THE CLASSROOM MANAGEMENT SOFTWARE



# **Classroom** (STANDARD EDITION)

## INSTALLATION AND CONFIGURATION GUIDE



**Revision 6.0** 

Based on version 20.4

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### **General information**

Net Control <sup>2</sup> Classroom is a classroom management software for easy controlling, teaching, monitoring and managing computers in local networks. The software is specially designed for use in educational environment.

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

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

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

The Student Component may be installed using one of the following methods:

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

### Hardware requirements and software environment

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

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

Terminal sessions (RDP, Multipoint Server, nComputing).

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

100 Mb/s wireless or Ethernet local network.

### A. Installation with the standard installation package

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

We recommend to install the software on the teacher computers first, it is not required

### though.

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

1. Run the Net Control 2 Installation Package.

Select S	Setup Language ×
t P	Select the language to use during the installation.
	English
	OK Cancel

Select the language of installation.

**Please note!** The selected language will be set up as the default language of the software, if supported by the software. Currently, the standard installation package includes language interface for English, Arabic, French, Italian, Portuguese, Russian and Spanish languages. Other languages may be available in packages from local distributors.

🖟 Setup - Net Control 2 Classroom	X
Setup - Net Control 2 Classroom	Welcome to the Net Control 2 Classroom Setup Wizard         This will install Net Control 2 Classroom 20.04 on your computer.         This package includes both teacher and student components, on next page you can select the type of installation.         First, we recommend to install the software on teacher computers, then, on student computers.         Installation and configuration guides are available in Downloads section on our website http://www.netcontrol2.com         Click Next to continue, or Cancel to exit Setup.
	<u>N</u> ext > Cancel

2. Read carefully and accept if you agree the End-User License Agreement.

### 3. Select Components

On the **Setup Type** page select the necessary components for installation:

🔂 Setup - Net Control 2 Classroom — 🗌 🗙	
Select the Setup Type to install.	2
Click the type of Setup you prefer, then dick Next	
Typical installation:	
<ul> <li>Teacher components</li> <li>Student components (should be installed on all computers that you wish to control)</li> </ul>	
O Advanced installation	
< <u>B</u> ack <u>N</u> ext > Cancel	

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

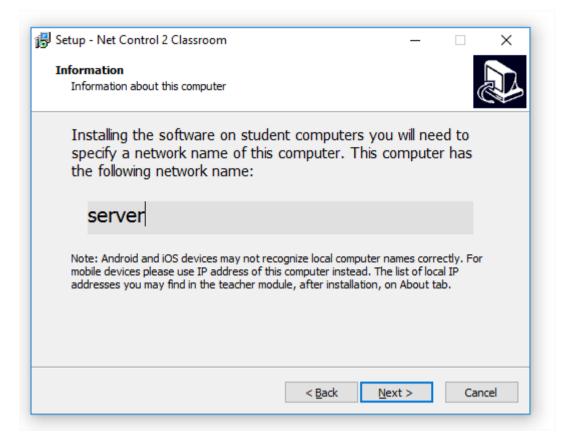
🔂 Setup - Net Control 2 Classroom — 🗆 🗙
Select the Setup Type to install.
Click the type of Setup you prefer, then click Next
Typical installation:
<ul> <li>Teacher components</li> <li>Student components (should be installed on all computers that you wish to control)</li> </ul>
O Advanced installation
< <u>B</u> ack <u>N</u> ext > Cancel

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

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

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

If you are installing the software on a teacher computer (teacher components are selected), the setup program will display a network computer name for this computer:

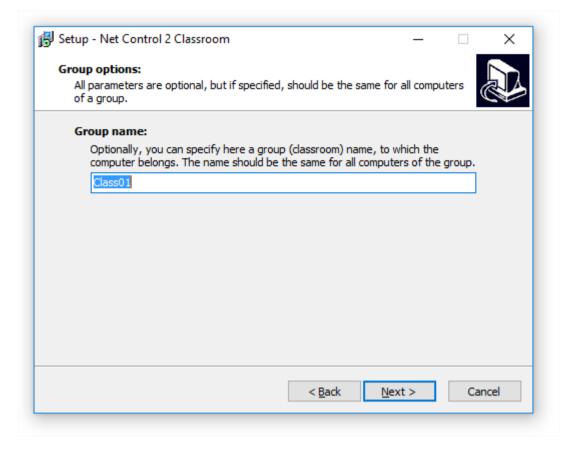


This information is provided for your reference only, but you may need it when you will install the student components on student computers.

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



#### 6. Group name



Net Control 2 Classroom may be used in an environment that consists of several individual classrooms, and therefore the software allows dividing student computers to groups (virtual classrooms).

Each teacher can work with one or multiple groups.

Each student computer belongs to one group only. And by default, when it is not configured specially, all students belong to the group "Default".

It is important to keep the same strategy for all computers of one group, assigning them the same group name and other connection parameters. Otherwise, incorrectly configured student computers may be invisible for teachers.

The most common situations are described below.

- If the software is used <u>within one classroom only</u>, one teacher works with a permanent set of student computers; as also students are controlled by one, the same teacher, you may leave the default group settings, do not configure them. In this case all students will belong to "Default" group.
- If you have <u>several classrooms within one local network</u>, student computers should be connected to one or several teacher computers, we recommend to set up a unique group name to each group of student computers (a classroom or class). Please keep the same name for all computers of one group.
- For the teacher module only. If one teacher computer may work with multiple groups (classrooms), installing the software on a teacher computer, in Group Name field you may leave "Default" group name or specify a name of any group; other groups will

appear in the list automatically.

- If students are moving from one classroom to other, it is impossible to join them to a permanent group, like a class, or a group them per some other criterion, it is still possible to connect them to a teacher using search features. For additional information please refer to <u>Chapters D</u> and <u>E</u> of this manual. In this case, you may leave a default value for the group name.
- More complex grouping features, like assigning a student computer to multiple groups, grouping students by a Windows login name etc., are available in Net Control 2 Professional Edition.

**If you have set up an incorrect value for Group Name** for student computers, it is always possible to change settings after installation, remotely from the teacher module, if you have remote access to the student computers in your teacher console (select student computers in the teacher console, then click *N* – *Options* – *Client Options* the main menu command); or if you don't have remote access to the student module, on the student computer click Net Control 2 icon in the System Tray (area beside of system clock)

^ 🖪 🖫 🔇
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and then click Configure button in the appeared Student Console. Group Name field is on Connections tab of Net Control 2 Client Configuration window:

Connections Security Appeara
Instructor computers:
Group Name:
Class01
$\sim$

More information regarding student module settings that may be changed after installation is available in <u>Chapter F</u> of this manual.

### 7. Student module installation only: addresses of teacher computers.

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

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

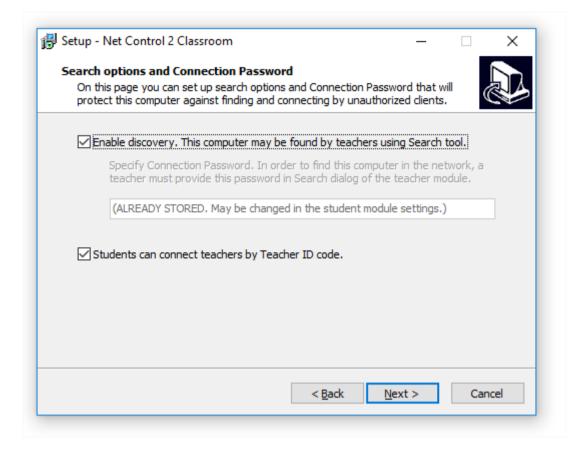
address per line.

Use IP addresses for addressing teacher computers only if your network uses static IP addressing (at least for teacher computers). Otherwise, please use network names. If your network uses a domain, it is preferred to use the name in a fully-qualified DNS format, e.g. **teacher.mydomain.local**. Installing the software on teacher computers, the setup program displays a computer name of the teacher computer on Information page (please see p.5 above), you can use the discovered computer name at this step.

🐉 Setup - Net Control 2 Classroom — 🗆 🗙
Instructor computers Specify address of one or several Instructor computers. To enter more addresses click "More" and specify the addresses, one address per line
Computer name or IP address of teacher computer #1
Computer name or IP address of teacher computer #2 (optional)
Computer name or IP address of teacher computer #3 (optional)
teacher02
More
< <u>B</u> ack <u>N</u> ext > Cancel

If you made a mistake in the process of installation, you can change parameters on student computers at any moment, configuring them in Net Control 2 Client Configuration window, on each student computer, as described in the previous paragraph, in **Instructor Computers** section of **Connections** tab.

### 8. Search options and Connection Password (Student module installation only).



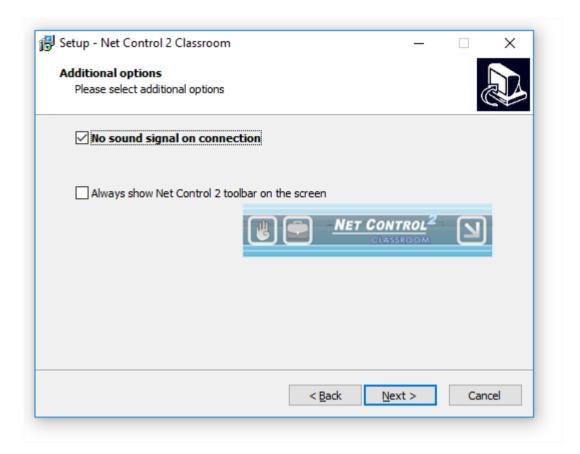
If you have not configured all teacher computers in the previous paragraph, or if you need to give teachers ability to add students to the group permanently or temporarily (for a lesson only), you can enable discovery for this student computers.

When enabled, teachers will be able to scan the network for available student computers and add them to the connections list.

Enabling this option, for security reasons, you must set up a connection password. Teachers that do not provide this password in the search dialog on their computers, will not be able to find and connect this computer. We recommend to set up the same password for a group of computers (e.g. a classroom), because searching computers in the network a teacher can specify only one password at a time.

Alternatively, or in addition, you can enable the searching teachers by students feature. In this case, students will be able to connect a teacher themselves, by a special teacher ID code that a teacher provides to students. For more information regarding this feature please refer to <u>chapter E</u>.

### 9. Additional options (student module installation only).



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

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

### 10. Teacher module configuration (for teacher components only).

On "Configuration Options" page you can set up how the teacher module will store its configuration:

😽 Setup - Net Control 2 Classroom	_	□ X	1
<b>Configuration options</b> How the software will store its configuration and profiles.			
Please specify how the software will store the configura	ation and	profiles:	
Individual configuration for each user of this computer			
O Common configuration for all users			
○ Common configuration in the following folder:			
< <u>B</u> ack <u>t</u>	lext >	Cancel	

**Individual configuration for each user of this computer** – the workspace, profiles, settings and Net Control 2-related documents will be individual for each user of this computer and stored in a personal folder of the user, for example:

"C:\Users\[Your\_Login\_Name]\AppData\Roaming\Net Control 2" for Windows 7 and higher.

**Common configuration for all users**– the configuration will be common for all users of this computer.

**Common configuration in the following folder** – the configuration will be common for all users of this computer and stored in a specified folder. This option is useful if you need to keep the same configuration for teacher modules on several computers in a shared network folder.

### 11. Broadcast Desktop options. (The teacher module installation only).

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

To exclude the possible interference, you need to set up a unique broadcast desktop channel for each teacher module. If you have only one classroom in the network, the default value may be used.

😼 Setup - Net Control 2 Classroom 🦳		×
Broadcast Desktop options		
Please specify Broadcast Desktop tool options.	(	24
Broadcast Desktop Channel (0-500):		
Please specify Broadcast Desktop channel, as a number in a range 0-500. T number should be the same for all computers of a group, and different from channels of other groups.		
< <u>B</u> ack <u>N</u> ext >	Can	icel

The broadcast desktop channel is a number from 0 to 500 that will be internally mapped then to a unique network port to guarantee that only one teacher uses this network port number at a time.

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

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

### 12. Additional tasks and options.

The set of options may vary depending on teacher or student module installation.

Setup - Net Control 2 Classroom		_		×
Select Additional Tasks				Ì
Which additional tasks should be perfor	rmed?		Ċ	A
Select the additional tasks you would li 2 Classroom, then click Next.	ke Setup to perform w	nile installing Ne	et Control	
Additional icons:				
Create a desktop icon				
Enable RDP connections support				
Enable Network Discovery Firewal	Pule when necessary	,		
Compatibility mode (direct connect				
	uons supporty			
Update software automatically				
	< <u>B</u> ack	<u>N</u> ext >	Cancel	

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

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

**Compatibility mode (direct connections support)** – not recommended for new installations. Turns on direct connections mode for the teacher and student modules. Direct connections were used in previous versions of Net Control 2 Classroom and this option left for compatibility reasons. If you need to use Net Control 2 Classroom version 12 in an old environment.

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

### 13. Restart the computer after installation.

### B. Registration and activation.

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

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

損 License Manager	_		×
v20 std	<i>This Wizard helps you to register and activate your copy of Net Cont</i> <i>Please follow the instructions provided below.</i>	rol 2 soft	ware.
503	Registration key:		
50	Activation:		
305	Automatic, online (Internet is required).		
2ns	$\bigcirc$ Manually on any other computer		
	CANCEL	XT >	
52906e60			

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

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

🛃 License Manager		- 🗆	×
v20 std	1. Please use this link in a browser on this or any	other com	outer:
	http://reg1.netcontrol2.com/manu?	-	^
502		-	¥
2000	2. Then paste the received code here:		
and an	5		
03			
VIV			
	Back	ACTIVATI	:
52906e60	If you cannot activate due to server issues		

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

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

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

### C. The teacher console

At the teacher module start up, it may display a prompt to enter the lesson details:

	Start Journal
Lesson:	Teacher Name:
Objectives:	Teacher ID:
Class:	n al la sector de la
BASIC VIEW	ADVANCED VIEW
<ul> <li>Ask at startup</li> <li>Save Journal on exit</li> </ul>	OK Cancel
Simplified user interface, only the mos important tools are displayed on the tool	t are visible on the top toolbar on several tabs, bar

These details are optional, are necessary for keeping the lesson information in the Journal, and will be displayed on student computers in the student console.

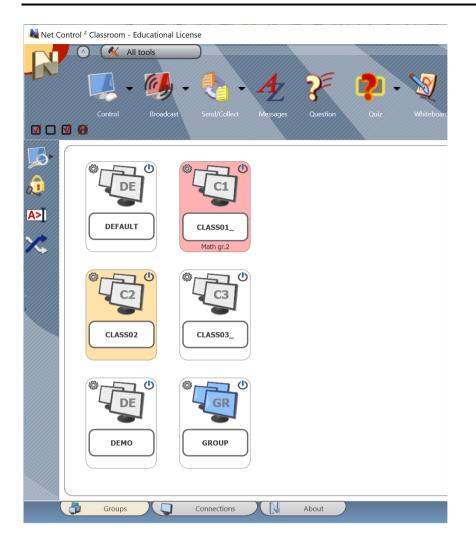
You can uncheck "Ask at startup" option to prevent appearing this window at next start. The entered Teacher name, ID and Class will be stored and used for next lessons.

If student computers were properly configured, and a correct group is opened in the teacher console, student connections should appear in the teacher console in 15-30 seconds.

The actual group name is displayed in the bottom-left hand corner of the teacher console:



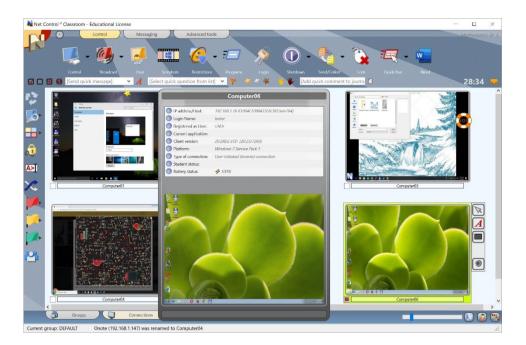
If student computers were assigned to different groups, the available groups will appear in the teacher console, on "Groups" tab (the tab button is at the bottom of the teacher console):



To open a group, double click the respective icon.

New groups appear in the teacher module automatically only if the respective student computers were configured to connect this teacher computer.

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

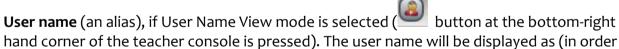


Now you can select one or several connections and apply commands and tools to perform operations. Tools and features that are common for all editions are described in the Tools and Features Guide, you can download it from our website at http://www.netcontrol2.com/downloads

By default, connections are named as a combination of:

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

and/or



- hand corner of the teacher console is pressed). The user name will be displayed as (in order of importance):
  - o a student registration name, i.e. a name that students enter in Student Registration dialog (for more information please see Student registration tool), or
  - o any custom alias, if provided in the student module settings in "Alias" field on Connections tab of Client Configuration window; by default the alias is not set; or
  - a full user name as provided in the Active Directory database (as "John M. Doe", for 0 example), if available; or
  - a Windows user login name.

You can rename a connection (the computer name part) right clicking the connection, and then using Modify connection menu command:

Classifi	or initiated t	A Disasting	
lodify Connectio	n		
lame:		_	
Some computer na	N	_	
Description (option	iai): VS		
		C	change
P address or netwo	ork host name	e of compu	
P address or netwo 192.168.1.76	ork host nam	e of compu	
	ork host nam	e of compu	

### Arranging and sorting connections. Custom layouts.

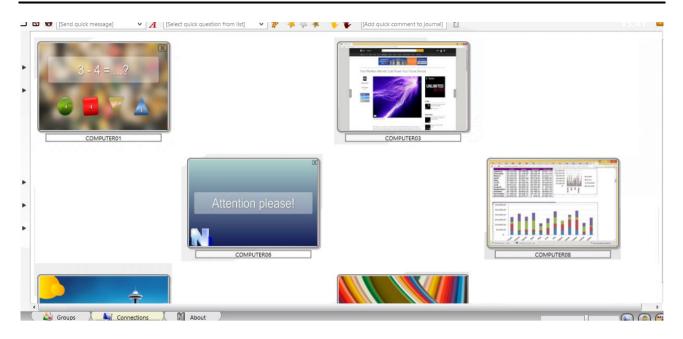
Except for the Table View (described below), the teacher module may display connections either in arranged order or in custom, user-defined positions:

### Arranged view:



**Custom layout:** 

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### In Arranged View connections may be sorted in one of the following orders:

Control	Messaging Advanced tools	
	- 🗐 🛅 🧖 🖅 🔬	0 - 🛃 - 🏠 🗄
	> User Scrnshots Restrictions Programs Log	in Shutdown Send/Collect Lock
Options	Select quick question from list	Add quick comment to journe
All Tools	Client Options	
📿 Macro	<ul> <li>View Options</li> <li>View A:</li> </ul>	
Registration	> View Profiles	Alphabetically Numerically Unsorted
Help and Support		Ascending
About		Groups on Top
Exit		Ignore Alias/User Names Lock Free Layout

### Alphabetically, in descending or ascending order;

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

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

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

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

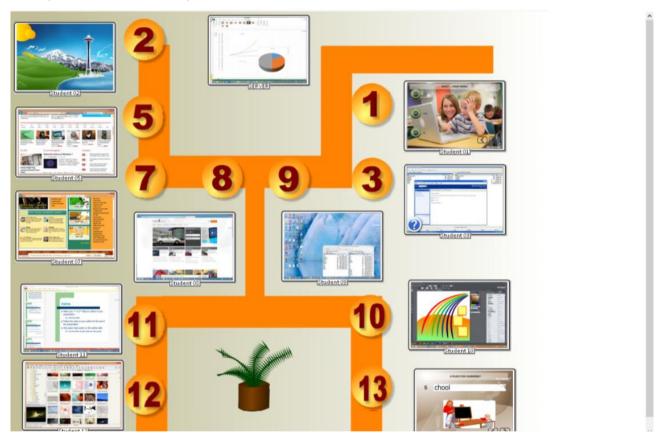
To change the sort mode, use the main menu command **N** – **Options** – **View Options** – **Sort**.

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



### **Custom background**

In addition, for both Arranged and Free View modes you can enable a **custom background** image for the connections list. It is possible to use this feature to draw some class layout, for example as shown on the picture:



To load a custom background image, in the teacher module click the main menu command **N** – **Options** – **Options**; on **Interface** page, in **"Workspace background"** section open a file for the background and click OK.

Notions	
<ul> <li>Interface</li> <li>Commands</li> <li>Control/Broadcast</li> <li>Hot keys</li> <li>Lesson info</li> <li>Right Panel</li> <li>Update</li> <li>Advanced Options</li> </ul>	Language: English (default)  Apply to User Computers Workspace background:

### View modes

Net Control 2 Classroom supports five view modes for the connections list:



Thumbnails: connections are displayed as desktop snapshot thumbnails,



In this mode, you can see an icon of the currently used application on the student computer (in

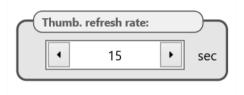
the bottom-left hand corner), help request buttons, awards, poll answer information etc.

Thumbnail size may be adjusted with a slider at the bottom-right hand corner of the teacher console:



or in the teacher module settings.

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



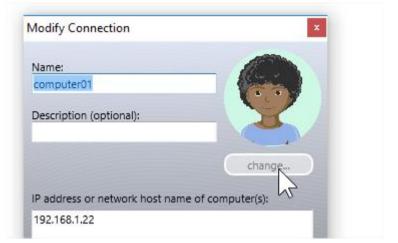
**Table**: the connections list is displayed as a table, each line represents one connection, in this view mode you can see connection and user names, IP address or DNS name of the remote computer, awards, help request, description, remote platform information, MAC addresses of the remote computer, other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

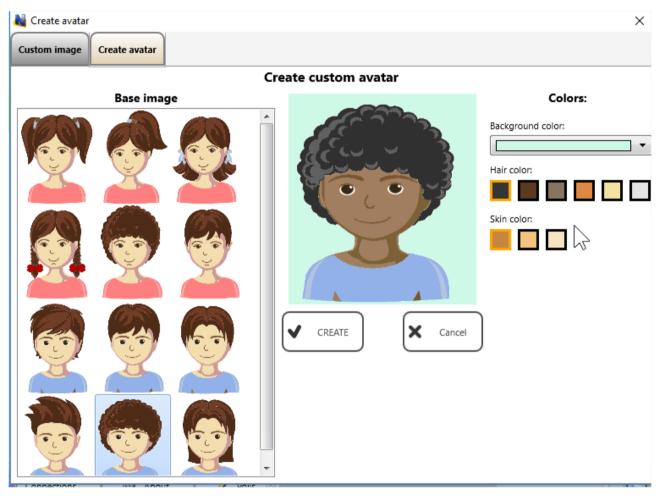
Name	Alias	Address		Description	Platform	StudID
🔲 🖳 🖐 computer02 🛛 🔯	tester	192.168.1.76 RDP#1	🦊 – İ		Windows 7 Service Pack 1/11.1.1.632	
🔽 💐 computer01	user	192.168.1.22 RDP#2			Windows 10 /12.0.0.515	

**Avatars:** connections in the list are displayed as avatars, for any connection you create an avatar with the built-in editor or assign a custom image from a file.



To change an avatar for a connection, right click it in the connections list, use **"Modify connection"** context menu command. In the appeared window click **"Change"** button below the avatar image.





Customize the avatar or load a graphic image on **Custom Image** tab:

**Net Control**<sup>2</sup> Classroom. Installation and Configuration Guide.



Click Crop and Use button to save changes.





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



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



To change the view mode you can use the Thumbnail button's sub-menu:

Or the main menu command N – Options – View Options – View as.

### Left Toolbar



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

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

**Scan** – allows searching computers in the network, please see additional information regarding this feature below.

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

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

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

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

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

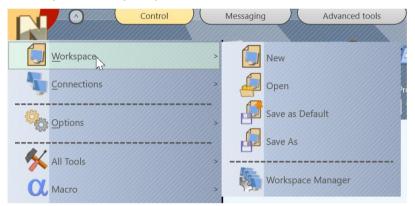
Then, to select computers of the group again, just click the button again.

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

### Workspace operations

*The workspace* is a list of groups and connections with related information, including information about established connections, a position of thumbnails, color groups and other connection details. When some of connection details are changed in the process of the teacher module exploitation, on closing the program it will prompt to save changes to the workspace.

In several cases, you may need to transfer the workspace to another computer to create a copy of the group and connection structure. For such cases, you can use commands of **Workspace** menu (**N** – **Workspace**):



**New** – creates a new, empty workspace

Open – opens a workspace from a file

**Save as Default** – saves the current workspace with all its changes, and makes this configuration "default", which will be loaded at next startup.

Save as – saves the current workspace to a custom file.

To transfer the workspace to a new computer you need to save the workspace to some file with *Save as* command, then on the new computer open it with *Open* command and save it immediately as "default" workspace with *Save as Default* command.

# D. How to search or add student computers remotely from the teacher console

In Net Control 2 Classroom teachers can search the network for available student computers and add them to the workspace, respective settings will be changed on student computers in the student module settings.

### Requirements

To prevent unauthorized access to student computers, you must explicitly allow this feature in

the student module settings and a special connection password must be set.

Installing the software on student computers with the standard installation package, on "Search options" page you need to enable **"Enable discovery. This computer may be found by teachers using Search"** option, in the field below, you need to enter a connection password:

	-	Connection Pa		_			$\square$
			options and Connecti and connecting by u				
	nable discovery	This computer (	may be found by tea	chers using	Search t		
22							
			In order to find this sword in Search dialo				
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	(ALDEADV ST	CODED May be a	hand in the stude	at madula a	attings )		
	(ALKLADI S	IORED. May be c	hanged in the studer	it module s	etungs.)		
	(ALKLADT 3	TORED. May be c	nangeu in trie studei	nt module s	etungs.)		
29			y Teacher ID code.	nt module s	etungs.)		
25			-	nt module s	etungs.)		
2			-	nt module s	etungs.)		
			-	nt module s	etungs.)		
2			-	it module s	etungs.)		
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			-	Nex		Car	

If the software is already installed, you can change these settings in the student module settings (on a student computer: right click Net Control 2 icon in the System Tray, then click Configure button; or, if you have access to student computers from another teacher computer, select student connections, use the main menu command N – Options – Client Options). In the appeared Net Control 2 Client Configuration window, on Connections tab:

Enable **"Allow instructors to find this computer in the network"** option, set up some **Connection Password** in the respective field:

Allow Instructors to find this computer in the network
Connection password
To find this computer in the network Instructors must specify

**Important!** We recommend setting up the same connection password for all computers of the same group (classroom).

### Search

To search computers from the teacher console, click Scan button on the left toolbar:

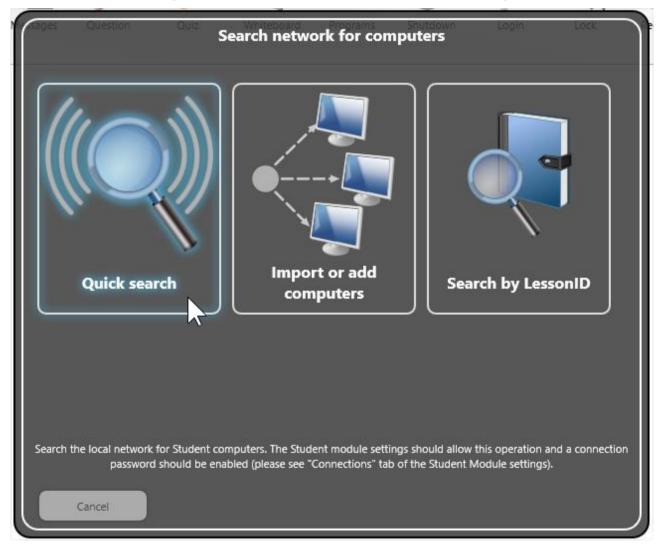


In the appeared window:

**Quick Search** performs a quick scan of the network for available student computers, the operation takes 10-15 seconds. Quick Search may be unable to find computers in other VLANs or if the network hardware blocks Multicast and UDP Broadcast traffic between subnetworks.

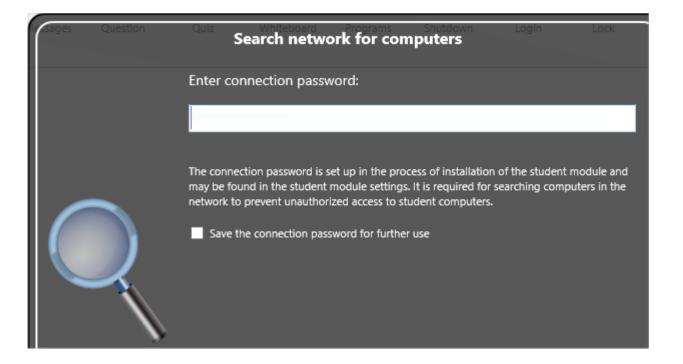
**Import or Add Computers** – performs search within some provided list of computers, as an IP address range, text files containing computer names, Active Directory database or Network Neighborhood.

**Search by Lesson ID** – a special case of quick search that does not require Connection Password for connecting student computers, and is based on Student Registration feature.



### Quick Search

As a first step after clicking Quick Search button you will need to specify a connection password (please see <u>Requirements</u> section of this chapter):



At next step, you should specify how the teacher module should treat found connections:

	Search network for computers
Connection type:	
O Temporary	Found connections will be active until reboot of the student computer and will not be associated with this Instructor computer permanently.
Permanent	Permanently associate found student computers with this Instructor computer. Student computers will restore the connection every time when you are opening this group.
Permanent local	For large networks only: permanent connections are stored on this computer. Use when each student computer should be connected to more than 5 Instructors.

**Temporary** – establishes a temporary connection with found student computers. The connection will be removed from the teacher console automatically, after a user on the student computer logs off or the computer or Net Control 2 Student Module Service is restarted.

**Permanent** – creates permanent connections with found computers. The student module settings for the found computers will be adjusted and the teacher computer's address will be stored in the student module settings. To achieve the better performance for the student computer, we do not recommend setting up more than 5-10 teacher computers per each student computer.

**Permanent (local)** – creates permanent connections with found computers and store them on the teacher computer as direct connections. Use this option only if each student computer should be controlled by more than 10 teachers. Otherwise, use simple "permanent" connections instead.

asages Question Quiz	Search network for computers
Scope of search:	
O Current Group only	Search only for computers that are assigned to group "%s"
All Groups	Search for all computers in the network, use group settings, create new groups when necessary.
Ignore Groups	Ignore group settings. All found connections will be placed to the current group.

At next step, as the scope of search you can select:

**Current Group only** – the teacher module will search only for student computers that belong to the currently opened in the teacher module group. For example, if the currently opened group in the teacher console is "Default", and the student module has "Classo1" as the Group Name in the student module settings, then the connection will not be added to the workspace.

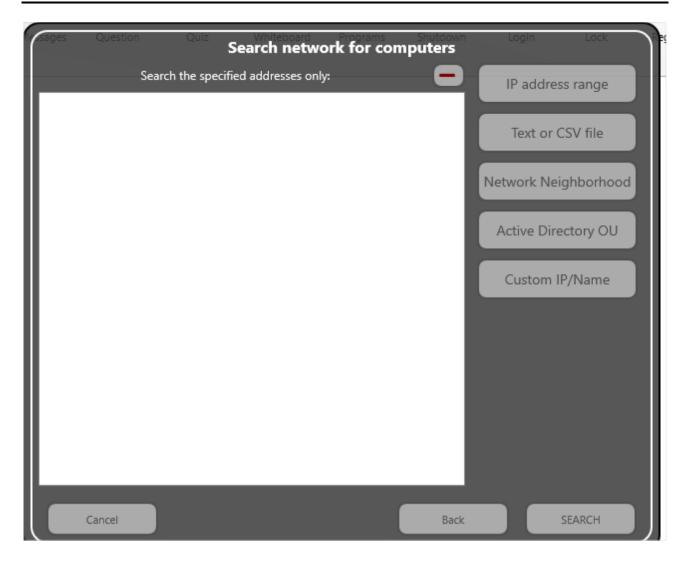
All Groups – the teacher module will search for all students, which are available in the network and accept the specified connection password. If students belong to another than the currently opened in the teacher module group, <u>the teacher module will create new groups</u> <u>automatically</u>.

**Ignore Groups** – the teacher module will search for all available students, despite the group settings on student computers, <u>all connections will be placed to the currently opened in the teacher module group</u>. Group settings on the student computer will not be changed.

### "Import or add computers" mode

First steps of this mode are the same as for **Quick Search** mode described in the previous section.

In addition, at fourth step you will need to create a list of network computers, where the teacher module will search for the available students.



**IP address range** – you can specify a range of IP addresses, for example 192.168.0.1 – 192.168.1.254. The teacher module will scan each computer of the specified range for available student module that correspond to the specified group parameters and the connection password.

**Text or CSV file** – you can open a list of computers or IP addresses that are stored in a text or CSV file.

**Network Neighborhood** – you can select computers from Network Neighborhood where the teacher module will search the student module.

Active Directory OU – the list of available computers will be filled with computers that are present in Active Directory Organizational Unit database, and you will be able to select computers for search from this list.

**Custom IP/Name** – you can add one or more computers to the list of search, use a network computer name or IP address of the student computer that should be added.

The process of scanning the network for this mode may take several minutes, depending on the number of objects where the student module will be searching.

## Search by Lesson ID mode

This mode is useful for 1-to-1 and BYOD environments, for situations when it is impossible to form permanent groups of students.

This feature is based on Student Registration tool, i.e. it is assumed that Student Registration is performed on student computers automatically after user logon.

In Student Registration window students can enter a Lesson ID parameter, as a word or a phrase.

Teachers then can use this Search by Lesson ID mode of Scan tool, enter Lesson ID phrase as the search parameter:

ages Question	Quiz Whiteboard Programs Shutdown Login Lock Search network for computers
	Enter lesson code:
	Using this tool you can find students that were registered with Student Registration tool and provided the specified lesson code on registration.

The teacher module will try to find students that have specified the provided Lesson ID on student registration.

The operation may fail if students and teachers are connected to different routers or located in different subnetworks (VLANs).

## E. How a student can connect a teacher.

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

For more flexible adaptation to different work scenarios, Net Control 2 Classroom supports the following connection methods:

- self-registration;
- connection to a teacher by providing a network name or IP address of the teacher computer;
- connection by Teacher Session ID.

#### Settings

All methods are disabled by default and should be enabled in the student module settings or in the process of Installation.

In the process of installation, you can enable Teacher ID connections:

🛃 Setup - Net Control 2 Classroom	-		×
Search options and Connection Password On this page you can set up search options and Connection Passw protect this computer against finding and connecting by unauthor			
Enable discovery. This computer may be found by teachers us	ng Search t	tool.	
Specify Connection Password. In order to find this compute teacher must provide this password in Search dialog of the			
(ALREADY STORED. May be changed in the student modul	e settings.)		
Students can connect teachers by Teacher ID code.			
< <u>B</u> ack N	ext >	Can	cel

To enable student-initiated connections to teachers, enable **"Students can connect teachers by Teacher ID code"** option.

Other features are controlled by the options of 1:1 tab of the student module settings.

If the software is already installed, you can enable or disable the feature in the student module settings.

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

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

Or on each student computer:

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

In the appeared Client Configuration window, on 1:1 tab:

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Net Control 2 Client Configuration Connections Security Appearance 1:1 Control/Broadcast Internet	Commands Advanced
Self-registration         Show after logon         Show after disconnect         Restricted mode (require registration)         Show a button on the screen         Student can select a teacher from the list         Any teacher can see the student and accept registration         Fields:         Name field is required         Lesson ID (required)         Custom field #1:         Custom field #2:	Student can connect teachers:
	OK Cancel

#### Student can connect teachers:

**By IP address/computer name** – when enabled, students can connect teachers by entering an IP address or network computer name of the teacher computer (disabled by default).

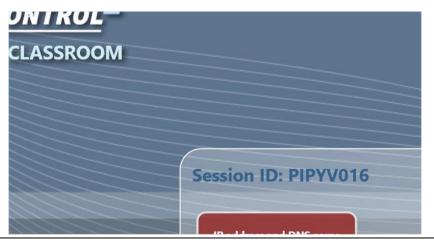
**By Teacher Session ID** – when enabled, students can connect teachers by providing a special Teacher Session ID code. This feature is enabled by default.

Self-registration section sets up self-registration options as described below.

#### Connect by Teacher ID

To connect a teacher by a Teacher ID code:

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



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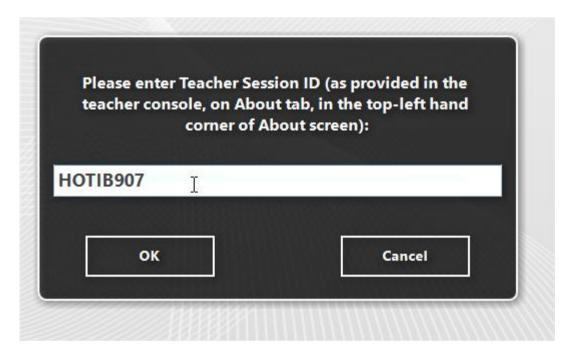
2. Students on their computers open Student Console using an icon in the System Tray or Net Control 2 toolbar (if it is enabled); then click "Connect" button:



3. In the appeared window click "Find Instructor computer" button:



4. At next step, enter the Teacher session ID code and click OK:



Connections, created with this feature are always temporary, i.e. "live" within the current session only, and are closed automatically after the user log off.

## Connect by IP address or network computer name

In the same manner as described above, when "Allow connecting Instructors by IP address/DNS name" option is enabled, students can connect teachers by providing a teacher's

IP address or a network name of the teacher computer.

To connect a teacher:

1. Students open Student Console using an icon in the System Tray or Net Control 2 toolbar (if it is enabled); then click "Connect Instructor computer" button:



2. In the appeared panel:

	Connect by IP address or DNS name	
Enter IP address or DNS	name of Instructor computer:	
	teacher-pc	
	· .	

enter an IP address or DNS name of the teacher computer and confirm the operation.



Connections, created with this feature are always temporary, i.e. "live" within the current session only, and are closed automatically after the user log off.

#### Self-registration

Self-registration is a new mechanism implemented in the version 20 for self-connecting students to teachers in a convenient and quick way.

The behavior of the tool depends on the settings of the student module (see the beginning of this chapter, 1:1 tab):

Allow Self-Registration – enables the self-registration feature.

**Show after logon** - if enabled, the self-registration window will automatically open after a user is logging on.

**Show after disconnect** - if enabled, the self-registration window will automatically open on the student computer after disconnecting from a teacher.

**Restricted mode** – prevents closing the self-registration window without registration.

**Show a button on the screen** – displays a self-registration button on the screen when the student is not connected to any teacher, for quick access to the self-registration tool.

Student can select a teacher from the list – in the process of self-registration, students can see a list of currently available teachers in the network, and select a teacher from the list.

**Any teacher can see the student and accept registration** – when enabled, in the process of self-registration, the student module posts the entered by the student information to all teachers in the network, teachers then can accept necessary requests confirming the connection.

**Fields** – enables or disables fields of the self-registration form. Two custom fields may be included to the form with a custom label on them.

Net Control 2 Client Configuration -		×
Connections Security Appearance 1:1 Control/Broadcast Internet Commands Advanced		
Connections       Security       Appearance       1:1       Control/Broadcast       Internet       Commands       Advanced         Self-registration <ul> <li>Allow Self-Registration</li> <li>Show after logon</li> <li>Show after disconnect</li> <li>Restricted mode (require registration)</li> <li>Show a button on the screen</li> <li>Student can select a teacher from the list</li> <li>Any teacher can see the student and accept registration</li> </ul> Fields: <ul> <li>Name field is required</li> <li>Lesson ID (required)</li> <li>Custom field #1:</li> <li>Custom field #2:</li> </ul> Internet     Commands     Advanced		
OK OK	Car	ncel

When the self registration window pops up, the student should enter some information about him/herself:

<b>Self-registra</b> Using this tool you can send a signal	
Enter your name:	
Lesson ID:	
Field 1 Field 2	

All fields, except the "Enter your name" field are optional and displayed only if enabled in the self registration settings.

After entering the required information, at next step, if "Students can select a teacher from the list" option is enabled, the student module will display a list of available teachers. The student can select a teacher from the list and click **Connect** button.

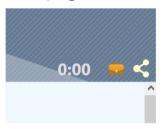
<b>Self-registration</b> Using this tool you can send a signal to teachers to connect you.	
Select a teacher from the list:	
John Doe [JD-01]	
< >	
WAIT the teacher will connect me himself	

Otherwise, the student can click Wait button and a request will be sent to all teachers in the network.

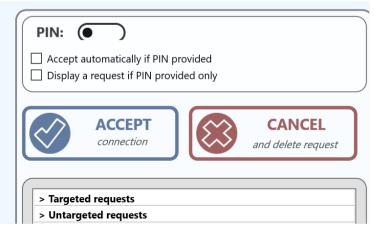
In the process of waiting while the teacher accepts the connection request, the student can click "Close and wait in background" button for closing the self registration window and waiting for the teacher connection in background, or click Cancel button to cancel the request.



When a teacher receives a connection request, the pending connections icon will be flashing in the top right hand corner of the teacher console:



After clicking the icon, the teacher can see a list of pending connection requests, and can accept or reject them:



Targeted requests – are requests that were sent to this teacher directly, by selecting him/her in

the list.

Untargeted requests – are requests that were sent to all teachers in the network.

The teacher can enable a PIN code to secure self-registered connections. If "Accept automatically if PIN provided" option is enabled, the teacher module will automatically accept all requests that were sent with a correct PIN code provided.

If "Display a request if PIN provided only" option is enabled, the teacher module will display targeted requests only if a correct PIN code was provided by the student.

The self registration settings of the teacher module may be set up also in the teacher module settings N – Options – Options; Connections page.

## F. Student Module settings.

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

To configure Student Module remotely from Teacher Console:

- select the Student Computers
- click menu command N ->Options -> Client Options or just click the User Opts button on the Advanced Tools tab
- configure the options as specified below
- click the OK button

#### To configure Student Module on a student computer directly:

- click on the Net Control 2 icon in the System Tray
- then click the **Configure** menu command
- Configure options
- click OK

#### Connections

Instructor computers:		
teacherpc01 teacherpc02 teacherpc03	IP address address pe	or DNS name, one r line
	s computer a member of a group, specify her f this computer is a member of Default group	
Allow Instructors to find this computer in the network	Alias (alternate name):	

To find this computer in the network Instructors must specify...

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

OK

Instructor computers - a list of teacher computers, to which this student module will be connected. The teacher computers should be referenced by their IP address or DNS (network) name, one address per line.

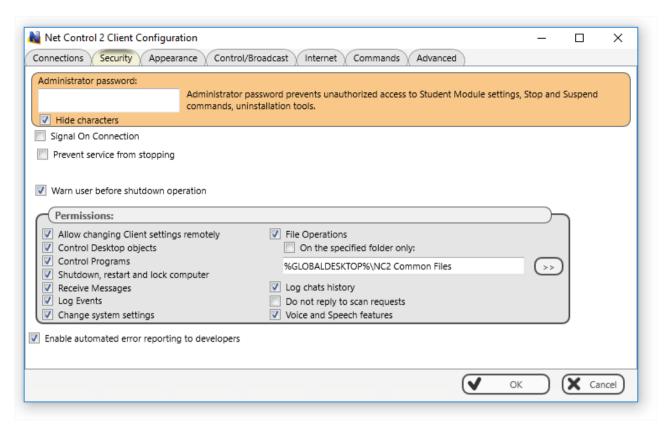
Group Name – Group Name to which the computer belongs. For more information about groups, please see Chapter A.

Allow Instructors to find this computer in the network, Connection Password – enables finding this computer in the network by teachers not specified in the Instructor computers list, for more information please see Chapter E.

Alias (alternate Name) - this name will be displayed when Teacher switches the view mode from Computer Name View to User Name View. If it is left blank or [USER NAME] value is specified, the name of the currently logged in user will be displayed.

Security

Cancel



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

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

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

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

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

- Allow changing Server settings remotely when this permission is set, the Teacher can change Server settings remotely via the Net Control 2 Client.
- **Control Desktop objects** permission for controlling the Desktop of the user computer remotely, receive screenshots, run Remote Desktop and Broadcast Desktop sessions, change resolution, etc.
- File Operations permission for file operations between computers. When additionally, "On the specified folder only" option is set, all file operations may be performed within the specified folder only.
- **Control programs** permission to execute and terminate programs and services remotely.
- **Shutdown, restart, lock** permission to perform power-related operations, like shutdown, reboot, stand-by etc., and lock and unlock computer remotely.

- 48
- Receive messages permission to receive messages from the Teacher computer.
- Log Events permission for Events Watcher and Events Logger tools.
- Change system settings access to Registry, Policies, and access to the Internet etc.
- Allow Help Requests when enabled, student can send Help requests to Teachers via Net Control 2 Server menu.
- Log Chats History chat history will be logged in C:\Users\YOURLOGINNAME\AppData\Roaming\Net Control 2\nc2chat.log file for Net Control 2 MiniChat and in C:\Users\YOURLOGINNAME\AppData\Roaming\Net Control 2\nc2cchat.log file for Chat tool.
- **Do not reply to scan requests** -when enabled, the service will not respond to scan requests sent from any Instructor computer.

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

#### Appearance

Connections Security Appearance 1:1 Control/Broadcast Internet	Commands Advanced
<ul> <li>Always show the Mini toolbar (at the top right-hand screen corner)</li> <li>Hide the Student Console automatically</li> <li>Show popup notifications for certain operations</li> </ul>	
<ul> <li>Enable help requests</li> <li>Enable hand-raising</li> <li>Enable statuses</li> </ul>	
Disable administrator operations (Stop/Exit/Configure)	
Use monitor:	
Primary monitor	~
Disable DirectX acceleration	
	OK Cancel

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

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

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

and for several other operations.

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

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

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

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

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

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

#### 1:1

Options of 1:1 tab are described in the Chapter E.

Connections Security Appearance	1:1 Control/Broadcast Internet Commands Advanced
Quality/Performance: Remote Desktop:	Display driver acceleration O Use always Auto
Quality Bandwidth Broadcast Desktop protocol: Auto Multicast Broadcast Direct Broadcast	<ul> <li>Do not use (Aero-safe)</li> <li>Prevent cursor flashing in GDI mode</li> <li>Close Metro applications when viewer is in full screen broadcast mode</li> <li>Lossless compression (higher quality, lower performance)</li> </ul>
Reduce high resolution	

### Control/Broadcast

#### Quality/Performance.

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

#### Broadcast Desktop protocol:

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

**Broadcast** – when enabled, the Broadcast Desktop service will use UDP Broadcast protocol for transmission data over network. If a network consists in several VLANs, a router or other network hardware may block incoming from other VLANs network traffic sent in Broadcast mode. In this case, you may need to add broadcast IP address of every VLAN to the broadcast list on the "Advanced" tab. For example, if VLAN 1 uses IP addresses in range 192.168.0.1-192.168.0.254 and VLAN2 uses IP address range 192.168.1.1-192.168.1.254, you need to add the following addresses:

192.168.0.255 192.168.1.255 as IP masks for the specified networks.

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

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

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

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

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

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

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

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

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

## Internet

Connections Security Appearance Control/Broadcast Internet Commands Advanced
Web Control Engine maintenance:
Do nothing
O Mode 1: Install as IE Addon + Direct control (IE and Chrome only)
O Mode 2: Install as Protocol Layer + IE addon (recommended)
O Mode 3: Install as TCP Protocol Layer (old mode)
O Uninstall both
Individual restrictions for every user*

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

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

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

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

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

Individual restrictions for every user – by default all Internet restrictions are applied to all

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

### Commands

Connections Security Appeara	nce 1:1 Contro	ol/Broadcast Inter	rnet Commands	Advanced
After logon:				
Show Use Policy document at	startup:			
[DEFAULT]		()		
Clear NC2 Common Files				
<ul> <li>Students can send files</li> <li>File size limit, MBytes</li> <li>10</li> <li>AutoSend folder:</li> <li>NC2:\AutoCollect</li> </ul>				

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

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

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

**Clear NC2 Common Files** – when enabled, NC2 Common Files folder will be automatically cleared on user logon

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

#### Advanced

Connections Security Appearance 1:1 Control/Broadcast Internet Commands Advanced			
☑ Terminal Server sessions support			
<ul> <li>Allow only RDP/hyper-V connections</li> <li>Stop service at startup (manual start required)</li> <li>Cloned VM image support</li> </ul>			
Terminal sessions: do not connect within teacher sessions			
UDP/Multicast:			
Custom broadcast addressess:			
255.255.255			
Multicast address:			
226.0.1.120			

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

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

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

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

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

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

## G. Teacher module settings

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

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

## Interface

Interface Connections Commands	Language:       English (default)       ✓       Apply to User Computers	Simplified interface OFF
<ul> <li>✓ Control/Broadcast</li> <li>▲ Hot keys</li> <li>Lesson info</li> <li>■ Right Panel</li> <li>✓ Update</li> </ul>	Workspace background:	Thumb. refresh rate:
Sector Advanced Options	Double click command: Control ~	Lock current group
	Instructor Console password:	
10	<ul> <li>Minimize to System Tray</li> <li>Show lesson time</li> </ul>	

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

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

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

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

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

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

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

**Minimize to System Tray** – when the option is enabled, being minimized to the taskbar, Net Control 2 Administrator Console will remove its button from the taskbar and place an icon to the System Tray.

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

## Connections

Nterface	Connection Password (default):
Connections	•••••••••••
Commands	No Groups: put all inverse connections to the current group Wake up computers on group entry
Right Panel	Self-Registration
✓ Update ॐ Advanced Options	<ul> <li>Self-Registration enabled: Users can connect Instructors</li> <li>Display a request if PIN provided only</li> <li>Accept automatically if PIN provided</li> <li>PIN: 0000</li> </ul>
	Addressing for automatically found connections:         ● Autodetect         ● Static IPs. Create connections using IP address         ● Dynamic IPs. Create connections using network name         ✓ Exclude domain suffix from network name         ✓ Show unconnected computers

**Connection Password** – the password used by the teacher module for search operations and direct connections.

**No groups: put all inverse connections to the current group** – in this mode, the teacher module ignores group settings and puts all incoming student connections into the current group. This mode may be useful for solving issues with incorrect group settings on student computers, or if the software is used in isolated classrooms with one group only. **Wake up computers on group entry** – if enabled, when a teacher opens a group, the teacher module will send a Wake up signal to computers of the opened group to turn them on. Computers must be configured to support Wake up On LAN technology and should be connected to the teacher module at least once before.

**Self Registration** – configures self registration options of the teacher console. For more information about Self-registration feature, please refer Chapter E of this guide.

Addressing for automatically found connections – these settings are in effect for Search tool,

when you are scanning the network for permanent local connections. Here you can set up the addressing mode for the found connections: to address them by an IP address or computer name.

**Show unconnected computers** – when enabled, the teacher module will show currently unconnected computers in the connections list.

## Commands

<ul> <li>Interface</li> <li>Connections</li> <li>Commands</li> <li>Control/Broadcast</li> <li>Hot keys</li> <li>Lesson info</li> <li>Right Panel</li> <li>Update</li> <li>Advanced Options</li> </ul>	Help requests: <ul> <li>Confirm</li> <li>Accept automatically (chat)</li> <li>Accept automatically (control)</li> <li>Decline automatically</li> </ul> Clear history of text messages   Display Start Journal prompt at startup   Keep Journals automatically   "Lock" command: lock input devices after restart   Full-screen mode for:   Quizzes   Whiteboard
	Quizzes

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

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

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

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

Decline automatically – help requests will be automatically declined.

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

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

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

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

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

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

<ul> <li>Interface</li> <li>Commands</li> <li>Control/Broadcast</li> <li>Hot keys</li> <li>Lesson info</li> <li>Right Panel</li> <li>Update</li> <li>Advanced Options</li> </ul>	Quality/Performance:   Control:   Broadcast:   O   Lossless compression (slow)   Reduce high resolution       Broadcast from Display:   DISPLAY2
	Broadcast options:         Display full-screen on user computers         Prevent switching to other applications during broadcast session         Browser view (display in any browser at %s)         Port:
203	Broadcast protocol:       VHD Driver acceleration:         Image: Direct broadcast       Use always         Multicast       Auto         Adapting       Do not use         Prevent cursor flashing (does not capture semi-transparent windows)

#### Control/Broadcast page

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

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

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

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

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

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

#### **Broadcast options:**

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

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

**Browser view** – when enabled, in Broadcast Desktop mode, the teacher module will also establish a web server that will be showing the current broadcast desktop image in any browser. To watch the broadcast desktop session from any browser, just type the computer name of the teacher computer and the browser view port number (1080 by default), e.g.: http://myteacher:1080

where myteacher is the computer name of the teacher computer. The performance of this tool is significantly lower of the original Broadcast Desktop tool performance, but allows showing the screen on devices that do not support Net Control 2 clients.

#### Troubleshooting

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

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

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

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

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

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

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

Disable Lossless compression;

Enable "Reduce high resolution" option;

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

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

Set VHD Driver acceleration option to "Use always"

## Hot Keys

A Options	_		×
Interface Direct connections Commands Control/Broadcast Hot keys Lesson info Right Panel Update Advanced Options		Add Delete Edit	
Send Screenshot:            • Ctrl+Shift+F12         • Ctrl+PrtSc         • Scroll             * - administrative privileges in the system are required	Lock		
** - changes will be applied after restart of the program	ок	Cance	

On this page you can assign a hot key to Net Control 2 Classroom tools or commands; to change a default hot key for the "Send snapshot" command.

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

#### Lesson Information

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

Interface Connections	Classroom name	Room 26
Commands	Teacher Name:	John Doe
🛓 Hot keys	Teacher ID:	JD-01
Lesson info		
☐ Right Panel ✓ Update	Lesson:	Computer Design
Advanced Options	Objectives:	Photoshop

#### Right panel

The Right panel is a special toolbar that provides quick access to the most often used features and tools.

崔 Options		_		×
<ul> <li>Interface</li> <li>Commands</li> <li>Control/Broadcast</li> <li>Hot keys</li> <li>Lesson info</li> <li>Right Panel</li> <li>Update</li> <li>Advanced Options</li> </ul>	<ul> <li>Show Popup Panel (When minimised)</li> <li>Show Rated Commands</li> <li>Show Custom Commands</li> </ul> Custom commands: Available commands:          Available commands:         Control         Broadcast         Send/Collect         Messages         Quiz         Whiteboard         Programs         Shutdown         Lock         Register         Scrnshots         Restrictions         Shutdown         Forced Shutdown         Lock         Reboot         Lock         Reboot         Lock         Reboot         Lock         Reboot         Lock         Lock         Reboot         Lock	Commands in the panel: Scrnshots Restrictions		
	ed after restart of the program	✓ ок Х	Cance	

**Show Popup panel** – when enabled, the teacher module will display a popup panel on the screen when the main teacher module window is minimized, providing quick access to the most important tools.

Right Panel – enables or disables the Right panel.

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

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

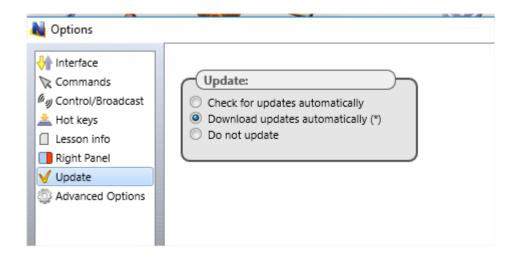
Custom commands – the list of commands, displayed on the Custom Commands tab.

## Update

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

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

**Do not update** – when enabled, the software will not check the server for updates.



## **Advanced Options**

Interface	Connections:
Connections	Disable Loopback Connections
Commands	Save non-console session connections
Control/Broadcast	Use Multicast for search routines
	Scan empty groups automatically
Hot keys	Interface:
Lesson info	Enable administrative tools (for experienced users)
Right Panel	Save Workspace automatically
V Update	Apply a command to all connections when none selected
🚳 Advanced Options	Disable DirectX hardware acceleration
	🗌 "Lock" command: do not display warning message
	Show connection status
	Show Status Bar
	Display User module notifications
	Run Instructor Module at startup
	Show selected thumbnail toolbar
	Settings scope:
	Individual settings and profiles for every user
	O Share the same settings for all users
	O Common settings in the following folder:
	Backup/move settings
N	
Nan	Custom UDP Broadcast subnetworks (comma separated):
204	255.255.255
407	Multicast address: 226.0.1.120
1005	

**Disable loopback connections** - Enabled by default. Connections to itself (to the same computer, where the teacher module is installed) will be blocked. You need to enable this option if the teacher module is installed on a <u>terminal server</u>, and student sessions are running on the same terminal server.

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

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

**Enable administrative tools** – enables several tools that are intended for experienced users, and are hidden by default, including File Manager, system services control and several others.

**Show connection status** – when enabled, displays status of a connection including error description in a popup message.

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

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

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

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

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

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

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

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

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

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

#### Settings scope:

**Individual settings and profiles for every user** – every user on this computer will have its own set of profiles and settings;

**Common settings for all users –** when enabled, all users will share the same settings and profiles;

**Common settings in the following folder** – defines a custom local or network folder, where the teacher console will store its settings, workspace and profiles.

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

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

## H. Use in the Terminal Server (RDP) environment

Net Control 2 software can be used in the **Terminal Server** environment of **Windows Server**, when multiple users (teachers and students) share resources of the same physical computer, and user isolation is realized through Windows user logon sessions.

Each terminal session is considered in this case as a virtual computer and will be visible in the teacher console as a separate connection that may be controlled independently from other sessions of the same computer.

In order to use Net Control 2 software in the Terminal Server environment, you may need to change default settings of the teacher and student modules and to take into account some limitations and special cases of the platform, described below:

1. Only one teacher module may be used within bounds of the same physical computer, i.e. you cannot run more than one teacher module session at a time on the same server.

If the *teacher module* is installed on the server *together with student modules* and it should control student sessions running on the same server, you need to disable the Disable Loopback Connections option in the teacher module settings (N – Options – Options); on the Advanced Options page:

Connections:
Disable Loopback Connections
Save non-console session connections

otherwise, student connections of the same machine will not appear in the connections list.

3. All copies of the **student module share the same settings**. Changing the student module settings in any student session will change them for all users of the computer. Particularly, all students can belong only to the same group, share the same administrator password and security settings.

4. The **student module settings** include several options that you may need to configure in the terminal server environment. To access the student module settings, please click **Net Control 2 icon** in the System Tray area, then click the **Configure** button.

Please consider modifying the following settings:

4.1 *File operations* folder: on the **Security** tab, the field below the **On the specified folder only** option:

File operations On the specified folder only:	
%LOCALDESKTOP%\NC2 Common Files	(;
	_

we recommend to set up it as

#### %LOCALDESKTOP%\NC2 Common Files

In this case **Net Control 2 Common Files** folder (NC2 Common Files) that is used by *Send/Collect*, *AutoCollect* tools and other file operations, will be placed separately on each user's Desktop. The default settings place it on the Public Desktop that is shared by all users and therefore file operations of sending and collecting files from individual users may not work properly.

4.2 By default, Internet restrictions are in effect in all sessions of the same computer, including the teacher's session. To enable individual settings for each user account:

- remove any Internet restrictions applied;
- in the student module settings, on the **Internet** tab, please enable the **Individual** restrictions for every user option:

Co	nnections V Security V Appearance V 1:1 V Control/Broadcast V Internet V Co
(	Perform Web Control Engine installation:
	Do nothing
	Mode 1: Direct control (Chrome, Edge and IE only)
	O Mode 2: Protocol Layer (recommended)
	Mode 3: Legacy TCP Layer Mode (obsolete)
l	O Uninstall Web Control Engine (disables Internet restrictions)
Ε	Individual restrictions for every user (Modes 1-2)
	-

- Apply necessary Internet restrictions again.

4.3 On the Advanced Options page:

**Terminal Server sessions support** – the option should be enabled in the Terminal Server environment.

Allow only RDP/hyper-V connections – enable this option to allow only RDP/Terminal Client sessions; otherwise, the console session (usually the logon screen session) will also be displayed in the connections list.

**Terminal sessions: do not connect within teacher sessions** – enable this option to prevent the teacher session from appearing in the connections list along with student sessions.

Connections	Security	( Appearance )	1:1	Control/Broadcast	Internet )	Commands	Advanced	)
🗹 Terminal	Server ses	sions support						
		per-V connect startup (shoul		tarted manuallv)				
Cloned V	<ul> <li>Stop the service at startup (should be started manually)</li> <li>Cloned VM images support</li> </ul>							
Terminal	sessions: o	lo not connec	t with:	in teacher sessions				
	ulticact							
	http:	//www.ne	tcon	trol2.com © 202	.0, Net Cont	rol 2 Software	. All rights re	eserv

5. Broadcast Desktop engine (**N – Options – Options; Control/Broadcast** page of the teacher module settings) supports the following protocols only: *Direct Broadcast* (recommended), *Multicast*, *UDP Broadcast*.

6. Abandoned user sessions (disconnected but not logged out) may appear in the connections list as *black screens*, to remove the abandoned sessions, select them and apply the **Log off** command of the **Shutdown** tool.

7. The **Remote Login** tool can work in the console session only and does not work with terminal sessions; **shutdown** operations are applied to the server computer and all user sessions.

8. Due to hardware resources, including the microphone, speakers and camera are shared by all sessions, most likely **Speech and Camera** tools will be unavailable in your terminal server environment.

9. If the terminal server students connect only the teacher module that is running on the same computer, you can use the loopback IP to address the teacher module:

127.0.0.1

10. Net Control 2 licensing model considers each user session as a separate virtual machine, using the software in the Terminal Server environment, please ensure that your license covers all user and teacher sessions connected to the server.

## I. Installation of student components using Active Directory Group Policy Objects (GPO) and MSI packages.

## Requirements

Windows Server 2008, 2012, 2016 or 2019 with Active Directory services installed, enabled; administrative privileges.

## MSI Packages

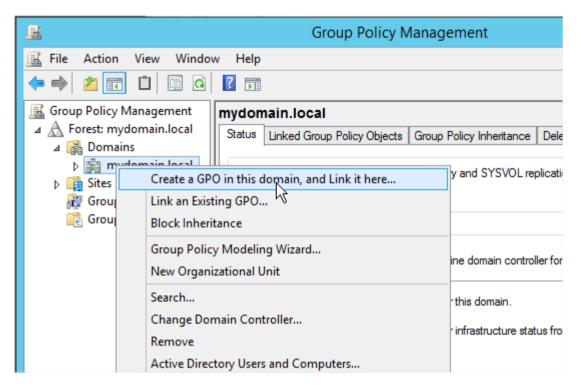
Special MSI package for the student module installation through Active Directory GPO and software installation services, is available free-of-charge for registered customers by request. This package is intended for the installation of the student module only, in <u>default</u> <u>configuration</u> and without any additional modification or configuration. Custom settings may be passed to the client module separately, using administrative templates for GPO, please see <u>Chapter I</u> of this manual.

Alternatively, a special MSI Builder utility is available for registered customers. This utility is intended for compiling custom MSI packages with some pre-defined settings. MSI Builder generates unsigned MSI packages.

To request the package or MSI Builder program please contact us at <a href="http://ask.netcontrol2.com">http://ask.netcontrol2.com</a>,

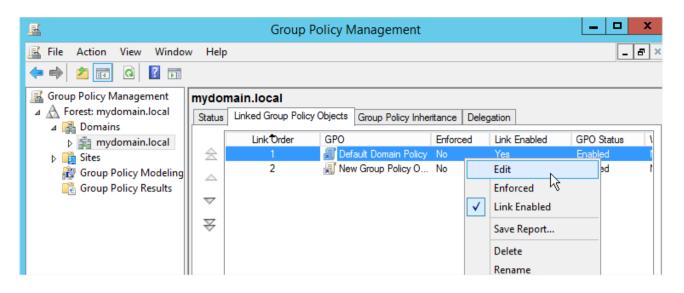
To install either the standard or custom MSI package:

- 1. Copy the MSI package to a shared folder on your network.
- 2. Log in to the Domain Controller with administrative privileges.
- Open Active Directory Users and Computers applet.
   (For Windows Server 2012, click Start -> Administrative Tools -> Group Policy Management.
- 4. On the left pane, browse and select a domain where you wish to deploy the package. Right click and select **Create a GPO in this domain**:



	New GPO	x
Name: New Group Policy Object		
Source Starter GPO: (none)		~
	ОК	Cancel

Or edit a default group policy object for the domain. Group Policies you can find on **Linked Group Policy Objects** tab:



5. In the appeared Group Policy Management Editor, expand the left tree: Computer Configuration -> Software Settings -> Software Installation. Right click within right pane area, and click menu command New -> Package from the context menu.

<u>.</u>	Group Policy Management Editor	_ <b>D</b> X
File Action View Help ← → 2  □ □ □ □ □ ↓ 2 □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Versi Deployment st Source	
	There are no items to show in this view.	
<ul> <li>▷ Preferences</li> <li>⊿ Ser Configuration</li> <li>▷ Policies</li> <li>▷ Preferences</li> </ul>	New     Package       Paste     Refresh       View     Image: Construction of the second	

6. Browse for a <u>network path</u> to Net Control 2 Server MSI package, choose **"Assigned"** and click **OK.** 

**Please note!** You need to specify a network path to the package exactly, in a network format <u>\\SERVER\SHARED\_RESOURCE\_NAME\PATH\ns.msi</u>. This path should be valid and accessible for all user computers where the software will be installed. Most often MSI package installation fails due to the wrong path to the package.

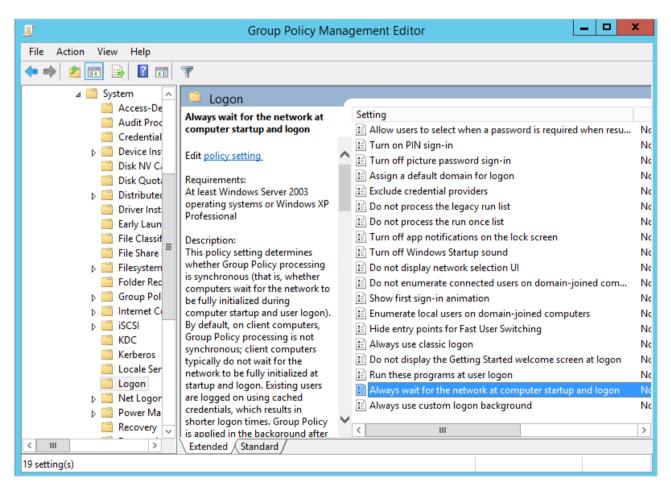
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Deploy Software
Select deployment method:
○ Published
<ul> <li>Assigned</li> </ul>
○ Advanced
Select this option to Assign the application without modifications.
OK Cancel

7. The procedure of software installation through Active Directory GPOs requires availability of the package that is being installed, at the moment of GPO installation on student computers. This means that "Always wait for the network at computer startup and logon" policy must be enabled.

You can enable this policy in the same Group Policy Object. Open **Computer Configuration ->Administrative Templates ->System ->Logon ->Always wait for the network at computer startup and logon** policy; enable it.



<b>9</b>	Always wa	it for the network at computer startup and I
Always wait for t	he network at com	puter startup and logon
○ Not <u>C</u> onfigured	Comment:	
● <u>E</u> nabled		
O <u>D</u> isabled		
	Supported on:	At least Windows Server 2003 operating systems or W
Options:		Help:
		This policy setting determines whet

8. Close Group Policies and restart user computers.

Net Control 2 will be automatically installed when a User computer applies domain settings at Windows startup and logon.

To remove Net Control 2 software from user computers, simply remove the Net Control 2 package from the Software Installation list as described in p.5 of this chapter.

To update Net Control 2 software on user computers, remove the Net Control 2 package from the Software Installation list as described in p.5 of this chapter and add a new package.

# J. Setting up the Net Control 2 Client and Teacher settings with Active Directory Administrative templates.

Several settings of Net Control 2 Client Module and Teacher module may be set up remotely using Active Directory Group Policies of Windows Server 2003-2016.

 Download the administrative templates: http://www.netcontrol2.com/getfile?id=nc2client.adm and http://www.netcontrol2.com/getfile?id=nc2teacher.adm

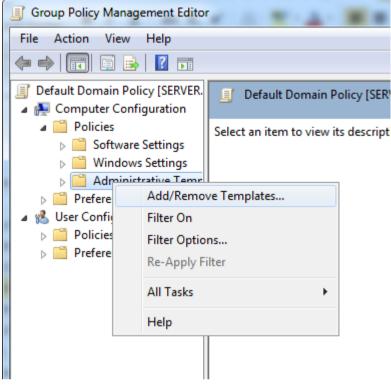
2. Open the Group Policy Management console: for Windows 2008/2012 click Start -> Administrative Tools -> Group Policy Management.

3. Select a policy where the settings should be deployed. For example Default domain policy.

4. Right click it and select **Edit** menu command to open **Group Policy Management** http://www.netcontrol2.com © 2020, Net Control 2 Software. All rights reserved. Editor.

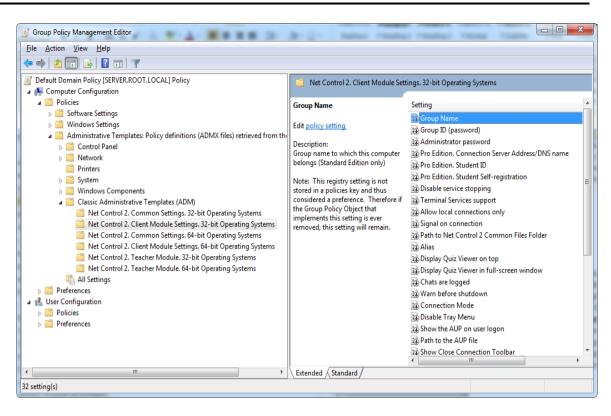
5. In the editor, at left pane open **Computer Configuration -> Policies -> Administrative Templates**.

6. Right click the **Administrative Templates** option and click **Add/Remove templates** menu command:



7. In **Add/Remove Templates** window click **Add** button to add Net Control 2 template files downloaded in p.1

8. When templates are imported you can change Net Control 2 settings in **Computer Configuration -> Policies -> Administrative Templates -> Classic Administrative Templates (ADM)** section. Settings in 32 and 64 bit operating systems are stored separately and therefore the administrative templates provide separate sections for 32 and 64 bit operating systems. If you have mixed computers with 32 and 64 bit operating systems, both sections should be configured.



## K. Script installation with standard installation package.

The standard executable installation package provides a mechanism for a non-interactive centralized installation and deployment the package in large networks, Active Directory and SCCM environments with installation scripts.

**Please note!** The installation script <u>must have administrative</u> elevated or system privileges in the system, otherwise the package cannot be installed. Particularly, for Active Directory scripts you need to use Computer Configuration section of AD GPO, but not User Configuration (which may not have the necessary privileges).

Script installation is unavailable for **Demo-versions** of the software.

The installed package may be pre-configured in the process of installation by passing to the setup package special command line parameters:

**/SILENT** – a required for script installation option, runs the installer in a non-interactive mode, the setup program will display the progress of the installation on the screen but will not wait keyboard or mouse input from a user.

**/COMPONENTS="adm user comm drv lspm\ho"** - space-separated list of components, which should be installed. Possible values:

**adm –** Teacher Component

**user** – Student Component, install as service (default)

**comm**– Common components (required)

**drv**– Install NC2 Video Hook Driver (required for Remote Desktop, Broadcast Desktop and Desktop Recorder tools)

**lspm\lsp**– Install Internet Control Engine in Mode 1: as Internet Explorer plugin and with internal control of Internet Explorer. In this mode Net Control 2 can control only websites visited in Internet Explorer browser, and cannot control other browsers like Firefox, Chrome or Safari. This mode is recommended if you experience issues with the default Mode 2.

**lspm\ho** – Install Internet Control Engine in Mode 2: as protocol layer module and Internet Explorer addon (this mode is recommended).

/NORESTART – Do not restart computer automatically after installation

Optional parameters:

/USERCONNECT:teacher1;teacher2;192.168.1.11; - for the student module installation, sets up teacher computers that will be connected to this student, teacher1, teacher2, 192.168.1.11 – are network names and IP address of teacher computers. Names/addresses should be separated with a ";" sign.

/**BDCHANNEL:NN** – specifies Broadcast Desktop channel. Instead of NN please specify the number of Broadcast Desktop channel. When not specified, uses the default channel.

/GROUPNAME:Name -- specifies Group Name for this computer. Used only if the software was not earlier installed on this computer.

/**GROUPID:***Password* –specifies Group ID (password) for this computer. Used only if the software was not earlier installed on this computer, valid for direct connections only.

/ADMPASS:password – set up administrator password for the student module.

/ADV:ShowMiniToolbar=o – disables Net Control 2 toolbar on student computers.

/ADV:InverseScanEnabled=1 – enables finding the student computer from teacher computers

/ADV:SearchPasswordOpen=password – sets up Connection Password

/ADV:ConnectByTeacherID=1 – for a student module, enables connecting teacher computers by Teacher ID

**Example 1.** To install the software, Student components only in default configuration, execute the following command line:

D:\Downloads\net2000r.exe /SILENT /COMPONENTS="user comm drv lspm\ho" /NORESTART

Example 2. To install Teacher components of the software only, execute the following command line:

D:\Downloads\net1200r.exe /SILENT /COMPONENTS="adm comm drv" /NORESTART

**D:**\**Downloads** should be replaced to the actual path to the installation package on a local computer.

## L. Student components installation using Net Deploy tool.

#### **Requirements:**

- A network with domain;
- User who is installing the software remotely must be an administrator of the computer where the software will be installed (have administrative privileges);
- The Adminstrative Shared Folder (Remote Admin, ADMIN\$) resource should not be disabled;
- Net Control 2 software is already installed on the Teacher computer;

#### The Remote Admin resource.

Remote installation of Net Control 2 Classroom software with built-in NetDeploy tool is possible only if Administrative Share ("ADMIN\$") resource is enabled on computers of the network.

#### 1. How to check whether Administrative share is enabled on client computer

On a student computer open Command Prompt window (press Win+R on the keyboard and type cmd.exe)

in the Command Prompt window type:

#### net share

verify that the ADMIN\$ shared resource is in list of resources.

#### 2. How to enable Administrative share resource:

#### Windows 7-10:

Add the following setting to the system registry of every client computer: **Key:** HKEY\_LOCAL\_MACHINE\Software\Microsoft\Windows\CurrentVersion\Policies\System **Value:** LocalAccountTokenFilterPolicy **:DWORD** = 1 To apply changes after altering this setting you need to restart the client computer.

#### To install the software:

- 1. Run the teacher module of Net Control 2 Classroom;
- 2. Click on Top toolbar's command Net Deploy (Advanced Tools tab);
- 3. In **Network Neighborhood**, find and select computers where the software should be installed;

<b>N</b>				NetDeploy		 x
	£	~	*		_	
Root	To parent	Install		Export		
👫 Microso	oft Terminal Ser	vices	Λ	Microsoft Terminal Services		
👬 Microso	oft Windows Ne	twork	Λ	Nicrosoft Windows Network		
👫 Web Client Network			V	Veb Client Network		
	SERVER					
SERVER	2		Λ	Nicrosoft Windows Network		

- 4. Click Install ("Install Net Control 2 on Selected Computers") button on the top toolbar;
- 5. Specify local path to Net Control 2 Setup installation package;
- 6. Specify components of the software that should be installed;
- 7. Specify Advanced options when necessary;

	Install	lation o	option	าร	×
Path to the	installer file:				
IP addresss	/host name:				
User co	omponents of	the softwar	e		
and the state of the ball	strator compo computer aut		e softwa	re	
Advanced	options		OK	)(x	Cancel
	tallation is pos nt, if you have	the state of the state of the state			
More inform	nation: http://	kb.netcontr	ol2.com/	entry/5	
Group Nam	e:				
Group ID:					
Administrat	or password:				

7. Click the **OK** button.

The program will try to connect to the remote computer and install the software. If the login name and password of the remote computer's administrator differs from the name and password of currently logged in user, Net Control 2 will prompt to enter the correct login name and password on the remote computer.

This method of installation will fail if:

- Your network does not have domain
- You do not have local administrative privileges on remote computer

- Provided login name and password of administrator is incorrect

## M. Update.

#### Manual update through the teacher module

To update the teacher module of the software to a higher version, most often it is enough to close the teacher module, download the latest installation package from our website (please verify that you are downloading the same edition of the software), and install it over existing package without removal of the previous version.

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

- download the latest installation package or use the package that you have used for installation of the teacher module;
- in the teacher console of Net Control 2 Classroom, select student computers that should be updated;
- click the main menu command N ->Help and Support ->Update Client
- specify a path to Net Control 2 installation package on your computer.

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

#### Automatic update

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

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

Automatic update feature must be enabled in the teacher module settings: N ->Options -> Options, on Update page, Download Updates Automatically option should be enabled

Notions 📔	
<ul> <li>Interface</li> <li>Commands</li> <li>Control/Broadcast</li> <li>Hot keys</li> <li>Lesson info</li> <li>Right Panel</li> <li>Update</li> <li>Advanced Options</li> </ul>	Update: Check for updates automatically Download updates automatically (*) Do not update

The software will check Net Control 2 update server every 14 days for available new versions. If any update is found, the program will download it to the teacher computer and will deploy it to the user computers as soon as they are connected to the teacher computer.

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

- right-click on the Net Control 2 Classroom icon on Desktop or in Start -> Programs menu
- click menu command Run As Administrator
- confirm execution

#### **MSI** Packages

If the software was installed through **Active Directory Group Policies** and a MSI package, to update the software on student computers, remove the older package from the Group Policies Object, and install the new package. Please see <u>chapter I</u> of this manual.

## N. How to disable Groups tab of the teacher console.

In several cases the Teacher may need to select some default group for a teacher and disable access for teacher to other groups. To prevent access to Groups tab and Groups functions:

- Select the default group, to which a teacher will have access;
- Click the main menu command N -> Options -> Options;
- On Interface tab, click the Lock Current Group button;
- Specify some password, which will be used for unlocking the Groups tab;
- Click OK.

To unlock Groups tab, in the same manner click the Unlock Current Group password on Interface tab of the Control Options.

## O. How to forbid access to some teacher module features.

Net Control 2 Teacher Module may be specially configured to hide or enable its functionality for different groups of users. For example, ordinary teachers will use only part of its features, while IT administrator will have access to full range of features.

This is realized through the **View Profiles** tool. The Administrator may create several view profiles, protect some profiles with a password or mark some profiles as **"default"**, i.e. make them active automatically at startup.

- View Profiles

  New

  Edit

  Duplicate

  Delete

  Make default

  No Control

  Image: Control

  Show this dialog at startup

  Use
- 1. To create a custom View profile:
  - click menu command N ->Options ->View Profiles.

- Click the **New** button.
- On the **Policies** tab, check only those window elements (*buttons, fields, menus*), which should be visible (available for user) in the new configuration:

	View Policies 🛛 🗕 🗙
Inte	rface Tools and Commands Additional options
V	Policies
	A 🗹 Main window
<u> </u>	Buttons
	▲ 🗌 Tabs
	Groups
	✓ Connections
	✓ About
	Menu items
	► 🗹 First start
	Program Manager
	<ul> <li>Options window</li> </ul>
	<ul> <li>Shutdown Manager</li> </ul>
	<ul> <li>Send Profile dialog</li> </ul>
	Protect with a password
	Save X Cancel

- on the **Tools and Commands** tab you can set up what commands and macro commands will be available for teachers:

Interface Tools and Commands	Additiona	
op toolbar buttons:		Macro commands: 🔽 🗖
<ul> <li>Control</li> </ul>	^	Shutdown
✓ Broadcast		<ul> <li>Forced Shutdown</li> </ul>
✓ User		✓ Forced Reboot
<ul> <li>Scrnshots</li> </ul>		Stop Net Control 2 Client
<ul> <li>Restrictions</li> </ul>		✓ Reboot
✓ Programs		✓ Log Off
✓ Login		<ul> <li>Terminate Program</li> </ul>
✓ Shutdown		Run
✓ Send/Collect		<ul> <li>Execute Command Prompt Command</li> </ul>
✓ Lock		<ul> <li>Lock Computer</li> </ul>
✓ Quick Run		<ul> <li>Unlock Computer</li> </ul>
✓ Messages		✓ Message
✓ Chat		Message Box
✓ Speech		Refresh Connections
✓ Register		Send and Execute file
	*	THE THE
Protect with a password		Save Cancel

<b>N</b>	View Policies	_ 🗆	x
Interface Tools and Command	s Additional options		
Additional options: Disable Main window's co Disable Main window's ad Show the Popup Panel wh Show the Rated Command Show the Custom Comma Disable thumbnail double	vanced top tools en the program is minimised Is panel nds panel		
Protect with a password		Save	Cancel

- when a new profile is created, click the **Save** button to save the profile
- specify some name for profile
- created profile should appear in the list

<b>N</b>	View Profiles	_ 🗆 🗙
New Edit	Duplicate Delete	Make default
New profile		
💦 no Control		
Show this dialog at startup		
		Use X Cancel

In addition, you can make any profile **"Default"**. In this case, the profile will be loaded and applied automatically at start up of Teacher Module.

If the **Show this dialog at startup** option is enabled, Net Control 2 Teacher will display profiles list at startup with the possibility to select one of available profiles.

If any password was specified in the profile, Net Control 2 Teacher will prompt for this password before applying selected profile.

# P. How to protect access to Net Control 2 Classroom with a password.

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

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

 click N (Net Control 2) icon in the System Tray, then click Configure button. In the Configuration window, on Security tab, in Administrator Password field, specify new password.

**Please note:** The password will be applied and stored only in the registered version of the software. Particularly, this feature is not available in Public Trial version.