Using the Name & Connectivity Server

with NetSupport School

Overview

The NetSupport School Name & Connectivity Server introduced in NSS version 9 is provided as an optional installation component within the standard setup.exe.

Its purpose is to provide a simple and reliable method of locating and connecting to student PC's in LAN / Wireless LAN environments particularly where students move with their notebooks from class to class.

Other scenarios where the Name & Connectivity Server may be required are as follows:

- Large slow networks where Students computers may not respond in time to be located using the Browse function.
- Networks with UDP restrictions making it impossible to perform a UDP Browse to locate Students computers.
- Networks with multiple subnets where maintaining Tutor and Student Browse settings becomes an issue.

Benefits of implementing the Name & Connectivity Server.

- Resolves Connectivity Issues.
- Negates the need to browse the network to locate Student computers.
- Reduces the time to locate Student computers.
- Reduces the need to configure and maintain broadcast range entries in the Tutor and Student configuration.
- The Tutor program uses the current IP address when establishing connections, resolving possible misidentification.

How it Works.

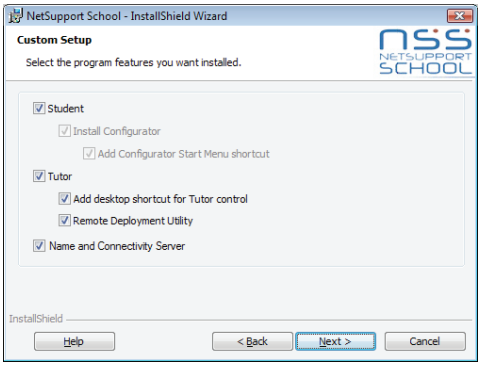
Once implemented the Student computer will on start-up, register its current IP Address with the Name & Connectivity Server. In turn, the Tutor will request a Student details from the Name & Connectivity Server instead of performing a UDP Browse.

Technical Document

Name & Connectivity Server - Installation.

The Name & Connectivity Server or "Gateway" is designed to be installed and run on a Windows 2000, Windows XP or Windows 2003 Server that is accessible from both the Tutor and Student PC's - It must therefore have a fixed or static IP Address.

The Name & Connectivity Server can be installed as a standalone component or along with other NetSupport components by choosing {Custom Setup} and selecting to install the Name and Connectivity Server during setup.

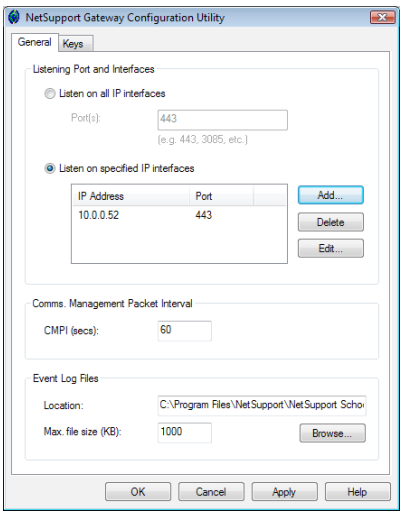


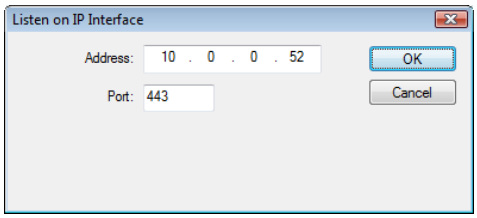
Note: Currently the NetSupport Name & Connectivity Server cannot be installed on Microsoft Vista.

At the end of the installation the Name & Connectivity Server Configuration Utility will launch, this can be access later by right clicking on the Name & Connectivity Icon in the System Tray or by running PCIGWCFG.EXE from the folder where NetSupport has been installed.

Name & Connectivity Server - Configuration.

The NetSupport Name & Connectivity Server General tab settings need to be configured as follows:





Listen on all IP interfaces
By default, the installed Gateway component uses the local IP Address(es) and communicates through Port 443 this can be changed if required.

Listen on specified IP interfaces
If the Gateway machine has multiple network cards installed, you can add the specific IP Address to use. Click {Add} and enter the required address.

CMPI (Communications Management Packet Interval)
When configured for Gateway connections, the Client workstation confirms its availability by periodically polling the Gateway. By default, a network packet is sent every 60 seconds but you can change this if required.

Event Log Files
Gateway activity during an active session is recorded in a text file, default GW001.LOG. This can be useful for checking which Clients and Controls have connected through the Gateway.

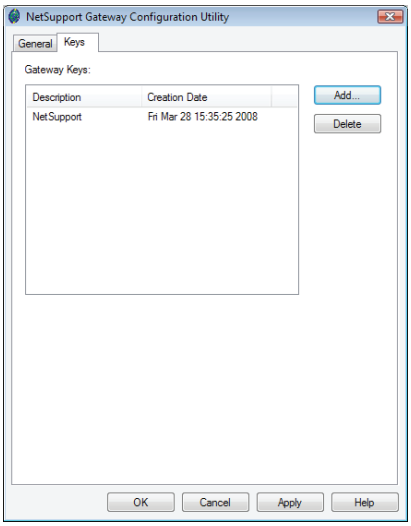
Location:
By default, the log file is stored in the NetSupport program folder. i.e. C:\Program Files\NetSupport\NetSupport School\GW001.log. Select Browse to specify an alternative path.

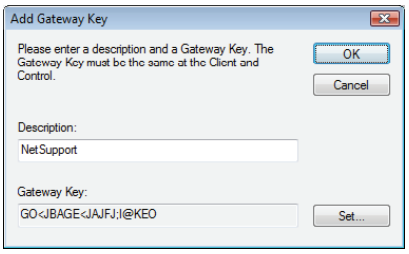
Technical Document

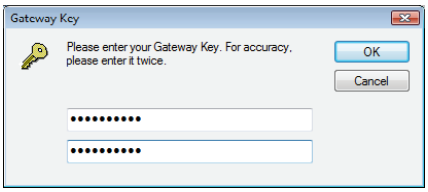
Max File Size (KB):
Over a period of time the log file could become quite large, you can manage this by specifying a maximum file size. When the limit is reached the existing information in the file is overwritten by the new records.

Note: For changes to the log file settings to take affect you will need to restart the Gateway32 service.

The Name & Connectivity Server Keys tab settings need to be configured as follows:







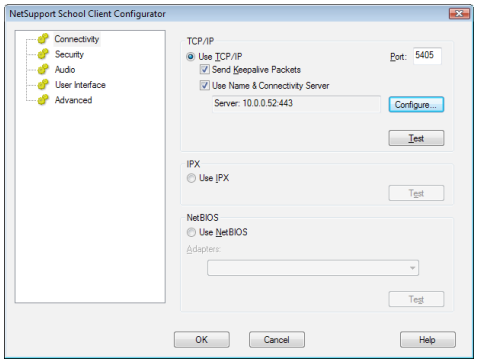
Access to a Gateway/Name Server is protected by the use of a Gateway key. The Gateway will not accept connections from a Tutor or Student unless a Gateway key is specified, and the same key is also configured at both the Tutor and Students. The Gateway can support multiple keys; at least one key must be specified.
Select{Add} to specify the key.

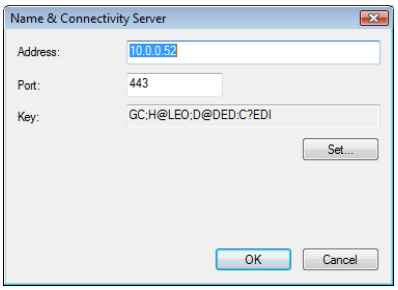
Note: The Key must be at least 8 characters.

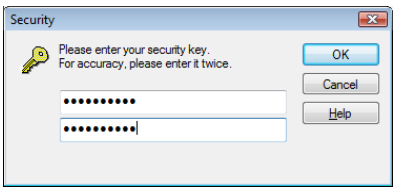
The NetSupport School Student and Tutor(s) must also be configured to use the Name & Connectivity server

Configuring the Student to use the Name & Connectivity Server.

Using the NetSupport School Configurator navigate to the Connectivity Tab and select {Use Name & Connectivity Server}





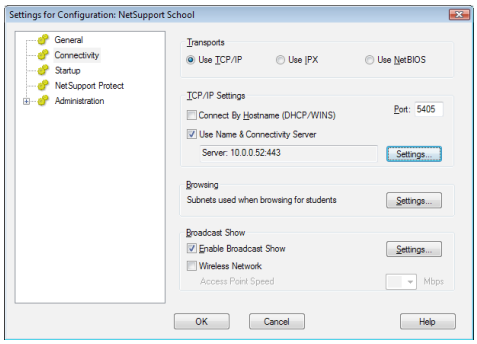


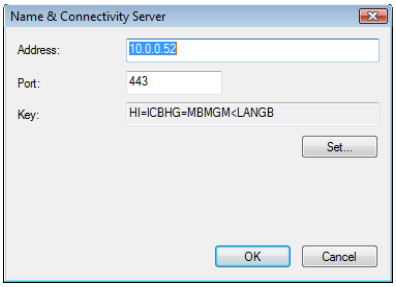
Select {Configure} and enter the IP Address, Port and Key that have been assigned at the Name & Connectivity Server.

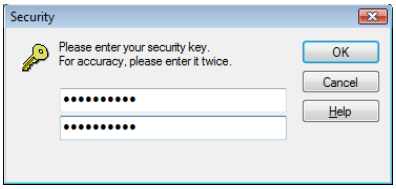
Note: Once completed the Student component will need to be restarted for the changes to take effect.

Configuring the Tutor to use the Name & Connectivity Server.

Within the Tutor interface select {School}{Configuration...} navigate to the Connectivity Tab and select {Use Name & Connectivity Server}







Select {Configure} and enter the IP Address, Port and Key that have been assigned at the Name & Connectivity Server.

Technical Document

Operation when using the Name & Connectivity Server

↘Students
Student computers connect to the Name & Connectivity Server on start-up and register their availability and current IP Address information.

Join Class
When browsing to locate a published class the Name & Connectivity Server is used instead of performing a UDP browse.

↘Tutor
When browsing to locate Students the Tutor program looks on the Name & Connectivity Server instead of performing a UDP browse across the Network. When connecting to Student the Tutor program uses the IP address registered with the Name & Connectivity Server.

The Name & Connectivity Server can be used with all three Tutor start-up modes:

Browse at start-up
Browse at start-up and Refresh look to the Name Server instead of using a UDP browse across the Network.

Connect to a known list
When browsing to locate Students to add to the Known/Class lists the Name & Connectivity Server is used instead of performing a UDP browse across the Network. When connecting to Students in the Known/Class lists the student name is resolved on the Name Server and the IP address registered with the Name Server is used to establish a connection direct over TCP between the Tutor and Student.

Publish Class
The Tutor publishes the class on the Name Server instead of on the Tutor. Students that are located on a separate subnet are then able to use the student join class function to join the class.

Troubleshooting Connectivity Issues

The main cause of connection issues between the Name & Connectivity Server, Student and Tutor are that IP Address, Port and Key do not match on all components. This should be checked first by re-entering the details and restarting the Name & Connectivity Server and Student components.

If the above does not resolve the connectivity issues investigate the following:

1. Is the Name & Connectivity Server Running?
There should be an icon representing the Name & Connectivity Server in the System tray of the computer where it is installed. The Name & Connectivity server runs as a service (Gateway32) so check that this has started.

2. Is the Name & Connectivity Server listening?
Look at the log file on the Name & Connectivity Server (usually C:\Program Files\NetSupport\NetSupport School\GW001.log) for the message "Failed to bind to listening port..." this is usually caused by another application such as Skype or Internet Information Server using the same port.

From the command line type "netstat –b –a –n" to see whether another application is bound to the port you have selected for the Name & Connectivity Server – if this is the issue either reconfigure NetSupport School to use an alternative port or reconfigure/disable the application that it causing the conflict.

3. Are the Students connected to the Name & Connectivity Server?
Look at the log file on the Name & Connectivity Server (usually C:\Program Files\NetSupport\NetSupport School\GW001.log) for the message "Clientname connected" if this is not present then the Student may not be attempting to connect to the Name & Connectivity Server.

4. Are the Students connected to the Name & Connectivity Server?
There should be an icon representing the Student in the System Tray of the computer where it is installed. Right click and select {Open}{Help}{About the Client...}{Transports} – There should be two entries as follows:

If not the Student component is not configured to use the Name & Connectivity Server.

5. Have you reached the maximum number of Student Connections?
The Name & Connectivity Server restrict the number of Students that are able to connect to the license limit, check the number of Clients you wish to connect to the Name & Connectivity Server does not exceed the number specified in the license. (NSM.LIC)

6. Is the Student Running?
There should be an icon representing the Student in the System tray of the computer where it is installed. The Student component runs as a service (Client32) so check that this has started.

7. Is the Name & Connectivity Server visible to the Student?
The IP Address of the Name & Connectivity Server should be accessible to the Student, ping the IP Address of the Name & Connectivity Server and ensure that there are not firewall restrictions that may block traffic.

Technical Document

8. Is the Name & Connectivity Server visible to the Tutor?
The IP Address of the Name & Connectivity Server should be accessible to the Tutor, ping the IP Address of the Name & Connectivity Server and ensure that there are not firewall restrictions that may block traffic.

For more details and to download free 30 days software trials go to

www.netsupportsoftware.com

Tel: +44 (0)1778 382270
Email: sales@netsupportsoftware.com

Tel: +49 (0)89 550 508 -30
Email: sales@pci-software.de

Tel: 770-205-4456
Email: sales@netsupport-inc.com

Tel: 905-415-4708
Email: sales@netsupport-canada.com