

SYBERGEN NETWORKS

*SYGATE*TM 3.1

USER GUIDE

WWW.SYGATE.COM

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SYGATE 3.1

SyGate 3.1 is software product that enables multiple users on a local network to share a connection to the Internet through a single machine that acts as the gateway. With SyGate 3.1, users on a small network (including laptops) can conveniently share simultaneous Internet access inexpensively. SyGate runs on Windows 95, Windows 98, and Windows NT systems and supports many kinds of Internet connections, including analog modems, ISDN, cable modems, xDSL, and DirecPC.

SyGate 3.1 from Sybergen Networks is software that enables multiple users on a local network to share a connection to the Internet through a single machine that acts as a gateway. With SyGate 3.1, users on a small network (including laptops) can conveniently share simultaneous Internet access inexpensively. SyGate runs on Windows 95, Windows 98, and Windows NT systems and supports many kinds of Internet connections including analog modems, ISDN, cable modems, xDSL, and DirecPC.

Key Components

SyGate 3.1 consists of a core application (SyGate Server) and an optional client component (SyGate Client):

SyGate Server is installed on a workstation that has access to the Internet via analog modem, ISDN, cable modem, xDSL, or DirecPC. The SyGate Server manages all aspects of connecting from workstations on the local network to the Internet via an ISP. The SyGate Server handles these tasks in the background and its operation is transparent to users.

SyGate Client is an optional component that can installed on any workstation in the local network. The SyGate Server has the SyGate Engine, which manages the Internet connection, but the Client does not. You would install the client software to perform specialized tasks, such as to check the status of the Internet connection or to explicitly dial-on-demand or hang up. For example, you might install the SyGate Client on an administrator's or power user's machine so that they can remotely manage the SyGate Server from their own workstation rather than the inconvenience of physically going to the server machine.

Key Benefits

SyGate 3.1 provides the following benefits:

Easy to Install. SyGate installs in minutes and usually requires no additional configuration. SyGate Diagnostics verifies your system components during installation to ensure that SyGate will run smoothly. You need to install only the SyGate Server component because, unlike proxy server products, installing the client component on other workstations is *optional*.

Easy to Use. SyGate has an intuitive graphical user interface that any Windows user can navigate. SyGate starts up and runs in the background without manual intervention. SyGate connects to the Internet automatically, on demand, as a background task whenever it detects Internet traffic on the local network. Rather than needing to manually dial the Internet each time, users can continue working uninterrupted, transparently sharing the connection with other users while they browse the World Wide Web, send and receive e-mails, chat, use ftp, and conduct other activities. Network users on non-

Windows client machines (Macintosh, Solaris, and Linux) can also access the gateway via TCP/IP.

Easy to Administer. The SyGate Client enables users to remotely monitor and manage the SyGate Server from any workstation on the TCP/IP network. SyGate Diagnostics can verify your system components anytime during operation to help identify configuration or connection problems. SyGate maintains logs of usage and configuration settings that can be easily inspected as needed. Although usually not necessary, SyGate is highly configurable and can be adapted to the needs of most any small network.

Cost-Effective. SyGate enables multiple network users to simultaneously share a single Internet connection, which eliminates the cost of additional phone lines, wiring, modems or adapters, and ISP accounts. SyGate does not require a dedicated server. SyGate delivers all the capabilities of similar products at an attractive price point.

Web Site Access Control. SyGate can be configured to *prevent access* to certain undesirable web sites ("black list" sites), as well as *restrict access* to only certain desirable web sites ("white list" sites). This password-protected feature allows parents to determine suitable web content for their children.

Firewall Protection. SyGate can be configured, via its port blocking technology, to prevent outside intrusion of your local network from the Internet, ensuring that your network remains private even while connected to the Internet.

Highly Supported. SyGate's dial-on-demand feature SyGate provides extensive online help for on-demand support. SyberGen provides responsive product support via its web site (www.sygate.com) and email.

Comparison with Proxy and Hardware Solutions

SyGate 3.1 compares favorably with proxy and hardware solutions that are more costly to purchase, set up, and maintain:

	SyGate 3.1	Proxy	Hardware
Configuration	Automatic	Reconfigure every application running on the client, then reconfigure the server to resolve any conflicts that might arise.	Automatic
Adding Applications	No changes needed	Determine whether the application supports proxies and which port it uses. Configure the port on the server and configure the application to use the port. After learning that the port is already in use, create a gateway to another port, reconfigure the application, and hope it works.	
Changing Servers	Automatic	Manually reconfigure the proxy server and start over.	Automatic
Transparency	Simply "telnet DomainName.com"	Configure the telnet server and client, telnet to the proxy server, and open DomainName.com.	Simply "telnet DomainName.com"
Feedback	Displays detailed messages that describe connecting events, such as finding the site, connecting to the site, and opening pages.	Displays only "connected" and, after a long time, you are informed that a proxy error occurred.	Depends on the manufacturer
Compatibility	HTTP, HTTPS, POP3, NNTP, SMTP, TELNET, FTP (PASV mode), IRC, ICQ, MS CHAT, RealAudio (TCP mode) and	Reliant upon third-party software with individual manual configuration.	Very limited support.

	many other networking applications, including Quake II, StarCraft, and Diablo.		
Purchase & Replacement	Download trial version before purchase. Downloadable patches and upgrades.	Download trial version before purchase. Downloadable patches and upgrades.	Purchase and install the device, see if it works, and return it if it fails to obtain a refund or replacement.

SyGate 3.1 Licensing

To get a fully-licensed version or to upgrade from a previous version, you need to purchase a SyGate license and obtain a serial number and registration code that allow you to "unlock" the trial version.

SyberGen offers a variety of licensing options (3-user, 6-user, 10-user, 15-user, 20-user, and 25-user). A license includes one SyGate Server and as many client licenses as you purchased. For example, the 3-user license includes one SyGate Server and up to three concurrent client users. For pricing information, see the Sybergen web site at <http://www.sybergen.com>.

About Sybergen Networks

Sybergen Networks develops and markets Internet/intranet access sharing and management software for the growing small office, remote office, and home office ("technical telecommuter") marketplace.

Sybergen's first software product, SyGate 1.0, quickly became a "stealth" favorite among Internet aficionados when it was introduced in early 1998. Sybergen is now shipping SyGate 3.1 as well as other Internet/intranet software titles and is actively developing new products to easily set up and manage secure Internet/intranet access. Sybergen also partners with leading hardware companies for bundled solutions and offers partnership programs for VARs, ISPs, and systems integrators.

For the latest information about Sybergen products, see the Sybergen web site at <http://www.sybergen.com>.

Contacting Sybergen

Sybergen sells its products directly through its web site at <http://www.sybergen.com>. The web site provides downloadable trial versions of its software as well as product literature, documentation, and a FAQ for this product.

To contact Sybergen:

Sybergen Web Site	http://www.sybergen.com
Sybergen Email	support@sybergen.com
Product Support for SyGate 3.1	http://www.sygate.com/support.htm
Mailing Address	42808 Christy Street Suite B-100 Fremont, CA 94538 USA

INSTALLATION

Verifying System Requirements

The system on which you will install the SyGate 3.1 software must meet the following minimum requirements. Requirements differ for Server and Client workstations.

Server System

SyGate Server software runs on a workstation that connects to the Internet via an analog modem, ISDN, xDSL, cable modem, or DirecPC.

Component	Requirement
Supported Platforms	One of the following operating systems: Windows 95 Windows 98 Windows NT 4.0 (Service Pack 3 or higher)
Processor	486 or higher for analog or ISDN modem sharing 586 or higher for xDSL or cable modem sharing
Disk Space	10MB or more available disk space
Memory	32MB or more
Network Connection	Ethernet Network Interface Card (NIC) and software
Internet Connection	Internal or external analog, ISDN, xDSL, or cable modem, or DirecPC
Network Protocol	TCP/IP (with Winsock 1.1 or higher)
ISP Account	An ISP account with Microsoft DUN 1.2 (or higher) or America Online 4.0 (or higher), a cable modem ISP, an xDSL IDP, or a DirecPC account.

Client System

SyGate Client software runs on any workstation that has access to the workstation on which the SyGate Server is installed.

Component	Requirement
Supported Platforms for optional SyGate client software	One of the following operating systems is required to use the optional SyGate client software: Windows 95 Windows 98 Windows NT 4.0 (Service Pack 3 or higher) Users on the following platforms can also share, over the local TCP/IP network, the Internet connection managed by the SyGate server: Apple Macintosh, Sun SparcStation, or Linux. To access the shared Internet connection, you must manually assign the default gateway address to the IP address of the SyGate Server.
Processor	486 or higher

Disk Space	10MB or more available disk space
Memory	32MB or more
Network Protocol	TCP/IP (with Winsock 1.1 or higher)
Network Connection	Ethernet Network Interface Card (NIC) and software

Network Configuration

SyGate 3.1 runs on workstations connected by Ethernet networks (but *not* ATM or token ring networks). Components of an Ethernet network include cables, network interface cards (NICs) in each workstation, and possibly hubs. This section briefly describes Ethernet network configuration requirements.

Cables

Ethernet networks use two types of cables: UTP or COAX, depending on throughput requirements:

Cables	Unshielded-Twisted Pair (UTP) (10 MBPS and 100 MBPS networks)	Thin Coaxial Cable (COAX) (< 10 MBPS networks)
Connector Type	RJ-45	BNC
Standards	10Base-T	10Base-2

For network cabling, follow these guidelines:

- For UTP cable, you need a *hub* or a *cross-over cable* (which can connect two computers without a hub).
- For COAX cable, you need two *terminators* instead of a hub.
- For other types of network cards, see your network card vendor's documentation.
- Other types of connections, such as normal telephone wire, power lines and some wireless network cards, are also supported in SyGate 3.1.

Network Interface Cards (NICs)

Every networked workstation needs to have a NIC (also known as a *network adapters*) installed and connected to the network cables. The NIC enables each networked PC to communicate with other computers or devices on the network.

Hubs

A hub is a centralized connection device that concentrates cables for efficient connection and easy maintenance. Hubs are used whenever 10Base-T or UTP cabling is used.

Preparing to Install

Before you install the SyGate 3.1 software, be sure to complete the following steps:

Checking your TCP/IP Settings

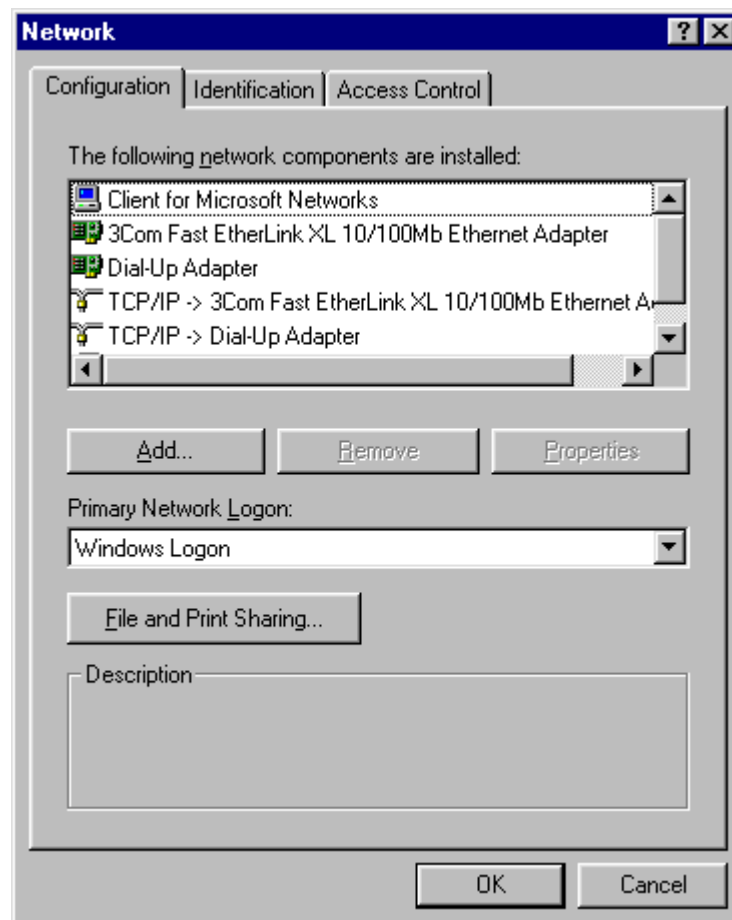
The SyGate Server and Client components communicate using the TCP/IP protocol. The SyGate installation procedure determines whether the target workstation is properly configured with TCP/IP before installing the software. Installation succeeds only if the TCP/IP stack exists and the network adapter is properly bound to the TCP/IP protocol.

In Windows 98 and Windows NT 4.0, the TCP/IP stack is usually installed by default when you install the network adapter. However, on Windows 95, the TCP/IP stack is not automatically installed by default. Instead, you must install TCP/IP manually according to the instructions in Microsoft's and your NIC vendor's documentation. Note that TCP/IP installation may require you to insert your original Windows 95 installation CD.

Note: In Windows 95, you might need to explicitly bind your network adapter to the TCP/IP protocol.

To view the TCP/IP settings for a system: Choose Settings > Control Panel. Double-click the Network icon.

1. On the Configuration tab, scroll the list of network adapters and select an adapter that is configured for TCP/IP. Click the Properties button to display the properties for this network adapter.



Checking Your Internet Connection Settings

To share an analog modem or ISDN via a serial port, you need to properly configure the Dial-Up Networking Profile for your ISP (Start > Programs > Accessories > Dial-Up Networking). You need to be able to successfully connect to your ISP and save your password (which is required to support SyGate's Dial-on-Demand feature). For configuration instructions, see your ISP's documentation.

Note: For ISDN via Ethernet, xDSL, cable modem, and DirecPC, you need to verify that these devices can connect to your computer through Ethernet.

Setting Up America Online

SyGate 3.1 requires America Online 4.0 to use the Dial-on-Demand feature. You must configure America Online to save your password. In addition, sharing AOL has the following requirements:

Share Connection to AOL: If you dial to AOL on the computer running the SyGate Server, the other computers can access the Internet but they *cannot* log in to AOL.

Multiple AOL Accounts: To enable multiple people to use multiple AOL accounts, you must share a connection to an ISP *other than* AOL.

Setting Up Cable Modems, xDSL, and DirecPC

For SyGate Server workstations that are connected via a cable or xDSL modem, you need two NICs: one for the Internet connection and another to connect to the local network. Using two NICs creates a secure separation between your local network and the Internet and also ensures that local network traffic won't create extra load on the backbone. SyGate also works with DirecPC 2.0 and certain brands of one way cable modems (such as the SurfBoard 1200).

Installing the Software

This section describes how to install the server and client components of the SyGate 3.1 software on a network workstation.

Downloading the Software

You download the SyGate 3.1 software from www.sygate.com. The software comes in a single, self-extracting installation file that you run to install either the SyGate Server or the SyGate Client component.

To download the SyGate software:

1. Connect to the Internet, if you have not already done so.
2. Using your web browser, go to www.sygate.com.

Follow the instructions on the web site to download the SyGate software.

You normally download the software to a temporary installation directory (such as c:\temp) on the workstation on which you want to install the SyGate software (usually the SyGate Server machine). If you are installing on other workstations, you can simply copy the download file to those workstations. Alternatively, put the download file in a shared directory to which those workstations have access so that you do not need to copy the installation file.

Note: Installing the SyGate Client software is optional.

Proceed to the installation instructions for the SyGate Server or Client.

Server Installation

1. To install the SyGate Server component on a workstation:
2. Determine the workstation on which you will install the SyGate Server software. This system *must* have an Internet connection and must meet the minimum system requirements described in Server System earlier in this document.
3. Verify that your network adapter card and software is properly installed and running according to the vendor's instructions.
4. Verify the ISP connection on this workstation, following the procedure you normally use to connect to your ISP.
5. Close any extra open applications or windows.
6. Do one of the following:
 - If you are installing from a downloaded installation file, complete the procedure in Downloading the Software earlier in this section to obtain the download file and store it in a temporary installation directory.
 - If you are installing from a SyGate install CD, insert the CD into the CD-ROM drive on your workstation.
7. In the Windows Explorer or NT Explorer, double-click the self-extracting installation file to run the SyGate Setup program. After decompressing, the Welcome window appears.
8. Click Next. The Software License Agreement window appears. Review the license agreement, scrolling as needed, and then click Yes. The Choose Destination Location window appears.
9. If you want to change the destination location for the SyGate software, click the Browse button. In the Choose Folder dialog box, type the target path or select a target folder from the Directories list, and then click OK. If the specified path does not exist, Setup prompts you to click Yes to create a new folder.
10. Click Next. The Select Program Folder window appears. Edit the Program Folder name, if you want.
11. Click Next. Setup copies the software files to the destination location, and then prompts you to indicate whether this is a server or client installation. Select Server,

and then click OK. Setup starts the SyGate Diagnostics and begins testing your system configuration, including:

- System settings
- Network adapters
- TCP/IP protocol and settings

Note: If any of these tests fail, Setup displays a message describing the problem and suggests possible actions. Click OK, and then click Exit to exit Setup. You need to correct the problem first, and then run the SyGate Diagnostics again. See *Troubleshooting Your Installation* in this document for more information. Setup displays the SyGate Diagnostics window, which prompts you to connect to the Internet before continuing.

If you are not currently connected to the Internet, follow the procedure you normally use to connect to your ISP, and then return to this window.

12. Click Continue. (If you click Skip, you can bypass the remaining tests and run the SyGate Diagnostics later. However, before you can run the SyGate Manager, you'll need to successfully complete the SyGate Diagnostics). SyGate Diagnostics verifies the ISP connection as well as TCP/IP settings. If your configuration is correct, Setup displays a message indicating that the test was successful.

Note: If any of these tests fails, Setup displays a message describing the problem and suggests possible actions. Click OK, and then click Exit to exit Setup. You need to correct the problem first, and then run the SyGate Diagnostics again. See *Troubleshooting Your Installation* in this document for more information.

13. Click OK. Then click Finish. For a first-time installation, the Register dialog box appears. Do one of the following:
 - If you have purchased your SyGate license and obtained your serial number and registration code, complete the Register dialog box. Enter your user name, company name, e-mail address (optional), serial number, and registration code, and then click OK.
 - If you have not yet purchased your SyGate license, click the I Am a Trial User button.
14. Setup then prompts you to reboot your system. Click Yes. Your system reboots.
15. After your system starts up, launch the SyGate Manager. From the Start menu, choose Programs > SyGate > SyGate Manager. The SyGate Manager starts running. You should see the local workstation in the SyGate Network Neighborhood list.

Note: You will need to register your SyGate installation. For instructions, see *Registering SyGate*.

Proceed to Client Installation.

Client Installation

SyGate Client installation is optional. You would install the client software to perform specialized tasks, such as to check the status of the Internet connection or to explicitly dial-on-demand or hang up. For example, you might install the SyGate Client on an administrator's or power user's machine so that they can remotely manage the SyGate

Server from their own workstation rather than the inconvenience of physically going to the server machine.

To install the SyGate Client on a workstation:

1. Determine the workstation(s) on which you will install the SyGate Client software. This system must meet the minimum system requirements described in Client System earlier in this document.
2. Verify that your network adapter card and software is properly installed and running according to the vendor's instructions.
3. For each workstation on which you will install SyGate Server or Client software, verify that the network connection exists between the client workstation and the server workstation.
4. Close any extra open applications or windows.
5. Do one of the following:
 - If you are installing from a downloaded installation file, complete the procedure in Downloading the Software earlier in this section to obtain the download file and store it in a temporary installation directory.
 - If you are installing from a SyGate install CD, insert the CD into the CD-ROM drive on your workstation.
6. In the Windows Explorer or NT Explorer, double-click the self-extracting installation file to run the SyGate Setup program. After decompressing, the Welcome window appears.
7. Click Next. The Software License Agreement window appears. Review the license agreement, scrolling as needed, and click Yes. The Choose Destination Location window appears.
8. If you want to change the destination location for the SyGate software, click the Browse button. In the Choose Folder dialog box, type the target path or select a target folder from the Directories list, and then click OK. If the specified path does not exist, Setup prompts you to click Yes to create a new folder.
9. Click Next. The Select Program Folder window appears. Edit the Program Folder name, if you want.
10. Click Next. Setup copies the software files to the destination location, and then prompts you to indicate whether this is a server or client installation. Select Client, and then click OK.
11. Setup starts the SyGate Diagnostics and begins testing your system configuration, including:
 - System Settings
 - Network adapters
 - TCP/IP protocol
 - TCP/IP settings
 - Assigned IP address
 - Connection with SyGate Manager (Server)

Note: If any of these tests fails, Setup displays a message describing the problem and suggests possible actions. Click OK, and then click Exit to exit Setup. You need to correct the problem first, and then run the SyGate Diagnostics again. If your configuration is correct, Setup displays a message indicating that the test was successful.

Note: If any of these tests fail, Setup displays a message describing the problem and suggests possible actions. Click OK, and then click Exit to exit Setup. You need to correct the problem first, and then run the SyGate Diagnostics again.

12. Click Finish. Setup launches the SyGate Manager (Client) automatically. In the SyGate Network Neighborhood list, you should see the local workstation as well as the workstation on which the SyGate Server is running.

Configuring your Installation

During installation, the Setup program assigns TCP/IP settings automatically for each SyGate Server or Client installation. In most cases, you do *not* need to change your configuration. For the SyGate Server, the IP address is assigned by your ISP. For the SyGate Client, the IP address is assigned dynamically by the built-in SyGate DHCP server.

Note: The IP address is assigned to the Server or Client software, *not* to the physical workstation on which the software is installed.

Setup uses IP addresses from the Private IP Address class, which is a special class of IP addresses that is reserved for private, local networks (not to be confused with Virtual Private Networks, or VPNs). All workstations on which SyGate is installed will have the following default TCP/IP parameters:

Setting	Server Workstation	Client Workstation
IP Address	192.168. 0 . x	automatic
Subnet Mask	255.255.255.0	automatic
DNS	(Do not change.)	automatic
Gateway IP Address	None	Automatic (same address as the local IP address of the SyGate Server. Default is 192.168.0.1.)

You do not need to manually change TCP/IP settings *unless* automatic configuration failed during installation or if you have client systems running on other platforms (such as Macintosh, Solaris, or Linux). To manually reconfigure TCP/IP settings, use the settings in the table above. For more information on SyGate configuration, see Configuring the SyGate Manager.

Note: We do *not* recommend using different TCP/IP settings unless you have experience with configuring TCP/IP networks.

Verifying Your Installation

After you have installed and configured SyGate on a server machine and on at least one client machine, you must verify that your installation works correctly.

To verify your installation...

1. Verify that the SyGate Manager is running on the server machine and all client machines.
2. Launch the SyGate Manager. From the Start menu, choose Programs > SyGate > SyGate Manager. The SyGate Manager starts. On the right side of the SyGate Manager window, you should see a SyGate Network Neighborhood list of all the workstations on which the SyGate Manager is running, along with the Computer Type (server or client), Status (servers only), IP address, net mask, gateway (clients only), and DNS address.
3. On each client workstation, open a browser and attempt to access the following URLs:
 - <http://209.24.94.62>
 - <http://www.sygate.com>

If you encounter any problems, see Troubleshooting Your Installation for more information.

Troubleshooting Your Installation

If you encounter problems during installation:

1. Verify that the server and client workstations conform to the system requirements.
2. Verify that you successfully completed all installation steps on the server and any client machines.
3. If you manually configured TCP/IP, verify that you successfully completed all configuration steps on the server and any client machines.
4. Test the connection from the client to the server by going to the command prompt on the client workstation and typing the following command:

ping <ServerIPAddress> where <ServerIPAddress> is the IP address of the SyGate Server (such as 192.168.0.1). You should receive a reply (not a timeout).
5. Test the connection from the server to the client by going to the command prompt on the server workstation and typing the following command:

ping <ClientIPAddress> where <ClientIPAddress> is the IP address of the SyGate Client (such as 192.168.0.2). You should receive a reply (not a timeout).
6. Test the ISP connection to the Internet by going to the command prompt on the client workstation and typing the following command:

ping 209.24.94.62 where 209.24.94.62 is the IP address of the SyberGen web site (www.sygate.com). You should hear the modem dialing or you should receive a reply (not a timeout).
7. Test the DNS by going to the command prompt on the client workstation and typing the following command:

ping www.sygate.com. You should see a reply and the host name should be resolved to 209.24.94.62.

8. Test the DNS by opening your web browser and going to the following URL: www.sygate.com. You should see the web site appear.
9. Review the following list for common problems and possible solutions:

Problem	Possible Cause	Suggested Action(s)
Network Adapter Test Failed	Network Interface Card (NIC) is not properly installed & configured.	Install and configure the NIC according to your vendor's documentation.
Cannot access http://209.24.94.62	Problem with ISP connection to the Internet.	Check your dial-up connections and configure your system according to your ISP's documentation.
Can access http://209.24.94.62 but not www.sygate.com	Problem with domain name services (DNS) configuration.	On the SyGate Client system, set the DNS to be the same as for the SyGate Server.
SyGate Client cannot access the SyGate Server	Problem with network connection or TCP/IP configuration.	<p>Ping the server machine's IP address from the command prompt on the client machine.</p> <p>Ping the client machine's IP address from the command prompt on the server machine.</p> <p>If either of these tests fail (you see a timeout instead of a reply, then check your internal network configuration.</p>

Look through the FAQ for information about the problem you encountered. The FAQ provides immediate answers to most common problems.

If you cannot resolve the problem, see Getting Product Support.

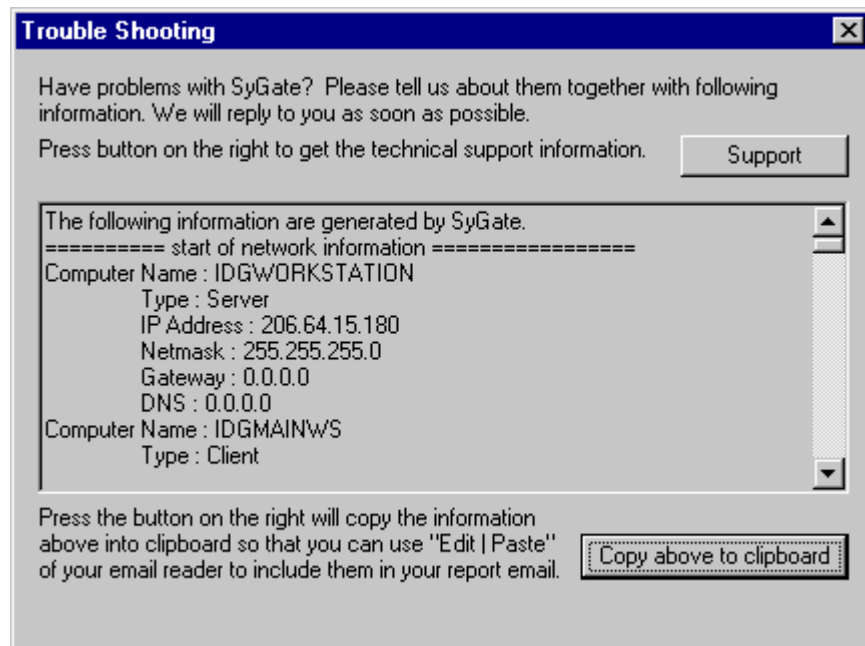
Getting Product Support

Sybergen provides product support for this product via its web site and e-mail. To get product support, go to <http://www.sybergen.com/support.htm>, and look for information about any issues you may have encountered.

Be sure to check our FAQ if you don't see a solution published on this page. If our online support material does not help you resolve your particular issue, you can send an e-mail to support@sygate.com to obtain additional assistance.

The following steps will provide us with more information that may result in faster resolution of any issues you are experiencing.

1. Compose an e-mail on the workstation on which the SyGate Server is installed.
2. Provide a detailed description of the issue you are having.
3. Open the SyGate Manager (Server) window - on the toolbar, click the Troubleshooting tool. The Troubleshooting dialog box appears.



4. Click the Copy Above to Clipboard button and then choose "paste" under the Edit menu in your email application.
5. Go to the command prompt (Start > Programs > Command Prompt) and type ROUTE PRINT and press ENTER. The command displays the workstation's network address, mask, gateway address, interface, and metric.
6. Mark the output text (Edit > Mark), highlight the section with your cursor, and copy it to the Clipboard (Edit > Copy).
7. Open the e-mail window, paste this text into the window, and then send the e-mail message to support@sygate.com.

PURCHASING YOUR SOFTWARE

To get a fully-licensed version or to upgrade from a previous version, you need to purchase a SyGate license and obtain a serial number and registration code that allow you to "unlock" the trial version. Sybergen offers a variety of licensing options (3-user, 6-user, 10-user, 15-user, 20-user, 25-user). For pricing information, see www.sygate.com. You can securely purchase the software in either of two ways:

1. From within the SyGate Manager on the server machine, dial your ISP, if needed. On the toolbar, click the Order/Upgrade tool and follow the on-screen instructions.
2. From your browser, open www.sybergen.com and go to the purchase section of our website.

Upon receiving your order, Sybergen will process your purchase request and e-mail a serial number and registration code that you will then use to register the software.

Registering Your Software

Once you have purchased the SyGate software and obtained a registration code, you need to register your copy in order to "unlock" the trial version to support the number of licenses you bought. You can also re-register if you purchased an upgrade or increased the user count.

To register SyGate

1. Connect to your ISP, if you are not currently connected.
2. On the toolbar, click the Registration tool. The SyGate End User License dialog box appears.
3. Review the license agreement, scrolling as needed, and click Accept. The Registration dialog box appears.
4. Enter your user name, company name, e-mail address (optional), serial number, and registration code. Click OK.

The following information will be sent to SyGate license validation web site. Please make sure you are connected to the Internet.

User Name :

Company Name :

Email (Optional) :

Serial No : -

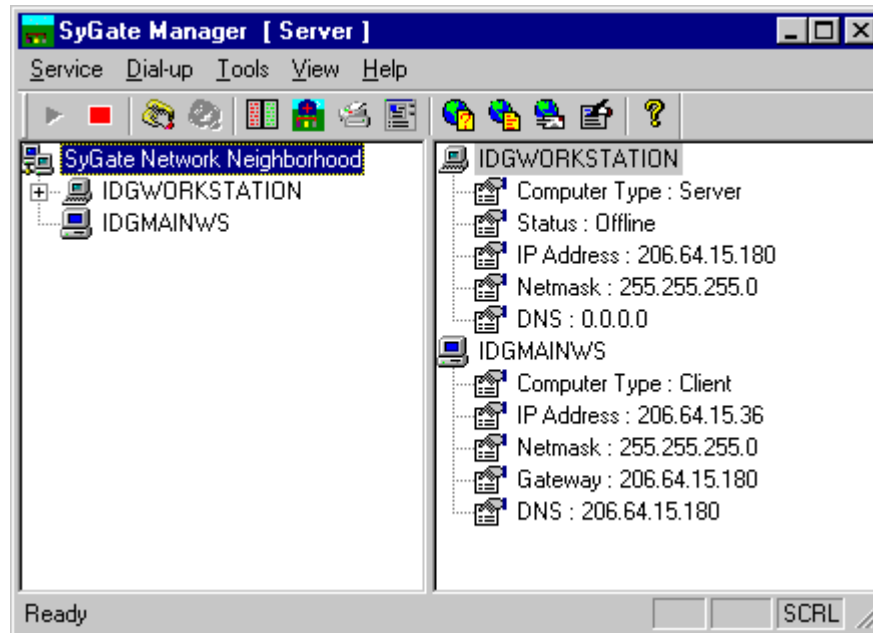
Registration Code :

OK I am a trial user

ADMINISTRATION

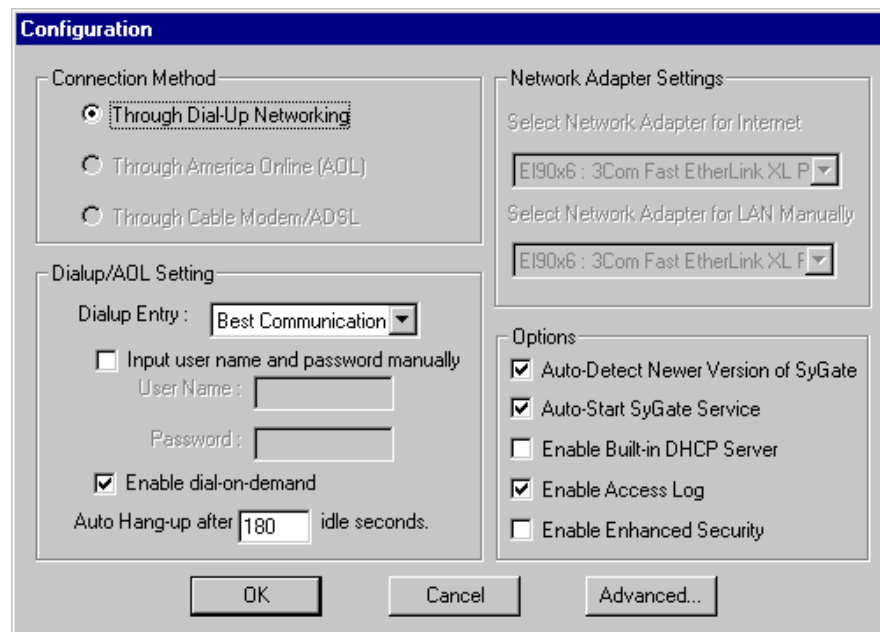
Running SyGate 3.1

If Auto-Start SyGate Server is enabled in the Configuration dialog box, SyGate starts when the system reboots. To manually start SyGate 3.1:
Choose Start > Programs > SyberGen > SyGate Manager.



Configuring the SyGate Manager

You can configure the SyGate Manager to manage Internet connection settings, dial-on-demand, logging, enhanced security, and other settings.



To configure the SyGate manager...

On the toolbar, click the Configuration tool. The Configuration window appears (displayed above). Change configuration settings as needed.

Connection Method. Select the method by which you connect to the Internet (dial-up networking, cable modem, xDSL, or American Online).

Dial-Up Only:

Dialup/AOL Setting. Select the Dialup Entry used to connect to the Internet. You define the Dial-up Entry using the Dial-Up Networking configuration (Start > Programs > Accessories > Dial-Up Networking).

Input user name and password manually. Select this option to manually enter your user name and password each time your system dials out to connect with your ISP.

Dial-Up and AOL Only:

Enable dial-on-demand. Select this option if you want the SyGate Server to dial out to your ISP automatically whenever it detects Internet traffic on the network. For dial-on-demand to work, you *must* save your password in the dial-up entry for your Dial-Up Networking configuration (Start > Programs > Accessories > Dial-Up Networking). Verify that the password is entered correctly and that the Save Password checkbox is selected.

Auto Hang Up. Enter the number of seconds that you want to allow as idle time without any Internet traffic before SyGate automatically hangs up the Internet connection.

Cable Modem/DSL Only:

Select Network Adapter for Internet. Select the network adapter that connects to the Internet. SyGate maintains security by using two network interface cards (NICs). One NIC connects to the cable or xDSL modem, while the other NIC connects to the internal network. As a result, internal traffic between a client and server machine is not exposed to the Internet, and there is no direct connection between any client machine and the Internet.

Select Network Adapter for LAN Manually. If the workstation has two network adapters, this option is automatically selected when the Internet adapter is selected. If this workstation has three or more network adapters, select the network adapter that connects to the local network.

Options:

Auto-Detect Newer Version of SyGate. Select this setting to have SyGate notify you if a new version of SyGate is available. If selected, SyGate checks the SyGate web site for a newer version whenever the service starts up and the Internet connection is active. SyGate displays a message if it detects a newer version.

Auto-Start SyGate Service. Select this setting to have SyGate automatically start and run in the background when the server machine boots up (you do not need to add SyGate Manager to the Startup folder). Clear this setting if you want to start the SyGate service manually by choosing Start > Programs > SyberGen > SyGate Manager (other network users will not be able to share the modem until the SyGate service is running).

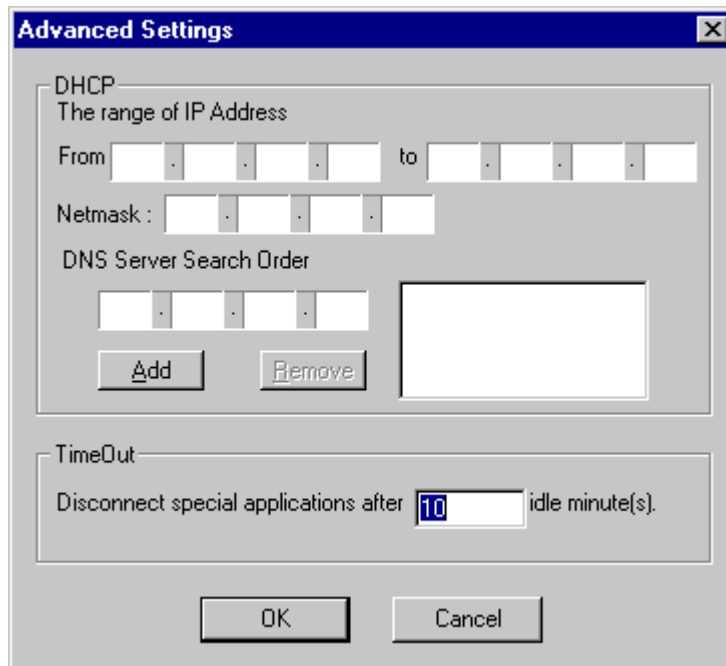
Enable SyGate Built-In DHCP Server. Select this option to enable SyGate's Dynamic Host Configuration Protocol (DHCP) server, which can assign a temporary IP address to a

host automatically when the host connects to the network. Clear this option if you want to use the server machine's Windows DHCP server instead.

Enable Access Log. Select this option to enable the SyGate Client Access Log, which tracks all Internet access and DNS requests from the client machines on your network. The log file resides on the server machine in the SyGate directory. To view the log, open this file with a text editor, such as Microsoft Notepad or WordPad (Start > Programs > Accessories).

Enable Enhanced Security. Select this option to enable SyGate's enhanced security feature, a circuit level firewall that prevents users outside your network from accessing the computers within your network. With Enable Enhanced Security activated, SyGate blocks incoming Internet traffic to ports 1 through 1000 and ports 5000 through 65536. Note that, with this setting enabled, the server machine as well as any web servers on your network will not be accessible from the Internet through the shared connection managed by the SyGate Server.

If you want to configure *advanced settings*, click Advanced.



Change configuration settings as needed.

DHCP. These settings control SyGate's built-in DHCP Server. To change these settings, the Enable Built-In DHCP Server option must be selected in the Configuration dialog box.

The range of IP Address. If you want to restrict the range of IP addresses that SyGate's built-in DHCP server assigns to SyGate Clients, specify the starting and ending IP address and the Netmask. You would do this to prevent conflicts with other IP addresses on your local network.

DNS Server Search Order. If you want to specify back-up DNS servers in case your primary DNS server fails, specify the search order according to your ISP's instructions. Click Add, enter the IP address of the DNS Server, and click OK. The new entry appears in the list, in the order in which the roll-over will occur.

Timeout: If you want to *override* the default timeout of a special application, specify an default idle time (in minutes). For example, if you specify 10 minutes and you run a game program that normally disconnects if it's idle longer than a 5-minute timeout period, the timeout will be extended to 10 minutes.

When finished, click OK to save your changes. Your configuration settings take effect immediately.

Starting and Stopping the SyGate Service

You can dynamically start and stop the SyGate service. When the service is stopped, other users can no longer share the Internet connection.

To start the SyGate service from within the SyGate Manager: From the toolbar, click the Start Service button. The Start Service button (green arrow) becomes inactive, and the Stop Service button (red square) becomes active, indicating that service has started.

To stop the SyGate service from within the SyGate Manager: From the toolbar, click the Stop Service button. The Stop Service button (red square) becomes inactive, and the Start Service button (green arrow) becomes active, indicating that service has stopped.

Configuring TCP/IP Parameters Manually

Every computer on your network must have TCP/IP protocol installed. The operating systems for Windows 95/98/NT and Macintosh OS (7.5.5 or later) include TCP/IP software. Although TCP/IP is not installed by default on Windows 95, you can install TCP/IP from the Windows 95 CD.

On client machines, SyGate is compatible with operating systems other than Windows, such as Macintosh and UNIX. However, on server machines, the SyGate Server must run on Windows 95/98/NT. In the Windows environment, TCP/IP is compatible with IPX and NETBEUI protocols.

During a typical installation, SyGate automatically assigns the TCP/IP parameters for the network according to the following example:

Server machine	
IP Address:	192.168.0.1
Subnet mask:	255.255.255.0
DNS:	Leave unchanged
Gateway IP Address:	None
Client machine #1	
IP Address:	192.168.0.2
Subnet mask:	255.255.255.0
DNS:	192.168.0.1
Gateway IP Address:	192.168.0.1
Client machine #2	
IP Address:	192.168.0.3
Subnet mask:	255.255.255.0
DNS:	192.168.0.1
Gateway IP Address:	192.168.0.1
Client machine #3	
IP Address:	192.168.0.4

Subnet mask:	255.255.255.0
DNS:	192.168.0.1
Gateway IP Address:	192.168.0.1

On the client machines, notice the pattern of the IP Addresses—the last value increases by one on every subsequent client machine. Notice also that the values for the DNS and Gateway IP Address for every client machine are the same as the IP Address of the server machine.

If the SyGate installation fails to set the TCP/IP parameters according to the above specifications, you can set them manually.

To manually set the TCP/IP parameters

1. From the Taskbar, choose Start > Settings > Control Panel.
2. Double-click the Network icon.
3. From the Network window, then select the TCP/IP protocol for your internal network card, then choose properties. *For Windows NT, select the protocols tab, choose TCP/IP, then select properties.*
4. Enter the correct IP Address, Subnet Mask, and Gateway IP address for the workstation from which you are working. Click OK.
5. Repeat steps 1 through 7 for every workstation that requires setting the TCP/IP parameters manually.

Sharing Internet Connections

To connect to the Internet from a client machine, launch an Internet application such as a web browser. This will cause the server machine to dial out to its ISP to make an Internet connection. This is the dial-on-demand setting.

To enable dial-on-demand

1. On the toolbar, click the Configuration tool.
2. Select Enable Dial-on-Demand.

To disable dial-on-demand

1. On the toolbar, click the Configuration tool.
2. Clear Enable Dial-on-Demand.

To connect to the Internet from a server machine, use standard methods, such as launching a web browser or using your ISP's dialer program.

To share Internet connections, the server and client machines must be connected in a local network using Ethernet and running TCP/IP protocol to communicate with each other. The only computer that must have an Internet connection is the one acting as the server. The Internet connection may be analog, cable, ISDN ADSL, or DirecPC. The machine acting as the server must also have an Internet access account.

Although client machines may have Internet connections as well, only the SyGate Server system is required to have Internet access in order for all workstations on the network to share Internet access.

You can also share your Internet connection with an outside computer that dials into your network. The computer accessed by the outside computer directs the connection to the IP address of the server.

Managing Web Site Access

SyGate's BWList Editor allows you to control access to specific web sites. You can use SyGate to prevent users (such as children) from accessing undesirable sites, and you can restrict access to authorized sites only.

Use the BWList Editor to maintain two kinds of lists:

- The Black List prevents users from accessing the IP addresses specified therein.
- The White List restricts users to accessing only the IP addresses specified therein.

Determining the IP Address of a Web Site

The BWList uses IP addresses (such as 209.24.94.62), not domain names (such as www.sygate.com) to control web site access.

If you do not know the IP address of a specific web site...

Go to the command prompt and type the following command, and then press ENTER

```
ping <domain name>
```

Where <domain name> is the fully-qualified domain name (such as www.sygate.com).

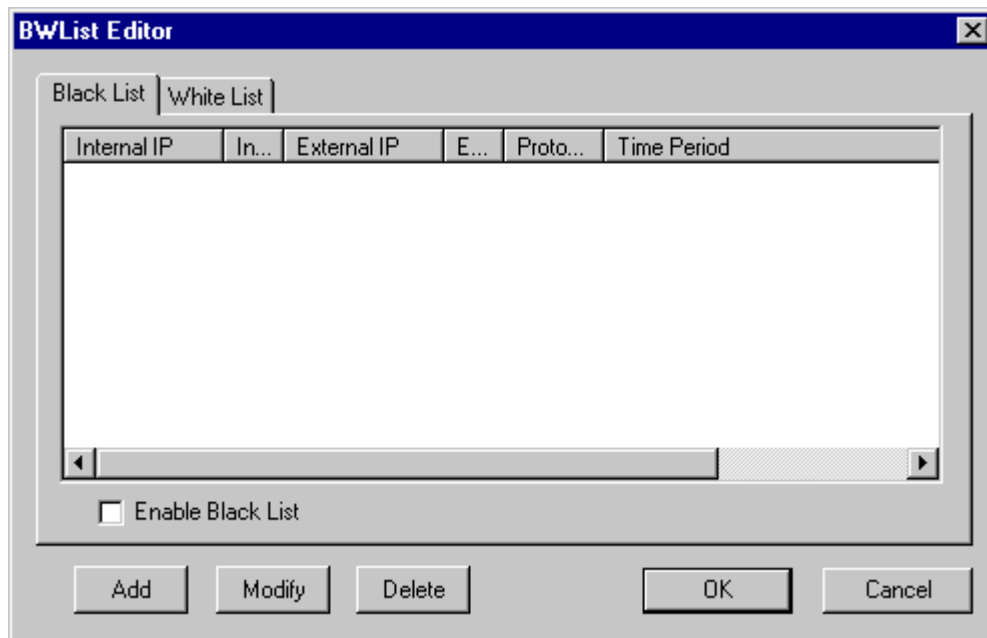
You should see a reply similar to the following example (after pinging www.sygate.com):

```
Pinging www.sygate.com [209.24.94.62] with 32 bytes of data:  
Reply from 209.24.94.62: bytes=32 time=141ms TTL=252  
Reply from 209.24.94.62: bytes=32 time=130ms TTL=252  
Reply from 209.24.94.62: bytes=32 time=121ms TTL=252  
Reply from 209.24.94.62: bytes=32 time=120ms TTL=252
```

The IP address (209.24.94.62) appears next to the domain name. This is the IP address you would specify for the External IP address.

Starting the BWList Editor

To start the BWList Editor: From the Toolbar, click the BWList Editor button. A password window appears. Enter a valid password (the default is no password). Click OK. The BWList Editor window appears.



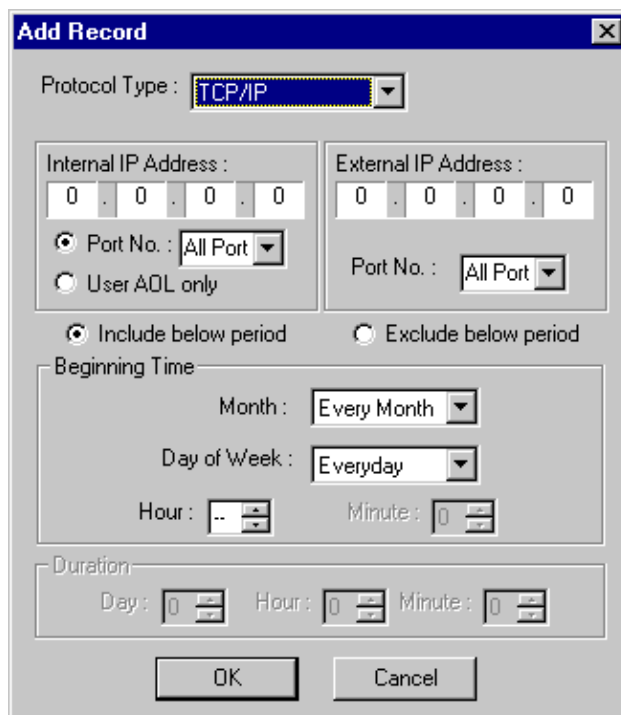
Managing the Black List

The Black List prohibits your network users from accessing certain sites *as long as* they are connecting to the Internet through a shared Internet connection that is managed by SyGate.

Note: Make sure that you select the Enable Black List checkbox.

To add a web site's IP address to the Black List: In the BWList Editor, select the Black List tab.

1. Click the Add button. The Add Record window appears



2. Select the Protocol Type from the drop-down list (TCP/IP or UDP).
3. Leave blank to have this entry apply to all internal IP addresses, or enter the Internal IP Address of the workstation you want to prevent from accessing this web site.
4. Select a Port Number for the Internal IP Address.
5. Enter the External IP Address.
6. Select a Port Number for the External IP Address.
7. Select one of the following:
 - Include below period
 - Exclude below period
8. Select Beginning Time settings, including Month, Day of Week and Hour. The default settings are Every Month and Everyday.
9. Select Duration settings to specify the duration of time you want the entry on the Black List to be in effect (Day, Hour and Minute). Click OK.

To modify an entry in the Black List

1. In the BWList Editor, select the record you want to modify by clicking the item shown under the Internal IP column.
2. Click the Modify button. The Modify Record window appears.
3. Make any desired modifications. Click OK.

To delete an entry from the Black List:

1. In the BWList Editor, select the record you want to delete by clicking the item shown

Modify Record

Protocol Type : TCP/IP

Internal IP Address : 0 . 0 . 0 . 0

External IP Address : 0 . 0 . 0 . 0

Port No. : All Port

Port No. : All Port

Include below period Exclude below period

Beginning Time

Month : Every Month

Day of Week : Everyday

Hour : -- Minute : 0

Duration

Day : 0 Hour : 0 Minute : 0

OK Cancel

under the Internal IP column.

2. Click the Delete button. The SyGate Manager prompts you to confirm deletion. Click Yes.

Managing the White List

The White List restricts your network users to accessing only certain sites *as long as* they are connecting to the Internet through a shared Internet connection that is managed by SyGate.

Note: Make sure that you select the Enable White List checkbox.

To add a web site's IP address to the White List:

1. In the BWList Editor, select the White List tab. Click the Add button.

The Add Record window appears.

2. Select the Protocol Type from the drop-down list (TCP/IP or UDP).
3. Leave blank to have this entry apply to all internal IP addresses, or enter the Internal IP Address of the workstation that you want to restrict to this web site.
4. Select a Port Number for the Internal IP Address.
5. Enter the External IP Address.
6. Select a Port Number for the External IP Address.

7. Select one of the following:
 - Include below period
 - Exclude below period
8. Select Beginning Time settings, including Month, Day of Week and Hour. By default, Every Month and Everyday are selected.
9. Select Duration settings to specify the duration of time you want the entry on the White List to be in effect (Day, Hour and Minute). Click OK.

To modify an entry in the White List:

1. Select the record you want to modify by clicking the item shown under the Internal IP column.
2. Click the Modify button. The Modify Record window appears.

Modify Record

Protocol Type : TCP/IP

Internal IP Address : 0 . 0 . 0 . 0

External IP Address : 0 . 0 . 0 . 0

Port No. : All Port

Port No. : All Port

Include below period Exclude below period

Beginning Time

Month : Every Month

Day of Week : Everyday

Hour : -- Minute : 0

Duration

Day : 0 Hour : 0 Minute : 0

OK Cancel

3. Make any desired modifications. Click OK.

To delete an entry from the White List:

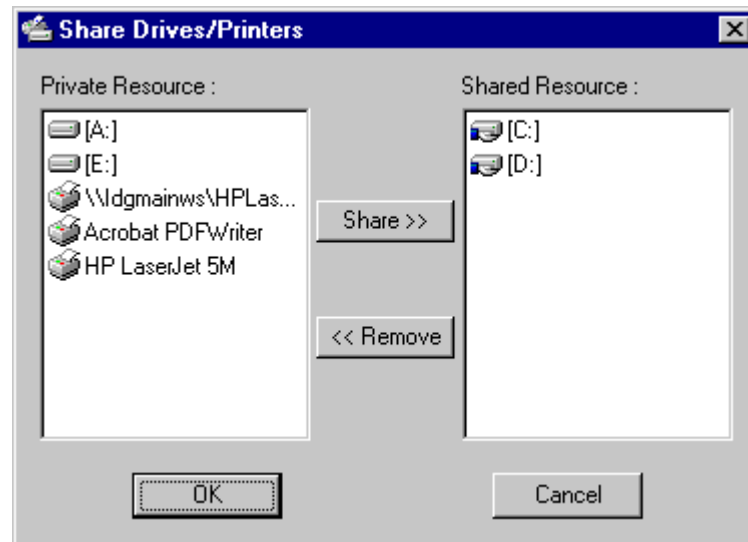
1. Select the record you want to delete by clicking the item shown under the Internal IP column.
2. Click the Delete button. The SyGate Manager prompts you to confirm deletion. Click Yes.

Sharing Drives and Printers

SyGate allows you to share drives (hard drives, floppy drives, and CD-ROM drives) and printers on your local workstation with other users on the local network.

To share resources:

1. On the toolbar, click the Share Drives/Printers tool. The Share Drives / Printers dialog box appears.



2. In the Private Resource list, select a resource that you want to share.
3. Click the Share button. The selected resource appears in the Shared Resource list.
4. Click OK. Users on other workstations are now able to use this drive or printer from their workstation.

To unshare a shared resource

1. On the toolbar, click the Share Drives/Printers tool. The Share Drives / Printers dialog box appears.
2. In the Shared Resource list, select a resource that you no longer want to share.
3. Click the Remove button. The selected resource appears in the Private Resource list.
4. Click OK.

Users on other workstations are no longer able to use this drive or printer from their machines.

Running the SyGate Diagnostics

You can run the SyGate Diagnostics whenever you encounter a problem running SyGate. To run the SyGate Diagnostics:

Do one of the following:

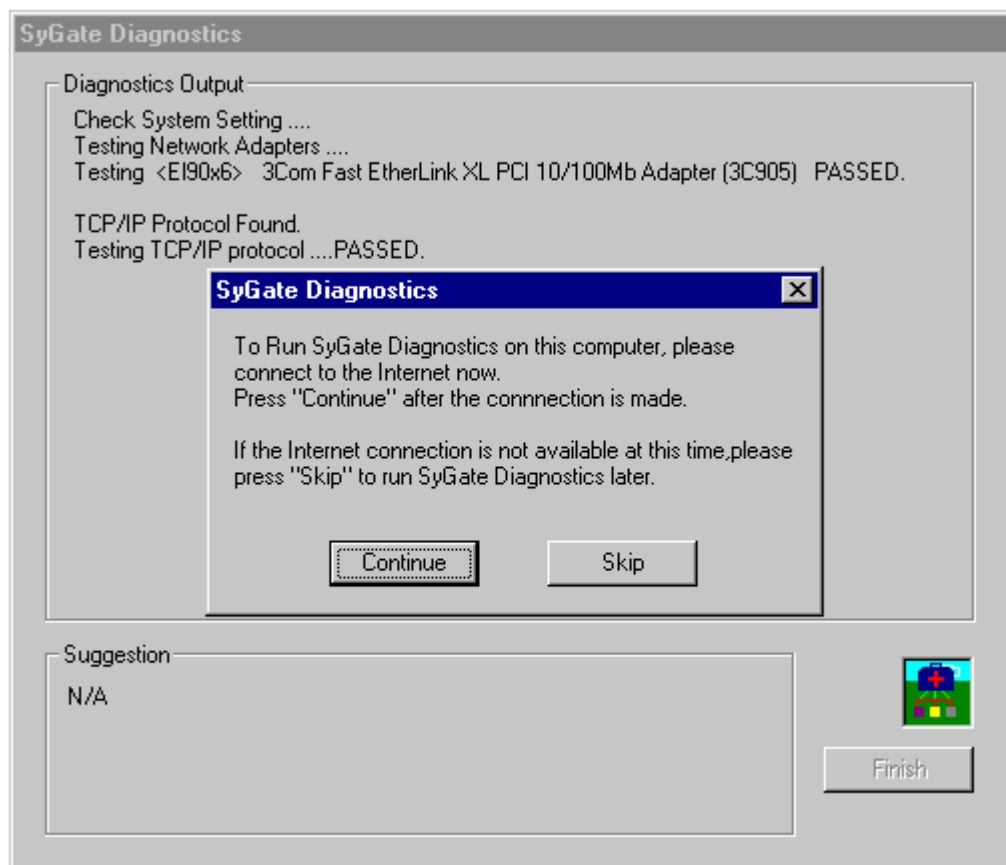
- From the SyGate Manager, on the toolbar, click the SyGate Diagnostics tool.
- From the Windows Desktop, choose Start > Programs > SyGate > SyGate Diagnostics.

Either way, the SyGate Diagnostics loads and begins testing your system configuration, including:

- System settings
- Network adapters
- TCP/IP protocol and settings

Note: If any of these tests fails, Setup displays a message describing the problem and suggests possible actions. Click OK, and then click Exit to exit Setup. You need to correct the problem first, and then run the SyGate Diagnostics again. See Troubleshooting Your Installation for more information.

Setup displays the SyGate Diagnostics window, which prompts you to connect to the Internet before continuing.



If you are not currently connected to the Internet, follow the procedure you normally use to connect to your ISP, and then return to this window.

Click Continue. SyGate Diagnostics verifies the ISP connection as well as TCP/IP settings. If your configuration is correct, Setup displays a message indicating that the test was successful.

Note: If any of these tests fail, you need to correct the problem, and then run the SyGate Diagnostics again. See Troubleshooting Your Installation for more information. Click Finish.

FREQUENTLY ASKED QUESTIONS

This is a brief list of frequently asked questions about SyGate. We have a much larger FAQ available on our website at <http://www.sygate.com/faq.htm> if the information below doesn't answer your question.

Does SyGate support VPN?

SyGate works with AltaVista Tunnel, Bay VPN, Shiva VPN and PPTP (Microsoft VPN) and supports one VPN client on the SyGate network. This allows your SyGate network client to communicate with your companies LAN through a secured connection. If you wish to have a VPN server, the SyGate server can be used in conjunction with Microsoft's PPTP service on Windows NT - allowing remote VPN clients to reach your SyGate network. SyGate's enhanced security benefits VPN as it blocks non-VPN connections from coming into your LAN from the ISP.

How secure is SyGate?

SyGate offers a one-way wall between your public network (the Internet) and your private network (your LAN). The only connections that will be allowed to your LAN are those that you specify in SyGate's configuration file (apprule.cfg) or those that are initiated by the LAN itself. Incoming connections are refused unless they are requested by your network or are specified in the apprule.cfg file.

Can I dial into my SyGate network?

The dial-in service must be on a computer behind SyGate and not on the computer running SyGate. The remote dial-in computer must also be using the same subnet and gateway as the computers on your local network.

What if I have more computers than my SyGate license is for?

If you have a three-user license you can have three simultaneous connections to the Internet. If an additional computer tries to use the Internet and all the connections are taken - it will simply not work. If one of these three users closes their Internet applications, the additional user on your network will then have access. If you run into this issue frequently, we recommend buying an upgrade from us to allow more connections.

What does the APPRULE.CFG file do?

The APPRULE.CFG file is used to customize the SyGate server to allow certain applications on your network to work properly on the Internet. We've created several settings in this file you can use for web servers, FTP servers, VPN, Games, Chat, and more. To enable a setting that we created for you but disabled, open up the apprule.cfg file in the SyGate directory and remove the "#" signs in front of the settings you wish to enable. The default apprule.cfg has settings enabled to allow most popular applications to work by default. If you have a special application which does not have any settings defined, you can also create your own.

How do I setup my non-Windows computers to work with SyGate?

For Macintosh computers, the easiest way is to make sure that the SyGate's built-in DHCP server is running on the SyGate server and configure your Macintosh TCP/IP Control Panel for Ethernet and to obtain its settings from a DHCP server. Then restart your Macintosh. For Unix or Linux computers, set the IP address as a static address in the same subnet as the SyGate server, set the DNS to be the same DNS setting as that on the SyGate server, and set the gateway to be the internal IP address of the SyGate server.

How come I cannot receive NetMeeting calls on my SyGate clients?

SyGate 3.1 can't route incoming NetMeeting calls to its clients because NetMeeting dynamically assigns the ports it uses from the caller. The SyGate server computer can both send and receive NetMeeting calls. SyGate networked clients can initiate NetMeeting calls fine.

How come my SyGate clients cannot send or receive email?

If using a cable modem, we've seen this with customers where the "domain suffix" defined by the ISP needs to be set for each computer on the network. If you experience this issue and have a cable modem, enter the same domain suffix on the client computers as defined on the SyGate server in the TCP/IP settings. If you are unable to obtain these settings, we have a automated page to provide this information with instructions on setting it up at <http://www.sygate.com/support.htm>.

How do I set my SyGate server to automatically dial when it's used?

If the SyGate server computer does not automatically dial the Internet when it's used on its own, there may be a problem with the connection settings. Verify that the connection settings in the Internet options Control Panel is set to dial automatically.

How come my SyGate clients cannot browse the Internet?

Make sure that your browser preferences (Netscape) or Internet options control panel (Internet Explorer) are not setup to use a proxy server for your Internet connection. Continue with the following troubleshooting steps after you have verified you are not setup to use a proxy server.

Make sure that the SyGate server can browse the Internet. If it cannot, you must fix this problem as it's most likely a problem with the Internet connection.

Check the DNS settings in the TCP/IP settings on the SyGate server and go to a command prompt and type "ping xxxx" and replace xxxx with the IP's of the DNS servers listed. If you fail to get a reply from the first one listed, the ISP's primary DNS server is down. Switching the order listed in the TCP/IP settings will usually correct the problem and the clients should be able to use the Internet.

If you can ping and browse okay from the server but you are still unable to browse the Internet from the client computers - try pinging the client's IP address from the SyGate server. If you fail to get a reply, we recommend running SyGate diagnostics on both computers to correct the problem. Other things to check if the two computers cannot communicate via TCP/IP with one another are cables, hubs, network drivers. and the TCP/IP software installation.