THE CLASSROOM MANAGEMENT SOFTWARE

NET CONTROL²

SmallClass

INSTALLATION AND CONFIGURATION GUIDE
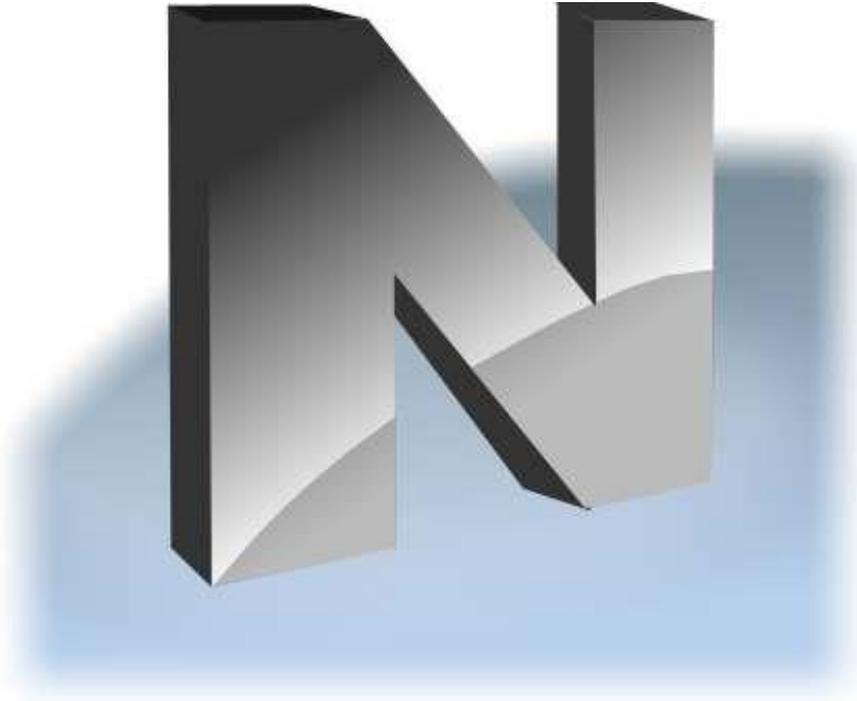
Revision 6.0

Based on version 20.4

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General information

Net Control ² SmallClass is a classroom management software for easy controlling, monitoring and managing computers in local networks.

The software consists of two main parts – **Teacher Component** and **Student Component**.

You need to install the student component of the software on each student computer that will be managed with **Net Control ² SmallClass** software. *The **Teacher Component*** should be installed on each computer that will be used to control other computers. Both components may be installed on the same computer.

The *Teacher Component* should be installed manually using the standard installation package.

The *Student Component* may be installed using one of the following methods:
   – manually on each student computer, using the standard (.exe) installation package;
   – deployed automatically through Microsoft Windows Active Directory/Group Policies service and using a special MSI distribution package. The special MSI package is available by request for registered users;
   – deployed through Microsoft Windows Active Directory or SCCM scripts, using the standard installation package (.exe) in a non-interactive mode, pre-configured with command line parameters;
   – the built-in Net Deploy tool allows centralized deployment of the software in a network with a domain, if administrator tools are enabled and several other conditions met as described below, in Chapter K of this manual.

Hardware requirements and software environment

Microsoft Windows 7, 8.x, 10, all 32- and 64-bit editions; or Microsoft Windows Server 2008R2, 2012, 2016; or Mac OS X 10.5 and higher (the teacher module only).

Virtual Machines (Microsoft HyperV, Oracle VirtualBox, VMWare) with one of the specified above operating systems as a "guest" system.

Terminal sessions (RDP, Multipoint Server, nComputing).

1 GHz or faster 32-bit (x86) or 64-bit (x64) processor; 2 GB RAM (32-bit) or 4 GB RAM (64-bit); 250 MB of free disk space.

100 Mb/s wireless or Ethernet local network.

A. Installation with standard installation package

To understand the basic principles of Net Control ² SmallClass configuration, we recommend to read this chapter even if you are planning some other ways of installation.

We recommend to install the software on teacher computers first. It is not required though.

The installation package is intended for installation of teacher and student components in any

combination (i.e. only teacher components, only student components, or both). The kind of installation is configured in the process of setup.

1. Run the Net Control ² SmallClass Installation Package (most often net1200r.exe).
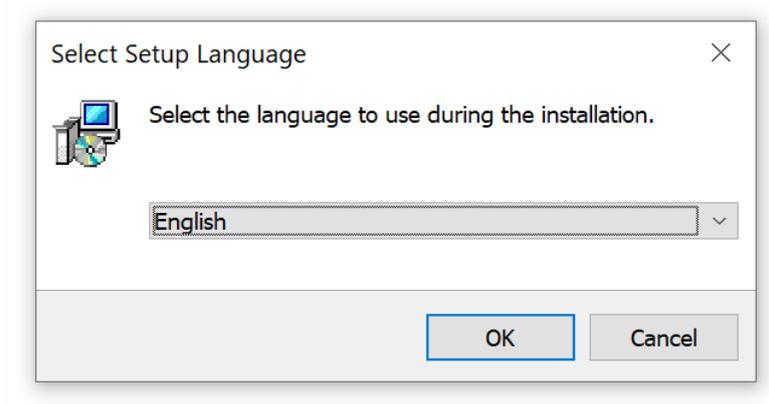
Select the language of installation.

Please note! The selected language will be set up as the default language of the software, if supported by the software. Currently, the standard installation package includes language interface for English, Arabic, French, Italian, Portuguese, Russian and Spanish languages. Other languages may be available in packages from local distributors.
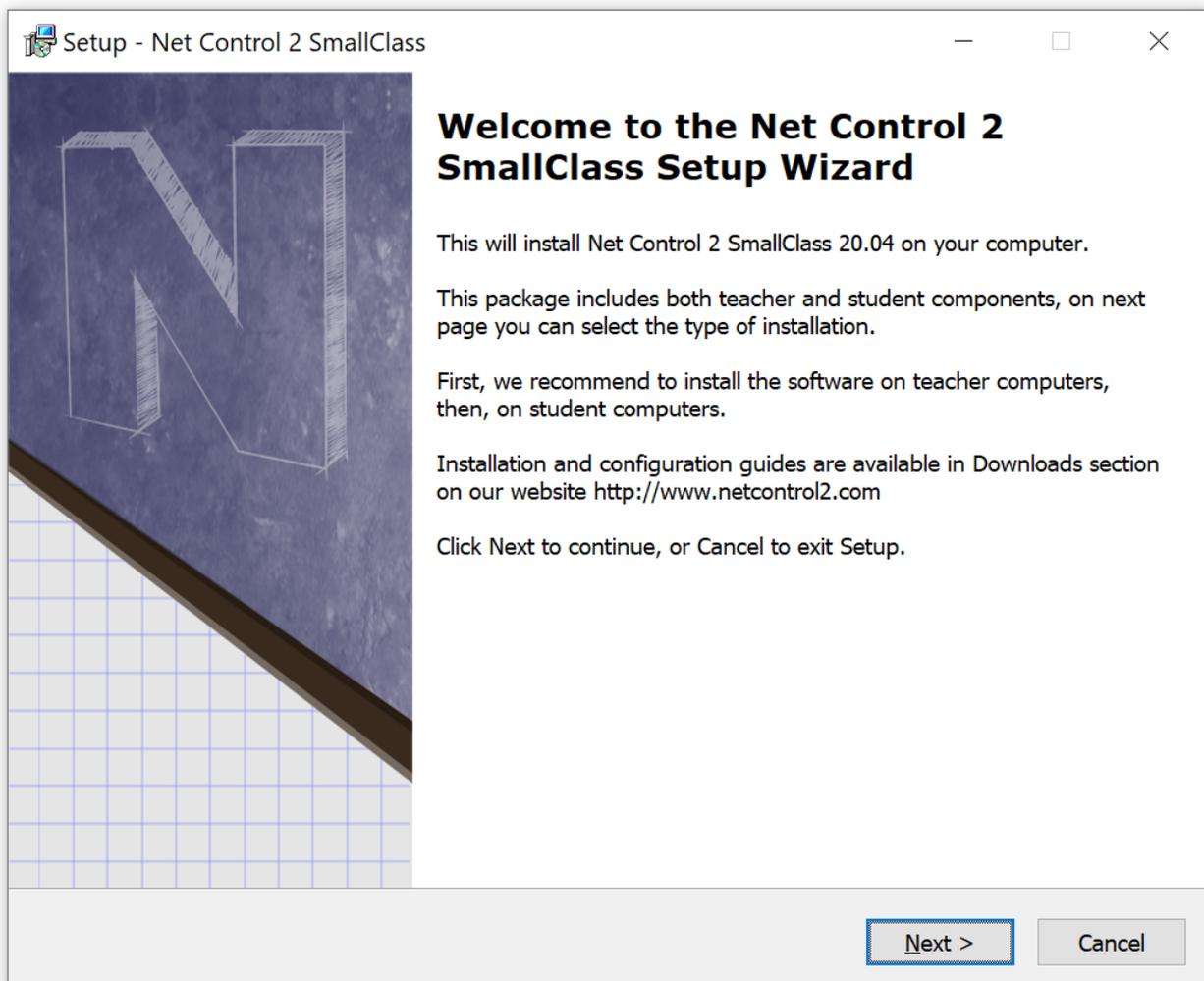
2. Read carefully and accept if you agree the End-User License Agreement.

3. Select Components

On the **Setup Type** page select the necessary components for installation:
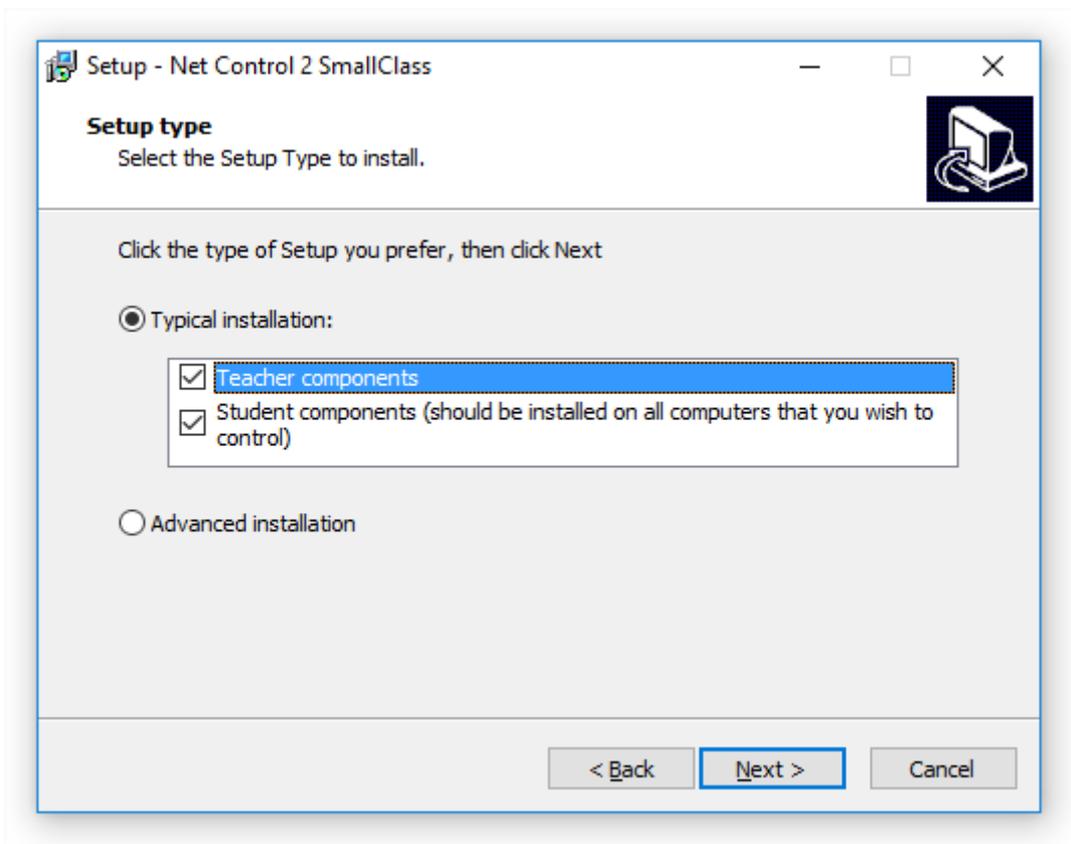
- most often you need to use the **"Typical installation"**;
- select **Teacher Components** if you are installing the software on <u>a teacher computer</u>;
- select **Student Components** if you are installing the software on a student computer, or if this computer should be controlled remotely from another teacher module.

<u>TERMINAL SERVER ONLY:</u> If you are installing the software on a terminal server, one installation is necessary for all sessions of the server. Installing teacher components on a terminal server, you are making them available for all users in all terminal sessions. If you need to limit access to the teacher module from student sessions, we recommend to set up a teacher password for the teacher console after installation, alternatively you can change Windows access privileges for the teacher module file (<u>teacher.exe</u> file in *C:\Program Files [(x86)]\Net Control ² SmallClass* folder, may be changed in the process of installation). Only one teacher module may work within one terminal server.

4. **Select a path to the installation folder.**

5. **Network computer name (Teacher module installation only).**

If you are installing the software on a teacher computer (teacher components are selected), the setup program will display a network computer name for this computer:
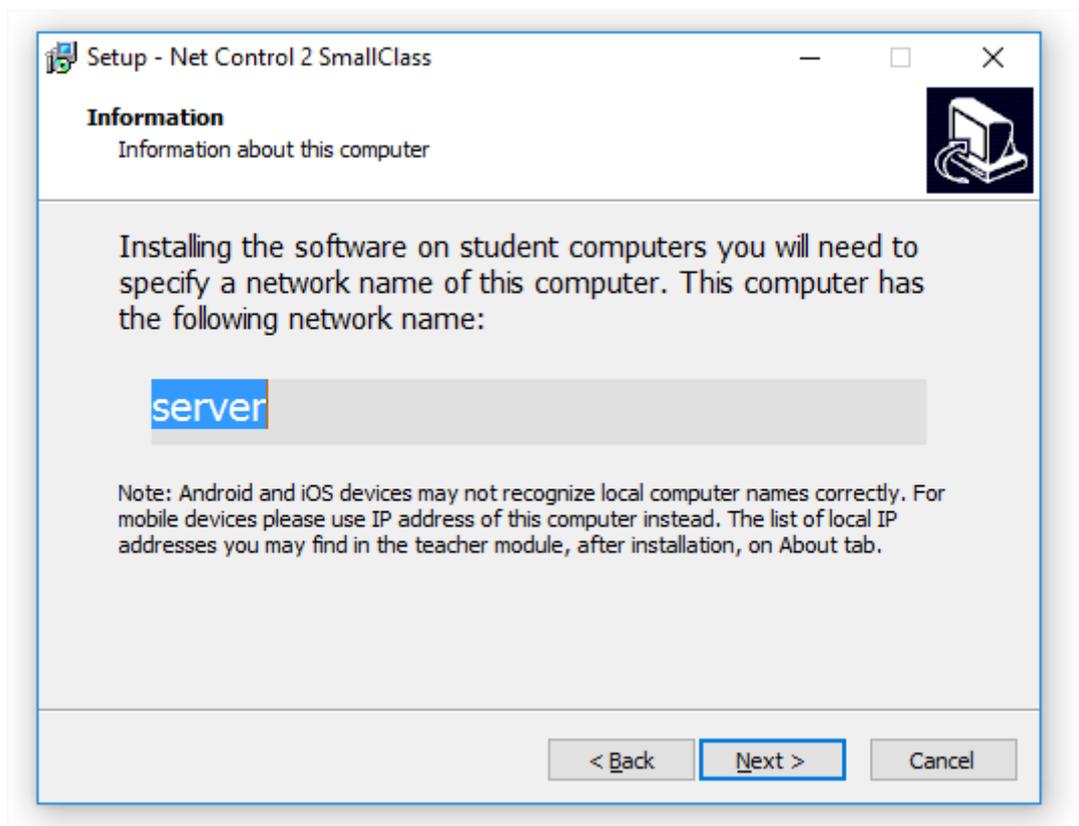
This information is provided for your reference only, but you may need it when you will install the student components on student computers.

If necessary after installation, you can find your teacher computer name and IP addresses in the teacher module on About tab (**IP address and DNS name** button):

6. **Student module installation only: addresses of teacher computers.**

Installing the software on student computers, at next step you will need to enter an IP address or a network name (DNS name) of all teacher computers that should have access to this student computer.

By default, you can specify up to three addresses, if you need to set up more teacher computers, click More button and specify as many teacher computers as you need, one address per line.

Use IP addresses for addressing teacher computers only if your network uses static IP addressing (at least for teacher computers). Otherwise, please use network names. If your network uses a domain, it is preferred to use the name in a fully-qualified DNS format, e.g.

http://www.netcontrol2.com

teacher.mydomain.local . Installing the software on teacher computers, the setup program displays a computer name of the teacher computer on Information page (please see p.5 above), you can use the discovered computer name at this step.
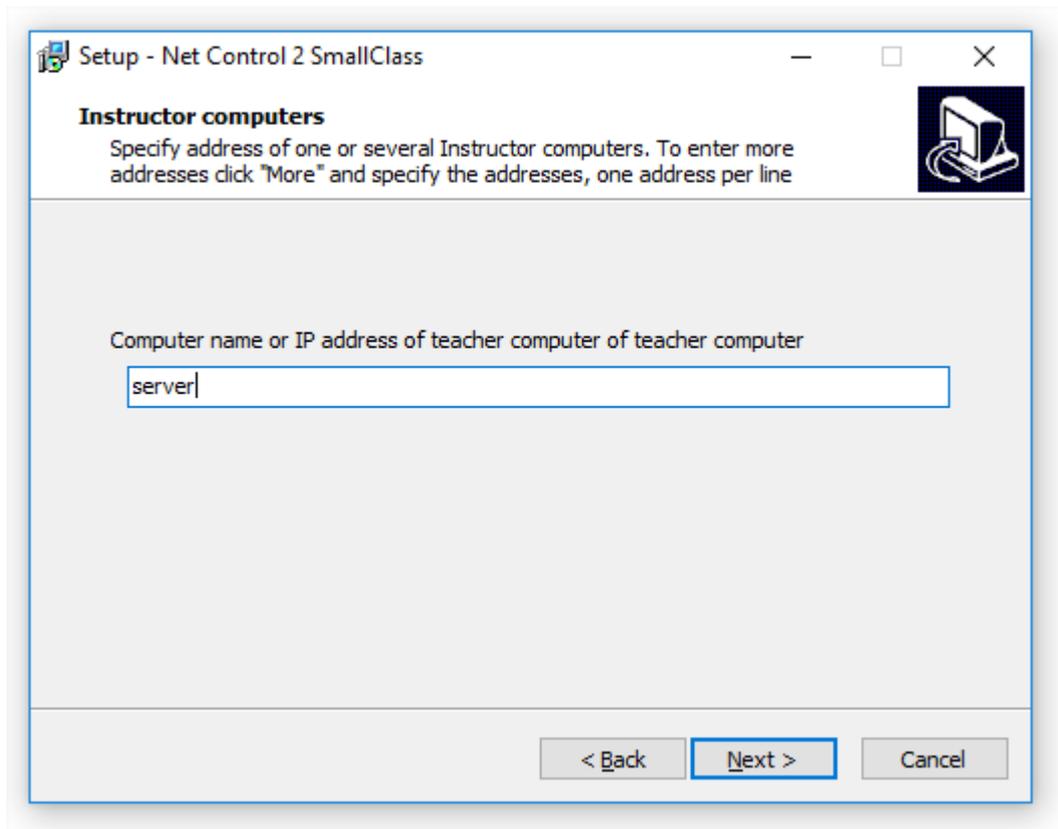
If you made a mistake in the process of installation, you can change parameters on student computers at any moment, configuring them in Net Control ² Client Configuration window, on each student computer, as described in the previous paragraph, in **Instructor Computers** section of **Connections** tab.

7. **Additional options (student module installation only).**
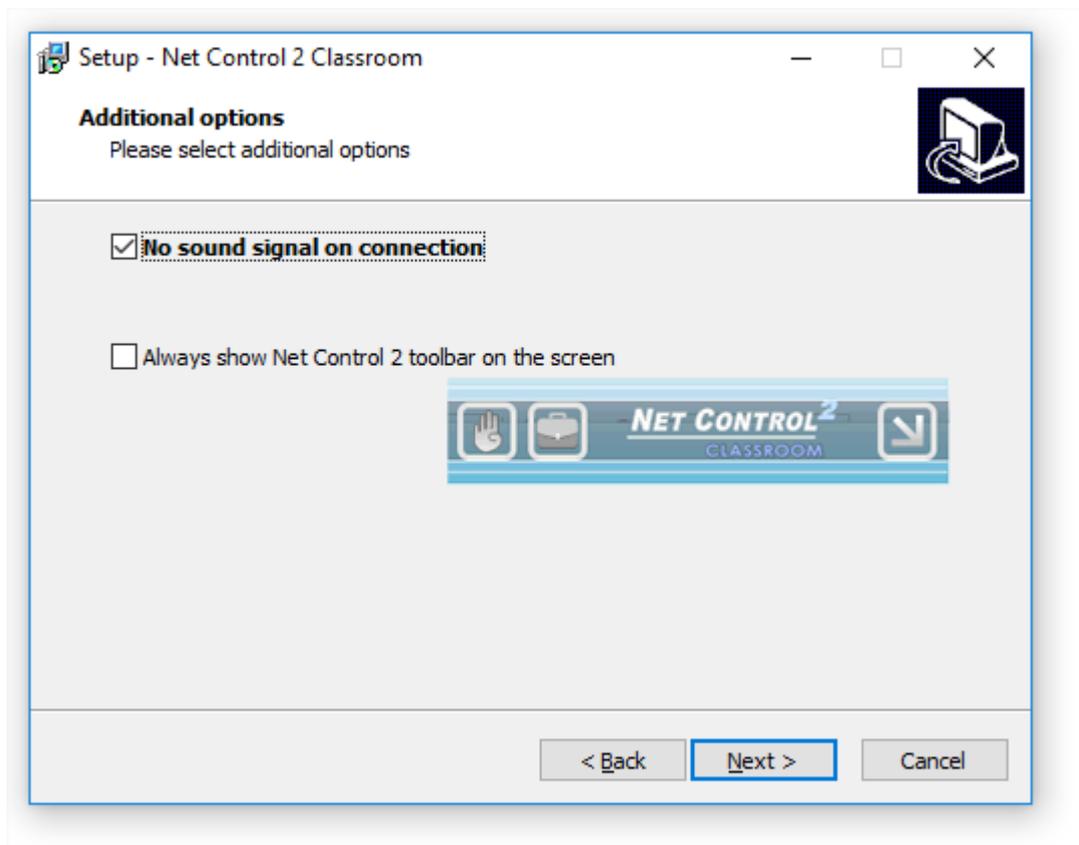
No signal on connection – when it is not enabled, the student module will alert with a sound signal and text notification when a teacher computer is connecting to it. Enable this option to suppress the sound signals and leave text notifications only.

Always show Net Control ² SmallClass toolbar on the screen – when enabled, the student module will display Net Control ² Student Module toolbar on a screen of the student computer. The toolbar **is always present** on the screen as a popup window in the top area of the screen. The toolbar provides quick access to "Raise hand" and "Lesson Resources" features of the student console, as also quick access to Student Console itself.

8. **Broadcast Desktop options. (The teacher module installation only).**

Broadcast Desktop tool by default uses special multicast protocols for sending data over network to multiple recipients, this allows keeping a minimum bandwidth use, but makes possible an interference between several teachers, broadcasting on the same network port over the same network.

To exclude the possible interference, you need to set up a unique broadcast desktop channel for each teacher module. If you have only one classroom in the network, the default value may be used.
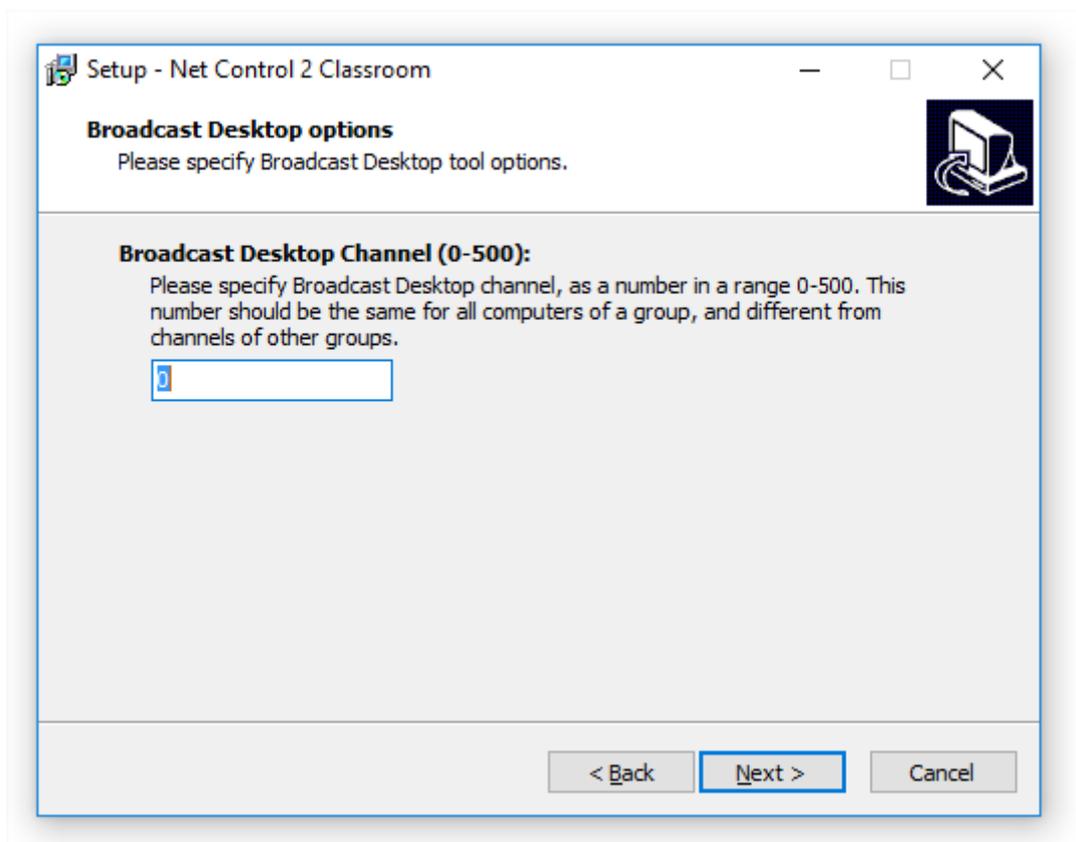
The broadcast desktop channel is a number from 0 to 500 that will be internally mapped then to a unique network port to guarantee that only one teacher uses this network port number at a time.

You need to set up Broadcast Desktop Channel for teacher module installation only.

After installation, you can change the channel and other broadcast settings in the Teacher Console, clicking the main menu command **N -> Options -> Control Options**; on Control/Broadcast page.

9. **Additional tasks and options.**

The set of options may vary depending on teacher or student module installation.
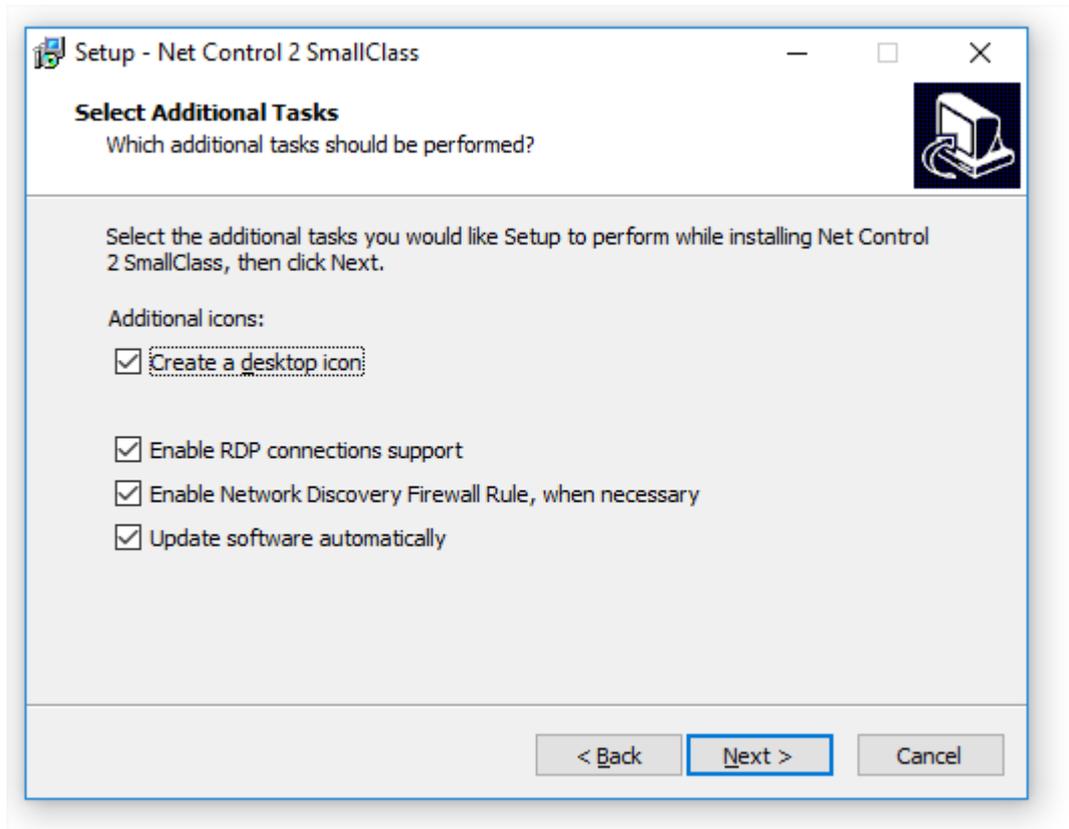
Enable RDP connections support – enabled by default, recommended. When enabled, the student module will support both console (real) and terminal (remote) login sessions. Each user login session will be displayed in the teacher console as a separate connection ("computer"). This option is required for use with Terminal server or nComputing connections. Disable this option if RDP sessions should be invisible in the teacher console.

Enable Network Discovery Firewall Rule – enables the Network Discovery rule of Windows Firewall in Windows 7 and higher. This rule is required for connectivity between computers in a local network and is enabled by default for "private" and "work" network profiles of Windows Firewall.

Update software automatically – enables automatic update of the software over the Internet. When enabled, Teacher Component will check the update server every 14 days for available updates, download, and install them automatically when necessary. This feature is available in the software for registered users only.

13. Restart the computer after installation.

Registration and activation.

At first start of the teacher module, if the software was not registered and activated before, the teacher module opens License Manager program to activate the software.

If License Manager was not opened automatically, you can run it from Windows Start menu instead: Start - All Programs – Net Control 2 Classroom – License Manager.

http://www.netcontrol2.com
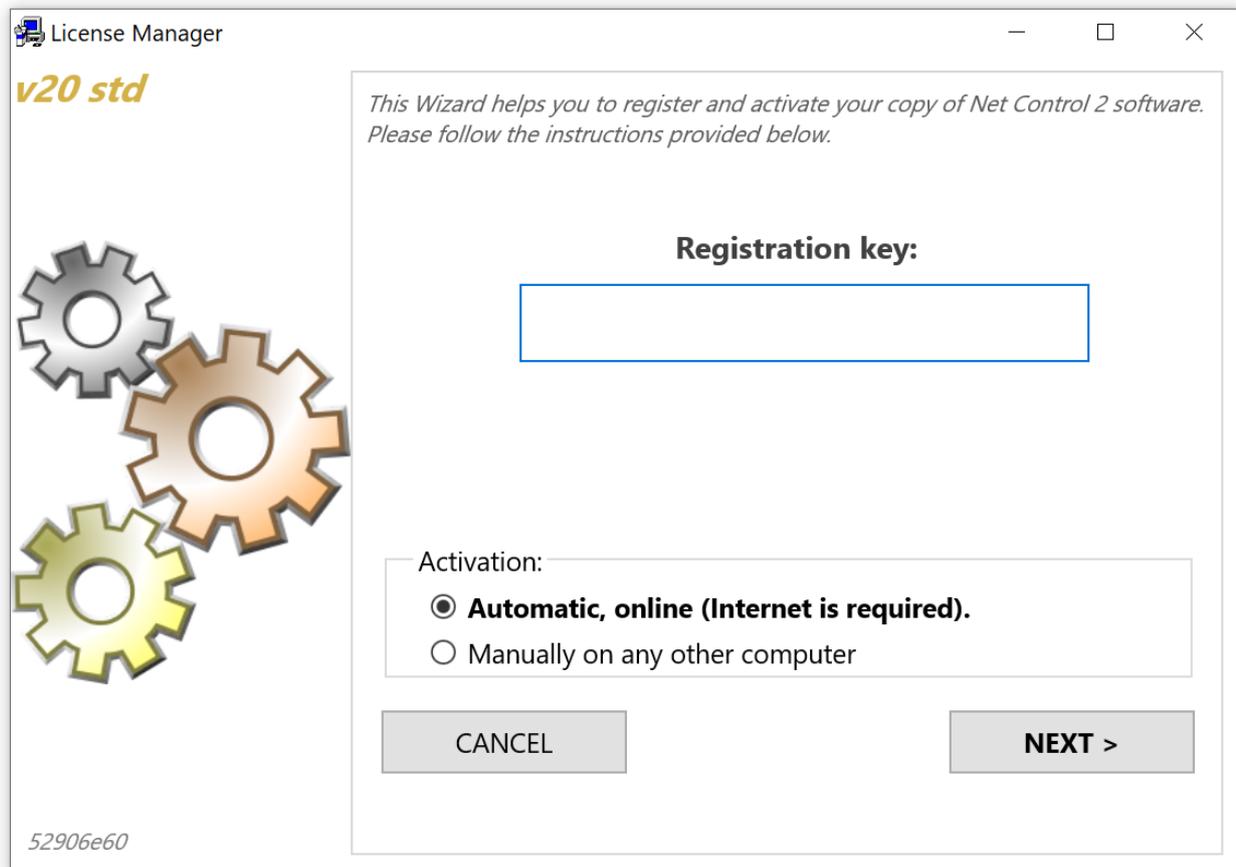
In the opened program enter your registration key, exactly as specified in your license. The registration name is not required at this step. If the computer is connected to Internet, use "Automatic, online (Internet is required" mode and click Next button. Activation will be complete automatically.

If the computer where the teacher module is installed does not have an Internet connection, you can activate the software through any other computer, tablet or smartphone connected to Internet. In this case, on the teacher computer use "Manually on any other computer" activation option, click Next.

http://www.netcontrol2.com
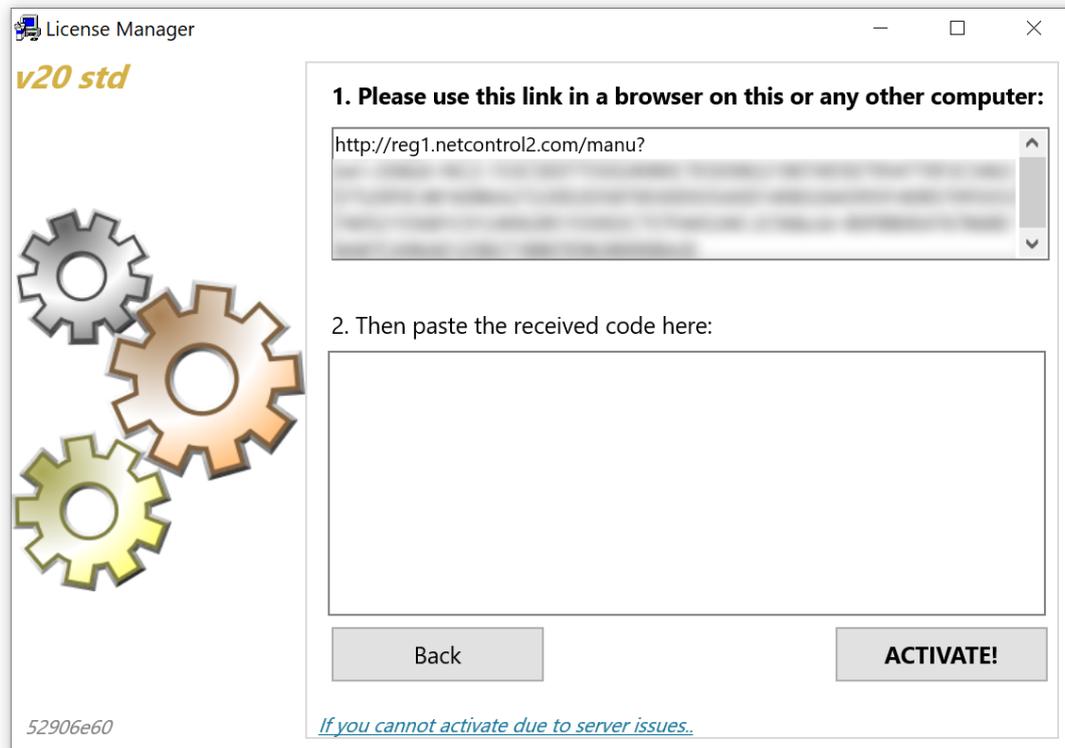
At next step, copy the link provided in the upper field to the device that is connected to Internet, open the link in any browser and get an activation block. Copy the received activation block back to the License Manager window and paste it into the field below. Click Activate button, the software should be activated immediately.

In rare cases, when the activation server is unavailable, does not work for some technical reasons, it is possible to perform a pre-activation of the software without access to Internet. This procedure allows using the software some time without activation, but the activation is still necessary and we recommend to complete it as soon as possible after pre-activation. To pre-activate the software, on the step 1, select Manually on any other computer method, then on the step 2, click "If you cannot activate due to server issues" link at the bottom of the window.
In the appeared window, you'll need to provide your registration name exactly as specified in the license, and a recovery code that is also provided in the license at the bottom of the document.

After the activation is complete, close License Manager program and open the teacher module again.

C. The teacher console

At the teacher module start up, it may display a prompt to enter the lesson details:
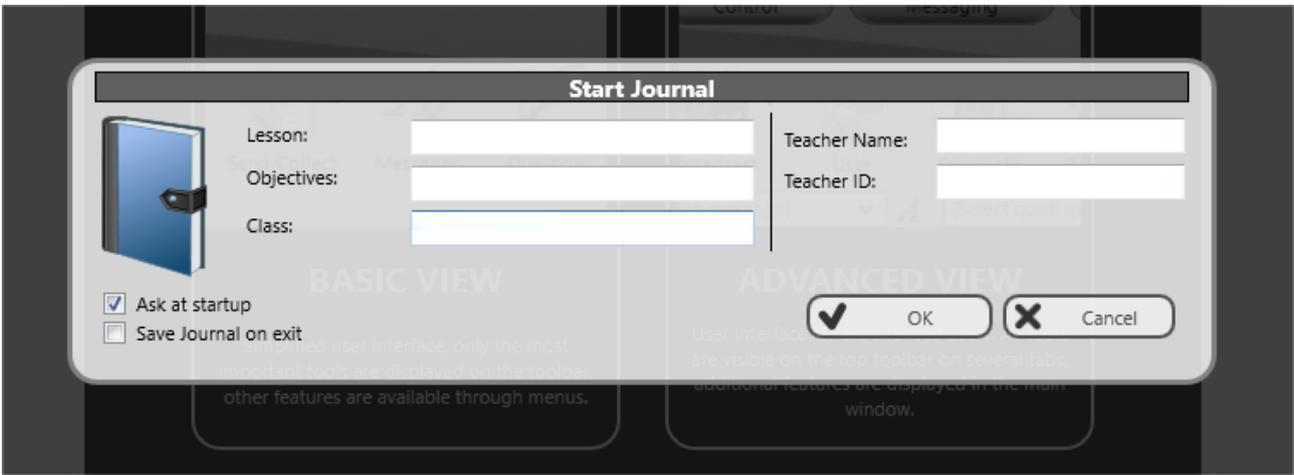
These details are optional, are necessary for keeping the lesson information in the Journal, and will be displayed on student computers in the student console.

You can uncheck "Ask at startup" option to prevent appearing this window at next start. The entered Teacher name, ID and Class will be stored and used for next lessons.

If student computers were configured correctly, student connections should appear in the teacher console in 15-30 seconds.
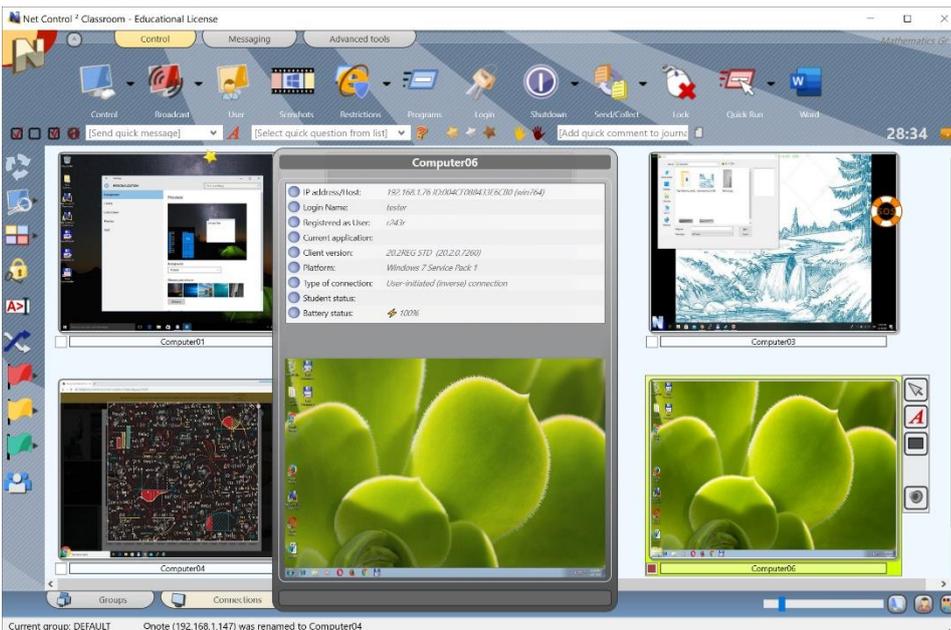
If connections do not appear in the teacher console within 15-30 seconds, please check that settings on the student computers are correct (the teacher computer IP address or DNS name is correct); local third party firewall (network security or anti-virus software) on the teacher computer does not block incoming connections.

Now you can select one or several connections and apply commands and tools to perform

operations. Tools and features that are common for all editions are described in the **Tools and Features Guide**, you can download it from our website at
http://www.netcontrol2.com/downloads

By default, connections are named as a combination of:

Computer name (network computer name), if Computer Name View mode is selected (button at the bottom-right hand corner of the teacher console is pressed);

and/or

User name (an alias), if User Name View mode is selected (button at the bottom-right hand corner of the teacher console is pressed). The user name will be displayed as (in order of importance):

- o a student registration name, i.e. a name that students enter in Student Registration dialog (for more information please see Student registration tool), or

- o any custom alias, if provided in the student module settings in "Alias" field on Connections tab of Client Configuration window; by default the alias is not set; or

- o a full user name as provided in the Active Directory database (as "John M. Doe", for example), if available; or

- o a Windows user login name.

You can rename a connection (the computer name part) right clicking the connection, and then using Modify connection menu command of Connections menu:
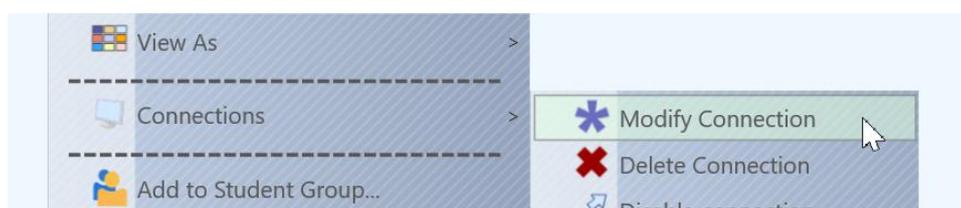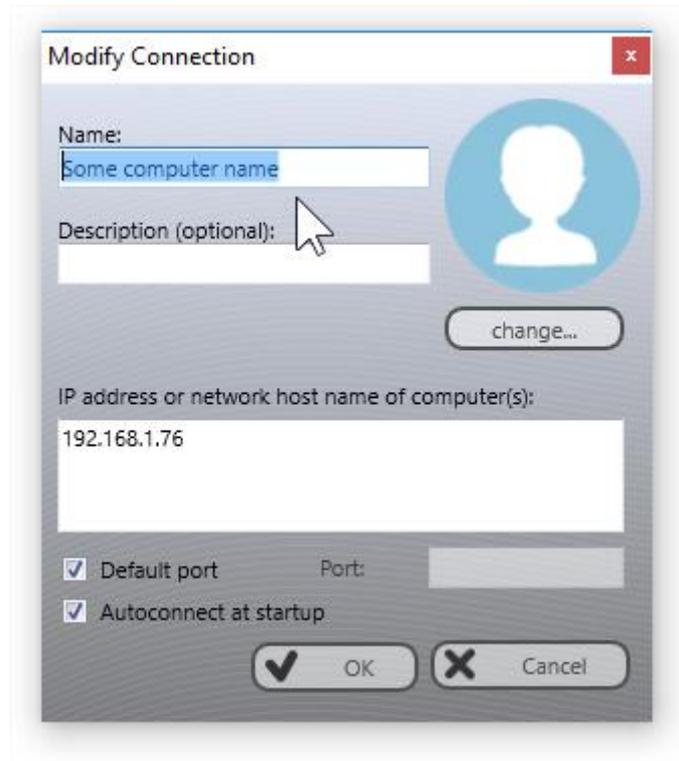
Arranging and sorting connections. Custom layouts.

Except for the Table View (described below), the teacher module may display connections either in arranged order or in custom, user-defined positions:

Arranged view:
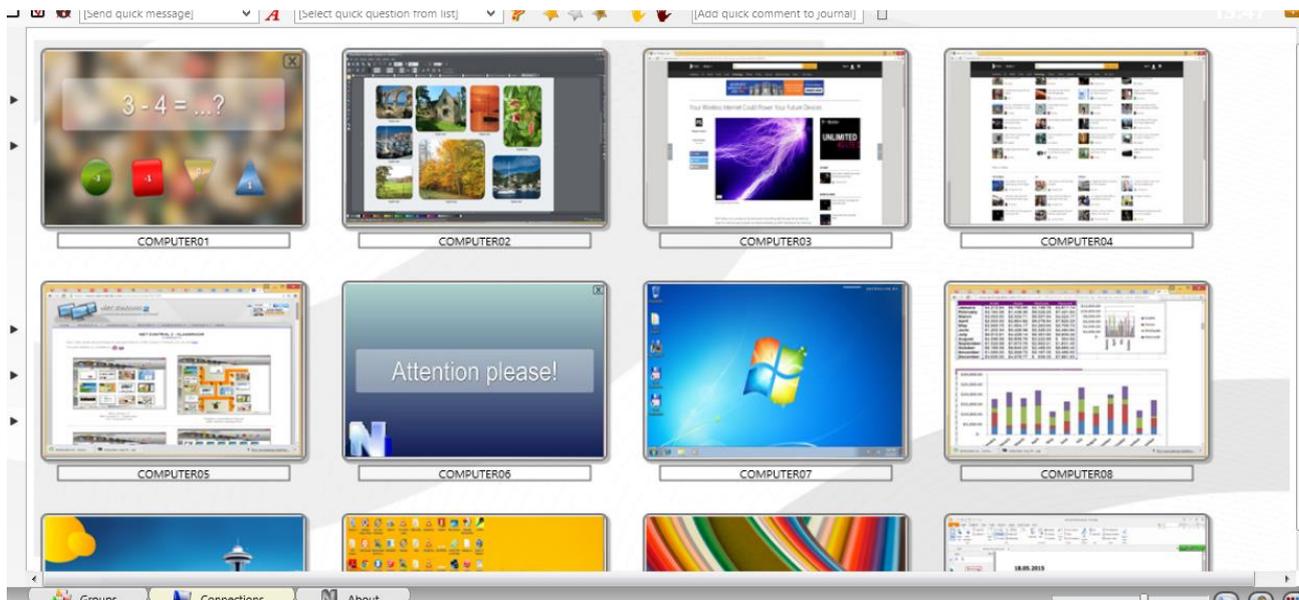
Custom layout:
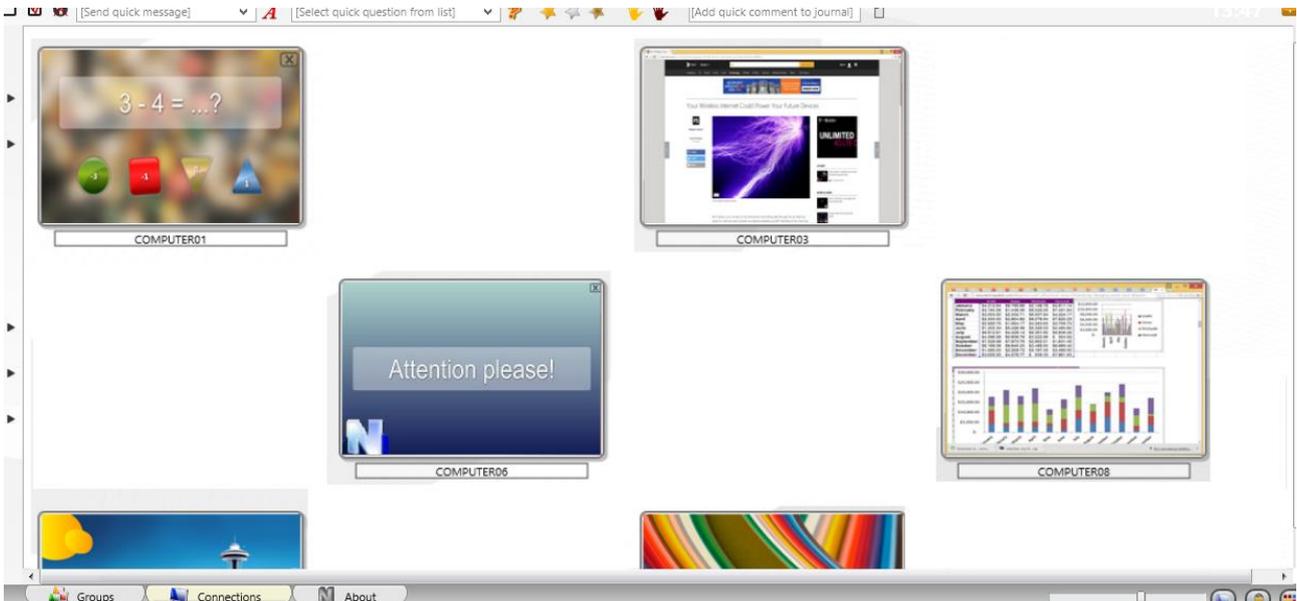
In *Arranged View* connections may be sorted in one of the following orders:
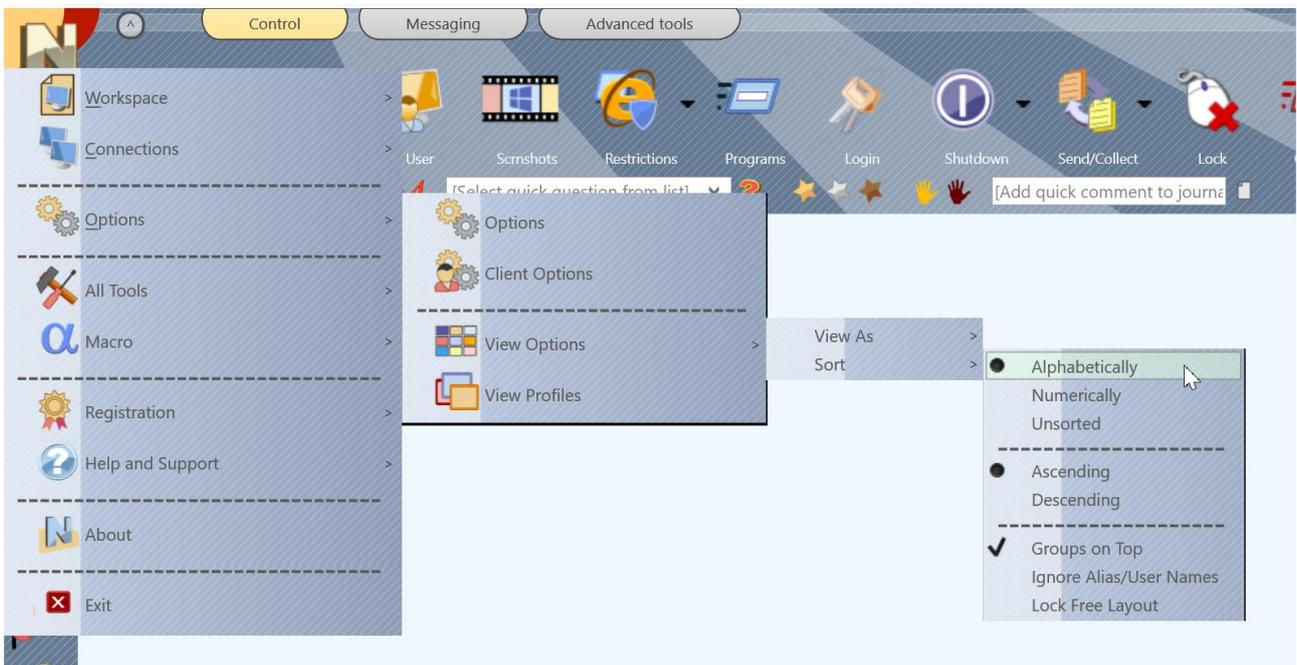
Alphabetically, in descending or ascending order;

Numerically, in descending or ascending order, in this case only the numeric part of a connection name will be taken in account for sorting, e.g. *"Computer0123"* connection will be displayed earlier than *"Auto987"* for ascending order.

Unsorted – connections appear in the order as they are stored in the workspace database.

Groups on Top – places joined (grouped) connections to the top of the list.

Ignore Alias/User Names – when enabled, only the computer name part of a connection name will be taken in account for arranging.

To change the sort mode, use the main menu command **N – Options – View Options – Sort**.

In **Free View** mode, you can position connections in the connections list in a custom order, just by dragging them to a desired position within the connections list. To change Arranged View mode to Free View, please use the following button at the bottom-right hand corner of the teacher console:

Custom background

In addition, for both Arranged and Free View modes you can enable a **custom background** image for the connections list. It is possible to use this feature to draw some class layout, for example as shown on the picture:
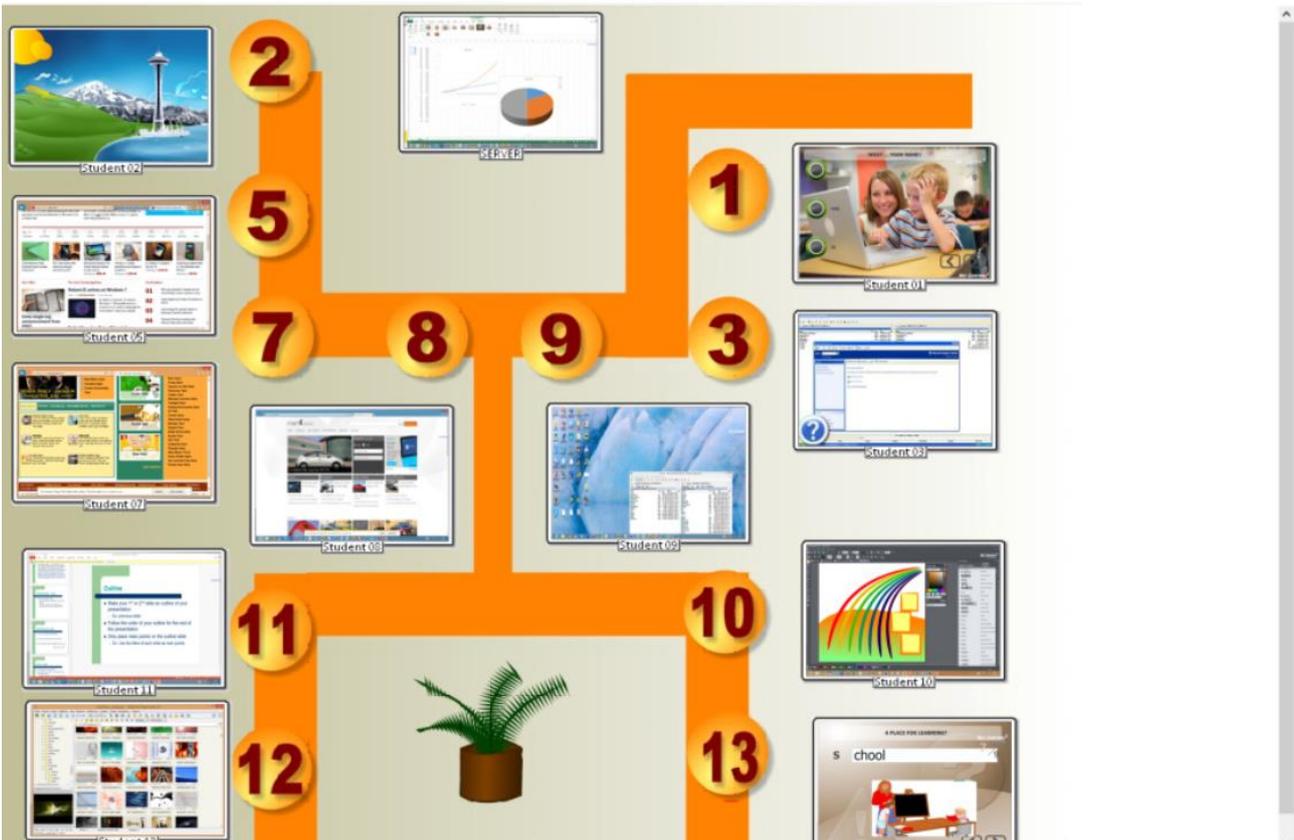
To load a custom background image, in the teacher module click the main menu command **N – Options – Options**; on **Interface** page, in **"Workspace background"** section open a file for the background and click OK.
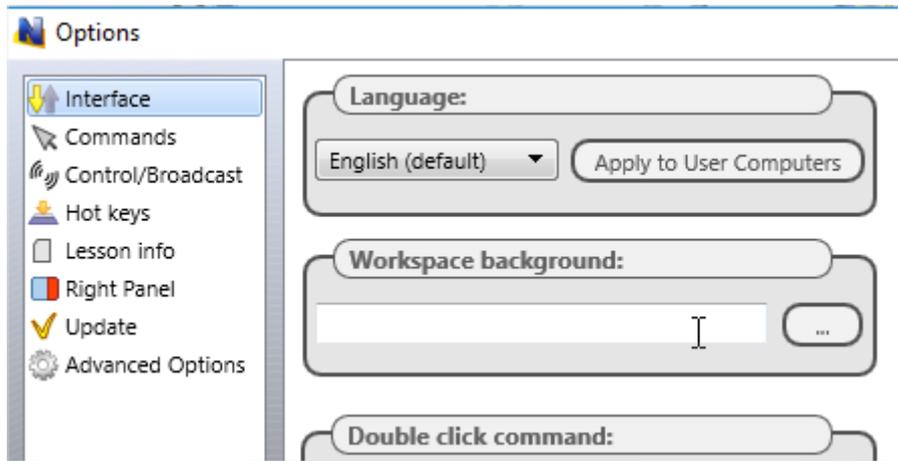
View modes

Net Control ² SmallClass supports five view modes for the connections list:
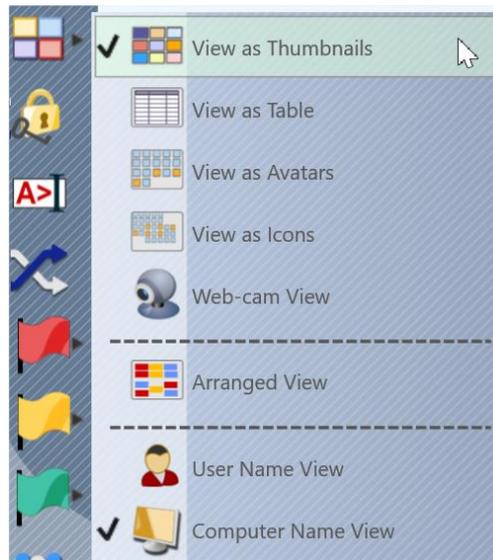
Thumbnails: connections are displayed as desktop snapshot thumbnails,

In this mode, you can see an icon of the currently used application on the student computer (in the bottom-left hand corner), help request buttons, awards, poll answer information etc.

Thumbnail size may be adjusted with a slider at the bottom-right hand corner of the teacher console:
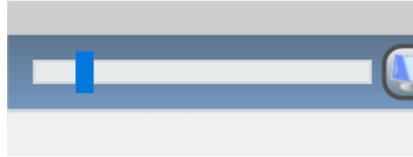
or in the teacher module settings.

The default refresh rate for thumbnails is 15 seconds, i.e. the image will be reloaded every 15 seconds. To change this value, in the teacher module settings (the main menu command Options – Options) on Interface page, adjust "Thumb refresh rate" option, click OK to apply changes:

Thumb. refresh rate:

◄ 15 ► sec
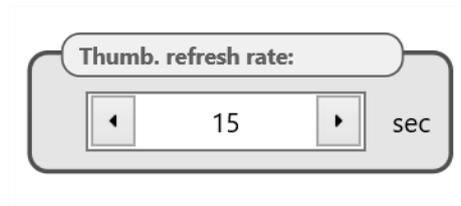
**Table**: the connections list is displayed as a table, each line represents one connection, in this view mode you can see connection and user names, IP address or DNS name of the remote computer, awards, help request, description, remote platform information, MAC addresses of the remote computer, other information:

	Name		Alias	Address		Description	Platform	StudID
☐	🖥️👋	computer02	tester	192.168.1.76 RDP#1	⭐		Windows 7 Service Pack 1/11.1.1.632	
☑	🖥️	computer01	user	192.168.1.22 RDP#2			Windows 10 /12.0.0.515	

Avatars: connections in the list are displayed as avatars, for any connection you create an avatar with the built-in editor or assign a custom image from a file.
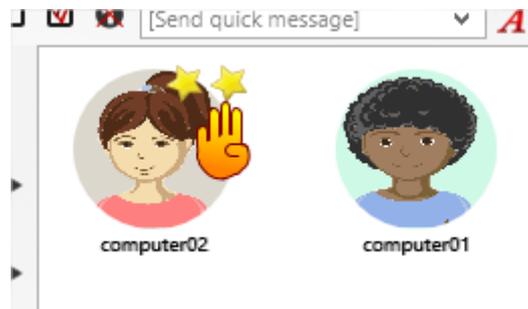
To change an avatar for a connection, right click it in the connections list, use **"Modify connection"** context menu command. In the appeared window click **"Change"** button below the avatar image.
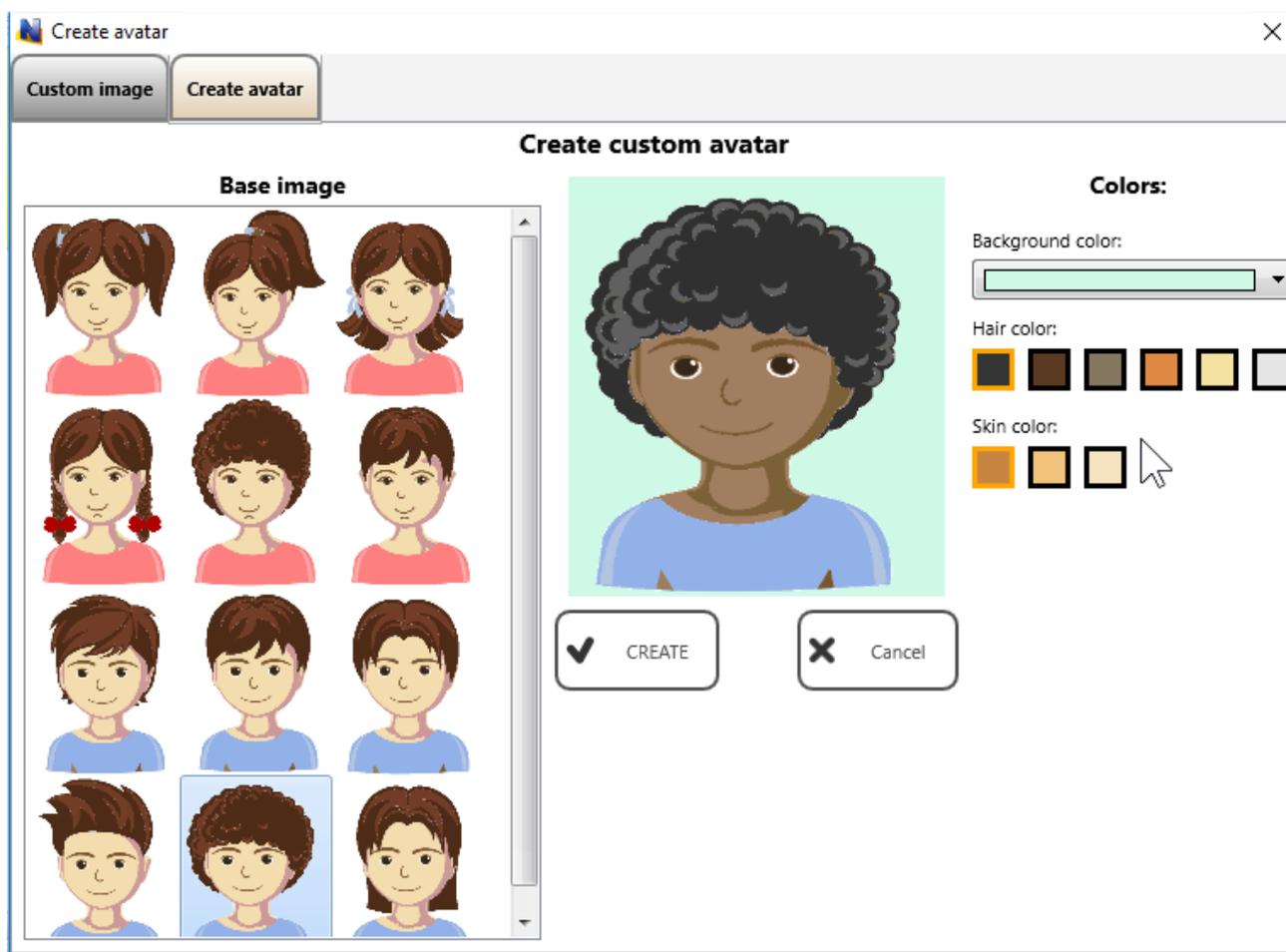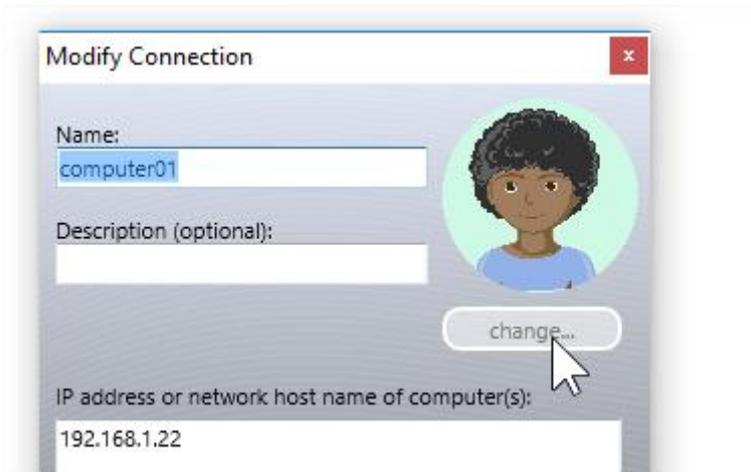
Customize the avatar or load a graphic image on **Custom Image** tab:

Click Crop and Use button to save changes.

Icons: connections will be represented in the connections list by small icons, making possible to place more connections on the screen than with other view modes:

Web-cam view: connections are represented by thumbnails from a web-camera attached to student computers. Except the source for the thumbnail image, this mode is similar to Thumbnails view mode, allows displaying icons, signs and other information in the same way as in Thumbnails View mode.

To change the view mode you can use the Thumbnail button's sub-menu:
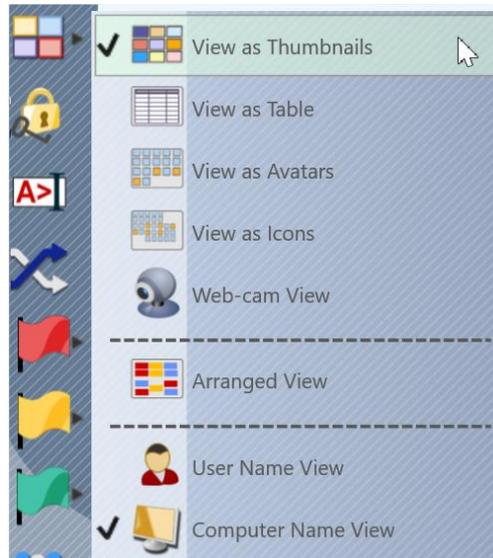
Or the main menu command **N – Options – View Options – View as**.

Left Toolbar

The left toolbar provides access to several connection-related features of the teacher console:

Refresh connections – reloads connections, current connections will be closed and re-opened. You can use this command if you experience some issues with network connection or a remote computer does not respond.

**View mode** – changes the view mode.

Lock – locks the teacher console, the teacher console will be locked and waiting for a teacher module password. If the password is not set, you will be prompted to create the password first.

Console – opens an internal Command Console window, where you can send commands to student computers directly, view notifications and connection events.

Random – selects a random connection. Works for connected computers only.

Select red, yellow or green group of computers. With these buttons, you can create a selection group for selected computers: select one or more computers click one of color group buttons, the selected computers will be assigned to the respective color group. Then, to select computers of the group again, just click the button again.

Student Group Manager – allows managing student groups. For additional information regarding this feature please refer to Tools and Features Guide.

D. How a student can connect a teacher.

With Net Control ² SmallClass it is possible to allow students to connect teachers, by initiative of the students, using commands of Student Console. This feature may be useful for 1-to-1 and BYOD environments, when it is impossible to create permanent groups, or to assign all available teachers to students.

Settings

This feature may be enabled or disabled in the student module settings. When the software is already installed, you can enable or disable the feature in the student module settings.

If you have access to the student computers remotely from the teacher console:

- o Select student computers in the teacher console;
- o Click the main menu command N – Options – Client Options.

Or on each student computer:

- o Click Net Control ² icon in the System Tray.
- o Use Configure button in the appeared Student Console.

In the appeared Client Configuration window, on Appearance tab:
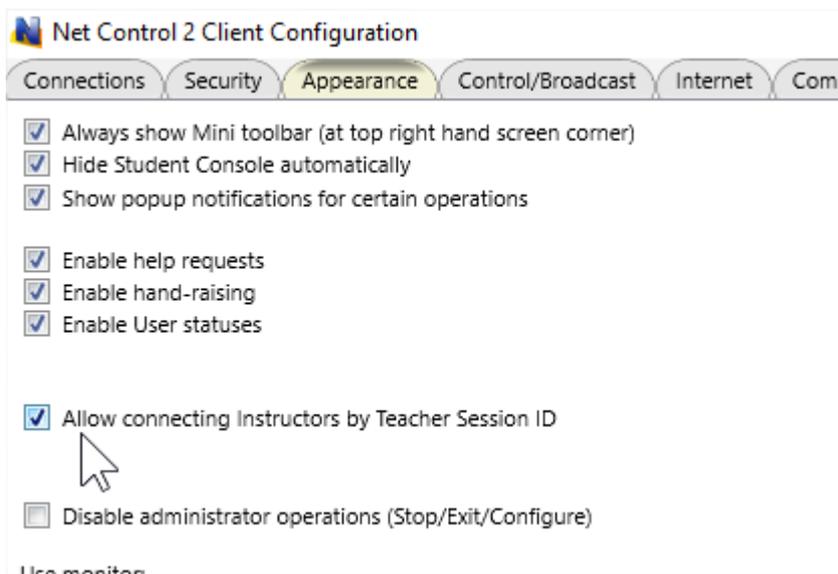
Allow connecting Instructors by Teacher Session ID – when enabled, students can connect teachers by providing a special Teacher Session ID code. This feature is enabled by default.

Connect by Teacher ID

To connect a teacher by a Teacher ID code:

1. A teacher lets know to students a Teacher session ID code that is available in the teacher console, on About tab, in the upper-left hand corner of the About

window ("Session ID" parameter):

2. Students on their computers open Student Console using an icon in the System Tray or Net Control ² toolbar (if it is enabled); then click "Connect Instructor computer" button:
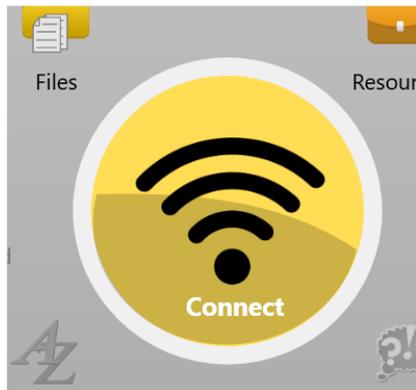
3. In the appeared window click "Find Instructor computer" button:

4. At next step, enter the Teacher session ID code and click OK:
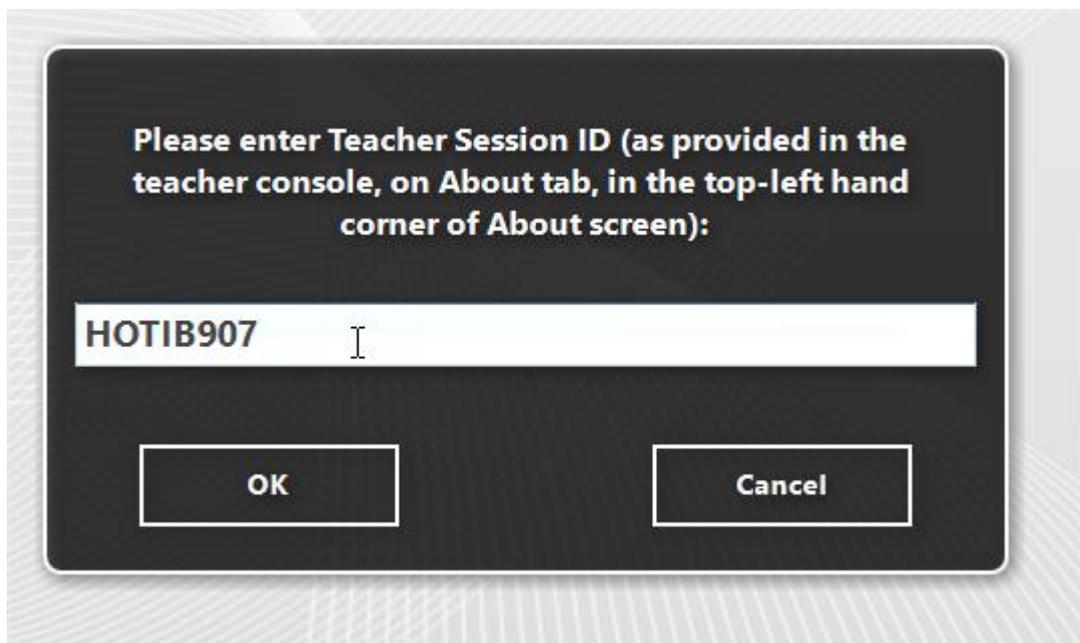
Connections, created with this feature are always temporary, i.e. "live" within the current session only, and are closed automatically after the user log off.

E. STUDENT MODULE SETTINGS.

The Student Component may be configured remotely from Teacher Module or on a Student Computer directly.

To configure Student Module remotely from Teacher Console:

- select the Student Computers

- click menu command **N ->Options -> Client Options** or just click the **User Opts** button on the **Advanced Tools** tab

- configure the options as specified below

- click the **OK** button

To configure Student Module on a student computer directly:

- click on the Net Control ² icon in the System Tray

- then click the **Configure** menu command

- Configure options

- click **OK**

Connections
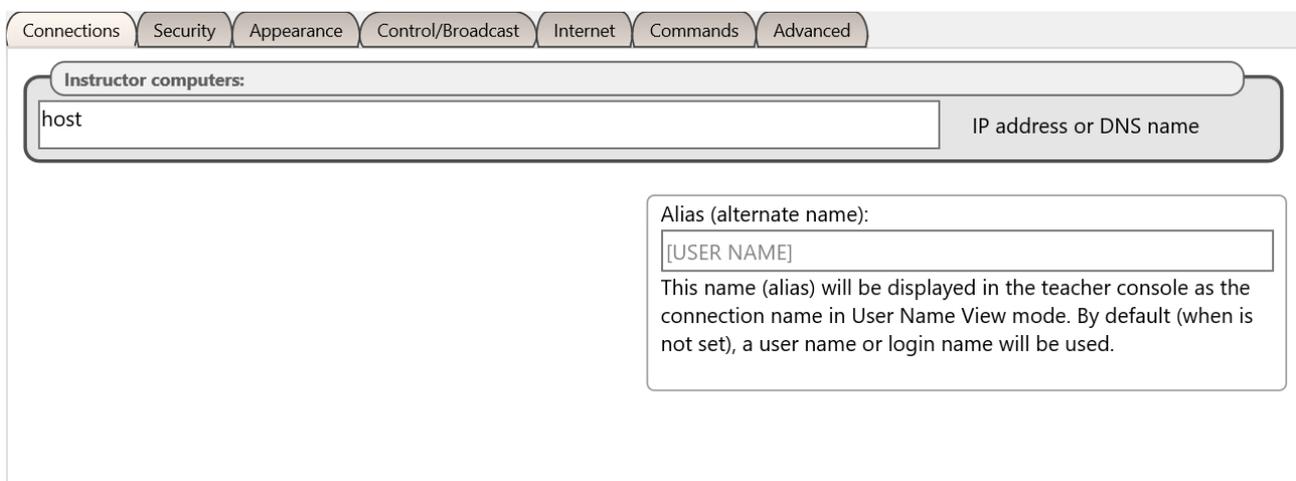
| Connections | Security | Appearance | Control/Broadcast | Internet | Commands | Advanced |

Instructor computers:

host   IP address or DNS name

Alias (alternate name):

[USER NAME]

This name (alias) will be displayed in the teacher console as the connection name in User Name View mode. By default (when is not set), a user name or login name will be used.

Instructor computers – a teacher computer, to which this student module will be connected. The teacher computer may be referenced either by its IP address or DNS (network) name.

Alias (alternate Name) – this name will be displayed when Teacher switches the view mode

from *Computer Name View* to *User Name View*. If it is left blank or [USER NAME] value is specified, the name of the currently logged in user will be displayed.

Security
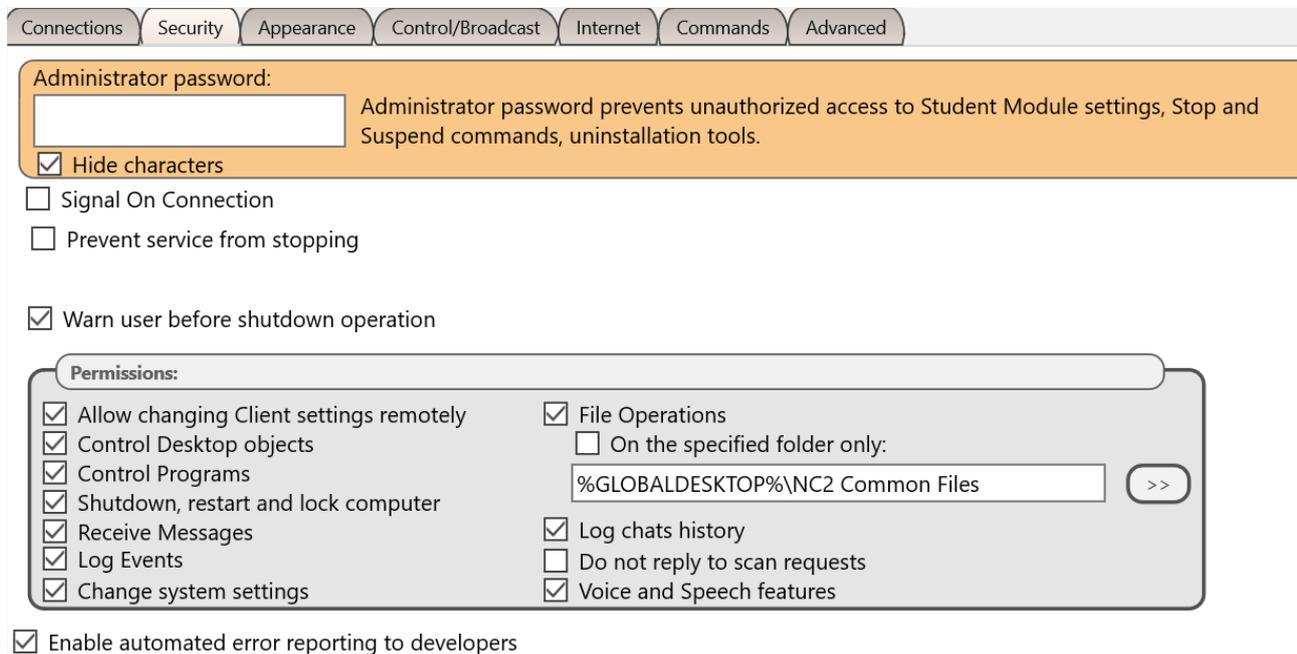
Administrator password used when a user attempts to change the settings of the student module or clicks the menu commands "Stop" or "Exit". We recommend setting up this parameter if you need to prevent stopping Net Control ² SmallClass service or unauthorized configuring the service.

Signal On Connection - when enabled, any connection of Teacher computer will be accompanied with a sound signal and text message.

Prevent service from stopping – when checked, the user will not be able to stop Net Control 2 Client service using Services console of Administrative Tools or net.exe system program.

Warn user before shutdown operation – enables 20-second timer before applying a shutdown, restart or logoff operation.

PERMISSIONS – allows limiting the functionality of service. When permission is disabled, all features related to this permission will be disabled:

- **Allow changing Server settings remotely** - when this permission is set, the Teacher can change Server settings remotely via the Net Control ² Client.

- **Control Desktop objects** - permission for controlling the Desktop of the user computer remotely, receive screenshots, run Remote Desktop and Broadcast Desktop sessions, change resolution, etc.

- **File Operations** - permission for file operations between computers. When additionally, **"On the specified folder only"** option is set, all file operations may be performed within the specified folder only.

- **Control programs** - permission to execute and terminate programs and services remotely.

- **Shutdown, restart, lock** - permission to perform power-related operations, like shutdown, reboot, stand-by etc., and lock and unlock computer remotely.

- **Receive messages** - permission to receive messages from the Teacher computer.

- **Log Events** - permission for Events Watcher and Events Logger tools.

- **Change system settings** - access to Registry, Policies, and access to the Internet etc.

- **Allow Help Requests** - when enabled, student can send Help requests to Teachers from Student Console.

- **Log Chats History** – chat history will be logged in *C:\Users\YOURLOGINNAME\AppData\Roaming\Net Control 2\nc2cchat.log*.

- **Do not reply to scan requests** -when enabled, the service will not respond to scan requests sent from any Instructor computer.

Enable automatic error reporting to developers – enables anonymous reports to the software developer about critical errors occurred in the student module. The error reports contain only common information regarding the error and a place in the program, which has raised the error.

Appearance

| Connections | Security | Appearance | Control/Broadcast | Internet | Commands | Advanced |

☐ Always show the Mini toolbar (at the top right-hand screen corner)
☑ Hide the Student Console automatically
☑ Show popup notifications for certain operations

☑ Enable help requests
☑ Enable hand-raising
☑ Enable statuses

☐ Disable administrator operations (Stop/Exit/Configure)

Use monitor:

Primary monitor

☐ Disable DirectX acceleration

Always show Mini toolbar – when enabled, the student module will display the mini toolbar in the top area of the screen, the popup toolbar provides quick access to Student Console; Lesson Resources and Raise Hand features of Student Console.

Hide Student Console automatically – when enabled the Student Console will be automatically hidden if the student cursor is out of the window within more than 5 seconds.

Show popup notifications for certain operations – when enabled, the student module will display a popup notification to a user when the teacher uses Control (Remote Desktop) command, runs a program or URL on the student computer, applies a new restriction profile, and for several other operations.

Enable Help Requests - when enabled, a student can send help requests to teachers.

Enable Hand Raising – when enabled, a student can "raise hand" in the Student Console. This raised hand status will be shown in the teacher console, the teacher can accept the request ("to call on" the student) or reset the status.

Enable statuses – enables "user statuses". The user status is a short string that is visible on teacher computer in student connection properties, and it's shown in a tooltip when a student is changing his/her status. With this tool students can quickly communicate with teachers sending short messages to the teacher.

Allow connecting Instructors by Teacher Session ID - if enabled, students can connect Instructors by Teacher session ID, for more information please see Chapter D.

Disable administrator operations (Stop/Exit/Configure) – when enabled, the Student Console will not provide access to "Stop", "Exit" and "Configure" commands of Student Console.

Use monitor – in a multimonitor environment, here you can select a display, which will be used as a source for screenshots and thumbnails, displayed on the teacher computer.

Disable DirectX acceleration – enable this option, if you experience issues with compatibility of Net Control ² software with DirectX drivers.

Control/Broadcast
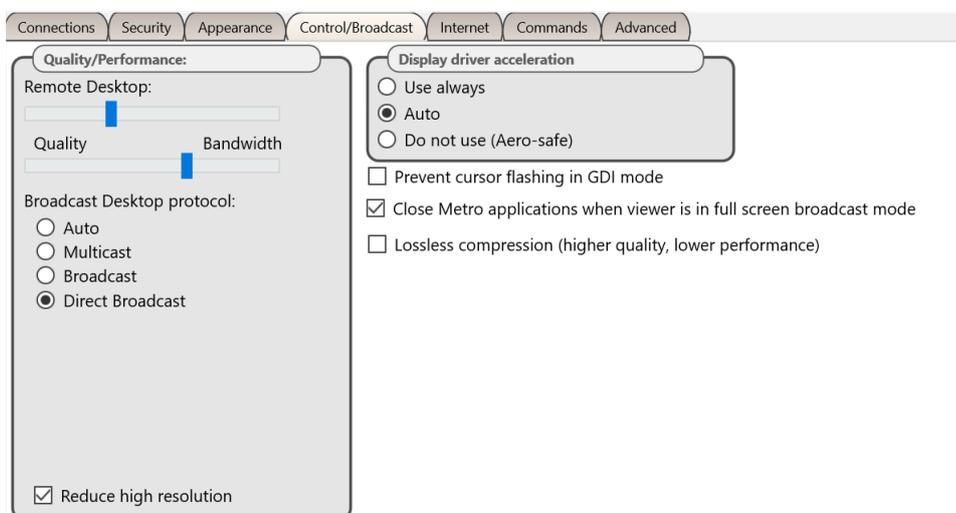
Quality/Performance.

Use this option to adjust the level of performance/quality for Remote Desktop and Broadcast Desktop features. Moving the track bar position to the left will increase quality of the picture displayed on remote computer, but at the same time will increase network bandwidth usage and may result slower speed of image refreshing.

Broadcast Desktop protocol:

Auto – the default value, Broadcast Desktop service will try to determine the transmission protocol automatically.

Broadcast – when enabled, the Broadcast Desktop service will use UDP Broadcast protocol for transmission data over network. If a network consists in several VLANs, a router or other network hardware may block incoming from other VLANs network traffic sent in Broadcast mode. In this case, you may need to add broadcast IP address of every VLAN to the broadcast list on the "Advanced" tab. For example, if VLAN 1 uses IP addresses in range 192.168.0.1-

192.168.0.254 and VLAN2 uses IP address range 192.168.1.1-192.168.1.254, you need to add the following addresses:

192.168.0.255
192.168.1.255
as IP masks for the specified networks.

Multicast – Broadcast Desktop service will use Multicast protocol as a transport protocol. Most often this protocol has better performance and resistance to errors during data transmission if clients use Windows Vista/7/8/10 operating system. If the default Multicast address interfere with other network software used in your network, you can change it in this dialog, and need to change it on all Student and Teacher computers.

Direct Broadcast – *enable this mode, if you experience issues with the performance of Broadcast Desktop tool* with the default parameters, this mode has the better performance in slow or in high-loaded networks, but generates more network traffic that the previous modes.

Display Driver acceleration – enables or disables Video Hook Driver acceleration for Remote Desktop and Broadcast Desktop tools.

Video Hook Driver provides better performance and accuracy in screen changes tracking for these tools. In Windows Vista/7, when the VHD driver is active, Windows will disable Aero style for windows (semi-transparent borders and captions) as also some Direct3D features, which will be restored only after stopping the driver.

If you prefer to have Aero style active during Broadcast Desktop/Remote Desktop sessions in Windows 7, you need to disable the driver, setting up the "Do not use (Aero safe)" option.

For Windows 8/10, "Auto" or "Use always" modes are recommended.

Prevent cursor flashing in GDI mode – in several cases, some display/theme configurations may result flashing the mouse cursor on student computers when Remote Desktop session ("Control" command) is active, or on a teacher computer in Broadcast Desktop session. To avoid this issue you can enable this option.

Close Metro applications when viewer is in full screen broadcast mode – in Windows 8, full-screen Metro-applications may overlap Net Control ² Broadcast Desktop Viewer window, making it invisible for students. When this option is enabled, the student module will automatically close all Metro applications before opening Broadcast Desktop Viewer window.

Lossless compression – when enabled, Broadcast Desktop and Remote Desktop tools will use lossless compression algorithms for image compression, this makes possible to display high quality picture of the remote computer on the receiving side, without compression "artifacts", but generates 1.5-2 times higher volume of network traffic.

Internet

Web Control Engine maintenance – manage the installation of the Internet Control Engine. Setting any option, except for "Do nothing", will schedule the installation routine. **Do not change this value unless you need re-install the Internet Control Engine.**

Mode 1: Install as Internet Explorer Addon + Direct Control (IE only) – schedules installation of the Net Control ² Internet Control Engine as a plug-in for Internet Explorer, and enables internal control of Internet Explorer and Google Chrome browsers from the service. This mode is most compatible with third-party software, but allows controlling access to Internet resources in Internet Explorer and Google Chrome only. Other browsers (Safari, Opera, Firefox, Edge) will be automatically blocked when an Internet restrictions are applied.

Mode 2: Install as Protocol Layer + IE addon (recommended) — schedules installation of Net Control ² Internet Control Engine as a Protocol Layer. In this mode, applied Internet restrictions work in all the most popular browsers (including Internet Explorer, Edge, Chrome, Safari, Opera, Firefox), but the mode is less compatible with third party software. **Use this mode if you need to make Internet restrictions working in alternative browsers, like Chrome, Opera, Safari, Firefox.** If you have any compatibility related issues, or if all Internet restrictions do not work in your environment, change the mode to Mode 1.

Mode 3: Install as TCP Protocol Layer (old mode) – use this mode if you have issues with both Mode 1 and 2.

Uninstall both - Internet Control Engine will be uninstalled from the User computer. You can use this option if Net Control ² software conflicts with other software installed on User computers. All Internet-controlling features will be disabled.

Individual restrictions for every user – by default all Internet restrictions are applied to all users of the same computer. This may result some issues when one computer works as a terminal server, several users are working on the same computer, sharing all its resources, and therefore share the same Internet restriction profile. Enable this option if profiles should be applied on a per-user basis, i.e. individually for every user. This option work only together with **Control web-sites from the service** option.

Commands

Connections	Security	Appearance	1:1	Control/Broadcast	Internet	Commands	Advanced

After logon:

☐ Show Use Policy document at startup:

[DEFAULT]   ...

☐ Clear NC2 Common Files

☑ Students can send files
File size limit, MBytes
10
AutoSend folder:
NC2:\AutoCollect

After logon operations are performed by the service automatically after a user logs on.

Require Student Registration – requires a student to enter his/her real name, other lesson details for Student Registration tool.

Show Use Policy document at startup – when enabled, the service will display the Acceptable Use Policy document at user logon, with this option you can also specify a path to a custom .RTF or text document that will be displayed instead of the default AUP document.

Student can send files – when enabled, Net Control ² Student module will maintain a special "AutoSend" folder, so all files saved in this folder will be synchronized with connected teacher computers. Here you can also set up a path for the folder (by default it is in Net Control 2 Common Files\AutoSend folder on Desktop), and a limit for files that will be sent to teachers.

Advanced

Terminal Server sessions support – if enabled, the student module will create a separate connection for users in terminal or RDP Windows sessions, this option is enabled by default.

Allow only RDP/hyper-V connections – recommended only for environments where students work on their computers over RDP connection, for example, for Hyper-V virtual machines. In this case, two connections may appear for one computer (as a screen of the "console"/logon session and a screen of RDP session). This option disables the student module in the console (real) sessions and enables it only for terminal sessions. **Please enable this option only if you are sure that RDP connections are available for student computers**.

Stop service at startup (manual start required) – when enabled, the student module will be "stopped" at Windows startup, students need to click a special button of the Student Console in order to run the service. In the "stopped" state, the student module does not establish network connections with teachers.

Cloned VM image support – when enabled, the student module supports installation from an image, when the same settings are cloned for all student computers.

Terminal sessions: do not connect within teacher sessions – when enabled, in the terminal server environment, the student module will not connect the teacher module if it is running within the same session. Useful, when student and teacher modules are installed on the same terminal server.

UDP/Multicast – here you can change settings of UDP Broadcast and Multicast protocols used by the software.

F. Teacher module settings

To change settings and options of Net Control ² Teacher Console, click the main menu command **N -> Options -> Options**.

Several options of Control Options window are marked with **(*)** sign. To change these options you need to run the teacher module as administrator: in Windows 7-10 right click Net Control ² SmallClass shortcut on Desktop or in Start menu, then click menu command **Run as Administrator**.

Interface
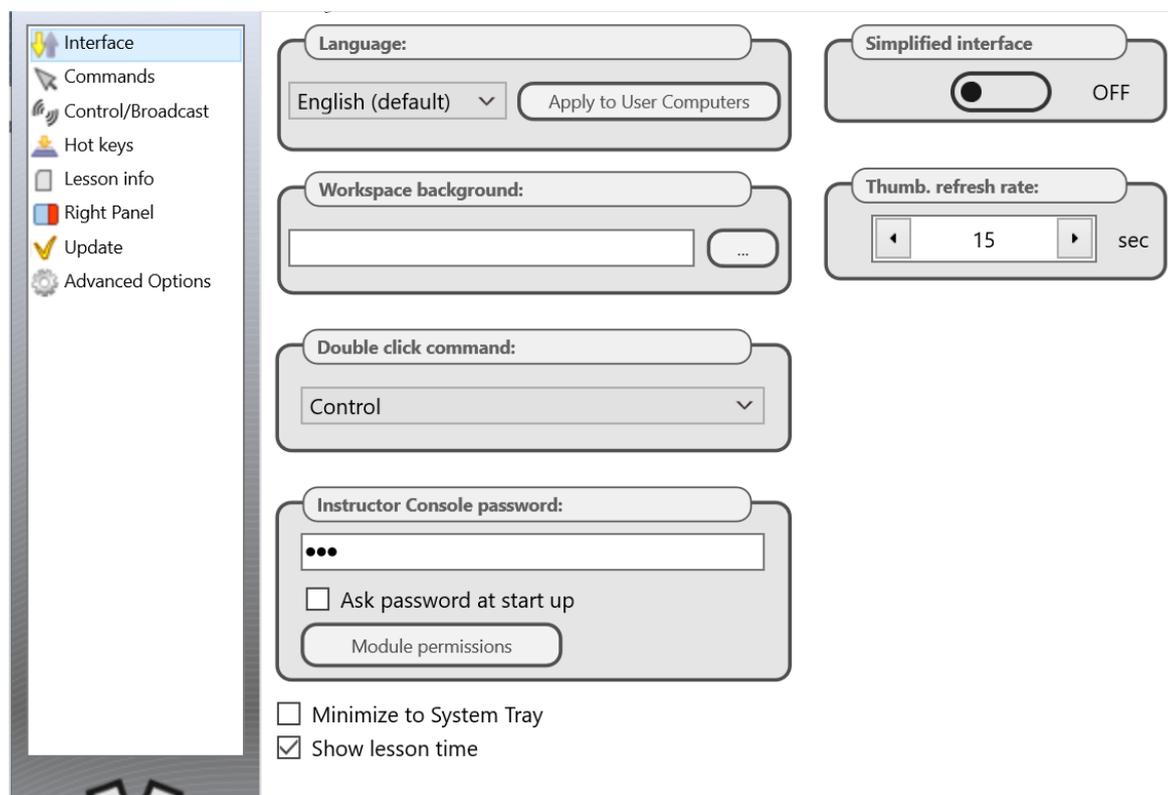
Language – select a language for the user interface. To apply language settings to client computers, select them in connections list, then select a language and click the **"Apply to User computers"** button.

Workspace background – use this option to set up background picture for the connections list.

Double-click command – allows to specify a command, which will be performed when a user double clicks a thumbnail in the connections list. Default double-click command opens Remote Desktop session with the selected computer.

Instructor Console password – here you can set up a password for the teacher console. If **Ask Password at startup** option is enabled, the password will be required at the teacher module startup. Otherwise the password is used by *Lock Console* command when you need to block the teacher module temporarily.

Module permissions – click this button to set up Windows security settings for the teacher module program file.

Simplified Interface – when enabled, the Basic View mode will be enabled, please see Chapter B for more information.

Thumbnail Refresh interval – specifies a refresh interval in seconds, when thumbnails of client connections will be updated.

Minimize to System Tray – when the option is enabled, the teacher module will be minimized to System Tray area instead of Taskbar.

Show lesson time – when enabled, the lesson time will be displayed on the top toolbar of the teacher console.

Commands
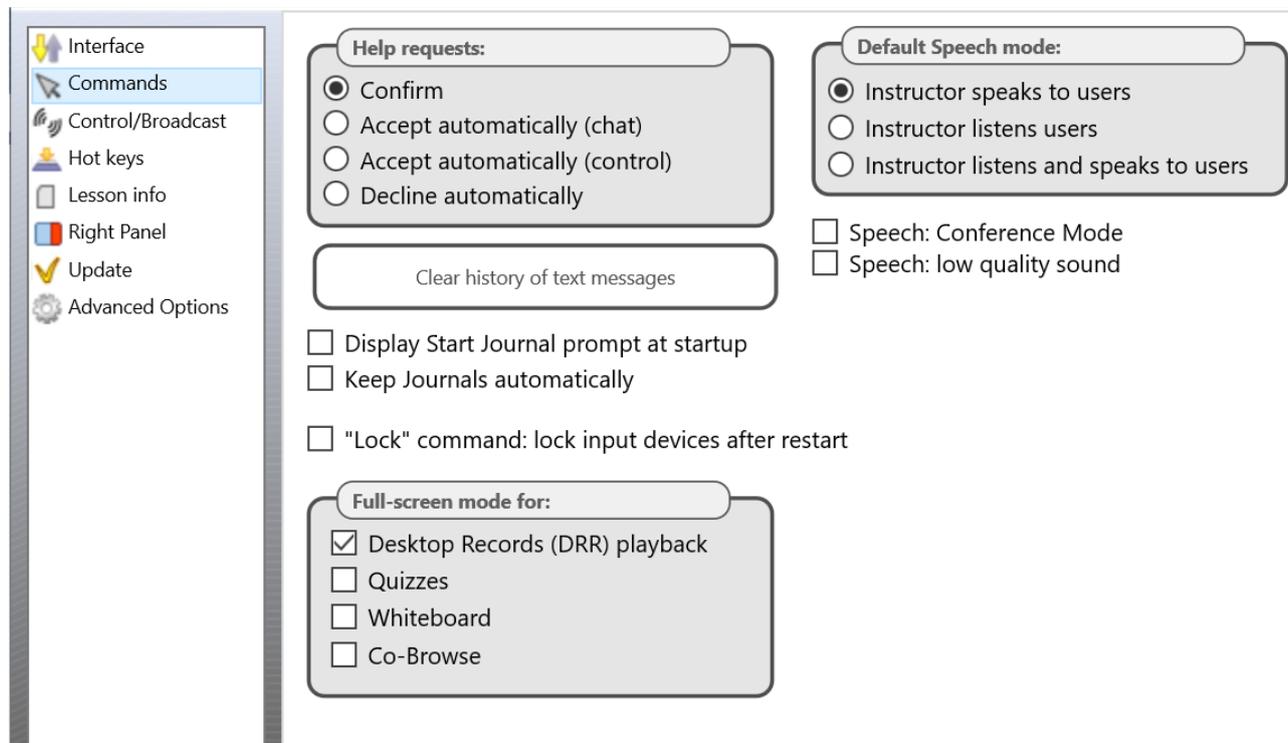
Help requests – determines a default action, which will be applied when a teacher receives a help request from a client computer:

      Confirm – the software will prompt the teacher what action should be applied;

      Accept automatically (chat) – accepts the request and initiates a chat session;

      Accept automatically (control) – accepts the request and initiates remote control session;

      Decline automatically – help requests will be automatically declined.

Lock command: lock input devices after restart – when enabled, and client computer was locked with the "Lock" command, Net Control ² Client will restore the locked state of the client computer after restart.

Display Start journal prompt at startup – when enabled, the teacher console will display the "Start journal" prompt at program start up. For more information please refer to **the Journal** chapter of Tools and Features Guide.

Keep journals automatically – the teacher module will start a new journal automatically for each new session, when you are opening the teacher console, and will save it automatically when you are closing the program; the current journal will be stored in Documents\Net Control 2 folder.

Show lesson time – shows a lesson timer in the upper right hand corner of the teacher console.

Default speech mode – determines a default mode for Speech Manager tool, when you are opening it.

Speech: Conference mode, Speech: low quality sound – Speech Manager quality settings, for more information please see "Speech Manager tool" chapter in Tools and Features Guide.

Full screen mode – enables the full screen mode on student computers for Co-Browse, Whiteboard and Quiz tools, as also for Desktop Records playback.

Control/Broadcast page

Control/Broadcast page changes various settings used by Control (Remote Desktop), View and Broadcast tools. Please note, these settings have effect on Broadcast Desktop engine of this computer only, i.e. cases when the teacher shares his/her screen with students using Broadcast Desktop tool. The respective settings of the student module change behavior for the tools on the student computer.

Quality/Performance – move the top slider of the section to adjust quality/performance ratio for Control tool, and the bottom slider to change settings for Broadcast Desktop tool. Moving the slider to right, you are increasing the compression rate for the screen capture images, so each screen update generates less the network traffic making the performance better, but also high compression rates degrade the picture quality.

Lossless compression – when enabled, the software will use lossless compression algorithms for the captured screen updates; the displayed image entirely corresponds to the original picture on the remote side. But this mode generates 3-5 times higher volume of the network traffic. We do not recommend using this mode for Broadcast Desktop tool.

Reduce high resolution – when enabled, the software will reduce the screen resolution for Broadcast Desktop.

Broadcast from Display – here you can select a display in the multimonitor environment, which will be used as a source for Broadcast Desktop tool, the image will be captured from this display only.

Broadcast channel or port – in order to avoid interference between different classrooms when Broadcast Desktop tool is used simultaneously, you need to assign a unique Broadcast Desktop channel to each teacher computer in the network. We recommend setting up Channel 0 for the first classroom, 1 – for the second classroom etc. The channel number will be automatically mapped to a network port used by the software.

Broadcast options:

Display full screen on user computers – when enabled, Broadcast Desktop viewer window will be displayed full screen on student computers; the teacher can switch between the full screen and windowed modes using the respective button of Broadcast Desktop toolbar.

Prevent switching to other applications during Broadcast Desktop session – when enabled, in the full screen mode of Broadcast Desktop Viewer displayed on student computers, students will not be able to switch to other applications during the session.

Browser view – when enabled, in Broadcast Desktop mode, the teacher module will also establish a web server that will be showing the current broadcast desktop image in any browser. To watch the broadcast desktop session from any browser, just type the computer name of the teacher computer and the browser view port number (1080 by default), e.g.:
http://myteacher:1080
where myteacher is the computer name of the teacher computer. The performance of this tool is significantly lower of the original Broadcast Desktop tool performance, but allows showing the screen on devices that do not support Net Control 2 clients.

Troubleshooting

Options of this section help solving performance issues of Broadcast Desktop tool.

Broadcast protocol – determines a network protocol used by Broadcast Desktop tool. The default Direct Broadcast protocol sends image to each student computer individually, providing optimal performance on a moderate number of students. This mode generates significantly higher volume of network traffic than multicast protocols produce. If you need to broadcast the screen to a large number of recipients, Multicast protocol may become more effective. If Multicast protocol is not supported by the network, Broadcast protocol may be used instead.

VHD driver acceleration – determines the mode of screen capture. "Use always" mode enables the VHD engine for screen capturing, "Do not use" disables it, and "Auto" mode enables VHD always in Windows 8 and higher, in Windows 7 the use depends on the system settings. We recommend enabling VHD for all situations, except if you experience issues with the screen capture on the teacher computer (white screen, artefacts, low update speed). In Windows 7, if Aero theme is enabled (semi-transparent Windows toolbars), when the VHD driver is active in the process of broadcasting, the theme may change temporarily to Basic theme and revert back to Aero once the broadcast session is complete.

Prevent cursor flashing – if you experience the mouse cursor flashing during Broadcast Desktop session, enabling this option should solve the issue. When this option is enabled, the

capture engine may not be able to capture semi-transparent windows.

If you experience issues with Broadcast Desktop performance, please try to change the options of this page as follows:

Move the Broadcast Desktop performance **slider** to the right;

Disable **Lossless compression**;

Enable **"Reduce high resolution"** option;

Set the **channel** to a number between 0 and 500.

Enable **"Direct Broadcast"** as the broadcast protocol, if this does not change the performance, please then try Multicast protocol instead.

Set VHD Driver acceleration option to **"Use always"**

Hot Keys
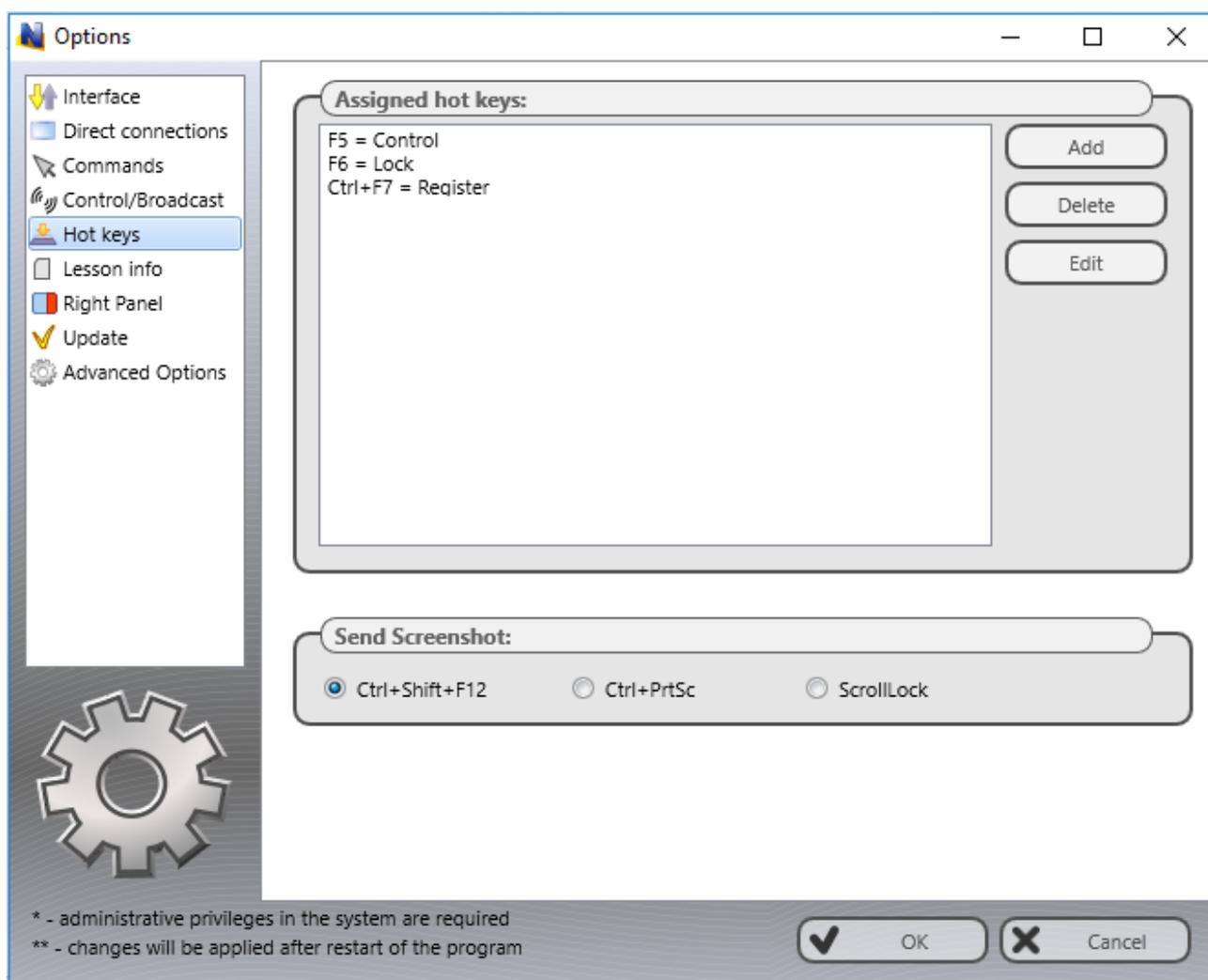
On this page you can assign a hot key to Net Control ² SmallClass tools or commands; to change

a default hot key for the "Send snapshot" command.

The hot key for the "Send snapshot" command is a global key combination, i.e. it works in any Windows application when Net Control ² software is running at background.

Lesson Information

The information on this page may be also updated with Start Journal, Lesson Resources, Student Registration tools. Teacher and lesson information is visible on student computers in Student Console window.


Right panel

The Right panel is a special toolbar that provides quick access to the most often used features and tools.
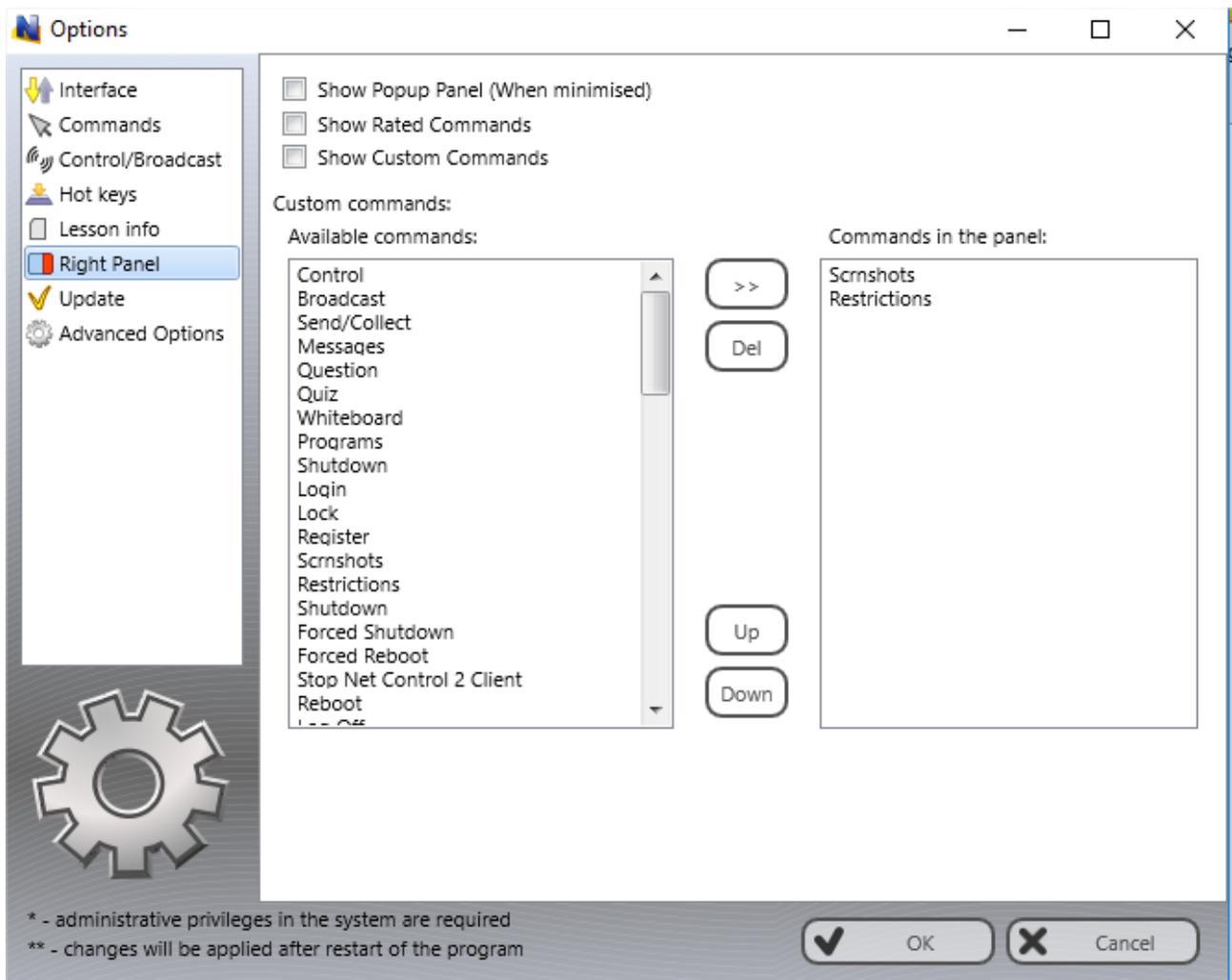
Show Popup panel – when enabled, the teacher module will display a popup panel on the screen when the main teacher module window is minimized, providing quick access to the most important tools.

Right Panel – enables or disables the Right panel.

Show Rated Commands – enables or disables the Rated Commands tab on the Right panel.

Show Custom Commands – enables or disables the Custom Commands tab on the Right panel.

Custom commands – the list of commands, displayed on the Custom Commands tab.

Update

Check for updates automatically – when enabled, the software will check the update server for new versions (updates) of the software and will notify when an update will be found.

Download updates automatically – when enabled, the software will download and update the software on teacher and client computers automatically. To change this option the program should have administrative privileges (please see a comment at begin of this chapter). Only critical updates are passed through automatic update, regular versions should be updated manually.

Do not update – when enabled, the software will not check the server for updates.
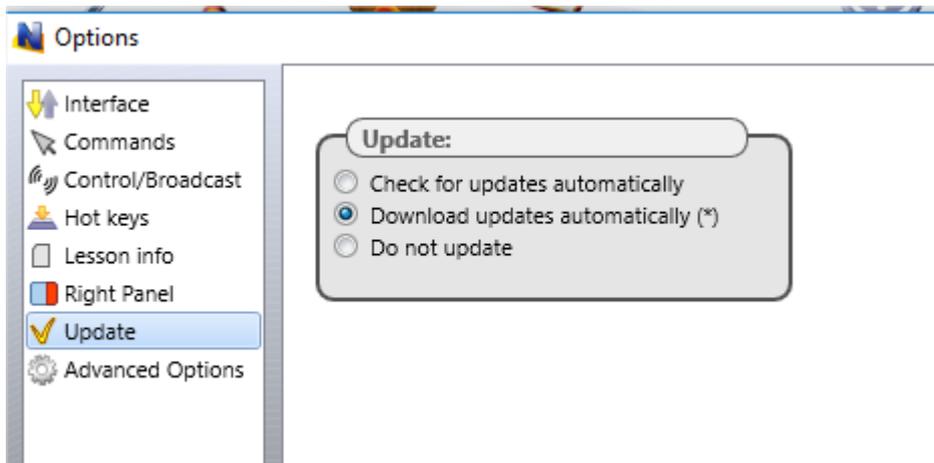
Advanced Options
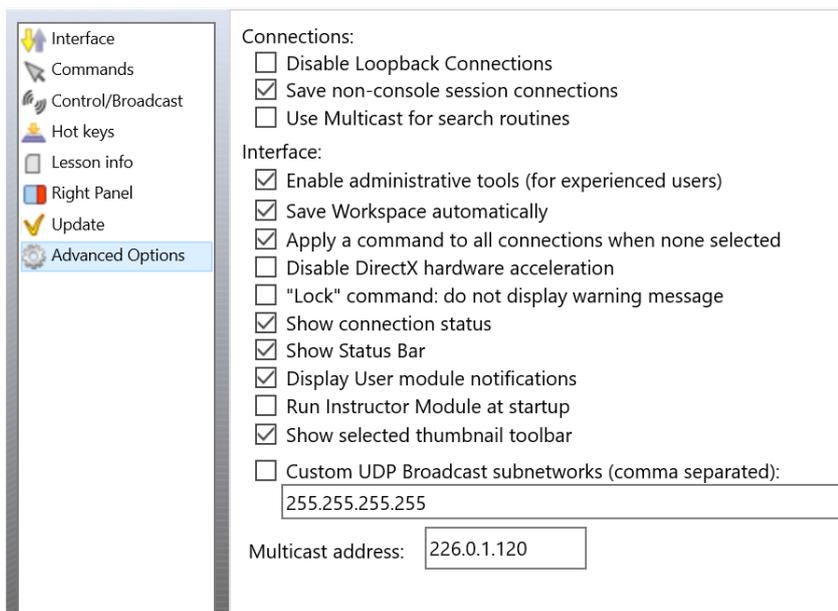
Disable loopback connections - Enabled by default. Connections to itself (to the same computer, where the teacher module is installed) will be blocked. You need to enable this option if the teacher module is installed on a _terminal server_, and student sessions are running on the same terminal server.

Save non-console session connections – by default, the software stores connection information in the workspace (position, name, color groups) for connections that represent a real (console) session only, RDP sessions are always dynamic and are not stored. Enabling this option, you are making possible storing information for all sessions, real and terminal ones.

Use Multicast for Search routines – disable this option if your network does not support Multicast protocol.

Enable administrative tools – enables several tools that are intended for experienced users,

and are hidden by default, including File Manager, system services control and several others.

Save Workspace automatically – when enabled, the teacher module will save the workspace automatically on closing the application.

Apply a command to all connections when none selected – if enabled, when none connection selected in the connections list, the operation will be applied to all computers.

Disable DirectX acceleration – enable this option if the teacher module shows a critical error message after opening some tools.

Lock command: do not display warning message – when enabled, and client computer was locked with the "Lock" command, Net Control 2 Client will not display a warning message or splash screen.

Show connection status – when enabled, the teacher module will display connection information (connected/disconnected) in the status bar at the bottom of the main window of the teacher console.

Show Status Bar – enables or disables the Status bar at the bottom of main window.

Display User module notifications – when enabled, the Console will display notifications from client computers when some operation was failed or requires additional attention.

Run Instructor module at startup – when enabled, the teacher module will be automatically opened after user logon.

Prevent Cursor Flashing – prevents mouse cursor flashing in Remote Desktop (Control) and Broadcast Desktop tools that may appear with several configurations.

Show selected thumbnail toolbar – when enabled, the teacher module will display a toolbar at the right side of a selected student connection for quick access to important commands (control, send message etc.)

Custom UDP Broadcast subnetworks – in this field you can specify a comma-separated list of broadcast IP addresses of your subnetworks/VLANs. The software uses UDP broadcast protocol for many features. In large networks, most often the UDP traffic is limited by the bounds of the network segment where the sender is located. Providing in this list broadcast addresses of other subnetworks, may enable the features that use this protocol for student computers in other subnetworks.

Multicast address – in this field, you can customize the Multicast address used by Net Control 2 services. The address should be the same for all student and teacher computers. The respective settings are provided in the student module on Advanced tab. Please change the address only if it interferes with other software installed on your computers.

G. Update.

Manual update through the teacher module

To update the teacher module of the software to a higher version, most often it is enough to

close the teacher module, download the latest installation package from our website (please verify that you are downloading the same edition of the software), and install it over existing package without removal of the previous version.

To update the student module remotely, from the teacher console:

- o download the latest installation package or use the package that you have used for installation of the teacher module;

- o in the teacher console of Net Control 2 SmallClass, select student computers that should be updated;

- o click the main menu command **N ->Help and Support ->Update Client**

- o specify a path to *Net Control 2 installation package* on your computer.

The package will be uploaded to the student computers and installed there.

Automatic update

Automatic update provides a simple interface to update the software on teacher and student computers automatically.

Please note! Automatic update does not include all versions of the software, we reserve it for critical updates only. It is still possible that a newer version is available on our website and you can use it using manual update methods.

Automatic update feature must be enabled in the teacher module settings: **N ->Options -> Options, on Update page, Download Updates Automatically** option should be enabled
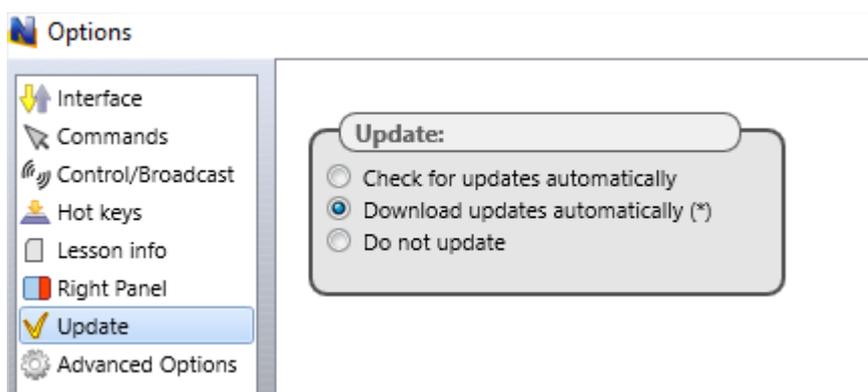
The software will check Net Control ² update server every 14 days for available new versions. If any update is found, the program will download it to the teacher computer and will deploy it to the user computers as soon as they are connected to the teacher computer.

Please note: To change the Update options, the program should be started with administrative privileges in the system. For Windows 7-10, you need to run the program as follows:

- – right-click on the Net Control 2 SmallClass icon on Desktop or in Start ->Programs menu

- – click menu command **Run As Administrator**

- – confirm execution

H. How to protect access to Net Control 2 SmallClass with a password.

To protect access to Net Control 2 Teacher, click the menu command **N ->Options -> Interface -> Lock password**, specify the password, and click **OK**.

To prevent stopping Net Control 2 Student service or configuring its settings on the Student computer, you need to enable the Administrator password:

- – click **N** (Net Control 2) icon in the **System Tray**, then click **Configure** button. In the **Configuration** window, on **Security** tab, in **Administrator Password** field, specify new password.
  Please note: The password will be applied and stored only in the registered version of the software. Particularly, this feature is not available in Public Trial version.

http://www.netcontrol2.com