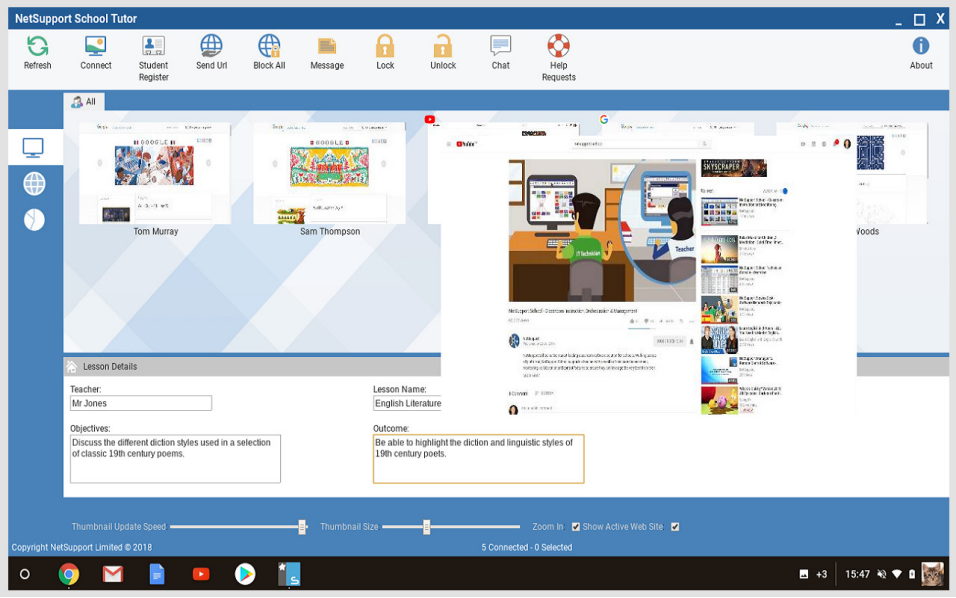
Technical Document

NetSupport School

Configuring NetSupport School for use in a Google Chrome environment

NetSupport School delivers a perfect solution for a Chromebook-only classroom, offering both a Tutor app for Chrome OS and a Student extension for installation on each student device. Compatibility is also provided for a teacher using a Windows desktop to manage student Chromebooks. This document provides step-by-step instructions on installing the various components required to facilitate a connection between the teacher's computer, Windows or Chrome, and the student Chromebooks.



Feature highlights

Note: *The feature set available in the NetSupport School Tutor app for Chrome OS is a subset of the Windows version:*

- Flexible choice of connection modes enables the Tutor application to quickly connect to the required student devices at the start of a NetSupport-managed lesson – by Classroom name, user name, a general browse of the network or via direct integration with Google Classroom or ClassLink OneRoster SIS data.
- View a real-time thumbnail of each student Chromebook in a single view.
- Zoom in to view a larger thumbnail of any selected student Chromebook.
- Click on a thumbnail to discreetly view screen activity on a selected Chromebook.*
- Ask students to register at the start of each lesson.
- Show the teacher's screen. Ensure student attention and focus when presenting by 'showing' the teacher's desktop to selected student Chromebooks.*
- Perform a show to students in a browser tab, or in full screen mode.*
- Multi-monitor support. If the teacher is using multiple monitors, select an individual screen to show to students or show all.*
- Show an application to selected students.*
- Lock the student's mouse and keyboard when instructing.
- Send an instant survey or request for feedback to each student and display results in real time.
- Open a discussion session with selected or all students, enter their comments and share with the rest of the class.
- Send an attention-grabbing message or instruction to each student Chromebook.
- Block unauthorised websites.

- Use approved websites only.
- Block all internet access.
- Launch a website on the Student Chromebook.
- Close a website on the Student Chromebook.*
- Copy the content of the clipboard between teacher and student machines during a view session.
- Block FTP access on each Chromebook.
- See details of the website that students are currently viewing.

* Feature not available when using the NetSupport School Tutor app for Chrome.

Planning an installation: required components

For a teacher to be able to monitor and interact with their students using Google Chromebooks, the following components must be installed:

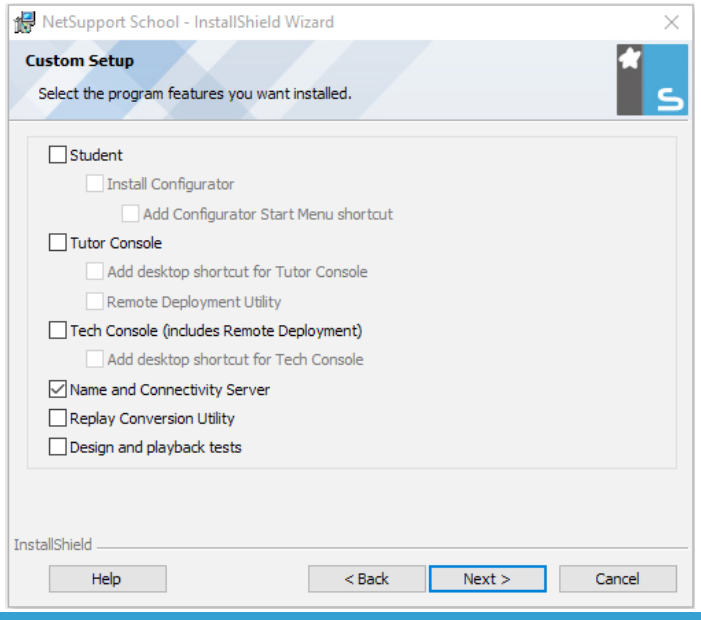
- The NetSupport School **Name & Connectivity Server**, used to manage connections between the teacher's machine and student Chromebooks, must be installed on a Windows Server;
- On the teacher's machine, you have the choice of installing the ***N*etSupport School Tutor app for Google Chrome** (if using a Chrome OS device) or the NetSupport School Tutor for Windows (if using a Windows PC);
- The **NetSupport School Student extension for Google Chrome** must be available on each student Chromebook.

Installing the NetSupport School Name & Connectivity Server

The **Name & Connectivity Server** is designed to broker secure connections between the NetSupport School Tutor application used by teachers (required for both Windows and Chrome versions) and the NetSupport School Student extension installed on each student Chromebook. The Server PC used must have a static IP address and be accessible at all times by the Tutor application and Student extension across the network.

On the required PC, run the NetSupport School Windows installer. (If you are already a NetSupport School user, enter your previously supplied licence details on the 'Licence Information' dialog or choose 30 day evaluation.)

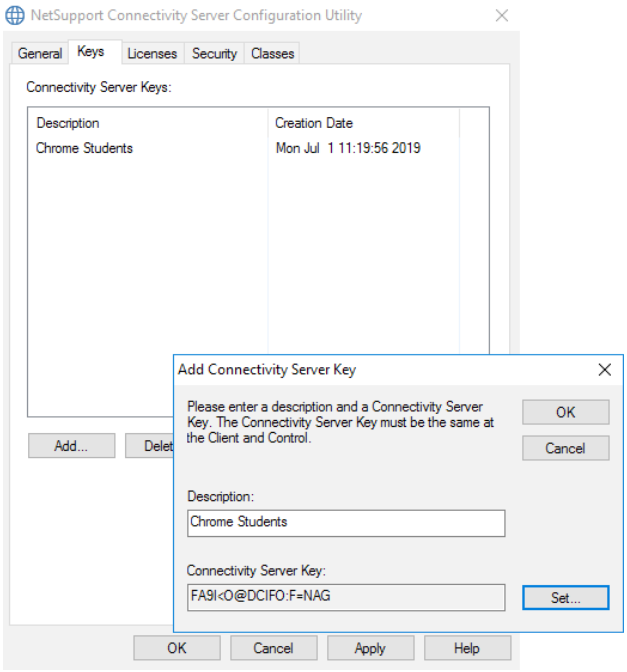
Choose **Custom Installation** to view the list of NetSupport School components and select the **Name and Connectivity Server** option.



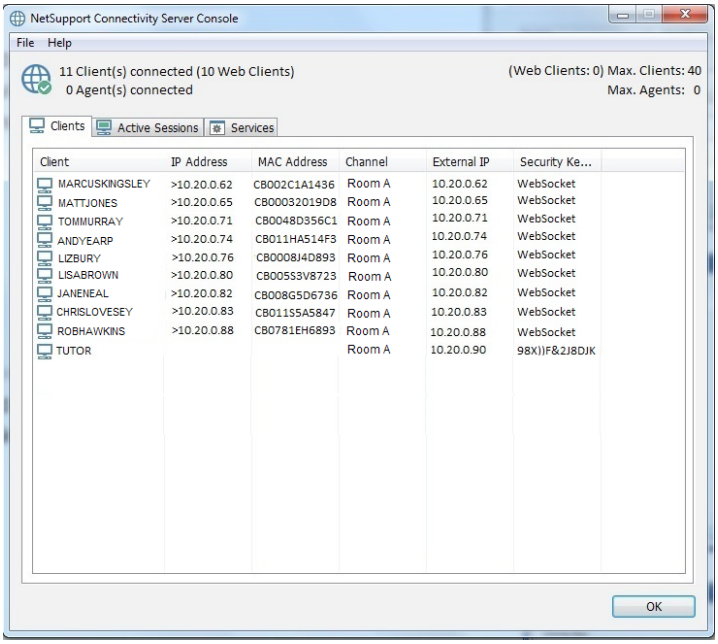
At the end of the installation, the **NetSupport Connectivity Server Configuration Utility** will be launched.

In order to make a valid and secure connection between the Server and the teacher and student devices, a 'Connectivity Server Key (password)' needs to be created. (This key, along with the IP address of the Server machine, will also be entered when configuring the Tutor and Student components.)

Select the **Keys** tab followed by **Add**. Enter a suitable description and click **Set** to enter and confirm your Connectivity Server key (password).



Note: *Once up and running, the 'NetSupport Connectivity Server Console' can be used to check the status of the Name & Connectivity Server and to see which student devices are currently connected. This utility can be accessed by right clicking and selecting* **Open** *on the* **NetSupport Connectivity Server Console** *icon*  *in the notification tray.*



Deploying the NetSupport School Student extension

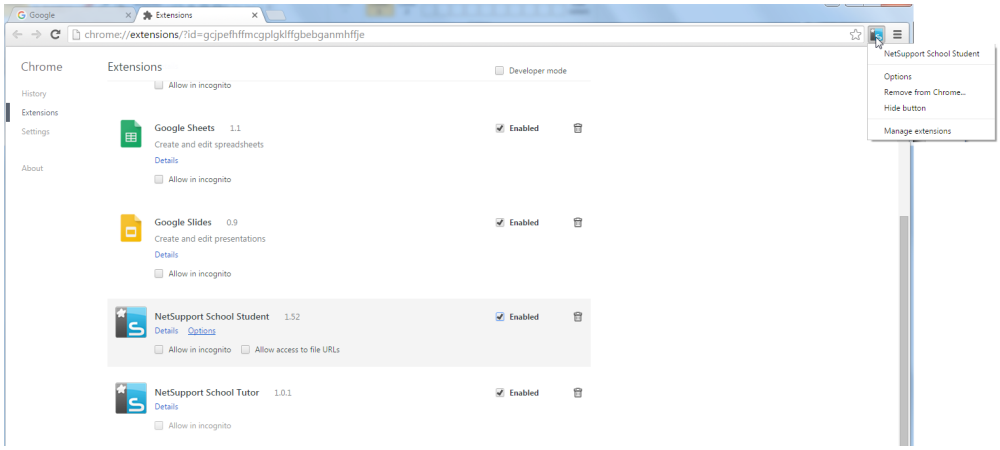
The NetSupport School Student extension for Google Chrome must be accessible on the students' Chromebooks and configured to connect to the NetSupport Name & Connectivity Server.

The following instructions will take you through the standard process, but for organisations that use "Google Apps for Domains", you can centrally manage the NetSupport School settings within the Google Admin Console. This enables you to 'force install' the Student extension to the required student accounts and, at the same time, specify a configuration file (policy) for use globally on all the required devices. For full instructions, please refer to the companion document '***Centrally configuring and deploying the NetSupport School Student Extension for Google Chrome***'.

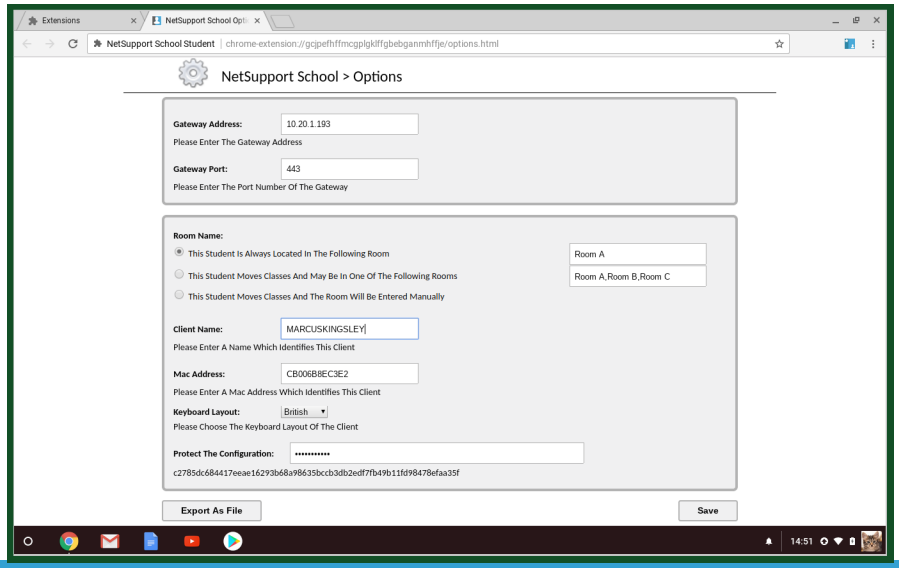
Configuring the NetSupport School Student to connect to the Name and Connectivity Server

Visit the Google Chrome Web Store and search for the NetSupport School Student extension. Click the **Add to Chrome** button.

Launch the browser on the Chromebook, right-click (or double tap) on the NetSupport School extension icon and choose **Options** from the drop-down menu. (Or select **Manage Extensions** to access the page from your Chrome Extensions list).



For convenience, NetSupport provides a ready-made template, the **NetSupport School > Options** page, to help you configure the required connectivity settings.



Enter the IP address and, if different to the default, port (443 by default) of the machine where the NetSupport School Name & Connectivity Server is installed.

Room Name:

To maximise teaching time, NetSupport School's handy Room Mode offers a quick and easy method for teacher and student devices to connect to each other at the start of a lesson. Depending on how you organise access to your Chromebooks, the student devices can be configured in one of three ways:

"This Student is Always Located in the Following Room"
If the Student is always assigned to the same classroom, enter the room name here.

"This Student Moves Classes and May Be In One of the Following Rooms"
If the Student moves between classrooms, you can enter multiple room names separated by a comma. (To select the correct room, the Student simply clicks on the NetSupport School Student icon in their Chrome browser and the room list will be displayed.)

"This Student Moves Classes and The Room will be Entered Manually"
Select this option if there are no set rooms and you want the students to enter the room name manually each time they want to join a NetSupport-managed lesson.

Client Name:

This is a unique identifier for each Chromebook User and is the name that will also be displayed in the NetSupport School Tutor interface to enable the teacher to identify each Student device. By default, this will display the first part of the logged-in user's email address (as associated with their Google account). Depending on your preferred mode of connection (User Mode, Name Mode etc) you can change the value but it must remain unique and up to a limit of 30 characters.

As explained below, it is recommended that the applied options are protected and centrally managed to prevent students making changes. However, should you find that the page has been accessed during a session and the Client Name field manually changed, you can apply a reset instruction in the NetSupport Configuration file (**Config.json**) that reverts back to the default Client name next time the NetSupport Student Extension is launched.

Enter the parameter as follows: **"resetClientName":true,**

Note: *At the start of a lesson, the teacher also has the option to create a 'Student Register' within the NetSupport School Tutor program that can be used to replace the generated Chromebook Client name with, for example, the actual student names.*

MAC Address:

If your Chrome devices are centrally managed and enrolled within the Google Admin Console, NetSupport School will form the address based on the registered device ID up to a limit of 12 characters. Alternatively, the address will mirror the Client Name field, again up to a limit of 12 characters.

In circumstances where the full ID is required in order to fully identify each device, generally when PC Mode is the preferred connection method, a parameter can be added to the NetSupport Configuration file (Config.json):
"useFullDeviceIdentifier":true,

Protect the Configuration:

It is recommended that you always password protect the NetSupport School configuration settings. This ensures that if a student attempts to access the Options page from their Chromebook, they are blocked from making changes.

Click **Save** to store the configuration.

Export As File:

As mentioned earlier, and explained in the document ***Centrally configuring and deploying the NetSupport School Student Extension for Google Chrome***, the Google Admin Console can be used to centrally deploy the NetSupport School configuration settings to the required student accounts.

To use this method, click **Export As File** to create the file (policy) in the format required by the Admin Console. Before the file is generated, you have the option to allow future changes to the 'Client Name' and 'MAC Address' options. By default, the generated file will disable these two settings.

Click **Generate File**. By default, the file will be named **Config.json** and is stored in your downloads folder. This file can then be uploaded in the Google Admin Console in order to centrally apply the NetSupport School Student configuration to the required student accounts.

Example content of a typical **Config.json** file including the information provided in the NetSupport Options page and any manual entries such as the Reset Client Name parameter:


```
"options":
{
        "Value":
        {
                "allowManualClientName":true,
                "allowManualMacName":false,
                "resetClientName":true,
                "useFullDeviceIdentifier":true,
                "gateways":[{"address":"10.20.1.64","port":443}],

"passKey":"1cf6d697dffa84ff860591f00c32f722580c602e49dc1b3b06c8526bfc81161d",
                "room":
                {
                        "mode":"Fixed",
                        "name":"Room1"
                }
        }
}
}
```


Installing and configuring the NetSupport School Tutor

The NetSupport School Tutor application is used by the teacher to communicate with the student Chromebooks. It should be installed on each teacher's computer (either a Chrome OS device or Windows desktop), and configured to connect to the NetSupport Name & Connectivity Server (Gateway) using the previously noted address details.

Installing the NetSupport School Tutor on a Chrome device

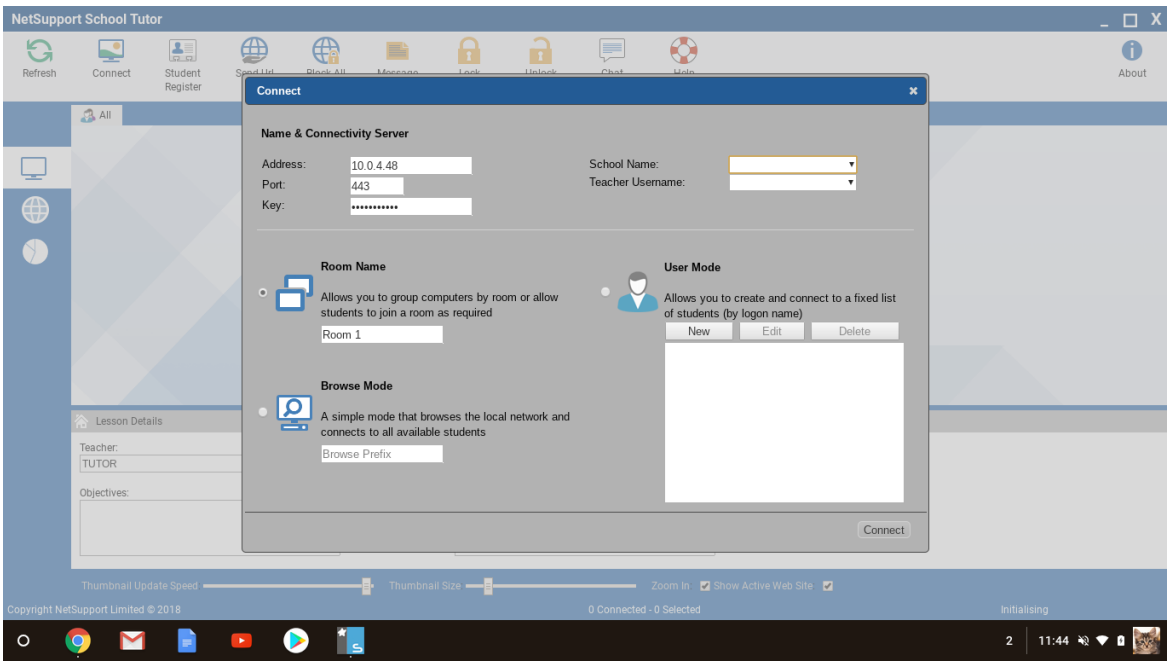
If the teacher is also using a Chromebook, you need to install the NetSupport School Tutor App for Chrome OS.

Visit the Google Chrome Web store, search for the NetSupport School Tutor App and click **Add to Chrome**.
You can evaluate the NetSupport School Chrome Tutor for 30 days on up to five student Chromebooks or, when prompted, you can enter your existing NetSupport School licence information. If you're new to NetSupport School or require additional licences, contact your ***NetSupport reseller***.

Connecting to Students

To make the connection with the required student devices, launch the installed NetSupport School Chrome Tutor. Enter the previously noted address and security key for the NetSupport Name & Connectivity Server.

Select your preferred mode of connection to the student devices:



Room Name

If the student devices are configured for a specific classroom (as previously named on the Student Extension Options page), you can quickly connect to the required Chromebooks for your current class by entering the room name.

User Mode

Allows you to connect to a fixed list of students by logged-in user name (the Client name as specified in the Student Extension Options page). Simply create a class list containing the required Student login names.

Browse Mode

You can also perform a general "browse" of the network for student devices that match your search criteria, e.g. part of the machine name.

Click **Connect.**

The NetSupport School Tutor interface will display a thumbnail of the connected student devices. From here, you can now monitor and interact with the student Chromebooks, individually or as a group. As previously mentioned, the Tutor for Chrome currently offers a subset of NetSupport School's full feature set. Learn more at: *www.netsupportschool.com/chrome*.

Note: *NetSupport School also offers direct integration with SIS (Student Information System) using Google Classroom or ClassLink OneRoster, allowing you to instantly access your SIS classrooms and student accounts. The* **School Name** *and* **Teacher Username** *fields are only populated when using SIS Mode. To connect to students using this method, please refer to the* **Connecting to Students via SIS** *topic at the end of this document.*

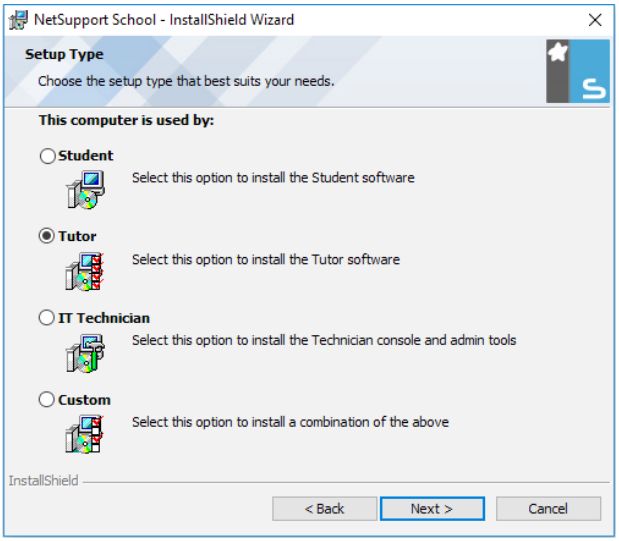
Installing the NetSupport School Tutor on a Windows device

NetSupport School is the perfect solution for mixed-platform classrooms, enabling an Admin or teacher using a Windows PC to simultaneously connect to a wide mix of student devices – PCs, tablets, smartphones and of course Chromebooks running the Student extension.

To install the Windows Tutor program, run the NetSupport School Windows installer at the Admin/teacher's PC.

If you are already a NetSupport School user, enter your previously supplied licence details on the 'Licence Information' dialog or choose 3**0 day evaluation**'

From the list of available NetSupport School components, choose the **Tutor** option.

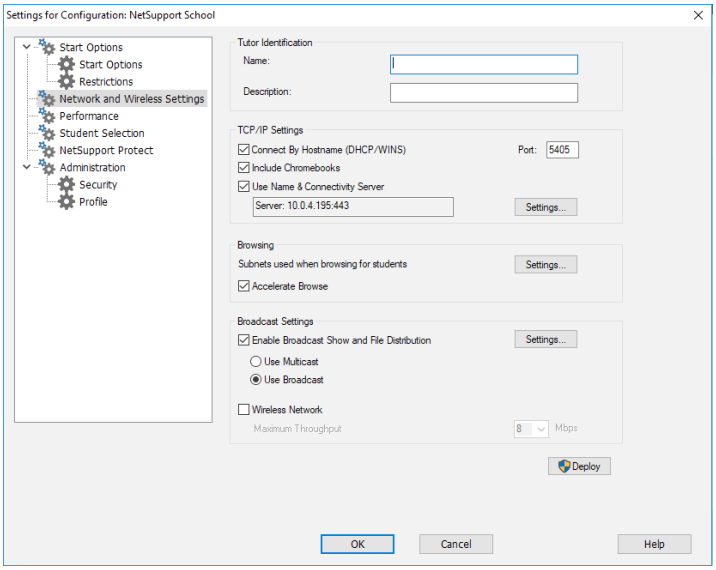


As part of the installation, if your student devices are organised into set rooms, you can enter the name of the classroom (as previously named on the Student Extension Options page) you want to connect to by default. However, should this not always be your preferred connection method, you can choose from a range of alternative connection modes at the start of a lesson from within the Tutor program.

Configuring the NetSupport School Windows Tutor to connect to the Name & Connectivity Server

Once the NetSupport School Windows Tutor application has been installed, it will need to be configured to connect to the previously created Name & Connectivity Server:

Launch the NetSupport School Windows Tutor application and, from the **School** drop-down menu, select the **Configuration** option followed by **Network and Wireless Settings**.



In the 'TCP/IP Settings' section, tick the **Include Chromebooks** option.

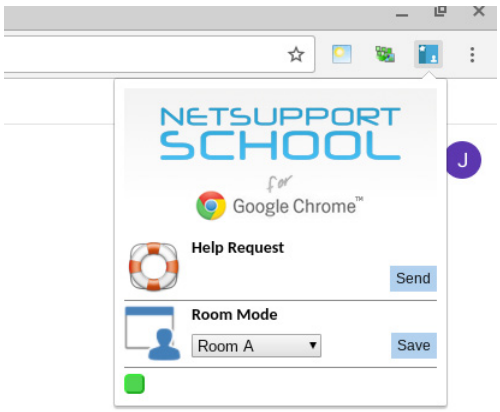
In the **Use Name & Connectivity Server** section, click **Settings** and enter the address and key for the previously created Server. (Ensure the **Connect by Hostname** option is unticked)

Note: *Optionally, the Start Options configuration dialog can be used to confirm that you are only connecting to Chrome students. This will ensure that only supported features are available to the teacher/Admin. Tick* **All your students are using Chromebooks**.

Click **OK** to exit the configuration dialog and click **Yes**, if prompted, to apply the revisions to the configuration. The Tutor program will automatically restart.

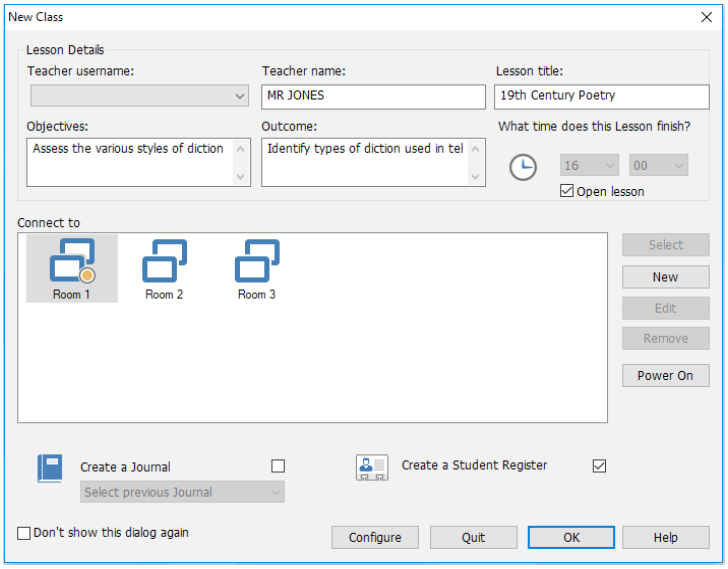
The NetSupport School Windows Tutor is now configured to connect to the required NetSupport Name and Connectivity Server.

Note: *The current Connection Status can also be checked at each Student Chromebook by right-clicking on the NetSupport School Student extension icon. Red indicator = no current connection to the Name and Connectivity Server; Yellow = attempting a connection; Orange = connected to the Name and Connectivity Server; Green = connected to the NetSupport Tutor.*



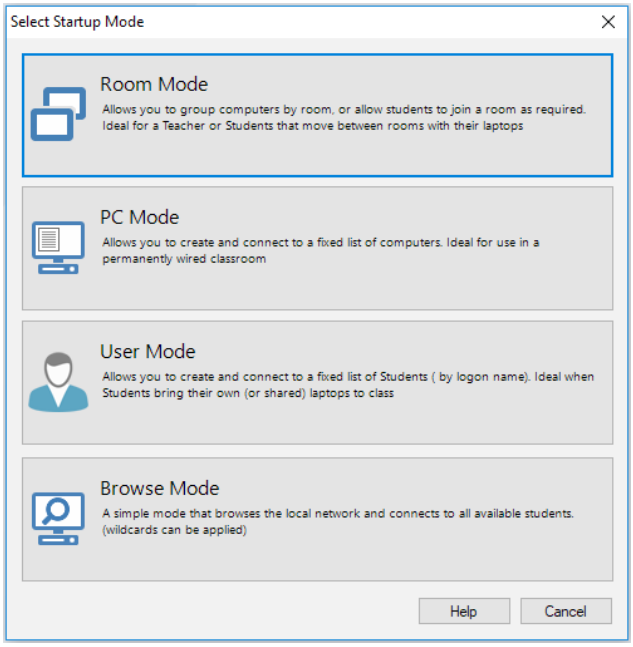
Changing the mode of connection between a Windows Tutor and Student Chrome devices

A quick and easy Class wizard enables a teacher/admin to select the connection mode that best suits their requirements for each of their classes or group of students. The Class wizard is displayed when the NetSupport School Windows Tutor program is initially started or can be loaded by ending one class with a view to starting another – by selecting the {School}{Manage Class}{End Class} from the Tutor Console drop-down menu or clicking the **Manage Class** toolbar icon.



The Class wizard enables you to enter the general properties of a lesson and allows you to choose how to locate and connect to your Students on startup, whether they are in set rooms or roaming. For convenience, you can create multiple pre-defined classrooms, each using a different connection method. The required class can then be loaded at the start of the lesson, enabling you to quickly connect to the required Student machines.

Click **New** to create a new classroom/student list. The NetSupport School Connection Modes will be displayed.



For connections to Chromebooks from a NetSupport School Windows Tutor, the supported options are Room Mode, PC Mode, User Mode and Browse Mode.

Note: *For added flexibility and time saving at the start of a NetSupport School-managed lesson, the Tutor also offers integration with SIS (Student Information System) environments via Google Classroom or ClassLink OneRoster. Please refer to the* **Connecting to Students via SIS** *topic at the end of this document.*

Room Mode

As you will have already seen when configuring the student Chromebooks, Room Mode offers a convenient method for organising devices into set rooms and provides a quick and easy way for the teacher to connect to the required devices at the start of any given lesson. Simply add your room names to the Class wizard and any Chromebooks pre-configured to use that room will be connected to – or, if the Chromebooks are mobile, students can choose from the pre-configured list available when clicking the Student extension icon.

PC Mode

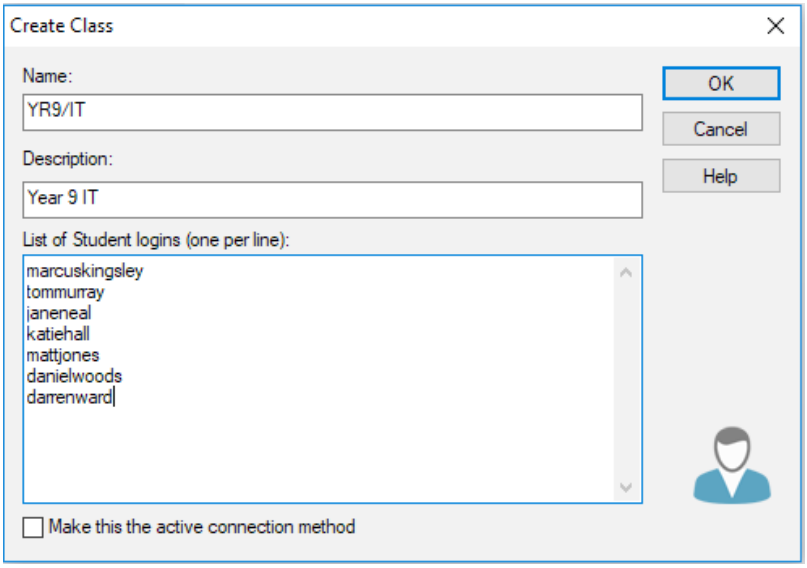
PC Mode enables the teacher to continually connect to the same set of Chrome OS devices irrespective of who the logged-in Student is. Ideal for environments where the devices remain in the same classroom.

Devices should be enrolled/provisioned within the Google Admin Console. The Chrome Student extension should be installed via a policy and will appear in the NetSupport Name & Connectivity Server with the uniquely generated machine ID:

e.g. Directory API ID = e9cb5baa-cc53-47e4-86e2-05f37062f83e

User Mode

User Mode allows you to connect to a fixed list of students by logged-in user name (the Client name as specified in the Student Extension Options page). Simply create a class list containing the required Student login names.



Browse Mode

Browse Mode allows you to search the local network and connect to all available Students that match your search criteria. Ideal when using a standard naming convention for your student devices.

The NetSupport School User Guide, available on our ***website***, provides more information about the various connection options available when using the Windows Tutor application.

Connecting to Students via SIS (Student Information System)

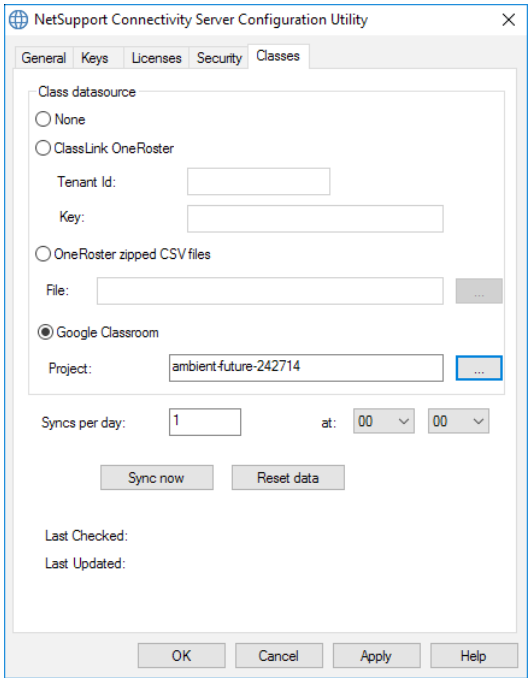
For added convenience, direct integration with SIS (Student Information System) using Google Classroom or ClassLink OneRoster is also provided, allowing you to instantly access your SIS classrooms and student accounts at the start of a NetSupport-managed lesson.

Configuring the NetSupport Name & Connectivity Server

As explained earlier in this document, a NetSupport Name & Connectivity Server needs to be installed on a Windows PC in order to manage connections between the NetSupport School Tutor and Students' Chrome devices. The Connectivity Server is also used to sync NetSupport School with the required data.

At the PC where the Name &Connectivity Server is installed, open the 'Connectivity Server Configuration Utility' by right-clicking  in the notification tray and selecting **Configure Connectivity Server**.

Select the Classes tab.



If using Google Classroom, select **Google Classroom** and browse for and select one of the JSON files that you have copied to the machine (both files must be present, but either file can be selected). *Click here* for information on how to set up a Google Classroom Project and create the required JSON files.

Click **Apply** and you will be prompted to sign into Google G Suite with administrator credentials and grant access to NetSupport School.

If using ClassLink OneRoster, select **ClassLink OneRoster** and enter your OneRoster Tenant ID or, if you have exported your SIS data, select **OneRoster zipped CSV files** and browse for the required OneRoster format ZIP files and click **OK**.

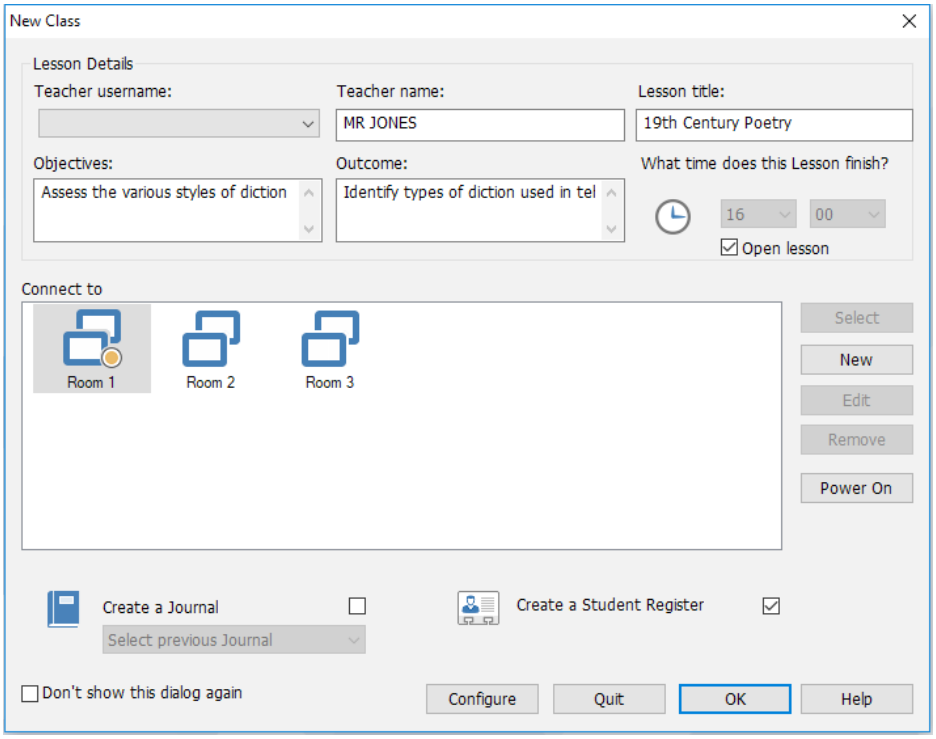
By default, the Connectivity Server will sync with OneRoster or Google Classroom once a day. This can be customised if required.

Configuring the NetSupport School Tutor

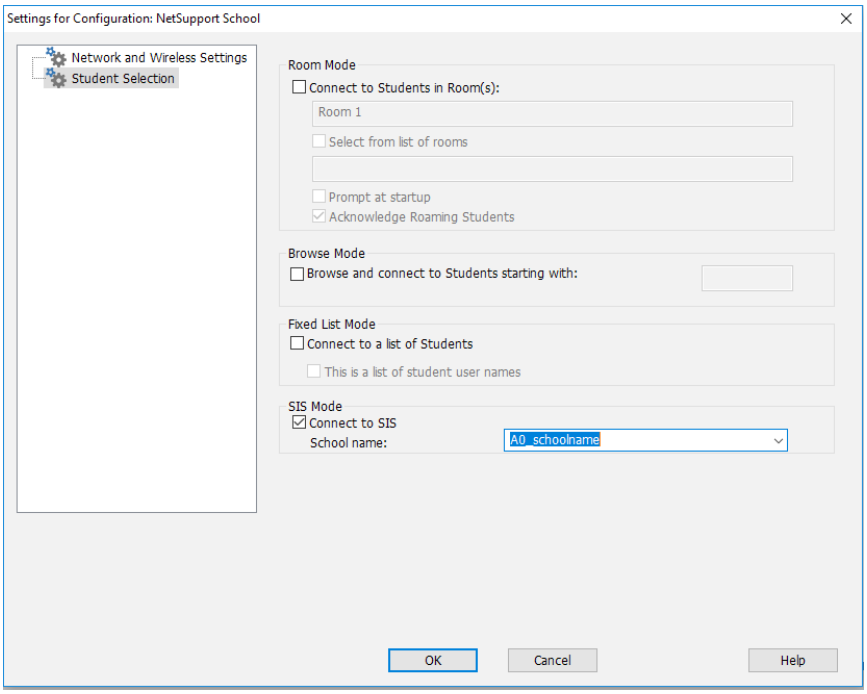
Having identified the required Google Classroom/OneRoster data, the NetSupport School Tutor (Windows or Chrome) can now be configured to connect to the specific class and student information.

Configuring the NetSupport School Tutor for Windows

Launch the NetSupport School Tutor and in the 'New Class' wizard, click **Configure**.



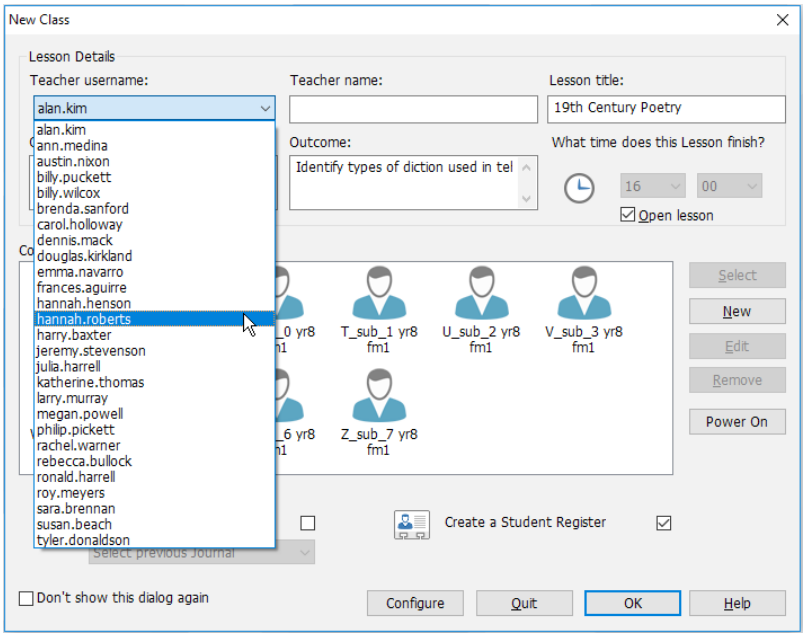
Note: *For the purpose of a SIS connection, a cut-down version of the Tutor Configuator is provided, offering only the required options. (These options are also available in the full Tutor Configurator, accessed by selecting {School} {Configuration} from the Tutor drop-down menu.)*



Note: *If you have not already configured the NetSupport School Tutor to connect to the Connectivity Server (Gateway), as described earlier in this document, select* ***Network and Wireless Settings*** *and enter the IP address and key and ensure the* **Include Chromebooks** *option is enabled.*

In the **Student Selection** settings, select **Connect to SIS**. School names associated with the Google Classroom Project, 'Tenant ID' or zip files previously specified in the Connectivity Server Configuration will be listed. Select the required school from the drop-down list and click **OK** to return to the Class wizard.

The **Teacher username** drop-down list will now be populated with the selected school's information. Select the required user name. Classes associated with the chosen user will be displayed.

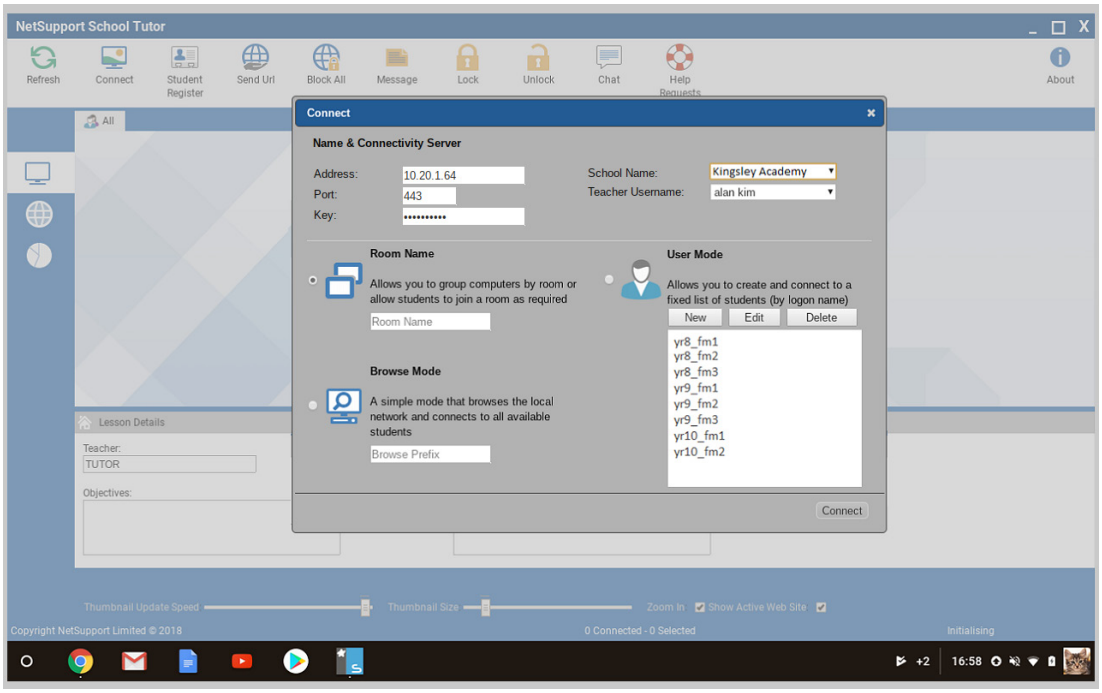


Click on the required class. The Tutor will browse for and connect to all Students associated with that class and their icons will be displayed in the Tutor interface. The usual NetSupport lesson properties can still be entered in the Class wizard if required.

Configuring the NetSupport School Tutor for Chrome

Launch the NetSupport School Tutor app on your Chrome device.

In the Connection dialog, if not already supplied, enter the address and security key for your previously configured NetSupport Connectivity Server. Once connected to the Connectivity Server, the NetSupport Chrome Tutor will sync with the required SIS data.



Select the required **School Name** and **Teacher Username**. Class/Lesson details associated with the teacher will appear.

Click on the required class and the Tutor will connect to the associated students, ready for you to commence your NetSupport-managed lesson.

Note: *The NetSupport School Tutor, if configured to the Name & Connectivity Server when launched, will recognise if the teacher's logged-in username/Google email appears within the SIS data and will automatically populate the school and teacher username fields.*

We hope you have found this installation guide useful. If you have any questions, our *support team* will be pleased to help.