. In some area, installing a surge suppression device may also help to protect your device from being damaged by unregulated surge or current to the MH-2K/4K.

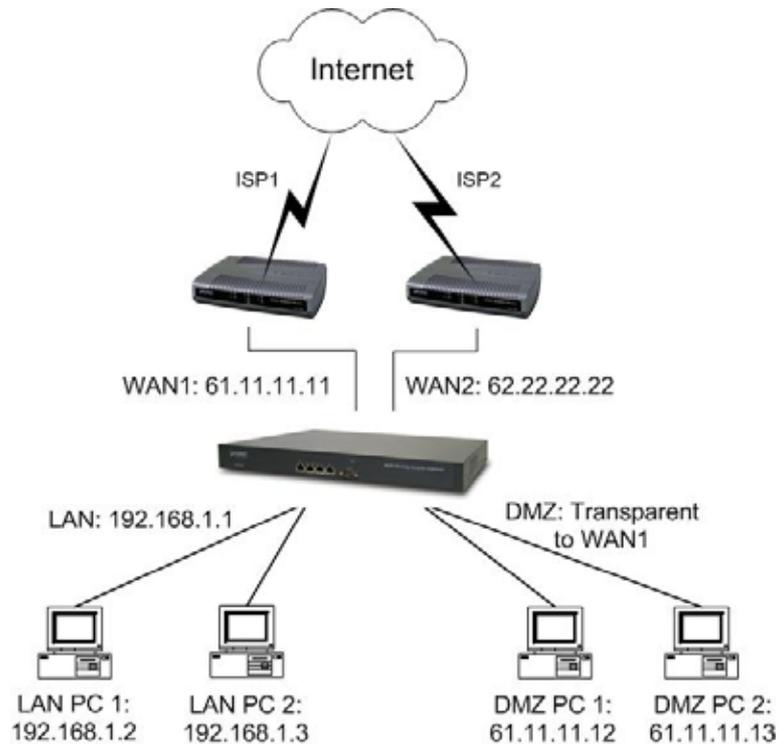
- Network Requirements

In order for MH-2K/4K to secure your network traffic, the traffic must pass through the device at a useful point in a network. In most situations, MH-2K/4K should be placed behind the Internet connection device.

2.2 Operation Mode

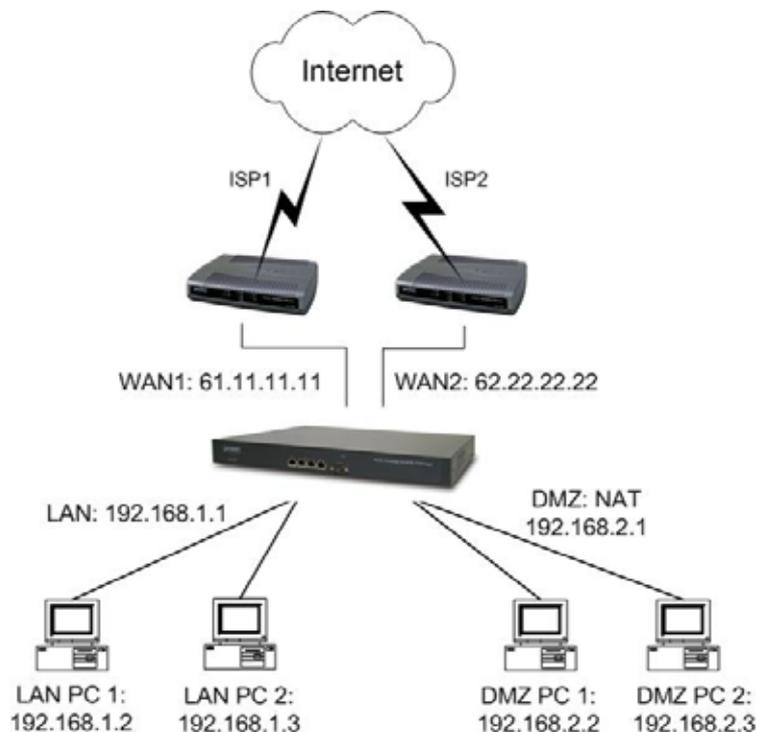
MH-2K/4K DMZ port supports three operation modes, Disable, NAT and Transparent. In Disable mode, the DMZ port is not active. In transparent mode, MH-2K/4K works as proxy with forward DMZ packet to WAN and forward WAN packet to DMZ. The DMZ and WAN side IP addresses are in the same subnet. In NAT mode, DMZ side user will share one public IP address of WAN port to make Internet connection. Please find the following two pictures for example.

2.2.1 Transparent Mode Connection Example



The WAN1 and DMZ side IP addresses are on the same subnet. This application is suitable if you have a subnet of IP addresses and you do not want to change any IP configuration on the subnet.

2.2.2 NAT Mode Connecting Example



DMZ and WAN1 IP addresses are on the different subnet. This provides higher security level than transparent mode.

Chapter 3: Getting Started

3.1 Web Configuration

STEP 1:

Connect the Administrator's PC and the LAN port of MH-2K/4K to a hub or switch. Make sure there is a link light on the hub/switch for both connections. MH-2K/4K has an embedded web server used for management and configuration. Use a web browser to display the configurations of MH-2K/4K (such as Internet Explorer 4(or above) or Netscape 4.0(or above) with full java script support). The default IP address of MH-2K/4K is **192.168.1.1** with a subnet mask of 255.255.255.0. Therefore, the IP address of the Administrator PC must be in the range between 192.168.1.2– 192.168.1.254

If the company's LAN IP Address is not subnet of 192.168.1.0, (i.e. LAN IP Address is 172.16.0.1), then the Administrator must change his/her PC IP address to be within the same range of the LAN subnet (i.e. 172.16.0.2). Reboot the PC if necessary.

By default, MH-2K/4K is shipped with its DHCP Server function enabled. This means the client computers on the LAN network including the Administrator PC can set their TCP/IP settings to automatically obtain an IP address from the device.

The following table is a list of private IP addresses. These addresses may not be used as a WAN IP address.

10.0.0.0 ~ 10.255.255.255
172.16.0.0 ~ 172.31.255.255
192.168.0.0 ~ 192.168.255.255

STEP 2:

Once the Administrator PC has an IP address on the same network as the Multi-Homing Security Gateway, open up an Internet web browser and type in <http://192.168.1.1> in the address bar.

A pop-up screen will appear and prompt for a username and password. A username and password is required to connect to MH-2K/4K. Enter the default login username and password of Administrator (see below).

Username: admin

Password: admin

Click OK.



3.2 Configure WAN 1 interface

After entering the username and password, MH-2K/4K WebUI screen will display. Select the **Interface** tab on the left menu then click on WAN below it.

Click on Modify button of WAN NO.1. The following page is shown.

The screenshot shows the WAN1 Interface configuration page. On the left is a navigation menu with options: System, Interface (selected), LAN, WAN, DMZ, Address, Service, Schedule, Content Filtering, Virtual Server, Policy, VPN, Log, Alarm, Statistics, and Status. The main content area is titled 'WAN1 Interface' and includes the following fields and options:

- Service:** A dropdown menu set to 'ICMP' and an 'Alive Indicator Site IP' text input field with an 'Assist' link.
- Wait:** A text input field containing '1' followed by the text 'seconds between sending alive packet. (0 - 99 , 0 : means not checking)'. A mouse cursor is visible over this field.
- Service Selection:** Four radio button options:
 - PPPoE (ADSL User)
 - Dynamic IP Address (Cable Modem User)
 - Static IP Address (selected)
 - PPTP (European User Only)
- IP Address:** A text input field.
- Netmask:** A text input field.
- Default Gateway:** A text input field.
- DNS Server 1:** A text input field.
- DNS Server 2:** A text input field.
- Max. Downstream Bandwidth:** A text input field followed by 'Kbps'.
- Max. Upstream Bandwidth:** A text input field followed by 'Kbps'.

Alive Indicator Site IP: This feature is used to ping an address for detecting WAN connection status.

Service: ICMP You can select an IP address by **Assist**, or type an IP address manually.

Service: DNS You can select a DNS IP and Domain name by **Assist**, or type the related data manually.

PPPoE (ADSL User): This option is for PPPoE users who are required to enter a username and password in order to connect.

Username: Enter the PPPoE username provided by the ISP.

Password: Enter the PPPoE password provided by the ISP.

IP Address provided by ISP:

Dynamic: Select this if the IP address is automatically assigned by the ISP.

Fixed: Select this if you were given a static IP address. Enter the IP address that is given to you by your ISP.

Max. Upstream/Downstream Bandwidth: The bandwidth provided by ISP.

Service-On-Demand:

The PPPoE connection will automatically disconnect after a length of idle time (no activities). Enter in the amount of idle minutes before disconnection. Enter '0' if you do not want the PPPoE connection to disconnect at all.

For Dynamic IP Address (Cable Modem User): This option is for users who are automatically assigned an IP address by their ISP, such as cable modem users. The following fields apply:

MAC Address: This is the MAC Address of the device. Some ISPs require specified MAC address. If the required MAC address is your PC's, click **Clone MAC Address**.

Hostname: This will be the name assign to the device. Some cable modem ISP assigns a specific hostname in order to connect to their network, please enter the hostname here. If not required by your ISP, you do not have to enter a hostname.

Domain Name: You can specify your own domain name or leave it blank.

User Name: The user name is provided by ISP.

Password: The password is provided by ISP.

Max. Upstream/Downstream Bandwidth: The bandwidth provided by ISP.

For Static IP Address: This option is for users who are assigned a static IP Address from their ISP. Your ISP will provide all the information needed for this section such as IP Address, Netmask, Gateway, and DNS.

IP Address: Enter the static IP address assigned to you by your ISP. This will be the public IP address of the WAN 1 port of the device.

Netmask: This will be the Netmask of the WAN 1 network. (i.e. 255.255.255.0)

Default Gateway: This will be the Gateway IP address.

Domain Name Server (DNS): This is the IP Address of the DNS server.

Max. Upstream/Downstream Bandwidth: The bandwidth provided by ISP.

For PPTP (European User Only): This is mainly used in Europe. You need to know the PPTP Server address as well as your name and password.

User Name: The user name is provided by ISP.

Password: The password is provided by ISP.

IP Address: Enter the static IP address assigned to you by your ISP, or obtain an IP address automatically from ISP.

PPTP Gateway: Enter the PPTP server IP address assigned to you by your ISP.

Connect ID: This is the ID given by ISP. This is optional.

Max. Upstream/Downstream Bandwidth: The bandwidth provided by ISP.

BEZEQ-ISRAEL: Select this item if you are using the service provided by BEZEQ in Israel.

Service-On-Demand: The PPTP connection will automatically disconnect after a length of idle time (no activities). Enter the amount of idle minutes before disconnection. Enter '0' if you do not want the PPTP connection to disconnect at all.

NOTE: This function is not supported on MH-4000.

Ping: Select this to allow the WAN network to ping the IP Address of MH-2K/4K This will allow people from the Internet to be able to ping MH-2K/4K WAN IP. If set to enable, the device will respond to echo request packets from the WAN network.

WebUI: Select this to allow the device WebUI to be accessed from the WAN network. This will allow the WebUI to be configured from a user on the Internet. Keep in mind that the device always requires a username and password to enter the WebUI.

3.3 Configure WAN 2 interface

If you want to connect WAN 2 to another ISP connection, click **Modify** button of **WAN No. 2** then repeat above procedures to setup.

3.4 Configure DMZ interface

Depends on your network requirement, you can disable the DMZ port, make DMZ port transparent to WAN 1 or enable NAT function on it.

To configure the DMZ port, select the **Interface** tab on the left menu, then click on DMZ, the following page is shown.

Please refer to section 3 for select the mode you need and configure relative IP parameters.

3.5 Configure Policy

STEP 1:

Click on the **Policy** tab from the main function menu, and then click on **Outgoing** (LAN to WAN) from the sub-function list.

STEP 2:

Click on **New Entry** button.

STEP 3:

When the **New Entry** option appears, enter the following configuration:

Source Address – select “**Inside_Any**”

Destination Address – select “**Outside_Any**”

Service - select “**ANY**”

Action - select “**Permit, ALL**”

Click on **OK** to apply the changes.

The screenshot shows the 'Outgoing' configuration page. On the left is a navigation menu with 'Policy' selected and 'Outgoing' highlighted. The main area is titled 'Modify Policy' and contains the following fields:

- Source Address: Inside_Any
- Destination Address: Outside_Any
- Service: ANY
- Action, WAN Port: PERMIT, ALL
- Logging: Enable
- Statistics: Enable
- Content Filtering: Enable
- Schedule: None
- Alarm Threshold: 0.0 KBytes/Sec

At the bottom right of the form are 'OK' and 'Cancel' buttons.

STEP 4:

The configuration is successful when the screen below is displayed.

The screenshot shows the 'Outgoing' configuration page after successful configuration. The navigation menu is the same. The main area displays a table of policies:

Source	Destination	Service	Action	Option	Configure	Move
Inside_Any	Outside_Any	ANY			Modify Remove	To 1

Below the table is a 'New Entry' button.

Please make sure that all the computers that are connected to the LAN port have their Default Gateway IP Address set to MH-2K/4K's LAN IP Address (i.e. 192.168.1.1). At this point, all the computers on the LAN network should gain access to the Internet immediately. If MH-2K/4K filter function is required, please refer to the Policy section in chapter 4.

Chapter 4: Web Configuration

The functions of MH-2000 and MH-4000 have some differences. MH-4000 support more functions than MH-2000. Please find the following table for a list of their functions comparison.

Menu items	MH-2000	MH-4000
System		
Admin	V	V
Setting	V	V
Date/Time	V	V
Multiple Subnet	V	V
Hacker Alert	V	V
Blaster Alert	V	V
Route Table	V	V
DHCP	V	V
Host Table	V	V
SNMP	N/A	V
Dynamic DNS	V	V
Language	V	V
Permitted IP	V	V
Logout	V	V
Software Update	V	V
Interface	V	V
LAN	V	V
WAN	V	V
DMZ	V	V
Address	V	V
LAN	V	V
LAN Group	V	V
WAN	V	V
WAN Group	V	V
DMZ	V	V
DMZ Group	V	V
Service	V	V
Pre-defined	V	V
Custom	V	V
Group	V	V
Schedule	V	V
QoS	V	V
Authentication	V	V
Auth User	V	V
Auth User Group	V	V
RADIUS	N/A	V
Content Filter	V	V
URL Blocking	V	V
Script Blocking	V	V
P2P Blocking	V	V
IM Blocking	V	V
Download Blocking	V	V
Virtual Server	V	V
Mapped IP	V	V
Virtual Server1	V	V
Virtual Server2	V	V
Virtual Server3	V	V

Virtual Server4	V	V
Policy	V	V
Outgoing	V	V
Incoming	V	V
WAN to DMZ	V	V
LAN to DMZ	V	V
DMZ to WAN	V	V
DMZ to LAN	V	V
VPN	V	V
IPSec Autokey	V	V
PPTP Server	V	V
PPTP Client	V	V
Inbound Balance	N/A	V
Log	V	V
Traffic Log	V	V
Event Log	V	V
Connection Log	V	V
Log Backup	V	V
Alarm	V	V
Traffic Alarm	V	V
Event Alarm	V	V
Accounting Report	N/A	V
Outbound	N/A	V
Inbound	N/A	V
Statistics	V	V
Interface Statistics	V	V
Policy Statistics	V	V
Status	V	V
Interface Status	V	V
System Info.	N/A	V
Auth. Status	V	V
ARP Table	V	V
DHCP Clients	V	V

4.1 System

MH-2K/4K Administration and monitoring configuration is set by the System Administrator. The System Administrator can add or modify System settings and monitoring mode. The sub Administrators can only read System settings but not modify them. In **System**, the System Administrator can:

1. Add and change the sub Administrator's names and passwords;
2. Back up all MH-2K/4K settings into local files;
3. Set up alerts for Hackers invasion.

"System" is the managing of settings such as the privileges of packets that pass through MH-2K/4K and monitoring controls. Administrators may manage, monitor, and configure MH-2K/4K settings. All configurations are "read-only" for all users other than the Administrator; those users are not able to change any settings for MH-2K/4K.

Admin: Control of user access to MH-2K/4K. He/she can add/remove users and change passwords.

Setting: The Administrator may use this function to backup MH-2K/4K configurations and export (save) them to an “Administrator” computer or anywhere on the network; or restore a configuration file to the device; or restore MH-2K/4K back to default factory settings. Under **Setting**, the Administrator may enable e-mail alert notification. This will alert Administrator(s) automatically whenever MH-2K/4K has experienced unauthorized access or a network hit (hacking or flooding). Once enabled, an IP address of a SMTP (Simple Mail Transfer protocol) Server is required. Up to two e-mail addresses can be entered for the alert notifications.

Date/Time: This function enables MH-2K/4K to be synchronized either with an Internet Server time or with the client computer's clock.

Multiple Subnet: This function allows local port to set multiple subnet works and connect with the internet through different WAN 1 IP Addresses.

Hacker Alert: When abnormal conditions occur, MH-2K/4K will send an e-mail alert to notify the Administrator, and also display warning messages in the **Event** window of **Alarm**.

Blaster Alert: This function is to protect your network from blaster worm. When abnormal network access on RPC port occur, MH-2K/4K will block the access on specified time, send an e-mail alert or SNMP trap to notify the Administrator, and also display warning messages in the **Event** window of **Alarm**.

Route Table: Use this function to enable the Administrator to add static routes for the networks when the dynamic route is not efficient enough.

DHCP: Administrator can configure DHCP (Dynamic Host Configuration Protocol) settings for the LAN (LAN) network.

Host Table: MH-2K/4K Administrator may use the Host Table function to make the device act as a DNS Server for the LAN and DMZ network. All DNS requests to a specific Domain Name will be routed to MH-2K/4K's IP address. For example, an organization has their mail server (i.e., mail.planet.com.tw) in the DMZ network (i.e. 192.168.10.10). The outside Internet world may access the mail server of the organization easily by its domain name, providing that the Administrator has set up Virtual Server or Mapped IP settings correctly. However, for the users in the LAN network, their WAN DNS server will assign them a public IP address for the mail server. So for the LAN network to access the mail server (mail.planet.com.tw), they would have to go out to the Internet, then come back through MH-2K/4K to access the mail server. Essentially, the LAN network is accessing the mail server by a real public IP address, while the mail server serves their request by a NAT address and not a real one. This odd situation occurs when there are servers in the DMZ network and they are bound to real IP addresses. To avoid this, set up Host Table so all the LAN network computers will use MH-2K/4K as a DNS server, which acts as the DNS Proxy.

Dynamic DNS: The Dynamic DNS (require Dynamic DNS Service) allows you to alias a dynamic IP address to a static hostname, allowing your device to be more easily accessed by specific name. When this function is enabled, the IP address in Dynamic DNS Server will be automatically updated with the new IP address provided by ISP.

SNMP (MH-4000 only): Provide the System Administrator enabling SNMP Trap Alert Notification for sending email to the setting SNMP Trap receiver IP address when the network is disconnected/ connected and being attacked by hackers or when emergency conditions occur.

Language: Both Chinese and English are supported in MH-2K/4K.

Permitted IP: Enables the Administrator to authorize specific internal/external IP address(es) for Managing Gateway.

Logout: Administrator logs out the Multi-Homing Security Gateway. This function protects your system while you are away.

Software Update: The administrator can update the device's software with the latest version. Administrators may visit distributor's web site to download the latest firmware. Administrators may update the device firmware to optimize its performance and keep up with the latest fixes for intruding attacks.

4.1.1 Admin

On the left hand menu, click on **Setup**, and then select **Admin** below it. The current list of Administrator(s) shows up.

The screenshot shows the PLANET Admin interface. On the left is a vertical menu with the following items: System, Admin (highlighted with two red arrows), Setting, Date/Time, Multiple Subnet, Hacker Alert, Blaster Alert, Route Table, DHCP, Host Table, Dynamic DNS, Language, Permitted IPs, Logout, Software Update, and Interface. The main content area has a dark blue header with the word "Admin" in white. Below the header is a table with three columns: Admin Name, Privilege, and Configure. The table contains one row with the value "admin" in the Admin Name column, "Read/Write" in the Privilege column, and a "Modify" button in the Configure column. Below the table is a "New Sub Admin" button.

Admin Name	Privilege	Configure
admin	Read/Write	Modify

[New Sub Admin](#)

Settings of the Administration table

Administrator Name: The username of Administrators for MH-2K/4K. The user **admin** cannot be removed.

Privilege: The privileges of Administrators (Admin or Sub Admin)

The username of the main Administrator is **Administrator** with **read / write** privilege.

Sub Admins may be created by the **Admin** by clicking **New Sub Admin**. Sub Admins have **read only** privilege.

Configure: Click **Modify** to change the "Sub Administrator's" password and click **Remove** to delete a "Sub Administrator."

Changing the Main/Sub-Administrator's Password

Step 1. The **Modify Administrator Password** window will appear. Enter in the required information:

- **Password:** enter original password.
- **New Password:** enter new password
- **Confirm Password:** enter the new password again.

Step 2. Click **OK** to confirm password change or click **Cancel** to cancel it.

The screenshot shows the PLANET Admin interface. On the left is a navigation menu with items like System, Admin, Setting, Date/Time, Multiple Subnet, Hacker Alert, Blaster Alert, and Route Table. The main area displays the 'Modify Admin Password' dialog box. The dialog has a title bar 'Modify Admin Password' and contains the following fields:

Admin Name	admin
Password	•••••
New Password	•••••
Confirm Password	•••••

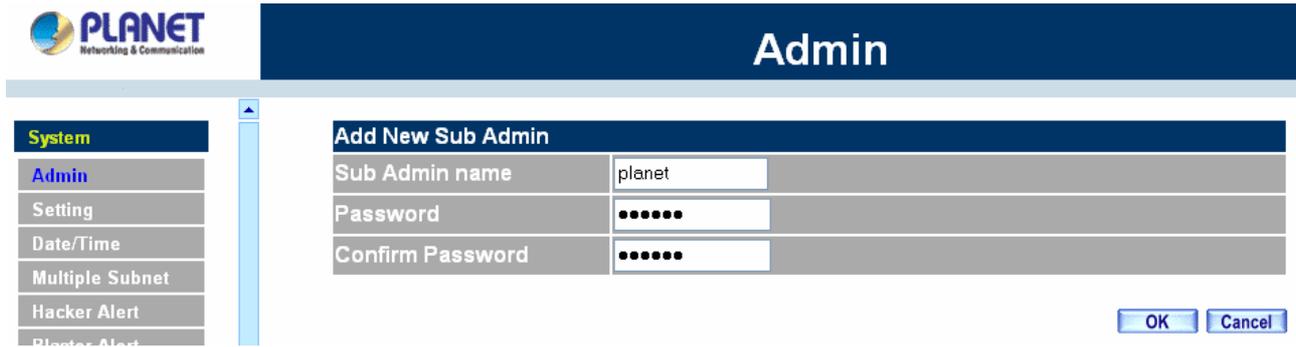
At the bottom right of the dialog are two buttons: **OK** and **Cancel**.

Adding a new Sub Administrator

Step 1. In the **Add New Sub Administrator** window:

- **Sub Admin Name:** enter the username of new **Sub Admin**.
- **Password:** enter a password for the new **Sub Admin**.
- **Confirm Password:** enter the password again.

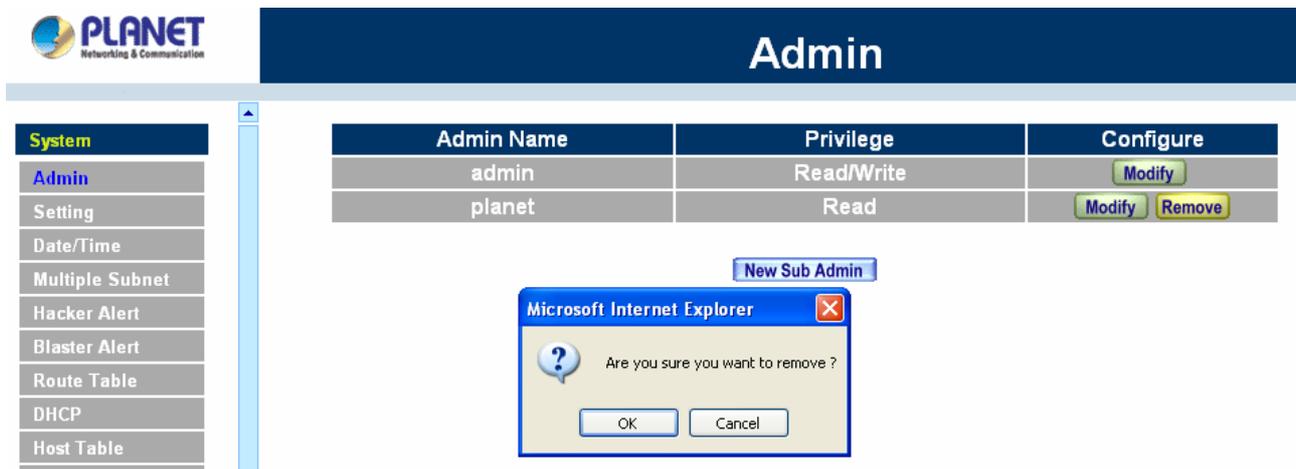
Step 2. Click **OK** to add the user or click **Cancel** to cancel the addition.



The screenshot shows the PLANET Admin interface. On the left is a 'System' menu with options: Admin, Setting, Date/Time, Multiple Subnet, Hacker Alert, and Blaster Alert. The main area is titled 'Admin' and contains a form titled 'Add New Sub Admin'. The form has three input fields: 'Sub Admin name' with the value 'planet', 'Password' with six dots, and 'Confirm Password' with six dots. At the bottom right of the form are 'OK' and 'Cancel' buttons.

Removing a Sub Administrator

- Step 1. In the Administration table, locate the Administrator name you want to edit, and click on the **Remove** option in the Configure field.
- Step 2. The Remove confirmation pop-up box will appear. Click **OK** to remove that Sub Admin or click **Cancel** to cancel.



The screenshot shows the PLANET Admin interface. On the left is a 'System' menu with options: Admin, Setting, Date/Time, Multiple Subnet, Hacker Alert, Blaster Alert, Route Table, DHCP, and Host Table. The main area is titled 'Admin' and contains a table with the following data:

Admin Name	Privilege	Configure
admin	Read/Write	<input type="button" value="Modify"/>
planet	Read	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Below the table, a 'New Sub Admin' button is visible. A confirmation dialog box titled 'Microsoft Internet Explorer' is open, asking 'Are you sure you want to remove?' with 'OK' and 'Cancel' buttons.

4.1.2 Settings

The Administrator may use this function to backup MH-2K/4K configurations and export (save) them to an “Administrator” computer or anywhere on the network; or restore a configuration file to the device; or restore MH-2K/4K back to default factory settings.

Entering the Settings window

Click **Setting** in the **System** menu to enter the **Settings** window. **MH-2K/4K Configuration** settings will be shown on the screen.

Setting

System

- Admin
- Setting** ← ←
- Date/Time
- Multiple Subnet
- Hacker Alert
- Blaster Alert
- Route Table
- DHCP
- Host Table
- Dynamic DNS
- Language
- Permitted IPs
- Logout
- Software Update

Interface

- Address
- Service
- Schedule
- Content Filtering

Backup / Restore Configuration

Export System Setting to Client

Import System Setting from Client

(ex: MHsystem.conf)

Reset Factory Setting

E-mail Setting

Enable E-mail Alert Notification

Device Name

Sender Address (Required by some ISPs)

SMTP Server

E-mail Address 1

E-mail Address 2

Mail Test

Web Management (WAN Interface)

HTTP Port

MTU Setting

MTU Bytes

Exporting MH-2K/4K settings

Step 1. Under **Configuration**, click on the **Download** button next to **Export System Settings to Client**.

Step 2. When the **File Download** pop-up window appears, choose the destination place to save the exported file. The **Administrator** may choose to rename the file if preferred.

Setting

System

- Admin
- Setting**
- Date/Time
- Multiple Subnet
- Hacker Alert
- Blaster Alert
- Route Table
- DHCP
- Host Table
- Dynamic DNS
- Language
- Permitted IPs
- Logout
- Software Update

Interface

- Address
- Service
- Schedule

Backup / Restore Configuration

Export System Setting to Client

Import System Setting from Client

Reset Factory Setting

E-mail Setting

Enable E-mail Alert Notification

Device Name

Sender Address (Required by some ISPs)

SMTP Server

E-mail Address 1

E-mail Address 2

Mail Test

Web Management (WAN Interface)

HTTP Port

MTU Setting

MTU Bytes

File Download

Save in: Temp

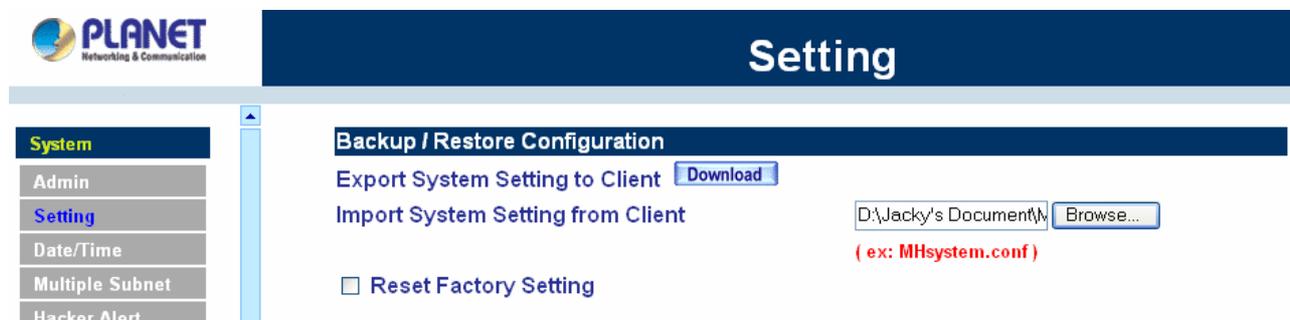
File name: MHsystem.conf

Save as type: .conf Document

Importing MH-2K/4K settings

Under **Configuration**, click on the **Browse** button next to **Import System Settings**. When the **Choose File** pop-up window appears, select the file which contains the saved MH-2K/4K Settings, then click **OK**.

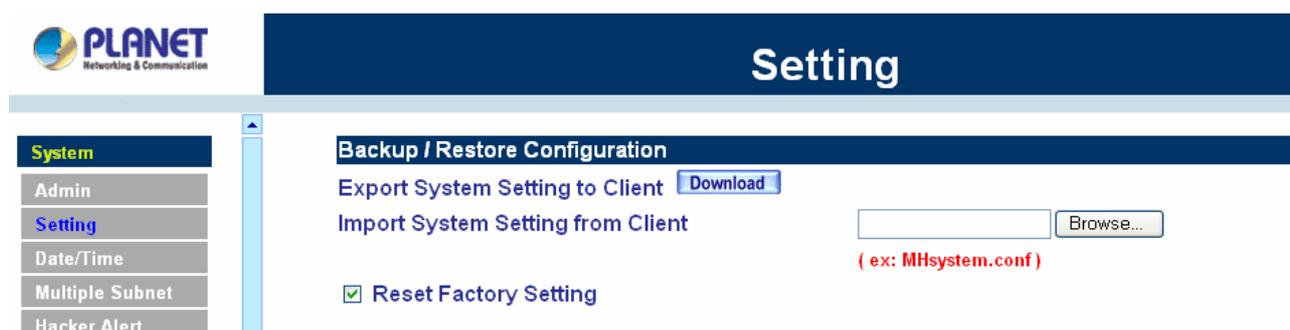
Click **OK** to import the file into MH-2K/4K or click **Cancel** to cancel importing.



Restoring Factory Default Settings

Step 1. Select **Reset Factory Settings** under **Configuration**.

Click **OK** at the bottom-right of the screen to restore the factory settings.



Enabling E-mail Alert Notification

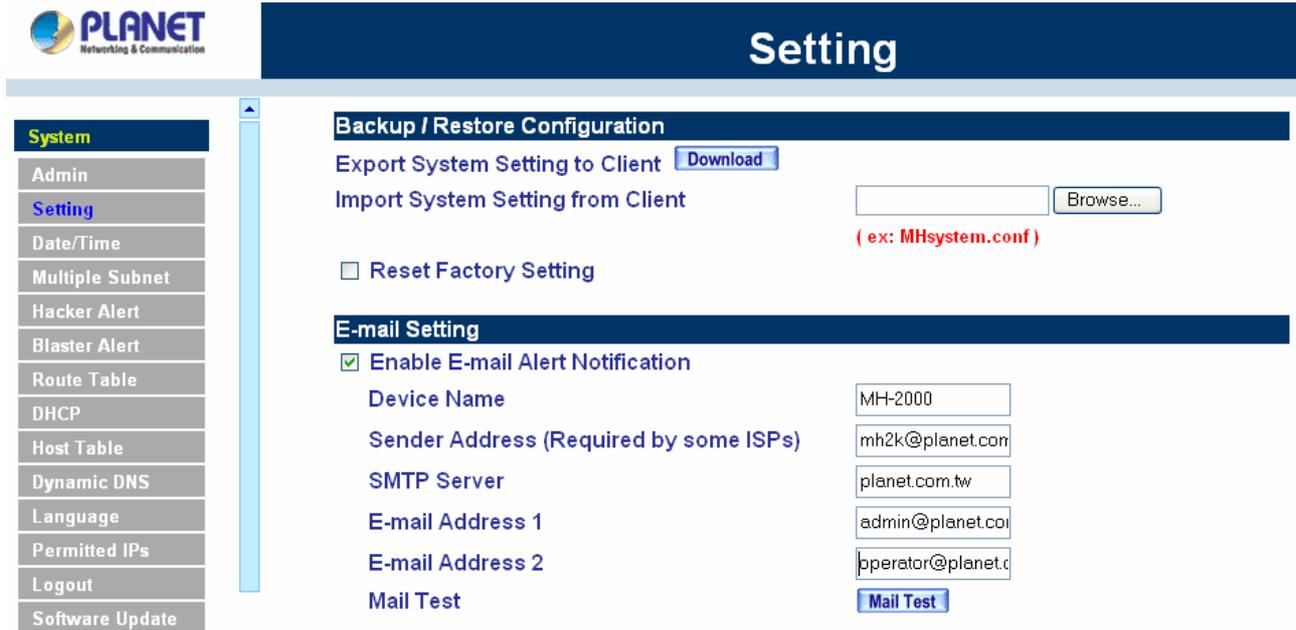
Step 1. Select **Enable E-mail Alert Notification** under **E-Mail Settings**. This function will enable the Multi-Homing Security Gateway to send e-mail alerts to the System Administrator when the network is being attacked by hackers or when emergency conditions occur.

Step 2. **SMTP Server IP:** Enter SMTP server's IP address.

Step 3. **E-Mail Address 1:** Enter the first e-mail address to receive the alarm notification.

Step 4. **E-Mail Address 2:** Enter the second e-mail address to receive the alarm notification. (Optional)

Click **OK** on the bottom-right of the screen to enable E-mail alert notification.



PLANET
Networking & Communication

Setting

System

- Admin
- Setting**
- Date/Time
- Multiple Subnet
- Hacker Alert
- Blaster Alert
- Route Table
- DHCP
- Host Table
- Dynamic DNS
- Language
- Permitted IPs
- Logout
- Software Update

Backup / Restore Configuration

Export System Setting to Client

Import System Setting from Client
(ex: MHsystem.conf)

Reset Factory Setting

E-mail Setting

Enable E-mail Alert Notification

Device Name

Sender Address (Required by some ISPs)

SMTP Server

E-mail Address 1

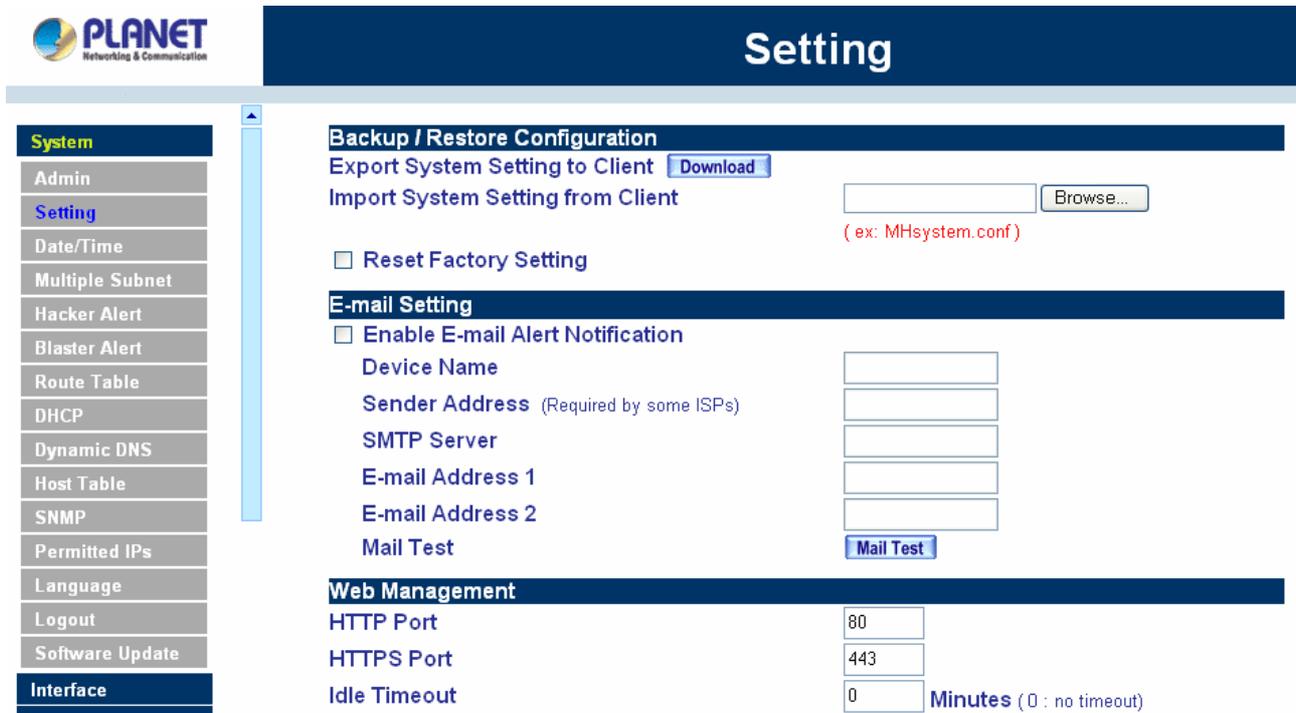
E-mail Address 2

Mail Test

Web Management (WAN Interface)

The administrator can change the port number used by HTTP or HTTPS port anytime. (HTTPS only supports with MH-4000)

- Step 1. **Set Web Management (WAN Interface).** The administrator can change the port number used by HTTP or HTTPS port anytime.
- Step 2. **Idle Timeout.** Fill in the Idle Timeout setting, when time is up, the remote user will be logout automatically. 0 means no timeout. (Idle Timeout only supports with MH-4000)



PLANET
Networking & Communication

Setting

System

- Admin
- Setting**
- Date/Time
- Multiple Subnet
- Hacker Alert
- Blaster Alert
- Route Table
- DHCP
- Dynamic DNS
- Host Table
- SNMP
- Permitted IPs
- Language
- Logout
- Software Update

Backup / Restore Configuration

Export System Setting to Client

Import System Setting from Client
(ex: MHsystem.conf)

Reset Factory Setting

E-mail Setting

Enable E-mail Alert Notification

Device Name

Sender Address (Required by some ISPs)

SMTP Server

E-mail Address 1

E-mail Address 2

Mail Test

Web Management

HTTP Port

HTTPS Port

Idle Timeout **Minutes** (0 : no timeout)

MTU (set networking packet length)

The administrator can modify the networking packet length.

Step 1. **MTU Setting.** Modify the networking packet length.

The screenshot shows the PLANET web management interface. The left sidebar contains a menu with 'System', 'Admin', 'Setting', and 'Date/Time'. The main content area is titled 'Setting' and has a sub-header 'Web Management (WAN Interface)'. Under this sub-header, there are two settings: 'HTTP Port' with a text input field containing '80', and 'MTU Setting' with a sub-header. Below 'MTU Setting', there is a label 'MTU' followed by a text input field containing '1500' and the unit 'Bytes'.

Link Speed / Duplex Mode Setting

This function allows administrator to set the transmission speed and mode of WAN Port. This feature is only available with MH-2000.

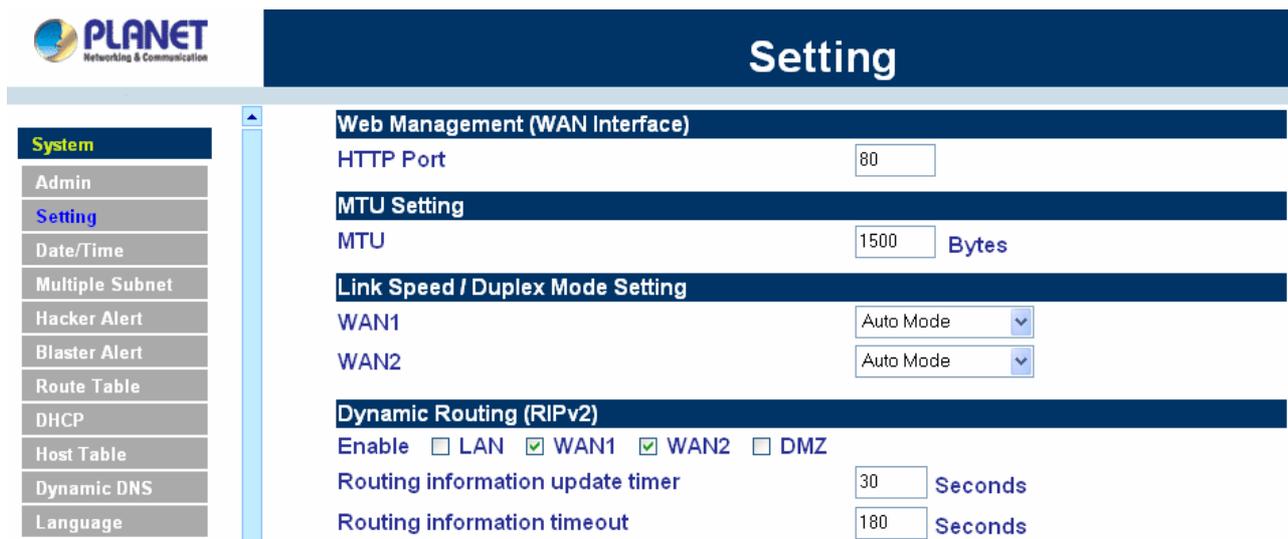
The screenshot shows the PLANET web management interface. The left sidebar contains a menu with 'System', 'Admin', 'Setting', 'Date/Time', 'Multiple Subnet', 'Hacker Alert', 'Blaster Alert', and 'Route Table'. The main content area is titled 'Setting' and has a sub-header 'Web Management (WAN Interface)'. Under this sub-header, there are three settings: 'HTTP Port' with a text input field containing '80', 'MTU Setting' with a sub-header, and 'Link Speed / Duplex Mode Setting' with a sub-header. Below 'Link Speed / Duplex Mode Setting', there are two labels: 'WAN1' and 'WAN2'. Each label is followed by a dropdown menu currently set to 'Auto Mode'.

Dynamic Routing (RIPv2)

Enable Dynamic Routing (RIPv2), MH-2K/4K will advertise an IP address pool to the specific network so that the address pool can be provided to the network. You can choose to enable LAN, WAN or DMZ interface to allow RIP protocol supporting.

Routing information update timer: MH-2K/4K will send out the RIP protocol in a period of time to update the routing table, the default timer is 30 seconds.

Routing information timeout: If MH-2K/4K does not receive the RIP protocol from the other router in a period of time, MH-2K/4K will cut off the routing automatically until it receives RIP protocol again. The default timer is 180 seconds.



PLANET
Networking & Communication

Setting

- System
- Admin
- Setting
- Date/Time
- Multiple Subnet
- Hacker Alert
- Blaster Alert
- Route Table
- DHCP
- Host Table
- Dynamic DNS
- Language

Web Management (WAN Interface)
HTTP Port

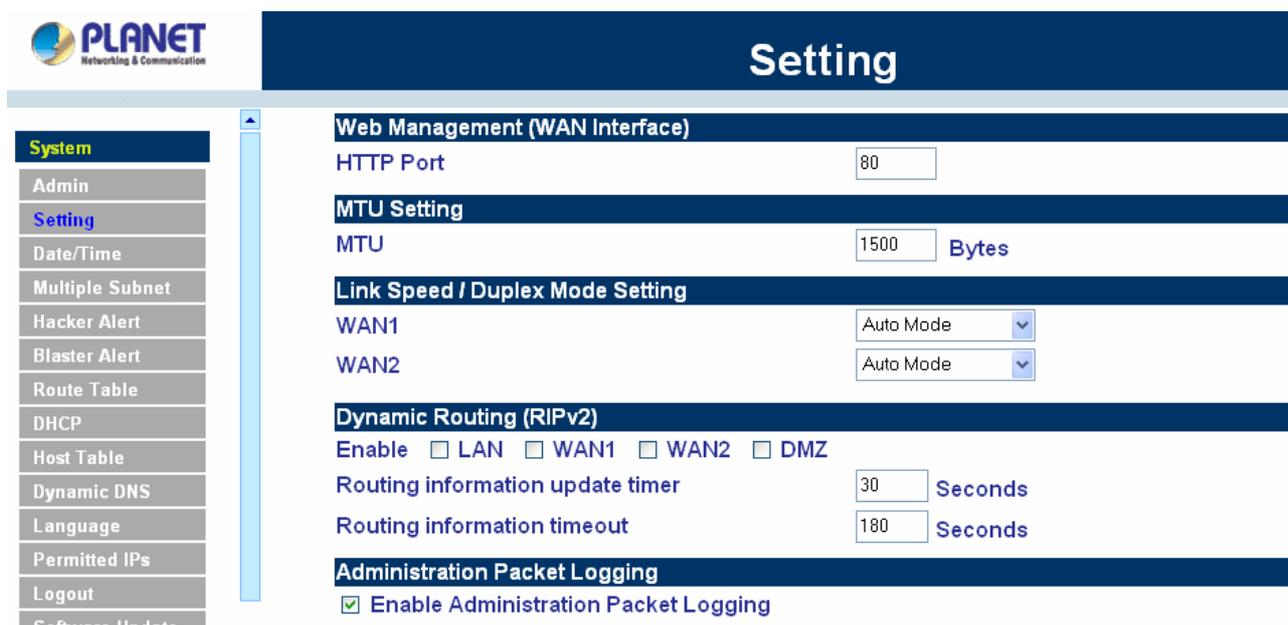
MTU Setting
MTU Bytes

Link Speed / Duplex Mode Setting
WAN1
WAN2

Dynamic Routing (RIPv2)
Enable LAN WAN1 WAN2 DMZ
Routing information update timer Seconds
Routing information timeout Seconds

Administration Packet Logging

Step 1. Select this option to the device's **Administration Packet Logging**. Once this function is enabled, every packet to this appliance will be recorded for system administrator to trace.



PLANET
Networking & Communication

Setting

- System
- Admin
- Setting
- Date/Time
- Multiple Subnet
- Hacker Alert
- Blaster Alert
- Route Table
- DHCP
- Host Table
- Dynamic DNS
- Language
- Permitted IPs
- Logout
- Software Update

Web Management (WAN Interface)
HTTP Port

MTU Setting
MTU Bytes

Link Speed / Duplex Mode Setting
WAN1
WAN2

Dynamic Routing (RIPv2)
Enable LAN WAN1 WAN2 DMZ
Routing information update timer Seconds
Routing information timeout Seconds

Administration Packet Logging
 Enable Administration Packet Logging

System Reboot

Once this function is enabled, MH-2K/4K will be rebooted.

Reboot Appliance: Click **Reboot**.

A confirmation pop-up box will appear. Follow the confirmation pop-up box, click **OK** to restart MH-2K/4K or click **Cancel** to discard changes

PLANET
Networking & Communication

Setting

System

- Admin
- Setting
- Date/Time
- Multiple Subnet
- Hacker Alert
- Blaster Alert
- Route Table
- DHCP
- Host Table
- Dynamic DNS
- Language
- Permitted IPs
- Logout
- Software Update

Web Management (WAN Interface)
HTTP Port

MTU Setting
MTU Bytes

Link Speed / Duplex Mode Setting

WAN1

WAN2

Dynamic Routing (R)
Enable LAN

Routing information update timer Seconds

Routing information timeout Seconds

Administration Packet Logging
 Enable Administration Packet Logging

System Reboot
Reboot the System

4.1.3 Date/Time

Synchronizing the MH-2K/4K with the System Clock

Administrator can configure MH-2K/4K's date and time by either syncing to an Internet Network Time Server (NTP) or by syncing to your computer's clock.

Follow these steps to sync to an Internet Time Server

- Step 1.** Enable synchronization by checking the box.
- Step 2.** Click the down arrow to select the offset time from GMT.
- Step 3.** Enter the Server IP Address or Server name with which you want to synchronize.
- Step 4. Update system clock every 5 minutes** You can set the interval time to synchronize with outside servers. If you set it to 0, it means the device will not synchronize automatically.

Follow this step to sync to your computer's clock.

- Step 1.** Click on the **Sync** button. Click **OK** to apply the setting or click **Cancel** to discard changes.

PLANET
Networking & Communication

Date/Time

System time : Wed Jan 1 04:25:35 2003

Synchronize system clock

Enable synchronize with an Internet time Server

Set offset hours from GMT [Assist](#)

Server IP / Name [Assist](#)

Update system clock every minutes (0 : means update at booting time)

Synchronize system clock with this client

4.1.4 Multiple Subnet

NAT mode

Multiple Subnet allows local port to set multiple subnet works and connect with the internet through different WAN 1 IP Addresses.

For instance: The lease line of a company applies several real IP Addresses 168.85.88.0/24, and the company is divided into R&D department, service, sales department, procurement department, accounting department, the company can distinguish each department by different subnet works for the purpose of convenient management. The settings are as the following:

1. R&D department sub-network: 192.168.1.11/24(LAN) \leftrightarrow 168.85.88.253(WAN 1)
2. Service department sub-network: 192.168.2.11/24(LAN) \leftrightarrow 168.85.88.252(WAN 1)
3. Sales department sub-network: 192.168.3.11/24(LAN) \leftrightarrow 168.85.88.251(WAN 1)
4. Procurement department sub-network: 192.168.4.11/24(LAN) \leftrightarrow 168.85.88.250(WAN 1)
5. Accounting department sub-network: 192.168.5.11/24(LAN) \leftrightarrow 168.85.88.249(WAN 1)

The first department(R&D department) was set while setting interface IP, the other four ones have to be added in Multiple Subnet, after completing the settings, each department use the different WAN IP Address to connect to the internet. The settings of LAN computers on service department are as the following

Service IP Address: 192.168.2.1

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.2.11

The other departments are also set by groups, this is the function of Multiple Subnet.

Multiple Subnet settings

Click Multiple Subnet in the System menu to enter Multiple Subnet window.

WAN Interface IP / Forwarding Mode	Alias IP of Int. Interface / Netmask	Configure
WAN 1 : 192.168.99.158 / NAT	192.168.2.1 / 255.255.255.0	Modify Remove
WAN 2 : 192.168.98.158 / NAT		

[New Entry](#)

Multiple Subnet functions:

WAN Interface IP / Forwarding Mode: Display WAN Port IP Address and Forwarding Mode.

Alias IP of Int. Interface / Netmask: Local port IP Address and subnet Mask.

Configure: Modify the settings of Multiple Subnet. Click Modify to modify the parameters of Multiple Subnet or click Delete to delete settings.

Add a Multiple Subnet NAT Mode:

Step 1: Click the **New Entry** button below to add Multiple Subnet.

Step 2: Enter the IP Address in the website name column of the new window.

Alias IP of LAN Interface: Enter Local port IP Address.

Netmask: Enter Local port subnet Mask.

WAN Interface IP: Add WAN 1 or WAN 2 IP.

Forwarding Mode: Click the NAT button below to setup.

Step 3: Click OK to add Multiple Subnet or click Cancel to discard changes.

WAN Interface IP			Forwarding Mode	
WAN1	192.168.99.159	Assist	<input checked="" type="radio"/> NAT	<input type="radio"/> Routing
WAN2	192.168.98.160	Assist	<input checked="" type="radio"/> NAT	<input type="radio"/> Routing

OK Cancel

Modify a Multiple Subnet:1

Step 1: Find the IP Address you want to modify and click Modify.

Step 2: Enter the new IP Address in Modify Multiple Subnet window.

Step 3: Click the OK button below to change the setting or click Cancel to discard changes.

WAN Interface IP			Forwarding Mode	
WAN1	192.168.99.158	Assist	<input checked="" type="radio"/> NAT	<input type="radio"/> Routing
WAN2	192.168.98.158	Assist	<input checked="" type="radio"/> NAT	<input type="radio"/> Routing

Removing a Multiple Subnet:

Step 1: Find the IP Address you want to delete and click Delete.

Step 2: A confirmation pop-up box will appear, click OK to delete the setting or click Cancel to discard changes.

Routing Mode

Multiple Subnet allows local port to set Multiple Subnet Routing Mode and connect with the internet through different WAN IP Addresses.

For example, the leased line of a company applies several real IP Addresses 168.85.88.0/24 and the company is divided into R&D, Customer Service, Sales, Procurement, and Accounting Department. The company can distinguish each department by different sub-network for the purpose of convenient management.

The settings are as the following:

R&D: Alias IP of LAN interface - 168.85.88.1, Netmask: 255.255.255.192

Sales: Alias IP of LAN interface - 168.85.88.65, Netmask: 255.255.255.192

Procurement: Alias IP of LAN interface - 168.85.88.129, Netmask: 255.255.255.192

Accounting: Alias IP of LAN interface - 168.85.88.193, Netmask: 255.255.255.192

Click System Configuration on the left side menu bar, then click Multiple Subnet below it. Enter Multiple Subnet window.

WAN Interface IP / Forwarding Mode	Alias IP of Internal Interface / Netmask	Configure
WAN 1 : --- / Routing	168.85.88.1 / 255.255.255.192	Modify Remove
WAN 2 : 192.168.98.157 / NAT		

[New Entry](#)

Multiple Subnet functions

WAN Interface IP / Forwarding Mode: Display WAN Port IP Address and Forwarding Mode which is NAT Mode or Routing Mode.

Alias IP of Int. Interface / Subnet Mask: Local port IP Address and subnet Mask.

Modify: Modify the settings of Multiple Subnet. Click Modify to modify the parameters of Multiple Subnet or click **Remove** to delete settings.

Adding a Multiple Subnet Routing Mode

Step 1: Click the Add button below to add Multiple Subnet.

Step 2: Enter the IP Address in Add Multiple Subnet window.

Alias IP of LAN Interface: Enter Local port IP Address.

Netmask: Enter Local port subnet Mask.

WAN Interface IP: Add WAN1 or WAN2 IP

Forwarding Mode: Click the Routing button below to setup.

Step 3: Click OK to add Multiple Subnet or click Cancel to discard changes.



Multiple Subnet

Add New Multiple Subnet IP			
Alias IP of LAN Interface	168.85.88.129		
Netmask	255.255.255.192		
WAN Interface IP		Forwarding Mode	
WAN1	0.0.0.0	Assist	<input type="radio"/> NAT <input checked="" type="radio"/> Routing
WAN2	192.168.98.161	Assist	<input checked="" type="radio"/> NAT <input type="radio"/> Routing

Step 4: Adding a new WAN to LAN Policy. In the Incoming window, click the New Entry button.



Incoming

System	Source	Destination	Service	Action	Option	Configure	Move
Interface	Outside_Any	Inside_Any(Routing)	ANY			Modify Remove	To 1
Address	New Entry						
Service							
Schedule							
Content Filtering							
Virtual Server							
VPN							
Policy							
Outgoing							
Incoming							
WAN Table							

Modify a Multiple Subnet Routing Mode

Step 1: Find the IP Address you want to modify in Multiple Subnet menu, then click Modify button, on the right side of the service providers, click OK.

Step 2: Enter the new IP Address in Modify Multiple Subnet window.

Step 3: Click the OK button below to change the setting or click Cancel to discard changes.



Multiple Subnet

Add New Multiple Subnet IP			
Alias IP of LAN Interface	168.85.88.1		
Netmask	255.255.0.0		
WAN Interface IP		Forwarding Mode	
WAN1	0.0.0.0	Assist	<input type="radio"/> NAT <input checked="" type="radio"/> Routing
WAN2	192.168.98.157	Assist	<input checked="" type="radio"/> NAT <input type="radio"/> Routing

Removing a Multiple Subnet Routing Mode

Step 1: Find the IP Address you want to delete in Multiple Subnet menu, then click Delete button, on the right side of the service providers, click OK.

Step 2: A confirmation pop-up box will appear, click OK to delete the setting or click Cancel to discard

changes.

4.1.5 Hacker Alert

The Administrator can enable the device's auto detect functions for hacker attacking this section. When abnormal conditions occur, MH-2K/4K will send an e-mail alert to notify the Administrator, and also display warning messages in the **Event** window of **Alarm**.

Auto Detect functions

- Some worms will attack your MS system in accordance with their weakness, such as **Sasser**, **Blaster**, **Code Red** and **Nimda**. Select the blocking function of MH-4000 will prevent you to be attacking by these worms (MH-4000 only).
- **Detect SYN Attack**: Select this option to detect TCP SYN attacks that hackers send to server computers continuously to block or cut down all the connections of the servers. These attacks will prevent valid users from connecting to the servers. After enabling this function, the System Administrator can enter the number of SYN packets per second that is

allowed to enter MH-2K/4K. Once the SYN packets exceed this limit, the activity will be logged in Alarm and an email alert is sent to the Administrator. The default SYN flood threshold is set to 200 Pkts/Sec .

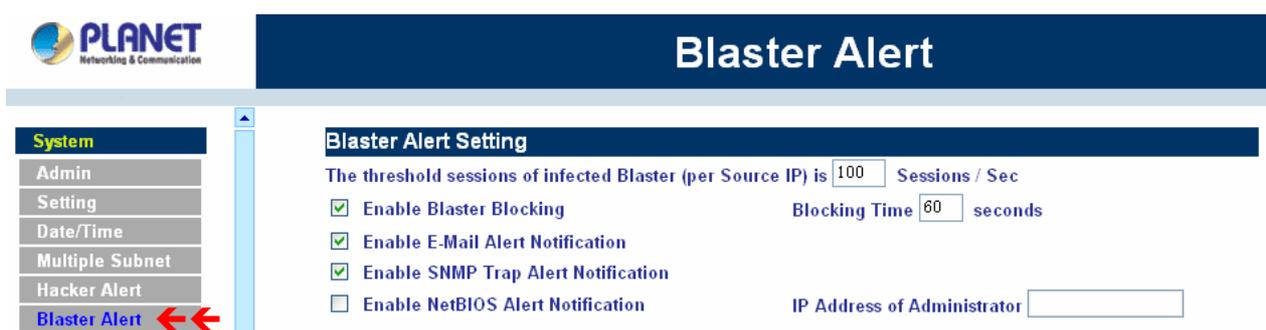
- **Detect ICMP Flood:** Select this option to detect ICMP flood attacks. When hackers continuously send PING packets to all the machines of the LAN networks or to the MH-2K/4K, your network is experiencing an ICMP flood attack. This can cause traffic congestion on the network and slows the network down. After enabling this function, the System Administrator can enter the number of ICMP packets per second that is allowed to enter the network or MH-2K/4K. Once the ICMP packets exceed this limit, the activity will be logged in Alarm and an email alert is sent to the Administrator. The default ICMP flood threshold is set to 1000 Pkts/Sec.
- **Detect UDP Flood:** Select this option to detect UDP flood attacks. A UDP flood attack is similar to an ICMP flood attack. After enabling this function, the System Administrator can enter the number of UDP packets per second that is allow to enter the network MH-2K/4K. Once the UDP packets exceed this limit, the activity will be logged in Alarm and an email alert is sent to the Administrator. The default UDP flood threshold is set to 1000 Pkts/Sec .
- **Detect Ping of Death Attack:** Select this option to detect the attacks of tremendous trash data in PING packets that hackers send to cause System malfunction. This attack can cause network speed to slow down, or even make it necessary to restart the computer to get a normal operation.
- **Detect Tear Drop Attack:** Select this option to detect tear drop attacks. These are packets that are segmented to small packets with negative length. Some Systems treat the negative value as a very large number, and copy enormous data into the System to cause System damage, such as a shut down or a restart.
- **Detect IP Spoofing Attack:** Select this option to detect spoof attacks. Hackers disguise themselves as trusted users of the network in Spoof attacks. They use a fake identity to try to pass through MH-2K/4K System and invade the network.
- **Filter IP Source Route Option:** Each IP packet can carry an optional field that specifies the replying address that can be different from the source address specified in packet's header. Hackers can use this address field on disguised packets to invade LAN networks and send LAN networks' data back to them.
- **Detect Port Scan Attack:** Select this option to detect the port scans hackers use to continuously scan networks on the Internet to detect computers and vulnerable ports that are opened by those computers.
- **Detect Land Attack:** Some Systems may shut down when receiving packets with the same source and destination addresses, the same source port and destination port, and when SYN on the TCP header is marked.

Enable this function to detect such abnormal packets.

After enabling the needed detect functions, click OK to activate the changes.

4.1.6 Blaster Alert

The Administrator can enable the device's auto detect functions for blaster worm attacking the local network. When abnormal conditions occur, MH-2K/4K will send an e-mail alert and/or SNMP trap to notify the Administrator, and also display warning messages in the **Blaster** window of **Alarm**.



Blaster Alert

Blaster Alert Setting

The threshold sessions of infected Blaster (per Source IP) is Sessions / Sec

Enable Blaster Blocking Blocking Time seconds

Enable E-Mail Alert Notification

Enable SNMP Trap Alert Notification

Enable NetBIOS Alert Notification IP Address of Administrator

Blaster Alerts Settings

- **Enable Blaster Blocking:** Select this option to enable the blaster blocking function. Once the blaster worm is detected, it will block the TCP port 135 for user-drefined blocking time.
- **Enable E-mail Alert Notification:** When Blaster worm is detected, send alert e-mail to administrator by using e-mail address defined on System -> Setting.
- **Enalbe SNMP Trap Alert Notification:** When Blaster worm is detected, send SNMP trap to user-defined SNMP trap receiver IP address defined on System -> SNMP (MH-4000 only).
- **Enable NetBIOS Alert Notification:** When Blaster worm is detected, send alert message to administrator by using "Net send" command (MH-4000 only).

After enabling the needed options, click OK to activate the changes.

4.1.7 Route Table

In this section, the Administrator can add static routes for the networks.

Entering the Route Table screen

- Step 1. Click **System** on the left side menu bar, then click **Route Table** below it. The Route Table window appears, in which current route settings are shown.

Route Table functions

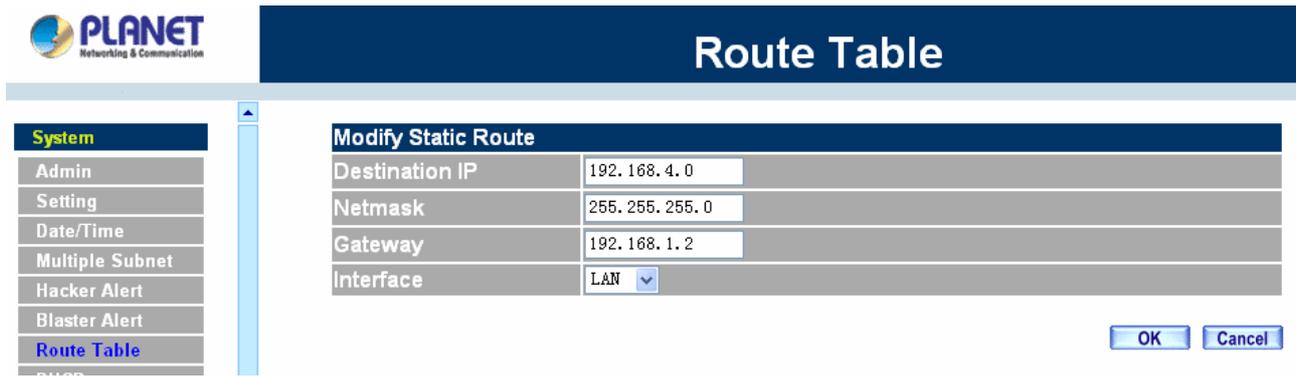
- **Interface:** Destination network, LAN or WAN 1 networks.
- **Destination IP:** IP address of destination network.
- **NetMask:** Netmask of destination network.
- **Gateway:** Gateway IP address for connecting to destination network.
- **Configure:** Change settings in the route table.

Adding a new Static Route

- Step 1. In the Route Table window, click the **New Entry** button.
- Step 2. In the Add New Static Route window, enter new static route information.
- Step 3. In the Interface field's pull-down menu, choose the network to connect (LAN, WAN1, WAN2, DMZ).
- Step 4. Click **OK** to add the new static route or click **Cancel** to cancel.

Modifying a Static Route:

- Step 1. In the Route Table menu, find the route to edit and click the corresponding Modify option in the Configure field.
- Step 2. In the **Modify Static Route** window, modify the necessary routing addresses.
- Step 3. Click **OK** to apply changes or click **Cancel** to cancel it.



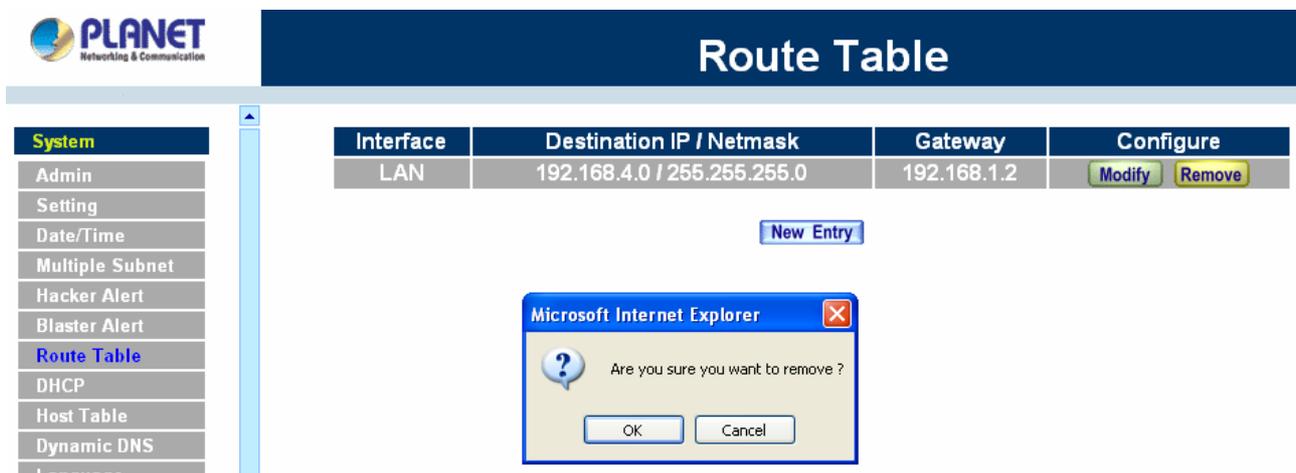
The screenshot shows the PLANET Route Table configuration interface. On the left is a 'System' menu with options: Admin, Setting, Date/Time, Multiple Subnet, Hacker Alert, Blaster Alert, Route Table (highlighted), and DHCP. The main area is titled 'Route Table' and contains a 'Modify Static Route' form with the following fields:

Destination IP	192.168.4.0
Netmask	255.255.255.0
Gateway	192.168.1.2
Interface	LAN

At the bottom right of the form are 'OK' and 'Cancel' buttons.

Removing a Static Route

- Step 1. In the Route Table window, find the route to remove and click the corresponding Remove option in the Configure field.
- Step 2. In the Remove confirmation pop-up box, click **OK** to confirm removing or click **Cancel** to cancel it.



The screenshot shows the PLANET Route Table configuration interface. The 'System' menu is on the left. The main area is titled 'Route Table' and contains a table with the following data:

Interface	Destination IP / Netmask	Gateway	Configure
LAN	192.168.4.0 / 255.255.255.0	192.168.1.2	Modify Remove

Below the table is a 'New Entry' button. A 'Microsoft Internet Explorer' dialog box is open in the foreground, asking 'Are you sure you want to remove?' with 'OK' and 'Cancel' buttons.

4.1.8 DHCP

In the section, the Administrator can configure DHCP (Dynamic Host Configuration Protocol) settings for the LAN (LAN) network.

Entering the DHCP window

Click **System** on the left hand side menu bar, then click **DHCP** below it. The DHCP window appears in which current DHCP settings are shown on the screen.



DHCP

System	Dynamic IP Address			
Admin	Subnet	192.168.1.0	Netmask	255.255.255.0
Setting	Gateway	192.168.1.1	Broadcast	192.168.1.255
Date/Time				
Multiple Subnet	<input checked="" type="checkbox"/> Enable DHCP Support			
Hacker Alert	Domain Name <input style="width: 150px;" type="text"/>			
Blaster Alert	<input type="checkbox"/> Automatically Get DNS			
Route Table	DNS Server 1	<input style="width: 80px;" type="text" value="192.168.1.1"/>		
DHCP ←←	DNS Server 2	<input style="width: 80px;" type="text"/>		
Host Table	WINS Server 1	<input style="width: 80px;" type="text"/>		
Dynamic DNS	WINS Server 2	<input style="width: 80px;" type="text"/>		
Language	LAN Interface :			
Permitted IPs	Client IP Range 1	<input style="width: 80px;" type="text" value="192.168.1.2"/>	To	<input style="width: 80px;" type="text" value="192.168.1.254"/>
Logout	Client IP Range 2	<input style="width: 80px;" type="text"/>	To	<input style="width: 80px;" type="text"/>
Software Update	Leased Time <input style="width: 30px;" type="text" value="24"/> hours			
Interface				
Address				
Service				
Schedule				

Dynamic IP Address functions

- **Subnet:** LAN network's subnet
- **NetMask:** LAN network's netmask
- **Gateway:** LAN network's gateway IP address
- **Broadcast:** LAN network's broadcast IP address

Enabling DHCP Support

Step 1. In the Dynamic IP Address window, click **Enable DHCP Support**.

Domain Name: The Administrator may enter the name of the LAN network domain if preferred.

Automatically Get DNS: Check this box to automatically detect DNS server.

DNS Server 1 : Enter the distributed IP address of DNS Server 1.

DNS Server 2 : Enter the distributed IP address of DNS Server 2.

WINS Server 1 : Enter the distributed IP address of WINS Server 1.

WINS Server 2 : Enter the distributed IP address of WINS Server 2.

LAN interface:

Client IP Address Range 1: Enter the starting and the ending IP address dynamically assigning to DHCP clients.

Client IP Address Range 2: Enter the starting and the ending IP address dynamically assigning to DHCP clients. (Optional)

DMZ interface:

Client IP Address Range 1: Enter the starting and the ending IP address dynamically assigning to DHCP clients.

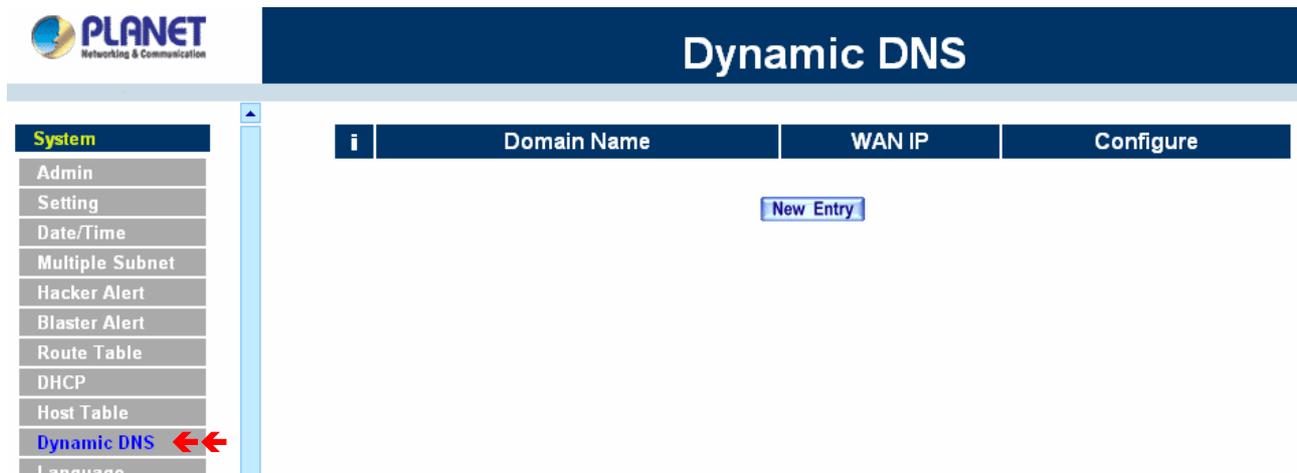
Client IP Address Range 2: Enter the starting and the ending IP address dynamically assigning to DHCP clients. (Optional)

Leased Time: Enter the leased time for DHCP.

Step 2. Click **OK** to enable DHCP support.

4.1.9 Dynamic DNS

The **Dynamic DNS** (require Dynamic DNS Service) allows you to alias a dynamic IP address to a static hostname, allowing your device to be more easily accessed by specific name. When this function is enabled, the IP address in Dynamic DNS Server will be automatically updated with the new IP address provided by ISP.



Click **Dynamic DNS** in the **System** menu to enter Dynamic DNS window.

The icons in Dynamic DNS window:

!: Update Status, Connecting; Update succeed; Update fail; Unidentified error.

Domain name: Enter the password provided by ISP.

WAN IP Address: IP Address of the WAN port.

Configure: Modify dynamic DNS settings. Click **Modify** to change the DNS parameters; click Delete to delete the settings.

How to use dynamic DNS:

MH-2K/4K provides many service providers, users have to register prior to use this function. For the usage regulations, see the providers' websites.

How to register:

Firstly, Click **Dynamic DNS** in the **System** menu to enter Dynamic DNS window, then click **Add** button, on the right side of the service providers, click **Register**, the service providers' website will appear, please refer to the website for the way of registration.

Dynamic DNS

Add New Dynamic DNS

Service Provider : DynDNS (www.dyndns.org) [U. S. A.] [Sign up](#)

WAN IP: Automatically WAN1

User Name :

Password :

Domain Name: . ath.cx

OK Cancel

Click to link to the website selected on the left.

Add Dynamic DNS settings

Step 1. Click **Add** button.

Step 2. Click the information in the column of the new window.

Service providers: Select service providers.

Sign up: to the service providers' website.

WAN IP Address: IP Address of the WAN port.

Automatically : Check to automatically fill in the WAN IP.。

User Name: Enter the registered user name.

Password: Enter the password provided by ISP (Internet Service Provider).

Domain name: Your host domain name provided by ISP.

Click **OK** to add dynamic DNS or click **Cancel** to discard changes.

Dynamic DNS

Add New Dynamic DNS

Service Provider : DynDNS (www.dyndns.org) [U. S. A.] [Sign up](#)

WAN IP: 192.168.99.158 Automatically WAN1

User Name : jackyko

Password :

Domain Name: planetest . dyndns.org

OK Cancel

Modify dynamic DNS

Step 1. Find the item you want to change and click **Modify**.

Step 2. Enter the new information in the Modify Dynamic DNS window.

Click **OK** to change the settings or click **Cancel** to discard changes.。

Dynamic DNS

Modify Dynamic DNS

Service Provider : DynDNS (www.dyndns.org) [U.S.A.] [Sign up](#)

WAN IP: 192.168.99.158 Automatically WAN1

User Name : jackyko

Password :

Domain Name: planetest . dyndns.org

Remove Dynamic DNS

- Step 1. Find the item you want to change and click **Remove**.
- Step 2. A confirmation pop-up box will appear, click OK to delete the settings or click Cancel to discard changes.

Dynamic DNS

i	Domain Name	WAN IP	Configure
	planetest.dyndns.org	192.168.99.158	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Microsoft Internet Explorer

Are you sure you want to remove?

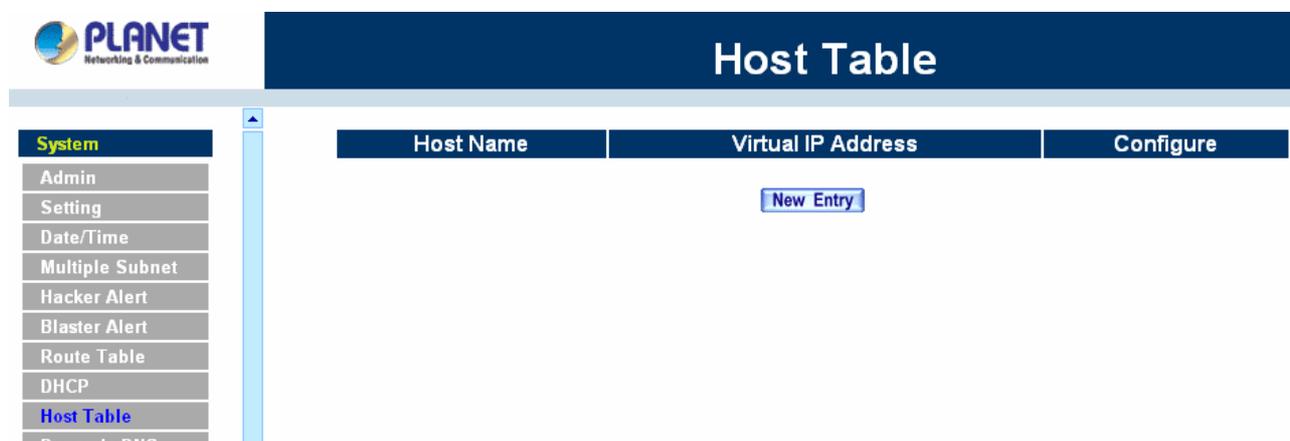
4.1.10 Host Table

The Multi-Homing Security Gateway's Administrator may use the Host Table function to make the MH-2K/4K act as a DNS Server for the LAN and DMZ network. All DNS requests to a specific Domain Name will be routed to MH-2K/4K's IP address. For example, let's say an organization has their mail server (i.e., mail.planet.com.tw) in the DMZ network (i.e. 192.168.10.10). The outside Internet world may access the mail server of the organization easily by its domain name, providing that the Administrator has set up Virtual Server or Mapped IP settings correctly. However, for the users in the LAN network, their WAN DNS server will assign them a public IP address for the mail server. So for the LAN network to access the mail server (mail.planet.com.tw), they would have to go out to the Internet, then come back through MH-2K/4K to access the mail server. Essentially, the LAN network is accessing the mail server by a real public IP address, while the mail server serves their request by a NAT address and not a real one.

This odd situation occurs when there are servers in the DMZ network and they are bound to real IP addresses. To avoid this, set up Host Table so all the LAN network computers will use MH-2K/4K as a DNS server, which acts as the DNS Proxy.

If you want to use the Host Table function of the device, the end user's main DNS server IP address should be the same IP Address as the device.

Click on **System** in the menu bar, then click on **Host Table** below it. The Host Table window will appear.



Below is the information needed for setting up the **Host Table**:

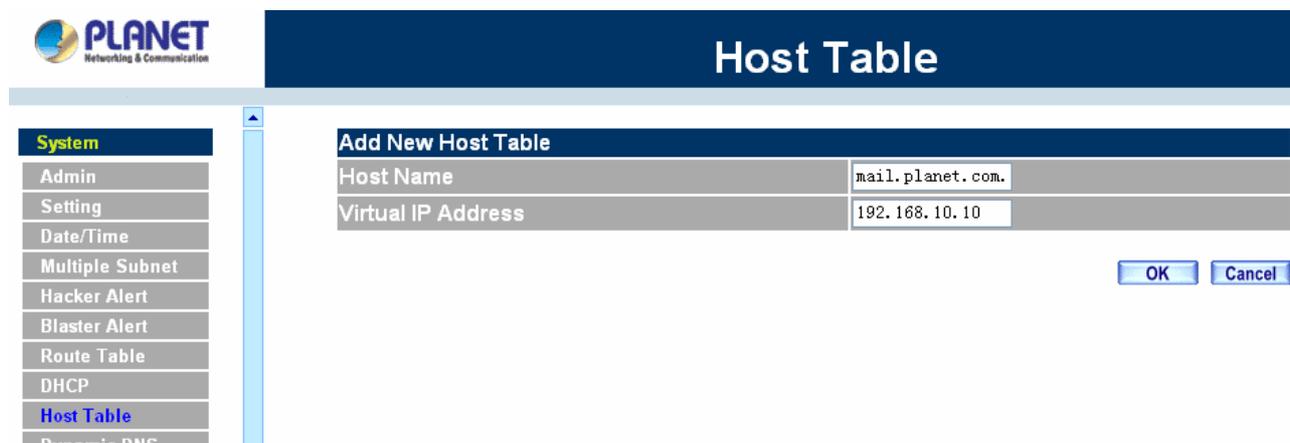
- **Host Name:** The domain name of the server
- **Virtual IP Address:** The virtual IP address respective to Host Table
- **Configure:** modify or remove each Host table policy

Adding a new Host Table

Step 1: Click on the **New Entry** button and the **Add New Host Table** window will appear.

Step 2: Fill in the appropriate settings for the domain name and virtual IP address.

Step 3: Click **OK** to save the policy or **Cancel** to cancel.



Modifying a Host Table

Step 1: In the Host Table window, find the policy to be modified and click the corresponding **Modify** option in the **Configure** field.

Step 2: Make the necessary changes needed.

Step 3: Click **OK** to save changes or click on **Cancel** to cancel modifications.

The screenshot shows the 'Host Table' configuration window. On the left is a 'System' menu with options: Admin, Setting, Date/Time, Multiple Subnet, Hacker Alert, Blaster Alert, Route Table, DHCP, Host Table (highlighted), and Dynamic DNS. The main area is titled 'Host Table' and contains a 'Modify Host Table' dialog. The dialog has two input fields: 'Host Name' with the value 'mail.planet.com.' and 'Virtual IP Address' with the value '192.168.10.10'. At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

Removing a Host Table

Step 1: In the **Host Table** window, find the policy to be removed and click the corresponding **Remove** option in the **Configure** field.

Step 2: A confirmation pop-up box will appear, click **OK** to remove the DNS Proxy or click **Cancel**.

The screenshot shows the 'Host Table' configuration window. The 'System' menu is on the left. The main area is titled 'Host Table' and contains a table with the following data:

Host Name	Virtual IP Address	Configure
mail.planet.com.tw	192.168.10.10	Modify Remove

Below the table is a 'New Entry' button. A 'Microsoft Internet Explorer' dialog box is overlaid on the screen, asking 'Are you sure you want to remove?' with 'OK' and 'Cancel' buttons.

4.1.11 SNMP (MH-4000 only)

The administrator could send the information to SNMP by enabling **SNMP Agent**.

NOTE: This function is not supported on MH-2000.

- Step 1: Enable SNMP Agent.
- Step 2: Enter Appliance Name.
- Step 3: Enter Appliance Location.
- Step 4: Enter Community.
- Step 5: Enter Contact Person.
- Step 6: Enter Description or not.

The screenshot shows the Planet Multi-Homing Security Gateway web interface. The left sidebar contains a menu with items like System, Admin, Setting, Date/Time, Multiple Subnet, Hacker Alert, Blaster Alert, Route Table, DHCP, Dynamic DNS, Host Table, SNMP, Permitted IPs, Language, and Logout. The main content area is titled "SNMP" and is divided into two sections: "SNMP Agent Setting" and "SNMP Trap Setting".

SNMP Agent Setting

- Enable SNMP Agent
- Appliance Name: MH-4000
- Appliance Location: Taipei, Taiwan
- Community: public
- Contact Person: root@public
- Description: MH-4000 Multi-Homing Secur

SNMP Trap Setting

- Enable SNMP Trap Alert Notification
- SNMP Trap Receiver Address: 192.168.99.156
- SNMP Trap Port: 162
- SNMP Trap Test: [Trap Test](#)

SNMP Trap Settings

Allow the System Administrator to enable SNMP Trap Alert Notification for sending trap message to the set SNMP Trap receiver IP address when the network is disconnected/ connecting and being attacked by hackers or when emergency conditions occur.

Step 1: Enable SNMP Trap Alert Notification.

Step 2: SNMP Trap Receiver Address : Set the SNMP Trap Receiver Address.

Step 3: SNMP Trap Port : Set the SNMP Trap Receiver Port.

Step 4: SNMP Trap Test : Click the [Trap Test] button to test if you can receive the SNMP Trap Alert Notification.

4.1.12 Permitted IPs

Only the authorized IP address is permitted to manage MH-2K/4K.

The screenshot shows the Planet Multi-Homing Security Gateway web interface for the "Permitted IPs" configuration page. The left sidebar menu is the same as in the previous screenshot, with "Permitted IPs" highlighted in blue and two red arrows pointing to it. The main content area has a dark blue header "Permitted IPs" and a table with the following columns: Name, IP Address / Netmask, Ping, HTTP, HTTPS, and Configure. Below the table is a "New Entry" button.

Name	IP Address / Netmask	Ping	HTTP	HTTPS	Configure
New Entry					

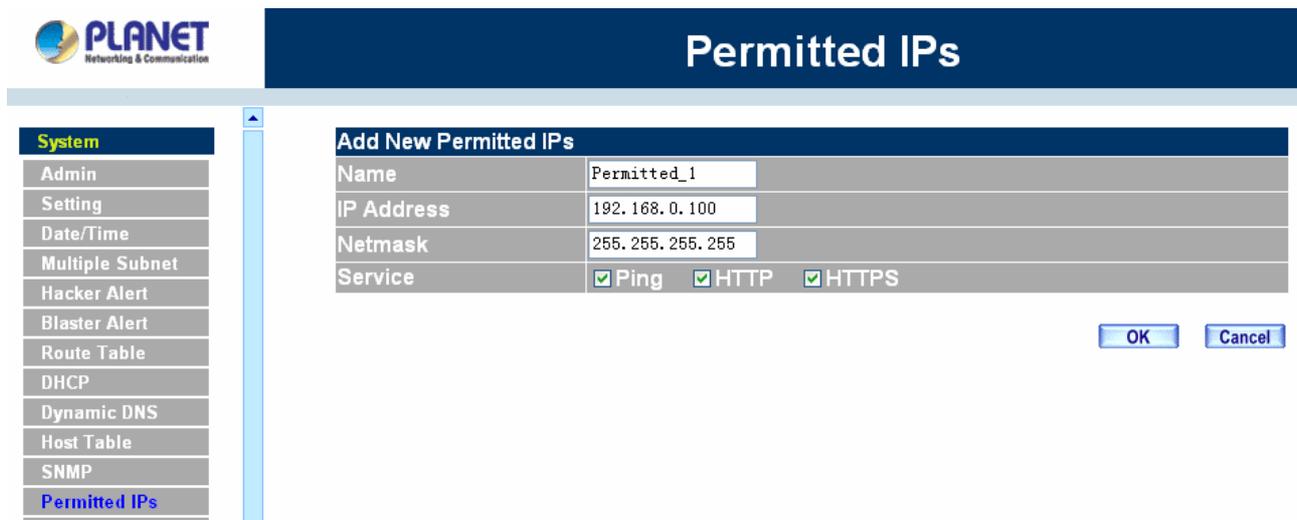
Add Permitted IP Address

Step 1. Click **New Entry** button.

Step 2. In IP Address field, enter the LAN IP address or WAN IP address.

- **IP address:** Enter the LAN IP address or WAN IP address.
- **Netmask:** Enter the netmask of LAN/WAN.
- **Ping:** Select this to allow the external network to ping the IP Address of the Firewall.
- **HTTP/HTTPS:** Check this item, Web User can use HTTP or HTTPS to connect to the Setting window of MH-2K/4K (HTTPS is only available with MH-4000).

Step 3. Click **OK** to add Permitted IP or click **Cancel** to discard changes.



The screenshot shows the 'Permitted IPs' configuration page. On the left is a navigation menu with 'Permitted IPs' selected. The main area contains a form titled 'Add New Permitted IPs' with the following fields:

Name	Permitted_1
IP Address	192.168.0.100
Netmask	255.255.255.255
Service	<input checked="" type="checkbox"/> Ping <input checked="" type="checkbox"/> HTTP <input checked="" type="checkbox"/> HTTPS

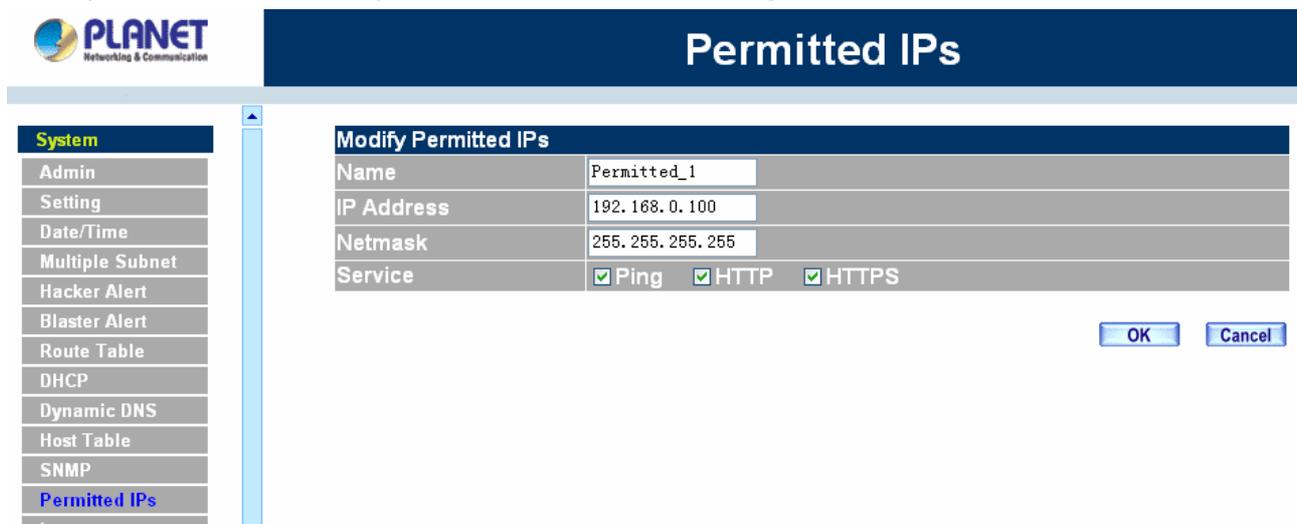
At the bottom right of the form are 'OK' and 'Cancel' buttons.

Modify Permitted IP Address

Step 1. In the table of **Permitted IPs**, highlight the IP you want to modify, and then click **Modify**.

Step 2. In **Modify Permitted IP**, enter new IP address.

Step 3. Click **OK** to modify or click **Cancel** to discard changes.



The screenshot shows the 'Permitted IPs' configuration page. On the left is a navigation menu with 'Permitted IPs' selected. The main area contains a form titled 'Modify Permitted IPs' with the following fields:

Name	Permitted_1
IP Address	192.168.0.100
Netmask	255.255.255.255
Service	<input checked="" type="checkbox"/> Ping <input checked="" type="checkbox"/> HTTP <input checked="" type="checkbox"/> HTTPS

At the bottom right of the form are 'OK' and 'Cancel' buttons.

Remove Permitted IP addresses

Step 1. In the table of **Permitted IPs**, highlight the IP you want to remove, and then click **Remove**.

Step 2. In **Remove Permitted IP**, enter new IP address.

Step 3. In the confirm window, click **OK** to remove or click **Cancel** to discard changes.

The screenshot shows the 'Permitted IPs' configuration page. On the left is a 'System' menu with 'Permitted IPs' selected. The main area contains a table with the following data:

Name	IP Address / Netmask	Ping	HTTP	HTTPS	Configure
Permitted_1	192.168.0.100 / 255.255.255.255				Modify Remove

Below the table is a 'New Entry' button. A dialog box titled 'Microsoft Internet Explorer' is open, displaying a question mark icon and the text 'Are you sure you want to remove?'. It has 'OK' and 'Cancel' buttons.

4.1.13 Language

Administrator can configure MH-2K/4K to select the Language version

Step 1. Select the Language version (**English Version**, **Traditional Chinese Version** or **Simplified Chinese Version**).

Step 2. Click **[OK]** to set the Language version or click **Cancel** to discard changes.

The screenshot shows the 'Language' configuration page. On the left is a 'System' menu with 'Language' selected, indicated by two red arrows. The main area contains the following 'Language Setting' options:

- English Version
- Traditional Chinese Version
- Simplified Chinese Version

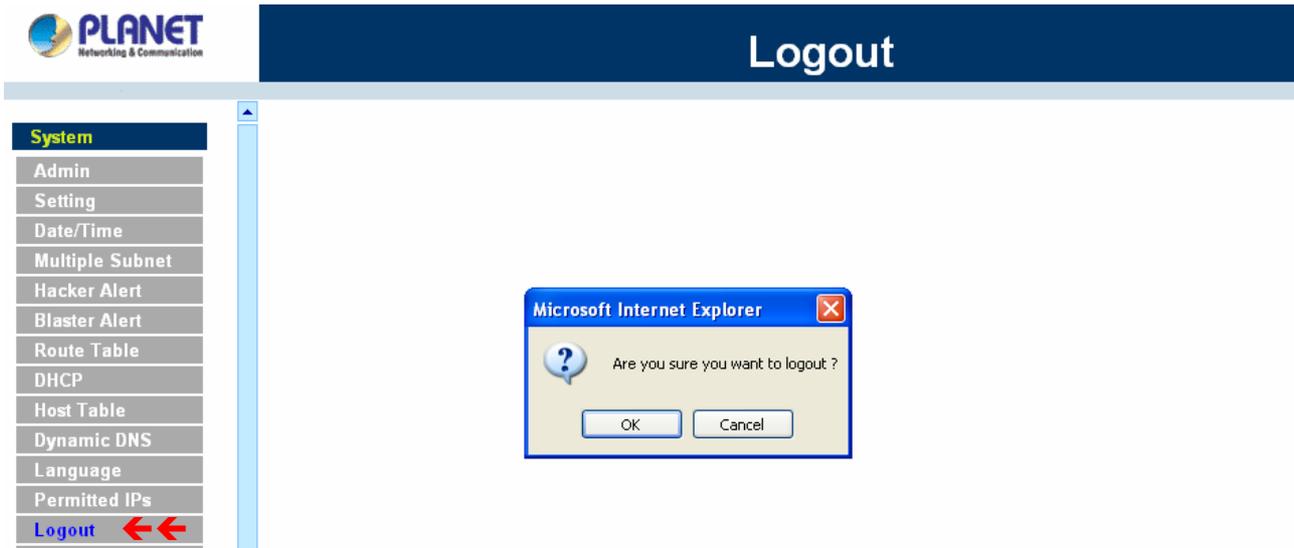
At the bottom right, there are 'OK' and 'Cancel' buttons.

4.1.14 Logout

Step 1. Select this option to the device's **Logout** MH-2K/4K. This function protects your system while you are away.

Step 2. Click Logout MH-2K/4K.

Step 3. Click **OK** to logout or click **Cancel** to discard the change.



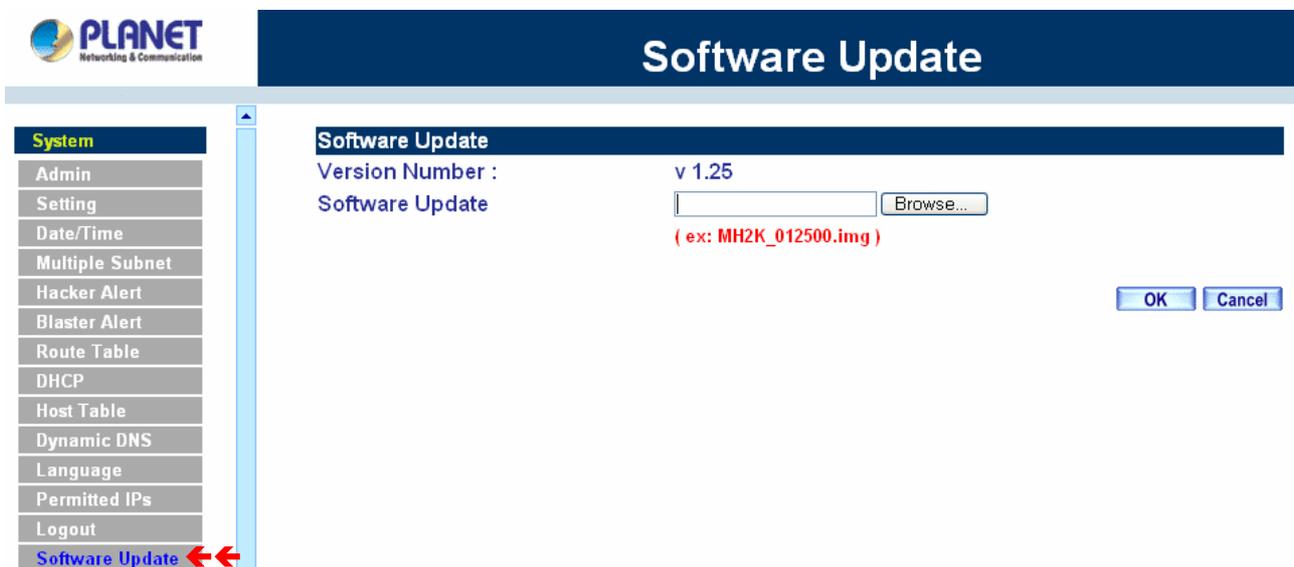
4.1.15 Software Update

Under **Software Update**, the admin may update the device's software with a newer software.

You may acquire the current version number of software in **Version Number**. Administrators may visit distributor's web site to download the latest version and save it in server's hard disc.

Step 1. Click **Browse** to select the latest version of Software.

Step 2. Click **OK** to update software.



NOTE: It takes three minutes to update the software. The system will restart automatically after updating the software.

4.2 Interface

In this section, the **Administrator** can set up the IP addresses for the office network. The Administrator may configure the IP addresses of the LAN network, the WAN 1/2 network, and the DMZ network. The netmask and gateway IP addresses are also configured in this section.

4.2.1 LAN

Entering the Interface menu:

Click on **Interface** in the left menu bar. Then click on **LAN** below it. The current settings of the interface addresses will appear on the screen.

The screenshot displays the configuration interface for the LAN network. The left sidebar contains a menu with the following items: System, Interface (highlighted), LAN, WAN, DMZ, Address, Service, and Schedule. The main content area is titled 'LAN Interface' and includes the following settings:

IP Address	192.168.1.1
Netmask	255.255.255.0
Enable	<input checked="" type="checkbox"/> Ping <input checked="" type="checkbox"/> HTTP <input checked="" type="checkbox"/> HTTPS

At the bottom right of the configuration area, there are two buttons: 'OK' and 'Cancel'.

Configuring the Interface Settings

Using the LAN **Interface**, the Administrator sets up the LAN network. The LAN network will use a private IP scheme. The private IP network will not be routable on the Internet.

IP Address: The private IP address of MH2000/MH4000's LAN network is the IP address of the LAN port of the device. The default IP address is 192.168.1.1. If the new LAN IP Address is not 192.168.1.1, the Administrator needs to set the IP Address on the computer to be on the same subnet as MH-2K/4K and restart the System to make the new IP address effective. For example, if MH-2K/4K's new LAN IP Address is 172.16.0.1, then enter the new LAN IP Address 172.16.0.1 in the URL field of browser to connect to MH-2K/4K.

NetMask: This is the subnet mask of the LAN network. The default netmask of the device is 255.255.255.0.

Ping: Select this to allow the LAN network to ping the IP Address of MH-2K/4K. If set to enable, the device will respond to ping packets from the LAN network.

HTTP/HTTPS: Select this to allow the device WEBUI to be accessed from the LAN network (HTTPS is only available with MH-4000).

4.2.2 WAN

Entering the Interface menu

Click on **Interface** in the left menu bar. Then click on **WAN** below it. The current settings of the interface addresses will appear on the screen.



Balance Mode : (Auto recommended)

WAN No.	Connect Mode	IP Address	Saturated Connections	Ping	HTTP	HTTPS	Configure	Priority
1	Static IP	192.168.99.94	1			---	<input type="button" value="Modify"/>	1
2	(Disable)	---	0	---	---	---	<input type="button" value="Modify"/>	0

Balance Mode:

Auto: MH-2K/4K distributes the WAN 1/2 download by proportion automatically according to the WAN download bandwidth. (For users who are using various download bandwidth)

Round-Robin: MH-2K/4K distributes the WAN 1/2 download bandwidth 1:1, in other words, it selects the agent by order. (For users who are using same download bandwidths)

By Traffic: MH-2K/4K distributes the WAN 1/2 download bandwidth by traffic. (For users who are connected to the Internet via a fixed WAN IP address)

By Session: MH-2K/4K distributes the WAN 1/2 download bandwidth by session. (For users who are connected to the Internet via a fixed WAN IP address)

By Packet: MH-2K/4K distributes the WAN 1/2 download bandwidth by packet and saturated connection. (For users who are connected to the Internet via a fixed WAN IP address)

WAN No: WAN port 1 or 2.

Connect Mode: Display the current connection mode: PPPoE, Dynamic IP Address (Cable Modem User) or Static IP Address.

IP Address: Display the current WAN IP Address.

Saturated Connections: Set the number for saturation whenever session numbers reach it, the MH-2K/4K switches to the next WAN port on the list. This function is only applicable for **By Session** mode.

Ping / HTTP/ HTTPS: Display Ping/HTTP/HTTPS functions of WAN 1/2 to show if they are enabled or disabled. (HTTPS is only available with MH-4000)

Configure: Click **Modify** to modify WAN 1/2 settings.

Priority: Set priority of WAN 1/2 for Internet Access.

WAN 1/2 Interface

Using the WAN 1/2 **Interface**, the Administrator can set up the **WAN 1/2** network. These IP Addresses are real public IP Addresses, and are routable on the Internet.

Alive Indicator Site IP: This feature is used to ping an address for detecting WAN connection status.

Service: ICMP You can select an IP address by Assist, or type an IP address manually.

Service: DNS You can select a DNS IP and Domain name by Assist, or type the related data manually.

For PPPoE (ADSL User): This option is for PPPoE users who are required to enter a username and password in order to connect, such as ADSL users.

Current Status: Displays the current line status of the PPPoE connection.

IP Address: Displays the IP Address of the PPPoE connection

Username: Enter the PPPoE username provided by the ISP.

Password: Enter the PPPoE password provided by the ISP.

IP Address provided by ISP:

Dynamic: Select this if the IP address is automatically assigned by the ISP.

Fixed: Select this if you were given a static IP address. Enter the IP address that is given to you by your ISP.

Max. Upstream/Downstream Bandwidth: The bandwidth provided by ISP.

Service-On-Demand:

Auto Disconnect: The PPPoE connection will automatically disconnect after a length of idle time (no activities). Enter in the amount of idle minutes before disconnection. Enter '0' if you do not want the PPPoE connection to disconnect at all.

Ping: Select this to allow the WAN 1 network to ping the IP Address of MH-2K/4K. This will allow people from the Internet to be able to ping MH-2K/4K. If set to enable, the device will respond to echo request packets from the WAN 1/2 network.

HTTP/HTTPS: Select this to allow the device WebUI to be accessed from the WAN 1 network. This will allow the WebUI to be configured from a user on the Internet. Keep in mind that the device always requires a username and password to enter the WebUI. (HTTPS is only available with MH-4000)



WAN

System
Interface
LAN
WAN
DMZ
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
Inbound Balance
Log
Alarm
Accounting Report
Statistics
Status

WAN1 Interface

Service : Alive Indicator Site IP : [Assist](#)

Wait seconds between sending alive packet. (0 - 99 , 0 : means not checking)

- PPPoE** (ADSL User)
 Dynamic IP Address (Cable Modem User)
 Static IP Address

Current Status **Disconnected** [Connect](#)

IP Address **0.0.0.0** [Disconnect](#)

User Name

Password

IP Address provided by ISP **Dynamic**

Fixed

IP Address

Netmask

Default Gateway

Max. Downstream Bandwidth Kbps

Max. Upstream Bandwidth Kbps

Service-On-Demand

Auto Disconnect if idle minutes (0 : means always connected)

Enable

Ping

HTTP

HTTPS

For Dynamic IP Address (Cable Modem User): This option is for users who are automatically assigned an IP address by their ISP, such as cable modem users. The following fields apply:

IP Address: The dynamic IP address obtained by MH-2K/4K from the ISP will be displayed here. This is the IP address of the WAN 1 (WAN 2) port of the device.

MAC Address: This is the MAC Address of the device.

Hostname: This will be the name assign to the device. Some cable modem ISP assign a specific hostname in order to connect to their network. Please enter the hostname here. If not required by your ISP, you do not have to enter a hostname.

Domain Name: You can specify your own domain name or leave it blank.

User Name: The user name is provided by ISP.

Password: The password is provided by ISP.

Max. Upstream/Downstream Bandwidth: The bandwidth provided by ISP.

Ping: Select this to allow the WAN 1 network to ping the IP Address of MH-2K/4K. This will allow people from the Internet to be able to ping MH-2K/4K. If set to enable, the device will respond to echo request packets from the WAN 1 network.

HTTP/HTTPS: Select this to allow the device WEBUI to be accessed from the WAN 1 network. This

will allow the WebUI to be configured from a user on the Internet. Keep in mind that the device always requires a username and password to enter the WebUI. (HTTPS is only available with MH-4000)

PLANET
Networking & Communication

WAN

System

Interface

LAN

WAN

DMZ

Address

Service

Schedule

QoS

Authentication

Content Filtering

Virtual Server

Policy

VPN

Inbound Balance

Log

Alarm

Accounting Report

Statistics

Status

WAN1 Interface

Service : Alive Indicator Site IP : [Assist](#)

Wait seconds between sending alive packet. (0 - 99 , 0 : means not checking)

PPPoE (ADSL User)
 Dynamic IP Address (Cable Modem User)
 Static IP Address

IP Address

MAC Address

Hostname

Domain Name

User Name (Required by DHCP+ protocol)

Password (Required by DHCP+ protocol)

Max. Downstream Bandwidth Kbps

Max. Upstream Bandwidth Kbps

Enable
 Ping
 HTTP
 HTTPS

For Static IP Address: This option is for users who are assigned a static IP Address from their ISP. Your ISP will provide all the information needed for this section such as IP Address, Netmask, Gateway, and DNS. Use this option also if you have more than one public IP Address assigned to you.

IP Address: Enter the static IP address assigned to you by your ISP. This will be the public IP address of the WAN 1 port of the device.

Netmask: This will be the subnet mask of the WAN 1 network. (i.e. 255.255.255.0)

Default Gateway: This will be the Gateway IP address.

Domain Name Server (DNS): This is the IP Address of the DNS server.

Max. Upstream/Downstream Bandwidth: The bandwidth provided by ISP.

Ping: Select this to allow the WAN 1 network to ping the IP Address of MH-2K/4K. This will allow people from the Internet to be able to ping MH-2K/4K. If set to enable, the device will respond to echo request packets from the WAN 1 network.

HTTP/HTTPS: Select this to allow the device WEBUI to be accessed from the WAN 1 network. This will allow the WebUI to be configured from a user on the Internet. Keep in mind that the device always requires a username and password to enter the WebUI. (HTTPS is only available with MH-4000)



WAN

System	WAN1 Interface	
Interface	Service : <input type="text" value="ICMP"/>	Alive Indicator Site IP : <input type="text" value="168.95.1.1"/> Assist
LAN	Wait <input type="text" value="1"/> seconds between sending alive packet. (0 - 99 , 0 : means not checking)	
WAN	<input type="radio"/> PPPoE (ADSL User) <input type="radio"/> Dynamic IP Address (Cable Modem User) <input checked="" type="radio"/> Static IP Address	
DMZ	IP Address	<input type="text" value="192.168.99.91"/>
Address	Netmask	<input type="text" value="255.255.255.0"/>
Service	Default Gateway	<input type="text" value="192.168.99.253"/>
Schedule	DNS Server 1	<input type="text" value="168.95.1.1"/>
QoS	DNS Server 2	<input type="text"/>
Authentication	Max. Downstream Bandwidth	<input type="text" value="10000"/> Kbps
Content Filtering	Max. Upstream Bandwidth	<input type="text" value="10000"/> Kbps
Virtual Server	Enable	<input checked="" type="checkbox"/> Ping <input checked="" type="checkbox"/> HTTP <input checked="" type="checkbox"/> HTTPS
Policy		
VPN		
Inbound Balance		
Log		
Alarm		
Accounting Report		
Statistics		
Status		

For PPTP (European User Only): This is mainly used in Europe. You need to know the PPTP Server address as well as your name and password.

User Name: The user name is provided by ISP.

Password: The password is provided by ISP.

IP Address: Enter the static IP address assigned to you by your ISP, or obtain an IP address automatically from ISP.

PPTP Gateway: Enter the PPTP server IP address assigned to you by your ISP.

Connect ID: This is the ID given by ISP. This is optional.

Max. Upstream/Downstream Bandwidth: The bandwidth provided by ISP.

BEZEQ-ISRAEL: Select this item if you are using the service provided by BEZEQ in Israel.

Service-On-Demand: The PPPoE connection will automatically disconnect after a length of idle time (no activities). Enter in the amount of idle minutes before disconnection. Enter '0' if you do not want the PPPoE connection to disconnect at all.

Ping: Select this to allow the WAN 1 network to ping the IP Address of MH-2K/4K. This will allow people from the Internet to be able to ping MH-2K/4K. If set to enable, the device will respond to echo request packets from the WAN 1 network.

HTTP: Select this to allow the device WEBUI to be accessed from the WAN 1 network. This will allow the WebUI to be configured from a user on the Internet. Keep in mind that the device always requires a username and password to enter the WebUI.

NOTE: This function is not supported on MH-4000.

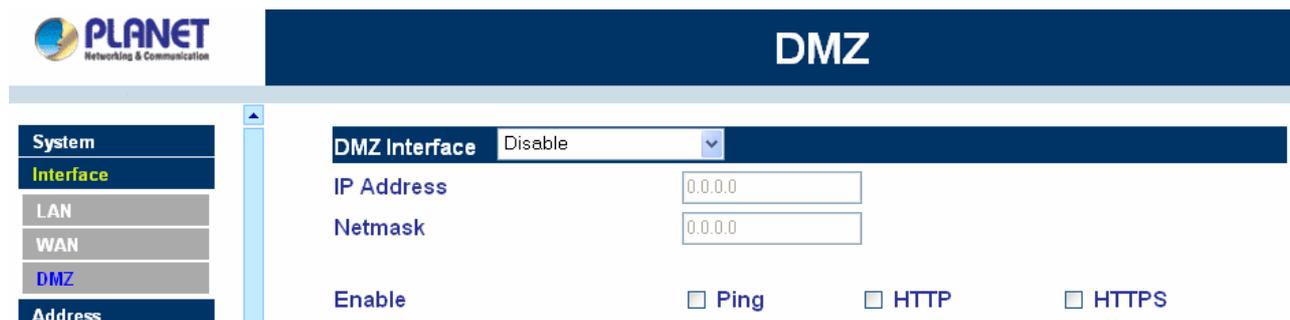


WAN

System	WAN1 Interface	
Interface	Service : <input type="text" value="ICMP"/> Alive Indicator Site IP : <input type="text" value="168.95.1.1"/> Assist	
LAN	Wait <input type="text" value="1"/> seconds between sending alive packet. (0 - 99 , 0 : means not checking)	
WAN	<input type="radio"/> PPPoE (ADSL User) <input type="radio"/> Dynamic IP Address (Cable Modem User) <input type="radio"/> Static IP Address <input checked="" type="radio"/> PPTP (European User Only)	
DMZ	Current Status Disconnected Connecting	
Address	IP Address 0.0.0.0 Disconnect	
Service	User Name <input type="text"/>	
Schedule	Password <input type="text"/>	
Content Filtering	IP Address provided by ISP <input checked="" type="radio"/> Obtain an IP address automatically	
Virtual Server	MAC Address <input type="text" value="00:30:4F:3F:09:84"/> Clone MAC Address	
VPN	Hostname <input type="text"/>	
Policy	Domain Name <input type="text"/>	
Log	<input type="radio"/> Use the following IP address	
Alarm	IP Address <input type="text"/>	
Statistics	Netmask <input type="text"/>	
Status	Default Gateway <input type="text"/>	
	PPTP Gateway <input type="text"/>	
	Connect ID <input type="text"/>	
	Max. Downstream Bandwidth <input type="text" value="10000"/> Kbps	
	Max. Upstream Bandwidth <input type="text" value="10000"/> Kbps	
	<input type="checkbox"/> BEZEQ-ISRAEL	
	<input checked="" type="checkbox"/> Service-On-Demand	
	Auto Disconnect if idle <input type="text" value="0"/> minutes (0 : means always connected)	
	Enable <input type="checkbox"/> Ping <input type="checkbox"/> HTTP	

4.2.3 DMZ

The Administrator uses the **DMZ Interface** to set up the DMZ network. The DMZ network consists of server computers such as FTP, SMTP, and HTTP (web). These server computers are put in the DMZ network so they can be isolated from the LAN (LAN) network traffic. Broadcast messages from the LAN network will not cross over to the DMZ network to cause congestions and slow down these servers. This allows the server computers to work efficiently without any slowdowns.



PLANET
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DMZ

System

Interface

LAN

WAN

DMZ

Address

DMZ Interface Disable

IP Address 0.0.0.0

Netmask 0.0.0.0

Enable **Ping** **HTTP** **HTTPS**

DMZ Interface: Display DMZ NAT Mode /DMZ TRANSPARENT Mode functions of DMZ to show if they are enabled or disabled.

IP Address: The private IP address of MH-2K/4K's DMZ interface. This will be the IP address of the DMZ port. If it is in NAT mode, the IP address the Administrator chooses will be a private IP address and cannot use the same network as the WAN or LAN network.

NetMask: This will be the subnet mask of the DMZ network.

Ping: Select this to allow the DMZ network to ping the IP Address of MH-2K/4K. This will allow people from the Internet to be able to ping MH-2K/4K. If set to enable, the device will respond to echo request packets from the DMZ network.

HTTP/HTTPS: Select this to allow the device WEBUI to be accessed from the WAN 1 network. This will allow the WebUI to be configured from a user on the Internet. Keep in mind that the device always requires a username and password to enter the WebUI. (HTTPS is only available with MH-4000)

4.3 Address

MH-2K/4K allows the Administrator to set addresses of the LAN network, LAN network group, WAN network, WAN group, DMZ network and DMZ group. These settings are to be used for policy editing.

What is the Address Table?

An IP address in the Address Table can be an address of a computer or a sub network. The Administrator can assign an easily recognized name to an IP address. Based on the network it belongs to, an IP address can be LAN IP address, WAN IP address and DMZ IP address. If the Administrator needs to create a control policy for packets of different IP addresses, he can first add a new group in the LAN **Network Group** or the **WAN Network Group** and assign those IP addresses into the newly created group. Using group addresses can greatly simplify the process of building control policies.

How to use Address Table

With easily recognized names of IP addresses and names of address groups shown in the address table, the Administrator can use these names as the source address or destination address of control policies. The address table should be built before creating control policies, so that the Administrator can pick the names of correct IP addresses from the address table when setting up control policies.

4.3.1 LAN

Entering the LAN window

- Step 1. Click LAN under the **Address** menu to enter the LAN window. The current setting information such as the name of the LAN network, IP and Netmask addresses will show on the screen.

Name	IP / Netmask	MAC Address	Configure
Inside_Any	0.0.0.0/0.0.0.0		In Use

New Entry

Definition

Name: Name of LAN network address.

IP: IP address of LAN network

Netmask: subnet mask of LAN network.

MAC Address: MAC address corresponded with LAN IP address.

Configure: You can configure the settings in LAN network. Click **Modify** to change the parameters in LAN

network. Click **Remove** to delete the settings.

In the **LAN** window, if one of the members has been added to **Policy** or **LAN Group**, the **Configure** column will show the message – **In Use**. In this case, you are not allowed to modify or remove the setting.

Adding a new LAN Address

- Step 1. In the LAN window, click the **New Entry** button.
- Step 2. In the **Add New Address** window, enter the settings of a new LAN network address.
- Step 3. Click **OK** to add the specified LAN network or click **Cancel** to cancel the changes.

The screenshot shows the PLANET LAN configuration interface. On the left is a navigation menu with the following items: System, Interface, Address (highlighted), LAN (highlighted), LAN Group, WAN, WAN Group, DMZ, DMZ Group, Service, Schedule, Content Filtering, Virtual Server, Policy, VPN, Log, Alarm, Statistics, and Status. The main area is titled 'LAN' and contains the 'Add New Address' dialog box. The dialog box has the following fields and options:

Add New Address	
Name	Vincent
IP Address	192.168.99.71
Netmask	255.255.255.255
MAC Address	00:30:4F:01:84:F4 Clone MAC Address
<input type="checkbox"/> Get static IP address from DHCP Server.	

At the bottom right of the dialog box are **OK** and **Cancel** buttons.

If you want to enable **Get Static IP address from DHCP Server** function, enter the MAC Address then check the **Get Static IP address from DHCP Server**.

Modifying an LAN Address

- Step 1. In the LAN window, locate the name of the network to be modified. Click the **Modify** option in its corresponding **Configure** field. The **Modify Address** window appears on the screen immediately.
- Step 2. In the **Modify Address** window, fill in the new addresses.
- Step 3. Click **OK** to save changes or click **Cancel** to discard changes.



LAN

System	Modify Address	
Interface	Name	Vincent
Address	IP Address	192.168.99.71
LAN	Netmask	255.255.255.255
LAN Group	MAC Address	00:30:4F:01:84:F4 Clone MAC Address
WAN	<input type="checkbox"/> Get static IP address from DHCP Server.	
WAN Group		
DMZ		
DMZ Group		
Service		
Schedule		
Content Filtering		
Virtual Server		
Policy		
VPN		
Log		
Alarm		
Statistics		
Status		

[OK](#) [Cancel](#)

Removing a LAN Address

- Step 1. In the LAN window, locate the name of the network to be removed. Click the **Remove** option in its corresponding **Configure** field.
- Step 2. In the **Remove** confirmation pop-up box, click **OK** to remove the address or click **Cancel** to discard changes.



LAN

System	Name	IP / Netmask	MAC Address	Configure
Interface	Inside_Any	0.0.0.0/0.0.0.0		In Use
Address	Richard	192.168.99.80/255.255.255.255	00:30:4F:00:12:CD	Modify Remove
LAN	Vincent	192.168.99.71/255.255.255.255	00:30:4F:01:84:F4	Modify Remove
LAN Group				
WAN				
WAN Group				
DMZ				
DMZ Group				

[New Entry](#)



4.3.2 LAN Group

Entering the LAN Group window

The LAN Addresses may be combined together to become a group.

- Step 1. Click LAN **Group** under the **Address** menu to enter the LAN Group window. The current setting information for the LAN network group appears on the screen.

System	Name	Member	Configure
Interface			
Address			New Entry
LAN			
LAN Group			
WAN			
WAN Group			
DMZ			
DMZ Group			
Service			
Schedule			
Content Filtering			
Virtual Server			
Policy			
VPN			
Log			
Alarm			
Statistics			
Status			

Definitions (LAN group):

Name: Name of the LAN group.

Member: Members of the group.

Configure: Configure the settings of LAN group. Click **Modify** to change the settings of LAN group. Click

Remove to delete the group.

In the **LAN Group** window, if one of the LAN Group has been added to **Policy**, the **Configure** column will show the message – **In Use**. In this case, you are not allowed to modify or remove the LAN group. You have to delete the Group in **Policy** window, and then you are allowed to configure the LAN Group.

Adding a LAN Group

- Step 1. In the LAN **Group** window, click the **New Entry** button to enter the **Add New Address Group** window.
- Step 2. In the Add New Address Group window:
- **Available Address:** list the names of all the members of the LAN network.

- **Selected Address:** list the names to be assigned to the new group.
- **Name:** enter the name of the new group in the open field.

Step 3. **Add members:** Select names to be added in Available Address list, and click the **Add>>** button to add them to the Selected Address list.

Step 4. **Remove members:** Select names to be removed in the Selected Address list, and click the **<<Remove** button to remove these members from Selected Address list.

Step 5. Click **OK** to add the new group or click **Cancel** to discard changes.



LAN Group

System	<div style="border: 1px solid black; padding: 5px;"> <p>Add New Address Group</p> <p>Name: <input type="text"/></p> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid gray; padding: 5px; width: 45%;"> <p><--- Available address ---></p> <p>Richard</p> <p>Vincent</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 45%;"> <p><--- Selected address ---></p> </div> </div> <div style="text-align: center; margin: 10px 0;"> <p><< Remove</p> <p>Add >></p> </div> </div>
Interface	
Address	
LAN	
LAN Group	
WAN	
WAN Group	
DMZ	
DMZ Group	
Service	
Schedule	
Content Filtering	
Virtual Server	
Policy	
VPN	
Log	
Alarm	
Statistics	
Status	

Modifying a LAN Group

Step 1. In the LAN **Group** window, locate the network group desired to be modified and click its corresponding **Modify** option in the **Configure** field.

Step 2. A window displaying the information of the selected group appears:

- **Available Address:** list names of all members of the LAN network.
- **Selected Address:** list names of members which have been assigned to this group.

Step 3. **Add members:** Select names in **Available Address** list, and click the **Add>>** button to add them to the **Selected Address** list.

Step 4. **Remove members:** Select names in the **Selected Address** list, and click the **<<Remove** button to remove these members from the **Selected Address** list.

Click **OK** to save changes or click **Cancel** to discard changes.



LAN Group

System
Interface
Address
LAN
LAN Group
WAN
WAN Group
DMZ
DMZ Group
Service
Schedule
Content Filtering
Virtual Server
Policy
VPN
Log
Alarm
Statistics
Status

Modify Address Group

Name:

<p><--- Available address ---></p> <p>Richard Vincent</p>	<p><< Remove</p> <p>Add >></p>	<p><--- Selected address ---></p> <p>Richard Vincent</p>
---	--	--

Removing a LAN Group

- Step 1. In the LAN **Group** window, locate the group to be removed and click its corresponding **Remove** option in the **Configure** field.
- Step 2. In the **Remove** confirmation pop-up box, click **OK** to remove the group or click **Cancel** to discard changes.



LAN Group

Name	Member	Configure
ENM	Richard, Vincent	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

System
Interface
Address
LAN
LAN Group
WAN
WAN Group
DMZ
DMZ Group
Service
Schedule
Content Filtering
Virtual Server
Policy
VPN
Log
Alarm
Statistics
Status

4.3.3 WAN

Entering the WAN window

- Step 1. Click **WAN** under the **Address** menu to enter the WAN window. The current setting information, such as the name of the WAN network, IP and Netmask addresses will show on the screen.

The screenshot shows the PLANET WAN configuration interface. On the left, a sidebar menu is visible with the following items: System, Interface, Address, LAN, LAN Group, WAN, WAN Group, DMZ, DMZ Group, Service, Schedule, Content Filtering, Virtual Server, Policy, VPN, Log, Alarm, Statistics, and Status. The 'Address' menu is expanded, and 'WAN' is selected, indicated by two red arrows. The main content area is titled 'WAN' and contains a table with the following data:

Name	IP / Netmask	Configure
Outside_Any	0.0.0.0/0.0.0.0	In Use

Below the table, there is a 'New Entry' button.

Definitions

Name: Name of WAN network address.

IP/Netmask: IP address/Netmask of WAN network.

Configure: Configure the settings of WAN network. Click **Modify** to change the settings of WAN network. Click **Remove** to delete the setting of WAN network.

NOTE: In the **WAN** Network window, if one of the members has been added to **Policy** or **LAN Group**, the **Configure** column will show the message – **In Use**. In this case you are not allowed to modify or remove the settings.

Adding a new WAN Address

- Step 1. In the WAN window, click the **New Entry** button.
- Step 2. In the **Add New Address** window, enter the settings for a new WAN network address.
- Step 3. Click **OK** to add the specified WAN network or click **Cancel** to discard changes.



WAN

System	Add New Address
Interface	Name <input type="text" value="yahoo"/>
Address	IP Address <input type="text" value="64.99.230.1"/>
LAN	Netmask <input type="text" value="255.255.255.0"/>
LAN Group	
WAN	
WAN Group	
DMZ	
DMZ Group	
Service	<input type="button" value="OK"/> <input type="button" value="Cancel"/>
Schedule	
Content Filtering	
Virtual Server	
Policy	
VPN	
Log	
Alarm	
Statistics	
Status	

Modifying an WAN Address

- Step 1. In the WAN table, locate the name of the network to be modified and click the **Modify** option in its corresponding **Configure** field.
- Step 2. The **Modify Address** window will appear on the screen immediately. In the **Modify Address** window, fill in new addresses.
- Step 3. Click **OK** to save changes or click **Cancel** to discard changes.



WAN

System	Modify Address
Interface	Name <input type="text" value="yahoo"/>
Address	IP Address <input type="text" value="64.99.230.1"/>
LAN	Netmask <input type="text" value="255.255.255.0"/>
LAN Group	
WAN	
WAN Group	
DMZ	
DMZ Group	
Service	<input type="button" value="OK"/> <input type="button" value="Cancel"/>
Schedule	
Content Filtering	
Virtual Server	
Policy	
VPN	
Log	
Alarm	
Statistics	
Status	

Removing an WAN Address

- Step 1. In the WAN table, locate the name of the network to be removed and click the **Remove** option in its corresponding Configure field.
- Step 2. In the Remove confirmation pop-up box, click **OK** to remove the address or click **Cancel** to discard changes.

The screenshot shows the WAN configuration page. On the left is a navigation menu with categories: System, Interface, Address, Service, Schedule, Content Filtering, Virtual Server, Policy, VPN, Log, Alarm, Statistics, and Status. Under the 'Address' category, a list of network types is shown: LAN, LAN Group, WAN, WAN Group, DMZ, and DMZ Group. The 'WAN' item is selected. The main area displays a table with the following data:

Name	IP / Netmask	Configure
Outside_Any	0.0.0.0/0.0.0.0	In Use
yahoo	64.99.230.1/255.255.255.0	Modify Remove

Below the table is a 'New Entry' button. A confirmation dialog box titled 'Microsoft Internet Explorer' is open, asking 'Do you really want to delete?' with 'OK' and 'Cancel' buttons.

4.3.4 WAN Group

Entering the WAN Group window

- Step 1. Click the **WAN Group** under the **Address** menu bar to enter the WAN window. The current settings for the WAN network group(s) will appear on the screen.

The screenshot shows the WAN Group configuration page. The navigation menu on the left is similar to the previous screenshot, but 'WAN Group' is selected and highlighted with two red arrows. The main area displays a table with the following data:

Name	Member	Configure
New Entry		

Definitions:

Name: Name of the WAN group.

Member: Members of the group.

Configure: Configure the settings of WAN group. Click **Modify** to change the parameters of WAN group Click **Remove** to delete the selected group.

NOTE: In the **WAN Group** window, if one of the members has been added to the **Policy**, "In Use" message will appear in the **Configure** column. You are not allowed to modify or remove the settings. Go to the **Policy** window to remove the setting, and then you can configure.

Adding an WAN Group

Step 1. In the **WAN Group** window, click the **New Entry** button and the **Add New Address Group** window will appear.

Step 2. In the **Add New Address Group** window the following fields will appear:

- **Name:** Enter the name of the new group.
- **Available Address:** List the names of all the members of the WAN network.
- **Selected Address:** List the names to assign to the new group.
- **Add members:** Select the names to be added in the **Available Address** list, and click the **Add>>** button to add them to the **Selected Address** list.
- **Remove members:** Select the names to be removed in the **Selected Address** list, and click the **<<Remove** button to remove them from the **Selected Address** list.

Step 3. Click **OK** to add the new group or click **Cancel** to discard changes.

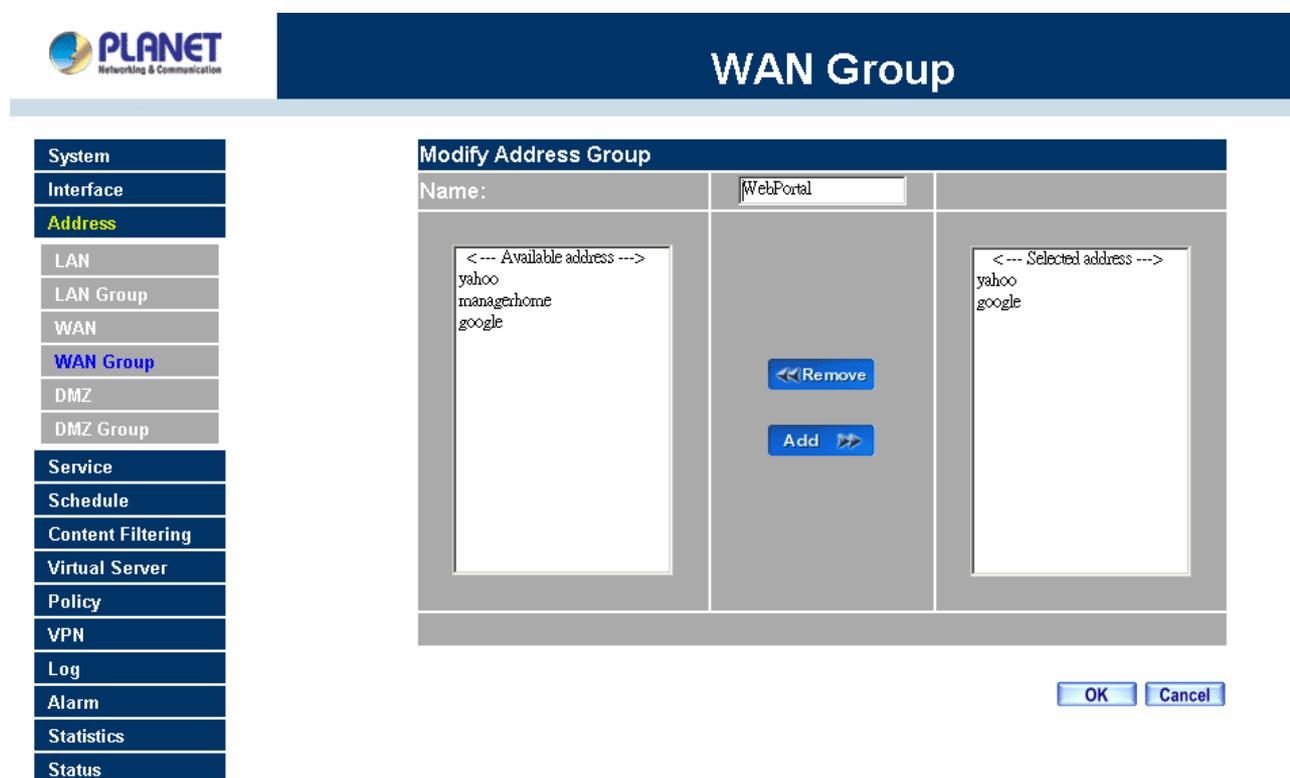
**WAN Group**

System	WAN Group	
Interface		
Address		
LAN		
LAN Group		
WAN		
WAN Group		
DMZ		
DMZ Group		
Service		
Schedule		
Content Filtering		
Virtual Server		
Policy		
VPN		
Log		
Alarm		
Statistics		
Status		

Add New Address Group							
Name:	<input type="text" value="WebPortal"/>						
<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #cccccc; font-size: small; text-align: center;">< --- Available address --- ></div> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #003366; color: white;">yahoo</td></tr> <tr><td style="background-color: #003366; color: white;">managerhome</td></tr> <tr><td style="background-color: #003366; color: white;">google</td></tr> </table> </div>	yahoo	managerhome	google	<div style="background-color: #003366; color: white; padding: 5px; margin-bottom: 5px;"><<Remove</div> <div style="background-color: #003366; color: white; padding: 5px; margin-bottom: 5px;">Add >></div>	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #cccccc; font-size: small; text-align: center;">< --- Selected address --- ></div> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #003366; color: white;">yahoo</td></tr> <tr><td style="background-color: #003366; color: white;">google</td></tr> </table> </div>	yahoo	google
yahoo							
managerhome							
google							
yahoo							
google							
<div style="display: inline-block; margin-right: 20px; background-color: #003366; color: white; padding: 2px 10px; border: 1px solid #ccc;">OK</div> <div style="background-color: #003366; color: white; padding: 2px 10px; border: 1px solid #ccc;">Cancel</div>							

Modifying a WAN Group

- Step 1. In the **WAN Group** window, locate the network group to be modified and click its corresponding **Modify** button in the **Configure** field.
- Step 2. A window displaying the information of the selected group appears:
- **Available Address:** list the names of all the members of the WAN network.
 - **Selected Address:** list the names of the members that have been assigned to this group.
- Step 3. **Add members:** Select the names to be added in the **Available Address** list, and click the **Add>>** button to add them to the **Selected Address** list.
- Step 4. **Remove members:** Select the names to be removed in the **Selected Address** list, and click the **<<Remove** button to remove them from the **Selected Address** list.
- Step 5. Click **OK** to save changes or click **Cancel** to discard changes.



Removing a WAN Group

- Step 1. In the **WAN Group** window, locate the group to be removed and click its corresponding **Modify** option in the **Configure** field.
- Step 2. In the **Remove confirmation** pop-up box, click **OK** to remove the group or click **Cancel** to discard changes.



WAN Group

System	Name	Member	Configure
Interface	WebPortal	yahoo, google	Modify Remove

[New Entry](#)

Microsoft Internet Explorer

Do you really want to delete?

OK Cancel

- Address
- LAN
- LAN Group
- WAN
- WAN Group
- DMZ
- DMZ Group
- Service
- Schedule
- Content Filtering
- Virtual Server
- Policy
- VPN
- Log
- Alarm
- Statistics
- Status

4.3.5 DMZ

Entering the DMZ window:

Click **DMZ** under the **Address** menu to enter the **DMZ** window. The current setting information such as the name of the LAN network, IP, and Netmask addresses will show on the screen.



DMZ

System	Name	IP / Netmask	MAC Address	Configure
Interface	DMZ_Any	0.0.0.0/0.0.0.0		In Use
Address	ftpserver	192.168.99.54/255.255.255.255		Modify Remove

[New Entry](#)

- Address
- LAN
- LAN Group
- WAN
- WAN Group
- DMZ
- DMZ Group
- Service
- Schedule
- Content Filtering
- Virtual Server
- Policy
- VPN
- Log
- Alarm
- Statistics
- Status

Adding a new DMZ Address:

- Step 1.** In the DMZ window, click the **New Entry** button.
- Step 2.** In the **Add New Address** window, enter the settings for a new DMZ address.
- Step 3.** Click **OK** to add the specified DMZ or click **Cancel** to discard changes.

The screenshot displays the PLANET Networking & Communication interface. On the left is a navigation menu with options: System, Interface, Address (highlighted), LAN, LAN Group, WAN, WAN Group, DMZ, DMZ Group, Service, Schedule, Content Filtering, Virtual Server, Policy, VPN, Log, Alarm, Statistics, and Status. The main area is titled 'DMZ' and contains an 'Add New Address' dialog box. The dialog box has the following fields and options:

Add New Address	
Name	wwwserver
IP Address	192.168.99.55
Netmask	255.255.255.255
MAC Address	<input type="text"/> Clone MAC Address
<input type="checkbox"/> Get static IP address from DHCP Server.	

At the bottom right of the dialog box are 'OK' and 'Cancel' buttons.

Modifying a DMZ Address:

- Step 1.** In the **DMZ** window, locate the name of the network to be modified and click the **Modify** option in its corresponding **Configure** field.
- Step 2.** In the **Modify Address** window, fill in new addresses.
- Step 3.** Click **OK** on save the changes or click **Cancel** to discard changes.



DMZ

- System
- Interface
- Address
- LAN
- LAN Group
- WAN
- WAN Group
- DMZ
- DMZ Group
- Service
- Schedule
- Content Filtering
- Virtual Server
- Policy
- VPN
- Log
- Alarm
- Statistics
- Status

Modify Address	
Name	<input type="text" value="ftpsrvr"/>
IP Address	<input type="text" value="192.168.99.54"/>
Netmask	<input type="text" value="255.255.255.255"/>
MAC Address	<input type="text"/> Clone MAC Address
<input type="checkbox"/> Get static IP address from DHCP Server.	

[OK](#) [Cancel](#)

Removing a DMZ Address:

- Step 1.** In the **DMZ** window, locate the name of the network to be removed and click the **Remove** option in its corresponding **Configure** field.
- Step 2.** In the **Remove** confirmation pop-up box, click **OK** to remove the address or click **Cancel** to discard changes.



DMZ

- System
- Interface
- Address
- LAN
- LAN Group
- WAN
- WAN Group
- DMZ
- DMZ Group
- Service
- Schedule
- Content Filtering
- Virtual Server
- Policy
- VPN
- Log
- Alarm
- Statistics
- Status

Name	IP / Netmask	MAC Address	Configure
DMZ_Any	0.0.0.0/0.0.0.0		In Use
ftpsrvr	192.168.99.54/255.255.255.255		Modify Remove
wwwsrvr	192.168.99.55/255.255.255.255		Modify Remove

[New Entry](#)



4.3.6 DMZ Group

Entering the DMZ Group window

Click **DMZ Group** under the **Address** menu to enter the **DMZ** window. The current settings information for the DMZ group appears on the screen.

System	Name	Member	Configure
Interface			
Address			New Entry
LAN			
LAN Group			
WAN			
WAN Group			
DMZ			
DMZ Group			
Service			
Schedule			
Content Filtering			
Virtual Server			
Policy			
VPN			
Log			
Alarm			
Statistics			
Status			

Adding a DMZ Group:

Step 1. In the DMZ Group window, click the **New Entry** button.

Step 2. In the **Add New Address** Group window:

- **Available Address:** list names of all members of the DMZ.
- **Selected Address:** list names to assign to a new group.

Step 3. Name: enter a name for the new group.

Step 4. Add members: Select the names to be added from the **Available Address** list, and click the **Add>>** button to add them to the **Selected Address** list.

Step 5. Remove members: Select names to be removed from the **Selected Address** list, and click the **<<Remove** button to remove them from the **Selected Address** list.

Step 6. Click **OK** to add the new group or click **Cancel** to discard changes.



DMZ Group

System	<div style="border: 1px solid black; padding: 5px;"> <h3>Add New Address Group</h3> <p>Name: <input type="text" value="DMZserver"/></p> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid gray; padding: 5px; width: 45%;"> <p><--- Available address ---></p> <p>ftpserver</p> <p>wwwserver</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 45%;"> <p><--- Selected address ---></p> <p>ftpserver</p> <p>wwwserver</p> </div> </div> <div style="text-align: center; margin: 10px 0;"> <input type="button" value="Remove"/> <input type="button" value="Add"/> </div> </div>
Interface	
Address	
LAN	
LAN Group	
WAN	
WAN Group	
DMZ	
DMZ Group	
Service	
Schedule	
Content Filtering	
Virtual Server	
Policy	
VPN	
Log	
Alarm	
Statistics	
Status	

Modifying a DMZ Group:

Step 1. In the **DMZ** Group window, locate the **DMZ** group to be modified and click its corresponding **Modify** button in the **Configure** field.

Step 2. A window displaying information about the selected group appears:

- **Available Address:** list the names of all the members of the DMZ.
- **Selected Address:** list the names of the members that have been assigned to this group.

Step 3. **Add members:** Select names to be added from the **Available Address** list, and click the **Add>>** button to add them to the **Selected Address** list.

Step 4. **Remove members:** Select names to be removed from the **Selected Address** list, and click the **<<Remove** button to remove them from **Selected Address** list.

Step 5. Click **OK** to save changes or click **Cancel** to cancel editing.



DMZ Group

- System
- Interface
- Address
- LAN
- LAN Group
- WAN
- WAN Group
- DMZ
- DMZ Group
- Service
- Schedule
- Content Filtering
- Virtual Server
- Policy
- VPN
- Log
- Alarm
- Statistics
- Status

Modify Address Group

Name:

< --- Available address ---> ftpserver wwwserver	<input type="button" value="Remove"/>	< --- Selected address ---> ftpserver wwwserver
<input type="button" value="Add"/>		

Removing a DMZ Group:

- Step 1.** In the **DMZ Group** window, locate the group to be removed and click its corresponding **Remove** option in the **Configure** field.
- Step 2.** In the **Remove confirmation** pop-up box, click **OK** to remove the group.



DMZ Group

- System
- Interface
- Address
- LAN
- LAN Group
- WAN
- WAN Group
- DMZ
- DMZ Group
- Service
- Schedule
- Content Filtering
- Virtual Server
- Policy
- VPN
- Log
- Alarm
- Statistics
- Status

Name	Member	Configure
DMZserver	ftpserver, wwwserver	<input type="button" value="Modify"/> <input type="button" value="Remove"/>



4.4 Service

In this section, network services are defined and new network services can be added. There are three sub menus under Service which are: Pre-defined, Custom, and Group. The Administrator can simply follow the instructions below to define the protocols and port numbers for network communication applications. Users then can connect to servers and other computers through these available network services.

What is Service?

TCP and UDP protocols support varieties of services, and each service consists of a TCP Port or UDP port number, such as TELNET(23), SMTP(21), POP3(110),etc. MH-2K/4K defines two services: pre-defined service and custom service. The common-use services like TCP and UDP are defined in the pre-defined service and cannot be modified or removed. In the custom menu, users can define other TCP port and UDP port numbers that are not in the pre-defined menu according to their needs. When defining custom services, the client port ranges from 1024 to 65535 and the server port ranges from 0 to 1023.

How do I use Service?

The Administrator can add new service group names in the Group option under Service menu, and assign desired services into that new group. Using service group the Administrator can simplify the processes of setting up control policies. For example, there are 10 different computers that want to access 5 different services on a server, such as HTTP, FTP, SMTP, POP3, and TELNET. Without the help of service groups, the Administrator needs to set up 50 (10x5) control policies, but by applying all 5 services to a single group name in the service field, it takes only one control policy to achieve the same effect as the 50 control policies.

4.4.1 Pre-defined

Entering a Pre-defined window

- Step 1. Click **Pre-defined** under it. A window will appear with a list of services and their associated IP addresses. This list cannot be modified.



System	ANY ANY (Any)	TCP IMAP (143)	TCP POP3 (110)	TCP TELNET (23)
Interface	TCP AFPoverTCP (548)	TCP InterLocator (389)	TCP PPTP (1723)	UDP TFTP (69)
Address	TCP AOL (5190-5194)	TCP IRC (6660-6669)	TCP Real-Media (7070)	ICMP Traceroute (3,11)
Service	TCP BGP (179)	TCP LZTP (1701)	UDP RIP (520)	UDP UDP ANY (Any)
Pre-defined ←←	UDP DNS (53)	TCP LDAP (389)	TCP RLOGIN (513)	UDP UUCP (540)
Custom	TCP FINGER (79)	TCP NetMeeting (389&1503&1720)	TCP SMTP (25)	TCP VDO-Live (7000-7010)
Group	TCP FTP (20-21)	UDP NFS (111)	UDP SNMP (161)	TCP WAIS (210)
Schedule	TCP GOPHER (70)	TCP NNTP (119)	TCP SSH (22)	TCP WINFRAME (1494)
Content Filtering	TCP HTTP (80)	UDP NTP (123)	UDP SYSLOG (514)	TCP X-Windows (6000-6063)
Virtual Server	TCP HTTPS (443)	UDP PC.Anywhere (5631-5632)	UDP TALK (517-518)	TCP MSN (1883)
VPN	UDP IKE (500)	ICMP PING (Any)	TCP TCP-ANY (Any)	

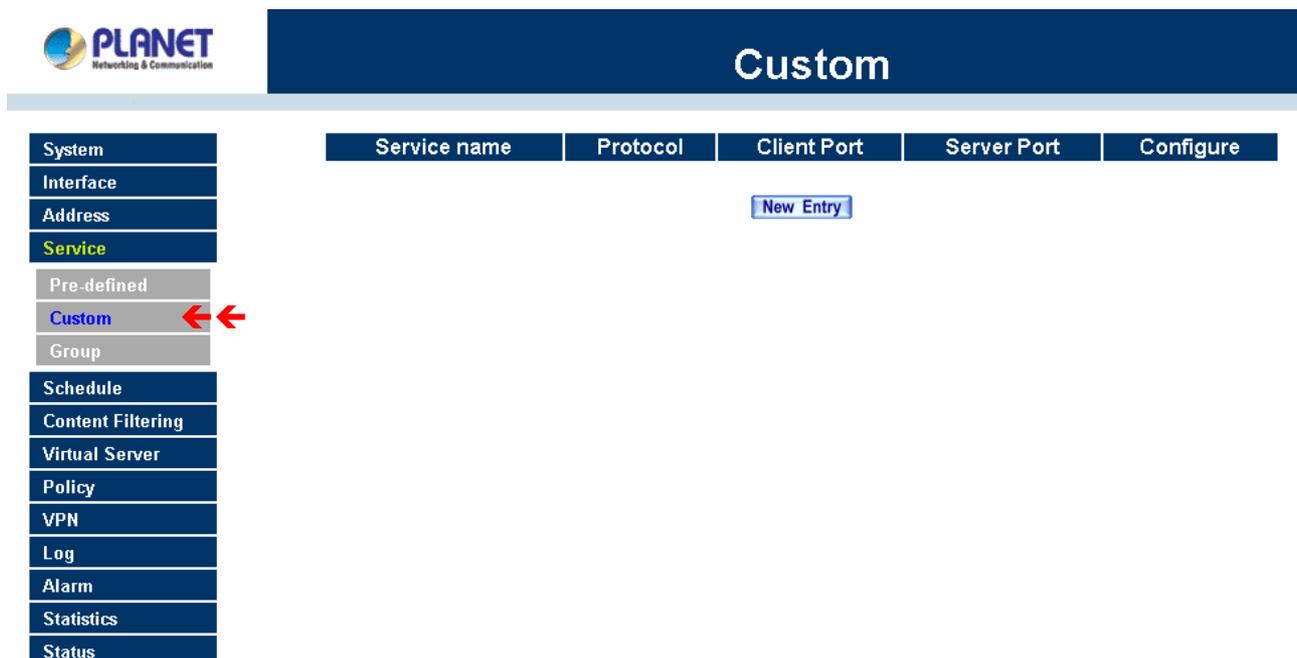
Icons and Descriptions

Figur	Description
	TCP services, i.g. AFP over TCP, FTP, FINGER, HTTP, HTTPS, IMAP, SMTP, POP3, ANY, AOL, BGP, GOPHER, InterLocator, IRC, L2TP, LDAP, NetMeeting, NNTP, PPTP, Real Media, RLOGIN, SSH, TCP ANY, TELNET, VDO Live, WAIS, WINFRAME, X-WINDOWS, MSN, etc.
	UDP services, i.g. IKE, DNS, NTP, RIP, SNMP, SYSLOG, TALK, TFTP, UDP-ANY, UUCP, NFS, PC Anywhere, etc.
	ICMP services, i.g. PING, TRACEROUTE, etc.

4.4.2 Custom

Entering the Custom window

Step 1. Click **Custom** under it. A window will appear with a table showing all services currently defined by the Administrator.



The screenshot shows the Planet Security Gateway web interface. On the left is a navigation menu with the following items: System, Interface, Address, Service (highlighted), Pre-defined, Custom (with two red arrows pointing to it), Group, Schedule, Content Filtering, Virtual Server, Policy, VPN, Log, Alarm, Statistics, and Status. The main content area is titled 'Custom' and contains a table with the following columns: Service name, Protocol, Client Port, Server Port, and Configure. A 'New Entry' button is located below the table header.

Definitions:

Service name: The defined service name.

Protocol: Network protocol used in the basic setting. Such as TCP、 UDP or others.

Client port: The range of Client port in defined service. If the number of ports entered in the two fields of Client port is different, it means that the port numbers between these two numbers are opened. If the number of ports entered in the two fields of Client port is identical, it means that the entered port number is opened.

Service port: The range of Service port in defined service.

If the number of ports entered in the two fields of Service port is different, it means that the port numbers between these two numbers are opened. If the number of ports entered in the two fields of Service port is identical, it means that the entered port number is opened.

Configure: Configure the settings in Service table. Click **Modify** to change the parameters in Service table. Click **Remove** to delete the selected setting.

NOTE: In the **Custom** window, if one of the services has been added to **Policy** or **Group**, "In Use" message will appear in the **Configure** column. In this case you are not allowed to modify or remove the settings. Go to the **Policy** or **Group** window to delete the setting, and then you can configure the settings.

Adding a new Service

In the **Custom** window, click the **New Entry** button and a new service table appears.

In the new service table:

- New Service Name: This will be the name referencing the new service.
- Protocol: Enter the network protocol type to be used, such as TCP, UDP, or Other (please enter the number for the protocol type).
- Client Port: enter the range of port number of new clients.
- Server Port: enter the range of port number of new servers.

The client port ranges from 1024 to 65535 and the server port ranges from 0 to 1023.

Step 1. Click **OK** to add new services, or click **Cancel** to cancel.

Step 2. Click **OK** to accept editing; or click **Cancel**.



Custom

System		Add User Define Service		
Interface		Service NAME :	eDonkey	
Address		#	Protocol	Client Port
Service		1	<input checked="" type="radio"/> TCP <input type="radio"/> UDP <input type="radio"/> Other 6	1024 : 65535
Pre-defined		2	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other 0	1024 : 65535
Custom		3	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other 0	1024 : 65535
Group		4	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other 0	1024 : 65535
Schedule		5	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other 0	1024 : 65535
Content Filtering		6	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other 0	1024 : 65535
Virtual Server		7	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other 0	1024 : 65535
Policy		8	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other 0	1024 : 65535
VPN				
Log				
Alarm				
Statistics				
Status				

Modifying Custom Services

- Step 1. A table showing the current settings of the selected service appears on the screen
- Step 2. Enter the new values.
- Step 3. Click **OK** to accept editing; or click **Cancel**.

Modify User Define Service

Service NAME : eDonkey

#	Protocol	Client Port	Server Port
1	<input checked="" type="radio"/> TCP <input type="radio"/> UDP <input type="radio"/> Other	1024 : 65535	4661 : 4665
2	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other	1024 : 65535	0 : 0
3	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other	1024 : 65535	0 : 0
4	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other	1024 : 65535	0 : 0
5	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other	1024 : 65535	0 : 0
6	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other	1024 : 65535	0 : 0
7	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other	1024 : 65535	0 : 0
8	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> Other	1024 : 65535	0 : 0

Removing Custom Services

- Step 1. Click its corresponding **Remove** option in the **Configure** field.
- Step 2. In the **Remove** confirmation pop-up box, click **OK** to remove the selected service or click **Cancel** to cancel action.

Service name	Protocol	Client Port	Server Port	Configure
microsoft-ds	TCP	1024:65535	445:445	<input type="button" value="Modify"/> <input type="button" value="Remove"/>
eDonkey	TCP	1024:65535	4661:4665	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

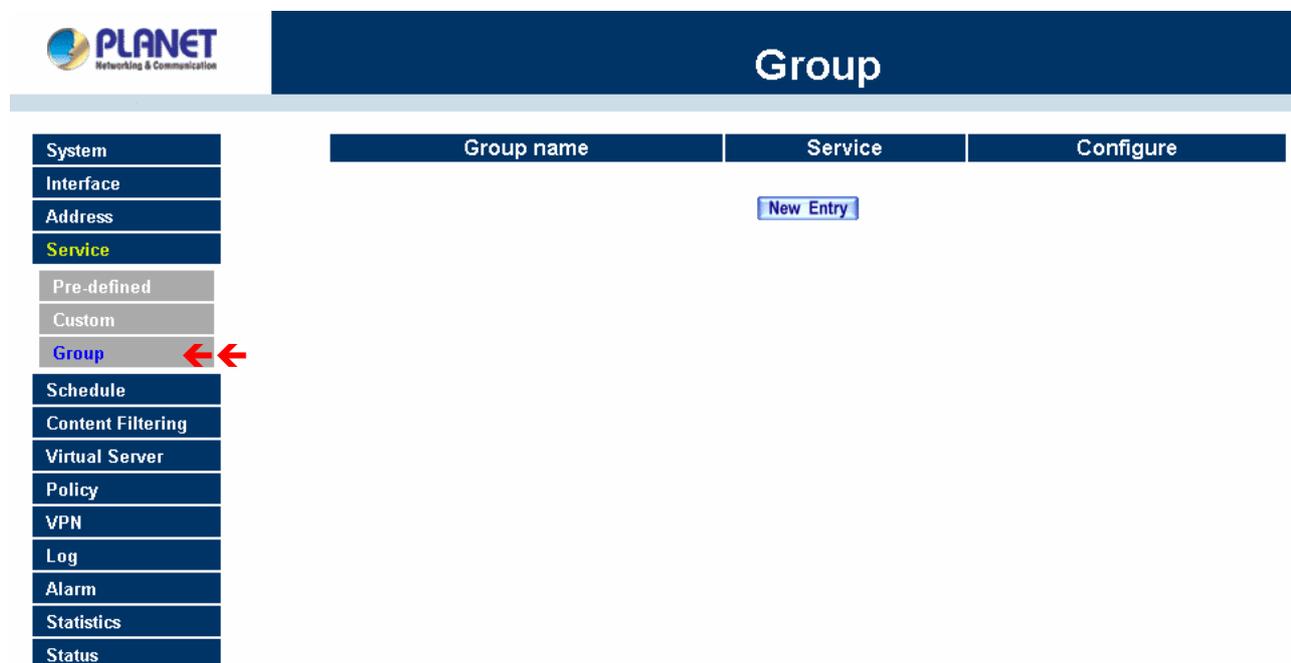
Microsoft Internet Explorer

Do you really want to delete?

4.4.3 Group

Accessing the Group window

- Step 1. Click **Group** under it. A window will appear with a table displaying current service group settings set by the Administrator.



Definitions:

Group name: The Group name of the defined Service.

Service: The Service item of the Group.

Configure: Configure the settings of Group. Click **Modify** to change the parameters of the Group. Click **Remove** to delete the Group.

NOTE: In the **Group** window, if one of the Service Groups has been added to **Policy**. **"In Use"** message will appear in the **Configure** column. You are not allowed to modify or remove the settings. Go to the Policy window, remove the Service group first, and then you are allowed to configure the setting.

Adding Service Groups

- Step 1. In the **Group** window, click the **New Entry** button.
- Step 2. In the **Add Service Group** window, the following fields will appear:
- **Available Services:** list all the available services.
 - **Selected Services:** list services to be assigned to the new group.
- Step 3. Enter the new group name in the group **Name** field. This will be the name referencing the created group.
- Step 4. **To add new services:** Select the services desired to be added in the **Available Services** list and then click the **Add>>** button to add them to the group.

Step 5. **To remove services:** Select services desired to be removed in the **Available Services**, and then click the **<<Remove** button to remove them from the group.

Step 6. Click **OK** to add the new group.



Group

System	Add Service Group	
Interface	Name:	GeneralAccess
Address	<div style="border: 1px solid gray; padding: 5px;"> SYSLOG TALK TCP-ANY TELNET TFTP Traceroute UDP-ANY UUCP VDO-Live WAIS WINFRAME X-Windows MSN microsoft-ds eDonkey </div>	<div style="border: 1px solid gray; padding: 5px;"> < --- Selected service ---> FTP HTTP </div>
Service	<div style="display: flex; justify-content: space-around; margin-top: 10px;"> << Remove Add >> </div>	
Pre-defined		
Custom		
Group		
Schedule		
Content Filtering		
Virtual Server		
Policy		
VPN		
Log		
Alarm		
Statistics		
Status	<div style="display: flex; justify-content: flex-end; gap: 10px;"> OK Cancel </div>	

Modifying Service Groups

Step 1. In the Mod (modify) group window the following fields are displayed:

- **Available Services:** lists all the available services.
- **Selected Services:** list services that have been assigned to the selected group.

Step 2. **Add new services:** Select services in the **Available Services** list, and then click the **Add>>** button to add them to the group.

Step 3. **Remove services:** Select services to be removed in the **Selected Services** list, and then click the **<<Remove** button to remove these services from the group.

Step 4. Click **OK** to save editing changes.



Group

- System
- Interface
- Address
- Service**
- Pre-defined
- Custom
- Group
- Schedule
- Content Filtering
- Virtual Server
- Policy
- VPN
- Log
- Alarm
- Statistics
- Status

Modify Service Group

Name:

< --- Available service --- >

- ANY
- AFPoverTCP
- AOL
- BGP
- DNS
- FINGER
- FTP
- GOPHER
- HTTP
- HTTPS
- IKE
- IMAP
- InterLocator
- IRC

<< Remove

Add >>

< --- Selected service --- >

- FTP
- HTTP

Removing Service Groups

In the **Remove** confirmation pop-up box, click **OK** to remove the selected service group or click **Cancel** to cancel removing.



Group

- System
- Interface
- Address
- Service**
- Pre-defined
- Custom
- Group
- Schedule
- Content Filtering
- Virtual Server
- Policy
- VPN
- Log
- Alarm
- Statistics
- Status

Group name	Service	Configure
GeneralAccess	FTP,HTTP	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

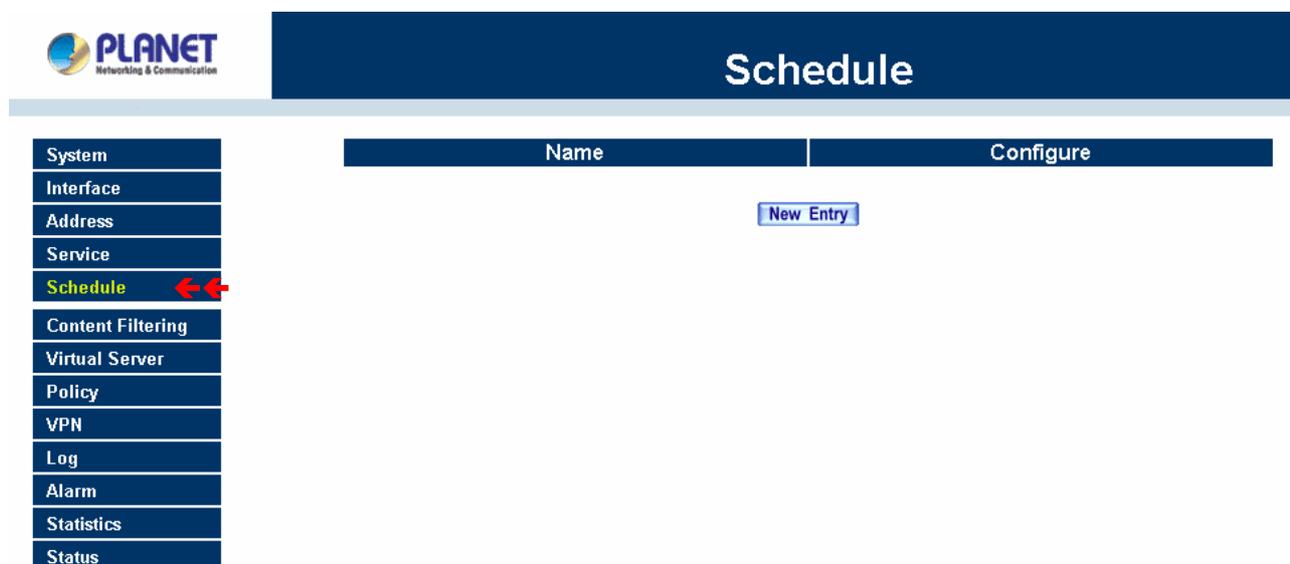


4.5 Schedule

MH2K/4K allows the Administrator to configure a schedule for policies to take affect. By creating a schedule, the Administrator is allowing MH2K/4K policies to be used at those designated times only. Any activities outside of the scheduled time slot will not follow MH2K/4K policies therefore will likely not be permitted to pass through MH2K/4K. The Administrator can configure the start time and stop time, as well as creating 2 different time periods in a day. For example, an organization may only want MH2K/4K to allow the LAN network users to access the Internet during work hours. Therefore, the Administrator may create a schedule to allow MH2K/4K to work Monday-Friday, 8AM - 5PM only. During the non-work hours, MH2K/4K will not allow Internet access.

Accessing the Schedule window

Step 1. Click on **Schedule** on the menu bar and the schedule window will appear displaying the active schedules.



The following items are displayed in this window:

Name: the name assigned to the schedule

Configure: modify or remove

Adding a new Schedule

Step 1. Click on the **New Entry** button and the **Add New Schedule** window will appear.

- **Schedule Name:** Fill in a name for the new schedule.
- **Period:** Configure the start and stop time for the days of the week that the schedule will be active.

Step 2. Click **OK** to save the new schedule or click Cancel to cancel adding the new schedule.



Schedule

System
Interface
Address
Service
Schedule
Content Filtering
Virtual Server
Policy
VPN
Log
Alarm
Statistics
Status

Add New Schedule

Schedule Name

Week Day	Period	
	Start Time	Stop Time
Monday	08:30	18:30
Tuesday	08:30	18:30
Wednesday	08:30	18:30
Thursday	08:30	18:30
Friday	08:30	18:30
Saturday	Disable	Disable
Sunday	Disable	Disable

NOTE: In setting a Schedule, the value in **Start time** must be less than the value in **Stop Time**, or you cannot add or configure the setting.

Modifying a Schedule

Step 1. In the **Schedule** window, find the policy to be modified and click the corresponding **Modify** option in the **Configure** field. Make needed changes.

Step 2. Click **OK** to save changes.



Schedule

System
Interface
Address
Service
Schedule
Content Filtering
Virtual Server
Policy
VPN
Log
Alarm
Statistics
Status

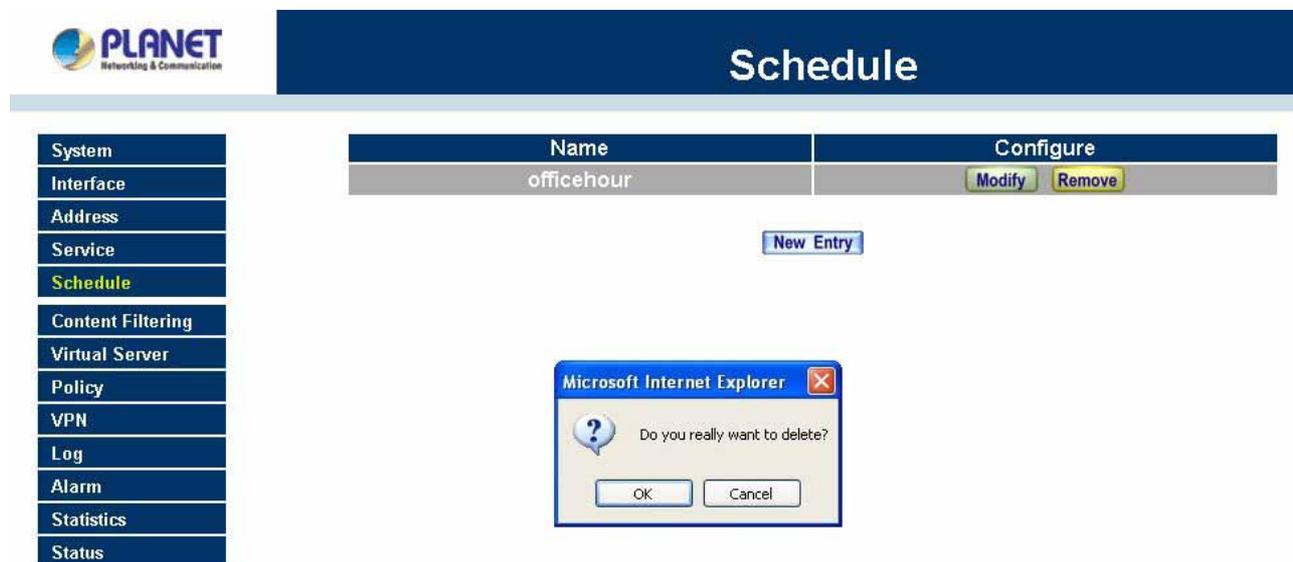
Modify Schedule

Schedule Name

Week Day	Period	
	Start Time	Stop Time
Monday	08:30	18:30
Tuesday	08:30	18:30
Wednesday	08:30	18:30
Thursday	08:30	18:30
Friday	08:30	18:30
Saturday	Disable	Disable
Sunday	Disable	Disable

Removing a Schedule

- Step 1. In the **Schedule** window, find the policy to be removed and click the corresponding **Remove** option in the **Configure** field.
- Step 2. A confirmation pop-up box will appear, click on **OK** to remove the schedule.



4.6 QoS

By configuring the QoS, you can control the outbound Upstream/downstream Bandwidth.

The administrator can configure the bandwidth according to the WAN bandwidth.

Downstream Bandwidth: To configure the Guaranteed Bandwidth and Maximum Bandwidth.

Upstream Bandwidth: To configure the Guaranteed Bandwidth and Maximum Bandwidth.

QoS Priority: To configure the priority of distributing Upstream/Downstream and unused bandwidth.

MH2K/4K configures the bandwidth by different QoS , and selects the suitable QoS through Policy to control and efficiently distribute bandwidth. MH2K/4K also makes it convenient for the administrator to use MH2K/4K with the best Utility.

Configuration of QoS

Click QoS in the menu bar on the left hand side.

The screenshot shows the PLANET QoS configuration page. On the left, a vertical menu lists various system settings, with 'QoS' highlighted in yellow and two red arrows pointing to it. The main content area features a table with the following columns: Name, WAN, Downstream Bandwidth, Upstream Bandwidth, Priority, and Configure. Below the table, there is a 'New Entry' button.

Definitions:

Name: The name of the QoS you want to configure.

WAN: Display WAN 1 or WAN 2.

Downstream Bandwidth: To configure the Guaranteed Bandwidth and Maximum Bandwidth.

Upstream Bandwidth: To configure the Guaranteed Bandwidth and Maximum Bandwidth.

Priority: To configure the priority of distributing Upstream/Downstream and unused bandwidth.

Add New QoS

Step 1. Click QoS in the menu bar on the left hand side.

Step 2. Click the **New Entry** button to add new QoS.



QoS

System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
Inbound Balance
Log
Alarm
Accounting Report
Statistics
Status

Add New QoS			
Name <input type="text" value="ICF"/>			
WAN	Downstream Bandwidth	Upstream Bandwidth	QoS Priority
1	G.Bandwidth = <input type="text" value="400"/> Kbps M.Bandwidth = <input type="text" value="420"/> Kbps	G.Bandwidth = <input type="text" value="400"/> Kbps M.Bandwidth = <input type="text" value="420"/> Kbps	High ▾
2	G.Bandwidth = <input type="text" value="400"/> Kbps M.Bandwidth = <input type="text" value="420"/> Kbps	G.Bandwidth = <input type="text" value="400"/> Kbps M.Bandwidth = <input type="text" value="420"/> Kbps	

Definition

Name: The name of the QoS you want to configure.

Downstream Bandwidth: To configure the Guaranteed Bandwidth and Maximum Bandwidth.

Upstream Bandwidth: To configure the Guaranteed Bandwidth and Maximum Bandwidth.

QoS Priority: To configure the priority of distributing Upstream/Downstream and unused bandwidth.

Click the **OK** button to add new QoS.

Modify QoS

Step 1. Click QoS in the menu bar on the left hand side.



QoS

System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
Inbound Balance
Log
Alarm
Accounting Report
Statistics
Status

Modify QoS			
Name <input type="text" value="ICF"/>			
WAN	Downstream Bandwidth	Upstream Bandwidth	QoS Priority
1	G.Bandwidth = <input type="text" value="400"/> Kbps M.Bandwidth = <input type="text" value="420"/> Kbps	G.Bandwidth = <input type="text" value="400"/> Kbps M.Bandwidth = <input type="text" value="420"/> Kbps	High ▾
2	G.Bandwidth = <input type="text" value="400"/> Kbps M.Bandwidth = <input type="text" value="420"/> Kbps	G.Bandwidth = <input type="text" value="400"/> Kbps M.Bandwidth = <input type="text" value="420"/> Kbps	

Click the **Modify** button to modify QoS.

Definition:

Name: The name of the QoS you want to configure.

Downstream Bandwidth: To configure the Guaranteed Bandwidth and Maximum Bandwidth.

Upstream Bandwidth: To configure the Guaranteed Bandwidth and Maximum Bandwidth.

QoS Priority: To configure the priority of distributing Upstream/Downstream and unused bandwidth.

Click the **OK** button to modify QoS.

Delete QoS

Step 1. In the QoS window, find the QoS you want to change, and click **Delete** in the Configure column.

Step 2. In the Delete QoS window, click **OK** to delete the QoS or click **Cancel** to discard the change.

The screenshot displays the PLANET QoS configuration window. On the left is a navigation menu with options like System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy, VPN, Inbound Balance, Log, Alarm, Accounting Report, Statistics, and Status. The main area is titled 'QoS' and contains a table with the following data:

Name	WAN	Downstream Bandwidth	Upstream Bandwidth	Priority	Configure
ICF	1	G.Bandwidth = 400Kbps M.Bandwidth = 420Kbps	G.Bandwidth = 400 Kbps M.Bandwidth = 420 Kbps	High	Modify
	2	G.Bandwidth = 400Kbps M.Bandwidth = 420Kbps	G.Bandwidth = 400 Kbps M.Bandwidth = 420 Kbps		Remove

A 'New Entry' button is located above the table. A dialog box titled 'Microsoft Internet Explorer' is open, displaying a question mark icon and the text 'Do you really want to delete?' with 'OK' and 'Cancel' buttons.

4.7 Authentication

By configuring the Authentication, you can control the user's access right time of LAN to WAN. The administrator can configure the authentication according to the authentication account and password.

MH2K/MH4K configures the authentication of LAN's user by setting account and password to identify the privilege.

4.7.1 Auth Setting

The administrator can specify the port number and authentication time of authentication management system for LAN user to access WAN network.

Configuration of Authentication

Click **Authentication** in the menu bar on the left hand side and click **Auth Setting**.



Auth Setting

System	Authentication Management
Interface	Authentication Port <input type="text" value="82"/>
Address	Re-Login if Idle <input type="text" value="30"/> Minutes
Service	Re-Login after user login successfully <input type="text" value="1"/> Hours (0: means unlimited)
Schedule	<input checked="" type="checkbox"/> Disallow Re-Login if the auth user has login
QoS	URL to redirect when authentication succeed <input type="text" value="http://www.planet.com.tw"/>
Authentication	Messages to display when user login
Auth Setting	<input type="text" value="Thanks to choice Planet Product "/>
Auth User	
Auth Group	
Content Filtering	
Virtual Server	
VPN	
Policy	
Log	
Alarm	
Statistics	
Status	<input type="button" value="OK"/> <input type="button" value="Cancel"/>

Authentication Port: The port number used for user login page. When user want to access WAN network and the authentication (Policy -> Outgoing) is enabled, the user has to send http request with this port number. MH-2K/MH-4K will send a User Login page for user to input user name and password. For example, if the gateway IP address is 192.168.1.1 and authentication port is 82, user have to open a web browser and input <http://192.168.1.1:82> on the address file to have the user login page.

Re-Login if Idle: When the LAN user access to WAN network and do not use for a while, the connection will be time-out. User has to re-login again. The default time is 30 minutes and you can configure this time by "System"-> "Setting" page.

Re-Login after user login successfully: When user login authentication page successfully access WAN for a while, MH-2K/MH-4K will asking user login again. The default time is unlimited time.

Disallow Re-Login auth user has login: when the user login authentication page, can not login same account again on other web page.

URL to redirect when authentication succeed: You can set up the default webpage to force user to access it first when user passes the authentication.

Messages to display when user login: You can specify a message to display at user's login page when user passes the authentication.

4.7.2 Auth User

Click **Authentication** in the menu bar on the left hand side and click **Auth User**.

The screenshot shows the PLANET web interface. On the left is a navigation menu with items: System, Interface, Address, Service, Schedule, QoS, Authentication (highlighted), Auth Setting, Auth User, Auth User Group, RADIUS, POP3, and LDAP. The main content area has a dark blue header with the text 'Auth User'. Below the header is a table with two columns: 'Authentication-User Name' and 'Configure'. Under the 'Configure' column, there is a 'New User' button.

Definitions:

Name : The name of the Authentication you want to configure.

Configure: modify settings or remove users.

Adding a new Auth User

Step 1. In the **Authentication** window, click the **New User** button to create a new **Auth User**.

Step 2. In the **Auth-User** window:

- **Auth-User Name:** enter the username of new **Authentication**.
- **Password:** enter a password for the new **Authentication**.
- **Confirm Password:** enter the password again.

Step 3. Click **OK** to add the user or click **Cancel** to cancel the addition.

The screenshot shows the PLANET web interface with the 'Auth User' configuration page. The left sidebar is the same as in the previous screenshot. The main content area has a dark blue header with the text 'Auth User'. Below the header is a table with two columns: 'Authentication-User Name' and 'Configure'. Below the table, there is a dialog box titled 'Add New Authentication-User'. The dialog box has three input fields: 'Authentication-User Name' (containing 'planet'), 'Password' (containing six dots), and 'Confirm Password' (containing six dots). At the bottom right of the dialog box are 'OK' and 'Cancel' buttons.

NOTE: When the LAN user access to WAN network and do not use for a while, the connection will be time-out. User has to re-login again. The default time is 30 minutes and you can configure this time by “Authentication”-> “Auth Setting” page.

In the form of controlling the [Outgoing] Policy, enable the Authentication-User Function.

Modify Policy

Source Address	Inside_Any
Destination Address	Outside_Any
Service	ANY
Action, WAN Port	<input checked="" type="checkbox"/> PERMIT ALL <input type="checkbox"/> DENY ALL <input type="checkbox"/> WAN1 <input type="checkbox"/> WAN2
Traffic Log	<input checked="" type="checkbox"/> Enable
Statistics	<input checked="" type="checkbox"/> Enable
Content Blocking	<input type="checkbox"/> URL <input type="checkbox"/> Script <input type="checkbox"/> P2P <input type="checkbox"/> IM <input type="checkbox"/> Download
Authentication User	planet
Schedule	None
Alarm Threshold	0.0 KBytes/Sec
QoS	None
MAX. Concurrent Sessions	0 (0:means unlimited)
Quota Per Session	0 KBytes
Quota Per Day	0 MBytes

NOTE: If Outgoing Policy only has configured one rule with Authentication feature enabled, please add another rule to allow DNS protocol passing through Internet. After that, when each LAN user tries to browse website, the Authentication page will pop up automatically.

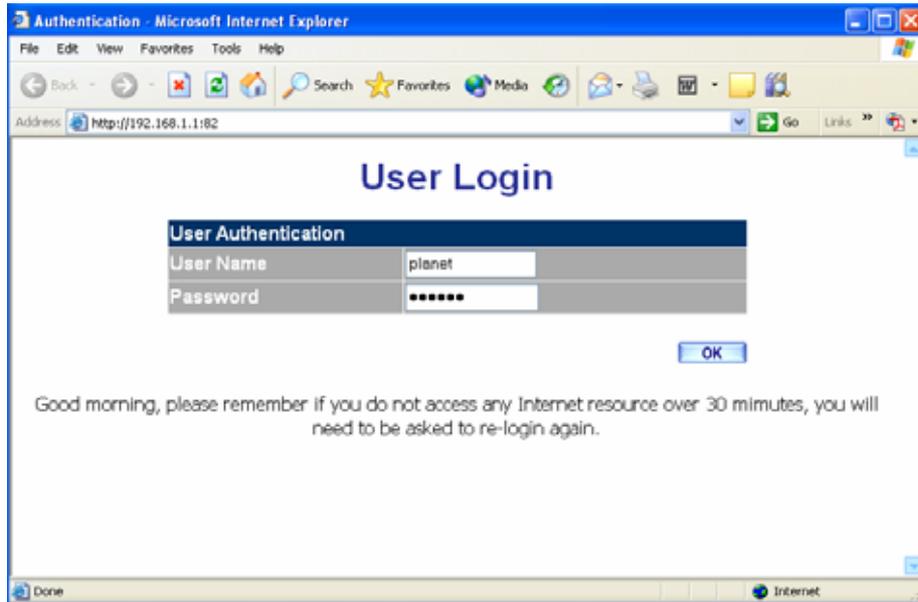
Outgoing

Source	Destination	Service	Action	Option	Configure	Move
Inside_Any	Outside_Any	DNS	✓		Modify Remove Pause	To 1
Inside_Any	Outside_Any	ANY	✓		Modify Remove Pause	To 2

New Entry

User Login Page Definitions:

- **User Name:** The name of the Authentication you want to configure.
- **Password:** The input carries on the authentication the password



Modifying the Authentication User

Step 1. In the **Authentication** window, locate the **Auth-User** name you want to edit, and click on **Modify** in the **Configure** field.

Step 2. The **Modify Auth-User Password** window will appear. Enter in the required information:

- **Auth-User:** show original authentication user.
- **Password:** show original password.
- **New Password:** enter new password
- **Confirm Password:** enter the new password again.

Step 3. Click **OK** to confirm authentication user change or click **Cancel** to cancel it.

Removing a Authentication User

Step 1. In the Authentication table, locate the Auth-User name you want to edit, and click on the Remove option in the Configure field.

Step 2. The Remove confirmation pop-up box will appear.

Step 3. Click **OK** to remove that Authentication User or click **Cancel** to cancel.

The screenshot shows the PLANET web interface for the 'Auth User' configuration. On the left is a navigation menu with 'Authentication' selected. The main area displays a table with one entry:

Authentication-User Name	Configure
planet	Modify Remove

Below the table is a 'New User' button. A 'Microsoft Internet Explorer' dialog box is open, asking 'Are you sure you want to remove?' with 'OK' and 'Cancel' buttons.

4.7.3 Auth User Group

Accessing the Auth User Group window

Click **Authentication** in the menu bar on the left hand side of the window. Click **Auth User Group** under it. A window will appear with a table displaying current Auth User Group settings by the Administrator.

The screenshot shows the PLANET web interface for the 'Auth User Group' configuration. On the left is a navigation menu with 'Auth User Group' selected. The main area displays a table with columns for configuration options:

Name	Member	Radius	POP3	LDAP	Configure
New Entry					

Adding Auth User Group

Step 1. In the Auth User Group window, click the **New Entry** button.

In the Auth User Group window, the following fields will appear:

- **Name:** Enter the new Auth User group name.
- **Available auth user:** List all the available Auth User.
- **Selected auth user:** List Auth User to be assigned to the new group.

Step 2. Enter the new group name in the group **Name** field. This will be the name referencing the created group.

Step 3. To add new Auth User: Select the Auth User desired to be added in the **Available auth user** list, and then click the **Add>>** button to add them to the group.

Step 4. To remove Auth User: Select Auth User desired to be removed in the **Available auth user** list, and then click the **<<Remove** button to remove them from the group.

Step 5. Click **OK** to add the new group.

The screenshot shows the 'Auth User Group' configuration window. The left sidebar contains a navigation menu with the following items: System, Interface, Address, Service, Schedule, QoS, Authentication (highlighted), Auth Setting, Auth User, Auth User Group (selected), RADIUS, POP3, LDAP, Content Filtering, Virtual Server, Policy, VPN, and Inbound Balance. The main window area is titled 'New Authentication Group' and features a 'Name:' field containing 'ENM'. Below this are two lists: 'Available Authentication User' and 'Selected Authentication User'. The 'Available' list contains 'planet (Radius User)', 'planet (POP3 User)', and 'planet (LDAP User)'. The 'Selected' list contains 'planet'. Between the lists are 'Remove' and 'Add' buttons. At the bottom right of the window are 'OK' and 'Cancel' buttons.

Modifying Auth User Group

Step 1. In the Auth User Group window, locate the Auth User Group to be edited. Click its corresponding **Modify** option in the **Configure** field.

Step 2. In the **Modify Auth group** window the following fields are displayed::

- **Name:** Enter the new Auth User group name .
- **Available auth user:** List all the available Auth User.
- **Selected auth user:** List Auth User to be assigned to the new group.

Step 3. To add new Auth User: Select the Auth User desired to be added in the **Available auth user** list, and then click the **Add>>** button to add them to the group.

Step 4. To remove Auth User: Select Auth User desired to be removed in the **Available auth user** list, and then click the **<<Remove** button to remove them from the group.

Step 5. Click **OK** to modify the Group.

Removing Auth User Group

Step 1. In the **Auth User Group** window, locate the Auth User Group to be removed and click its corresponding **Remove** option in the **Configure** field.

Step 2. In the **Remove** confirmation pop-up box, click **OK** to remove the selected service group or click **Cancel** to cancel removing.

The screenshot shows the PLANET web interface for the 'Auth User Group' configuration. On the left is a navigation menu with 'Auth User Group' selected. The main area contains a table with the following data:

Name	Member	Radius	POP3	LDAP	Configure
ENM	planet				Modify Remove Pause

A 'New Entry' button is located below the table. A 'Remove' button is highlighted, and a confirmation dialog box is displayed over it with the text: 'Are you sure you want to remove?' and 'OK' and 'Cancel' buttons.

4.7.4 Radius Server (MH-4000 Only)

Click **Authentication** on the left side menu bar, then click **Radius Server** below it. The following window is shown.

The screenshot shows the PLANET web interface for the 'RADIUS' configuration. The left navigation menu has 'RADIUS' selected. The main area is titled 'RADIUS Server' and contains the following configuration options:

- Enable RADIUS Server Authentication** (with a 'RADIUS Test' button)
- RADIUS Server (IP or Domain Name)**: 168.95.192.200
- RADIUS Server Port**: 1812
- Shared Secret**: planet
- Enable 802.1x RADIUS Server Authentication**

'OK' and 'Cancel' buttons are located at the bottom right of the configuration area.

Definition

- ◆ **Enable RADIUS Server:** Enable RADIUS Server Authentication.
- ◆ **RADIUS Server IP:** Enter RADIUS Server IP address.
- ◆ **RADIUS Server Port:** Enter RADIUS Server Port. The default port is 1812.
- ◆ **Shared Secret:** The Password for MH-4000 to access RADIUS Server.
- ◆ **Enable 802.1x RADIUS Server Authentication:** Enable 802.1x RADIUS Server Authentication.

4.7.5 POP3 (MH-4000 only)

Click **Authentication** on the left side menu bar, then click **POP3** below it. The following window is shown.

PLANET
Networking & Communication

POP3

POP3 Server

Enable POP3 Server Authentication POP3 Test

POP3 Server (IP or Domain Name)

POP3 Server Port

OK Cancel

Definition

- ◆ **Enable POP3 Server:** Enable POP3 Server Authentication.
- ◆ **POP3 Server :** Enter POP3 Server IP address or domain name.
- ◆ **POP3 Server Port:** Enter POP3 Server Port. The default port is 110.

4.7.6 LDAP (MH-4000 only)

Click **Authentication** on the left side menu bar, then click **LDAP** below it. The following window is shown.

PLANET
Networking & Communication

LDAP

LDAP Server

Enable LDAP Server Authentication LDAP Test

LDAP Server (IP or Domain Name)

LDAP Server Port

Search Distinguished Name

LDAP Filter

User Distinguished Name

Password

OK Cancel

Definition

- ◆ **Enable LDAP Server:** Enable LDAP Server Authentication.
- ◆ **LDAP Server:** Enter LDAP Server IP address or domain name.
- ◆ **LDAP Server Port:** Enter LDAP Server Port. The default port is 389

- ◆ **Search Distinguished Name:** The Distinguished Name will be used to search by LDAP server. (ex: dc=mydomain,dc=com)
- ◆ **LDAP Filter:** Input the object located at the range of Distinguished Name. (ex: (objectClass=*))
- ◆ **User Distinguished Name:** The user Distinguished Name of LDAP server. (ex: cn=users,dc=mydomain,dc=com)
- ◆ **Password:** The password of the user Distinguished Name

4.8 Content filtering

Content Filtering includes “**URL Blocking**” , “**Script Blocking**”, “**P2P Blocking**”, “**IM Blocking**” and “**Download Blocking**”.

URL Blocking: The administrator can use a complete domain name or key word to make rules for specific websites.

Script Blocking: To let Popup、ActiveX、Java、Cookie in or keep them out.

P2P Blocking: Block P2P program, include “eDonkey”, “Bit Torrent “ and “WinMX”.

IM Blocking: Block Internet Message program, include “MSN”, “Yahoo Messenger”, “ICQ”, “QQ” and “Skype”.

Download Blocking: Block download connection, audio and video transferring from web page. You can select to block which type of extension name or all type of the file.

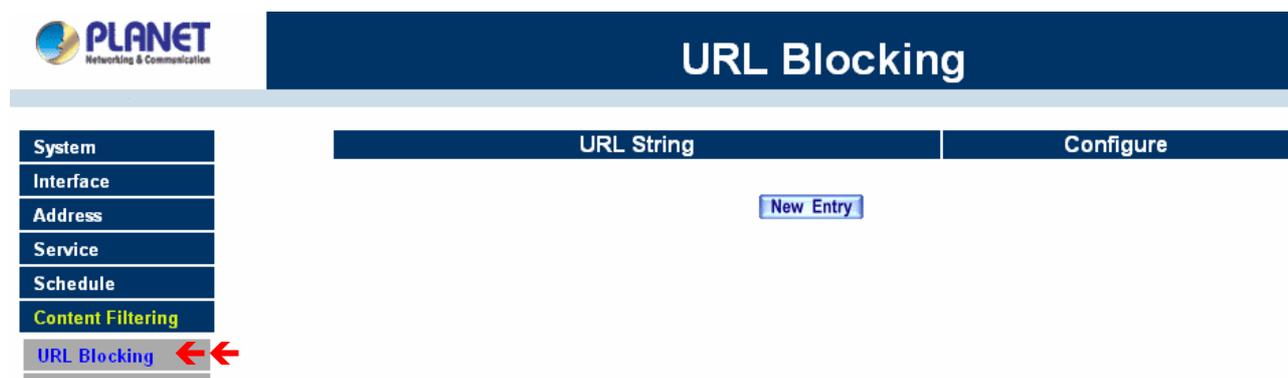
4.8.1 URL Blocking

The Administrator may setup URL Blocking to prevent LAN network users from accessing a specific website on the Internet. Any web request coming from an LAN network computer to a blocked website will receive a blocked message instead of the website.

Entering the URL blocking window

Step 1. Click on **URL Blocking** under the **Configuration** menu bar.

Step 2. Click on **New Entry**.



Definition:

URL String: The domain name that is blocked to enter by MH-2K/4K.

Configure: To change the settings of URL Blocking, click **Modify** to change the parameters; click **Delete** to delete the settings.

Adding a URL Blocking policy

Step 1. After clicking **New Entry**, the **Add New Block String** window will appear.

Step 2. Enter the URL of the website to be blocked.

Step 3. Click **OK** to add the policy. Click **Cancel** to discard changes.

The screenshot shows the PLANET Networking & Communication interface. The main window is titled 'URL Blocking'. On the left, there is a navigation menu with the following items: System, Interface, Address, Service, Schedule, Content Filtering, URL Blocking (highlighted in blue), and Script Blocking. The main content area is titled 'Add New URL String'. It contains a text input field labeled 'URL String' with the value 'gamble' entered. At the bottom right of the dialog, there are two buttons: 'OK' and 'Cancel'.

Modifying a URL Blocking Policy

Step 1. In the **URL Blocking** window, find the policy to be modified and click the corresponding **Modify** option in the **Configure** field.

Step 2. Make the necessary changes needed.

Step 3. Click on **OK** to save changes or click on **Cancel** to discard changes.

The screenshot shows the PLANET Networking & Communication interface. The main window is titled 'URL Blocking'. On the left, there is a navigation menu with the following items: System, Interface, Address, Service, Schedule, Content Filtering, URL Blocking (highlighted in blue), Script Blocking, and P2P Blocking. The main content area is titled 'Modify URL String'. It contains a text input field labeled 'URL String' with the value 'gamble' entered. At the bottom right of the dialog, there are two buttons: 'OK' and 'Cancel'.

Removing a URL Blocking policy

Step 1. In the **URL Blocking** window, find the policy to be removed and click the corresponding **Remove** option in the **Configure** field.

Step 2. A confirmation pop-up box will appear, click on **OK** to remove the policy or click on **Cancel** to discard changes.



URL Blocking

System	URL String	Configure
Interface	gamble	Modify Remove

[New Entry](#)

Microsoft Internet Explorer

Are you sure you want to remove ?

[OK](#) [Cancel](#)

Content Filtering

- URL Blocking
- Script Blocking
- P2P Blocking
- IM Blocking
- Download Blocking

Note: After finishing Content Filtering setting, you must enable it at Outgoing Policy, or Content Filtering will not be workable.



Outgoing

System	Modify Policy	
Interface	Source Address	Inside_Any
Address	Destination Address	Outside_Any
Service	Service	ANY
Schedule	Action, WAN Port	PERMIT ALL
Content Filtering	Logging	<input type="checkbox"/> Enable
Virtual Server	Statistics	<input type="checkbox"/> Enable
VPN	Content Filtering	<input checked="" type="checkbox"/> Enable
Policy	Schedule	None
Outgoing	Alarm Threshold	0.0 KBytes/Sec
Incoming	MAX. Concurrent Sessions	0 (0: means unlimited)
WAN To DMZ		
LAN To DMZ		
DMZ To WAN		

4.8.2 Script Blocking

To let Popup, ActiveX, Java, or Cookies in or keep them out.

Step 1: Click **Content Filtering** in the menu.

Step 2: **Script Blocking** detective functions.

Popup: Prevent pop-up boxes from appearing.

ActiveX: Prevent ActiveX packets.

Java: Prevent Java packets.

Cookie: Prevent Cookie packets.

Step 3: After selecting each function, click the **OK** button below.



Script Blocking

System	Script Blocking		
Interface	<input checked="" type="checkbox"/> Popup Blocking	<input checked="" type="checkbox"/> ActiveX Blocking	
Address	<input checked="" type="checkbox"/> Java Blocking	<input checked="" type="checkbox"/> Cookie Blocking	
Service			<input type="button" value="OK"/> <input type="button" value="Cancel"/>
Schedule			
Content Filtering			
URL Blocking			
Script Blocking ←←			
P2P Blocking			

When the system detects the setting, MH-2K/4K will spontaneously work.

Note: After finishing Content Filtering setting, you must enable it at Outgoing Policy, or Content Filtering will not be workable.



Outgoing

System	Modify Policy	
Interface	Source Address	Inside_Any ▾
Address	Destination Address	Outside_Any ▾
Service	Service	ANY ▾
Schedule	Action, WAN Port	PERMIT ALL ▾
Content Filtering	Logging	<input type="checkbox"/> Enable
Virtual Server	Statistics	<input type="checkbox"/> Enable
VPN	Content Filtering	<input checked="" type="checkbox"/> Enable
Policy	Schedule	None ▾
Outgoing	Alarm Threshold	0.0 KBytes/Sec
Incoming	MAX. Concurrent Sessions	0 (0:means unlimited)
WAN To DMZ		
LAN To DMZ		
DMZ To WAN		

4.8.3 P2P Blocking

Step 1: Click **Content Filtering** in the menu.

Step 2: Select **P2P Blocking** and configure the setting.

eDonkey Block: Prevent eDonkey connection built up.

Bit Torrent Block: Prevent Bit Torrent connection built up.

WinMX: Prevent WinMX connection built up.

Step 3: After selecting each function, click the **OK** button below.



P2P Blocking

System	Peer-to-Peer Application Blocking <input checked="" type="checkbox"/> eDonkey Blocking <input checked="" type="checkbox"/> Bit Torrent Blocking <input checked="" type="checkbox"/> WinMX Blocking
Interface	
Address	
Service	
Schedule	
Content Filtering	
URL Blocking	
Script Blocking	
P2P Blocking	
IM Blocking	

Note: After finishing Content Filtering setting, you must enable it at Outgoing Policy, or Content Filtering will not be workable.



Outgoing

System	Modify Policy Source Address: Inside_Any Destination Address: Outside_Any Service: ANY Action, WAN Port: PERMIT ALL Logging: <input type="checkbox"/> Enable Statistics: <input type="checkbox"/> Enable Content Filtering: <input checked="" type="checkbox"/> Enable Schedule: None Alarm Threshold: 0.0 KBytes/Sec MAX. Concurrent Sessions: 0 (0: means unlimited)
Interface	
Address	
Service	
Schedule	
Content Filtering	
Virtual Server	
VPN	
Policy	
Outgoing	
Incoming	
WAN To DMZ	
LAN To DMZ	
DMZ To WAN	

4.8.4 IM Blocking

Step 1: Click **Content Filtering** in the menu.

Step 2: Select **IM Blocking** and configure the setting.

MSN Messenger Blocking: Only to select to block MSN Messenger **login**.

Yahoo Messenger Blocking: Only to select to block Yahoo Messenger **login**.

ICQ Blocking: Only to select to block ICQ **login**.

QQ Blocking: Only to select to block QQ **login**.

Skype Blocking: Only to select to block Skype **login**.

Step 3: After selecting each function, click the **OK** button below.



IM Blocking

System	Instant Messaging Blocking
Interface	<input checked="" type="checkbox"/> MSN Messenger Blocking
Address	<input checked="" type="checkbox"/> Yahoo Messenger Blocking
Service	<input checked="" type="checkbox"/> ICQ Messenger Blocking
Schedule	<input checked="" type="checkbox"/> QQ Messenger Blocking
Content Filtering	<input checked="" type="checkbox"/> Skype Messenger Blocking
URL Blocking	<input type="button" value="OK"/> <input type="button" value="Cancel"/>
Script Blocking	
P2P Blocking	
IM Blocking	
Download Blocking	

Note: After finishing Content Filtering setting, you must enable it at Outgoing Policy, or Content Filtering will not be workable.



Outgoing

System	Modify Policy
Interface	Source Address: Inside_Any
Address	Destination Address: Outside_Any
Service	Service: ANY
Schedule	Action, WAN Port: PERMIT ALL
Content Filtering	Logging: <input type="checkbox"/> Enable
Virtual Server	Statistics: <input type="checkbox"/> Enable
VPN	Content Filtering: <input checked="" type="checkbox"/> Enable
Policy	Schedule: None
Outgoing	Alarm Threshold: 0.0 KBytes/Sec
Incoming	MAX. Concurrent Sessions: 0 (0: means unlimited)
WAN To DMZ	
LAN To DMZ	
DMZ To WAN	

4.8.5 Download Blocking

Step 1: Click **Content Filtering** in the menu.

Step 2: Select **Download Blocking** and configure the setting.

All Types Block: To block all types of the files downloading from web page.

Audio and Video Types block: To block audio and video downloading from web page..

Extensions Block: To block specific extensions name of the files from web page.

Step 3: After selecting each function, click the **OK** button below.



Download Blocking

System
Interface
Address
Service
Schedule
Content Filtering
URL Blocking
Script Blocking
P2P Blocking
IM Blocking
Download Blocking
Virtual Server

Download Blocking

- All Types Blocking
 Audio and Video Types Blocking

Extension Blocking

- | | | |
|-------------------------------|-------------------------------|-------------------------------|
| <input type="checkbox"/> .exe | <input type="checkbox"/> .zip | <input type="checkbox"/> .rar |
| <input type="checkbox"/> .iso | <input type="checkbox"/> .bin | <input type="checkbox"/> .rpm |
| <input type="checkbox"/> .doc | <input type="checkbox"/> .xl? | <input type="checkbox"/> .ppt |
| <input type="checkbox"/> .pdf | <input type="checkbox"/> .tgz | <input type="checkbox"/> .gz |
| <input type="checkbox"/> .bat | <input type="checkbox"/> .dll | <input type="checkbox"/> .hta |
| <input type="checkbox"/> .scr | <input type="checkbox"/> .vb? | <input type="checkbox"/> .wps |
| <input type="checkbox"/> .pif | | |

OK

Cancel

Note: After finishing Content Filtering setting, you must enable it at Outgoing Policy, or Content Filtering will not be workable.



Outgoing

System
Interface
Address
Service
Schedule
Content Filtering
Virtual Server
VPN
Policy
Outgoing
Incoming
WAN To DMZ
LAN To DMZ
DMZ To WAN

Modify Policy

Source Address	Inside_Any
Destination Address	Outside_Any
Service	ANY
Action, WAN Port	PERMIT ALL
Logging	<input type="checkbox"/> Enable
Statistics	<input type="checkbox"/> Enable
Content Filtering	<input checked="" type="checkbox"/> Enable
Schedule	None
Alarm Threshold	0.0 KBytes/Sec
MAX. Concurrent Sessions	0 (0:means unlimited)

4.9 Virtual Server

MH-2K/4K separates an enterprise's Intranet and Internet into LAN networks and WAN networks respectively. Generally speaking, in order to allocate enough IP addresses for all computers, an enterprise assigns each computer a private IP address, and converts it into a real IP address through MH-2K/4K's NAT (Network Address Translation) function. If a server providing service to the WAN networks is located in the LAN networks, outside users can't directly connect to the server by using the server's private IP address.

MH-2K/4K's Virtual Server can solve this problem. A virtual server has set the real IP address of MH-2K/4K's WAN network interface to be the Virtual Server IP. Through the virtual server feature, MH-2K/4K translates the virtual server's IP address into the private IP address of physical server in the LAN network. When outside users on the Internet request connections to the virtual server, the request will be forwarded to the private LAN server.

Virtual Server owns another feature known as one-to-many mapping. This is when one virtual server IP address on the WAN interface can be mapped into 4 LAN network server private IP addresses. This option is useful for Load Balancing, which causes the virtual server to distribute data packets to each private IP addresses (which are the real servers). By sending all data packets to all similar servers, this increases the server's efficiency, reduces risks of server crashes, and enhances servers' stability.

How to use Virtual Server and mapped IP

Virtual Server and Mapped IP are part of the IP mapping (also called DMZ, De-Militarization Zone) scheme. By applying the incoming policies, Virtual Server and IP mapping work similarly. They map real IP addresses to the physical servers' private IP addresses (which is opposite to NAT), but there are still some differences:

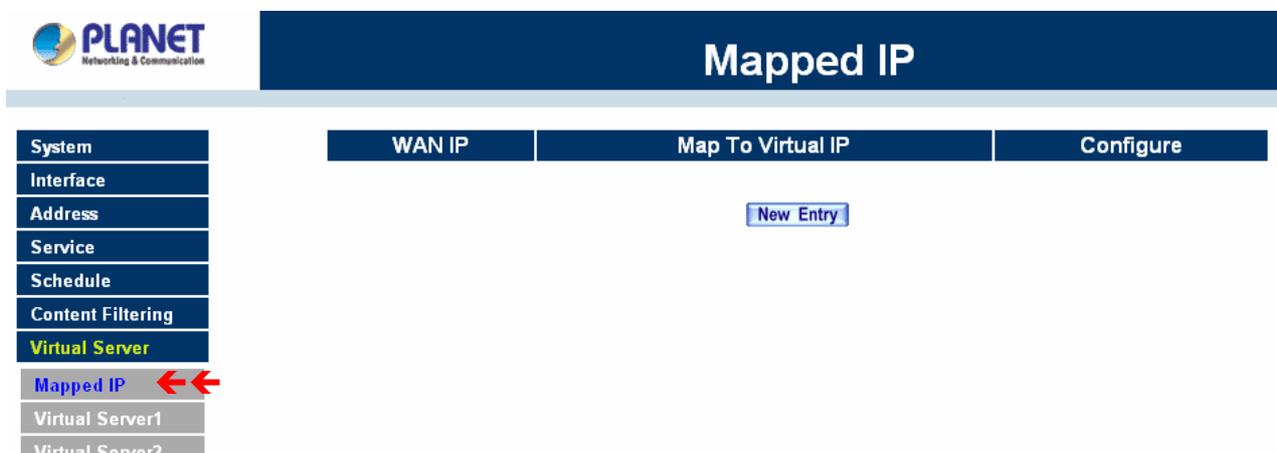
- Virtual Server can map one real IP to several LAN physical servers while Mapped IP can only map one real IP to one LAN physical server (1-to-1 Mapping). The Virtual Servers' load balance feature can map a specific service request to different physical servers running the same services.
- Virtual Server can only map one real IP to one service/port of the LAN physical servers while Mapped IP maps one real IP to all the services offered by the physical server.
- IP mapping and Virtual Server work by binding the IP address of the WAN virtual server to the private LAN IP address of the physical server that supports the services. Therefore users from the WAN network can access servers of the LAN network by requesting the service from the IP address provided by Virtual Server.

4.9.1 Mapped IP

Internal private IP addresses are translated through NAT (Network Address Translation). If a server is located in the LAN network, it has a private IP address, and outside users cannot connect directly to LAN servers' private IP address. To connect to a LAN network server, outside users have to first connect to a real IP address of the WAN network, and the real IP is translated to a private IP of the LAN network. Mapped IP and Virtual Server are the two methods to translate the real IP into private IP. Mapped IP maps IP in one-to-one fashion; that means, all services of one real WAN IP address is mapped to one private LAN IP address.

Entering the Mapped IP window

Step 1. Click **Mapped IP** under the **Virtual Server** menu bar and the Mapped IP configuration window will appear.



Definition:

WAN IP: WAN IP Address.

Map to Virtual IP: The IP address which WAN maps to the virtual network in the server.

Configure: To change the setting, click Configure to modify the parameters; click delete to delete the setting.

Adding a new IP Mapping

Step 1. In the **Mapped IP** window, click the New Entry button. The Add New Mapped IP window will appear.

- **WAN IP:** select the WAN public IP address to be mapped.
- **Internal IP:** enter the LAN private IP address will be mapped 1-to-1 to the WAN IP address.

Step 2. Click **OK** to add new IP Mapping or click **Cancel** to cancel adding.



Mapped IP

System	Add New Mapped IP	
Interface	WAN IP	192.168.99.120 Assist
Address	Map To Virtual IP	192.168.1.30
Service		
Schedule		
Content Filtering		
Virtual Server		
Mapped IP		
Virtual Server		

Modifying a Mapped IP

- Step 1. In the **Mapped IP** table, locate the Mapped IP you want it to be modified and click its corresponding Modify option in the Configure field.
- Step 2. Enter settings in the Modify Mapped IP window.
- Step 3. Click **OK** to save change or click **Cancel** to cancel.



Mapped IP

System	Modify Mapped IP	
Interface	WAN IP	192.168.99.120 Assist
Address	Map To Virtual IP	192.168.1.30
Service		
Schedule		
Content Filtering		
Virtual Server		
Mapped IP		
Virtual Server		

NOTE: A Mapped IP cannot be modified if it has been assigned/used as a destination address of any Incoming policies.

Removing a Mapped IP

- Step 1. In the Mapped IP table, locate the Mapped IP desired to be removed and click its corresponding Remove option in the Configure field.
- Step 2. In the Remove confirmation pop-up window, click **OK** to remove the Mapped IP or click **Cancel** to cancel.



Mapped IP

System	WAN IP	Map To Virtual IP	Configure
Interface	192.168.99.120	192.168.1.30	Modify Remove

[New Entry](#)

Microsoft Internet Explorer

Are you sure you want to remove ?

[OK](#) [Cancel](#)

- System
- Interface
- Address
- Service
- Schedule
- Content Filtering
- Virtual Server
- Mapped IP**
- Virtual Server1
- Virtual Server2

4.9.2 Virtual Server

Virtual server is a one-to-many mapping technique, which maps a real IP address from the WAN interface to private IP addresses of the LAN network. This function provides services or applications defined in the Service menu to enter into the LAN network. Unlike a mapped IP which binds a WAN IP to a LAN IP, virtual server binds WAN IP ports to LAN IP ports.



Virtual Server1

Virtual Server Real IP [click here to configure](#)

Service	WAN Port	Server Virtual IP	Configure

- System
- Interface
- Address
- Service
- Schedule
- Content Filtering
- Virtual Server
- Mapped IP
- Virtual Server1** ←←
- Virtual Server2

Definition:

Virtual Server Real IP: The WAN IP address configured by the virtual server. Click “**Click here to configure**” button to add new virtual server address.

Service: The service names that provided by the virtual server.

WAN Port: The TCP/UDP ports that present the service items provided by the virtual server.

Server Virtual IP: The virtual IP which mapped by the virtual server.

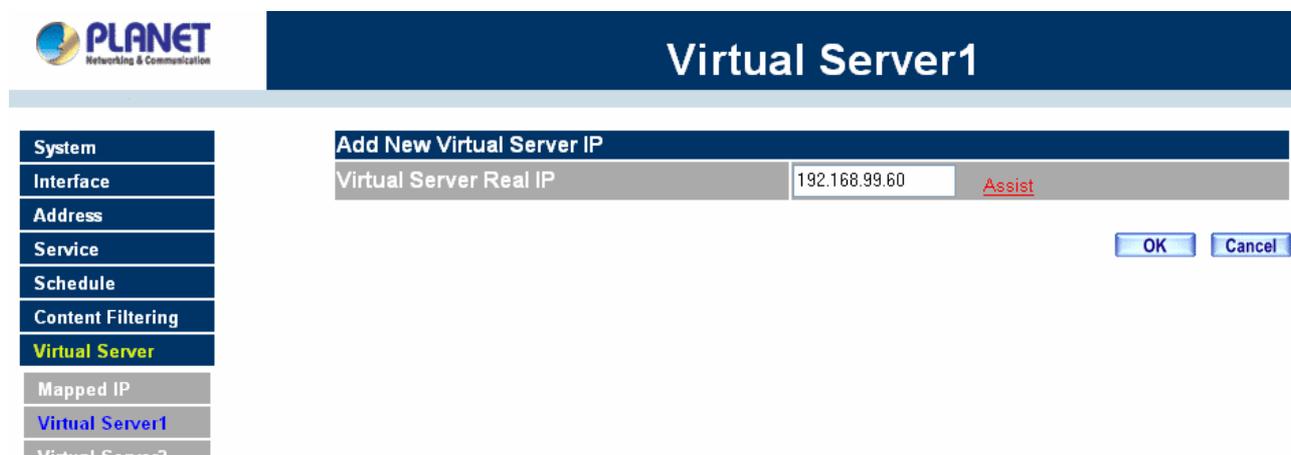
Configure: To change the service configuration, click **Configure** to change the parameters; click **Delete** to delete the configuration.

This virtual server provides four real IP addresses, which means you can setup four virtual servers at most (Setup under the Virtual Server sub-selections Virtual Server 1/2/3/4 in the menu bar on the left hand side.) The administrator can select Virtual Server1/2/3/4 under Virtual Server selection in the menu bar on the left

hand side, click **Virtual Server Real IP** to add or change the virtual server IP address; click “**Click here to configure**” to add or change the virtual server service configuration.

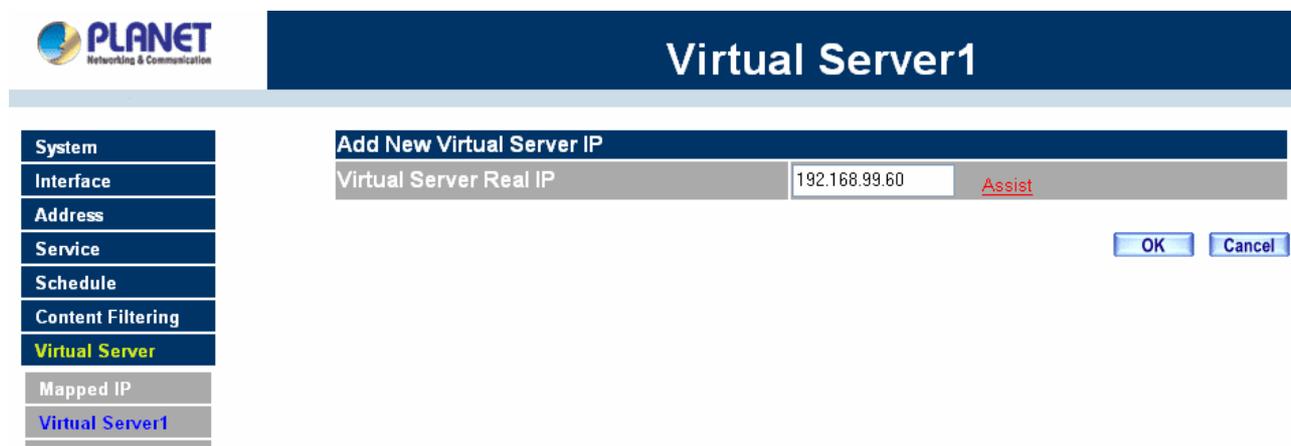
Adding a Virtual Server

- Step 1. Click an available virtual server from **Virtual Server** in the **Virtual Server** menu bar to enter the virtual server configuration window. In the following, Virtual Server is assumed to be the chosen option.
- Step 2. Click the **click here to configure** button and the Add new Virtual Server IP window appears and asks for an IP address from the WAN network.
- Step 3. Select an IP address from the drop-down list of available WAN network IP addresses.
- Step 4. Click **OK** to add new Virtual Server or click **Cancel** to cancel adding.



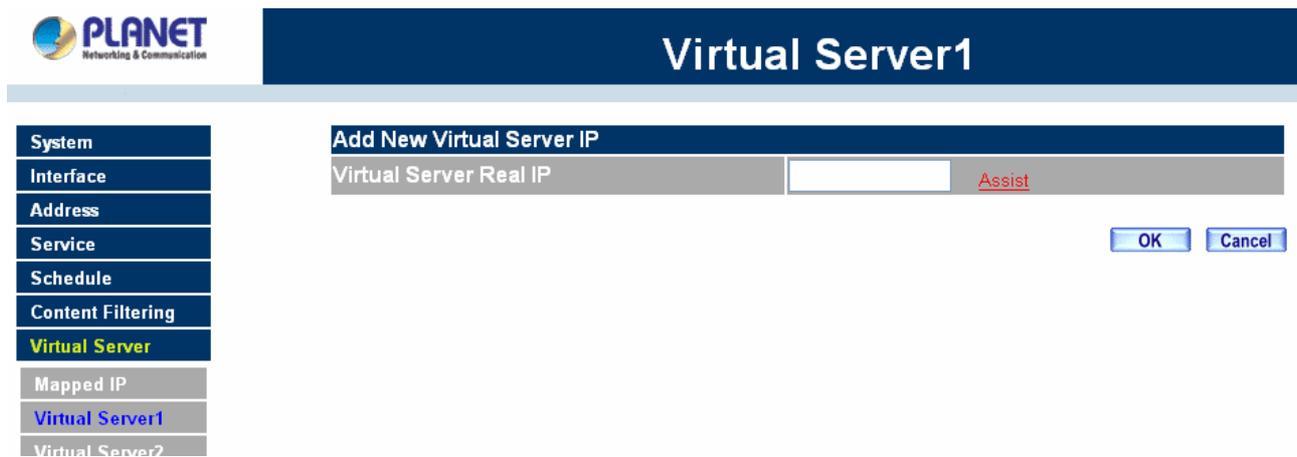
Modifying a Virtual Server IP Address

- Step 1. Click the virtual server to be modified Virtual Server under the **Virtual Server** menu bar. A new window appears displaying the IP address and service of the specified virtual server.
- Step 2. Click on the Virtual Server's IP Address button at the top of the screen.
- Step 3. Choose a new IP address from the drop-down list.
- Step 4. Click **OK** to save new IP address or click **Cancel** to discard changes.



Removing a Virtual Server

- Step 1. Click the virtual server to be removed in the corresponding Virtual Server option under the **Virtual Server** menu bar. A new window displaying the virtual server's IP address and service appears on the screen.
- Step 2. Click the Virtual Server's IP Address button at the top of the screen.
- Step 3. Delete the IP address.
- Step 4. Click **OK** to remove the virtual server.



Setting the Virtual Server's services

- Step 1. For the Virtual Server which has already been set up with an IP address, click the New Service button in the table.
- Step 2. In the Virtual Server Configurations window:
 - **Virtual Server Real IP:** displays the WAN IP address assigned to the Virtual Server.
 - **Service Name (Port):** select the service from the pull down list that will be provided by the Real Server (Load Balance Server).
 - **External Service Port:** Input the port number that the virtual server will use. Changing the Service will change the port number to match the service.
 - **Load Balance Server:** The internal server IP address mapped by the virtual server. Four computer IP addresses can be set at most, and the load can be maintained in a balance by round robin algorithm.
- Step 3. Enter the IP address of the LAN network server(s), to which the virtual server will be mapped. Up to four IP addresses can be assigned at most.
- Step 4. Click **OK** to save the settings of the Virtual Server.

NOTE: The services in the drop-down list are all defined in the Pre-defined and Custom section of the **Service** menu.



Virtual Server1

System	Virtual Server Configuration	
Interface	Virtual Server Real IP	192.168.99.60
Address	Service	ANY (0-65535)
Service	External Service Port	0-65535
Schedule	Load Balance Server	Server Virtual IP
Content Filtering	1	
Virtual Server	2	
Mapped IP	3	
Virtual Server1	4	
Virtual Server2		

Adding New Virtual Server Service Configuration

- Step 1. Select Virtual Server in the menu bar on the left hand side, and then select Virtual Server 1/2/3/4 sub-selections.
- Step 2. In Virtual Server 1/2/3/4 Window, click “**New Entry**” button.
- Step 3. Enter the parameters in the Virtual Server Configuration column.



Virtual Server1

System	Virtual Server Configuration	
Interface	Virtual Server Real IP	192.168.99.60
Address	Service	HTTP (80)
Service	External Service Port	80
Schedule	Load Balance Server	Server Virtual IP
Content Filtering	1	192.168.1.40
Virtual Server	2	192.168.1.41
Mapped IP	3	192.168.1.42
Virtual Server1	4	192.168.1.43
Virtual Server2		

- **Virtual Server Real IP:** displays the WAN IP address assigned to the Virtual Server
- **Service Name (Port):** select the service from the pull down list that will be provided by the Real Server (Load Balance Server).
- **External Service Port:** Input the port number that the virtual server will use. Changing the Service will change the port number to match the service.
- **Load Balance Server:** The internal server IP address mapped by the virtual server. Four computer IP addresses can be set at most, and the load can be maintained in a balance by round robin algorithm.

Click **OK** to execute adding new virtual server service, or click **Cancel** to discard adding.

Remember to configure the service items of virtual server before you configure Policy, or the service names will not be shown in Policy.

Modifying the Virtual Server configurations

- Step 1. In the Virtual Server window's service table, locate the name of the service desired to be modified and click its corresponding Modify option in the Configure field.
- Step 2. In the Virtual Server Configuration window, enter the new settings.
- Step 3. Click **OK** to save modifications or click **Cancel** to discard changes.



Virtual Server1

System	Virtual Server Configuration	
Interface	Virtual Server Real IP	192.168.99.60
Address	Service	HTTP (80)
Service	External Service Port	80
Schedule	Load Balance Server	Server Virtual IP
Content Filtering	1	192.168.1.40
Virtual Server	2	192.168.1.41
Mapped IP	3	192.168.1.42
Virtual Server1	4	192.168.1.43
Virtual Server2		

Click **OK** to execute the change of the virtual server, or click **Cancel** to discard changes.

NOTE: If the destination Network in Policy has set a virtual server, it will not be able to change or configure this virtual server, you have to remove this configuration of Policy, and then you can execute the modification or configuration.

Removing the Virtual Server service

- Step 1. In the Virtual Server window's service table, locate the name of the service desired to be removed and click its corresponding Remove option in the Configure field.
- Step 2. In the Remove confirmation pop-up box, click **OK** to remove the service or click **Cancel** to cancel removing.



Virtual Server1

System
Interface
Address
Service
Schedule
Content Filtering
Virtual Server
Mapped IP
Virtual Server1
Virtual Server2

Virtual Server Real IP

Service	WAN Port	Server Virtual IP	Configure
HTTP (80)	80	192.168.1.40 192.168.1.41 192.168.1.42 192.168.1.43	<input type="button" value="Modify"/> <input type="button" value="Remove"/>



NOTE: If the destination Network in Policy has set a virtual server, it will not be able to change or configure this virtual server unless you have already removed this configuration of Policy.

4.10 Policy

This section provides the Administrator with facilities to sent control policies for packets with different source IP addresses, source ports, destination IP addresses, and destination ports. Control policies decide whether packets from different network objects, network services, and applications are able to pass through MH-2K/4K.

What is Policy?

The device uses policies to filter packets. The policy settings are: source address, destination address, services, permission, packet log, packet statistics, and flow alarm. Based on its source addresses, a packet can be categorized into:

- (1)Outgoing: a client is in the LAN networks while a server is in the WAN 1/2 networks.
- (2) Incoming, a client is in the WAN 1/2 networks, while a server is in the LAN networks.
- (3) To DMZ: a client is either in the LAN networks or in the WAN networks while, server is in DMZ.
- (4) From DMZ, a client is in DMZ while server is either in the LAN networks or in the WAN networks.

How do I use Policy?

The policy settings are source addresses, destination addresses, services, permission, log, statistics, and flow alarm. Among them, source addresses, destination addresses and IP mapping addresses have to be defined in the **Address** menu in advance. Services can be used directly in setting up policies, if they are in the Pre-defined Service menu. Custom services need to be defined in the **Custom** menu before they can be used in the policy settings.

If the destination address of an incoming policy is a Mapped IP address or a Virtual Server address, then the address has to be defined in the **Virtual Server** section instead of the **Address** section.

Policy Directions:

- Step 1.** In **Address**, set names and addresses of source networks and destination networks.
- Step 2.** In **Service**, set services.
- Step 3.** In **Virtual Server**, set names and addresses of mapped IP or virtual server (only applied to **Incoming policies**).
- Step 4.** Set control policies in **Policy**.

4.10.1 Outgoing

This section describes steps to create policies for packets and services from the LAN network to the WAN 1/2 network.

Entering the Outgoing window:

Click **Policy** on the left hand side menu bar, then click **Outgoing** under it. A window will appear with a table

displaying currently defined Outgoing policies.

Source	Destination	Service	Action	Option	Configure	Move
Inside_Any	Outside_Any	ANY			Modify Remove	To 1

[New Entry](#)

The fields in the Outgoing window are:

- **Source:** source network addresses that are specified in the LAN section of **Address** menu, or all the LAN network addresses.
- **Destination:** destination network addresses that are specified in the WAN section of the Address menu, or all of the WAN network addresses.
- **Service:** specify services provided by WAN network servers.
- **Action:** control actions to permit or deny packets from LAN networks to WAN 1/2 network travelling through MH-2K/4K.
- **Option:** specify the monitoring functions on packets from LAN networks to WAN 1/2 networks travelling through MH-2K/4K.
- **Configure:** modify settings.
- **Move:** this sets the priority of the policies, number 1 being the highest priority.

Adding a new Outgoing Policy

Step 1: Click on the New Entry button and the Add New Policy window will appear.



Outgoing

Add New Policy	
Source Address	Inside_Any
Destination Address	Outside_Any
Service	ANY
Action, WAN Port	<input checked="" type="checkbox"/> PERMIT ALL <input type="checkbox"/> DENY ALL <input type="checkbox"/> WAN1 <input type="checkbox"/> WAN2
Traffic Log	<input type="checkbox"/> Enable
Statistics	<input type="checkbox"/> Enable
Content Blocking	<input type="checkbox"/> URL <input type="checkbox"/> Script <input type="checkbox"/> P2P <input type="checkbox"/> IM <input type="checkbox"/> Download
Authentication User	None
Schedule	None
Alarm Threshold	0.0 KBytes/Sec
QoS	None
MAX. Concurrent Sessions	0 (0:means unlimited)
Quota Per Session	0 KBytes
Quota Per Day	0 MBytes

Step 2: Configure all the parameters.

Source Address: Select the name of the LAN network from the drop down list. The drop down list contains the names of all LAN networks defined in the LAN section of the **Address** menu. To create a new source address, please go to the LAN section under the **Address** menu.

Destination Address: Select the name of the WAN 1/2 network from the drop down list. The drop down list contains the names of all WAN 1/2 networks defined in the WAN 1/2 section of the **Address** window. To create a new destination address, please go to the WAN 1/2 section under the **Address** menu.

Service: Specified services provided by WAN 1/2 network servers. These are services/application that are allowed to pass from the LAN network to the WAN 1/2 network. Choose ANY for all services.

Action: Select Permit ALL, Permit WAN 1, Permit WAN 2 or Deny ALL to allow or reject the packets travelling between the source network and the destination network.

Logging (Traffic Log): Select Enable to enable flow monitoring.

Statistics: Select Enable to enable flow statistics.

Content Filtering (Content Blocking): Select Enable to enable Content Filtering.

Authentication User: Select the item listed in the Authentication User to enable the policy to automatically execute the function in a certain time and range. (Only available with MH-4000)

Schedule: Select the item listed in the schedule to enable the policy to automatically execute the function in a certain time and range.

Alarm Threshold: set a maximum flow rate (in Kbytes/Sec). An alarm will be sent if flow rates are higher than the specified value.

QoS: Select the item listed in the QoS to enable the policy to automatically execute the function in a certain time and range. (Only available with MH-4000)

MAX. Concurrent Sessions: The maximum concurrent sessions that allows passing through

MH-2K/4K. 0 means it is unlimited.

Quota Per Session: The maximum throughput quota(in Kbytes/Sec) per session. (Only available with MH-4000)

Quota Per Day: The maximum throughput quota(in Kbytes/Sec) per day. (Only available with MH-4000)

Step 3: Click **OK** to add a new outgoing policy; or click **Cancel** to cancel adding a new outgoing policy.

Modifying an Outgoing policy

Step 1: In the **Outgoing** policy section, locate the name of the policy desired to be modified and click its corresponding Modify option under the Configure field.

Step 2: In the **Modify Policy** window, fill in new settings.

NOTE: To change or add selections in the drop-down list for source or destination address, go to the section where the selections are setup. (Source Address→LAN of **Address** menu; Destination Address → WAN of **Address** menu; Service→ [Pre-defined], [Custom] or Group under **Service**).

Step 3: Click **OK** to do confirm modification or click **Cancel** to cancel it.

The screenshot displays the Planet Security Gateway web interface. On the left is a navigation menu with options: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy (highlighted), Outgoing (highlighted), Incoming, WAN To DMZ, LAN To DMZ, DMZ To WAN, DMZ To LAN, VPN, and Inbound Balance. The main content area is titled 'Outgoing' and shows the 'Modify Policy' configuration window. The settings are as follows:

Modify Policy	
Source Address	Inside_Any
Destination Address	Outside_Any
Service	ANY
Action, WAN Port	<input checked="" type="checkbox"/> PERMIT ALL <input type="checkbox"/> DENY ALL <input type="checkbox"/> WAN1 <input type="checkbox"/> WAN2
Traffic Log	<input type="checkbox"/> Enable
Statistics	<input type="checkbox"/> Enable
Content Blocking	<input type="checkbox"/> URL <input type="checkbox"/> Script <input type="checkbox"/> P2P <input type="checkbox"/> IM <input type="checkbox"/> Download
Authentication User	None
Schedule	None
Alarm Threshold	0.0 KBytes/Sec
QoS	None
MAX. Concurrent Sessions	0 (0:means unlimited)
Quota Per Session	0 KBytes
Quota Per Day	0 MBytes

Pausing an Outgoing Policy: (Only available with MH-4000)

Step 1. In the **Outgoing** window, locate the name of policy desired to be paused and click its corresponding [Pause] option in the Configure field.

The screenshot shows the PLANET web interface for configuring an outgoing policy. The left sidebar contains a menu with options: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy, Outgoing, and Incoming. The main area displays a table with columns: Source, Destination, Service, Action, Option, Configure, and Move. The first row shows 'Inside_Any' for Source, 'Outside_Any' for Destination, 'ANY' for Service, and a purple icon for Action. The Configure column contains 'Modify', 'Remove', and 'Pause' buttons. The Move column shows 'To 1'. A 'New Entry' button is located below the table. A dialog box titled 'Microsoft Internet Explorer' is open, asking 'Are you sure you want to pause ? This entry will not be effective.' with 'OK' and 'Cancel' buttons.

Removing the Outgoing Policy

Step 1. In the **Outgoing** policy section, locate the name of the policy desired to be removed and click its corresponding **Remove** option in the **Configure** field.

Step 2. In the **Remove** confirmation dialogue box, click **OK** to remove the policy or click **Cancel** to cancel removing.

This screenshot is similar to the previous one, showing the PLANET web interface for configuring an outgoing policy. The left sidebar and main table are identical. However, the dialog box now asks 'Are you sure you want to remove ?' with 'OK' and 'Cancel' buttons.

Enabled Monitoring function:

Log: If Logging is enabled in the outgoing policy, MH-2K/4K will log the traffic and event passing through the Multi-Homing Security Gateway. The Administrator can click **Log** on the left menu bar to get the traffic and event logs of the specified policy.



Traffic Log

- System
- Interface
- Address
- Service
- Schedule
- QoS
- Authentication
- Content Filtering
- Virtual Server
- Policy
- VPN
- Inbound Balance
- Log
- Traffic Log
- Event Log
- Connection Log
- Log Backup
- Alarm
- Accounting Report
- Statistics
- Status

Mar 23 13:14:13 ▾
[Next](#)

Time	Source IP	Destination IP	Protocol	Port	Disposition
Mar 23 13:14:13	192.168.1.53	192.168.1.1	TCP	4144 => 80	
Mar 23 13:14:13	192.168.1.53	192.168.1.1	TCP	4143 => 80	
Mar 23 13:12:15	192.168.1.53	192.168.1.1	TCP	4136 => 80	
Mar 23 13:12:15	192.168.1.53	192.168.1.1	TCP	4135 => 80	
Mar 23 13:12:15	192.168.1.53	192.168.1.1	TCP	4134 => 80	
Mar 23 13:11:33	192.168.1.53	192.168.1.1	TCP	4132 => 80	
Mar 23 13:11:33	192.168.1.53	192.168.1.1	TCP	4131 => 80	
Mar 23 13:09:45	192.168.1.53	192.168.1.1	TCP	4124 => 80	
Mar 23 13:09:45	192.168.1.53	192.168.1.1	TCP	4123 => 80	
Mar 23 13:09:44	192.168.1.53	192.168.1.1	TCP	4122 => 80	
Mar 23 13:00:58	192.168.1.53	192.168.1.1	TCP	4095 => 80	
Mar 23 12:56:00	192.168.1.53	192.168.1.1	TCP	4080 => 80	
Mar 23 12:56:00	192.168.1.53	192.168.1.1	TCP	4079 => 80	
Mar 23 12:43:05	192.168.1.53	192.168.1.1	TCP	4040 => 80	
Mar 23 12:43:05	192.168.1.53	192.168.1.1	TCP	4039 => 80	

Clear Logs
Download Logs

NOTE: System Administrator can back up and clear logs in this window. Check the chapter entitled “Log” to get details about the log and ways to back up and clear logs.

Alarm: If Logging is enabled in the outgoing policy, MH-2K/4K will log the traffic alarms and event alarms passing through the Multi-Homing Security Gateway. The Administrator can click **Alarm** on the left menu to get the logs of flow and event alarms of the specified policy.



Traffic Alarm

- System
- Interface
- Address
- Service
- Schedule
- QoS
- Authentication
- Content Filtering
- Virtual Server
- Policy
- VPN
- Inbound Balance
- Log
- Alarm
- Traffic Alarm
- Event Alarm
- Accounting Report
- Statistics
- Status

Time	Source	Destination	Service	Traffic
There is no message!				

NOTE: The Administrator can also get information on alarm logs from the Alarm window. Please refer to the section entitled “**Alarm**” for more information.

Statistics: If statistics is enabled in the outgoing policy, MH-2K/4K will display the flow statistics passing through the Multi-Homing Security Gateway.



Policy Statistice

System	Source	Destination	Service	Action	Time
Interface	Inside_Any	Outside_Any	ANY	PERMIT	Minute Hour Day
Address	Inside_Any	Outside_Any	NetMeeting	PERMIT	Minute Hour Day
Service	Outside_Any	Inside_Any(Routing)	ANY	PERMIT	Minute Hour Day
Schedule	Outside_Any	DMZ_Any	ANY	PERMIT	Minute Hour Day
QoS	DMZ_Any	Outside_Any	ANY	PERMIT	Minute Hour Day
Authentication					
Content Filtering					
Virtual Server					
Policy					
VPN					
Inbound Balance					
Log					
Alarm					
Accounting Report					
Statistics					
Interface Statistics					
Policy Statistice					
Status					

NOTE: The Administrator can also get flow statistics in **Statistics**. Please refer to **Statistics** in Chapter 11 for more details.

4.10.2 Incoming

This section describes steps to create policies for packets and services from the WAN 1/2 network to the LAN network including Mapped IP and Virtual Server.

Enter Incoming window

Step 1: Click **Incoming** under the **Policy** menu to enter the Incoming window. The Incoming table will display current defined policies from the WAN 1/2 network to assigned Mapped IP or Virtual Server.

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Inside_Any(Routing)	ANY			Modify Remove Pause	To 1

[New Entry](#)

Step 2: The fields of the **Incoming** window are:

- **Source:** source networks which are specified in the **WAN** section of the **Address** menu, or all the WAN network addresses.
- **Destination:** destination networks, which are IP Mapping addresses or Virtual server network addresses created in **Virtual Server** menu.
- **Service:** services supported by Virtual Servers (or Mapped IP).
- **Action:** control actions to permit or deny packets from WAN networks to Virtual Server/Mapped IP travelling through the device.
- **Option:** specify the monitoring functions on packets from WAN networks to Virtual Server/Mapped IP travelling through MH-2K/4K.
- **Configure:** modify settings or remove incoming policy.
- **Move:** this sets the sequence of the policies, number 1 being the first policy to proceed.

Adding an Incoming Policy

Step 1: Under **Incoming** of the **Policy** menu, click the New Entry button.



Incoming

Add New Policy	
Source Address	Outside_Any ▾
Destination Address	Inside_Any ▾
Service	ANY ▾
Action, WAN Port	<input checked="" type="checkbox"/> PERMIT <input type="checkbox"/> DENY
Traffic Log	<input checked="" type="checkbox"/> Enable
Statistics	<input checked="" type="checkbox"/> Enable
Schedule	None ▾
Alarm Threshold	40.0 KBytes/Sec
QoS	None ▾
MAX. Concurrent Sessions	0 (0:means unlimited)
Quota Per Session	100 KBytes
Quota Per Day	500 MBytes
NAT	<input checked="" type="checkbox"/> Enable

Step 2: Configure the parameters.

Source Address: Select names of the WAN networks from the drop down list. The drop down list contains the names of all WAN networks defined in the WAN section of the Address menu. To create a new source address, please go to the LAN section under the Address menu.

Destination Address: Select names of the LAN networks from the drop down list. The drop down list contains the names of IP mapping addresses specified in the **Mapped IP** or the **Virtual Server** sections of **Virtual Server** menu. To create a new destination address, please go to the **Virtual Server** menu.

Service: Specified services provided by LAN network servers. These are services / application that are allowed to pass from the network to the LAN network. Choose ANY for all services.

Action: Select Permit or Deny to allow or reject the packets travelling between the specified WAN network and Virtual Server/Mapped IP.

Logging (Traffic Log): select Enable to enable flow monitoring.

Statistics: select Enable to enable flow statistics.

Schedule: Select the item listed in the schedule to enable the policy to automatically execute the function in a certain time and range.

Alarm Threshold: set a maximum flow rate (in Kbytes/Sec). An alarm will be sent if flow rates are higher than the specified value.

QoS: Select the item listed in the QoS to enable the policy to automatically execute the function in a certain time and range. (Only available with MH-4000)

MAX. Concurrent Sessions: The maximum concurrent sessions that allows passing through MH-2K/4K. 0 means it is unlimited.

Quota Per Session: The maximum throughput quota (in Kbytes/Sec) per session. (Only available with MH-4000)

Quota Per Day: The maximum throughput quota (in Kbytes/Sec) per day. (Only available with MH-4000)

NAT: Select all WAN networks source address will used NAT mode to a server is in the LAN networks. (Only available with MH-4000)

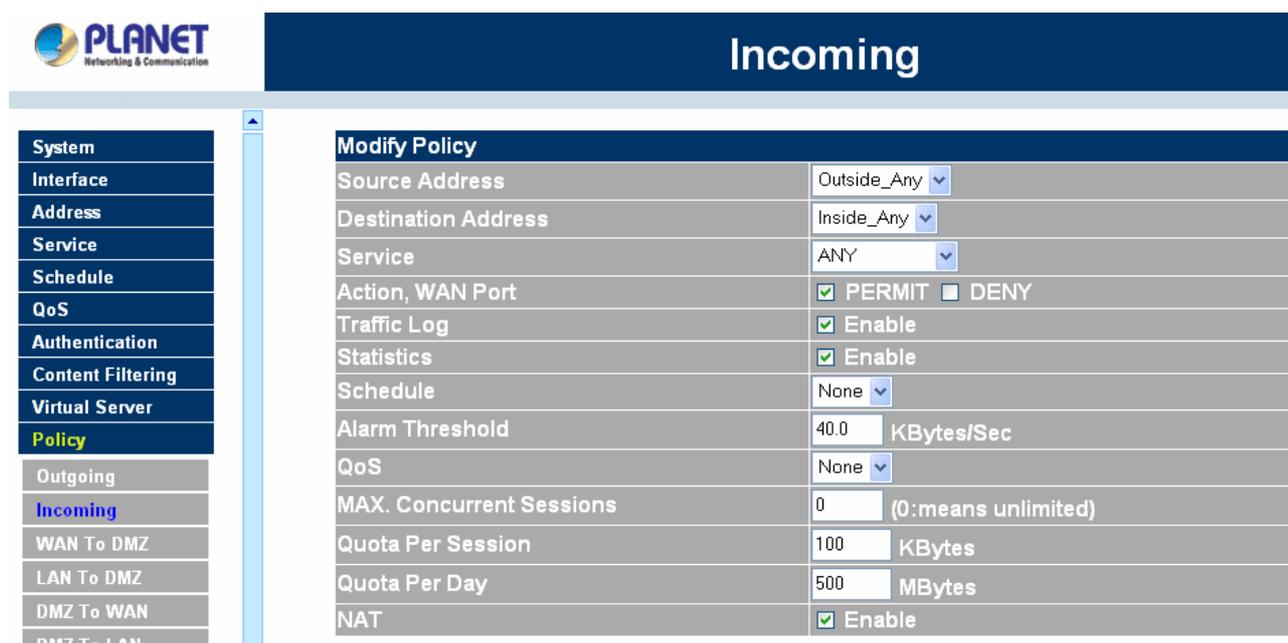
Step 3: Click **OK** to add new policy or click **Cancel** to cancel adding new incoming policy.

Modifying Incoming Policy

Step 1: In the **Incoming** window, locate the name of policy desired to be modified and click its corresponding Modify option in the Configure field.

Step 2: In the Modify Policy window, fill in new settings.

Step 3: Click **OK** to save modifications or click **Cancel** to cancel modifications.



The screenshot shows the Planet Security Gateway web interface. The top navigation bar includes the Planet logo and the title 'Incoming'. A left sidebar contains a menu with options: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy (highlighted), Outgoing, Incoming (highlighted), WAN To DMZ, LAN To DMZ, DMZ To WAN, and DMZ To LAN. The main content area is titled 'Modify Policy' and contains the following configuration fields:

Source Address	Outside_Any
Destination Address	Inside_Any
Service	ANY
Action, WAN Port	<input checked="" type="checkbox"/> PERMIT <input type="checkbox"/> DENY
Traffic Log	<input checked="" type="checkbox"/> Enable
Statistics	<input checked="" type="checkbox"/> Enable
Schedule	None
Alarm Threshold	40.0 KBytes/Sec
QoS	None
MAX. Concurrent Sessions	0 (0: means unlimited)
Quota Per Session	100 KBytes
Quota Per Day	500 MBytes
NAT	<input checked="" type="checkbox"/> Enable

Pausing an Incoming Policy: (Only available with MH-4000)

Step 1. In the **Incoming** window, locate the name of policy desired to be paused and click its corresponding [Pause] option in the Configure field.

Step 2. In the **Pause confirmation** dialogue box, click **OK**.

PLANET
Networking & Communication

Incoming

System	Source	Destination	Service	Action	Option	Configure	Move
Interface	Outside_Any	Inside_Any(Routing)	ANY			Modify Remove Pause	To 1

New Entry

Microsoft Internet Explorer
Are you sure you want to pause? This entry will not be effective.
OK Cancel

Removing an Incoming Policy

Step 1: In the **Incoming** window, locate the name of policy desired to be removed and click its corresponding **[Remove]** in the Configure field.

Step 2: In the Remove confirmation window, click **Ok** to remove the policy or click **Cancel** to cancel removing.

PLANET
Networking & Communication

Incoming

System	Source	Destination	Service	Action	Option	Configure	Move
Interface	Outside_Any	Inside_Any(Routing)	ANY			Modify Remove Pause	To 1

New Entry

Microsoft Internet Explorer
Are you sure you want to remove?
OK Cancel

4.10.3 WAN To DMZ & LAN To DMZ

This section describes steps to create policies for packets and services from the WAN networks to the DMZ networks. Please follow the same procedures for LAN networks to DMZ networks.

Enter **[WAN To DMZ]** or **[LAN To DMZ]** window:

Click **WAN To DMZ** under **Policy** menu to enter the **WAN To DMZ** window. The WAN To DMZ table will show up displaying currently defined policies.

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Mapped IP(192.168.99.120)	ANY			Modify Remove Pause	To 1

New Entry

The fields in WAN To DMZ window:

Source: source networks, which are addresses specified in the **WAN** section of the **Address** menu, or all the WAN network addresses.

Destination: destination networks, which are addresses specified in **DMZ** section of the **Address** menu and **Mapped IP** addresses of the **Virtual Server** menu.

Service: services supported by servers in DMZ network.

Action: control actions, to permit or deny packets from WAN networks to DMZ travelling through MH-2K/4K.

Option: specify the monitoring functions of packets from WAN network to DMZ network travelling through MH-2K/4K.

Configure: modify settings or remove policies.

Move: this sets the priority of the policies, number 1 being the highest priority.

Adding a new WAN To DMZ Policy:

Step 1: Click the New Entry button and the Add New Policy window will appear.



WAN To DMZ

System	Add New Policy	
Interface		
Address		
Service		
Schedule		
QoS		
Authentication		
Content Filtering		
Virtual Server		
Policy		
Outgoing		
Incoming		
WAN To DMZ		
LAN To DMZ		
DMZ To WAN		
DMZ To LAN		
Source Address	Outside_Any ▾	
Destination Address	Mapped IP(192.168.99.120) ▾	
Service	ANY ▾	
Action, WAN Port	<input checked="" type="checkbox"/> PERMIT <input type="checkbox"/> DENY	
Traffic Log	<input checked="" type="checkbox"/> Enable	
Statistics	<input checked="" type="checkbox"/> Enable	
Schedule	None ▾	
Alarm Threshold	0.0 KBytes/Sec	
QoS	None ▾	
MAX. Concurrent Sessions	0 (0:means unlimited)	
Quota Per Session	100 KBytes	
Quota Per Day	500 MBytes	
NAT	<input type="checkbox"/> Enable	

Step 2: Configure the parameters.

Source Address: Select names of the WAN networks from the drop down list. The drop down list contains the names of all WAN networks defined in the **WAN** section of the **Address** menu. To create a new source address, please go to the **LAN** section under the **Address** menu.

Destination Address: Select the name of the DMZ network from the drop down list. The drop down list contains the names of the DMZ network created in the **Address** menu. It will also contain Mapped IP addresses from the **Virtual Server** menu that were created for the DMZ network. To create a new destination address, please go to the **Virtual Server** menu. (Please refer to the sections entitled **Address** and **Virtual Server** for details)

Service: Select a service from drop down list. The drop down list will contain services defined in the **Custom** or **Group** section under the **Service** menu. These are services/application that are allowed to pass from the WAN network to the DMZ network. Choose ANY for all services. To add or modify these services, please go to the **Service** menu. (Please refer to the section entitled **Services** for details)

Action: Select Permit or Deny to allow or reject the packets travelling from the specified WAN network to the DMZ network.

Logging (Traffic Log): select Enable to enable flow monitoring.

Statistics: select Enable to enable flow statistics.

Schedule: Select the item listed in the schedule to enable the policy to automatically execute the function in a certain time and range.

Alarm Threshold: set a maximum flow rate (in Kbytes/Sec). An alarm will be send if a flow rate exceeds the specified value.

QoS: Select the item listed in the QoS to enable the policy to automatically execute the function in a certain time and range. (Only available with MH-4000)

MAX. Concurrent Sessions: The maximum concurrent sessions that allows passing through MH-2K/4K. 0 means it is unlimited.

Quota Per Session: The maximum throughput quota (in Kbytes/Sec) per session. (Only available with MH-4000)

Quota Per Day: The maximum throughput quota (in Kbytes/Sec) per day. (Only available with MH-4000)

NAT: Select all WAN networks source address will used NAT mode to a server is in the DMZ networks. (Only available with MH-4000)

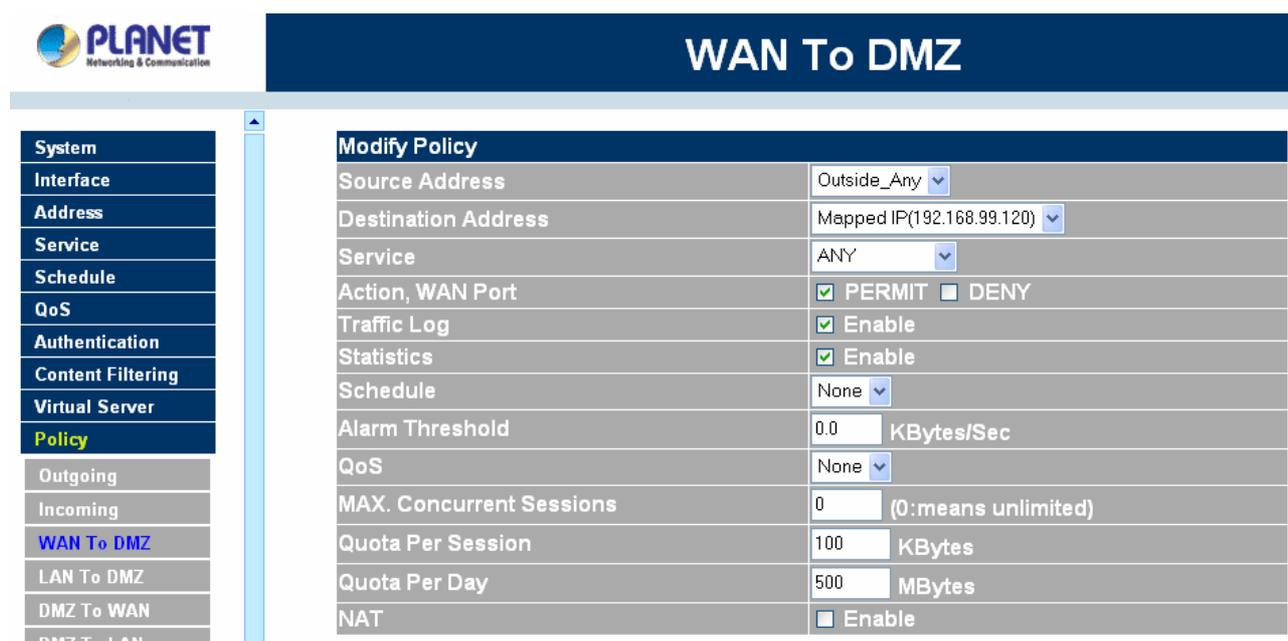
Step 3: Click **OK**.

Modifying an WAN To DMZ policy:

Step 1: In the **WAN To DMZ** window, locate the name of policy desired to be modified and click its corresponding **Modify** option in the **Configure** field.

Step 2: In the **Modify Policy** window, fill in new settings.

Step 3: Click **OK** to do save modifications.



The screenshot displays the 'WAN To DMZ' configuration window. On the left is a navigation menu with options: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy (highlighted), Outgoing, Incoming, WAN To DMZ, LAN To DMZ, DMZ To WAN, and DMZ To LAN. The main area is titled 'WAN To DMZ' and contains a 'Modify Policy' form with the following fields:

Source Address	Outside_Any
Destination Address	Mapped IP(192.168.99.120)
Service	ANY
Action, WAN Port	<input checked="" type="checkbox"/> PERMIT <input type="checkbox"/> DENY
Traffic Log	<input checked="" type="checkbox"/> Enable
Statistics	<input checked="" type="checkbox"/> Enable
Schedule	None
Alarm Threshold	0.0 KBytes/Sec
QoS	None
MAX. Concurrent Sessions	0 (0: means unlimited)
Quota Per Session	100 KBytes
Quota Per Day	500 MBytes
NAT	<input type="checkbox"/> Enable

Pausing a WAN To DMZ Policy: (Only available with MH-4000)

Step 1. In the **WAN To DMZ** window, locate the name of policy desired to be paused and click its corresponding **[Pause]** option in the **Configure** field.

Step 2. In the **Pause confirmation** dialogue box, click **OK**.

The screenshot shows the 'WAN To DMZ' configuration window. On the left is a navigation menu with 'Policy' selected. The main area contains a table with the following data:

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Mapped IP(192.168.99.120)	ANY			Modify Remove Pause	To 1

Below the table is a 'New Entry' button. A 'Microsoft Internet Explorer' dialog box is open, displaying the message: 'Are you sure you want to pause? This entry will not be effective.' with 'OK' and 'Cancel' buttons.

Removing a WAN To DMZ Policy:

Step 1: In the **WAN To DMZ** window, locate the name of policy desired to be removed and click its corresponding **[Remove]** option in the **Configure** field.

Step 2: In the **Remove** confirmation pop-up box, click **OK** to remove the policy.

The screenshot shows the 'WAN To DMZ' configuration window. On the left is a navigation menu with 'Policy' selected. The main area contains a table with the following data:

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Mapped IP(192.168.99.120)	ANY			Modify Remove Pause	To 1

Below the table is a 'New Entry' button. A 'Microsoft Internet Explorer' dialog box is open, displaying the message: 'Are you sure you want to remove?' with 'OK' and 'Cancel' buttons.

4.10.4 DMZ To WAN & DMZ To LAN

This section describes steps to create policies for packets and services from DMZ networks to WAN networks.

Please follow the same procedures for DMZ networks to LAN networks.

Entering the DMZ To WAN window:

Click **DMZ To WAN** under **Policy** menu and the **DMZ To WAN** table appears displaying currently defined **DMZ To WAN** policies.

System	Source	Destination	Service	Action	Option	Configure	Move
Interface	DMZ_Any	Outside_Any	ANY	Deny	Off	Modify Remove Pause	To 1

New Entry

The fields in the DMZ To WAN window are:

Source: source network addresses which are specified in the **DMZ** section of the **Address** window.

Destination: destination networks, which is the WAN network address

Service: services supported by Servers of WAN networks.

Action: control actions, to permit or deny packets from the DMZ network to WAN networks travelling through MH-2K/4K.

Option: specify the monitoring functions on packets from the DMZ network to WAN networks travelling through MH-2K/4K..

Configure: modify settings or remove policies

Move: this sets the sequence of the policies, number 1 being the first policy to proceed.

Adding a DMZ To WAN Policy:

Step 1: Click the New Entry button and the Add New Policy window will appear.



DMZ To WAN

Add New Policy	
Source Address	DMZ_Any
Destination Address	Outside_Any
Service	ANY
Action, WAN Port	<input checked="" type="checkbox"/> PERMIT ALL <input type="checkbox"/> DENY ALL <input type="checkbox"/> WAN1 <input type="checkbox"/> WAN2
Traffic Log	<input checked="" type="checkbox"/> Enable
Statistics	<input checked="" type="checkbox"/> Enable
Content Blocking	<input type="checkbox"/> URL <input type="checkbox"/> Script <input type="checkbox"/> P2P <input type="checkbox"/> IM <input type="checkbox"/> Download
Authentication User	None
Schedule	None
Alarm Threshold	40.0 KBytes/Sec
QoS	None
MAX. Concurrent Sessions	0 (0:means unlimited)
Quota Per Session	100 KBytes
Quota Per Day	500 MBytes

Step 2: Configure the parameters.

Source Address: Select the name of the DMZ network from the drop down list. The drop down list will contain names of DMZ networks defined in **DMZ** section of the **Address** menu. To add a new source address, please go to the **DMZ** section under the **Address** menu.

Destination Address: Select the name of the WAN network from the drop down list. The drop down list lists names of addresses defined in **WAN** section of the **Address** menu. To add a new destination address, please go to **WAN** section of the **Address** menu.

Service: Select a service from drop down list. The drop down list will contain services defined in the **Custom** or **Group** section under the **Service** menu. These are services/application that are allowed to pass from the DMZ network to the WAN network. Choose ANY for all services. To add or modify these services, please go to the **Service** menu.

Action: Select Permit or Deny to allow or reject the packets travelling from the specified DMZ network to the WAN network.

Logging (Traffic Log): Select Enable to enable flow monitoring.

Statistics: Select Enable to enable flow statistics.

Content Filtering: Select Enable to enable Content Filtering.

Schedule: Select the item listed in the schedule to enable the policy to automatically execute the function in a certain time and range.

Alarm Threshold: set a maximum flow rate (in Kbytes/Sec). An alarm will be sent if flow rates are higher than the specified value.

QoS: Select the item listed in the QoS to enable the policy to automatically execute the function in a certain time and range.

MAX. Concurrent Sessions: The maximum concurrent sessions that allows passing through MH-2K/4K. 0 means it is unlimited.

Quota Per Session: The maximum throughput quota(in Kbytes/Sec) per session.

Quota Per Day: The maximum throughput quota(in Kbytes/Sec) per day.

Step 3: Click **OK** to add new policy or click **Cancel** to cancel adding.

Modifying a DMZ To WAN policy:

Step 1: In the DMZ To WAN window, locate the name of policy desired to be modified and click its corresponding Modify option in the Configure field.

Step 2: In the Modify Policy window, fill in new settings.

NOTE: To change or add selections in the drop-down list, go to the section where the selections are setup. (Source Address → DMZ of Address; Destination Address →WAN, Service →Pre-defined Service, Custom or Group under Service.)

Step 3: Click OK to save modifications or click Cancel to cancel modifications.

Modify Policy	
Source Address	DMZ_Any
Destination Address	Outside_Any
Service	ANY
Action, WAN Port	<input checked="" type="checkbox"/> PERMIT ALL <input type="checkbox"/> DENY ALL <input type="checkbox"/> WAN1 <input type="checkbox"/> WAN2
Traffic Log	<input checked="" type="checkbox"/> Enable
Statistics	<input checked="" type="checkbox"/> Enable
Content Blocking	<input type="checkbox"/> URL <input type="checkbox"/> Script <input type="checkbox"/> P2P <input type="checkbox"/> IM <input type="checkbox"/> Download
Authentication User	None
Schedule	None
Alarm Threshold	40.0 KBytes/Sec
QoS	None
MAX. Concurrent Sessions	0 (0:means unlimited)
Quota Per Session	100 KBytes
Quota Per Day	500 MBytes

Pausing a DMZ To WAN Policy: (Only available with MH-4000)

Step 1. In the DMZ To WAN window, locate the name of policy desired to be paused and click its corresponding [Pause] option in the Configure field.

Step 2. In the Pause confirmation dialogue box, click **OK**.

The screenshot shows the 'DMZ To WAN' configuration window. On the left is a navigation menu with 'Policy' selected. The main area contains a table with the following data:

Source	Destination	Service	Action	Option	Configure	Move
DMZ_Any	Outside_Any	ANY			Modify Remove Pause	To 1

Below the table is a 'New Entry' button. A 'Microsoft Internet Explorer' dialog box is open, displaying the message: 'Are you sure you want to pause? This entry will not be effective.' with 'OK' and 'Cancel' buttons.

Removing a DMZ To WAN Policy:

Step 1. In the **DMZ To WAN** window, locate the name of policy desired to be removed and click its corresponding **[Remove]** option in the Configure field.

Step 2. In the **Remove confirmation** dialogue box, click **OK**.

The screenshot shows the 'DMZ To WAN' configuration window. On the left is a navigation menu with 'Policy' selected. The main area contains a table with the following data:

Source	Destination	Service	Action	Option	Configure	Move
DMZ_Any	Outside_Any	ANY			Modify Remove Pause	To 1

Below the table is a 'New Entry' button. A 'Microsoft Internet Explorer' dialog box is open, displaying the message: 'Are you sure you want to remove?' with 'OK' and 'Cancel' buttons.

4.11 VPN

MH-2K/4K's VPN (Virtual Private Network) is set by the System Administrator. The System Administrator can add, modify or remove VPN settings.

What is VPN?

To set up a **Virtual Private Network** (VPN), you don't need to configure an Access Policy to enable encryption. Just fill in the following settings: VPN Name, Source Subnet, Destination Gateway, Destination Subnet, Authentication Method, Preshare key, Encapsulation and IPSec lifetime. MH-2K/4K on both ends must use the same **Preshare** key and **IPSec** lifetime to make a **VPN** connection.

4.11.1 IPSec Autokey

This chapter describes steps to create a VPN connection using Autokey IKE. Autokey IKE (Internet Key Exchange) provides a standard method to negotiate keys between two security gateways. For example, with two MH-2K/4K devices, IKE allows new keys to be generated after a set amount of time has passed or a certain threshold of traffic has been exchanged.

Accessing the Autokey IKE window

Click **IPSec Autokey** under the VPN menu to enter the **IPSec Autokey** window. The **IPSec Autokey** table displays current configured VPNs.

The screenshot shows the Planet IPsec Autokey configuration interface. On the left is a navigation menu with the following items: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy, VPN (highlighted), IPSec Autokey (highlighted), PPTP Server, PPTP Client, Inbound Balance, Log, Alarm, Accounting Report, Statistics, and Status. The main content area is titled 'IPSec Autokey' and contains a table with the following data:

Name	Gateway IP	Destination Subnet	Algorithm	Status	Configure
vv	192.168.99.188	192.168.0.0	None	Disconnect	Connecting Modify Remove

Below the table is a 'New Entry' button.

The fields in the IPSec Autokey window are:

- **Name:** The VPN name to identify the VPN tunnel definition. The name must be different for the two sites

creating the tunnel.

- **Gateway IP:** The IP address for the remote side of VPN device.
- **Destination Subnet:** Destination network subnet.
- **Algorithm:** The display the Algorithm way.
- **Status:** Connect/Disconnect.
- **Configure:** Connect, Disconnect, Modify and Delete.

Adding the Autokey IKE

Step 1. Click the **New Entry** button and the **VPN Auto Keyed Tunnel** window will appear.

PLANET
Networking & Communication

IPSec Autokey

VPN Auto Keyed Tunnel

Name:

From Source: LAN DMZ

Use interface: WAN1 WAN2

Subnet / Mask: 255.255.255.0

To Destination:

Remote Gateway - Fixed IP

Subnet / Mask: 255.255.255.0

Remote Gateway - Dynamic IP

Subnet / Mask: 255.255.255.0

Remote Client - Fixed IP or Dynamic IP

Authentication Method: Preshare

Preshared Key:

Encapsulation:

ISAKMP Algorithm

ENC Algorithm: DES

AUTH Algorithm: MD5

Group: GROUP1

IPsec Algorithm:

Data Encryption + Authentication

ENC Algorithm: DES

AUTH Algorithm: MD5

Authentication Only

Perfect Forward Secrecy

IPsec Lifetime: 28800 Seconds

Keep alive ID:

Aggressive mode

My ID:

Peer ID:

GRE-IPsec

GRE Local IP:

GRE Remote IP:

Schedule: None

QoS: None

Authentication User: None

Show remote Network Neighborhood

OK Cancel

Step 2: Configure the parameters.

- **Preshare Key:** The IKE VPN must be defined with a Preshared Key. The Key may be up to 128 bytes long.

Encapsulation

ISAKMP Algorithm

- **ENC Algorithm:** ESP Encryption Algorithm. ESP (Encapsulating Security Payload) provides security for the payload (data) sent through the VPN tunnel. Generally, you will want to enable both Encryption and Authentication. The available encryption algorithms including: 56 bit DES-CBC, 168-bit Triple DES-CBC, AES 128-bit, AES 192-bit and AES 256-bit encryption algorithm. The default algorithm 56 bit DES-CBC.

- **AUTH Method:** Authentication Method. Selects MD5(128-bit hash) or SHA-1(160-bit hash) authentication algorithm. In general, SHA-1 is more secured than MD5. The default algorithm is MD5.

- **Group:** Selects Group 1(768-bit modulus), Group 2(1024-bit modulus) or Group 5(1536-bit modulus). The larger the modulus, the more secure the generated key is. However, the larger the modulus, the longer the key generation process takes. Both side of VPN tunnels must agree to use the same group. The default algorithm is Group 1.

IPSec Algorithm: Select Data Encryption + Authentication or Authentication Only.

Data Encryption + Authentication

- **Encryption Algorithm:** Selects 56 bit DES-CBC, 168-bit Triple DES-CBC, AES or NULL encryption algorithm. The default algorithm is 56 bit DES-CBC.

- **Authentication Algorithm:** Selects MD5(128-bit hash) or SHA-1(160-bit hash) authentication algorithm. In general, SHA-1 is more secured than MD5. The default algorithm is MD5.

Authentication Only

Perfect Forward Secrecy

- **IPSec Lifetime:** New keys will be generated whenever the lifetime of the old keys is exceeded. The Administrator may enable this feature if needed and enter the lifetime in seconds to re-key. The default is 28800 seconds (eight hours). Selection of small values could lead to frequent re-keying, which could affect performance.

- **Keep alive IP:** Check to allow Remote Client computer IP Address connected to keep alive.

- **Aggressive mode:** Select Aggressive mode algorithm.

- **GRE/IPSec:** Select GRE/IPSec (Generic Routing Encapsulation) packet seal technology.

- **Schedule:** Select the item listed in the schedule to enable the policy to automatically execute the function in a certain time.

- **QoS:** Select the item listed in the QoS to enable the policy to automatically execute the function in a certain range. (MH-4000 supports only)

- **Authentication-User:** Select the item listed in the Authentication-User to enable the policy to automatically execute the function in a certain time and range. (MH-4000 supports only)

- **Show remote Network Neighborhood:** Select the remote Network Neighborhood enable to show.

There are 5 examples of VPN setting.

Example 1. Create a VPN connection between two Multi-Homing Security Gateways.

Example 2. Create a VPN connection between the Multi-Homing Security Gateway and Windows XP Professional VPN Client.

Example 3. Create a VPN connection between two Multi-Homing Security Gateways using Aggressive mode Algorithm (3DES and MD5), and data encryption for IPSec Algorithm (3DES and MD5)

Example 4. Create a VPN connection between two Multi-Homing Security Gateways using ISAKMP Algorithm (3DES and MD5), data encryption for IPSec Algorithm (3DES and MD5) and GRE.

Example 5. Create a VPN connection between Multi-Homing Security Gateway and PLANET VRT-311 VPN Router.

Example 1. Create a VPN connection between two Multi-Homing Security Gateways.

Preparation Task:

Company A External IP is 61.11.11.11

Internal IP is 192.168.10.X

Company B External IP is 211.22.22.22

Internal IP is 192.168.20.X

To Allow Company A, 192.168.10.100 create a VPN connection with company B, 192.168.20.100 for downloading the sharing file.

The Gateway of Company A is 192.168.10.1. The settings of company A are as the following.

Step 1. Enter the default IP of Company A's Multi-Homing Security Gateway, 192.168.10.1. Click VPN in the menu bar on the left hand side, and then select the sub-select IPSec Autokey. Click Add.

Step 2. Enter the VPN name, VPN_A in IPSec Autokey window, and choose From Source to be LAN. Fill the subnet IP, 192.168.10.0 and subnet mask, 255.255.255.0.

VPN Auto Keyed Tunnel	
Name	VPN_A
From Source	<input checked="" type="radio"/> LAN <input type="radio"/> DMZ
Use interface	<input checked="" type="radio"/> WAN1 <input type="radio"/> WAN2
Subnet / Mask	192.168.10.0 / 255.255.255.0

Step 3. In To Destination table, choose Remote Gateway-Fixed IP, enter the IP desired to be connected, company B's subnet IP and mask.

To Destination	
<input checked="" type="radio"/> Remote Gateway -- Fixed IP	211.22.22.22
Subnet / Mask	192.168.20.0 / 255.255.255.0
<input type="radio"/> Remote Gateway -- Dynamic IP	
Subnet / Mask	/ 255.255.255.0
<input type="radio"/> Remote Client -- Fixed IP or Dynamic IP	

Step 4. In Authentication Method Table, choose Preshare and enter the Preshared Key. (The max length is 100 bytes.)

Authentication Method	Preshare
Preshared Key	123456789

Step 5. In Encapsulation or Authentication table, choose ISAKMP Algorithm. For communication via VPN, we choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm. And select Group 1 to connect.

Encapsulation	
ISAKMP Algorithm	
ENC Algorithm	3DES
AUTH Algorithm	MD5
Group	GROUP 1

Step 6. In IPSec Algorithm Table , choose Data Encryption + Authentication. We choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm.

IPSec Algorithm	
<input checked="" type="radio"/> Data Encryption + Authentication	
ENC Algorithm	3DES
AUTH Algorithm	MD5
<input type="radio"/> Authentication Only	

Step 7. Choose Perfect Forward Secrecy, and enter 28800 seconds in IPSec Lifetime and Keep alive IP to keep connecting.

<input checked="" type="checkbox"/> Perfect Forward Secrecy	
IPSec Lifetime	28800 Seconds
Keep alive IP :	192.168.20.100

Step 8. Click the down arrow to select the policy of schedule, which was pre-determined in Schedule. Refer to the corresponding section for details.

Schedule	None
----------	------

Step 9. Click OK to finish the setting of Company A.

IPSec Autokey

Name	Gateway IP	Destination Subnet	Algorithm	Status	Configure		
VPN_A	211.22.22.22	192.168.20.0	None	Disconnect	Connecting	Modify	Remove

New Entry

The Gateway of Company B is 192.168.20.1. The settings of company B are as the following.

Step 1. Enter the default IP of Company B's Multi-Homing Security Gateway, 192.168.20.1. Click VPN in the menu bar on the left hand side, and then select the sub-select IPSec Autokey. Click Add.

Step 2. Enter the VPN name, VPN_B in IPSec Autokey window, and choose From Source to be Internal. Fill the subnet IP, 192.168.20.0 and subnet mask, 255.255.255.0.

VPN Auto Keyed Tunnel	
Name	<input style="width: 90%;" type="text" value="VPN_B"/>
From Source	<input checked="" type="radio"/> LAN <input type="radio"/> DMZ
Use interface	<input checked="" type="radio"/> WAN1 <input type="radio"/> WAN2
Subnet / Mask	<input style="width: 40%;" type="text" value="192.168.20.0"/> / <input style="width: 40%;" type="text" value="255.255.255.0"/>

Step 3. In To Destination table, choose Remote Gateway-Fixed IP, enter the IP desired to be connected, company A's subnet IP and mask, 192.168.10.0 and 255.255.255.0 respectively.

VPN Auto Keyed Tunnel	
Name	<input style="width: 90%;" type="text" value="VPN_B"/>
From Source	<input checked="" type="radio"/> LAN <input type="radio"/> DMZ
Use interface	<input checked="" type="radio"/> WAN1 <input type="radio"/> WAN2
Subnet / Mask	<input style="width: 40%;" type="text" value="192.168.20.0"/> / <input style="width: 40%;" type="text" value="255.255.255.0"/>
To Destination	
<input checked="" type="radio"/> Remote Gateway -- Fixed IP	<input style="width: 90%;" type="text" value="61.11.11.11"/>
Subnet / Mask	<input style="width: 40%;" type="text" value="192.168.10.0"/> / <input style="width: 40%;" type="text" value="255.255.255.0"/>
<input type="radio"/> Remote Gateway -- Dynamic IP	
Subnet / Mask	<input style="width: 40%;" type="text"/> / <input style="width: 40%;" type="text" value="255.255.255.0"/>
<input type="radio"/> Remote Client -- Fixed IP or Dynamic IP	

Step 4. In Authentication Method Table, choose Preshare and enter the Preshared Key. (The max length is 100 bits.)

Authentication Method	Preshare
Preshared Key	123456789

Step 5. In Encapsulation or Authentication table, choose ISAKMP Algorithm. For communication via VPN, we choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm. And select Group to connect.

Encapsulation	
ISAKMP Algorithm	
ENC Algorithm	3DES
AUTH Algorithm	MD5
Group	GROUP1

Step 6. In IPSec Algorithm Table , choose Data Encryption + Authentication. We choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm.

IPSec Algorithm	
<input checked="" type="radio"/> Data Encryption + Authentication	
ENC Algorithm	3DES
AUTH Algorithm	MD5
<input type="radio"/> Authentication Only	

Step 7. Choose Perfect Forward Secrecy, and enter 28800 seconds in IPSec Lifetime and Keep alive IP to keep connecting.

<input checked="" type="checkbox"/> Perfect Forward Secrecy	
IPSec Lifetime	28800 Seconds
Keep alive IP :	192.168.10.100

Step 8. Click the down arrow to select the policy of schedule, which was pre-determined in Schedule . Refer to the corresponding section for details.

Schedule	None
----------	------

Step 9. Click OK to finish the setting of Company B.

IPSec Autokey

Name	Gateway IP	Destination Subnet	Algorithm	Status	Configure		
VPN_B	61.11.11.11	192.168.10.0	None	Disconnect	Connecting	Modify	Remove

[New Entry](#)

Example 2. Create a VPN connection between the Multi-Homing Security Gateway and Windows XP Professional VPN Client.

Preparation Task:

Company A External IP is 61.11.11.11, Internal IP is 192.168.10.X

Remote User External IP is 211.22.22.22

Remote user with an external IP wants to create a VPN connection with company A and connect to 192.168.10.100 for downloading the sharing file.

The Gateway of Company A is 192.168.10.1. The settings of company A are as the following.

Step 1. Enter the default IP of Company A's Multi-Homing Security Gateway, 192.168.10.1. Click VPN in the menu bar on the left hand side, and then select the sub-select IPsec Autokey. Click Add.

Step 2. Enter the VPN name, VPN_A in IPsec Autokey window, and choose From Source to be Internal. Fill the subnet IP, 192.168.10.0 and subnet mask, 255.255.255.0.

VPN Auto Keyed Tunnel	
Name	VPN_A
From Source	<input checked="" type="radio"/> LAN <input type="radio"/> DMZ
Use interface	<input checked="" type="radio"/> WAN1 <input type="radio"/> WAN2
Subnet / Mask	192.168.10.0 / 255.255.255.0

Step 3. In to Destination table, choose Remote Client – Fixed IP or Dynamic IP.

To Destination	
<input type="radio"/> Remote Gateway -- Fixed IP	<input type="text"/>
Subnet / Mask	<input type="text"/> / 255.255.255.0
<input type="radio"/> Remote Gateway -- Dynamic IP	<input type="text"/>
Subnet / Mask	<input type="text"/> / 255.255.255.0
<input checked="" type="radio"/> Remote Client -- Fixed IP or Dynamic IP	

Step 4. In Authentication Method Table, choose Preshare and enter the Preshared Key. (The max length is 100 bytes.)

Authentication Method	Preshare
Preshared Key	123456789

Step 5. In Encapsulation, ISAKMP Algorithm, choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm. And select Group 1 to connect.

Encapsulation	
ISAKMP Algorithm	
ENC Algorithm	3DES
AUTH Algorithm	MD5
Group	GROUP 1

Step 6. In IPsec Algorithm Table , choose Data Encryption + Authentication. We choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm.

IPsec Algorithm	
<input checked="" type="radio"/> Data Encryption + Authentication	
ENC Algorithm	3DES
AUTH Algorithm	MD5
<input type="radio"/> Authentication Only	

Step 7. Choose Perfect Forward Secrecy, and enter 28800 seconds in IPsec Lifetime and Keep alive IP to keep connecting.

<input checked="" type="checkbox"/> Perfect Forward Secrecy	
IPsec Lifetime	28800 Seconds
Keep alive IP :	211.22.22.22

Step 8. Click the down arrow to select the policy of schedule, which was pre-determined in Schedule. Refer to the corresponding section for details.

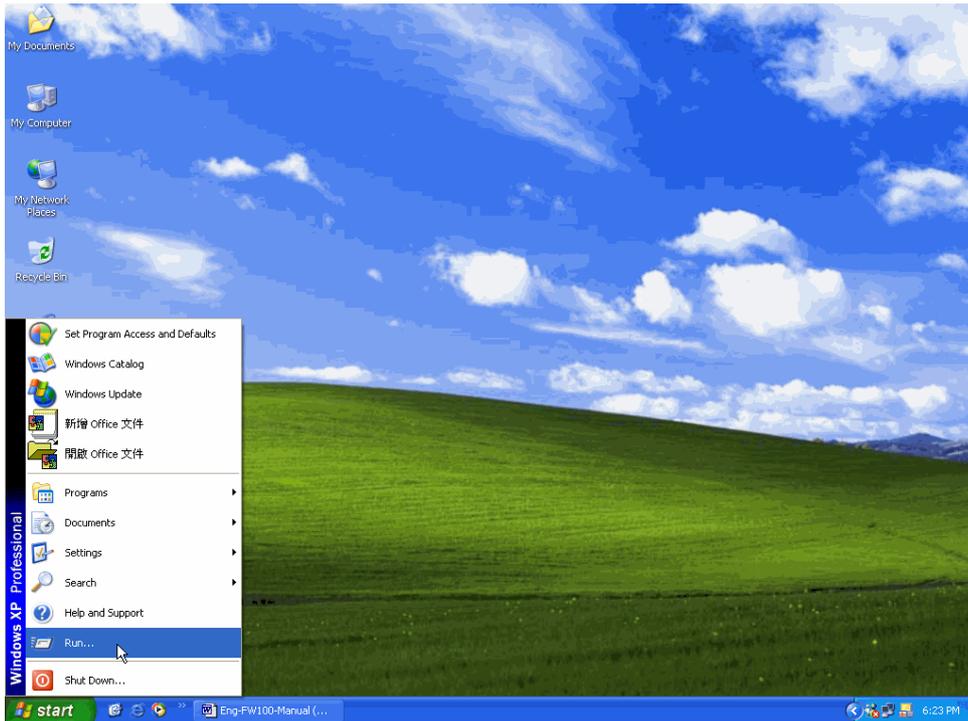
Schedule	None
----------	------

Step 9. Click OK to finish the setting of Company A.

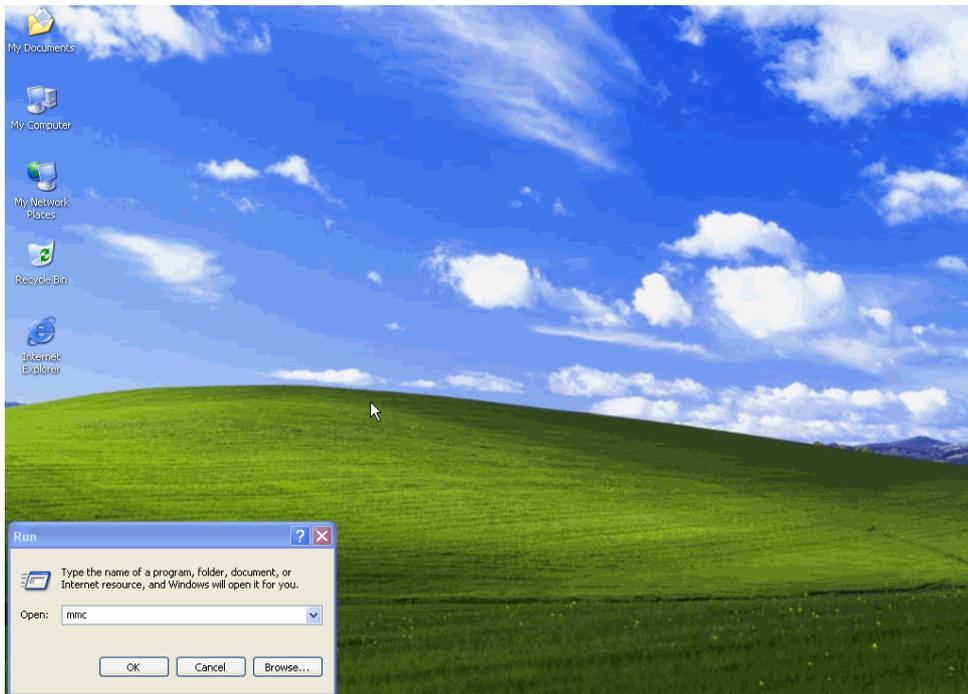
IPsec Autokey					
Name	Gateway IP	Destination Subnet	Algorithm	Status	Configure
VPN_A	No IP !	VPN Client	None	Disconnect	Modify Remove
New Entry					

The IP of remote user is 211.22.22.22. The settings of remote user are as the following.

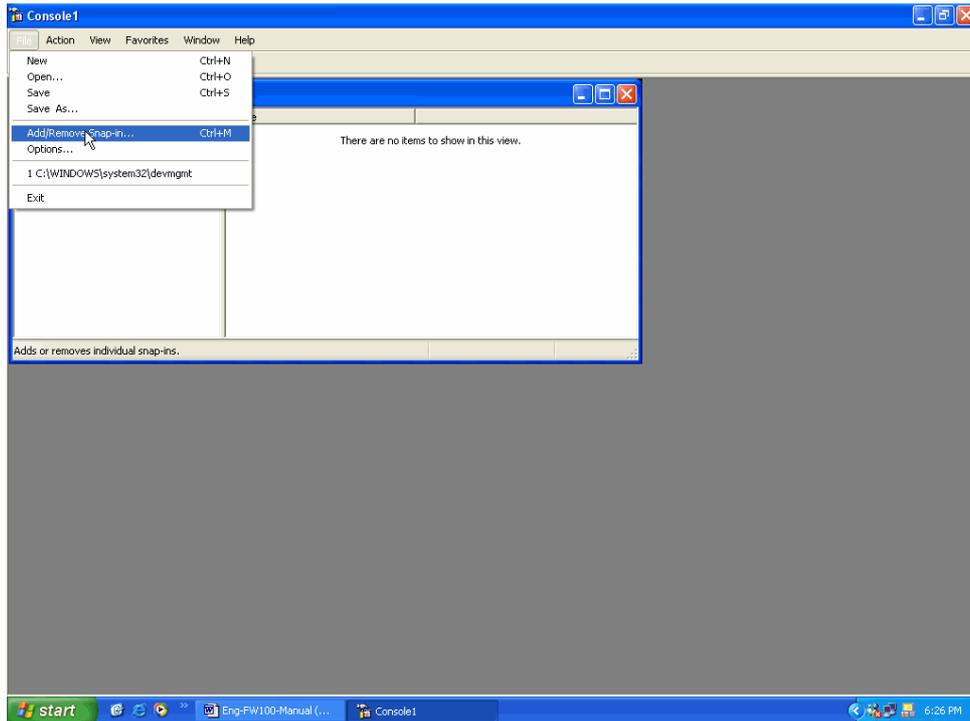
Step 1. Enter Windows XP, click Start and click Execute function.



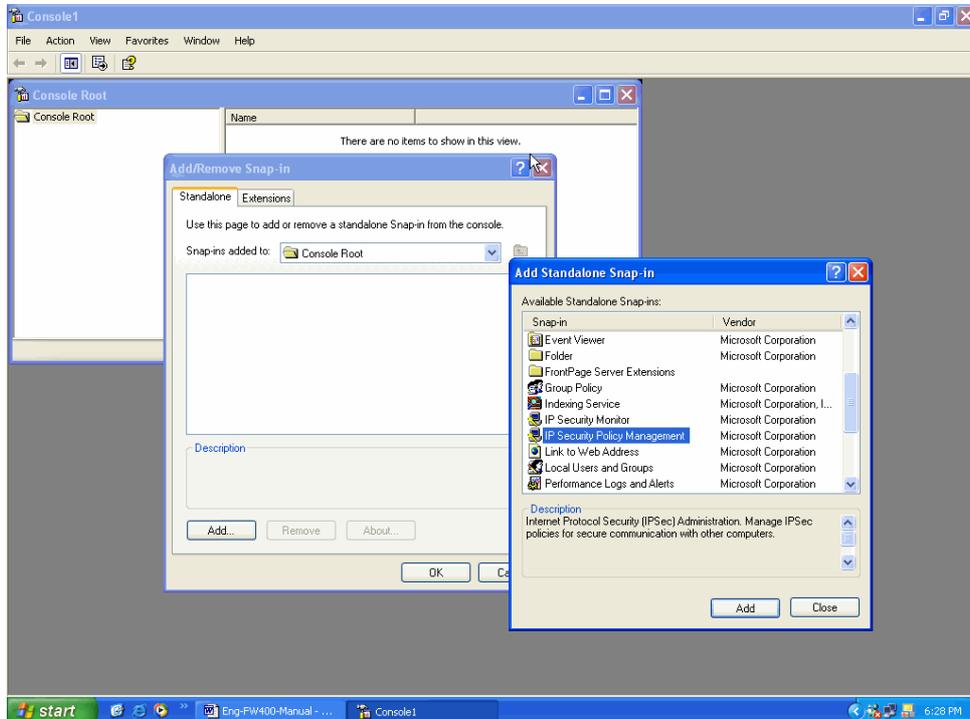
Step 2. In the Execute window, enter the command, MMC in Open.



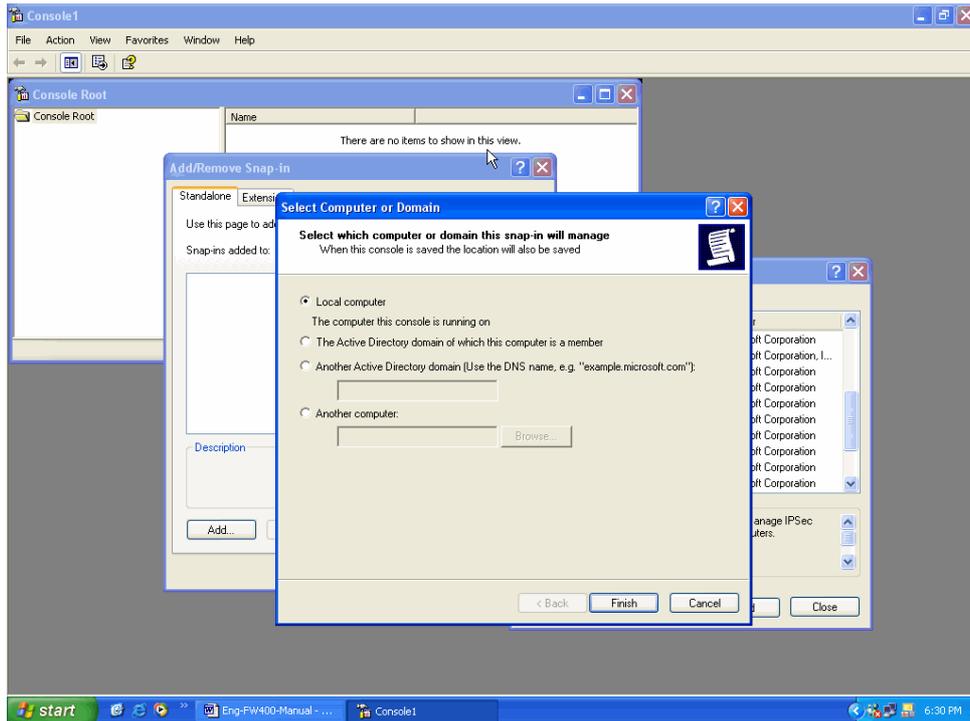
Step 3. Enter the Console window, click Console(C) option and click Add/Remove Embedded Management Option.



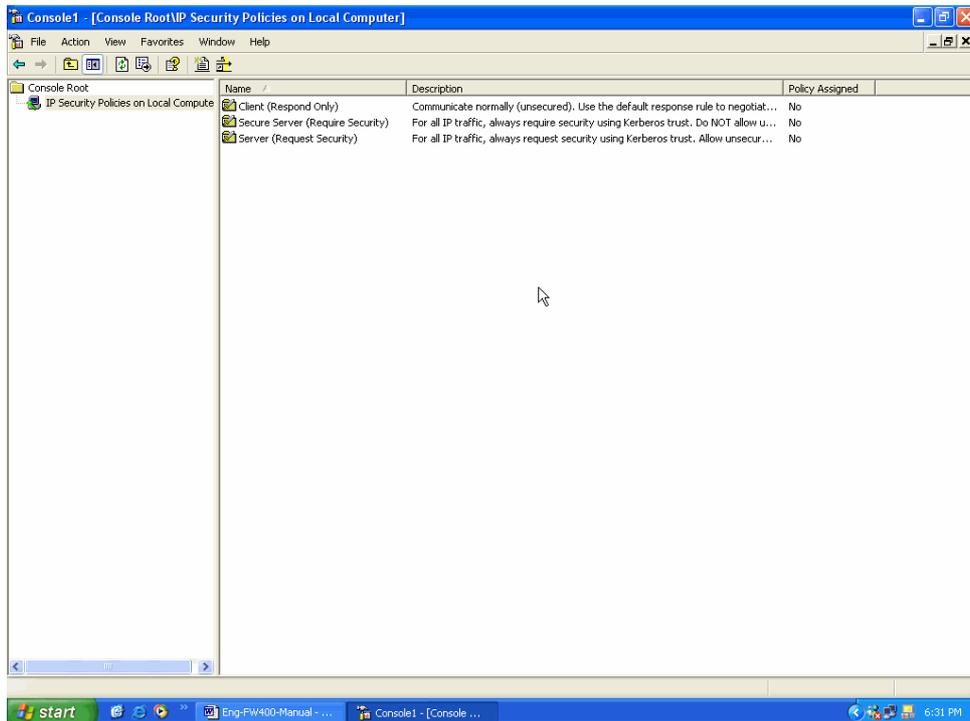
Step 4. Enter Add/Remove Embedded Management Option window and click Add. In Add/ Remove Embedded Management Option window, click Add to add Create IP Security Policy.



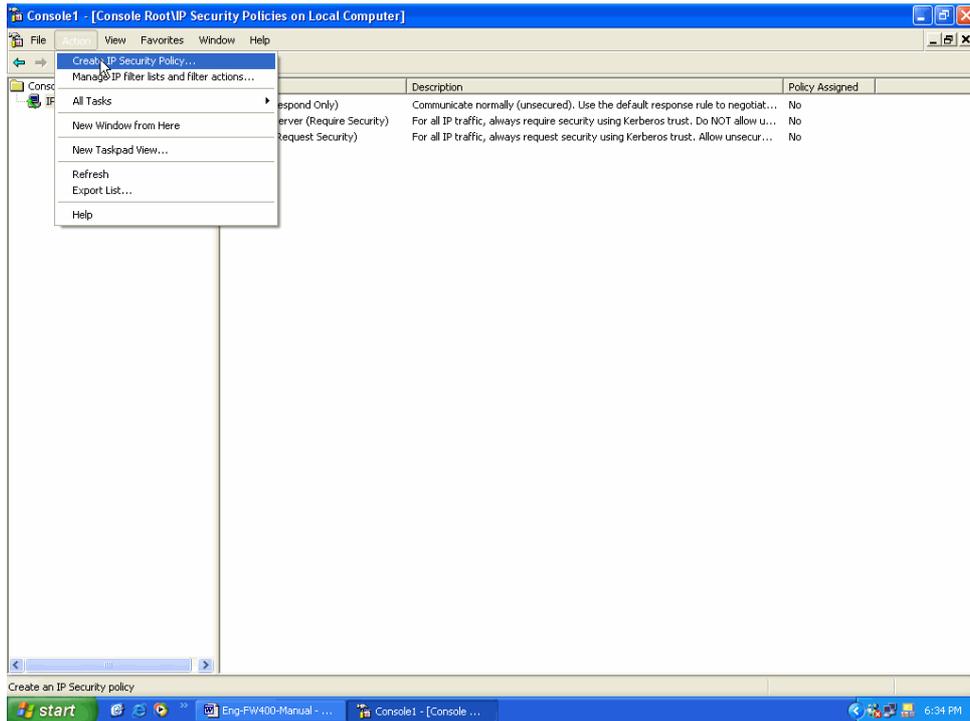
Step 5. Choose Local Machine (L) for finishing the setting of Add.



Step 6. Finish the setting of Add.



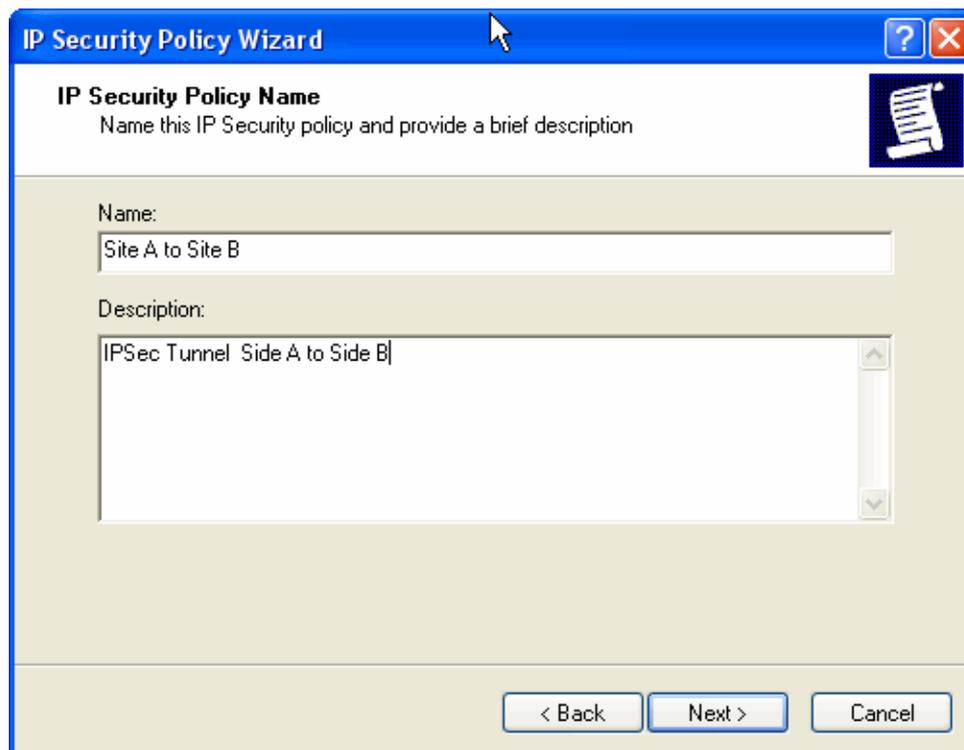
Step 7. Click the right button of mouse in IP Security Policies on Local Machine and choose Create IP Security Policy(C) option.



Step 8. Click Next.

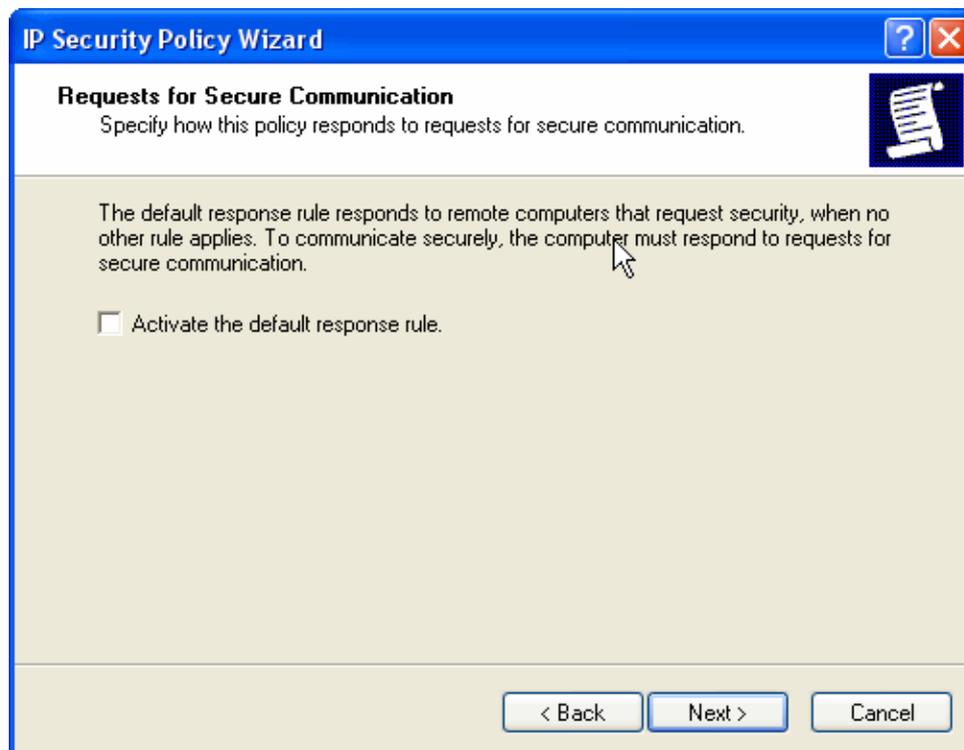


Step 9. Enter the Name of this VPN and optionally give it a brief description.



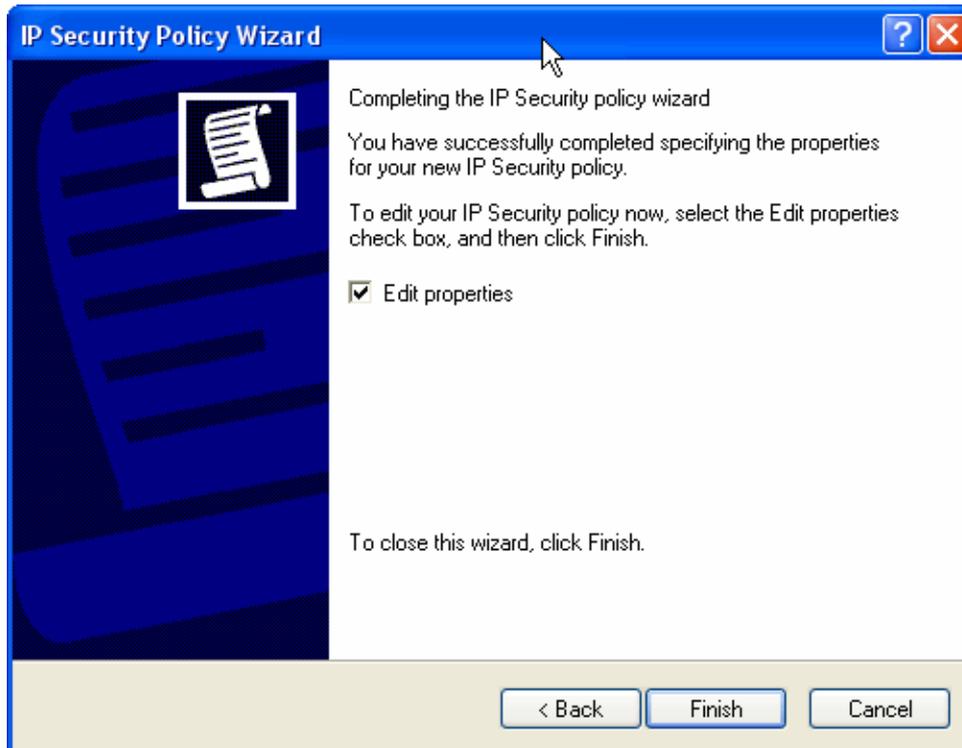
The screenshot shows the 'IP Security Policy Wizard' dialog box. The title bar reads 'IP Security Policy Wizard'. The main heading is 'IP Security Policy Name' with the instruction 'Name this IP Security policy and provide a brief description'. Below this, there are two input fields: 'Name:' with the text 'Site A to Site B' and 'Description:' with the text 'IPSec Tunnel Side A to Side B'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

Step 10. Disable **Activate the default response rule**. And click Next.

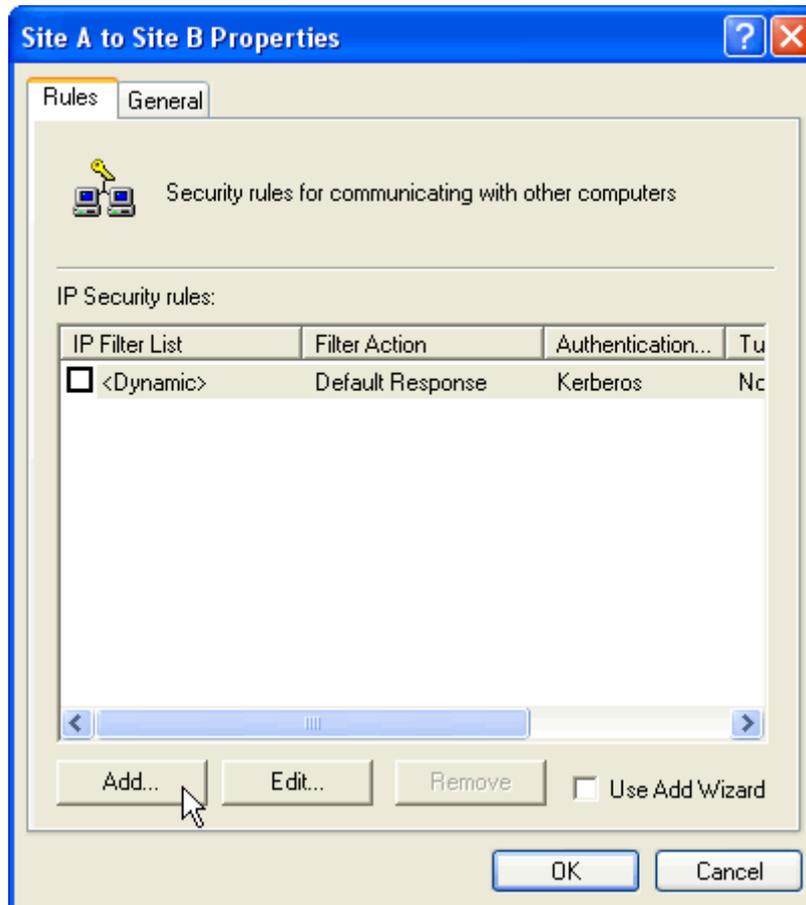


The screenshot shows the 'IP Security Policy Wizard' dialog box. The title bar reads 'IP Security Policy Wizard'. The main heading is 'Requests for Secure Communication' with the instruction 'Specify how this policy responds to requests for secure communication.' Below this, there is a paragraph of text: 'The default response rule responds to remote computers that request security, when no other rule applies. To communicate securely, the computer must respond to requests for secure communication.' Underneath, there is a checkbox labeled 'Activate the default response rule.' which is currently unchecked. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

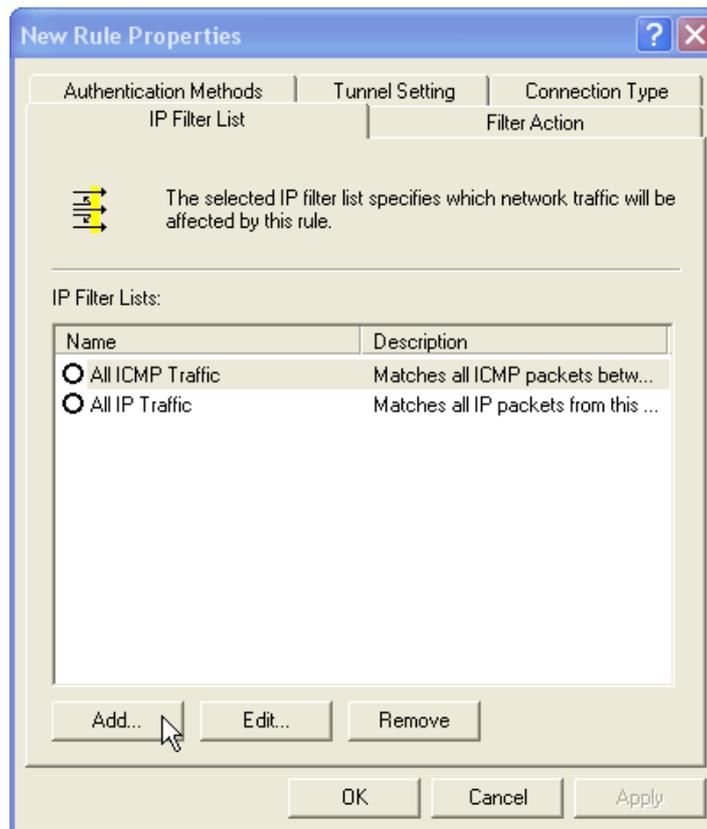
Step 11. Completing the IP Security Policy setting and click Finish. Enable Edit properties.



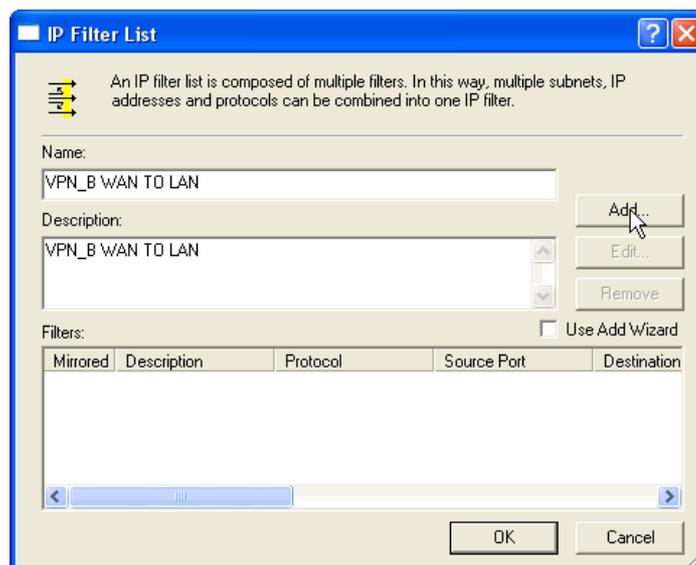
Step 12. In VPN_B window, click Add and please don't click Use Add Wizard.



Step 13. In IP Filter List tab, click Add.



Step 14. In IP Filter List window, please don't choose Use Add Wizard and change Name to VPN_B WAN TO LAN. Click Add.



Step 15. In Filter Properties window, in Source address, click down the arrow to select the specific IP Subnet and fill remote user's IP Address, 211.22.22.22 and Subnet mask, 255.255.255.255. In Destination address, click down the arrow to select the specific IP Subnet and fill Company A's IP Address, 192.168.10.0 and Subnet mask 255.255.255.0. Please disable Mirrored. Also match packets with the exact opposite source and destination addresses.

Filter Properties

Addressing | Protocol | Description

Source address:

A specific IP Subnet

IP Address: 211 . 22 . 22 . 22

Subnet mask: 255 . 255 . 255 . 255

Destination address:

A specific IP Subnet

IP address: 192 . 168 . 10 . 0

Subnet mask: 255 . 255 . 255 . 0

Mirrored. Also match packets with the exact opposite source and destination addresses.

OK Cancel

Step 16. Finish the setting and close IP Filter List window.

IP Filter List

An IP filter list is composed of multiple filters. In this way, multiple subnets, IP addresses and protocols can be combined into one IP filter.

Name: VPN_B WAN TO LAN

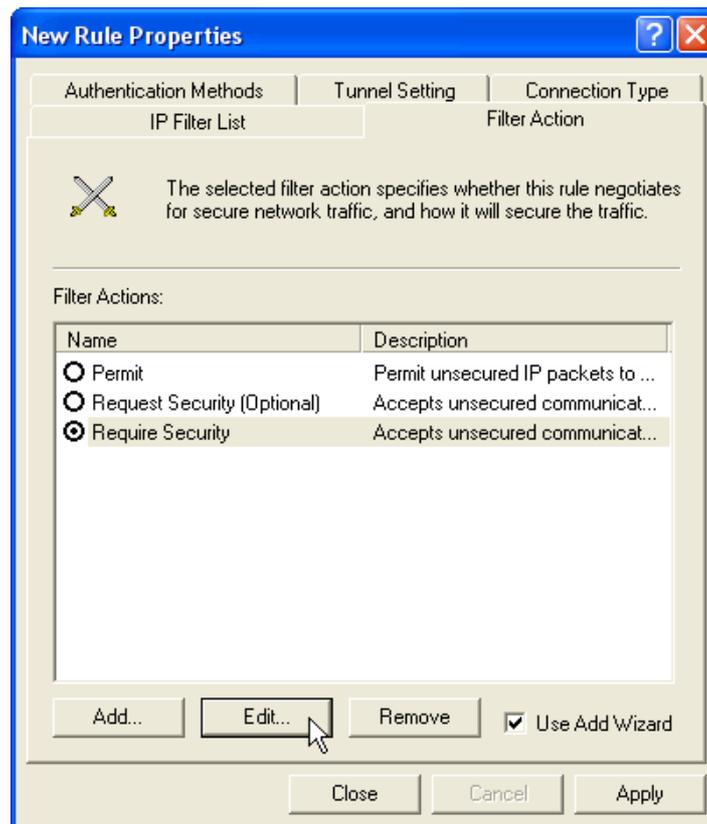
Description: VPN_B WAN TO LAN

Filters:

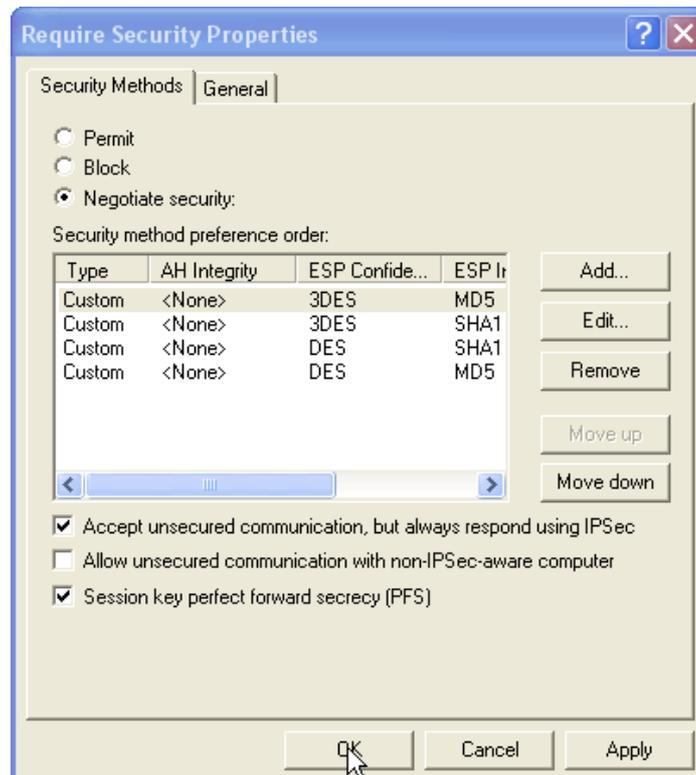
NS Name	Source Address	Source Mask	Destination DNS ...	Destinat...
ic IP Add...	211.22.22.22	255.255.255.255	<A specific IP Sub...	192.168...

OK Cancel

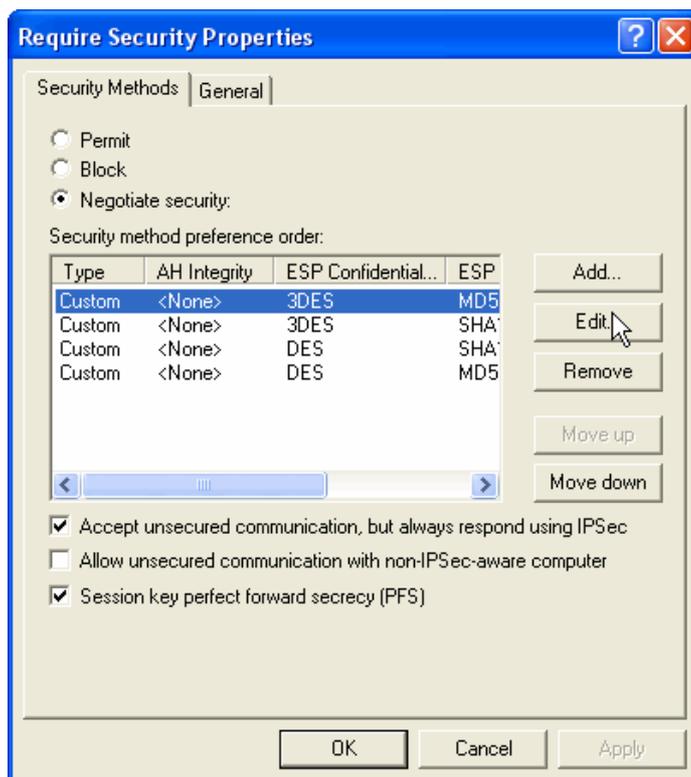
Step 17. Click Filter Action tab and choose Require Security. Click Edit.



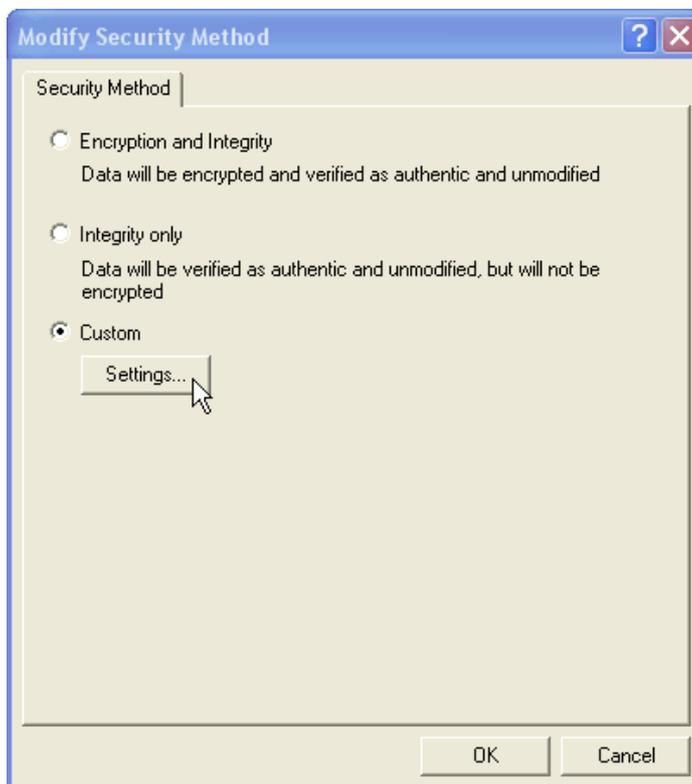
Step 18. In Security Methods tab, choose accept unsecured communication, but always respond using IPSec.



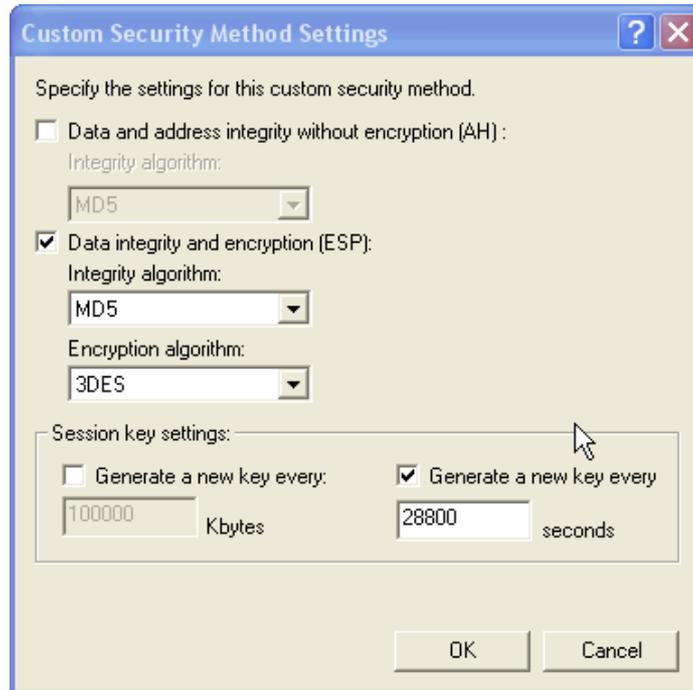
Step 19. Click Edit in Custom/ None/ 3DES/ MD5.



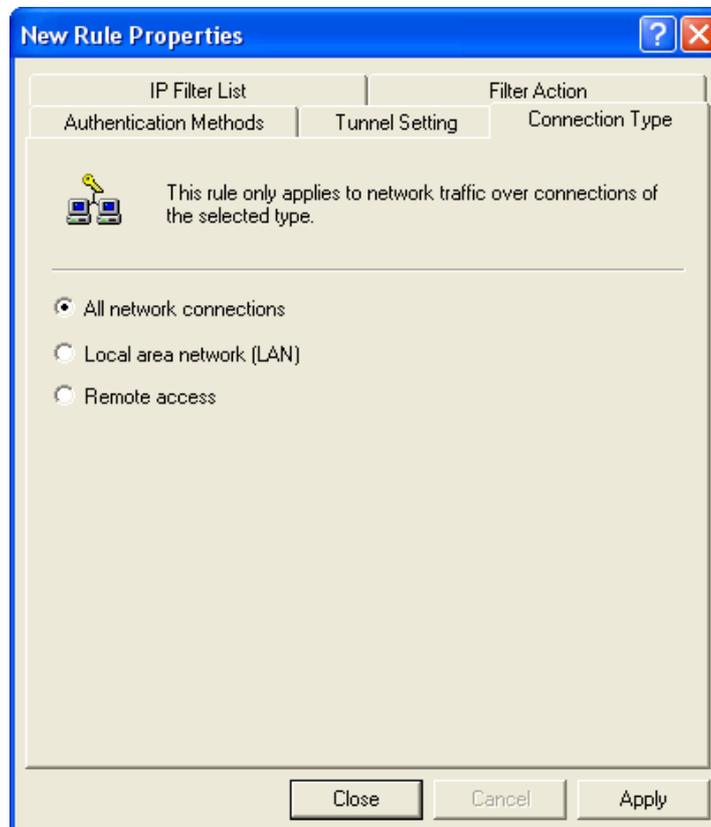
Step 20. Click Custom(For professional user) and click Edit.



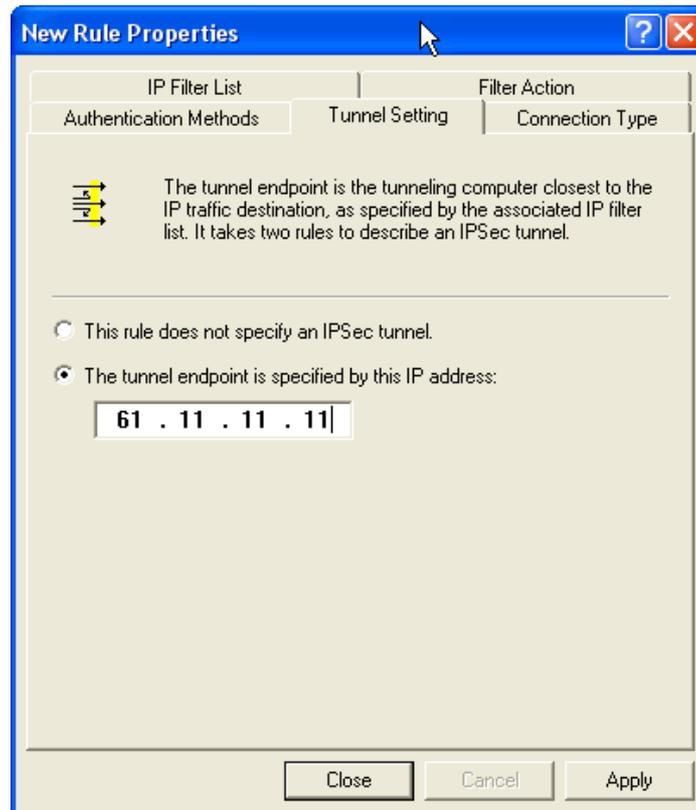
Step 21. Click Data Integrity and Encapsulation and choose MD5 and 3DES. Click Generate a New key after every 28800 seconds. And click 3 times OK to return.



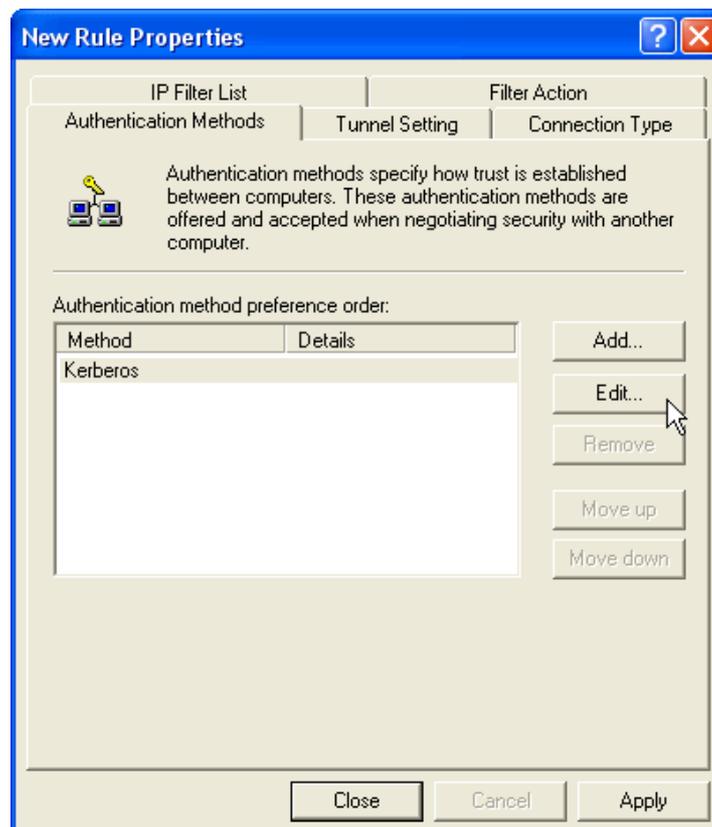
Step 22. Click Connection Type tab and click all network connections.



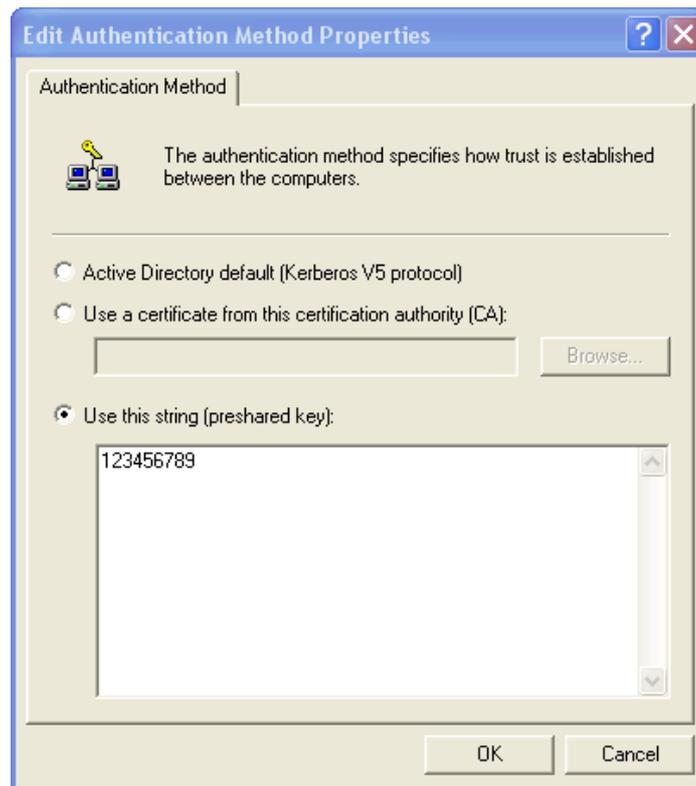
Step 23. Click Tunnel Setting tab, and click The tunnel endpoint is specified by the IP Address. Enter the WAN IP of Company A, 61.11.11.11.



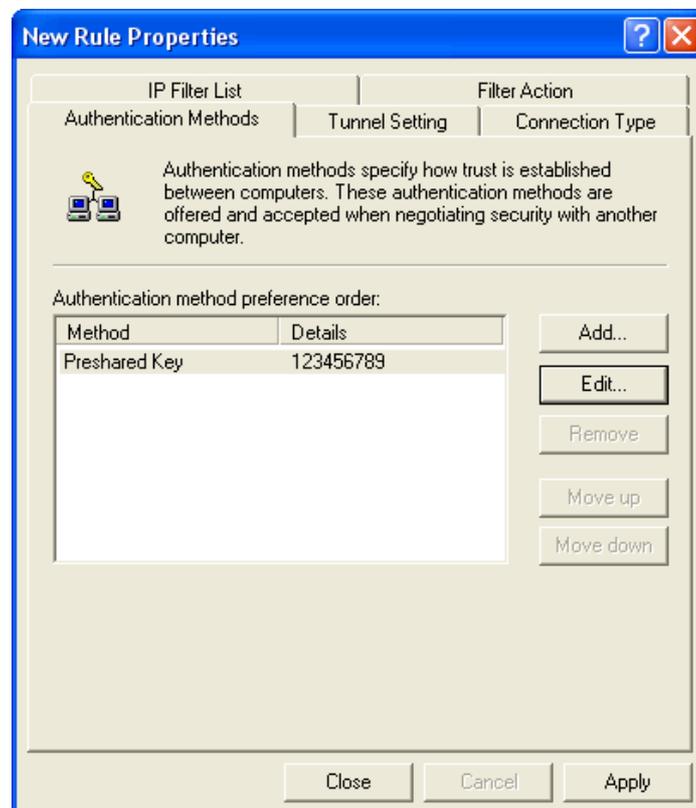
Step 24. Click Authentication Methods and click Edit.



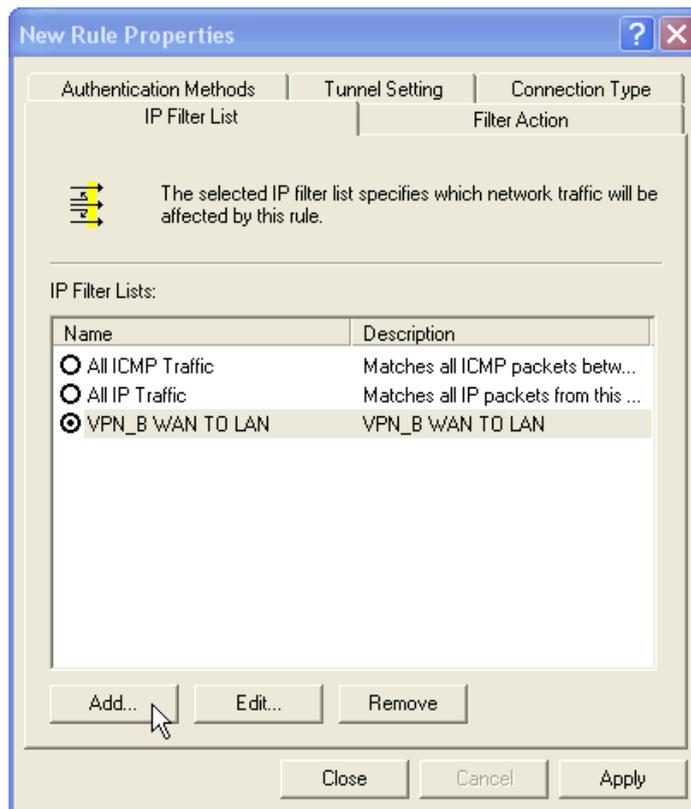
Step 25. Choose Use this string to protect the key exchange (Preshared Key). And enter the key, 123456789.



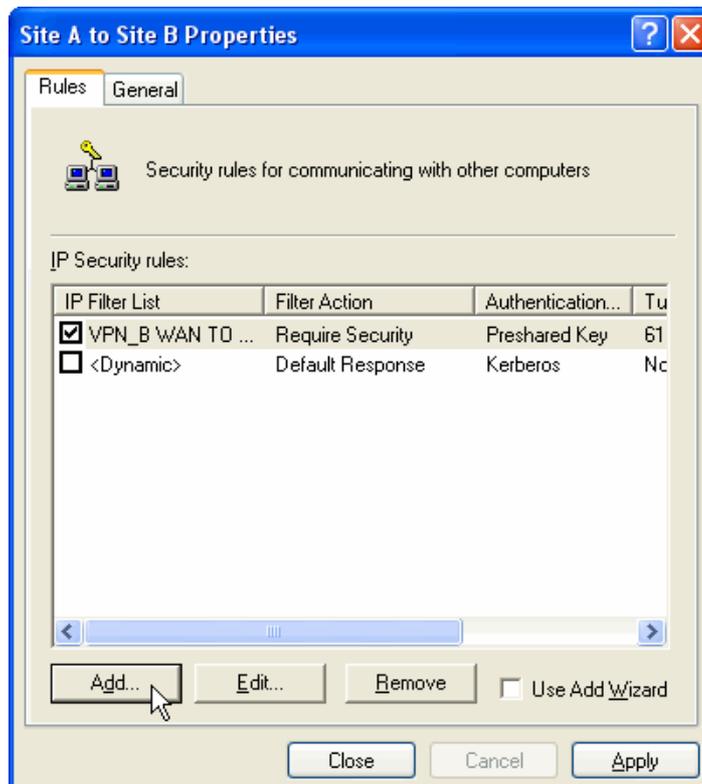
Step 26. Finish the setting, and close the window.



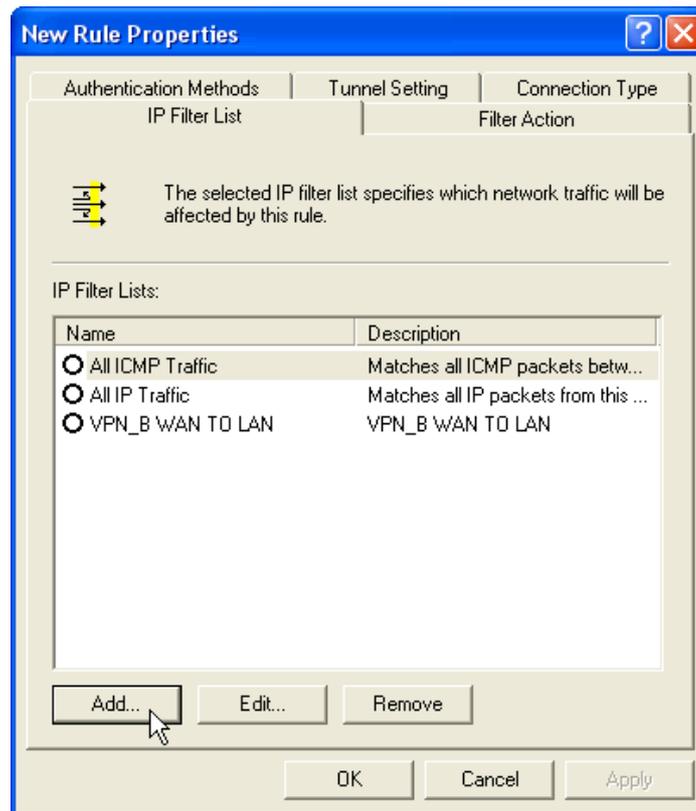
Step 27. Finish the Policy setting of VPN_B WAN TO LAN.



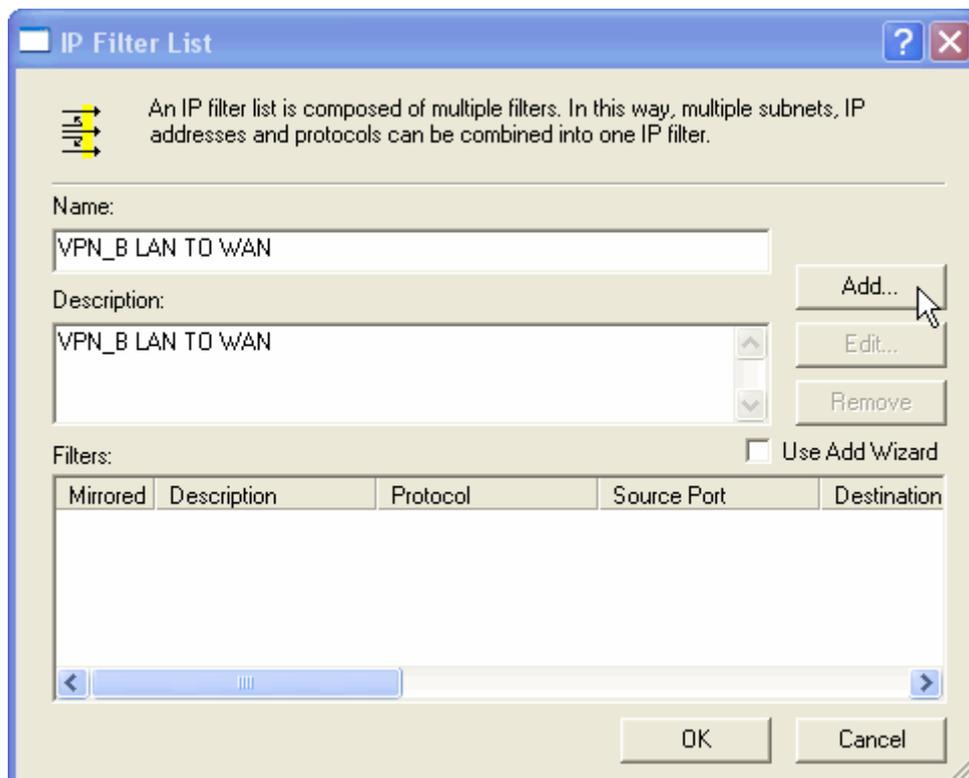
Step 28. Enter VPN_B window again and click Add to add second IP Security Policy. Please don't enable Use Add Wizard.



Step 29. In New Rule Properties, click Add.



Step 30. In IP Filter List window, please disable Use Add Wizard, and change Name to VPN_B LAN TO WAN. Click Add.



Step 31. In Filter Properties window, in Source address, click down the arrow to select the specific IP Subnet and fill Company A's IP Address, 192.168.10.0 and Subnet mask 255.255.255.0.

In Destination address click down the arrow to select the specific IP Subnet and fill remote user's IP Address, 211.22.22.22 and Subnet mask, 255.255.255.255., Please disable Mirrored. Also match packets with the exact opposite source and destination addresses.

Filter Properties

Addressing | Protocol | Description

Source address:
A specific IP Subnet

IP Address: 192 . 168 . 10 . 0
Subnet mask: 255 . 255 . 255 . 0

Destination address:
A specific IP Address

IP address: 211 . 22 . 22 . 22
Subnet mask: 255 . 255 . 255 . 255

Mirrored. Also match packets with the exact opposite source and destination addresses.

OK Cancel

Step 32. Finish the setting and close IP Filter List window.

IP Filter List

An IP filter list is composed of multiple filters. In this way, multiple subnets, IP addresses and protocols can be combined into one IP filter.

Name: VPN_B LAN TO WAN

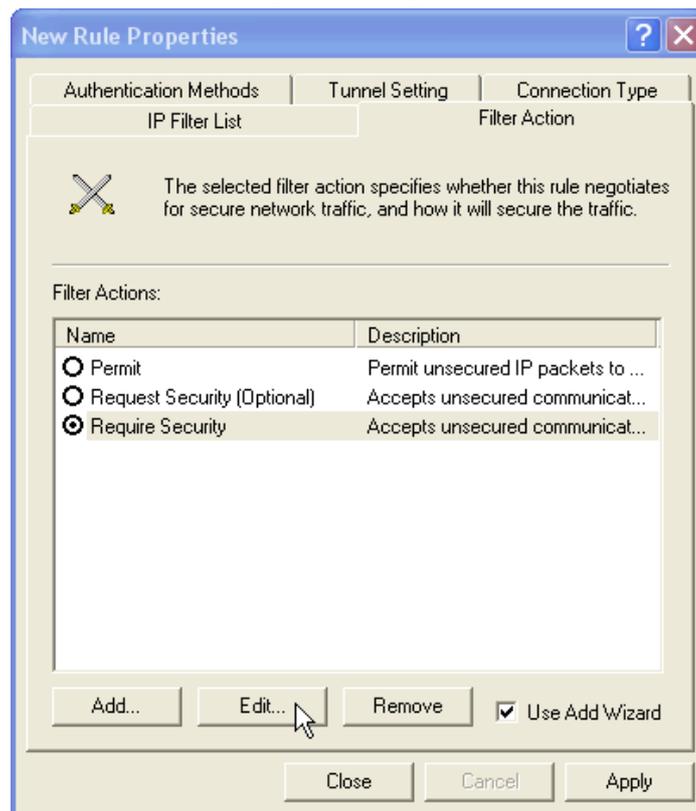
Description: VPN_B LAN TO WAN

Filters: Use Add Wizard

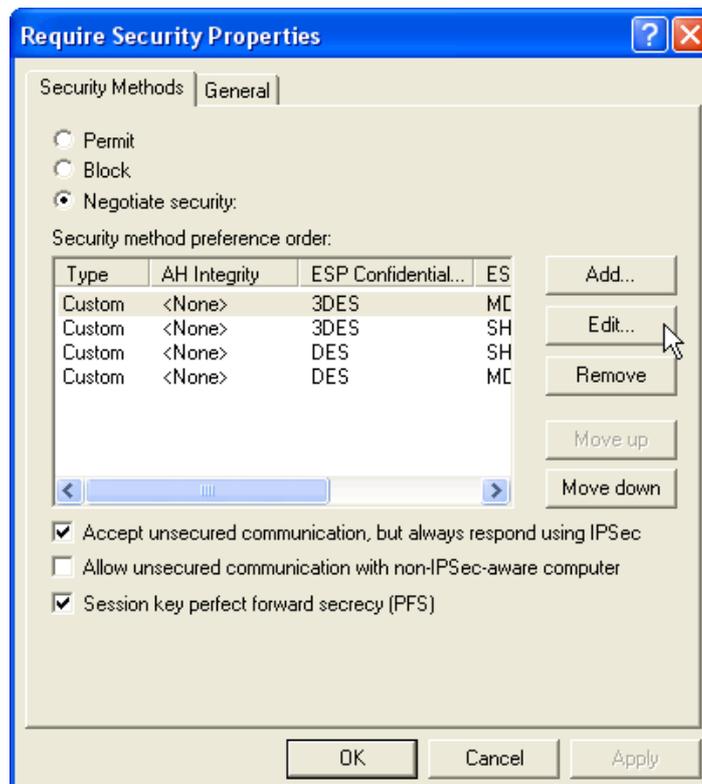
Source Address	Source Mask	Destination DNS ...	Destination Address
192.168.10.0	255.255.255.0	<A specific IP Add...	211.22.22.22

OK Cancel

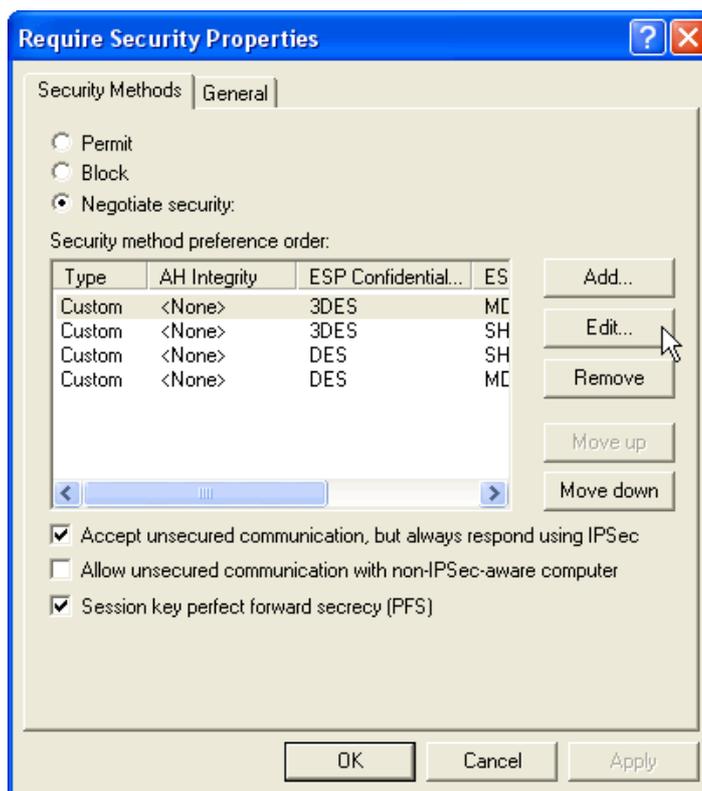
Step 33. Click Filter Action tab and choose Require Security. Click Edit.



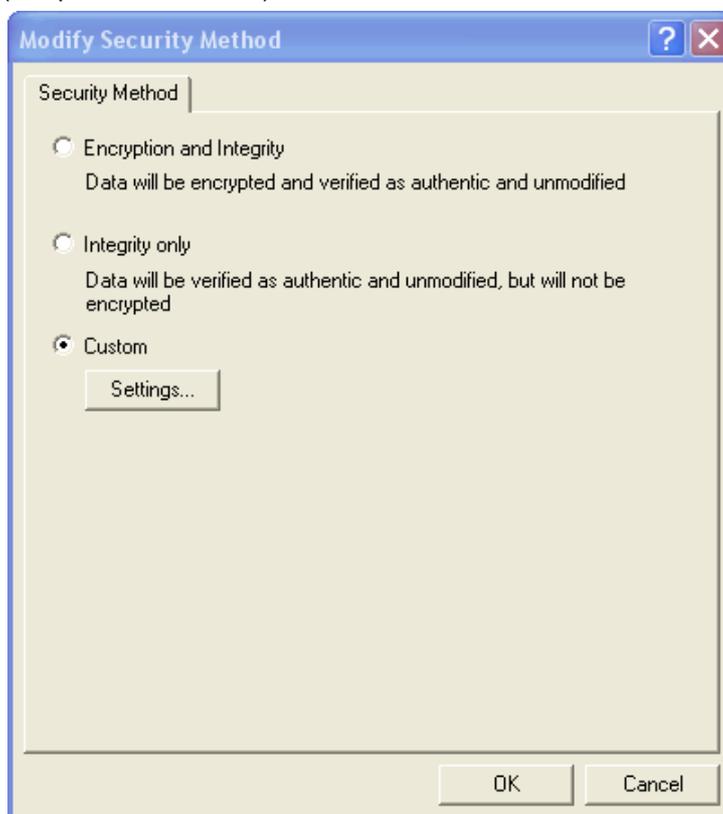
Step 34. In Security Methods tab, choose accept unsecured communication, but always respond using IPSec.



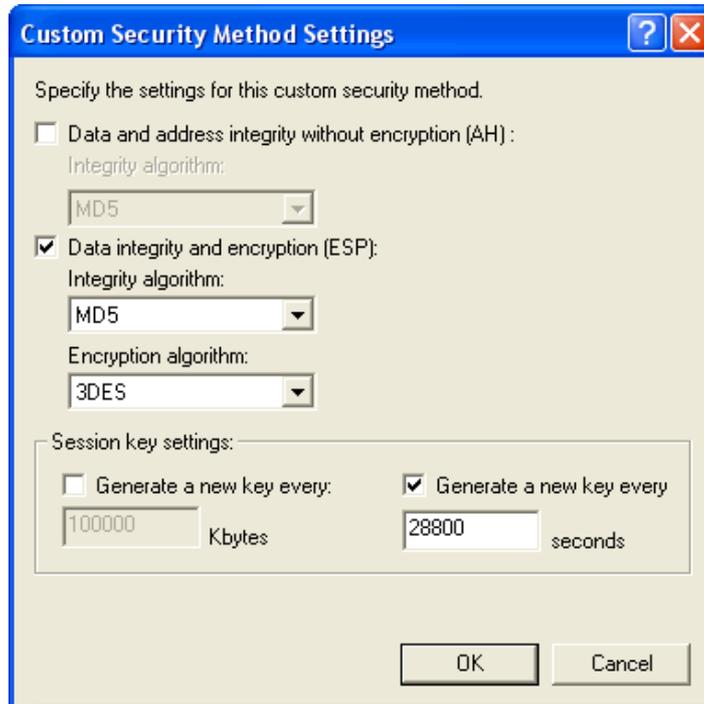
Step 35. Click Edit in Custom/ None/ 3DES/ MD5.



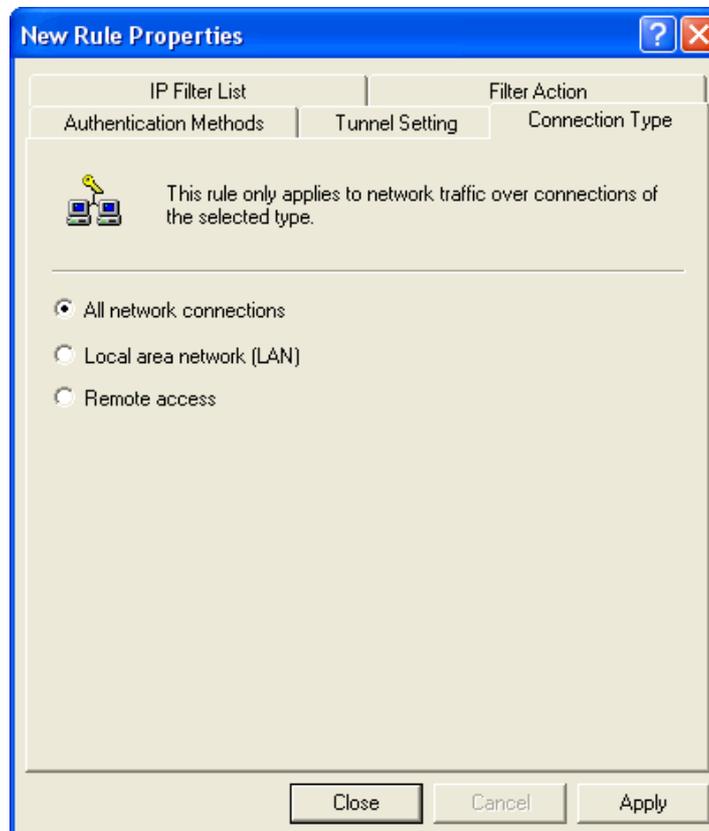
Step 36. Click Custom (For professional user) and click Edit.



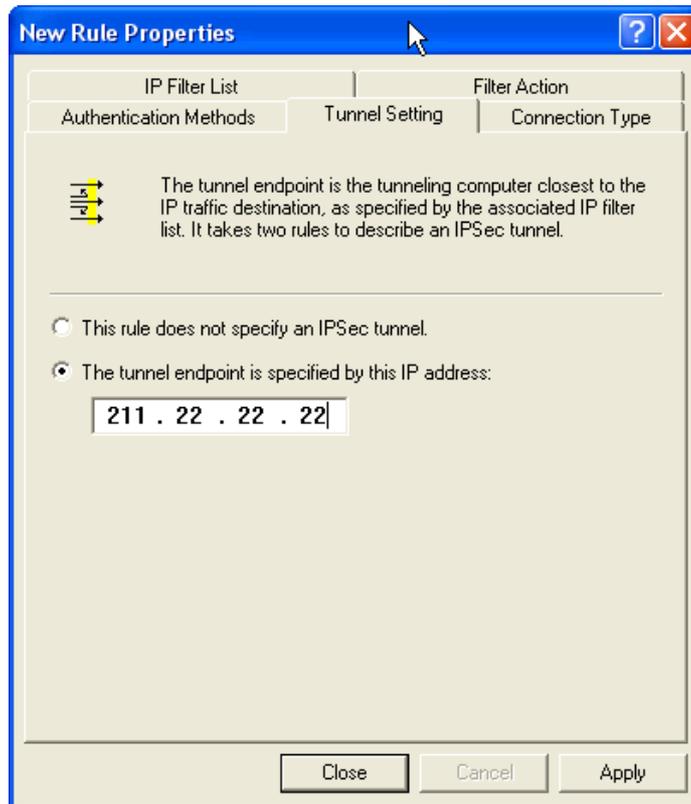
Step 37. Click Data Integrity and Encapsulation and choose MD5 and 3DES. Click Generate a New key after every 28800 seconds. And click 3 times OK to return.



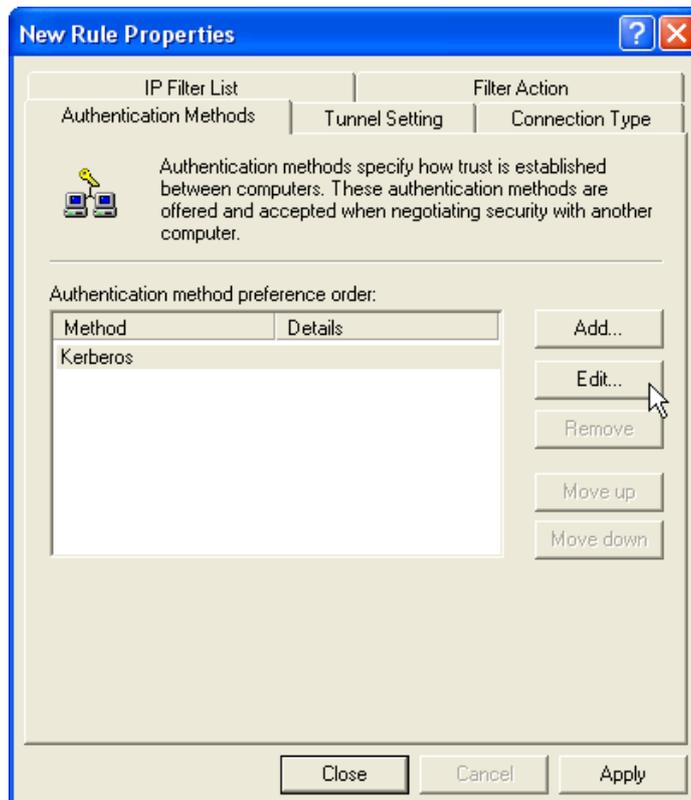
Step 38. Click Connection Type tab and click all network connections.



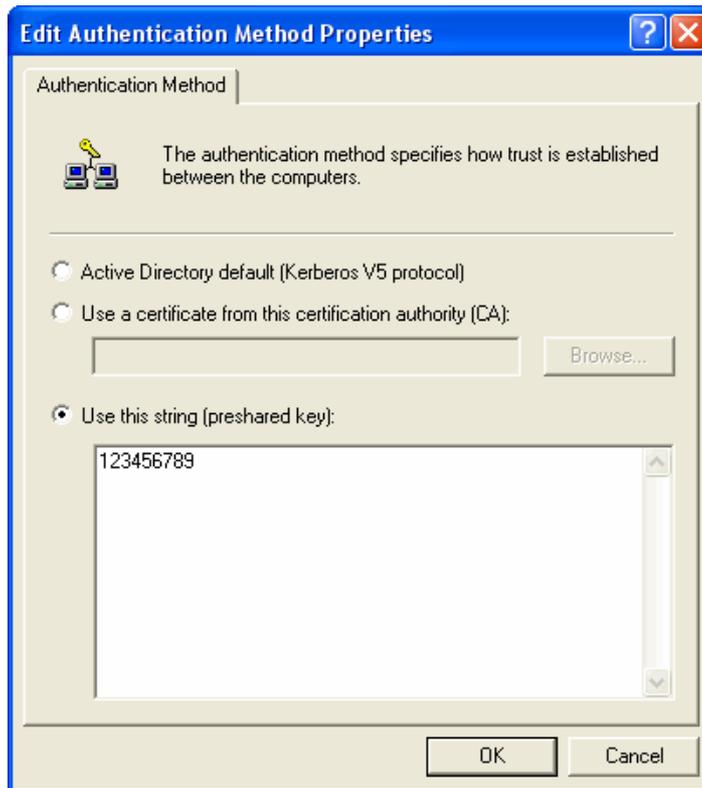
Step 39. Click Tunnel Setting tab, and click The tunnel endpoint is specified by the IP Address. Enter the WAN IP of remote user, 211.22.22.22.



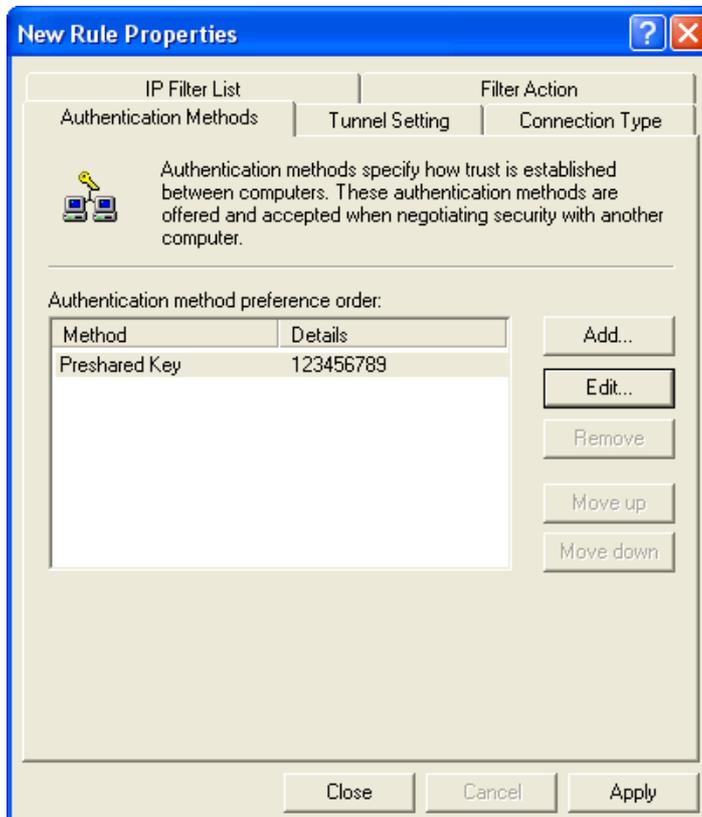
Step 40. Click Authentication Methods and click Edit.



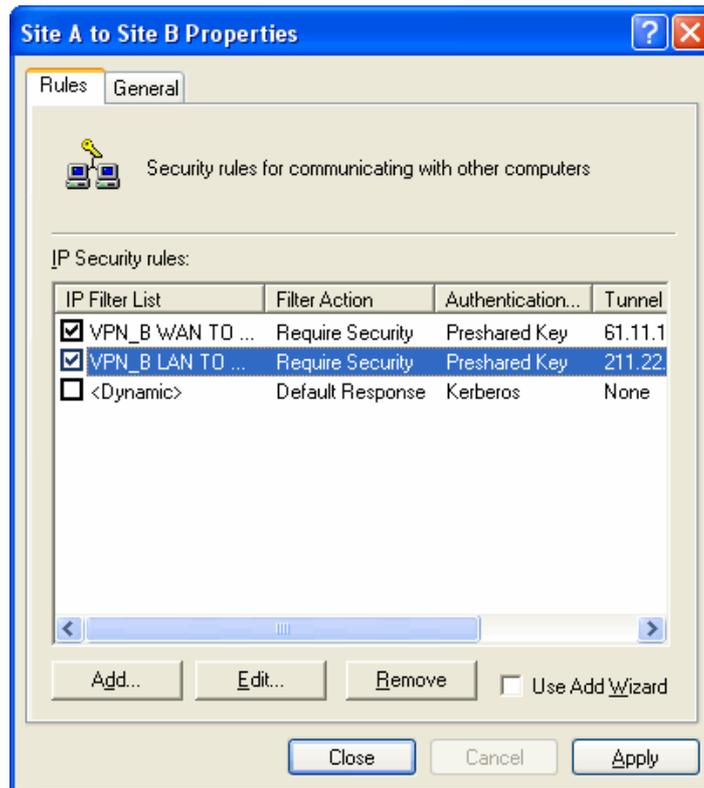
Step 41. Choose Use this string to protect the key exchange (Preshared Key). And enter the key, 123456789.



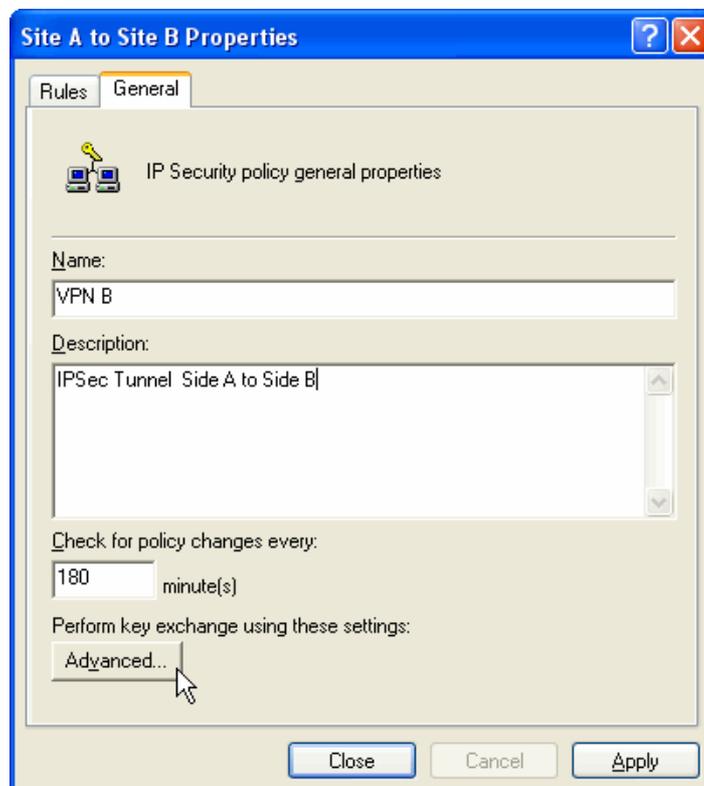
Step 42. Finish the setting, and close the window.



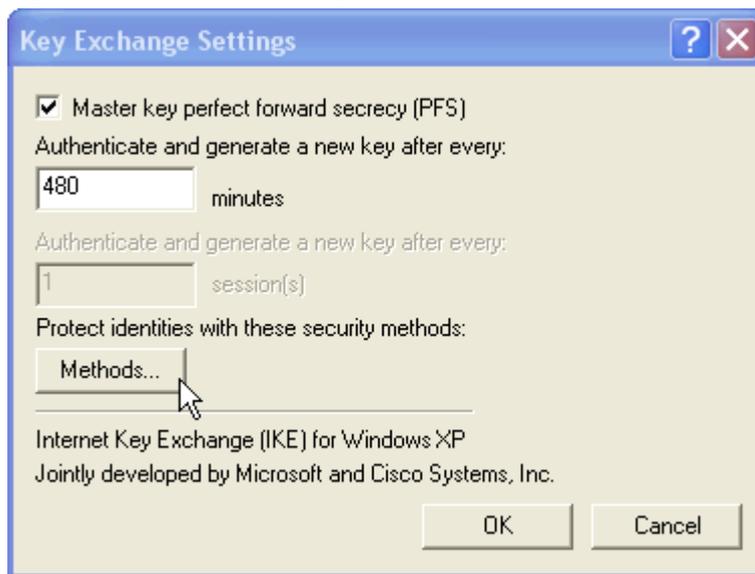
Step 43. Finish the Policy setting of VPN_B LAN TO WAN.



Step 44. In VPN_B window, click General tab. And click Advanced for Key Exchange using these settings.



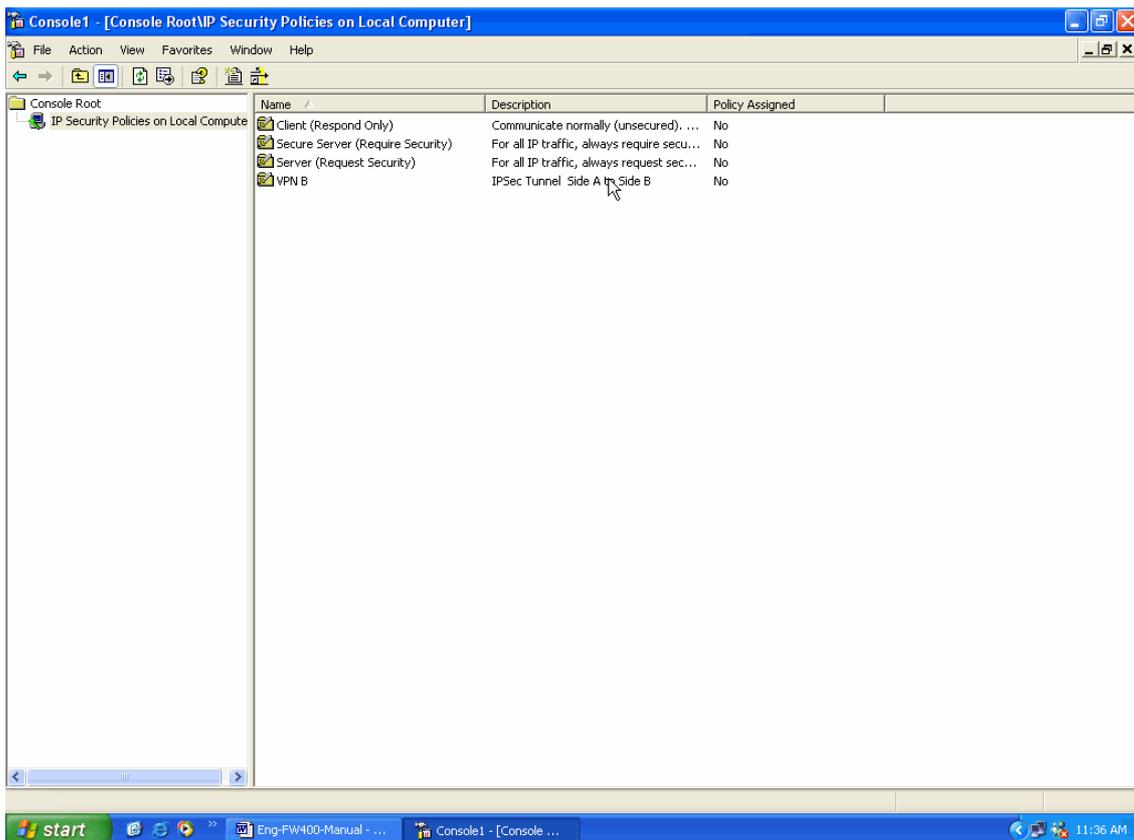
Step 45. Click Master key Perfect Forward Secrecy.



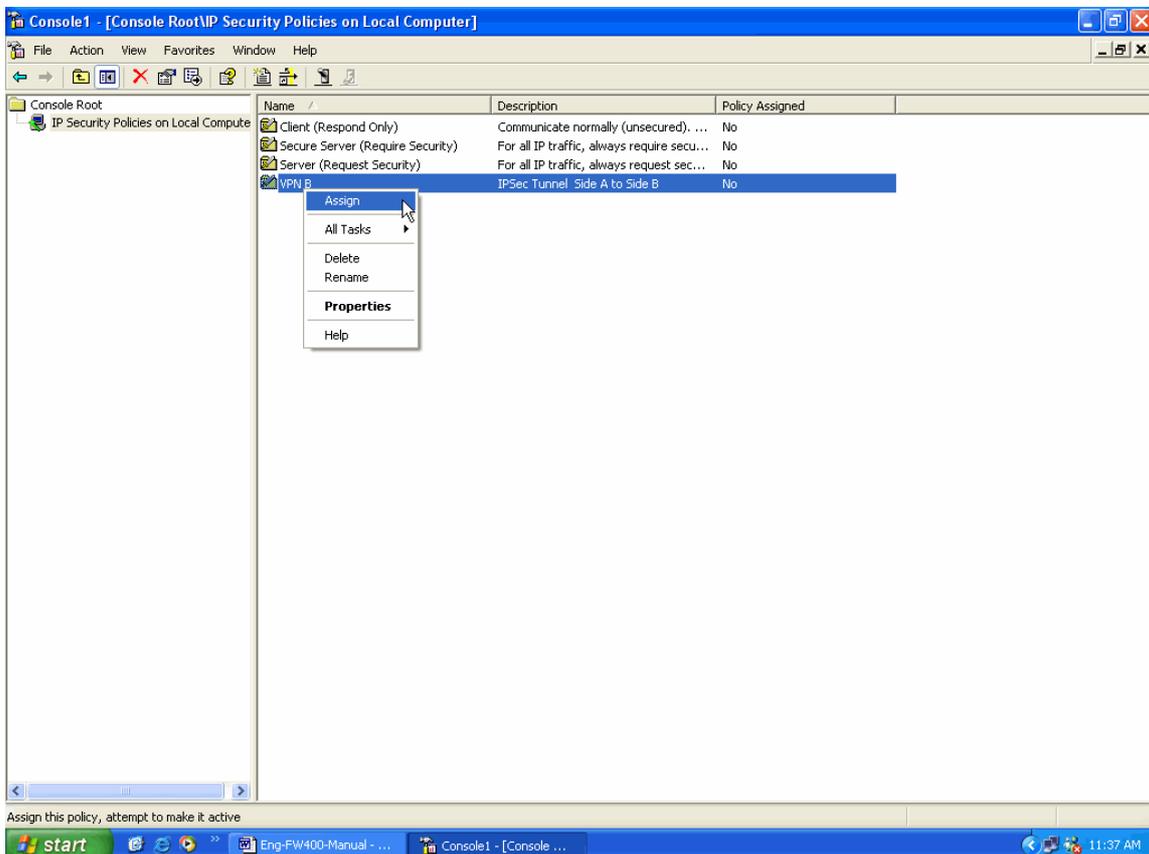
Step 46. Move IKE/ 3DES/ MD5/ up to the highest order. Finish all settings.



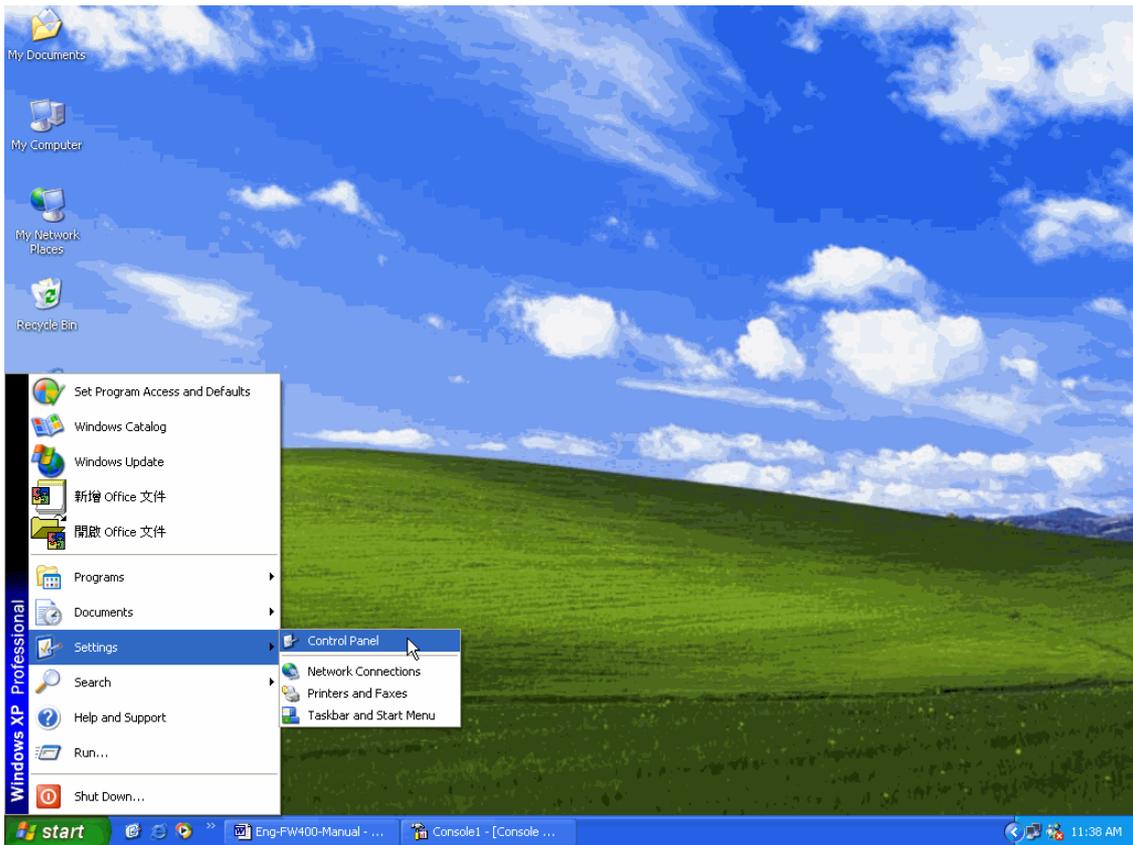
Step 47. Finish the settings of remote user's Windows XP VPN.



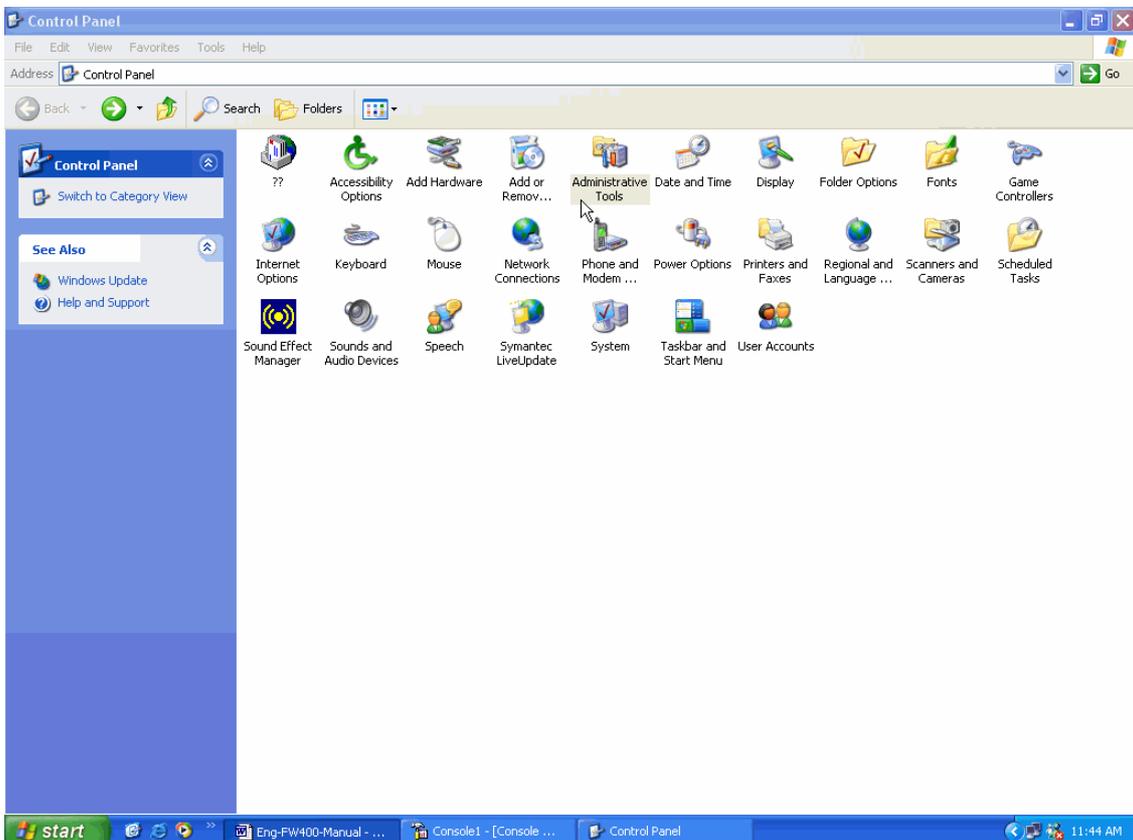
Step 48. Click the right button of mouse in VPN_B and enable Assign.



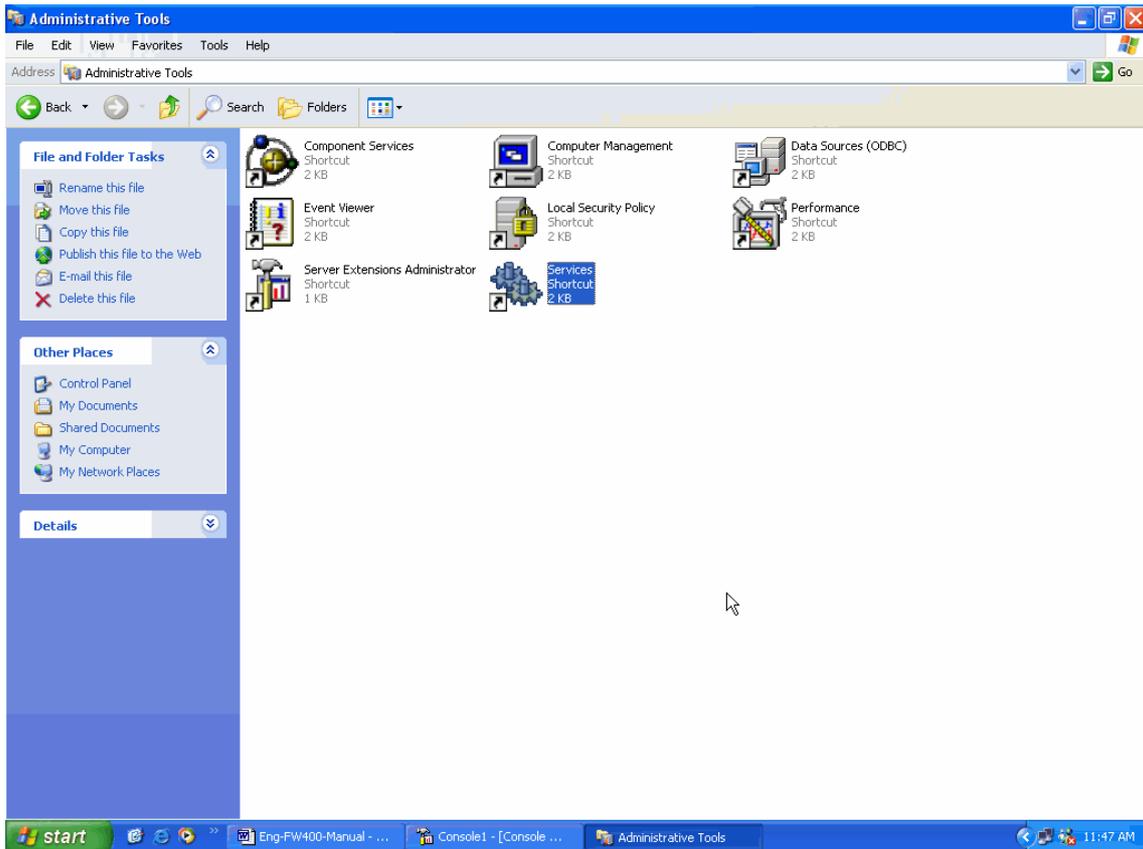
Step 49. To restart IPSec by Start→Settings→Control Panel



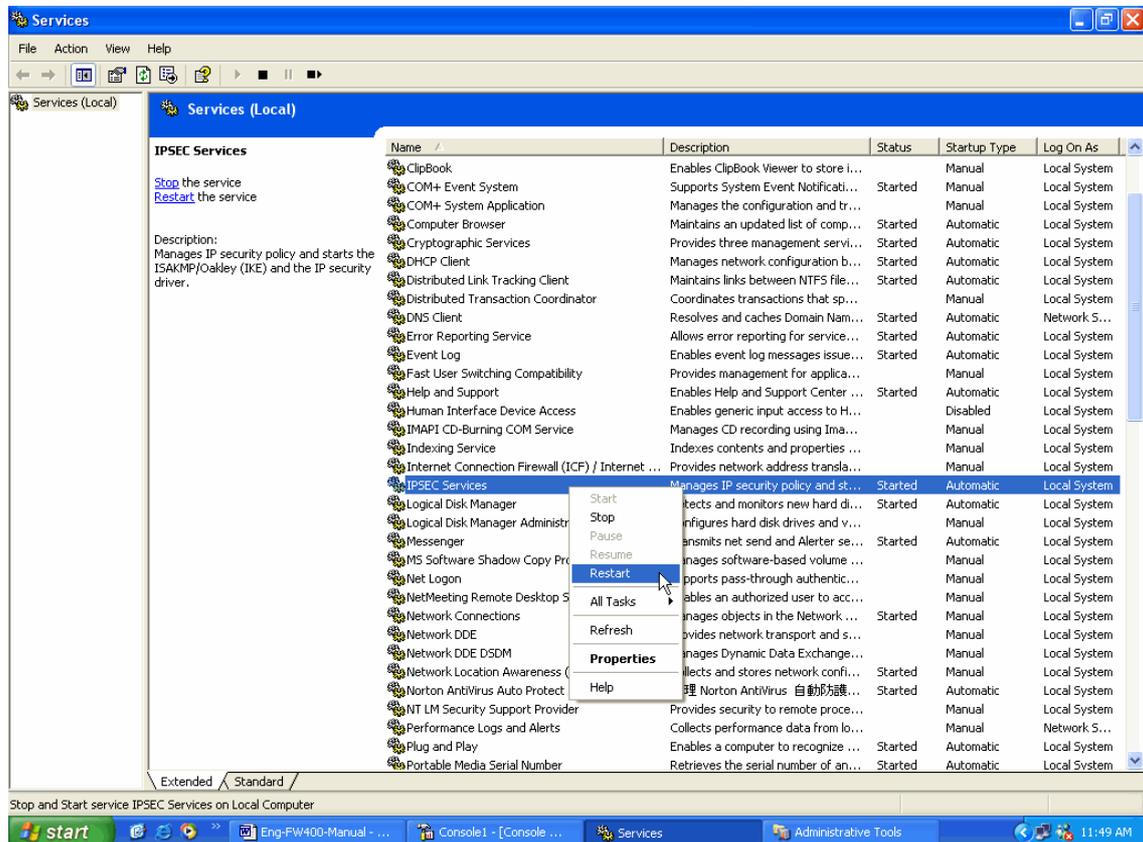
Step 50. Enter Control Panel and click Administrative Tools.

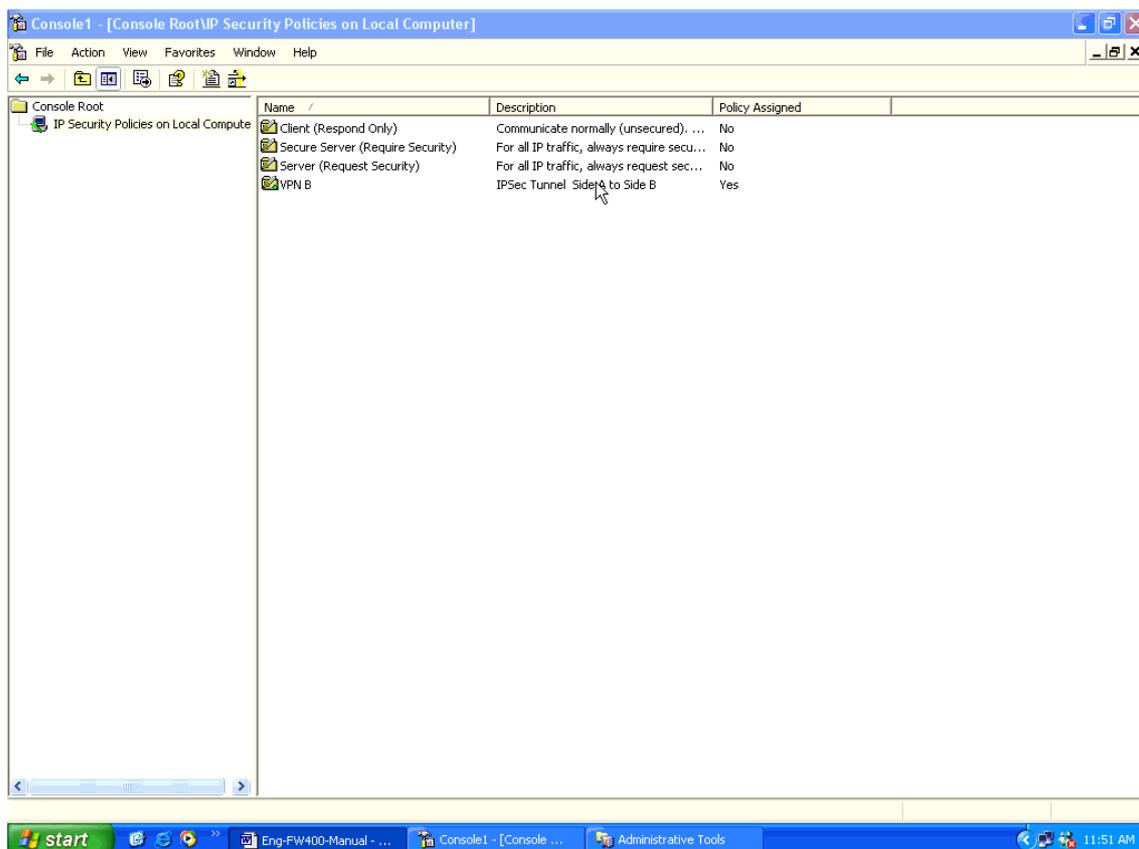


Step 51. After entering Administrative Tools, click Services.



Step 52. After entering Service, click IPsec Services, Restart the Service.



Step 53. Finish all settings.**Example 3. Create a VPN connection between two Multi-Homing Security Gateways using Aggressive mode Algorithm (3 DES and MD5), and data encryption for IPsec Algorithm (3DES and MD5)**

Preparation Task:

Company A External IP is 61.11.11.11

Internal IP is 192.168.10.X

Company B External IP is 211.22.22.22

Internal IP is 192.168.20.X

To Allow Company A, 192.168.10.100 create a VPN connection with company B, 192.168.20.100 for downloading the sharing file.

The Gateway of Company A is 192.168.10.1. The settings of company A are as the following.

Step 1. Enter the default IP of Company A's Multi-Homing Security Gateway, 192.168.10.1. Click VPN in the menu bar on the left hand side, and then select the sub-select IPsec Autokey. Click Add.

Step 2. Enter the VPN name, VPN_A in IPsec Autokey window, and choose From Source to be Internal. Fill the subnet IP, 192.168.10.0 and subnet mask, 255.255.255.0.

VPN Auto Keyed Tunnel	
Name	VPN_A
From Source	<input checked="" type="radio"/> LAN <input type="radio"/> DMZ
Use interface	<input checked="" type="radio"/> WAN1 <input type="radio"/> WAN2
Subnet / Mask	192.168.10.0 / 255.255.255.0

Step 3. In To Destination table, choose Remote Gateway-Fixed IP, enter the IP desired to be connected, company B's subnet IP and mask.

To Destination	
<input checked="" type="radio"/> Remote Gateway -- Fixed IP	211.22.22.22
Subnet / Mask	192.168.20.0 / 255.255.255.0
<input type="radio"/> Remote Gateway -- Dynamic IP	
Subnet / Mask	/ 255.255.255.0
<input type="radio"/> Remote Client -- Fixed IP or Dynamic IP	

Step 4. In Authentication Method Table, choose Preshare and enter the Preshared Key. (The max length is 100 bits.)

Authentication Method	Preshare
Preshared Key	123456789

Step 5. Enable Aggressive mode. For communication via VPN, the Multi-Homing Security Gateway will automatically choose 3DES for ENC Algorithm, MD5 for AUTH Algorithm and select Group 2 to connect. Local ID and Remote ID are optional parameters. If we choose to enter Local ID/ Remote ID, they couldn't be the same. For instance, Local ID is 11.11.11.11 and Remote ID is 22.22.22.22. If you want to use number or text, add @ in the front, for instance, @123A and @abcd123.

<input checked="" type="checkbox"/> Aggressive mode	
My ID	@abc123
Peer ID	11.11.11.11

Step 6. In IPsec Algorithm Table, choose Data Encryption + Authentication. We choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm.

IPsec Algorithm	
<input checked="" type="radio"/> Data Encryption + Authentication	
ENC Algorithm	3DES
AUTH Algorithm	MD5
<input type="radio"/> Authentication Only	

Step 7. Choose Perfect Forward Secrecy, and enter 28800 seconds in IPsec Lifetime and Keep alive IP to

keep connecting.

<input checked="" type="checkbox"/> Perfect Forward Secrecy	
IPSec Lifetime	28800 Seconds
Keep alive IP :	192.168.20.100

Step 8. Click the down arrow to select the policy of schedule, which was pre-determined in Schedule. Refer to the corresponding section for details.

Schedule	None
----------	------

Step 9. Click OK to finish the setting of Company A.

IPSec Autokey

Name	Gateway IP	Destination Subnet	Algorithm	Status	Configure
VPN_A	211.22.22.22	192.168.20.0	None	Disconnect	Connecting Modify Remove

[New Entry](#)

The Gateway of Company B is 192.168.20.1. The settings of company B are as the following.

Step 1. Enter the default IP of Company B's Multi-Homing Security Gateway, 192.168.20.1. Click VPN in the menu bar on the left hand side, and then select the sub-select IPSec Autokey. Click Add.

Step 2. Enter the VPN name, VPN_B in IPSec Autokey window, and choose From Source to be Internal. Fill the subnet IP, 192.168.20.0 and subnet mask, 255.255.255.0.

VPN Auto Keyed Tunnel	
Name	VPN_B
From Source	<input checked="" type="radio"/> LAN <input type="radio"/> DMZ
Use interface	<input checked="" type="radio"/> WAN1 <input type="radio"/> WAN2
Subnet / Mask	192.168.20.0 / 255.255.255.0

Step 3. In To Destination table, choose Remote Gateway-Fixed IP, enter the IP desired to be connected, company A's subnet IP and mask, 192.168.10.0 and 255.255.255.0 respectively.

To Destination	
<input checked="" type="radio"/> Remote Gateway -- Fixed IP	61.11.11.11
Subnet / Mask	192.168.10.0 / 255.255.255.0
<input type="radio"/> Remote Gateway -- Dynamic IP	
Subnet / Mask	/ 255.255.255.0
<input type="radio"/> Remote Client -- Fixed IP or Dynamic IP	

Step 4. In Authentication Method Table, choose Preshare and enter the Preshared Key. (The max length is

100 bytes.)

Authentication Method	Preshare
Preshared Key	123456789

Step 5. Enable Aggressive mode. For communication via VPN, the Multi-Homing Security Gateway will automatically choose 3DES for ENC Algorithm, MD5 for AUTH Algorithm and select Group 2 to connect.

Local ID and Remote ID are optional parameters. If we choose to enter Local ID/ Remote ID, they couldn't be the same. For instance, Local ID is 11.11.11.11 and Remote ID is 22.22.22.22. If you want to use number or text, add @ in the front, for instance, @123A and @abcd123.

<input checked="" type="checkbox"/> Aggressive mode	
My ID	11.11.11.11
Peer ID	@abc123

Step 6. In IPSec Algorithm Table, choose Data Encryption + Authentication. We choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm.

IPSec Algorithm	
<input checked="" type="radio"/> Data Encryption + Authentication	
ENC Algorithm	3DES
AUTH Algorithm	MD5
<input type="radio"/> Authentication Only	

Step 7. Choose Perfect Forward Secrecy, and enter 28800 seconds in IPSec Lifetime and Keep alive IP to keep connecting.

<input checked="" type="checkbox"/> Perfect Forward Secrecy	
IPSec Lifetime	28800 Seconds
Keep alive IP :	192.168.10.100

Step 8. Click the down arrow to select the policy of schedule, which was pre-determined in Schedule. Refer to the corresponding section for details.

Schedule	None
----------	------

Step 9. Click OK to finish the setting of Company B.

IPSec Autokey

Name	Gateway IP	Destination Subnet	Algorithm	Status	Configure
VPN_B	61.11.11.11	192.168.10.0	None	Disconnect	Connecting <input type="button" value="Modify"/> <input type="button" value="Remove"/>

Example 4. Create a VPN connection between two Multi-Homing Security Gateway using ISAKMP Algorithm (3DES and MD5), data encryption for IPSec Algorithm (3DES and MD5) and GRE.

Preparation Task:

Company A External IP is 61.11.11.11

Internal IP is 192.168.10.X

Company B External IP is 211.22.22.22

Internal IP is 192.168.20.X

To Allow Company A, 192.168.10.100 create a VPN connection with company B, 192.168.20.100 for downloading the sharing file by GRE/ IPSec Algorithm.

The Gateway of Company A is 192.168.10.1. The settings of company A are as the following.

Step 1. Enter the default IP of Company A's Multi-Homing Security Gateway, 192.168.10.1. Click VPN in the menu bar on the left hand side, and then select the sub-select IPSec Autokey. Click Add.

Step 2. Enter the VPN name, VPN_A in IPSec Autokey window, and choose From Source to be Internal. Fill the subnet IP, 192.168.10.0 and subnet mask, 255.255.255.0.

VPN Auto Keyed Tunnel	
Name	VPN_A
From Source	<input checked="" type="radio"/> LAN <input type="radio"/> DMZ
Use interface	<input checked="" type="radio"/> WAN1 <input type="radio"/> WAN2
Subnet / Mask	192.168.10.0 / 255.255.255.0

Step 3. In To Destination table, choose Remote Gateway-Fixed IP, enter the IP desired to be connected, company B's subnet IP and mask.

To Destination	
<input checked="" type="radio"/> Remote Gateway -- Fixed IP	211.22.22.22
Subnet / Mask	192.168.20.0 / 255.255.255.0
<input type="radio"/> Remote Gateway -- Dynamic IP	
Subnet / Mask	/ 255.255.255.0

Step 4. In Authentication Method Table, choose Preshare and enter the Preshared Key. (The max length is 100 bits.)

Authentication Method	Preshare
Preshared Key	123456789

Step 5. In Encapsulation / ISAKMP Algorithm, choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm. And select Group 1 to connect.

Encapsulation	
ISAKMP Algorithm	
ENC Algorithm	3DES
AUTH Algorithm	MD5
Group	GROUP 1

Step 6. Choose GRE/ IPSec and enter GRE Source IP, 192.168.50.100 and GRE Remote IP, 192.168.50.200.

NOTE: The Source IP and Remote IP should be in the same C Class.

<input checked="" type="checkbox"/> GRE/IPSec	
GRE Local IP	192.168.50.100
GRE Remote IP	192.168.50.200

Step 7. In IPSec Algorithm Table, choose Data Encryption + Authentication. We choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm.

IPSec Algorithm	
<input checked="" type="radio"/> Data Encryption + Authentication	
ENC Algorithm	3DES
AUTH Algorithm	MD5
<input type="radio"/> Authentication Only	

Step 8. Choose Perfect Forward Secrecy, and enter 28800 seconds in IPSec Lifetime.

<input checked="" type="checkbox"/> Perfect Forward Secrecy	
IPSec Lifetime	28800 Seconds
Keep alive IP :	

Step 9. Click the down arrow to select the policy of schedule, which was pre-determined in Schedule. Refer to the corresponding section for details.

Schedule	None
----------	------

Step 10. Click OK to finish the setting of Company A.

IPSec Autokey

Name	Gateway IP	Destination Subnet	Algorithm	Status	Configure		
VPN_A	211.22.22.22	192.168.20.0	None	Disconnect	Connecting	Modify	Remove

[New Entry](#)

The Gateway of Company B is 192.168.20.1. The settings of company B are as the following.

Step 1. Enter the default IP of Company B's Multi-Homing Security Gateway, 192.168.20.1. Click VPN in the menu bar on the left hand side, and then select the sub-select IPsec Autokey. Click Add.

Step 2. Enter the VPN name, VPN_B in IPsec Autokey window, and choose From Source to be Internal. Fill the subnet IP, 192.168.20.0 and subnet mask, 255.255.255.0.

VPN Auto Keyed Tunnel	
Name	VPN_B
From Source	<input checked="" type="radio"/> LAN <input type="radio"/> DMZ
Use interface	<input checked="" type="radio"/> WAN1 <input type="radio"/> WAN2
Subnet / Mask	192.168.20.0 / 255.255.255.0

Step 3. In To Destination table, choose Remote Gateway-Fixed IP, enter the IP desired to be connected, company A's subnet IP and mask, 192.168.10.0 and 255.255.255.0 respectively.

To Destination	
<input checked="" type="radio"/> Remote Gateway -- Fixed IP	61.11.11.11
Subnet / Mask	192.168.10.0 / 255.255.255.0
<input type="radio"/> Remote Gateway -- Dynamic IP	
Subnet / Mask	/ 255.255.255.0
<input type="radio"/> Remote Client -- Fixed IP or Dynamic IP	

Step 4. In Authentication Method Table, choose Preshare and enter the Preshared Key. (The max length is 100 bits.)

Authentication Method	Preshare
Preshared Key	123456789

Step 5. In Encapsulation -> ISAKMP Algorithm, choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm. And select Group 1 to connect.

Encapsulation	
ISAKMP Algorithm	
ENC Algorithm	3DES
AUTH Algorithm	MD5
Group	GROUP 1

Step 6. Choose GRE/ IPsec and enter GRE Source IP, 192.168.50.200 and GRE Remote IP, 192.168.50.100.

Note. The Source IP and Remote IP should be in the same C Class.

<input checked="" type="checkbox"/> GRE/IPSec	
GRE Local IP	192.168.50.200
GRE Remote IP	192.168.50.100

Step 7. In IPsec Algorithm Table , choose Data Encryption + Authentication. We choose 3DES for ENC Algorithm and MD5 for AUTH Algorithm.

<input checked="" type="radio"/> Data Encryption + Authentication	
ENC Algorithm	3DES
AUTH Algorithm	MD5
<input type="radio"/> Authentication Only	

Step 8. Choose Perfect Forward Secrecy, and enter 28800 seconds in IPsec Lifetime.

<input checked="" type="checkbox"/> Perfect Forward Secrecy	
IPsec Lifetime	28800 Seconds
Keep alive IP :	

Step 9. Click the down arrow to select the policy of schedule, which was pre-determined in Schedule. Refer to the corresponding section for details.

Schedule	None
----------	------

Step 10. Click OK to finish the setting of Company B.

IPsec Autokey

Name	Gateway IP	Destination Subnet	Algorithm	Status	Configure
VPN_B	61.11.11.11	192.168.10.0	None	Disconnect	Connecting Modify Remove

[New Entry](#)

Example 5. Create a VPN connection between Multi-Homing Security Gateway and PLANET VRT-311 VPN Router.

Preparation Task:

Company A External IP is 172.19.50.29

Internal IP is 192.168.120.X

Company B External IP is 211.22.22.22

Internal IP is 192.168.2.X

To Allow Company A, 192.168.120.100 create a VPN connection with company B, 192.168.2.100 for downloading the sharing file.

Step 1: Configure the Multi-Homing Security Gateway as the following:

VPN Auto Keyed Tunnel	
Name	mh
From Source	<input checked="" type="radio"/> LAN <input type="radio"/> DMZ
Use interface	<input checked="" type="radio"/> WAN1 <input type="radio"/> WAN2
Subnet / Mask	192.168.120.0 / 255.255.255.0
To Destination	
<input checked="" type="radio"/> Remote Gateway -- Fixed IP	211.22.22.22
Subnet / Mask	192.168.2.0 / 255.255.255.0
<input type="radio"/> Remote Gateway -- Dynamic IP	
Subnet / Mask	/ 255.255.255.0
<input type="radio"/> Remote Client -- Fixed IP or Dynamic IP	
Authentication Method	Preshare
Preshared Key	123
Encapsulation	
ISAKMP Algorithm	
ENC Algorithm	3DES
AUTH Algorithm	SHA1
Group	GROUP 2
IPSec Algorithm	
<input checked="" type="radio"/> Data Encryption + Authentication	
ENC Algorithm	3DES
AUTH Algorithm	SHA1
<input type="radio"/> Authentication Only	
<input checked="" type="checkbox"/> Perfect Forward Secrecy	
IPSec Lifetime	28800 Seconds
Keep alive IP :	
<input checked="" type="checkbox"/> Aggressive mode	
My ID	
Peer ID	
<input type="checkbox"/> GRE/IPSec	
GRE Local IP	
GRE Remote IP	
Schedule	None
QoS	None
Authentication-User	None
<input type="checkbox"/> Show remote Network Neighborhood	

OK Cancel

Step 2: Configure VRT-311 VPN policy as the following:

VPN Policy Definition

Name: Enable Policy
 Allow NetBIOS traffic

Remote VPN endpoint Dynamic IP
 Fixed IP:
 Domain Name:

Local IP addresses

Type: IP address: ~
Subnet Mask:

Remote IP addresses

Type: IP address: ~
Subnet Mask:

Authentication & Encryption

AH Authentication

ESP Encryption Key Size: (AES only)

ESP Authentication

Manual Key Exchange

IKE (Internet Key Exchange)

Direction:

Local Identity Type:

Local Identity Data:

Remote Identity Type:

Remote Identity Data:

Authentication: RSA Signature (requires certificate)
 Pre-shared Key

Authentication Algorithm:

Encryption: Key Size: (AES only)

Exchange Mode:

IKE SA Life Time: (secs)

IKE Keep Alive Ping IP Address:

IPSec SA Life Time: (secs)

DH Group:

IKE PFS:

IPSec PFS:

4.11.2 PPTP Server

This function allows the remote client dialup to your local network and access local resources by PPTP (Point to Point Tunnel Protocol) client software.

Entering the PPTP Server window

Step 1. Select **VPN**→**PPTP Server**.

PLANET
Networking & Communication

PPTP Server

PPTP Server (**Enable**, Encryption:OFF) :
Client IP Range : 192.168.1.200-254 [Modify](#)

User Name	Client IP	Uptime	Status	Configure
richard	0.0.0.0	---	Disconnect	Modify Remove

[New Entry](#)

- System
- Interface
- Address
- Service
- Schedule
- QoS
- Authentication
- Content Filtering
- Virtual Server
- Policy
- VPN**
- IPSec Autokey
- PPTP Server**
- PPTP Client
- Inbound Balance
- Log
- Alarm
- Accounting Report
- Statistics
- Status

- **PPTP Server** : Click **Modify** to select Enable or Disable.
- **Client IP Range**: Display the IP addresses range for PPTP Client connection.
- **User Name** : Displays the PPTP Client's user name for authentication.
- **Client IP** : Displays the PPTP Client's IP address for authentication.
- **Uptime** : Displays the PPTP connection time.
- **Status** : Displays current PPTP connection status.
- **Configure** : Click **Modify** to modify the PPTP Client settings or click **Remove** to remove the item.

Modifying PPTP Server Design

- Step 1. Select **VPN**→**PPTP Server**.
- Step 2. Click **Modify** after the Client IP Range.
- Step 3. In the **Modify** Server Design Window, enter appropriate settings.



PPTP Server

System	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #003366; color: white;">Modify Server Design</th> </tr> </thead> <tbody> <tr> <td><input type="radio"/> Disable PPTP</td> <td></td> </tr> <tr> <td><input checked="" type="radio"/> Enable PPTP</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Encryption</td> <td></td> </tr> <tr> <td>Client IP Range :</td> <td>192.7.164.1 .. 254</td> </tr> <tr> <td>Auto-Disconnect if idle</td> <td>0 minutes (0: means always connected)</td> </tr> <tr> <td>Schedule</td> <td>None</td> </tr> <tr> <td><input type="checkbox"/> Enable RADIUS Server Authentication</td> <td></td> </tr> <tr> <td>(IP or Domain Name)</td> <td></td> </tr> <tr> <td>RADIUS Server Port</td> <td>1812</td> </tr> <tr> <td>Shared Secret</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"> <input type="button" value="OK"/> <input type="button" value="Cancel"/> </td> </tr> </tbody> </table>	Modify Server Design		<input type="radio"/> Disable PPTP		<input checked="" type="radio"/> Enable PPTP		<input type="checkbox"/> Encryption		Client IP Range :	192.7.164.1 .. 254	Auto-Disconnect if idle	0 minutes (0: means always connected)	Schedule	None	<input type="checkbox"/> Enable RADIUS Server Authentication		(IP or Domain Name)		RADIUS Server Port	1812	Shared Secret		<input type="button" value="OK"/> <input type="button" value="Cancel"/>	
Modify Server Design																									
<input type="radio"/> Disable PPTP																									
<input checked="" type="radio"/> Enable PPTP																									
<input type="checkbox"/> Encryption																									
Client IP Range :		192.7.164.1 .. 254																							
Auto-Disconnect if idle		0 minutes (0: means always connected)																							
Schedule		None																							
<input type="checkbox"/> Enable RADIUS Server Authentication																									
(IP or Domain Name)																									
RADIUS Server Port		1812																							
Shared Secret																									
<input type="button" value="OK"/> <input type="button" value="Cancel"/>																									
Interface																									
Address																									
Service																									
Schedule																									
QoS																									
Authentication																									
Content Filtering																									
Virtual Server																									
Policy																									
VPN																									
IPSec Autokey																									
PPTP Server																									
PPTP Client																									
Inbound Balance																									
Log																									

- **Disable PPTP** : Check to disable PPTP Server.
- **Enable PPTP** : Check to enable PPTP Server.
 - Encryption:** the default is set to disabled.
 - Client IP Range:** The range of the IP address will allocate to PPTP clients when they connect to the PPTP server. The IP address is only for PPTP client connection using, so it may not be the same IP subnet with MH-2K/4K's LAN IP subnet. You can just keep the IP range as the default setting.
- **Auto-Disconnect if idle minutes:** Configure this device to disconnect to the PPTP Server when there is no activity for a predetermined period of time. To keep the line always connected, set the number to 0.
- **Schedule** : Click the down arrow to select the schedule, which was pre-determined in Schedule. Refer to the corresponding section for details.
- **Enable RADIUS Server Authentication:** (Only available with MH-4000)
 - IP or Domain Name:** the RADIUS IP address or domain name
 - RADIUS Server Port:** the port number of the RADIUS, default port number is 1812.
 - Shared Secret:** the Password for MH-4000 to access RADIUS Server.

Step 4. Click **OK** to save modifications or click **Cancel** to cancel modifications

Adding PPTP Server

Step 1. Select **VPN**→**PPTP Server**. Click **New Entry**.

Step 2. Enter appropriate settings in the following window.

- User name: Specify the PPTP client. This should be unique.
- Password: Specify the PPTP client password.
- Remote Client:
 - Single Machine: Check to connect with single computer at each connection.

Multi-Machine: Check to connect with a device, such as MH-2K/4K, that works as the PPTP client.

IP Address: Enter LAN IP subnet of the PPTP Client device.

Netmask: Enter subnet mask of the PPTP Client.

■ Client IP assigned by:

1. IP Range: check to enable auto-allocating IP for PPTP client to connect.
2. Fixed IP: check and enter a fixed IP for PPTP client to connect.



PPTP Server

System	Add New PPTP Server User Name : <input type="text" value="vincent"/> Password : <input type="password" value="*****"/> Remote Client <input checked="" type="radio"/> Single Machine <input type="radio"/> Multi-Machine IP Address : <input type="text"/> Netmask : <input type="text"/> Client IP assigned by <input type="radio"/> IP Range <input checked="" type="radio"/> Fixed IP : <input type="text" value="192.168.1.190"/>	
Interface		
Address		
Service		
Schedule		
QoS		
Authentication		
Content Filtering		
Virtual Server		
Policy		
VPN		
IPSec Autokey		
PPTP Server		
PPTP Client		
Inbound Balance		
Log		
Alarm		
Accounting Report		
Statistics		
Status		

Step 3. Click **OK** to save modifications or click **Cancel** to cancel modifications.

Modifying PPTP Server

Step 1. Select **VPN**→**PPTP Server**.

Step 2. In the **PPTP Server** window, find the PPTP server that you want to modify. Click **Configure** and click **Modify**.

Step 3. Enter appropriate settings.



PPTP Server

System	<table border="1"> <tr> <th colspan="2">Modify PPTP Server</th> </tr> <tr> <td>User Name :</td> <td><input type="text" value="richard"/></td> </tr> <tr> <td>Password :</td> <td><input type="password" value="*****"/></td> </tr> <tr> <td colspan="2">Remote Client</td> </tr> <tr> <td colspan="2"><input checked="" type="radio"/> Single Machine</td> </tr> <tr> <td colspan="2"><input type="radio"/> Multi-Machine</td> </tr> <tr> <td><input type="text"/></td> <td>IP Address : <input type="text"/></td> </tr> <tr> <td><input type="text"/></td> <td>Netmask : <input type="text"/></td> </tr> <tr> <td colspan="2">Client IP assigned by</td> </tr> <tr> <td colspan="2"><input checked="" type="radio"/> IP Range</td> </tr> <tr> <td colspan="2"><input type="radio"/> Fixed IP : <input type="text"/></td> </tr> <tr> <td colspan="2" style="text-align: right;"><input type="button" value="OK"/> <input type="button" value="Cancel"/></td> </tr> </table>	Modify PPTP Server		User Name :	<input type="text" value="richard"/>	Password :	<input type="password" value="*****"/>	Remote Client		<input checked="" type="radio"/> Single Machine		<input type="radio"/> Multi-Machine		<input type="text"/>	IP Address : <input type="text"/>	<input type="text"/>	Netmask : <input type="text"/>	Client IP assigned by		<input checked="" type="radio"/> IP Range		<input type="radio"/> Fixed IP : <input type="text"/>		<input type="button" value="OK"/> <input type="button" value="Cancel"/>	
Modify PPTP Server																									
User Name :		<input type="text" value="richard"/>																							
Password :		<input type="password" value="*****"/>																							
Remote Client																									
<input checked="" type="radio"/> Single Machine																									
<input type="radio"/> Multi-Machine																									
<input type="text"/>		IP Address : <input type="text"/>																							
<input type="text"/>		Netmask : <input type="text"/>																							
Client IP assigned by																									
<input checked="" type="radio"/> IP Range																									
<input type="radio"/> Fixed IP : <input type="text"/>																									
<input type="button" value="OK"/> <input type="button" value="Cancel"/>																									
Interface																									
Address																									
Service																									
Schedule																									
QoS																									
Authentication																									
Content Filtering																									
Virtual Server																									
Policy																									
VPN																									
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PPTP Server																									
PPTP Client																									
Inbound Balance																									
Log																									
Alarm																									
Accounting Report																									
Statistics																									
Status																									

Step 4. Click **OK** to save modifications or click **Cancel** to cancel modifications

Removing PPTP Server

Step 1. Select **VPN**→**PPTP Server**.

Step 2. In the **PPTP Server** window, find the PPTP server that you WAN t to modify. Click **Configure** and click **Remove**.

Step 3. Click **OK** to remove the PPTP server or click **Cancel** to exit without removing.



PPTP Server

System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
IPSec Autokey
PPTP Server
PPTP Client
Inbound Balance
Log
Alarm
Accounting Report
Statistics
Status

PPTP Server (**Enable**, **Encryption:OFF**) :

Client IP Range : 192.168.1.200-254 [Modify](#)

User Name	Client IP	Uptime	Status	Configure
richard	0.0.0.0	---	Disconnect	Modify Remove
vincent	0.0.0.0	---	Disconnect	Modify Remove

[New Entry](#)



4.11.3 PPTP Client

This function allows MH-2K/4K to dial-up the remote PPTP server and access the network resources on remote network.

Entering the PPTP Client window

Step 1. Select **VPN**→**PPTP Client**.



PPTP Client

System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
IPSec Autokey
PPTP Server
PPTP Client
Inbound Balance
Log
Alarm
Accounting Report
Statistics
Status

PPTP Client :

User Name	Server Address	Encryption	Uptime	Status	Configure
tom	61.20.30.40	OFF	---	Disconnect	Connecting Modify Remove

[New Entry](#)

- **User Name** : Displays the PPTP Client user's name for authentication.
- **Server Address** : Display the PPTP Server IP addresses.
- **Encryption** : Displays the PPTP Client Encryption ON or OFF
- **Uptime** : Displays the current PPTP connection time.
- **Status** : Displays the current PPTP connection status.
- **Configure** : Click **Modify** to modify the PPTP Client settings or click **Remove** to remove the item.

Adding a PPTP Client

Step 1. Select **VPN**→**PPTP Client**.

Step 2. Configure the parameters.

- **User name**: Specify the PPTP client. This should be unique.
- **Password**: Specify the PPTP client password.
- **Server Address**: Enter the PPTP Server's IP address.
- **Encryption**: Enable or Disabled the Encryption.
- **Remote Server**:
 - Single Machine**: Enter the PPTP Server IP address. PPTP client will only to access the resource of PPTP server.
 - Multi-Machine**: Check to allow connecting to the LAN computers of the PPTP Server on remote site.
 - IP Address** : Enter the PPTP Server LAN IP subnet.
 - Netmask**: Enter the PPTP Server LAN IP subnet mask.
- **always-connect**: Check to enable PPTP connection always on line.

- **Auto-Connect when sending packet through the link:** Check to enable the auto-connection whenever there's packet to transmit over the connection. The feature will be disabled automatically if **always-connect** is checked.
- **Auto-Disconnect if idle minutes:** Configure this device to disconnect to the PPTP Server when there is no activity for a predetermined period of time. To keep the line always connected, set the number to 0. The feature will be disabled automatically if **always-connect** is checked.
- **Schedule :** Click the down arrow to select the schedule, which was pre-determined in Schedule. Refer to the corresponding section for details.
- **NAT:** Check this feature if the remote PPTP Server belongs to Windows Server based.

Step 3. Click **OK** to save modifications or click **Cancel** to cancel modifications.

Modifying PPTP Client

Step 1. Select **VPN**→**PPTP Client**.

Step 2. In the **PPTP Client** window, find the PPTP server that you want to modify and click **Modify**.

Step 3. Enter appropriate settings.

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Networking & Communication

PPTP Client

Modify PPTP Client	
User Name :	Cindy
Password :	••••••
Server Address :	168.95.88.100 <input type="checkbox"/> Encryption
Remote Server	
<input type="radio"/> Single Machine <input checked="" type="radio"/> Multi-Machine	
IP Address :	192.168.12.0
Netmask :	255.255.255.0
<input type="checkbox"/> always-connect	
<input checked="" type="checkbox"/> Auto-Connect when sending packet through the link	
Auto-Disconnect if idle	0 minutes (0: means always connected)
Schedule	None
<input type="checkbox"/> NAT (Connect to Windows PPTP Server)	

Step 4. Click **OK** to save modifications or click **Cancel** to cancel modifications

Removing PPTP Client

Step 1. Select **VPN**→**PPTP Client**.

Step 2. In the **PPTP Client** window, find the PPTP client that you want to modify and click **Remove**.

Step 3. Click **OK** to remove the PPTP client or click **Cancel** to exit without removal.



PPTP Client

System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
IPSec Autokey
PPTP Server
PPTP Client
Inbound Balance
Log
Alarm
Accounting Report
Statistics
Status

PPTP Client :

User Name	Server Address	Encryption	Uptime	Status	Configure		
tom	61.20.30.40	OFF	---	Disconnect	Connecting	Modify	Remove
fairy	168.95.88.100	OFF	---	Disconnect	Connecting	Modify	Remove

[New Entry](#)

4.12 Inbound Balance (MH-4000 only)

MH-4000 provides the function of Inbound Load Balance to the enterprise's website. When customers visit the website and the internet is disconnected, customers still can connect to the website via the other lines instead of missing the chance of business.

NOTE: This function is not supported on MH-2000.

This chapter describes the detail introduction of Inbound Load Balance and steps to setup Inbound Load Balance.

Pre-requirement

1. Register the Domain Name, for example, planet.com.tw. You need to visit the Network Information Center in local (i.e., the origination in Taiwan and China is TWNIC (Taiwan Network Information Center) and CNNIC (China Network Information Center) respectively) to register the domain name.
2. Suppose the IP Address which is registered as below,
61.11.11.11 ~ 61.11.11.15
211.22.22.22~ 211.22.22.26
3. Setup the Primary Domain Name Server:
Host Name : dns1.planet.com.tw
IP Address : 61.11.11.11
Setup the Secondary Domain Name Server:
Host Name : dns2.planet.com.tw
IP Address : 211.22.22.22

Enter the Inbound Load Balance configuration page

Click on **Inbound Balance** on the menu, the following page is shown.

The screenshot displays the 'Inbound Balance' configuration page. On the left is a navigation menu with the following items: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy, VPN, **Inbound Balance** (highlighted), Log, Alarm, Accounting Report, Statistics, and Status. The main content area features a table with the following structure:

System	Domain Name	Enable	Configure
Interface	planet.com.tw		Modify Remove

Below the table, there is a [New Entry](#) button.

Domain Name: The IP Address isn't suitable for users to memorize and manage. So there's the Domain to map it. The format of Domain is xx.xx.xx.xx i.e., <ftp.planet.com.tw> or <www.planet.com.tw>. It's more convenient to use the meaningful words as Domain instead of the meaningless IP number. There are two parts of the address of website, host name and domain name. If the user would like to browse the website of Yahoo, he may encounter the Yahoo via entering www.yahoo.com in the browser. As a matter of fact, the Address of Yahoo is 66.218.71.84. MH-4000 provide the DNS Server to deal with the process of mapping the Domain Name (Yahoo) and IP (66.218.71.84).

Enable: Enable or Disable of the domain.

Configure: Click **Modify** to make further configuration and **Remove** to delete the domain.

New Entry: Click **New Entry** to add new domain.

Add New Domain

Click the New Entry button on Inbound Balance page to add new domain. The following page is shown.

The screenshot shows the 'Inbound Balance' configuration page. On the left is a vertical menu with the following items: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy, VPN, **Inbound Balance** (highlighted in yellow), Log, Alarm, Accounting Report, Statistics, and Status. The main area has a dark blue header with the text 'Inbound Balance'. Below the header, there is a 'Domain Name' input field containing 'broadband.com.tw', an 'OK' button, and a checkbox labeled 'Enable DNS zone'. Underneath is a table with the following columns: Name, Type, Address, Backup, Weight, Priority, and Configure.

Domain Name: The domain name you applied from your local network information centre.

Enable DNS Zone: Enable the configuration of domain name.

Name: The service name before the Domain Name. For example, www, ftp, mail, etc.

Type: A for Address, CNAME for Canonical NAME and MX for Mail eXchanger.

Address: The IP Address of this server.

Backup: The server whether enable the function of backup or not and the System Administrator could chose WAN 1/2.

Weight: MH-4000 would distribute the DNS inquiry WAN ports via the weight number. Each number stands for the round-robin distribution.

Priority: Adjust the priority of each WAN IP address.

Click **OK** to create the domain and click **New Entry** to add host DNS name.

Add New Host DNS name

On the domain configuration page, click **New Entry** to add host DNS name. The following page is shown.

Select type: There are 3 selectable types as below.

1. A (Address):

Set up the mapping of Domain Name and IP Address. For example, address record the mapping relation of Domain Name and IP Address.

Domain Name	Type	IP Address
host1.planet.com.tw	A	61.11.11.12
host2.planet.com.tw	A	61.11.11.13
host2.planet.com.tw	A	211.22.22.23

“A” stands for Address, and each record provides each Domain Name map into each IP Address. Because the host2 server has 2 IP Address, there are 2 records in the data file of DNS. The DNS request can return not only one IP Address for each Domain Name, and it may sort the DNS request result via *address-sorting* or *round-robin*.

2. CNAME

CNAME stands for the record of alias. The mechanism can provide Record A to have more than one name (Alias) for querying. For example the 2nd record provide the Alias of server map into its formal name, host5.planet.com.tw.

Domain Name	Type	IP Address
Host5.planet.com.tw	A	61.11.11.14

Host23.planet.com.tw	CNAME	Host5.planet.com.tw
----------------------	-------	---------------------

The alias name, host23.planet.com.tw may map into the formal name, host5.planet.com.tw. So when user ping host23.planet.com.tw, it'll get the IP Address, 61.11.11.14.

3. MX

"MX" stands for Mail Exchange Server. This mechanism would inquire about the mail server. The advantage is that the System Administrator may change the mail server via updating the DNS Record here. And the remote mail server doesn't need to care to communicate with which mail server. For example, this mechanism is provided for the service of Internet Email for special DNS record.

Domain Name	Type	IP Address
host25.planet.com.tw	A	211.22.22.24
mail.planet.com.tw	MX	host25.planet.com.tw

Enter the command in DOS, nslookup-type-MX mail.planet.com.tw (*nslookup is the command of DNS query, -type is the type of DNS Record and mail.planet.com.tw is the querying DNS Name*), the result show the Mail Exchange Server (host25.planet.com.tw) which is mapping into the mail.planet.com.tw and the IP Address (211.22.22.24) of the server (host25.planet.com.tw).

If the engineer of Customer Service Center may send an E-Mail to the customer, support@planet.com.tw. The engineer may send the mail via test.com.tw as SMTP Server. And the server (test.com.tw) could decide how to send the mail to the server (mail.planet.com.tw) via DNS Request. The server will send E-mail via the destination server of host3.planet.com.tw. (Via SMTP Protocol)

Name: Enter the service name before the Domain Name, it can be defined by user.

Address: The IP address of WAN port for remote user to connect to local server.

Reverse: Use IP Address to reverse the Domain Name. There're 2 mechanisms for DNS Mapping, Reverse and Forward. Here's an example of Forward. By entering www.planet.com.tw, the DNS Server may convert the Domain Name into 203.70.249.1. The opposite method is Reverse.

Balance Mode: There are two balance mode:

Round-Robin: According to specific weight and priority to distribute the load sharing from WAN to LAN.

Backup: After selecting the backup mode, if the defined WAN port of MH-4000 encounters disconnection, the device will return this IP address for future DNS inquiry.

Click **OK** to confirm the configuration and **Cancel** to discard.

Advanced Introduction

Announcement the domain name is managed by which DNS Server. All the records about that domain name could be queried in this primary DNS Server, for example, the domain name or IP Address of website, or the

alias name or IP Address of mail server. So the DNS Server should be searched via the Internet actually and the DNS record should be accurate.

According to the International usage and enhance the reliability and security, the DNS system must point to 2 DNS Servers.

Example:

Suppose we would like to setup a DNS Server applied as below situation:

- 1 . Register a domain name, planet.com.tw.
- 2 . The IP Address of Primary DNS Server is 61.11.11.11, and the host name is main.planet.com.tw.
The IP Address of Secondary DNS Server is 211.22.22.22, and the host name is main.planet.com.tw.
- 3 . Connect to the Internet via Leased line or ADSL (Fixed IP).
- 4 . Address Resolution for the following servers:
www.planet.com.tw (192.168.1.100) Web Server
mail.planet.com.tw (192.168.1.101) E-Mail Server

At first, we have to register 2 leased line/ADSL line for fixed IP.

Suppose the IP range provided by the ISP is below,

61.11.11.11 ~ 61.11.11.15

211.22.22.22~ 211.22.22.26

Visit the Network Information Center in local (i.e., the origination in Taiwan and China is TWNIC (Taiwan Network Information Center) and CNNIC (China Network Information Center) respectively) and register the domain name.

The Primary DNS Server:

Host Name : dns1.planet.com.tw

IP Address : 61.11.11.11

The Secondary DNS Server:

Host Name : dns2.planet.com.tw

IP Address : 211.22.22.22

NOTE: The domain name which is register to the local Network Information Center should map to Fixed IP absolutely.

The System Administrator may configure the below data in the function of Inbound Balance of MH-4000:

Name	Type	Address	Reverse	Weight	Priority
main.planet.com.tw	A	61.11.11.11	O	1	1
main.planet.com.tw	A	211.22.22.22	O	1	2

So, the 1st DNS Server (main.planet.com.tw) and 2nd DNS Server (main.planet.com.tw) should both record the above data. The mechanism of backup is that the 2nd DNS Server can run automatically to replace the 1st DNS Server which can't run well for uncertain reasons.

From the above table, the System Administrator could enter the command in DOS, nslookup, to test the Forward/Reverse Address Resolution.

```
C:\>nslookup main.planet.com.tw
```

```
...
```

```
Address Name: main. planet.com.tw
```

```
Address: 61.11.11.11-----> Test whether if the domain name map to IP or not accurately.
```

Enter the command in DOS, nslookup, to test if the backup function of 2nd DNS Server is enabled automatically or not when the 1st DNS Server is disconnected or can't run well.

```
C:\>nslookup main.planet.com.tw
```

```
...
```

```
Address Name: main.planet.com.tw
```

```
Address: 211.22.22.22 -----> Test whether if the function of backup is enabled automatically and smoothly or not. (Forward)
```

```
C:\>nslookup 61.11.11.11
```

```
...
```

```
Address Name: main.planet.com.tw
```

```
Address: 61.11.11.11 -----> Test whether the domain name map to IP accurately or not. (Reverse)
```

```
C:\>nslookup 211.22.22.22
```

```
...
```

```
Address Name: main.planet.com.tw
```

```
Address: 211.22.22.22 -----> Test whether if the function of backup is enabled automatically and smoothly or not. (Reverse)
```

The System Administrator may configure the below data in the function of Inbound Balance of MH-4000:

Name	Type	Address	Weight	Priority
web.planet.com.tw	A	61.11.11.11	1	1
web.planet.com.tw	A	211.22.22.22	2	2
www.planet.com.tw	CNAME	web.planet.com.tw	--	--

From the above table, the System Administrator could enter the command in DOS, nslookup, to test the Forward/Reverse Address Resolution.

C:\>nslookup

...

> server 61.11.11.11 -----> **Change to your own DNS Server**

Default Server : main.planet.com.tw

Address: 61.11.11.11

> www.planet.com.tw -----> **Test if the web server could map to the IP Address accurately. (Forward)**

Server: main.planet.com.tw

Address: 61.11.11.11

Name: web.planet.com.tw -----> **The server's alias (www.planet.com.tw) map to the formal domain name (web.planet.com.tw).**

Addresses: 61.11.11.11 -----> **Test the result is accurate.**

Aliases: www.planet.com.tw -----> **The alias of web server (web.planet.com.tw).**

So the DNS Server records the mapping relation with domain name and IP Address.

In the above table, we can learn the conclusion below.

When users query the DNS name of www.planet.com.tw, the sequence of entering the website is as below.

The first user enter the server of 61.11.11.11

The second user enter the server of 211.22.22.22

The third user enter the server of 211.22.22.22

The fourth user enter the server of 61.11.11.11

The fifth user enter the server of 211.22.22.22

The sixth user enter the server of 211.22.22.22

.....

MH-4000 would distribute the load sharing to different WAN ports sequentially via round-robin and weight repeatedly. That's the mechanism of Inbound Load Balance via round-robin and weight for conquering the over-loading problem of WAN link in most of enterprises.

In the MX Record of the following table, the less number of priority has much higher priority. Suppose there is a user would like to send an e-mail to support@mail.planet.com.tw, the user may send the mail via test.com.tw as SMTP Server. And the server (test.com.tw) could decide how the server (test.com.tw) to send the mail via DNS Request.

At first, the System Administrator can learn the 2 MX Records from querying mail.planet.com.tw below.

Name	Type	Address	Reverse	Weight	Priority
mail.planet.com.tw	MX	smtp1.planet.com.tw	X	--	1
mail.planet.com.tw	MX	smtp2.planet.com.tw	X	--	2

Because the number of priority, 1, has the highest priority, MH-4000 would use the server, smtp1.planet.com.tw, to send e-mail (via SMTP Protocol) by default. If the 1st server can't run well, it will send the e-mail to the server with second priority automatically.

Inbound Load Balance Examples

The following provide 4 examples for testing the Inbound Load Balance feature.

Example 1	Setup 【WEB Server】 and Type is 【A】 for 【Back up】 in Inbound Load Balance.
Example 2	Setup 【WEB Server】 and Type is 【A】 for 【Round-Robin】 in Inbound Load Balance.
Example 3	Setup【WEB Server】 and Type is 【CNAME】 for 【Round-Robin】 in Inbound Load Balance.
Example 4	Setup 【MAIL Server】 for 【Round-Robin】 in Inbound Load Balance.

Preparation

The domain name of DNS Server should map into Fixed IP.

Enter the WAN window under the Interface menu.

In WAN 1 and WAN 2 window respectively, enter relating parameter below:

WAN 1 IP: 61.11.11.11

WAN 2 IP: 211.22.22.22

Have the DNS's domain name (broadband.com.tw) provided by ISP registered in Network Information Center.

Primary DNS Server

Host Name : dns1.broadband.com.tw

IP Address : 61.11.11.11

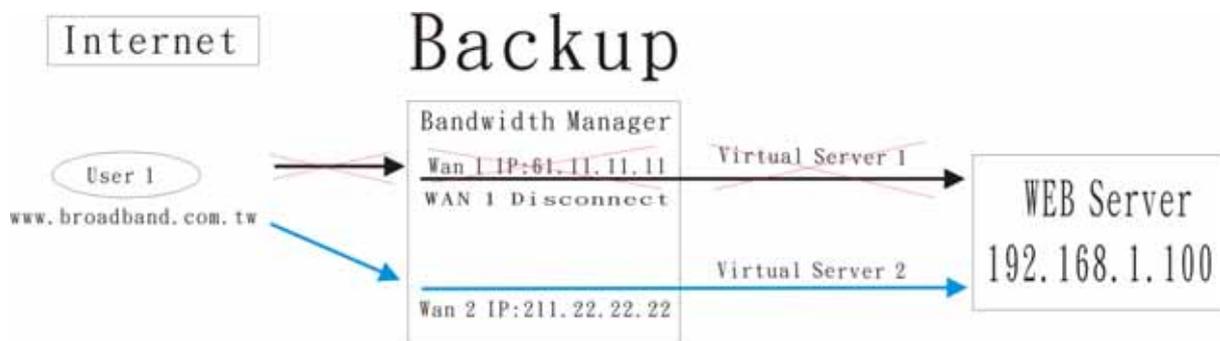
Secondary DNS Server

Host Name : dns2.broadband.com.tw

IP Address : 211.22.22.22

Example 1: Setup 【WEB Server】 and Type is 【A】 for 【Back up】 in Inbound Load Balance.

【Backup】: For providing stable and reliable connection service quality, MH-4000 provides this mechanism in setup of Inbound Load Balance. Below is the detail setup description for this function:



Step 1. Enter the window of Inbound Balance.

Step 2. Enter the DNS domain name (broadband.com.tw) registered by ISP in the field of 【Domain Name】 and enable 【Enable the Zone】.

System	Domain Name : broadband.com.tw	OK	<input checked="" type="checkbox"/> Enable DNS zone				
Interface	Name	Type	Address	Backup	Weight	Priority	Configure
Address							
Service							New Entry
Schedule							
QoS							
Authentication							
Content Filtering							
Virtual Server							
Policy							
VPN							
Inbound Balance							
Log							
Alarm							
Accounting Report							
Statistics							
Status							

Step 3. Enter the window of 【Inbound Balance Configuration】 and select 【A】 for the 【Select Type】.

Step 4. Add the 1st entry, and enter the【www】 in the field of 【Name】. And after selecting 【WAN 1】 from the drop down list in the right side of 【Address】, click on the 【Assist】 to select 61.11.11.11. And select 【Round-Robin】 in 【Balance Mode】. After the setup is completed, please click on 【OK】.

InBound Balance Configuration

Select type A (Address) CNAME (Canonical NAME) MX (Mail eXchanger)

Name :

Address : [Assist](#) Reverse

Balance Mode : Round-Robin Backup

Step 5. Add the 2nd entry, and enter the【www】in the field of 【Name】. And after selecting 【WAN 2】 from the drop down list in the right side of 【Address】, click on the 【Assist】 to select 211.22.22.22. And select 【Backup】 in 【Balance Mode】. After the setup is completed, please click on 【OK】.

InBound Balance Configuration

Select type A (Address) CNAME (Canonical NAME) MX (Mail eXchanger)

Name :

Address : [Assist](#) Reverse

Balance Mode : Round-Robin Backup

Step 6. The setup is completed below.

Domain Name : Enable DNS zone

Name	Type	Address	Backup	Weight	Priority	Configure
www	A	61.11.11.11(WAN1)	--	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="button" value="Modify"/> <input type="button" value="Remove"/>
www	A	211.22.22.22(WAN2)	WAN1	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Step 7. Enter the setup window of 【Virtual Server 1】 in the menu.

Step 8. Enter the window of 【Add Virtual Server IP】 and enter the virtual server IP【WAN 1, 61.11.11.11】. And click the 【Add】 button. Enter the relating parameters and click on 【OK】.



Virtual Server1

System	Virtual Server Configuration	
Interface	Virtual Server Real IP	61.11.11.11
Address	Service Name (Port)	HTTP (80)
Service	External Service Port	80
Schedule	Load Balance Server	Server Virtual IP
QoS	1	192.168.1.100
Authentication	2	
Content Filtering	3	
Virtual Server	4	
Mapped IP		
Virtual Server1		
Virtual Server2		
Virtual Server3		
Virtual Server4		
Policy		
VPN		

OK Cancel

Step 9. Add new policy of **Incoming** in **【Policy】** for Virtual Server 1.

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Virtual Server 1 (61.11.11.11)	HTTP (80)		NAT	Modify Remove	To 1

Step 10. Enter the setup window of **【Virtual Server 2】**.

Step 11. Enter the window of **【Add Virtual Server IP】** and enter the virtual server IP **【WAN 2, 211.22.22.22】**. And click the **【Add】** button. Enter the relating parameters and click on **【OK】**.

Virtual Server Configuration	
Virtual Server Real IP	211.22.22.22
Service Name (Port)	HTTP (80)
External Service Port	80
Load Balance Server	Server Virtual IP
1	192.168.1.100
2	
3	
4	

OK Cancel

Step 12. Add new policy of **Incoming** in **【Policy】** for Virtual Server 2.

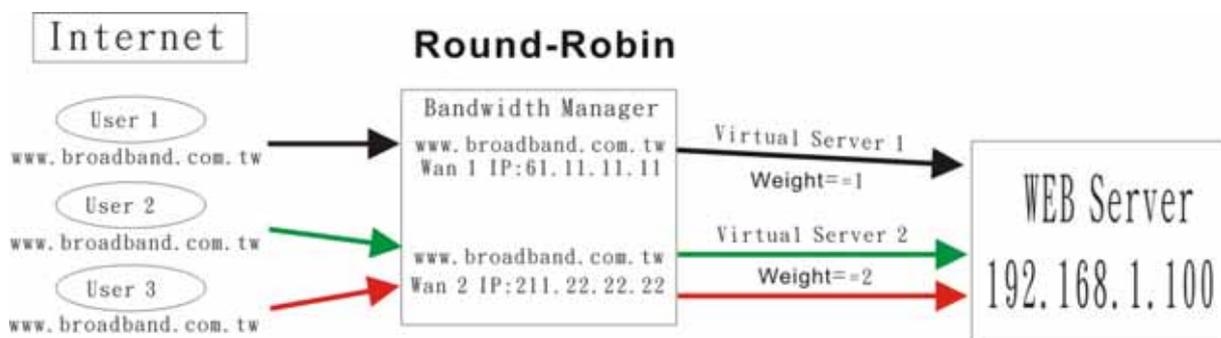
Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Virtual Server 1 (61.11.11.11)	HTTP (80)		NAT	Modify Remove	To 1
Outside_Any	Virtual Server 2 (211.22.22.22)	HTTP (80)		NAT	Modify Remove	To 2

Step 13. The setup is completed.

If WAN 1 is disconnected and WAN 2 can start for backup automatically, so the WEB Server could provide the stable and reliable service for users.

Example 2: Setup 【WEB Server】 and Type is 【A】 for 【Round-Robin】 in Inbound Load Balance.

【Round-Robin】 : For providing stable and reliable connection service quality, MH-4000 provides this mechanism according to specific weight and priority in setup of Inbound Load Balance. Below is the detail setup description for this function:



Step 1. Enter the window of Inbound Balance.

Step 2. Enter the DNS domain name(broadband.com.tw) registered by ISP in the field of 【Domain Name】 and enable 【Enable the Zone】 .

System	Domain Name :	OK	<input checked="" type="checkbox"/> Enable DNS zone													
Interface	<input type="text" value="broadband.com.tw"/>															
Address	<table border="1"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Address</th> <th>Backup</th> <th>Weight</th> <th>Priority</th> <th>Configure</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Name	Type	Address	Backup	Weight	Priority	Configure								
Name	Type	Address	Backup	Weight	Priority	Configure										
Service		<input type="button" value="New Entry"/>														
Schedule																
OoS																
Authentication																
Content Filtering																
Virtual Server																
Policy																
VPN																
Inbound Balance																
Log																
Alarm																
Accounting Report																
Statistics																
Status																

Step 3. Enter the window of 【Inbound Balance Configuration】 and select 【A】 for the 【Select Type】 .

Step 4. Add the 1st entry, and enter the【www】 in the field of 【Name】. And after selecting 【WAN 1】 from the drop down list in the right side of 【Address】 , click on the 【Assist】 to select 61.11.11.11. And select 【Round-Robin】 in 【Balance Mode】 . After the setup is completed, please click on 【OK】 .

InBound Balance Configuration	
Select type	<input checked="" type="radio"/> A (Address) <input type="radio"/> CNAME (Canonical NAME) <input type="radio"/> MX (Mail eXchanger)
Name :	<input type="text" value="www"/>
Address :	<input type="text" value="61.11.11.11"/> <input type="text" value="WAN1"/> Assist <input checked="" type="checkbox"/> Reverse
Balance Mode :	<input checked="" type="radio"/> Round-Robin <input type="radio"/> Backup <input type="text" value="WAN2"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

Step 5. Set 【weight】 to be 1(first priority), and the setup is completed below.

Domain Name :	<input type="text" value="boradband.com.tw"/> <input type="button" value="OK"/>	<input checked="" type="checkbox"/> Enable DNS zone				
Name	Type	Address	Backup	Weight	Priority	Configure
www	A	61.11.11.11(WAN1)	--	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Step 6. Enter the setup window of 【Virtual Server 1】 in the menu.

Step 7. Enter the window of 【Add Virtual Server IP】 and enter the virtual server IP【WAN 1, 61.11.11.11】. And click the 【Add】 button. Enter the relating parameters and click on 【OK】 .

Virtual Server Configuration	
Virtual Server Real IP	<input type="text" value="61.11.11.11"/>
Service Name (Port)	<input type="text" value="HTTP (80)"/>
External Service Port	<input type="text" value="80"/>
Load Balance Server	Server Virtual IP
1	<input type="text" value="192.168.1.100"/>
2	<input type="text"/>
3	<input type="text"/>
4	<input type="text"/>

Step 8. Add new policy of **Incoming** in 【Policy】 of Virtual Server 1.

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Virtual Server 1 (61.11.11.11)	HTTP(80)		<input type="checkbox"/> NAT	<input type="button" value="Modify"/> <input type="button" value="Remove"/>	To <input type="text" value="1"/>

Step 9. Add the 2nd entry, and enter the【www】in the field of 【Name】. And after selecting 【WAN 2】 from the drop down list in the right side of 【Address】 , click on the 【Assist】 to select 211.22.22.22. And select 【Round-Robin】 in 【Balance Mode】 . After the setup is completed, please click on 【OK】 .

www.broadband.com.tw	A	211.22.22.22	2	2
----------------------	---	--------------	---	---

When users want to connect www.planet.com.tw, the sequence of entering the website is below.

The first user enter the server of 61.11.11.11

The second user enter the server of 211.22.22.22

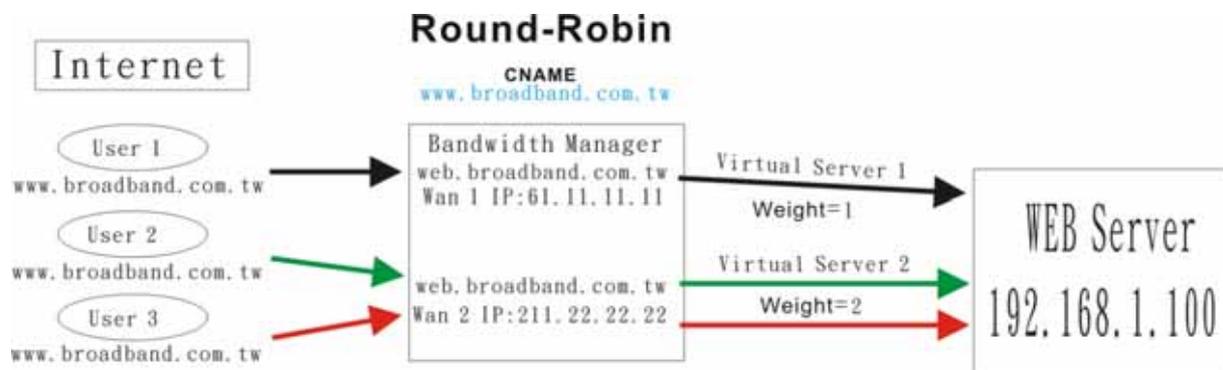
The third user enter the server of 211.22.22.22

The fourth user enter the server of 61.11.11.11

The fifth user enter the server of 211.22.22.22

The sixth user enter the server of 211.22.22.22

Example 3: Setup【WEB Server】and Type is 【CNAME】 for 【Round-Robin】in Inbound Load Balance.



【Round-Robin】 : For providing stable and reliable connection service quality, MH-4000 provides this mechanism according to specific weight and priority in setup of Inbound Load Balance. Below is the detail setup description for this function:

Step 1. Enter the window of Inbound Balance.

Step 2. Enter the DNS domain name (broadband.com.tw) registered by ISP in the field of **【Domain Name】** and enable **【Enable the Zone】** .

System	Domain Name : boradband.com.tw <input type="button" value="OK"/> <input checked="" type="checkbox"/> Enable DNS zone														
Interface	<table border="1"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Address</th> <th>Backup</th> <th>Weight</th> <th>Priority</th> <th>Configure</th> </tr> </thead> <tbody> <tr> <td colspan="7" style="text-align: center;"><input type="button" value="New Entry"/></td> </tr> </tbody> </table>	Name	Type	Address	Backup	Weight	Priority	Configure	<input type="button" value="New Entry"/>						
Name	Type	Address	Backup	Weight	Priority	Configure									
<input type="button" value="New Entry"/>															
Address															
Service															
Schedule															
QoS															
Authentication															
Content Filtering															
Virtual Server															
Policy															
VPN															
Inbound Balance															
Log															
Alarm															
Accounting Report															
Statistics															
Status															

Step 3. Enter the window of **【Inbound Balance Configuration】** and select **【A】** for the **【Select Type】** .

Step 4. Add the 2nd entry, and enter the **【www】** in the field of **【Name】** .

Step 5. And after selecting **【WAN 1】** from the drop down list in the right side of **【Address】** , click on the **【Assist】** to select 61.11.11.11. And select **【Round-Robin】** in **【Balance Mode】** . After the setup is completed, please click on **【OK】** .

InBound Balance Configuration						
Select type <input checked="" type="radio"/> A (Address) <input type="radio"/> CNAME (Canonical NAME) <input type="radio"/> MX (Mail eXchanger)						
Name :	<input type="text" value="www"/>					
Address :	<input type="text" value="61.11.11.11"/>	<input type="text" value="WAN1"/>	<input type="button" value="Assist"/>	<input checked="" type="checkbox"/> Reverse		
Balance Mode :	<input checked="" type="radio"/> Round-Robin <input type="radio"/> Backup <input type="text" value="WAN2"/>					
						<input type="button" value="OK"/> <input type="button" value="Cancel"/>

Step 6. Set **【weight】** to be 1 (first priority), and the setup is completed below.

Domain Name :	<input type="text" value="boradband.com.tw"/>	<input type="button" value="OK"/>	<input checked="" type="checkbox"/> Enable DNS zone			
Name	Type	Address	Backup	Weight	Priority	Configure
www	A	61.11.11.11(WAN1)	--	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Step 7. Enter the window of **【Inbound Balance Configuration】** and select **【A】** for the **【Select Type】** .

Step 8. Add the 1st entry, and enter the **【www】** in the field of **【Name】** .

Step 9. Select **【WAN 2】** from the drop down list in the right side of **【Address】** , click on the **【Assist】**

to select 211.22.22.22. And select【Round-Robin】in 【Balance Mode】. After the setup is completed, please click on 【OK】.

InBound Balance Configuration

Select type A (Address) CNAME (Canonical NAME) MX (Mail eXchanger)

Name :

Address : [Assist](#) Reverse

Balance Mode : Round-Robin Backup

Step 10. Set 【weight】 to be 2(second priority), and the setup is completed below.

Domain Name : Enable DNS zone

Name	Type	Address	Backup	Weight	Priority	Configure
www	A	61.11.11.11(WAN1)	--	1	1	<input type="button" value="Modify"/> <input type="button" value="Remove"/>
www	A	211.22.22.22(WAN2)	--	2	2	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Step 11. Enter the window of 【Inbound Balance Configuration】 and select 【CNAME】 for the 【Select Type】.

Step 12. The 【Alias Name】 is web.

The 【Real Name】 is www.broadband.com.tw

InBound Balance Configuration

Select type A (Address) CNAME (Canonical NAME) MX (Mail eXchanger)

Alias Name :

Real Name :

Step 13. The setup is completed.

Domain Name : Enable DNS zone

Name	Type	Address	Backup	Weight	Priority	Configure
www	A	61.11.11.11(WAN1)	--	1	1	<input type="button" value="Modify"/> <input type="button" value="Remove"/>
www	A	211.22.22.22(WAN2)	--	2	2	<input type="button" value="Modify"/> <input type="button" value="Remove"/>
web	CNAME	www.broadband.com.tw	--	--	--	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Step 14. Enter the setup window of **【Virtual Server 1】** in the menu.

Step 15. Enter the window of **【Add Virtual Server IP】** and enter the virtual server IP **【WAN 1, 61.11.11.11】**. And click the **【Add】** button. Enter the relating parameters and click on **【OK】**.

Virtual Server Configuration	
Virtual Server Real IP	61.11.11.11
Service Name (Port)	HTTP (80)
External Service Port	80
Load Balance Server	Server Virtual IP
1	192.168.1.100
2	
3	
4	

Step 16. Add new policy of **Incoming** in **【Policy】** of Virtual Server 1.

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Virtual Server 1 (61.11.11.11)	HTTP(80)		NAT	Modify Remove	To 1

Step 17. Enter the setup window of **【Virtual Server 2】**.

Step 18. Enter the window of **【Add Virtual Server IP】** and enter the virtual server IP **【WAN 2, 211.22.22.22】**. And click the **【Add】** button. Enter the relating parameters according to the service provided by this server (ex., HTTP 80) and click on **【OK】**.

Virtual Server Configuration	
Virtual Server Real IP	211.22.22.22
Service Name (Port)	HTTP (80)
External Service Port	80
Load Balance Server	Server Virtual IP
1	192.168.1.100
2	
3	
4	

Step 19. Add new policy of WAN to LAN in **【Policy】** of Virtual Server 2.

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Virtual Server 1 (61.11.11.11)	HTTP(80)		NAT	Modify Remove	To 1
Outside_Any	Virtual Server 2 (211.22.22.22)	HTTP(80)		NAT	Modify Remove	To 2

The setup is completed.

Name	Type	Address	Weight	Priority
www.broadband.com.tw	A	61.11.11.11	1	1
www.broadband.com.tw	A	211.22.22.22	2	1
web.broadband.com.tw	CNAME	www.broadband.com.tw	--	--

When users encounter web.broadband.com.tw (Alias Server), the connection service maps into www.broadband.com.tw (Real Server) and the sequence of entering the website is below.

The first user enter the server of 61.11.11.11

The second user enter the server of 211.22.22.22

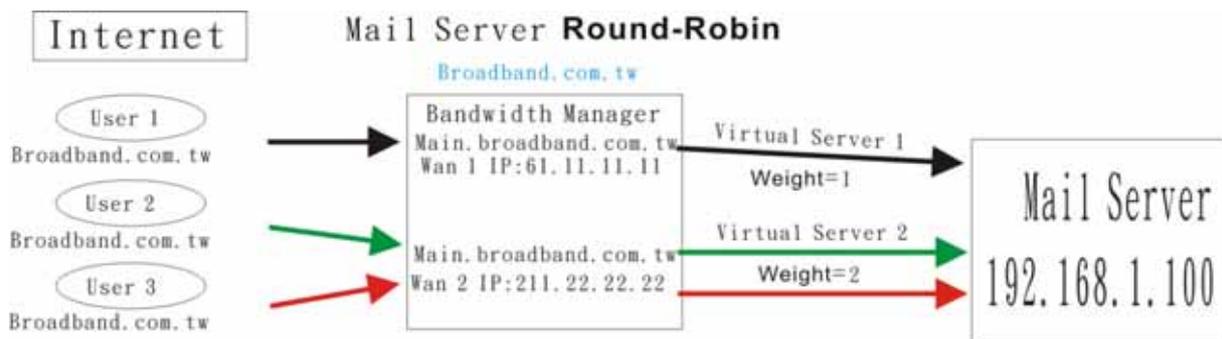
The third user enter the server of 211.22.22.22

The fourth user enter the server of 61.11.11.11

The fifth user enter the server of 211.22.22.22

The sixth user enter the server of 211.22.22.22

Example 4: Setup 【MAIL Server】 for 【Round-Robin】 in Inbound Load Balance.



For setup Mail Server, below is the detail setup description for this function:

Step 1. Enter the window of Inbound Balance.

Step 2. Enter the DNS domain name(broadband.com.tw) registered by ISP in the field of 【Domain Name】 and enable 【Enable the Zone】.

System	Domain Name : broadband.com.tw	OK	<input checked="" type="checkbox"/> Enable DNS zone				
Interface	Name	Type	Address	Backup	Weight	Priority	Configure
Address							
Service	New Entry						
Schedule							
QoS							
Authentication							
Content Filtering							
Virtual Server							
Policy							
VPN							
Inbound Balance							
Log							
Alarm							
Accounting Report							
Statistics							
Status							

Step 3. Enter the window of 【Inbound Balance Configuration】 and select 【A】 for the 【Select Type】.

Step 4. Add the 1st entry, and enter the 【main】 in the field of 【Name】. Selecting 【WAN 1】 from the drop down list in the right side of 【Address】 , click on the 【Assist】 to select 61.11.11.11. And select 【Round-Robin】 in 【Balance Mode】 . After the setup is completed, please click on 【OK】 .

InBound Balance Configuration	
Select type	<input checked="" type="radio"/> A (Address) <input type="radio"/> CNAME (Canonical NAME) <input type="radio"/> MX (Mail eXchanger)
Name :	<input type="text" value="main"/>
Address :	<input type="text" value="61.11.11.11"/> <input type="text" value="WAN1"/> Assist <input checked="" type="checkbox"/> Reverse
Balance Mode :	<input checked="" type="radio"/> Round-Robin <input type="radio"/> Backup <input type="text" value="WAN2"/>

Step 5. Set 【weight】 to be 1(first priority), and the setup is completed below.

Domain Name :	<input type="text" value="boradband.com.tw"/> <input type="button" value="OK"/>	<input checked="" type="checkbox"/> Enable DNS zone				
Name	Type	Address	Backup	Weight	Priority	Configure
main	A	61.11.11.11(WAN1)	--	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Step 6. Enter the window of 【Inbound Balance Configuration】 and select 【A】 for the 【Select Type】.

Step 7. Add the 2nd entry, and enter the 【main】 in the field of 【Name】. Select 【WAN 2】 from the drop down list in the right side of 【Address】 , click on the 【Assist】 to select 211.22.22.22. And select 【Round-Robin】 in 【Balance Mode】 . After the setup is completed, please click on 【OK】 .

InBound Balance Configuration	
Select type	<input checked="" type="radio"/> A (Address) <input type="radio"/> CNAME (Canonical NAME) <input type="radio"/> MX (Mail eXchanger)
Name :	<input type="text" value="main"/>
Address :	<input type="text" value="211.22.22.22"/> <input type="text" value="WAN2"/> Assist <input checked="" type="checkbox"/> Reverse
Balance Mode :	<input checked="" type="radio"/> Round-Robin <input type="radio"/> Backup <input type="text" value="WAN1"/>

Step 8. Set 【weight】 to be 2(second priority), and the setup is completed below.

Domain Name :	<input type="text" value="boradband.com.tw"/> <input type="button" value="OK"/>	<input checked="" type="checkbox"/> Enable DNS zone				
Name	Type	Address	Backup	Weight	Priority	Configure
main	A	61.11.11.11(WAN1)	--	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="button" value="Modify"/> <input type="button" value="Remove"/>
main	A	211.22.22.22(WAN2)	--	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Step 9. Enter the window of 【Inbound Balance Configuration】 and select 【MX】 for the 【Select Type】. The 【Name】 is mail.
the 【Real Name】 is main.broadband.com.tw

InBound Balance Configuration	
Select type	<input type="radio"/> A (Address) <input type="radio"/> CNAME (Canonical NAME) <input checked="" type="radio"/> MX (Mail eXchanger)
Name :	mail
Mail Server :	main.planet.com.tw
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

Step 10. The setup is completed.

Domain Name :	boradband.com.tw	<input type="button" value="OK"/>	<input checked="" type="checkbox"/> Enable DNS zone			
Name	Type	Address	Backup	Weight	Priority	Configure
main	A	61.11.11.11(WAN1)	--	1	1	<input type="button" value="Modify"/> <input type="button" value="Remove"/>
main	A	211.22.22.22(WAN2)	--	2	2	<input type="button" value="Modify"/> <input type="button" value="Remove"/>
mail	MX	main.planet.com.tw	--	--	1	<input type="button" value="Modify"/> <input type="button" value="Remove"/>

Step 11. Enter the setup window of 【Virtual Server 1】 in the menu.

Step 12. Enter the window of 【Add Virtual Server IP】 and enter the virtual server IP【WAN 1, 61.11.11.11】. And click the 【Add】 button. Enter the relating parameters according the service provided by this server (ex. POP3 110) and click on 【OK】.

Virtual Server Configuration	
Virtual Server Real IP	61.11.11.11
Service Name (Port)	POP3 (110)
External Service Port	110
Load Balance Server	Server Virtual IP
1	192.168.1.100
2	
3	
4	

Step 13. Enter the window of 【Add Virtual Server IP】 and enter the virtual server IP【WAN 1, 61.11.11.11】. And click the 【Add】 button. Enter the relating parameters according the service provided by this server (ex., SMTP 25) and click on 【OK】.

Virtual Server Configuration	
Virtual Server Real IP	61.11.11.11
Service Name (Port)	SMTP (25)
External Service Port	25
Load Balance Server	Server Virtual IP
1	192.168.1.100
2	
3	
4	

Step 14. Add new policy of **Incoming** in **【Policy】** for Virtual Server 1.

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Virtual Server 1 (61.11.11.11)	POP3(110)			Modify Remove	To 1
Outside_Any	Virtual Server 1 (61.11.11.11)	SMTP(25)			Modify Remove	To 2

[New Entry](#)

Step 15. Enter the setup window of **【Virtual Server 2】**.

Step 16. Enter the window of **【Add Virtual Server IP】** and enter the virtual server IP **【WAN 2, 211.22.22.22】**. And click the **【Add】** button. Enter the relating parameters according to the service provided by this server (ex. POP3 110) and click on **【OK】**.

Virtual Server Configuration	
Virtual Server Real IP	211.22.22.22
Service Name (Port)	POP3 (110)
External Service Port	110
Load Balance Server	Server Virtual IP
1	192.168.1.100
2	
3	
4	

Step 17. Enter the window of **【Add Virtual Server IP】** and enter the virtual server IP **【WAN 2, 211.22.22.22】**. And click the **【Add】** button. Enter the relating parameters according to the service provided by this server (ex. SMTP 25) and click on **【OK】**.

Virtual Server Configuration	
Virtual Server Real IP	211.22.22.22
Service Name (Port)	SMTP (25)
External Service Port	25
Load Balance Server	Server Virtual IP
1	192.168.1.100
2	
3	
4	

Step 18. Add new policy of Incoming in 【Policy】 for Virtual Server 2.

Source	Destination	Service	Action	Option	Configure	Move
Outside_Any	Virtual Server 1 (61.11.11.11)	POP3(110)			Modify Remove	To 1
Outside_Any	Virtual Server 1 (61.11.11.11)	SMTP(25)			Modify Remove	To 2
Outside_Any	Virtual Server 2 (211.22.22.22)	POP3(110)			Modify Remove	To 3
Outside_Any	Virtual Server 2 (211.22.22.22)	SMTP(25)			Modify Remove	To 4

Step 19. The setup is completed.

Name	Type	Address	Weight	Priority
main.broadband.com.tw	A	61.11.11.11	1	1
main.broadband.com.tw	A	211.22.22.22	2	2
mail.broadband.com.tw.	MX	main.broadband.com.tw	--	--

When users encounter mail.broadband.com.tw (Alias Server), the connection service maps into main.broadband.com.tw (Real Server) and the sequence of entering the website is below.

The first user enter the server of 61.11.11.11

The second user enter the server of 211.22.22.22

The third user enter the server of 211.22.22.22

The fourth user enter the server of 61.11.11.11

The fifth user enter the server of 211.22.22.22

The sixth user enter the server of 211.22.22.22

4.13 Log

MH-2K/4K supports traffic logging and event logging to monitor and record services, connection times, and the source and destination network address. The Administrator may also download the log files for backup purposes. The Administrator mainly uses the Log menu to monitor the traffic passing through MH-2K/4K.

What is Log?

Log records all connections that pass through MH-2K/4K's control policies. Traffic log's parameters are setup when setting up control policies. Traffic logs record the details of packets such as the start and stop time of connection, the duration of connection, the source address, the destination address and services requested, for each control policy. Event logs record the contents of System Configuration changes made by the Administrator such as the time of change, settings that change, the IP address used to log on, etc.

How to use the Log

The Administrator can use the log data to monitor and manage the device and the networks. The Administrator can view the logged data to evaluate and troubleshoot the network, such as pinpointing the source of traffic congestions.

4.13.1 Traffic Log

The Administrator queries MH-2K/4K for information, such as source address, destination address, start time, and Protocol port of all connections.

Entering the Traffic Log window

Step 1. Click the **Traffic Log** option under **Log** menu to enter the Traffic Log window.

The screenshot shows the Planet Security Gateway interface. The main window is titled "Traffic Log". On the left, there is a navigation menu with the following items: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy, VPN, Inbound Balance, Log, Traffic Log (highlighted with red arrows), Event Log, Connection Log, Log Backup, Alarm, Accounting Report, Statistics, and Status. The "Log" menu is expanded, and "Traffic Log" is selected. The main content area displays a table of traffic logs for the date "Mar 24 07:38:19". The table has the following columns: Time, Source IP, Destination IP, Protocol, Port, and Disposition. The table contains 15 rows of data, all showing TCP connections from source IP 192.168.1.53 to destination IP 192.168.1.1. The ports range from 1534 to 1553. The disposition column shows a status icon for each entry. Below the table, there are two buttons: "Clear Logs" and "Download Logs".

Time	Source IP	Destination IP	Protocol	Port	Disposition
Mar 24 07:38:19	192.168.1.53	192.168.1.1	TCP	1553 => 80	
Mar 24 07:38:19	192.168.1.53	192.168.1.1	TCP	1552 => 80	
Mar 24 07:07:59	192.168.1.53	192.168.1.1	TCP	1548 => 80	
Mar 24 07:07:51	192.168.1.53	192.168.1.1	TCP	1547 => 80	
Mar 24 07:07:51	192.168.1.53	192.168.1.1	TCP	1546 => 80	
Mar 24 07:07:51	192.168.1.53	192.168.1.1	TCP	1545 => 80	
Mar 24 07:07:06	192.168.1.53	192.168.1.1	TCP	1544 => 80	
Mar 24 07:07:05	192.168.1.53	192.168.1.1	TCP	1543 => 80	
Mar 24 07:01:15	192.168.1.53	192.168.1.1	TCP	1540 => 80	
Mar 24 07:01:15	192.168.1.53	192.168.1.1	TCP	1539 => 80	
Mar 24 06:58:56	192.168.1.53	192.168.1.1	TCP	1538 => 80	
Mar 24 06:58:56	192.168.1.53	192.168.1.1	TCP	1537 => 80	
Mar 24 06:58:55	192.168.1.53	192.168.1.1	TCP	1536 => 80	
Mar 24 06:58:46	192.168.1.53	192.168.1.1	TCP	1535 => 80	
Mar 24 06:58:46	192.168.1.53	192.168.1.1	TCP	1534 => 80	

Traffic Log Table

The table in the Traffic Log window displays current System statuses:

Definition:

- **Time:** The start time of the connection.
- **Source:** IP address of the source network of the specific connection.
- **Destination:** IP address of the destination network of the specific connection.
- **Protocol:** Protocol type of the specific connection.
- **Port:** Port number of the specific connection.
- **Disposition:** Accept or Deny.

Downloading the Traffic Logs

The Administrator can backup the traffic logs regularly by downloading it to the computer.

Step 1. In the Traffic Log window, click the **Download Logs** button at the bottom of the screen.

Step 2. Follow the File Download pop-up window to save the traffic logs into a specified directory on the hard drive.

The screenshot shows the Traffic Log window with a table of log entries. A Notepad window is open, displaying the contents of 'traffic[1].log'. The table has the following columns: Time, Source IP, Destination IP, Protocol, Port, and Disposition. The Notepad window shows the following log entries:

```

Jun 15 09:23:35 2005 ACCEPT 192.168.1.2 192.168.99.91 ICMP # # TYPE=8 #
Jun 15 09:57:37 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1091 80 # # # #
Jun 15 09:57:39 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1092 80 # # # #
Jun 15 10:00:12 2005 ACCEPT 192.168.1.11 192.168.1.1 TCP 1039 80 # # # #
Jun 15 10:00:16 2005 ACCEPT 192.168.1.11 192.168.1.1 TCP 1041 80 # # # #
Jun 15 10:01:47 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1114 80 # # # #
Jun 15 10:01:47 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1115 80 # # # #
Jun 15 10:02:15 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1116 80 # # # #
Jun 15 10:02:15 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1117 80 # # # #
Jun 15 10:06:01 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1120 80 # # # #
Jun 15 10:06:02 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1121 80 # # # #
Jun 15 10:52:30 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1121 80 # # # #
Jun 15 10:52:30 2005 ACCEPT 192.168.1.2 192.168.1.1 TCP 1120 80 # # # #
Jun 15 13:37:26 2005 ACCEPT 192.168.99.186 192.168.99.91 ICMP # # TYPE=
Jun 15 15:14:18 2005 ACCEPT 192.168.1.2 192.168.99.91 TCP 1715 80 # # # #
Jun 15 15:14:49 2005 ACCEPT 192.168.1.2 192.168.99.91 TCP 1720 80 # # # #
Jun 15 15:14:49 2005 ACCEPT 192.168.1.2 192.168.99.91 TCP 1721 80 # # # #
Jun 15 15:20:27 2005 ACCEPT 192.168.1.2 192.168.99.91 TCP 1730 80 # # # #
Jun 15 15:20:27 2005 ACCEPT 192.168.1.2 192.168.99.91 TCP 1731 80 # # # #
Jun 15 17:35:08 2005 ACCEPT 192.168.1.2 192.168.99.91 TCP 2261 80 # # # #

```

Clearing the Traffic Logs

The Administrator may clear on-line logs to keep just the most updated logs on the screen.

Step 1. In the Traffic Log window, click the **Clear Logs** button at the bottom of the screen.

Step 2. In the Clear Logs pop-up box, click **Ok** to clear the logs or click **Cancel** to cancel it.



Traffic Log

System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
Inbound Balance
Log
Traffic Log
Event Log
Connection Log
Log Backup
Alarm
Accounting Report
Statistics
Status

Mar 24 07:38:19 ▾

Next

Time	Source IP	Destination IP	Protocol	Port	Disposition
Mar 24 07:38:19	192.168.1.53	192.168.1.1	TCP	1553 => 80	
Mar 24 07:38:19	192.168.1.53	192.168.1.1	TCP	1552 => 80	
Mar 24 07:07:59	192.168.1.53	192.168.1.1	TCP	1548 => 80	
Mar 24 07:07:51	192.168.1.53	192.168.1.1	TCP	1547 => 80	
Mar 24 07:07:51	192.168.1.53	192.168.1.1	TCP	1546 => 80	
Mar 24 07:07:51	192.168.1.53	192.168.1.1	TCP	1545 => 80	
Mar 24 07:07:06	192.168.1.53	192.168.1.1	TCP	1544 => 80	
Mar 24 07:07:05	192.168.1.53	192.168.1.1	TCP	1543 => 80	
Mar 24 07:01:15	192.168.1.53	192.168.1.1	TCP	1540 => 80	
Mar 24 07:01:15	192.168.1.53	192.168.1.1	TCP	1539 => 80	
Mar 24 06:58:56	192.168.1.53	192.168.1.1	TCP	1538 => 80	
Mar 24 06:58:56	192.168.1.53	192.168.1.1	TCP	1537 => 80	
Mar 24 06:58:55	192.168.1.53	192.168.1.1	TCP	1536 => 80	
Mar 24 06:58:46	192.168.1.53	192.168.1.1	TCP	1535 => 80	
Mar 24 06:58:46	192.168.1.53	192.168.1.1	TCP	1534 => 80	



Clear Logs

Download Logs

4.13.2 Event Log

When MH-2K/4K WAN detects events, the Administrator can get the details, such as time and description of the events from the Event Logs.

Entering the Event Log window

Step 1. Click the **Event Log** option under the **Log** menu and the Event Log window will appear.



Event Log

- System
- Interface
- Address
- Service
- Schedule
- QoS
- Authentication
- Content Filtering
- Virtual Server
- Policy
- VPN
- Inbound Balance
- Log
- Traffic Log
- Event Log
- Connection Log
- Log Backup
- Alarm
- Accounting Report
- Statistics
- Status

Mar 24 06:57:53 [Next](#)

Time	Event
Mar 24 06:57:53	admin Modify [PPTP Client] (Name : tom Server IP : 61.20.30.40) from 192.168.1.53
Mar 24 06:56:57	admin Add [PPTP Client] (Name : fairy Server IP : 168.95.88.100) from 192.168.1.53
Mar 24 06:49:21	admin Add [PPTP Client] (Name : tom Server IP : 61.20.30.40) from 192.168.1.53
Mar 24 06:42:53	admin Add [PPTP Server] (Name : vincent) from 192.168.1.53
Mar 24 06:29:01	admin Add [PPTP Server] (Name : richard) from 192.168.1.53
Mar 24 06:28:25	admin Modify [PPTP Server Design] from 192.168.1.53
Mar 24 06:25:16	admin Modify [PPTP Server Design] from 192.168.1.53
Mar 23 17:43:35	admin Modify [DNS Server] (Zone Name : mail Address : 192.168.90.2.) from 192.168.1.53
Mar 23 17:43:12	admin Modify [DNS Server] (Weight) from 192.168.1.53
Mar 23 17:43:06	admin Modify [DNS Server] (Zone Name : mail Address : 192.168.99.60) from 192.168.1.53

Clear Logs
Download Logs

Step 2. The table in the Event Log window displays the time and description of the events.

- **Time:** time when the event occurred.
- **Event:** description of the event.

Downloading the Event Logs

Step 1. In the Event Log window, click the Download Logs button at the bottom of the screen.

Step 2. Follow the File Download pop-up window to save the event logs into a specific directory on the hard drive.



Event Log

- System
- Interface
- Address
- Service
- Schedule
- QoS
- Authentication
- Content Filtering
- Virtual Server
- Policy
- VPN
- Inbound Balance
- Log
- Traffic Log
- Event Log
- Connection Log
- Log Backup
- Alarm
- Accounting Report
- Statistics

Jun 16 13:16:45 [Next](#)

Time	Event
Jun 16 13:16:45	WAN1 is connected
Jun 16 13:16:30	WAN1 is disconnected
Jun 15 17:21:30	WAN1 is connected
Jun 15 17:21:35	WAN1 is disconnected
Jun 15 17:34:26	admin (192.168.1.2) Delete [Autokey] 4K to 210.66.155.90 FTP permit
Jun 15 18:39:09	admin (192.168.1.2) Add [PPTP Client] (Name : Candy)
Jun 15 18:43:04	admin (192.168.1.2) Modify [DNS Server] (Domain Name : 192.168.1.2)
Jun 15 18:43:39	admin (192.168.1.2) Modify [DNS Server] (Domain Name : 192.168.1.2)
Jun 15 18:43:47	admin (192.168.1.2) Modify [DNS Server] (Domain Name : 192.168.1.2)
Jun 15 19:43:59	admin user admin (192.168.1.2) [Login success]
Jun 15 19:44:46	admin (192.168.1.2) Remove [Virtual Server 1]
Jun 15 19:44:57	admin (192.168.1.2) Delete [Policy](External to DMZ)
Jun 15 19:45:04	admin (192.168.1.2) Delete [Policy](DMZ to External)
Jun 15 19:45:11	admin (192.168.1.2) Remove [Mapped IP] (External IP : 192.168.1.2)
Jun 16 10:26:22	admin (192.168.1.2) Delete [Policy](Incoming,Outside_Any=>210.66.155.90 FTP permit)

```

event[1].log - Notepad
File Edit Format View Help
Jun 15 09:57:39 2005 admin user admin (192.168.1.2) [Login success]
Jun 15 09:58:04 2005 admin (192.168.1.2) Modify [Policy](Outgoing,Insid
Jun 15 09:59:08 2005 192.168.1.2 Authentication User planet [Login succ
Jun 15 10:00:15 2005 admin user admin (192.168.1.11) [Login success]
Jun 15 10:00:30 2005 192.168.1.11 Authentication User planet [Login suc
Jun 15 10:06:09 2005 admin (192.168.1.2) Modify [Policy](Outgoing,Insid
Jun 15 15:14:25 2005 admin user admin (192.168.1.2) [Login success]
Jun 15 15:21:08 2005 admin (192.168.1.2) Add [Autokey] 4K to 210.66.155
Jun 15 17:16:35 2005 WAN1 is disconnected
Jun 15 17:21:30 2005 WAN1 is connected
Jun 15 17:34:26 2005 admin (192.168.1.2) Delete [Autokey] 4K to 210.66.1
Jun 15 18:39:09 2005 admin (192.168.1.2) Add [PPTP Client] (Name : Candy
Jun 15 18:43:04 2005 admin (192.168.1.2) Modify [DNS Server] (Domain Name
Jun 15 18:43:39 2005 admin (192.168.1.2) Modify [DNS Server] (Domain Name
Jun 15 18:43:47 2005 admin (192.168.1.2) Modify [DNS Server] (Domain Name
Jun 15 19:43:59 2005 admin user admin (192.168.1.2) [Login success]
Jun 15 19:44:46 2005 admin (192.168.1.2) Remove [Virtual Server 1]
Jun 15 19:44:57 2005 admin (192.168.1.2) Delete [Policy](External to DMZ)
Jun 15 19:45:04 2005 admin (192.168.1.2) Delete [Policy](DMZ to External
Jun 15 19:45:11 2005 admin (192.168.1.2) Remove [Mapped IP] (External IP
    
```

Clearing the Event Logs

The Administrator may clear on-line event logs to keep just the most updated logs on the screen.

- Step 1. In the Event Log window, click the Clear Logs button at the bottom of the screen.
- Step 2. In the Clear Logs pop-up box, click **OK** to clear the logs or click **Cancel** to cancel it.



Event Log

- System
- Interface
- Address
- Service
- Schedule
- QoS
- Authentication
- Content Filtering
- Virtual Server
- Policy
- VPN
- Inbound Balance
- Log
- Traffic Log
- Event Log
- Connection Log
- Log Backup
- Alarm
- Accounting Report
- Statistics
- Status

Mar 24 06:57:53 [Next](#)

Time	Event
Mar 24 06:57:53	admin Modify [PPTP Client] (Name : tom Server IP : 61.20.30.40) from 192.168.1.53
Mar 24 06:56:57	admin Add [PPTP Client] (Name : fairy Server IP : 168.95.88.100) from 192.168.1.53
Mar 24 06:49:21	admin Add [PPTP Client] (Name : tom Server IP : 61.20.30.40) from 192.168.1.53
Mar 24 06:42:53	admin Add [PPTP Client] (Name : vincent) from 192.168.1.53
Mar 24 06:29:01	admin Add [PPTP Client] (Name : richard) from 192.168.1.53
Mar 24 06:28:25	admin Add [PPTP Client] (Name : Design) from 192.168.1.53
Mar 24 06:25:16	admin Add [PPTP Client] (Name : Design) from 192.168.1.53 (Zone Name : mail Address : 192.168.90.2.)
Mar 23 17:43:35	admin Add [PPTP Client] (Name : Design) from 192.168.1.53
Mar 23 17:43:12	admin Modify [DNS Server] (Weight) from 192.168.1.53
Mar 23 17:43:06	admin Modify [DNS Server] (Zone Name : mail Address : 192.168.99.60) from 192.168.1.53

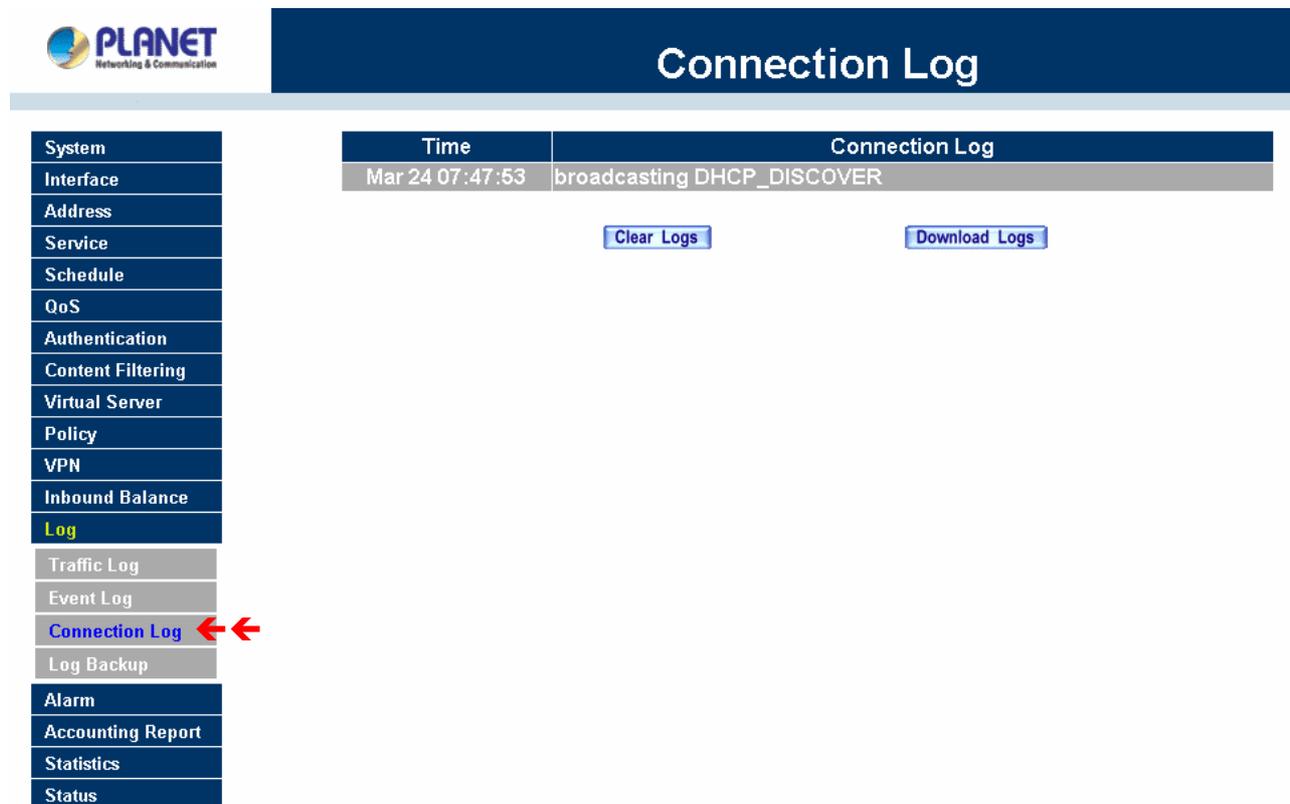
```

Microsoft Internet Explorer
Do you really want to delete?
[OK] [Cancel]
    
```

Clear Logs
Download Logs

4.13.3 Connection Log

Click Log in the menu bar on the left hand side, and then select the sub-selection Connection Log.



The screenshot displays the PLANET web interface. On the left, a vertical menu lists various system functions, with 'Log' highlighted in yellow. Under 'Log', 'Connection Log' is selected and highlighted in blue, with two red arrows pointing to it. The main content area features a dark blue header 'Connection Log' and a table with the following data:

System	Time	Connection Log
Interface	Mar 24 07:47:53	broadcasting DHCP_DISCOVER

Below the table, there are two buttons: 'Clear Logs' and 'Download Logs'.

Definition:

Time: The start and end time of connection.

Connection Log: Event description during connection.

Download Logs

- Step 1. Click **Log** in the menu bar on the left hand side and then select the sub-selection **Connection Log**.
- Step 2. In Connection Log window, click the **Download Logs** button.
- Step 3. In the Download Logs window, save the logs to the specified location.



Connection Log

- System
- Interface
- Address
- Service
- Schedule
- QoS
- Authentication
- Content Filtering
- Virtual Server
- Policy
- VPN
- Inbound Balance
- Log
- Traffic Log
- Event Log
- Connection Log
- Log Backup
- Alarm
- Accounting Report
- Statistics
- Status

Time	Connection Log
Mar 24 07:47:53	broadcasting DHCP_DISCOVER

[Clear Logs](#)

[Download Logs](#)



4.13.4 Log Backup

Click **Log** → **Log Backup**.



Log Backup

- System
- Interface
- Address
- Service
- Schedule
- QoS
- Authentication
- Content Filtering
- Virtual Server
- Policy
- VPN
- Inbound Balance
- Log
- Traffic Log
- Event Log
- Connection Log
- Log Backup
- Alarm
- Accounting Report
- Statistics
- Status

Log Mail Configuration

- Enable Log Mail Support
When Log Full (300Kbytes), Firewall Appliance sends Log
You must set E-mail Alarm => enable

Syslog Settings

- Enable Syslog Messages
- Syslog Host IP Address
- Syslog Host Port

[OK](#) [Cancel](#)

Log Mail Configuration: When the Log Mail files accumulated up to 300Kbytes, router will notify administrator by email with the traffic log and event log.

NOTE: Before enabling this function, you have to configure E-mail Settings in System -> Settings.

Syslog Settings: If you enable this function, system will transmit the Traffic Log and the Event Log simultaneously to the server which supports Syslog function.

NOTE: To restart Connection Log, click the **Refresh** button on the right hand side in Log window.

Enable Log Mail Support & Syslog Message

Log Mail Configuration /Enable Log Mail Support

Step 1. Firstly, go to **Admin** –Select **Enable E-mail Alert Notification** under **E-Mail Settings**. Enter the e-mail address to receive the alarm notification. Click **OK**.

Step 2. Go to **LOG** →**Log Backup**. Check to enable **Log Mail Support**. Click **OK**.

System Settings/Enable Syslog Message

Step 1. Check to enable Syslog Message. Enter the Host IP Address and Host Port number to receive the Syslog message.

Step 2. Click **OK**.

PLANET
Networking & Communication

Log Backup

Log Mail Configuration

Enable Log Mail Support
When Log Full (300Kbytes), Firewall Appliance sends Log
You must set E-mail Alarm => enable

Syslog Settings

Enable Syslog Messages

Syslog Host IP Address

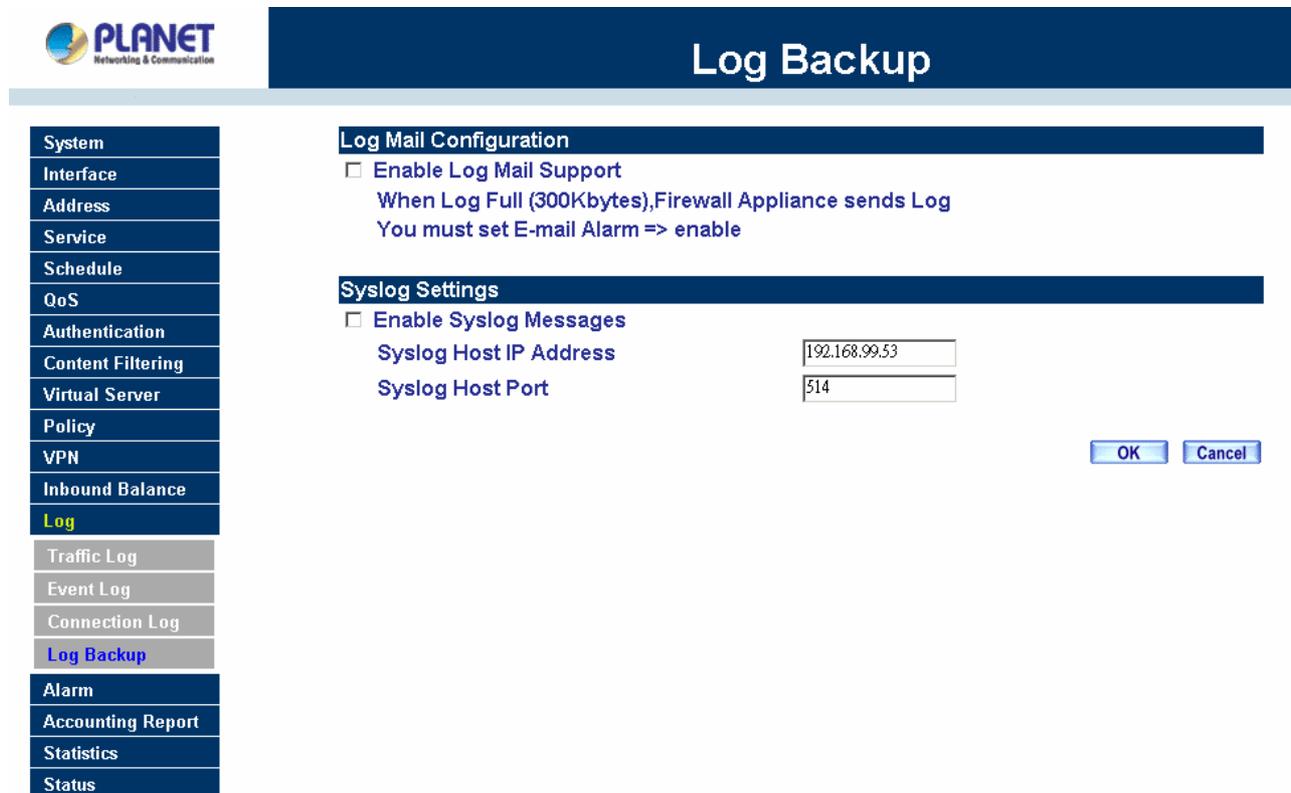
Syslog Host Port

System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
Inbound Balance
Log
Traffic Log
Event Log
Connection Log
Log Backup
Alarm
Accounting Report
Statistics
Status

Disable Log Mail Support & Syslog Message

Step 1. Go to **LOG** → **Log Backup**. Uncheck to disable Log Mail Support. Click **OK**.

Step 2. Go to **LOG** → **Log Backup**. Uncheck to disable Settings Message. Click **OK**.



The screenshot shows the configuration page for 'Log Backup' in the Planet Security Gateway. On the left is a navigation menu with the following items: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy, VPN, Inbound Balance, Log (highlighted in yellow), Traffic Log, Event Log, Connection Log, Log Backup (highlighted in blue), Alarm, Accounting Report, Statistics, and Status. The main content area has a dark blue header 'Log Backup'. Below it are two sections: 'Log Mail Configuration' and 'Syslog Settings'. In 'Log Mail Configuration', there is an unchecked checkbox for 'Enable Log Mail Support' with a note: 'When Log Full (300Kbytes), Firewall Appliance sends Log You must set E-mail Alarm => enable'. In 'Syslog Settings', there is an unchecked checkbox for 'Enable Syslog Messages'. Below this are two input fields: 'Syslog Host IP Address' with the value '192.168.99.53' and 'Syslog Host Port' with the value '514'. At the bottom right of the settings area are 'OK' and 'Cancel' buttons.

4.14 Alarm

How to apply Alarm Service

The administrator can use **Blaster Alarm** to track the Virus infected IP; use **Traffic Alarm** to track the Source Address, Destination Address, network service and the status of network; and use **Event Alarm** to track the attack event from hacker. The administrator also can save **Blaster Alarm**, **Traffic Alarm** and **Event Alarm** for a pre-determined time and then delete them to keep the newest log.

Blaster Alarm:

The Administrator can enable the device's auto detect functions for blaster worm attacking the local network. When abnormal conditions occur, MH-2K/4K will send an e-mail alert and/or SNMP trap to notify the Administrator, and also display warning messages in the **Blaster** window of **Alarm**.

Traffic Alarm:

In control policies, the Administrator set the threshold value for **Traffic Alarm**. The System regularly checks whether the traffic for a policy exceeds its threshold value and adds a record to the traffic alarm file if it does.

Event Alarm:

When MH-2K/4K detects attacks from hackers, it writes attacking data in the event alarm file and sends an e-mail alert to the Administrator to take emergency steps.

4.14.1 Blaster Alarm

The Administrator can enable the device's auto detect functions for blaster worm attacking the local network. When abnormal conditions occur, MH-2K/4K will send an e-mail alert and/or SNMP trap to notify the Administrator, and also display warning messages in the **Blaster** window of **Alarm**.

Entering the Blaster Alarm window

Step 1. Click the **Blaster Alarm** option below **Alarm** menu to enter the **Blaster Alarm** window.

The screenshot displays the 'Blaster Alarm' configuration window. The left sidebar contains a menu with the following items: System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy, VPN, Inbound Balance, Log, Alarm, Blaster Alarm, and Traffic Alarm. The 'Alarm' menu item is highlighted in yellow, and 'Blaster Alarm' is selected. The main content area shows a table with the following structure:

Threshold Sessions / Sec : 100			
Interface	Virus infected IP	MAC Address	Alarm Time
There is no message !			

The table in **Blaster Alarm** window displays current blaster alarm logs for connections.

- **Interface:** Specify which interface received the attack packets.
- **Virus infected IP:** Specify the IP address who is infected the virus and spreads the attack packets out.
- **MAC Address:** Specify the MAC address who is infected the virus and spreads the attack packets out.
- **Alarm Time:** Log time.

Downloading the Blaster Alarm Logs

The Administrator can backup **Blaster Alarm** logs regularly by downloading it to a file on the computer.

- Step 1. In the **Blaster Alarm** window, click the **Download Alarm** button at the bottom of the screen.
- Step 2. Follow the File Download pop-up box to save the blaster alarm logs into specific directory on the hard drive.

Clearing Blaster Alarm Logs

The Administrator may clear on-line logs to keep the most updated logs on the screen.

- Step 1. In the **Blaster Alarm** window, click the **Clear Alarm** button at the bottom of the screen.
- Step 2. In the Clear Logs pop-up box, click **OK**.

4.14.2 Traffic Alarm

In control policies, the Administrator set the threshold value for **Traffic Alarm**. The System regularly checks whether the traffic for a policy exceeds its threshold value and adds a record to the traffic alarm file if it does.

Entering the Traffic Alarm window

- Step 2. Click the **Traffic Alarm** option below **Alarm** menu to enter the **Traffic Alarm** window.

The screenshot displays the Planet Security Gateway interface. On the left, a vertical menu lists various system settings, with 'Alarm' highlighted in yellow. Under 'Alarm', 'Blaster Alarm', 'Traffic Alarm', and 'Event Alarm' are listed. Two red arrows point to 'Traffic Alarm'. The main window title is 'Traffic Alarm'. Below the title is a table with the following structure:

Time	Source	Destination	Service	Traffic
There is no message !				

Step 3. The table in the **Traffic Alarm** window displays the current traffic alarm logs for connections.

- **Time:** The start and stop time of the specific connection.
- **Source:** Name of the source network of the specific connection.
- **Destination:** Name of the destination network of the specific connection.
- **Service:** Service of the specific connection.
- **Traffic:** Traffic (in Kbytes/Sec) of the specific connection.

Downloading the Traffic Alarm Logs

The Administrator can backup traffic alarm logs regularly and download it to a file on the computer.

Step 1. In the **Traffic Alarm** window, click the **Download Alarm** button on the bottom of the screen.

Step 2. Follow the File Download pop-up box to save the traffic alarm logs into specific directory on the hard drive.

Clearing the Traffic Alarm Logs

Step 1. In the **Traffic Alarm** window, click the **Clear Logs** button at the bottom of the screen.

Step 2. In the Clear Logs pop-up box, click **Ok** to clear the logs or click **Cancel** to cancel.

4.14.3 Event Alarm

When MH-2K/4K detects attacks from hackers, it writes attacking data in the event alarm file and sends an e-mail alert to the Administrator to take emergency steps.

Entering the Event Alarm window

Step 1. Click the **Event Alarm** option below the **Alarm** menu to enter the **Event Alarm** window.



Event Alarm

System	Time	Event
Interface	Jun 16 15:38:57	The system has detected the attack of TCP port scan , suspected to be 210.66.155.91
Address	Jun 16 15:38:33	The system has detected the attack of TCP port scan , suspected to be 210.66.155.91

System
 Interface
 Address
 Service
 Schedule
 QoS
 Authentication
 Content Filtering
 Virtual Server
 Policy
 VPN
 Inbound Balance
 Log
Alarm
 Blaster Alarm
 Traffic Alarm
Event Alarm ←←
 Accounting Report

The table in **Event Alarm** window displays current event alarm logs for connections.

- **Time:** log time.
- **Event:** event descriptions.

Downloading the Event Alarm Logs

The Administrator can back up event alarm logs regularly by downloading it to a file on the computer.

- Step 3. In the **Event Alarm** window, click the **Download Alarm** button at the bottom of the screen.
- Step 4. Follow the File Download pop-up box to save the event alarm logs into specific directory on the hard drive.

Clearing Event Alarm Logs

The Administrator may clear on-line logs to keep the most updated logs on the screen.

- Step 3. In the **Event Alarm** window, click the **Clear Alarm** button at the bottom of the screen.
- Step 4. In the Clear Logs pop-up box, click **OK**.

4.15 Accounting Report (MH-4000 only)

Accounting Report can be divided into three parts, **Setting**, **Outbound Accounting Report**, and the **Inbound Accounting Report**.

NOTE: This function is not supported on MH-2000.

4.15.1 Setting

Select **Setting** to configure what type of Accounting Report will be logged at MH-4000. There are three types of report can be select: **User**, **Site** and **Service**.

Outbound Accounting Report: the statistics of the downstream and upstream for the LAN, WAN and all kinds of communication services.

User (Source IP): the IP address used by LAN users.

Site (Destination IP): the IP address used by WAN service server.

Service: the communication service which listed in the pull-down menu when LAN users connect to WAN service server via MH-4000.

Inbound Accounting Report: the statistics of downstream and upstream for all kinds of communication services; the Inbound Accounting report will be shown when WAN host connects to LAN host via MH-4000.

User (Source IP): the IP address used by WAN host.

Site (Destination IP): the IP address used by LAN host.

Service: The communication service which listed in the pull-down menu when WAN host connect to LAN host.

Administrator can use this Accounting Report to inquire the LAN IP users and WAN IP users, and to gather the statistics of Downstream/Upstream, First packet/Last packet/Duration and the service for all the user's IP that passes through MH-4000.

4.15.2 Outbound Accounting Report

Click the **Accounting Report** function, and then select **Outbound**. There are three options for outbound accounting report: Top Users (source IP), Top Sites(Destination IP) and Top Services(Service).

PLANET Networking & Communication

OutBound

Top Users: 1-2

No.	Source IP	Downstream	Upstream	First Packet	Last Packet	Duration	Action
1	792D02-012	38.8 MB 89.4%	35.8 MB 98.3%	06/15 09:19:03	06/16 17:34:54	1D 08:15:51	Remove
2	JACKYKO	235.7 KB 0.6%	44.5 KB 0.1%	06/15 10:00:32	06/15 10:01:32	00:01:00	Remove
Total Traffic		39.0 MBytes	35.9 MBytes	Report time Thu Jun 16 17:37:34 2005			

Reset Counters

Setting
OutBound
InBound

Outbound Top Users (source IP) Accounting Report

Click **Top Users** icon on the page to show the source IP accounting report. If this option is already selected, it does not change when you click it.

PLANET Networking & Communication

OutBound

Top Users: 1-2

No.	Source IP	Downstream	Upstream	First Packet	Last Packet	Duration	Action
1	792D02-012	38.8 MB 89.4%	35.8 MB 98.3%	06/15 09:19:03	06/16 17:34:54	1D 08:15:51	Remove
2	JACKYKO	235.7 KB 0.6%	44.5 KB 0.1%	06/15 10:00:32	06/15 10:01:32	00:01:00	Remove
Total Traffic		39.0 MBytes	35.9 MBytes	Report time Thu Jun 16 17:37:34 2005			

Reset Counters

Setting
OutBound
InBound

When LAN users connect to WAN service server through MH-4000, all of the Downstream / Upstream / First Packet / Last Packet / Duration log of the source IP will be recorded.

Definition:

TOP Users: Select the data type you want to check, it presents 10 results in one page.

Source IP: The LAN user's IP address connects to MH-4000 to access WAN service server.

Downstream: The percentage of downstream and the statistic value of the connection from WAN server to LAN user.

Upstream: The percentage of upstream and the statistic value of the connection from LAN user to WAN server.

First Packet: The time record of the first packet that was sent to WAN service server from LAN user.

Last Packet: The time record of the last packet sent from WAN server and received by the LAN user

Duration: The time statistic record that started from the first packet and end to the last packet.

Total Traffic: MH-4000 will record the sum of upstream/downstream packets from LAN user to WAN service server.

Reset Counter: Click **Reset Counter** button to refresh Accounting Report.

Outbound Top Sites (Destination IP) Accounting Report

Click **Top Sites** icon on the page to show the Destination IP accounting report. If this option is already selected, it does not change when you click it.



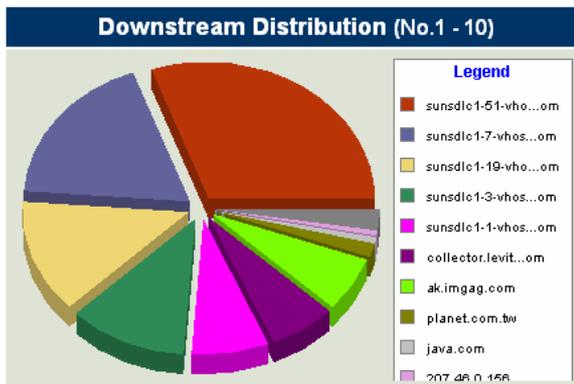
OutBound

System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
Inbound Balance
Log
Alarm
Accounting Report
Setting
OutBound
InBound
Statistics
Status

Top Sites: 1-10



No.	Destination IP (User)	Source IP	Downstream	Upstream
1	sunsdlc1-51-vhost2...om (1)	(1) 792D02-012 [192.168.1.2]	3.6 MB 30.6%	65.2 KB 16.0%
2	sunsdlc1-7-vhost2....om (1)	(1) 792D02-012 [192.168.1.2]	2.2 MB 18.4%	41.1 KB 10.1%
3	sunsdlc1-19-vhost1...om (1)	(1) 792D02-012 [192.168.1.2]	1.6 MB 13.2%	29.4 KB 7.2%
4	sunsdlc1-3-vhost2....om (1)	(1) 792D02-012 [192.168.1.2]	1.4 MB 11.7%	26.6 KB 6.5%
5	sunsdlc1-1-vhost2....om (1)	(1) 792D02-012 [192.168.1.2]	892.0 KB 7.3%	19.8 KB 4.8%
6	collector.levitonv...om (1)	(1) 792D02-012 [192.168.1.2]	803.5 KB 6.6%	40.8 KB 10.0%
7	ak.imgag.com (1)	(1) 792D02-012 [192.168.1.2]	754.3 KB 6.3%	22.1 KB 5.4%
8	planet.com.tw (1)	(1) 792D02-012 [192.168.1.2]	199.3 KB 1.7%	13.9 KB 3.4%
9	java.com (1)	(1) 792D02-012 [192.168.1.2]	83.2 KB 0.7%	2.0 KB 0.5%
10	207.46.0.156 (1)	(1) 792D02-012 [192.168.1.2]	60.3 KB 0.5%	65.9 KB 16.1%
Total Traffic			11.9 MBytes	408.3 KBytes



When LAN user connect to WAN service server through MH-4000, all of the Downstream / Upstream / First Packet / Last Packet / Duration log of the Destination IP will be recorded.

Definition:

Top Sites: Select the data type you want to check, it presents 10 results in one page.

Destination IP (User): The WAN Server's IP address. The value of () indicates how many users had accessed the website.

Source IP: The list of the user's IP address who had ever accessed the website of the destination IP address.

Downstream: The percentage of downstream and the statistic value of the connection from WAN server to LAN user.

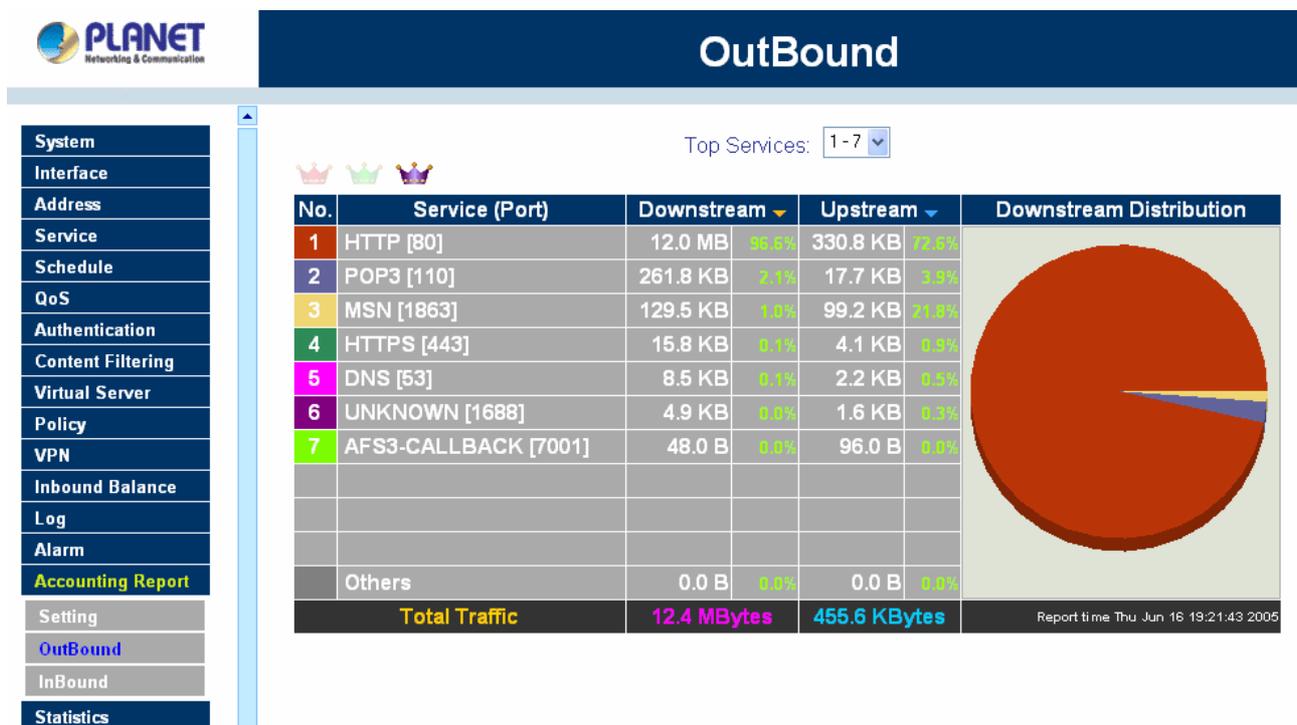
Upstream: The percentage of upstream and the statistic value of the connection from LAN user to WAN server.

Total Traffic: MH-4000 will record the sum of upstream/downstream packets from LAN user to WAN service server.

NOTE: To correctly display the pizza chart, please install the latest java VM for <http://www.java.com>.

Outbound Service Accounting Report

Click **Top Services** icon on the page to show the outbound service accounting report. If this option is already selected, it does not change when you click it.



When LAN users connect to WAN Service Server through MH-4000, all of the Downstream / Upstream / First Packet / Last Packet / Duration log of the Communication Service will be recorded.

Definitions:

Top Services: Select the data type you want to check. It presents 10 results in one page.

Service (Port): The report of Communication Service when LAN users connect to WAN service server through MH-4000. **(Port)** indicates the protocol port number.

Downstream: The percentage of downstream and the statistic value of the connection from WAN server to LAN user.

Upstream: The percentage of upstream and the statistic value of the connection from LAN user to WAN server.

Total Traffic: MH-4000 will record the sum of upstream/downstream packets from LAN user to WAN

service server.

NOTE: To correctly display the pizza chart, please install the latest java VM for <http://www.java.com>.

4.15.3 Inbound Accounting Report

Click the **Accounting Report** function, and then select **Inbound**. There are three options for Inbound accounting report: Top Users (source IP), Top Sites(Destination IP) and Top Services(Service).

The screenshot shows the PLANET Inbound Accounting Report interface. The sidebar menu on the left includes System, Interface, Address, Service, Schedule, QoS, Authentication, Content Filtering, Virtual Server, Policy, VPN, Inbound Balance, Log, Alarm, Accounting Report, Setting, OutBound, and InBound. The main area displays a table of top users with the following data:

No.	Source IP	Upstream	Downstream	First Packet	Last Packet	Duration	Action
1	210.66.155.91	109.5 KB 100.0%	10.7 KB 98.1%	06/16 10:02:04	06/16 10:39:40	00:37:36	Remove
2	ENM-NICK	0.0 B 0.0%	120.0 B 1.1%	06/15 13:37:29	06/15 13:37:29	00:00:00	Remove
3	210.66.1.214	0.0 B 0.0%	320.0 B 2.8%	06/16 11:22:12	06/16 11:47:53	00:25:41	Remove
Total Traffic		109.5 KBytes	11.2 KBytes	Report time Thu Jun 16 19:29:07 2005			

Additional elements in the interface include a 'Top Users' dropdown menu set to '1-3', three crown icons (red, green, purple), and a 'Reset Counters' button at the bottom right.

Inbound Source IP Accounting Report

Click **Top Users** icon on the page to show the inbound source IP accounting report. If this option is already selected, it does not change when you click it.



InBound

System	Top Users: 1-3							
Interface	No.	Source IP	Upstream	Downstream	First Packet	Last Packet	Duration	Action
Address	1	210.66.155.91	109.5 KB 100.0%	10.7 KB 96.1%	06/16 10:02:04	06/16 10:39:40	00:37:36	Remove
Service	2	ENM-NICK	0.0 B 0.0%	120.0 B 1.1%	06/15 13:37:29	06/15 13:37:29	00:00:00	Remove
Schedule	3	210.66.1.214	0.0 B 0.0%	320.0 B 2.8%	06/16 11:22:12	06/16 11:47:53	00:25:41	Remove
QoS	Total Traffic		109.5 KBytes	11.2 KBytes	Report time Thu Jun 16 19:29:07 2005			
Authentication	Reset Counters							
Content Filtering								
Virtual Server								
Policy								
VPN								
Inbound Balance								
Log								
Alarm								
Accounting Report								
Setting								
OutBound								
InBound								

When WAN users connect to LAN service server through MH-4000, all of the Downstream / Upstream / First Packet / Last Packet / Duration log of the source IP will be recorded.

Definitions:

TOP Users: Select the data type you want to check. It presents 10 pages in one page.

Source IP: The IP address used by WAN host.

Downstream: The percentage of Downstream and the statistic value of the connection from WAN host to LAN host via MH-4000.

Upstream: The percentage of Upstream and the statistic value of the connection from LAN host to WAN host via MH-4000.

First Packet: The time record of the first packet that was sent from WAN host to LAN host.

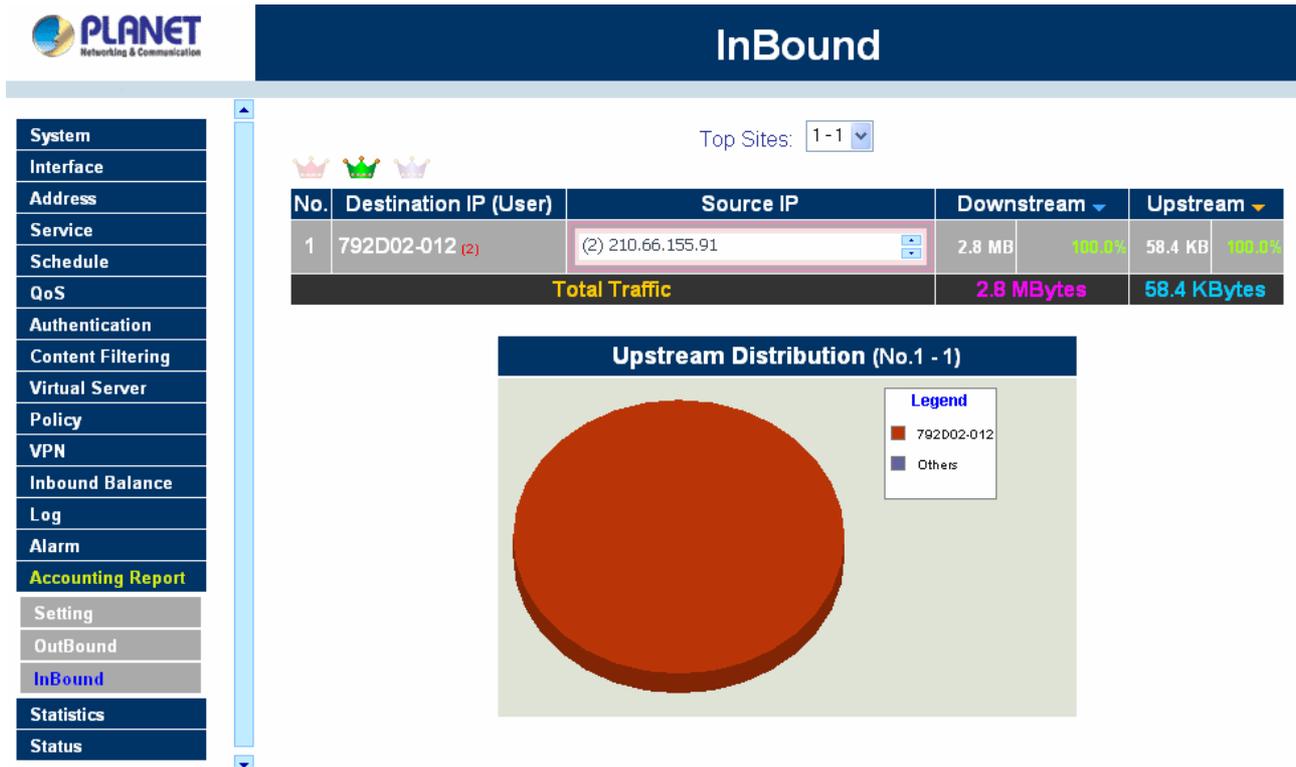
Last Packet: The time record of the last packet that sent from WAN host to LAN host.

Duration: The time statistic record that started from the first packet and end to the last packet.

Total Traffic: MH-4000 will record the sum of upstream/downstream packets from WAN host to LAN host.

Inbound Destination IP Accounting Report

Click **Top Sites** icon on the page to show the inbound Destination IP accounting report. If this option is already selected, it does not change when you click it.



When WAN host connect to LAN through MH-4000, all of the Downstream/Upstream/First Packet/Last Packet/Duration log of the Destination IP will be recorded.

Definitions:

Top Site: Select the data type you want to check. It presents 10 pages in one page.

Destination IP (User): The IP address used by LAN host. The value of () indicates how many users had accessed the LAN host.

Downstream: The percentage of Downstream and the statistic value of the connection from WAN host to LAN host via MH-4000.

Upstream: The percentage of Upstream and the statistic value of the connection from LAN host to WAN host via MH-4000.

Total Traffic: MH-4000 will record the sum of upstream/downstream packets from WAN host to LAN host.

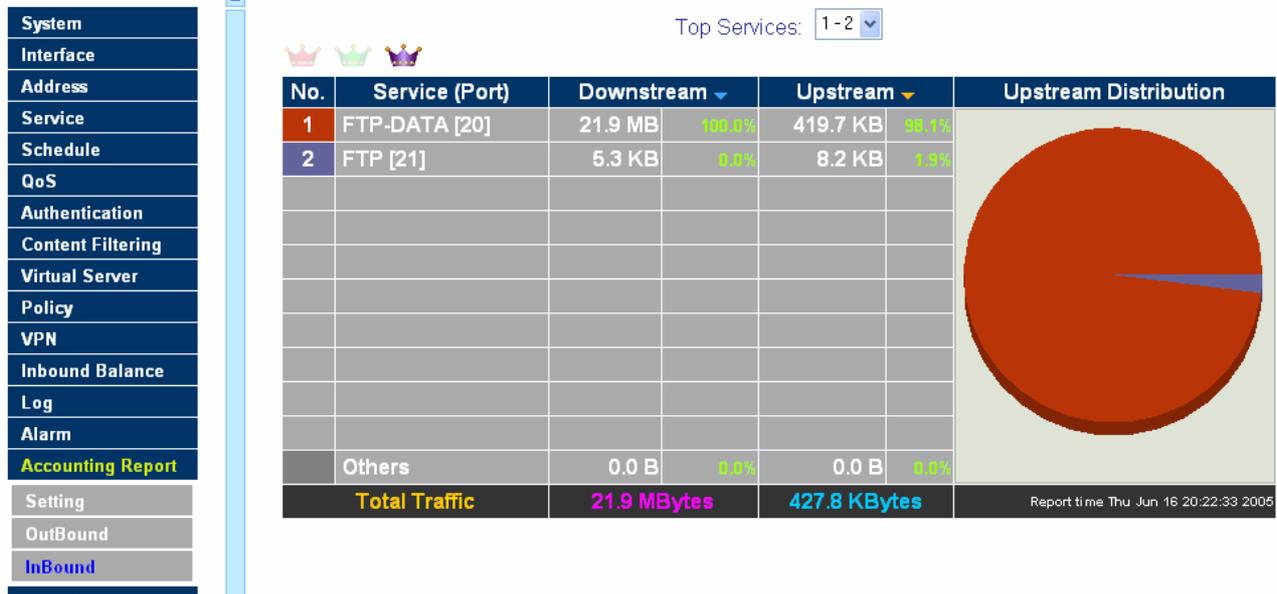
NOTE: To correctly display the pizza chart, please install the latest java VM for <http://www.java.com>.

Inbound Service Accounting Report

Click **Top Services** icon on the page to show the inbound service accounting report. If this option is already selected, it does not change when you click it.



InBound



When WAN host connect to LAN host through MH-4000, all of the Downstream/Upstream/First Packet/Last Packet/Duration log of the Communication Service will be recorded.

Definitions:

Top Services: Select the data type you want to check. It presents 10 results in one page.

Service (Port): The report of Communication Service when WAN host connect to LAN host through MH-4000. **(Port)** indicates the protocol port number.

Downstream: The percentage of Downstream and the statistic value of the connection from WAN host to LAN host via MH-4000.

Upstream: The percentage of Upstream and the statistic value of the connection from LAN host to WAN host via MH-4000.

Total Traffic: MH-4000 will record the sum of upstream/downstream packets from WAN host to LAN host.

NOTE: To correctly display the pizza chart, please install the latest java VM for <http://www.java.com>.

4.16 Statistics

In this chapter, the Administrator queries MH-2K/4K for statistics of packets and data which passes across the Multi-Homing Security Gateway. The statistics provides the Administrator with information about network traffics and network loads.

What is Statistics

Statistics are the statistics of packets that pass through MH-2K/4K by control policies setup by the Administrator.

How to use Statistics

The Administrator can get the current network status from statistics, and use the information provided by statistics as a basis to manage networks.

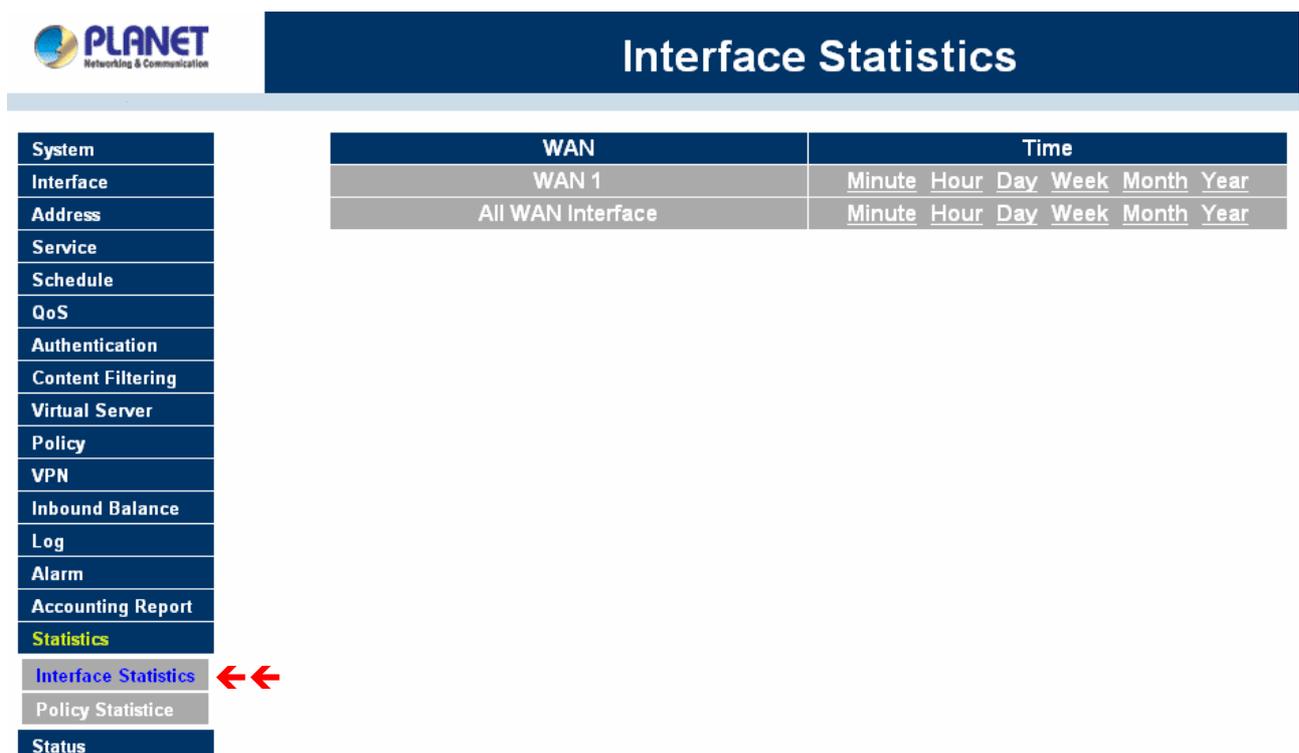
How to apply WAN Statistics

The Administrator needs to go to Policy to set the network IP addresses that you want to gather statistics. In this way, the administrator can handle the whole network condition and takes it as a basis of managing the network.

The administrator needs to go to the Policy to set the network IP of the statistics. By the WAN statistics you can obtain the status of the network.

4.16.1 Interface Statistics

Step 1. Click Statistics in the menu bar on the left hand side, and then select Interface Statistics.



The screenshot shows the Planet Network & Communication web interface. The left sidebar menu is visible, with 'Statistics' highlighted in yellow. Below it, 'Interface Statistics' is selected, indicated by two red arrows. The main content area displays the 'Interface Statistics' page, which includes a table with the following structure:

System	WAN	Time
Interface	WAN 1	Minute Hour Day Week Month Year
Address	All WAN Interface	Minute Hour Day Week Month Year
Service		
Schedule		
QoS		
Authentication		
Content Filtering		
Virtual Server		
Policy		
VPN		
Inbound Balance		
Log		
Alarm		
Accounting Report		
Statistics		
Interface Statistics		
Policy Statistic		
Status		

Step 2. The Interface Statistics will be displayed. It displays statistics of WAN 1/2 network connections (downstream and upstream as well) in a total amount by Minute (60 minutes), Hour (24 hours), Day (30 days), Week (7 weeks), Month (12 months) and Year (10 years). Select the WAN port you want to show and select the time units (minute, hour, day, week, month or year) of the graph.



Interface Statistics

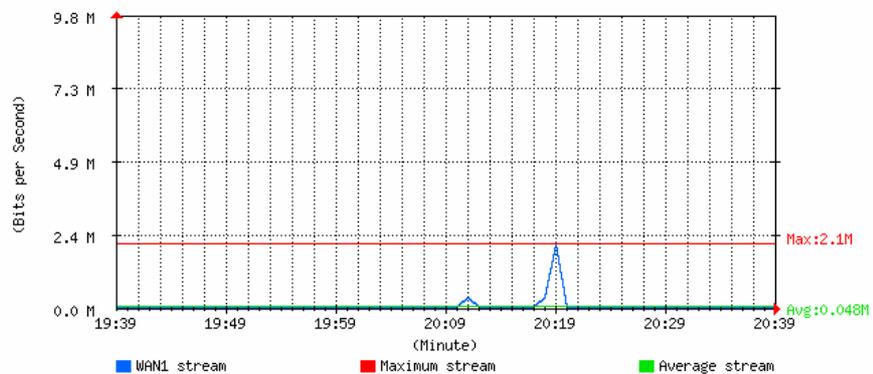
System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
Inbound Balance
Log
Alarm
Accounting Report
Statistics
Interface Statistics
Policy Statistic
Status

Bits/sec Bytes/sec Utilization Total

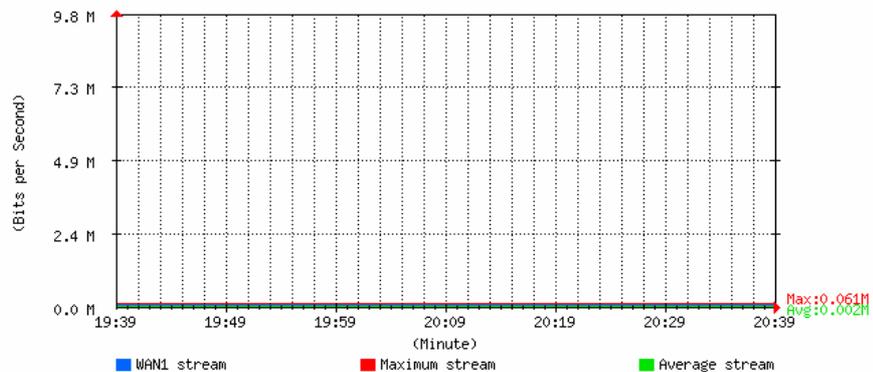
Minute Hour Day Week Month Year

Real-time: Down 0.7 KBits/sec Up 0.7 KBits/sec

WAN1 Downstream



WAN1 Upstream



Y-Coordinate: Four options are available: Total, Bits/sec, Bytes/sec and Utilization.

X-Coordinate: Time (Hour/Minute/Day/Week/Month/Year) .

4.16.2 Policy Statistics

Entering the Statistics window

The Statistics window displays the statistics of current network connections.

- **Source:** the name of source address.
- **Destination:** the name of destination address.
- **Service:** the service requested.
- **Action:** permit or deny
- **Time:** viewable by minutes, hours, days, weeks, months or years.



Policy Statistic

System	Source	Destination	Service	Action	Time					
Interface	Inside_Any	Outside_Any	ANY		<u>Minute</u>	<u>Hour</u>	<u>Day</u>	<u>Week</u>	<u>Month</u>	<u>Year</u>
Address										
Service										
Schedule										
QoS										
Authentication										
Content Filtering										
Virtual Server										
Policy										
VPN										
Inbound Balance										
Log										
Alarm										
Accounting Report										
Statistics										
Interface Statistics										
Policy Statistic 										
Status										

NOTE: To use Statistics, the administrator needs to go to Policy to enable Statistics function.

Entering the Policy Statistics

- Step 1. Click **Statistics** in the menu bar on the left hand side, and then select **Policy Statistics**.
- Step 2. In Statistics window, find the policy you want to view
- Step 3. In the Statistics window, click Minute on the right hand side, and then you will be able to view the Statistics figure every minute; click Hour to view the Statistics figure every hour; click Day to view the Statistics figure every day....., etc.

Y-Coordinate: There are three options: Total, bits/sec, bytes/sec.

X-Coordinate: Time (Hour/Minute/Day/Week/Month/Year).



Policy Statistic

System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
Inbound Balance
Log
Alarm
Accounting Report
Statistics
Interface Statistics
Policy Statistic
Status

Bits/sec Bytes/sec Total

Inside_Any to Outside_Any

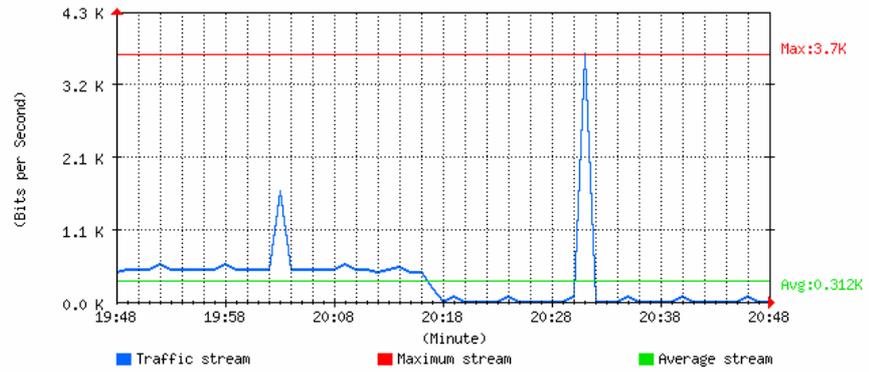
Service : ANY

Action : permit

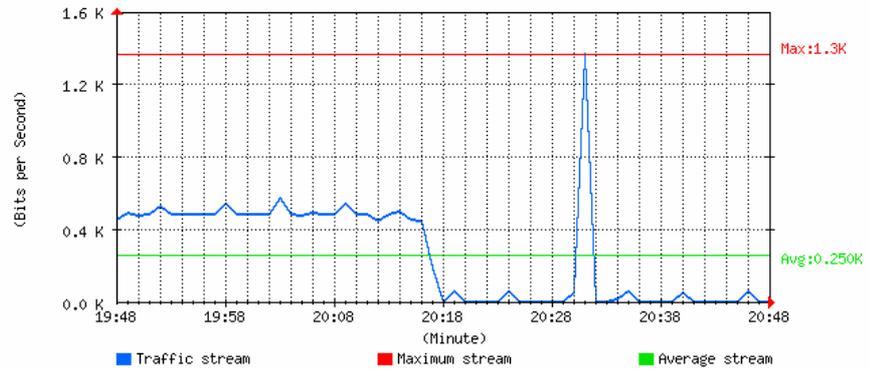
Minute Hour Day Week Month Year

Real-time: Down 0.0 KBits/sec Up 0.0 KBits/sec

Downstream



Upstream



4.17 Status

In this section, the device displays the status information about MH-2K/4K. Status will display the network information from the Configuration menu. The Administrator may also use Status to check the DHCP lease time and MAC addresses for computers connected to MH-2K/4K.

4.17.1 Interface Status

Entering the Interface Status window

Click on **Status** in the menu bar, then click **Interface Status** below it. A window will appear and provide information from the Configuration menu. **Interface Status** will list the settings for **LAN Interface**, **WAN 1/2 Interface**, and **DMZ Interface**.

	LAN	WAN1	WAN2	DMZ
Forwarding Mode	NAT	Static IP	Static IP	Transparent
Connection Status	---			---
DnS / UpS Kbps	---	100000 / 100000	100000 / 100000	---
DnStream Alloca.	---	100%	0%	---
UpStream Alloca.	---	100%	0%	---
PPPoE Con. Time	---	---	---	---
MAC Address	00:90:fb:04:66:4f	00:90:fb:04:66:4e	00:90:fb:04:66:4d	00:90:fb:04:66:4c
IP Address	192.168.1.1	192.168.99.156	192.168.98.100	0.0.0.0
Netmask	255.255.255.0	255.255.255.0	255.255.255.0	0.0.0.0
Default Gateway	---	192.168.99.253	192.168.98.200	---
DNS1	---	168.95.1.1	168.95.1.1	---
DNS2	---	168.95.192.1	168.95.192.1	---
Rx Pkts, Err. Pkts	0, 0	11896, 0	0, 0	20221, 0
Tx Pkts, Err. Pkts	0, 0	8656, 0	0, 0	17042, 0
Ping				
WebUI				

4.17.2 System Info (MH-4000 only)

NOTE: This function is not supported on MH-2000.

Entering the System Info window

Click on **Status** in the menu bar, then click **System Info** below it. A window will appear and display a table with CPU Utilization / Memory Usage and Ram Disk Usage, the device will list them in this System Info.

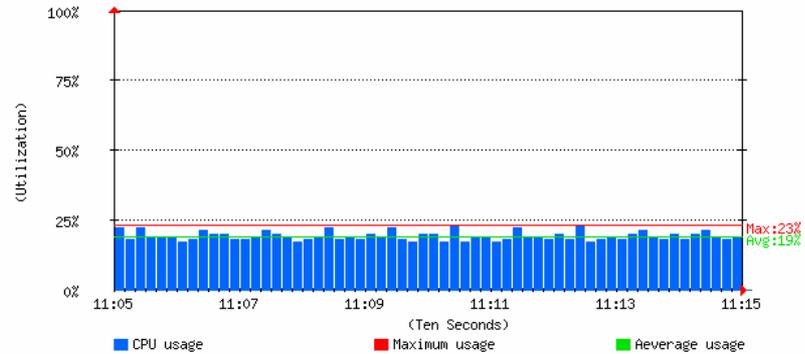


System Info

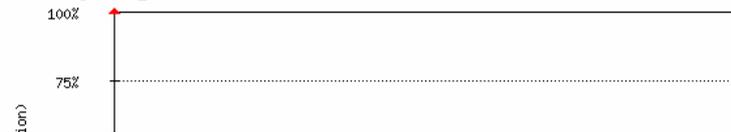
System
Interface
Address
Service
Schedule
QoS
Authentication
Content Filtering
Virtual Server
Policy
VPN
Inbound Balance
Log
Alarm
Accounting Report
Statistics
Status
Interface Status
System Info
Auth Status
ARP Table
DHCP Clients

Memory Size 256 MB

CPU Utilization



Memory Usage



4.17.3 Auth Status

Entering the Auth Status window

Click on **Status** in the menu bar, then click Auth Status below it. A window will appear and provide information from the Auth User menu. Auth Status will list the settings for Auth User login status.



Auth Status

System	IP Address	Authentication-User Name	Login Time
Interface	192.168.1.2	planet	2005/6/15 9:59:8
Address			
Service			
Schedule			
QoS			
Authentication			
Content Filtering			
Virtual Server			
Policy			
VPN			
Inbound Balance			
Log			
Alarm			
Accounting Report			
Statistics			
Status			
Interface Status			
System Info			
Auth Status			
ARP Table			
DHCP Clients			

IP Address: The IP address of the host computer.

Auth-User Name: The Auth User Name of that host computer.

Login time: The Auth User login in time.

4.17.4 ARP Table

Entering the ARP Table window

Click on **Status** in the menu bar, then click **ARP Table** below it. A window will appear and display a table with IP addresses and their corresponding MAC addresses. For each computer on the LAN, WAN 1/2, and DMZ network that replies to an ARP packet, the device will list them in this ARP table.



ARP Table

System	NetBIOS Name	IP Address	MAC Address	Interface
Interface	792D02-012	192.168.1.2	00:0E:A6:0F:8B:92	LAN
Address	----	210.66.155.94	00:A0:C5:11:89:C9	WAN 1
Service				
Schedule				
QoS				
Authentication				
Content Filtering				
Virtual Server				
Policy				
VPN				
Inbound Balance				
Log				
Alarm				
Accounting Report				
Statistics				
Status				
Interface Status				
System Info				
Auth Status				
ARP Table				
DHCP Clients				

IP Address: The IP address of the host computer

MAC Address: The MAC address of that host computer

Interface: The port that the host computer is connected to (LAN, WAN 1/2, DMZ)

4.17.5 DHCP Clients

Entering the DHCP Clients window

Click on **Status** in the menu bar, then click on **DHCP Clients** below it. A window will appear and display the table of DHCP clients that are connected to the device. The table will list host computers on the LAN network that obtain its IP address from MH-2K/4K's DHCP server function.



DHCP Clients

System	NetBIOS Name	IP Address	MAC Address	Leased Time	
Interface				Start	End
Address	792D02-012	192.168.1.2	00:0e:a6:0f:8b:92	2005/6/16 21:2:14	2005/6/17 21:2:14
Service					
Schedule					
QoS					
Authentication					
Content Filtering					
Virtual Server					
Policy					
VPN					
Inbound Balance					
Log					
Alarm					
Accounting Report					
Statistics					
Status					
Interface Status					
System Info					
Auth Status					
ARP Table					
DHCP Clients					

IP Address: the IP address of the LAN host computer

MAC Address: MAC address of the LAN host computer

Leased Time: The Start and End time of the DHCP lease for the LAN host computer.