# FWA-3310

**Version 1.0**

# FireWall Appliance Configuration & Operation Guide

*Network Computing Technology*

ADVANTECH

Network Computing

# Copyright Notice



# Advantech Customer Services

Each and every Advantech product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Advantech equipment is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Advantech has come to be known. Your satisfaction is our primary concern. Here is a guide to Advantech's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

# Technical support

We want you to get the maximum performance from your products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone. So please consult this manual first. If you still cannot find the answer, gather all the information or questions that apply to your problem, and with the product close at hand, call your dealer. Our dealers are well trained and ready to give you the support you need to get the most from your Advantech products. In fact, most problems reported are minor and are able to be easily solved over the phone. In addition, free technical support is available from Advantech engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products.

# Table of Contents

# 1. Introduction

## • About the Advantech FWA-3310

Advantech's FWA-3310 is specifically designed for Internet secure connectivity. It comes with a concrete hardware with pre-installed operating systems and software applications.

## • Hardware

The FWA-3310 is built-in with 20GB IDE HDD drive and 64MB DOM flash. The system only supports single Pentium III processor up to 933MHz. The system memory can be up to 256MB Registered PC-133 SDRAM with ECC.

Memory Module approval list is as follows:

| | | | |
|---|---|---|---|
| ATP | AR32V72N4S4GAS | 256MB | PC-133 Registered PC-133 SDRAM w/ ECC |
| ATP | AR32V72C4S4GAS | 256MB | PC-133 Registered PC-133 SDRAM w/ ECC |
| ATP | AR16V72C4S4GAS | 128MB | PC-133 Registered PC-133 SDRAM w/ ECC |

*ATP Website: www.atpusa.com*

| | | | |
|---|---|---|---|
| Smart | SM572164574E63R | 128MB | PC-133 Registered PC-133 SDRAM w/ ECC |
| Smart | SM572324574E03R | 256MB | PC-133 Registered PC-133 SDRAM w/ ECC |

*Smart Website: www.smartmodulartech.com*

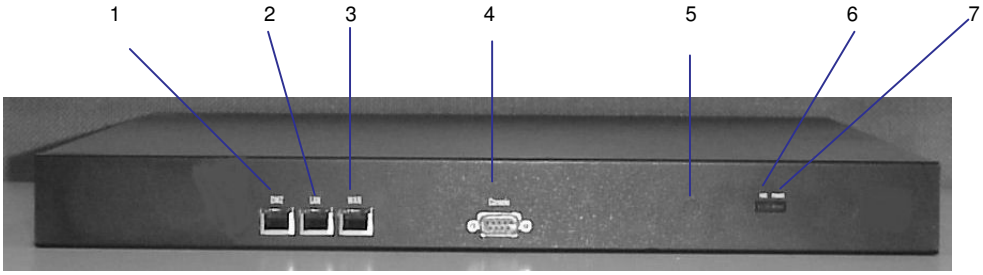
## • Operating Systems

The FWA-3310 runs on Linux operating system with a kernel version of 2.2.14.

## • Software Applications

Supported and pre-installed applications on the FWA-3310 include:
• Check Point FireWall-1® — Enables enterprises to define and enforce a single, comprehensive Security Policy while providing full, transparent connectivity.
• Check Point VPN-1™ — A powerful and secure Internet connectivity solution that lets enterprises deploy Virtual Private Networks (VPNs) to protect the privacy and integrity of business communications over the Internet.

- **Front Panel**




1. DMZ PORT

   The DMZ port connector is RJ-45 and support 10/100BaseT Ethernet (10 Mbps/100 Mbps on twisted pair cable). This port is connects the De-Military Zone.

2. LAN PORT

   The LAN port connector is RJ-45 and support 10/100BaseT Ethernet (10 Mbps/100 Mbps on twisted pair cable). This port connects to the Local Area Network.

3. WAN PORT

   The WAN port connector is RJ-45 and support 10/100BaseT Ethernet (10 Mbps/100 Mbps on twisted pair cable). This port connects the Wide Area Network.

4. CONSOLE PORT

   The console port supports a data terminal equipment (DTE) interface (cable included) with 8 data bits, no parity, and 1 stop bit, running up to 38400 bps.

5. LOAD DEFAULT BUTTON

   The Load Default Button restores the system to its default configuration.

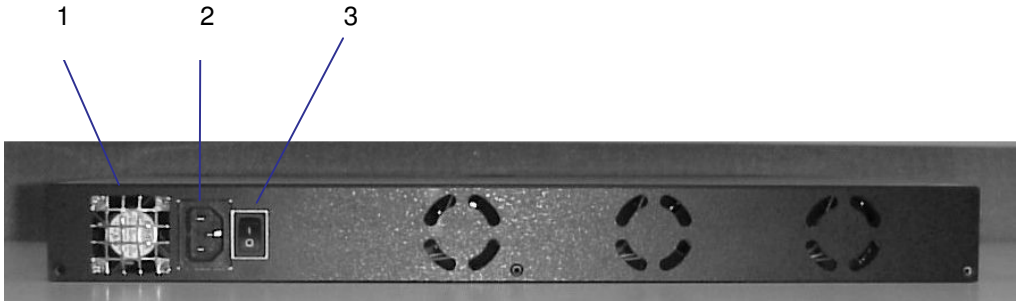
6. HDD LED

   The HDD LED lights when the HDD is operating properly.

7. POWER LED

   The Power LED lights when power is turned on.

- **Back Panel**




1. FAN
2. POWER SOCKET

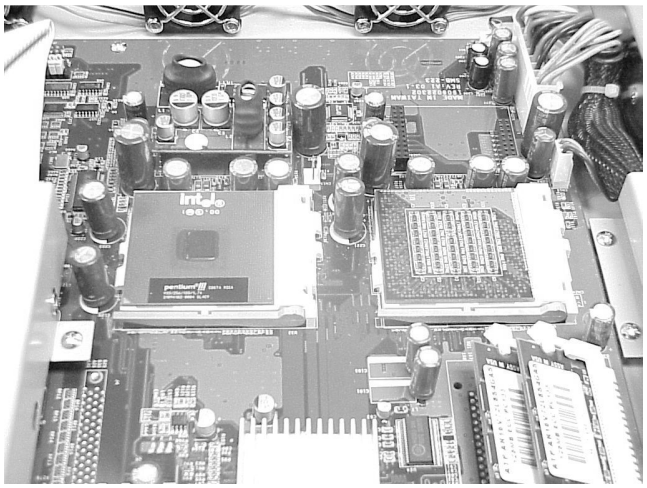
   The power supply of the FWA-3310 automatically senses the input voltage (90 ~ 264 VAC) and configures itself appropriately.
3. ON/OFF SWITCH

# 2. Installation and Configuration

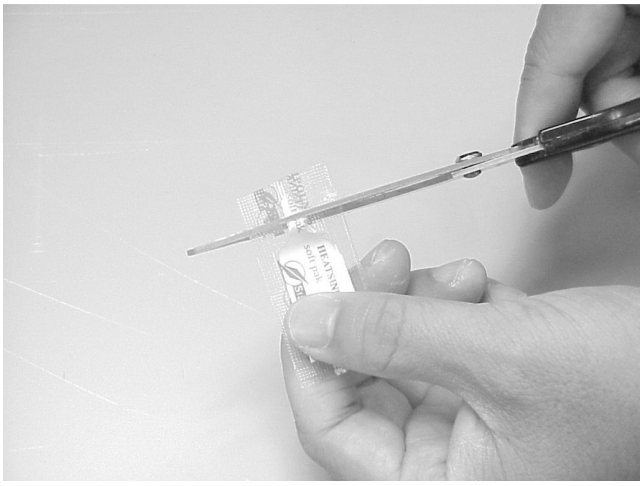
- **Hardware Setup**

### 2..1. CPU Cooler Fan Installation

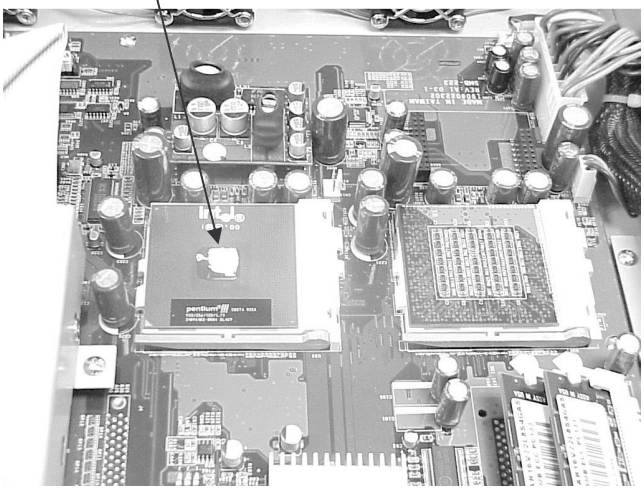
1. First, install the CPU.



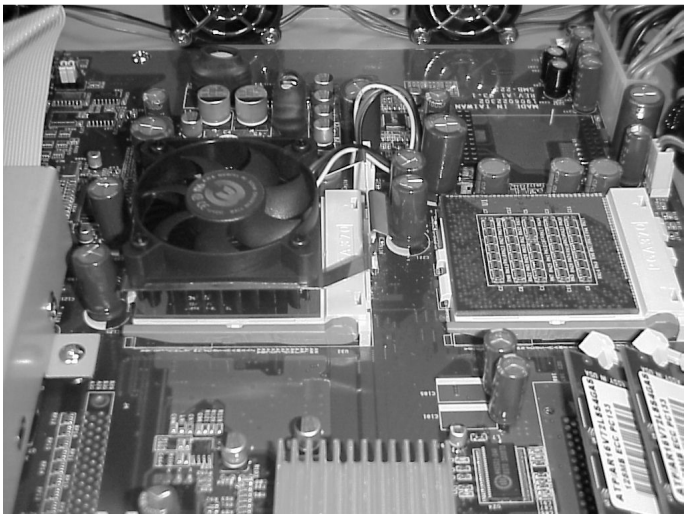
2. Take out the heatspread glue.



3. Paint the glue on the CPU die evenly.



4. Next, install the fan.



### 2..2. Interface Connection

- **Network connection**

  Connect a Twisted Pair Ethernet (TPE) network cable to the LAN, WAN, or DMZ port that was designated on the FWA-3310 interface.

- **Console connection**

  Using the null-modem cable, connect the client's COM1 port to the console port of FWA-3310.

### 2..3. Power Connection

1. Tightly plug the power cord into the power socket at the back of the FWA-3310.
2. Plug the other end of the power cord to the power outlet.
3. Press the power On/Off switch to turn the FWA-3310 on.

## • Before Login

There are two ways of logging into the FWA-3310. One method is through the network connection such as LAN, WAN or DMZ. The other method is via Console Port. The procedures are described as below.

- **Connecting the FWA-3310 to a PC via LAN, WAN or DMZ**

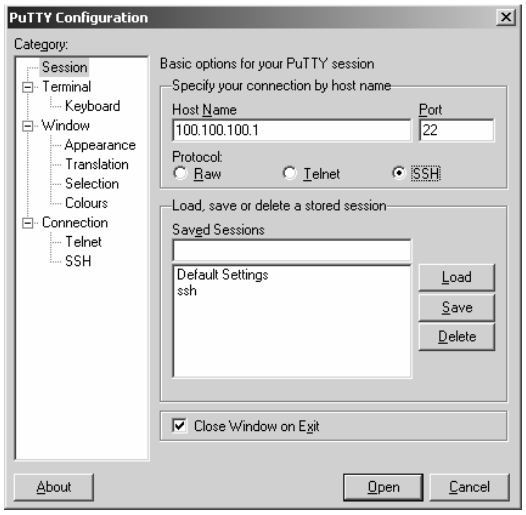
  Perform the following steps:

  1. The default IP address of the FWA-3310 are as below:

| Default / Port | IP | Subnet mask |
|---|---|---|
| WAN | 100.100.100.1 | 255.255.255.0 |
| LAN | 100.100.100.2 | 255.255.255.0 |
| DMZ | 100.100.100.3 | 255.255.255.0 |

  2. Check the client's IP address. Make sure that the IP and subnet mask of the client should be as follows:
     IP: 100.100.100.4
     Subnet mask: 255.255.255.0

3. To connect the FWA-3310, client management software could be used to support SSH protocol. Below is a sample configuration that uses PuTTY.

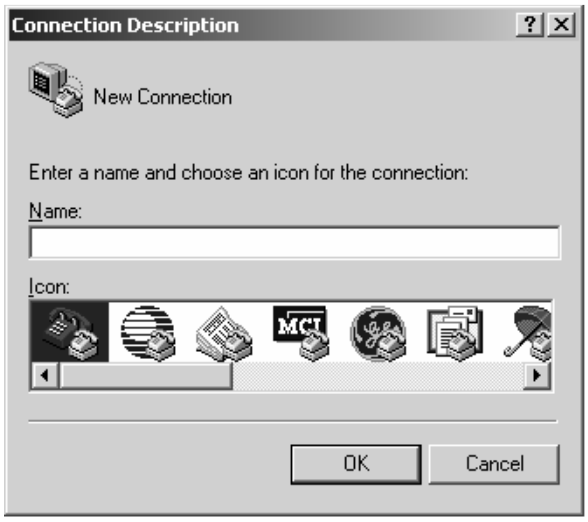



- **Connecting the FWA-3310 to a PC via console port.**

The following setup operates under Windows OS.

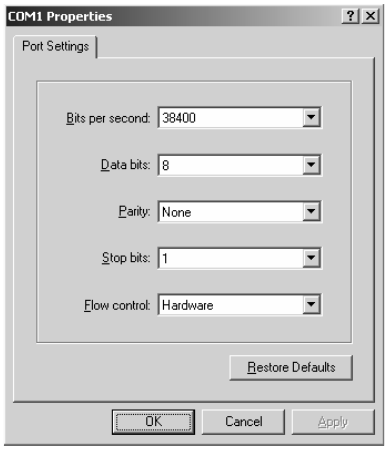
1. Run the console client management programs such as HyperTerminal or NetTerm to configure the console port connection.

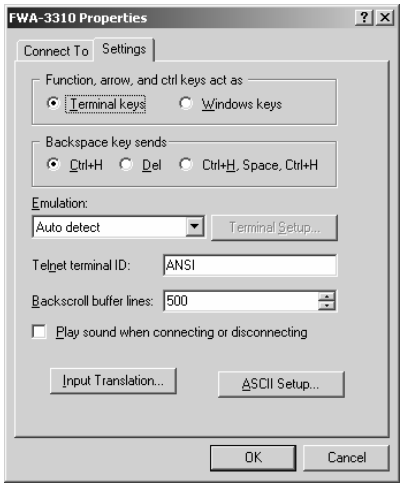
2. HyperTerminal is applied for the following example:



3. Setting the connection to COM1.


4. The parameter of baudrate is 38400bps for COM1. It simulates ANSI.

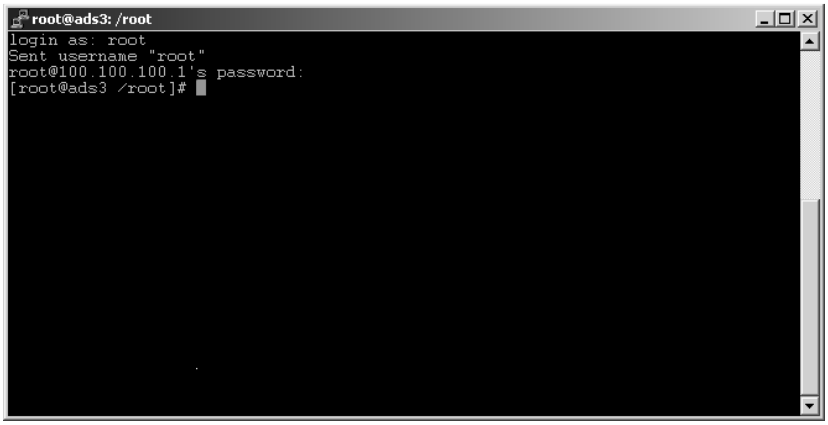


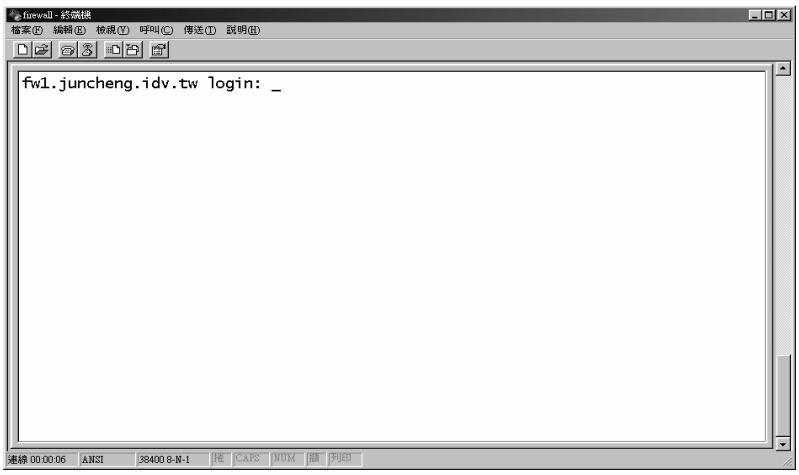
- ## Login the FWA-3310

There are two different ways of logging in the FWA-3310. They are described as below:

- **Logging in via LAN, WAN, or DMZ**
  At the prompt, type in the user name. “root” is the default that owns the supervisor authority. Then confirm the entry. Next type the password according to the system prompt. The default password for root is “123456”.

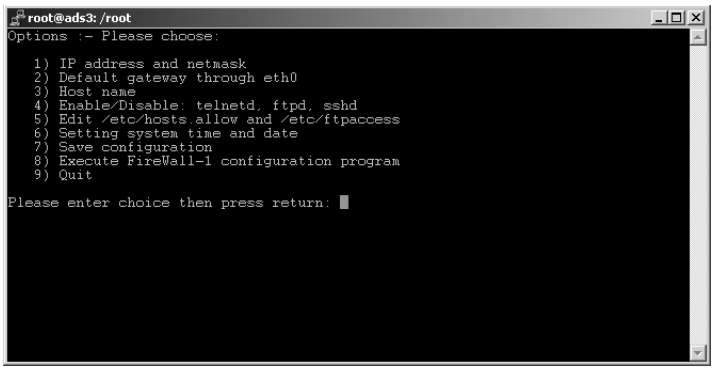



- **Login via console port**
  At the login as prompt, type the user name. “root” is the default that owns the supervisor authority. Then confirm the entry. Next type the password according to the system prompt. The default password for root is “123456”.



- ## Configure the FWA-3310

Once login succeeds, use the command ”setup-fw” to configure it. The procedures will remain the same no matter which port is applied. Configuration under network connecting is as follows:




- **IP address and netmask**
  Changes the FWA-3310’s IP address and netmask.

- **Default gateway through eth0**
  eth0 stands for WAN port.

- **Host name**
  Place to enter the FWA-3310’s hostname.

- **Enable/Disable: telnetd. ftpd. sshd**
  Enables or disables telnet, ftp, or sshd daemon.

- **Edit /etc/hosts.allow and /etc/ftpaccess**
  Edits host.allow to define telnet service.
  The file “ftpaccess” defines the ftp service.

- **Setting system time and date**
  Place to set the system’s date and time.

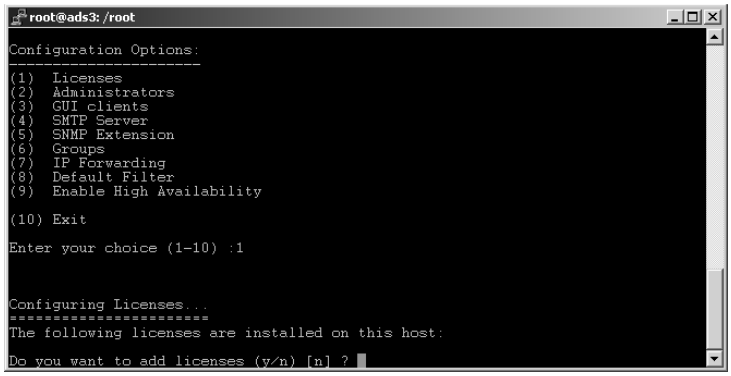
- **Save configuration**
  Select this option to save the configuration.

- **Execute FireWall-1 configuration program**
  The system will prompt for configuration of the Check Point software.

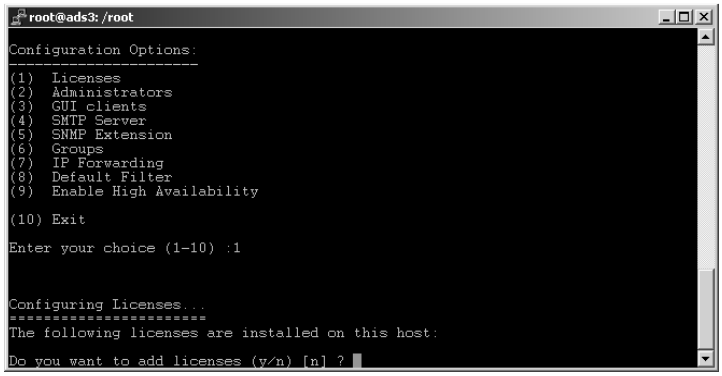
- **Quit**
  Select this if no configuration changes were made and exit.

- ## Check Point Configuration

Once FireWall-1® configuration program is executed, the display will show as follows:

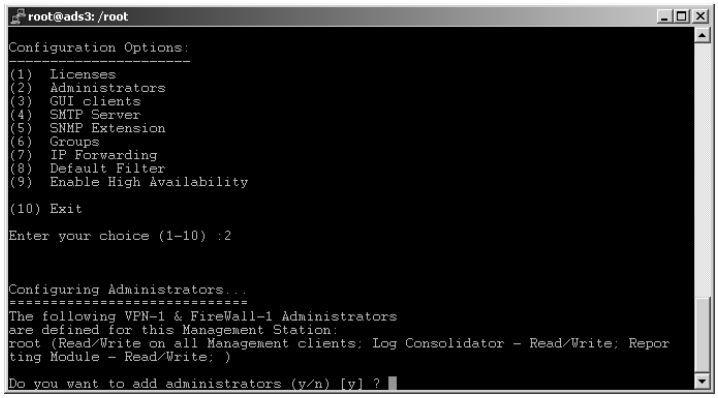



- **Configuring licenses**
  Upon choosing "y" in this section, enter the Check Point FireWall-1® license exactly as supplied by Check Point. This field is case sensitive.

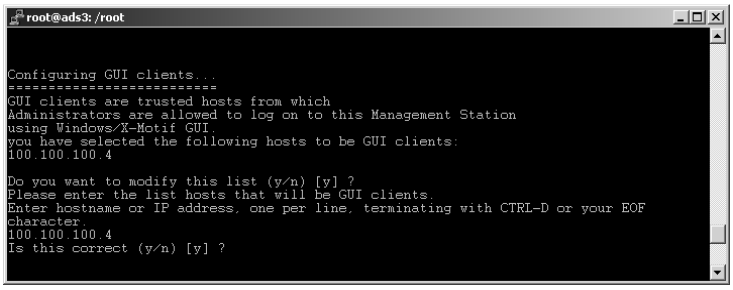



- **Configuring administrators**
  Enter a username, password, and permission information to establish a new administrator account. First enter a unique name for the new administrator account. Then type a unique password for the new administrator account and retype the previously entered password for confirmation. Lastly, pick the command (Read/Write All, Read Only All, or Customized) for the new administrator. Once the procedure is completed, the

following message will display: Administrator xxxx was added successfully and has OOO permission to all management clients.(xxxx and OOO are the name and the permission you offered to the new administrator.)



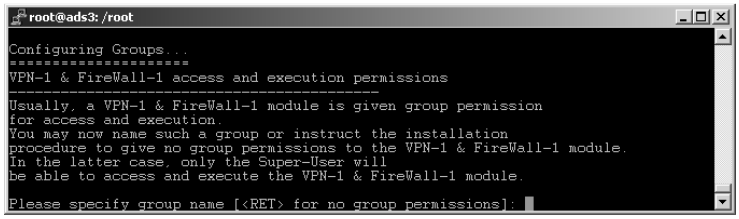

- **Configuring GUI clients**
  Enter the IP addresses to specify the GUI clients that allow connections to the appliance for installing security policies and receiving logging information. Only these specific IP addresses will launch GUIs to connect to the firewall. Type the IP address(es) after “Please enter the list hosts that you will be GUI clients.” Enter hostnames or IP addresses, one per line, terminating with CTRL+D or the EOF character. prompt.



- **Configuring SMTP server**
  A default value in the SMTP parameters will display on the screen. That will work under most circumstances. Change values only when the mail system is not functioning properly and after carefully eliminating other potential malfunctioning Configuration SNMP Extension


- **Configuring SNMP extension**
  Activate or deactivate SNMP(Simple Network Management Protocol) after the prompt.


- **Configuring groups**
  Sets up users (within a group) other than roots that can start or stop the FireWall-1® software.



- **Configuring IP forwarding**
  IP Forwarding is usually handled by the gateway's operating system (OS), but this arrangement provides no network security. The section indicates whether the IP Forwarding should be activated next time when the system is booted up.

```
root@ads3: /root
Configuration Options:
----------------------
(1)  Licenses
(2)  Administrators
(3)  GUI clients
(4)  SMTP Server
(5)  SNMP Extension
(6)  Groups
(7)  IP Forwarding
(8)  Default Filter
(9)  Enable High Availability

(10) Exit

Enter your choice (1-10) :7


Configuring IP Forwarding...
============================

Do you wish to disable IP-Forwarding at boot time (y/n) [y] ?
```

- **Configuring default filter**
  The Default Filter page selects a default security policy to be used when the system boot and FireWall-1® starts. After FireWall-1® starts, security policy will be enforce the security. Select the options: (1)Allow only traffic necessary for boot, or (2)Drop all traffic.

```
root@ads3: /root
Configuring Default Filter...
=============================

Do you wish to modify your /etc/rc.d/rc3.d boot scripts to allow a d
efault
filter to be automatically installed during boot (y/n) [y] ? y

Please note that when you change your default runlevel
you will need to link FW-1 startup scripts to that runlevel's direct
ory

Which default filter do you wish to use?
----------------------------------------
(1) Allow only traffic necessary for boot
(2) Drop all traffic
NOTE: If you are installing the VPN-1 & FireWall-1 module,
      and not reconfiguring, it is recommended you choose
      option (1) in order to allow communications with the
      VPN-1 & FireWall-1 management.  After installing a
      policy on the module from the management, you can
      reconfigure the default filter to option (2)

Enter your selection (1-2) [1]:
```

- **Enable high availability**
  Enable or disable High Availablity.

```
root@ads3: /root
Configuration Options:
----------------------
(1)  Licenses
(2)  Administrators
(3)  GUI clients
(4)  SMTP Server
(5)  SNMP Extension
(6)  Groups
(7)  IP Forwarding
(8)  Default Filter
(9)  Enable High Availability

(10) Exit

Enter your choice (1-10) :9


Configuring Enable High Availability...
=======================================


High Availability module is currently disabled.


Would you like to enable the High Availability module (y/n) [y] ?
```

## Restore the System to the Default Configuration

To reset the system to its factory default configuration, press the load default button on the front panel of the FWA-3310.


## Operating System Installation

Operating System is built in the FWA-3310; it is not necessary to install the Operation System.

## Upgrading the Software

- **FTP**
  To enable ftpd, ftp host-ip-address, cd /tmp and put files. (Standard windows 98 ftp) Users may adopt differential ftp, ex. cuteftp, ftp32, and so on. Upgrade or install via rpm, tar or any other file format.

- **Secure copy**
  Type "pscp -r -pw password filename user@ip-address:/tmp/filename" Users may adopt a separate secure copy, ex. openssh, standard ssh, and so on. Upgrade or installation via rpm, tar and any other format.

- ## Backing up the configuration

  There are no procedures to back up the provided configuration. Please back up the configuration per your requirement.

# 3. Product Specifications

## Specifications

- **CPU:** Intel® Pentium® !!! Processor up to 933MHz, FSB 133MHz
- **Chipset:** Serverworks Serverset 30LE chipset, support 133 MHz FSB
- **BIOS:** Award 2 Mb flash memory
- **Memory:** Up to 256MB Registered PC-133 SDRAM DIMM with ECC
- **LAN:** Triple Intel 82559 Fast Ethernet controllers, support 10/100 Base-TX with RJ-45 connectors
- **Storage:** One 64MB IDE DOM (Primary Master) and 20GB IDE HDD drive (Secondary Master, store Event log)
- **On-board I/O:** 1 x RS-232 port (Console), 3 x RJ-45 LAN ports on the front panel

## System and Environmental Specifications

- **Construction:** 19" Rack Mount, Heavy-duty steel chassis
- **Cooling system:** Three cooling fans
- **Controls:** Default setting switches
- **Indicators:** LED Displays for Power, LAN and HDD
- **Storage drives:** one IDE DOM and one HDD drive
- **Power supply:** Slim 200W switching power supply
- **Input:** 90 ~ 264 Vac Full Range @ 47 ~ 63Hz
- **Weight:** 4.5Kg
- **Paint color:** Black 4U 2X, Fabric Texture
- **Operating temperature:** 0 ~ 40℃ (32 ~ 104°F)
- **Storage temperature:** -20 ~ 75℃ (-4 ~ 167°F)
- **Operating humidity:** 5 ~ 95% @ 40℃, non-condensing
- **Storage humidity:** 5 ~ 95%
- **Dimension:** 426 mm W x 44mm H x 367.5 mm D
- **OS:** Hardened Linux
- **AP:** Inactive FireWall-1®/VPN-1 ™ Software Package of Check Point

# 4. Frequently Asked Questions (FAQs)

- **How can the configuration files be backed up?**

  Only default configuration is provided. Please backup the configuration files per your requirement.

- **How can the system password be restored once it's lost?**

  Press the load default button on the front panel of the FWA-3310.

- **How can the configuration files be edited?**

  Use the command "setup-fw" to edit the configuration file. Refer back to Chapter 2.4 for more information.

- **How can technical support be reached?**

  To request any technical support and/or additional information, please visit: http://www.advantech.com/support/index.asp