

# GB-750

## Firewall APPLIANCE

### Product Guide

*powered by*  
**GNAT Box**  
System Software



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**GB-750 Product Guide**

**July 2003**

## Technical Support

GTA includes 30 days installation support from the day you receive the initial shipment. GTA's direct customers in the USA should call or email GTA using the telephone and email address below. International customers should contact a local GTA authorized channel partner.

**Tel: +1.407.482.6925    Email: [support@gta.com](mailto:support@gta.com)**

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# 1 Introduction

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## GNAT Box Basics

Global Technology Associates, Inc., has been designing and building Internet firewalls since 1994. In 1996, GTA developed the first truly affordable commercial-grade firewall, the GNAT Box<sup>®</sup>. Since then, ICSA-certified GNAT Box System Software has become the engine that drives all GTA firewall systems.

Powered by GNAT Box System Software, GTA's firewall systems currently include the small-to-medium enterprise (SME) firewalls, GB-1500 and GB-1200; the RoBoX line, for remote office/branch office applications, including GB-750, GB-500, and GB-200; and GTA's powerful software-based products.

## Requirements

To connect the GB-750 Firewall Appliance, you will need:

- A power cord.
- Two Ethernet cables, one for each required network.
- A crossover cable to connect to a host or router, or a straight-through cable to connect to a hub or switch.

A power cord, a yellow crossover cable and a grey straight-through cable, as well as a null modem cable for the Console interface, are included with firewall appliances.

In addition, to use GNAT Box System Software, you will need:

- An understanding of TCP/IP networking.
- Network IP addresses for all network interfaces used.
- Netmasks for each attached network.
- Default route for External Network.
- Which services to allow inbound (if any).
- Which services to restrict outbound (if any).

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## Registration

To register, go to [www.gta.com](http://www.gta.com), click on Support and then the GTA Support Center link. If you already have an account, enter your user ID and password in the login screen; if not, click New Account, enter the profile information. Once you have completed the form, click Add to save the profile.

Return to the login screen and enter your user ID and password. Click on the Support Center link, then click on Product Registration in the Account Home screen for your support information. Enter your serial number and activation (unlock) code, then click Submit. Your new product will now appear in the View Registered Products screen, accessible from the Account Home page.

In addition to qualifying you for installation support, your product registration will allow GTA to inform you about upgrades and special offers.

### **Note**

If you cannot retrieve your registration code, or a code does not appear under Registered Products, please email support with a brief description of your problem in the body of the email. Include the product serial number and your Support Center User ID in the message subject.

## Activation Codes

All commercial GTA Firewalls use activation codes to protect software. For firewall appliances, the required code is pre-installed. Additional features require separate feature activation codes. Serial numbers and activation codes are printed on packaging and are also available under **View Registered Products** on the GTA Support site, [www.gta.com](http://www.gta.com). GNAT Box System Software can be copied for backup purposes.

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## Support

Installation ("up and running") support is available to registered users. If you have registered your product and need installation assistance during the first 30 days, contact the GTA Support team by email at [support@gta.com](mailto:support@gta.com). Include your product name, serial number, registration number, feature activation code numbers for your optional products, and a System or Hardware Configuration Report, if possible.

Installation support covers only the aspects of configuration related to installation and default setup of the firewall. For further assistance, contact GTA Sales staff for information about support offerings.

## Support Options

If you need support after installation and configuration to defaults, a variety of support contracts are available. Contact GTA Sales staff for more information. Contracts range from support by the incident to full coverage for a year.

Other avenues for assistance are available through the GNAT Box Mailing List, on the GTA website, found at [www.gta.com](http://www.gta.com), or through an authorized GTA Channel Partner.

## Upgrades

Once registered, you can view available upgrades in the GTA Support Center. If the Action field in the Registered Products section indicates that there is an upgrade for your product, click on the Free Upgrade link. When you return to the Registered Product List, click the product's serial number and see the Product Details section to obtain the new activation code. The section will also display previous activation codes. Upgrades are also available in Support Center Downloads. Only downloads for your version will be shown.

### **Caution**

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Back up your configuration before upgrading!

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## About This Guide

This Product Guide shows how to set up and install the GB-750 and change the factory settings to your network's default configuration. The **GNAT BOX SYSTEM SOFTWARE USER'S GUIDE** includes configuration functions, descriptions of GBAdmin and the Web interface, administrative tools and GNAT Box-specific terms.

A few conventions are used in this guide to help you recognize specific elements of the text. If you are viewing this in a PDF, color variations are also used to emphasize notes, warnings and new sections.

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### Documentation Conventions

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SMALL CAPS	FIELD NAMES IN BODY TEXT.
<b>BOLD SMALL CAPS</b>	<b>NAMES OF PUBLICATIONS.</b>
<b><i>Bold Italics</i></b>	<b><i>Emphasis.</i></b>
Courier	Screen text.
<b>Condensed Bold</b>	<b>Menus, menu items, buttons.</b>

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# Additional Documentation

For instructions on installation, registration and setup of a GTA Firewall in default configuration, see your GTA Firewall’s product guide; for optional features, see the appropriate Feature Guide. User’s Guides, Product Guides and Feature Guides are delivered with new GTA products; these manuals and other documentation for registered products can also be found on the GTA website, [www.gta.com](http://www.gta.com).

Documents on the website are either in plain text (\*.txt) or Portable Document Format (PDF) which requires Adobe Acrobat Reader version 5.0. A free copy of the reader can be obtained at [www.adobe.com](http://www.adobe.com). Documents received from GTA Support may also be in email or Microsoft Word format (\*.doc).

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## Documentation Map

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### Products and Options

GNAT Box System Software .....	GNAT Box System Software User’s Guide
GTA Firewall Installation .....	Product Guides
Global Management System for Firewalls.....	GMS User’s Guide
Reporting .....	GTA Reporting Suite User’s Guide
Content Filtering .....	Surf Sentinel Content Filtering Feature Guide
High Availability .....	H <sub>2</sub> A High Availability Feature Guide
Virtual Private Networking .....	GNAT Box VPN Feature Guide
VPN Examples .....	GNAT Box VPN to VPN Tech Docs

### Utilities & Information

Logging Utilities .....	GNAT Box System Software User’s Guide & Addendum
Database Maintenance .....	GMS & GTA Reporting Suite User’s Guides
Troubleshooting .....	Product and Feature Guides
Ports & Services .....	Product CDs
Drivers & NICs (GNAT Box Pro, Flash) .....	<a href="http://www.gta.com">www.gta.com</a>
Frequently Asked Questions .....	FAQs on <a href="http://www.gta.com">www.gta.com</a>
Web Interface, GBAdmin.....	GNAT Box System Software User’s Guide
Console interface .....	Console Interface User’s Guide

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# About GB-750

The GB-750 Firewall Appliance is a self-contained unit with the system software pre-installed. This guide describes and explains how to install and initially configure the GB-750. For configuration options and field descriptions see the **GNAT BOX SYSTEM SOFTWARE USER'S GUIDE**.

## Features

- 20,000 concurrent sessions
- Two versions available: 50 concurrent outbound users, or Unrestricted concurrent outbound users
- DNS, DHCP Servers
- Three 10/100 Ethernet ports
- ICSA-certified GNAT Box System Software
- IPSec VPN with 1 mobile user license
- Hardware VPN Acceleration
- Local Content List (LCL) filtering
- PPP/PPPoE/PPTP
- Secure Email Proxy (SMTP)
- Secure remote management
- Stateful Packet Inspection
- Time-based filters
- Transparent NAT (Network Address Translation)
- Two DB-9 serial interfaces
- USB interface
- User authentication

## Optional Features

- H<sub>2</sub>A High Availability
- Surf Sentinel
- Support Contracts
- Additional VPN mobile user licenses

## Additional Software Products

- GTA Reporting Suite
- GMS (Global Management System)

## Software Specifications

• Address Objects	150
• Concurrent Connections	20,000
• Maximum Concurrent Mobile VPNs	45
• DNS Domains	5
• DNS Hosts	255
• DNS Networks	80
• IP Aliases	50
• IP Pass Through Filters	100
• PPPs	5
• Outbound Filters	200
• Protocols	255
• Remote Access Filters	200
• Security Associations	90
• Static Maps	100
• Static Routes	100
• Time Groups	100
• Tunnels	100
• URL Access Lists	100
• Local Content Lists	75
• User Authentication	300
• VPN Objects	25

## Hardware Design

The GB-750 Firewall Appliance is a 1RU appliance with one cooling fan. The system has three high speed 10/100 Ethernet interfaces to ensure high performance and network design flexibility and two multifunction DB-9 serial interfaces to provide access for a serial console and a dial-up modem/ISDN TA. Flash memory stores and runs the pre-installed system software.

### **Caution**

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At least six (6) inches of clearance should be provided at the rear of the system to allow efficient cooling. Blocking fans or inadequate clearance for the exhaust vents can cause the system to overheat.

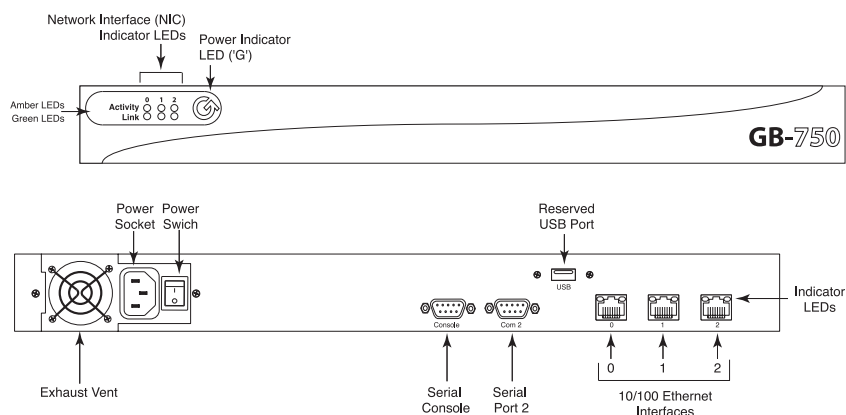
## Status Displays

The GB-750 has seven LEDs on the front panel, indicating power, connectivity and activity. When the red GTA logo on the front panel of the GB-500 is lit, the GB-750 is powered on. Two groups of three LEDs labeled 0, 1 and 2 correspond to the network interfaces; the amber LEDs blink whenever activity at any speed is detected by the firewall, while the green LEDs will be lit whenever the network interface is connected.

Three sets of lights on the back panel correspond to the indicator lights on the front, except that the colors are reversed: amber is link and green is activity.

### Warning

There are no user serviceable parts in the GB-750. Opening the unit will void the warranty on the system.



*GB-750 Front and Back Panel*

## LED Indicators – Front Panel

Red Power	When the firewall is powered up, the red GTA logo power LED indicator will be lit.
Green Link	A green LED is lit when the network interface is active.
Amber Activity	An amber LED is lit when data is being transmitted or received at any speed.

## Hardware Specifications

### Physical Specifications

Chassis	1.75" h x 9" d x 19" w ( 4.45 cm x 22.7 cm x 48.25 cm)
Weight	8 lbs (3.63 kg)

### Power Specifications

MTBF	(Mean Time Between Failure) Minimum—150,000 Hours
Input Voltage	95-135 VAC 180-265 VAC (Auto-switching)
Input Frequency	47Hz-63Hz

### Operational Specifications

Temperature	32° to 104° F (0° to 40° C)
Relative Humidity	10% - 90%, non-condensing

### Storage Specifications

Temperature	14° to 158° (-10° to 70°C)
Relative Humidity	5% - 95%, non-condensing

### Memory

CPU	733 Mhz VIA C3
Memory	128 Mb
Flash Memory	64 Mb

### I/O Interfaces

- 3 10/100 Ethernet interfaces. Ethernet 10Base-T on UTP Cat. 3, 4 and 5, and Fast Ethernet 100Base-TX on UTP Cat. 5. Interfaces 0, 1 and 2 are active and available.
- 2 RS-232 (DB-9). The Serial Console port should be set to 38,400 bps, 8 bit, 1 stop, no parity and flow control to Hardware.
- 1 USB port. Reserved.

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## VPN Acceleration

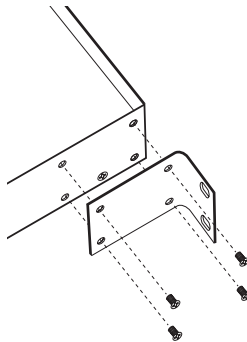
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Chip	Hi/fn 7951 security accelerator chip
Memory	128 KB high speed buffer
Throughput	64 Mbps
Compression	LZS and MPPC at 43 to 99 Mbps
Encryption	DES, Triple-DES and RC4 at 70 to 188 Mbps
Authentication	SHA-1 and MD5 at 66 to 79 Mbps
	Public Key, RSA and DH, 2 to 8 connections/sec using 1024 bit keys
	Hardware random number generator
Form Factor	Mini-PCI type III
Power	1.2 Watt Maximum
Operating Temperature	32° to 140° F (0 to 60 °C)

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## Mounting

Use the supplied screws and mounting brackets to attach the system unit to a standard equipment rack. Align the mounting bracket screw holes to the chassis screw holes, insert the screws and tighten.



*19" Rackmount Bracket*



## 2 Installation

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### Preinstallation

Installing the GB-750 requires that the system be connected to your local area network (LAN). This allows the administrator to connect to the GB-750, configure the network settings to match the local network address scheme and perform connectivity tests. The GB-750 can be configured and administered using any of the user interfaces. Installation procedures for GBAAdmin and the Web user interfaces are described in this document.

Note that the IP Address 192.168.71.254 is the factory setting for the Protected Network interface (0) port on the GB-750.

### Install Utilities and Documentation

Prior to installation of the GB-750, install the utility software and documentation on your workstation. If the workstation is running Windows 95, 98, NT, Me, XP or Windows 2000, there is an automated installer on the Installation CD that will install these files. If the workstation is running a non-Windows based OS (e.g., Macintosh or Unix) or an older version of Windows, locate the directory on the CD-ROM for your OS and use the Read Me document to install the documentation and utility programs.

### Temporarily Configure Workstation

The factory network information settings on the GB-750 are unlikely to match your network, so you must temporarily configure a local workstation to match the GB-750's network information settings in order to configure the GB-750 and integrate it into your network.

#### **Note**

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Please refer to the **GNAT Box SYSTEM SOFTWARE USER's GUIDE** for specific information about editing Network Information.

Once you are able to connect to the firewall, the network information can be changed to match the existing address scheme on your network and you can reset your local machine to its original IP Address.

## LAN Using the Default IP Network

If your local area network is currently using the 192.168.71.0 network, make sure that the IP address 192.168.71.254 is not currently assigned to any device on your network. If a device *does* have this IP address assigned:

- Set up an isolated network that contains only the GB-750 Firewall Appliance and a workstation that will be used to configure the system; connect the GB-750 and your workstation to a hub that has no other connections.
- Optionally, use an Ethernet crossover cable and connect your workstation directly to the GB-750's Protected Network interface, (port 0). A yellow crossover cable is included with hardware appliances.

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## Connect the GB-750

Connect the GB-750 to a hub or switch on your local area network using the Protected Network interface, (the first interface port 0, see illustration GB-750 Rear Panel) and a standard (straight-through) network cable. By default, 0 is assigned the IP address 192.168.71.254. Use a crossover cable to connect the firewall directly to a host or router.

Connect the GB-750 to a power outlet, then turn on the power using the switch on the back panel. This will cause the boot process to begin.

The system will be operational in about one minute. Check to see that the Power LED on the front panel is lit. The Link LED on NIC "0" should be lit.

Installation of the GB-750 is complete. The next step is to enter your basic network information in the GB-750's default configuration.



## 3 Set Up Default Configuration

The following sections will describe how to set up your GB-750 in the default configuration, in which all internal users are allowed outbound and no unsolicited inbound connections are allowed.

### Basic Configuration using Web Interface

Start a web browser on your workstation and enter the following URL into the browser Address field: `https://192.168.71.254`.

#### Note

Web setup requires a browser that supports frames.

If your network and cables are configured correctly, you will be prompted with a Security Alert dialog indicating that the Certificate Authority is not one you have chosen to trust; that the security certificate date is valid; and that the name on the security certificate does not match the name of the site.



*Security Alert*

Select Yes, or if your alert differs, choose the selection that allows you to proceed. You will establish your GB-750 certificate once you have logged on to the firewall. See the **GNAT BOX SYSTEM SOFTWARE USER'S GUIDE**.

Next, in the login screen, enter the default user ID, "gnatbox" (all lower case), press the <Tab> key, then enter the default password, also "gnatbox" (all lower case). Select **OK** or press the <Return> key when finished.



*User ID and Password*

### Note

GTA recommends changing the default user ID and password. See the **GNAT BOX SYSTEM SOFTWARE USER'S GUIDE** for instructions.



*Web Interface*

### Exception

GNAT Box System Software is known to be incompatible with Internet Explorer 5 for Macintosh. If your browser does not allow you to continue past the Security Alert screen in order to set up your new GB-750, GTA recommends using another compatible browser such as Mozilla ([www.mozilla.org](http://www.mozilla.org)), Netscape ([www.netscape.com](http://www.netscape.com)) or Opera ([www.opera.com](http://www.opera.com)) to administer your firewall, that allows you to use SSL encryption, or using a compatible browser, GBAdmin or Console to install GB-750, disable SSL, then use Internet Explorer 5 with SSL encryption disabled. See Technical Documents on the CD and on [www.gta.com](http://www.gta.com) for information about installing the GTA certificate or disabling SSL encryption.

## Network Information

The GB-750 comes configured with factory settings which need to be changed to match our network settings. Click on Basic Configuration and expand the menu to select Network Information. On the Network Information screen:

- Configure IP and netmasks, (expressed in either dotted decimal or CIDR notation), for your External and Protected Networks.
- Disable the DHCP option on the external interface if necessary, as it is set by default.
- Set the Default Route to your Internet router IP address.
- Set the Host Name to that given to the firewall in your DNS server.

Once you have completed Network Information, apply the changes by clicking on the **Save**. The GB-750 will now be on a different logical network (assuming you've changed the default IP address for the Protected Network) and you will not be able to access the GTA Firewall from your workstation, since the firewall will now be on a different network.

The GB-750 has three network interfaces. Only one External and one Protected Network interface are required to initially configure and test the GTA Firewall. The other interfaces can be defined as any of the three network types: Protected, External or PSN (Private Service Network, GTA's DMZ). See the **GNAT BOX SYSTEM SOFTWARE USER'S GUIDE** for more information about the functions of the network interface types.

**GNAT-Box Network Information**

Logical Interfaces

Logical Name	Type	IP Address	NIC	DHCP	Gateway
EXTERNAL	External	0.0.0.0/24	rl1	<input type="checkbox"/>	<input type="checkbox"/>
PROTECTED	Protected	192.168.71.254/24	rl0	<input type="checkbox"/>	<input type="checkbox"/>
PSN	PSN		rl2	<input type="checkbox"/>	<input type="checkbox"/>

Network Interface Cards

NIC	MAC Address	Connection	Option	MTU
rl0	00:00:24:C0:00:6C	AUTO	default	1500
rl1	00:00:24:C0:00:6D	AUTO	default	1500
rl2	00:00:24:C0:00:6E	AUTO	default	1500

Host name:

Default gateway:

*Network Information*

## Re-configure Workstation

Re-configure your workstation back to its original IP address, now on the same network as the GTA Firewall.

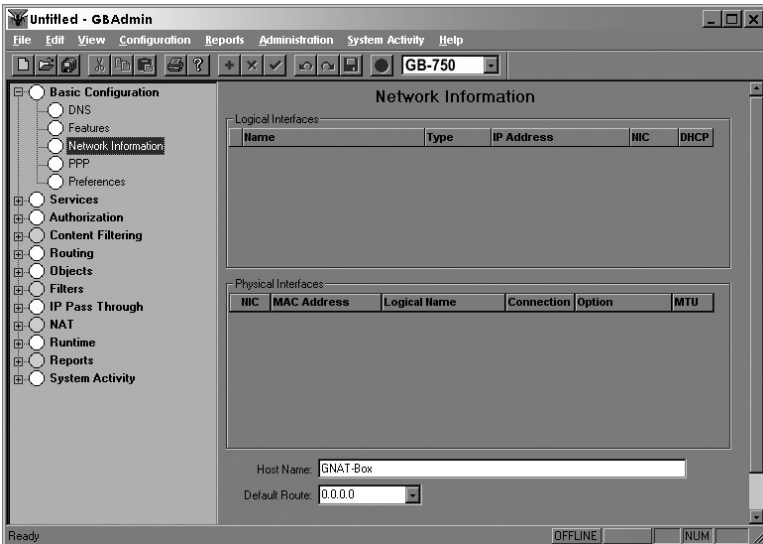
## Access the GB-750

After re-configuring your workstation, you can access the GB-750 using the new IP address assigned to the Protected Network interface.

The GB-750 should now be active and functioning in default security mode, (all internal users are allowed outbound and no unsolicited inbound connections are allowed). You can now perform any additional configuration tasks. See the **GNAT BOX SYSTEM SOFTWARE USER'S GUIDE** for more information.

## Basic Configuration using GBAdmin

Select GBAdmin (GBAdmin.exe) from the program menu. This opens a blank GBAdmin interface, similar to the following screen: Select File from the toolbar, then select Open.

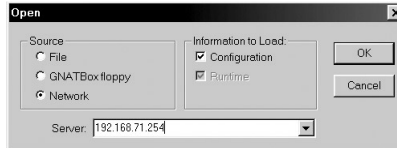


*GBAdmin Interface*

### Note

GBAdmin must be installed on a local workstation running Windows 95, 98, NT 4.0, XP, Me, or Windows 2000.

In Open File dialog box, in the Source area, select Network. In the Server field, enter the default IP Address for the GB-750 (192.168.71.254). Make sure that there is a check in the box next to Configuration in the Information to Load section. Once this is complete, press the **<Return>** key or click **OK**.



*GBAdmin Open*

The system will prompt you for a user ID and password. Enter the default user ID, which is "gnatbox" (all lower case), then press the **<Return>** key. Next, enter the default password, which is also "gnatbox" (all lower case), then press the **<Return>** key or select **OK** when finished.



*User ID and Password*

### Note

GTA recommends changing the default user ID and password. See the **GNAT Box SYSTEM SOFTWARE USER'S GUIDE** for instructions.

## Network Information

The GB-750 comes configured with factory settings which need to be changed to match our network settings. Click on Basic Configuration and expand the menu to select Network Information. On the Network Information screen:

- Configure IP and netmasks, (expressed in either dotted decimal or CIDR notation), for your External and Protected Networks.
- Disable the DHCP option on the external interface if necessary, as it is set by default.
- Set the Default Route to your Internet router IP address.
- Set the Host Name to that given to the firewall in your DNS server.

Once you have completed the Network Information form, apply the changes to the GB-750 by clicking on the single diskette icon on the tool bar to save the data. The GB-750 will now be on a different logical network (assuming you've changed the default IP address for the Protected Network).

The GB-750 has three network interfaces; two are used for Protected and External Networks. The other network interfaces can be defined as any of the three network types: Protected, External or PSN (Private Service Network, GTA's DMZ). Only External and Protected Network interfaces are required to initially configure and test the GTA Firewall. See the **GNAT BOX SYSTEM SOFTWARE USER'S GUIDE** for more information about the functions of the network interface types.

### Network Information

Logical Interfaces

	Name	Type	IP Address	NIC	DHCP
1	EXTERNAL	External	0.0.0.0/0	rl1	<input type="checkbox"/>
2	PROTECTED	Protected	192.168.71.254/24	rl0	<input type="checkbox"/>

Physical Interfaces

NIC	MAC Address	Logical Name	Connection	Option	MTU
rl0	00:D0:68:00:47:D1	PROTECTED	AUTO	Default	1500
rl1	00:D0:68:00:47:D2	EXTERNAL	AUTO	Default	1500
rl2	00:D0:68:00:47:D3		AUTO	Default	1500

Host Name:

Default Route: EXTERNAL

### *Network Information*

Once you click Save on the Network Information screen you will not be able to access the GB-750 from your workstation, since the firewall will now be on a different network.

## Re-configure Workstation

Re-configure your workstation back to its original IP address, now on the same network as the GTA Firewall.

## Access the GB-750

After re-configuring your workstation, you can access the GB-750 using the new IP address assigned to the Protected Network interface.

The GB-750 should now be active and functioning in the default security mode, (all internal users are allowed outbound and no unsolicited inbound connections are allowed). You can now perform additional configuration tasks. See the **GNAT BOX SYSTEM SOFTWARE USER'S GUIDE** for more information.

## 4 Troubleshooting

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### Guidelines

GTA Support recommends the following guidelines as a starting point when troubleshooting network problems:

1. Start with the simplest case of locally attached hosts.
2. Use IP numbers, not names. Your problem could be DNS.
3. Work with one network segment at a time.
4. Verify your system configuration. The verification check is the best method of ensuring that your system is configured correctly. Correct all errors and warnings listed.
5. Your first tests should be connectivity tests. Ping and Traceroute are very useful tools for testing connectivity.
6. Make sure the network cabling is connected to the correct network interface. Some useful guidelines are:
  - In a GB-750, the port/NIC numbers, MAC addresses and logical names are listed on the Network Information screen and in the Configuration Report.
  - Use the trial and error method. Connect one network cable and use the ping facility to reach a host on the desired network. Move the cable and use ping until you are successful. Connect the next network cable and perform the test again with the two remaining network interface cards.
  - Generate a hardware report from one of the user interfaces. Check the report to ensure all your network devices have been recognized by the system at boot time.

# Troubleshooting Q & A

## 1. Why are the amber LEDs on the back not lighting up?

This indicates that you do not have network connectivity. You may have selected the wrong network connection type. Check the Network Information screen to ensure the appropriate connection type is selected. If you have selected one of the specific settings, reset to AUTO, the factory setting.

## 2. Why can't *all* hosts behind the firewall reach the Internet?

This is usually a routing problem. The Traceroute facility can be very useful in debugging routing problems. Check for these problems:

- Are the hosts that can't reach the Internet on a different network subnet?
- Have you added a static route to the GB-750 to tell it which router is used to reach the problem network? Have you set the router's default route to be the GB-750? Have you set the default route for hosts on the problem network to be the router?
- Is the wrong IP address assigned? All network interfaces on the GB-750 must be on different logical networks.
- Is the default route assigned incorrectly? The default route must always be on the same subnet as the network interface of the host (this is true for all hosts, not just the GTA Firewall). For a GB-750, the default route must be an IP address on the network which is attached to the External Network interface.

### ***Exception***

When using PPP, PPTP or PPPoE, the default route is not necessarily on the same subnet. The route is assigned by your PPP provider.

## 3. Why can't *one* host behind the firewall reach the Internet?

This indicates that the default route is assigned incorrectly (or not at all) to hosts on the Protected or Private Service networks. All hosts protected by the GB-750 must use the IP address of the GB-750's network interface for the respective network. Hosts that reside behind routers or other gateways on these networks generally use the IP address of the gateway or router.

## 4. Why can't I access the Web interface from the Protected Network?

The default Remote Access filter set is generated from the configuration parameters entered in the Network Information screen. It is possible that the GB-750's Protected Network interface is on a different subnet from the remote host. Check the Remote Access filter for the Web interface; it may need to be adjusted.



## 5. Why do I get errors starting GBAAdmin? Why is online help not displayed?

GBAdmin requires Microsoft Internet Explorer 5.x or later installed on your workstation. Components from Internet Explorer are used to display the online help information.

For more Troubleshooting suggestions, see the **GNAT BOX SYSTEM SOFTWARE USER's GUIDE** and GTA's website at [www.gta.com](http://www.gta.com).

## 6. Why can't I see or ping the Protected Network interface?

You may have the wrong cable for your connection.

- For a direct connection (GB-750 to host or router) you need a cross-over cable.
- For a connection to a hub or switch you need a straight-through cable.

A yellow crossover cable and grey straight-through cable are included with hardware appliances.

### Note

Distinguish between crossover cables and straight-through cables by comparing the connection ends. On a straight-through cable, the wire order matches; on a crossover cable, the first three of the four cables are in reverse order.

## 7. I lost my user name and/or password. How can I log on to my firewall ?

If login information has been irretrievably lost, a firewall can be reset to factory defaults, erasing all configuration data from the currently used memory partition and resetting the user name and password to `gnatbox/gnatbox`. The configuration data can only be restored by loading a saved configuration with known user name and password, or by manually entering the information.

To reset your firewall to factory defaults, attach either a terminal (using a serial console cable), or a workstation with terminal emulation software (using a DB9 null modem cable). Enter these settings for the console connection:

Emulation	VT 100
Port	COM port used on the system.
Baud Rate	38400
Data	8
Parity	None
Stop	1
Flow control	Hardware*

\* Set flow control to "None" as an alternative to hardware flow control.

Power on the GTA Firewall. The following words will display:

```
GNAT Box System Software 3.4.0
loading...
```

When the word “loading” appears, immediately press <Control R>. The system will begin to load, and configuration and hardware data will appear on screen. Finally, a confirmation question displays:

```
Are you sure you want to reset your GB-750 configuration?: ("yes"
or "no")
```

To reset to factory defaults, type the word “yes” in **lower case** letters. Typing any other key will reboot the system without resetting to defaults. There is no time out, the reset confirmation question will remain until a key is pressed.

## 8. How do I revert to my previous configuration after a version upgrade?

The GB-750’s flash memory is in two sections; one contains the current software version plus any saved configuration, the other contains the previous software version and configuration. A new GB-750 has two identical slices.

When the GB-750 is upgraded to a new runtime, the upgrade process automatically overwrites the memory slice not in use with the new software version and the existing configuration, leaving the production firewall version and configuration intact. When the firewall is rebooted, the updated memory slice will load by default.

To select a memory slice other than the default, set up the console interface as described in Troubleshooting question #7.

When the system boots up, the memory slice information will load. When the word “Default” appears, immediately type the number of the slice you wish to load.

```
1  GNAT Box slice 1
2  GNAT Box slice 2
Default: 1
```

## 9. How do I use the memory slice feature for live configuration testing?

The memory slice feature can be used to test a new firewall configuration in production while preserving the current configuration in the opposite memory slice. In the following example, memory slice 1 contains the production configuration, and memory slice 2 is used for test a configuration.

1. Save a copy of the current configuration.
2. Reboot the firewall using the console interface.
3. Select and boot memory slice 2.

### **Caution**

---

The test configuration will now be your active firewall.

4. Upload the configuration saved in step #1.
5. Switch to the Web interface or GAdmin to make advanced configuration changes; the slice will load by default until another is selected.
6. To revert to the production configuration, reboot the firewall using the console interface and select memory slice 1.

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