



NetSupport Manager Gateway

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What is a NetSupport Manager Gateway?

The NetSupport Gateway component provides a secure method to establish connections between the NetSupport Control and Client PCs via the Internet using the HTTP protocol, providing web based remote control without the need for complex modifications to existing firewall configurations.

The Gateway handles communications between the NetSupport Control and Client PCs. As there is no direct connection they can each be located behind a firewall configured to use NAT (Network Address Translation) without the need to make configuration changes to the firewall.

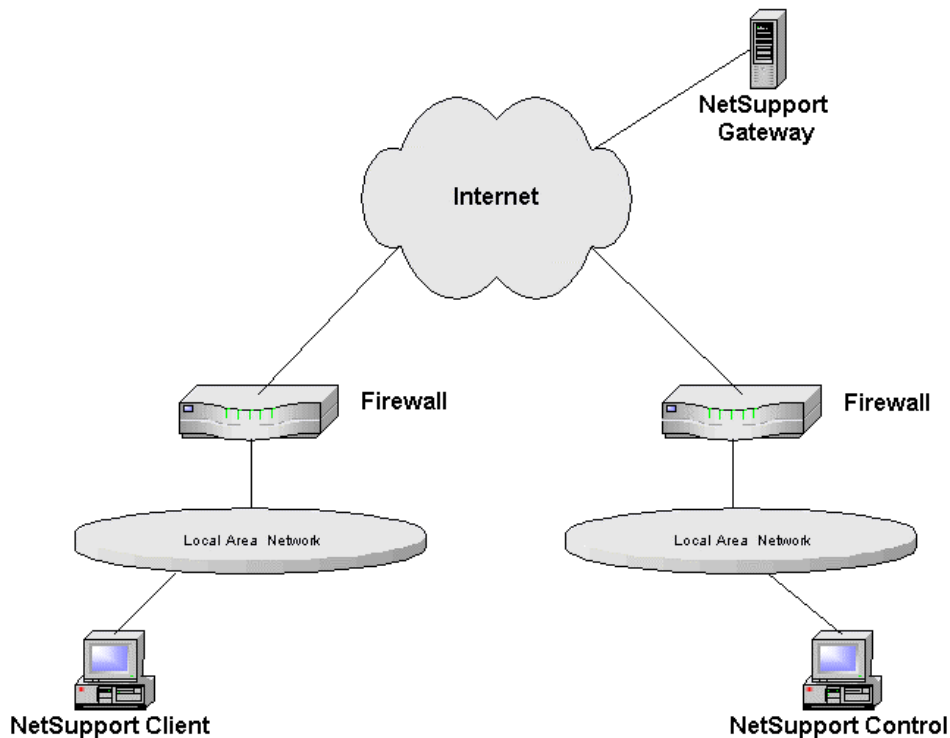
A NetSupport Client configured to use the HTTP Protocol connects to the Gateway at start-up and maintains a secure connection to the Gateway. A Control with authorised access can establish a HTTP connection on demand to the Gateway and browse for a list of available Clients to remote control.

In order for the Gateway to effectively connect a Client and Control, both must be able to connect to the Gateway using the HTTP Protocol on the Gateway's configured port. The default Port is 443 (previously 3085 for NetSupport Manager 9.00 and below).

The Gateway can be located in various different Network locations as shown in the following scenarios:

Scenario 1

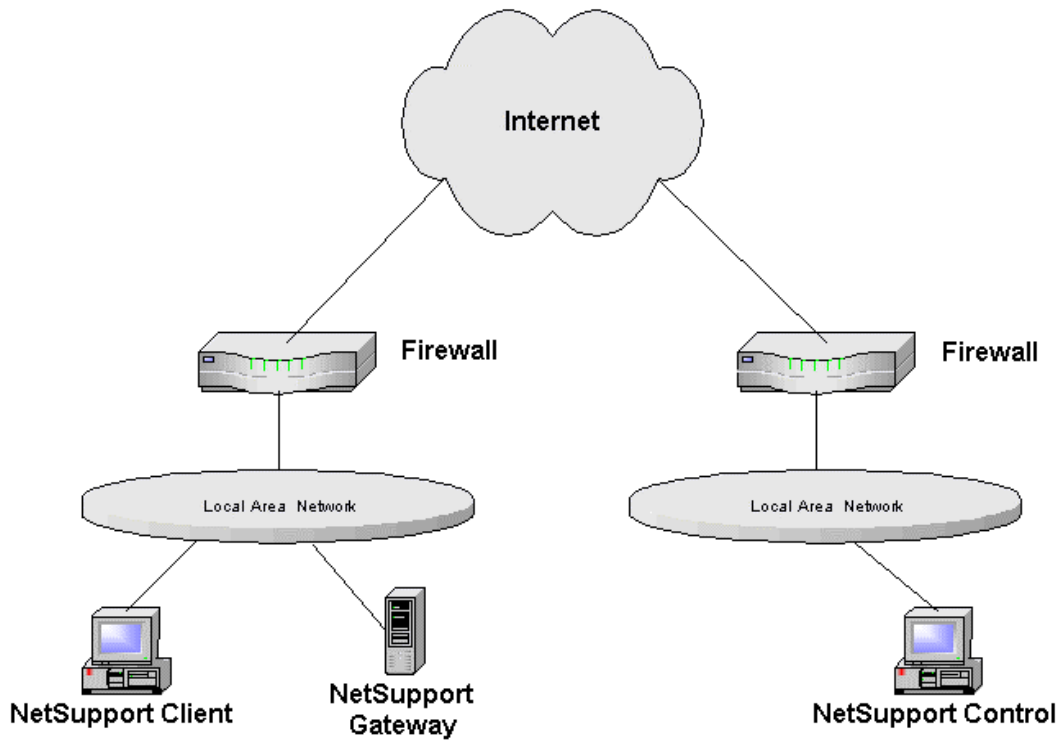
NetSupport Gateway on the public Internet.



In this scenario the NetSupport Gateway is installed on the public Internet. No configuration changes would normally need to be made to either of the firewalls. However, the machine that is running the NetSupport Gateway is freely available on the Internet and could be open to an attack.

Scenario 2

NetSupport Gateway on the Client Network.

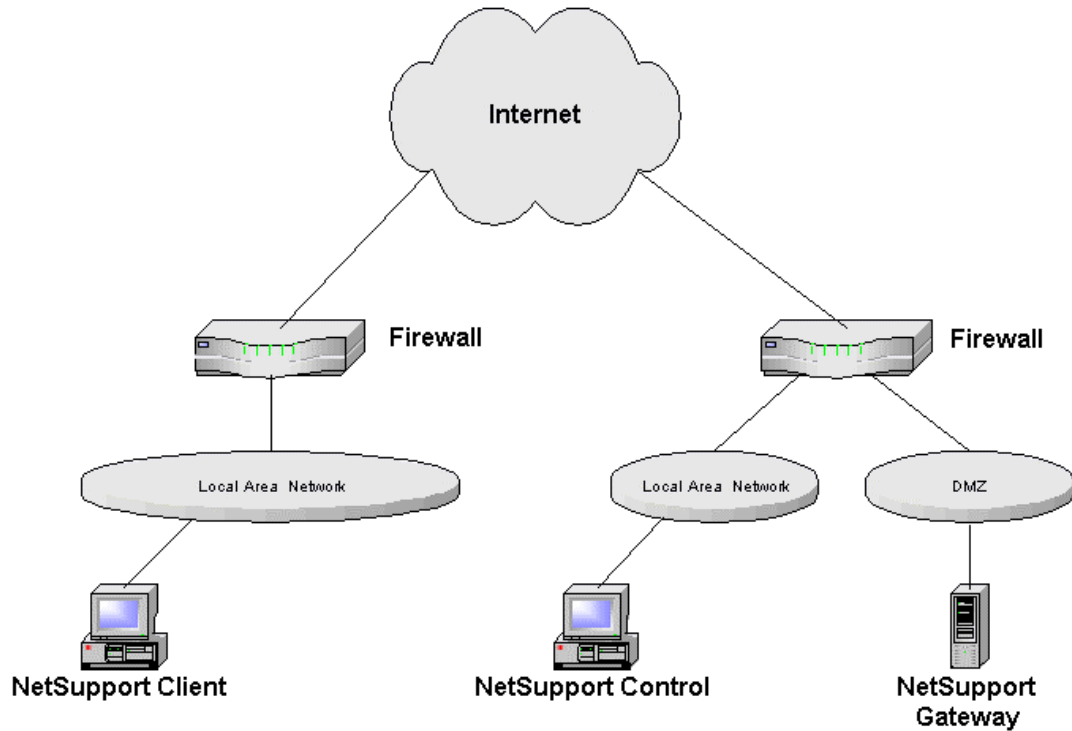


In this scenario the firewall at the NetSupport Client site would need to be configured to allow incoming HTTP connections to the Gateway (on the NetSupport Gateway's configured Port number). This would be similar to having a Web server installed at the NetSupport Client's Network and making this web server publicly available to users on the Internet.

The advantage of this location for the gateway is that the machine running the NetSupport Gateway is now protected from attack by a firewall. However, this option does require some configuration changes to the firewall at the NetSupport Client site.

Scenario 3

NetSupport Gateway on a DMZ.

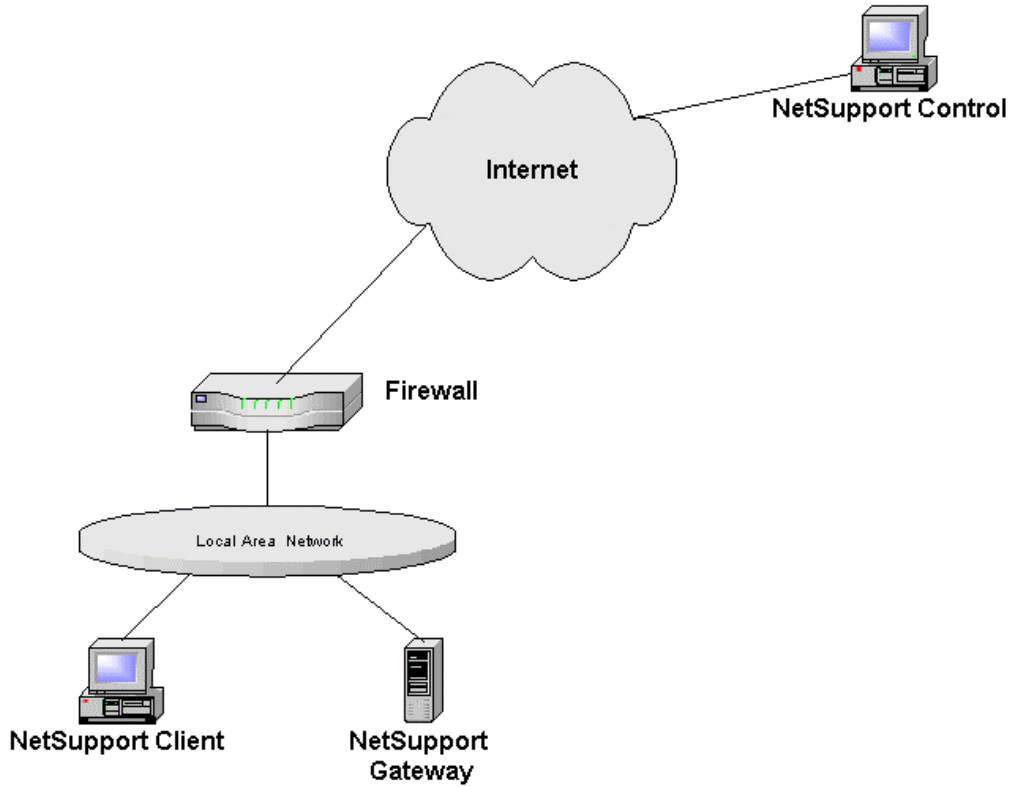


In this scenario the firewall at the NetSupport Control site would need to be configured to allow incoming HTTP Connections to the Gateway (on the NetSupport Gateway's configured Port number). This would be similar to having a Web server installed on the DMZ and making this web server publicly available to users on the Internet.

The advantage of this location for the Gateway is that the machine running the NetSupport Gateway is now protected from attack by a firewall. However, this option does require some configuration changes to the firewall at the NetSupport Control site

Scenario 4

NetSupport Gateway on the NetSupport Client's Network with a NetSupport Control on the public Internet.



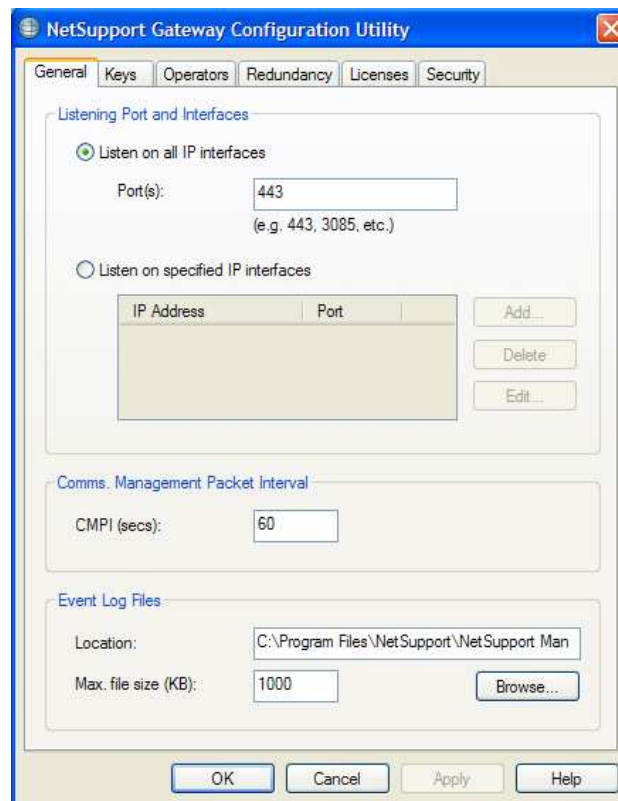
In this scenario the firewall at the NetSupport Client site would need to be configured to allow incoming HTTP Connections to the Gateway (on the NetSupport Gateway's configured Port number). This would be similar to having a Web server installed at the NetSupport Client's Network and making this web server publicly available to users on the Internet. This example could be used to provide remote access to users working from home.

Installing the NetSupport Gateway

The NetSupport Gateway can only be used on an NT based Operating System (Win2k, NT, XP or above) as the NetSupport Gateway installs as a service.

The Gateway is not installed by default. To install the NetSupport Gateway run the standard NetSupport Manager Installation package. When prompted for an installation type, select **Custom**. When prompted to select from the list of available components select **Gateway** and continue through the installation.

At the end of the Installation the **NetSupport Gateway Configuration Utility** will run as shown below:



Here you can set the Port number that the Gateway will accept connections on. The default Port is 443. You can also specify the location and maximum size of the Gateways log file. The logging functions of the Gateway are explained in detail later in this document.

You can also add a Gateway Key. Gateway Keys are used to authenticate NetSupport Clients and Controls, ensuring that unauthorised users cannot use the Gateway.

You must set at least one Gateway Key before you can apply the configuration, the Gateway will not accept any connections unless at least one Gateway Key is specified.

To enhance security you can restrict remote control access to specific users by entering a username and password.

You can also set up a secondary Gateway, to use as a backup when the primary Gateway is not available.

If you do not have an Internet connection you can manually activate your NetSupport Manager license in the Licenses tab.

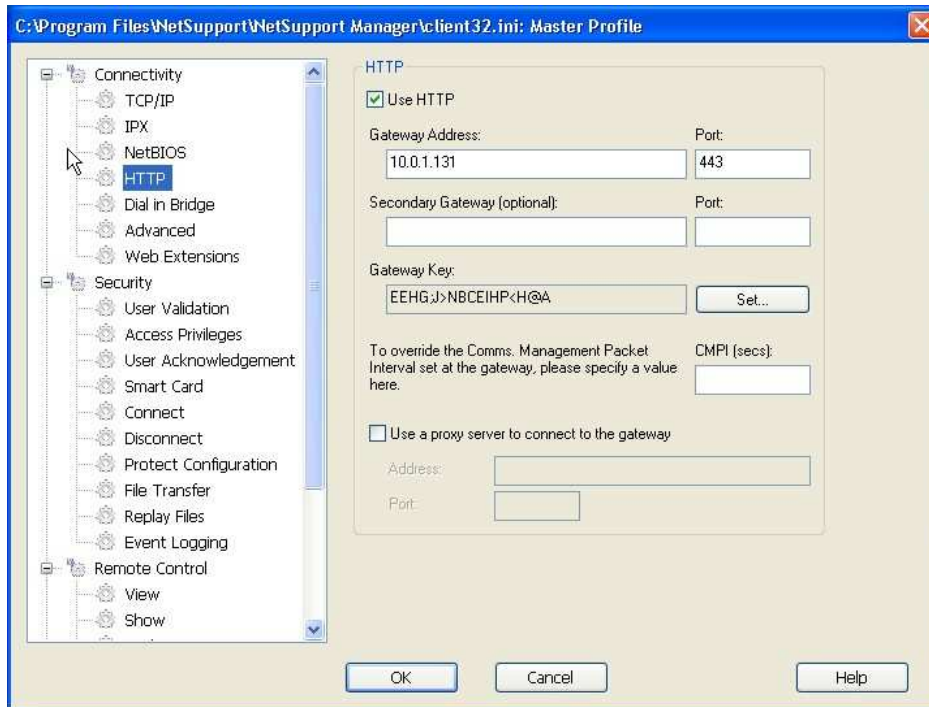
The gateway provides support for an enhanced level of encryption to be used when initiating communications from remote computers.

Setting up Clients to Use the Gateway

To configure a Client to use the HTTP protocol you will need to run the NetSupport Configurator.

Note: If you are running the NetSupport client on a Pocket PC device you will need to run the NetSupport Configurator on the Host PC {Start}-{Programs}-{NetSupport Manager for Pocket PC 2003}-{Client Configuration}.

1. Select {Connectivity}{HTTP}.



2. Check the **Use HTTP** option and confirm the Port number, 443 being the NetSupport default.
3. Enter the IP address of the NetSupport Gateway. If required, enter the IP address of the secondary Gateway.
4. Press the **Set** Button to set a Gateway Key. The Key set here must also be set at the Control and match the key that has been configured in the Gateway itself.
5. Proxy Server settings can be set if the Client needs to access the Gateway via a Proxy Server.
6. You can override the CMPI that is set at a Gateway by entering a value here.

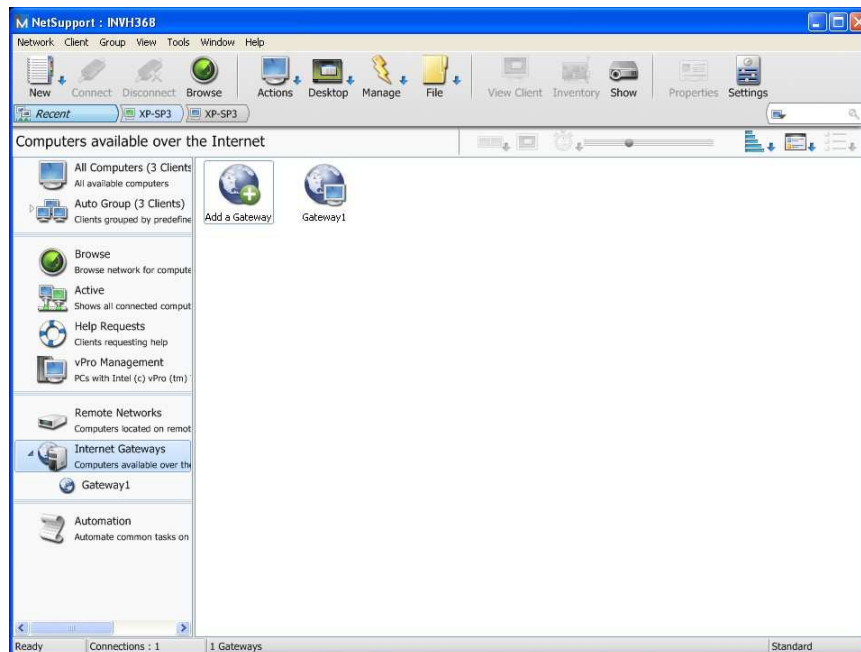
Once you have completed the configuration save and restart the NetSupport Client. The Client will then attempt to connect to the Gateway on start-up.

The entire configuration for a NetSupport Client is stored in the Configuration file and this can be easily copied or deployed (Using NetSupport Deploy) to other NetSupport Clients, for further details please refer to the Online Help or Manual.

Setting up a Control to use the NetSupport Gateway (Windows Control)

Before you can connect to a NetSupport Client using a NetSupport Gateway you **must** add the Gateway definition to your NetSupport Control. To do this, follow the steps below.

1. Run the NetSupport Control.



2. In the left hand pane select the **Internet Gateways** Group.
3. Double click on the **Add a Gateway** Icon.
4. Enter a name and description for the Gateway and click **Next**.
5. Enter the IP Address of the Gateway and the Port that the gateway is configured for (default is 443), if required, enter the IP address of the secondary Gateway. Click **Next**.
6. You can optionally add Proxy Server settings. Required if the Control program needs to access the Gateway via a proxy Server.
7. At the next step click **Set** and specify the Gateway Key that you will use.
8. To restrict the remote control access to specified users, enter a username and password.
9. Click **Finish** to save the new Gateway definition.

Note: If the Gateway is configured with multiple Gateway Keys, when you browse for Clients on this Gateway you will only see Clients that are using the same Gateway Key that you enter here.

You can have multiple gateways configured in your NetSupport Control with the same IP address but different Gateway Keys.

Once you have a Gateway configured in your control you can browse the Gateway for a list of connected Clients.

Setting Up a Control to use the NetSupport Gateway (Pocket PC Control)

1. Load the Control program.
2. Select the Commands Options



3. On the Gateways tab select **Enable Gateway support**.
4. Set the default Port number to be used when adding Gateway configurations.
5. Double click **Add Gateway...**



6. Enter a suitable name and description to identify the Gateway PC.
7. Enter the IP Address of the Gateway.
8. Enter the Port that the Gateway is configured for (default is 443).

Note: It is recommended that NetSupport Manager Gateway version 9.10 or above is used with Pocket PC devices.

9. Click **Edit** and set the Gateway Key. This needs to match a corresponding key configured on the Gateway PC.
10. Proxy Server settings can be entered if the Control program needs to access the Gateway PC via a Proxy Server

To Browse a Gateway PC for available clients

1. Load the Control program.
2. Select Commands - Browse.



3. Optionally enter a partial Client name to filter the browse list.
4. Double click the Gateway to browse for clients.
5. Double click the Client in the browse list to remote control



Securing the NetSupport Gateway.

The Gateway will support multiple Gateway Keys, each Key must be a minimum of 8 characters. Gateway Keys can be added to the Gateway dynamically without disrupting any current connections.

The Gateway will not accept connections from a NetSupport Control or Client unless a Gateway Key configured at the NetSupport Client or NetSupport Control has also been entered at the Gateway.

Clients support one Key only and the Control is able to support multiple Gateways with different Keys. All Gateway Key data is sent encrypted between the Client, Control and Gateway. Once connected to the Gateway all Client and Control security such as user names, Security Keys etc will function normally.

A Control can only connect and browse for Clients that are using the same Gateway Key as the Control.

Gateway Key connection Matrix

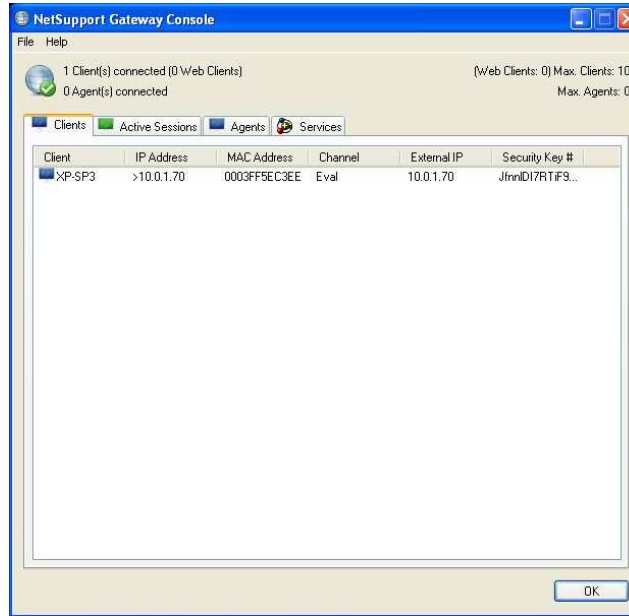
Control Gateway Key	Gateway "Gateway Keys"	Client Gateway Key	Result
"Testing1"	"Testing2"	"Test1"	No connection from Client or Control
"Testing2"	"Testing1" "Testing2"	"Testing1"	Client connects to Gateway but Control can not connect to this Client or see the Client in a browse
"Testing1"	"Testing1"	"Testing1"	Client connects, Control can connect to the Client and see the Client in a browse
"Testing2"	"Testing1"	"Testing2"	No connection from client or control
"Testing2"	"Testing1" "Testing2" "Test3"	"Testing2"	Client connects, Control can connect to the Client and see the Client in a browse

Logging and Monitoring the NetSupport Gateway.

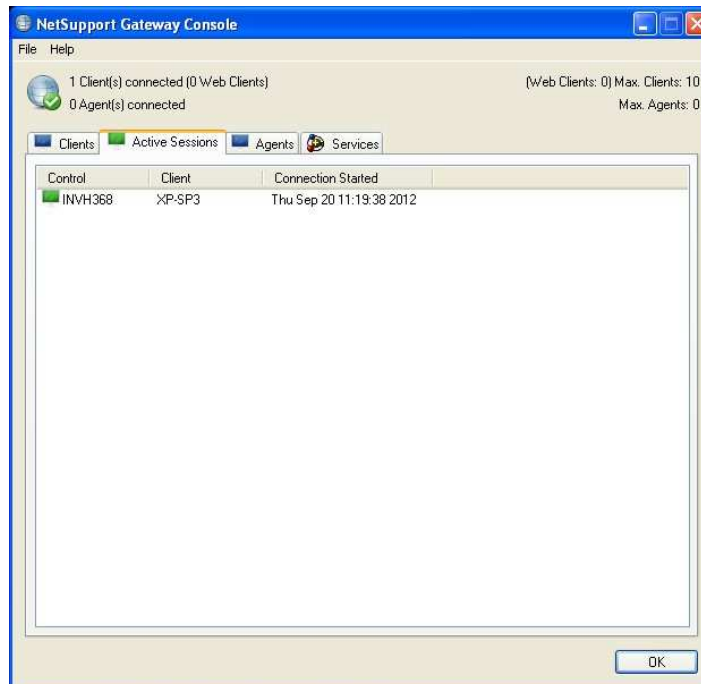
The Gateway runs as a service and is displayed as an icon in the system tray. If you right-click on this icon a shortcut menu is displayed giving options to "Open", "Configure" or "About"

If you select **Open** the NetSupport Gateway Status window is displayed.

The **Clients** tab will show a list of all the NetSupport Clients currently connected to this Gateway.



The **Active sessions** tab displays a list of current connections between a NetSupport Control and a NetSupport Client with the date and time that the connection started.



The NetSupport Gateway creates a log file that records activity through the Gateway. The log file name is gw001.log and is stored in the locations specified in the Gateway configuration dialog.

Gw001.log Example

08-Dec-02, 16:11:20, NetSupport V8.00, running on Windows NT 5.0 (build 2195), platform 2
 08-Dec-02, 16:11:20, Gateway started, Max. Licensed connections: 5, Listening port: 80
 08-Dec-02, 16:15:32, Gateway stopped

The following is a list of events that are logged to the NetSupport Gateway Log File

<product_name> <product_version>, running on <operating_system> <operating_system_version> <operating_system_ service_pack> (build <build_number>), platform <platform_number>

This event is logged when the Gateway is first started. A typical example would be as follows:

NetSupport V8.00D, running on Windows NT 5.0 Service Pack 3 (build 2195), platform 2

Gateway started. Mac licensed connections: <max_connections>

This event is logged when the Gateway is first started.

Failed to start gateway

This event is logged when the Gateway fails to start.

Gateway stopped

This event is logged when the Gateway is stopped.

Listening on port <port_number>

This event is logged when the Gateway starts listening on the specified port. This occurs during start-up and when a change in the Gateway port is applied in the Gateway configurator.

Listening on port <port_number>

This event is logged when the Gateway starts listening on the specified port. This occurs during start-up and when a change in the Gateway port is applied in the Gateway Configurator.

Failed to bind to listening port <port_number>

This event is logged when the Gateway fails to assign the specified port to listen for incoming connections. The port is probably being used by another application.

Reloading configuration

This event is logged by the Gateway when the administrator has used the Gateway configurator to apply configuration changes.

Listen port has changed. All current connections and sessions will be terminated.

This event is logged by the Gateway when the administrator modifies the listening port in the Gateway configurator and then applies the change whilst the gateway is running.

<p>Reloading Gateway Keys</p> <p>This event is logged by the Gateway when the administrator has used the Gateway configurator to apply configuration changes – which may have included additions or removals to the list of Gateway Keys.</p>
<p>Client <clientname> connected</p> <p>This event is logged when a Client connects to the Gateway</p>
<p>Client <clientname> disconnected</p> <p>This event is logged when a Client disconnect from the Gateway.</p>
<p>Control <controlname> connected to Client <clientname></p> <p>This event is logged when a Control connects to a Client.</p>
<p>Control <controlname> disconnected from Client <clientname></p> <p>This event is logged when a Control disconnects from a Client.</p>
<p>Licence exceed. Rejecting connection from Client <clientname> (<real_ip_address>, <public_ip_address>)</p> <p>This event is logged when a client connecting to the Gateway would exceed the licensed number of Clients.</p>
<p>Security check failed for Client <clientname> (<real_ip_address>). Terminating connection from <public_ip_address></p> <p>This event is logged when a new Client connection fails to provide a valid Gateway Key.</p>
<p>Security check failed for control browse. Terminating connection from <public_ip_address></p> <p>This event is logged when a Control fails to provide a valid Gateway Key during a browse Clients request.</p>
<p>Security check failed for Control <controlname>. Rejecting connection request to Client <clientname> from <public_ip_address></p> <p>This event is logged when a control fails to provide a valid Gateway Key during a connection request to a Client.</p>
<p>Client/Control security check failed for Control <controlname>. Rejecting connection request to Client <clientname> from <public_ip_address></p> <p>This event is logged when the Gateway Key provided by the Control during a connection request to a Client does not match the Gateway Key supplied by the Client.</p>

Contacting NetSupport

If you have any comments regarding the design, installation, configuration, or operation of this package please contact us.

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