
THE CLASSROOM MANAGEMENT SOFTWARE

NET CONTROL²

CLASSROOM,
PROFESSIONAL,
SmallClass

**THE TOOLS AND FEATURES
GUIDE**



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Installation and configuration

This guide does not cover procedures related to installation and configuration of the software. Detailed information on how to install, deploy and configure the software you can find in the Installation and Configuration Guide, which is available on our website:

<https://www.netcontrol2.com/downloads>

License

The software described in this manual shall be used exclusively in accordance with the End User License Agreement (EULA), as also any other agreements (the Registered User License, the Evaluation License and so on). Installing and using Net Control 2 software, you agree to be bound with the terms and conditions of the EULA and respective agreements. The text of the EULA is supplied with the software and is always available at:

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Terms and definitions

This guide is intended for use and describes the following editions of Net Control 2 software: **Net Control 2 Classroom**, **Net Control 2 SmallClass**, **Net Control 2 Professional**.

Collectively, the editions are referred to as **Net Control 2** or **NC2**.

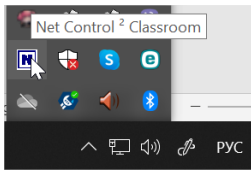
When the implementation or availability of a feature or some functions of a feature is edition-specific, the information related to a particular edition is marked with the respective notes: **[STD]** for Net Control 2 Classroom, **[SC]** for Net Control 2 SmallClass and **[PRO]** for Net Control 2 Professional.

While many features of this guide are available for both Windows and macOS versions of the software, this guide is based and describes the Windows version of the software only.

The **Instructor Module** or **Teacher Console** terms mean the main program of the teacher component, installed on the teacher computer. To run this program, you can use Net Control 2 Classroom, SmallClass or PRO icon on Desktop, or run it from Windows Start menu (Start - All Programs - Net Control 2 Classroom - Net Control 2 Classroom).

The **User Module** is the software component installed on user (student) computers. The main part (window) of this module is the **Student Console**. The Student Console provides quick access to many of the features available for users, may be used to configure the software on user computers, to stop or suspend the service, to access information regarding

current connections. To open the Student Console, please right click the Net Control 2 icon in the System Tray area of Windows Taskbar (the area next to the clock):



It is also possible to enable a popup toolbar, which will be always visible on the screen for quick access to the Student Console and its features.

N menu – the main menu of the Teacher Console, provides access to settings and workspace management features of the Instructor Module. To open the menu, just click on the N button in the top-left hand corner of the main window:



The Instructor Module settings are available in the *N menu* of the Teacher Console, **N menu -> Options -> Options**.

The User Module settings may be changed on user computers: please right click Net Control 2 icon in the System tray, then click Configure button in the appeared Student Console window. If the user computer is connected to the Teacher console, the settings also may be changed remotely, using the main menu command of the Teacher Console **N -> Options -> Client Options**.

How to use Net Control 2 software

To use Net Control 2 software, first you need to install the Instructor components of the software on the teacher (instructor) computer; then install the User components of the software on user (student) computers; for Professional Edition you also need to install the Connection Server component on the server computer.

The detailed information on how to install, deploy and configure the software you can find in the Installation and Configuration Guide, which is available on our website:

<https://www.netcontrol2.com/downloads>

The Teacher Console

The Left toolbar

The **Left toolbar** provides access to connection and group management features:



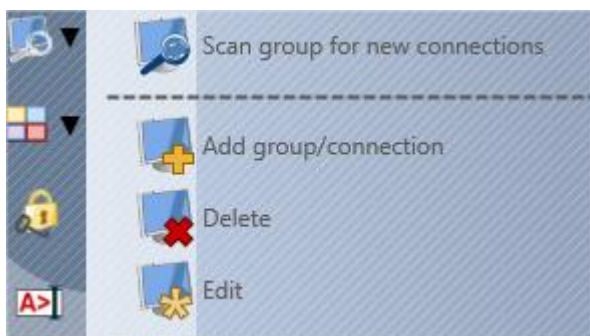
Refresh connections – reopens existing connections and refreshes the list of connections. This command may be used to close lost connections, which the operating system was unable to determine as disconnected, for example.

[PRO] In Professional Edition, when used on Groups tab, it refreshes the list of groups.



Scan. [STD] Classroom Edition only. Use this button to scan the network for available user computers using various methods. For detailed information on how to scan the network, please refer to the **Chapter D** of the **Installation and Configuration** guide.

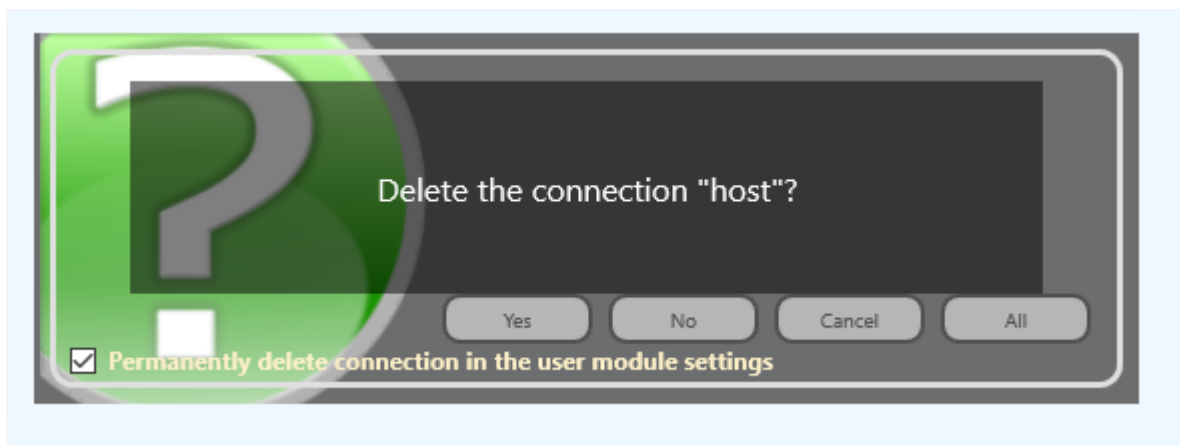
The button's submenu provides access to additional commands:



Scan – the same action as the **Scan** button provides.

Add – creates a new group (on Groups tab) or direct connection (on Connections tab). The direct connections created with this command are stored on the teacher computer and require the connection password specified in the Instructor Module settings (N – Options – Options; Connections page), which should correspond to the connection password set up on the student computers.

Delete – deletes a group or connection from the connections list. If the **“Permanently delete connection in the user module settings”** option is enabled, this command also changes settings of the User module and removes the connection reference to this Instructor computer from the User module settings.



Modify – modifies the selected connection or group, including the connection name, color label, avatar, description and so on.



View as Thumbnails – switches the view mode of the connections list: the button itself shows the connections as thumbnails of the student computer's desktop; the button's submenu commands show connections as **avatars**, big and small **icons**, camera **snapshots**. Additional commands are used to configure the sort and layout modes. Detailed information on the view modes is available in the **Installation and Configuration** guide.



Lock the Console – use this button to lock temporarily the Teacher

Console. The unlock password, which is required for unlocking the console, should be set up in the Instructor Module settings, **N – Options – Options; Interface** page.



Command Console – opens the command console. The console is used primarily for diagnostics and troubleshooting purposes.



Select random – selects a random connected computer in the connections list.



Color groups – the color groups may be used to create subgroups of users. Just select one or several connections in the list and assign them one of the color groups (red, yellow or green). Now, to select computers of the group, just click the respective color group button again. The button's submenu commands may be used to re-assign computers of the group.



Student Group Manager – opens the Student Group Manager window. Using this feature, the Instructor can join several Users into a separate student group and assign a leader of the group from one of the selected students. The leader can broadcast his/her screen to other students of the group, control computers of the group, initiate chats etc. For more information, please refer the [Student Groups](#) chapter.

The Bottom toolbar



The Bottom toolbar includes **tab buttons** that provide access to the groups list (**Groups** tab), connections list (**Connections** tab), About panel (**About** tab),

and tool-specific panels, available when you are using the respective tool or feature.

Using the trackbar of the toolbar, you can change the size of thumbnails.

Use the **Computer Name View** and **User Name View** buttons to change on how the connections will be named in the connections list.

Using the **Arranged/Free View** button, you can change the layout mode for the connections in the connections list.

The Top toolbar

The **Top toolbar** is the main toolbar of the Instructor module that provides access to the most important tools and features.

The Top toolbar includes the **N menu**, *tools and features* placed on tabs, the *quick status bar*, and the *auxiliary tools*. In addition, in the *Plan playback* mode, this panel includes the *Planner panel*.

N menu (the main menu)

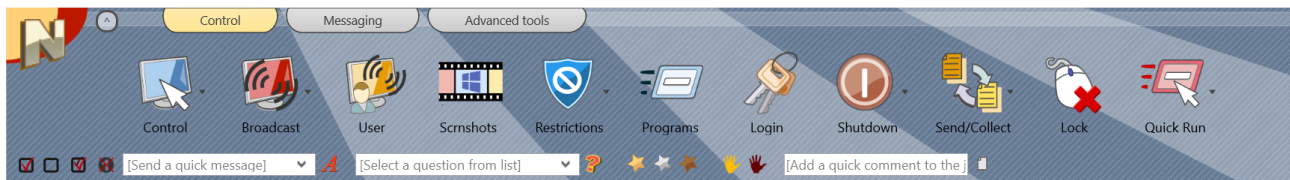


The main menu of the program (N menu) provides access to settings of the Instructor and User modules, workspace- and connection management features and settings. The commands of the N menu are described below, in the N menu Chapter.

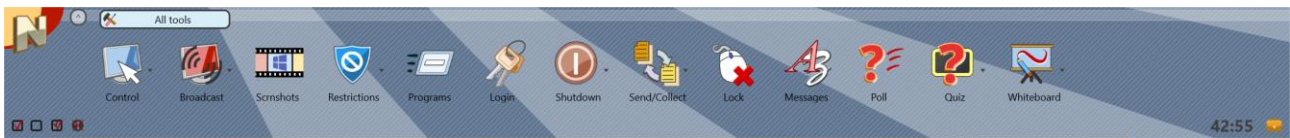
Tools

The Tools panel provides access to the most important tools and features of the Instructor module. The appearance of this panel and the set of tools displayed on the tabs depends on the interface mode:

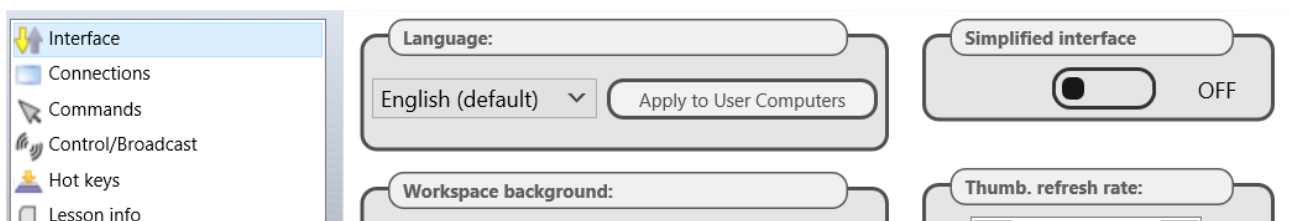
- **Standard mode** provides quick access to more than 30 tools displayed on three tabs (**Control**, **Messaging**, **Advanced Tools**). The auxiliary tools panel below the main tools provides quick access to additional tools and features.



- **Simplified interface mode** provides access to 13 tools on one toolbar without tabs, other tools are available through **All Tools** button. The auxiliary tools are not displayed.

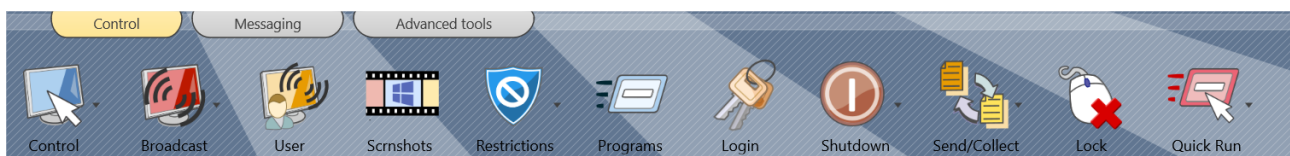


To enable or disable the simplified interface mode, in the teacher module settings (**N menu – Options – Options**); **Interface** page, use the **Simplified interface** switch:



Tab “Control”

The tab “Control” provides access to controlling and monitoring features:



Control – opens a remote assistance session. The Instructor can help Users remotely, controlling their computers with the keyboard and mouse, together with the User, so the User can observe all actions performed by the Instructor on the computer. This command may be applied to several computers at the time, in this case the Instructor can see one computer but control all selected

computers.

The button's submenu provides access to additional modes:

Control (one window) – when several User computers selected, all them are opened in one Remote Desktop window, the Instructor can switch between computers using the buttons of the Remote Desktop window's toolbar.

Control (separate windows) – when several Users selected, a separate Remote Desktop window will be opened for each student.

View – the same as the command "Control (one window)" but enables the view only session by default, i.e. Instructor can view student computers realtime, but cannot control them.

Close – closes the remote assistance sessions on Instructor and User computers.

Broadcast – shares the Instructor's screen with selected Users.

Broadcast button's submenu provides access to additional features:

Broadcast Instructor's Screen – the same as clicking the Broadcast button.

Broadcast User's Screen – shares the screen of the selected User with other Users.

Close – closes Broadcast Desktop sessions and viewers on Instructor and User computers.

Show Viewer – shows Broadcast Desktop Viewer window on Instructor computer.

Browser Broadcast only – broadcasts the Instructor's screen over the network using http protocol, so students can use any Internet browser on their computers or devices to watch the Instructor's desktop.

User – the same as **Broadcast User's Screen** command of **Broadcast** button's submenu: shares the screen of the selected User with other students.

Screenshots – displays screens of student computers, one or several

screenshots at a time.

Restrictions – using the tools of Restrictions window, the Instructor can apply different restrictions to User computers: limit access to undesirable websites and applications, mute speakers, disable external storage devices and printers.

Programs – allows managing applications on student computers, open programs, documents and web links, manage system services.

Login – login students on their computers remotely in a few clicks.

Shutdown – turns on and off User computers, makes possible to reboot them or switch to power saving modes.

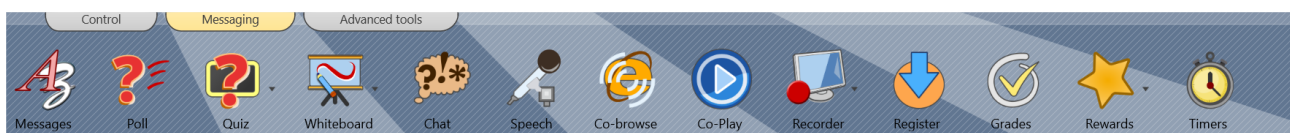
Send/Collect – Instructor can send files to Users and collect them back in a few clicks.

Lock – temporarily locks and unlocks User computers.

Quick run – using this tool the Instructor can create buttons for quick launch of certain applications on User computers.

Tab “Messaging”

This tab provides access to teaching, messaging and communication features.



Messages – allows sending text messages, images or sound files; speak some text on User computers using system text-to-speech features, control the sound volume.

Poll – performs polls on User computers and shows immediate statistics on the poll to the Instructor.

Quiz – allows creating various quizzes and sending them to Users.

Whiteboard – provides access to the virtual whiteboard.

Chat – opens the chat session with users.

Speech – provides access to speech and camera features.

Co-browse – using this tool, the Instructor can browse the web together with Users: all pages opened by the Instructor will be synchronously opened on User computers

Co-Play – plays multimedia files on User computers synchronously with the Instructor.

Recorder – provides access to Desktop Recorder tools:

Create Desktop Record – records actions on the screen to a DRR file for further playback.

Play Desktop Record – plays the selected DRR file on the Instructor's computer.

Play Desktop Record on User computer – plays a DRR file on User computers. It is assumed that the file is already placed on the User computers.

Send Desktop Record and Play – sends the selected DRR file to students and play it on the User computers.

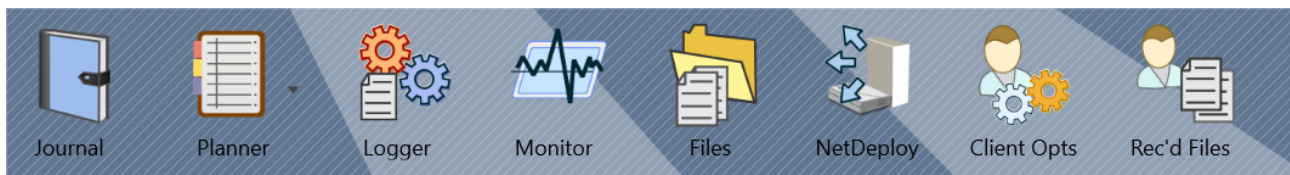
Register – performs registration of students in the classroom: prompts Users to enter their name and other information.

Grades – allows managing grades of students on the lesson.

Rewards – using this tool, the teacher can encourage students in class by giving out gold, silver and bronze stars.

Timers – using this tool, the Instructor can start different timers on student computers.

Tab “Advanced Tools”



Journal – provides access to the journal that includes information about the lesson: the list of registered students, events occurred during the lesson: polls, quizzes, grades, comments made by the Instructor etc.

Planner – using this tool, the Instructor can create lesson plans as a set of timed events; run and manage the plans.

Logger – enables logging on User computers of different events: running programs, visited web links, system events. Later such logs may be sent back to the Instructor using this tool.

Monitor – enables the event monitoring: the Instructor can watch applications running on User computers at the moment, visited web links and other realtime information.

Files – provides access to file management features.

NetDeploy – allows deploying the student module on computers in the local network.

Client Options – changes settings of the User module for selected computers.

Received Files – provides access to files sent to the Instructor by Users.

Detailed description of the tools is provided in this guide below.

Other elements of the Top toolbar



using this button in the top-lefthand corner of the toolbar, the Instructor can move descendant windows of the teacher console that are currently hidden behind the main window to the front, showing them over the main window.

The quick status panel



In the status panel the Instructor can specify any quick information about the lesson. The text of this status will be shown in the Student Console. To change

the status, double click on the text.

Quick tools:



The Quick tools panel provides quick access to several often-used features.

Buttons and panels of the Quick tools toolbar:

- select all connections;
- clear selection of connections;
- invert selection of connections;
- clear over thumbnail-marks (help requests, poll results);
- send a **message** to students. The message will be displayed in a full-screen window with the default background, if you need to send a more customized message, please use **Message** tool;
- select and send a previously stored **question**, prepared with **Poll** tool;
- send **rewards** (gold, silver, bronze);
- accept the **"raised hand"**;
- **reset the "raised hand"** statuses;
- add **quick comment** to the journal.

Right panel

The **Right panel** is an optional panel that is disabled by default. The Right panel contains the *Rated Commands List*, which is created on a base of rating of tools (i.e. the most often used tools will be grouped at the top of the list) and *Custom Commands List*, which may be customized by the Instructor, using the main menu command **N -> Options -> Options**; on the *"Right Panel"* tab.

To disable or enable the **right panel**, please click the main menu command **N -> Options -> Options**. On the *Right Panel* tab, enable or disable *"Show right panel"* option and click the OK button. To disable only the Rated Commands list or the Custom Commands list enable

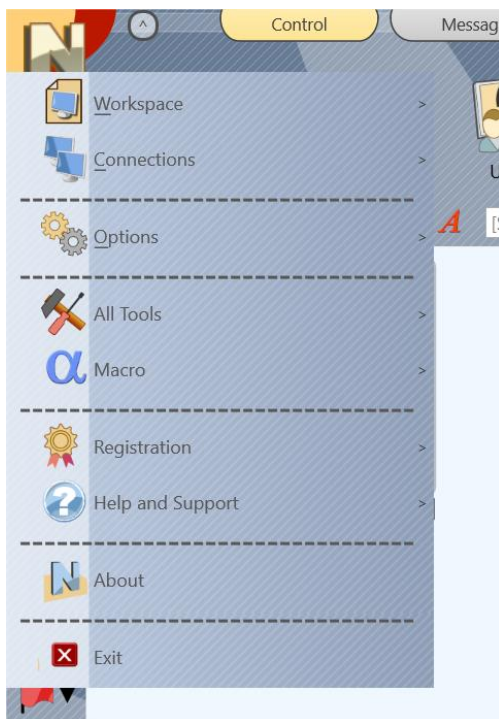
or disable the respective option in this group.

Main Menu

The main menu provides quick access to the Net Control 2 workspace management functions, connection management functions, settings, the product registration features, the help and update routines.

To open the **Main menu** please click N button at upper left-hand corner of the main window of the Teacher Console.

[STD] Workspace



The Workspace – is a list of Net Control 2 groups and connections including additional information (position of a thumbnail on the screen, membership in the color groups etc.).

New – creates a new, empty workspace.

Open – opens a workspace from a file.

Save Default – saves the current workspace as a default workspace. The Default workspace will be loaded automatically at the program start up.

Save As – saves current workspace using file path and name specified by user.

For more information regarding connections and workspaces please see the “**Workspace operations**” chapter of the **Installation and Configuration** guide.

[STD] *Connections menu*

Search – scans the local network for available connections. For more information please see Chapter D of the Installation and Configuration guide (Net Control 2 Classroom edition).

Add – add a new “direct” connection to the current group.

Delete – deletes selected connections.

Modify – modifies the selected connection.

Import connections from a CSV file – import “direct” connections from a text (CSV) file.

Options menu

Options – provides access to the teacher module configuration.

Client Options – for selected student computers, opens the client configuration window, making possible to configure the student module remotely.

View Options – opens connection list view options submenu. The menu commands set up sorting rules for connections and their appearance in the list. For more information please refer to the “**Teacher Console**” chapter of the Installation and Configuration guide.

View Profiles – [STD] [PRO] (Standard and PRO Editions only) – using View Profiles you can customize the teacher console appearance, for example, hiding some features from inexperienced teachers. For more information please see “**How to forbid access to some teacher module features**” chapter of the *Installation and Configuration* guide.

All Tools Menu

All Tools menu provides access to all available tools of the teacher console.

Macro Menu

Contains the list of macro commands, management tools for macro- and autoexecutable commands.

Macro commands – are customizable set of actions that may be applied to student computers (custom messages, a sequence of standard actions etc.).

Autoexecutable commands – are macro commands that will be scheduled on student computers for some time or system event and automatically executed at the specified time, even if no teacher computers are connected to the student at this moment.

For additional information please refer to [Macro Commands](#) and [Autoexecutable Commands](#) chapters below.

Help and Support

Bug Found – use this menu command to send a message to developers regarding the technical issue found.

Check for update – checks the update server for new versions of the software.

Update Client – remote update of the student module. Using this command you can send an updated version of the software to student computers and update it there:

- select student computers that should be updated;
- click this menu command;
- open the installation package (.exe) downloaded from our website;
- the software will be uploaded to student computers and updated there.

Registration

Register – (unregistered state) – allows to enter registration information.

Re-register – (registered state) – allows to reset the current registration information and re-register the software with a new registration key.

About - shows version information for the teacher module.

The Control tool: Remote Desktop features

Using Remote Desktop features teachers can help students remotely, from their place, controlling one or several student computers in real time, using the keyboard and mouse.



All actions that are applied by the teacher are visible to students; in addition, teachers can use special **annotation tools**, drawing directly on the student screen, making the teacher assistance more targeted to students and the teaching process more effective.

With the **Control** tool, you can work with **multiple computers at a time**, and actions may be applied either to one, currently visible computer, or repeated on all other controlled computers. This makes possible, for several scenarios, to install software or perform some system configurations on multiple computers at a time.

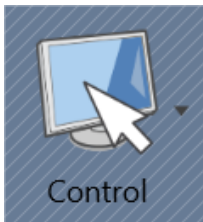
Unlike Windows Remote Desktop tools, with Net Control 2 remote desktop features **the screen is always shared** with the currently logged in student (or the session begins on the login screen if no users logged in the system).

During the remote desktop session, teachers can **save or print screenshots**, use common **clipboard**, **record** the whole session to a file **for further replay** on teacher or student computers.

When necessary for security reasons, or to avoid interference with students, teachers can **temporarily block the keyboard and mouse** of student computers during the session.

To start a remote desktop session:

- Select one or several user computers;
- On the **Control** page of the **Top toolbar**, click the **Control** button:



The button's submenu provides access to additional modes:

Control (one window) – when several User computers selected, all them are opened in one Remote Desktop window, the Instructor can switch between computers using the buttons of the Remote Desktop window's toolbar.

Control (separate windows) – when several Users selected, a separate Remote Desktop window will be opened for each student.

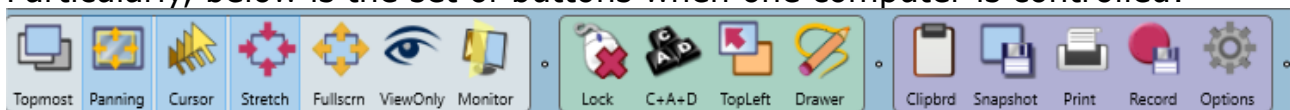
View – the same as the command **Control (one window)** but enables the view only session by default, i.e. Instructor can view student computers realtime, but cannot control them.

Close – closes the remote assistance sessions on Instructor and User computers.

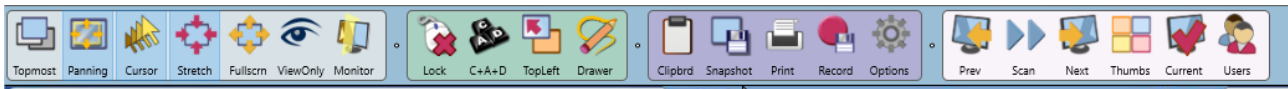
Remote Desktop viewer:

Modes and commands of the Remote Desktop Viewer window are controlled using the Top toolbar buttons. The appearance of the toolbar and its set of buttons depends on the current mode.

Particularly, below is the set of buttons when one computer is controlled:



The set of buttons when several computers are controlled in one window:



Topmost – when the **Topmost** mode is enabled, the **Remote Desktop Viewer** window will be placed on the top of all other standard (“non-topmost”) windows;

Panning – when enabled, **Remote Desktop Viewer** will automatically scroll the content of the **Remote Desktop** window, whenever the Instructor moves the cursor over the window, this mode works with the 100% scale mode only;

Shadow cursor– when enabled, the viewer will display the “shadow” mouse cursor in the actual shape and position of the cursor on the remote computer;

Fullscreen – when enabled, the **Remote Desktop** window will be expanded to the full-screen mode;

View-only mode – enables/disables the view-only mode. When enabled, the Instructor can view the desktop of the user computer, but cannot control it with the keyboard and mouse;

Stretched – when enabled, the contents of the **Remote Desktop** will be automatically resized to fit the window;

Monitor – in a multimonitor environment, using this button, you can switch between displays of the remote computer. By default the software uses the “primary” display as a source.

Lock/Unlock – locks the keyboard and mouse of the remote computer (works until the end of the remote session or when canceled with “Unlock” command);

Ctrl-Alt-Del – simulates Ctrl+Alt+Delete key combination pressing on the remote computer.

To top-left – moves the currently active window on remote computer to the top- lefthand corner of the screen. This feature is useful when the Instructor is controlling several computers at the same time and the user computers have different screen resolutions. Clicking this command forces the current window on all user computers to be arranged in the same position: in the top-left-hand corner of the screen.

Drawer – click to enable the drawer mode. For more information please refer to the **Annotation Mode** section, below;

Clipboard – enables or disables the shared clipboard. When enabled, any text information copied to the Clipboard on one computer will be available on another.

Snapshot and **Print** – makes a screenshot of the current remote screen and saves it to a file or prints, respectively.

Record – records the current session in a DRR (Desktop Recorder) file. Later, this file may be replayed or converted with Desktop Recorder tools.

Options – provides the way to change the current compression and performance settings to optimize image quality or increase the refresh rate. Here you can adjust the **compression level** (higher levels mean the better quality of the picture); the **scale factor** (sometimes it is useful to downscale the picture resolution of controlled computers that have ultra-high definition monitors to %-75%, to achieve significantly better performance and frame rates). We also recommend downscaling when you control computers that play videos full screen. The **Scan interval** option sets the time interval in seconds after which the viewer switches to another computer, when multiple computers are controlled.

The following buttons are only shown, when multiple User computers are controlled in one Remote Desktop Viewer window:

Previous – switches the view to the previous computer;

Next – switches the view to the next computer;

Scan – enables the **Scan** mode. The viewer will switch between controlled computers after a specific time interval (3 seconds by default). The interval may be changed using the **Options** button;

Thumbnails – display thumbnails of the controlled computers, click on a thumbnail to switch to the computer;

Current – when this mode is enabled, all the actions of the Instructor will be applied to the currently visible user computer only. Otherwise, the Instructor's actions will be applied to all the computers that are associated with this Remote Desktop session and the viewer.

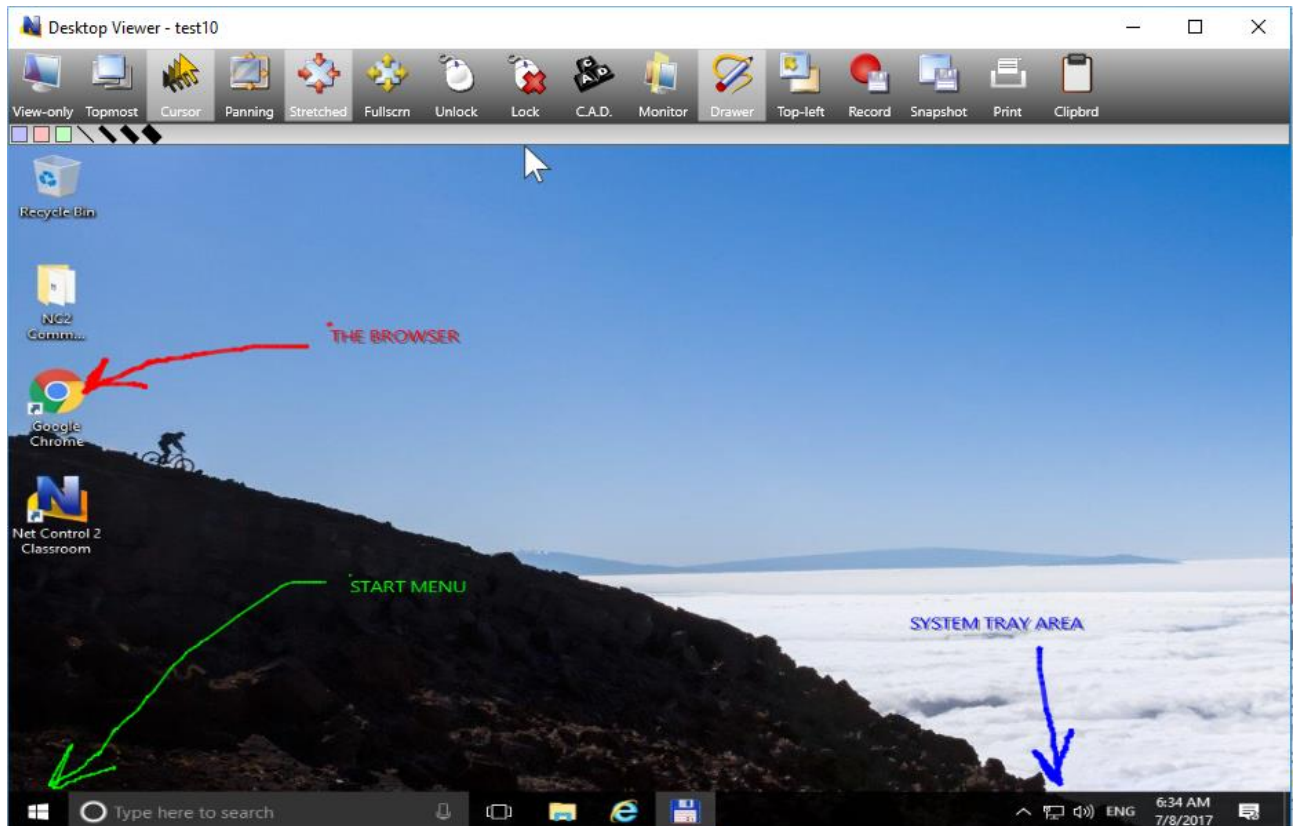
Users – use this button to see what user computers are connected currently to this viewer window. The currently visible user computer is marked in the list with a **red** button. By selecting a user in the list, you will be able to close its remote desktop session (the **Close** button), or to exclude this user from this window into a separate Remote Desktop Viewer window (the **Exclude** button).

Drawer Mode (Annotations).

The Instructor can use **Drawer mode** in **Remote Desktop Viewer** to make graphic and text annotations on the desktop of the user computer.

After switching to the **Drawer Mode**, the Instructor can draw directly within the **Remote Desktop** window, by pressing the left mouse button and moving the

mouse. You can also type a text from the keyboard. The drawing will be reproduced on the user computer.



Cursor flashing on the controlled computer

Sometimes users of controlled computers may notice that the cursor is flashing when an Instructor is controlling them remotely. This side effect appears only when the computer is actually in a Remote Desktop session, and disappears after the Instructor disconnects the machine. The same effect may appear on the computer, whose screen is shared with the **Broadcast Desktop** tool, described in the next chapter.

This side effect may appear on Windows computers only, and it depends on different factors (e.g. on the display adapter driver, supported hardware acceleration modes, system settings), and the software cannot determine

automatically whether the issue appears and if it needs to be corrected.

To prevent the cursor flashing:

On Instructor computer:

- Click the main menu command N – Options – Options;
- On **Control/Broadcast** page, enable the **Prevent cursor flashing** option.
- Click OK.

If the issue appears on User computers:

- Select computers in the teacher console;
- Click the main menu command N – Options – Client Options;
- On **Control/Broadcast** page enable the **Prevent cursor flashing in GDI mode** option and click OK.

Changes will be applied after restart of the Broadcast/Control session.

Broadcast Desktop: demonstrate the Instructor's screen to Users, or a screen of one of Users with others

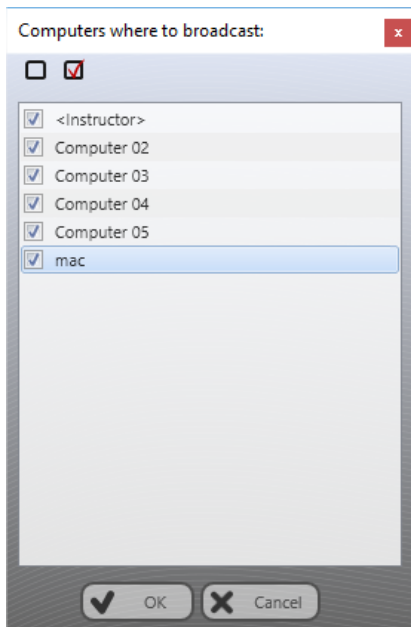
Broadcast Desktop tools provide the ability to demonstrate the Instructor's screen to users, or a screen of one of the users to others.

To broadcast the Instructor's screen to students, use the **Broadcast** button on the top toolbar:



To broadcast the screen of one of students, please *select* the student computer, whose screen should be shared, then use either the button **User** (available on the top toolbar in the standard interface mode), or the **Broadcast User's Screen** command of the Broadcast button's **submenu**; and then in the appeared window, *select the student computers* where the screen should be shown:





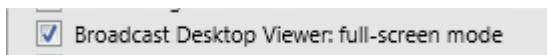
To close the Broadcast Desktop session (both the sender and the viewers), select student computers in the connections list and use the **Close** command of the **Broadcast** button's submenu.

To open the Broadcast Desktop Viewer window on the Instructor computer, to monitor the broadcast from student computers, please use the **Show Viewer**

command of the **Broadcast** button's submenu.

Broadcast Desktop Viewer may be displayed on User computers either in the *full screen* mode, making impossible switching to other applications during the broadcast session; or in a *window*, so users can work with other applications.

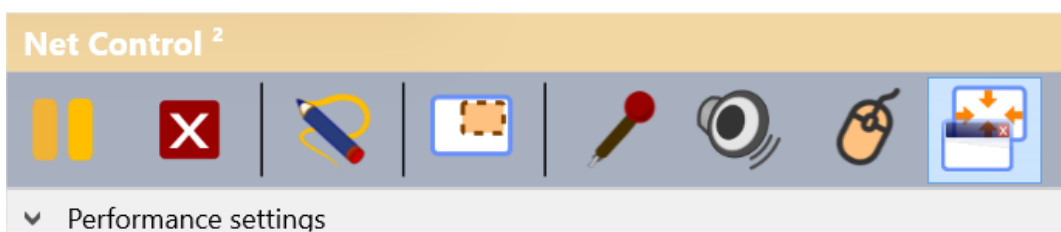
The full screen mode is used by default. To change the default window mode, in the teacher module settings (**N – Options – Options; "Control/Broadcast"** page), you need to disable the **Broadcast Desktop Viewer: full-screen mode** option:



The default mode just means how the *Broadcast Desktop Viewer* appears initially. The Instructor can switch between the full screen and windowed modes in the process of broadcasting.

Broadcast Desktop Toolbar

When a **Broadcast Desktop session** is started, on the source computer (which screen is displayed), the software will display the **Broadcast Desktop toolbar** at the top-right-hand corner of the screen:



Pause/Resume - pauses / restores the broadcast;

Stop – stops the Broadcast Desktop session. In the case, when clicking this button does not close the viewers on User computers (this may happen in the case of some network communication issues, when the connection between the Instructor and Users is lost), to close the session you can use also the **Close** command of the *Broadcast button's submenu*.

Annotate - enables the **Annotation mode**. In this mode, the Instructor or the User, whose screen is shared can annotate (draw or type text) right on the screen and Users will be able to see these annotations.

Select the capture area button allows to limit the area of the screen that should be shared and shown on User computers. The selected area boundaries will remain in effect until the computer is restarted or the area is reset, using the Reset button of this tool.

Enable /disable the microphone – enables or disables the microphone on the computer, so students will be able to hear the Instructor's or the User's whose screen is shared voice.

Broadcast the system audio – broadcasts the system audio of the sender's computer to students. The system audio means all the sounds that are playing on the computer by all applications of the computer.

Users can control this computer – when this mode is enabled, Users will be able to use the mouse and keyboard in the Broadcast Desktop Viewer window, and such actions will be reproduced on the Instructor computer (or the User computer, whose screen is shared).

Full screen / windowed mode – switches *Broadcast Desktop Viewer* on User computers between the full screen and windowed modes.

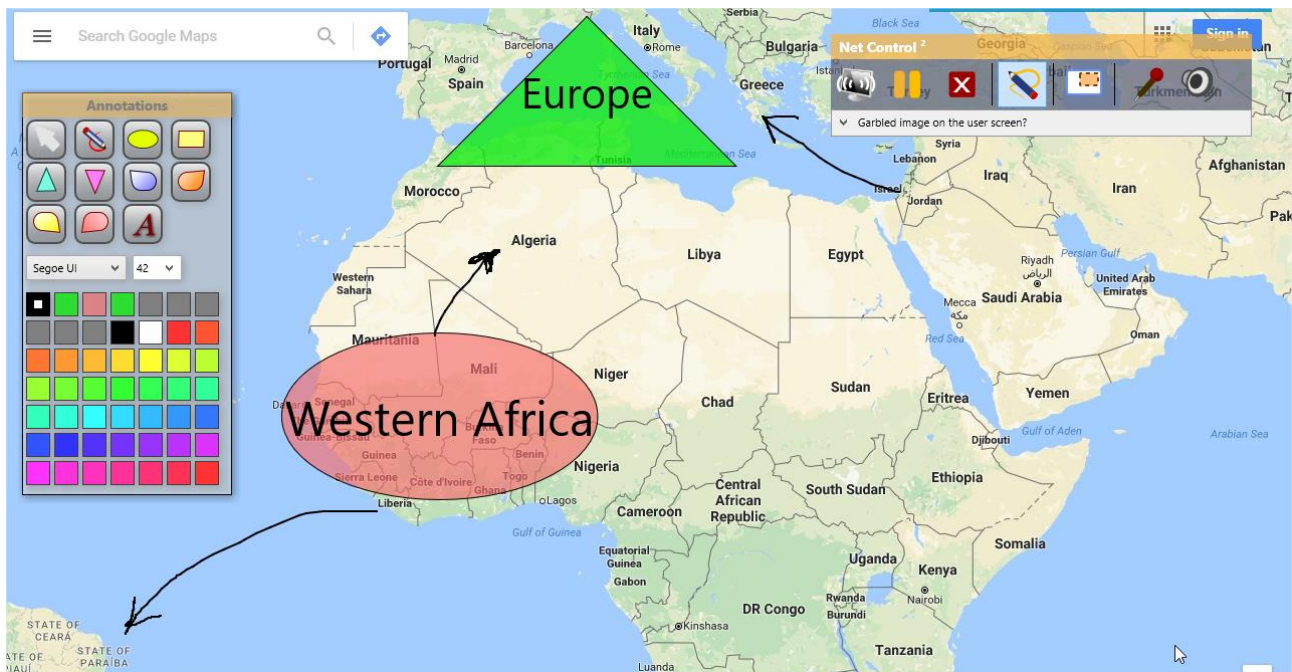
Annotations

Using the annotations, the Instructor or User, whose screen is shared, can draw on the screen or type some text, and such annotations will be shown on User computers in the Broadcast Desktop Viewer window.

To start the annotation mode, in the process of broadcasting, on the Broadcast Desktop toolbar, please click the **Annotate** button:



Another toolbar will open on the right-hand side of the screen. The tools of the toolbar allow drawing by hand, using primitives, type text and so on.



To close the annotation mode, just click the **Annotate** button again.

Browser View Mode

In addition to the standard broadcast modes, the Browser View mode allows showing a broadcast session through an Internet browser. This mode maybe useful if it is necessary to show the Instructor's screen on devices that do not support Net Control 2 software or where the software is not installed.

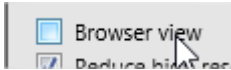
When this mode is enabled and a Broadcast Desktop session is started, Users can type the Instructor computer's address as follows:

<http://teacher:1080>

where **teacher** is the Instructor computer's name (or an IP address) in the network. You can determine this name in the teacher module, on **About** tab, clicking the **IP address/DNS name** button.

1080 is the default Browser View port, may be customized in the Broadcast Desktop settings as described below.

The Browser View mode may be enabled for regular broadcast modes, in this case the browser broadcast session will be started together and at the same time with the regular broadcast sessions. To enable this mode, in the teacher module settings (**N – Options – Options; Control/Broadcast**), enable the **Browser View** option and click **OK**:



Broadcast Desktop settings

Channels

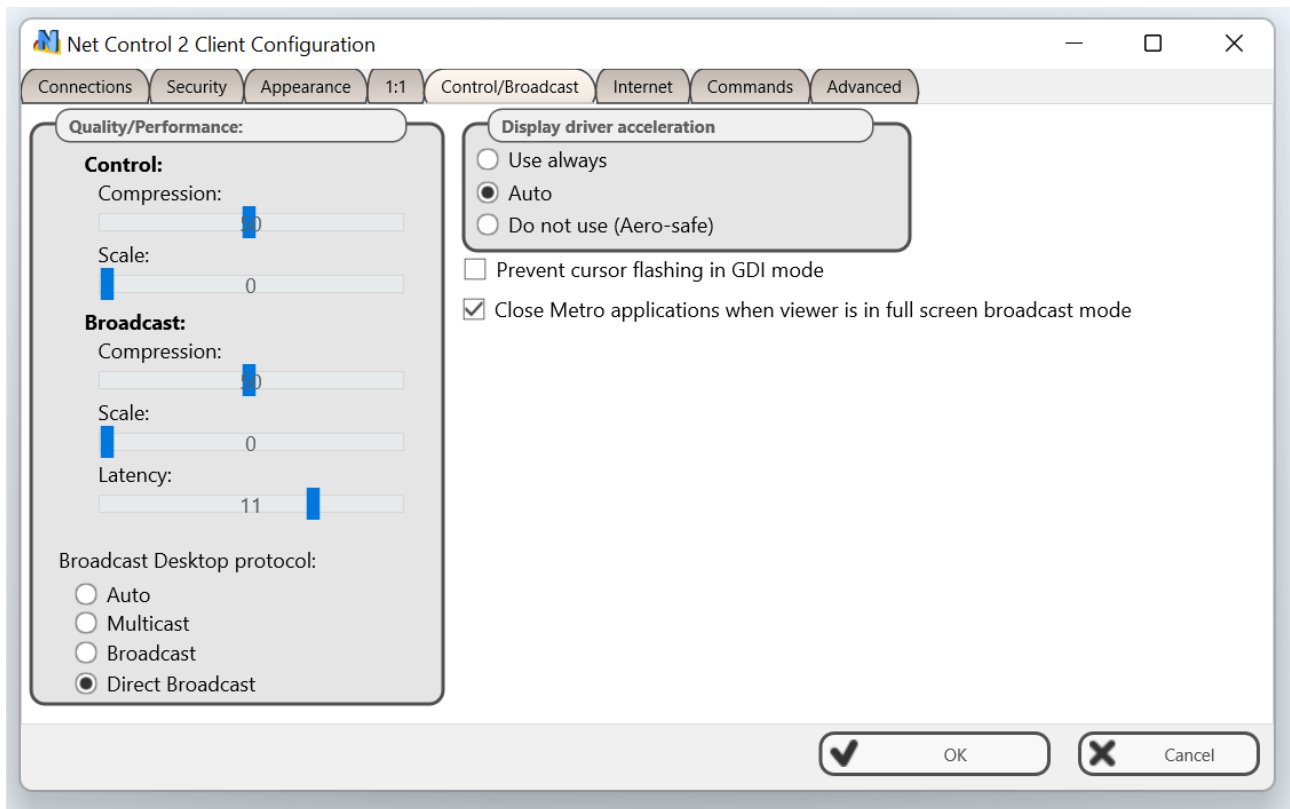
The **Broadcast Desktop** tool in its work uses some network ports that should be unique for each Broadcast Desktop session. Therefore, to exclude interference between several Broadcast Desktop sessions, **each teacher computer in the network should use its own Broadcast Desktop channel**.

The Broadcast Desktop channel may be assigned in the process of installation, and changed at any moment in the teacher console as described below.

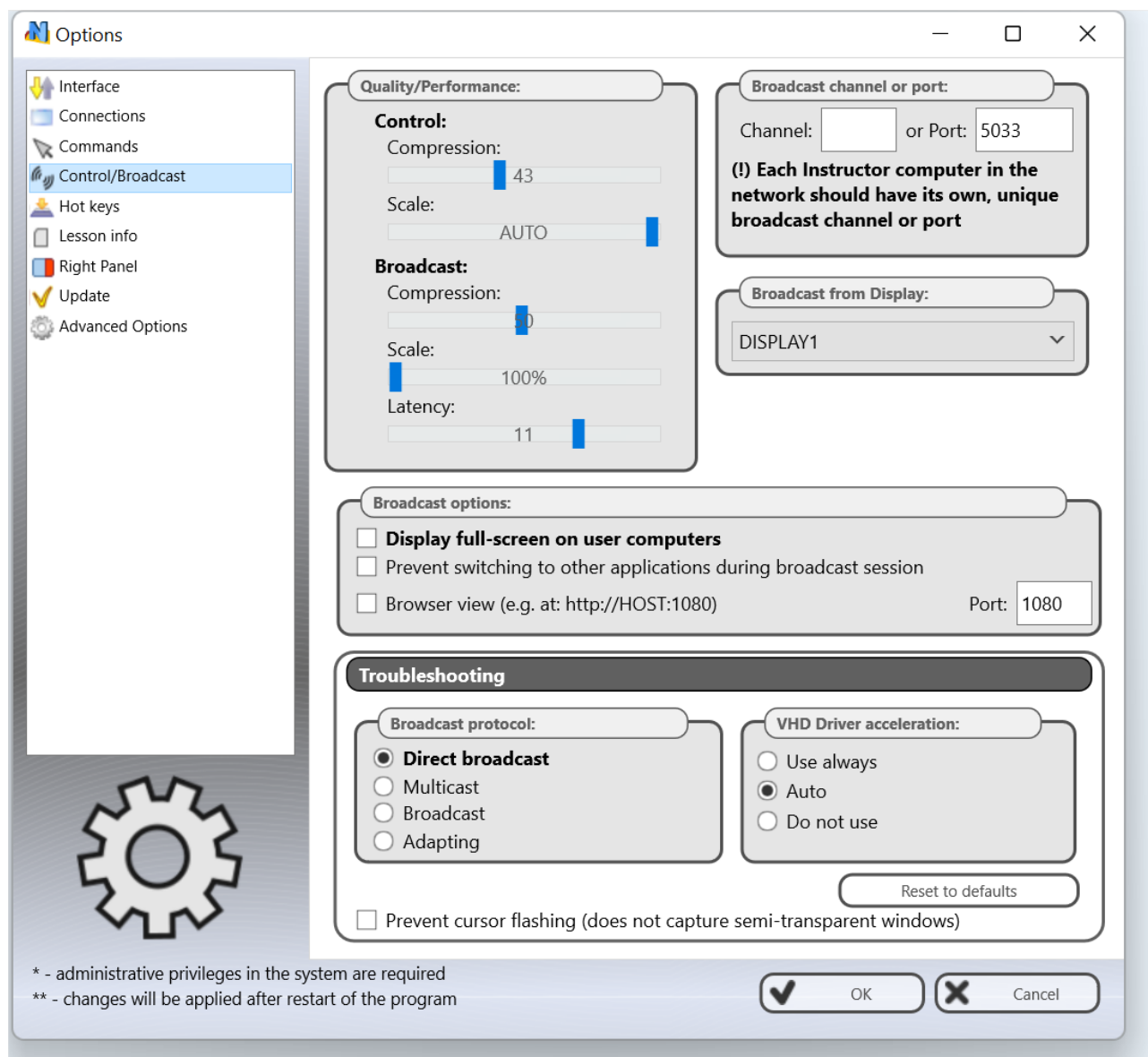
Settings

Broadcast Desktop settings should be configured on the *source* computers (the Instructor computer settings are used when the Broadcast Desktop session is started on the Instructor computer; the User module settings are used when a screen is broadcasting from the User computer).

The User module settings may be changed remotely from the teacher console: select the student computers whose settings you need to modify, use the main menu command of the teacher console **N – Options – Client Options**. The Broadcast Desktop and Remote Desktop settings are provided on the Control/Broadcast page:



To configure Broadcast Desktop settings of the teacher module, use the main menu command **N – Options – Options**; the **Control/Broadcast** page:



The **Quality/Performance** section allows you to set up compression and scale settings that help to improve the performance or image quality of the *Broadcast Desktop* tool (the **Broadcast** group of settings) or the *Remote Desktop* tool (the **Control** group of settings). **Compression** means the image compression level. Higher values mean better quality but worse performance. **Scale** sets up the scale factor (100%, 75%, 50%, 38%, 25%), reducing the output resolution. Low scale values may significantly improve performance and are typically used when broadcasting full screen videos or images that do not require high resolutions.

The **Latency** option is used with the Broadcast Desktop tool, to adjust the transfer speed when some connection issues occur during the broadcast. If image appears on student computers with a significant delay, we recommend to

move the slider position to the right (10-12).

Broadcast Desktop protocol settings determine the network protocol used for data transmission. Usually, you only need to change these settings **in the case of some performance degradation** of the Broadcast Desktop tool.

The default and recommended mode is **Direct Broadcast**. Usually, this mode provides better performance, but may generate significantly more network traffic for its operation than the Multicast and Broadcast protocols.

Multicast protocol generates much less network traffic than Direct Broadcast and provides good performance but may be not supported by certain network configurations.

Broadcast protocol is an alternative to Multicast and when Direct Broadcast does not provide good performance. The system will use UDP Broadcast protocol. If you need to broadcast to several VLANs, you need to specify Broadcast addresses of subnetworks in the **Custom UDP Broadcast subnetworks** list of Advanced Options page of the teacher module settings.

Display full screen on user computers – enables the full screen mode for Broadcast Desktop Viewer on student computers by default. The default mode may be changed, using the respective button of the Broadcast Desktop toolbar.

Prevent switching to other applications during the broadcast session – when enabled, Users will not be able to switch to other applications while viewing a broadcast session.

Browser view – enables the Browser View mode described above.

VHD Driver acceleration – enables or disables the Video Hook Driver acceleration. The recommended value is **Auto** or **Enabled**. Disabling the acceleration may significantly affect the performance. Please do not change this mode unless you experience some compatibility issues with the screen capturing.

Broadcast from display – sets up a display in a multimonitor system, which

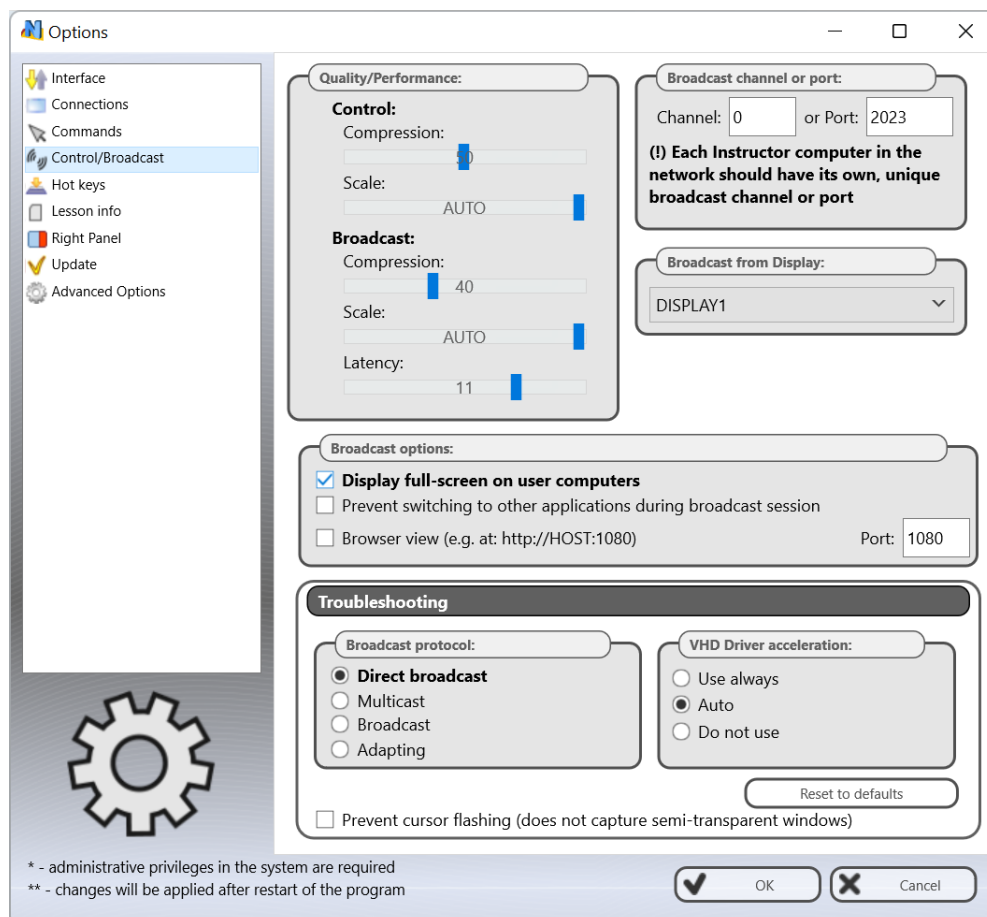
will be used for The primary display is used by default.

Prevent cursor flashing – enable this option if you experience cursor flashing in Broadcast Desktop or Remote Desktop sessions. Please refer the **Cursor flashing on the controlled computer** section of the previous article.

Broadcast troubleshooting

1. The teacher's screen is not shown on student computers.

Click the teacher module options **N – Options – Options;** on **Control/Broadcast** page, try to adjust the Broadcast Desktop settings according to the screenshot below:



Click OK, restart the Broadcast Desktop session.

Restart the Broadcast Desktop session.

If the issue still persists, please contact the support: <http://ask.netcontrol2.com>

Screenshot View



The screenshot view provides a way to monitor student computers viewing their desktop screenshots, cycling through the monitored computers. With this tool you can see one, 4, 16 or 64 screenshots at once. The tool requires much less network and processor resources than the **Remote Desktop / Control** tool and is suitable for long-time monitoring over the classroom.

You can control the tool options with the toolbar:



Screenshot refresh interval – the time interval, in seconds (0-30), which determines how often the screen is updated.

Flip through interval – the time interval, in seconds (0-30), after which the

view is switched to a next computer or a set of computers (if more than one computer is displayed).

Mouse/keyboard control – if enabled, any mouse clicks and key presses on the screenshot are reproduced on the student computer. This control mode is available only when the tool is not in the full screen mode and is scaled for showing one screenshot at a time.

Copy to Clipboard – copies the screenshot to the Clipboard.

Save – saves the screenshot to a file.

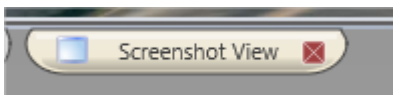
Print – prints the screenshot.

Scale – allows showing 1, 4, 16 or 64 screenshots at a time on one screen.

Full screen – switches to the full screen mode.

Previous/Next – switches to a next or a previous computer.

To close the mode, just close the **Screenshot View** tab at the bottom of the teacher console:



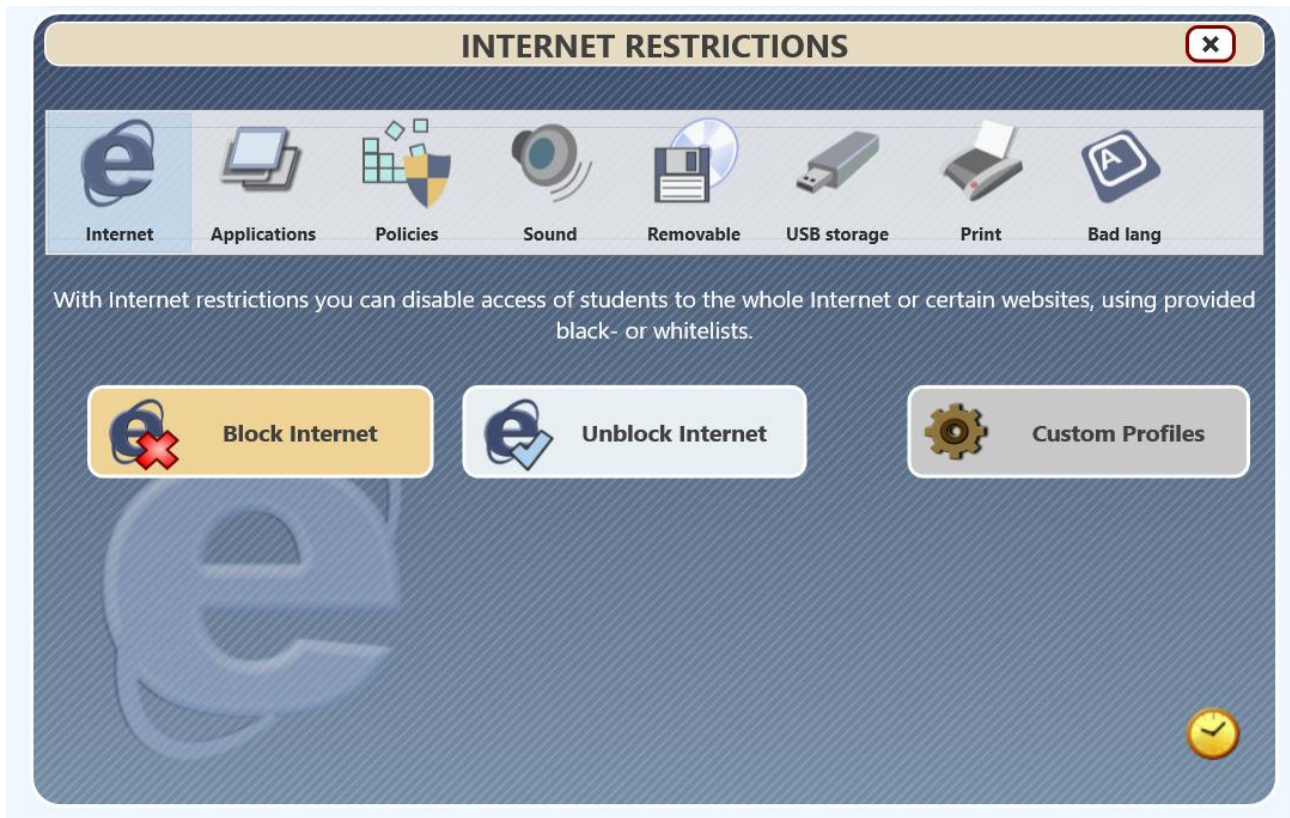
Restrictions



Using the **Restrictions** tool, Instructors can restrict access of students to web-resources, applications, system objects and settings (Policies), printing services,

removable and USB storage devices, system audio, and provides access to the Bad Language monitoring tool.

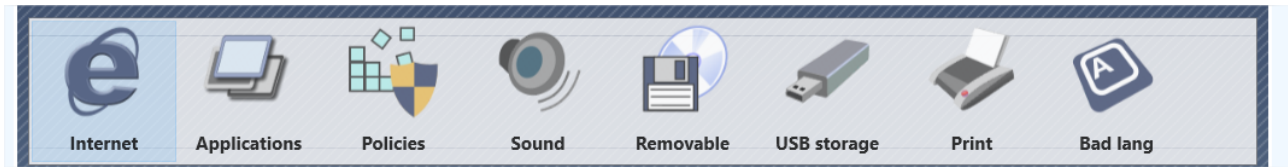
All restrictions, except for Policies and the Bad Language monitoring settings, may be applied either permanently or temporarily for a certain time.



To apply a restriction, select User computers in the computers list, click the **Restrictions** button on the top toolbar (the **Control** tab):



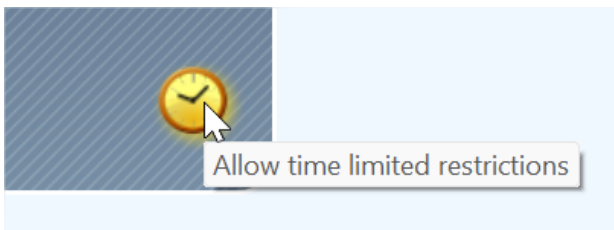
Select a category:



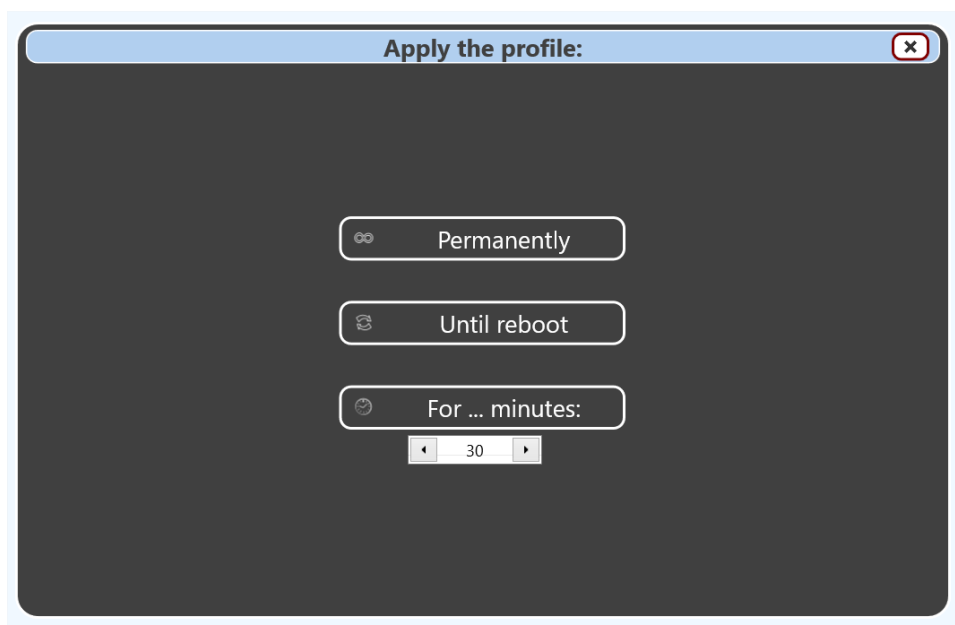
Each category has two or three buttons: **enable restrictions**, **disable restrictions**, and **custom profiles**.

With *Custom Profiles*, the Instructor can configure different restriction profiles for different cases, and apply the necessary profiles when needed. The software includes a set of predefined profiles (as examples), which may be freely edited.

The **Timed restrictions** button enables time-limited restrictions:



When the option is enabled, before applying a restriction that may be applied temporarily, the program prompts to specify time limits for the profile:



Permanently – the restriction will be applied permanently, without time

limitations, until a next profile of the same type is applied;

Until reboot – the restriction will be in effect until reboot of the student computer;

For ... minutes – the restriction will be in effect until the specified time in minutes elapses.

After the temporary restriction time expires, the last permanent restriction profile of the same type will be restored.

Internet restrictions



Block Internet disables access to all websites on selected student computers.

Unblock Internet enables access to all websites on the selected student computers.

Use **Custom Profiles** to customize restrictions.

After applying any profile, **it may take 15-30 seconds on student computers before the profile is updated and reloaded**. After the profile is applied, students may need to refresh the currently opened in the browser page, to reload it with the new profile settings.

Web restrictions work in Google Chrome, Microsoft Edge (both the legacy and the new Chromium-based Edge), Mozilla Firefox, Internet Explorer, Opera and Safari. Please read the **Compatibility** section below to learn how to add compatibility for other browsers.

To create a new Internet restriction profile or send an existing one, click the Custom Profiles button,



Select a profile from the list and use the **Apply now** button.

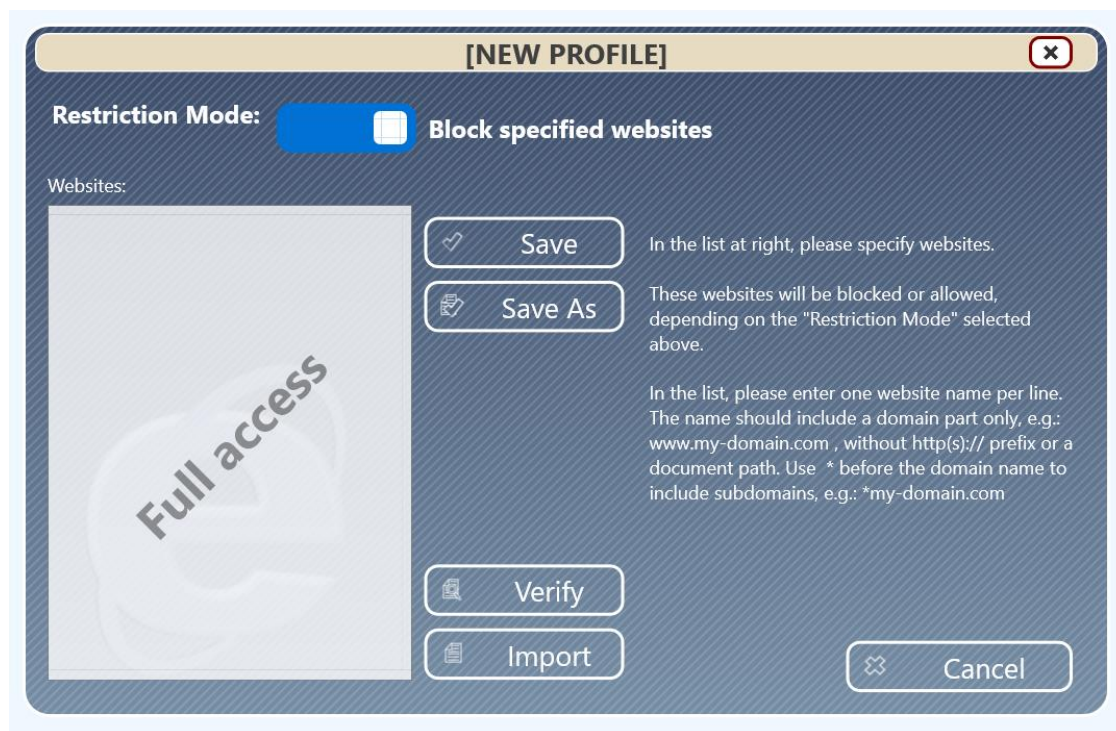
Use the **New**, **Edit** and **Delete** buttons to create a new profile or to modify the existing one.

The buttons at the bottom of the window allows sending profiles from non-standard locations: **from a local file**, from a **file on the User computer**, or allows **copying the files** to User computers to use them in macro commands, for example:



When you are creating a new profile or modifying an existing one, the following

window will appear:



The **Restriction Mode** switch – if enabled, the specified in the list websites will be blocked (the blacklist); if the option is disabled, the specified websites will be enabled, and all not specified in the list websites are automatically disabled (the whitelist).

Providing the websites in the list, you need to follow the following rules:

- The website should **not** include the protocol prefix **http://** or **https://**
- The website should include the *domain name only*, please do not specify the document path. For example, for the URL: <https://somydomain.com/here/is/thedocument.php?and=params> you need to specify **somydomain.com** only.
- Many websites use subdomains: mail.domain.com, www.domain.com, domain.com, video.domain.com are four different websites that should be added to the list separately. If you need to cover all possible subdomains of a website, please add an asterisk before the domain name, as *domain.com

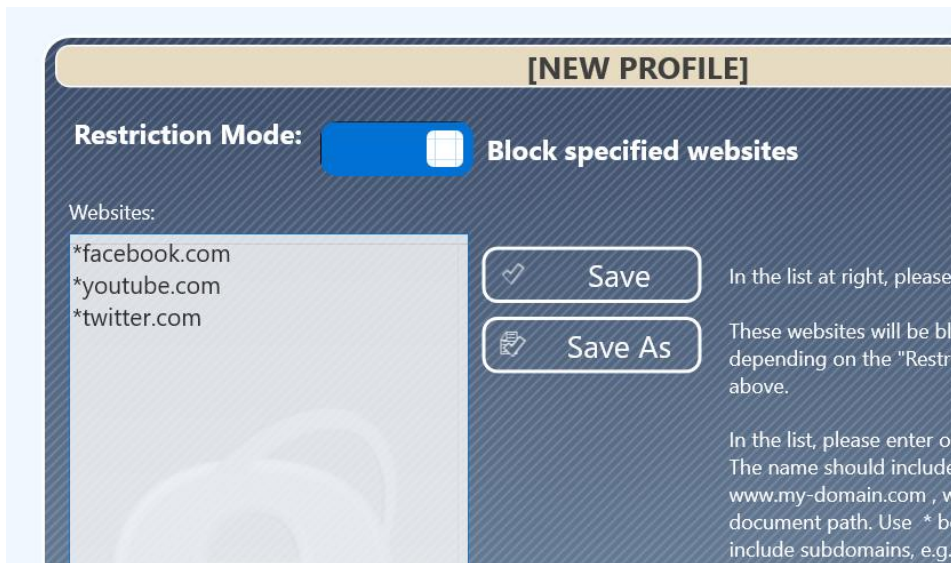
After you added the websites to the list, you can use the **Verify** button to check the entries for the above specified rules.

You can also import websites from a text file, using the **Import** button.

Once you have changed the profile, click the **Save** button to save it under the

same name, or **Save As** to save it under some new name.

Example 1. The profile that blocks YouTube, Facebook and Twitter:



Example 2. The profile that allows only myschoolnetwork.com and YouTube. All the rest websites are disabled:



After you save the profile under some new name, it appears in the profiles list, where you can select it and apply to the selected student computers using the **Apply Now** button.

The default installation of Net Control 2 software includes several pre-defined profiles, which you can edit or use as an example:

Disable Internet Access – disables access to all websites;

Enable Full Access – enables full access to all websites;

Disable `www_mydomain_com` site – the profile disables access to one website (`www.mydomain.com` as an example);

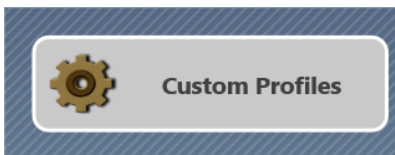
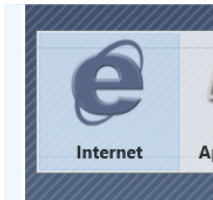
Enable `www_mydomain_com` web-site only – an example, enables access to `www.mydomain.com` web-site only;

Example 3. Enable all websites, except for `site1.com` and `site2.com`. Step-by-step.

1. Click Restrictions button on the top toolbar



2. Then click **Custom Profiles** in the **Internet** section:



3. Create a **New** profile:



4. The **Restriction Mode** switch should be enabled ("Block"):



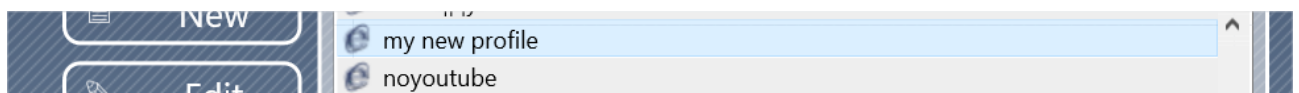
5. In the websites list, add `*site1.com` and `*site2.com`:



6. Save the profile:



7. The profile appear in the list:



8. Select it and click **Apply Now**:



Example 4. Disable all websites, except for site1.com and site2.com. Step-by-step.

1. Repeat the steps 1 – 3 of the previous example.
2. **Disable** the **Restriction Mode** switch ("allow"):



3. Repeat the steps 5-8 of the previous example.

Compatibility

By default, Net Control ² uses a complex user mode driver to intercept web requests sent to browsers. Sometimes, third party applications and services (including parental control software, network filters) use an extra layer of their own protection that may interfere or disable Net Control ² restrictions.

For such cases, when third party software or system settings prevent Net Control ² from accessing browsers, our software supports several alternative protection modes for Internet Control Engine ("**ICE**"). You can switch between the modes using the student module settings.

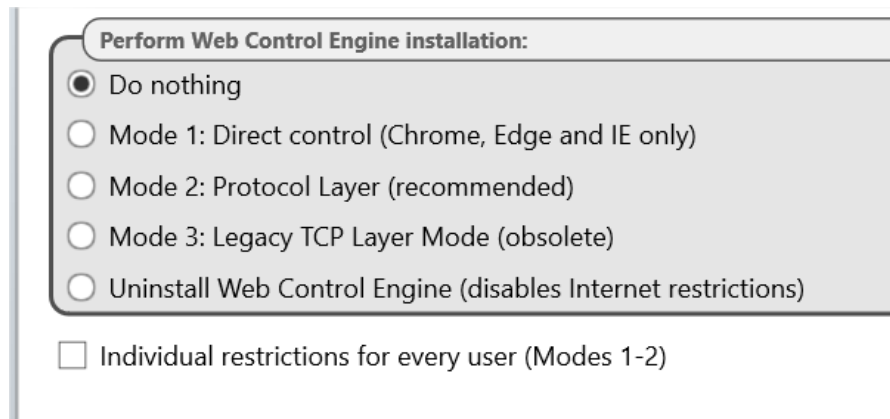
- ☐ Mode 1: Direct control (Chrome, Edge and IE only)
- ☐ Mode 2: Protocol Layer (recommended)
- ☐ Mode 3: Legacy TCP Layer Mode (obsolete)

Mode 1 – is recommended if the default installation of Net Control 2 software does not allow blocking websites when a restriction profile is applied, i.e. if the default *Mode 2* does not work in your environment. In this mode, ICE controls browsers directly from the student module service. The restrictions work in Google Chrome, Microsoft Edge and Internet Explorer only. Other browsers (Firefox, Opera etc) will be automatically disabled if some restrictive Internet profile is applied, so users will not be able to run these browsers; access to the browsers will be restored after disabling the restrictions.

Mode 2 – the *default and recommended* mode, restrictions work in all major browsers (Google Chrome, Microsoft Edge, Mozilla Firefox, Opera and Safari).

Mode 3 – this special mode is reserved for compatibility with older versions of Net Control 2 software (versions 9.xx and below), keeping the same restriction model. **We do not recommend using it for new installations.**

To switch the mode, select student computers, click the main menu command of the teacher console **N – Options – Client Options**, on the **Internet** tab enable the respective mode and click OK. Changes will be applied after restart of the student computers.



Perform Web Control Engine installation:

- ☒ Do nothing
- ☐ Mode 1: Direct control (Chrome, Edge and IE only)
- ☐ Mode 2: Protocol Layer (recommended)
- ☐ Mode 3: Legacy TCP Layer Mode (obsolete)
- ☐ Uninstall Web Control Engine (disables Internet restrictions)

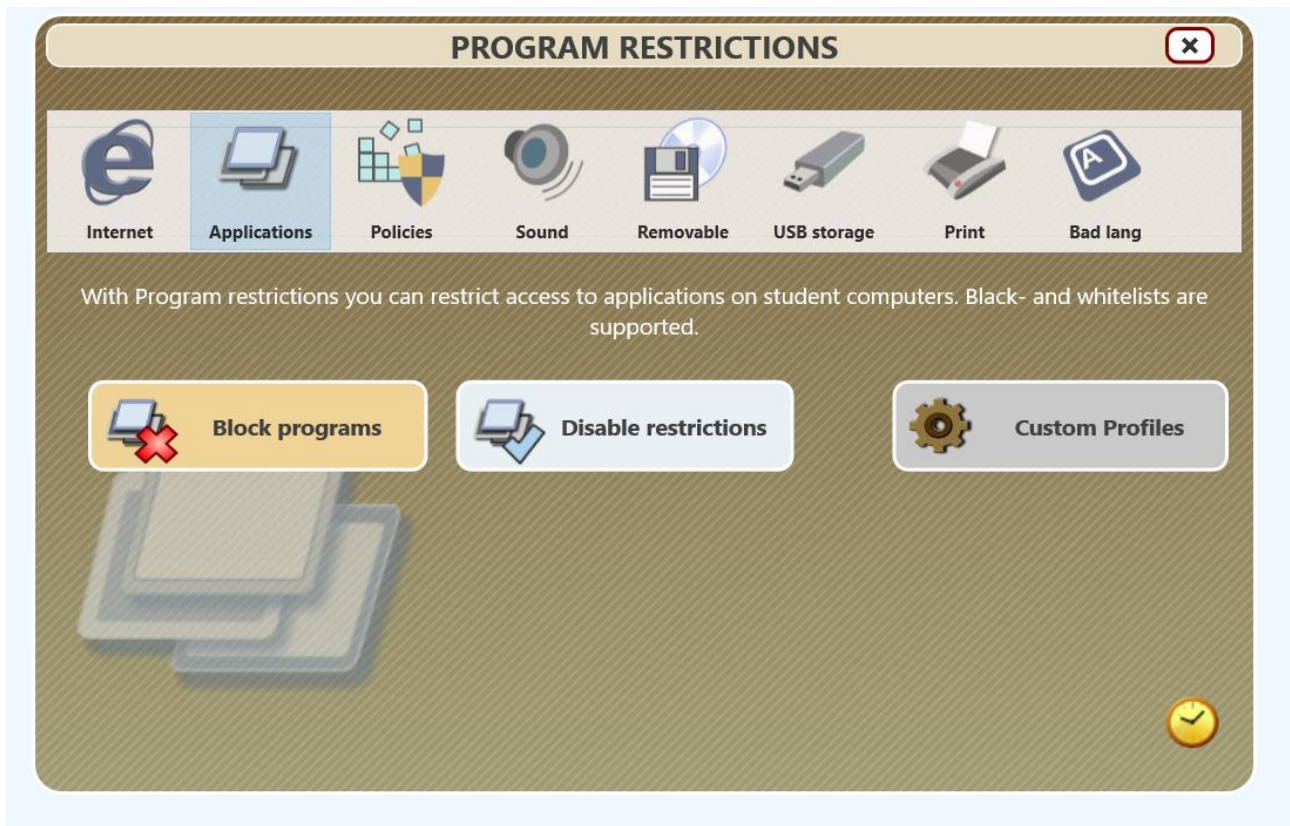
☐ Individual restrictions for every user (Modes 1-2)

Please note, after performing the necessary action to enable one of the specified modes, the mode reverts back to “Do nothing”.

Terminal Server environment

If you use web restrictions in a terminal server environment for terminal users, the restrictions apply by default on a per-machine basis, to all users of this physical terminal server machine. To apply individual restrictions for each user of the computer, you need to enable the **Individual restrictions for every user** option as described above.

Restrict programs and applications



The **Program Restrictions** feature provides the ability to enable or disable programs and applications on student computers.

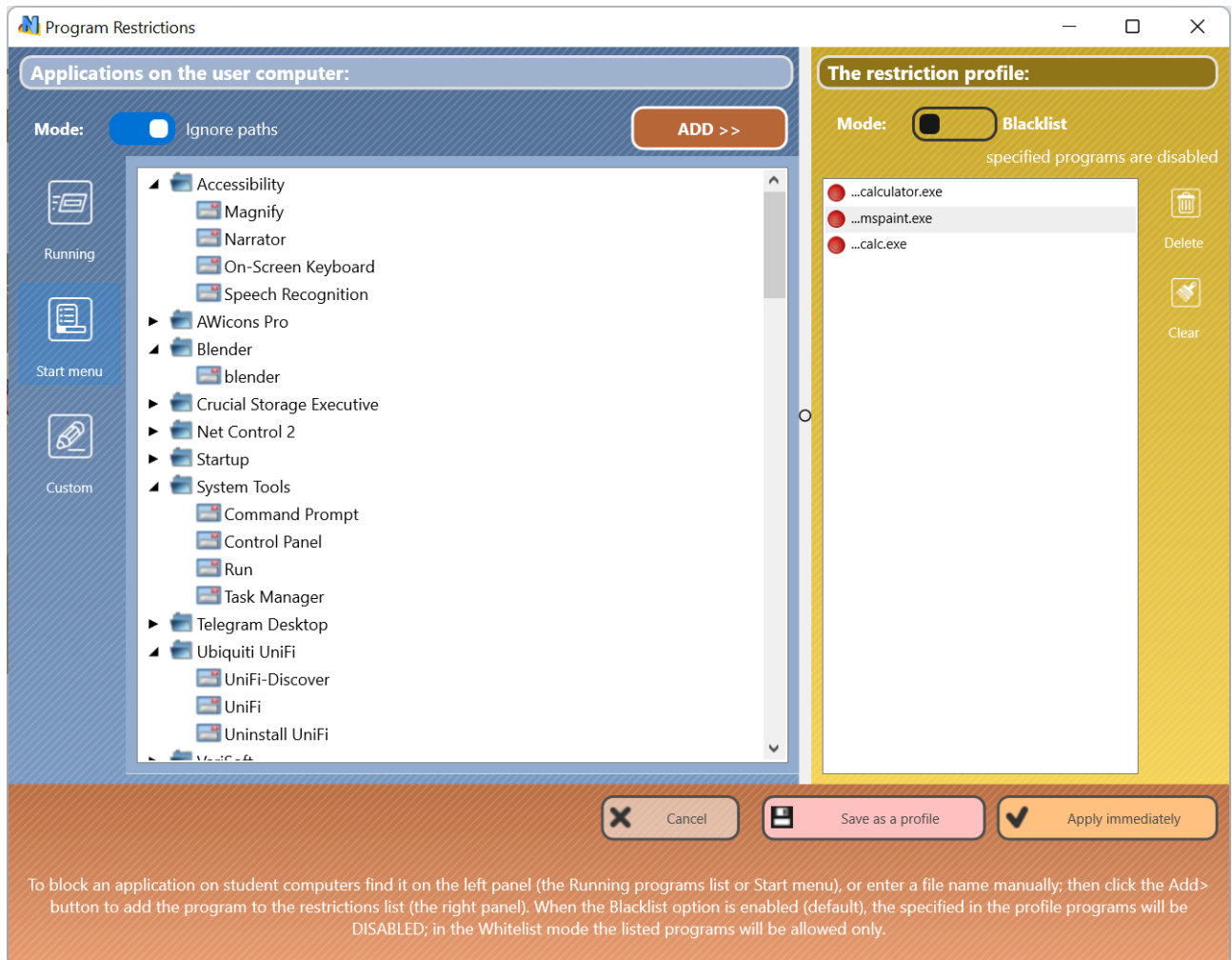
To access Program Restrictions, click the **Restrictions** button on the top toolbar, and in the appeared window, click the **Applications** button.

Using the **Block programs** button, you can set up and apply program restrictions immediately, to the selected student computers, as described below.

To reset all program restrictions, and to enable all programs, use the **Disable restrictions** button instead.

Using the **Custom Profiles** button, you can create restrictions and save them as a profile for further reuse and quick application as needed.

When you are using the Block programs button or creating a new program restrictions profile, the following window will appear:



- The left pane of the appeared **Program Restrictions** window contains a list of applications. The right pane (the **Restriction profile**) contains a list of restricted applications. To create a restriction profile, you need to move the necessary applications from the left pane to the right pane.
- On the left pane, the Instructor can select programs that are running at this moment on the student computer (the **Running** page); installed applications that are listed in the *Windows Start – All Programs* menu of the student computer (the **Start menu** page), or enter a file name of the program manually or select by browsing to it on the **Custom**” page. Once found, click the **Add>** button to move the program the right pane.
- If the restriction **Mode** selector in the right pane is placed to the position **Blacklist**, the listed in the profile programs will be disabled; respectively, all

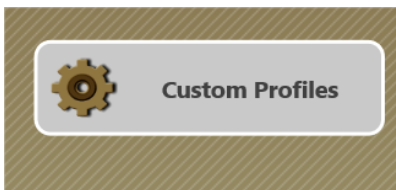
not provided in the list programs are enabled. If the selector is placed to the position **Whitelist**, only the listed programs will be allowed, all not specified in the list applications will be disabled.

- to apply the restrictions, click **"Apply immediately"**.

The list of restricted programs may be saved as a profile for further use; to save it, click **"Save as a profile"** button.

To apply a restriction from a profile:

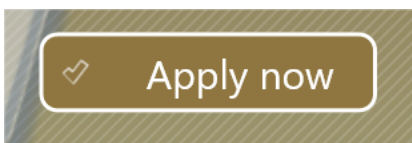
In the Program restrictions window, click the **Custom profiles** button:



Select a profile from the list:



And apply the profile:

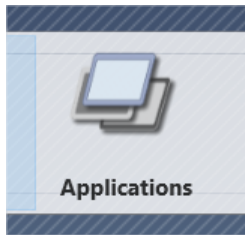


Example. How to disable access to Windows Word and Google Chrome:

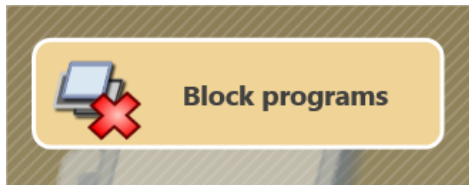
1. Click the Restrictions button on the top toolbar:



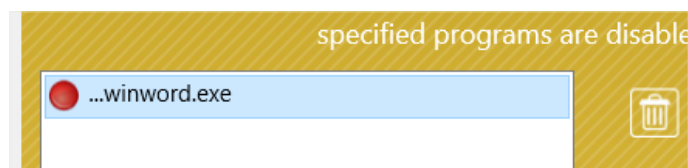
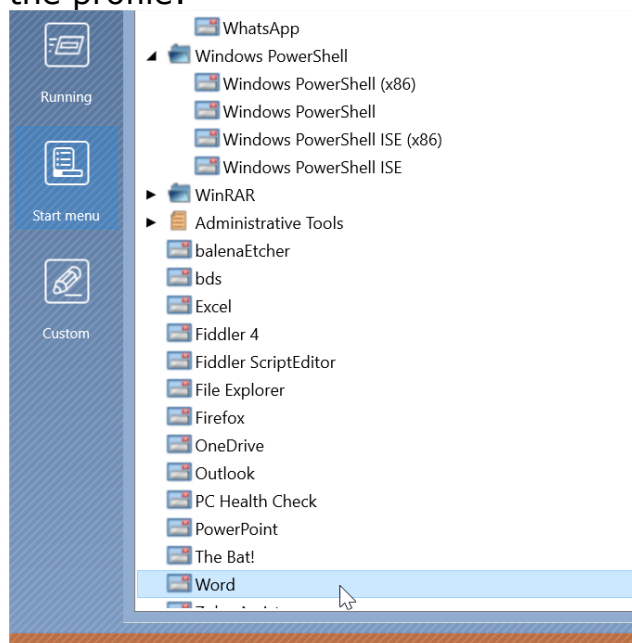
2. Click **Applications** button in the **Restrictions** window:



3. Click **Block programs**:

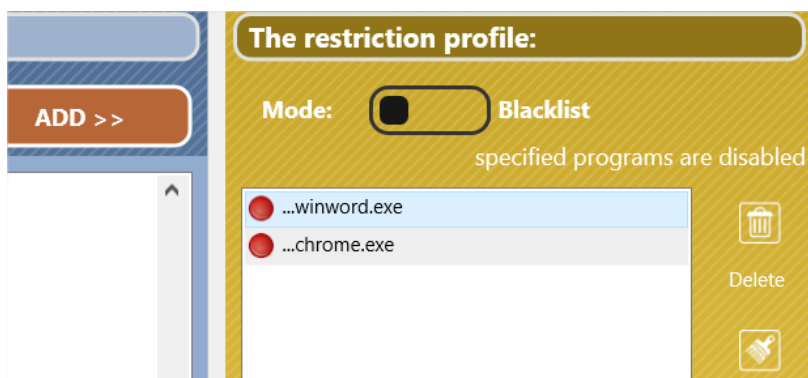


4. Find **Word** program in the left pane (using any tab) or specify the path manually (**winword.exe**), use the **Add** button to add the program to the profile:

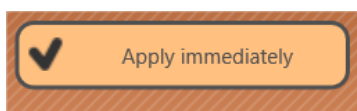


5. Repeat the step 4 for **Google Chrome**

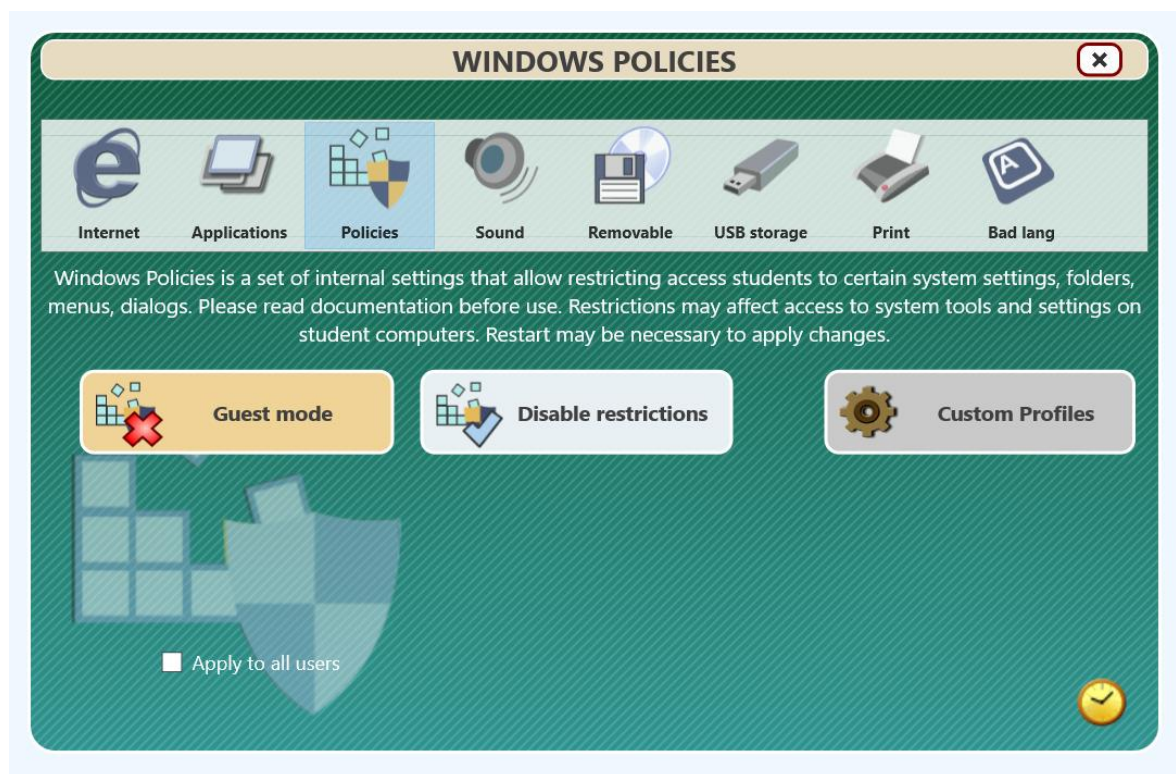
6. The restriction **Mode** selector should be set to **Blacklist** (the listed programs are disabled):



7. Click Apply immediately to apply the restrictions.



Windows Policies (access to system folders and settings)



Understanding the Policies.

The *Policies* are special, non-visual system settings which enable or restrict access to system settings, objects or services. Policies are managed by Windows internally, are stored in the system registry, and the support of policies may depend on the version of the operating system. Most Policies require restart of the computer or logging off the currently logged in user to be applied. By default, Windows applies policies only to the currently logged on user. Using the **Apply to all users** option, you can enforce applying the policies to all users. Windows and its components use thousands different policies, Net Control 2 implements only several, the most popular of them.

Domain group policies may override the policies changed with Net Control 2 restrictions and have higher priority. Any policies may be changed on student computers manually, using standard Windows tools: Registry Editor (regedit.exe) or Local Group Policy Editor console (gpedit.msc).

In order to apply some policies through Net Control 2, you need to create a restriction profile first, then select student computers and apply the profile.

To create a profile:

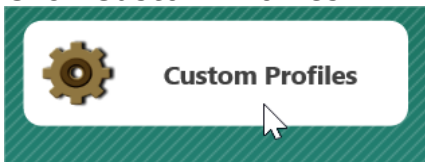
1. Click the **Restrictions** button:



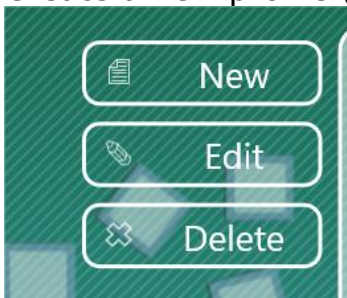
2. Select Policies from the list of restriction categories:



3. Click Custom Profiles:

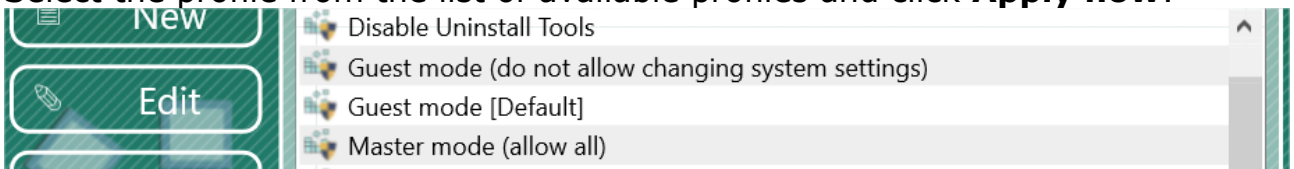


4. Create a new profile (or to modify an existing one):



5. Set up necessary policies and save the profile.

6. Select the profile from the list of available profiles and click **Apply now**:



Instead of creating or using profiles, the first page of the Policies window contains two buttons:

Guest Mode – restricts access to Control Panel, Desktop settings, and Taskbar.

Disable restrictions – disables all Net Control 2-managed restrictions.

The following default profiles are distributed with the software:

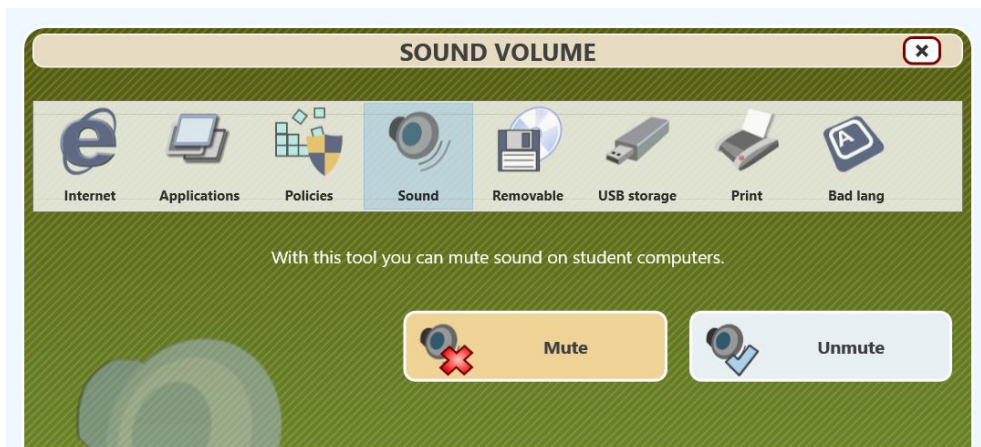
Disable Uninstall Tools - disables access to the **Add/Remove programs** Control Panel's applet;

Guest mode – disables access to the most important system settings and folders;

Master mode – disables all policy restrictions that are managed through Net Control 2. Provides normal access to system settings and folders.

Sound volume

The **Sound volume** restrictions allow to mute or restore a volume level of the default audio output device on student computers.



To mute the sound:

- Select student computers;
- Click **Restrictions** button on the top toolbar;
- Select the **Sound** restriction category;
- Click the **Mute** button.

To restore the default volume level on student computers, repeat the previous operations but click the **Unmute** button instead.

Print services restrictions

Net Control 2 provides an easy way for enabling and disabling printing services on student computers in one click. The tool supports timed restrictions.

When the printing services are disabled, users will not be able to print documents on local or network printers installed in the system, add, remove or manage printers.



To disable the printing services, select User computers in the connections list; click the **Restrictions** button on top toolbar, select the **Print** category; use the **Restrict** or **Enable** buttons to manage the restrictions.

Access to removable drives (CD/DVD/BD) and USB storage devices

With Net Control 2 software you can dynamically enable or disable access to removable devices (CD/DVD/BlueRay, other devices that are categorized by the system as "removable") and USB mass storage devices (SD cards, Flash drives, portable HDDs, other removable USB devices). The tools support the timed

restrictions.

When the restrictions are applied, users will not be able to access these devices, including reading, writing, modifying, copying, deleting etc.

To disable access to devices for selected student computers, click the Restrictions on the top toolbar, select the **Removable** or **USB storage** category and use the **Restrict** or **Enable** button to disable or enable access:



Bad Language monitor

Using the **Bad Language** monitoring tool, teachers can maintain discipline in the classroom. The tool is listed as a part of the **Restrictions** tool. When the bad language monitoring is enabled, the student module monitors text entered by the student from the keyboard for the presence of forbidden words. The monitoring works in all applications running on the student computer.

For security reasons, Net Control 2 will never log, store or keep in any other way text entered by the student. But when one of the forbidden words is typed by the student, the Instructor receives a notification in the teacher console (as a sound signal and a special sign on the student computer thumbnail). By clicking the sign on the thumbnail, the teacher can capture the actual snapshot of the student screen.



To manage the Bad Language restrictions, click **Restrictions** button on the top toolbar, then select the **Bad Lang** category:



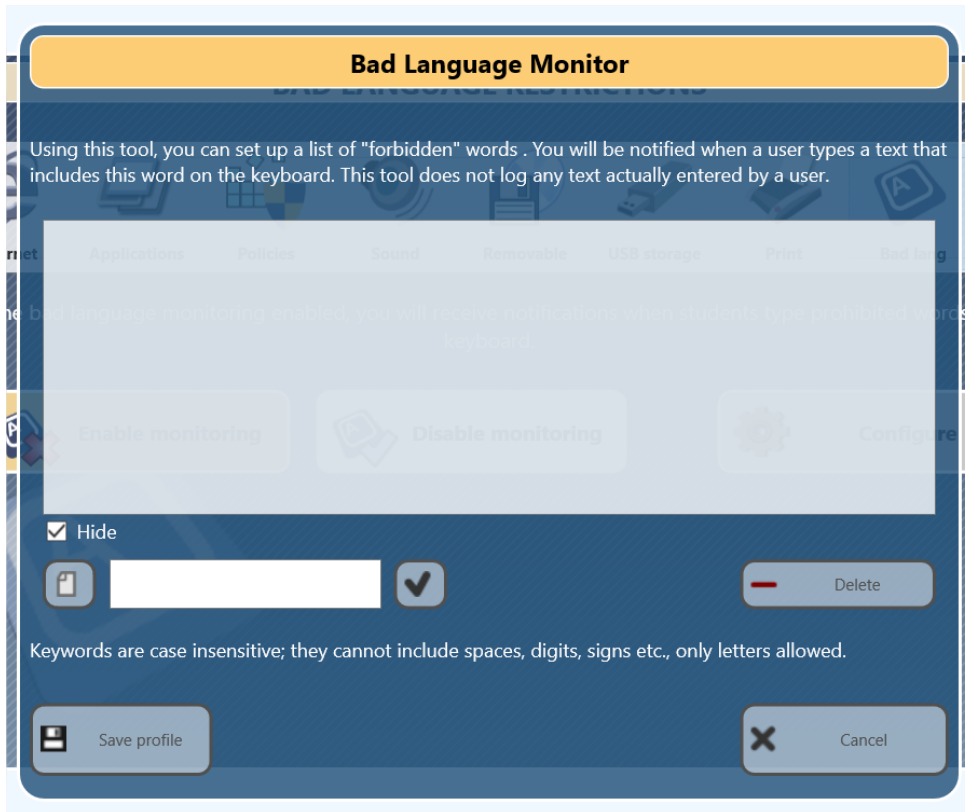
Use the **Configure** button to set up the *forbidden words list*.

After the list is created, you can use the **Enable monitoring** or the **Disable monitoring** buttons to enable or disable monitoring.

Creating the forbidden words list, you need to add all words in all possible forms that you would like to monitor for. You cannot use phrases, only words without spaces, digits and special characters are allowed.

Use the **Save profile** button to save the list.

The bad language restrictions may be applied on a temporary basis.



Program Manager



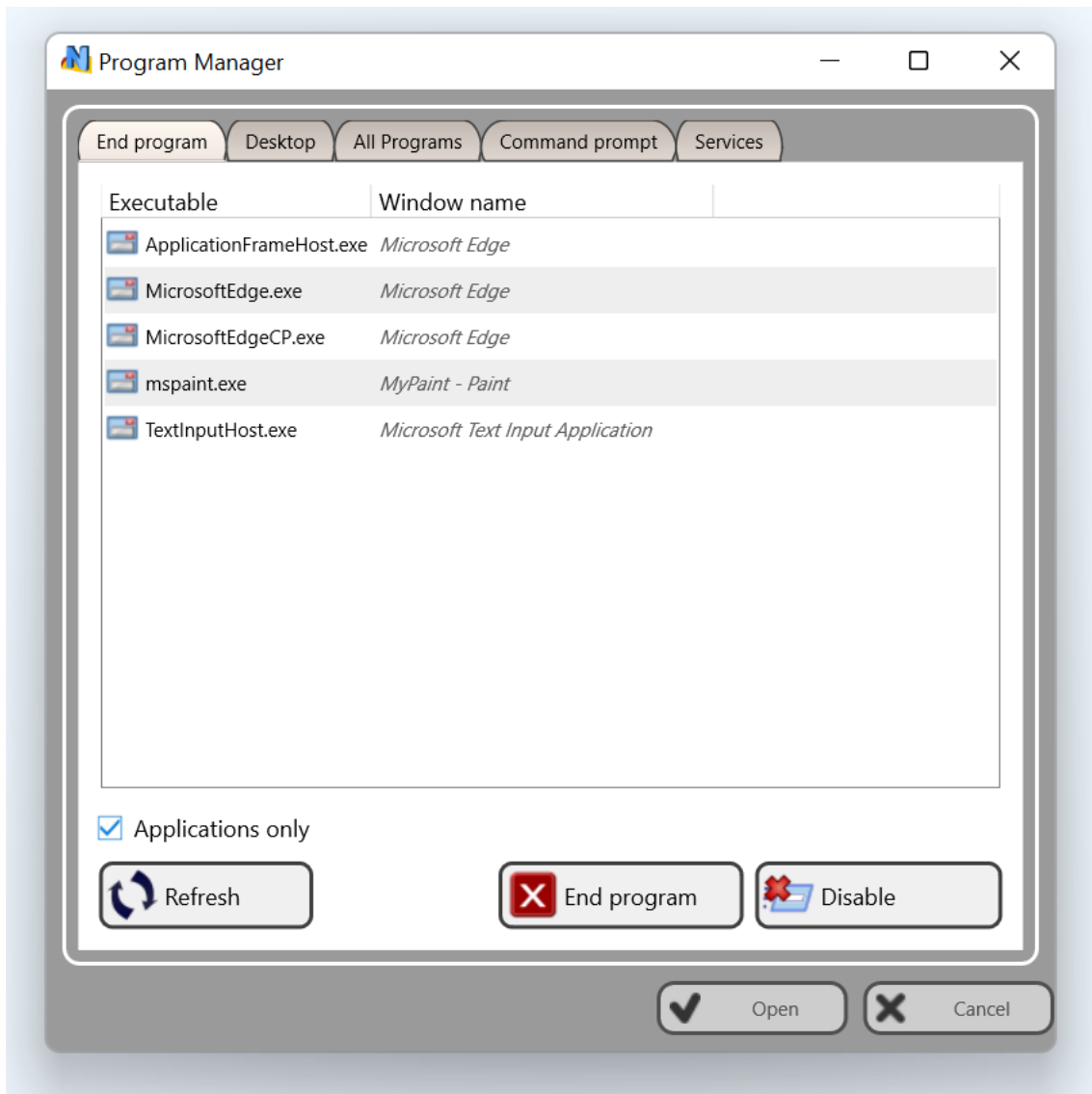
Using the **Program Manager** tool, Instructors can run programs, open documents or web links, manage running applications and system services on student computers from the teacher module.

To manage applications:

- select student computers;
- click the **Programs** button on the Control tab of the top toolbar:



End program



Using the **End Program** tab, you can stop programs and applications running on the student computers.

If the **Applications only** option is enabled, the list contains only applications, if the option is disabled, the list includes also background processes.

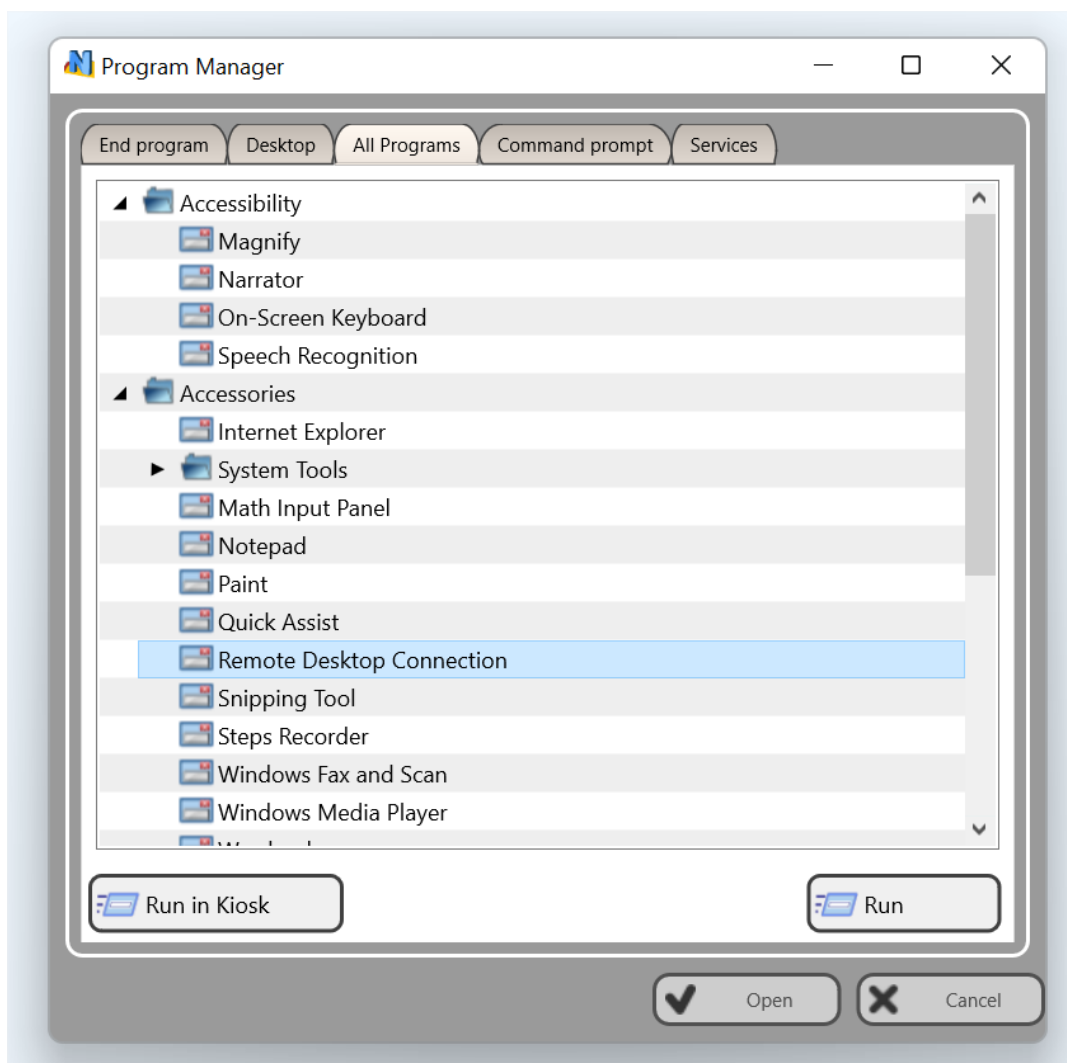
To terminate a program, select it in the list and click the **End program** button.

To add an application to the *program restrictions*, use the **Disable program** button. The program restrictions are discussed in the previous chapter.

The **Desktop** and **All Programs** tabs contain a list of programs (documents, URLs), placed on Desktop and in Windows' *Start menu* respectively. To run an application or to open a document/URL just select it in the list and click the **Run** button.

The **Run in Kiosk** button allows running an application in the Kiosk mode, as described below.

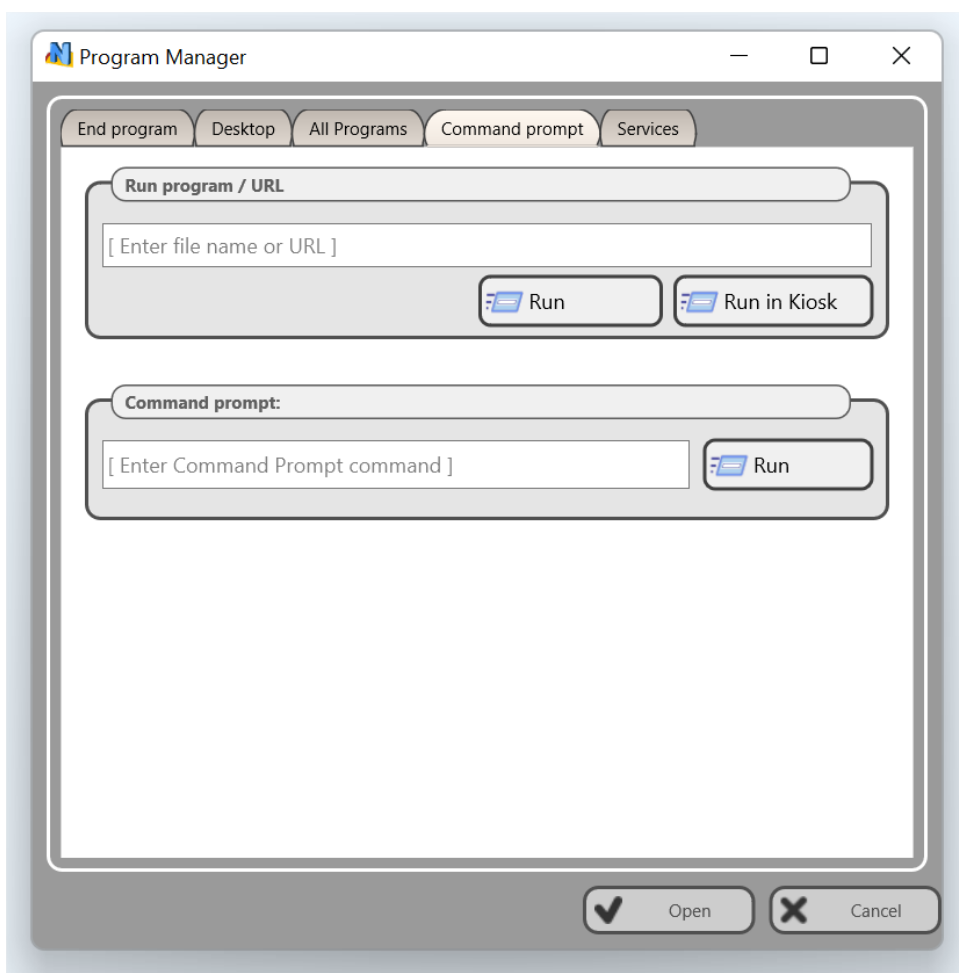
The documents and URLs can only be open if an application is associated on the student computers with this document type or protocol.



Using the **Command prompt** tab and the **Run program/URL** field you can run a program, open a document or a web link by entering its full path. Entering a URL, you need to specify the http:// or https:// protocol. Documents and URLs are opened only if a respective application is associated with the document type or the protocol.

Using the **Command Prompt** field of this tab you can pass a command to *Windows Command Prompt* or *macOS Terminal*.

Programs, documents, URLs and command prompt commands are always executed with privileges of the currently logged in user on the student computer.



The **Services** tab provides access to the Windows system services management features. This tab is only visible, if the administrative tools are enabled in the teacher module settings (**N – Options – Options; Advanced Options; the Enable administrative tools** option).

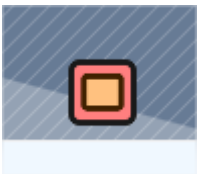
Kiosk applications

Using the *Desktop*, *All Programs* and *Command Prompt* tab, you can run programs and applications in the **Kiosk mode**. When an application is running in this mode, students can work with this program only and will be unable to switch to other applications, use Windows *Start menu* or *Taskbar*.

When a student attempts to close a kiosk application, it will be automatically re-opened.

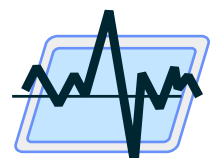
While many third-party applications support this mode, due to the kiosk environment is a non-standard program environment, some applications may be unable to run in this way.

When a kiosk application is running on student computers, the teacher console will display a flashing icon on the bottom-right hand corner of the top toolbar:



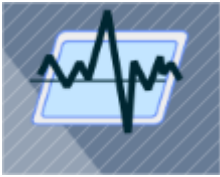
To close kiosk applications on student computers, just click on the button.

Event Monitoring

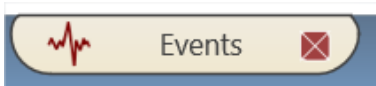


The Event Monitoring tool provides a quick way to monitor usage of student computers in the classroom.

To open the tool, click the **Monitor** button on the **Advanced Tools** tab:



The tool creates a new tab at the bottom of the teacher console window:



The information on the **Events** panel is provided using compact cards per each monitored student computer, and usually allows to display the whole class on one screen.



Each card includes the following information:

An **application name**

Current **document name** or a **website title**

For a website, an **URL** of the current page

Time statistics:

- how long the application has been running since the user last switched to the application;
- how long has this application been running in total since last run;
- percentage of use of this application (since the moment the teacher started monitoring)

A special sign



appears **if the application** has been run from a non-standard location. The standard locations are **Program Files** and **Program Files (x86)** folders. This may help determine when students run downloaded applications or apps brought on removable devices.

A detailed log of all used by the student applications is available by clicking the "...” button



When a user does not work actually on the computer for some time (i.e. no mouse or keyboard activity is detected), the cards become changing their background color:

- Light orange – more than 1 minute;
- Orange – more than 2 minutes;
- Red – more than 5 minutes;
- Gray – more than 10 minutes.

To stop monitoring, just close the **Events** tab at the bottom of the teacher console.

Login Tool



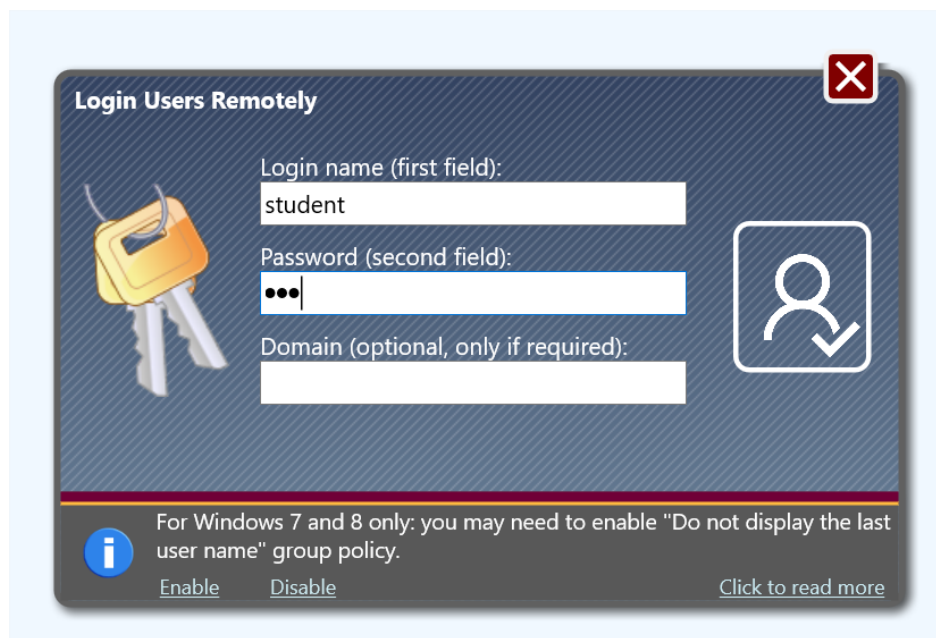
Using the **Login** tool, you can login users on student computers remotely. At the moment of applying the login command, the client computer must be on the logon screen.

This feature is available in Windows only.

To use the tool, select student computers, use the **Login** button of the top toolbar:



Enter a login name, password and an optional domain name, confirm the operation:



Login Users Remotely

Login name (first field):
student

Password (second field):
...

Domain (optional, only if required):

For Windows 7 and 8 only: you may need to enable "Do not display the last user name" group policy.
[Enable](#) [Disable](#) [Click to read more](#)

In **Windows Server 2008, 2008R2, Windows 7 and 8**, the **Do not display last user name** policy must be enabled on student computers before applying the operation, otherwise the remote login operation may fail. To enable the policy, just click the **Enable** link at the bottom of the login window, the student computer must be restarted after applying the policy. **This policy is not required in Windows 10 and 11.**

Shutdown / Power management



The power management features provide teachers with a quick and simple way to turn multiple computers on, switch them to the sleep or hibernation modes, reboot or turn off the computers.

To apply a power management operation:

- select User computers in the connections list;
- click the **Shutdown** button on the Control tab



- in the appeared window:



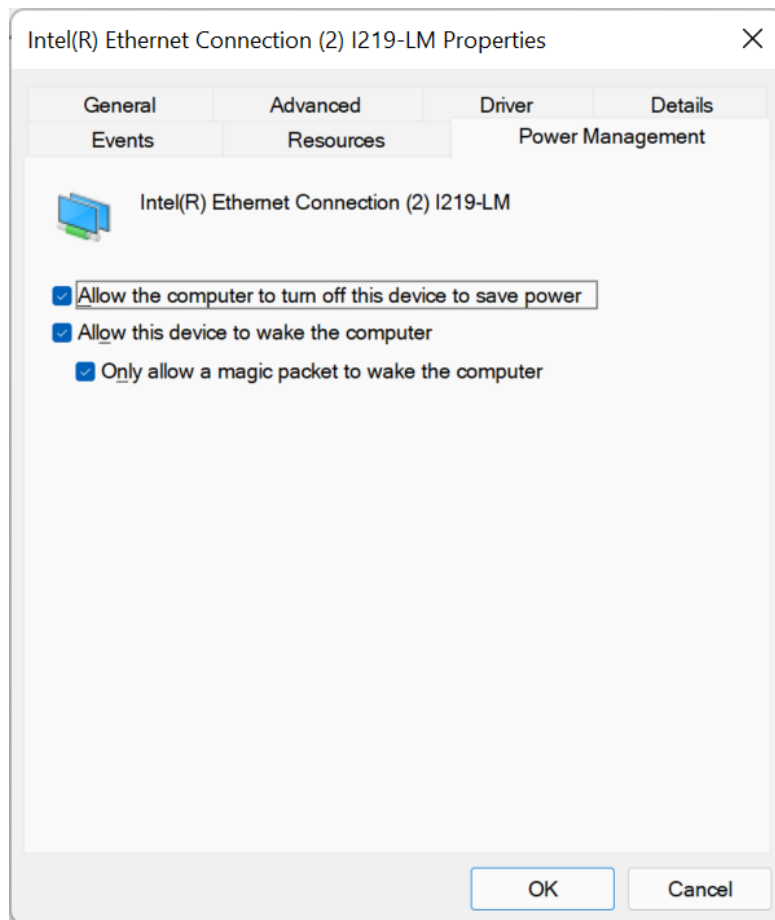
click the respective operation button, to close the window, click Close.

- if the **Forced** option is selected, users cannot cancel the operation (due to unsaved documents for example); otherwise, the operation may be postponed or canceled until the user saves the document.
- if the **Apply immediately** option is not enabled (the default state), the countdown 20-seconds timer appears on student computers before the operation runs, within this time students can save unsaved documents and prepare the computer for shutting down. You can disable this option, to apply the operation immediately.

The **Wake-up** command uses the Wake-up On LAN (WOL) technology and relies on some system settings. The operation is possible when the following conditions met:

- The Wake-up on LAN (WOL) feature is enabled in the CMOS BIOS Setup of each user computer. Most often this feature may be found in the Power Management Setup section of the CMOS BIOS Setup program as a **Wake-up on LAN, WOL, Resume by PCI** or **Resume by Network Adapter** option. For more information about enabling the WOL feature for the computer, please refer to your computer's or motherboard's manual.

- In Windows 10 and 11, the WOL feature must be enabled in the Ethernet adapter properties of each student computer. In Windows Device Manager, find your Ethernet adapter and open its properties. On the Power Management tab, enable the **Allow this device to wake the computer** and **Only allow a magic packet to wake the computer** options (the actual option names may vary in different Windows versions):



- Usually, only Ethernet adapters (wired networks) support the Wake-up on LAN technology. Several wireless adapters that support the WoWLAN technology can wake up computers also.
- To wake up computers remotely, the teacher module should “know” MAC addresses of student computers. This information is obtained by the teacher module when it connects to a student first time. So, to apply the operation, the student computer should be connected to the teacher at least one time before.

Send/Collect Tool



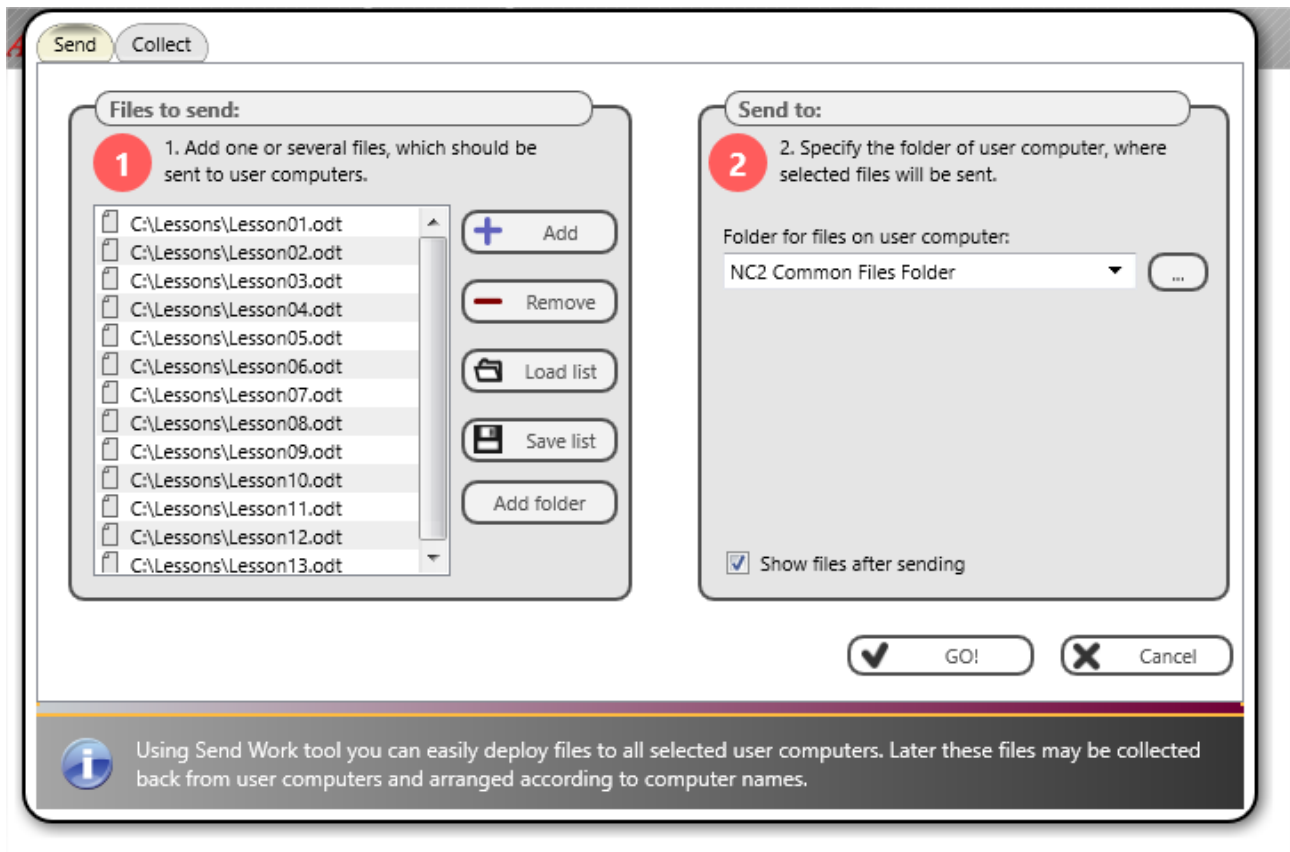
The **Send/Collect Tool** provides an easy way for the Instructor to send files to remote users with a few clicks. In the same way, these files can be collected back from the users' computers to the Instructor and sorted by computer name.

To use the Send/Collect Tool:

- click the **Send/Collect** button in the **Control** toolbar;



- In the Send/Collect window:



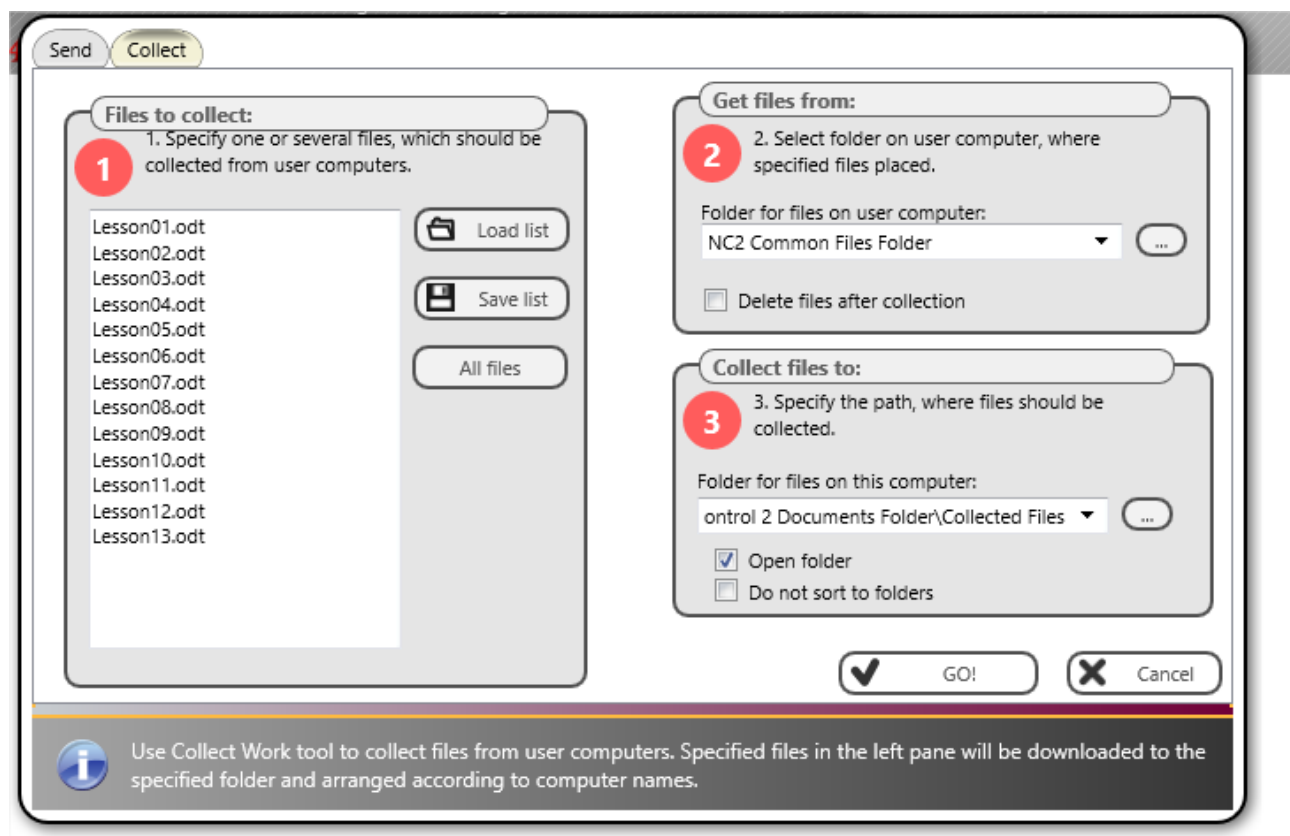
To send files:

- click **Add**;
- specify a local path of the file to be sent;
- repeat the above steps until all the necessary files are selected;
- if you need to send the whole content of some folder, use the **Add folder** button instead;
- in the drop-down menu **Folder for files on user computer** specify a folder on student computers where the file or files should be saved;
- if the **Show files after sending** option is enabled, the list of sent files will be displayed on the student computer in Student console after sending;
- click **Go!** to run the operation.

Using the **Load list** and **Save list** buttons of this tab, you can save the file lists to the computer for further use or open them.

To collect the files back:

- in the **Send/Collect Work** window, open the **Collect** tab;
- specify the files that should be collected; by default, the list contains files that were sent with the last *Send* operation. If you need to receive all files of the *source* folder, click the **All files** button.
- specify the source folder on the student computer where the files are located, by default it is the same folder as was used for the *Send* operation;
- specify a local path, where the collected files should be saved;
- click **Go!**.



If **Delete files after collection** is enabled, the collected files will be deleted on student computers after collecting.

If the **Open folder** option is enabled, the destination folder will be opened after the operation is complete.

When the **Do not sort to folders** option is disabled (default), Net Control 2 will create in the destination folder on the teacher computer, an individual folder for

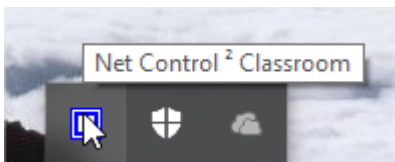
each student, using the respective connection name, and will place the collected files into this folder. When the option is enabled, Net Control 2 will place all the collected files in the destination folder, without sorting to folders, adding a connection name to the file name as a prefix.

Hand Raising

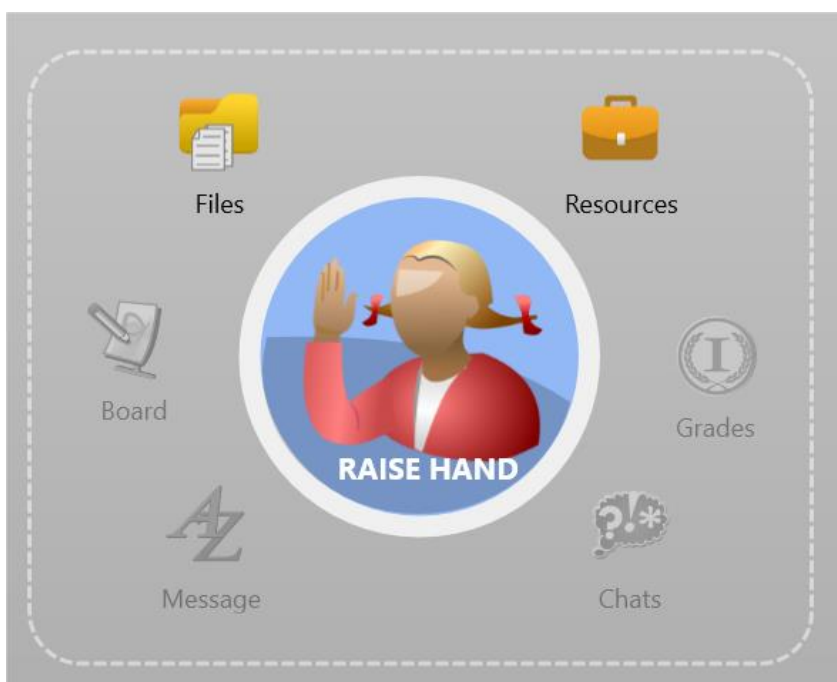
Using this tool, students can notify teachers that they are ready to answer a question or need the teacher's assistance.

To "**raise**" the hand, students can use *Student Console* or *Net Control 2 toolbar*.

To raise the hand, using *Student Console*, right click Net Control 2 icon in the System tray:



then, in the appeared window, click the **Raise hand** button:



If student computers are configured to show the popup Net Control 2 toolbar on the screen, move the mouse cursor to the toolbar, then click the **Raise hand** button:



In both cases, the button should change its color and caption to **Hand is raised**:

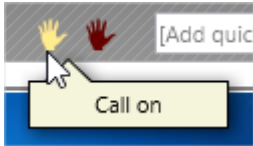


Clicking the button in the *Hand is raised* status will reset the "raised hand" notification on the teacher computer.

When the hand is raised, the teacher receives a sound notification and the following icon appears on the thumbnail:



To accept the request, the teacher can click on the icon, or click the **Call on** button of the top toolbar:



To reset the raised hand statuses on one or several computers, in the teacher console select the students and click the **Reset Raised Hands** button:



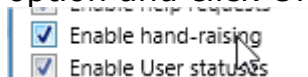
When the teacher accepts the raised hand request, the Student Console will appear and the button is changed to the **"you're called on"** status:



How to disable the feature

To disable the "hand raising" interface on student computers:

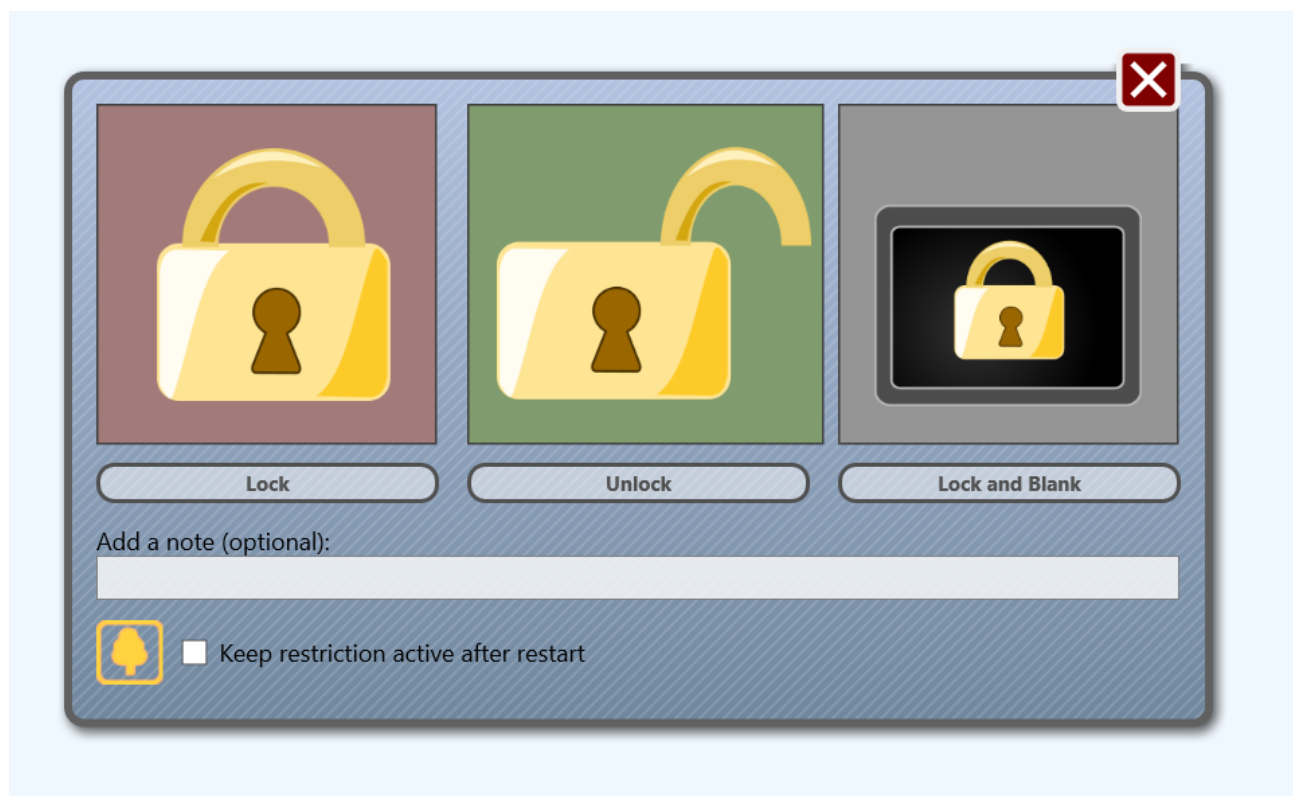
- select student computers in the teacher console;
- click the main menu command **N – Options – Client Options**;
- on the **Appearance** tab uncheck the **Enable hand-raising** option and click OK.



Lock



Using the **Lock** tool, teachers can minimize distractions and maintain attention of students on learning tasks. With this tool, a teacher can temporarily block student computers, add an optional notification, and unblock the computers when necessary.



Click **Lock** to lock the selected computers, **Unlock** to unlock them, use **Lock and Blank** to lock computers without displaying a splash screen.

An optional text notification may be added in the **Add a note** field.

Use the **Replace the background image** button, you can change the default background of the “locked” screen:



If the **Keep the restriction active after restart** option is enabled, the “locked”

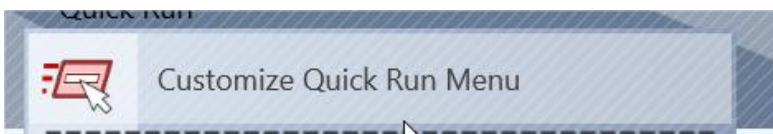
state will be restored after reboot of the computer, when Net Control ² Client service starts up.

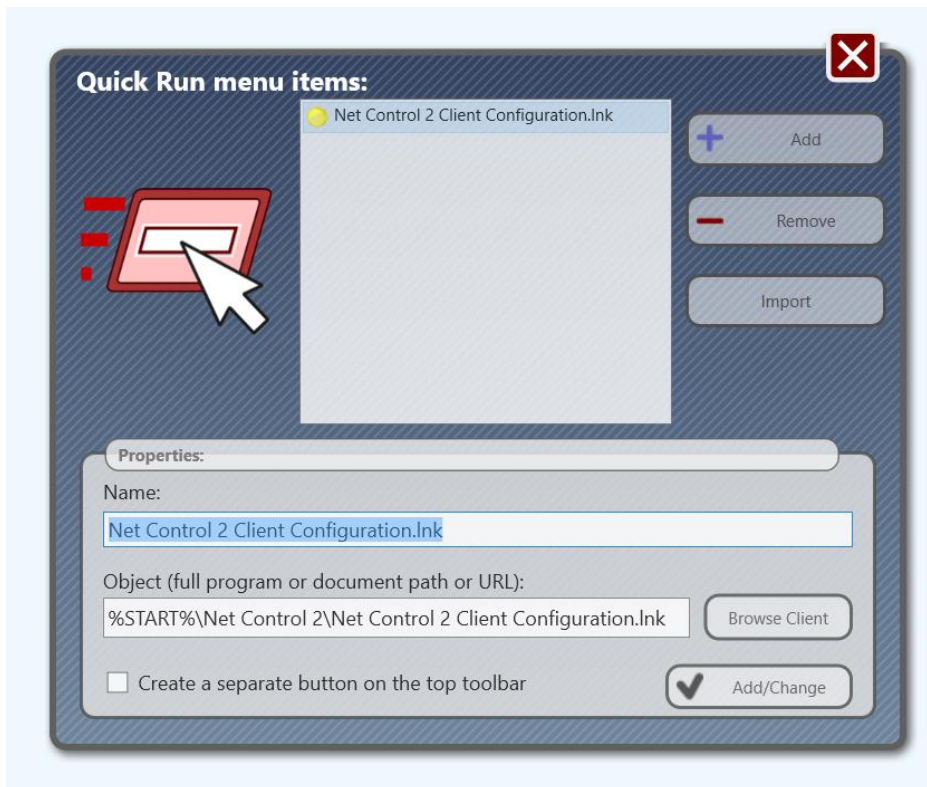
Quick Run



Using the **Quick Run** tool, you can build shortcuts for a quick launch of certain applications on student computers.

To create a shortcut, click the **Quick Run** button on the top toolbar (the *Control* tab), then use the **Customize Quick Run Menu** command:





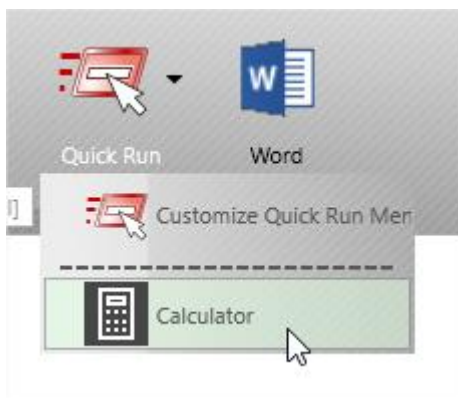
In the appeared window, click the **Add** button to add a new item to the list or select an item and click the **Remove** button to delete this item from the list.

Adding a new Quick Run menu item, you need to specify a name, which will be displayed in the teacher module, and to select an object for execution. As the object, you can specify a web link (with `http://` or `https://` protocol prefix), a document (using its full path with an extension, for example `C:\Users\All Users\Documents\file.doc`), a program module (with the full file path and name, for example `C:\Windows\System32\Calc.exe`) or a program from *Start Menu*. To select a program from the Start menu, click the **Browse Client** button and select a program from the list (at least one client computer should be selected at this moment).

The shortcuts may be placed either as separate buttons on the top toolbar to the right of the *Quick Run* tool:



Or as *Quick Run submenu* items:



If the **Create a separate button on the top toolbar** option is selected, the shortcut is created on the top toolbar, otherwise, a menu item is created.

Messages



Using the **Messages** tool, you can send text and graphic messages, sounds and use the “text-to-speech” features.

To send a message, click the **Messages** button on the top toolbar (the

Messaging tab):



In the appeared panel:

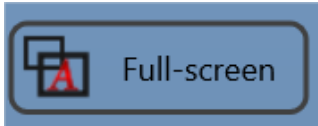


To send a text message, enter the text in the **Text of message** field. Optionally, you can select a background in the list of backgrounds:

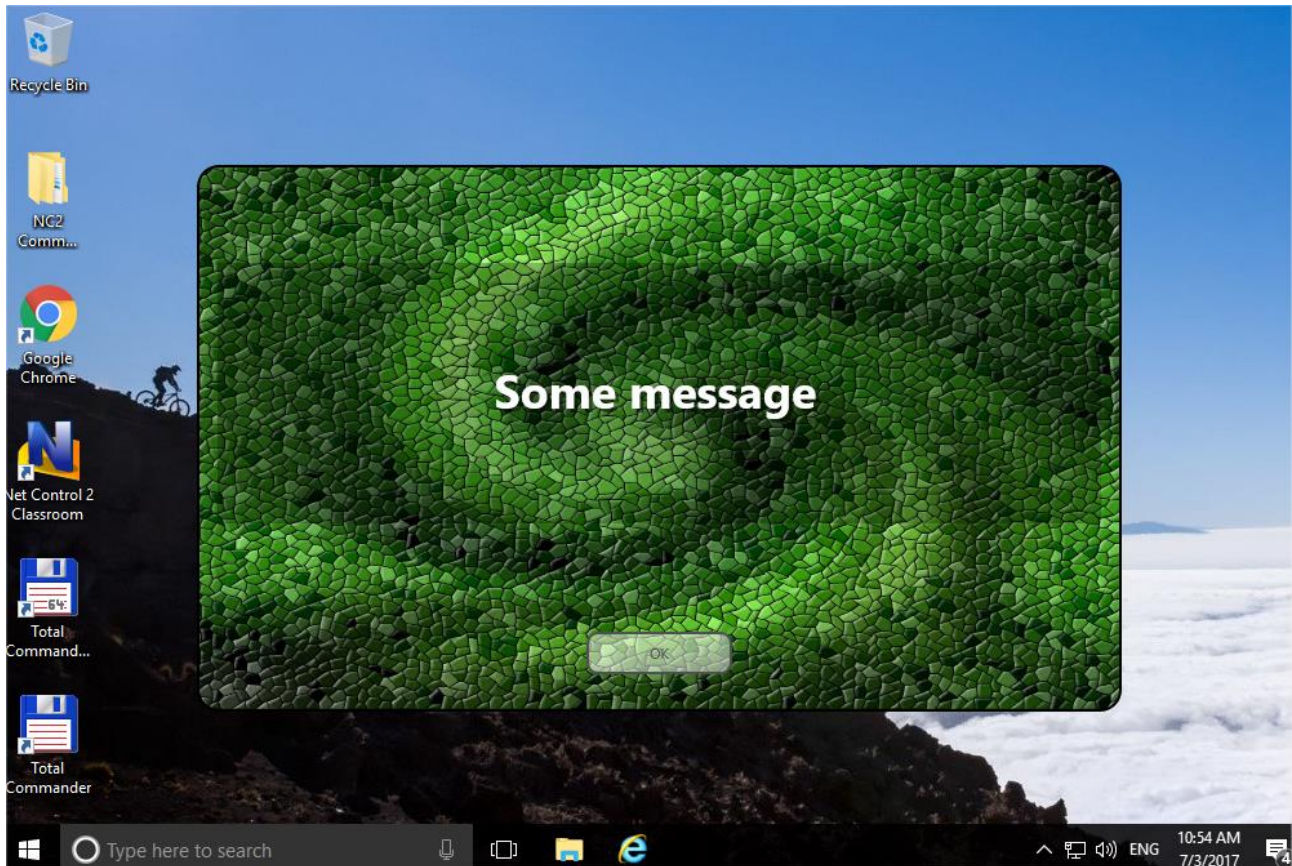


The first three backgrounds are animated.

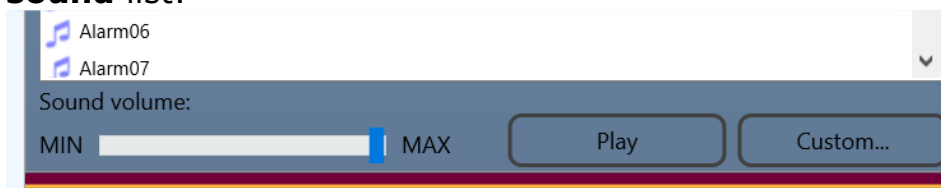
Click the **Full-screen** button to display the message in full screen:



To display the message in a window, click the **On-screen** button instead:



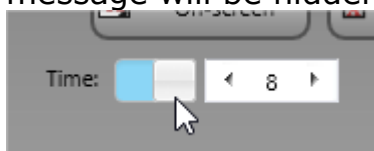
To play a standard or custom sound together with the message, use the **Play sound** list:



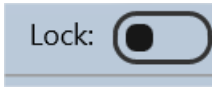
Click **Custom** to select a custom sound (.WAV and .MP3 formats are supported), click **Play** to play the sound on the teacher computer.

Using the **Sound volume** slider, you can adjust the sound volume level on student computers before sending the message.

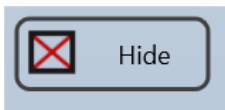
Using the **Time** selector, you can enable a time interval, after which the message will be hidden:



If the **Lock** switch is enabled, students cannot close the message window themselves:



Use the **Hide** button to hide the message on student computers.



Use the **Say** button to pronounce the text on student computers, using the Text-to-Speech features:



To clear the history of sent messages, use the **Clear history of text messages** button:



In the text you can use the following macro variables:

{CURRENTNAME} – substitutes the connection name;

{CONNNAME} – substitutes a computer name of the student computer;

{USERNAME} - substitutes a user name (login) of the user on the student computer;

{NUM} – displays the number of this computer in the class (the teacher module counts connected computers only)

{RANDOM} – displays a random number from the number of connected computers. Each student receives its unique random number.

{12} – counts off by twos;

{123} – counts off by threes;

{DATE} – displays the current date;

{TIME} – displays the current time;

{OSVER} – displays the operating system version;

{VER} – displays the version of Net Control 2 software;

{DESCRIPTION} – displays a description assigned to the connection in the teacher module;

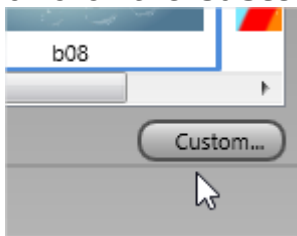
{GROUP} – displays a group name.

Instead of entering the variable names, you can use the **Macro texts** menu button:

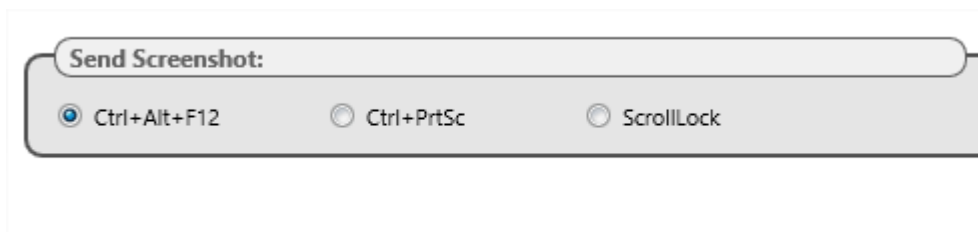


To send and show a graphic image from a file, either:

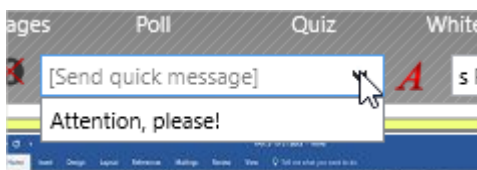
- **drag-drop** the file to the teacher console window;
- or click the **Custom** button in the backgrounds list, and open the file:



To send a screenshot from any external application, press **Ctrl+Alt+F12** hot key (the key combination may be re-assigned in the teacher module settings **N – Options – Options; the Hot Keys** page:



To send a text message outside of the **Messages** tool, you can use the **Send quick message** list on the top toolbar:



Or using the **Message** button of the thumbnail's menu:



Polls

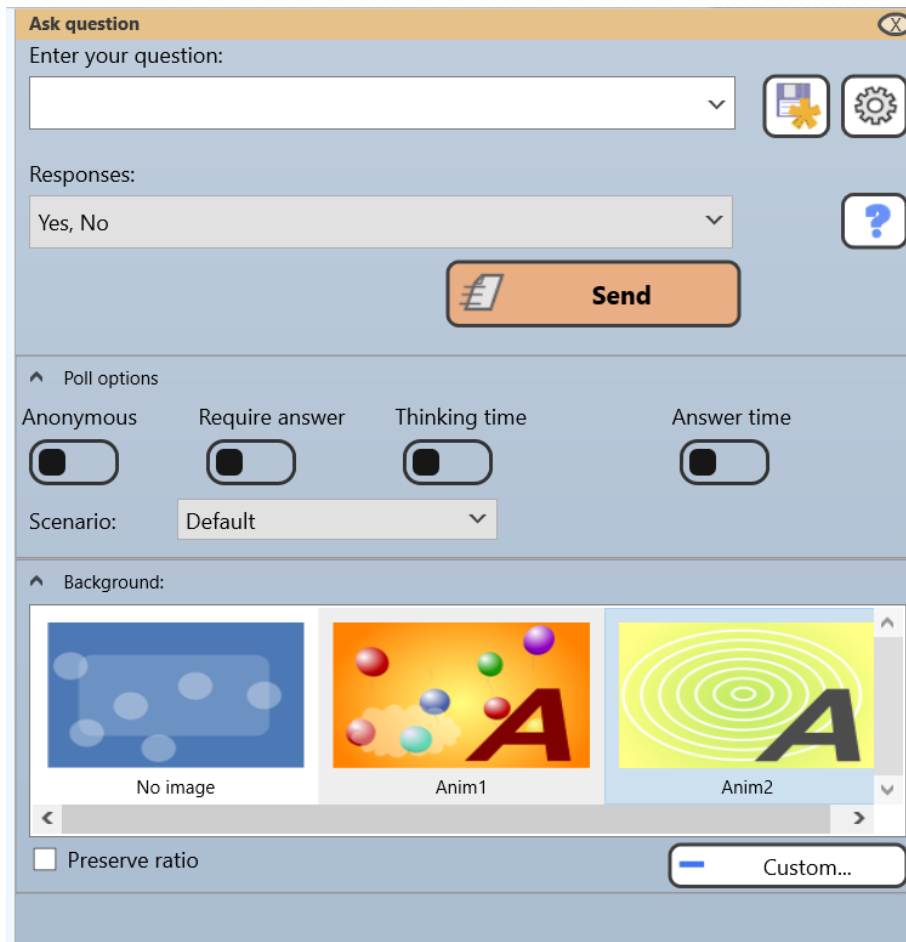


With the **Poll** tool teachers can ask students questions in a couple of clicks, get answers and detailed statistics per each student.

To create a poll, click the **Poll** button on the top toolbar (the **Messaging** tab):



Enter your question in the top field of the appeared panel, select a type of possible answers (Yes – No, Yes – No – Maybe, Yes – No – Don't know) or use the **Custom** type and specify a list of custom answers (up to 4):



Optionally, you can select a background for the question and customize the poll options:

Anonymous – poll results are anonymous; the teacher gets only common statistics per each answer. When disabled, the teacher can see answers given by each student.

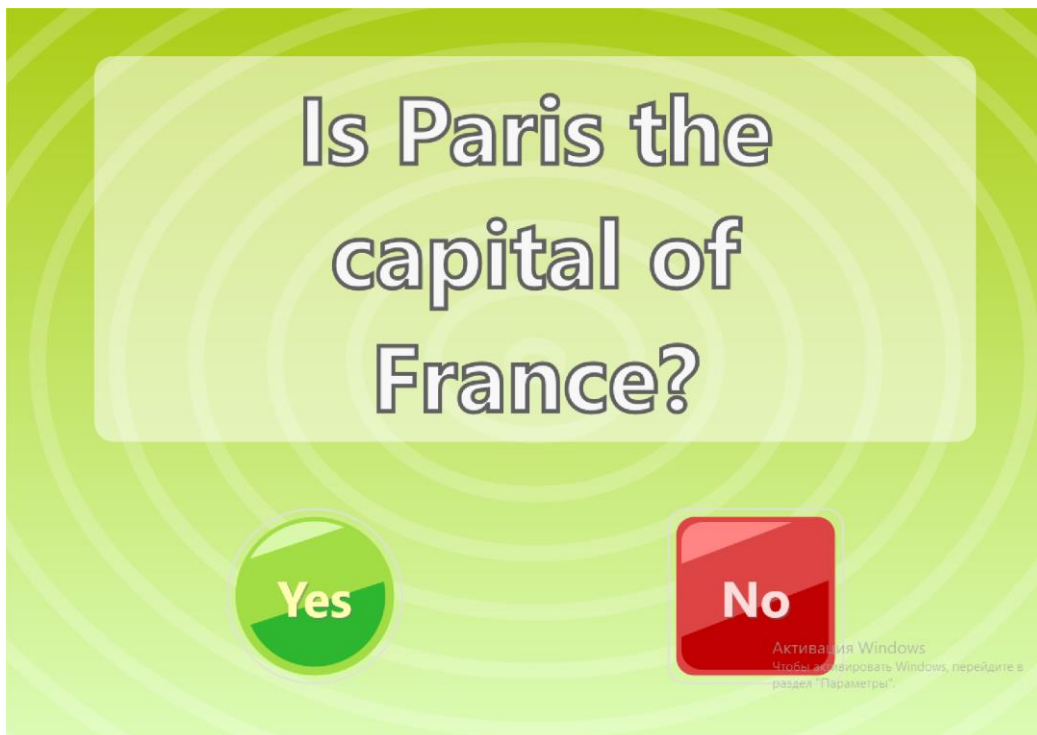
Require answer – if enabled, students cannot close the poll window and must give some answer.

Thinking time – you can set up a time interval, in seconds, within this time,

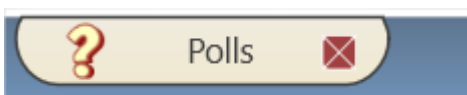
students can see the question and think on it, but cannot answer it.

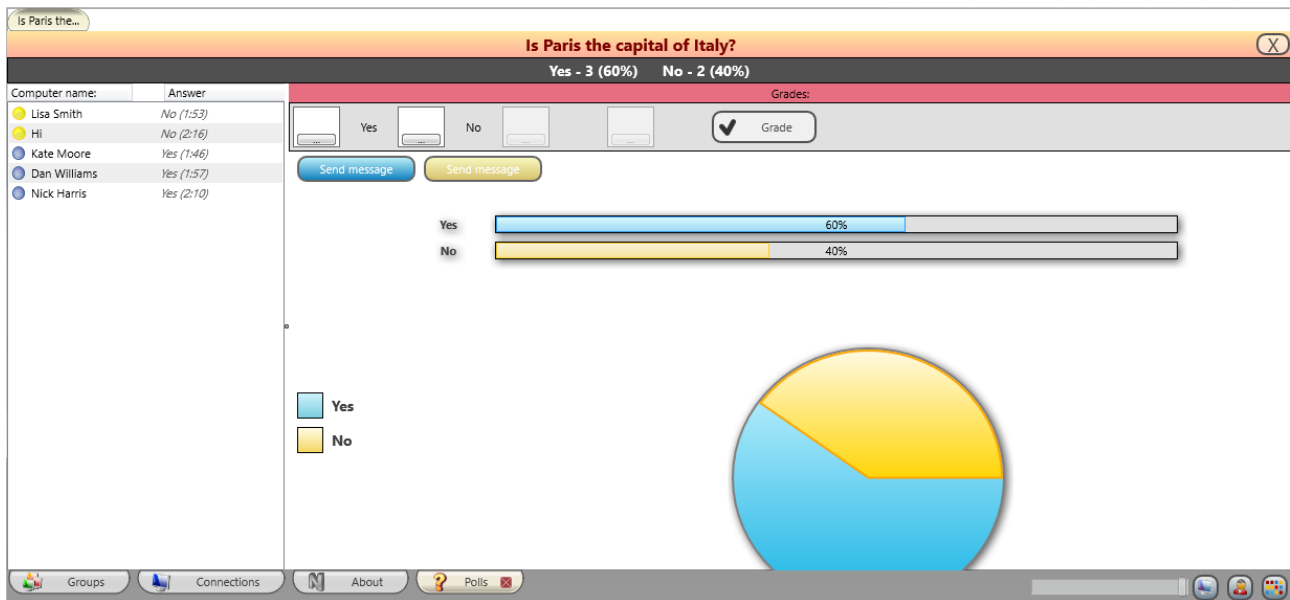
Answer time – you can set up a time, in seconds, for the question. After this time, the poll window automatically closes.

To run the poll, click **"Send"** button.



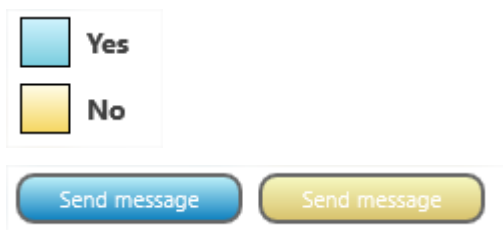
After students make an answer, the **Polls** tab appear at the bottom of the teacher console:





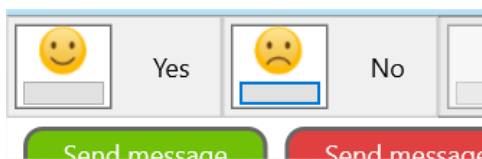
The window contains a list of students, arranged by their answer and the answer time. For anonymous polls, only common statistics for all students are provided.

Using the **Send Message** block:



you can send a message to groups of students that gave the first or the second answer

Using the **Grades** section you can grade students depending on the given answer:



The thumbnails on the **Connections** tab show special icons with the poll results: the answer is color-coded, numbers mean a place in the competition (lesser

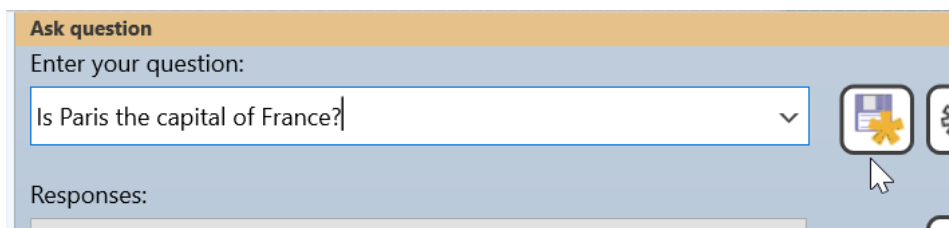
numbers mean the faster answer).



To reset the poll icons on the thumbnails, use the **Reset signs** button on the top toolbar:



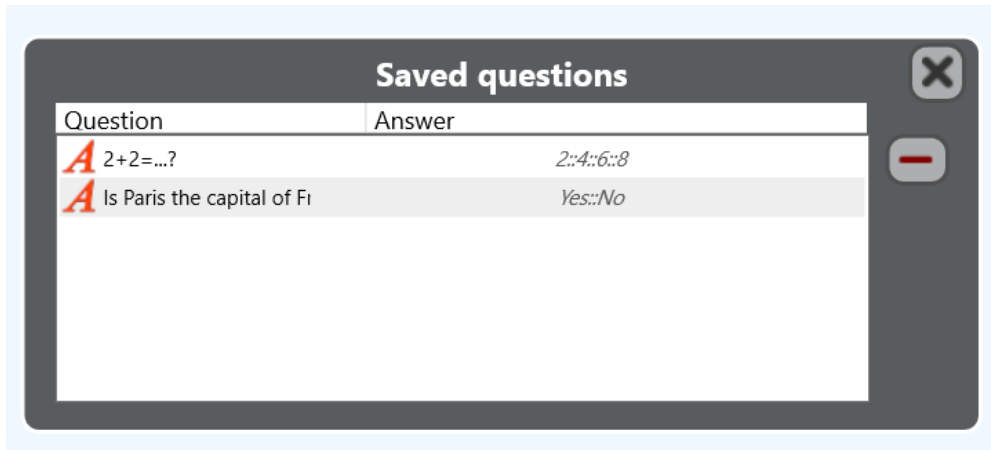
Before sending a question to students you can save it for use in future:



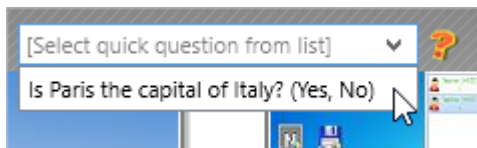
Click the **Save question** button to save the question, click **Manage questions**:



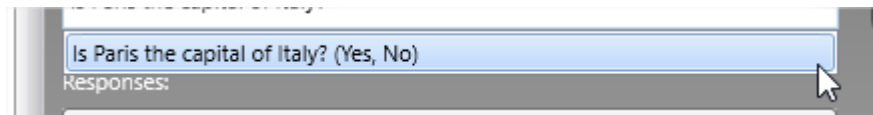
to manage the list of saved questions.



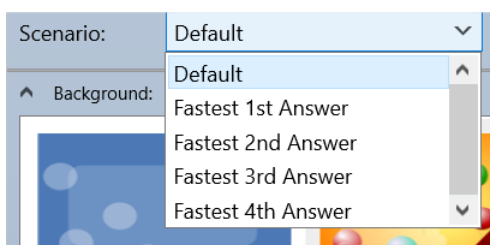
When a question is saved, you can send it in a click using **Send question from list** of the top toolbar:



The question also appears in the list of questions of the **Poll** panel:



Scenarios can help to diversify the survey process. Currently, the **Fastest NN answer** scenario is available:



with this scenario, you can determine the student who was the first to give the correct answer. What answer is correct (1st, 2nd, 3rd or 4th) is determined by the selected scenario.

Quizzes



Using the **Quiz** tool, teachers can create, deploy and manage interactive quizzes.

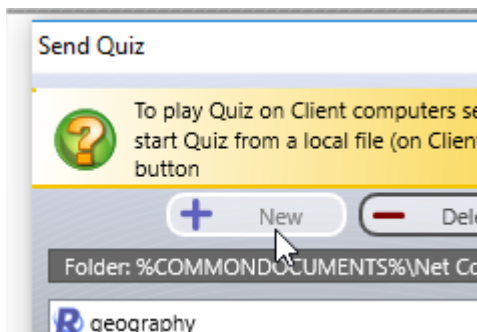
As an example, the standard installation of Net Control 2 software includes two samples of quizzes, we recommend to run or edit them to learn how to work with quizzes in Net Control 2.

Quiz Constructor

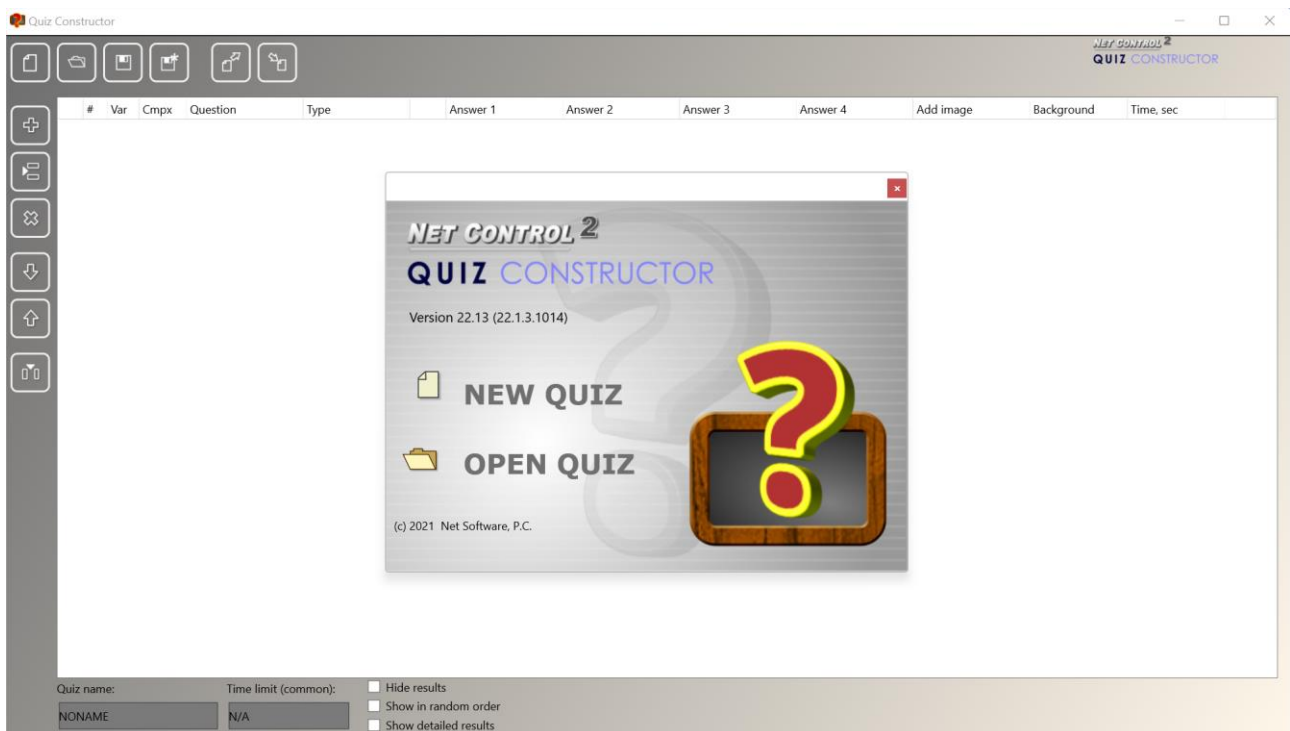
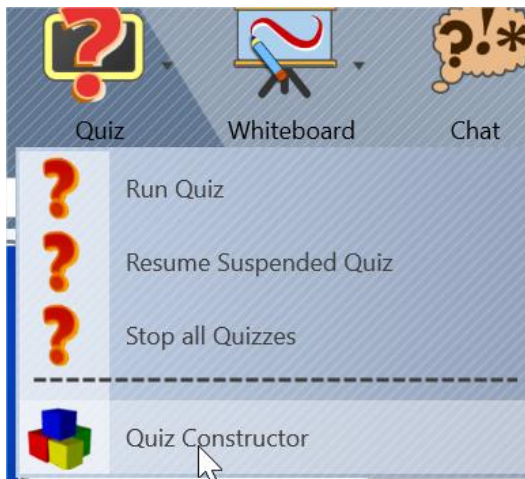
To create a new quiz, click the **Quiz** button on the top toolbar (the **Messaging** tab):



then click the **New** button in the appeared **Send Quiz** dialog:



Alternatively, you can use the **Quiz Constructor** menu command of the Quiz button's submenu:



In the appeared **Quiz Constructor** program, click the **New Quiz** button to create a new quiz, to open an existing quiz, click the **Open Quiz** button.

The top toolbar of *Quiz Constructor* allows to create a new quiz, open an existing quiz, save it or save under a new name:



On the *left toolbar*:



- Adds a new question to the quiz



- inserts a new question before the currently selected question



- deletes the selected question



- moves the selected question upper/lower.



- inserts an extra answer. By default the quiz constructor assumes up to four possible answers per a question, using this button you can add as many extra answers for the question as you need.

#	Var	Cmpx	Question	Type	Answer 1	Answer 2	Answer 3	Answer 4	Add image	Background	Time, sec
1	0			One correct a	< 0 >	< 0 >	< 0 >	< 0 >	...	1	N/A
2	0			One correct a	< 0 >	< 0 >	< 0 >	< 0 >	...	1	N/A

Each row of the Quiz Constructor's table represents one question.

Typically, you configure quiz questions using this table.

Var (*a variant*)– using the variants, you can prepare separate sets of questions for different groups of students within one quiz.

For example, within one quiz, you can create questions A, B, C and assign them the variant No. 1, then also questions D, E, F for the variant No. 2. When you are starting a quiz for a group of students, you can specify what variant of the questions should be used for these students, and respectively either the questions A, B, C or D, E, F only will be displayed.

Variants are completely optional. The default value of 0 means that there is no division of questions into variants.

Cmpx (*Complexity*) – an extension of the “variants” described above. The complexity is a string value that describes complexity of the question. For

example, you can prepare questions A, B, C, D with complexities 10, 20, 30 and 40 respectively. Sending the quiz to a group of students, you will be able to specify the complexity level for the quiz session. Setting up the complexity level 25 for the session, you will make that only questions C and D will appear on the student computers (as having complexities 30 and 40 respectively, which are bigger than 25).

Use of the complexity parameter is optional.

Question – text of the question.

Type – a type of the question:

One correct answer – several answers will be provided, and students should choose one correct answer from the list.

Several correct answers – several answers will be provided, and students can select several correct answers.

Text answer – students should give an answer in text form in the input field. The teacher should specify all possible correct answers in the **Answer NN** columns.

Custom layout – a custom layout question. With this question type you need to design the question page manually, as described below.

Answer 1, 2, 3...N – in the *Answer* columns you need to specify possible answers for the question.

	Answer 1	Answer 2	Answer 3
Incorrect answer	<div data-bbox="376 1375 1002 1621"> <input type="text" value="[Enter the answer]"/> <div> Points: <input type="button" value="◀"/> <input type="text" value="0"/> <input type="button" value="▶"/> </div> <div> <input type="button" value="Cancel"/> <input type="button" value="OK"/> </div> </div>		
Incorrect answer			

enter here an answer for the question, in the **Points** field you can specify how many points should be given to the student if s/he selects this answer. For example, for an incorrect answer you can give 0 points (or a negative value), and 1 or more points for a correct answer.

Add image – optionally, in this field you can specify a graphic image that will be displayed together with the question.

Background – you can select a custom background image either from a list of

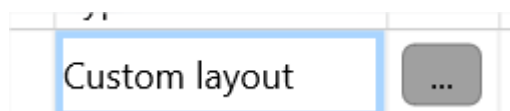
built-in images or a from a file. This parameter is optional, if not set, a random background will be used.

Time – set a time limit for the question, in seconds. The parameter is optional, by default questions are not time limited.

Custom layout questions

With ***Custom layout*** questions, you build the question page layout yourself, using a set of available quiz elements.

To create a custom layout question, in the question row select **Custom layout** as the question type, then click “...” button to modify the layout:



At next step, you will be able to select a template for the question:

Check boxes –several answers displayed; several answers may be correct.

Radio boxes – several answers displayed; one only answer may be correct.

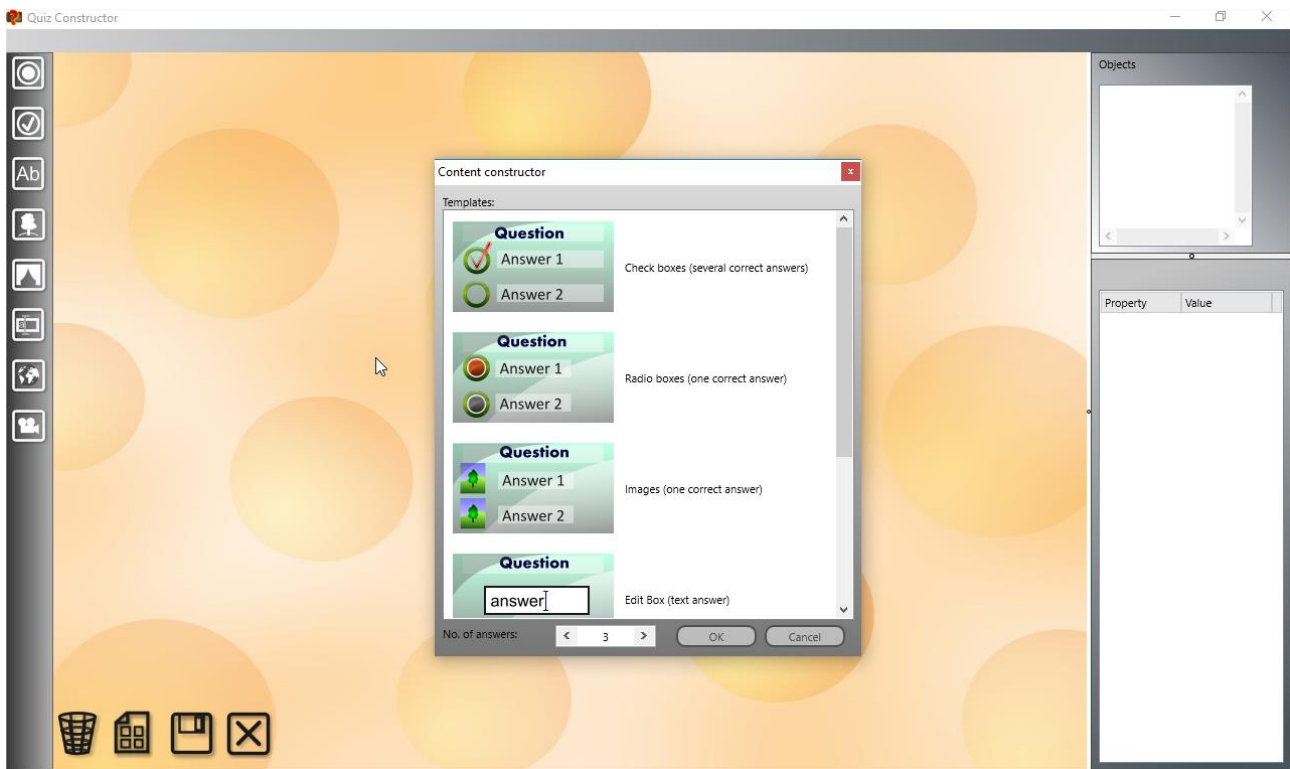
Images – a list of images, one answer only is correct. Students need to click one of the images to give the answer.

Edit box – an input field (the edit box) will be displayed, the answer should be provided in text form, you need to provide together with the question a list of all possible correct answers.

Check boxes with image – the same as *Check boxes* with an image displayed at right side of the screen.

Radio boxes with image – the same as *Radio boxes* with an image displayed at right side of the screen.

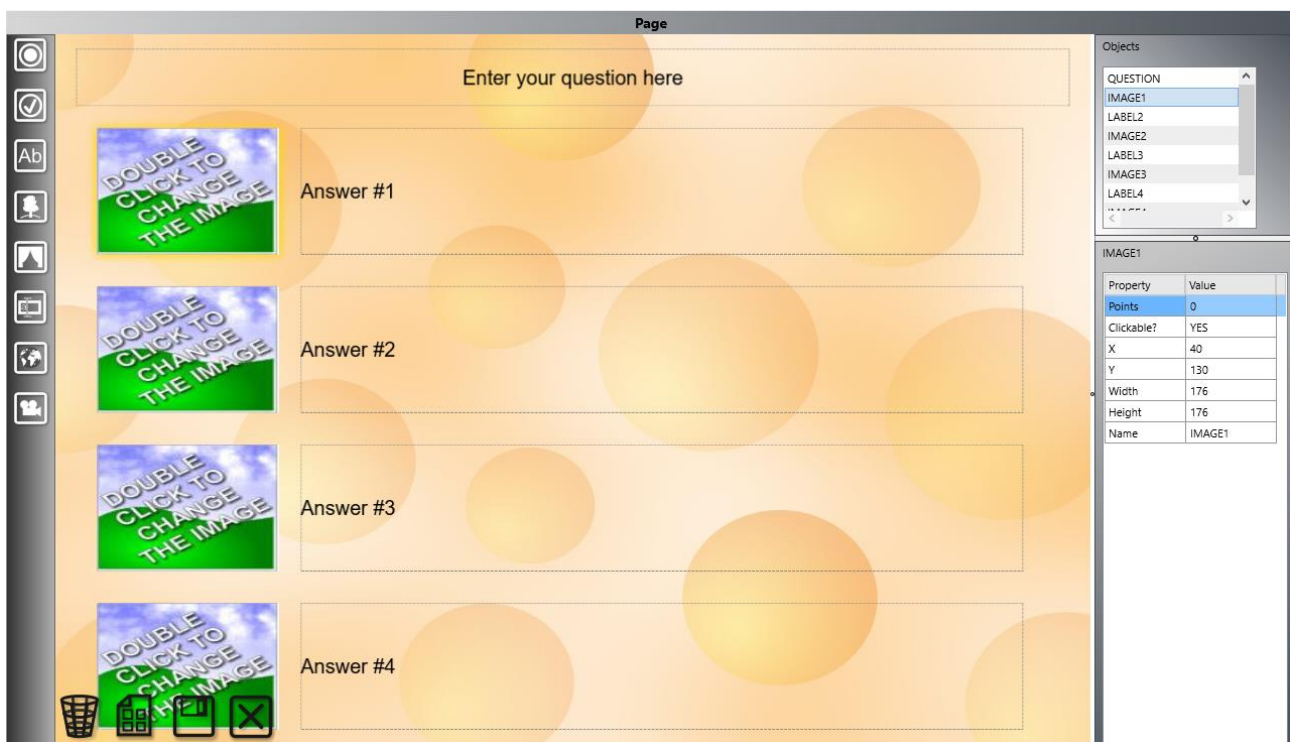
After you select the template, at the bottom, you can specify a number of possible answers for the question (when applicable to the type of template).



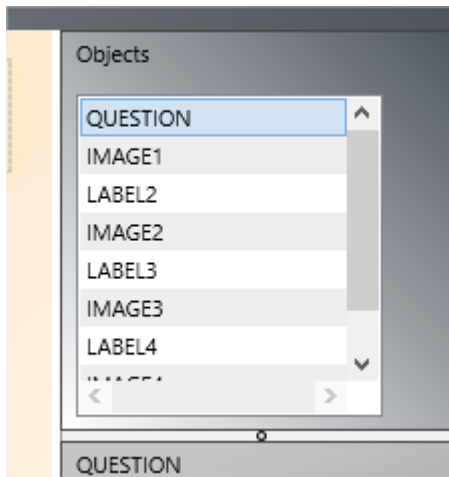
Use of the templates is optional, click **Cancel** button in the template constructor to create completely your own layout.

To edit text of any text element, click it, then type the text.

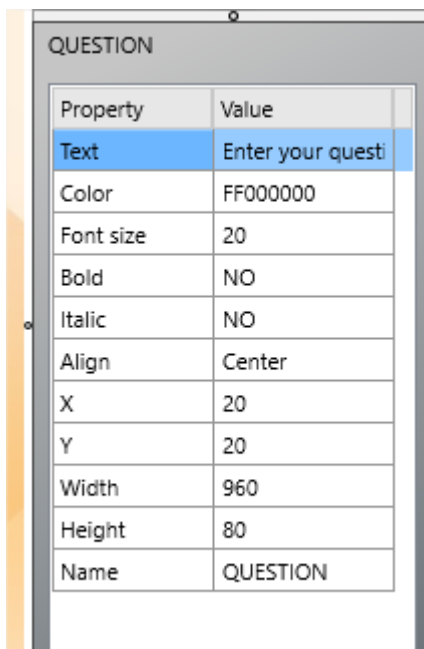
To change an image, double click the image element and choose a file.



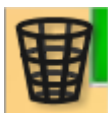
A list of available objects on the question page is available in the top-right hand corner of the window:



To change properties of an object, select it in the list, change its properties in the list below:



To delete an object on the page, select it and press Delete on the keyboard or click the **Delete** button on the bottom-left hand corner of the page:



To change the template, if was incorrectly selected, use the **Select template** button:



To accept all changes and save the page use the **Save** button:



To cancel the question creation, use the **Cancel** button:



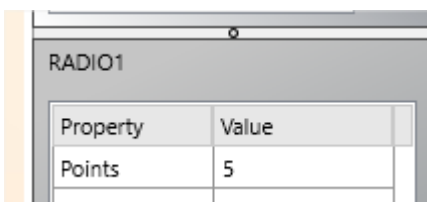
On the custom layout question pages you can add as many elements as you need, using the left toolbar:



- Radio button – assumes only one correct answer on the page. The added on the page element looks as follows:



If the element designates a “correct” answer, you need to add a positive number of points for the element in Properties panel:



After that the “correct” button will appear on the constructor page as follows:





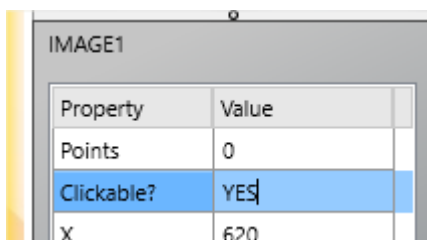
- a "check box" or "multi-select" button. Similar to the "radio" button described above, but assumes several correct answers on one page. In the same manner, as above, you need to add a positive number of points in Properties panel for a correct answer:



- Label, any text label that shows some text on the page. Labels do not have points, they are intended only for use as a description for other elements.



- Image, a custom image from a file. To edit the image in the page constructor, double click it. Images may be used as answers, in this case, you need to enable "Clickable" property for the image in Property editor:



When the "clickable" option is enabled, students can click the image as an answer for the question. The Points value will be used in this case.



- Background. Here you can assign a custom background for the page.



- Edit. The input field, students can enter an answer for the question in this text field, then the system will compare the given answer with the list of possible answers, and will add points only if the given answer is found in the

list. Therefore, you need to provide a list of all possible correct answers in Properties panel for the element (up to 9 answers allowed):

EDIT1

Property	Value
Points	0
X	243
Y	482
Width	500
Height	50
Name	EDIT1
Case-sensitive?	NO
Answer1	
Answer2	
Answer3	
Answer4	
Answer5	
Answer6	
Answer7	
Answer8	
Answer9	



- Web image. An image from the web,



in the *Properties* field you need to provide a URL for the image in the web:

WEB1	
Property	Value
URL	
X	68
Y	501
Width	450
Height	350
Name	WEB1



- Media object. A sound, audio or video file that may be played with the system media player. In *Properties* of the object, you need to specify a path to the multimedia file.



MMEDIA1	
Property	Value
File	
AutoPlay?	NO
X	73
Y	507
Width	450
Height	350
Name	MMEDIA1

After the custom layout is created, save it using the Save button:



Quiz Options

The following parameters may be assigned to a quiz:

Quiz name:	Time limit (common):	<input type="checkbox"/> Hide results
NONAME	N/A	<input type="checkbox"/> Show in random order
		<input type="checkbox"/> Show detailed results

Quiz name – a custom quiz name that will be displayed in Quiz Player and other reports. We recommend assigning a unique quiz name to every quiz you create.

Time limit – the total time limit for the entire quiz, in minutes.

Hide results – if enabled, students will not be able to see test results.

Show in random order – the quiz answers will be displayed in random order.

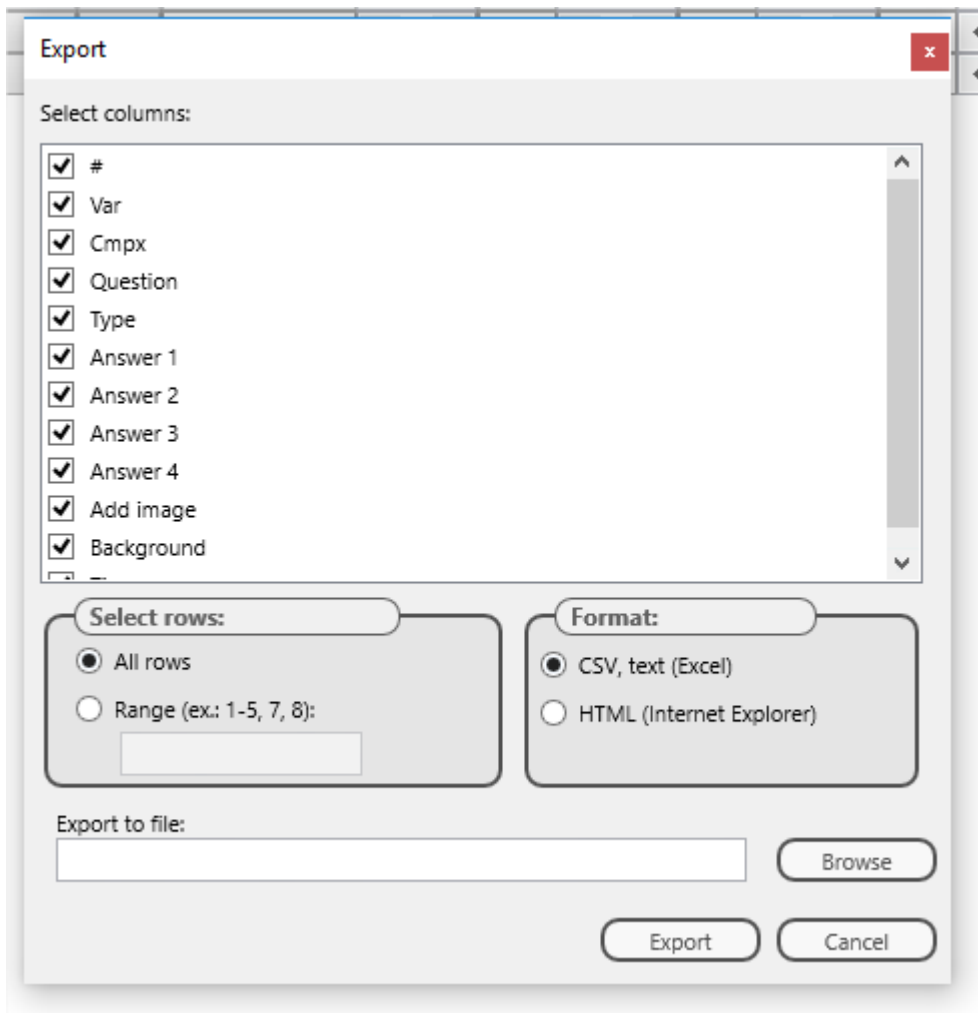
Show detailed results – on the quiz completion students receive detailed statistics for given and correct answers, points earned per each question.

Export

Quiz Constructor provides an easy way to export quiz questions with answers and other related information to a CSV or HTML file.

To export your quiz, on the top toolbar click the **Export** button:





Select columns that should be exported, a range of rows to export, the output file format: CSV for post-processing in a spreadsheet editor like Microsoft Excel or OpenOffice Calc; HTML - for displaying in a browser, printing or processing in external programs and editors like Microsoft Word or OpenOffice Writer.

Import

Alternatively, you can use external programs like Microsoft Excel to prepare a list of questions in a spreadsheet, then import it to *Quiz Constructor* using the built-in Import tools.

To import a file, in *Quiz Constructor*, click the **Import** button on the top toolbar:



File: ...

Delimiter: Re-read

Var	<Do not change> ▼
Cmpx	<Do not change> ▼
Question	<Do not change> ▼
Type	<Do not change> ▼
Answer 1	<Do not change> ▼
Answer 1 :: Points	<Do not change> ▼
Answer 2	<Do not change> ▼
Answer 2 :: Points	<Do not change> ▼
Answer 3	<Do not change> ▼
Answer 3 :: Points	<Do not change> ▼
Answer 4	<Do not change> ▼
Answer 4 :: Points	<Do not change> ▼
Add image	<Do not change> ▼
Background	<Do not change> ▼
Time, sec	<Do not change> ▼

☐ Append to existing questions

For the "Type" field use codes: 0 - for "one correct answer" question type, 1 - "several correct answers", 2 - Edit field, 3 - custom layout

Import Cancel

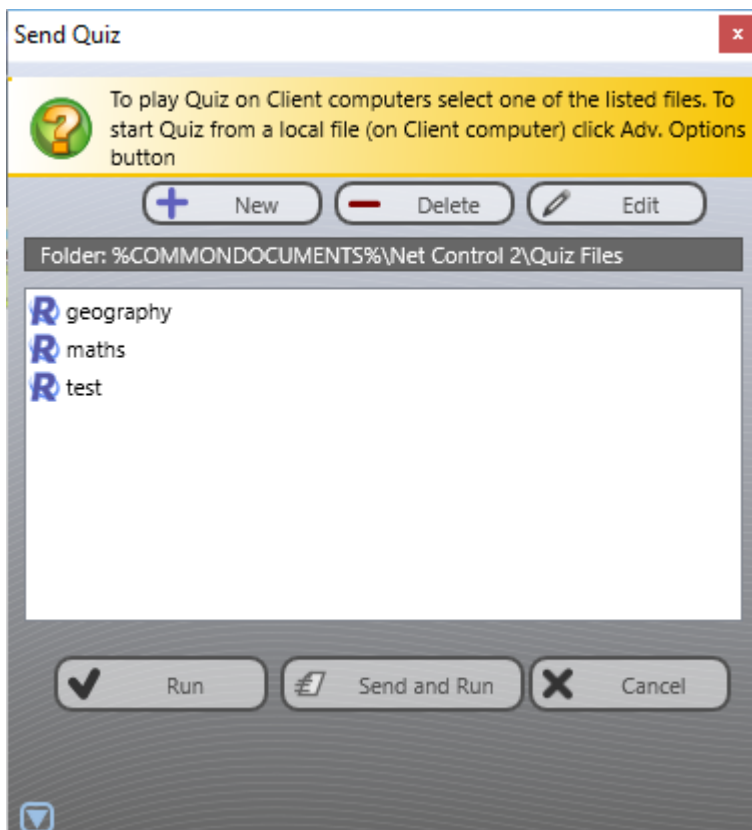
Open a CSV formatted file (when necessary, specify the used CSV delimiter in the respective field). Specify what columns of the imported CSV file correspond to columns of the quiz table. For example, double click the field at right of the **Var** line and select a column of the CSV file that corresponds to *variants*, repeat for other columns. If you leave the default "**Do not change**" value for a line, the column will not be imported and a default value will be used instead.

Quizzes

To run a quiz on student computers, select them in the connections list, click the **Quiz** button on the top toolbar:



Select a quiz form the list:



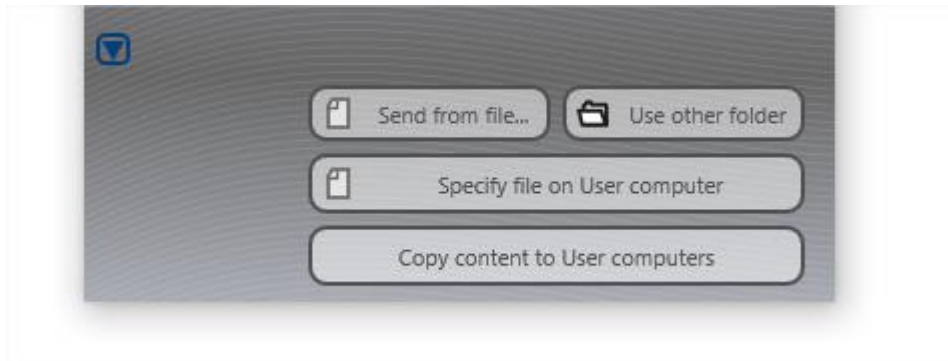
Click the **Run** button to run the selected quiz from a local file on student computers, the quiz should be copied to student computers beforehand.

Click the **Send and run** button to send the selected quiz to student computers and run it then there. Use this option, if the quiz files are not present on student computers.

Click



to get access to additional options:



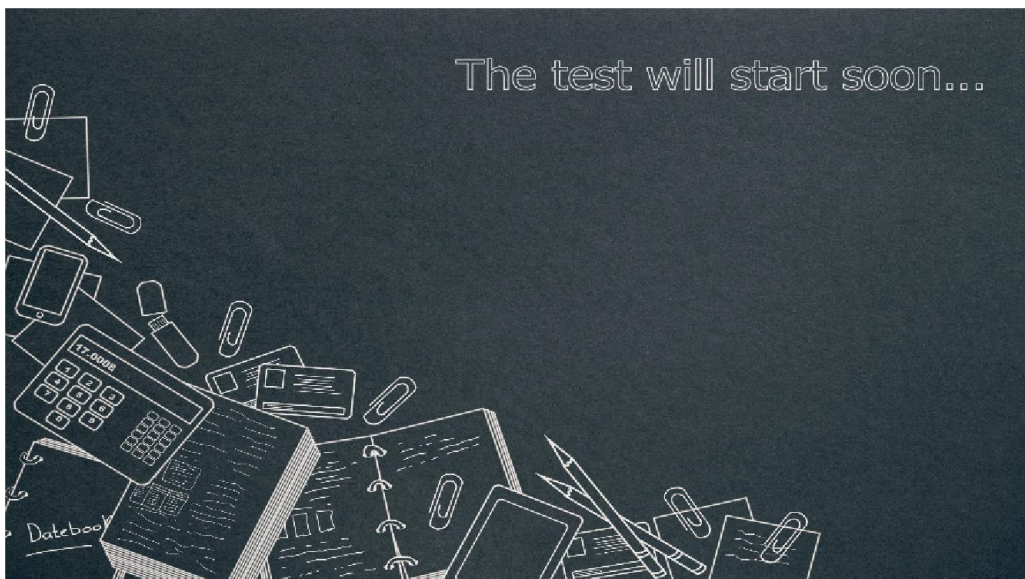
Send from file – you can select a quiz file on your computer, the file will be sent to students and started there.

Use other folder – you can specify a path to any non-default folder, where the quiz files are located.

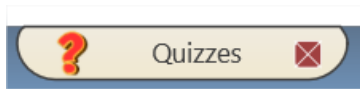
Specify file on User computer – you can specify a full path to the quiz file on student computers.

Copy content to User computers – copies quizzes from the currently opened folder to student computers. After the operation is complete, you can use the **Run** button to initiate quizzes instead of *Run and Send*.

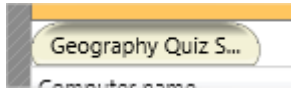
After running a quiz on student computers, the following splash screen appears:



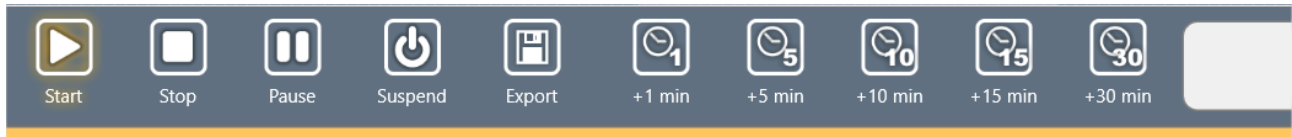
And the **Quizzes** tab appears at the bottom of the teacher console:



Each running quiz is displayed on its own tab within the Quizzes panel:



The Quiz Monitor toolbar provides access to the following controls and commands:



(Start) – Starts the quiz.



(Stop) – Stops the running quiz.



(Pause) – Pauses the running quiz; blanks the displayed question page, students cannot see questions or answer them.



(Suspend) – Suspends the quiz. The quiz progress, actual state and statistics will be stored on student computers, and the quiz will be closed. At any moment later the teacher can resume the quiz using the **Resume Suspended Quiz** menu command of the **Quiz** button's submenu:

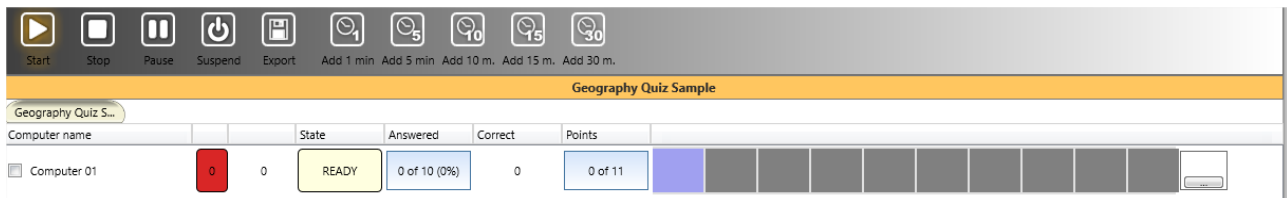


(Export) – exports the current quiz statistics to a CSV or HTML file. CSV files may be imported to a spreadsheet editor (Microsoft Excel, OpenOffice Calc); HTML files may be printed or imported to text editors.



- Adds 1, 5, 10, 15 or 30 minutes to a time-limited quiz.

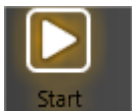
The main part of the Quiz panel provides access to detailed statistics on the quiz progress for each student.



Right after the quiz is sent to student computers, its status appears as **“ready”**:



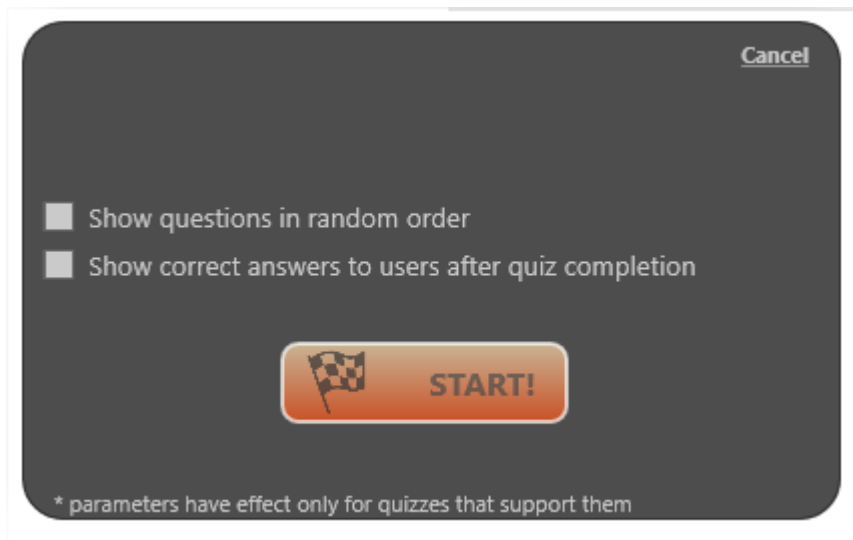
The **Start** button becomes flashing:



Click the **Start** button to run the quiz. In the appeared window, you can select optional parameters for the quiz. For quizzes that have questions in different complexities or variants, you will be able to select the necessary variant or complexity.

Show questions in random order – enables random order for questions.

Show correct answers to users after quiz completion – if enabled, students will be able to see the full quiz statistics after the quiz is complete: a list of questions, correct and given answers, earned points.



Click the **Start** button to run the quiz. The quiz status on the teacher computer should change to **"Started"**:



For each student you can see the statistics:

Computer name	Variant	Complexity	State	Answered	Correct	Points	Progress
Computer 01	0	0	STARTED	3 of 10 (30%)	1 of 3 (33%)	1 of 11	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>

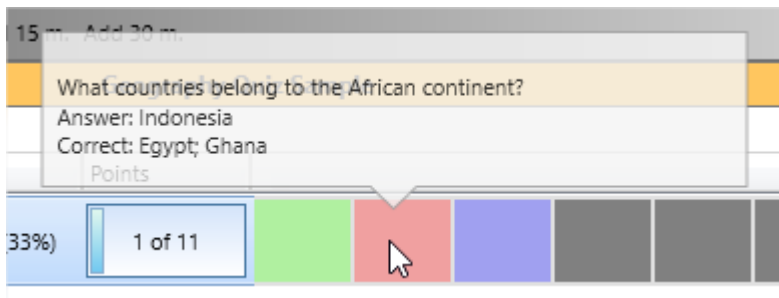
The computer name, variant, complexity, current state (*"ready"*, *"started"*, *"suspended"*, *"paused"*, *"finished"*), a number of answered questions (both correctly and incorrectly), a number of correct answers and earned points.

The color-coded statistics per each question:



Each square represents one question, a "green" square means the correctly answered question; a "red" square represents the wrong answered question, a "blue" question means the question that is currently displayed on the computer; a "gray" square means the question that was not shown yet.

Moving the mouse cursor over the red or green squares, you can see the given and correct answers:



Click on the line to get more detailed statistics:

#	Question:	Answer1:	Correct:
1	What is the capital of Italy?	Rome	Rome
2	What countries belong to the African continent?	Indonesia	Egypt; Ghana
3	When it is summer in the United States, what season is it in Australia?		WINTER

At any moment, you can grade students using the button at the right of the statistics line:



To close all quizzes running on student computers, use the **Stop All Quizzes** command of the **Quiz** button's submenu of the top toolbar.

Virtual Whiteboard

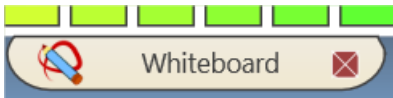


Virtual Whiteboard is a tool that is intended to replace ordinary school boards, providing teachers with a significantly more effective way to explain lesson material, attractive to students and easy to use for teachers.

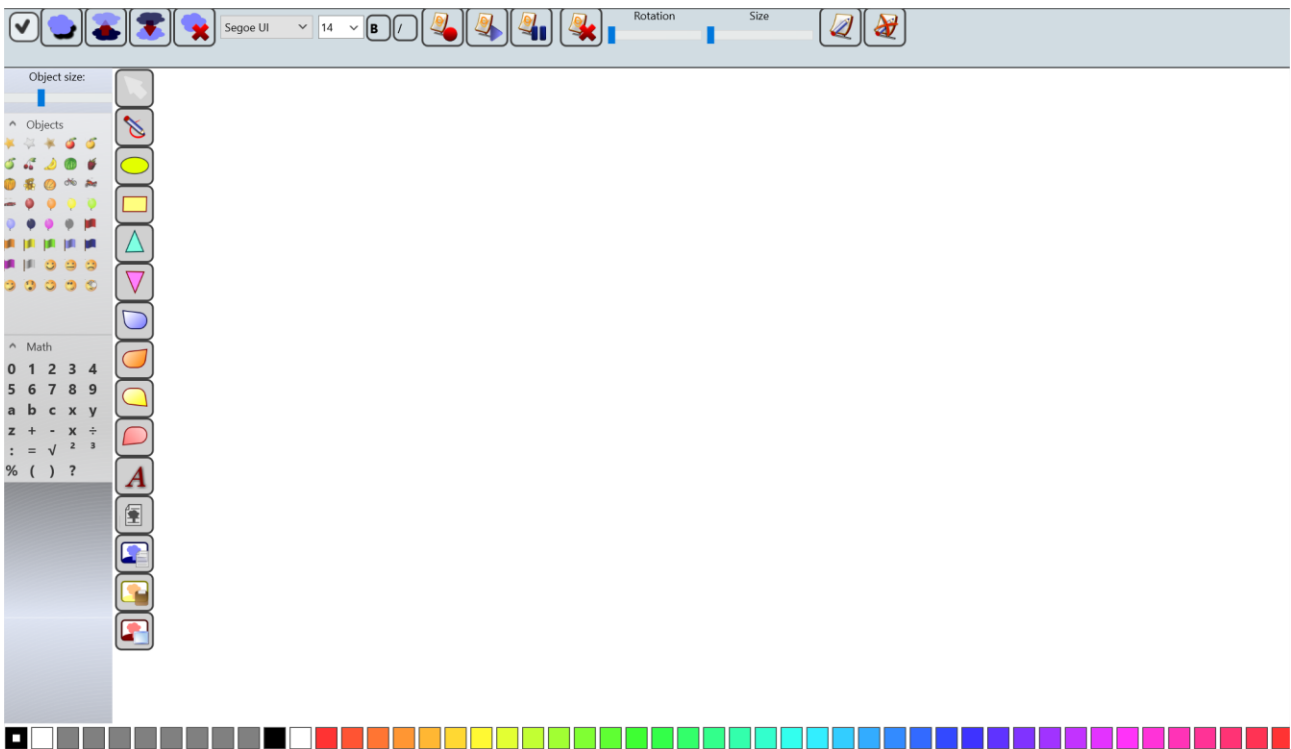
To open the whiteboard, select student computers and click the **Whiteboard** icon on the top toolbar (the **Messaging** tab):



The Whiteboard tab should appear at the bottom of the teacher console:



The whiteboard surface is expanded to the whole teacher console window:



Any actions performed by the Instructor on the Whiteboard, will be reproduced on the student computers.

By default, students cannot draw on the whiteboard, but only can see the actions of the teacher.

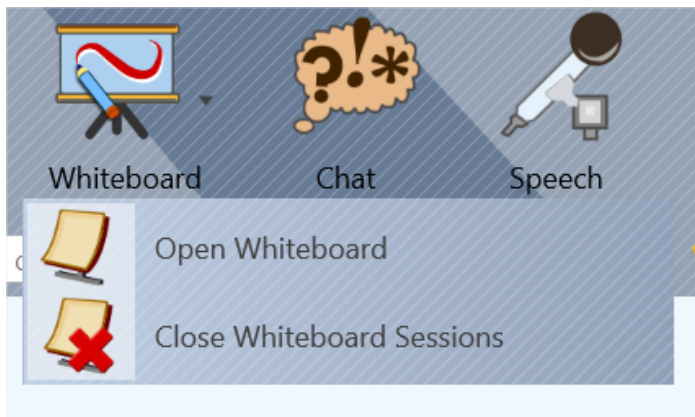
The teacher can enable drawing features for any student, using the **Enable Drawing for Students** button on the top toolbar of the whiteboard surface:



To disable the drawing features for students, use the Disable Drawing for Students button:



To close the *Whiteboard session*, just close the **Whiteboard** tab at the bottom of the teacher console, or use the **Close Whiteboard Sessions** menu command of the Whiteboard button's submenu on the top toolbar:



Whiteboard tools:



- select an object on the drawing surface



- free hand drawing



- draw an ellipse



- draw a rectangle



- draw a triangle



- draw a callout



- type text



- insert an image from a file



- set the whiteboard's background from a file



- paste the whiteboard's background from Clipboard



- create a screenshot and use it as the whiteboard's background (the screenshot is made with a 5 seconds delay after pressing the button).

Object Library



At the left side of the whiteboard surface is placed **Object Library**, a set of graphic objects, digits and mathematics symbols that you can simply drag and drop to the surface (on teacher computers) or click and use (on student computers).

The **Object size** slider is intended for setting up a default size for the inserted from the library objects. When you make changes on the slider, they do not apply to existing objects but will be applied to the new ones only.

The color panel at the bottom of the surface:



May be used to change colors of drawing and filling. The first rectangle designates the color of drawing (i.e. the line color for the free hand drawing tool,

texts, the border color for shapes), the second rectangle sets the fill color for shapes.

The top toolbar:



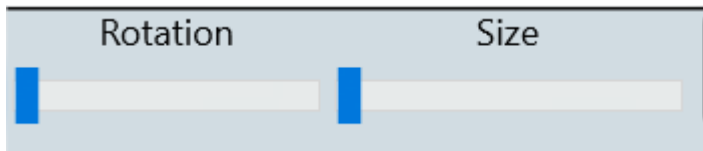
- finishes the current free hand drawing operation

Add a shadow – adds a shadow to the current object.

Move forwards, Move backwards – moves the selected object higher or lower in the Z-order position, one level up or down.

Delete – deletes the selected object.

Font parameters – set up a font name, size, style (bold, italic) for the text object.



Rotation – rotates the selected object

Size – changes the selected object size



Whiteboard recorder controls:

Record – records further actions on the whiteboard to a file for further replay.

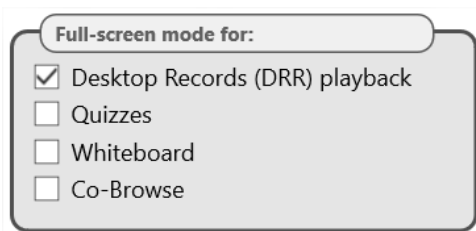
Play – replays actions from a previously saved whiteboard record.

Pause – makes a pause in the recording.

Clear all – deletes all objects from the surface.

The whiteboard window on student computers may be displayed either full

screen or in a window. To change the mode, in the teacher console, click the main menu command **N – Options – Options**; on the **Commands** page



enable the **Whiteboard** option in the **Full-screen mode** section and click OK.

If the whiteboard window was closed on the student computer, to restore the latest whiteboard session and open the window, students can use the **Board** button in the Student Console:



Chat



The **Chat** in Net Control ² is a powerful tool for communicating and sharing files and information between teachers and students

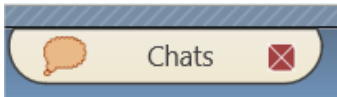
To start a chat session with selected students:

- select one or more student computers;

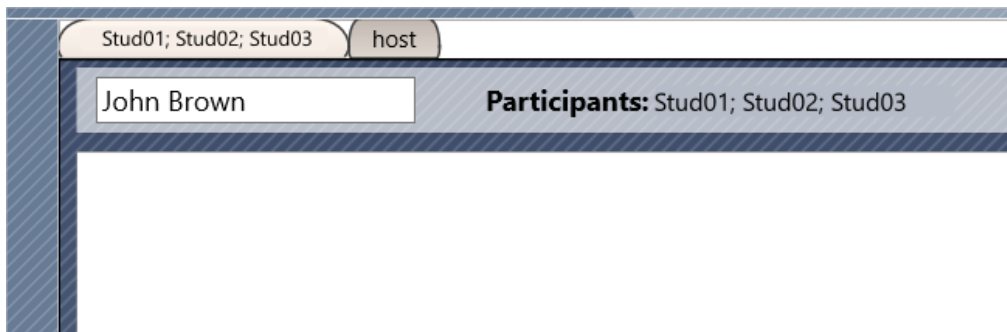
- in the **Messaging** tab, click the **Chat** button:



- the **Chat** tab appears at the bottom of the teacher console and a new chat session is started:

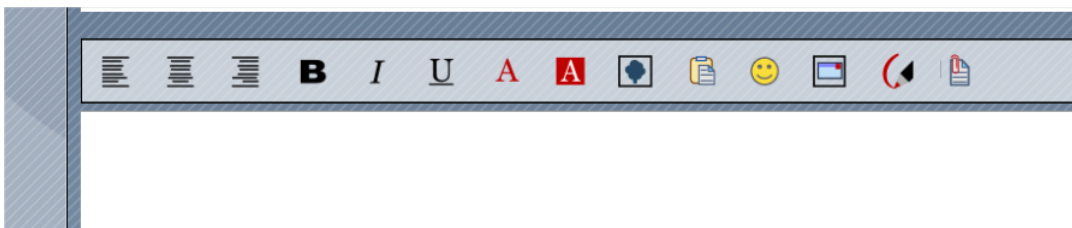


The chat panel contains separate chat tabs for each chat session:



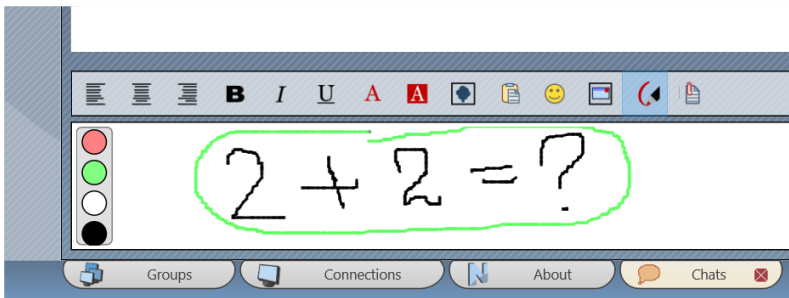
You can change participants of the chat using the **Participants** label at the top of the chat panel.

The chat message may be formatted with the controls at the bottom of the chat panel:



The **text alignment** (left, center, right); **bold**, **italic** and **underscore** styles for the selected text; the **font color** and **font background** controls; insert an **image from a file**; paste **text or an image from Clipboard**; insert an **emoticon**; insert a **screenshot**; the **free hand drawing**; attach a **file**.

In the free hand drawing mode, you can make drawings instead of text:



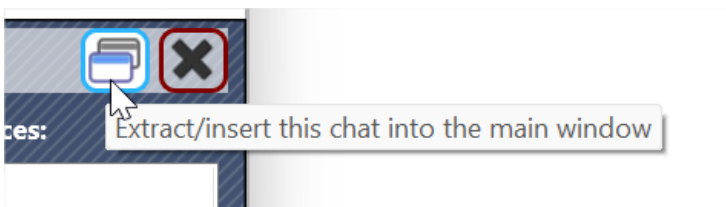
In the screenshot capture mode, you can select area of the screen that should be captured or capture the entire screen:



To attach a file to the chat, just drag and drop it to the text area or use the **Attach** button of the chat toolbar.

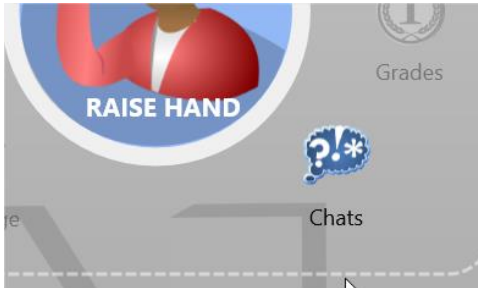
Attached files and sent images are automatically placed to the **Resources** section of the chat. This section provides quick access to files and images sent via the chat without having to scroll through the chat content to find the necessary file.

By default, all chats are displayed within the **Chat** panel. If necessary, you can extract the chat from the panel into a separate window, or insert the chat back to the panel, using the **Extract/insert this chat into the main window** button:



To close the chat button, use the **Close** button on the top-right hand corner of the chat panel.

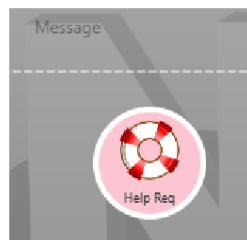
On student computers, each chat session is displayed in its individual window, to restore closed chat windows, students can use the **Chats** button in the Student Console:



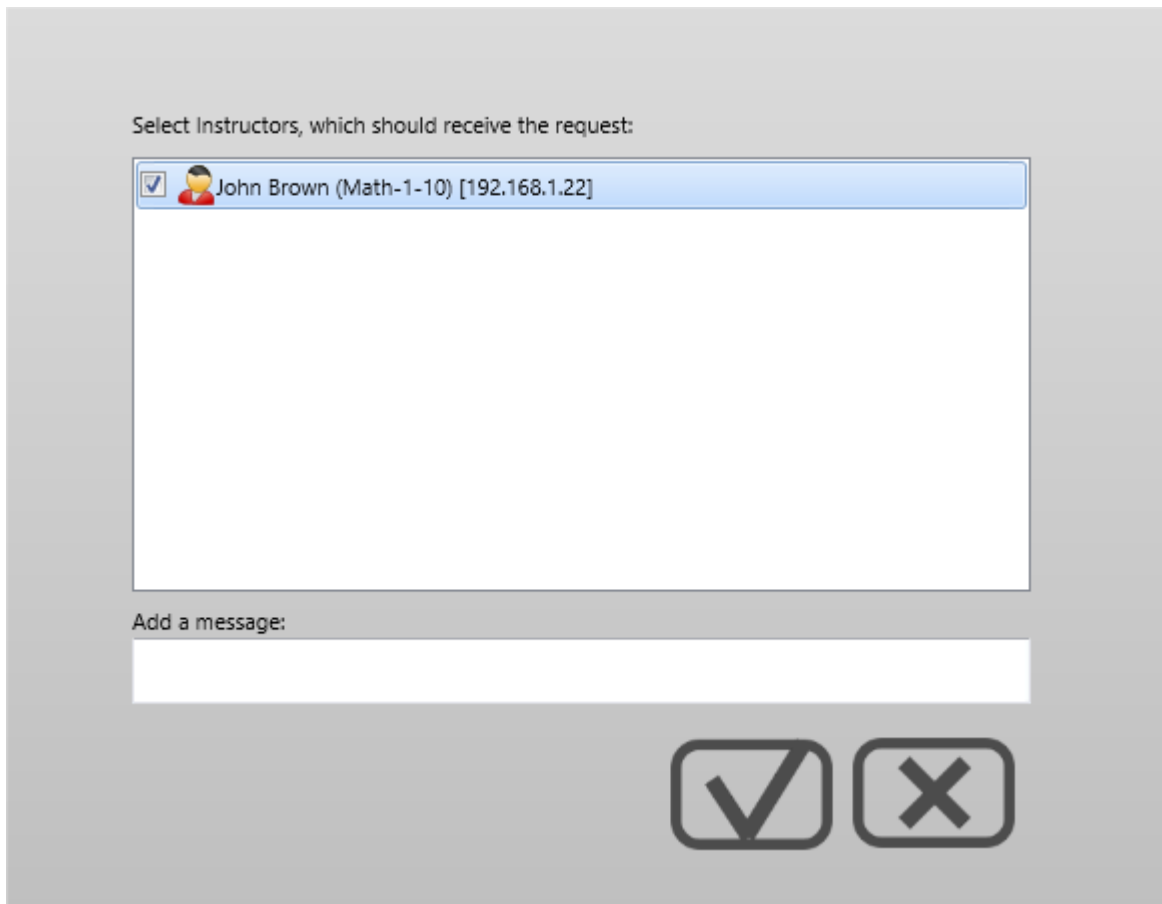
Help Requests

To get attention of a teacher, students can send him/her help requests. Help requests may be sent to any connected teachers and include some text describing the issue.

To send a help request, the student should open the *Student Console*, clicking the *Net Control 2 icon* in the system tray, and then click the **Help Request** button:



Select one of the currently connected to this student computer Instructors:



add an optional message and click OK.

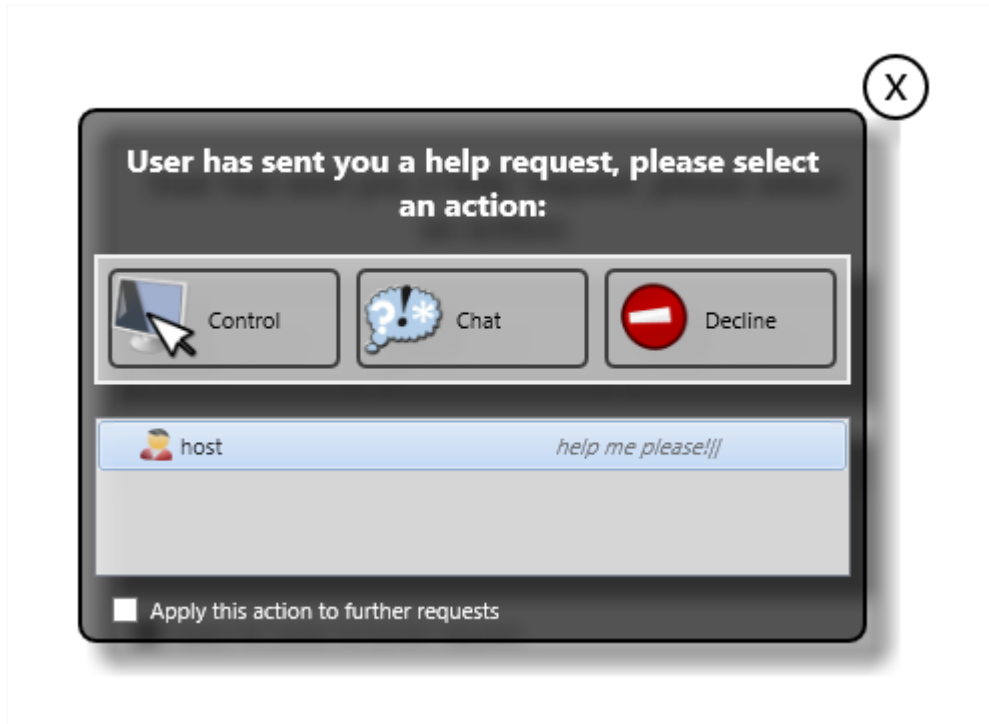
In the teacher console, on the thumbnail of the student computer a special "SOS" icon will appear:



In addition, the same flashing icon appears in the top-right hand corner of the teacher console window:



Clicking this icon you can select an action in response to the request:



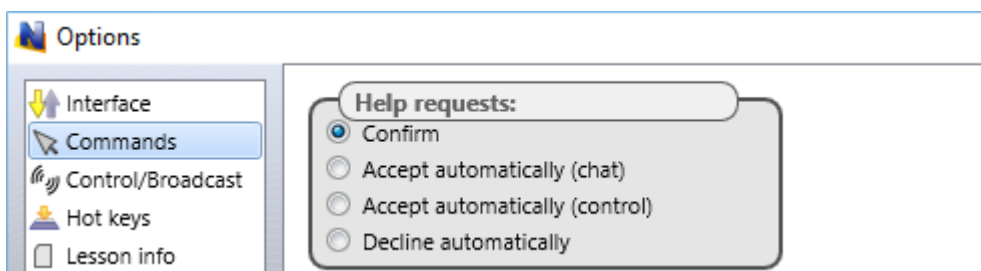
Control – opens a remote desktop session with the student computer;

Chat – opens a text chat session with the student;

Decline – declines the request.

If the **Apply this action to further requests** option is enabled, the chosen action will be applied to all further help requests from all other students.

You can change the behavior of the default help request action in the teacher console settings (**N – Options – Options**; the **Commands** tab, the **Help requests** section”):



Speech and Camera



The **Speech and Camera** tool is available on the **Messaging** tab of the top toolbar, and is represented on the toolbar with the **Speech** icon.

The tool provides access to the following features:

- broadcast the **teacher's voice from a microphone** (or other recording device) to students;
- listen to a **voice from student computers**, recorded from a microphone or other recording device;
- broadcast **the system audio of the teacher computer** to students;
- listen to the **system audio of student computers**;
- display an **image from a teacher's web-camera** to students; optionally, together with the teacher's voice or the system audio;
- view an **image from the student webcams**, optionally, together with the system audio or a sound from the microphone;
- **audio conference** calls between the teacher and students so that all participants can communicate with each other.
- **video conference** calls between the teacher and students;
- ability to **record** the received sound from student computers with saving to a file;
- divide participants of a conference call into **conference groups** (up to 4 groups) for individual work;
- dynamically change the capture and output **settings**, the volume and recording levels.

The Speech tool is available only in modules for Microsoft Windows.

To use the tool, please select students in the connections list, then click the **Speech** button on the **Messaging** tab of the main toolbar. In the appeared window you can select an initial mode of the tool (the mode can also be changed and customized later, within the speech session):



Speak – teacher speaks to students, the voice recorded from a microphone is playing on student computers

Listen - the teacher listens to the students (their voice recorded from a microphone)

Play System - plays the system audio of the teacher computer on student computers. The system audio is the sound that is currently playing on a computer.

Listen System – plays the system audio of student computers on the teacher computer

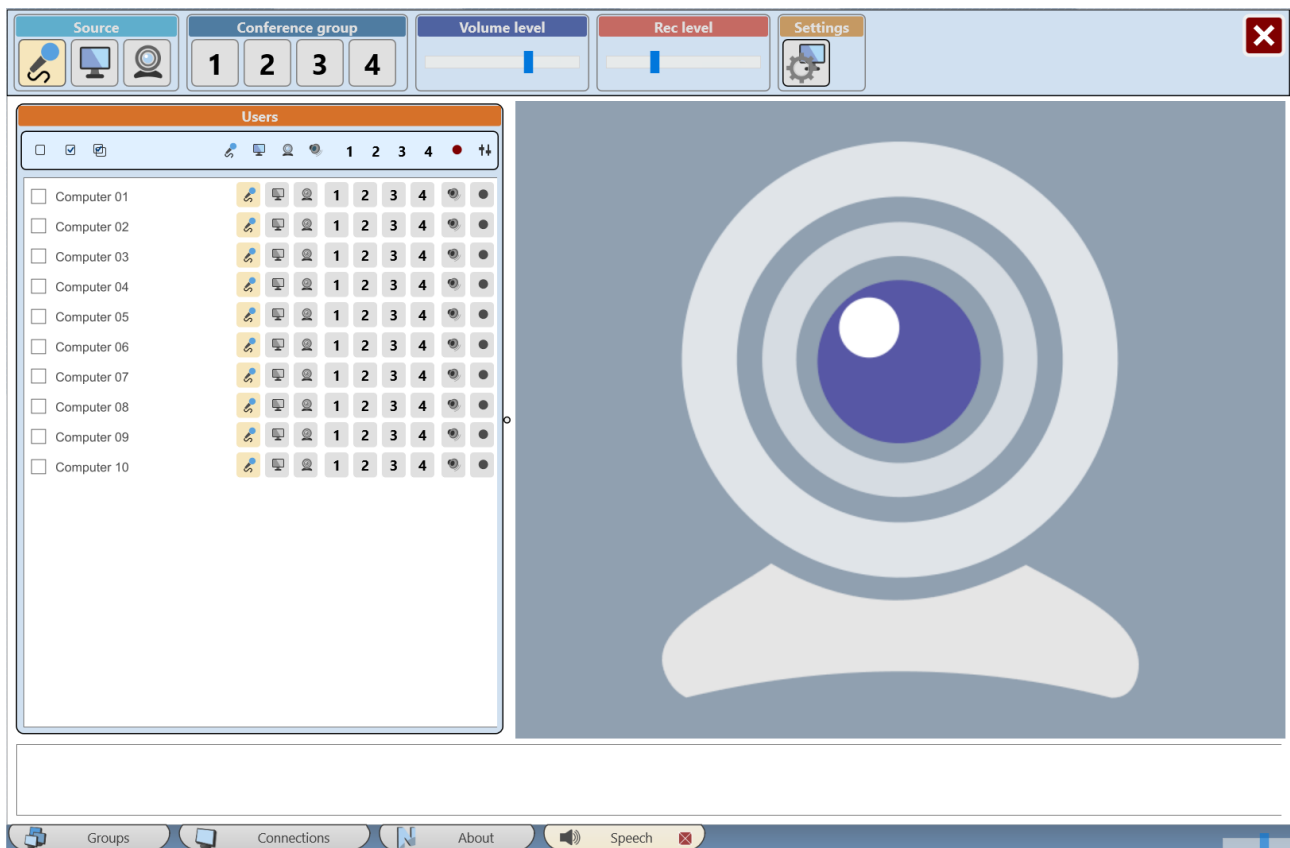
Show - displays an image from the teacher's web-camera and sound from a microphone on student computers

Watch - displays an image from web-cameras of student computers on the teacher computer

Aud. Conference - enables the audio conference call mode

Video conference - enables the video conference call mode.

After selecting the mode, the **Speech** tab appears at the bottom of the main window:



The top toolbar of the Speech panel provides access to the commands and features of teacher computer:

Microphone – turns on the microphone on the teacher computer and broadcasts the sound to student computers. As the microphone, Net Control ² uses the default audio recording device, as it set up in the Windows sound settings.

System – broadcasts the system audio of the teacher computer to students. The system audio is a sound that is currently playing on the teacher computer.

The **Microphone** and the **System** modes are mutually exclusive, only one of them can be used at a time.

Camera – turns on the web camera connected to the teacher computer and

broadcasts an image from the camera to students. The default recording mode is 640x480 or closest.

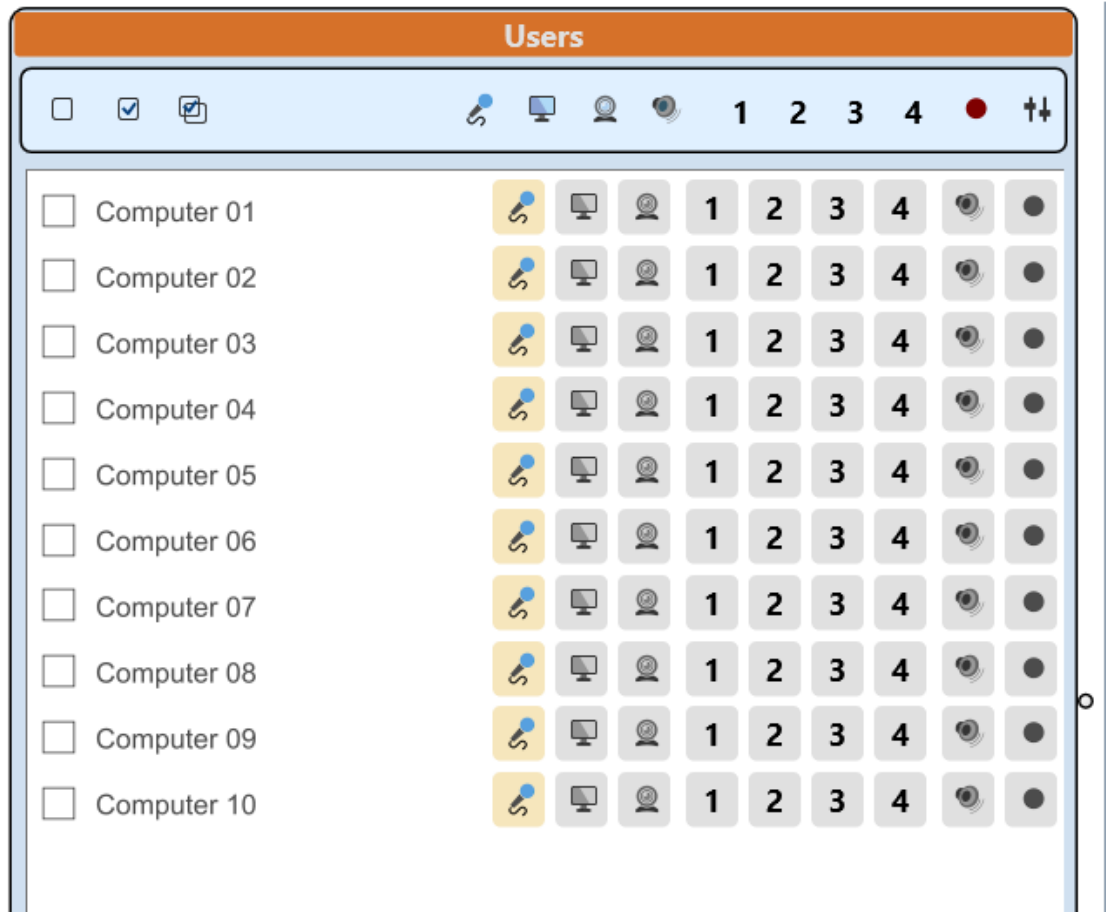
Conference groups (1, 2, 3, 4) – adds a membership of the teacher in the respective conference group. Please see *Conference groups* section below for more details.

Volume and Recording levels – set up the sound volume and recording level on the teacher computer. The recording level of the system audio cannot be modified.

Settings:

System – displays the Windows system sound settings dialog, where the sound settings of the teacher computer may be customized.

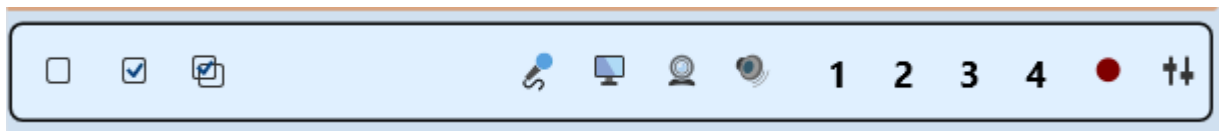
The **Users** panel (on the left) contains a list of students that participate in the speech session. If you need to add new students to the session, just select them in the *connections list* (on *Connections* tab) and then click the *Speech* tool button on the top toolbar again:



The mode of each student in the list may be configured independently, you can turn on or off the necessary features individually for each student.

To enable or disable certain functions for a specific user, you can use the buttons at the right side of the student item in the list.

To enable or disable functions for several users at the same time, just select students using the checkboxes at the left of the student's name, and then use the respective buttons of the "Users" panel's toolbar:



Clear selection – resets the selection of users in the list

Select All - selects all users in the list

Invert selection – inverts the selection of users in the list

Microphone – turns on the microphone (or other “default” recording device) on the student computer.

System – turns on the capture of the system sound on the student computers.

Camera – turns on the web-camera connected to the student computer, and displays an image from the camera on the teacher computer.

1, 2, 3, 4 – enables or disables membership in the respective conference group.

Play – turns on the playback of the sound from the teacher or other student computers.

Record - enables recording of the received audio from the student computer and saves it to a file.

Volume - allows adjusting the sound volume or recording levels on student computers.

Broadcast and playback of the sound.

With the *Speech and Camera* tool, you can customize features for each participant in the session individually, just by turning on or off the necessary sources (devices) and enabling or disabling the playback.

For example, to play the teacher's voice on student computers, you need to turn on the microphone in the teacher panel (the top toolbar of the Speech tool), and to enable the *Play* feature for those students in the list, who need to listen to the teacher's voice. Respectively, for the students who should not be able to hear the teacher, the "Play" feature should be disabled.

When you are selecting the initial mode at startup of the tool, the respective features will be enabled or disabled by default, depending on the selected mode.

Audio conference call mode. Conference groups

By default, when you are turning on the microphone on student and teacher computers, the teacher can hear all students, but students can hear the teacher only and cannot hear other students.

If some students should be able to hear other students, you need to join them into a conference group. Net Control 2 provides access to four conference groups, and members of one group can hear each other but are unable to hear members of other conference groups.

To add a student to a conference group, just select them in the Users list and

click the number of the respective conference group (1, 2, 3 or 4) in the Users panel

Moreover, if some students are assigned to a conference group, the teacher will not be able to hear such students unless the teacher is also the member of this conference group. To assign a conference group to the teacher, please use 1, 2, 3, 4 buttons on the top toolbar of the Speech tool.

Video conference call

When a web-camera is enabled on student and teacher computers, the teacher can watch all selected students (images are appearing in the central part of the Speech tool panel), but students are able to see only one, the **"source"** computer. The *source* computer is marked by the following icon:



By default, the *"source"* is the camera of the teacher. The teacher can change the *source* just by clicking the source button on the respective web-camera image. To disable temporarily showing the camera on student computers, just click the source button again.

An image from the teacher or another *"source"* computer is displayed on student computers in a small window at the top righthand corner of the screen. Students cannot close this window, while the session is in effect and the camera *"source"* is selected and enabled.

Recording audio from student computers

To record a sound from student computers (the microphone or the system sound), just click the **Record** button in the user list. The audio is recorded in MP3 format and saved in the *My Documents\Net Control 2 folder* under the name of the computer from which the recording was made, with the respective time stamp.

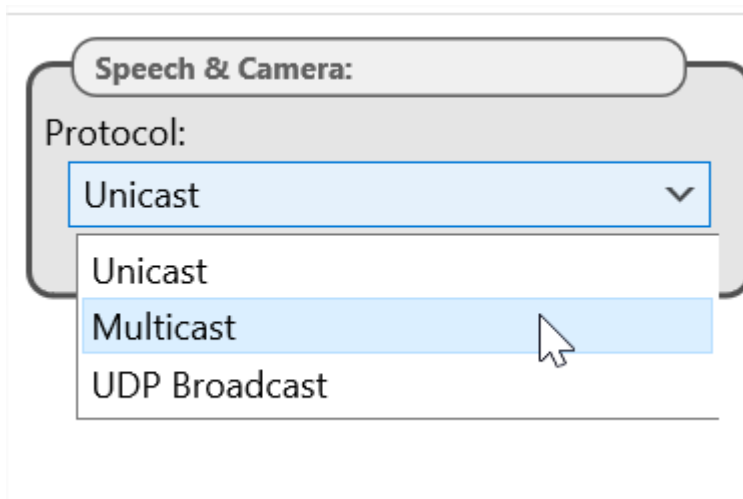
Performance and protocols

The performance of the tool (refresh rate of the camera image, delays in

voice/audio transmission) depends on the number of participants in the session, network load and latency, configuration of the hardware.

Small delays in the transmission of the voice or sound (about 1 second) are acceptable and inevitable, due to peculiarities of the sound capture, compression and transmission technology.

When the tool should be used in sessions with a large number of participants (above 15) or in loaded networks, multicast protocols may significantly reduce the network load and sometimes to increase the performance of the tool. To change the protocol, please open the teacher module settings (**N - Options - Options**), the **Commands** page:



in the *Speech and Camera* section, select the necessary protocol and click OK button:

Unicast is the default protocol that is recommended for the most of situations.

Multicast generates less network traffic and provides better performance on busy networks or when the tool is used in sessions with many participants.

UDP Broadcast is an alternative to *Multicast*, when the Multicast protocol is not supported by the network configuration.

Closing the session

To close the speech session, just close the **Speech** tab at the bottom of the main window of the teacher console, or click the **Close Session** button in the top-right hand corner of the Speech panel:

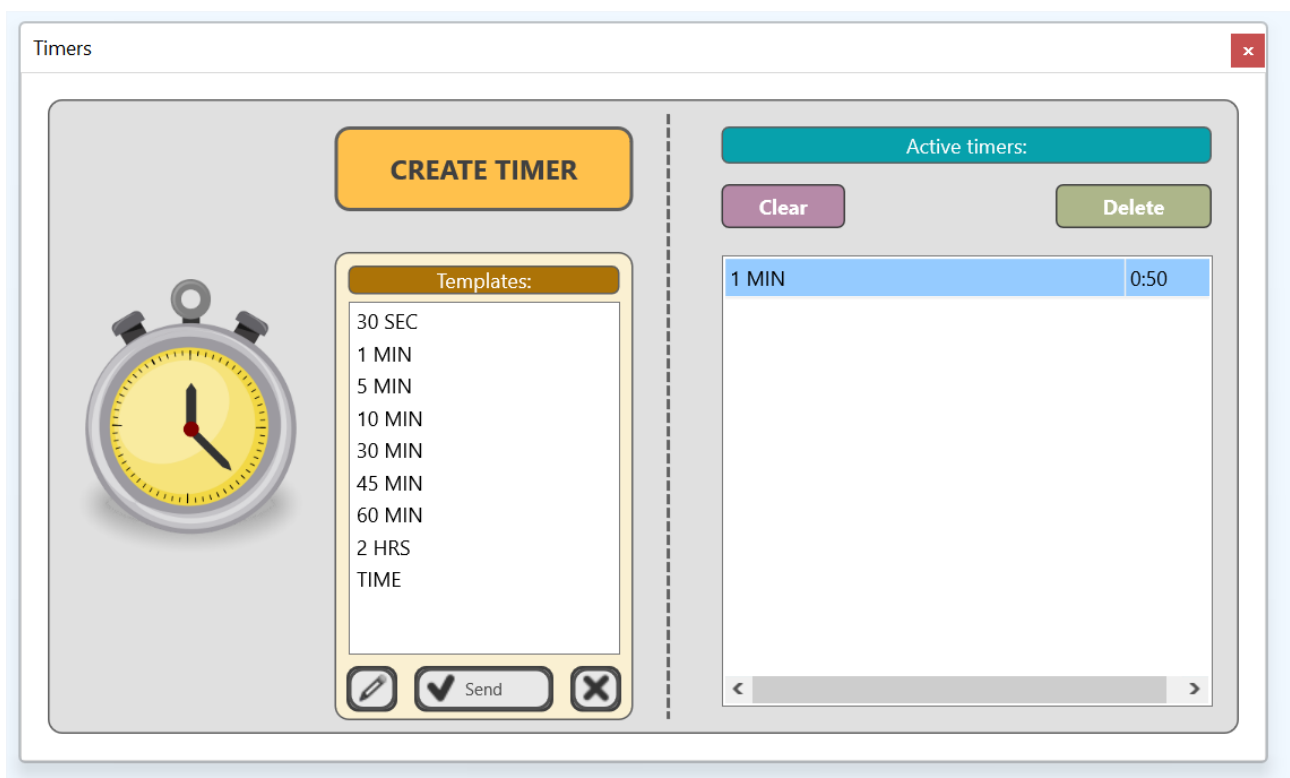


Timers



With the **Timers** tool, the teacher can run various timers on student computers. This can be useful when students complete some time-limited assignments.

To run a timer, click the **Timers** button on the top toolbar, in the **Messaging** tab:

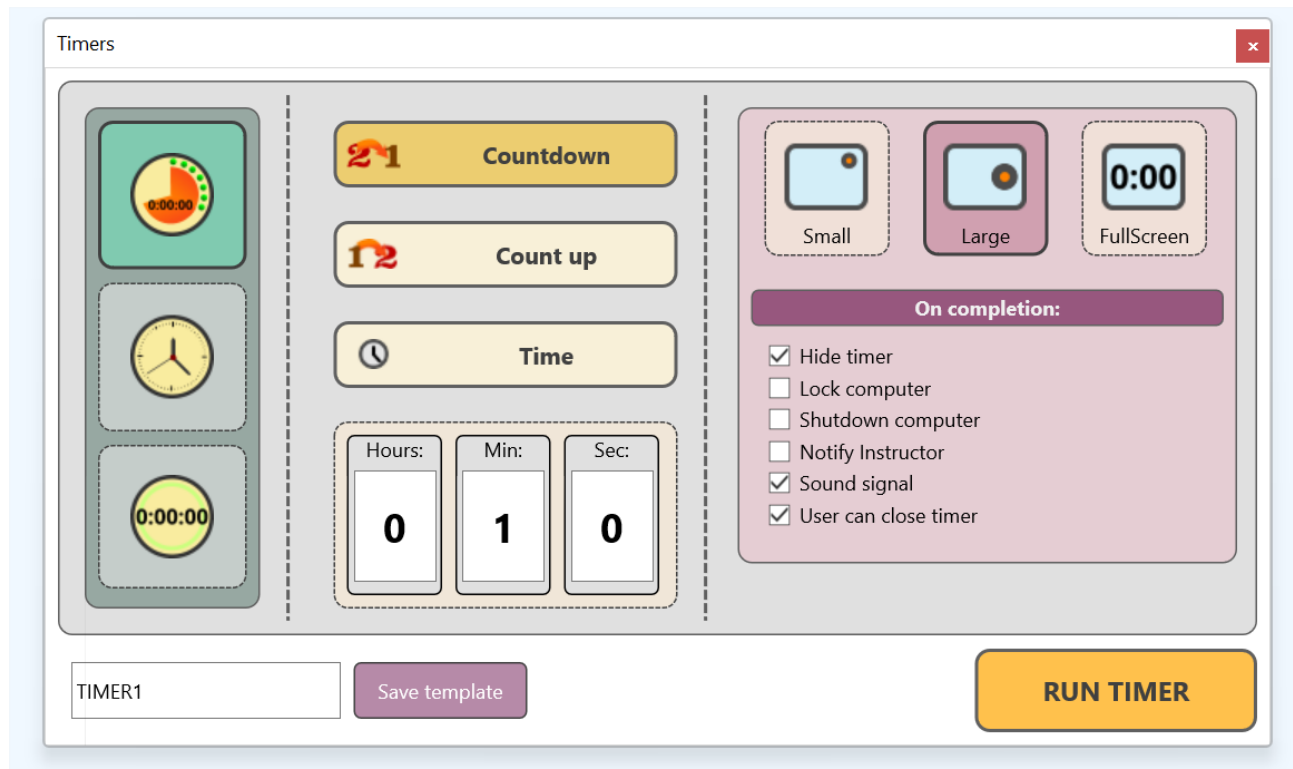


The **Templates** section contains a set of pre-defined timers lasting from 30 seconds to 2 hours. To send a timer from this section, just double click on its

name or select it and click the **Send** button. You can also edit or delete timers in this section with the respective **Edit** and **Delete** buttons.

The **Active Timers** section contains a list of currently running or elapsed timers on student computers. The **Clear** button in this section stops all timers and deletes them from the list. The **Delete** button stops and deletes the selected timer only.

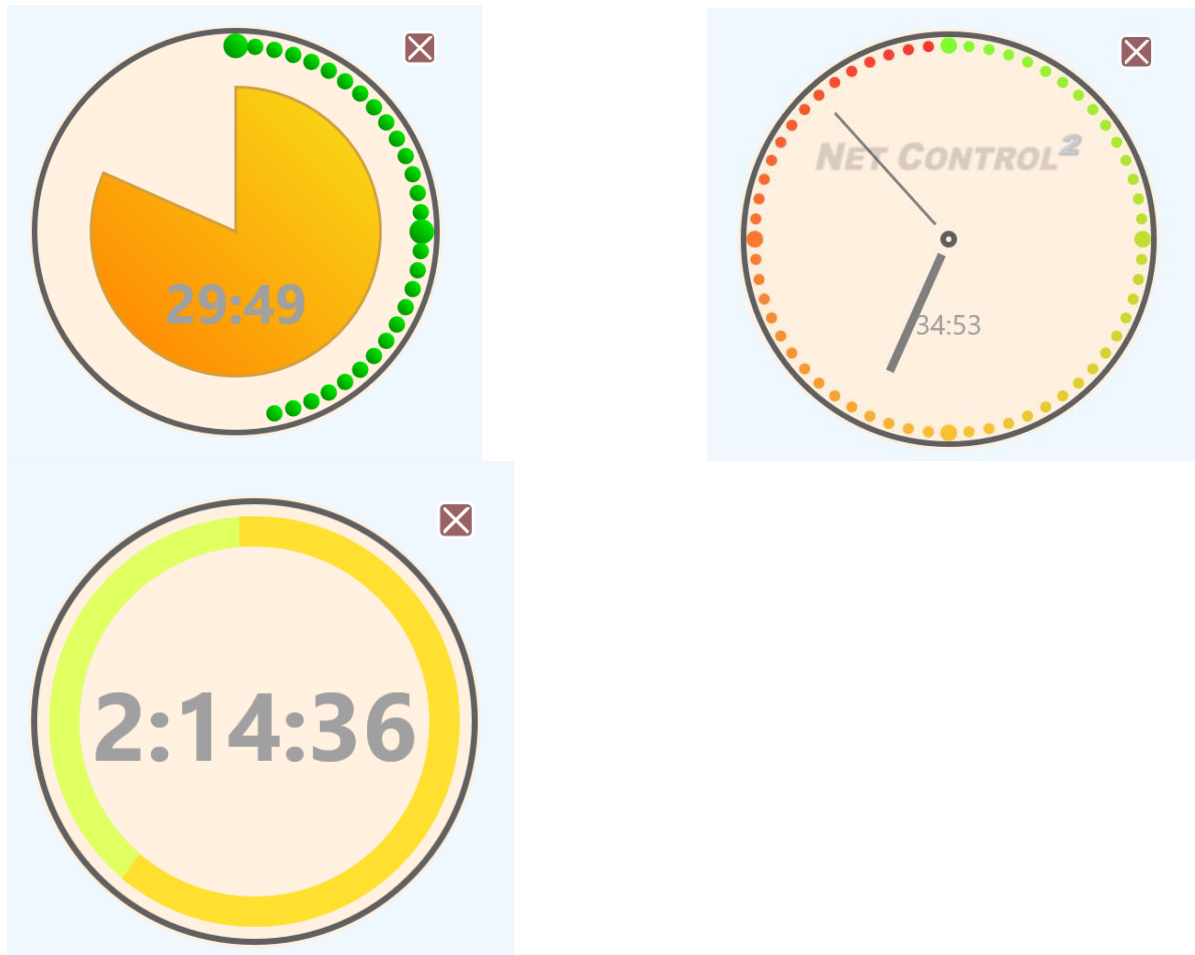
To create a custom timer, use the **Create Timer** button.



On this page you need to configure an appearance, duration and properties of the timer:

1. A clock face:





2. A type of the timer and its duration: **count down** the specified time interval; **count up** the specified time interval or just show the **current time** instead of a timer.
3. A size of the timer (small – large – full screen).
4. An event on completion and properties of the timer:

Hide timer – the timer will be hidden after the time has elapsed.

Lock computer – the computer will be locked after the time elapsed. To unlock the computer, use the **Unlock** command of the **Lock** tool of the teacher console (the **Control** tab).

Shutdown computer – the computer will be turned off after the time elapsed.

Notify instructor – when the timer expires, a sound signal will be played and a popup message (*"the timer is elapsed"*) will be appeared on the student computer's thumbnail in the teacher console.

Sound signal – play a sound signal on the student computer when the timer expires.

User can close time – if enabled, the student can close the timer using the **Close** button. The button appears when a user clicks on the timer.

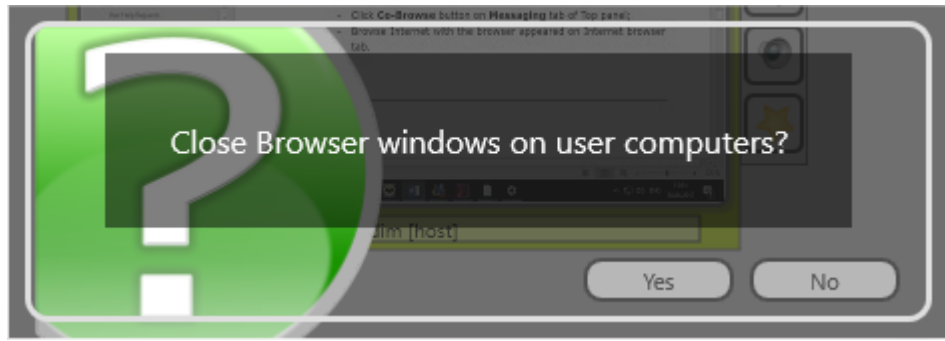
5. Click **Run timer** to run the timer immediately or **Save template** to save the timer as a template, it appears then in the *Templates section* of the first screen of the *Timers* tool.
-

Co-Browse

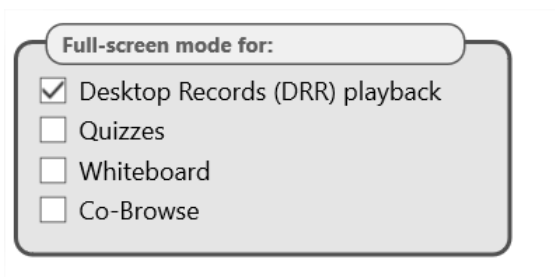


With the **Co-Browse** tool teachers can browse web on their computers synchronously with students. To start browsing:

- Select student computers;
- Click the **Co-Browse** button on the **Messaging** tab of the top panel;
- Net Control ² Browser appears on the teacher and student computers. All websites opened on the teacher computer are automatically opened on the student computers also.
- To close the session, close the browser on the teacher computer, confirm closing browsers on student computers in the appeared prompt:



Depending on the option of the teacher console (**N – Options – Options**), **Commands** page, the **Full-screen mode for** section, **Co-Browse**:



the browser on student computers is displayed either full screen or in a window.

Co-Play



Using the **Co-Play tool**, teachers can play video and audio synchronously on both the Instructor's and User's computers.

The Co-Play tool is intended for synchronous playback of files, and it is assumed that files are placed on both User's and Instructor's computers. If it is impossible to copy files to user computers, we recommend to place them on a file server or in a network shared folder, and open the multimedia files from this network location.

To use the **Co-Play** tool:

- Select one or several user computers;
- Click the **Co-Play** button in the **Messaging** toolbar;



- In the **Co-Play** window:



The Playlist management buttons:

Add files – adds a file to the play list;

Delete file – removes a file from the play list;

Open play list – loads a play list from a file;

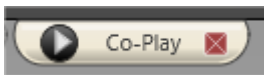
Save play list – saves a play list to a file.

Copy Files to Students – copies files of the play list to student computers and places them in the folder **Net Control 2 Common Files\Video (NC2:\Video)** of student computers. The *Net Control 2 Common Files* folder most often is placed on Desktop.

Path on User comps – specifies a path to the files on the student computers.

If the **The same as on teacher** option is enabled, the files on student computers should be placed in the same folder as on the teacher computer (e.g. *D:\NC2-video\1.avi* for the screenshot above). If the **In the following folder** option is enabled, and the path is provided in the field below, the player will be searching for the files in the specified folder only (as a relative path, e.g. *NC2:\Video\1.avi*).

To close the mode, just close the **Co-Play** toolbar:



Desktop Recorder



With the **Desktop Recorder** tool, teachers can record any actions from their screen to a file, for further replay on student computers, for example, as an electronic manual. Records may include a voice from the microphone or the system audio (the sound that is playing on the computer); teachers can use on-

screen annotations to make the prepared material more demonstrative.

Desktop Recorder operations are available in the submenu of the **Desktop Recorder** button on the top toolbar:



Create Desktop Record – creates a new record;

Play Desktop Record – plays a record on the teacher computer;

Play Desktop Record on User Computers – plays a record from a file on student computers;

Send Desktop Record and Play – send a record file to students and play it then. Sending large desktop record files may take a significant time.

Convert DRR to AVI – using this conversion tool, you can convert desktop records from the internal DRR format to the common AVI multimedia format that is supported by the most of media players. Records in the internal DRR format may be played only within Net Control 2 software.

To create a record:

- click the **Create Desktop Record** command of the **Recorder** button's submenu;
- specify a path to the file where the record will be stored;
- confirm if the record should include an audio track:

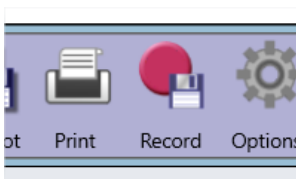


- On the appeared **Desktop Recorder** toolbar:



you can *pause / resume* or *stop* recording, use the **Annotation** tool to make instant annotations on the screen

Desktop records may also be prepared with the **Control** tool of the top toolbar, in the process of controlling a student computer remotely, by clicking the Record button of the Remote Desktop Viewer window:



Records prepared with the **Control** tool do not include audio.

To convert a file to the AVI format, click the **Convert DRR to AVI** command in the "Recorder" button's menu. Specify a path to the source DRR and the destination AVI files, select a *codec* for conversion. A codec is a third-party component of the operating system, which provides certain video compression and playback functionality for a video compression format. Microsoft Windows operating system has several built-in codecs, other codecs may be installed separately.

The quality and size of the resulting AVI file entirely depends on the used for compression codec. We recommend using MPEG4, H.264 or H.265 class

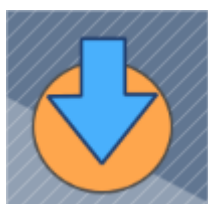
codecs.

Student Registration.



The **Student Registration** tool may be used by teachers for obtaining additional information from students (for example, a full name of the student) as also for showing on the student computers information about the lesson.

To initiate the student registration, click the **Register** button on the top toolbar (the **Messaging** tab):



In the appeared window:

Register Users

Teacher name: John Brown Teacher ID: JB101

Class: Math-1-10 Lesson: Multiplication

Objectives:

Request for:

☒ Student name ☒ Lesson ID

☐ Custom field #1

☐ Custom field #2

Registered users:

	Computer:	User Name:	ID:		
	<input checked="" type="checkbox"/> Computer 01	test10			
	<input checked="" type="checkbox"/> Computer 02	Lisa Smith			
	<input checked="" type="checkbox"/> Computer 03	Dan Williams			

☐ Registration is required, users cannot bypass the request

Buttons: Register, Re-register, Save/Export

The top section allows setting up teacher and lesson information that will be visible on student computers in the process of the student registration:

Teacher name, any optional **Teacher ID** that, **Class** and **Lesson** names, **lesson objectives**.

In the **Request For** section you can set up parameters that should be requested from students:

Student name: a full name of the student. After the registration this name will be visible as a full name of the student in other parts of the program (for example as a connection name in the *User Name View* mode).

Lesson ID: an optional Lesson ID code. The ID may be collected and stored

then in journals as an additional custom information about the student.

Custom field 1, Custom field 2 – two optional fields may be used to request any additional information from students. You can specify what names should be used for these fields.

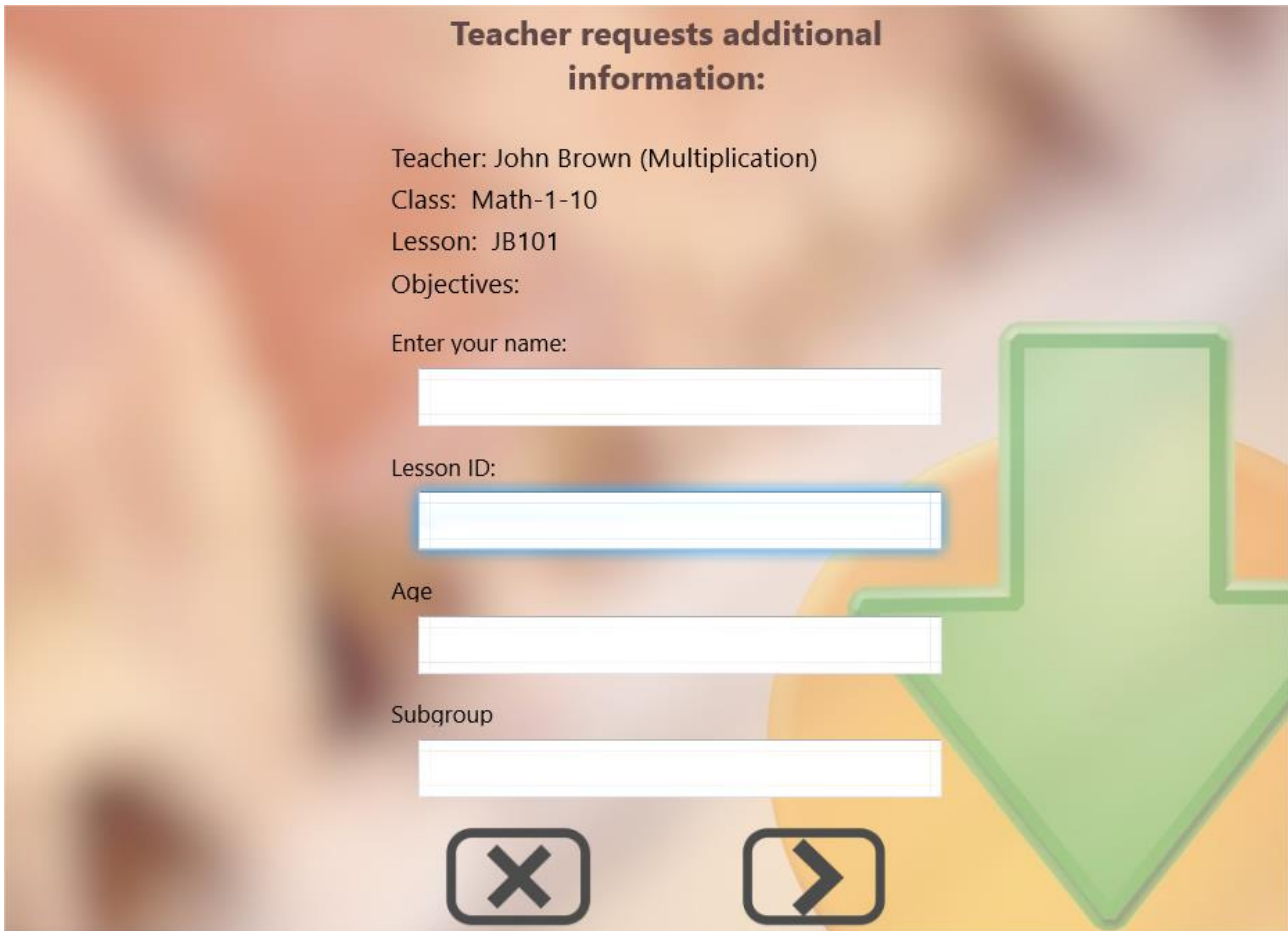
The **Registered Users** section – shows a list of currently connected student computers. The **red arrow** designates “unregistered” students, the green arrow means that the student was already registered.

Click the **Register** button to start the registration on the selected student computers. The registration will be performed only if the student was not registered before. To enforce re-registering of all students, use the **Re-register** button instead.

If the **Registration is required** option is enabled, students cannot close the registration window on their computers, some response is required.

Using the **Save/Export** button you can export the list of registered students with the entered information to a HTML file (for further printing, displaying in the browser, export to Word etc.), or to a CSV file for further processing with a spreadsheet editor like Microsoft Excel or OpenOffice Calc.

In the process of registration, the following window appears on student computers:



Teacher requests additional information:

Teacher: John Brown (Multiplication)
Class: Math-1-10
Lesson: JB101
Objectives:

Enter your name:

Lesson ID:

Age

Subgroup

In several cases it may be useful to request this information from students every time the student logs in to Windows and immediately *after the logon*.

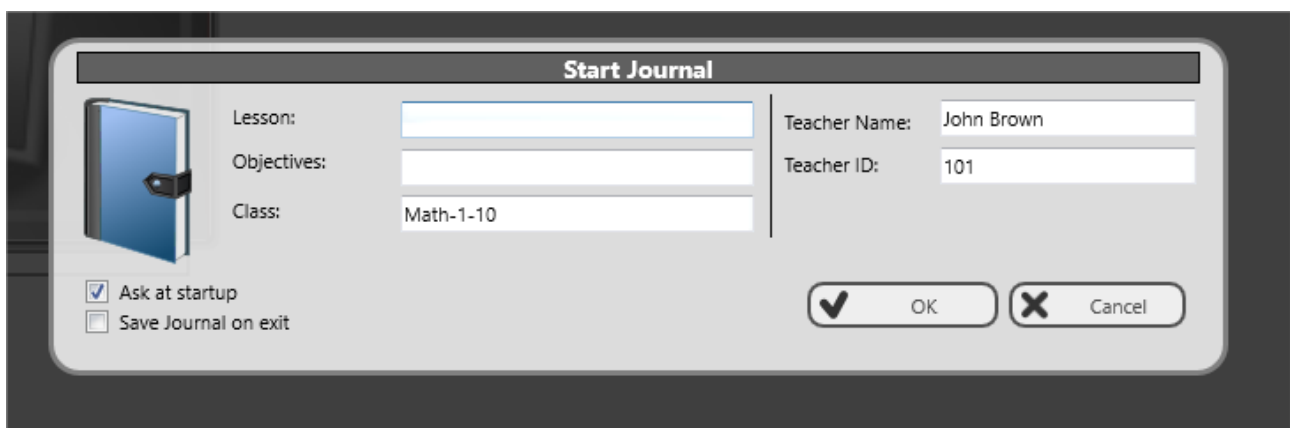
To enable this mode, in the student module settings (**N – Options – Client Options**), on the **1:1** tab, enable the options **Allow Self-Registration** and **Show after logon**.

Journal



With the **Journal** tool, the Instructor can collect and log various information obtained during the lesson: a list of registered students, results of quizzes and polls, grades, events and Instructor's comments. The journal later may be saved, reviewed or printed.

The teacher module can prompt to enter initial information about the Instructor and the lesson at startup:



After you click OK in this prompt, a new journal will be created.

Uncheck the **Ask at startup** option to disable displaying this prompt at start up. The specified teacher name, ID and class name will be stored and used by default for all future journals. If you need to re-enable the prompt after you disabled it, use the **Display Start Journal prompt at startup** option in the teacher module settings: **N -> Options -> Options**; the **Commands** page.

Journals are always created and kept by the teacher module, and are saved in your **Documents** folder in the **Net Control 2\Journals** folder under *jnl-DDMMYYYY-HHMMSS* file name (where DDMMYYYY is the current date; HHMMSS is the

current time). If you do not want to keep the journals, uncheck the **Save Journal on exit** option in this prompt. You can also modify this option in the teacher module settings **N – Options – Options**; on the **Commands** page, using the **Keep Journals automatically** option:

To add any *comment* to the journal, just enter text of the comment in the **Add quick comment** field of the top toolbar, and press Enter:



To open the current journal, click the **Journal** button on the top toolbar, the **Advanced Tools** tab. The journal will be opened on a special tab at the bottom of the Teacher Console.



On the **Journal** tab, you can review the current journal, export it to a HTML or CSV file, print the journal, or open a journal from a file.



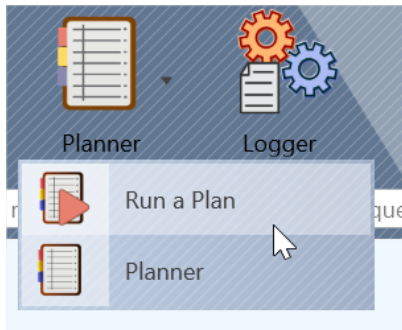
Planner



Using the **Planner** tool teachers can create and manage lesson plans. The lesson plans are

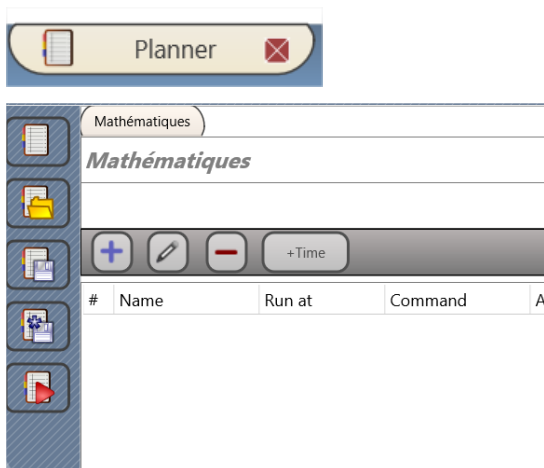
integrated with the teacher module, allowing the teacher to use the lesson time more effectively, facilitating the teaching process.

The lesson plan is a sequence of events, actions (commands) and notifications, distributed over time of the lesson and assigned to some time events.



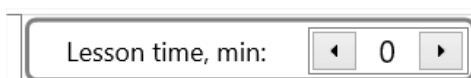
To create a plan, click the **Planner** menu command of the **Planner** button's submenu on the top toolbar, on the **Advanced Tools** tab.

A new tab should appear on the bottom toolbar, with the planner console on it:



At the top of the planner console you can specify a lesson name and optional description of the plan.

It is important to set up the duration of the lesson in the **Lesson time** section:



Using the buttons of the plan toolbar:



You can add a new event, modify an existing one, delete it, change the event time, at which it should occur.

When you are adding or modifying an event, the following window appears:

[Event name]

Description:

1 **Action:**

- ☒ Comment
- ☐ Run a command
- ☐ Record a macro command

2 **Run at:**

- ☒ Execute at:
- ☐ Notify at:
- ☐ Do not execute

0:00:00

3 **Apply to:**

- ☒ All users
- ☐ Selected
- ☐ Specified only...

✓ Save X Cancel

In this window you can specify a name of the event, any optional description, assign an **action** to the event:

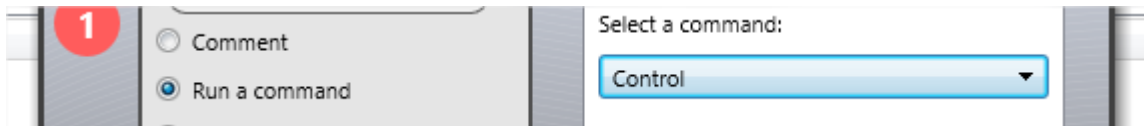
Comment – when the event occurs, the teacher console will display a text message (comment) in the teacher console, the text of the comment you can specify at right of the **Action** section:

1 **Action:**

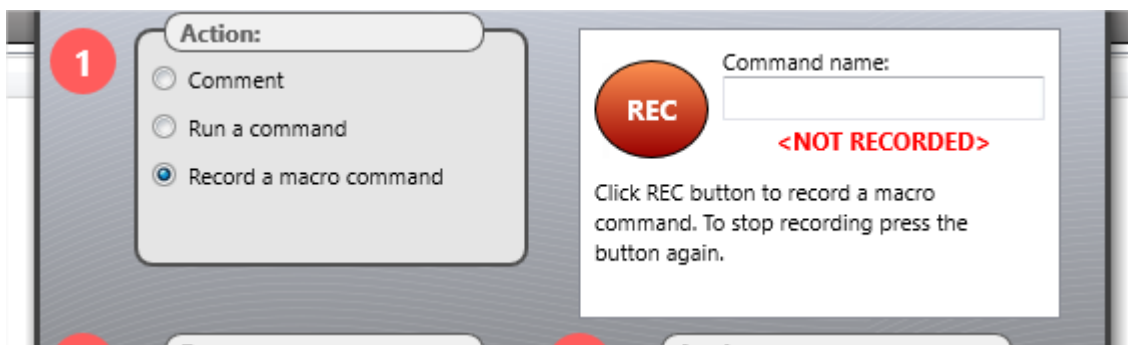
- ☒ Comment
- ☐ Run a command

Show the children a multiplication table

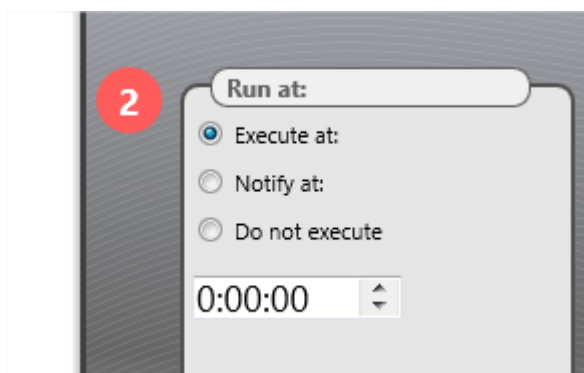
Run a command – when the event occurs, the teacher console will run the specified in the list command



Record a macro command – with this option you can record a macro command (as a sequence of actions in the teacher console), and this command will be reproduced when the event occurs.



After the action is assigned, you need to specify when the event should occur:

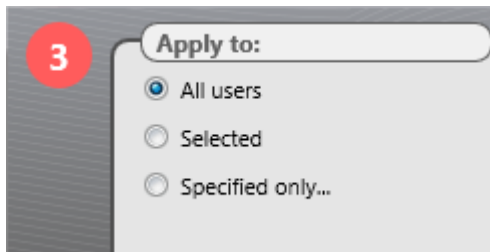


Execute at – you need to specify a time within the lesson time, when the specified command will be executed.

Notify at – at the specified time, the teacher console will display a notification that the command is planned for this time but will not execute it automatically. You can run the command manually, using a button, or bypass the event.

Do not execute – the event will be stored in the plan, but will not be executed or displayed in the plan player.

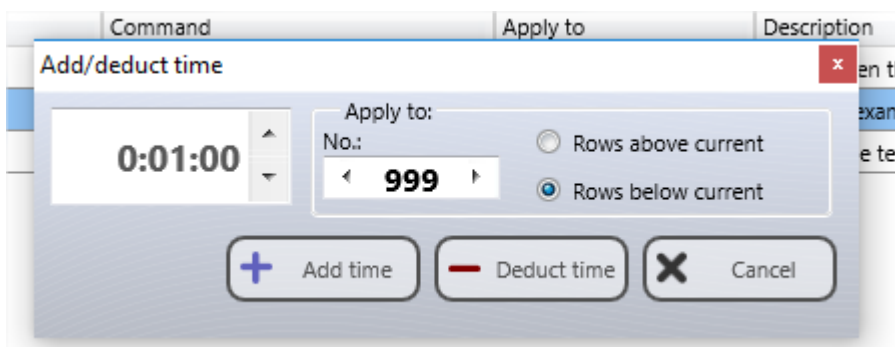
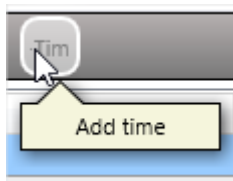
Finally, you can specify what computers should be used for the applied command:



The created events will be arranged in the list according to the time of the event:

#	Name	Run at	Command	Apply to	Description
1	Introduction	Notify: 0:00:30	Cmnt: Introduction	All	Tell children that today the
2	Explicit instruction	Notify: 0:01:35	Cmnt: Write an example on the board	All	Write an example on the b
3	Explicit instruction	Notify: 0:02:40	Cmnt: Explain the term "factor"	All	Explain the term "factor"

You can add or deduct time of any event of the list, adjusting respectively time of the events stored after or before the modified event. To add/deduct time of an event, select it, click the Add time button:



In the appeared window, you can specify the time interval that you need to add/deduct,

the number of events (rows) that will be modified, the direction of modification (to the top or to the bottom of the list).

After the plan is created, you can save it using the buttons of the left toolbar **Save** or **Save as**:



To modify or view an existing plan, use the **Open** button of the left toolbar:



To create a new plan, use the **Create new plan** button of the left toolbar:



To run a plan, use either the **Run plan** button of the left toolbar:



Or use the **Run a plan** menu command of the **Planner** button's submenu on the top toolbar:



When you are running a plan, the teacher console will display a panel at the top of the teacher console window:



The panel includes: the lesson timer, the playback scale (where you can adjust the plan playback position or switch between the events), the panel with the event name and its description.

Grades



The **Grades** tool provides access to an internal gradebook, which is connected with other tools of the program, making possible to grade students based on results of polls, quizzes, any other events. Teachers can make immediate reports to students, keep grades with any optional text descriptions, store them in journals and export to external programs.

As a grade, teachers can use any text letter, phrase, digit or sign (e.g. A-F, 0-12 etc.) or a graphic image from the built-in library that includes different objects, flags, stars, smiles:



Multiplication

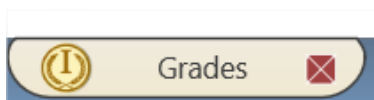
06.06.2017

Multiplication

[Enter a description here]

	Total	2x2=..?	Quiz: Multiplication
Kate Moore [Computer 05]	<div>A</div> good job!	<div>😊</div> correct	<div>A</div> all questions answered correctly
Robin Black [Computer 04]	<div>C</div>	<div>😞</div>	<div>B</div>
John Smith	<div>A</div>	<div>😊</div> correct	<div>A</div>
Lisa Smith [Computer 02]	<div>C</div>	<div>🎈</div>	<div>D</div> pay more attention
Andrew White [Computer 01]	<div>C</div>	<div>😜</div>	<div>C</div>
Dan Williams [Computer 03]	<div>A</div> good job!	<div>😊</div> correct	<div>A</div>

To open the tool, use the Grades button of the top toolbar, the Messaging tab. After you open the tool, a new **Grades** tab appears on the bottom toolbar:



On this tab, in the top section you can specify optional parameters for the grade book, including a date, lesson name and description. Below you can see the list of students and at least one column **"Total"** that is intended for the summary grades of the lesson. The program does not maintain the **total** column automatically, it is assumed that you fill in the column grades yourself, based on the lesson results.

On the left toolbar:



Add column – adds a new column of grades.



Add row – adds a new row (for a new student for example).



Delete row – deletes the selected row (student).



Move the row higher – moves the selected row (student) higher in the list. Using this button, you can arrange students manually.



Move the row lower – moves the selected row lower in the list.



Show to User – shows grades of the selected row to the student (one selected row only).



Show grades to students – show to students their grades. Each student can see only his/her grades, and not grades of other students.

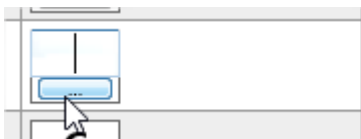


Save – exports the table to HTML file for external processing, printing or displaying in a browser.



Print – prints the grade book.

To add a grade:

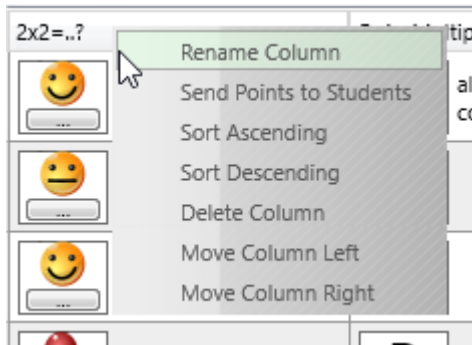


Click the grade field to enter the grade in a text form (A-F, 0-9 etc.) or click the button below the grade field to assign a graphic grade.

If you need to add an optional text description for the grade, double click the field at the right side of the grade field.

Columns in the table mean any object for grading (a poll, quiz, any other optional event). When you are grading students in the Poll or Quiz tools, the respective columns are created automatically. If you need to add a custom column, click the **Add column** button on the left toolbar.

Clicking on the column header you can change the column properties:



Rename column – renames the column header.

Send Points to Students – send points of this column to students (only the points of this column will be shown).

Sort Ascending, Sort Descending – arrange students by grades of this column.

Delete Column – deletes the column.

Move Column Left, Move Column Right – changes the order of columns in the grade book.

Rewards

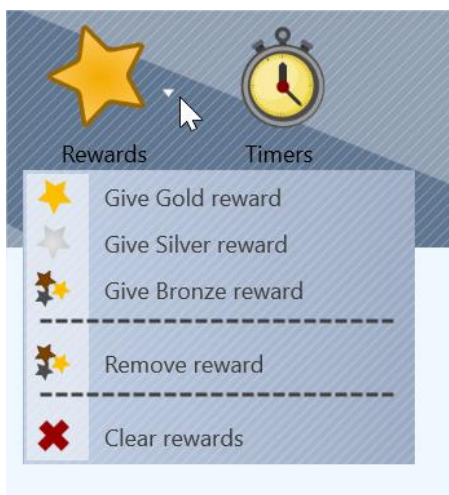


With the **Rewards** tool, the Instructor can grant students with rewards: **gold**, **silver** or **bronze** stars. Up to 8 stars of every quality may be assigned to every user.

Rewards are always displayed on the student computer screen, in the top-righthand corner of the screen, as semi-transparent stars.

Rewards are an alternative to the grades, described in the previous chapters, and do not replace them but used independently.

To add a reward, select a student computer, click the **Reward** button to open the **Rewards** tool or add a reward from the **Reward** button's submenu.



You can also give rewards from the thumbnail's menu:



The top toolbar:

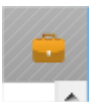


Rewards are stored on student computer within the current session only, until the user is logged off.

Lesson resources

The **Lesson resources** is a set of files, links and text descriptions that are available for all students, connected to the teacher. The teacher module synchronizes the lesson resources with the student module on the first connection.

To set up resources, on the teacher computer click the **Lesson resources** button in the top-right hand area of the teacher console:




In the appeared window, you can set up or modify the lesson information, when necessary.

In the description section, you can specify any text description of the lesson:

Any custom description:

Segoe UI 12 **B** *I* U



Lesson resources

 Math-1-10
[LESSON]
[OBJECTIVES]



John Brown
Multiplication

Any custom description:

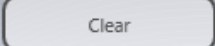
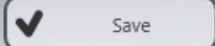
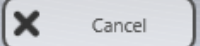
Segoe UI 12 **B** *I* U


Send files  

File name	Description
-----------	-------------

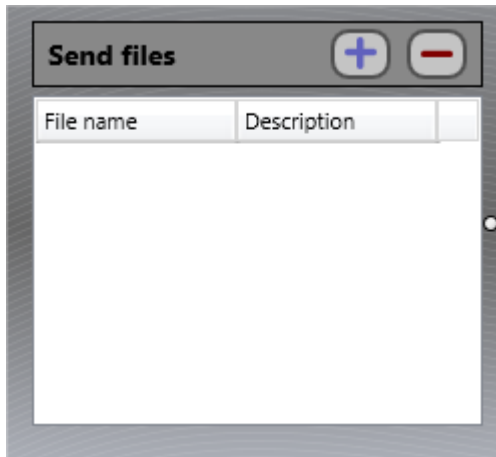
Links, programs and local documents  

Resource	Description
----------	-------------

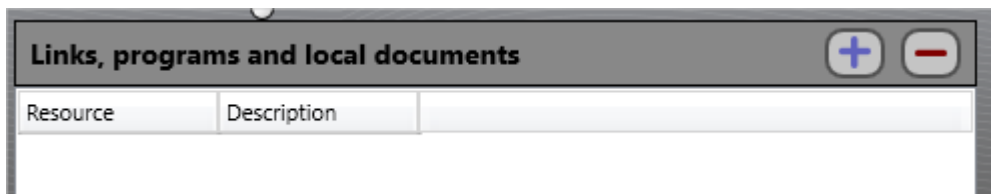
  

 Lesson resources are a set of files, Internet links and a text description available for students on their computers when they are connected to your teacher computer. You can place here necessary for the lesson information, including tasks, work files, multimedia resources/

In the **Send files** section, you can specify files that should be sent to students:



In the **Links, programs and local documents** section, you can add links to local and web resources: local files on student computers, programs (using a full path to the program), web links.



To save changes, click the Save button. The lesson resources will be updated on a next connection of student computers (for example, you can refresh connections with the **Refresh** button on the left toolbar, to force the lesson resources update).

Event Logger

The **Event Logger** tool provides ability to monitor and log various events on a student computer, even if a teacher is not connected to the student at the moment.

The logged events include:

- A program launch/termination;

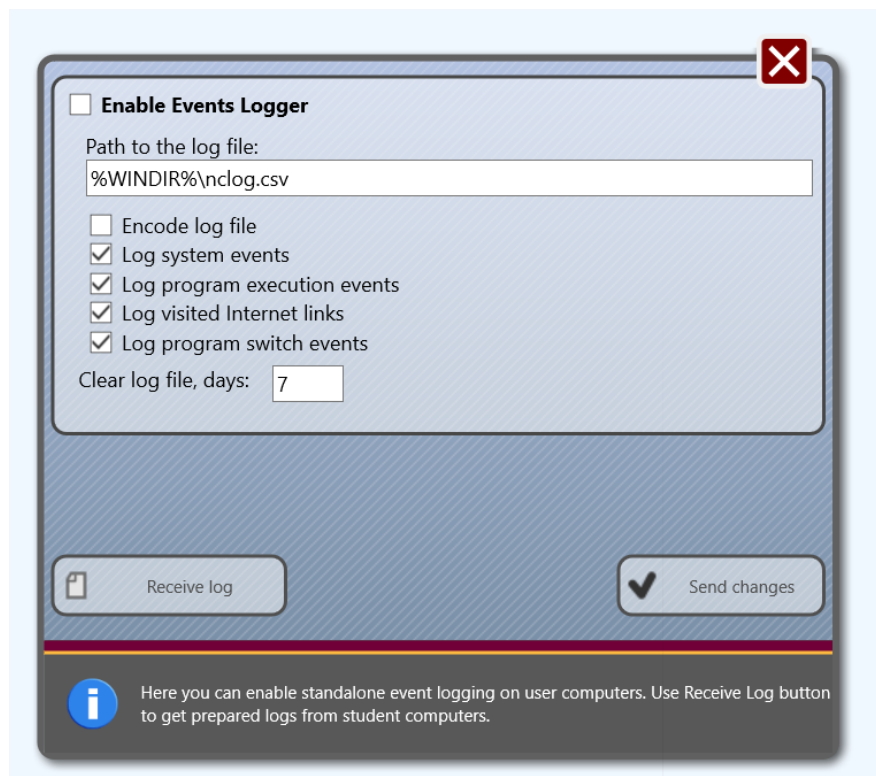
- switching between programs;
- system events: attaching new devices, date/time change events, user logon and logoff etc.

To enable logging:

- select student computers;
- click the **Logger** button on the **Advanced tools** tab:



In the Events Logger window:



- enable the **Enable Events Logger** option to activate the tool;
- optionally you can set here a path to the log file where Net Control ² will store the event information. *%WINDIR%* refers to the home Windows directory, *%TEMP%* - the system services temporary files folder (usually, *C:\Windows\Temp*); *%SYSDIR%* - the Windows' System directory.
- if the **Encode log file** option is set, Net Control ² will encode the file, to hamper reading;

- by default, logs are re-initialized and cleared every week. You can change this term in the **Clear log file** field;
- you need also to specify which types of events should be tracked.
- click the **Send changes** button to apply changes.

To receive a log file from a remote computer, click the **Receive log** button and select which event types should be included in the received log.

Student Console and Mini Toolbar

The primary place of interaction students with Net Control ² software is the **Student Console** and the **Mini toolbar**.

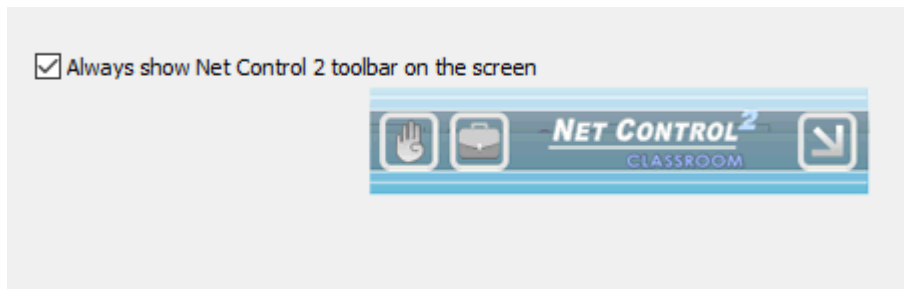
Mini toolbar

Using the Mini toolbar, students can open the *Student Console*, access *lesson resources* and *raise their hand*:

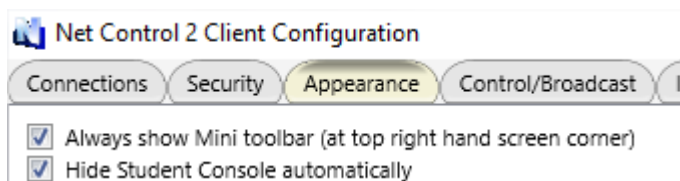


If enabled, the toolbar is hidden by default, leaving only a thin blue line at the top of the screen. Moving the mouse cursor over the line will pop up the toolbar.

The Mini Toolbar is an optional tool, it can be enabled in the process of installation, enabling the respective option in the installer program:



or, if the software is already installed, you can turn it on, using the **Always show Mini toolbar** option of the student module settings, on the **Appearance** tab:



The Mini toolbar buttons:



Raise hand or **Put hand down**, depending on the actual state of the **Raise Hand** button of the Student Console;



quick access to the lesson resources in the Student Console;



open the Student Console.

Student Console

To open the Student Console, right click the Net Control 2 icon in the System Tray:



The appearance and functions of the Student Console depend on the student module settings. Almost all features (except the About screen) may be disabled through the settings.

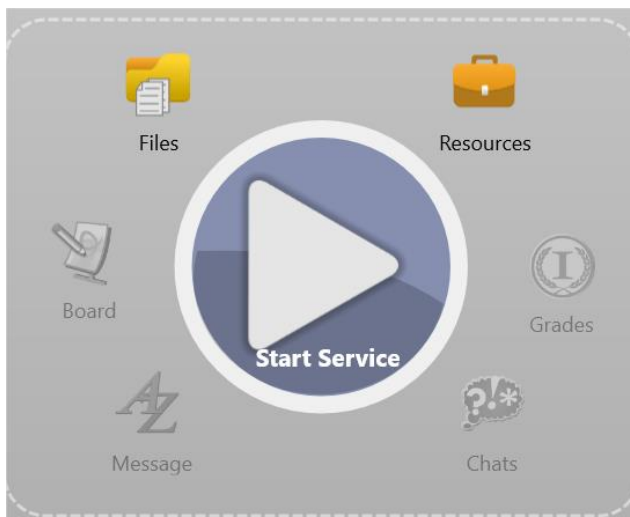
The upper part of the console provides access to the student module service settings:



Stop the service, **Suspend** the service, **Hide** the console.

To stop or suspend the service, an administrator password is required (if it is enabled in the student module settings).

When a service is *suspended*, it closes all established connections, does not accept any new connections. To resume the service, you can use the **Start service** button:



The bottom part of the console provides access to the **About** and **Configure** buttons:



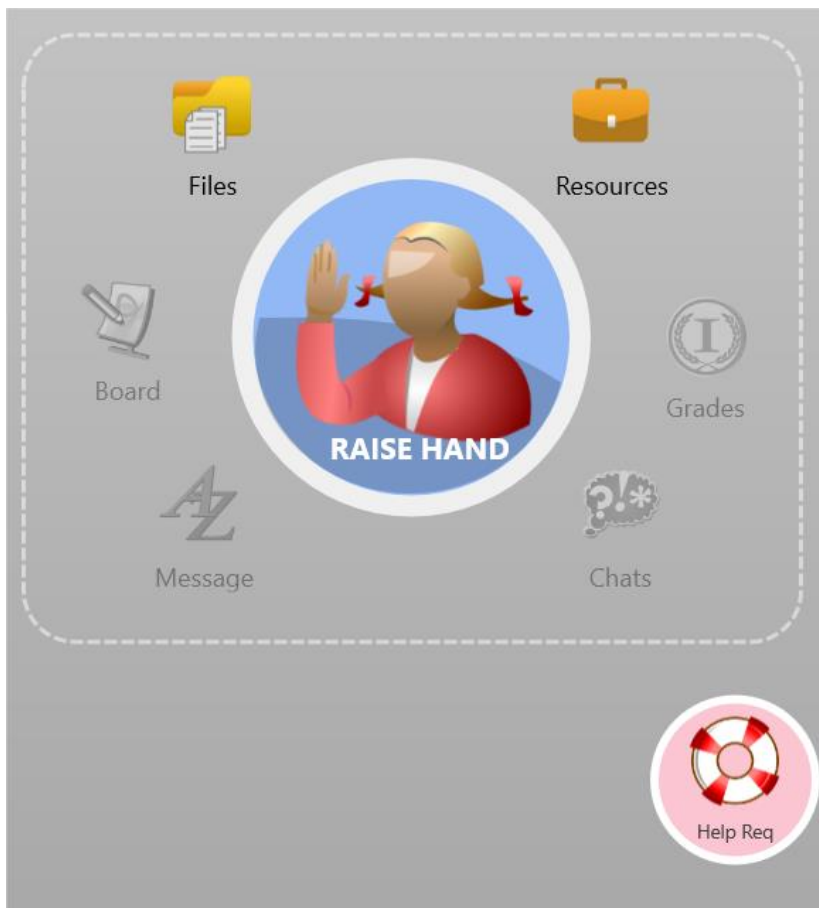
The **About** button provides access to the **About the program** screen that

contains information about established connections with the teacher computers; network error messages if the connection was failed; actual permissions assigned to the student module, and version information.

The **Configure** button provides access to the student module settings. If an administrator password is enabled, it will be required in order to access the settings.

Since the **Stop**, **Suspend** and **Configure** buttons provide a way to breach normal operation of the service, if students pick a password, for example, sometimes it may be useful to hide these buttons from the console for better security. To hide these buttons, in the student module settings, on the **Appearance** tab, enable the **Disable administrator operations** option.

The central part of the console provides access to tools and features:



The function and appearance of the central button depends on the current state

of the service, and typical functions are:

Raise Hand – if a teacher is connected to this student computer;

Connect Teacher – if no teachers connected to the student computers;

Start Service if the service is suspended.

Leader Console - to open the leader console, if the student is a leader of a student group

Help Req – (send a help request) – sends a help request to teachers. For more information please refer to the chapter [Help Requests](#). This button may be disabled on the **Appearance** tab of the student module settings (the **Enable help requests** option).

Connect – students can connect teachers themselves; the connection methods depend on the current student module settings. Typically, student can connect teachers by an IP address or network name, by a Teacher Session ID, using the self-registration. The connection methods may be enabled or disabled on the **Appearance** tab of the student module settings. For more information regarding the connection capabilities, please refer the Installation and Configuration guide.

Leader Console - clicking this button, the student can open the leader console to communicate with other group members.

Resources – provides access to the *lesson resources*.

Grades – opens the grades list. Shows the last grades sent by a teacher to this student.

Chats – opens chat windows. The chats should be initiated by the teacher.

Message – shows the last message sent by the teacher.

Board – shows the **Virtual Whiteboard** window.

Files – shows a list of received files.

Statuses

Teachers and students can use “statuses” as short text information about the lesson, visible to students and teachers. Teachers can pass through statuses some important lesson information to all connected students at once, students can pass some information to the teacher, for example, that the work is done.

To disable student statuses – uncheck the **Enable User statuses** option in the **Appearance** tab of the student module settings.

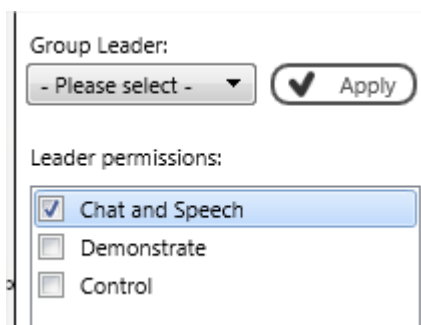
Student groups. Leaders.

Using the **Student Groups** feature, a teacher can join students to special work groups, assign one of members of the group as a “leader” of the group and grant to the leader several teacher features and permissions.

To join students to a student group, select them, right click and use the **Add to Student Group** command of the context menu:



In the appeared Student Groups window you can manage existing groups, manage members of these groups, and select a leader of the group. The leader may be granted with the following privileges:



Chat and Speech – enables communicative features:

- **Chat**,
- **Speech and Camera**,
- ability to **lock** and **unlock** student computers.

Demonstrate – enables the following features:

- **Broadcast Leader's screen** to students;
- **Broadcast a screen of one of students** to other students of the group;
- **Close the Broadcast Desktop** mode on student computers;
- **Desktop Recorder tools**: create a record, play a DRR file on the leader or student computers; send and play a DRR file on student computers;
- **Send and Collect**: send files to students and collect them back;
- **Co-Browse**: browse web pages together with other students of the group;
- **Co-Play**: play multimedia files together with students of the group;
- **Whiteboard**: use the Virtual Whiteboard tool.

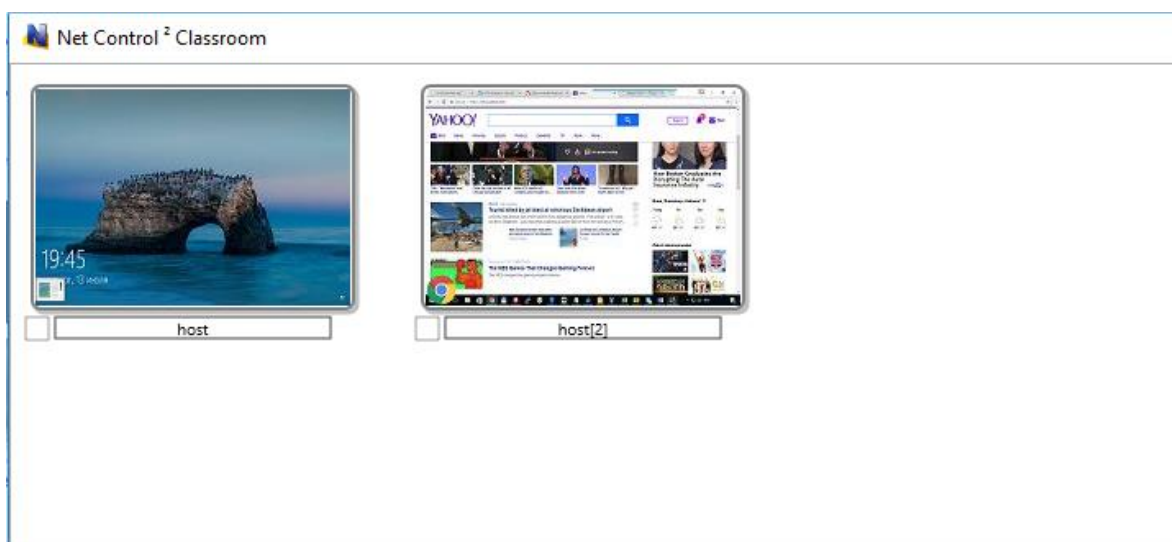
Control – provides access to the following features:

- **View** or **Control** student computers remotely, using the keyboard and mouse;
- **Programs** – manage running programs on student computers; run applications from Desktop or Start menu, execute command lines or open URLs.

After the leader is selected and granted with some permissions, the *Student Console* will contain the **Leader Console** button:



After clicking this button, the student module will run the leader console window. Within about 30 seconds, the members of the group should appear in the console:



To apply a command, right click the connection, then use a command of the context menu:

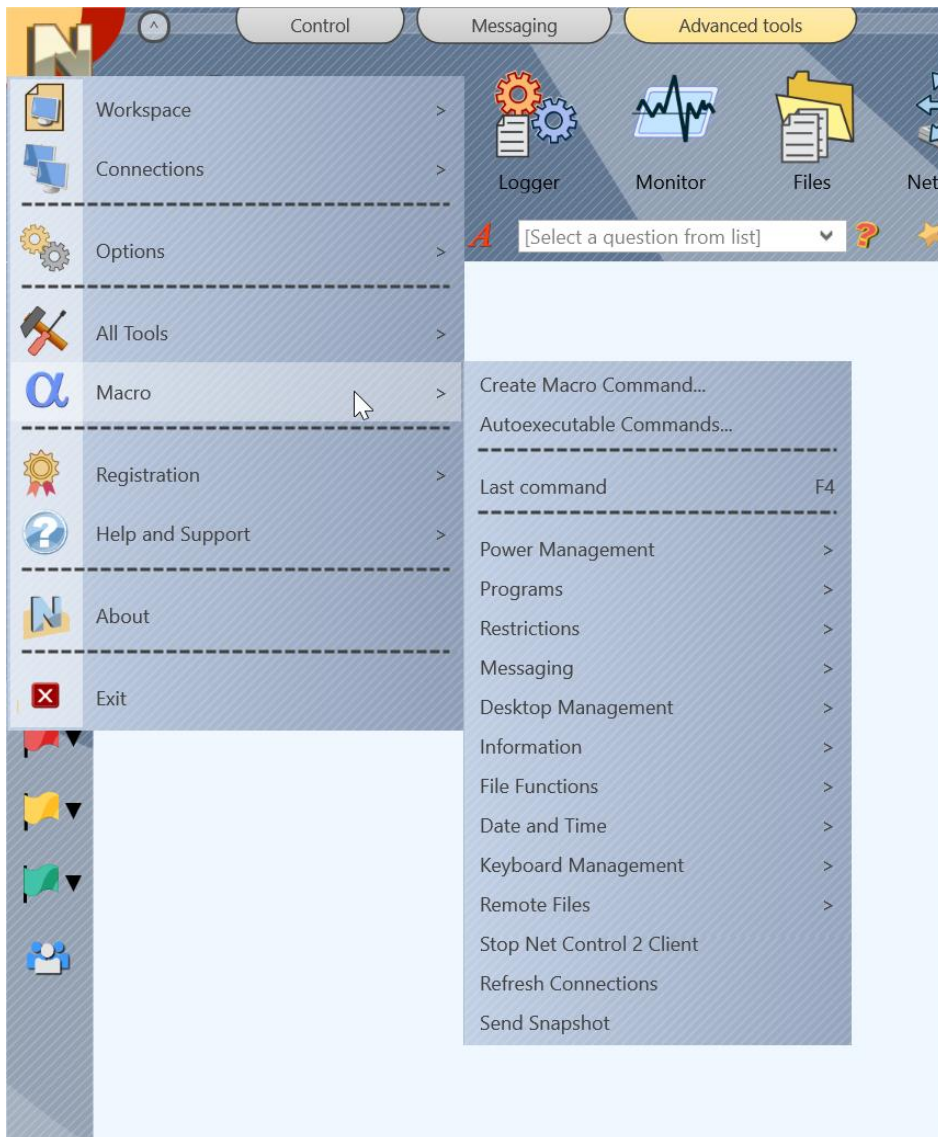


The teacher can manage existing student groups and leaders, using the **Student groups** button of the left toolbar:



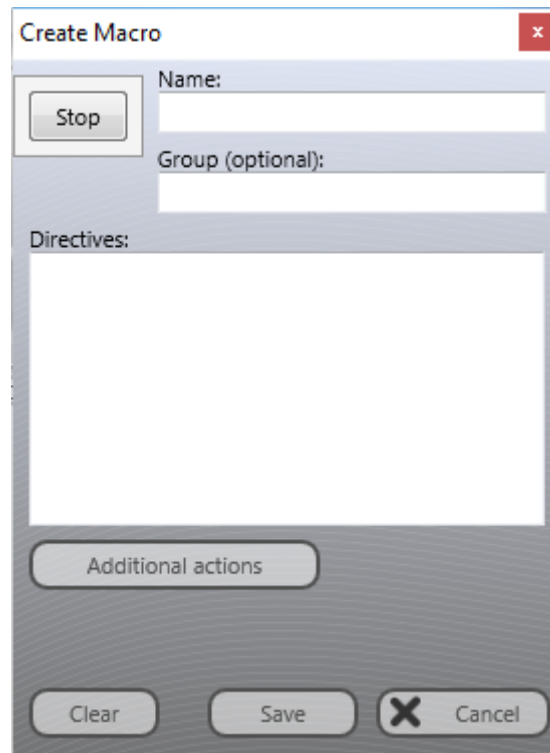
Macro Commands

Net Control 2 includes a set of pre-defined macro commands that are available in the teacher console through the main menu **N -> Macro**.



In addition to the preinstalled macros, you can create your own macro commands, which will be placed to this menu or may be assigned with some hot keys for quick execution.

To create a macro command, click the main menu command **N – Macro – Create Macro Command**:



You need to assign some name to the command; if the command should be placed to some menu group, you can specify the respective group name here; then apply commands to student computers. Applied commands will be recorded to the macro. When the command recording is finished click the **Save** button to save the command.

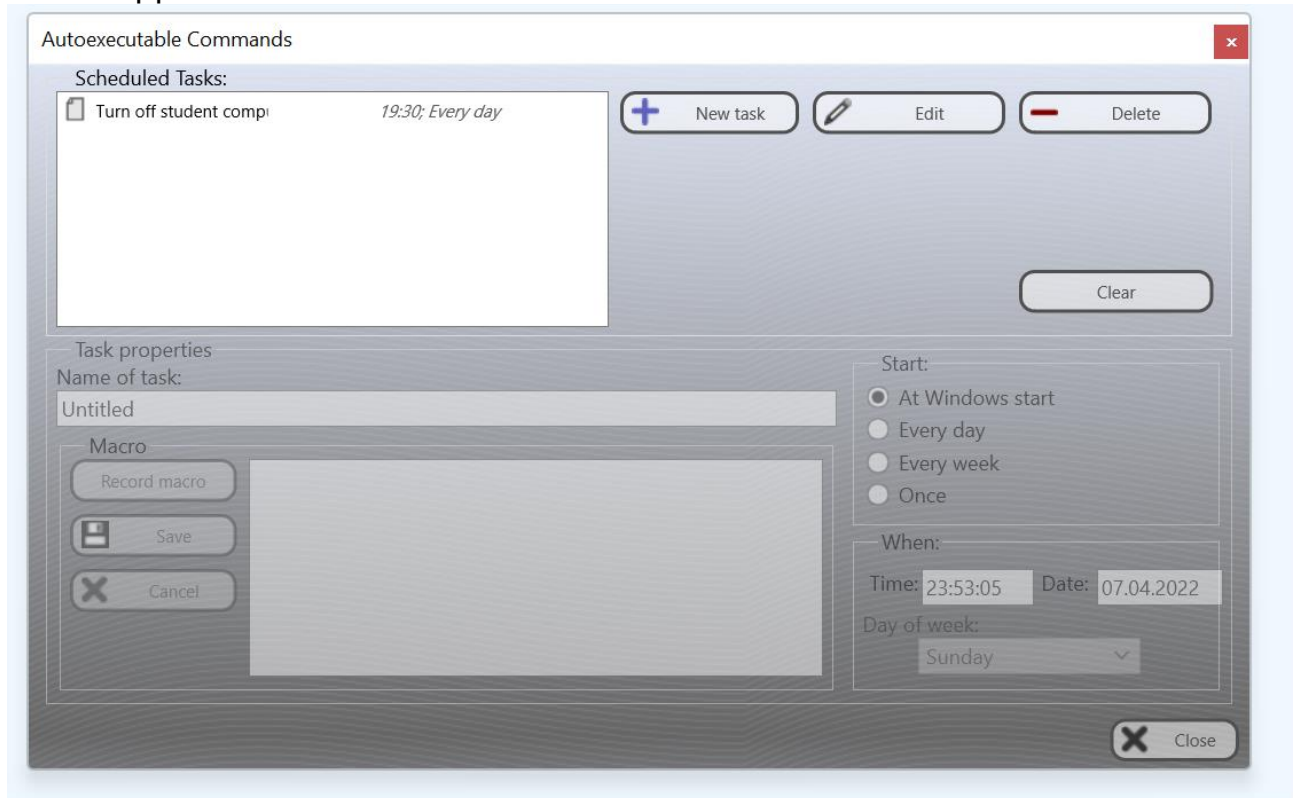
New macro commands will be loaded to the teacher console after restart of the program.

Autoexecutable macro commands

The Autoexecutable commands – are macro commands that are stored on student computers and executed on some event (time or date); autoexecutable commands are executed on student computers even if a teacher is not connected at this moment to the student.

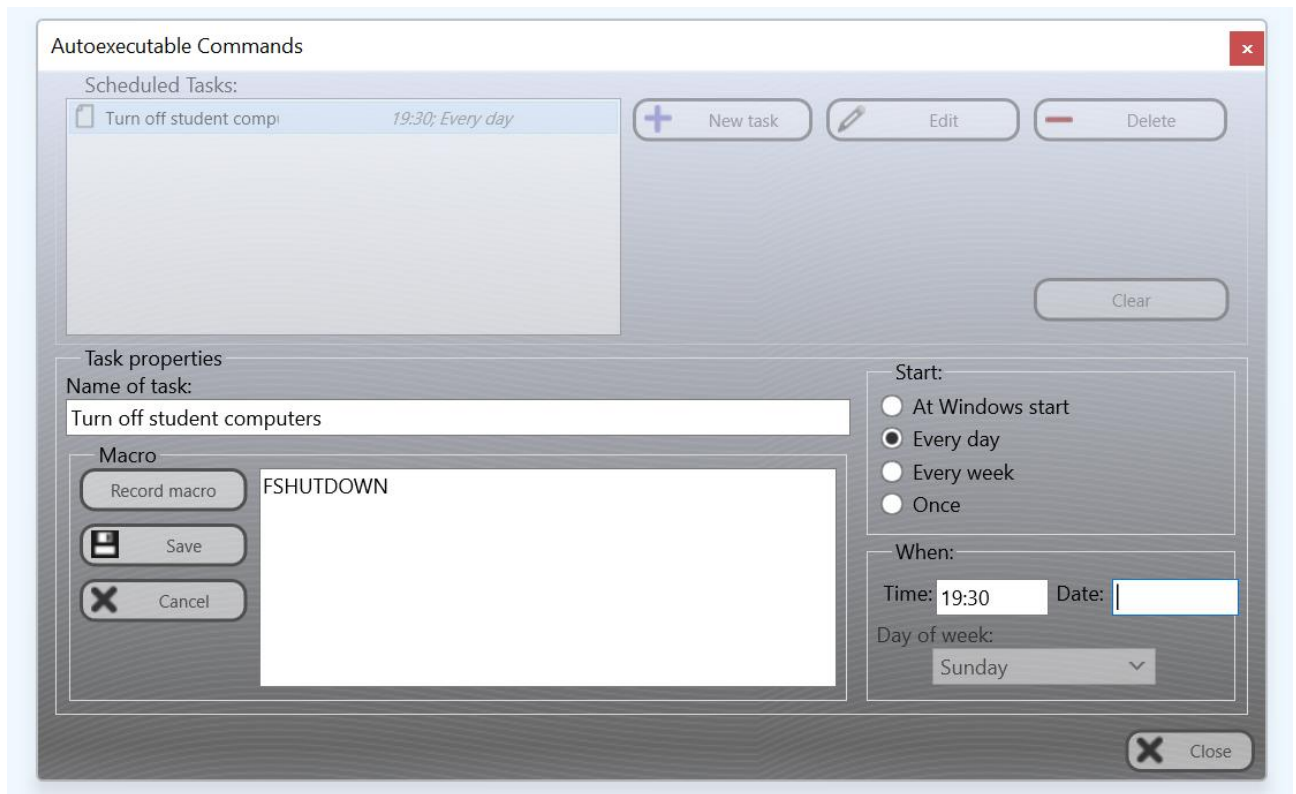
To create an autoexecutable command:

- Select student computers in the teacher console;
- Click the main menu command **N – Macro – Autoexecutable commands**.
- In the appeared window:



- Use the **New task**, **Edit** or **Delete buttons** to create a new task, to modify an existing task or to delete it.

When you are creating a new task, you need to specify some name for the task, specify when the task should be executed and record the actions that should be stored as the autoexecutable macro command. Click the **Save** button to save changes.



File Manager



The **File Manager** tool allows to manage files and folders on several student computers at a time, remotely from the teacher console. **File Manager** uses the conventional “commander”-like, two-panel interface.

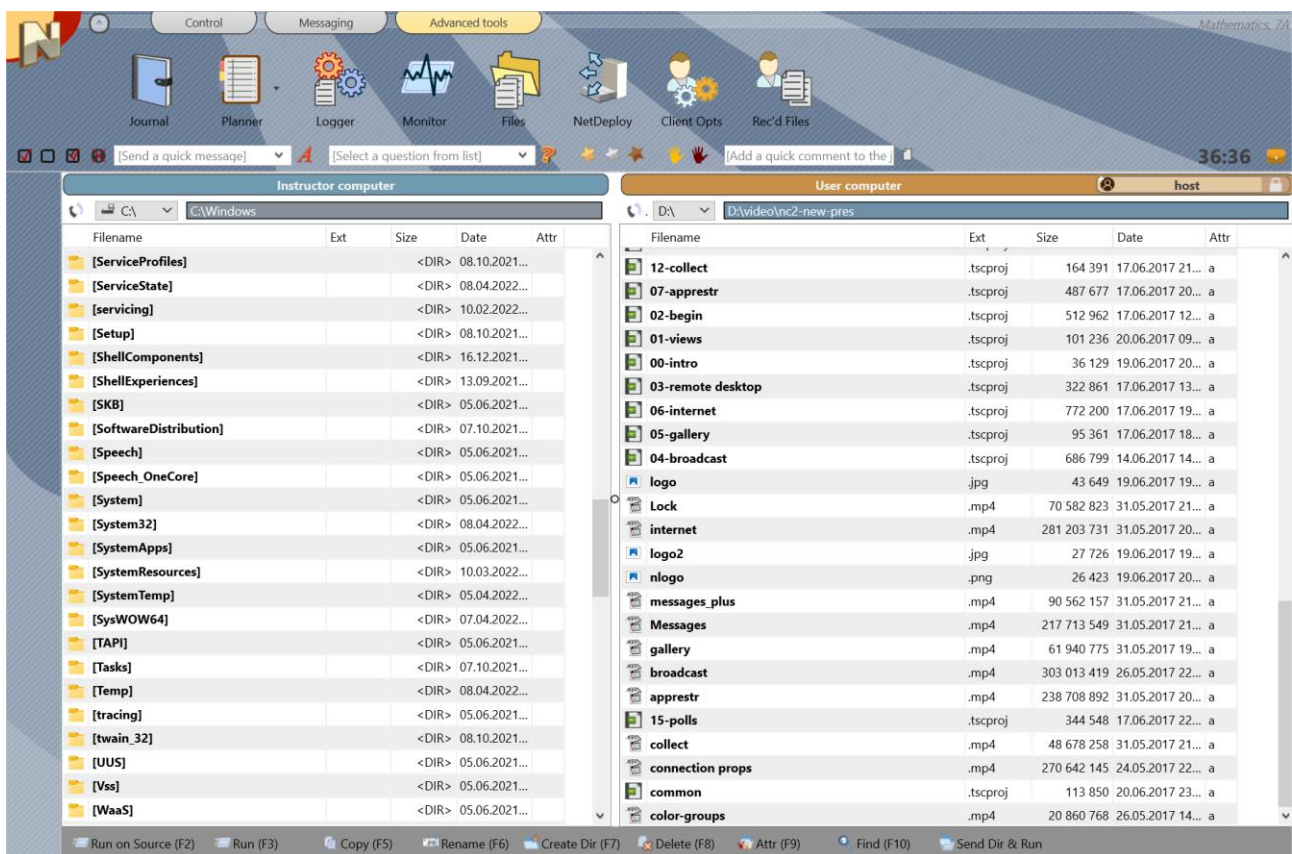
Due to the tool provides access to the entire file system, it is recommended only for experienced users, and therefore the **tool is hidden by default**. To enable the tool, use the main menu command **N – Options – Options**; the **Advanced Options** page; the **Enable administrative tools (for experienced users)** option. After changing the option, you need to restart the teacher module to

reload new settings.

To open File Manager, select students in the connections list and click the top toolbar command **Files** on the **Advanced Tools** tab:



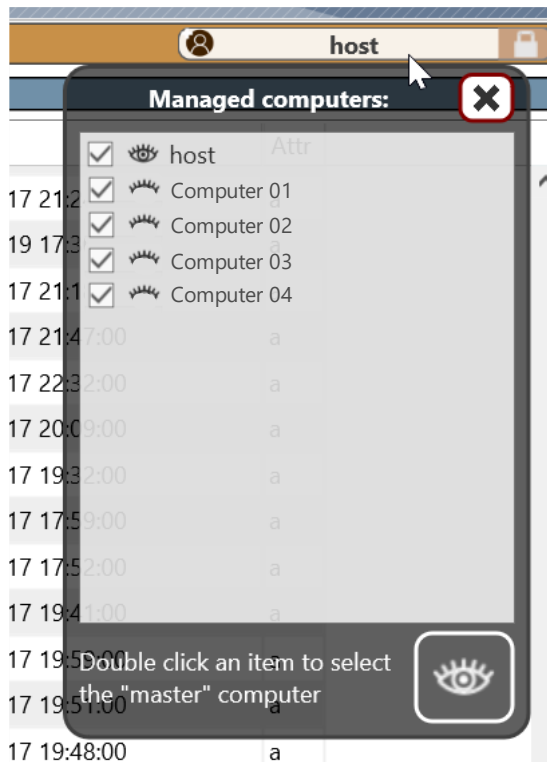
The **File Manager** tab appears (at the bottom of the teacher console).



The File Manager panel consists of two panels. The left panel represents the teacher computer and the right panel represents student computers.

File Manager can work with several student computers at a time, i.e. all file operations will be applied to several computers, but the right panel shows files and folders of only one of the managed computers, this computer is called the **master**.

You can select the master and change managed computers using the list in the header of the right panel:



Double click on an item to make it the **master** computer.

When the **Lock** button is pressed, file operations will be applied only to the master computer; when it is released, file operations are applied to all “checked” computers.

Double click the *path label* to change the current path, use the drives list to change the current drive letter.

Use the **Insert** key or **right mouse button** to select files and folders on the panel.

Use buttons on the bottom toolbar or the hot keys to perform file operations:

F2 – **Run on Source** – executes the selected file on the teacher computer (if the left panel is the current panel); or on student computers if the right panel is active.

F3 – **Run** – executes the file on the teacher computer

F5 – **Copy** – copies selected files and folders to the opposite panel (from the teacher to students or vice versa).

F6 – **Rename/Move** – renames or moves the files to another location within the same computer.

F7 – **Create Directory** – creates a new folder on teacher or student computers.

F8 – **Delete** - deletes selected files and folders.

F9 – **Change Attributes** – changes file attributes (system, read-only, archive and hidden) for selected computers.

F10 – **Find** – use this command to find files on student computers.

Send Dir & Run – sends the entire content of the current folder of the teacher computer to students and executes the selected file. This tool may be used to send a program or a document that uses some additional external files.

Received files



Using the **Received Files** panel teachers can manage files received from student computers. The tool is available on the **Advanced Tools** tab by clicking the **Rec'd Files** button:

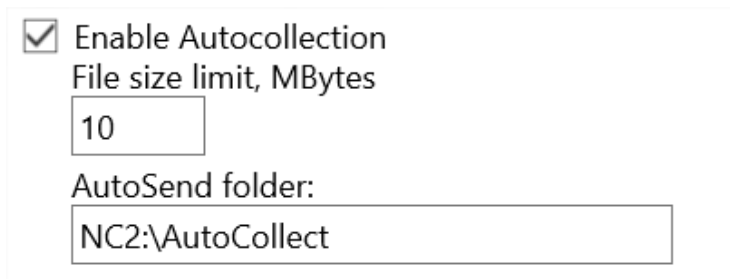


Refresh Open Folder Open Delete Block Send back		
Name:	Size:	Date:
host--211027-FR1.docx	30322	28.10.2021 15:10:00
host--211027-FR1.pdf	69436	27.10.2021 16:22:45
host--211129-FR1.docx	49116	10.01.2022 15:19:22
host--220110-FR1.docx	49109	10.01.2022 15:19:42
host--220110-FR1.pdf	163692	10.01.2022 15:19:53
host--220113-FR1.docx	29942	26.01.2022 16:09:03

The panel shows files sent from students through the AutoSend folder. The **AutoSend** folder is placed by default inside the **NC2 Common Files** folder, which by default is placed on **Desktop**.

You can change the location of the **AutoSend** folder with the student module

settings, on the **Commands** tab, the **AutoSend folder** field:



☒ Enable Autocollection
File size limit, MBytes

AutoSend folder:

NC2: designates the **NC2 Common Files** folder.

When a student is copying or saving a file into this folder, it will be automatically sent to the currently connected teacher. On the Instructor computer, the file will be renamed as **[COMPUTER_NAME]-[ORIGINAL_FILE_NAME]**.

Using the panel, Instructors can select any file, and:

Open folder – opens the folder on the teacher computer where the file is actually stored.

Open – opens the file in the associated with the file type program.

Delete – deletes the selected file.

Block – blocks the sender to avoid receiving files from him/her in the future.

Send Back – sends the file back to the student, for example, the Instructor can receive a file, verify or modify it, then send it back to the student for further work.