Net Control ² Professional Edition

INSTALLATION AND CONFIGURATION GUIDE



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General information

Net Control 2 Professional Edition (PRO) is classroom management software for local networks, it is designed for use on public access computers, primarily for the sphere of education.

Net Control 2 Professional Edition consists of three main parts - *Teacher Module*, *User Module* and *Server Module*.

Teacher Component should be installed on each computer that will be used to control other computers.

User Component should be installed on each computer that you wish to control.

Server Component should be installed on one, main computer, which will manage student and teacher connections; teacher and student computers should have constant connection to this computer.

Any combination of components may be installed on the same computer.

Server Components may be installed only manually using the standard installation package.

The *Teacher Component* may be installed either manually using the standard installation package or via Active Directory/Group Policy using special MSI package. This package is available by request for registered users.

The *User Component* may be installed in one of the following ways:

- manually on each computer, using the standard installation package;
- automatically through Windows Server's Active Directory/Group Policies service and a MSI package. The special MSI package is available by request for registered users;
- automatically through the built-in Net Deploy tool. In order to use the Net Deploy service:
 - your network must have a domain;
 - you should have *local administrator* privileges on all remote computers;
 where the software will be installed;
 - your Windows administrator account should be protected with a password;
 - sharing services should be enabled in your network;
 - Remote Administration Shared Folder should be allowed.

0. Common installation strategies.

Generally the software may be installed in any combination of components and in any sequence, but we recommend installing the software in the following sequence:

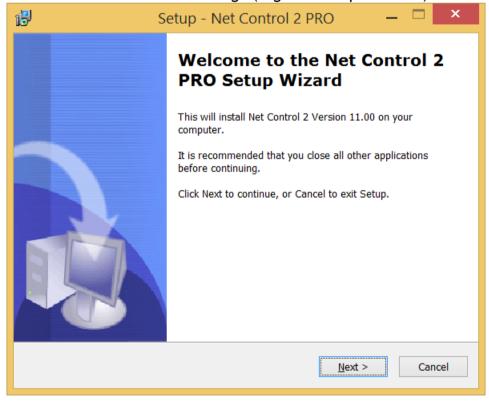
Install Connection Server components on a "server" computer. The "server" here
means a computer in the local network that uses Windows operating system.
 Server operating systems are not required, desktop editions like Windows 7 or 10
also may be used. The server computer should be accessible by all student and

teacher computers in the network; we recommend to assign a static IP address to the server, though it is not required. If you use dynamic IP addressing (DHCP) for the server, you need to address it in the teacher and student module by its computer name (DNS name). Connection Server is used in Net Control 2 Professional edition only for establishing communication between teachers and students, it does not process network traffic between these parties and therefore does not require a wide network bandwidth or high productivity CPU. As the hardware configuration for Connection Server components we recommend to use the "recommended" by Microsoft hardware configuration for the operating system installed on the server computer.

- 2. After the software is installed on Connection Server computer we recommend to install student components of the software on student computers.
- 3. At next step we recommend to set up on Connection Server computer one or several teacher accounts as described in Chapter B of this manual. You will need to specify the teacher account credentials in the process of installation of the teacher components or at first start of the teacher module.
- 4. Install the teacher module on teacher computers.

A. INSTALLATION USING STANDARD INSTALLATION PACKAGE

1. Run the Net Control 2 Installation Package (e.g. net1100pr.exe file).



2. Read and accept the End-User License Agreement.

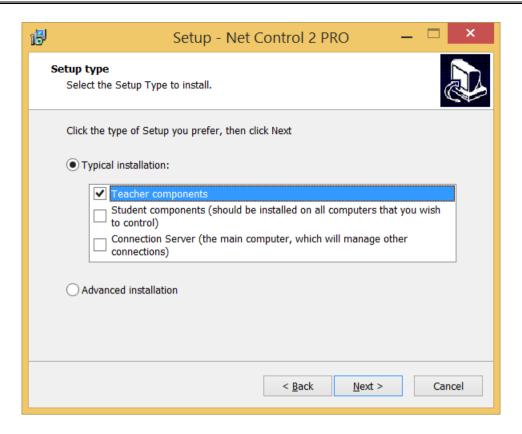


3. On the **Setup Type** page, select **Typical Installation** and specify components, which should be installed:

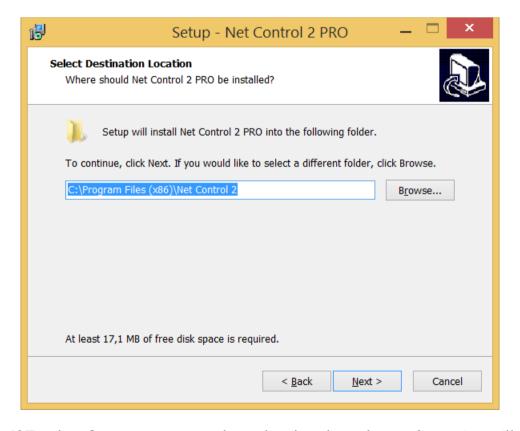
Teacher Components - should be installed on teacher computers; **Student Components** - should be installed on student computers;

Connection Server component should be installed on one, main computer, which will manage student and teacher connections.

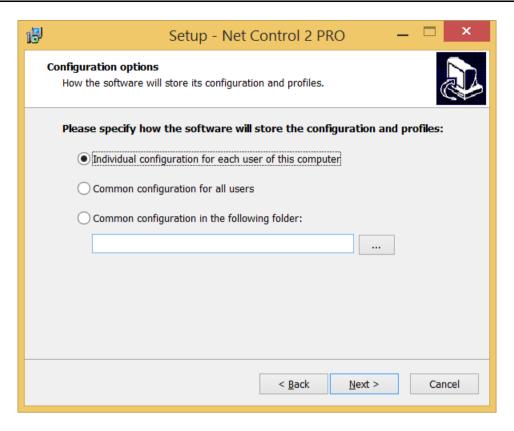
Any combination of components is allowed.



4. Select the folder and Start Menu folder (optional) where the Net Control 2 software will be installed.



5. If Teacher Components are selected, select how the configuration will be stored on this computer:



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

"C:\Users\LOGINNAME\AppData\Roaming\Net Control 2" for Windows Vista/7/8/10/2008/2012

"C:\Documents and Settings\LOGINNAME\Application Data\Net Control 2" for Windows XP.

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 stored in the specified folder.

6. Select Net Control 2 Connection Server options.

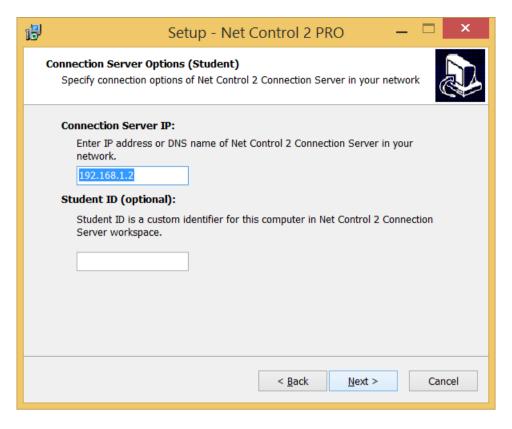
For Teacher Components:



Connection Server IP: specify here an IP address or DNS name of computer, where *Server Component* (Net Control 2 Connection Server) is installed.

Teacher ID and **Teacher password:** a login name and password of the teacher account in Net Control 2 Connection Server settings. We recommend to set up teacher accounts in Connection Server Management Console as described in Chapter B, before installation of the teacher components. You can leave this field blank and specify the teacher account credentials later, in the teacher module directly. Also, you can use Windows authentication, when teachers are authenticated in Net Control 2 Connection Server by their Windows login names, in this case you need to leave this field blank also. For more information about teacher accounts please refer to **Chapter B, p.2.**

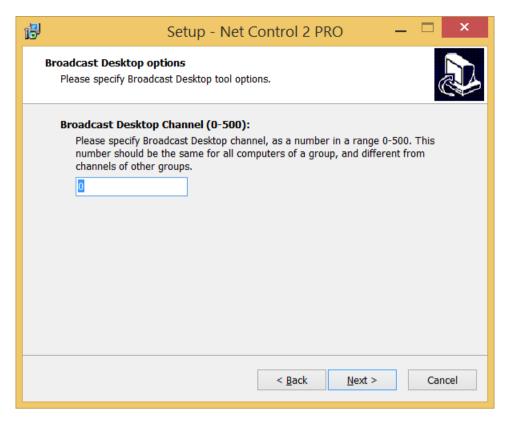
If Student Components were selected:



Connection Server IP: specify here an IP address or DNS name of the computer, where *Server Components* (Net Control 2 Connection Server) are installed.

Student ID (optional): a custom identifier for this student computer or a group of student computers. These IDs may be optionally used in Connection Server for addressing one or several student computers by their Student IDs instead of computer names, IPs or user logins. For example, if you set up for a group of student computers the same Student ID, e.g. "Group A", then you can later add all these student computers to a group on the server just by adding one "Group A" Student ID item to the group. You can leave this field blank if Student IDs will not be used or if you are planning to set up this parameter later.

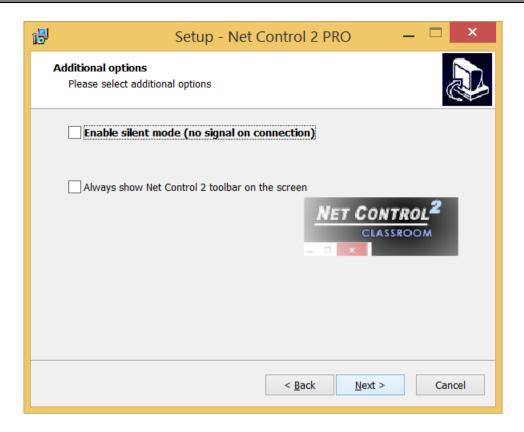
7. Select the default Broadcast Desktop options (only if Teacher components were selected):



The **Broadcast Desktop Channel** number should be different for every lab of your network, otherwise the transmission sent in one classroom, will be "visible" in other classrooms.

After installation you can change these settings in the Teacher Console, clicking the main menu command N -> Options -> Options; Control/Broadcast page.

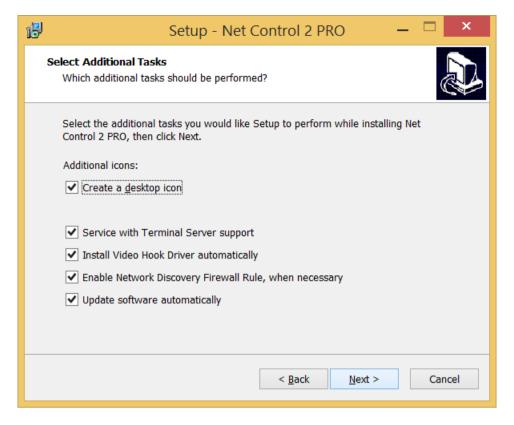
8. Enable or disable Net Control 2 Student Console toolbar:



Enable silent mode (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 text notifications.

The toolbar is a button that is always shown on the screen of a student computer, at top-right hand corner of the screen (by default); the user can click this button to open instantly the Student Console.

9. Review and select the appropriate Additional installation options:



Enable Network Discovery Firewall Rule - enables the Network Discovery rule of Windows Firewall in Windows Vista/2008/7. This rule is required for connectivity between computers in a local network and is enabled by default for "private" and "work" network profiles of Windows Firewall.

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

During the installation, Net Control 2 will automatically install the Video Hook Driver, which is a required component for Remote Desktop, Broadcast Desktop, and Desktop Recorder tools. During the driver setup, the screen may flicker several times.

10. Restart the computer after installation.

B. CONNECTION SERVER MANAGEMENT CONSOLE.

Connection model

Net Control 2 Professional Edition uses the client-server connection model, which requires creation of special connection server in the network. This server acts as an intermediary between student and teacher computers, and helps the software to operate more effectively in large networks, which consist of several VLANs:

- when a Student computer connects the Connection Server, the server checks its database whether this connecting <u>computer</u> or logged in <u>user</u> belongs to any of existing <u>Groups</u>. If no records for the connecting computer were created, i.e. no suitable group was found, the computer will appear in "**DEFAULT**" group. Net Control 2 Group is a logical unit that joins one or more connections; for example you can create separate group for every lab in your network.
- At next step the Connection Server checks whether any <u>teacher</u> has entered to this group. If so, the server instructs the student computer to connect the respective teacher.

Every student computer may belong to several groups, and may be connected to several teachers at a time.

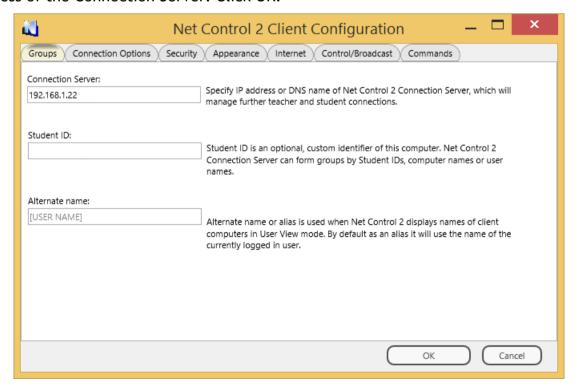
Quick start

As described in previous chapters, before setting up teacher and student computers we recommend to install the server components of the software on Connection Server computer as described in Chapter A above.

1. Configuring Student module.

Connection Server IP address/ DNS name may be set up in the process of installation (as provided in the previous chapter) or changed at any moment in settings of the Client module:

On Client computer right click Net Control 2 icon in the System Tray, then click "Configure" button. In the Client Configuration dialog, on Groups tab, specify IP address of the Connection Server: Click OK.

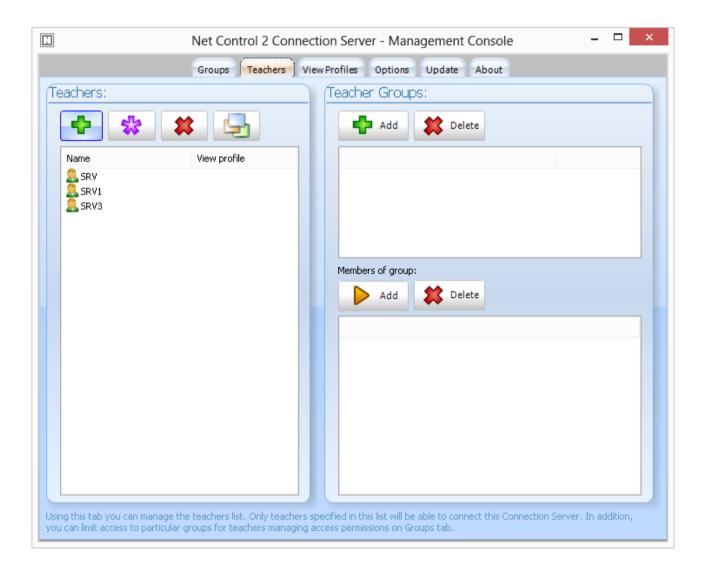


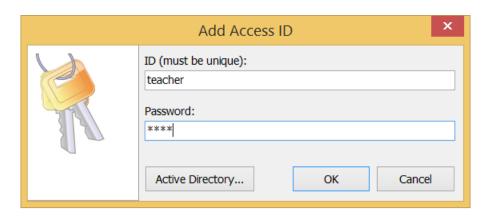
2. Create teacher accounts in the Connection Server database.

For security reasons all teachers connecting Connection Server computer must be authenticated. Therefore, before using the teacher module you need to create one or several teacher accounts that will have access to the server.

On Connection Server computer open Connection Server Management Console: click Windows Start menu command Start -> All Programs -> Net Control 2 -> Connection Server Management Console

On Teachers tab, at left pane ("Teachers"), click Add button to create a new teacher account.





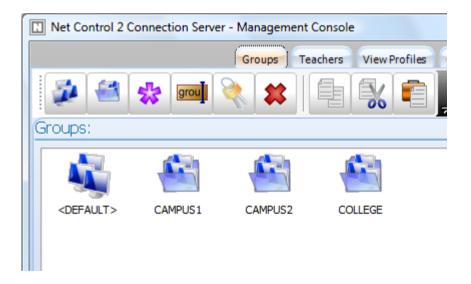
Here you can create a custom teacher account, providing some teacher ID and password; or choose an existing Windows account from Active Directory database. As the Active Directory account you can select any Windows user account or a user group.

We strongly recommend using Windows logins for authentication on Connection Server only in networks with a domain, if Active Directory services are enabled on all teacher and connection server computers.

For networks without a domain we recommend to create a custom account for each teacher that will be connected to NC2 Connection Server.

3. Create groups.

In the Connection Server Management Console open Groups tab.



Click **Add group** button on top toolbar to create a new group. Specify name for this group.

In the appeared Group Editor you need to assign members (student computers) to the group. Net Control 2 group may consist of *computers* addressed by their DNS name, IP address or a custom Student ID parameter, or *users*, referenced by their login name.

To add an item to the group, click buttons of top toolbar:

Computer name - adds a new connection to the group referenced by the computer (host) name.

User name - adds a new connection to the group referenced by the user login name, i.e. once a user is logged in on any student computer under the specified login name, this computer becomes a member of the group (while the user is logged in).

IP address - adds a new connection referenced by IP address.

StudentID - adds a new connection referenced by StudentID parameter. StudentID is an optional identifier, which may be assigned to a student computer or a group of computers in Net Control 2 Client settings or in the setup program when you're installing the student components of the software. All computers that have this Student ID in their settings will be placed to the group.

Example: for several student computers specify the same StudentID in their settings, for example "S01". In Connection Server Management Console, when you're creating a group for these students, in Group Editor add one only record of "Student ID" type, and specify S01 as the value of the record. All student computers in the network that have "S01" as the StudentID become the members of this group now.

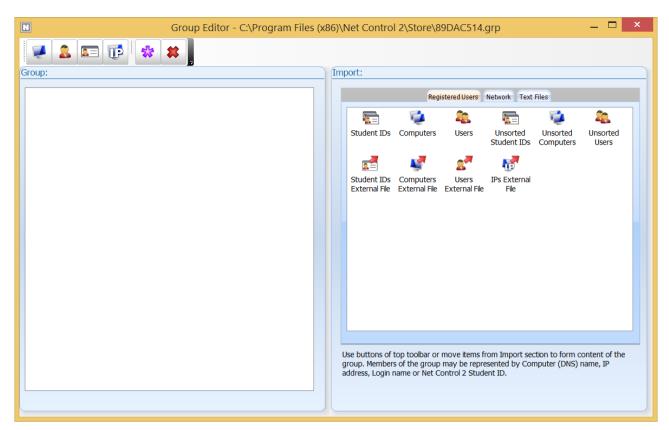
Rename - renames the object selected.

Delete - deletes the object selected from the group.

To simplify the process of group creation you can also use import tools placed in Import section (right pane):

Registered users tab contains list of objects (StudentIDs, Computers and Users), which were connected to the Connection Server earlier. To add objects to the group, select them and drag-drop to the left pane.

Student IDs External File, Computers External File, Users External File and IPs External File items may be used to link the group with some text file. In this case the group members of the specified type will be loaded from the text file right after connection server start up. For example, using this feature you can form dynamic groups using external scripts, where the script creates groups based on some necessary algorithm.



Network tab - provides access to the Network Neighborhood. To import computers from this list to the group drag-drop them to the left pane.

Text files tab - here you can open any text file and import elements of the file to group.

Close Group Editor to save changes.

4. Configure the teacher module.

Connection Server parameters may be set up on the teacher computer in the process of installation. If the software is already installed you can change settings by clicking the main menu command N -> Options -> Options:

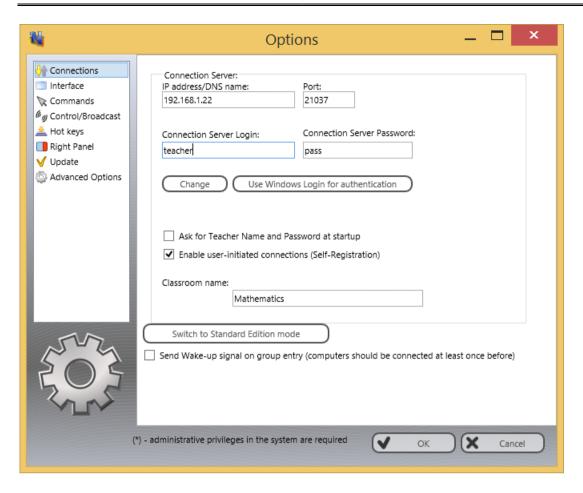
On Connections page you need to set up:

Connection Server IP address/DNS name - IP address or host name of Connection Server computer, where the server components are installed.

Connection Server Login - the Teacher account ID, as provided in Connection Server Management Console (described above in p. 2 of this chapter).

Connection Server Password - the Teacher account password.

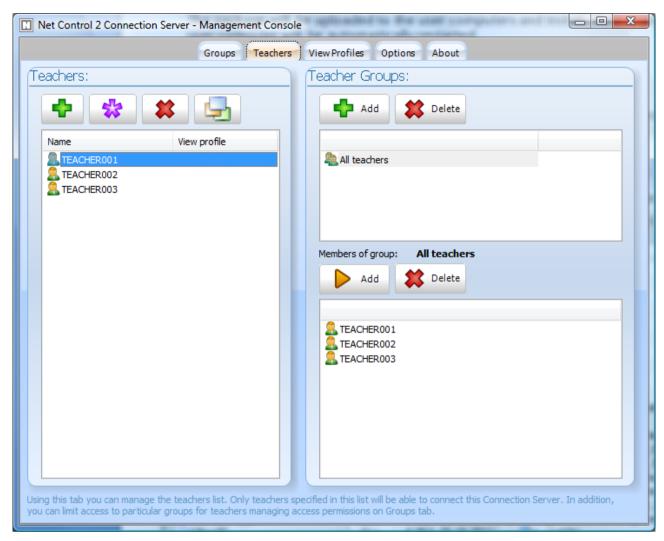
Click Change button.



Connection Server Management Console

To open the Connection Server Management Console: click Windows Start menu command Start -> All Programs -> Net Control 2 -> Connection Server Configuration

TEACHERS



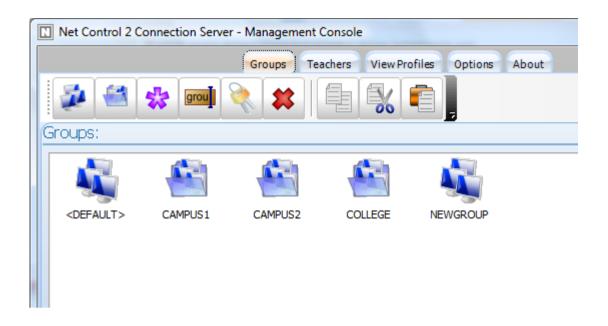
"Teachers" pane contains a list of teachers, who will have access to the server. You need to create one or more teacher accounts, assign some password and specify these credentials on teacher computers in the Teacher console. Connection Server requires authentication of every connecting teacher with one of the specified teacher accounts/passwords.

In addition, here you can assign to a teacher account some View profile, which may be used for limiting access of teachers to features of the Teacher Console. View profiles may be created on **View Profiles** tab. To assign a profile, select one or more teacher accounts and click **Assign View Profile** button. Select View Profile from the list.

On "Teacher Groups" pane you can manage teacher groups. Every teacher group represents several teacher accounts and may be used as a common alias for all these accounts. Teacher groups may be used on *Groups* tab for setting up teacher access privileges to individual Net Control 2 groups; teacher groups do not have passwords and therefore cannot be used for authentication of the teacher console.

To create a teacher group click **Add** button in Teacher Groups section. To move teacher accounts to this group, select the group in groups list; then select teacher accounts at left pane and click **Add** button in "Members of group" section of right pane.

GROUPS



Buttons of top toolbar:

Add group - adds a new group in the current container and opens Group Editor.

Add container - creates a new container. Containers are equivalent of folders in Windows file system, e.g. you can open containers and add new groups there.

Edit - modifies currently opened group.

Rename - renames the selected group or container.

Access permissions - changes access permissions for selected group. By default all teachers have (read) access privileges to new groups.

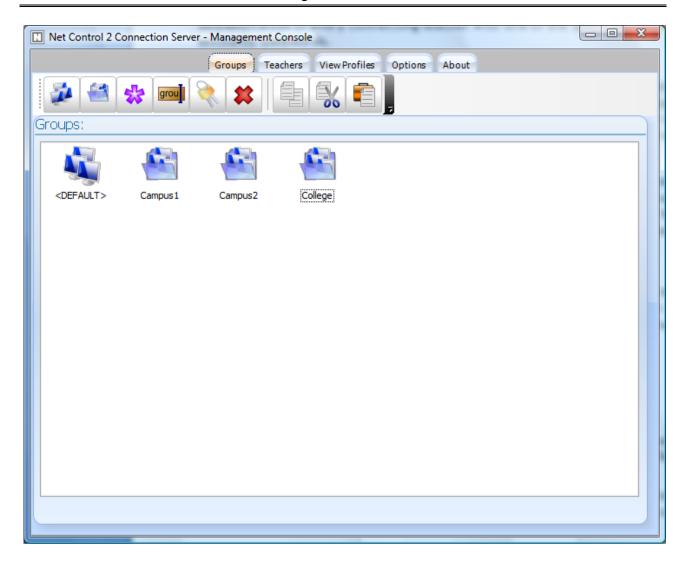
Delete - deletes a group or container.

Copy - copies selected groups to the Clipboard;

Cut - cuts selected groups to the Clipboard;

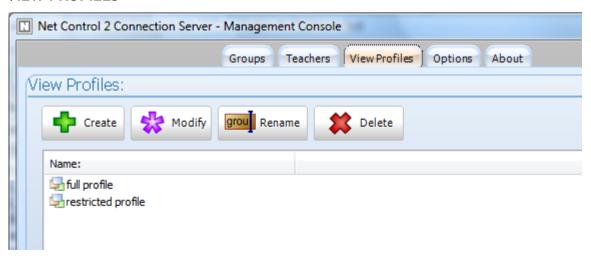
Paste - inserts selected groups from the Clipboard.

<DEFAULT> group in the main container is a special group, which contains <u>all</u> student connections, which cannot be sorted to any of existing groups, i.e. are not assigned to any group.



For more detailed information about Group Editor please refer to p. 2 of the previous chapter.

VIEW PROFILES

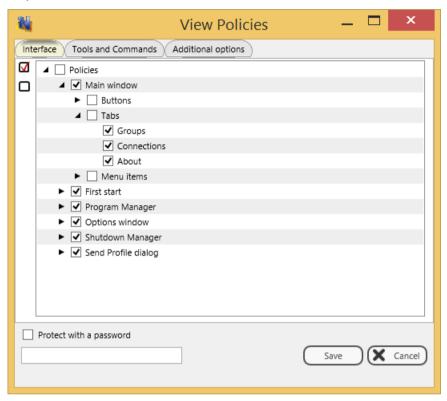


View profile determines what menu commands and toolbar buttons will be available for

teacher. Disabling certain user elements you can limit functionality of the teacher module. When created, the profile may be assigned to particular teacher accounts on **Teachers** tab.

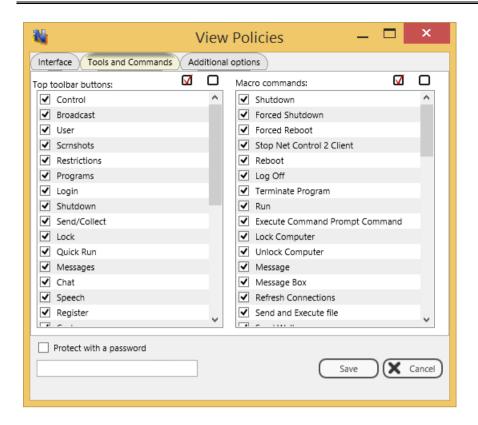
To create a profile click **Create** button on top toolbar, to modify a profile click **Modify** button, to rename a profile click **Rename** button and to delete any profile select it and click **Delete** button.

In profile editor:



On Interface tab uncheck elements, which should be hidden.

On **Tools and Commands** tab you can set up buttons of top toolbar that should be visible or hidden.



Click Save button to save the profile.

To assign a view profile to teacher accounts:

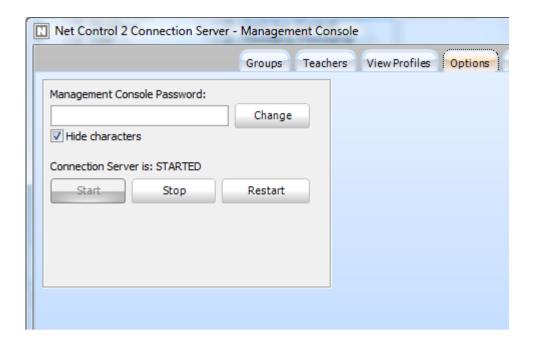
On **Teachers** tab, in **Teachers** section select one or several teacher accounts, click **Assign View Profile** button and select the profile from the list.

OPTIONS

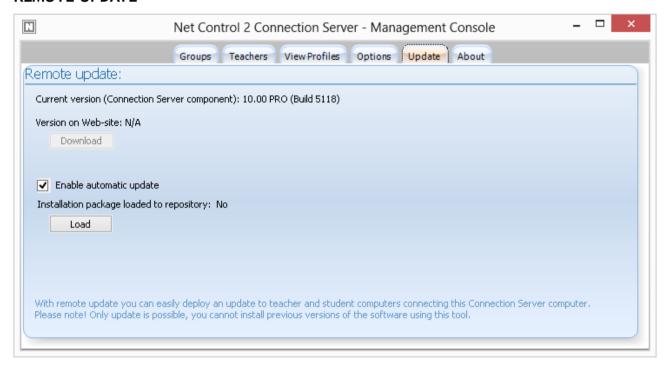
On **Options** tab of Connection Server Management Console you can set up additional options for the Connection Server:

Management Console Password field assigns a password for access to the Connection Server Management Console.

In addition, here you can also manage Connection Server service and obtain current status of the service: click **Start** button to start the service, **Stop** button to stop the service and **Restart** button to restart the server.



REMOTE UPDATE



Using **Update** tab of Connection Server Management Console you can set up automatic update of connecting teacher and student computers to the latest version, loaded to the repository of Connection Server.

To push an installation package to the automatic update:

- Download the latest version of the software (standard .exe installation package, common for teacher and student components);
- On Update tab of Connection Server Management Console click Load and open the package.

Please note! It is assumed that Connection Server works with hundreds and thousands of computers at a time, to decrease load of your network and use of your server resources the update will be performed by Connection Server distributed in time, if you have several thousands of computers in your network the whole process may take several days.

Close Connection Server Management Console program to apply changes.

C. LICENSING

The software may be used in two modes:

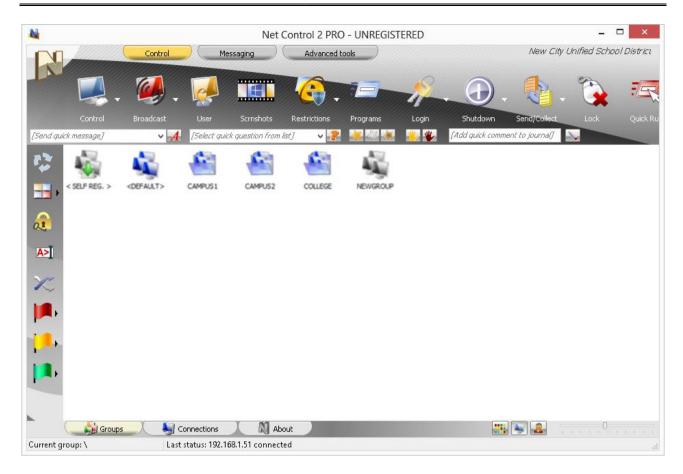
- With Evaluation ("unregistered") license. In this case you can use the software for managing up to 50 student computers, within 30 days **from the moment of first installation**. If you need to prolong the evaluation period or test the software on more student/teacher computers please contact Net Control 2 support or our reseller for free evaluation license.
- If you are owner of Registered User License to register the software: open Net Control 2 Connection Server Management Console; on **About** tab click **Register** button and enter your registration information. Teacher and student computers will be registered automatically.

If you had some Registered User License and upgraded it then to some other (larger) license, to reset your previous registration: open Net Control 2 Connection Server Management Console; on **About** tab click **Re-register** button; restart the Connection Server Management Console.

D. TEACHER CONSOLE

Before using Teacher console you need to configure it, setting up Connection Server settings (IP address and teacher credentials). These settings may be specified in the process of installation (please refer to **Chapter A**) or changed at any moment after installation (please refer to **Chapter B**, p.4)

Upon starting Teacher Console up you should see on **Groups** tab a list of groups and containers as configured on Connection Server:

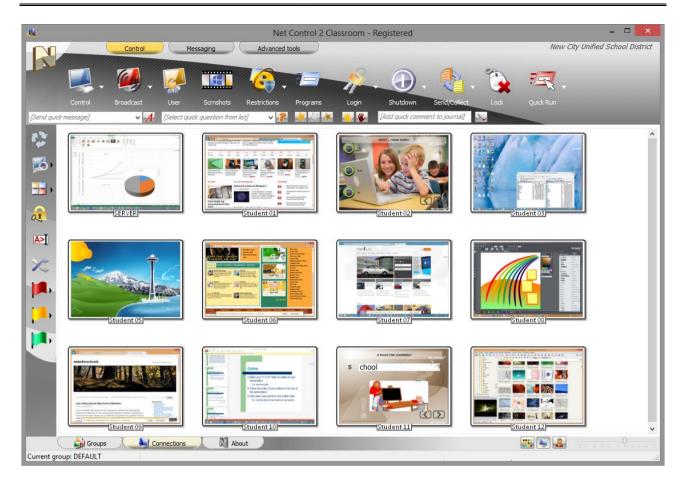


Currently selected group is highlighted with blue monitors icon.

Double click a group or container to enter it.

- **PEFAULT** sproup in the main container is a special group, which contains all student connections, which were not sorted to any other groups.
- **SELF REG.>** group is a special group, which contains only connections initiated and created by students (*self-registered* connections). For more information about this mode please refer to **Chapter D.**

After entering a group you will see a list of student connections, belonging to this group.



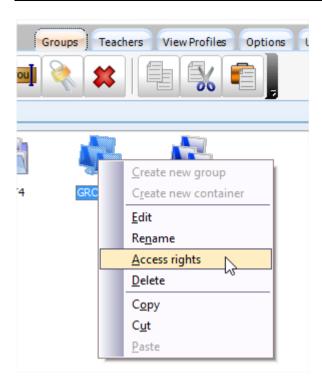
To control User Computers, select them in the list and apply a command from the Top toolbar, Right Panel, All Tools or Commands menu.

E. ACCESS TO GROUPS AND CONTAINERS.

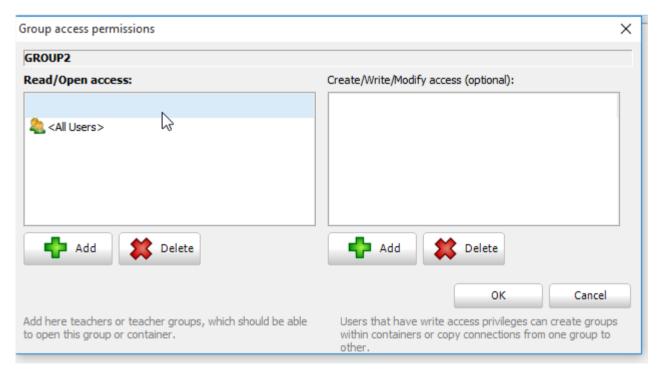
With Professional Edition administrator can limit access of teachers to groups or containers by setting up access permissions for particular groups in Connection Server Management Console.

By default all teachers have access to all groups.

To change an access permission for any group or container, in Connection Server Management Console, on Groups tab select a group and right click it; in the appeared context menu click "Access rights" command:



In the appeared window, in Read/Open access section use Add or Delete buttons to add users, user groups, Active Directory users or Active Directory groups that <u>will have</u> <u>access to the group</u>. The predefined <All Users> group means all teachers registered on Connection Server. In order to limit access to the group you need to delete <All Users> and add only the teacher accounts that should be able to open and work with the group.



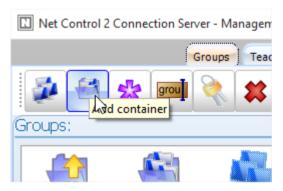
To apply changes click OK button, close Connection Server Management Console and restart Connection Server services.

F. HOW TEACHER CAN CREATE GROUPS OR CONTAINERS AND ADD CONNECTIONS TO A GROUP.

In Net Control 2 version 11.10 and higher it is possible to assign write access privileges to particular teachers to allow them to create groups, containers and manage members of these groups.

By default teachers do not have write privileges for any groups, and group management is possible only by administrator on Connection Server computer in Connection Server Management Console. Any write access privileges must be set up for each group or container individually.

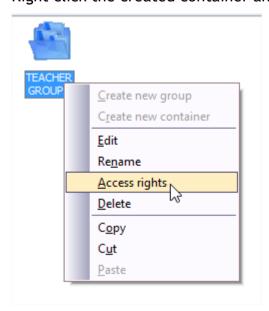
Teachers can create, delete or rename groups only within containers where they have write access privileges. Particularly, teachers cannot create or delete groups on the root level, you need to create a container for the teacher's groups and assign the necessary privileges. In Connection Server Management Console on Groups tab click Add Container button:



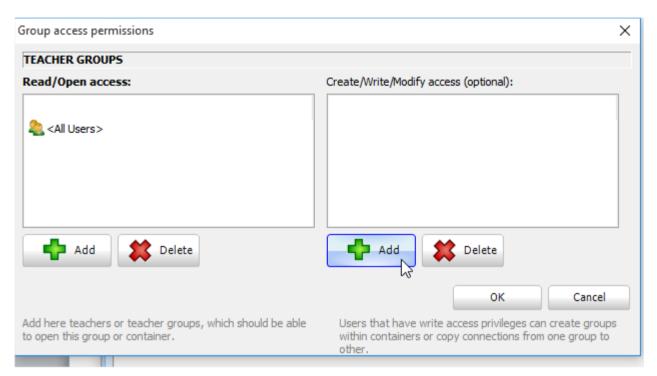
And create a container:



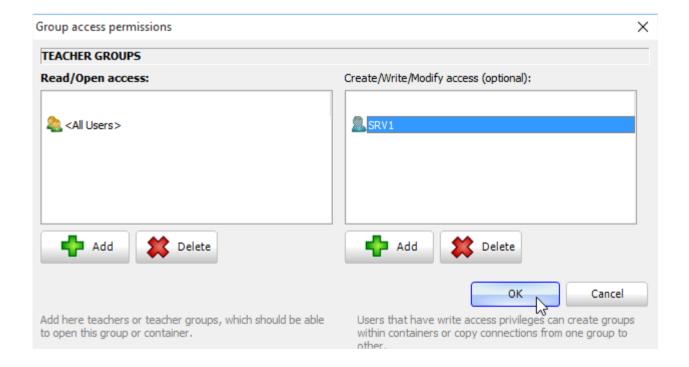
Right click the created container and use "Access rights" menu command:



In the appeared Group access permissions window, in right section (Create/Write/Modify access) click Add button:



And add a teacher account that will have write access privileges for the group.



Click OK, close Connection Server Management Console, restart Connection Server service in order to apply changes.

In the same way you can add write permissions to any existing group. In this case the teacher will be able to copy connections to this group from any other groups, delete this group or rename it.

When the write access privileges are assigned, the teacher can use group management tools in the teacher console:



On Groups tab, in Add Group button's context menu the teacher can perform the following operations:

Add group/connection - create new group. Group creation is possible only within a group container where this teacher has write access privileges.

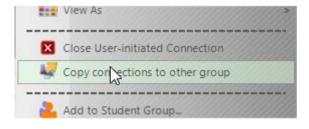
Add container - create new container. Container creation is also possible only within a group container where this teacher has write access privileges.

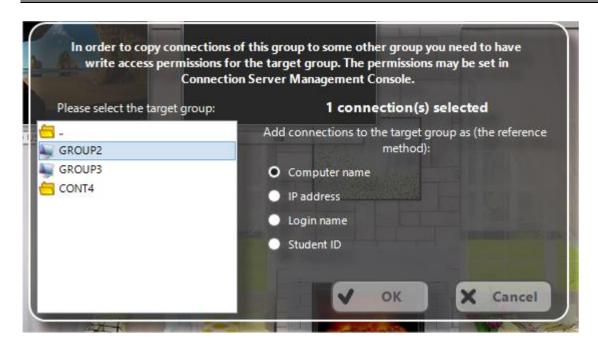
Delete group/connection - deletes the selected group, if the teacher has write access privileges for this group.

Group properties - using this command the teacher can rename any group if s/he has write privileges for this group.

By default has automatically read and write privileges for all groups and containers that s/he has created.

In order to copy student connections from one group to another, on Connections tab of the teacher console select the respective connections, right click them, use Copy Connections to other group context menu command:





In the appeared window select the target group where the connections will be copied and specify how the connections should be referenced in the target group: by computer name, IP address, login name or Student ID.

The write privileges are required only for the target group, the source group may be any existing group, including Default, the copied connections are any connections, created on the server or self-registered connections, connected by students manually.

G. SPECIAL MODE: STUDENT SELF-REGISTRATION.

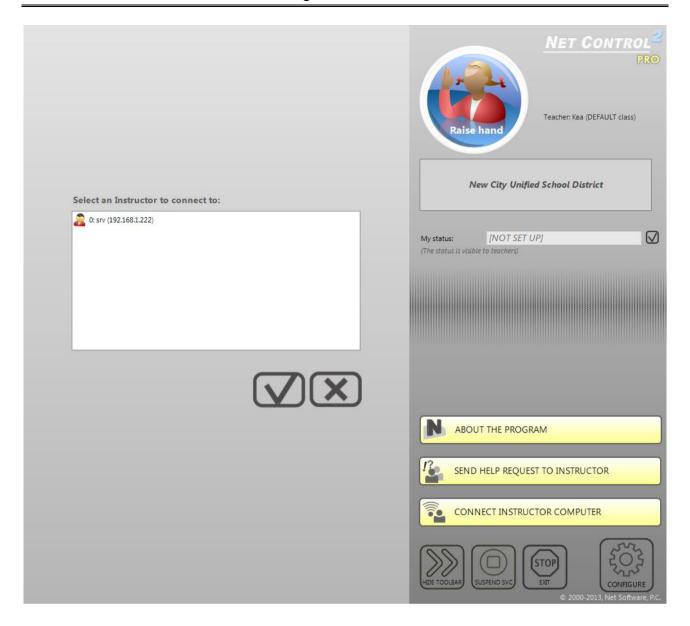
Student self-registration mode may be useful when students (users) use laptops and can move from one classroom to other, i.e. from one Teacher to other, when it is impossible to join such students in one constant group.

When Student Registration mode is enabled on teacher and student computers, the student can initiate connection with selected teacher computer.

To initiate the connection:

- click Net Control 2 icon in the System Tray
- or use "Connect Instructor" shortcut on Desktop,
- or right click Net Control 2 icon in the System Tray and select in appeared Net Control 2 Client Menu "CONNECT INSTRUCTOR COMPUTER" button.

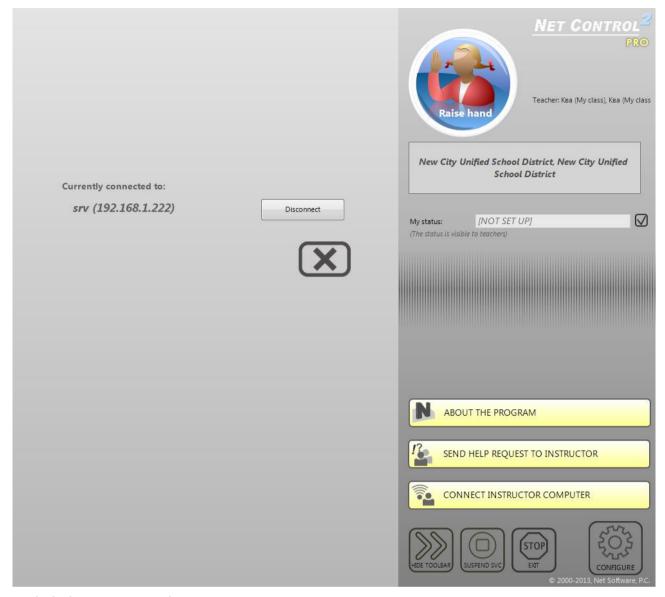
In all these cases the software will display the following dialog window:



With one or several currently available teacher computers. Select a teacher to which you would like to connect and click OK button.

The client module will connect the respective teacher computer and create new connection in its workspace.

To disconnect from teacher computer **click** Net Control 2 icon in the System Tray again or click shortcut on Desktop again:



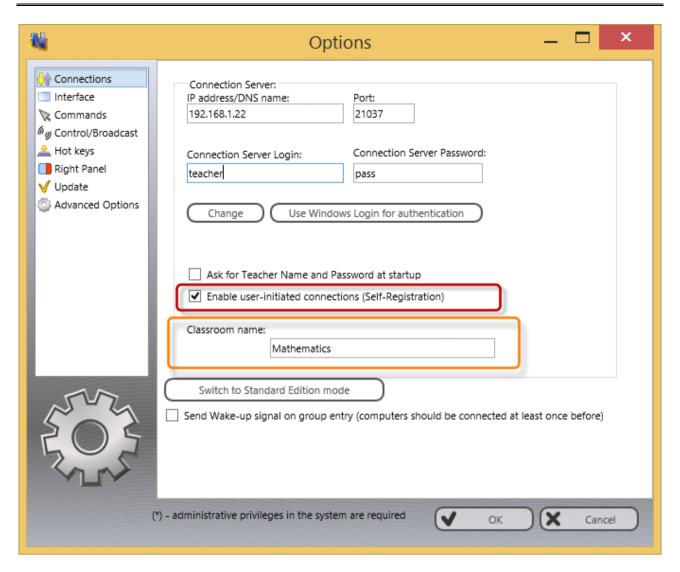
and click Disconnect button.

In order to allow student-initiated connections the teacher module should be respectively configured: in Teacher module click the main menu command N -> Options -> Options.

On **Connections** page the **Enable Student Self-Registration** option should be **enabled**. Optional **Classroom name** parameter may specify some name, which will be displayed in the teachers list on the student computer.

New student connections will be automatically placed to the currently opened group on teacher computer and removed automatically upon disconnect.

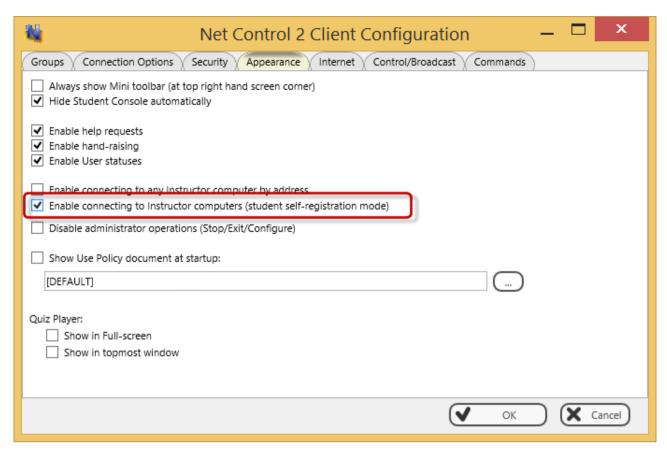
In addition to standard groups, groups list on teacher computer will contain special **<SELF REG.>** group. This group is empty by default and will contain only student-initiated connections.



Student Self-Registration mode may be disabled or enabled in the client configuration. To modify client computers configuration remotely from teacher computer:

- select student computers;
- click the main menu command N -> Options -> Client Options.

To change the configuration on student computers directly right click Net Control 2 icon in the System Tray of client computer and then click **Configure** button.



On Appearance tab, when "Enable connecting to Instructor computers (student self registration mode)" option is enabled (checked) the student self-registration interface is enabled.

H. DETAILED CONFIGURATION OF CLIENT MODULE.

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

To configure User Module remotely from Teacher Component:

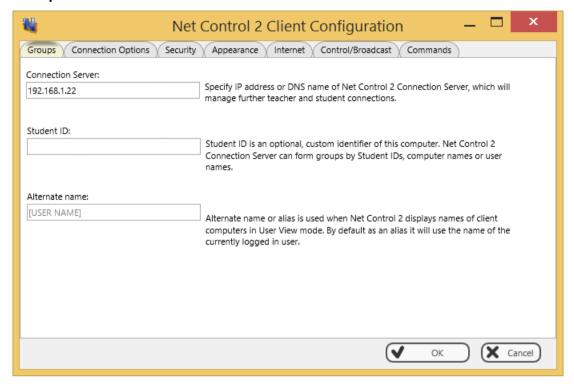
- select the User Computers
- click menu command N -> Options -> Client Options or just click the User Opts button on the Advanced Tools tab
- configure the options as specified below
- click the OK button

To configure User Module on User computer directly:

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

Configuration window:

Groups tab:

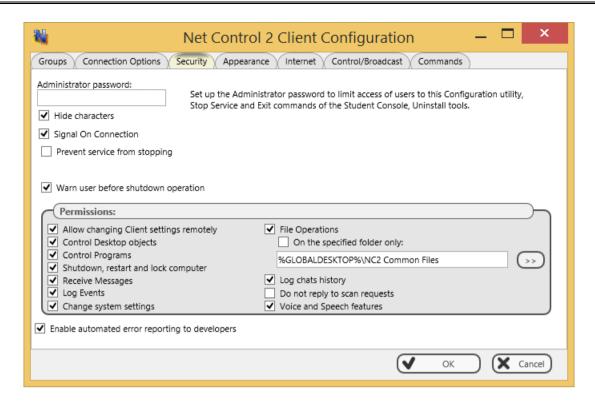


Connection Server - IP address or DNS name of the Connection Server computer.

Student ID - a custom identifier for this computer, may be used by Connection Server for sorting computers to groups.

Alternate Name - this name will be displayed instead of the user name when the teacher module is in *User Name View*. If this field is blank or [USER NAME] value is specified, the login name of the currently logged in user will be displayed.

SECURITY tab



Administrator password - we recommend to set up this password to prevent unrestricted access to Net Control 2 Client Module configuration dialog, "Stop service" and "Exit" buttons; uninstall program (for registered versions of the software only).

Signal On Connection - when checked, any connection of teacher computer will be accompanied by a sound signal and text message.

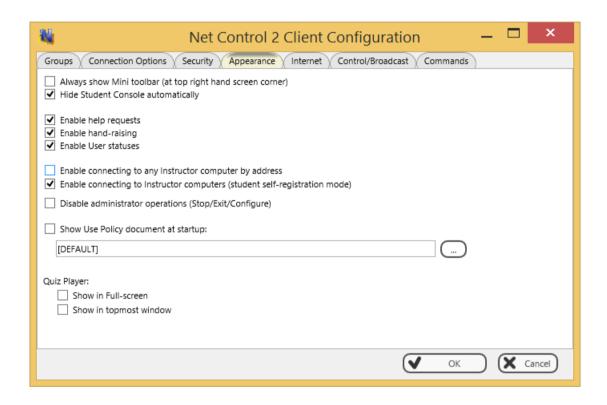
Prevent service from stopping - when checked, the user will not be able to stop Net Control 2 Client service using Services console of Windows Administrative Tools or net.exe system program. This option does not prevent stopping the service using third party tools, Task Manager or in several other ways.

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

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

- Change system settings access to Registry, Policies, and access to the Internet etc.
- Allow Help Requests when enabled, user 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 for Net Control 2 MiniChat and in C:\Users\YOURLOGINNAME\AppData\Roaming\Net Control 2\nc2cchat.log file for Chat tool.

APPEARANCE:



Always show Mini toolbar (at top right hand screen corner) - when enabled Net Control 2 Student module will show the mini toolbar (a button on the top right hand corner of the screen, always visible on the screen, for quick access to the 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.

Enable Help Requests - when enabled, user can send Help requests to Teachers via Net Control 2 Server menu.

Enable Hand Raising - when enabled, user can "raise hand" in the Student Console. This status will be visible in the teacher console, the teacher can accept the request ("to call on" the student) or reset status at any moment.

Enable User statuses - enabling "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.

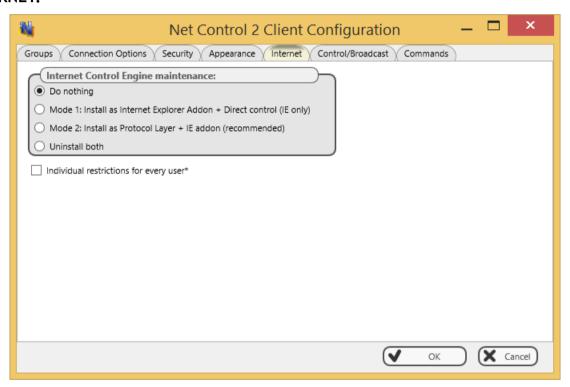
Show Use Policy document at startup - when enabled, the service will display the Acceptable Use Policy document at user logon, either default or custom (specified by the Teacher).

Quiz Player:

Show in full-screen - when enabled, quizzes will be played in full-screen window.

Show in topmost window - when enabled, the user will not be able to switch to other programs during quizzing.

INTERNET:



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

Mode 1: Install as Internet Explorer Addon + Direct Control (IE only) - installs the Net Control 2 Internet Control Engine as a plug-in for Internet Explorer and enables direct controlling browsers from Net Control 2 client service. Restrictions work in Internet Explorer (the preferred browser for this mode) or Chrome (with some restrictions). We recommend to use this mode only if Mode 2 does not work in your environment.

Mode 2: Install as Protocol Layer + IE addon (recommended) — schedules installation of Net Control 2 Internet Control Engine as Protocol Layer. This mode is <u>recommended</u> for all modern operating systems. Restrictions work in all modern browsers, including Edge, Chrome, Safari, Firefox, Opera. Several third party network/Internet security solutions may automatically turn off/disable all intermediate network layers for security

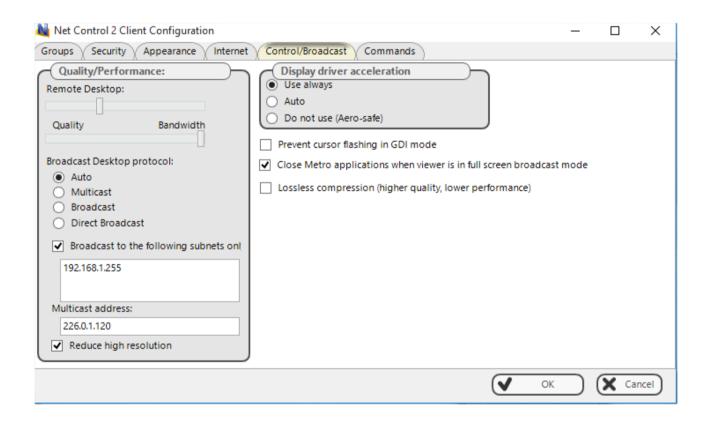
reasons without additional prompts or notifications, in this case restrictions will not work. In this case we recommend to enable and use Mode 1 instead.

Mode3: Install as TCP Protocol Layer (old mode) - this mode is recommended only if you use Windows XP, Vista or 7 operating systems and you cannot use for some reason Mode 1 or 2. It is not recommended for other cases.

Uninstall both - Internet Control Engine will be uninstalled from the User computer. You can use this option if Net Control 2 software interfere 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.

Control/Broadcast tab.



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 mode, in the most network configurations it detects supported

network protocols and enables the respective transport mode.

Multicast - we recommend to set up this mode if "Auto" mode does not work. Your network should support Multicast protocol.

Broadcast - when enabled, the Broadcast Desktop service will use UDP Broadcast protocol for transmission data over network. We recommend to use this mode if Auto mode and Multicast protocol are not supported in your network. If the network consists in several VLANs, a router or other network hardware may prevent information sent in Broadcast mode from sending to other VLANs, in this case you may need to add IP address of every VLAN to the broadcast list. 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

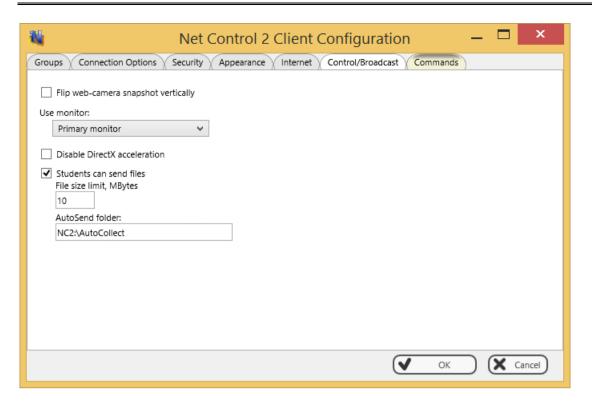
as IP masks for the specified networks.

Direct Broadcast - we recommend to set up this mode if Auto, Multicast and Broadcast modes do not work. This mode generates more network traffic than the previous modes do but often provides the better reliability and performance, especially in slow and wireless networks.

Display Driver acceleration - enables or disables Video Hook Driver acceleration for Remote Desktop and Broadcast Desktop tools. Video Hook Driver provides the better performance and accuracy in screen changes tracking for these tools. When enabled, Broadcast Desktop and Remote Desktop tools activate VHD display driver only when Broadcast Desktop or Remote Desktop session is started and will unload it automatically once the session is finished. In addition, when the VHD driver is active, Windows Vista/7 will disable automatically Aero style for windows and several Direct3D interfaces, which will be restored only after stopping the driver. Therefore, if you prefer to have Aero style active during Broadcast Desktop/Remote Desktop sessions you need to disable the driver, setting up "Do not use (Aero safe)" option.

The "Auto" option means that VHD display driver will be used in Windows XP, in Windows Vista/7 (when Aero theme is disabled), and always used in Broadcast Desktop sessions; and the VHD driver will not be used in Windows Vista/7, when Aero theme is enabled.

COMMANDS



Flip web-camera snapshot vertically - when enabled, the service will automatically flip snapshots obtained from web-camera vertically.

What monitor should be used by service - here you can select the display in multimonitor environment, which will be used as a source for screenshots and thumbnails, displayed on the teacher computer.

Disable DirectX acceleration - enable this option if "Floating point division by zero" error appears after starting Net Control 2 Client module, for more information please refer to the following Knowledge base article: http://kb.netcontrol2.com/entry/77/.

Students can send files - when this option is enabled, students can use AutoCollect folder to send files to teachers and receive them back in a couple of clicks. Files that are copied or saved in this folder by a student will be automatically sent to currently connected teacher computers; teachers can check or modify these files and send them back to students. As additional parameters you can set up the physical location for this folder on student computers and a limit for file size, in this case all files that exceed this limit will not be sent to teachers.

I. HOW TO DISABLE ACCESS TO GROUPS LIST IN THE TEACHER CONSOLE.

This way provides a quick solution for disabling Groups tab in the teacher console. Server features of Professional Edition provide a more effective way of managing access privileges for teachers to access groups and containers. Please refer to Chapter E for more information.

To disable changing the currently selected group in the Teacher console Administrator can lock the group in settings of Teacher Console:

- Select the default group, to which a teacher should 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 group;
- Click OK.

To unlock Groups tab, in the same manner click the **Unlock Current Group** button on **Interface** tab of the Options window.

J. HOW TO PROTECT ACCESS TO NET CONTROL 2 WITH PASSWORD.

To protect access to **Net Control 2 Teacher Module**, click the menu command **N -> Security -> Setup Client Password**, specify the password, and click **OK**.

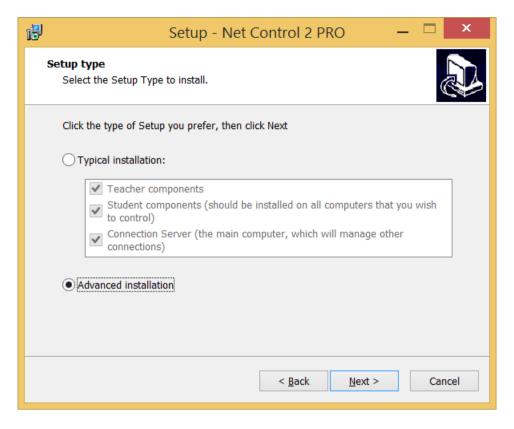
To prevent stopping Net Control 2 User service or configuring its settings on the User computer, you need to enable the Administrator password:

- Right 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.

K. ADVANCED INSTALLATION MODE OF THE STANDARD INSTALLATION PACKAGE

Advanced installation mode may be used for more detailed configuration of parameters of installation.

To enable Advanced installation, in the process of installation, on "Setup type" page select "Advanced installation" option:



At next steps the setup program will prompt all additional parameters as provided in **Chapter A**.

Additionally, on "Select Components" page you can select necessary components from the detailed list of variants of installation:



Additionally to Teacher, Server and Student components you can enable installation of the following components:

Install Video Hook Driver - enables installation of Net Control 2 Video Hook Driver - special acceleration driver used by Broadcast Desktop and Remote Desktop engines. Installation of this component is recommended. You should uncheck this option only if the VHD driver interferes with some other software installed on this computer.

Install Internet Control Components - enable this option on student machine if you need to control access to Internet services on this computer. The component may be installed either in "IE Plugin Mode" or "Protocol Layer Mode". "*Protocol Layer Mode*" is recommended.

"Protocol Layer Mode" provides monitoring functionality in any network software, including alternative browsers, like Google Chrome, Opera or Safari; several Internet monitoring features are unavailable in this mode. For more detailed information regarding difference in these modes please refer to Net Control Tools and Features Guide, Internet Restrictions section.

L. INSTALLATION OF STUDENT COMPONENTS USING ACTIVE DIRECTORY/GROUP POLICIES AND MSI PACKAGE.

Requirements: Network with domain, Windows Server 2003, 2008, 2012, Active Directory services enabled, administrative privileges.

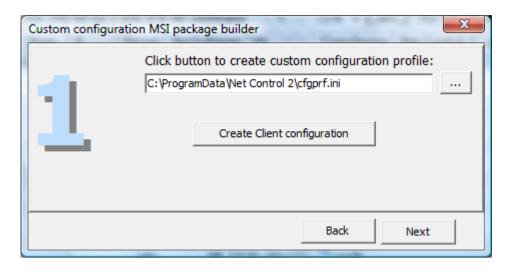
MSI Builder tool is available by request (http://www.netcontrol2.com/downloads).

1. Install MSI Builder package.

MSI Builder program requires **Microsoft .NET Framework version 2.0** installed. .NET Framework version 2 is part of Windows 7 operating system and you should be able to compile MSI packages in this operating system without additional configuration. For Windows 8/10 you need to enable .NET Framework version 3.5 component in Windows settings (Control Panel -Programs and Features - Turn Windows Features On or Off - enable .NET Framework version 3.5).

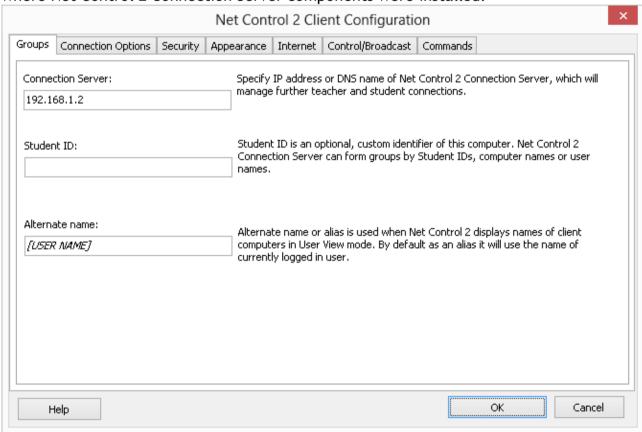
For Windows XP you need to download and install .NET Framework version 2.0 from Microsoft website.

Run MSI Builder from **Start** -> **All Programs** -> **Net Control 2** -> **MSI** -> **MSI Builder** menu.



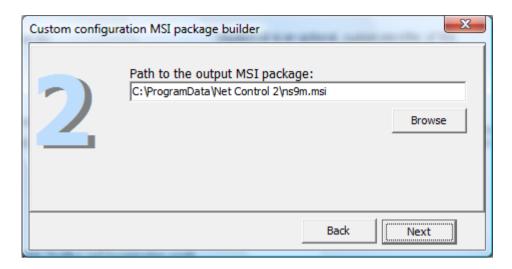
Click Create Client configuration button to create default configuration.

Set up default settings for Net Control 2 Client. At least **Connection Server** field should be specified. In this field you need to specify IP address or DNS name of a computer, where Net Control 2 Connection Server components were installed:

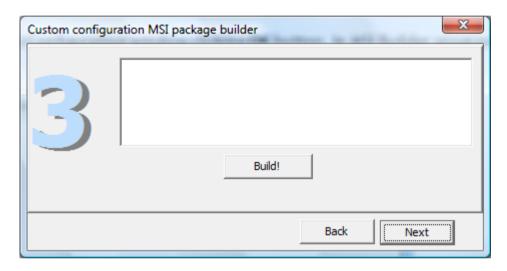


Detailed description of other parameters please see in Chapter H of this manual.

Close Client Configuration window clicking **OK** button. In MSI Builder program click **Next** button.



Specify path to the output MSI package and click **Next** button.



Build the package clicking **Build!** button.

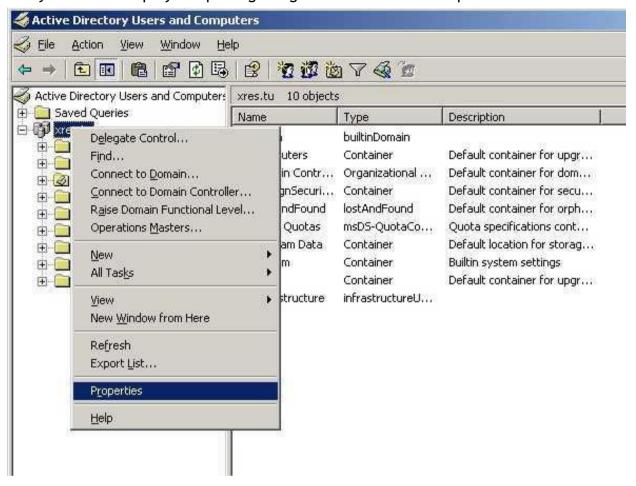
Please note! The prepared MSI package is intended for installation over Active Directory Group Policies only. Manual installation or installation using other ways may be done only if MSI installer has administrative privileges in the system.

Install the built MSI package in Active Directory.

To install the MSI package:

- 1. Copy the MSI package to a shared folder on your network.
- 2. Log in to the Domain Controller with administrative privileges. For Windows Server 2003, click Start -> Programs -> Administrative Tools -> Active Directory Users and Computers.
 - For Windows Server 2008/R2 click Start -> Administrative Tools -> Group Policy Management.

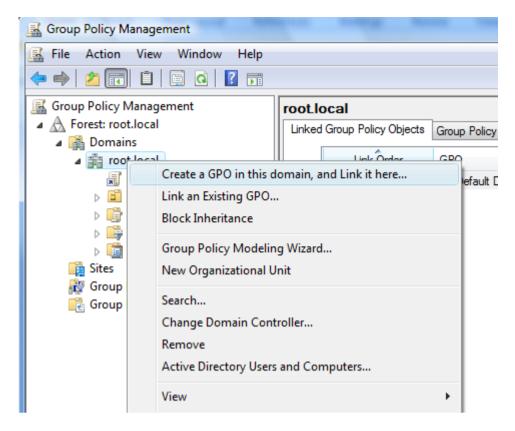
3. In **Windows Server 2003** on the left pane, browse and select the domain where you wish to deploy the package. Right click and select Properties.



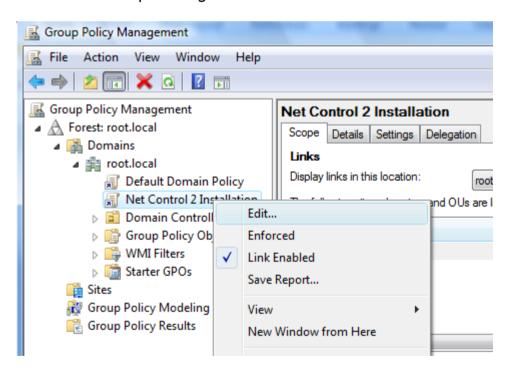
In the Domain properties window, switch to the **Group Policy** tab, click the "New" button, specify a name for the policy, and then click the "Edit" button:



In **Windows Server 2008** right click the domain, where the software will be installed and click **Create a GPO in this domain and link it here** menu command:

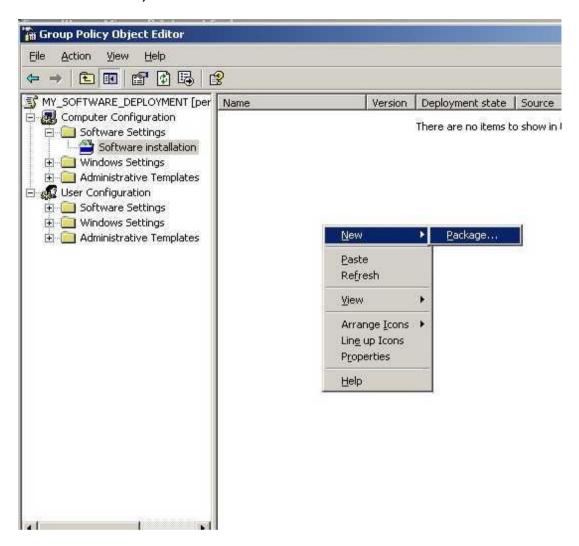


Specify a name for new Group Policy and click OK. New Group Policy will appear in the list at left pane. Right click it and select **Edit** command:

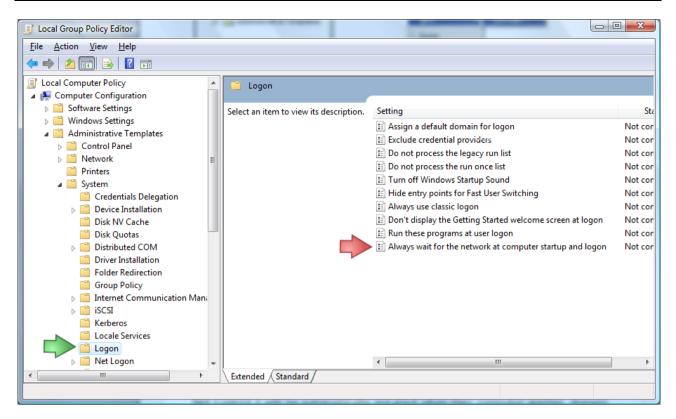


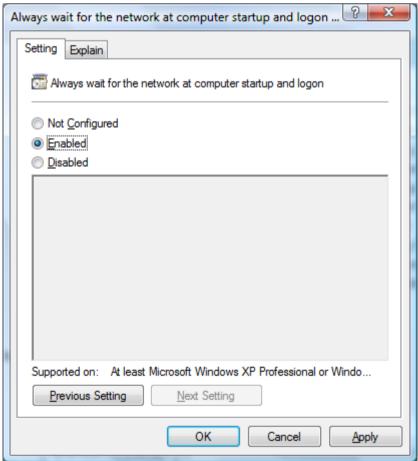
4. In the **Group Policy** window, expand the left tree: **Computer Configuration** -> **Software Settings** -> **Software Installation**. Right click within right pane area, and click menu command **New** -> **Package** from the context menu.

5. Browse for the network path to the Net Control 2 Server MSI package, choose "Assigned" and click OK. (Please note: You need to specify the network path to the package in this format - \\SERVER\SHARED_RESOURCE_NAME\PATH\ns.msi\). This path should be valid and accessible for all user computers where the software will be installed).



6. If Windows XP or later is installed on user computers, please enable "Always wait for the network at computer startup and logon" policy in the same Group Policy. Open Computer Configuration -> Administrative Templates -> System -> Logon -> Always wait for network at computer startup and logon policy; enable it.





7. Close **Group Policies** and restart the 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, 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.

L1. SETTING UP THE NET CONTROL 2 CLIENT AND TEACHER SETTINGS WITH ACTIVE DIRECTORY ADMINISTRATIVE TEMPLATES.

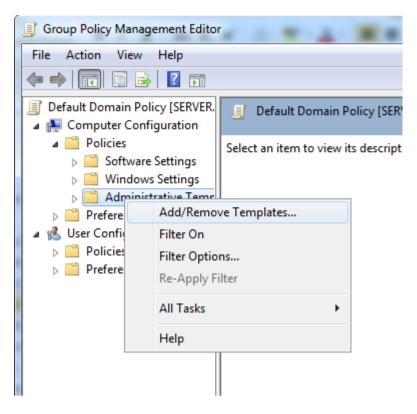
Several settings of Net Control 2 Client Module and Teacher module may be set up remotely using Active Directory Group Policies of Windows Server 2003-2012. To change settings over Active Directory Group Policies:

1. Download the administrative templates:

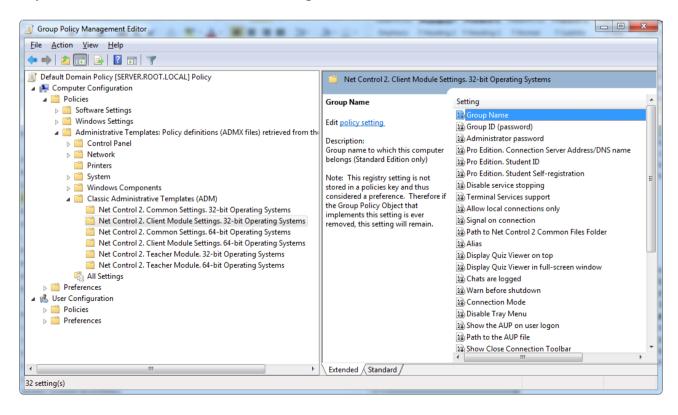
http://www.netcontrol2.com/getfile?id=nc2client.adm and

http://www.netcontrol2.com/getfile?id=nc2teacher.adm

- 2. Open the Group Policy Management console: for Windows 2008/R2 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 Editor.
- 5. At left pane select 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.



All settings will be applied after restart of client computers.

M. SCRIPT INSTALLATION WITH STANDARD INSTALLATION PACKAGE.

Script installation is unavailable in DEMO versions of the software.

This mode allows using the standard executable setup package for many scenarios of the centralized deployment using Active Directory, SCCM and other scripts and tools. The installing script must have administrative privileges in the system. Installing the software in manual, automatic or semi-automatic, non-interactive way, you anyway accept and agree the End User License Agreement bundled with the product and installed together with the software in the setup folder as also placed online on our website: http://www.netcontrol2.com/license

To install the software using the standard Net Control 2 Setup installation package in automatic execution mode and without manual configuration, you can run it with the following parameters:

/SILENT - run the installer in a non-interactive mode without additional prompts. The setup window is still visible on the screen in the process of installation.

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

adm - Teacher Component;

serv - Connection Server component;

user - Student Component;

comm - Common components (required)

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

Ispm\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.

Ispm\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

/BDCHANNEL:NN - (optional) specifies Broadcast Desktop channel. Instead of NN please specify the number of Broadcast Desktop channel. When not specified, uses the default channel.

/CSIP:Address - IP address or DNS name of Connection Server.

/TEACHERID: ID - Teacher ID for Connection Server log in.

/TEACHERPW:password - Teacher password for Connection Server log in.

/ADV:ShowMiniToolbar=0 - disables Net Control 2 mini toolbar (the button on the topright hand corner of the screen) on student computers, that may be used for quick

launching the Student Console.

If any parameter contains space characters, it should be enclosed in quotes.

Example 1. To install the software, student components only in default configuration, where Connection Server has address "192.168.1.2" execute the following command line:

D:\Downloads\net1100pr.exe /SILENT /COMPONENTS="user comm drv lspm\ho" /NORESTART /CSIP:192.168.1.2

Example 2. To install Teacher Components of the software only, if Connection Server computer has address "192.168.1.2", Teacher ID is "MYTEACHERID" and password is "my password", execute the following command line:

D:\Downloads\net1100pr.exe /SILENT /COMPONENTS="adm comm drv" /NORESTART /CSIP:192.168.1.2 /TEACHERID:MYTEACHERID "/TEACHERPW:my password"

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

N. INSTALLATION USER COMPONENTS OF THE SOFTWARE USING NET DEPLOY TOOL.

Requirements:

- A network with domain;
- A user who is installing the software remotely must be an administrator of the computer where the software will be installed (have *local administrator* privileges);
- The Adminstrative Share (Remote Admin) resource should be enabled on the student computers;
- Net Control 2 software is already installed on the Teacher computer;

The Remote Admin resource.

Remote installation of Net Control 2 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 Client computer run Command Prompt (press Win+R on a 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 XP Professional:

in Local Security Policy (Windows' Start button -> Administrative Tools -> Local Security Policy) select Security Settings -> Local Policies -> Security Options. At right pane select "Network access: sharing and security model for local accounts" policy, set this policy to "Classic - local users authenticate as themselves"

Windows XP Professional SP3:

- Open Explorer and select Tools -> Folder Options
- Select the View tab and scroll all the way down to the bottom of Advanced Settings
- Make sure that "Use simple file sharing (Recommended)" is not selected

Windows Vista and 7/8/10:

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 Net Control 2 teacher console;
- 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;



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



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 a domain
- You do not have local administrator privileges on remote computers
- The provided login name and password of administrator is incorrect

O. UPDATE.

Automatic update.

To set up update through connection server please refer to Chapter B of this manual, UPDATE tab.

- 2. Remote update through the teacher console and standard installation package.
 - download the latest installation package
 - in Net Control 2 Teacher Console, select the user computers
 - click menu command N -> Help and Support -> Update Client

specify path to Net Control 2 installation package

The package will be uploaded to the user computers and install. During installation, the user computer will be automatically restarted.

3. Update with MSI package.

If the software was installed earlier via **Active Directory/Group Policies** and MSI package, you can update it, removing the older package from Group Policies, and installing the new package.