BrowseGate Proxy Server

A powerful and easy to configure network proxy server that provides a single point connection to the Internet for your entire network.

Developed and supported by NetcPlus Internet Solutions

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Main BrowseGate Window

The main BrowseGate window is shown above.   The entries in the information list box shows that this is a licensed copy for up to 10 concurrent users. It also shows that it is providing proxy services to any connections that make a request to the IP address of 192.168.4.10 and it is configured to respond to web browser requests on TCP/IP port 81 for access to the World Wide Web from any networked web browsers. The green LED's show that BrowseGate is configured to support ALL common protocols.

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What is BrowseGate ?

BrowseGate is what is generally termed a "Proxy Server".

What this really means is that BrowseGate provides a single point for all Internet access that allows multiple networked computers to access the Internet at one and the the same time, using any "external" connection such as a modem, ISDN, cable modem, leased line, etc. It will run on any low specification Windows 95/98/2000 or NT4 (Workstation or Server) computer, which does not have to be "dedicated" to the task of being a proxy server.

BrowseGate can provide Internet connectivity for any computer that can run the Internet standard protocol - TCP/IP - This includes Apple Mac and Unix/Linux computers as well as Amiga and others, plus of course Window's based PC's, and it provides full single point access to the Internet (and Intranet) for most popular applications such as Netscape Navigator, MS Internet Explorer, Outlook and Outlook Express, Eudora, Netscape Mail, popular NNTP News programs, Internet Chat programs such as mIRC, communications applications such as ICQ and Yahoo Messenger, plus most popular FTP programs and many, many other internet style applications.

It is designed to allow as many of your networked PC's as you wish to have (simultaneous) "on-demand" access to virtually all aspects of the Internet using just a single modem or other connection device on a single PC (the PC that BrowseGate is installed on).   It can of course also connect to these same services via standard permanent connections such as Cable modems, DSL systems, Routers and ISDN links to the Internet without the need to use a modem if you are fortunate enough to have such a connection, or to local web and email/news servers that are accessible across your intranet without the use of a modem at all.

So what happens once you have installed and configured BrowseGate and setup your Web Browsers and Email/News/FTP/Communications clients on the network to access BrowseGate.?

Each time any of your networked PC's enters a URL into a web browser, or another application wants to connect to another machine out on the Internet, BrowseGate receives those requests across the network, and it will then fetch the page from the web site specified, or send/fetch mail and news articles etc, providing of course that no blacklist or other rules prohibit the request.!!

Modem connections (only)
BrowseGate checks to see if it already has a connection to the Internet and if not it makes a connection by dialing out using the connection you have specified for the Windows/NT dial-up networking system (DUN/RAS).

To save connection costs, you simply set a maximum timeout period (default is 15 minutes). Once that timeout period has expired without any further web browser activity

from any connected browser having been received, BrowseGate will automatically attempt to ensure that it's dial up connection is dropped, providing you have "disconnect" option checked (which is the default setting)

<u>General</u>
BrowseGate has been designed especially to work as either a stand-alone server or as a plug-in option for our SmartServer3 email server system. This means that you can have BrowseGate installed and operating on the same PC as SmartServer3, using the same modem, and both systems will cooperate to ensure they share the modem connection correctly. You can even have SmartServer connect to the Internet via BrowseGate if you wish to configure your Internet access that way !!.

If you are ready for more powerful control over your network email then we recommend that you check out the details of our SmartServer3 email server system, which is designed especially to work with BrowseGate to provide full function mail handling for any business network. Full information and a 5 user evaluation version of SmartServer3 is available from our web site at http://www.netcplus.com.

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Overview
Configuring your new BrowseGate Proxy Server

The following notes are aimed at network administrators, (or even budding network administrators) who wish to provide their entire networks with Internet access via our BrowseGate Proxy Server.

They assume that you have at least a basic grasp of TCP/IP and are able to set up Internet applications such as web browsers and email client packages to work successfully on a single PC.

INTRODUCTION

Because a proxy server is a rather clever piece of software that, just like every other Internet application, uses the TCP/IP protocol to connect to both other PC's and to the Internet itself, it requires that you configure, or, as is more often the case, reconfigure your networked TCP applications and possibly some of your network's TCP/IP settings in order that you are able to take advantage of any proxy server such as BrowseGate.

Yes - we know that may sound complex - but it is actually quite simple, and once you have understood the reasons and steps behind it, you should be able to have it all working really quickly. The following notes will try to outline what is necessary, and the steps you need to perform to get it all going .....

It is assumed that you already have TCP/IP installed and working on one or more PC's on your network, including the PC on which you have just installed BrowseGate.

If the BrowseGate PC is THE ONLY one on your network that has TCP installed on it, we suggest that you go through section ONE below, otherwise you can probably skip this and go straight to section TWO (as long as you know the IP address of the BrowseGate PC which is shown at the top right of the BrowseGate application itself).

SECTION ONE   (specifying an IP address on the BrowseGate PC)

You need to ensure that this PC has been allocated a valid class "C" IP address such as 192.168.100.1 To do so go to the W95/98 Start menu on the task bar, select Settings, then select Control Panel, and finally, double click on the "Network" entry in the list displayed.

Scroll down the list of "Network components installed" until you find an entry that looks something like :- TCP/IP -> network_card_name (where network card name is the typically the manufacturer of your NIC/network card, eg : Artisoft, Dec, etc.)

You DO NOT want to select any entry that says TCP/IP -> Dial-up Adapter (at least not yet...)

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Having selected your network cards TCP entry, click the Properties button, and ensure that you are on the tab labeled "IP Address".

You must have the "Specify an IP address" option checked.

Now if you already have any numbers in the two fields below the option, then just make a note somewhere of the one labeled "IP Address". Why - Well you may well need this later on to configure your other networked PC's. You also need to select the "DNS configuration tab and note down each of the IP addresses that should be in the "DNS Search Order" list box.

If you don't have any numbers in these fields, then read the help system on how to set up TCP/IP on your network, or contact Microsoft for further assistance on their networking system.

SECTION TWO   (Domain Name server)

Now you have to make a very important decision which is - "Do you want to use the built-in Domain Name Server (DNS) in BrowseGate?"

This is actually a simple decision - If you already have a working DNS on your network (such as an NT4 server system), then you should DISABLE the BrowseGate system entirely. Otherwise, we strongly recommend that you should use the DNS in BrowseGate, although it is not mandatory.

Assuming you do accept our recommendation to use the BrowseGate DNS system, click the Configure button on the BrowseGate main window, and then select the DNS tab on the property sheet. Ensure that you have both the "Enable internal" and "Enable external" options checked.

Enter the main IP address of your ISP's DNS server (which they will have given you) in the "external DNS settings" panel below. Unless you have a good reason to needing to do so, do NOT change the port numbers.

Don't worry about having no entries in the Internal list at present.!

Click the Apply button to save the changes.

BrowseGate is now configured to provide all required DNS services for your networked Internet applications.

SECTION THREE   (Setting up the Internet access services BrowseGate is to provide)

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BrowseGate can provide every PC on your network with on-demand Internet access to perform any/all of the following tasks, and some we haven't mentioned....

Email delivery and collection via POP3 and SMTP.
Web Browsing via HTTP, HTTPS, SOCKS 4/5
NNTP News collection and delivery
FTP (File Transfers via packages such as CuteFTP, WS_FTP, FTP Voyager and Absolute FTP)
Communications systems such as ICQ, Internet Phones etc via SOCKS 4 or 5

3.1. Web access for your networked web browsers.

Most networked users need to access the World Wide Web, and BrowseGate does of course allow them to do so very easily.

On the "Configure" property sheet, click on the "Connect" tab.
Select and enter a port number for BrowseGate to use to connect to all your web browsers. We recommend port 80 or 81.
Make a note of the port you have selected so that you can configure all the web browsers correctly later.

3.2. Email access for networked email clients.

Many networked users have their own email accounts and run a client such as Outlook or other similar email package. If you have your own domain, or your ISP provides you with a mail forwarding account, so that all email from your ISP is held in a single mailbox and you normally download it to an email server on your network (such as our own SmartServer email server), then the easiest way to do this is to use the special built-in email proxy in BrowseGate to access this account.

On the "Configure" property sheet, click on the "Email" tab.
Enter the name of your Pop3 mailbox in the Incoming mail field.
Enter the name of your SMTP mail server in the Outgoing mail field.
These are exactly the same server details as currently set in your email client package(s)
Leave the "Remote" ports set to the default settings.
ADVANCED USERS :- Select any port number you wish for the local ports, or you may leave them at the default settings.

3.3. NNTP News access for networked email clients.

Many networked users have News clients such as Outlook or other similar News packages. If you wish to provide access to your ISP's News Server then :-

On the "Configure" property sheet, click on the "News" tab.

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Enter then name of your News Server in the News Server name field.
This is exactly the same server name as currently set in your news client package(s)
Leave the "Remote" ports set to the default settings.
ADVANCED USERS :- Select any port number you wish for the local port, or you may leave it at the default setting.

3.4 Collecting mail from multiple different mailboxes/hosts
If any of your networked users each have their own email accounts and run a client such as Outlook or other similar email package, you may wish to allow them all to access their personal mailboxes individually via BrowseGate.

On the "Configure" property sheet, click on the "Map TCP " tab.
Click the New button.
Enter the name of whichever Pop3/Imap4 mailbox you wish to provide access to in the "Connect to host" field.
This will be exactly the same server details as currently set in the relevant email client package.
Leave the "Remote" ports set to the default settings.
ADVANCED USERS :- Now you need to select any available (free) port number you wish to assign as the local port for this connection. You only have to worry about not selecting any of the default ports normally reserved by TCP as listed in the Ports section (Click here for a list of ports you cannot use). (BrowseGate will warn you when you try to save these if you have accidentally duplicated a port number)

3.5. Setting up TCP port mapping

Because BrowseGate provides support for most types of Internet connection, you can create "TCP port mapping" to act as a gateway for almost any internet client application you require BrowseGate to provide a gateway for.

On the "Configure" property sheet, click on the "Map TCP " tab.
Click the New button.
Enter the name of whatever host machine it is that you wish to provide a gateway to in the "Connect to host" field.
Set the "Remote" port to the correct port for the service in question (eg :FTP-21, POP3-110, SMTP-26 etc)
Select any available (free) port number you wish to assign as the local port for this connection. Again you only have to worry about not selecting any port already used, or using one of the default ports normally reserved by TCP as listed in the Ports section (BrowseGate will warn you when you try to save these if you have accidentally duplicated a port number)

3.6. Providing SOCKS 4/5 support

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BrowseGate supports both SOCKS 4 and SOCKS 5 for most types of Internet client applications that require this.

On the "Configure" property sheet, click on the "SOCKS" tab.
Check the "Run Socks 4/5 proxy server " option
Set the port to whatever you wish. The default is 1080. Please note that some SOCKS applications do not allow you to change this port number.
 (BrowseGate will warn you when you try to save these if you have accidentally duplicated a port number)

SECTION 4   (Connecting to the Internet)

BrowseGate can be used to connect via the Window's Dialup Networking (DUN/RAS) system, or via fixed connections such as cable modems, DSL, routers and other fixed connections.

4.1 Dial-up networking
These notes assume that you have already successfully installed dial-up networking, and have a working dial-up connection on the BrowseGate PC.

On the "Configure" property sheet, click on the "Connections" tab.
Select the "Use Dialup networking" option box.

If you have more than a single DUN connection configured, select the one you wish BrowseGate to use.

Enter the number of minutes that you want BrowseGate to stay on line before dropping the phone line when there are no network requests being handled in the "Disconnect after xx minutes" field. We recommend 10 or 15 minutes as being a reasonable time to avoid incessant dials and line drops, but it does of course depend on the level of your network's use of the internet. You can use the modem statistics reports to tune this setting as your network starts to use BrowseGate in earnest day on day.

Select any of the other options provided to suit your own preferences.

4.2 Permanent connections to the Internet
On the "Configure" property sheet, click on the "Connections" tab.
Select the "Use standard TCP" option box.

NB – you do not need to "tell" BrowseGate the IP address of the EXTERNAL NIC as this is handled automatically by the Window's Winsock.

That's it......

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Setting up the TCP networking in Windows 95/98 to use the BrowseGate DNS

Because BrowseGate provides both internal and external DNS services, you will very probably need to change the TCP/IP settings in each of your networked PC's.

If a PC has previously had TCP/IP dialup facilities, it will almost certainly have one or more DNS addresses setup in the TCP/IP setting property sheet. To check these and to change them to allow each PC to use the BrowseGate DNS, simply follow the instructions below for each networked PC.

Go to the PC on which BrowseGate is running, and select the "Tools | Select local ip address" menu option.
Carefully note down the number that is highlighted (It will always be a set of 4 groups of digits looking something like "xxx.yyy.zzz.aaa")
This is the BrowseGate Server PC IP ADDRESS (hereafter called the "server-ip")
Then:-

 1. Go to the Start Menu and select Settings
 2. Select Control Panel
 3. Double click on the Network entry from the list shown
 4. Select the Configuration tab if not already selected
 5. Locate and select the entry that looks like "TCP/IP -> network_card_name"
 6. Make sure you have NOT selected the entry that has "Dial-Up Adapter in it....
 7. Click on the Properties button
 8. Select the DNS Configuration tab on the property sheet.
 9. Make sure you have the "Enable DNS" option selected.
10. If the "Host" field is empty, enter the name of that PC in the field.
11. Leave the Domain field empty.
12. If there are any entries in the "DNS Server Search Order" listbox, highlight each one and use the Remove button to delete them until the list it empty.
13. Carefully type the "server-ip" into the top field (the one with the dots already in it)
14. Click the Add button
15. Finally click the OK button on each dialog that appears.
16. Windows will load (or reload) some files, and will almost certainly then ask you to reboot the PC.

That's it !!!!!!!!!!

Once you have rebooted, that PC _should_ then be able to connect to the BrowseGate PC for all future DNS requests for any/all of the Internet applications that may be run on it….

What to do if your networked PC's cannot connect to BrowseGate

BrowseGate, like virtually all other Internet programs, requires all PC's that wish to access it to have the industry standard TCP/IP protocol installed. This is available to all windows users free of charge as it is provided as a part of the Windows 95/98/NT operating system. If the PC on which BrowseGate is installed or the other PC's on your network do not have this installed as a part of their networking system, then they will definitely not be able to communicate with BrowseGate. On network PC's that do not have a modem, you only need to install the TCP/IP protocol for whatever network card is installed, and do not need to install TCP/IP dial up networking on these machines.

It is assumed that you already have your standard PC networking configured and working correctly.... If not please set up your preferred network system and then return to this help page.

If you have installed BrowseGate on a PC that is not networked you still need to install TCP/IP on this PC as your Browser communicates with BrowseGate using this protocol.

To install TCP/IP on a Windows based PC.
Under W95 and NT4... (ONLY)

Click on Start Menu -> Control Panel -> Network - Configuration

Check for the following entry in the list of protocols that are installed
        TCP/IP -> {Your network card name}

If you do not have this entry on your PC, you must add this protocol as follows.

The following instructions assume you are using Microsoft Networking...

Click the "Add" button.
Double click on the "Protocols" entry in the list displayed
Click on the "Microsoft" entry in the next list displayed (or other manufacturer if you are using a different networking system)
Click on the TCP/IP entry in the right hand list.
Click the OK Button.
Follow any instructions that are displayed.

Reboot Windows if told to do so.
After rebooting - you will be ready to set up IP addresses on your PC.

For further support on this please contact Microsoft, as TCP/IP networking is their product, not ours !!

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All About TCP/IP etc

TCP/IP
TCP/IP is essential if you want to use the Internet. TCP/IP stands for 'Transmission Control Protocol / Internet Protocol'. TCP/IP (usually called TCP) is the standard method of sending and receiving data on the Internet. It is based on data packets that have a set format, including to and from addresses, similar to a letter. If you want to use the Internet or BrowseGate, then TCP/IP needs to be installed on every machine on your LAN that wishes to connect to BrowseGate. In truth, TCP and IP are actually different protocols, but they are so tightly tied together that they are usually referred to in this way.

Packet
A data packet is a like a 'mail parcel'. Think of a package that gets sent in the post. There are a few things that you have to have. There has to be both a name plus address, possibly a return address, and of course stamps, plus the envelope and/or some wrapping. But, you can put anything you like in the parcel. You can send anything that is acceptable to your postal system. A data packet is very similar to this. You have to supply certain 'Wrappers' such as 'to' and 'from' fields, but what is sent in it as "data" is entirely up to you. There are different types of packets used on the internet and other networks, but they all use this same idea of a parcel of data.

IP
IP stands for Internet Protocol. This is the method used on the internet (and on many LANs) to communicate. IP is a system of what are called datagram packets. IP is not usually dealt with directly, this is the job of TCP. IP gets datagrams from point A to point B. TCP sends IP a datagram, and a destination. It assembles and sends a packet with information from the source (eg TCP) and a checksum that indicates the integrity of the packet. IP doesn't care what the datagram contains. In fact it does not care if the packet it sends even gets there, and when IP receives a packet, if it has been corrupted somehow, IP throws it away! It is up to the protocol using IP to arrange for the packet to be resent if required.

IP Number / IP Address
An IP number is a simple way for IP to distinguish different computers (actually their Interfaces) that exist on the same network. On the Internet you simply can not have two computers sharing an IP, as this creates havoc when trying to send data to the correct location. All computers that are 'on' the Internet (or LAN) need discrete IP's. There are different types of IP.

You have probably seen IP addresses in the form 128.211.23.45. This is a 32-bit number separated in to four "8 bit" parts. The four parts are similar to a mailing address, except the detail is the other way round. The first number of the IP is the most general, the last is the most specific. Since each computer on the Internet needs a different IP, there has to be some way of allocating the IP's so that large companies and organizations are able to have individual ones for all their machines, while smaller

organizations also have some to go around as well. Since there are a small number of Large organizations and a large number of small organizations, ranges of IP's can be allocated accordingly.

In an IP number there are 2 parts, the network and the host identifiers.
There are three ways the IP's can be split in to 2 parts.

Class A nnn.hhh.hhh.hhh
Class B nnn.nnn.hhh.hhh
Class C nnn.nnn.nnn.hhh
where n's=network identifier, h's=host identifier

A huge company with very complex internal networks may be allocated a class A address range such as 105.*.*.* . Only the range 1.*.*.* to 126.*.*.* are available for A class addresses. There are very few A class addresses, and no more are to be allocated, mainly because no-one has 16 million computers on their network!

B class addresses however are common for Large companies, allowing a range of around 65000 IP's. Microsoft and IBM probably have several each. When an B class IP address is allocated, (say 165.103.*.*), the first two numbers identify that companies network. The company can decide what to do with the next two (*'s in this case mean any number), and give any IP in that range to any computer on their network. B class networks addresses have 128 - 191 as the first number in the IP.

Class C addresses, giving 254 possible addresses (0 and 255 are reserved) are the third type. Here, the first 3 8 bit fields are specified, and the remaining field is allocated by the owner of the address. C class licenses are in the range 192.*.*.* to 223.*.*.*

Networks that are directly connected to the internet are connected to an ISP via some full time connection (such as a cable or leased line) and the ISP will inform the network administrator of which IP's can be used on the network. A router is used to 'tell computers how to get to a particular IP'.

ISP's typically have 1-2 C class licenses, providing 250 to 500 IP's. When you dial up an ISP with a modem, you are Dynamically allocated an IP address. This will be in the range of the C class license that they own.

Private IP's

These are the IP addresses you are almost sure to want to use on your network when setting it up to connect to BrowseGate

Private IP numbers are ranges of IP numbers that are 'Known not to exist' on the Internet. What this means is that no computer on the Internet will be assigned these addresses. These can safely be used in internal LANs, as they have no direct connection to the Internet. One example of a Private IP range is the 192.168.0.* range

that this manual commonly refers to.

The private IP ranges that will not be allocated on the Internet are

10.0.0.0	to	10.255.255.255	Class A
172.16.0.0	to	172.31.255.255	Class B
192.168.0.0	to	192.168.255.255	Class C

For a private network - <u>do not choose an IP range that is not on this list</u>. Also note that 0 and 255 are reserved in any class.

Netmask

Network masks are IP filters. They are used in directing or 'routing' network traffic. The mask is related to whether you are on an A B or C class network.

localhost

localhost is a special term in TCP/IP. 127.0.0.1 is the localhost (loopback interface) this is a software only interface internal to the stack itself, and is not accessible over any interface. It doesn't matter what your LAN card IP really is, 127.0.0.1 will always refer to the local machine. This means that this interface can only be accessed from the machine itself. It is like saying "ME" or "I" in reference to yourself. TCP/IP often uses localhost if a machine wants to talk to itself on a different port it can say "localhost:<port#>". The TCP stack looks at this, realizes it refers to itself, and directs to the correct port, with out sending anything on the network.

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BrowseGate commands (web browser URL's)

BrowseGate provides a set of commands that let you interrogate the proxy server to find out what settings apply to the PC you are working on, or even to force BrowseGate to hang up the telephone line....

The commands shown below should be typed into your browser exactly as shown, or with "//" before the commands. You do not need to type "http://" at the start of the URL.

PLEASE MAKE SURE YOU DO **NOT** type "www" into the URL field as this will always force BrowseGate to attempt to connect externally to try to resolve this as an external URL.

Available Commands
[bg-help]   Shows these commands
[bg-log]   Displays a list of available BrowseGate activity log files
[bg-hangup]   Drops a modem connection
[bg-rules]   Shows any rules that apply to this connection
[bg-allrules]   Shows all rules that exist
[bg-alias]   Shows any address aliases that will be used
[bg-connect] Details what internet connection BrowseGate is using
[bg-proxy]   Details the external proxy server that may be in use
[bg-cache]   Shows the current cache system status.
[bg-downloads]Details the FTP setting that are in use
[bg-local]   Details the local web server settings
[bg-about]   Displays registration and serial number information
[bg-blacklist] Displays the status of the BlackList system
[bg-ports]   Displays a list of the current ports configured for standard services by BrowseGate
[bg-tcpmap]   Displays settings for all "extra Service" ports configured
[bg-socks]   Displays settings for the SOCKS 4/5 support
[bg-real]   Displays Real Player settings that will be used
[bg-dns]   Displays settings for the BrowseGate DNS configuration
[bg-modem]   Displays the current modem settings and online status for BrowseGate

eg: Address | http://bg-help/

You will see that each of these commands is a link to the command, so you can simply click on any command to see what it does from the Help screen that is displayed.

BG-HELP
Displays a page showing the list of commands as shown above

BG-LOG
lists all available BrowseGate activity Log files

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eg:

The following log files are available :

Thu.log is dated Thu 25 Feb

The log files are detailed and can grow quite large, but contain considerable information on all services provided by BrowseGate during the period concerned. This includes the IP address of the requesting PC, the Web site URL requested and the date/time of the request.
eg:

See: Example of a log file

BG-HANGUP

Forces BrowseGate to arbitrarily hang-up the phone even if other users are browsing the Web via BrowseGate at that time, but if our SmartServer3 email server system is installed on the same PC, and is also using the same dial-up connection at the time, then the disconnection request is correctly ignored.
eg:
Command [hangup] received and actioned...

BG-RULES

Lists any Rules that have been set up for that specific PC on the network.
eg:
Your server administrator has set the following rules which apply to your connection...
Rule Name: Sex ban 1
Contains the word: sex
Rule Status: Active
Rule Applies: between 9:00 and 17:00 hours
Rule Applies On: Sun, Mon, Tue, Wed, Thu, Fri, Sat
Please contact your server administrator to have settings changed...

BG-ALLRULES

Displays a full list of all Rules that have been set up (for any PC on the network). NB Rules can be set to be both Network wide and/or only applicable to a specific PC.
eg:
Your server administrator has set the following rules...
Rule Name: Sex ban 1
Contains the word: sex
Rule Status: Active
Rule Applies: between 9:00 and 17:00 hours
Rule Applies On: Sun, Mon, Tue, Wed, Thu, Fri, Sat
Rule Name: searches
Originates from the address: 192.143.55.118

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Rule Status: Inactive
Rule Applies: between 9:00 and 17:00 hours
Rule Applies On: Sun, Mon, Tue, Wed, Thu, Fri, Sat
Please contact your server administrator to have settings changed...

BG-ALIAS
Lists complete current Alias settings
eg:
Aliasing is enabled
Alias No. 1 : *.com
Alias No. 2 : *.net
Alias No. 3 : www.*.com
Alias No. 4 : www.*.net
Alias No. 5 :
Alias No. 6 :
Alias No. 7 :
Alias No. 8 :

BG-CONNECT
Lists the current external connection configuration of the BrowseGate proxy server you
are connected to.
eg:
Listening on port 80
Connect using Virgin net
Inactivity timeout is 30 minutes
Seconds to wait for connection to be made is 120
Number of redial attempts is 1
Delay between redial attempts is 5 seconds

BG-PROXY
Lists the current settings of any external proxy that the BrowseGate proxy server you
are connected to may be using.
eg:
External proxy Disabled...

BG-CACHE
Lists the current settings for the web site cache system.
eg:
The cache is currently Enabled...
Path to \Cache directory is [F:\SMARTSERVER40059]
Max disk space to be used by cache is set to [3] Mb
Current size of the cached data is 460,915 bytes
When cache is purged, 13% of newest data will be retained

BG-DOWNLOADS
Lists the details of the (Browser) FTP configuration of the BrowseGate proxy server you

are connected to.
eg:
FTP access type Passive
FTP username ftp
FTP password wwwuser@here.com

BG-LOCAL
Lists the details of the local web site that BrowseGate will connect to if asked
eg:
Local server root directory C:\netc web sites\Public Web Site
Local server default page home.htm

BG-ABOUT
Lists version information for the BrowseGate proxy server you are connected to.
eg:
Version number: 1.05
Registered serial no 15000001
Maximum number of users 25
Using port 80

BG-BLACKLIST
Lists information on the Blacklist settings for the BrowseGate proxy server you are
connected to.
eg:

Blacklisting from banned SITES file is Enabled...
Strict blacklisting is Enabled...
Blacklisting of Sites from banned WORDS file is Enabled...
The following PC's will NOT be blacklisted from entries in banned SITES file :-
192.168.4.3 192.168.4.1
The following PC's will NOT be blacklisted from entries in banned WORDS file :-
192.168.4.3 192.168.4.1

BG-PORTS
List the ports that are configured for standard services
eg:
Configured services are as follow

WWW service listening on port 81
SMTP service listening on port 26 connecting to pop3.ps-consultants.co.uk on port 25
POP3 service listening on port 111 connecting to pop3.ps-consultants.co.uk on port 110
NNTP service listening on port 121 connecting to news.demon.co.uk on port 119

BG-TCPMAP
Lists information on the TCP Port Mappings configured for the BrowseGate proxy server
you are connected to.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

eg:

Configured TCP Mappings are as follows

Connection No. 1 : news.demon.co.uk, Local port - 123, Remote Port - 119, Connection ACTIVE
Connection No. 2 : mail.virgin.net, Local port - 151, Remote Port - 110, Connection ACTIVE
Connection No. 3 : pop.site.csi.com, Local port - 153, Remote Port - 110, Connection ACTIVE
Connection No. 4 : pop3.demon.co.uk, Local port - 154, Remote Port - 110, Connection ACTIVE
Connection No. 5 : pop.freeserve.net, Local port - 155, Remote Port - 110, Connection ACTIVE
Connection No. 6 : mailhost.airtime.co.uk, Local port - 152, Remote Port - 110, Connection ACTIVE
Connection No. 7 : pop3.ps-consultants.co.uk, Local port - 221, Remote Port - 110, Connection ACTIVE

BG-SOCKS
Lists information on the TCP port Mappings configured for the BrowseGate proxy server you are connected to.
eg:

SOCKS V4 and V5 service: Enabled...
SOCKS port number 1080

BG-REAL
Lists information on the port settings configured for RealPlayer to use the BrowseGate proxy server you are connected to.
eg:

Real Player (PNA) service: Enabled...
PNA port number 1090

BG-DNS
Lists information on the TCP Mappings configured for the BrowseGate proxy server you are connected to.
eg:

Internal DNS service Enabled...
External DNS service Enabled...
Primary DNS server 194.168.8.100
Secondary DNS server 158.152.1.58
DNS service running on port number 53
DNS service external port number 53

BG-MODEM

Lists information on the current modem settings and status for the BrowseGate proxy server you are connected to.

eg:

The specified RAS/DUN connection to be used is [Virgin net]
The modem connection timeout is set to [10] minutes
The modem is NOT on-line at this time...

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Configuring BrowseGate

Both standard Dial up connections using the built in Windows Dial Up Networking system (and NT4 RAS system) or direct TCP/IP connections are fully supported. This tab lets you specify and configure the external connection method BrowseGate will use to connect to the Internet or WorldWide Web.
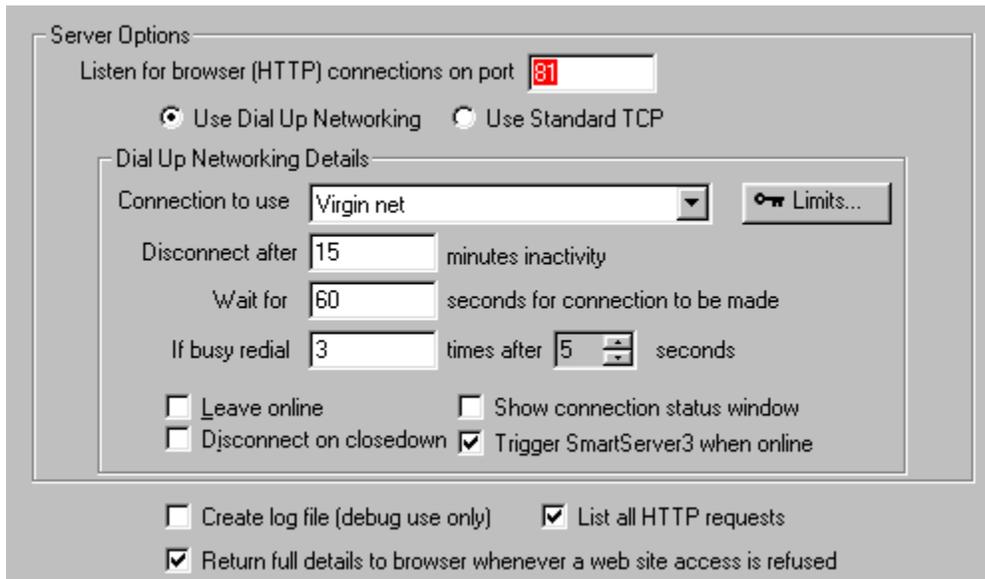
The settings on the above dialog are all fairly self explanatory…

FTP settings
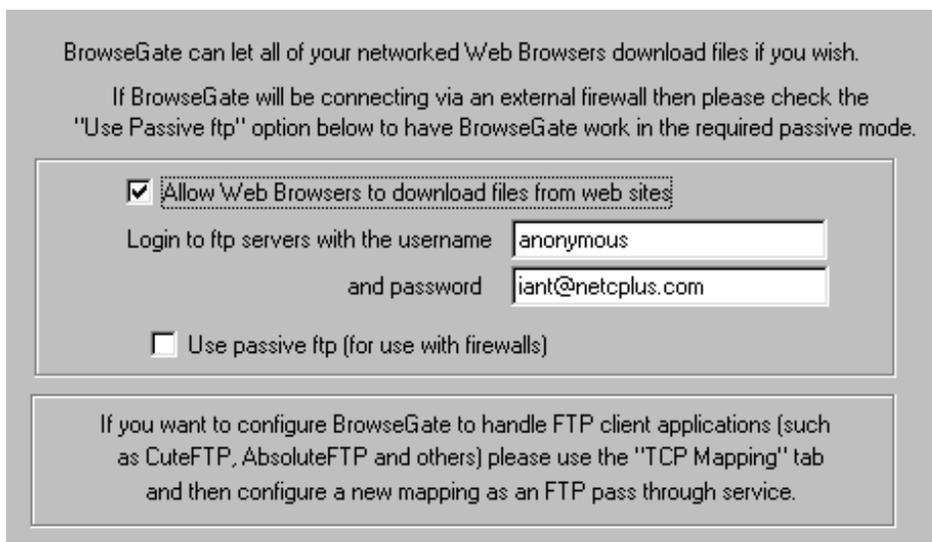
BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

This is the setup dialog to enable or disable the built-in FTP downloading system, and is NOT USED for NORMAL FTP connections, which should be enabled by creating an FTP gateway on the "Map TCP" configuration tab.

For most systems, we recommend that you CHECK the "Use Passive ftp" option as this is standard for connections thru a proxy server.

The other settings on the above dialog are all fairly self explanatory…

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

THE WEB PAGE CACHE - How to set it up

What is a cache ?
A cache is simply a technical term for the process whereby whenever a web site is visited, each and every web page (HTM, HTML etc) that is requested by the browsers on your network, plus all the associated image files (GIF, JPG etc) are not only given to the web browser that asked for them, but are also stored in a special subdirectory on your local hard disk. This means that the next time you want to visit that web site, BrowseGate can provide the pages and images directly from the hard disk, making the process faster and more effective.

BrowseGate provides a highly efficient, optimized and configurable web site caching system that is capable of storing on your local hard disk ALL the web pages and related files that are requested by any web browser that is connected through it.

How does a cache work ?
Providing you have chosen to enable the BrowseGate cache system, then every time a request is received from any web browser for an HTML page, BrowseGate first checks to see if it already has that particular page available in it's own cached data.

If a Cached page is found
BrowseGate checks with the Internet site concerned to ensure that the locally stored page is still up to date, and if so, it simply sends that copy back to the requesting browser, which means the user gets the page faster, and the amount of Internet traffic required is minimized.

What if the page is out of date ?
BrowseGate will always check to see if the page is out of date, and if so it will automatically fetch the latest version from the real web site, give this to the requesting browser, and then update the copy in the cache with this newer version.

What if a cached page is not found
BrowseGate simply fetches the requested page from the Internet web site itself, and after passing it to the web browser that asked for it, stores a copy in the local cache ready for the next time it may be requested.

This process is fully automatic, and all you will hopefully notice once you have some web site data stored in your cache is considerably faster access to these sites.

What happens when the cache gets too full ?
The BrowseGate cache has been optimized to operate what is called a high/low water mark system. All this means is that when the cache reaches the high water mark (typically around 95% of the maximum specified cache disk space), it will automatically remove the oldest data in the cache until the used cache disk space is reduced back to the low water mark (typically around 30% of the maximum specified cache disk space).

This involves a complex algorithm that decides which files in the cache are the oldest ones, and then removes these files one by one until the low water mark is reached. This means that many of the web sites that are already cached will still remain there, but some of the images or pages may then need to be fetched from the Internet again. However, this strategy enables BrowseGate to still provide a faster response than would be the case if the entire site had to be downloaded again.

All of this complex processing by BrowseGate is performed as a background task, and the only indication you will have of it happening if you are sitting at the PC on which BrowseGate is running will typically be some pretty rapid disk activity, and the Cache level indicator (or percentage display) on the main BrowseGate window suddenly dropping to around 15-20% of the overall cache size.

Creating additional proxy services using TCP port mapping

Because many intranets have the need to connect to more than a single mail host or different news servers or virtually any other type of servers, BrowseGate provides you with the ability to configure (or Map) as many additional ports as you want to act as "proxy services" to your TCP client applications on your network.

The configuration and use of these mapped TCP proxy services is quite simple once you understand the way that ports are used in TCP/IP communications.
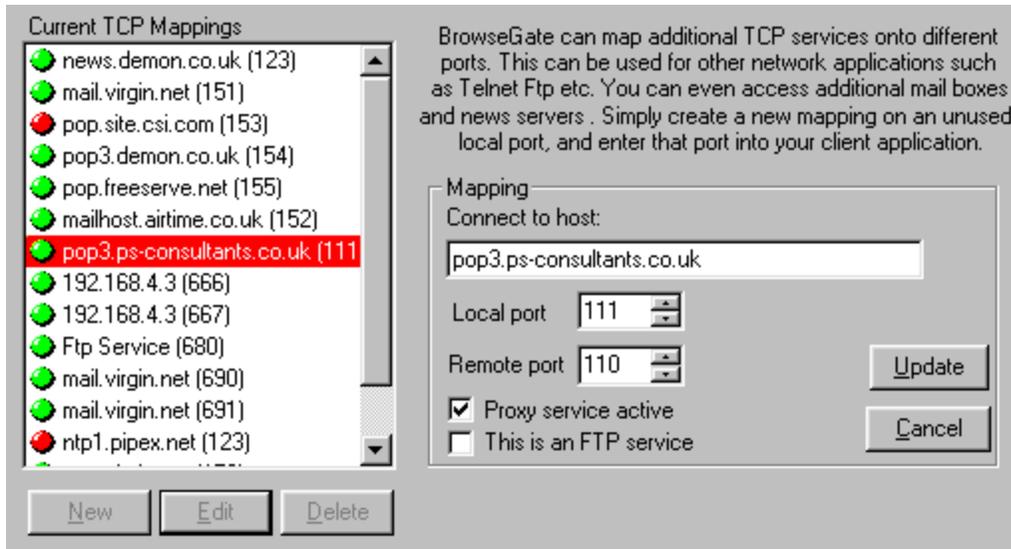
The property sheet tab above shows the first few of around 16 extra ports configured, all setup to connect to different email host machines apart from the first one, which is a connection to a news server.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Address alias settings

The address aliasing in BrowseGate allows you to type simple commands into the URL field of your browser such as "mywebsite", and let BrowseGate try to find suitable matching "full" URL addresses for you.

In the dialog shown, BrowseGate would try each of the entries shown in sequence attempting to connect to a URL that is comprised of any of the entries, which it uses to replace the "*".

So in our example it would try the following in order until it succeeded to connect or had tried all options :

mywebsite.com, mywebsite.net, www.mywebsite.com, www.mywebsite.net

Configuring BrowseGate to support NNTP news

BrowseGate can provide automatic access to a complete network to allow all PC's to fetch and post news articles from the Internet's NNTP news system

To configure this click "Configure" on the main BrowseGate window, and then select the "News" tab.
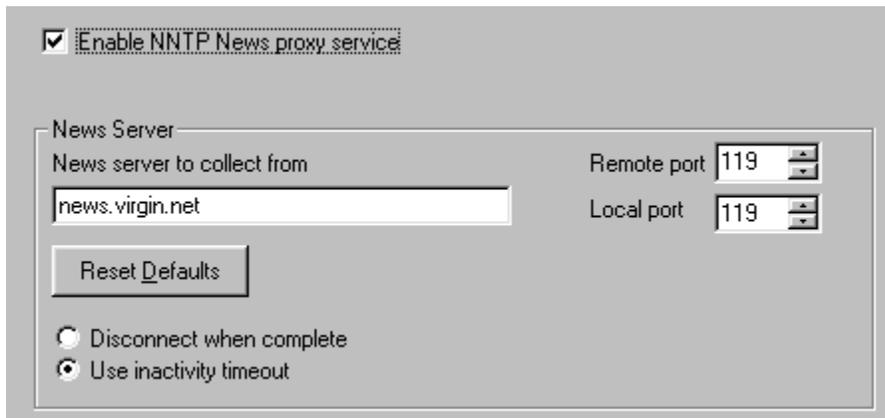
It is most important that you also ensure that the port settings in each of your news client's configurations match those you have selected on this tab. See - **Configuring your news clients** and **Ports - what you need to know**

Configure - Options
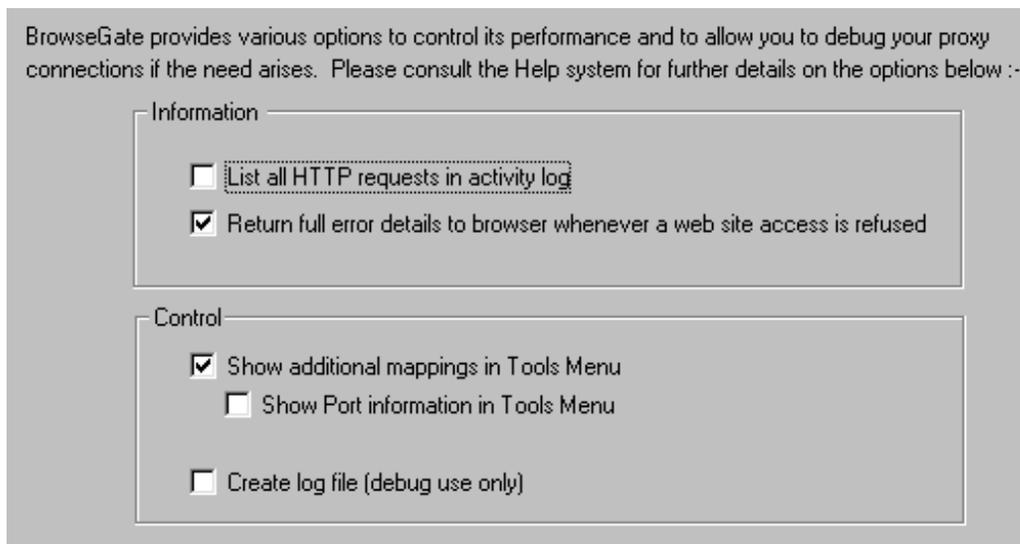
BrowseGate offers various special settings on the Options tab. Most are for advanced uses....

The "list all HTTP requests" option simply allows you to display ALL the HTTP requests made by your networked browsers. This includes all images, JPG's etc. Again this is only useful for debugging purposes, but it does not create any real overhead if you do wish to enable it…

The "return full error details…" option lets you select whether Browsegate sends back a fully detailed refusal page to a browser who encounters a hit on an activated blacklist entry, or to merely let them receive the standard browser's "Failed to connect" message.

The show additional mappings option lets you choose how much detail you want in the Options menu.

The "Create log file (debug…) option should only be used if you are asked to turn this on by the NetcPlus technical support group to allow them to see EXACTLY what connections your system has been doing. This generates a very detailed and fast growing file named BRWGATE.TXT in the BrowseGate installation directory that you may be asked to create and send to support if you are unusual enough to find a problem with BrowseGate.

Configuring BrowseGate to support pop3/smtp email

BrowseGate can provide automatic access to a complete network to allow all PC's to send emails (via SMTP) and collect emails (via POP3) from one or more mailboxes.

To configure this click "Configure" on the main BrowseGate window, and then select the "Email" tab.

It is most important that you also ensure that the port settings in each your email client account configurations match those you have selected on this tab.
See - **Configuring your email clients** and **Ports - what you need to know**

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Proxy server settings (Local Web site)

With BrowseGate you can take advantage of an external web proxy server if you
wish to do so. Just check the "Connect" option below, and enter the http address
of the server you wish to use, and then the TCP/IP port that is to be used.

(The default TCP/IP Port is usually 80 for Web connections)

Proxy Server configuration

☑ Connect through a proxy server

Type	Address	Port
HTTP	www-cache.demon.co.uk	8080

If this option is checked, it will allow BrowseGate to make it's external web browsing
connection via your ISP's external proxy server. Remember that you must also
complete the full URL of any such external proxy server correctly, and to enter the port
number exactly as it was given to you by your ISP.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting a password

BrowseGate allows you to set an "Administration password" that will ensure that the configuration settings cannot be changed by unauthorized individuals who do not know the password.

If a password is set, it MUST be entered before the system will display the Configuration property sheet.
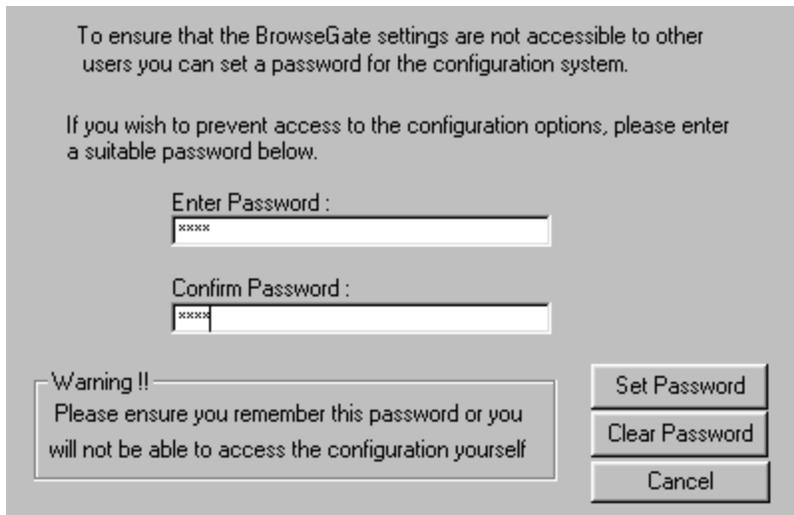
BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up the use of "Blacklisted" web sites or Words

BrowseGate can monitor web connections for specific site access or keywords and refuse the request if they appear. This facility could be used for example to stop children from accessing adult material. An up to date list of such sites is available from our web site.

Banned Sites
- ☑ Refuse access if site is in banned list   Edit Banned Sites
  - ☑ Apply strict enforcement
  Allow access if request made by the following network addresses
  192.166.43.21

Banned Keywords
- ☑ Refuse access if banned word is detected in URL   Edit Banned Words
  - ☑ Apply if partial match (Strict)
  Allow access if request made by the following network addresses
  192.166.43.35

Configure - SOCKS SERVICE

BrowseGate provides full support for both SOCKS4 and SOCKS5.

If you wish to use SOCKS4 however, please ensure that you also have the BrowseGate external DNS system (or another DNS) configured and enabled, as a working DNS capable of resolving Internet addresses is essential for SOCKS4 to work correctly....

BrowseGate can run a SOCKS V4 and V5 proxy service. If you wish to enable SOCKS access then please check the option below. We recommend you use SOCKS V5 in your network applications if they support it. NB the default SOCKS port is 1080

☑ Run SOCKS V4 and V5 proxy service

SOCKS
Use port: 1080   Restore Default

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up Rules to allow connections to specified URL's only !!

The "Site Blocking" option allows you to configure BrowseGate to only permit access to sites with URL's that match those you specify.

This puts YOU in total control of the use of the web and the sites that will allow to be visited by any networked user of BrowseGate.

BrowseGate can restrict web access to certain sites only. If you want to enable this feature then please enter the permitted sites below. eg www.netcplus.com

☑ Only allow connections to the following web sites

Site 1:	www.netcplus.com	Site 7:	*fastlink*
Site 2:	www.proxy-servers.com	Site 8:	*microsoft*
Site 3:	www.email-servers.com	Site 9:	
Site 4:	search.microsoft.com	Site 10:	
Site 5:	www.microsoft.com	Site 11:	
Site 6:	*shareware*	Site 12:	

Setting up BrowseGate to serve a local (intranet) web site automatically

Look for HTML files in	C:\netc web sites\Public Web Site	Browse
Default page to open	home.htm

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Configuring a dial up DUN's settings

WARNING - You must ensure that you this PC has windows Dial up networking system installed before you can configure a dial up connection.

Connection to use
Select for the list of available DUN connections the one you want BrowseGate to make use of for it's connections.

Disconnect after...
BrowseGate is designed to automatically disconnect any dial up connection it has started once the period you specify here has expired with no activity having been identified by BrowseGate. You should consider the setting you use here very carefully, as a timeout that is too short will result in BrowseGate making possible too many very short dial up connections. However if the timeout is too long, then your phone charges may be excessive. Typically you will need to monitor this for a while to ascertain the level of use made by your network users. We recommend a setting of 10 or 15 minutes as being a reasonable compromise for most businesses.

Wait for
This setting controls the maximum time that BrowseGate will attempt to make a dial up connection. We recommend 240 seconds as a safe setting.

If busy redial
Sets the number of dial attempts that BrowseGate will make if a connection cannot be made the first time it tries. We recommend the default setting should be left at 3 times.

Leave on Line
If this option is checked, then BrowseGate will NOT honor the settings in the "Disconnect After" field. This allows you to have a fall back disconnection time set, but to toggle its operation if you have ISDN links or other direct dial up links.

Disable inactivity connections
If this option is checked, BrowseGate will usually disconnect any dial up connection if you use the EXIT button to close BrowseGate down. The exception to this is if you are also running SmartServer 3 on the same PC as BrowseGate (as a full Internet server system). If this is the case, and SmartServer3 is in the process of a mail collection/delivery, then BrowseGate will naturally enough, ignore this setting.

Show connection status window
If checked, a popup monitor dialog will be displayed to show the dial status.

Trigger SmartServer when on line
Because BrowseGate and our own SmartServer email server can co-operate, and providing that you have installed BrowseGate as a plug-in to SmartServer, then by checking this option SmartServer will automatically check for, fetch and send mail each

time BrowseGate starts a dialup connection.

This may be sufficiently often on your network to allow you to not have the server scheduled to send/collect mail at all !!.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Configuring @NetClock

The following dialog is only enabled if you have our @NetClock Time server plug-in for BrowseGate installed. It allows you to have BrowseGate check and reset the Server PC's clock automatically each time it dials out to connect to the Internet.

The @NetClock plug-in also provides a network Time server that allows all other PC's on your network to set their own clocks to the same time as that on this machine automatically after predefined periods of xx minutes.
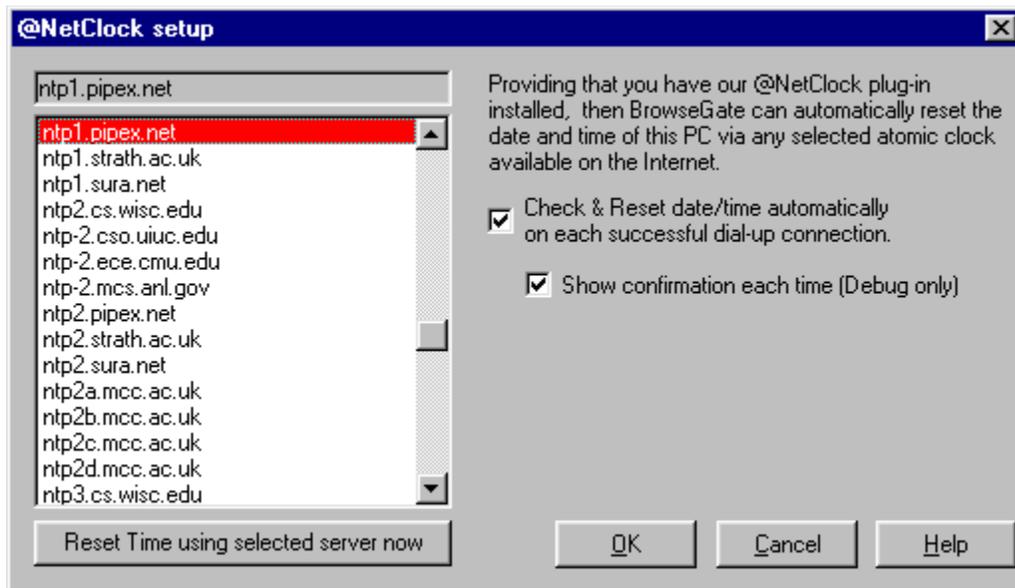
BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Configuring the Cache

We have tried to make configuring the BrowseGate cache as easy as possible. We let you specify the Drive and directory the cache sub-system will be stored in, and you can also specify the maximum amount of disk space that it can use, and how often it will check each requested item for currency.

NB For obvious reasons, We STRONGLY recommend that you always assign a cache drive/path that is on <u>the same PC that BrowseGate is running on</u>. Although the Window's drive selection dialog will of course allow you to go to the Network Neighborhood, and therefore select any accessible remote Drive/Path, BrowseGate will NOT allow you to select a networked drive from here as the location for the cache. For example, if you were to select a network server with a path such as :-

        \\ServerOne\webcache

BrowseGate will not accept your selection. But to handle the situation where this may really be necessary to suit your own network topography, you can map a networked drive to any free drive letter on the BrowseGate PC and then select that drive. This means you could get around this apparent "restriction" by mapping a networked drive of say

        \\ServerOne\webcache

to say drive x:\ on the BrowseGate PC. However we strongly recommend that you do not do this as you will almost certainly lose any speed benefits gained from the use of the cache system due to BrowseGate having to first retrieve the required web site data across your network, and then it would still have to feed it back again to the requesting

browser - yet again across the network. Not a very effective idea really, even with 100Mb networks !!!!

BrowseGate also checks the drive/path you select and will not allow you to select a CDROM or removable disk of any type. It will also refuse to accept a RAM drive (memory drive) if selected.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Configuring Yahoo Messenger to use BrowseGate

BrowseGate full supports both the HTTP only and (Recommended) the HTTP plus SOCKS4/5 connection methods available with Yahoo Messenger.

It is very easy to get YM to connect via BrowseGate by following the instructions below.

1. Run YM.
2. Select Edit | Preferences
3. Click on the Connection tab.

IF YOU WANT TO USE HTTP + SOCKS:
4. Check the "Use proxies" option
5. Check the "Enable HTTP proxy" option.
6. In the Server name field enter either the IP address of the PC on which BrowseGate is installed, or more easily, you can simply use the internal moniker of "browsegate" (entered WITHOUT the quotemarks).
7. Set the server port number to whatever local port BrowseGate uses for HTTP requests across the   network (typically this will be port 80)
8. Check the "Enable SOCKS proxy".
9. Repeat step 6 in the Server name field for the SOCKS configuration.
10. Set the server port number to whatever local port BrowseGate uses for SOCKS requests across the network (typically this will be port 1080).
11. Check the SOCKS version you wish to use. We recommend you use SOCKS 5, but you must have the BrowseGate DNS configured for this to work correctly.
12. Click the OK BUTTON.

IF YOU WANT TO USE HTTP ALONE:
4. Check the "Use proxies" option
5. Check the "Enable HTTP proxy" option.
6. In the Server name field enter either the IP address of the PC on which BrowseGate is installed, or more easily, you can simply use the internal moniker of "browsegate" (entered WITHOUT the quotemarks).
7. Set the server port number to whatever local port BrowseGate uses for HTTP requests across the network (typically this will be port 80)
8. UNCHECK the "Enable SOCKS proxy".
12. Click the OK BUTTON.

Now test the connection.

If you still have problems, check the Yahoo messenger web site Help system for firewalls and try each of the options listed there.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Configuring your mail clients

NB IMPORTANT - in all the example setup details above, we have assumed that the network name of PC on which you have installed the BrowseGate proxy server is named "browsegateproxy". Simply replace this with your own PC's name as appropriate.

Unfortunately, email clients are all very different in the way that you configure them to send and receive mail, so we have given detailed instructions on setting up the free Microsoft Outlook Express that comes with Internet Explorer 4, and our own SmartMail email client. Most others will be similar, although you will have to find the relevant configuration options in other packages for yourself.

Basically, the process is the same for all, and the concepts you need to understand are described briefly below :

When a proxy server is going to handle email access to the "outside" world, you need to change the address of the pop3 and smtp hosts that your email client will try to connect to from the external mail host name to the BrowseGate PC. This can be done using either the IP address (such as 192.168.40.123) of the PC on which BrowseGate is installed, or you can usually make use of that PC's Name (such as DELLPC200).

You must also ensure that the <u>local port number</u> you have configured in BrowseGate is also set to be the same in your email client. Most email clients allow this to be setup for each email account that can be configured. If you have an email client that has the ability to collect mail from multiple accounts, you will need to ensure that the Local port used for each account exactly matches the local port configured in BrowseGate for that particular mailbox !!!!

Configuring your news clients

NB IMPORTANT - in all the example setup details above, we have assumed that the network name of PC on which you have installed the BrowseGate proxy server is named "browsegateproxy". Simply replace this with your own PC's name as appropriate.

Unfortunately, newsreader are all very different in the way that you configure them to access the Internet NNTP news system so we have given details instructions on setting up the newsreader in the free Microsoft Outlook Express that comes with Internet Explorer 4. Most others will be similar, although you will have to find the relevant configuration options in other packages for yourself.

Basically, the process is the same for all, and the concepts you need to understand are described briefly below :

When a proxy server is going to handle news access you need to change the address

of the news server that your news client will try to connect to from the external news server name to the BrowseGate PC. This can be done using either the IP address (such as 192.168.40.123) of the PC on which BrowseGate is installed, or you can usually make use of that PC's Name (such as DELLPC200).

You must also ensure that the local port number you have configured on the BrowseGate "News Service" tab is also set to be the same in your newsreader. You will need to ensure that the Local port used for news access exactly matches the local port configured in BrowseGate for News Service !!!!

BrowseGate network proxy server for business networks

How to complete the built-in registration eMail

This dialog can be reached from the Register | Create eMail buttons.....

Please ensure that all Registrations are sent to the relevant
address(s) as shown on the Help | About dialog

Please note that you must complete ALL fields but the phone/fax numbers to
enable us to get your credit card payment authorized.

Licenses can be any multiple of 5.

**Please ensure that the email address you provide is correct, as we use this to
mail your registration codes to you via that mail box address.**

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Creating status reports

BrowseGate lets you generate configuration reports that can be saved as files and printed for later reference.
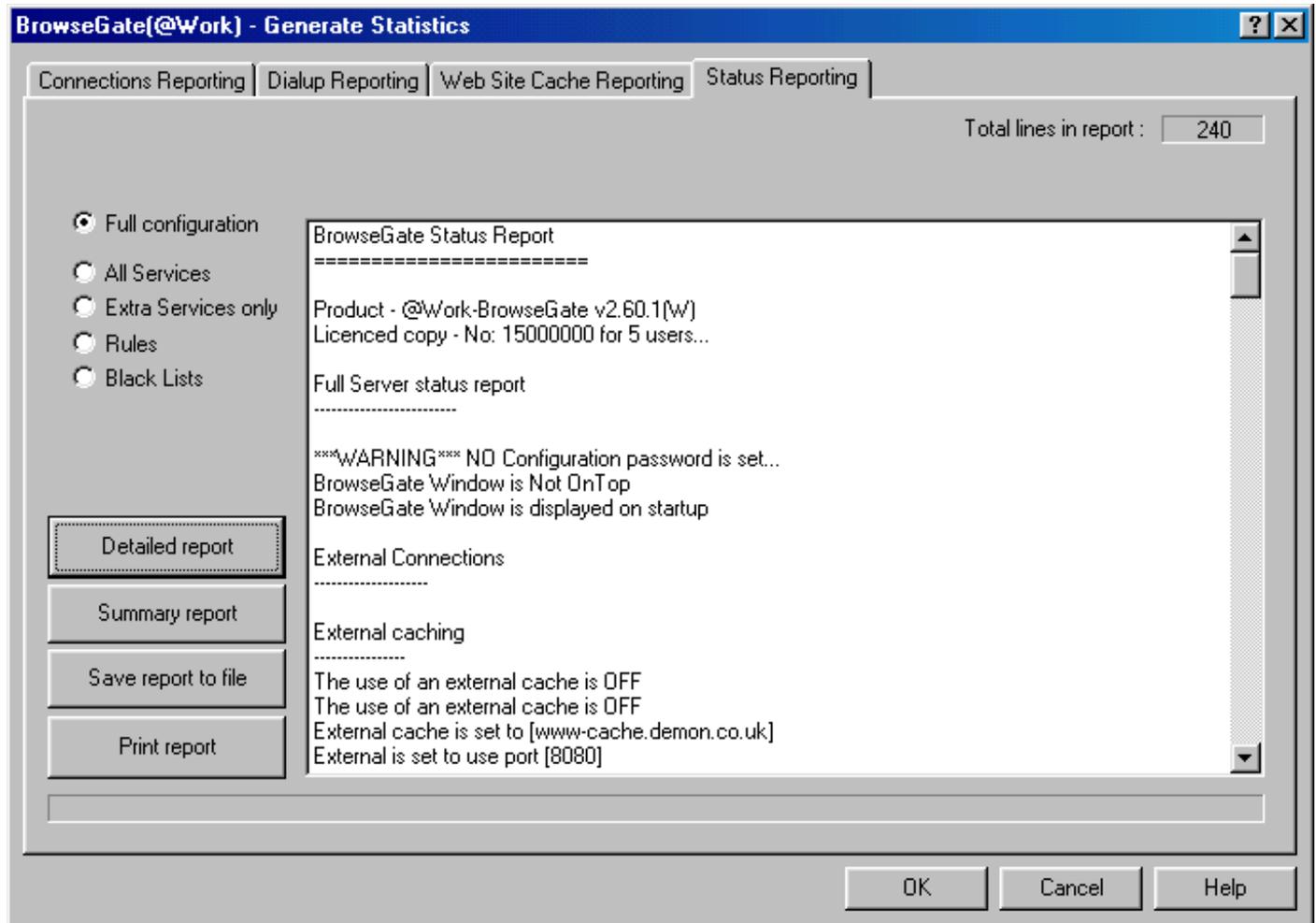
The options above are all self explanatory…

Forcing a disconnection

By clicking the disconnect button, you can force BrowseGate to drop its active modem connection. Please note that this will only perform the disconnection if either BrowseGate initiated the modem connection, or if another application did so using the same DUN connection.

To illustrate this, if you have more than a single DUN connection configured under Windows on your PC, and another application has used the modem to make a connection via "Demon", and BrowseGate is configured to use a "Virgin" connection and not the "Demon" one, BrowseGate would NOT perform a disconnection of any active "Demon" connection, although it would use it if a request was received for any service

provided by BrowseGate.

BrowseGate has been extensively tested to ensure that it will always endeavor to disconnect a modem connection after the specified timeout period. To allow it to do so we strongly recommend that any other applications that may also use this modem on the PC on which BrowseGate is installed should be configured to always use the same DUN connection as BrowseGate. This will avoid the potential for a connection remaining open indefinitely.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Discussion on Ports

Ports are the key to all TCP/IP communications. As you may be aware there are several predefined "default" ports for most TCP operations such as HTTP, FTP, POP3, SMTP and NNTP, but actually you can select almost any number of different settings/port numbers on your intranet/network system if you find that you need to do so. However, there are few rules involved in this process, the selections you make being pretty arbitrary.

The key point to always remember is that no two applications (on the same PC) can be monitoring or intercepting the same port at the same time, and whatever port you choose to handle a certain operation (eg pop3 mail) in BrowseGate is the one you MUST also configure each of your email clients (or news clients or web browsers etc) to use

What this means in the real world is that if you encounter a clash where two applications are intercepting and handling the same port, you can simply select almost any other unused port number. However you must ensure that all applications on the entire network that are using the same services are also configured to use the same port number you have decided on.....

As far as BrowseGate is concerned, it treats the internal port connection (local port) to your network applications totally separately to the external port (remote port) it is using to communicate with whatever external server(s) it is configured to work with. That is why it is usually only necessary to change the "local port" setting in BrowseGate to handle any internal network port clashes on your network.

Most external servers use the predefined "standard" ports, so you will be unlikely to need to change the remote port settings in BrowseGate.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

DNS - An Overview

The following are the main reasons why you may want to set up DNS on your LAN

1.   You want to use SOCKS to access FTP or Gopher or HTTPS URLs in a browser.
2.   You want to run some other SOCKS capable software
3.   You have a large LAN and you want name resolution for the machines on your LAN.

None of the proxies in BrowseGate other than SOCKS require a DNS to be working on your LAN.

One of the oddities of the SOCKS protocol is that a request for a connection is made in the form of a request for connection to an IP number. What this means is that a SOCKS client must be able to 'look up' addresses in order to supply this IP number to the SOCKS server.

This is the reason we added the built-in DNS server to BrowseGate. If however you already have DNS on your network, and it has the ability to resolve all the names you wish to connect to, then you do not need to run the BrowseGate DNS server in order to use SOCKS client applications. <u>You should not enable the BrowseGate DNS server if you are already running a DNS server</u> on the same machine - this is quite likely to mess up both DNS servers.

You WILL need to enable the DNS on your LAN however.

If you are using the BrowseGate DNS server, you should set the DNS Server settings for your LAN adapters (on all machines EXCEPT possibly the BrowseGate PC) to be the IP number of the BrowseGate PC.

There are a lot of very good resources on the Internet, which will help you to set this all up. In particular, the following page will most likely be able to help you if you run into difficulties:

http://www.windows95.com/connect/

Remember that IP numbers have to be unique for machines on the same network? Well, you can think of the entire Internet as a single network. But your LAN is probably not on the same network, even if one of the machines (i.e. the BrowseGate PC) is connected to the Internet. It is not so much a computer as a computer interface being visible on the Internet, and it does not matter at all whether this is a LAN card or a modem's serial port. The Internet can see any connected interface, but no further.

This means that you can choose any number you like for the machines on your LAN. However it isn't a good idea to choose just any old thing, because you have to think of the situation the BrowseGate PC is in.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

When connected to the Internet the BrowseGate PC can see the entire Internet, and it can of course also see every PC on your LAN. So, you don't want to confuse it by giving your LAN the same addresses that the BrowseGate machine can see on the Internet.

Fortunately some smart person already thought of this one, and so a whole heap of addresses have been kept aside for just this purpose. These addresses are called "private addresses" and are not meant to be available anywhere on the Internet. Therefore, by using them on your LAN, there won't ever be any confusion for the BrowseGate PC.

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The DNS System - Important information

Potential problem when running Internet client applications on the BrowseGate server PC itself.

NB This situation only occurs when attempting to run client applications
on the SAME PC as the one on which BrowseGate is running.

Each and every PC that has the TCP/IP protocol installed will have been given a "name" such as "myserver", or "Dellp200" or a similar unique name that Window's always uses for it's internal address resolution system. This Computer name can be seen in the property sheet shown below that can be reached from Start Menu | Settings | Network
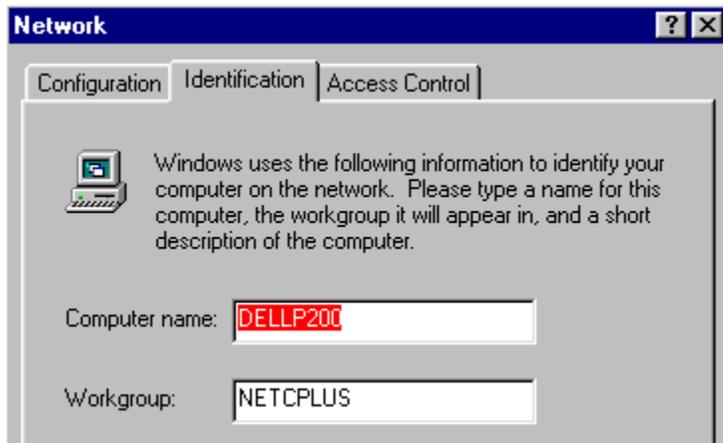
If you then click on the Configuration tab, and locate an entry that looks similar to the one shown below (but for your particular network card)
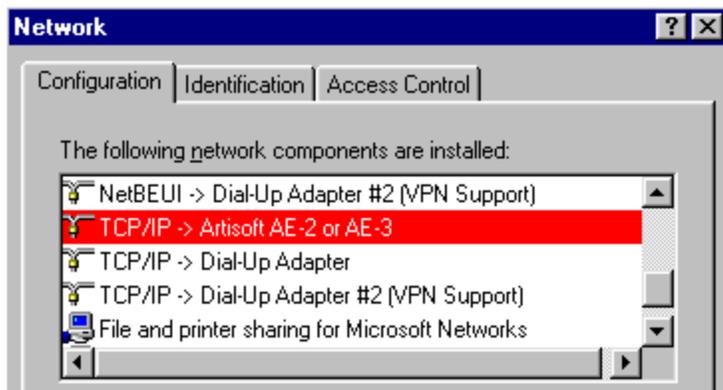
Now click the properties button, and you will see a panel similar to this one :-

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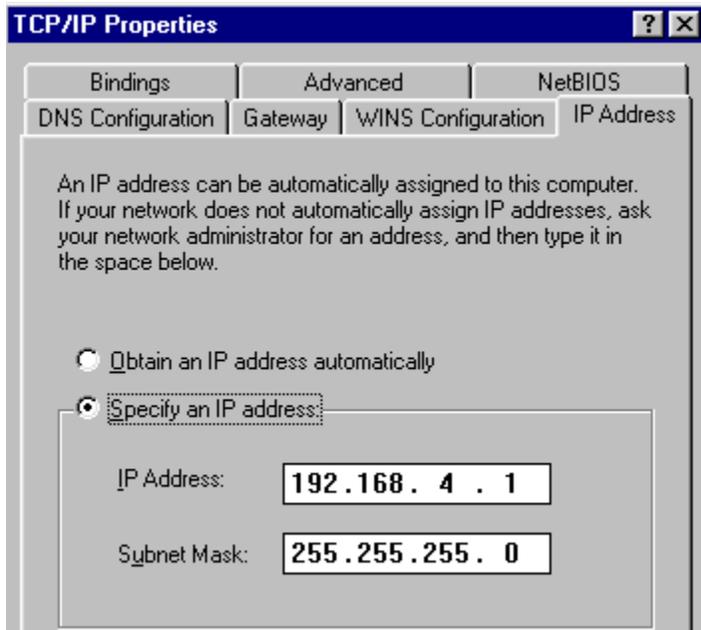
You can see that this is where the actual IP address of this PC has been entered.

Although the Windows 95/98 operating systems do not have a DNS system, they do have an internal caching and DNS resolution system for the use of "locally" executing applications, and this will correctly resolve the machine name (DELLP200) in our example as having an IP address of 192.168.4.1.

However, this will cause you problems because if you happen to use the actual "name" (DELLP200 in this case) of the local machine when attempting to configure any Internet client application such as email, news, web browsers etc to be run on the same PC that BrowseGate is installed on, Windows will always perform the IP address resolution, rather than letting BrowseGate handle it for you. The problem with this is that you will never get an external connection via this form of resolution as Windows does not pass it on to BrowseGate and so it does not know the request has been received.

This can be very confusing when you are assuming (perfectly reasonably) that the BrowseGate DNS system will be handling ALL DNS requests.

There are two simple work arounds for this problem :-

1. The simplest way is to **use the built-in "special" machine name of "BROWSEGATE".** This is because BrowseGate knows about this name and it will always handle it without any need for you to add it to your internal machines list. The BrowseGate DNS will handle all IP address resolution as expected. You can of course also use "BROWSEGATE" when configuring their internet client applications on all your networked machines.

2. Lets assume as per our examples above that the name of your BrowseGate server

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PC is "DELLP200"

Do NOT use this actual machine name in your list of internal DNS settings. Instead add an entry in the BrowseGate internal servers list of say "DellProxy"

Now ALL PC's on the network (including the server machine itself) can safely use the name of "DellProxy" rather than it's IP address, and it will all work as expected, with the BrowseGate DNS handling all IP address resolution as expected.

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What is the Internal DNS ?

The Internal DNS is actually quite a simple "lookup" system that checks each and every entry in a special file called HOSTS.TXT to see if there is a matching entry for the machine name requested by any application. In the example below you will see that there are actually several different entries in the internal DNS list that are used for exactly the same machine with an IP address of 192.168.4.1.
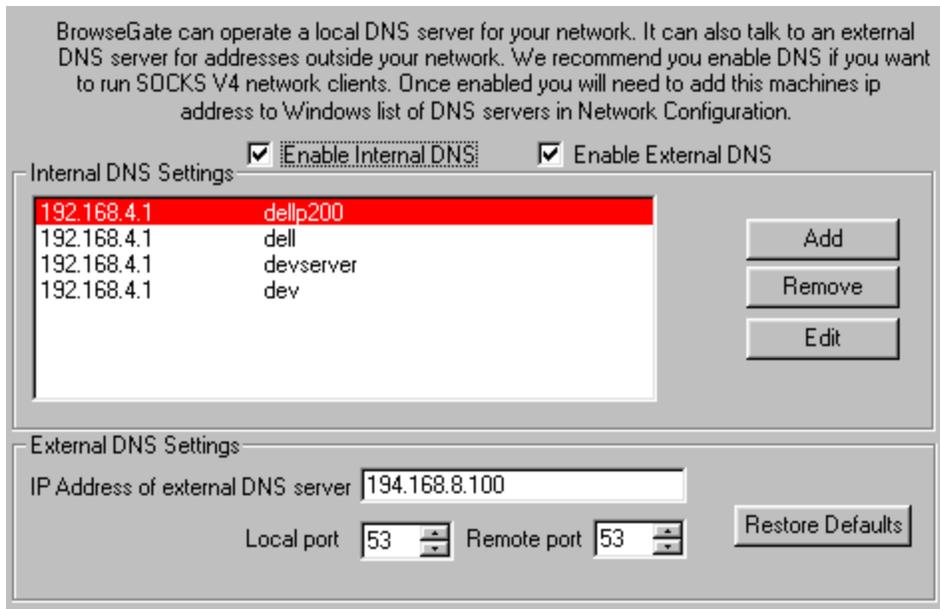
This is perfectly legal, and can sometimes be very useful if you wish to allocate any specific server PC a different name for use with different applications. BrowseGate will check each and every "human readable" name in an attempt to find a match with the requested one.

So in the example above, when a request is received for a machine with the name of say "devserver", BrowseGate would of course find this in the 3rd entry of the HOSTS.TXT file, and would return the assigned IP address of 192.168.4.1. A different application on the network might be configured to access the same server machine but using a name of just "dev", which would of course, also return the same IP address of 192.168.4.1 (and so of course the same server PC)

However, a more typical list of local (networked) machines would also contain some other machine entries and might look more like :-

192.168.4.1   Dellp200
192.168.4.1   MailServer
192.168.4.3   Gateway2200
192.168.4.4   ASTP90
192.168.4.4   proxy

Which shows that we actually have 3 networked machines, but have chosen to assign 2 names to the machine with the IP address of 192.168.4.1, and also 2 names to the machine with the IP address of 192.168.4.4, but leaving the GateWay2200 with just a single name.

This is known as DNS aliasing.

Of course it is essential that you ensure that no machine names you allocate are duplicated in the DNS List, or the first entry is the only one that will ever be located...

The search and comparison is NOT performed CASE SENSITIVELY, so it is not important that you enter the machine names in any particular case, but you must of course ensure that you spell them totally correctly..

WARNING: If you make changes to the internal DNS list in BrowseGate, you may find it necessary to reboot the BrowseGate PC. This is due to the fact that Windows caches many DNS entries internally, and this can confuse the TCP/IP system and DNS lookups if you happen to remove an entry that is already being cached by Windows itself.

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The built-in DNS system

You can enable or disable either / both the internal or external DNS facilities provided by BrowseGate if required.

Simply check/uncheck the options here, but please note that if you do DISABLE the external DNS, you will almost certainly need to change the entries on your network card's TCP/IP DNS settings also....

What is an Internal DNS
This is normally what is used to resolve the addresses of each and every PC on your internal network. You enter the TCP/IP address and also the name that has been given to that PC in the maintenance dialog, and then when you enter a meaningful address into one of your internet client applications such as "myserver:1080" this will be resolved by the internal DNS system to be the IP address of that PC on your network - perhaps 192.168.345.123... You can see that it is much easier to remember (and to type without errors) a server with the name "myserver" rather than trying to remember 192.168.345.123 all the time.

What is an External DNS
Whenever a request is received for a non numeric URL, BrowseGate will always check it's internal list first, but if the URL requested does not have an entry in the internal list, BrowseGate will then automatically connect to the Internet (if not already connected) and then ask whatever external DNS server you have specified to resolve the address.

This is all handled totally transparently as far as the networked users are concerned.

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The BrowseGate Domain Name Server (DNS)

BrowseGate offers your Windows 95/98 network a full featured, built-in DNS server that handles both internal resolution and external (DNS forwarding) requests because most (W95/98) networks do not have a DNS built-in such as the one provided as a part of the NT4 operating system.

A DNS is an essential item on your network if you wish to use SOCKS4, and very useful for many other intranet --> Internet communications protocols.

DNS stands for "Domain Name Server", which is just a fancy name for a bit of rather clever software that converts requests for internet (and intranet/network) resources such as web pages and email hosts into the actual TCP/IP addresses that are ESSENTIAL if any internet software is to be able to work.

What this means is that when you type into your web browser a URL of say

http://www.microsoft.com

this is really just a "human readable" and meaningful address that HAS TO BE CONVERTED somehow into the correct Internet TCP/IP address such as 192.164.203.126 or whatever the actual physical internet address of that particular web site really is.   (This is usually known as "Resolving" the address)

That is exactly what a DNS does, and BrowseGate provides you with your very own DNS !!!
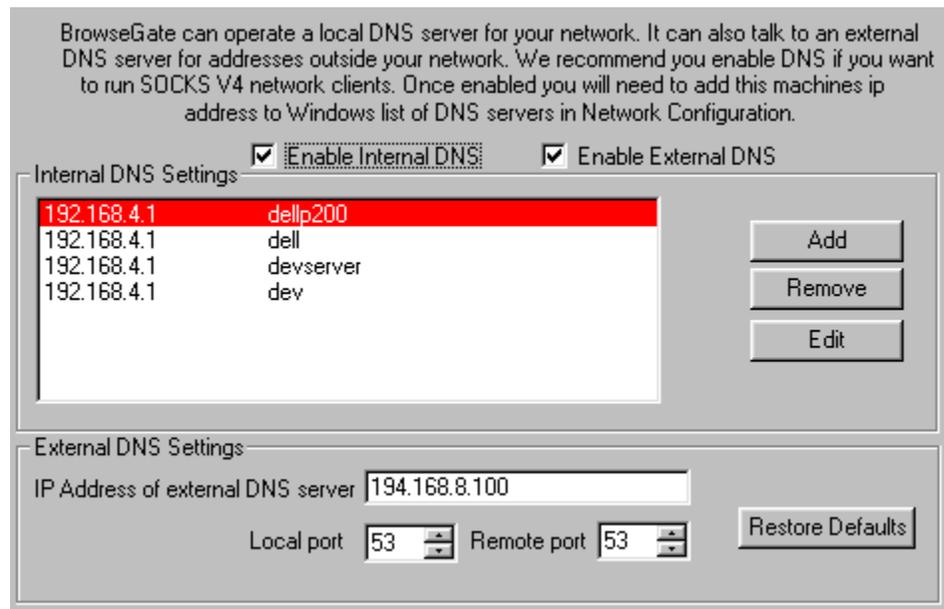
BrowseGate actually has two different DNS systems built-in to it, an Internal DNS and an External DNS (DNS forwarding) hence the 2 check boxes shown.

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Editing banned sites/words lists

BrowseGate lets you modify the content of both the Blacklist Sites and Blacklist Words using the same editor dialog shown below.
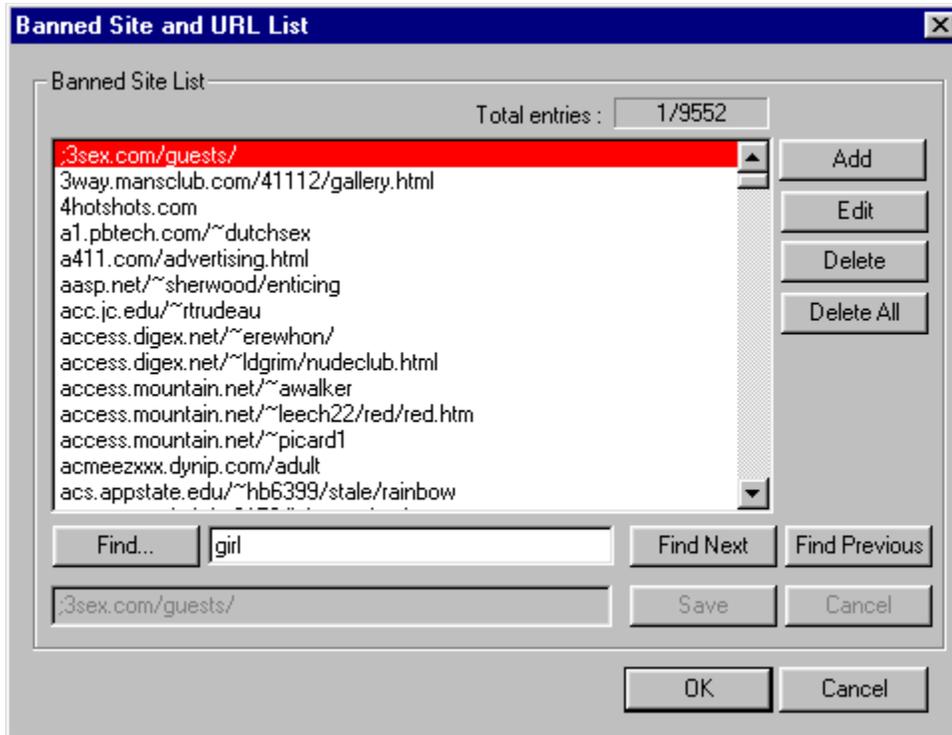
If you want to ENABLE any words or URL's that may be found in the Blacklists, all you need to do is edit the entry concerned and add a semi colon to the front, ensuring it is in the 1st character position (no leading spaces etc) This acts as a "commenting marker" which if removed again will enable this entry again.

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Editing the cache contents
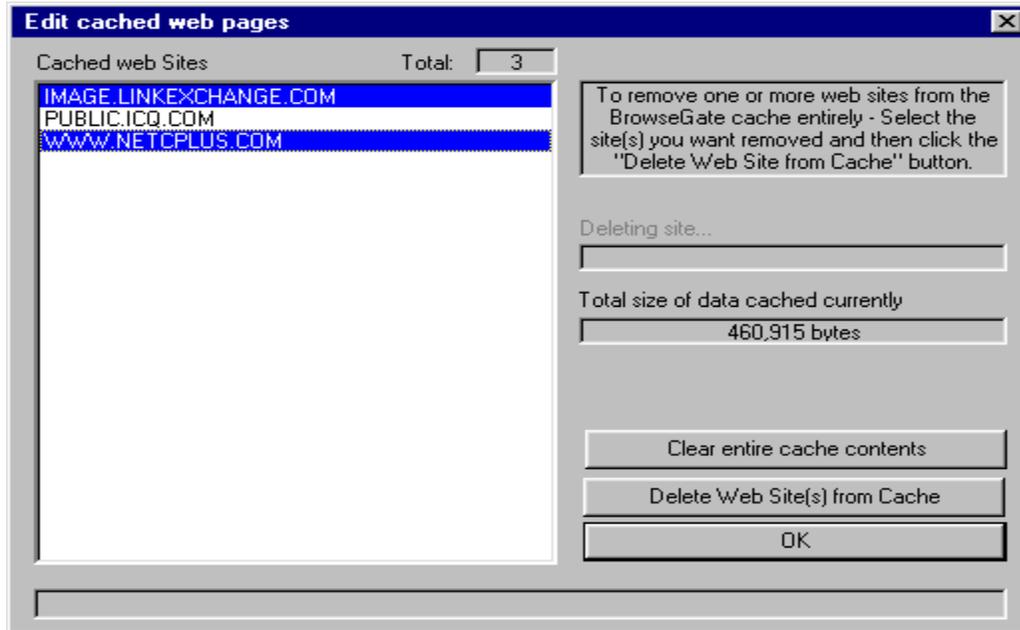
The dialog provides a list of each and every web site that is held in the BrowseGate cache system.

You can select one (or more) sites in the list box, and once you press the "Delete Web Site" button, you will be asked to confirm, and then each of the selected web site(s) and all the data stored for it will be deleted form the cache system and removed from your hard disk.

This puts you in control of the cache contents, and lets you quickly and easily remove any web site(s) you decide you no longer wish to keep cached on your hard disk.

Checking this option allows you to stop all connected web browsers from performing FTP style file downloads from web sites.

Please note that this will **not** however stop browser users from being able to download files from web sites that use the newer http://xxxxx form of FTP. You can however block this by setting up a new entry on the "Rules" tab that contain the file suffixes of those files you wish to stop being downloaded.

In this case for security the entries MUST include the leading period - for example, a typical rule to stop downloads of common files types might contain the following line:

.EXE .COM .TAR .ZIP .GZ

This would automatically ban any URL that contained a filename which included any of the above 5 common download types.

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Generating dial-up statistics

BrowseGate provides a powerful modem usage reporting facility that allows you to monitor the amount of time that BrowseGate has been connected to the Internet over the last 7 day period.

The statistics option takes advantage of the detailed activity log files that are automatically generated for each of the 7 days of the week, and scans these to produce summary information on the dial-up activity for any/all of the last 7 days
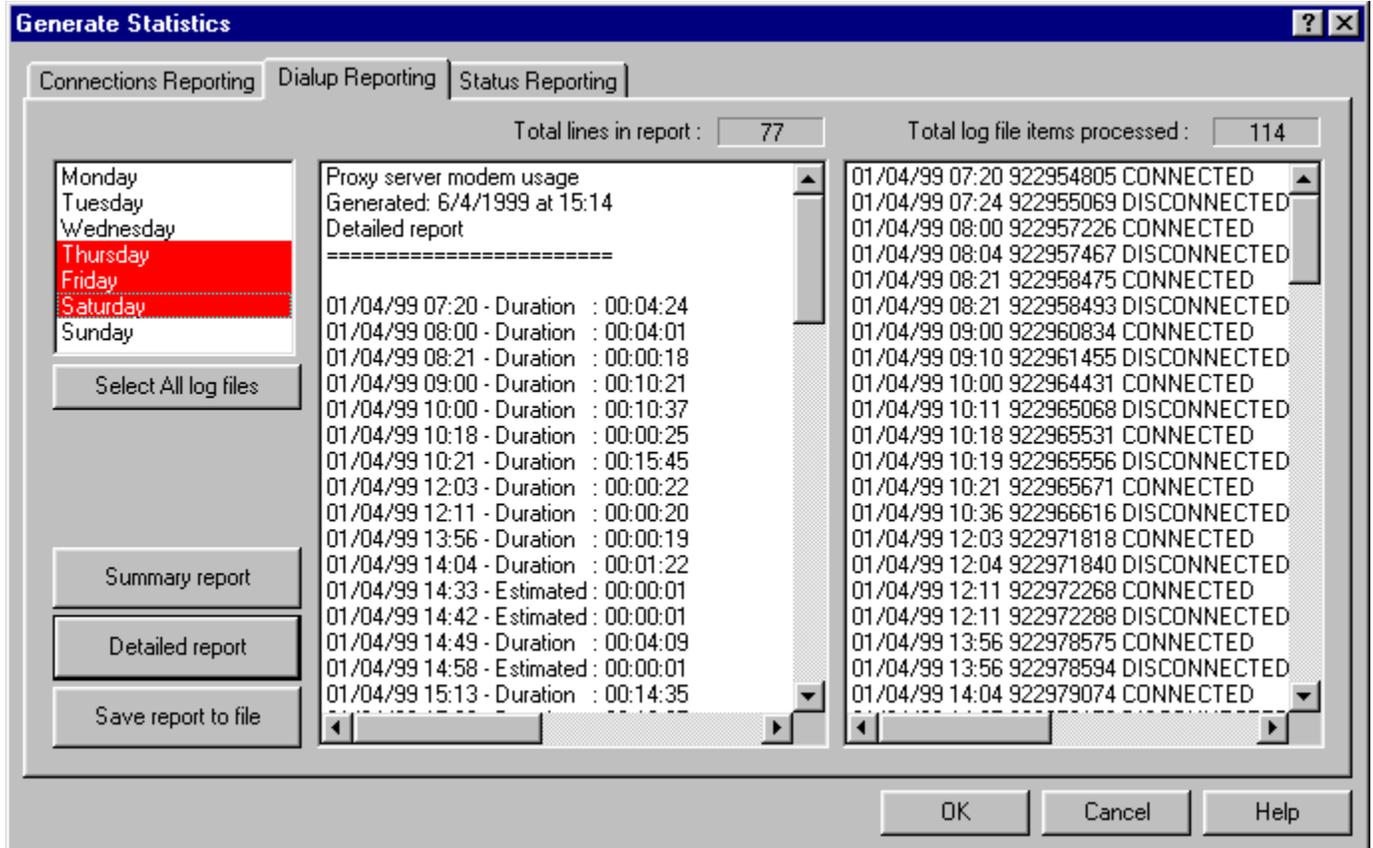
In our example above, a detailed report has been generated for the three selected log files, which shows the time and duration of each modem connection that BrowseGate has made.

NB The BrowseGate logging system ONLY logs connections and disconnections that are made by BrowseGate itself. If you start or stop a dial-up connection manually from the "Dial Up Networking" folder or a desktop shortcut, it will, quite reasonably, NOT be logged by BrowseGate...

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How to access your local intranet web site

Once you have configured the local web site details, you can type a simple URL into any of your networked Web browsers that are using the BrowseGate proxy server.

URL's look like this :-
        //DELLPC

which will force BrowseGate to display the specified default page for the directory you have specified.

You can also use URL's such as //DELLPC/home.htm or even //DELLPC/info.htm to force the loading of a specific web page from the local site providing you know the correct page name.

How to register your copy of BrowseGate

If you have already registered !
Browsegate is easily registered at any time by the entry of the unlock codes that are provided to you (when you pay the registration fee) into the Register dialog accessed from the Register button on the main BrowseGate window.

If you want to register !
You can pay for your registration by email or telephone. If you are using a credit card we have provided a special credit card registration dialog that is accessed from the Register dialog that lets you enter all the credit card details we require and save this to a file that can be sent to us via email. Just click the "Create eMail" button on the register dialog to access this.

For all payment methods, please ensure you provide us with a valid eMail address to which we can send your registration unlock codes !!

Full details of all email addresses and phone numbers to send registrations to can be found by clicking the "Help | How to Register" menu option

The BrowseGate(Work) version starts with 5 users and can be increased thereafter in increments of a further 5 users, (10, 15, 20 etc) all at small incremental costs.

The BrowseGate(Home) version only supports a maximum of 4 users. Hence the lower price…….

The BrowseGate(Personal) version only supports a maximum of 3 users. Hence the even lower price…….

The BrowseGate(Lite) version only supports a maximum of 2 users. And it's FREE !!

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How to specify permitted web URL's

If you have one or more of the site blocking fields in BrowseGate set this will limit access to any web site URL by checking each and every request received from your networked users, and looks for a complete match of the main URL entry itself (this is the bit after"http://" prefix and up to, but not including the next "/")

It then compares this URL to each of the Site Blocking entries you have made. The match is NOT case sensitive. The asterisk can also be used as a wildcard to expand the scope of a rule limit for maximum flexibility (see below)

If whatever you have entered in any of the fields provided does match the complete requested URL, the request will be allowed and the web page fetched for the user concerned...

For example, the entry "www.microsoft.com" in Site 3 above would allow access to
      http://www.microsoft.com/uk/nt4/downloads.htm
(because the URL to be checked is the bit between the "//" and the following "/" ONLY.... eg "www.microsoft.com")
and it would allow access to variations such as
      http://www.microsoft.com//w95/downloads?search=NetcPlus?xcvdef,
but it would REFUSE a request for
      http://searchengine.www.microsoft.com/uk/nt4/downloads.htm

because none of your entries contain the complete URL of
"**searchengine.www.microsoft.com**"
(The word "searchengine" is missing)

However, if for example a network user were to click on the search option on the Microsoft site, they would not be allowed to perform this based on the allowed "www.microsoft.com" entry, as this URL is actually changed by the Microsoft site to http://search.microsoft.com/...., which does NOT of course match the originally permitted site name of www.microsoft com.

There are two ways you can overcome this problem. :-
      Add a new entry (see Site 4) to permit this URL,
or
      Take advantage of the wildcards !!!!

Using Wildcards

BrowseGate allows you to add an "*" (asterisk) character as either the first or last character (only) of a blocking entry. Please do not put one in the middle of an entry as it will not work as expected

This allows you to perform substring matches such as

microsoft
which WOULD match both **"www.microsoft.com"** AND
"searchengine.www.microsoft.com",
or
 www.microsoft.*
which WOULD match both **"www.microsoft.com"** AND **"www.microsoft.co.uk"**, but
NOT **"searchengine.www.microsoft.com"**

WARNING

Because many web sites collect data automatically from other sites, such as visitor
counters and advertising links, you will almost certainly see one or more "error"
message in your browsers when these URL's are requested by the pages being loaded.
Typically these are the now familiar Java script errors, or Unable to connect to site
xxx.xxx.xxx messages. If for any reason you DO WANT to allow these links, you must
add the relevant URL details into your list of allowed sites on this configuration tab.

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Creating short cuts to the
BrowseGate URL commands

The screen shot below is just a suggestion for using the favorites menu in IE4 and Netscape for quick access to BrowseGate Commands
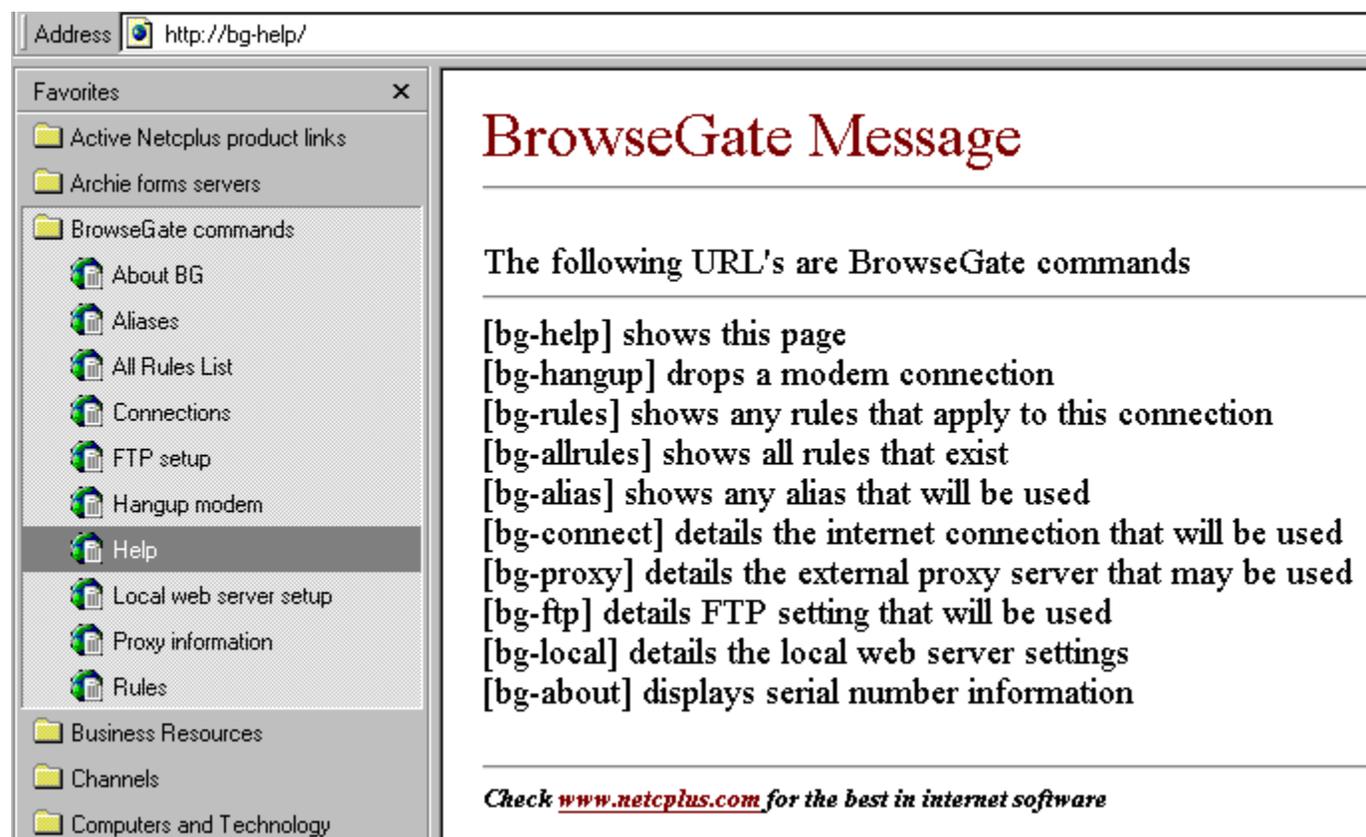
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Limiting Internet access to specified times/days
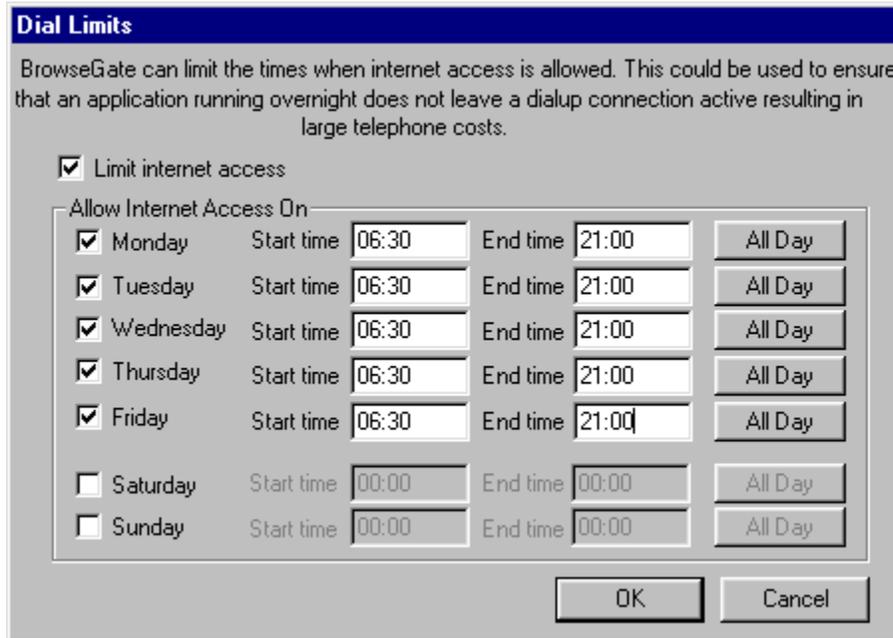
By clicking the "Limits..." button on the initial "Connections" tab of the BrowseGate configuration property sheet, the dialog shown above will be displayed.

Whether you are using a dial-up connection or a permanent link to the Internet, you will probably want to limit this access to certain days or times of certain days.

This is because of the problems that both Web Browser and Real Player "Channels" can cause, plus the innumerable "tickers" and other real time, Internet based facilities currently available that will make requests on a rather too regular basis for a connection to the Internet to enable them to update whatever data they are using.

BrowseGate puts you in control of your dial-up access by providing you with the ability to specify both the times between which, and the days on which, it will honor dial-up internet access requests to any of your networked users.

This means that you can easily enable or disable all internet access that may be provided by BrowseGate for any day of the week by simply checking or unchecking the relevant day, and you can also limit the hours between which BrowseGate will allow dial-up requests.

You can even disable these limits globally quickly and easily without losing the settings you have already entered (Great when the network administrator has to work late....!!)

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Example of log file entries

27/02/99 7:36 192.168.4.1 Connected to pop3.ps-consultants.co.uk
27/02/99 7:36 192.168.4.1 Connected to pop3.ps-consultants.co.uk
27/02/99 7:36 192.168.4.1 Disconnected from pop3.ps-consultants.co.uk
27/02/99 7:37 192.168.4.1 Connected to pop3.ps-consultants.co.uk
27/02/99 7:37 192.168.4.1 Disconnected from pop3.ps-consultants.co.uk
27/02/99 7:37 192.168.4.1 Connected to pop3.ps-consultants.co.uk
27/02/99 7:38 192.168.4.1 Disconnected from pop3.ps-consultants.co.uk
27/02/99 7:38 192.168.4.1 Connected to pop3.ps-consultants.co.uk
27/02/99 7:38 192.168.4.1 Disconnected from pop3.ps-consultants.co.uk
27/02/99 7:38 192.168.4.1 Disconnected from pop3.ps-consultants.co.uk
27/02/99 7:38 192.168.4.1 Connected to mail.virgin.net
27/02/99 7:38 192.168.4.1 Disconnected from mail.virgin.net
27/02/99 7:38 192.168.4.1 Connected to mailhost.airtime.co.uk
27/02/99 7:38 192.168.4.1 Disconnected from mailhost.airtime.co.uk
27/02/99 7:39 192.168.4.1 Connected to pop3.demon.co.uk
27/02/99 7:39 192.168.4.1 Disconnected from pop3.demon.co.uk
27/02/99 7:39 192.168.4.1 Connected to pop.freeserve.net
27/02/99 7:39 192.168.4.1 Disconnected from pop.freeserve.net
27/02/99 7:41 [192.168.4.1] GET http://bg-help/ HTTP/1.0
27/02/99 7:41 [192.168.4.1] GET http://bg-blacklist/ HTTP/1.0
27/02/99 7:42 [192.168.4.1] GET http://bg-blacklist/ HTTP/1.0
27/02/99 7:42 [192.168.4.1] GET http://bg-help/ HTTP/1.0
27/02/99 7:42 [192.168.4.1] GET http://bg-extra/ HTTP/1.0
27/02/99 7:42 [192.168.4.1] GET http://bg-help/ HTTP/1.0
27/02/99 7:42 [192.168.4.1] GET http://bg-ports/ HTTP/1.0
27/02/99 7:42 [192.168.4.1] GET http://bg-help/ HTTP/1.0
27/02/99 7:42 [192.168.4.1] GET http://bg-about/ HTTP/1.0
27/02/99 7:44 [192.168.4.1] GET http://3438189349/ma/spice747/trip.html HTTP/1.0
27/02/99 7:45 [192.168.4.1] GET http://www.scoot.co.uk/scoot.asp?
&s=SUK&a=&c=F00525&ce=intranet&ae=milton+keynes&a=01048&c=F00525
HTTP/1.0

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Creating a debug log file for use by NetcPlus support

This option is only for debugging purposes, and unless asked to do so by our Support staff we recommend that you do not check this. A low level and highly detailed communications file is generated which can grow very large - very rapidly, and it will also adversely effect the performance our your proxy operations.

However, BrowseGate automatically generates a daily activity log report that gives you a full trace of all server activity. A separate log file is created for each day of the week (Mon - Sun) and these are placed in a special \BGLOGS subdirectory in the BrowseGate installation directory on your hard disk. These log files are also used by the Statistics feature to summarize the throughput.
You cannot turn this daily logging off !!

To view these logs at any time, you can use any web browser that is connected to BrowseGate by typing the following URL into that browser :

      BG-LOG

This will generate a clickable list of all the currently available log files with their dates, and you can click on whichever log file you wish to view in your browsers window.

These logs contain detailed entries including information whenever a request has to be refused by BrowseGate so that you can check how your rules are working and which networked PC is attempting to perform these "banned" tasks.

If, which is most unlikely, you need a low level log of server activity for debug purposes, you can create one by selecting the Configure button on the main BrowseGate window, and then checking the "Keep log file" option on the Connections tab.

This is normally only ever needed if you are asked to do so by a member of the technical support staff.

The debug log file generated is highly detailed, and can
      get very large very rapidly....

We strongly recommend that you do not check this option unless asked to do so by our support personnel, and that you always uncheck it again as soon as you are able to do so.

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Configuring Microsoft Internet Explorer 3.xx

  1. Start MSIE 3.xx
 2. Select the menu option "View | Options"
 3. Select the Connection tab (2nd from left)
 4. Uncheck the top option labeled "Connect to the Internet as needed".
 5. Check the option labeled "Connect through a proxy server"
 6. Click the "Settings" buttons to the right of the option.
 7. Enter into the "HTTP" field the ip address of the PC that BrowseGate
        is installed on, or you can enter "browsegate", which is a special DNS entry
        - but only if you are using the BrowseGate DNS system.
 8. Enter the port number in the field alongside that is to be used for
        communication between this web browser and BrowseGate.
              (This may be the default HTTP port in BrowseGate or via a configured
        "Extra Service")
 9. Repeat steps 7 and 8 for the FTP fields.
10. Repeat steps 7 and 8 for the SECURE fields if you wish to access https (secure)
sites.
11. All other fields are ignored by BrowseGate, although you may have
other servers supporting these.
12. Press OK to save your changes.

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Configuring Microsoft Internet Explorer 4.xx

1. Start MSIE 4.xx
2. Select the menu option "View | Internet Options"
3. Select the Connection tab (4th from left)
4. Uncheck the option labeled "Connect to the Internet using a modem"
   in the "Connection" group frame.
5. Check the option labeled "Connect to the Internet using a local area network"
6. In the "Proxy Server" frame directly below, check the two options marked
   "Access the Internet using a proxy server" and
   "Bypass proxy server for local (Intranet) addresses".
7. Click the "Advanced" button to the right of these options.
8. Enter into the "HTTP" field the ip address of the PC that BrowseGate
   is installed on. , or you can enter "browsegate", which is a special DNS entry
   - but only if you are using the BrowseGate DNS system.
9. Enter the port number in the field alongside that is to be used for
   communication between this web browser and BrowseGate.
   (This may be the default HTTP port in BrowseGate or via a configured "Extra
   Service")
10. Repeat steps 7 and 8 for the FTP fields.
11. Repeat steps 7 and 8 for the SECURE fields if you wish to access https (secure)
sites.
12. We recommend that you enter the following ip address into the Exceptions
    field at the bottom of the property sheet "127.0.0.1" (Do not enter the quote
    marks)
13. All other fields are ignored by BrowseGate, although you may have
    other servers supporting these.
14. Click on the OK buttons to close and save the configuration system.

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Configuring Microsoft Internet Explorer 5.xx

1. Start MSIE 5.xx
2. Select the menu option "Tools | Internet Options"
3. Select the Connection tab (4th from left)
4. Check the option labeled "Never dial a connection"
      in the "Dial-up settings" group frame.
5. In the "LAN settings" frame directly below, click the button marked
      "LAN Settings"
7. Unless you have centralized network configuration for your browsers,
      ensure you have both entries in the "Automatic configuration" frame
      UNCHECKED.
8. Check the "use a proxy server" option in the "Proxy server" frame
9. Click on the Advanced button
10. Enter the IP address (or machine name) of the BrowseGate Server PC
      into the "proxy address to use" field for the HTTP field, or you can enter
      "browsegate", which is a special DNS entry - but only if you are using the
      BrowseGate DNS system.
11. Enter the port number in the field alongside that is to be used for
      communication between this web browser and BrowseGate.
      (This may be the default HTTP port in BrowseGate or via a configured "Extra
      Service")
12. Repeat steps 10 and 11 for the SECURE fields if you wish to access https (secure)
sites.
13. Repeat steps 10 and 11 for the FTP fields.
14. Repeat steps 10 and 11 for the Socks fields (If you want to use SOCKS).

12. We recommend that you enter the following ip address into the Exceptions
      field at the bottom of the property sheet "127.0.0.1" (Do not enter the quote
      marks)
13. The Gopher fields are ignored by BrowseGate, although you may of course have
      other servers that do support this protocol.
14. Click on the OK buttons (all three of them) to close and save the various
configuration dialogs.

WARNING
Due to a new connection system built in to IE5, It is not possible to configure a copy of
IE5 running on THE SAME PC AS BROWSEGATE to use a proxy sever correctly. This
has been discussed at length with Microsoft, who agree this will produce problems, but
who also state they have no intention of changing the way IE5 works in this respect.

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Setting up mIRC

mIRC is pretty easy to configure for use with BrowseGate.
The following instructions apply to v 5.51(32bit)

1. Start mIRC
2. Open General options dialog from button bar or File | Options menu.
3. Select FireWall in the list of Categories.
4. Check the "Use SOCKS firewall " option
5. Make sure you select Socks5 (Socks 4 will not work...)
6. Enter in the "Hostname" field the machine name (or IP address) of the
      PC on which BrowseGate is running. You can also simply enter the word
      "browsegate", which is a special DNS entry - but only if you are using
      the BrowseGate DNS system.
7. Normally you should leave User ID and Password blank for public IRC servers.
8. Ensure "port" is set to 1080.
9. Check "Ensure DCC's through firewall" option
10. Click OK.
11. Try connecting to an IRC server from the button bar - it should all work !!!

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Configuring Netscape Navigator 4.xx

1. Start Navigator
2. Select the menu option "Edit | Preferences"
3. Click the "+" sign in front of the "Advanced" entry in the
   list box to open up the tree.
4. Click on the "Proxies" entry that is now visible.
5. Check the option labeled "Manual proxy configuration"
5. This will uncheck the other two unwanted options automatically.
6. Click the "View" button to the right of the option.
7. Enter into the "HTTP" field the ip address of the PC that BrowseGate
   is installed on, or you can enter "browsegate", which is a special DNS entry
   - but only if you are using the BrowseGate DNS system.
8. Enter the port number in the field alongside that is to be used for
   communication between this web browser and BrowseGate.
   (This may be the default HTTP port in BrowseGate or via a configured "Extra
   Service")
9. Repeat steps 7 and 8 for the FTP fields.
10. Repeat steps 7 and 8 for the SECURE fields if you wish to access https (secure)
sites.
11. All other fields are ignored by BrowseGate, although you may have
   other servers supporting these.
12. Press OK to save your changes.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up an NNTP News proxy

If you wish to provide support for NNTP news access via BrowseGate, you should first check the "Enable NNTP News proxy service" option at the top, which will enable the panel that follows.

Enter the name of your preferred news server in the "News server to collect from" field. This will be an entry such as **news.virgin.net.**
If you are unsure we suggest you check the documentation provided by your ISP or the settings in your existing working news client for the correct values for this field.

The port settings should normally be left set to the default of 119 unless you already have other applications on this PC that are using them. If this is the case, you will normally only need to select a different port value for the Local Port

The Remote Port should normally be left at the default setting of 119.

You can also choose to have BrowseGate disconnect immediately upon completion of news operations, or to use the same timeout that has been set for web access (on the Connections tab) This allows you to configure the proxy to work the way that suits your own circumstances best. This setting affects both Mail and News proxy operations.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up POP3 mail proxies

If you wish to enable POP3 and SMTP eMail access via BrowseGate, you should first check the "Enable email proxy services" option at the top, which will give you access to the fields that follow.

Enter the name of your main hosts mailbox in the "Get incoming mail from" field. This will be an entry such as **mail.virgin.net,** and do the same in the "Send outgoing mail to" field. Typically these are both the same, but you may have a provider that uses **pop3.xxxxx.xxxx** and **smtp.xxxx.xxx** for fetching and sending mail. If you are unsure we suggest you check the documentation provided by your ISP or the settings in your existing working email client(s) for the correct values for these fields.

Both the Local and Remote port settings will usually not need to be changed from the default values of POP3 = 110 and SMTP = 25, unless you already have other network applications on this PC that are using them. If this is the case, you will normally only need to select a different port value for one or both of the Local Ports

The Remote Port settings should normally be left at the default settings unless your ISP (host) gives you a different setting.

You can also choose to have BrowseGate disconnect immediately upon completion of email operations, or to use the same timeout that has been set for web access (on the Connections tab) This allows you to configure the proxy to work the way that suits your own circumstances best.

This setting affects both Mail and News proxy operations.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up BrowseGate to support Real Player
(& other streaming Audio/Video packages)

BrowseGate provides PNA support for Real Player G2 to handle streaming Audio and Video. To enable this proxy, simply check the "Run PNA proxy service" option, and if you must, change the port number, although we recommend you accept the default in this case.
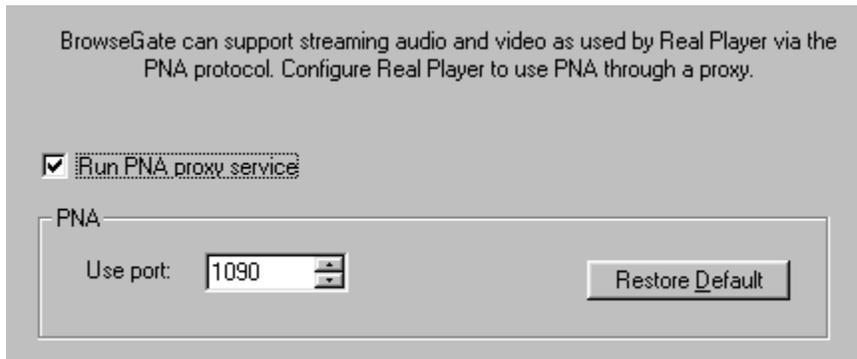
The following configuration information applies to Real Player G2 release v6.0.5.27 or possibly later releases.

The Real Player product has over time been found to be consistently changing it's configuration options, so you may have to check the options on your version against the ones quoted below a little more carefully if they are different.

Real Player will happily takes advantage of many of the features such as the special PNA support provided by BrowseGate. That said, it is essential that you go through the configuration process in Real Player very carefully if you want it to work correctly first time with any proxy server.

1. IMPORTANT - Ensure you have checked the Real Player PNA option on the BrowseGate configuration property sheet and the port is set to 1090.

2. Start Real Player.

3. Select menu Options | Preferences

4. You now need to work your way through virtually all of

the property sheets provided, following the instructions below :-

The items marked with two asterisks (**) are only important if you do NOT WANT RP to force Internet connections on startup or to perform automatic updates of it's channels, news tickers etc...

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

General Tab
** ** We recommend you UNCHECK the
"Allow SmartStart to run in System tray" option

Other options on this tab may be set to suit your own preferences.

Display
May be set to suit your own preferences.

Content
** UNCHECK the "Enable automatic headline updating" option
Other options on this tab may be set to suit your own preferences.

Upgrade
All options may be set to suit your own preferences.

Connection
In the Bandwidth selection lists, select 10Mbs LAN if you are running
across a LAN, otherwise the most relevant connection to match your
PC's configuration. You should almost certainly NOT select and
modem type connection type as this will force RP to bypass BrowseGate.

Other options on this tab may be set to suit your own preferences.

Transport
You should use the "automatically select best transport" option to let RP check
for, and if required, change the proxy settings on this tab before making any
changes whatsoever to the proxy tab on this property sheet.

To do this effectively, we recommend that you should have BrowseGate running
and with an active and working connection to the Internet. (use a browser to
start a connection)

Now select the "automatically select best transport" option, and click the
Auto-configure button. Press OK at the next dialog that appears.
Wait for the auto connection system to complete it's checking......

RP should report "Autoconfigure completed successfully..."
Click OK at the confirmation dialog
Note that the Auto select option you checked initially has probably been
changed by this process to the "Use specified transports" radio button
- that's absolutely fine !!!!

You should NOT need to make any further changes to the settings for either
the RTSP or PNA settings as these will have been auto sensed by RP.

Do NOT check the "Use specific UDP port" option.

Proxy

If the auto sense system worked correctly when you followed the instructions above, then the "Use PNA" option should be checked, and the port number should be set to 1090.

If the first field is blank (this is the server name field) then you need to enter in this field the NETBIOS name of this computer, or the IP address.

Ensure the RTSP option is UNCHECKED.

The entries you will require in the HTTP Options section on this tab will depend very much on the way your web browser has been configured. If the web browser ON THIS PC is already setup to work via BrowseGate correctly (NB IE5.xx) you can simply check the "use my Web browsers HTTP proxy".

Unless you want RP to connect directly, bypassing BrowseGate, do NOT select the "No HTTP proxy" option

If you want to be absolutely certain that RP will use BrowseGate for all HTTP connectivity the select the "Manually configure HTTP proxy" option, and enter the NETBIOS name of this PC, or the IP address in the first field, and the INTERNAL port number you have set up in BrowseGate for all HTTP connections (typically this is port 80).

You may use the Exception field to "Except" certain local sites if you wish providing always that you are aware of what the restrictions and impact these may have on your network's overall functionality.

Performance

All options may be set to suit your own preferences.

Support

All options may be set to suit your own preferences.

Real Player should now be successfully configured to use BrowseGate for it's connectivity

To confirm this, press OK (not CANCEL!!!!) on the configuration property sheet.

Now go to the RP main window and select any one of the channels under the Presets menu. Watch the LED's on the BrowseGate window, with particular attention to the REAL PLAYER indicator. Once the channel you select starts to load, you should see the Real Player LED start to flash periodically.

If you do see this LED flash, then BrowseGate is providing PNA support to Real Player.

That's it - RP is now configured to work correctly via BrowseGate :-)

Registering BrowseGate

Simply enter the serial number and activation key provided to you when you registered and paid for your copy of BrowseGate with NetcPlus in the fields above.

Please ensure that you take great care with the activation key as each letter is case sensitive, and the complete entry will be refused if you do not enter it correctly.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

The Rules system
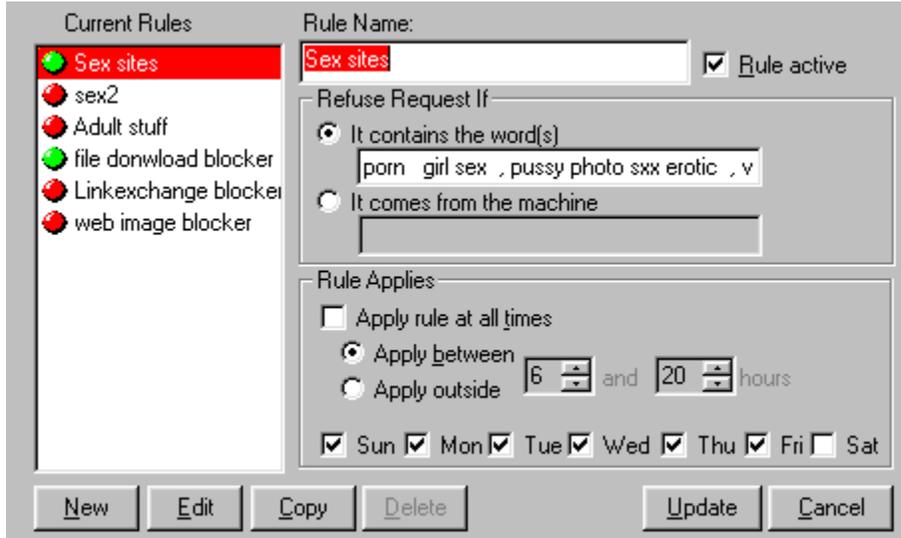
There are two different ways that BrowseGate can apply the Rules to your network's web site access.

1. Contains the word
If you enter one (or more) words in this field, then any URL that contains any of these words anywhere in them will be ignored. In our example, if a request to connect to a URL of say :
        http:www.kinkysex.net/home.htm
were received, BrowseGate would ignore it due to the match in "kinkysex" with the specified word "sex".

These words are not case sensitive, so any combination of upper and lower case letters will still be matched by the BrowseGate rules control system.

You can also enter multiple words (up to 1024 characters per entry are allowed) providing that you leave a space or insert a comma between each individual word. This means that you can set up a single rule that would stop access to most sex sites with an entry such as shown below :-
        sex porn, xxx fetish , girl boy hot woman,foot

This gives you the maximum control over your network user's web access using potentially only a few rules....

1a. Stopping HTTP/FTP downloads
If you want to stop all of your networked web browser users from being able to download files from web sites that use the newer http://xxxxx form of FTP file downloading, you can do so easily by simply setting up a new entry on the "Rules" tab that contain the file suffixes of those files you wish to stop being downloaded with a

space between each one.

In this case for security the entries MUST include the leading period - for example, a typical rule to stop downloads of
common files types might contain the following line:

.EXE .COM .TAR .ZIP .GZ
This would automatically ban any URL that contained a filename which included any of the above 5 common download types.

2. Comes from Machine
This field allows you to specify that this rule is only to be applied to one, (or a range) of the PC's on your network either at all times (permanent block) or only between certain hours of the day and/or on certain days of the week. This allows you to control which networked computers in your business are permitted to access the web to avoid staff browsing it for their own private reasons - on your phone bill. Possible scenarios are to disable some/all PC's during the standard lunch hours or at any time out of standard office hours.

2a. Refusing web access to a range of machines on your network via BrowseGate
If you want to **block an entire range of IP addresses**, you can enter into the "comes from machine" field an IP address that contains one or more asterisks eg : 192.165.*.* which would immediately stop all and any computers with any IP addresses in the range 192.165......... from accessing BrowseGate to access the web.

You can also **block a limited range of IP addresses** by entering an ip into the "comes from machine" field in the following format :- 192.165.1.1-45
This will stop all and any computers with any of the IP addresses in the range 192.165.1.1 to 192.165.1.45 from accessing BrowseGate to access the web. You can use this xx-yy notation in any one of the four IP address quads if required to provide maximum flexibility on those networks that do not use a subnet mask of 255.255.255.0

If you need to do so, you can even combine the two options (asterisk in any one field and range notation in another above for maximum flexibility eg:-
192.165.*.1-40 would stop all and any computers with any of the IP addresses in the range 192.165.xxx.1 to 192.165.xxx.40 from accessing BrowseGate to access the web.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting the cache size

We recommend that for maximum efficiency you allow sufficient hard disk space to be able to allocate a maximum disk cache size of at least 10Mb per typical single PC that will use it's web browser via BrowseGate. What this means in a typical environment is that you need to multiply this cache maximum cache size by at least the number of users you have accessing the web via BrowseGate to gain the maximum benefit from the cacheing system. eg: a 5 user BrowseGate should have 50Mb of cache space available.

If you are unable to allocate sufficient disk space to the cacheing system, you will probably find that it will spend rather too much time refreshing and then removing files, and you will loose any benefits you may have gained from the use of cacheing in the first place..

However, If all your web users tend to visit much the same sites, then you do not need to use this multiplier as BrowseGate will only ever cache any web site exactly once....., not once for each user that may access it.

Setting the HTTP port

In this field you should enter the number of the TCP/IP port you want to use to allow each of the web browsers (that are using HTTP and/or HTTPS protocols) on your network to connect with BrowseGate. The standard default port is set to 80, but you may change this if you wish to or have a good reason for needing to do so.

Please remember that each of the web browsers on your network will also need to be reconfigured to use the SAME port number you set here.

If you change this you will have to restart BrowseGate for the change to take effect.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting the local machines IP address

Because BrowseGate has to negotiate with both fixed and dynamically assigned IP addresses when connected to the Internet, plus communicating with other networked machines, BrowseGate needs to ensure that it knows the internal/network IP address of the machine it is running on because the Windows implementation of the Winsock cannot identify this information at all times,

You may well never ever see this dialog or have any need to look at it, as In most situations BrowseGate will do this totally automatically, but if you select the "Tools | Select local IP address" menu option a dialog as shown below is displayed.

In this example it can be seen that there is only a single Internet Class "C" IP address of 192.168.4.1, which has been selected automatically, which means that this MUST be the IP address of the local machine.

Select Local IP Address

Please select the local IP address for this machine. This should be the IP address that corresponds to your local network not a dynamic dial-up address.

192.168.4.1

OK
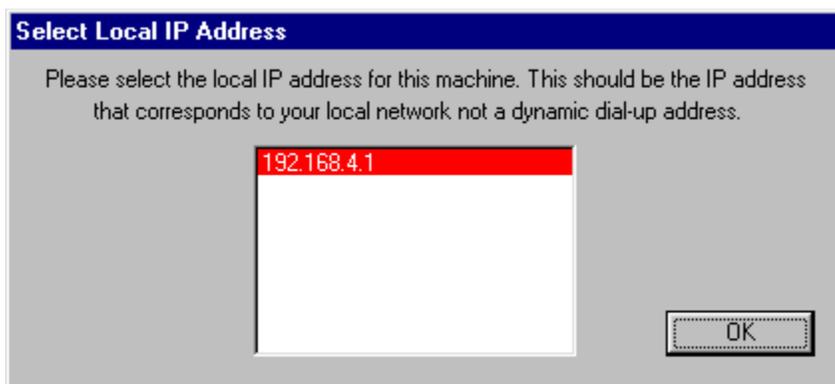
However, once you dial out or otherwise connect to the Internet you will normally see entries similar to those shown below, where a new IP address of 194.168.60.33 has appeared and been inserted into the list. Providing BrowseGate has already been able to identify the local machine automatically, it will simply highlight the correct entry automatically as shown below. You do not need to do anything more.....

Select Local IP Address

Please select the local IP address for this machine. This should be the IP address that corresponds to your local network not a dynamic dial-up address.

194.168.60.33
192.168.4.1

OK
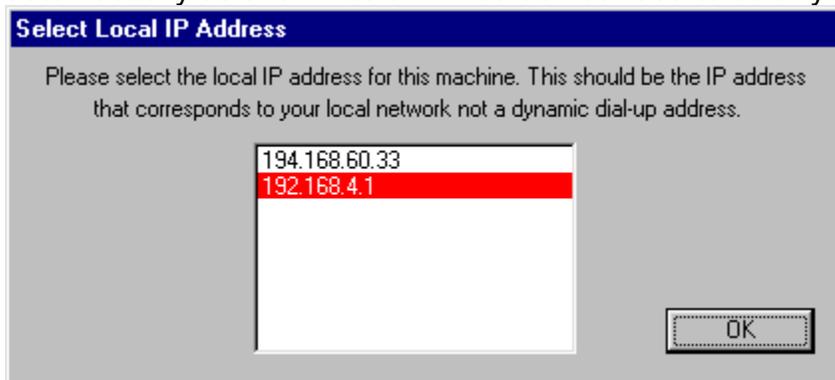
There are however, more complex scenarios where it may be necessary for the system administrator to physically identify and specify to BrowseGate which of several

available/listed IP addresses is actually the correct one for the PC on which BrowseGate is running.

Typically this is when a PC has more than one network card (NIC) installed (multi-hosted systems), or if it is fortunate enough to be connected to an ASDL connection. In these cases, if you do not actually have a note of the IP address of the BrowseGate PC, you will need to identify the correct IP address by going to the Windows Start Menu, and then selecting Settings | Networks, and finally checking the entries on the relevant TCP/IP entry for the correct "internal/networking" adapter (NIC) and then select this address in the list provided by BrowseGate.

You should normally only ever need to do this once as BrowseGate automatically stores the information for later reuse. If you happen to change the IP address of the PC, then you will of course also need to reset this in this BrowseGate configuration option.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up email clients to connect through BrowseGate

All email clients on your network that are to use BrowseGate to send and fetch email using the industry standard POP3 and SMTP protocols will need to have some very simple changes made to their settings to enable them to connect via BrowseGate.

Full configuration details are provided for :-

Microsoft Outlook Express
NetcPlus SmartMail
Other mail clients will (very probably) be similar........

Setting up FTP Explorer

FTP Explorer (We configured the version 1 .00 Build 010) does not appear to support totally
global configuration of the use of a proxy server/firewall. Therefore the notes below must be applied to each and every FTP connection you use, at least the first time you wish to connect to that site via BrowseGate.....

1. Start FTP EXPLORER
2. Select View | Options and then select the FireWall Tab
3. Check the "Use Firewall" option
4. Ensure you check the"Use PASV Mode"
5. Ensure you check the "Use Firewall" option
5. Enter the host name or ip address of the BrowseGate PC in the "Host" field.
        You can also simply enter the word   "browsegate", which is a special DNS entry
        - but only if you are using the BrowseGate DNS system.
6. Set the Port to the same value as the local port of any assigned FTP connection in
    BrowseGate.
8. Ensure you select the "USER user@hostname " option for firewall type.
11. Click the OK button to close the options properties dialog.

Don't forget that each time you choose a new or existing connection from the "Connect" dialog under FTP EXPLORER, you should check that both the "Use PASV Mode" and the "Use Firewall" options on the right hand side are checked.

The port should typically be left at port 21, as the main firewall setting holds the local port
for BrowseGate.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

How to set up Internet access limitations

Check each and every day that you want BrowseGate to provide
access to the Internet, ensuring that any days on which
you do not want it to allow this are unchecked.

If you want to allow 24 hour access, you can click the "All Day"
button, which will set both start and end times to 00:00, which
BrowseGate recognizes automatically as meaning that you want to
provide dial-up access for the entire 24 period of that day.

If you want to set start and end times, simply enter the relevant time
in the fields provided in the standard time format of HH:MM. BrowseGate
will also let you enter a period between the hours and minutes if you prefer.

To disable all limits entries, uncheck the "Limit Internet access" option,
which will preserve your current settings, but will still allow unlimited
access until you recheck this option.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up IP addresses under W95/NT4

The creation and assignment of TCP/IP addresses are a widely misunderstood area of intranet systems.

The following information should hopefully clarify the position for you...

The first thing to understand is that if you intend to use TCP on your Intranet system (in-house network), then it is mandatory that each and every PC is assigned a unique address. These ALWAYS come in the format shown below :-

158.152.45.2 or similar type of numbers.

There are ALWAYS 4 groups of digits, and each of these groups may contain 1 or more digits within the group. Typically the first two groups tend to always contain 3 digits, and the last two groups vary quite a bit....

So 158.152.45.2 and 158.152.459.213 and 158.152.4.2 are all valid IP addresses.

If you have a registered Domain (with Internic) and have been allocated a publicly recognized IP number, and you ARE PERMANENTLY connected to the Internet, then your Server PC would HAVE to be assigned this "public" IP Address.

If you have a registered Domain (with Internic) and have been allocated a publicly recognized IP number, but you are NOT PERMANENTLY connected to the Internet, then your Server PC would NOT HAVE this "public" IP Address assigned to it.

The Internet has provided three different groups of IP addresses that should ALWAYS be used for intranet PC's that are NOT PERMANENTLY connected and known globally to the Internet itself. These are :-

Starting at   Ending with
        10.0.0.0   -   10.255.255.255
        172.16.0.0   -   172.31.255.255
        192.168.0.0   -   192.168.255.255
                                     (Source of information - RFC 1918)

You can select any numbers you wish, but all PC's on a network MUST be assigned DIFFERENT numbers BUT FROM THE SAME GROUP if they are to communicate with each other, and with the server PC. Also you should always set the Subnet mask to 255.255.255.0 (see below for more info on this)

As an example, lets assume you have decided to use numbers form the 172.16.0.0 group for your Intranet, and you have 5 PC's plus your SmartServer PC to configure.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

You might choose the following set of IP addresses :-

VALID ADDRESSING SCHEME		INVALID ADDRESSING SCHEME	
SmartServer PC	172.16.100.1	SmartServer PC	172.16.100.1
Client PC 1	172.16.100.2	Client PC 1	172.16.100.2
Client PC 2	172.16.100.3	Client PC 2	172.16.100.3
Client PC 3	172.16.100.4	Client PC 3	172.16.100.4
Client PC 4	172.16.100.5	Client PC 4	192.168.100.2
<- this is INVALID			
Client PC 5	172.16.100.6	Client PC 5	172.16.100.5

or

VALID ADDRESSING SCHEME		INVALID ADDRESSING SCHEME	
SmartServer PC	172.16.100.1	SmartServer PC	172.16.100.1
Client PC 1	172.16.100.2	Client PC 1	172.16.100.2
Client PC 2	172.16.100.35	Client PC 2	172.16.100.35
Client PC 3	172.16.100.46	Client PC 3	172.16.100.46
Client PC 4	172.16.100.52	Client PC 4	192.168.100.52
<- this is INVALID			
Client PC 5	172.16.100.68	Client PC 5	172.16.100.68

You will see from the above that typically you would simply increment the last group of digits to assign a different IP address to each PC on you network, but they DO NOT have to be sequential if you do not want to do so. They must all be in the same IP group however.

To configure each PC on your network with these IP Addresses, follow the instructions below.

Click on Start Menu -> Control Panel -> Network - Configuration

Find and highlight the following entry in the list of protocols that are installed

TCP/IP -> {Your network card name}
If you do not have TCP/IP setup on a PC, you need to do this by following the instructions on How to Configure your PC to run TCP/IP first, and then follow the instructions below.

Click on Properties.
Click on the IP Address Tab in the properties dialog.
Make sure you check the "Specify an IP Address" option.
Enter the chosen address for this PC (remember - each PC must be different) in the "IP address" field.
You should ALWAYS Enter 255.255.255.0 in the "Subnet mask" field This is a standard value that ensures the PC's cannot be seen externally... (Unless you want your PC's

visible externally and you have a permanent connection to the Internet)

Click the OK button on this dialog, and then on the main dialog. Windows 95/NT4 will almost certainly load new files, and may ask you for the Windows CDROM when you do this. Once the files have been updated it will then usually tell you that you need to restart Windows before the settings will be valid. Once you have restarted Windows, the PC will be capable of Sending and receiving mail using the TCP protocol.

Repeat this process, with different IP addresses, on each PC on your network.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up Internet Explorer 4 to use SOCKS 4

1. Start MSIE 4.xx
2. Select the menu option "View | Internet Options"
3. Select the Connection tab (4th from left)
4. Uncheck the option labeled "Connect to the Internet using a modem"
   in the "Connection" group frame.
5. Check the option labeled "Connect to the Internet using a local area network"
6. In the "Proxy Server" frame directly below, check the two options marked
   "Access the Internet using a proxy server" and
   "Bypass proxy server for local (Intranet) addresses".
7. Click the "Advanced" button to the right of these options.
8. Enter into the "Socks" field the ip address of the PC that BrowseGate
   is installed on. You can also simply enter the word "browsegate", which is
   a special DNS entry - but only if you are using the BrowseGate DNS system.
9. Enter the port number (usually 1080) in the field alongside that is to be used for
   SOCKS communication between this web browser and BrowseGate.
10. Enter the IP address and port for any other protocols you wish to use, but you
    should NOT need to use any others!!!!
12. We recommend that you enter the following ip address into the Exceptions
    field at the bottom of the property sheet "127.0.0.1" (Do not enter the quote
    marks)
13. All other fields are ignored by BrowseGate, although you may have
    other servers supporting these.
14. Click on the OK buttons to close and save the configuration system.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up Internet Explorer 5 to use SOCKS 4

1. Start MSIE 5.xx
2. Select the menu option "Tools | Internet Options"
3. Select the Connection tab (4th from left)
4. Check the option labeled "Never dial a connection"
   in the "Dial-up settings" group frame.
5. In the "LAN settings" frame directly below, click the button marked
   "LAN Settings"
7. Unless you have centralized network configuration for your browsers,
   ensure you have both entries in the "Automatic configuration" frame
   UNCHECKED.
8. Check the "use a proxy server" option in the "Proxy server" frame
9. Click on the Advanced button
10. Enter the IP address (or machine name) of the BrowseGate Server PC
    into the "proxy address to use" field for the SOCKS field.
    You can also simply enter the word   "browsegate", which is a special
    DNS entry - but only if you are using the BrowseGate DNS system.
11. Enter the port number in the field alongside that is to be used for
    communication between this web browser and BrowseGate.
    (This will usually be 1080)
12. We recommend that you enter the following ip address into the Exceptions
    field at the bottom of the property sheet "127.0.0.1" (Do not enter the quote
    marks)
13. The Gopher fields are ignored by BrowseGate, although you may of course have
    other servers that do support this protocol.
14. Click on the OK buttons (all three of them) to close and save the various
configuration dialogs.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up WS-FTP

WS_FTP (We configured the 95 LE version) does not appear to support totally global configuration of the use of a proxy server/firewall. Therefore the notes below must be applied to each and every FTP connection you use, at least the first time you wish to connect to that site via BrowseGate.....

1. Start WS-FTP32 - The properties dialog for the last session used is displayed....
2. Select the FireWall Tab
3. Check the "Use Firewall" option
4. Check "Save Password" (providing you are the only user of this PC)
5. Enter the host name or ip address of the BrowseGate PC in the "Host Name" field.
      You can also simply enter the word "browsegate", which is a special DNS entry
       - but only if you are using the BrowseGate DNS system.
6. Optionally - enter your User ID and password for this specific FTP connection.
7. Set the Port to the same value as the local port of any assigned FTP connection in
     BrowseGate.
8. Ensure you select the "USER with no logon" option for firewall type.
9. Now select the Advanced Tab.
10. Ensure that the "Passive Transfers" option is UNCHECKED.
11. Click the Apply or OK button and close the session properties dialog.

Don't forget that the first time you choose a new or existing connection under WS-FTP, you should check the settings on the Firewall tab to make sure it has the "Use Firewall" option checked. This is normally saved between sessions, but typically defaults to OFF initially

You should NOT need to change any other settings, as when you select the "Use Firewall" option, the default settings automatically appear and are used.

BrowseGate network proxy server for business networks
(from NetcPlus Internet Solutions)

Setting up News clients to connect through BrowseGate

This shows how to configure Microsoft Outlook Express, but the settings will be similar in most other news reader packages.

BrowseGate Setup:

       Configure | Email Tab
·   Incoming mail tab with remote port set to 110.
·   Outgoing mail with remote connection set to port 25.
       Local ports for both set to whatever you wish....

Outlook Express Setup:

1. Start Outlook Express
2. Select the menu option Tools | Accounts
3. Click the News tab
4. For each News account you have configured, do the following :-

5a. Select a news account.
5b. Double click on it or click the Properties button.
5c. Select the Connection tab.
5d. Ensure you have the "Connect using my local area network (LAN)"
      selected.
5e. Now select the Server tab.
5f. Enter the IP address of the PC that is running your BrowseGate server
      in the Server Name field in the Server information panel.
      You can also simply enter the word   "browsegate", which is a special
      DNS entry - but only if you are using the BrowseGate DNS system.
      Finally - Check the "Server log on" box if appropriate.
6. Select the Advanced Tab.
7. Check that the entries in the Server port numbers panel are the same as
      the **Local Port settings** in the BrowseGate news services configuration
      tab. (The default is 119 for NNTP, which is usually OK on most networks -
      but please check with your network administrator if you are unsure)
8. Select any other options you wish to use on the advanced tab.
9. Click the OK button to save any changes made
10. Make sure you repeat the steps 5a -> 9 for each news account you have in Outlook.
11. When you have configured each and every account, close the account dialog.

Outlook express should now connect to your specified news server via BrowseGate totally automatically.!!!

WARNING Because Microsoft are known to be constantly revising Outlook and Outlook Express, your news account dialogs may well vary in content and name from those described above. If you find this to be the case you need to find the

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same entries on your particular version and then follow the instructions above....
or contact Microsoft for details of how to configure your version of Outlook to
work through a networked proxy server. Please do not send support questions
to us on this as we are not able to provide support on Microsoft products
directly - for obvious reasons !

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Setting up your networked PC's to connect to BrowseGate

The following information assumes that you already have TCP/IP configured and working on your PC network.

Overview
Every PC, (or other computer) on a TCP/IP network must be given a unique, network wide IP address in the format xxx.xxx.xxx.xxx. Most will also have been given a "human readable" name such as "Dellp200" or "MyDell".

TCP/IP is capable of utilizing both of these as a means of client applications addressing a specific computer, but if you prefer to use the machine names rather than having to try to remember long and complex number series, then it requires the installation of a Domain Name Server (DNS) which is able to identify a machine via it's name and "resolve this" to the correct IP address, which is what the computer itself uses to communicate across the network under TCP.

To make you life as easy as possible, BrowseGate comes with it's own built-in DNS system capable of handling both internal (machines on your private network) and external (all other computers out there on the Internet) IP address resolution.

To take advantage of this powerful system is quite easy, but you will need to have a basic understanding of what it all means, and you will need to change a single setting on each networked PC, including the PC on which BrowseGate is installed.

The following diagram illustrates a typical office network, with each machine having it's own unique TCP/IP address (which do not need to be sequential) The BrowseGate PC has (totally arbitrarily) been given the IP address of **192.168.100.50**
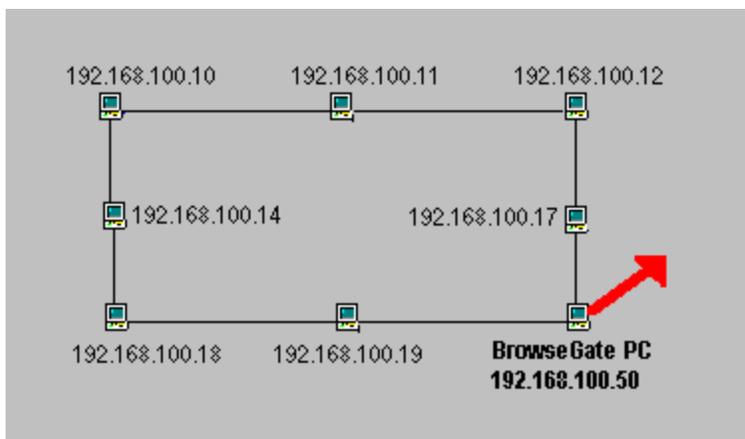
All the other machines on the network will have similar addresses, normally all will need to use the same first 3 groups of numbers eg: "192.168.100" but the last group is varied for each machine, which is standard TCP/IP addressing practice. In the example here our example network has machines with a final 'group' ID of 10, 11, 12, 14, 17, 18, 19. Let us also assume for the sake of this example that each PC has been given a name of

netpcxx, where the 'xx' is the same as it's last group of the IP address.

All totally valid, resulting in a network that has the following unique TCP/IP addresses and machine names :

IP Address	Name	
192.168.100 10	netcpc10	
192.168.100 11	netcpc11	
192.168.100 12	netcpc12	
192.168.100 14	netcpc14	
192.168.100 17	netcpc17	
192.168.100 18	netcpc18	
192.168.100 19	netcpc19	
192.168.100 50	netcpc50	(This is the BrowseGate Server PC)

So far - so good !!!!

Now we can see that "netpc50" with an ip address of 192.168.100.50 is the machine on which we have installed BrowseGate. So we need to tell all the other PC's on the network how to connect to it.....

This involves selecting Start Menu | Settings | Control Panel | Network, and then selecting the "configuration" tab shown below.
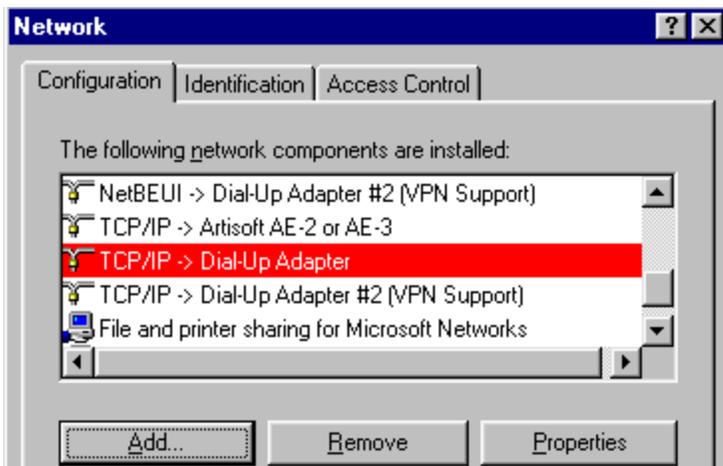
Locate and highlight the same entry as shown above, and click on Properties, then select the DNS configuration tab, which will look like the dialog below.

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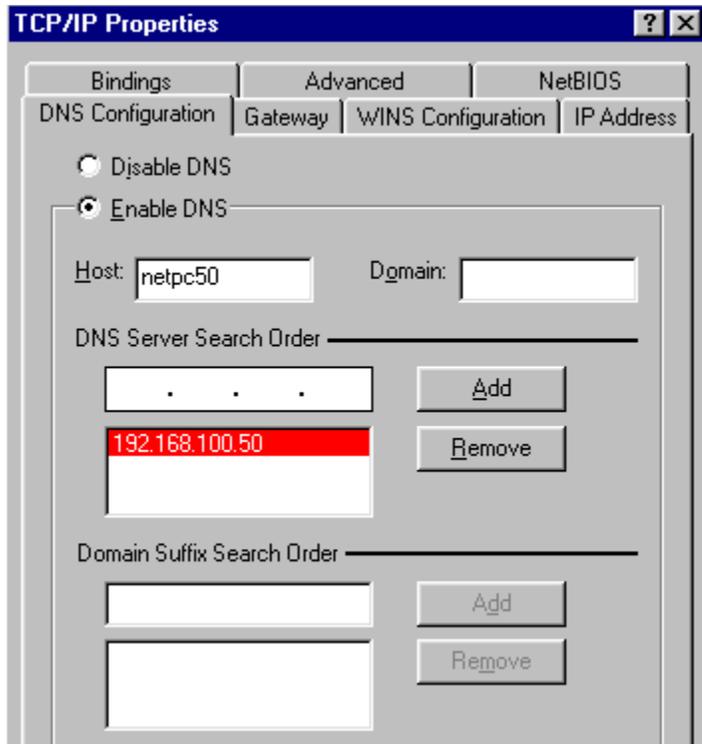
You can see that we already have the PC name (in the Host field) and have entered the IP address of the BrowseGate server in the DNS search order list. If you currently have other DNS entries in here, we suggest that you make a note of them (just in case) and then highlight and remove each one before entering the ip address of the BrowseGate server PC.

That's all there is to it - once you have done this, this PC will always pass <u>ALL DNS requests</u> from any/all applications that require it to the BrowseGate PC.

Click the OK button(s) until all property sheets have been closed and the changes saved. This will usually result in Windows updating some files from your CAB files or the Windows CDROM, and you will then have to reboot the PC before the changes will take effect.

Repeat this process, **with exactly the same entries**, on all other networked PC's apart from (possibly) the PC on which BrowseGate is running.

On the BrowseGate PC itself, you can, if you wish, use exactly the same entries, but if you have any internet type client applications that will not be using BrowseGate for whatever reason, you can add up to 2 external DNS address to this list after the BrowseGate PC's IP address. This will allow these "rogue" applications to connect via your ISP's DNS system as normal.

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The settings you need to enter for an extra service entry are quite straightforward for most connections

FTP connections (Firewall).
Handling FTP connections is slightly more complex than most other connections, as BrowseGate is actually acting as a "FireWall", and has to perform some special handling of these types of connections.

You must first ensure that you check the "THIS IS AN FTP SERVICE" option to let BrowseGate know this is an FTP connection via a firewall.

This will disable the host name field as it is not used for connections from FTP client packages. BrowseGate automatically allocates each FTP connection the name of "FTP Service (xxx)" where (xxx) is the local port you have assigned to be used. The local port is the port number that will be used for all communications between BrowseGate and the FTP client package that wishes to access this extra connection. This means that you must configure your FTP client application(s) to use this same port number (and like any other "Service" you can use any available port number you wish for local ports).

The "Service Active" check box allows you to enable/disable any TCP port mapping you have set up, but you can also more easily just double click on an entry on the list to achieve this.

You will also need to configure your FTP client to work through a firewall, and select the host + password option.

Once you have added or edited an entry, please ensure that you click the Update button. You also must click the main OK button before any changes will be saved to the configuration system. Pressing Cancel will discard all changes made...

All other "pass through" connections
The host name is the usual name of the mail host or news server machine in exactly the same way as you might enter it into a mail or news client. The **local port** is the port number that will be used for all communications between BrowseGate and the client package that wishes to use this extra connection. This means that you must configure your client application(s) to use the same port number as the port you select here (and you can use any free port number you wish).

The "Service Active" check box allows you to enable/disable any TCP port mapping you have set up, but you can also more easily just double click on an entry on the list to achieve this.

Once you have added or edited an entry, please ensure that you click the Update button. You also must click the main OK button before any changes will be saved to the configuration system. Pressing Cancel will discard all changes made...

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3 - How to set up your client applications

Most email, news, FTP and similar clients have their own help systems that should provide information on what you need to do to make them work with BrowseGate. This will typically be found under the headings of either PROXY or FIREWALL in those help systems.

The BrowseGate Help system also contains detailed information on how to configure many of the most popular internet applications to work with a proxy server - (Just in case you are unable to find the information you need in their own help systems)

These include instruction for all of the following applications at the time of writing.

> Microsoft Internet Explorer 4.xx and 5.xx
> Netscape Navigator 4.xx
> Absolute FTP
> CuteFTP
> WS_FTP
> Microsoft Outlook (and Express)
> Qualcomm Eudora
> MS Exchange
> Pegasus mail
> Forte Free Agent

Please check out the following BrowseGate Help Topics :-

> **Configuration**
> Configuring SOCKS applications to use BrowseGate

> **Setting up your network clients to use BrowseGate**
> Setting up your web browsers to connect to BrowseGate
> Configuring your eMail clients to connect to BrowseGate
> Configuring NNTP News clients to connect to BrowseGate
> Configuring common FTP clients to use BrowseGate

###
The rest of the BrowseGate configuration is slightly more advanced, but a quick browse through the Help system should be all you need to sort it all out.

SOCKS - How to use the SOCKS support

Click the Configure button, or use the Options | Configure menu option and then select the SOCKS tab, which contains the setup panel shown below...
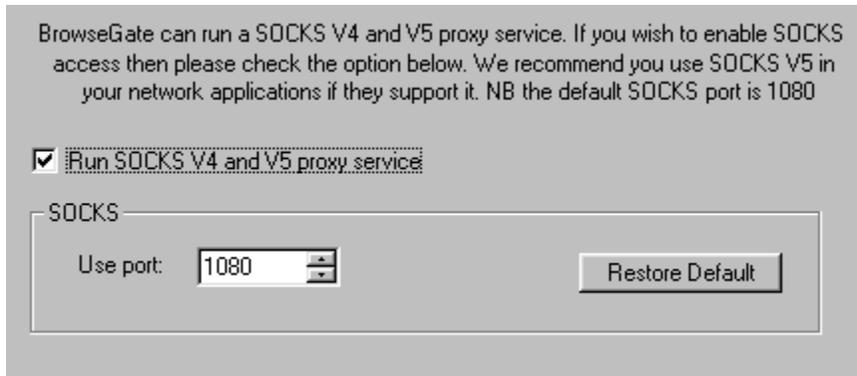
If you do enable SOCKS support, BrowseGate will automatically enable support for both SOCKS4 and SOCKS5.

Unless you have other TCP/IP applications using port 1080, we strongly recommend that you leave the port setting on this default value.

For applications such as IE4/5, Netscape Navigator and any others that only provide support for SOCKS4 but not SOCKS5, it is **essential** that you also activate the BrowseGate Domain Name Server, as SOCKS 4 will not work because it cannot resolve IP addresses without the built-in DNS support.

Hint:
Although both Microsoft IE4 and Netscape Navigator will happily perform web browsing via a SOCKS proxy connection, we strongly recommend that you should use the HTTP and HTTPS (Secure) protocols rather than SOCKS for normal web browsing. This is because the design of the SOCKS protocol does not allow BrowseGate to perform either its Rules checking or Blacklist checking, and the log files will not contain any web browsing information....

If you wish to take advantage of these control features of BrowseGate, you should NOT configure your web browsers to use the SOCKS protocol alone, although you can have both HTTP/HTTPS and SOCKS configured at the same time which will work fine as the web browsing requests will always be routed via the HTTP protocols first, allowing BrowseGate to provide you with all of the built in control and reporting features....

Most SOCKS applications use port 1080, but you may change this if you wish, providing you ensure that all applications that require SOCKS support can also use a different port number (some cannot)

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Creating reports

The following report options are available :-

Full configuration
Selecting this option will allow you to generate either a Full or Summary
report for all BrowseGate's configuration settings.
The full reports gives full details of all settings and complete lists of
all proxy services, ports used etc.
The Summary Report omits the detailed information to give an overview
of the current server status

All Services
Only a full report is available for this option.
This report lists in detail all of the TCP Mappings, and the email and News settings

TCP Mapping only
Only a full report is available for this option.
This report lists in detail all of the TCP port mappings.
Rules
Only a full report is available for this option.
This report lists in detail all of the Rules that are configured.

Black Lists
Only a full report is available for this option.
This report lists all of the Blacklist settings and machine exceptions

If you want to save a report as a file on your hard disk, just click here.

A standard Windows "Save to file" dialog will be displayed with a default
file name, and once the report has been saved, it is automatically loaded
and displayed to let you print or check it's content, using whatever default
application you have Windows configured to use for a TXT file.

Normally under W95/98/NT4 this will be WordPad.....

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The Cache status window

To allow you to easily see what is happening in the web site cache system, you can display the window shown below by clicking the Cache | Show Cache status window option on the main BrowseGate menu. This will also "check" this option, which tells BrowseGate to automatically load the cache status each time it is started....
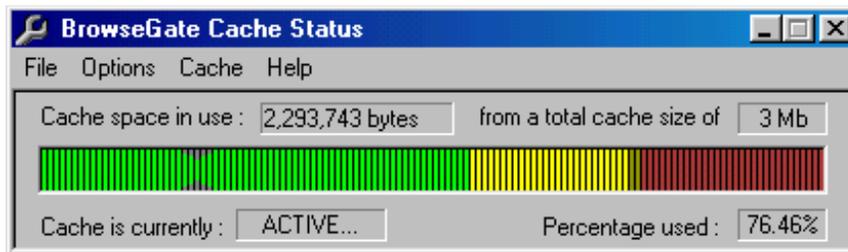
The colored "slider" is updated in real time, and shows exactly how full the disk cache is at any point in time. The gray "Up & down arrow indicators" show the current "Low Water" level, which shows the percentage of newest data that will be preserved whenever the specified cache space is totally filled and BrowseGate automatically purges older data.

There are also indicators to show you in Mb's the maximum cache space allocated currently, and the actual amount of data that the cache contains in bytes.

The menus contain the following options.:-

File
Show Main Window - redisplays the main BrowseGate window...
Close Cache Display - Shuts the cache status window.

Options
Keep window on top - if checked, makes the status window remain on top of all other "non topmost" windows.

Cache
Web Page Cache Active - A toggle that allows you disable/enable the cache system at any time. The check mark will change automatically. (This operation can also be done from the cache menu of the main BrowseGate window if required.)
Show Cache Information - Displays a dialog with all the current cache settings
Edit cache contents - This option allows you to optionally remove one or more cached web sites from the cache entirely. Useful if you want to save disk space and have visited a web site you do not want to keep in your cache...
Clear all cache contents - CAUTION - This will REMOVE ALL of the cached data for all web sites currently held in the cache.
Recalculate Cache total - A useful option that scans the entire cache control database

and recalculates the exact size of the data held in the cache. You should however rarely need to use this.

Cache properties - Provides immediate access to the property sheet with the cache tab activated to let you change any of the cache settings you wish.

Help
Takes you to the online help system.

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Things to check when trying to configure applications to use a proxy server

BrowseGate is fully capable of supporting most internet and intranet applications with the exception of Telnet, Ping and java programs that demand large ranges of ports to be opened simultaneously.

Because of the unnecessary complexity that is involved today in setting up TCP on the Windows platforms, we recognize that some of you just may experience some difficulties when trying to get some networked applications to work correctly via BrowseGate. These problems are usually caused because you have one or more contradictory settings on your PC somewhere, and in our own experience these are most often connected with how you have setup your existing web browser.

Before you go through this list however - CHECK THE HELP SYSTEM OF YOUR APPLICATION under firewall or Proxy for information you may have missed or that may be important..... ALSO please contact the Help desk for the application itself before asking us how to set up 3rd party applications. We cannot possibly provide support for every network application around !!!

What follows is a wholly unsorted list of potential problem areas you may wish to check out if you are unable to get any particular application to work via BrowseGate.

It may well contain exactly the answer you are looking for....

1. Check your HTTP port settings in your browser.
All browsers have settings for a firewall/proxy server name or ip address and port. Make sure these are set to those configured In BrowseGate.

2. Check that your application uses EXACTLY the same HTTP settings.

3. If your application needs to use SOCKS 4 or 5, make sure you have the SOCKS protocol enabled in BrowseGate, and configured to use the default port.

4. Also for SOCKS, you MUST enable and configure the DNS system in BrowseGate, and make sure it works...

UDP PORT MAPPING - create/control additional proxy services

See TCP mapping formost setup options.

Uninstalling BrowseGate

Although we cannot think of a good reason, If you somehow find that you do need to remove BrowseGate from your PC, we provide a special uninstall program called KILLBG.EXE which you will find in the BrowseGate installation subdirectory. However, you CANNOT simply run this program from the Windows Explorer window as the log file it requires will <u>not be located correctly</u>.

You can remove BrowseGate from your PC entirely however by either simply deleting the **entire** BrowseGate subdirectory manually, or if you prefer, you can use the RUN command from the Windows Start Menu with the following command :-

x:\your_browsegate_subdirectory\KILLBG x:
\your_browsegate_subdirectory\BGINSTALL.LOG

and then select the <u>manual option</u> and ensure that you select all files as each dialog appears.

Both these methods will totally remove BrowseGate from the PC, with no changes or removals being performed to any windows DLL files or other "standard" files, so you can rest assured that your PC will be in exactly the same state as it was before BrowseGate was installed (providing you haven't installed other software later - of course)

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Using the Statistics to control your proxy use

BrowseGate provides a powerful reporting facility that allows you to monitor the throughput of each computer that has used BrowseGate over the last 7 days.

The statistics option takes advantage of the detailed activity log files that are automatically generated for each of the 7 days of the week, and scans these to produce summary information on the activity for each computer (by IP address) that has access the server.
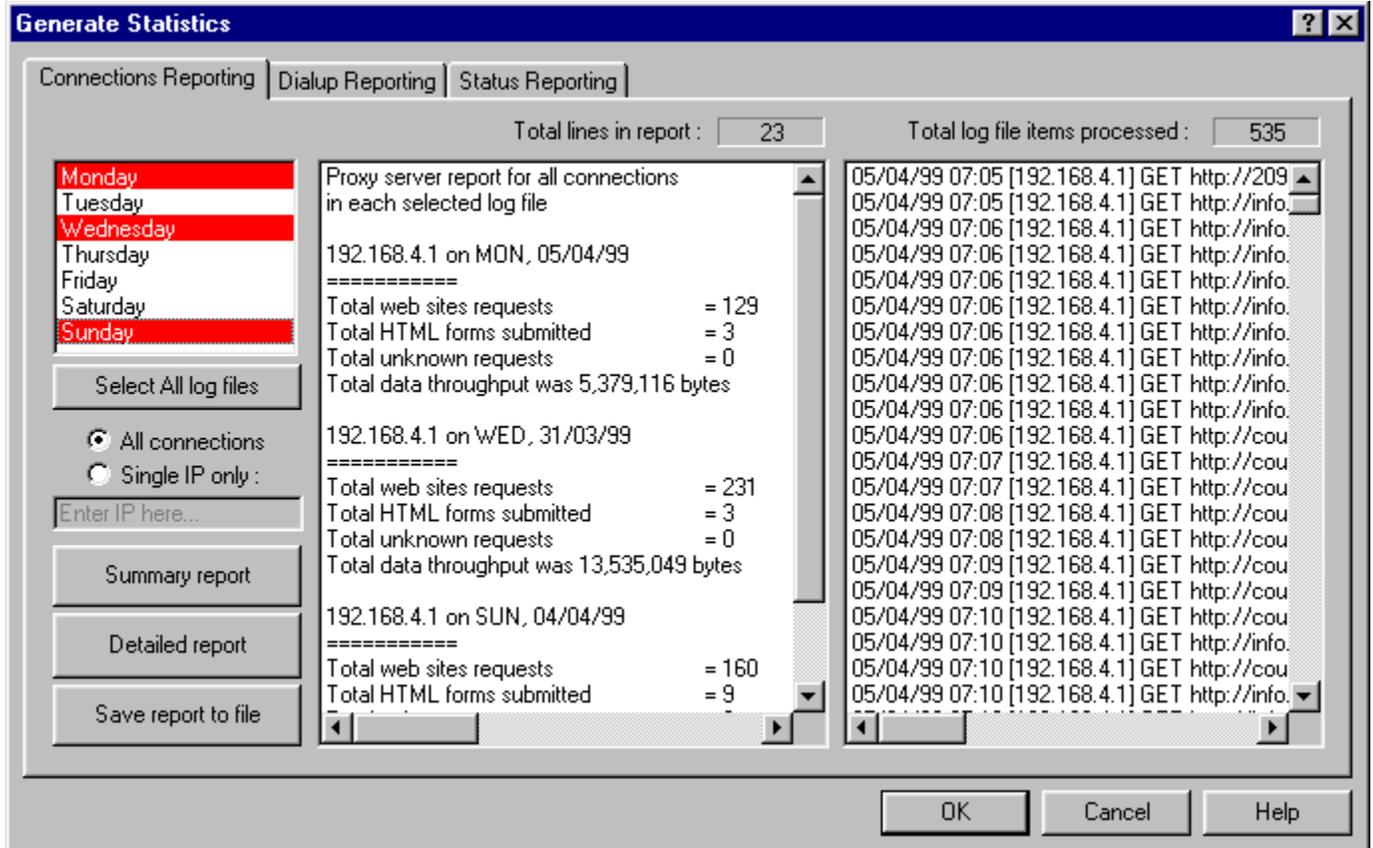
Although you can select one, multiple, or all days, in our example above the three days of Monday, Thursday and Sunday have been selected to be reported on. The middle panel shows the summary report for all of these days. It shows only ONE machine with an IP address of 192.168.4.1 used BrowseGate on various dates, and the total bandwidth (data requests + data received for that IP address for each date is summarized below each entry.

If another machine with say, an IP address of 192.168.4.3 had also used BrowseGate on one of these dates, the statistics would have been broken down separately for each machine on that day.

These statistics use the data from the special daily log files that may be found in the

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\BGLOGS subirectory below the BrowseGate installation directory. BrowseGate maintains a separate set of log files for each day of the week, and overwrites each day's log as the date changes each week. (eg: mon.log dated 13 Mar 99 would be automatically overwritten as soon as any entry dated 20 Mar 99 is received)

When you first run BrowseGate after you have first installed it, you will find that there are only logs for the day(s) that you have had connections. Statistics are always listed in the normal weekly sequence of Mon -> Sun.

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Maintaining the "Blacklist" of banned web sites and words

Because the web now contains huge numbers of web sites that most business, and of course home users may wish to ensure they do not reach, We have built into BrowseGate a powerful and comprehensive Blacklist system for both web sites themselves and also for specific words that may be contained in an offensive web site URL.

In a very similar way to that used by **NetNanny** and other similar products, BrowseGate gives you the power to control which web sites may be accessed by any network user by verifying the URL entered against a comprehensive list of web sites that are known to be unacceptable (sex, bombs.drugs etc). You can modify this list at any time to suit your own particular situation.

We provide an initial list (NNSITES.BAN) in it's installation, containing a comprehensive list of approximately 10,000 known pornographic and other unacceptable sites. These are based upon the freely available and well respected "NetNanny" lists. The latest versions of these "blacklists" can be downloaded from our web site at **www.netcplus.com**, but you can modify this list as you wish to suit your own requirements.... (If you download a new list from our web site, don't forget that it will overwrite any existing file including any changes you may have made to it. We recommend that you create your own site additions as a separate ASCII text file, which you can then always add back into any new list you download from us...)

If you have the Blacklist option turned on, BrowseGate will automatically check for any sites listed in this standard ASCII file, and , it will not provide access to any site in the list. BrowseGate also allows you to enforce this list on either of two different basis -

1 - exact match
This means that any URL entered must be found in the list. For example :-
if a networked user enter the URL of say **dutch-wendy.com**
and the blacklist file contained this EXACT entry, then BrowseGate would not allow access to this site, however, if a network user were to enter a URL of :
> **dutch-wendy.com/home.htm**
then this check would <u>FAIL</u> if the blacklist file only contained an entry for dutch-wendy.com...

However................ by using :-

2 - Strict checking
this site would remain banned, because BrowseGate would check to see if just the web site domain address was in the banned list (that is **dutch-wendy.com**), and would therefore continue to ban ANY access whatsoever to any pages on this site.......

This puts you in control of how strict you wish the checking to be.

You are able to change/remove/add to the list of banned sites at any time via the Configure | Blacklists menu option.

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Warnings for when you are setting up the Cache for the first time

Because most web browsers tend to be configured to cache web site data themselves, there are a few things you need to remember when first starting to use the BrowseGate cache on your network.

1. You MUST clear any cached data from each and every one of your browsers as they will almost certainly have quite a bit cached away already. Both IE and Netscape provide an option to remove all cached data.

2. We recommend that you configure each browser that is to use BrowseGate to NOT cache data itself. They all do it to a certain extent anyway, but nominally turning this off will make the BrowseGate cache work harder to store ALL the required information, which will then of course be available to ALL of the browsers on your network overcoming the wasted time and disk space required if each one repeats the same internal caching for the same web sites !!! We suggest that you select whatever the relevant option is on your version of the web browsers that means **"Check for new page every time"** which will force BrowseGate to fetch and store the pages on most occasions.

3. Unless you have a very good reason to do so, do not check the "Ignore proxy for local addresses" option. This MAY stop the BG-HELP commands from working correctly in some installations.

4. Think carefully about the BrowseGate settings you select. In particular when you want it to check for newer versions of web pages etc. If you are likely to use the same web pages very often, and they are not dynamic and subject to rapid change, we recommend you leave the option at the default setting which will tells BrowseGate to automatically check for newer data if any item is older than ONE DAY.

If however, you visit highly dynamic sites regularly, you may want BrowseGate to check for newer versions every time a request is received.

5. Make sure you allocate sufficient disk space to handle the amount of cached data you want to access. A fairly good rule of thumb for an average network is to allow 10Mb of disk space per browser that is going to use cached data.   eg a 10 user network should allocate 100Mb of cache disk space.

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Setting up ICQ

ICQ is not quite so easy to configure for use with BrowseGate.
But is still quite straightforward.......
The following instructions apply to v99a(beta)

1. Start ICQ
2. Click the ICQ button.
3. Select Preferences
4. Select "Connection" tab on the property sheet
5. Select the "I'm using a permanent internet connection (LAN)" option.
6. Then select the "I am behind a firewall or proxy" option.
7. You may need to try the "Always use Real IP option checked and unchecked.
    We suggest you start with it unchecked.
8. Ensure the "Use 16 Bit dialer" option is unchecked.
9. Click the "Firewall Settings" button.
10. On the popup dialog, ensure you select the "I am using a SOCKS5
     proxy server" option
11. Set the "Firewall sessions time out after" option as you require, but ensure
     you make the delay long enough.... We suggest 120 seconds as a minimum.
12. Click the Next button
13. In the "SOCKS5 Host" field the machine name (or IP address)
     of the PC on which BrowseGate is running. You can also simply
     enter the word "browsegate", which is a special DNS entry
     - but you can only do this if you are using the BrowseGate DNS system.
14. Ensure "SOCKS5 Port" is set to 1080.
15. Do NOT check the "Socks External Host IP option or enter anything in that field
16. We recommend you check the "Resolve IP" option...
17. DO NOT check the "use RFC1929..." option.
17. Click Next button
18. Try clicking the "Check my FIREWALL / Proxy Setting" button.
19. After a short while you should get a "Success..." message

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Configuring AbsoluteFTP

1. Start AbsoluteFTP
2. Select Menu Options | Global Configuration
3. Select the Advanced Tab
4. Ensure that the "Use Outgoing data connections (PASV)" option is NOT CHECKED
5. Select FireWall Tab
6. Select "USER user@host port" option in the Type frame
    (NB This has a space after Host, please make sure you do NOT
     select the very similar entry with a colon after the word Host)
7. Enter the IP address of the BrowseGate PC in the "Hostname or IP field.
       You can also simply enter the word   "browsegate", which is a special DNS
          entry - but only if you are using the BrowseGate DNS system.
8. Enter the port number you have configured in the TCP Mapping on
    BrowseGate for this FTP connection.

Hereafter you can leave the standard port settings and FTP site names in each preconfigured
connection exactly as they were previously (Typically using port 21).

eg: if you have set the firewall access to use port 680, you do not need to change the port
number in each FTP connection to 680 as well, although it will still work successfully if you do.
The default port setting of 21 will work really fine.....

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Configuring CuteFTP

1. Start CuteFTP
2. Select Menu FTP | Settings | Options to display Options dialog.
3. Select the FireWall Tab
4. Select "USER user@site" option in the Type frame
5. Ensure the "Enable FireWall Access" option is checked
6. Enter the PC Name (or IP address) of the BrowseGate PC in the "Host field.
    You can also simply enter the word   "browsegate", which is a special DNS
    entry - but only if you are using the BrowseGate DNS system.
7. Enter the port number you have configured in the TCP Mapping on
    BrowseGate for this FTP   connection in the Port field.
8. Enter a user ID and password if you wish to.

Hereafter you can leave the standard port settings and FTP site names in each preconfigured
connection exactly as they were previously (Typically using port 21).

eg: if you have set the firewall access to use port 680, you do not need to change the port
number in each FTP connection to 680 as well, although it will still work successfully if you do.
The default port setting of 21 will work really fine.....

Configuring Absolute FTP

Absolute FTP is pretty easy to configure for use with both the SOCKS4 and/or
SOCKS 5 support in BrowseGate.
The following instructions apply to Absolute FTP v1 .5(32bit)

1. Start AbsoluteFTP
2. Select Options | Global from the menu.
3. Select FireWall tab on property sheet
4. Select the "SOCKS version x" option you wish to use (4 or 5)
5. Enter in the "Hostname or IP" field the machine name (or IP address) of the
    PC on which BrowseGate is running. You can also simply enter the word
    "browsegate", which is a special DNS entry - but only if you are using
    the BrowseGate DNS system.
7. Ensure "Port" is set to 1080.
8. Normally you should leave Username and Password blank for public IRC servers.
10. Click OK.
11. Try connecting to an FTP site of your choice from the button bar - it should all work
as expected

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Configuring Eudora

Email setup is the same for all current versions of Eudora.

BrowseGate Setup:

      Configure | Email Tab
·   Incoming mail tab with remote port set to 110.
·   Outgoing mail with remote connection set to port 25.
      Local ports for both set to whatever you wish....

Eudora Setup:

1.   From the Eudora Menu bar, under the "Tools" menu, select "Options.."
      This will bring up the "Options" dialog box.

2.   In the "Category" menu, choose the "Getting Started" icon.

3.   In the "Pop account:" field enter the user name given to you by your POP server,
      your POP server's host name and the BrowseGate machine name.
      Use this form: 'username' # 'host name' @ 'name of BrowseGate machine'.
      For example: billg#microsoft.com@BrowseGateProxy
      You can also simply enter the word "browsegate", which is a special DNS entry
      - but only if you are using the BrowseGate DNS system.

4.   The delimiter character '#' should be that specified in the set-up of the POP3
      proxy.

5.   Still under the "Getting Started" icon, in the "Connection Method:" options, enable
      "Winsock".

6.   In the "Category" menu, choose the "Personal Information" icon.
      Enter the same "POP account:" as above.
      The "Return address:" field should be in the 'user'@'host' format.

7.   In the "Category" menu, choose the "Hosts" icon. Once again enter the same
      "POP account:"
      details. In the "SMTP:" field, enter 'browsegateproxy' (or whatever).

8.   In the "Category" menu, choose the "Checking Mail" icon. Enter the "POP
      account:" details yet again.

9.   In the "Category" menu, choose the "Sending Mail" icon. Enter the "Return
      Address:" as above. In the "SMTP server:" field enter 'browsegateproxy' (or
      whatever).
The rest of the Eudora set up does not relate to BrowseGate.

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Configuring Forte Free Agent

BrowseGate Setup:

      Configure | Email Tab
·   Set remote port set to 110.
·   Set Local port to whatever you wish....

Mapped link to news-group server (NNTP), accepting connections on whatever local port you have set in BrowseGate.

Mapped link to mail-forwarding server (SMTP), accepting connections on whatever local port you have set in the Outgoing Email setup of BrowseGate.

The 'Free Agent Setup' dialog box will be presented when Agent is loaded, or from the menu bar, under the 'Options' menu, select 'Preferences...' and select the 'System Profile' tab.

In the 'News Server:' field enter 'browsegateproxy' (or whatever).

In the 'Email Server:' field also enter 'browsegateproxy' (or whatever).

The rest of the Agent set up does not relate to BrowseGate.

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Configuring FTP clients to use BrowseGate

BrowseGate provides built-in support for FTP client packages to be able to connect to remote FTP sites on the Internet via the proxy. This is configured automatically in the BrowseGate "Map TCP" tab, providing that you ensure that you check the "FTP connection" option.

BrowseGate provides support for the **user@password FTP** for firewall connections. This is available in most well known Windows (and other platform) FTP client programs.

We have tried BrowseGate with the three most popular FTP clients (CuteFTP (32), AbsoluteFTP, FTP EXPLORER and WS_FTP95) and detailed instructions on setting up these packages for use with BrowseGate is available from the pages below :-

CuteFTP (v 1.8)
AbsoluteFTP (v 1 5)
WS-FTP (v 95LE)
FTP Explorer

If your FTP client supports SOCKS4 or SOCKS5 (many don't) you can also select either one of these, and as long as you have the BrowseGate SOCKS support enabled, this will work transparently.

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Configuring Microsoft Outlook Express

BrowseGate Setup:

      Configure | Email Tab
·   Incoming mail tab with remote port set to 110.
·   Outgoing mail with remote connection set to port 25.
      Local ports for both set to whatever you wish....

Outlook Express Setup:

1. Start Outlook Express
2. Select the menu option Tools | Accounts
3. Now for **each email account** you have configured, do the following :-

3a. Select an email account.
3b. Double click on it or click the Properties button.
3c. Select the Connection tab.
3d. Ensure you have the "Connect using my local area network (LAN)" selected
3e. Now select the Servers tab.
3f. Enter the IP address of the PC that is running your BrowseGate server in both
      the fields in the Server information panel. That is the Outgoing Mail (SMTP)
      and Incoming Mail (POP3) fields. You can also simply enter the word
      "browsegate", which is a special DNS entry - but only if you are using
      the BrowseGate DNS system.
3g. Ensure you have selected POP3 as the mail server type.
3h. Ensure that the Account name and password in the Incoming Mail Server panel
      are correct for the server you are going to collect mail from.
3i. If authentication is required for outgoing mail, check the option at the bottom of the
tab.

4. Select the Advanced Tab.
5. Check that the entries in the Server port numbers panel are the same as the **Local
Port settings** in the BrowseGate "email" configuration tab. (The defaults are 25
      for SMTP and 110 for POP3, and these are usually OK on most networks - but
      please check with your network administrator if you are unsure)

6. Click the OK button to save any changes made
7. Make sure you repeat the steps 3a -> 5 for each email account you have in Outlook.
8. When you have configured each and every account, close the account dialog.

Outlook express should now connect via BrowseGate totally automatically.!!!

WARNING Because Microsoft are known to be constantly revising Outlook and
Outlook Express, your email account dialogs may well vary in content and name from
those described above. If you find this to be the case you need to find the same

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entries on your particular version and then follow the instructions above.... or contact Microsoft for details of how to configure your version of Outlook to work through a networked proxy server. Please do not send support questions to us on this
as we are not able to provide support on Microsoft products directly - for obvious reasons !

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Configuring MS Exchange

BrowseGate Setup:

     Configure | Email Tab
·   Incoming mail tab with remote port set to 110.
·   Outgoing mail with remote connection set to port 25.
     Local ports for both set to whatever you wish....

Exchange setup:

1.   From the menu bar, under the "Tools" menu, select "Services..." to bring up the "Services" dialog box.

2.   If there is no 'Internet Mail' profile then create one.

3.   Highlight the 'Internet Mail' profile and hit the 'Properties' button to bring up the "Internet Mail" dialog box.

4.   On the "General" page, in the "Internet Mail server:" field, enter 'browsegateproxy'.

5.   In the "Account name:" field, enter your POP user name and your POP server's host name, in the following fashion: 'user name' # 'host name'
     For example: billg#microsoft.com

6.   The delimiter character '#' should be that specified in the set-up of the POP3 proxy.

7.   On the "Connection" page, enable the 'Connect using the network' option.

8.   The rest of the MS Exchange setup does not relate to BrowseGate.

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Configuring Pegasus mail

BrowseGate Setup:

      Configure | Email Tab
·   Incoming mail tab with remote port set to 110.
·   Outgoing mail with remote connection set to port 25.
      Local ports for both set to whatever you wish....

Pegasus Setup:

1.   From the menu bar, under the "File" menu, select "Network configuration..."
      to bring up the "Configuration for Built-in Internet Mailer" dialog box.

2.   In the "POP3 host" entry, enter 'browsegateproxy'. You can also simply enter
      the word "browsegate", which is a special DNS entry - but only if you are using
      the BrowseGate DNS system.

3.   In the "User name" field, enter your POP server user name and your POP
      server's host name, in the following fashion: 'user name' # 'host name'.
      For example: billg#microsoft.com.

4.   The delimiter character '#' should be that specified in the set-up of the POP3
      proxy.

5.   In the "SMTP host" entry, enter ''browsegateproxy' (or whatever).

6.   Hit 'Advanced configuration options...' to bring up the "Advanced Configuration
      for Built-in Internet Mailer" dialog box.

7.   In the "Incoming (POP3) mail" area there is a "Connect to POP3 server on TCP
      port" entry. In this field, enter the port number that the POP3 proxy in
      BrowseGate is configured to accept connections on.

The rest of the Pegasus set up does not relate to BrowseGate.

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Configuring SOCKS applications to use BrowseGate

We have provided configuration details for the following common SOCKS applications

mIRC - Chat system
ICQ - Communications system
Absolute FTP
Yahoo Messenger
Microsoft Internet Explorer 4
Microsoft Internet Explorer 5

NB The current releases of CuteFTP or WS_FTP do not provide SOCKS support

WARNING

If for whatever reason you decide to use SOCKS 4 as the ONLY protocol between your web browsers and BrowseGate, this will disable the majority of the powerful Web (HTTP) control features built into BrowseGate. The Blacklists and Rules will not be applied to page requests, and the web access statistics will be empty. This is because SOCKS is by definition more of an "open door" protocol which means that it has little concept of what types of data or requests are being processed, but simply passes data back and forth totally transparently, rather like a pair of wide open double doors.!!!!

We recommend that unless you have a very good reason for needing to do so, you do NOT use SOCKS alone for web browser connections thru BrowseGate . The standard HTTP and HTTPS (Secure) protocols work very well and you will still be able to have BrowseGate provide the full power of Blacklisting, Rules and it will log all web access performed by any machine on your network.

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Banned words configuration

Refuse access if banned word is detected in URL
If checked, BrowseGate will check the entire list of words in the NNWORDS.BAN file and if any
word exists in the requested URL it will display a suitable web page informing the user that the
site they have requested is banned due to the presence of the word identified in the current
Blacklist of words.

Apply if Partial match (Strict)
If this option is checked, BrowseGate will check the requested web site URL for any substring
match from the blacklist of words. For example, if you have the Strict words option <u>checked</u>,
and you had a word in your list of "girl", then if a URL entry of say
  "www.dirtygirls.com/female/porno/dirty.htm"

was requested, the page would **be banned** because the word "girl" can be found as a substring
in the URL.

However if you have <u>Strict unchecked</u>, then this URL would **not be banned** because the checking
algorithm looks for the characters immediately prior to and immediately after the match, and then
will only ban the request if both of these are one of the following characters :-
"." Period
"/" Forward Slash
"%" Percent
"?" Question mark.

So in our example URL, although the following character is indeed a period, the immediately
preceding character is actually "y", so the match would FAIL and the URL would not be banned.

When should or shouldn't I use web site cacheing

When is it best to use the BrowseGate internal cache ?

If your web surfing involves visiting various web sites on a regular basis, it makes a lot of sense to have BrowseGate store the site information locally on your hard disk. If these sites do not change their content too often, then you should definitely use the cache system. If however, they are fairly dynamic and change some of their content quite regularly, you will still see a considerable improvement in performance by using the cache, as typically only a small percentage of the pages or images involved actually need to be re-downloaded.

Reasons why you may NOT want to use the BrowseGate cache

1. If you already connect via a web cache provided by your ISP to reach the Web, you should experiment to see if it is better to turn the BrowseGate cache ON or OFF. This is because BrowseGate needs to check for newer pages first, and then the remote cache has to do so, and finally, it may decide it also has to update itself before passing the data back to BrowseGate. This can result in slower web access rather than the expected faster access a cache will typically provide.

2. If your web surfing involves visiting web sites that you are unlikely to wish to revisit, it is quite clearly a pointless and unnecessary overhead to have BrowseGate store all this information on your hard disk.

3. If you are unable to allocate sufficient disk space to the cacheing system, you will probably find that it will spend rather too much time refreshing and then removing files. We recommend that for maximum efficiency you allow sufficient hard disk space to be able to allocate a maximum disk cache size of at least 10Mb per typical single PC's, which means you need to multiply this by at least the number of users you have accessing the web via BrowseGate to gain the maximum benefit from the cacheing system. eg: a 5 user BrowseGate should have 50Mb of cache space available.

The only time this does not apply is if all the networked users tend to visit the SAME web sites, in which case a small cache of 10Mb or whatever suits your maximum site needs is fine, as of course, BrowseGate will only cache a web site once, NOT once for each user that accesses them.

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Why does a service(s) fail to initialize when it is activated?

Browsegate always performs a check on startup to ensure that there are no TCP/IP port allocation clashes.

If it discovers that some other application on the BrowseGate PC is already monitoring the same port as the local port you have assigned to any one of the BrowseGate proxy services, it cannot also monitor it, so will automatically terminate it's attempt to provide that particular service.

Where relevant, the activity LED's will show as RED to warn you this has occurred, but the status list will always contain an entry similar to the following for any port it has had to disable due to a port clash :-

BrowseGate: xxx proxy service suspended on port xxx

It is a good idea to check the list whenever you have made changes to proxy services or installed other TCP/IP applications on this PC, so that you ensure you have not encountered any suspended services.

To overcome these, simply go to the Configure property sheet, select the relevant tab, and select any free port for the local port of any service that has been identified by BrowseGate as having a port number clash.... or of course, you could also change the port settings of the other application concerned.

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About the Windows HOSTS file

A HOSTS file acts as a local database that tells your computer where to go when it's looking for a certain address, kind of like a "mini-domain name server." Using NOTEPAD, create a new text file. The only entry in this file should be the IP address and name of the BrowseGate PC, separated by at least one space.

It should be in the format shown below :
IPNUMBER<tab>NAME<enter>
IP   Name to use for the BrowseGate machine

So your entry might look like this:

192.168.0.1   browsegate

Make sure you press ENTER at the end of the line of text, otherwise Windows 95/98NT4 may not recognize it.

Now save your file in the WINDOWS directory in Windows 95 or the \system32\drivers\etc directory in NT, with the filename HOSTS with NO file extension (for your information, the HOSTS file entries do not replace or interact with NetBIOS names in any way). To save a file name with no extension in Notepad, surround the name in quotes, and add a dot to the end.

Usually there is a hosts.sam (sample) file in the same directory as the hosts file, so if you cant find hosts or you mess up your copy, you can look at this sample file to see how they are laid out. Any line with a # at the front is a comment. You only need the one line (as above) to get resolution for the name of the BrowseGate machine.

More about the Window's HOSTS files

Some Windows installations may have what are called a HOSTS or LMHOST file.
If you do not know what these are then you can safely ignore the following information....

However if you have been using either the HOSTS or LMHOSTS files on your network, you can simply copy it to the main BrowseGate installation directory, and then rename it to HOSTS.TXT. BrowseGate is capable of using these files transparently, and handles any comments or commented out entries correctly. eg: a HOSTS file looking like the one below would still be correctly checked

----
HOSTS file for our company network
#created by SysAdmin 12/11/98

192.168.4.1   Dellp200   #temp server name only

#192.168.4.1 MailServer
192.168.4.3   Gateway2200
#192.168.4.4 ASTP90
192.168.4.4   proxy

#EOF

All lines that start with "#" in column 0 are ignored, as are any comments following the "#" character on a line after a valid entry

So the line
192.168.4.1   Dellp200   #temp server name only
would return 192.168.4.1 for an enquiry on DellP200, but would ignore the comment - #temp server name only

and the two lines :-
#192.168.4.1 MailServer
#192.168.4.4 ASTP90

would be ignored entirely and these machine names would NOT result in a resolved IP Address

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LMHOSTS - What is it and do you need one ?

If your organizations network does not have a DNS systems installed, then you will not normally be able to use PC names in the "Host" fields of most typical TCP/IP packages such as email, NNTP news and FTP clients. To overcome this Windows has a special facility called an LMHOSTS (and also a HOSTS) file that lets you provide a simple text file that is used to "map" all the names of the machines on your network to their actual IP addresses.

We strongly recommend that you take advantage of the built-in DNS servers in BrowseGate, which means that you can /(and indeed should!!!) discard any HOSTS or LMHOSTS files on your system, unless of course they are specifically required by any other applications.

However - if you still want to play with these files, you may just find the following information useful.....

According to the best Windows documentation around, the choice as to which of these two files you should create/use depends on various Windows network setup options, so we recommend that you create both, with identical contents, which we can guarantee will not have any detrimental effect on any other installed DNS type lookup system.

Most Windows installations have a sample version of these files (with suitable annotation), which can usually be found in the \Windows directory with the name LMHOSTS.SAM or HOSTS.SAM (Samples!!)

We suggest you open these and have a look through them first, and then you can create your own 'usable' LMHOSTS (and/or HOSTS) file by opening Notepad or a similar _ASCII TEXT _editor and making one or more entries similar to those shown below.

192.168.44.21   DELLPC166
192.168.44.25   GATEWAY2100
192.168.44.27   GATEWAY2200
....

Naturally, you will replace the ip number and names with those of the PC's on your own network....

The format of this file is that the first entry in column zero will be the IP address of one of your PC's on your network/intranet.

Next will be a tab.

The second entry after the tab is the machine name of the PC that has that particular IP address.

So in our example above, the DELLPC166 has an IP address of 192.168.44.21, the Gateway 2100 laptop has an IP address of 192.168.44.25 and so on.

You may enter comment lines or disable an entry if you wish by starting any line with '#' eg:
#192.168.44.23   mylaptop

Each and every PC on your network SHOULD have an entry in this LMHOSTS (and HOSTS) file.

You should save the resulting file to your \windows directory with the correct name of
        lmhosts.
and/or
        hosts.

Yes, that is a period at the end........ !!!!

To achieve this, you need to enclose the entire name in quotes in the filename field of the "Save File As" dialog - eg: "LMHOSTS." or "HOSTS." and then press OK.

Restart Windows after doing this and you should be able to use PC names rather than the less understandable IP addresses in all of your TCP/IP client packages with no problems.

Each PC on your network should have an identical copy of these files....

NB Please note that the whole file is parsed including comments on each lookup, so keeping the number of comments to a minimum will improve performance.

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Routing for advanced networks

This is the run-down on route tables for multi-homed hosts (more than one interface).

Interface
An interface is a logical interface associated with a piece of communications hardware that has a TCP/IP stack. These bits of hardware include things like Modems, ethernet cards, ethernet interfaces on a router etc. The logical interface always has an IP address associated with it. These IP addresses must be unique within any connected network.

Route tables
When you want to make a TCP/IP connection, or just send some packets to a machine, you have to figure out which interface to send the packets out of. It is obviously no good sending packets out your LAN adapter when you are trying to say connect to an internet site. Conversely, it is no good sending packets out your modem when you are trying to access a machine on your LAN.

For this reason there are routing tables. The routing table is a table that the TCP/IP stack looks at when it wants to send a packet somewhere, and the routing table tells the stack which interface to pump the packets out of in order to get to the desired destination.

So route table entries specify:

1.   A range of destinations (made up by network address / subnet mask - see later)
2.   Which router (gateway) to send packets to for these destinations.
3.   Which interface to send packets out to get to these destinations

in Win95, the syntax to check the current routing table is just :-
        route

and to ADD a new entry to the routing table is :-

        route ADD networkaddr MASK subnetmask gateway

subnetmask is a way of saying which bits to ignore in the address when checking for a match. So if the subnetmask is 255.255.255.0 then we ignore the last 8 bits of the address (last octet) when checking to see if this route table entry applies to the destination or not.

E.g.

This is a route table when online with my modem

Active Routes:

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Network Address	Netmask	Gateway Address	Interface	Metric
0.0.0.0	0.0.0.0	203.96.10.254	03.96.10.51	1
127.0.0.0	255.0.0.0	127.0.0.1	127.0.0.1	1
192.168.0.0	255.255.0.0	192.168.0.4	192.168.0.4	2
192.168.0.4	255.255.255.255	127.0.0.1	127.0.0.1	1
192.168.0.255	255.255.255.255	192.168.0.4	192.168.0.4	1
203.96.10.0	255.255.255.0	203.96.10.51	203.96.10.51	1
203.96.10.51	255.255.255.255	127.0.0.1	127.0.0.1	1
203.96.10.255	255.255.255.255	203.96.10.51	203.96.10.51	1
224.0.0.0	224.0.0.0	203.96.10.51	203.96.10.5	1
224.0.0.0	224.0.0.0	192.168.0.4	192.168.0.4	1
255.255.255.255	255.255.255.255	192.168.0.4	192.168.0.4	1

I have 2 interfaces on my box - a LAN adapter with IP address 192.168.0.4 and a modem PPP interface with address 203.96.10.51

You will see that there is an entry in the table for both of these, plus some others.

If we look at the 4th entry, that is the definition of the entry for the LAN card. What it is saying is that if we get a packet that we want to send to 192.168.0.4 MASK 255.255.255.255 (which means that it must match the whole address), then we send the packet over interface 192.168.0.4 - the gateway is ignored. That is the easy one.

The next significant one is the 3rd entry. That is saying that if we have a packet for 192.168.0.0 MASK 255.255.0.0 (that means anything from 192.168.0.1 to 192.168.254.254 since 255 is reserved as is 0) then we send it out interface 192.168.0.4 - so this means all our LAN traffic goes out of the LAN card.

By comparison, the 7th entry is the same as the 4th entry, but for the PPP interface (modem) and the 6th entry is the same as the 3rd entry, but applies to the range 203.96.10.1 to 203.96.10.254 which is a subnet on our service provider. This will probably give us access to their router.

The other VERY significant entry is the 1st one. The effect of having a destination of 0.0.0.0 with MASK 0.0.0.0 means any IP address at all. This is called the DEFAULT ROUTE. This one is the last route used if there is no match on the others. This is the one that causes problems in multi-segment networks when you dial up, because it is changed by the PPP login process. What this means is that if we don't have a static route (like the other entries) for a destination, we send it out over the default route to 203.96.10.254 (our ISP's router) which is accessible through the interface 203.96.10.51 (our modem).

What this is saying, is that everything goes out over our modem, except things that match a static route - so this includes our LAN (local subnet only).

The other entries are.

127.0.0.0 is the localhost (loopback interface) this is a software only interface internal to the stack itself, and is not accessible over any interface. This means that this interface can only be accessed from the machine itself.

192.168.0.255 is the broadcast address for broadcast packets on our LAN.
203.96.10.255 is the broadcast address for broadcast packets on the LAN segment on our ISP.

224.0.0.0   is another broadcast (or perhaps multicast) address on both our LAN and the ISP's

LAN. The effect of two matching entries means any packets sent to this destination will be broadcast on our LAN and the ISP's LAN.

255.255.255.255 is the global broadcast address.

Route table when off-line

Active Routes:

Network Address	Netmask	Gateway Address	Interface	Metric
127.0.0.0	255.0.0.0	127.0.0.1	127.0.0.1	1
192.168.0.0	255.255.0.0	192.168.0.4	192.168.0.4	1
192.168.0.4	255.255.255.255	127.0.0.1	127.0.0.1	1
192.168.0.255	255.255.255.255	192.168.0.4	192.168.0.4	1
224.0.0.0	224.0.0.0	192.168.0.4	192.168.0.4	1
255.255.255.255	255.255.255.255	192.168.0.4	192.168.0.4	1

So these are all the same except for the PPP interface addresses, since we are off-line there is no PPP interface.

Routes automatically created by the OS

There are a number of routes created automatically by the OS. Whenever an interface is added, you get a route for the interface, one for the subnet the interface is on, and one for the broadcast address for that interface. If you look at the route table above, the interface 192.168.0.4 results in the addition of route entries 2, 3, 4, 5 and 6.

The OS also creates the localhost interface (1st one).

Important

If you specify a default gateway for your LAN adapter (i.e you have a router on your

LAN), then you also get a default route entry. this is the entry that is used to access the other subnets on your LAN.

What this all means

Well, what it means is that your PPP login when it changes your default route. So by default all your packets go to your ISP's router (so you can access internet sites). This makes the rest of your LAN segments inaccessible, since unless you have manually entered a static route to those subnets, they will have been dependent on the default route.

So, if you have other subnets, you need to add a static route to your route table with the ROUTE ADD command.

You can be smart about it. if you have numbered your segments say like this:

Segment A (BrowseGate machine): 192.168.0.0 mask 255.255.255.0
(this means 192.168.0.1 to 192.168.0.254)
Segment B : 192.168.1.0 mask 255.255.255.0
Segment C : 192.168.2.0 mask 255.255.255.0
Segment D : 192.168.3.0 mask 255.255.255.0
Segment E : 192.168.4.0 mask 255.255.255.0
Segment F : 192.168.5.0 mask 255.255.255.0
Segment G : 192.168.6.0 mask 255.255.255.0
and the router is on 192.168.0.254

Then you can either do it the hard way and add a route for each of B to F - e.g.

route ADD 192.168.1.0 MASK 255.255.255.0 192.168.0.254
route ADD 192.168.2.0 MASK 255.255.255.0 192.168.0.254
route ADD 192.168.3.0 MASK 255.255.255.0 192.168.0.254
route ADD 192.168.4.0 MASK 255.255.255.0 192.168.0.254
route ADD 192.168.5.0 MASK 255.255.255.0 192.168.0.254
route ADD 192.168.6.0 MASK 255.255.255.0 192.168.0.254

Or, you could combine these to a single entry by setting the mask to ignore the second to last octet of the address as well.

e.g

route ADD 192.168.0.0 MASK 255.255.0.0 192.168.0.254

This would cover segments B to F.

If some of the segments B to F are only accessible through another router somewhere else, you can either add route statements to the router on 192.168.0.254 or put in

different route table entries for these ones.

When matching, the stack looks for a match in this sequence.

1. Look for a match with an interface address (mask of 255.255.255.255 - exact address)
2. Look for a match with a subnet
3. use the default route.

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(from NetcPlus Internet Solutions)

Sample full status report

Below is shown a full status report on a working BrowseGate system...

NetcPlus - BrowseGate Proxy Server
==================================
Full Server status report

Configuration password is set to [iant]
BrowseGate Window is Not OnTop
BrowseGate Window is displayed on startup

External Connections

DUN/RAS is in use for external connections
Dialup connection in use is [Virgin net]
Connection will be hung up after [10] minutes inactivity
Connection will NOT be hung up when BrowseGate is closed down
BrowseGate will attempt 3 dial retries

External caching

The use of an external cache is OFF
The use of an external cache is OFF
External cache is set to [www-cache.demon.co.uk]
External is set to use port [8080]

URL Aliasing

URL aliasing is OFF
Alias 1 is set to [*.com]
Alias 2 is set to [*.net]
Alias 3 is set to [www.*.com]
Alias 4 is set to [www.*.net]
Alias 5 is set to [*co.uk]

Browser File Downloads

Downloading of files via browser based FTP requests is ON
FTP user ID is set to [ftp]
FTP password is set to [wwwuser@here.com]

POP3/SMTP Mail support
----
eMail proxy is ON

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POP3 email requests will be sent to [pop3.ps-consultants.co.uk]
Local port for POP3 client applications is port [650]
POP3 request will connect externally on port [110]
SMTP email requests will be sent to [smtp.ps-consultants.co.uk]
Local port for SMTP client applications is port [26]
SMTP requests will connect externally on port [25]

NNTP News Support

NNTP News proxy is ON
News Server requests will be sent to [news.virgin.net]
Local port for News Server client applications is port [121]
News Server requests will connect externally on port [119]

Additional services (proxies) Support

Proxy service 0 connects to [news.demon.co.uk] on port 119
   Local port for client connections to use this proxy is [123]
   This proxy service is ACTIVE
Proxy service 1 connects to [mail.virgin.net] on port 110
   Local port for client connections to use this proxy is [151]
   This proxy service is ACTIVE
Proxy service 2 connects to [pop.site.csi.com] on port 110
   Local port for client connections to use this proxy is [153]
   This proxy service is NOT Active
Proxy service 3 connects to [pop3.demon.co.uk] on port 110
   Local port for client connections to use this proxy is [154]
   This proxy service is ACTIVE
Proxy service 4 connects to [pop.freeserve.net] on port 110
   Local port for client connections to use this proxy is [155]
   This proxy service is ACTIVE
Proxy service 5 connects to [mailhost.airtime.co.uk] on port 110
   Local port for client connections to use this proxy is [152]
   This proxy service is ACTIVE
Proxy service 6 connects to [pop3.ps-consultants.co.uk] on port 110
   Local port for client connections to use this proxy is [111]
   This proxy service is ACTIVE
Proxy service 7 connects to [192.168.4.3] on port 25
   Local port for client connections to use this proxy is [666]
   This proxy service is ACTIVE
Proxy service 8 connects to [192.168.4.3] on port 110
   Local port for client connections to use this proxy is [667]
   This proxy service is ACTIVE
Proxy service 9 is an FTP client proxy connecting externally on port 21
   Local port for client connections to use this proxy is [680]
   This proxy service is ACTIVE

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Proxy service 10 connects to [mail.virgin.net] on port 110
     Local port for client connections to use this proxy is [690]
     This proxy service is ACTIVE
Proxy service 11 connects to [mail.virgin.net] on port 25
     Local port for client connections to use this proxy is [691]
     This proxy service is ACTIVE

URL Rules

Rule 1 - [Sex sites] is NOT Active
- Bans entries containing the following words :
- porn   girl sex , pussy photo sxx erotic , voyeur
- Ban is applied at following times:
- Between the hours of 6 and 20 on the following days :
- Sun Mon Tue Wed Thu Fri

Rule 2 - [sex2] is NOT Active
- Bans entries containing the following words :
- girl fanny sex sxx whore woman fetish
- Ban is applied at following times:
- Between the hours of 9 and 17 on the following days :
- Sun Mon Tue Wed Thu Fri

Rule 3 - [Adult stuff] is NOT Active
- Bans entries containing the following words :
- adult
- Ban is applied at ALL TIMES

Rule 4 - [file download blocker] is NOT Active
- Bans entries containing the following words :
- .exe .zip .gz .tar leader.linkexchange.com
- Ban is applied at ALL TIMES

Rule 5 - [Linkexchange blocker] is NOT Active
- Bans entries containing the following words :
- linkexchange
- Ban is applied at ALL TIMES

Rule 6 - [web image blocker] is NOT Active
- Bans entries containing the following words :
- .gif .jpg
- Ban is applied at ALL TIMES

Site Blocking

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Site Blocking is NOT Active
Site 1 allowed is [www.netcplus.com]
Site 2 allowed is [www.proxy-servers.com]
Site 3 allowed is [www.email-servers.com]
Site 4 allowed is [search.microsoft.com]
Site 5 allowed is [www.microsoft.com]
Site 6 allowed is [*shareware*]
Site 7 allowed is [*fastlink*]
Site 8 allowed is [*microsoft*]

Black Listing

Use of Blacklisted URL'S is on STRICTLY
The following sites are EXCLUDED from URL blacklisting :
192.168.4.1

Use of Blacklisted WORDS is on (but not STRICTLY)
The following sites are EXCLUDED from WORDS blacklisting :
192.168.4.1

Local Server

The following local (network) web site is supported
C:\netc web sites\Public Web Site
The default home page for this site is [home.htm]

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The @NetClock SNTP time server Plug-in

Due to the many well documented problems with various versions of Windows being unable to maintain the time on a PC system clock correctly, NetcPlus have now released their @NetClock SNTP server/client system to overcome these problems.

@NetClock is an intelligent "plug-in" designed specifically for our BrowseGate proxy server (and SmartServer3 email) that can automatically, and totally transparently, take advantage of the dial-up connections made by BrowseGate to check with any one of several hundred atomic clocks that are freely available on the Internet worldwide.

Once installed, you simply select the atomic clock server you wish to use for verification, and then install a copy the @NetClock client (NCCLIENT.EXE) on each and every other PC on your network. You will normally run them via a shortcut in the \Windows\Startup directory - which enables every other PC on the network to benefit from always having the correct date and time - taken from the BrowseGate PC that will of course, <u>always</u> have the right settings.....

An evaluation copy of @NetClock will be able to be be downloaded from our web site as shown in the About box.

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TCP/IP ports - what you can use !!

For your Reference - the following is a pretty exhaustive list of the standard TCP ports used by most external (Remote) hosts:

Most commonly used ports

Service	Port#	Description
FTP	21	File Transfer Protocol - for transferring files
Telnet	23	for logging into an account on a Remote Host
SMTP	25	For Sending mail
Gopher	70	Text menu based browser
HTTP	80	WWW protocol - Netscape, Mosaic
POP 3	110	Downloading Mail
NNTP	119	Internet Newsgroups
IRC	6667	Internet Relay Chat
Compuserve	4144	Compuserve WinCIM communications
AOL	5190	America Online
MSN	569	Microsoft Network

Other Ports
```
# Format:
#
# <service name>  <port number>  [aliases...]   [#<comment>]
#

echo            7
discard         9     sink null
systat          11
systat          11    users
daytime         13
netstat         15
qotd            17    quote
chargen         19    ttytst source
ftp-data        20
telnet          23
time            37    timserver
name            42    nameserver
whois           43    nicname       # usually to sri-nic
domain          53    nameserver    # name-domain server
nameserver      53    domain        # name-domain server
mtp             57                  # deprecated
rje             77    netrjs
finger          79
link            87    ttylink
supdup          95
hostnames       101   hostname      # usually from sri-nic
```

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```
iso-tsap        102
dictionary      103     webster
x400            103                     # ISO Mail
x400-snd        104
csnet-ns        105
pop             109     postoffice
pop2            109                     # Post Office
portmap         111
portmap         111/udp
sunrpc          111
auth            113     authentication
sftp            115
path            117
uucp-path       117
nbsession       139
NeWS            144     news
tcprepo         158     repository   # PCMAIL
print-srv       170                     # network PostScript
vmnet           175
vmnet0          400
exec            512
login           513
shell           514     cmd             # no passwords used
printer         515     spooler     # line printer spooler
efs             520                     # for LucasFilm
tempo           526     newdate
courier         530     rpc
conference      531     chat
rvd-control     531/udp   MIT disk
netnews         532     readnews
netwall         533/udp                 # -for emergency broadcasts
uucp            540     uucpd       # uucp daemon
klogin          543                     # Kerberos authenticated rlogin
kshell          544     cmd             # and remote shell
remotefs        556     rfs_server rfs# Brunhoff remote filesystem
garcon          600
maitrd          601
busboy          602
kerberos        750     kdc             # Kerberos authentication--tcp
kerberos_master 751                     # Kerberos authentication
krb_prop        754                     # Kerberos slave propagation
erlogin         888                     # Login and environment passing
kpop            1109                    # Pop with Kerberos
ingreslock      1524
knetd           2053                    # Kerberos de-multiplexor
eklogin         2105                    # Kerberos encrypted rlogin
```

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```
rmt          5555     rmtd
mtb           5556    mtbd          # mtb backup
man           9535                  # remote man server
w            9536
mantst         9537                 # remote man server, testing
bnews         10000
queue         10001
poker         10002
gateway        10003
remp          10004
qmaster        10012
```

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Glossary

A

B

Binding
A binding is a 'requirement to use'. In the case of a service (or protocol) to interface binding, it is a requirement for the service to use the specified interface. Binding a service to an interface causes the service to listen on the specified interface. BrowseGate usually binds to all interfaces by default. Services only listen to interfaces for which they have a binding.

C

Cascading
Using one proxy to connect via another proxy is called cascading. It is commonly done when an ISP has a WWW proxy for its customers to use. To cascade the BrowseGate WWW Proxy to the ISP's proxy, simply enter the ISP's proxy details on the Configure | Proxy Server tab.

Client
A client is a recipient of a service. With computers, client machines are PC's on networks that are generally used by a single person. That computer can access BrowseGate if it requires data or a service that is not part of the client system. For example, when a client computer wants Internet access, it will ask the BrowseGate server for a connection. Client software is a program that makes use of Server software to obtain the required data or service.

Connection
A connection can mean several things. At a physical level it means a joining of two devices, by cable, plug or similar. With Modems, a connection made on a successful dialing of another modem. At a Internet software level it commonly means a channel of communication between the client and server has been established.

D

Dialer
The dialer is software that tells the modem who and when to dial. BrowseGate comes with SmartDun, a System tray module that accesses the standard Window's Dial up networking / Remote Access system and handles your modem transparently.

Dun
This stands for Dial-Up-Networking, a Microsoft term for the part of the operating system used to get modems to talk to each other in Windows 95. In NT the dialing is

controlled by RAS, which is very similar to DUN.

E

F

Firewall

A firewall is a barrier between your network and the Internet, through which only authorized traffic can pass. As traffic passes between your network and the Internet it's examined by the firewall which follows the strict guideline of "whatever is not expressly permitted is denied."

Most firewalls screen traffic between a company's internal network and the Internet, however firewalls can also secure on part of a network from another. For instance securing your corporate accounting department or your network from your subsidiary's network.

FTP

FTP stands for File-Transfer-Protocol. This is a method by which files are up/down loaded from the internet. Many client applications exist to make the process easy.

G

H

hosts file

The hosts file is a file that resides in your windows (In 95) or system32\drivers\erc directory (In NT4). This stores some info about where certain machines are.

HTTP

HTTP is the Protocol used for World Wide Web browsing, but many other programs are starting to use HTTP. The BrowseGate WWW proxy allows HTTP access to LAN users so they can view World Wide Web sites.

HTTPS

This is secure http. Netscape and other browsers have built in encryption, to make data exchange more secure. This is commonly used for Online purchasing, especially where Credit cards are involved.

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I

IP Number

An Internet protocol number is unique identifying Internet address.

Interface

An interface is a 'network connection'. That may be a network card, an online Dialer profile, or your localhost loopback.

ISP

This stands for Internet Service Provider. ISP's are companies that have a connection to the internet and provide dial-up or direct connections to customers. Typically ISP's have many modems that customers can dial up with a PPP account. Dialing up an ISP usually gives you direct access to the internet. Many ISP's also offer ISDN T1, or other connections for improved speed.

L

Leased line
A Leased line is a full-time network connection to the internet where you are given an IP number (or a range of IP numbers) for your LAN. There are different methods of connection including ISDN, modem and ethernet. Basically they give you guaranteed access to the internet. Full-time connections are often called 24/7, meaning 24 hours, 7 days a week.

License
BrowseGate licenses are sold in different counts in multiples of 5 users. This number represents the number of client machines that can connect to BrowseGate simultaneously. It is not the number of machines on you network. It is quite common, and permissible, to have a network of over 10 users, but to have only a 5-user license. This is a way of limiting Internet use. A 5 user license allows the BrowseGate machine + 5 other machines to access the Internet at any one time.

Localhost

localhost is a special term in TCP/IP. 127.0.0.0 is the localhost (loopback interface) this is a software only interface internal to the stack itself, and is not accessible over any interface.

N

NIC

Network Interface Card.

P

Packet

A data packet is a like a 'mail parcel'. Think of a package that gets sent in the post. There are a few things that you have to have, requirements. There has to be a name and address for the recipient, a return address, there have to be stamps, and of course the envelope or wrapping paper. But, what you put in the parcel is up to you. You can send (with in reason) anything that will be accepted by the port office. A data packet is very similar to this. You have to supply certain 'Wrappers' like to and from fields, but what is sent as the payload is up to you.

There are different types of packets used on the internet and other networks, but all of them use this idea of a parcel of data.

Ping

Ping is a command available on most TCP/IP capable systems including DOS. It is a command line program that tests a TCP connection between locations, and gives feedback on the speed of the link.

Usage: ping [-t] [-a] [-n count] [-l size] [-f] [-i TTL] [-v TOS
            [-r count] [-s count] [[-j host-list] | [-k host-list]]
            [-w timeout] destination-listOptions:
-t   Ping the specified host until interrupted.
-a   Resolve addresses to hostnames.
-n count   Number of echo requests to send.
-l size   Send buffer size.
-f   Set Don't Fragment flag in packet.
-i TTL   Time To Live.
-v TOS   type Of Service.
-r count   Record route for count hops.
-s count   timestamp for count hops.
-j host-list Loose source route along host-list.
-k host-list Strict source route along host-list.
-w timeout   timeout in milliseconds to wait for each reply.

As an example, to test for a connection to ftp.microsoft.com, type at a command prompt:

ping ftp.microsoft.com <enter>

From a machine that is directly connected to the internet you will get a response such

as

Pinging [198.105.232.1] with 32 bytes of data
Reply from [198.105.232.1] : Bytes=32 time 40ms
Reply from [198.105.232.1] : Bytes=32 time 20ms
Reply from [198.105.232.1] : Bytes=32 time 20ms
Reply from [198.105.232.1] : Bytes=32 time 30ms

You will notice that the name you typed is converted to an IP number. This is where DNS comes in. With out DNS you can only ping IP's.

From a workstation that is connected through BrowseGate you would get a result similar to

Pinging [198.105.232.1] with 32 bytes of data
Destination host unreachable
Destination host unreachable
Destination host unreachable
Destination host unreachable

(You may get 4 Request timed out message, they are basically the same thing)

This indicates that DNS is working. BrowseGate can't proxy ping packets, so you can't get the other data from the ping.

If you get a result like

Bad IP address ftp.microsoft.com

Then your DNS probably isn't working, so go back and check where you may have gone wrong.

POP3

Used for retrieving mail from mail servers. A simple protocol that was preceded by the even simpler POP2, and the positively prehistoric POP. POP3 is used by Outlook (& Express), Eudora and most other eMail clients to talk to POP3 servers for retrieving mail.

Ports

A port can be thought of as a channel of communications to a machine. Similar to telephones, it is like a companies PABX that has several lines. Packets of information coming into a machine are addressed not only to that machine, but to that machine on a specified port. You can think of a port as a radio channel if you like, but the fundamental difference between a radio receiver and a computer, is that the computer

can listen to any / all of 65000 possible channels at once! A Port is a logical TCP/IP connection. Any TCP/IP program needs to use a port to communicate with any other program or Computer. Certain ports are set aside for certain TCP/IP operation, eg 80 for HTTP.

Protocol

See Unix. A Protocol is a method by which 2 or more parties can communicate or organize their communication. Network protocols are very strict. If an application does not follow the agreed style of communication, then they are unlikely to be understood. Protocol includes such things as greeting a server, logging on with a name and password, requesting and sending information, and saying 'good bye' when closing the connection. This is a similar idea as when one writes a letter. First one writes ones own details, then the recipients name and address, then you greet them with their correct title. Then the bulk of the letter is written. At the end, a suitable sign off such as 'Your sincerely' and then a signature close the communication. Proxy servers typically need one proxy per supported protocol. Examples of Protocols are POP3 Post office protocol and http hypertext transfer protocol.

Proxy

The normal meaning of the word proxy is someone who does something on behalf of someone else, e.g. voting by proxy. The Internet use of the word means basically the same thing, in relation to a software program. BrowseGate does things on behalf of other software programs. Specifically BrowseGate makes Internet requests on behalf of Internet clients to Internet servers.

Proxy Request

This is the action taken when a proxy aware program 'talks' to a proxy and asks for a resource.

R

RAS

Remote access service. An NT term, more or less the same as DUN. This is the modem controlling software in Windows.

Resource

A resource is a term used to mean any data item or hardware processing/storage. On a machine, resources are the memory, disk space, or processing time. An Internet resource is a Graphic, an HTML page, a downloadable file, live streaming video or any other available data. BrowseGate has internal resources, images, used to display in listings and other places.

S

Scope
A Scope is a range of IP addresses sharing common properties. The DHCP servers Auto mode will use the 192.168.0.1 to 192.168.0.254 scope. A DHCP scope comprises a group of computers running DHCP clients in a subnet.

Server

A machine and/or software that is set up to provide a service to assist you. Examples are FTP, Email, or Web servers.

Service

A service is something that helps or serves you. In BrowseGate, each proxy you set up are services provided to help you connect to the internet.

SMTP

Simple Mail Transfer Protocol is the method used on the internet for sending mail. BrowseGate fully supports SMTP.

Subnet
A subnet is a group of computers that are directly connected via coax or a hub. A computer with two network adapters will be on 2 subnets.

T

TCP/IP

TCP/IP is essential if you want to use the Internet. TCP/IP stands for 'Transmission Control Protocol / Internet Protocol'. TCP/IP (usually called TCP) is the standard method of sending data on the Internet. It is based on data packets that have a set format, including to and from addresses, similar to a letter. If you want to use the Internet or BrowseGate the TCP/IP needs to be installed on every machine on your LAN.

Actually TCP and IP are different protocols, but they are so tied up that they are usually referred to in this way.

Telnet

Telnet is a command line program used to access remote computer and run programs on them. Telnet was the method by which the internet was first used. BrowseGate supports Telnet proxies.

Terminator

A small device used at each end of a coaxial cabled network. Terminators are essential.

U

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Contacting Us

NetcPlus offer unlimited support to registered users via email. If you are really stuck you may also call our US support center between the hours of 9 - 5 at 1 - 727 391 8966 (EST)

Please send support questions by email to the following addresses. They will normally be answered within 24 hours at the latest.

support@netcplus.com

Further information on our products can be obtained by pointing your web browser at our web sites as shown in the Help | About box

Sales information, pricing, and upgrade information can all be obtained from the same addresses and phone/fax number show on the Help | About box.

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