NET CONTROL 2
classroom

Professional Edition

INSTALLATION AND CONFIGURATION GUIDE

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Based on version 9.10

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General information

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

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 of the software should be installed 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 using one of the following methods:

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

A. INSTALLATION USING STANDARD INSTALLATION PACKAGE

1. Run the Net Control 2 Installation Package (e.g. net900pr.exe file).

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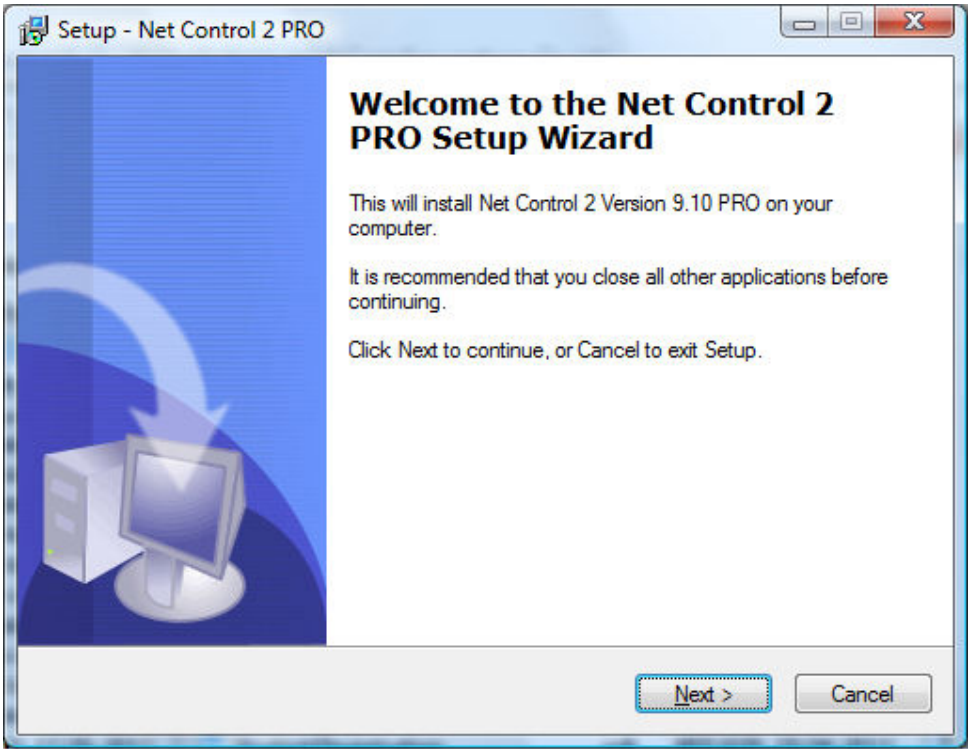

2. Read and accept the End-User License Agreement.

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

Teacher Components – should be installed on teacher computers;

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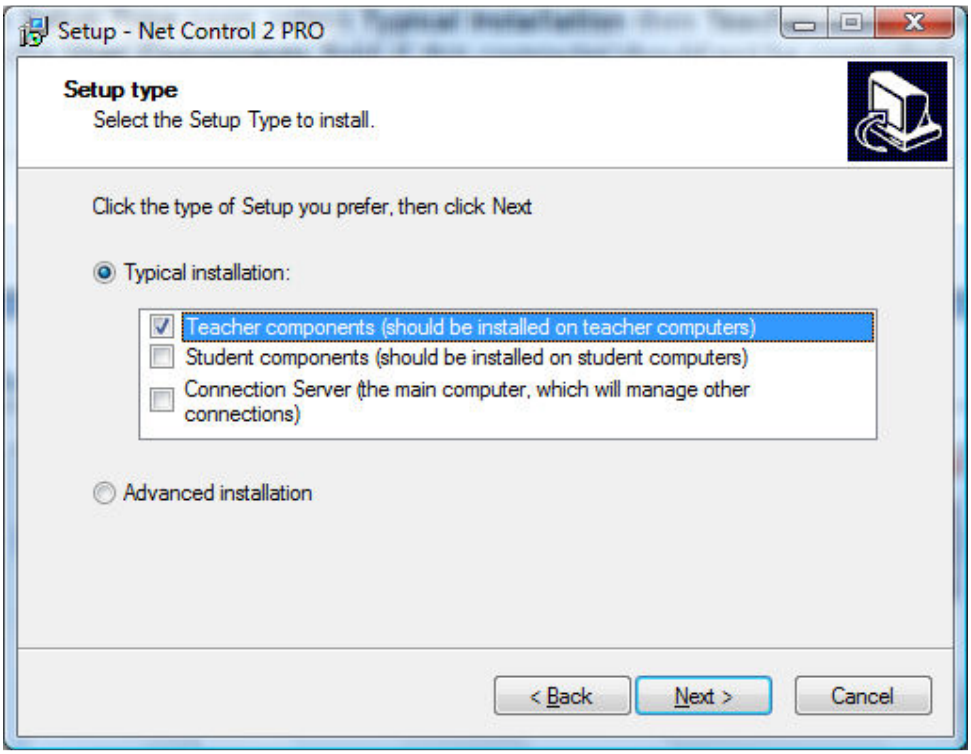
Student Components – should be installed on student computers;

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.

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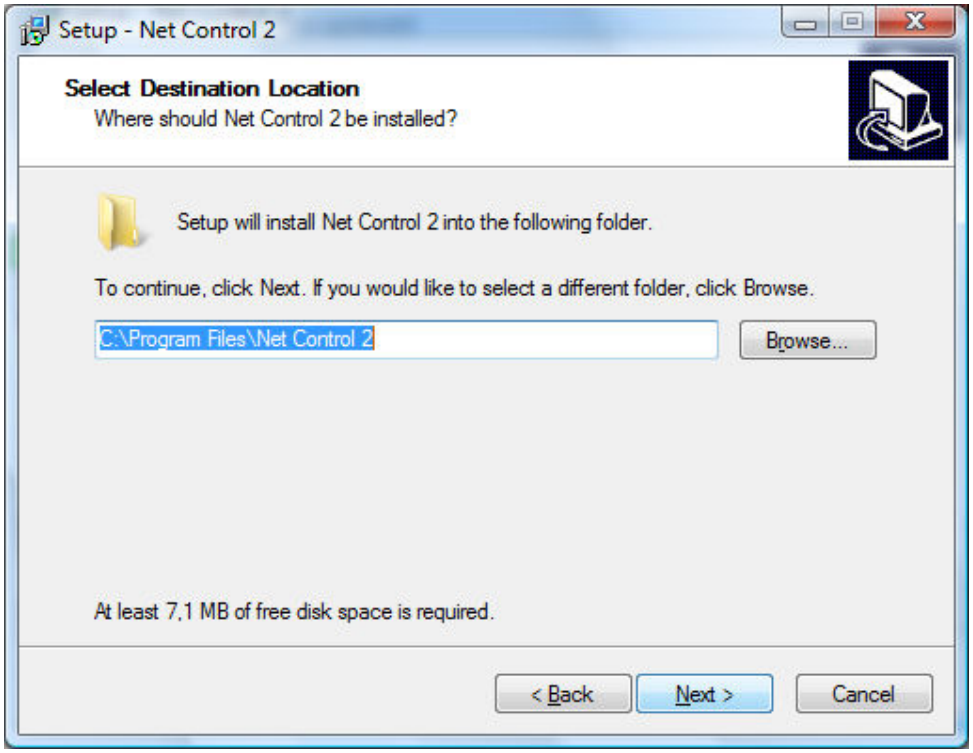
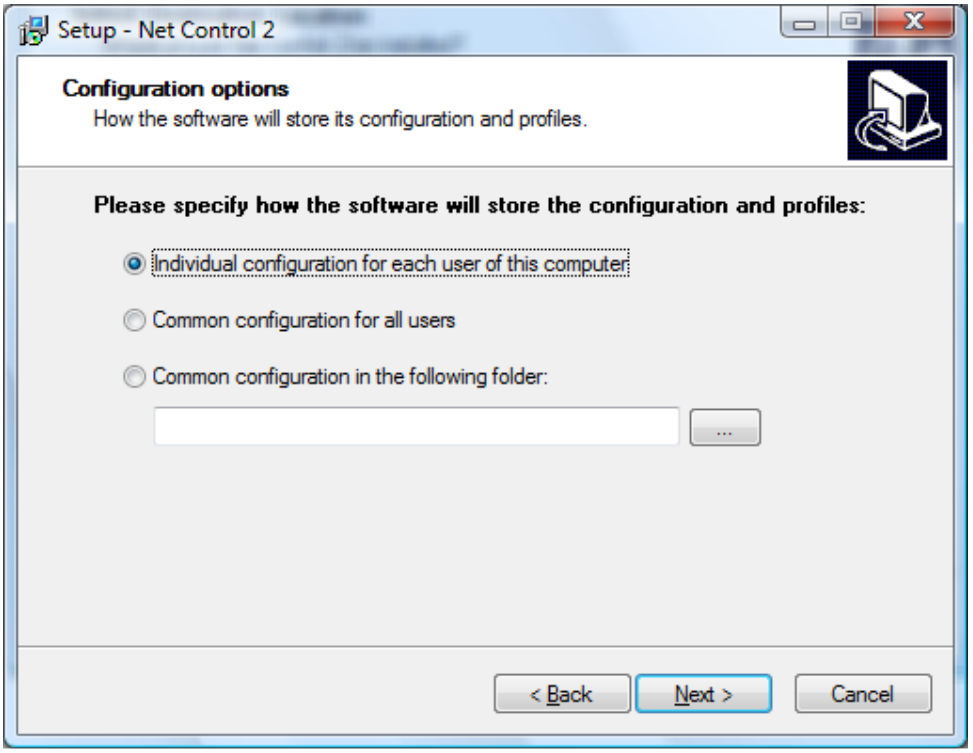


5. If Teacher Components are selected, select how the configuration will be stored:



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 personal folder of the user, for example:
"C:\Users\LOGINNAME\AppData\Roaming\Net Control 2" for Windows Vista/7/2008

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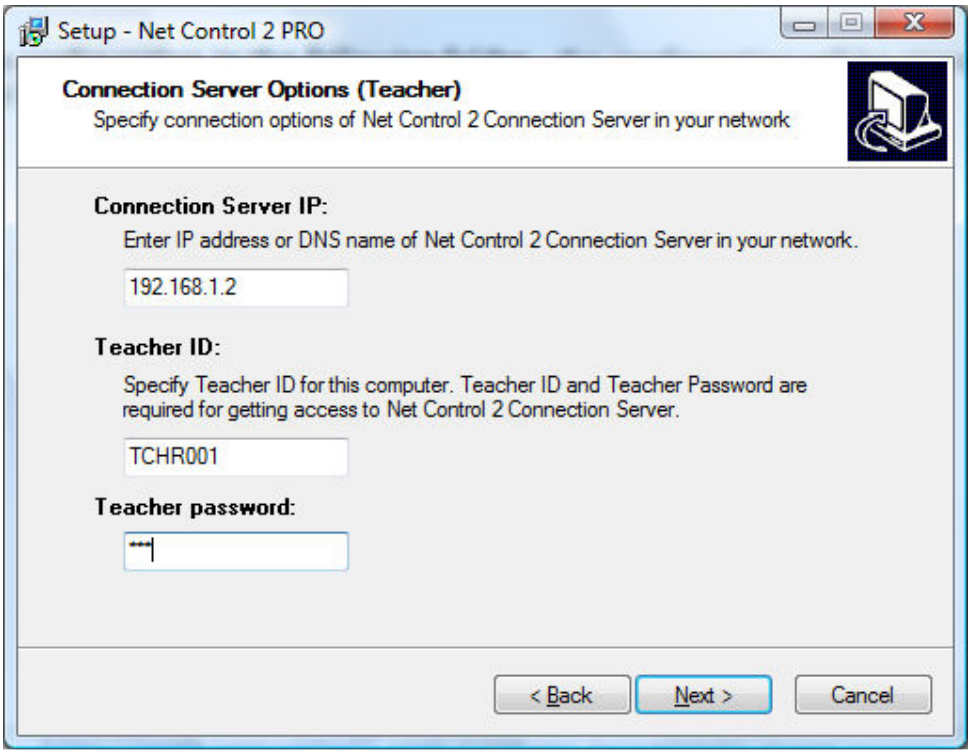
"C:\Documents and Settings\LOGINNAME\Application Data\Net Control 2" for Windows XP.

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 a 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 Components* (Net Control 2 Connection Server) are installed.

Teacher ID and **Teacher password:** login name and password of teacher account in Net Control 2 Connection Server settings. For more information about teacher accounts please refer to **Chapter B, p.2.**

If **Student Components** were selected:

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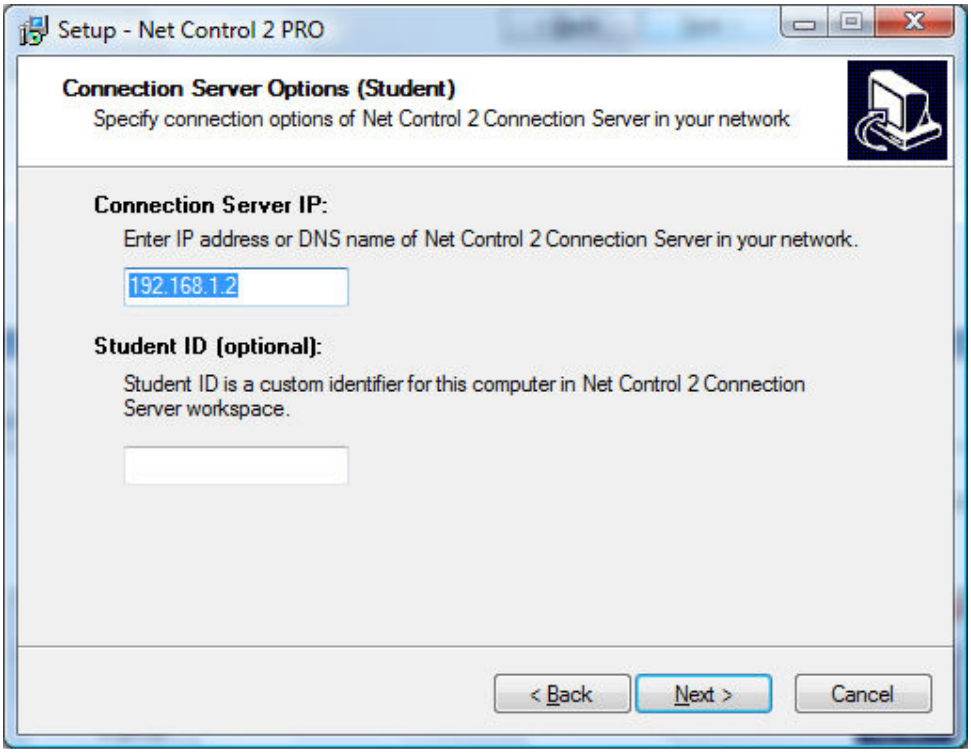

Connection Server IP: specify here an IP address or DNS name of computer, where *Server Components* (Net Control 2 Connection Server) are installed.

Student ID (optional): custom identifier for this student computer. You can optionally use this parameter forming groups in Connection Server.

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

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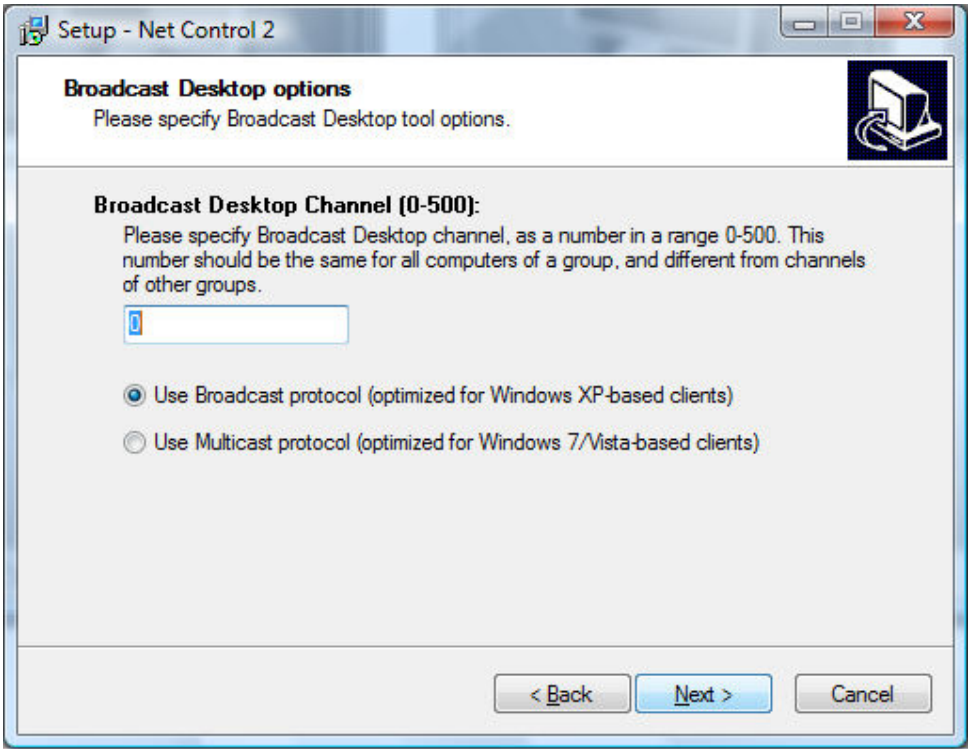

The ***Broadcast Desktop Channel*** number should be different for every lab of your network, otherwise the transmission sent in one classroom, will be "visible" in other classrooms.

Select the transmission protocol for the Broadcast Desktop tool:
The **Broadcast** (UDP Broadcast) protocol is more commonly used in local networks and it is more effective on computers with Windows XP.

The **Multicast** protocol may work significantly better than the Broadcast protocol on computers with Windows Vista/2008 or 7, it has better resistance for transmission errors. But in several cases it may be unsupported by the network configuration or hardware.

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

8. Review and select the appropriate Additional installation options:

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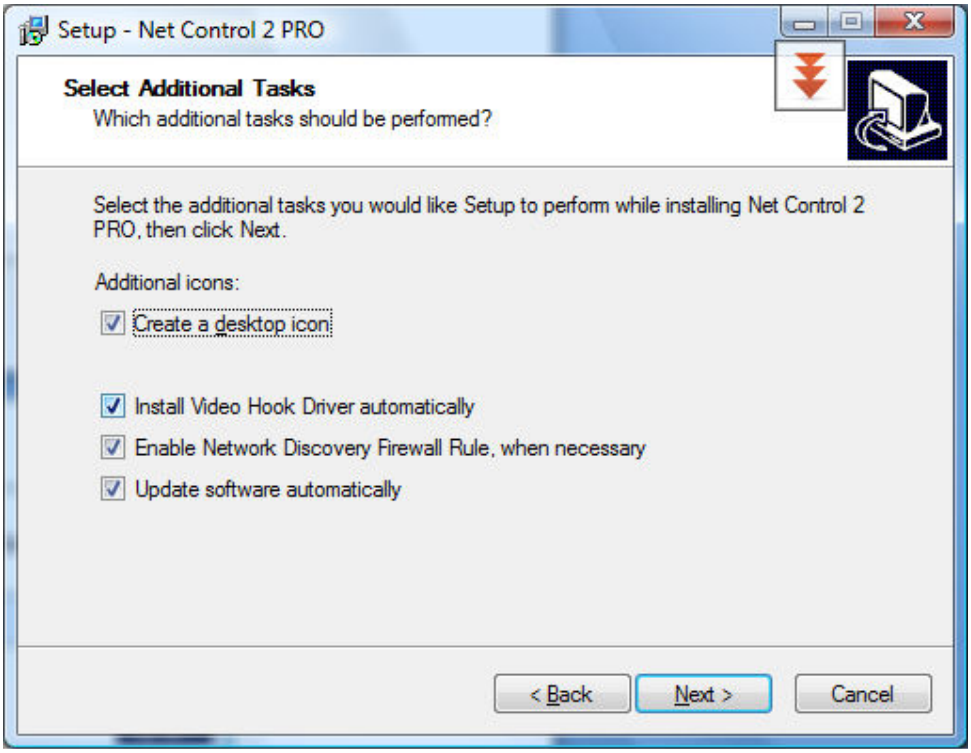

Enable Network Discovery Firewall Rule – enables the Network Discovery rule of Windows Firewall in Windows Vista/2008/7. This rule is required for connectivity between computers in a local network and is enabled by default for "private" and "work" network profiles of Windows Firewall.

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.

6. Restart the computer after installation.

B. CONNECTION SERVER MANAGEMENT CONSOLE.

Connection model

Net Control 2 Professional Edition uses connection model, which requires creation of special connection server in a 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:

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- when Student computer connects the Connection Server, the server checks its database whether this connecting computer or logged in user belongs to any existing *Group*. If no records for the connecting computer were created, i.e. no suitable group was found the computer is assigned to **"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 teacher 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

To configure Net Control 2 connections you need:

1. to specify on student computer an IP address or DNS name of the ***Connection Server***;
2. the Connection Server requires connecting teacher computers to authenticate themselves with teacher login and password. Therefore, you need to create at least one teacher account in the Connection Server database and specify this account credentials on teacher computers.
3. Optionally, you may need to create Groups on the Connection Server; otherwise all unsorted connections will be automatically placed to the "DEFAULT" group.
4. Finally you need to configure teacher module, specifying there IP address of the Connection Server and teacher account credentials (login and password).

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 the menu command **"Configure"**. In the Client Configuration dialog, on Groups tab, specify IP address of the Connection Server: Click OK.

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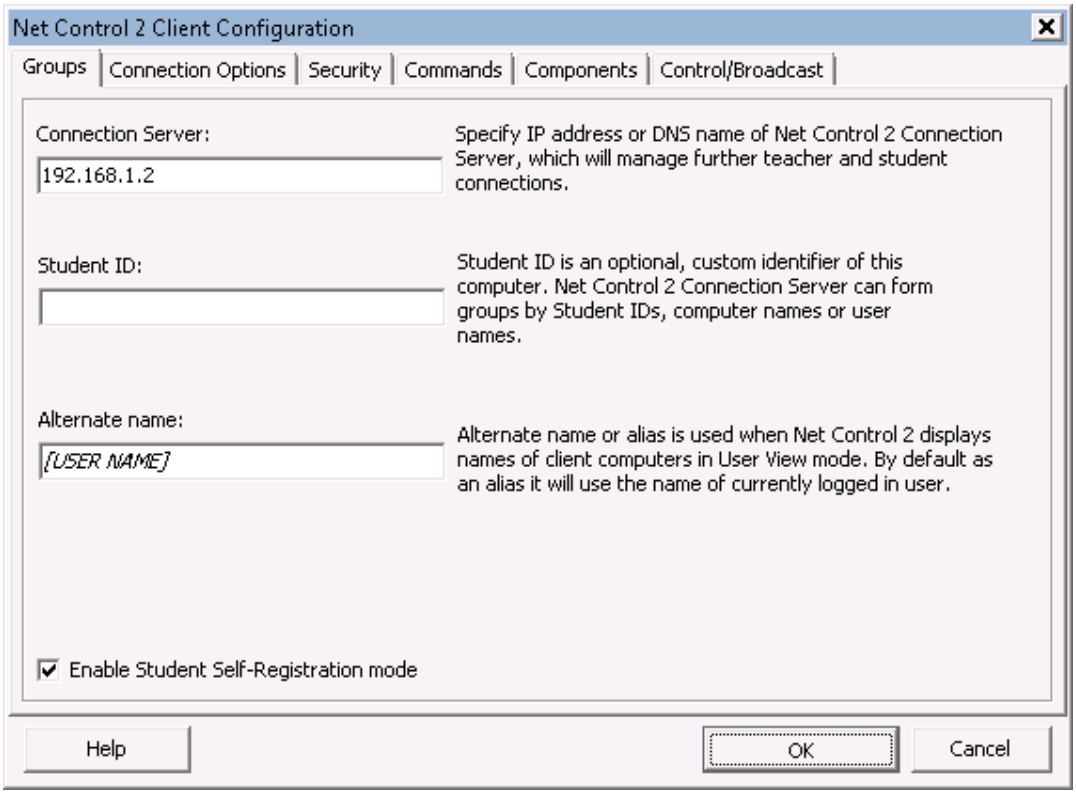

2. Create teacher accounts in the Connection Server database.

Open Connection Server Management Console: click Windows Start menu command **Start -> All Programs -> Net Control 2 -> Connection Server Configuration**

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

3. Create groups.

In the Connection Server Management Console open Groups tab.

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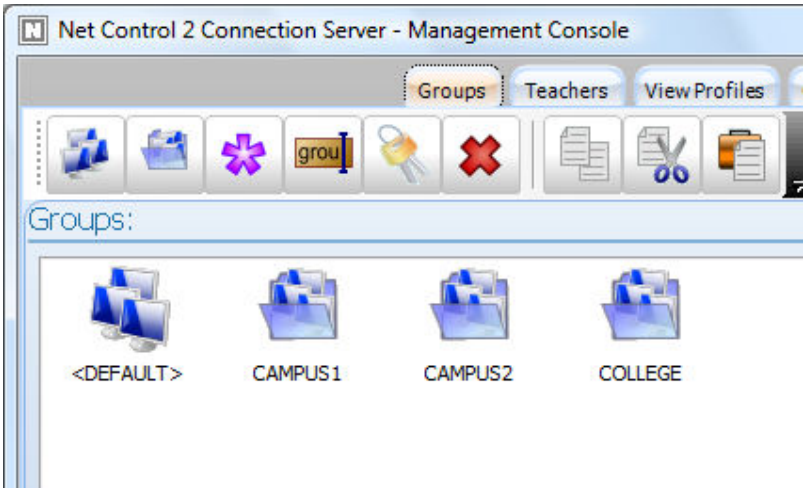

Click **Add group** button on top toolbar to create new group. Specify name for this group.

In appeared Group Editor you need to form content of the group. A group may consist of ***computers*** addressed by DNS name, IP address or custom Student ID, or ***users***, referenced by login name.

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

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

User name – adds new connection to the group referenced by user login name.

IP address – adds new connection referenced by IP address.

StudentID – adds new connection referenced by StudentID. StudentID is an optional text parameter, which may be assigned to student computer in Net Control 2 Client settings. Connection Server considers connecting student computer as belonging to the group if its StudentID is listed in the group.

Several student computers may have the same StudentID. In this case single reference of Student ID in the group puts all these computers to this group.

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.

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.

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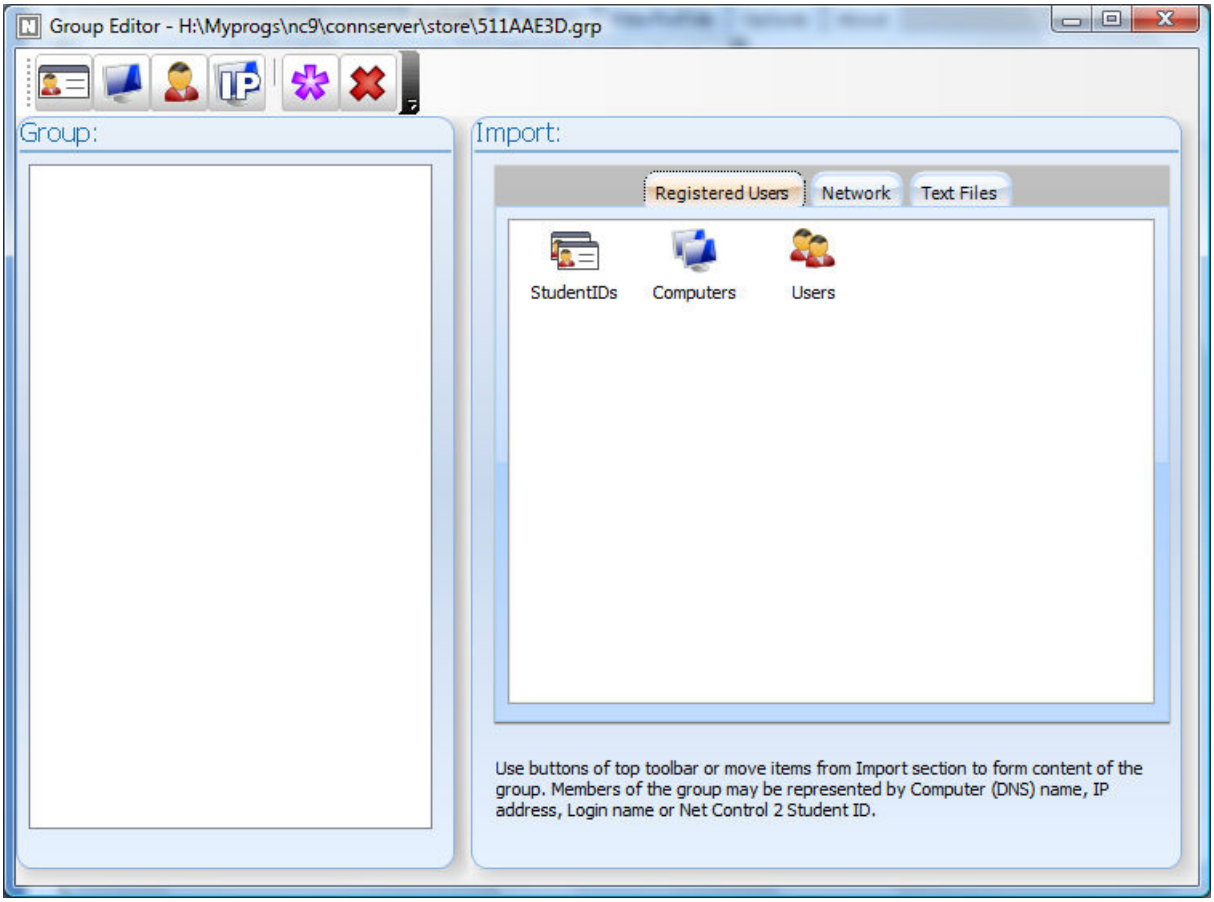

Close Group Editor to save changes.

4. Configure the teacher console.

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

On Connections page you need to set up:

Connection Server IP address/DNS name – IP address or host name of computer, where Net Control 2 Connection Server components are installed.

Connection Server Login – specify the teacher id, as was added in p. 2 of this chapter.

Connection Server Password – specify teacher password corresponding to the specified teacher id.

Click **Change** button.

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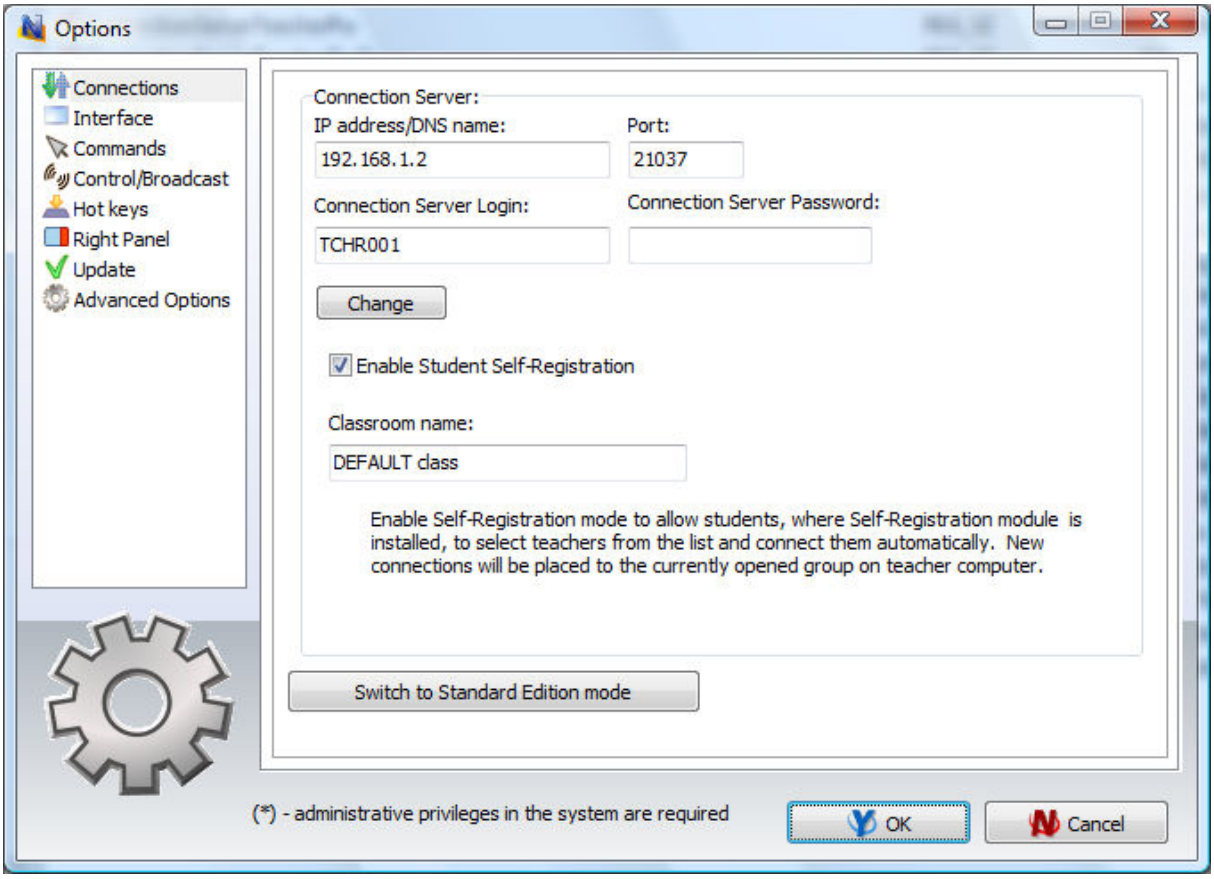

Connection Server Management Console

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

Teachers tab

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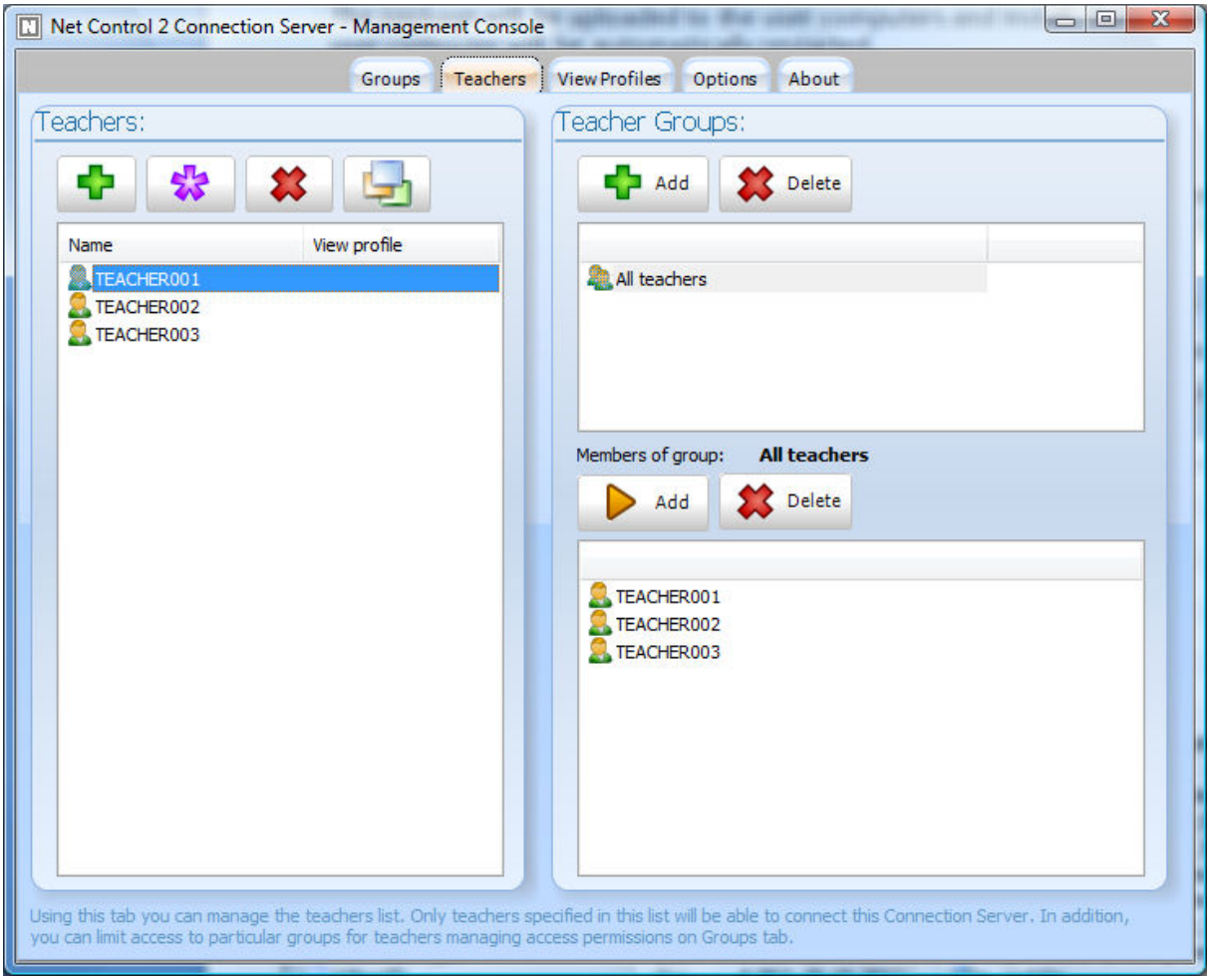

"Teachers" pane contains list of teachers, who will have access to the server. You need to create one or more teacher accounts, assign some password and specify these credentials on teacher computers in the Teacher console. Connection Server requires authentication of every connecting teacher with one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

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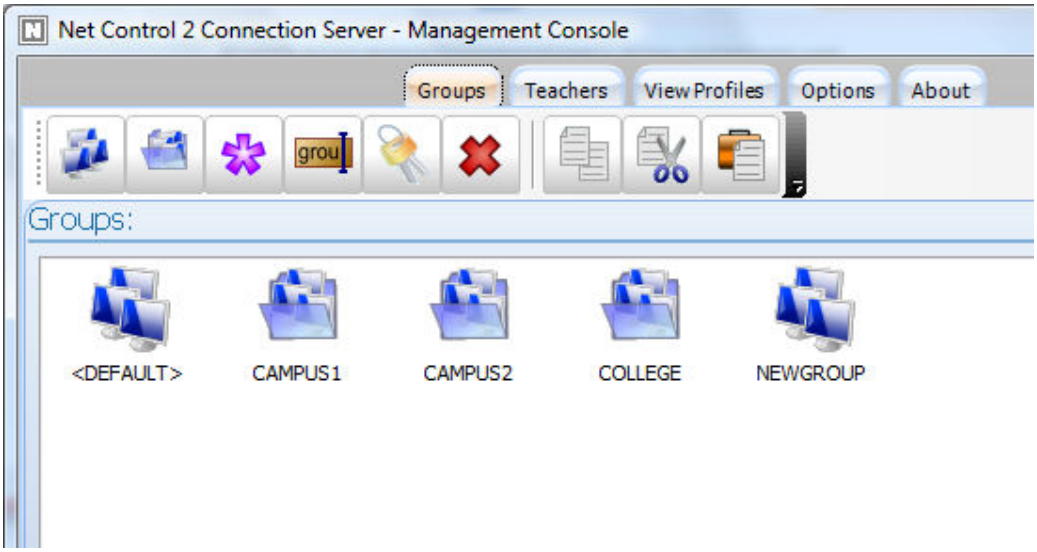
Groups tab



Buttons of top toolbar:

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

Add container – creates 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 access 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 all student connections, which cannot be sorted to any of existing groups.

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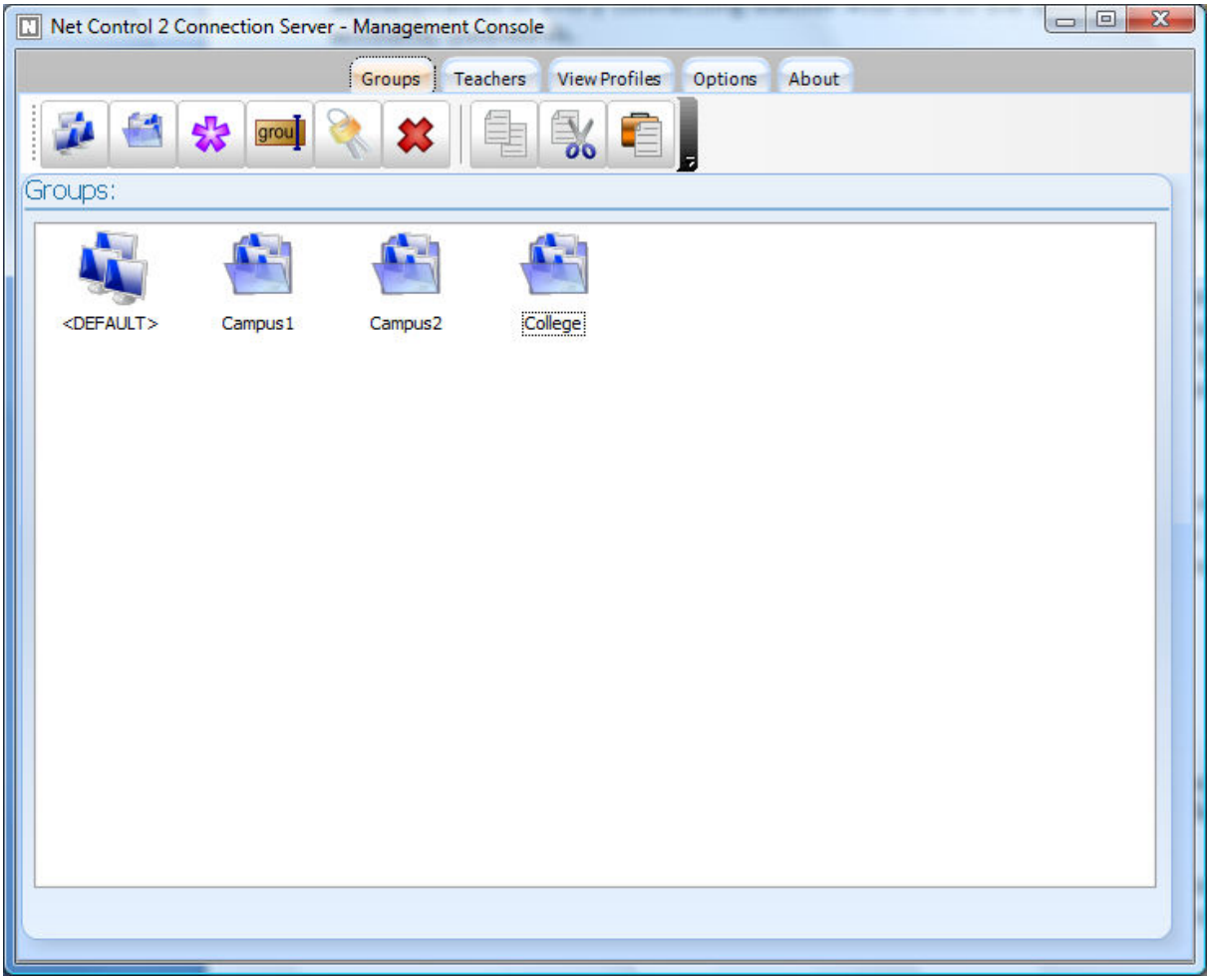
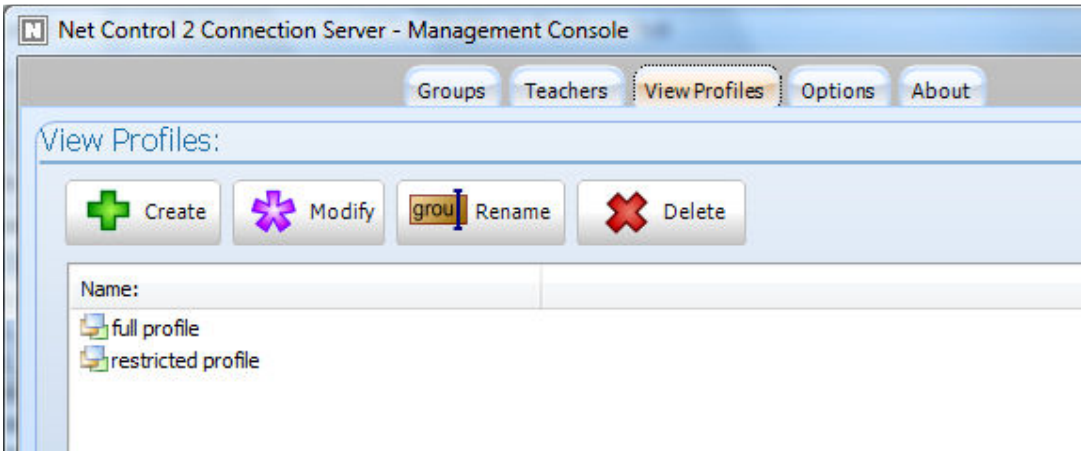


For detailed information about Group Editor please refer to p. 2 of previous chapter.

View Profiles tab



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

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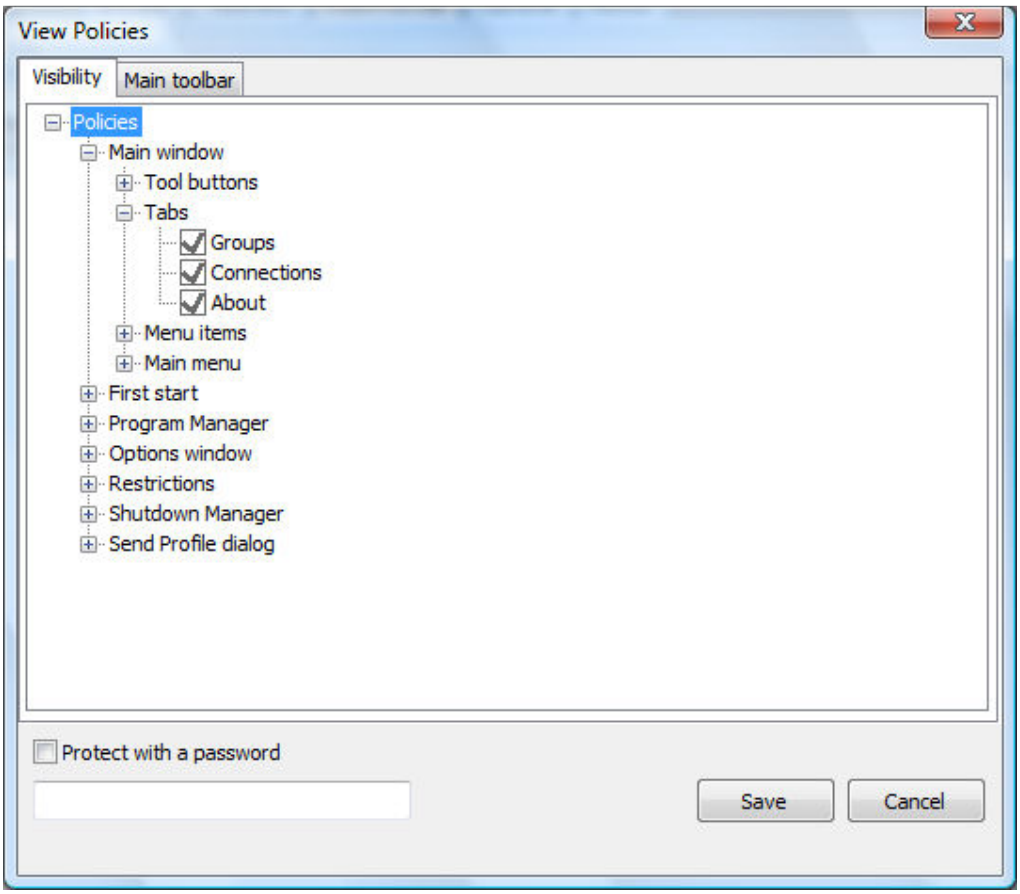
module. When created, the profile may be assigned to particular teacher accounts on **Teachers** tab.

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 Visibility tab uncheck elements, which should be hidden.

On Main toolbar tab you can move buttons between tabs of top toolbar: select a button in **Buttons** list and select the respective page and toolbar for it.

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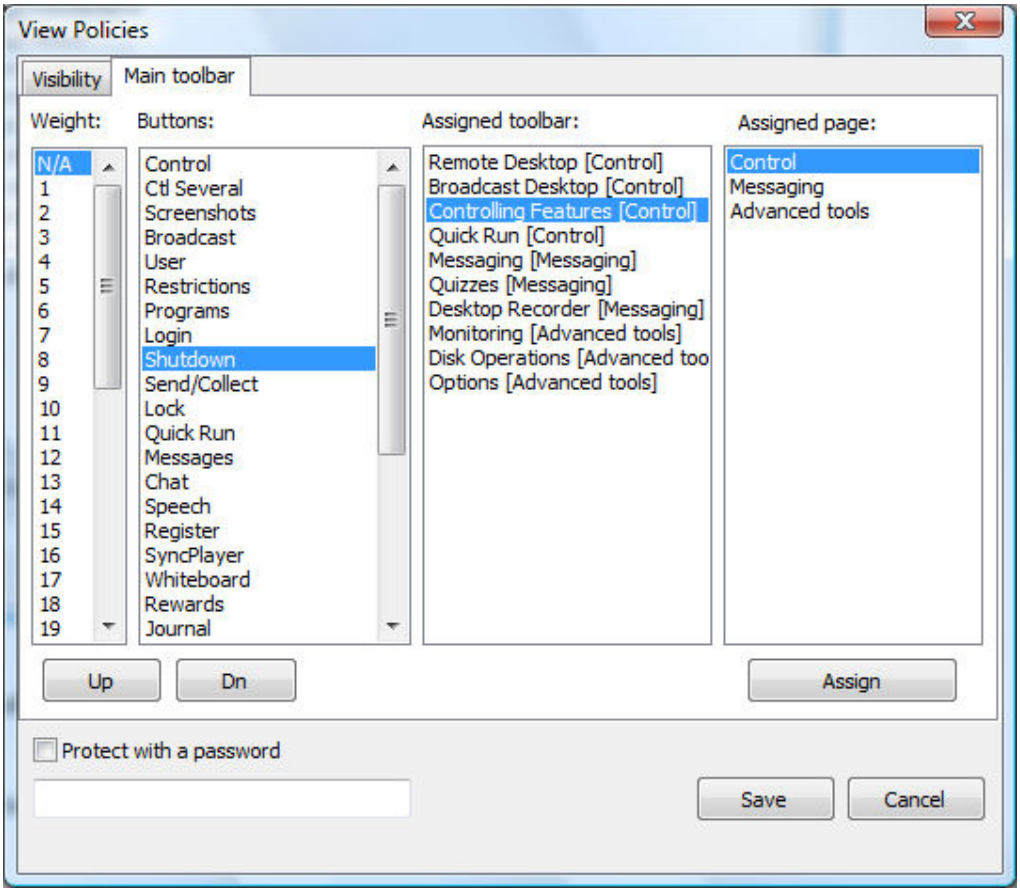

Click **Save** button to save the profile.

To assign view profile to teacher accounts:

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

On **Options** tab 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.

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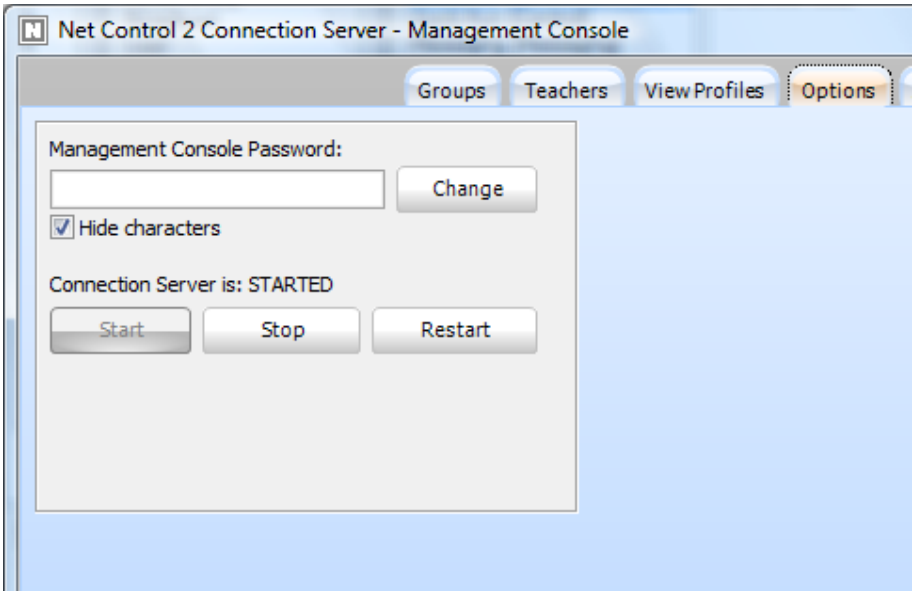

Close **Connection Server Management Console** program to apply changes.

C. 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:

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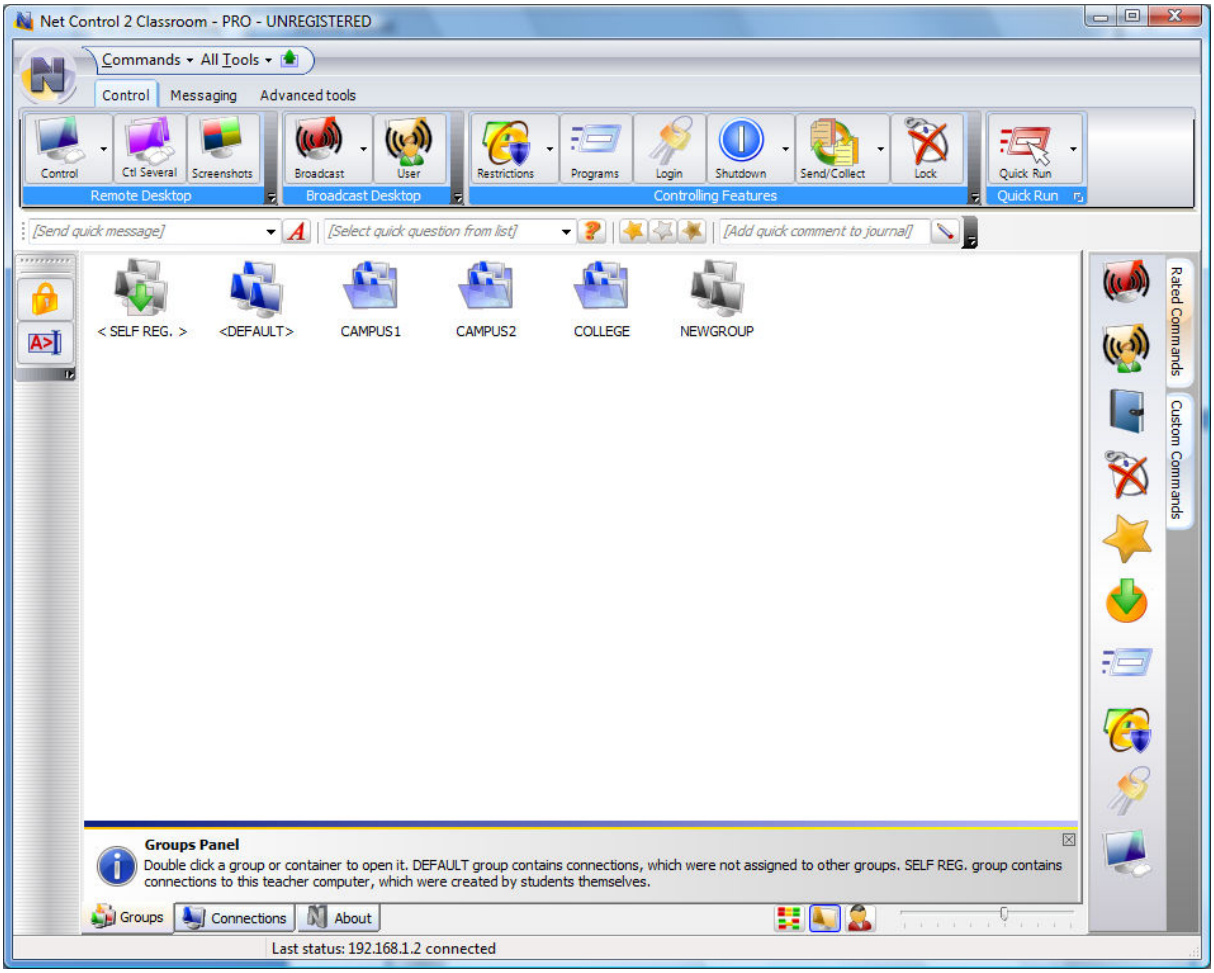

Currently selected group is highlighted with blue monitors icon.

Double click a group or container to enter it.

<DEFAULT> group 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.

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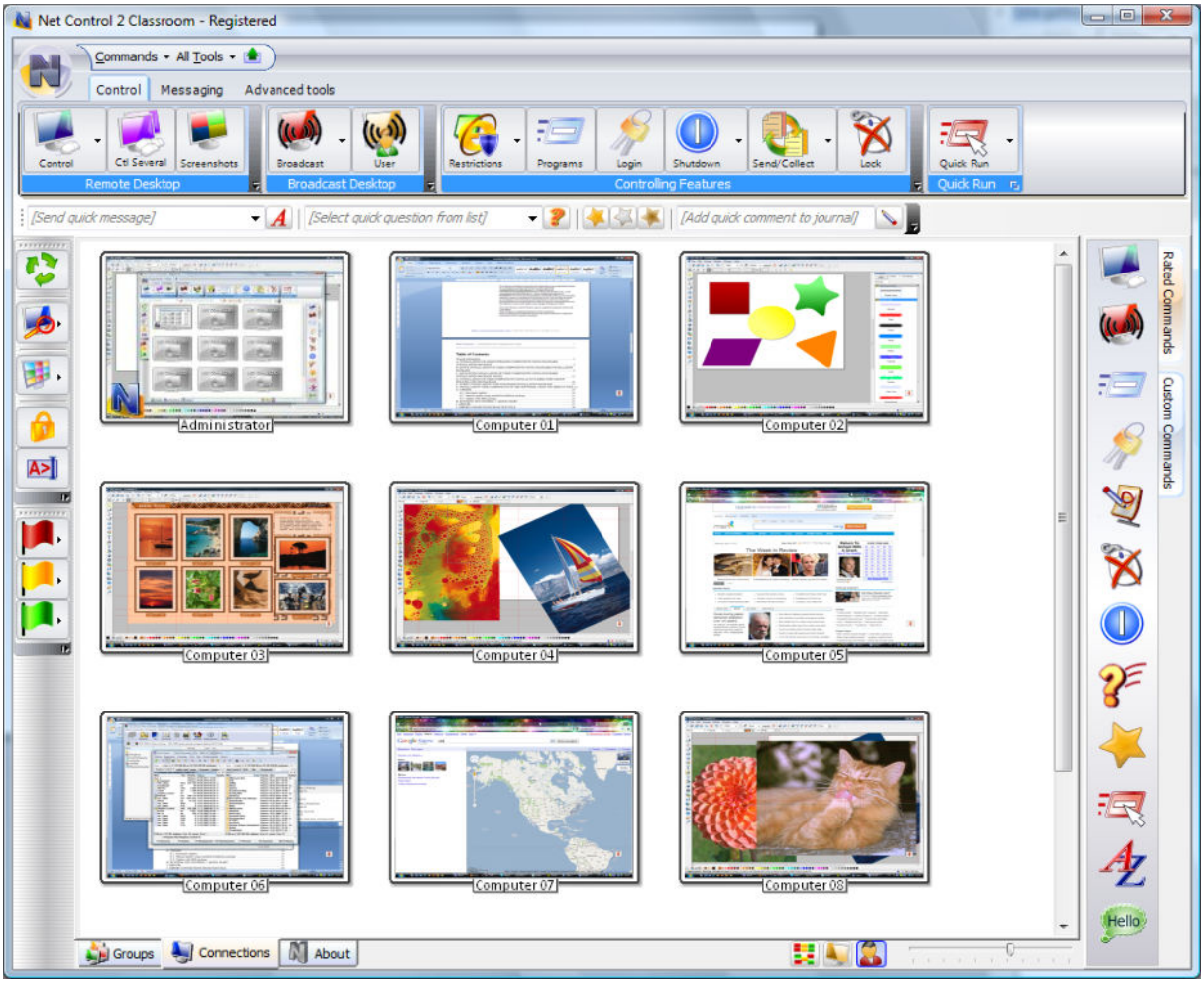

To control User Computers, select them in the list and apply a command from the Top toolbar, Right Panel, All Tools or Commands menu.

D. 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 **“Find and Connect Instructor Computer”** menu command.

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

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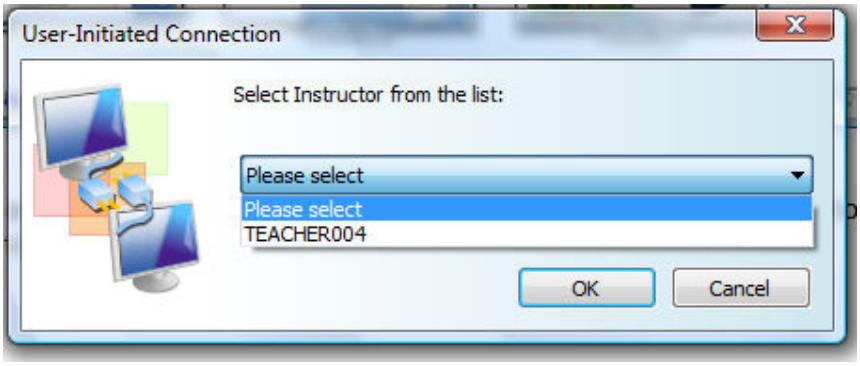
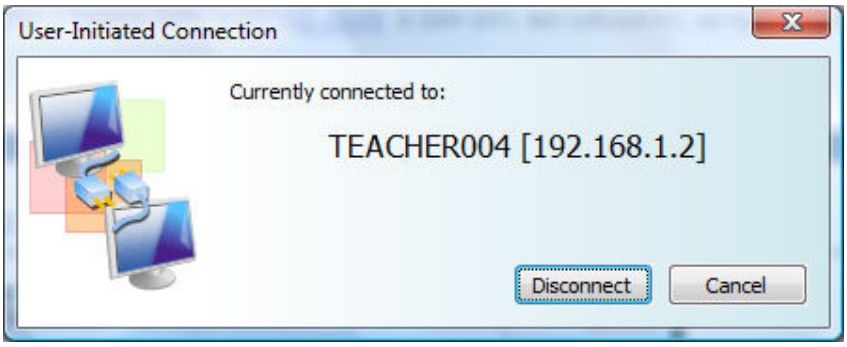


where the student can select one of teachers. After clicking OK button the software will connect the respective teacher computer and create new connection in its workspace.

To disconnect from teacher computer click Net Control 2 icon in the System Tray or 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 -> Control 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.

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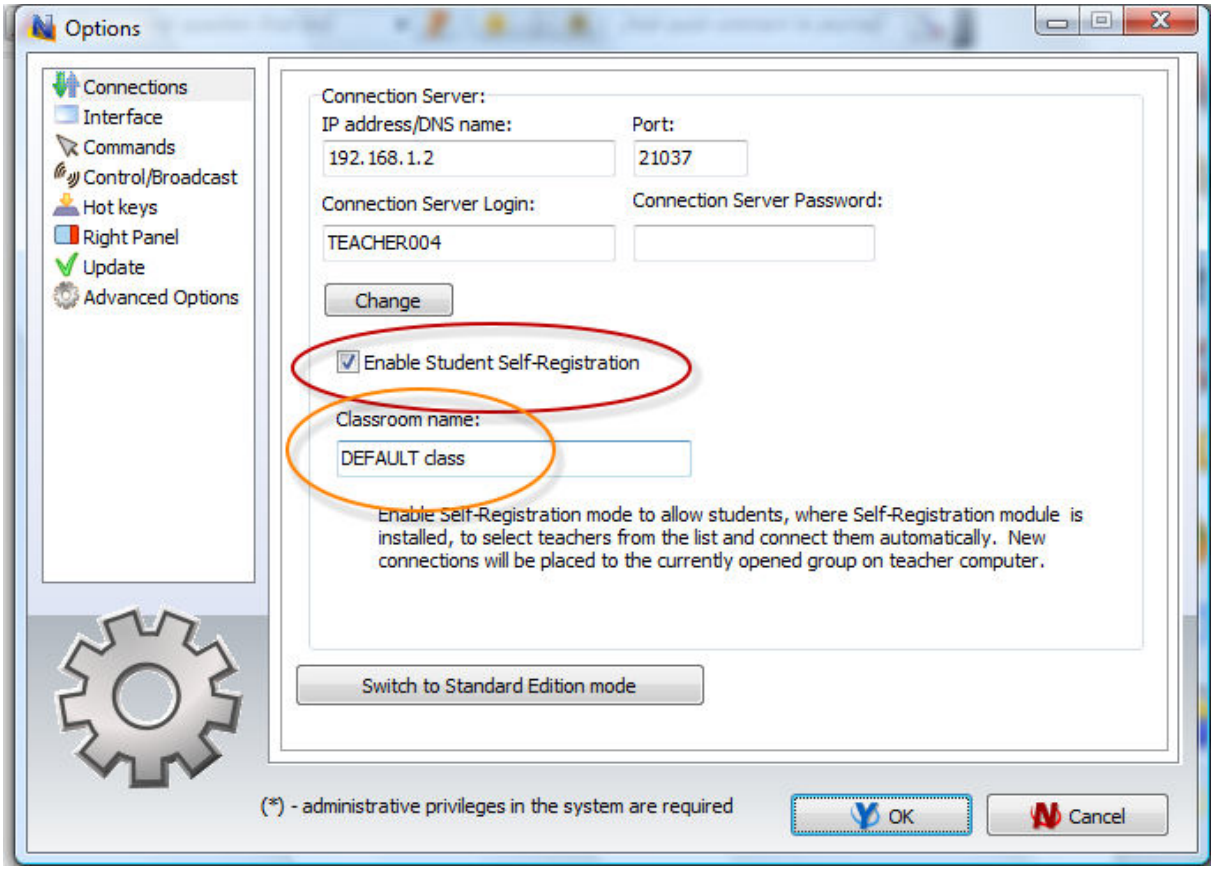

Student Self-Registration mode may be disabled or enabled in the client configuration. To modify client computers configuration remotely from teacher computer:

- select student computers;
- click the main menu command **N -> Options -> Remote Computer 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** menu command.

In Net Control 2 Client Configuration window, on Connections tab, check “Enable Student Self-Registration Mode” option to enable the mode or uncheck the option to disable it:

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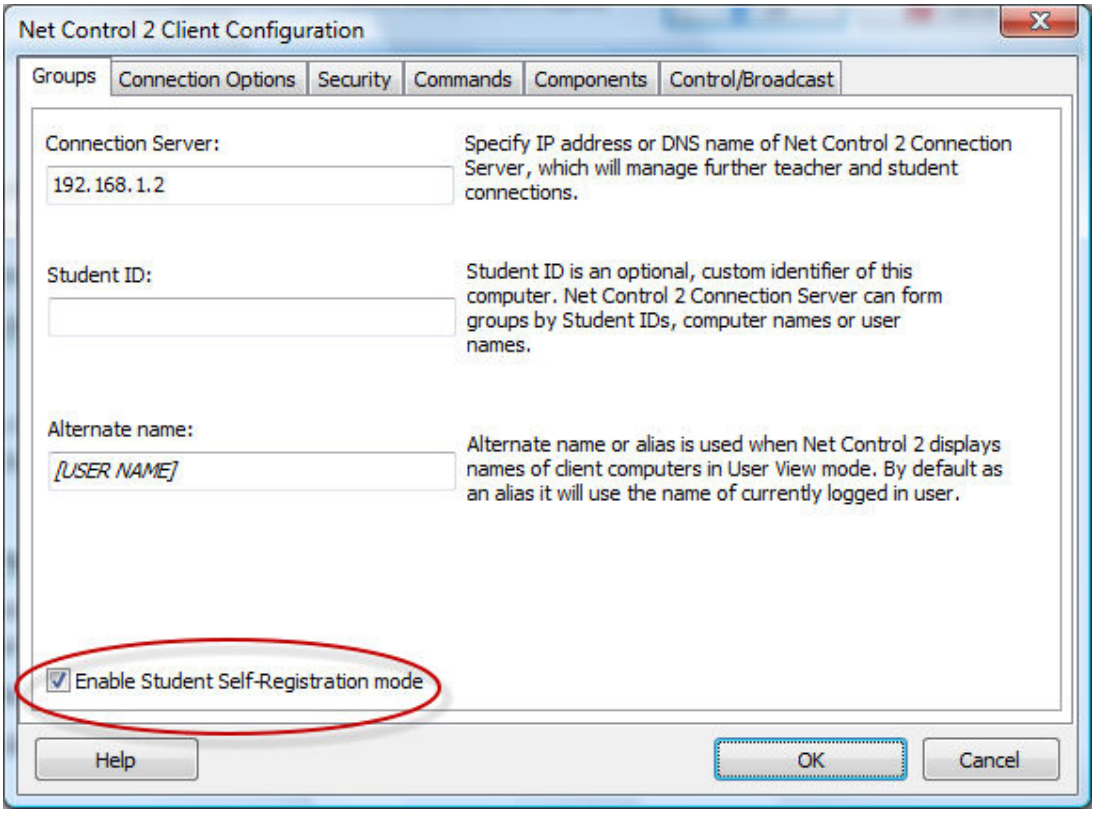

Click **OK** to apply changes.

E. 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 -> Remote Computer 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:

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

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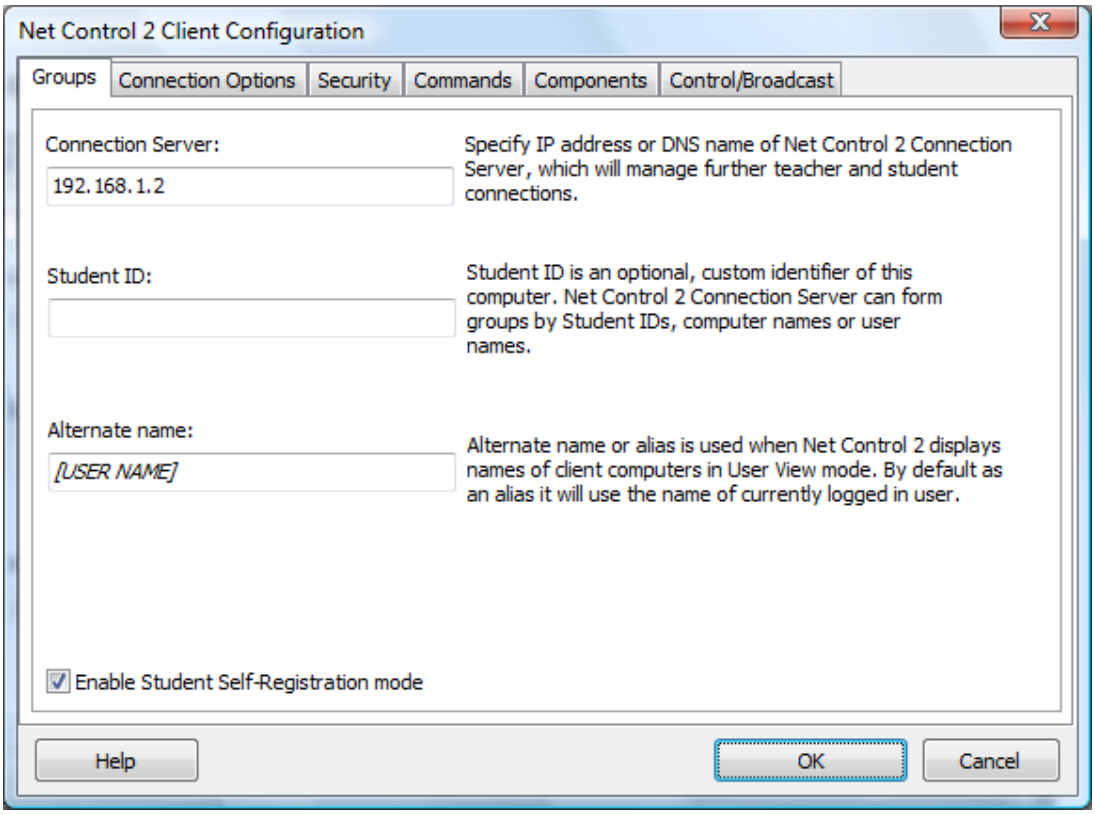
Configuration window:

Groups tab:



Connection Server – IP address or DNS name of the Connection Server.

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

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

Enable Student Self-Registration mode – enables Self-Registration mode for this computer. For more information please refer to **Chapter D**.

Connection Options:

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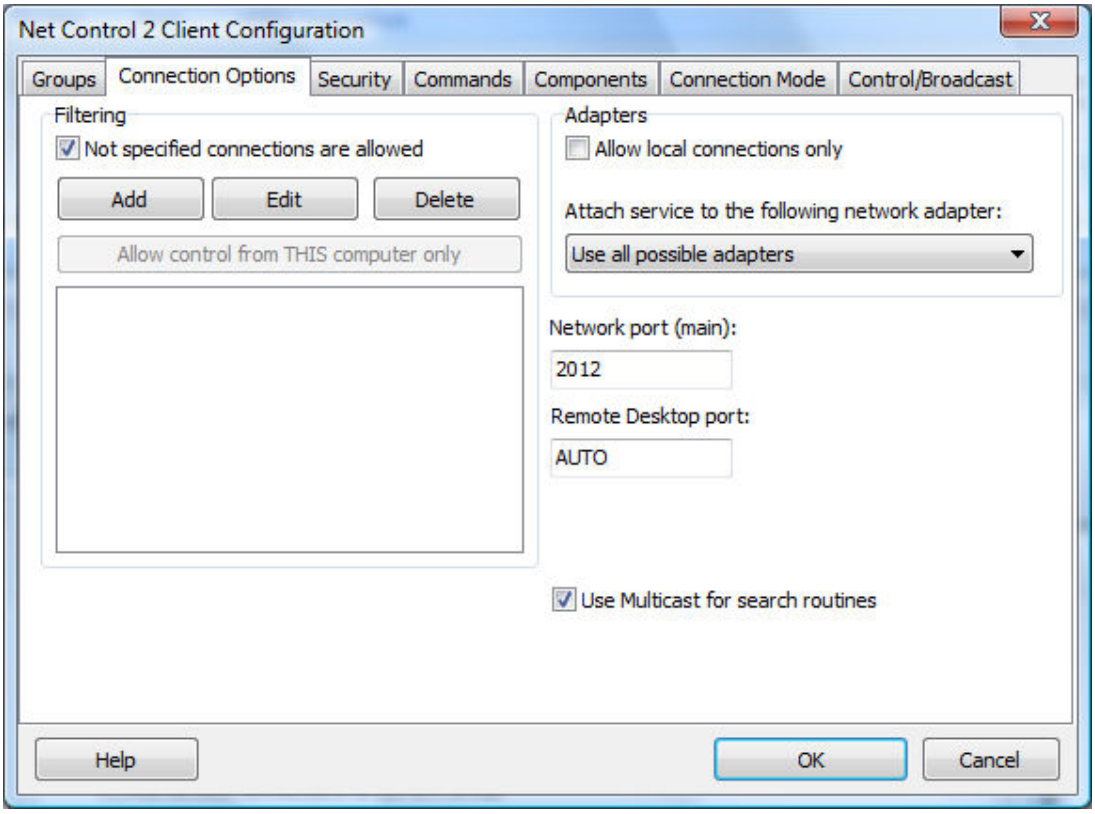
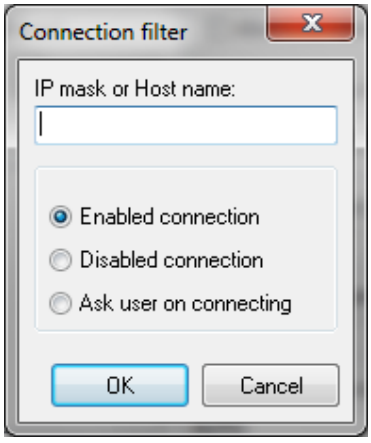


Filtering – control access to this computer by IP address or DNS name of connecting computer.

Not specified connections are allowed – when checked, all connections not specified in the list will be allowed. If is not checked, all connections not listed will be blocked.

Click **Add, Edit** or **Delete** buttons to add, modify or delete IP address or name to the list.



IP mask or Host name – specify one IP address, first digits of IPv4 address or DNS name of computer, e.g. 192.168.0.1, 192.168.1, COMPUTER01

Mark this connection as:

Enabled connection– the connection is enabled.

Disabled connection – the connection is blocked.

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Ask User on Connecting – when this option is chosen, on each attempt of connection from the specified address, Net Control 2 User Module will prompt *"Connect computer NNN?"*. Access is available only when the user confirms the connection.

"Allow control from This computer only" button adds IP addresses of Teacher computer to the list of allowed connections.

Allow local connections only – when checked, Net Control 2 will enable only those connections which were made from current network, i.e. first digits of IP address on both computers are the same.

Attach service to the following network adapter - here you can choose a network adapter where Net Control 2 service will be enabled. This option is useful when the computer has several network adapters.
Example: if your computer has access to a local network through a LAN Adapter and to the Internet through a WAN Adapter, you can select the first one to make Net Control 2 service available only within bounds of local network.

Ports:

Network port (TCP/IP, by default — 2012). Change this value ONLY if Net Control 2 software conflicts with other software in your network.

Remote Desktop port — when it is set as AUTO (default, recommended), the port of Remote Desktop services will be calculated as MAIN PORT + 7. The same value should be the set up on both Teacher and User computers. On the Teacher side, this value may be set up in **N -> *Options -> Control Options -> Connections tab***.

SECURITY tab

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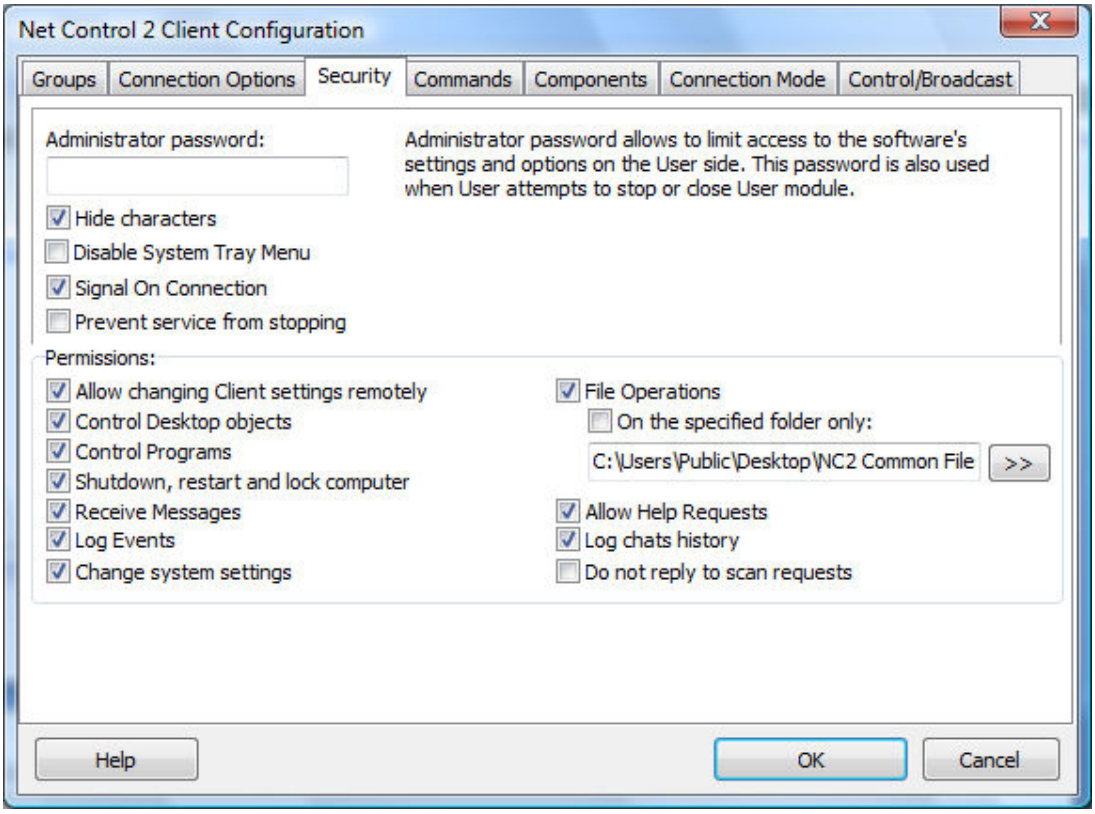

Administrator password used when any user attempts to change the settings of Net Control 2 Server or clicks the menu commands "Stop" or "Exit". We recommend setting up this parameter if you would like to prevent stopping Net Control 2 service or unauthorized configuring the service.

Disable System Tray Menu – when checked, Net Control 2 disables all commands in Net Control 2 System Tray Menu, except About menu command (available in the registered version only). System Tray icon will not be disabled.

Signal On Connection - when checked, any connection of teacher computer will be accompanied by 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.

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.

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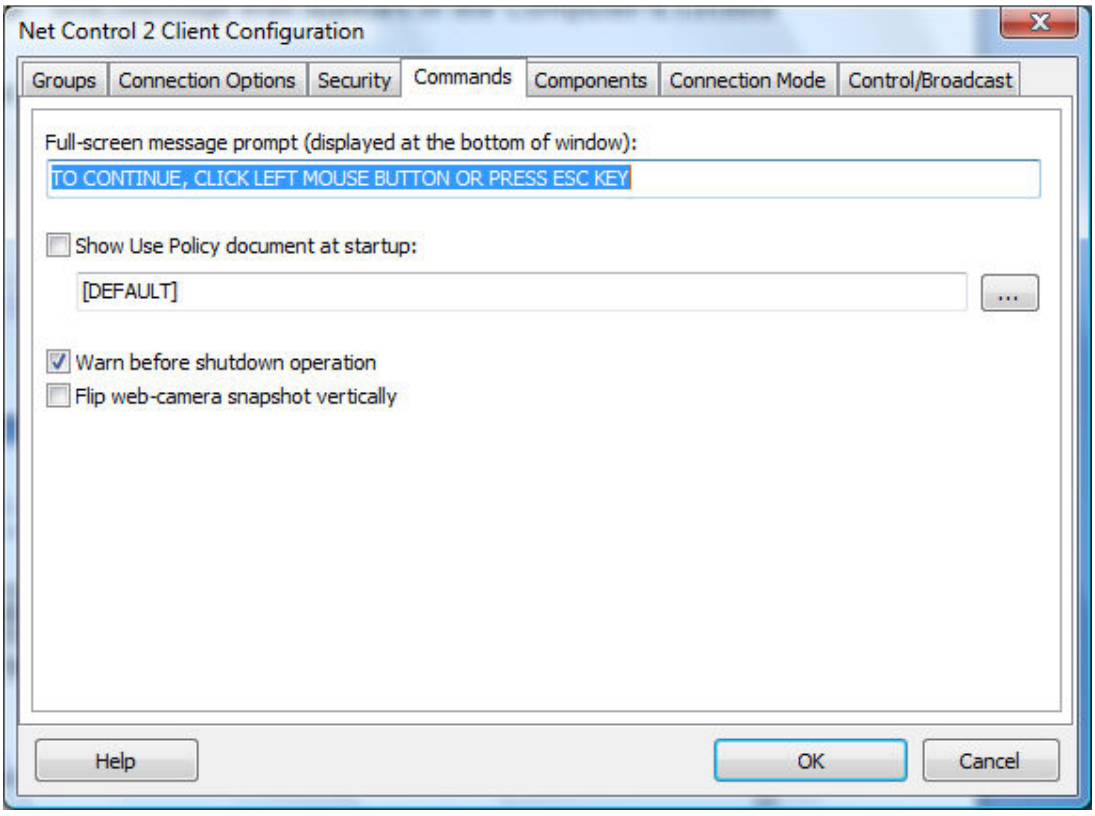
- **Shutdown, restart, lock** - permission to perform power-related operations, like shutdown, reboot, stand-by etc., and lock and unlock computer remotely.
- **Receive messages** - permission to receive messages from the Teacher computer.
- **Log Events** - permission for Events Watcher and Events Logger 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.
- **Do not reply to scan requests** - when enabled, the service will not respond to scan requests sent from any Instructor computer.

COMMANDS:



Full screen message prompt – text message that appears at the left-bottom corner of the full-screen message.

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).

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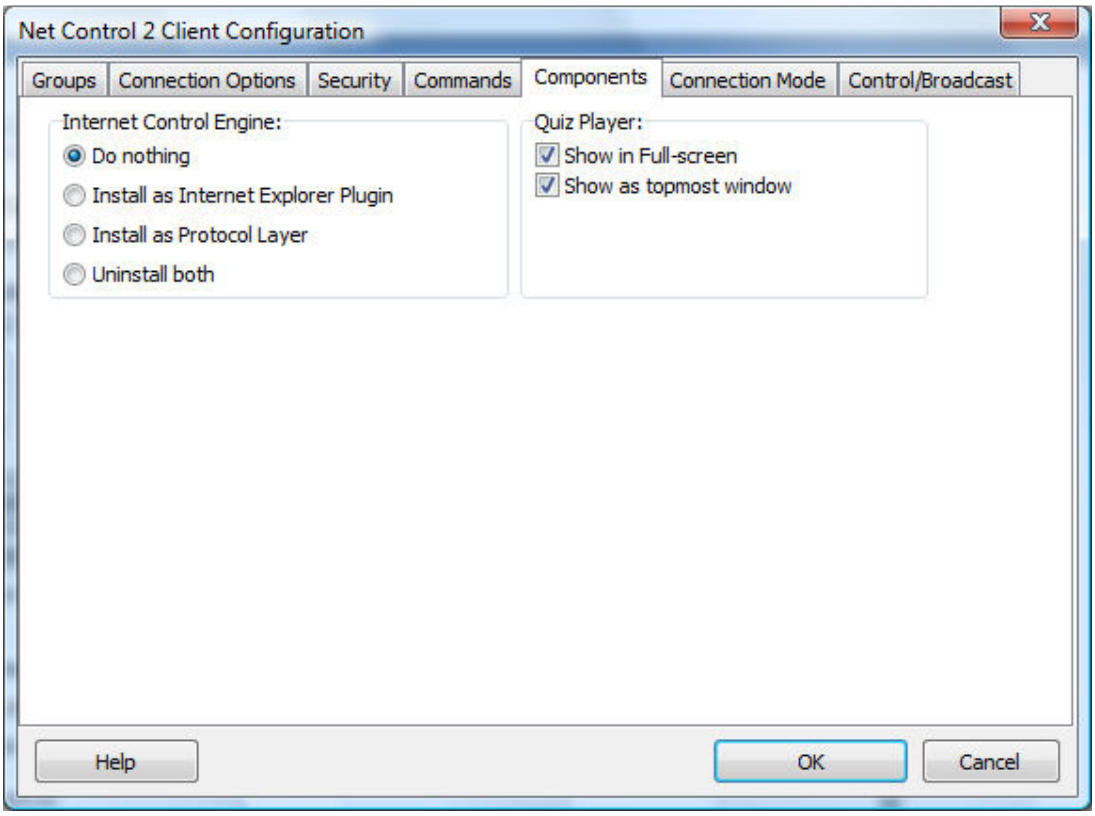
Warn before shutdown operation - when enabled, the service will display a warning message before shutdown operation is applied.

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

COMPONENTS tab:



Internet Control Engine – 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.**

Install as Internet Explorer Plug-in - schedules installation of the Net Control 2 Internet Control Engine as a plug-in for Internet Explorer. This mode is most compatible with third-party software, but allows controlling Internet traffic in Internet Explorer only.

Install as Protocol Layer — schedules installation of the Net Control 2 Internet Control Engine as a Protocol Layer. This mode is less compatible with third-party software than IE plug-in mode, but provides additional functionality and does not depend on Internet clients (browsers, e-mail clients etc.)

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.

Quiz Player:

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

Show as Topmost window – when enabled, the user will not be able to switch to other programs during quizzing.

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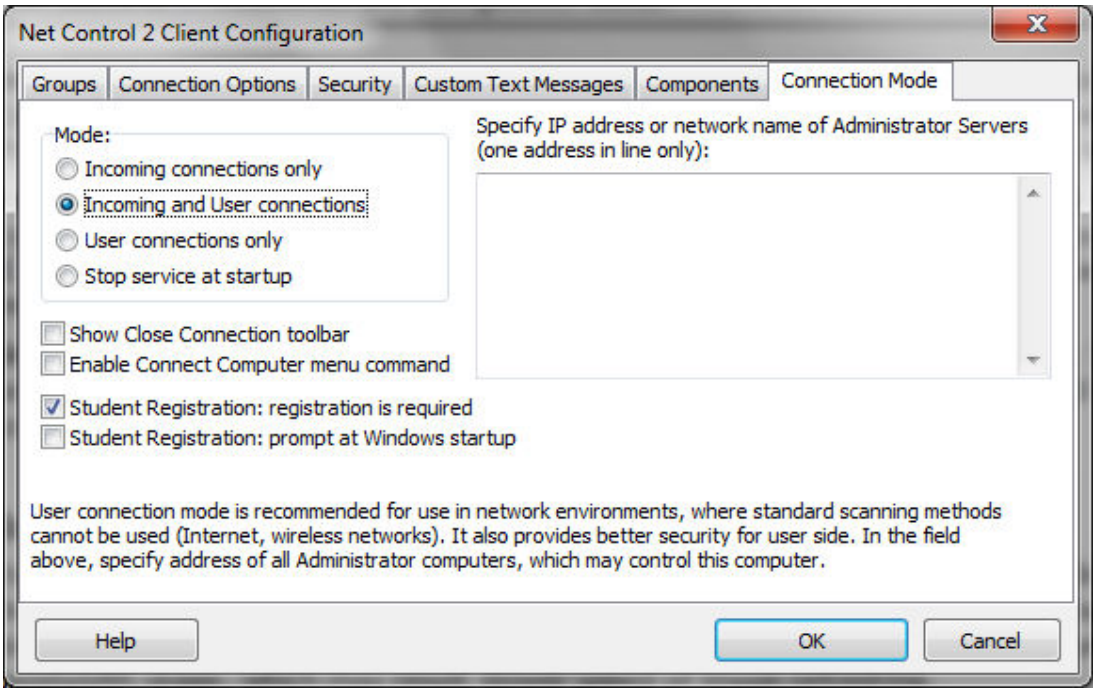
Connection Mode:

These settings are not used and unavailable in Professional Edition connection mode.



Mode - option determines what types of connections are allowed for this computer

Incoming connections only – only standard connections of Net Control 2 Instructor are available

Incoming and User connections – (default) - both standard and user-connect connections are allowed.
User connections are connections, made by the User module, to the specified in its configuration IP address or network name of Teacher computers. These addresses/names should be listed at right pane (**Specify IP address or network name of Administrator Servers** field).

User connections only – only user-connections are allowed.

Stop service at startup – the service is not enabled at startup. To enable the service, the User either needs to resume the service by clicking on the Resume Service command in Net Control 2 System Tray menu or to connect Teacher computer by using the Connect computer command.

Additional options:

Show Close Connection Toolbar – when enabled, special “Close Connection” toolbar will be displayed on the User Computer, if the connection was initiated by the User, via **Connect Computer** Tray Menu's command or via Student Registering window.

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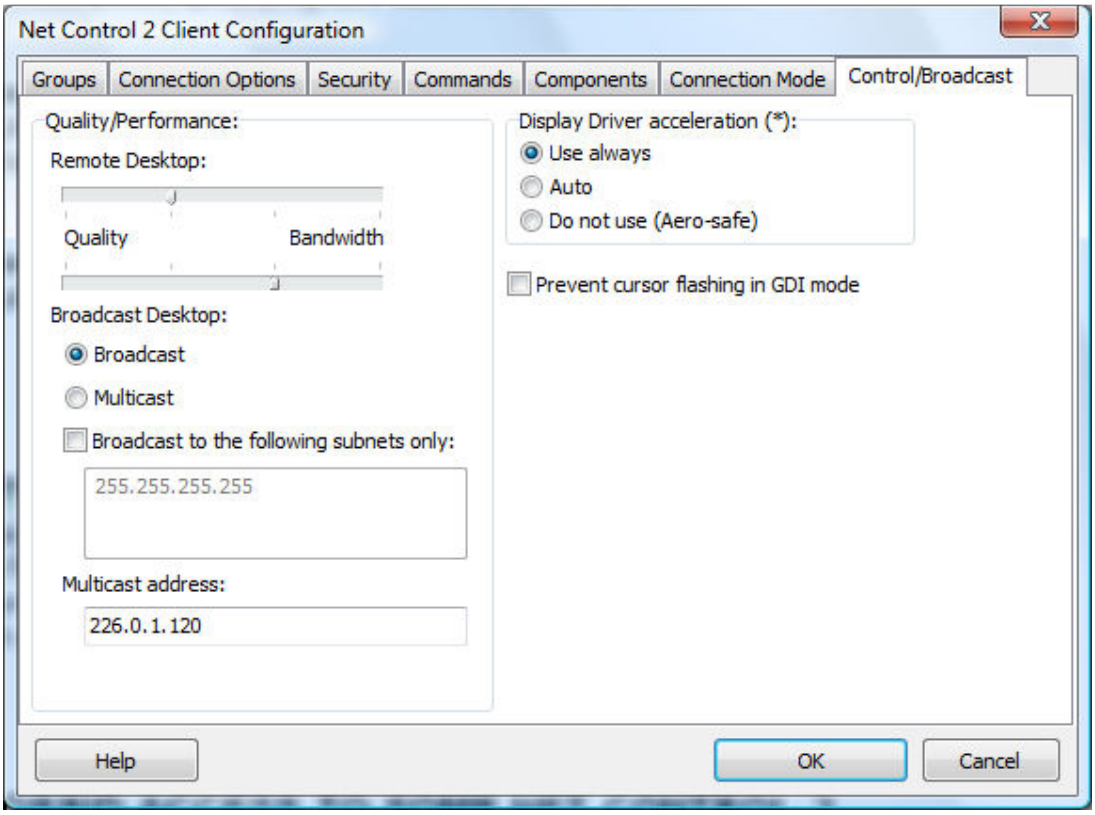
Enable Connect Computer Menu command – when enabled, the Connect Computer command of Net Control 2 Tray Menu will be enabled, so the user will be able to connect to the Administrator computer, specifying its IP address or network name.

Student Registration: registration is required – when enabled, Student Registration window will be displayed in a full-screen window, which prevents switching to other programs until student registers in the system.

Student Registration: prompt at Windows startup – when enabled, Student Registration window will be displayed at the Windows startup immediately after the user logs on to the system.

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 transport options:

Broadcast – when enabled, the Broadcast Desktop service will use UDP Broadcast protocol for transmission data over network. This protocol has better compatibility with network configurations and hardware, and is recommended if clients use Windows XP

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operating system. If a 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.

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/7/2008 operating system. If default Multicast address interfere with other network software used in your network, you can change this address and need to change it on all Student and Teacher computers.

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. 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.

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

To disable changing 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 -> Control Options;
- On Interface tab, click the **Lock Current Group** button;
- Specify some password, which will be used for unlocking the group;
- Click OK.

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

G. 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:

- click **N** (Net Control 2) icon in the **System Tray**, then click **Configure** menu command. 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.

H. 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:

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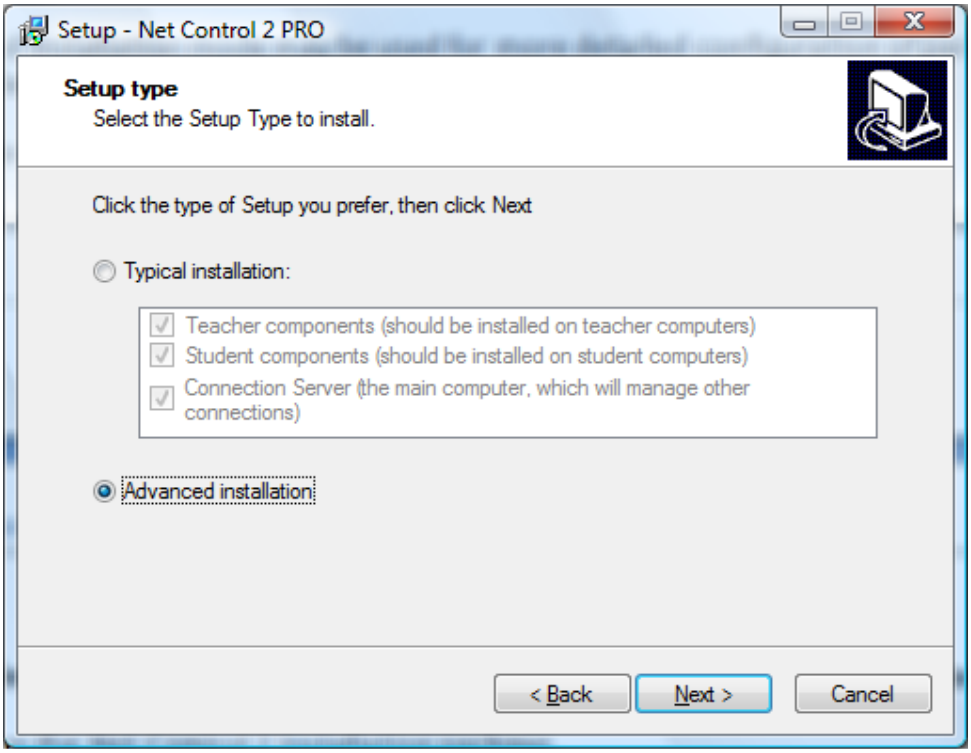
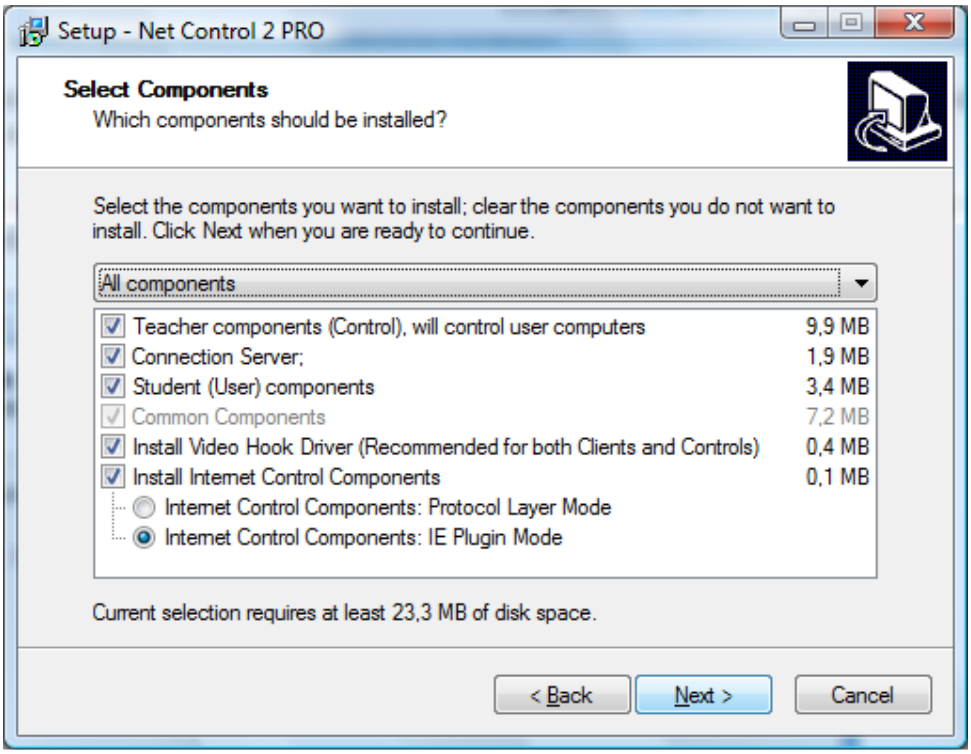


At next steps the setup program will prompt all additional parameters as provided in **Chapter A**.

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



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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.

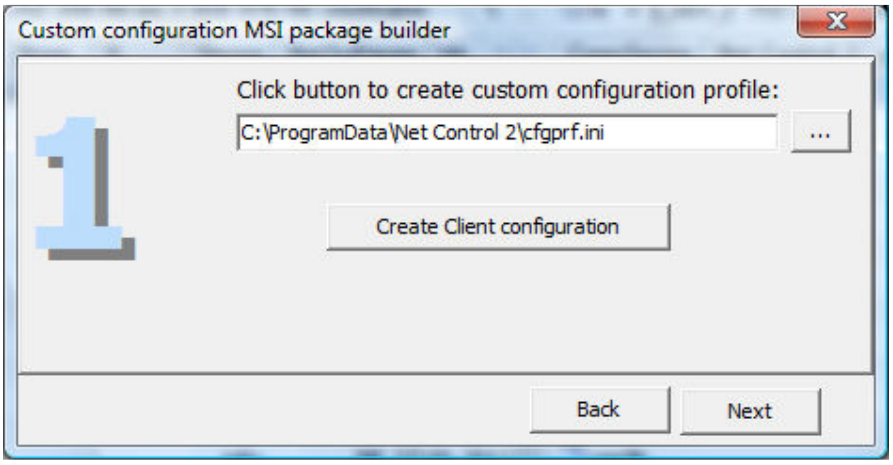
Install Internet Control Components – enable this option on student machine if you need to control access to Internet services on this computer. The component may be installed either in "IE Plugin Mode" or "Protocol Layer Mode". *"IE Plugin Mode"* is recommended, and provides full functionality in Internet Explorer and Mozilla Firefox browsers.
"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 2 Help.

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

Requirements: Network with domain, Windows Server 2003, 2008 or 2008/R2, Active Directory services enabled, and administrative privileges.

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

1. Install MSI Builder package and run it 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:

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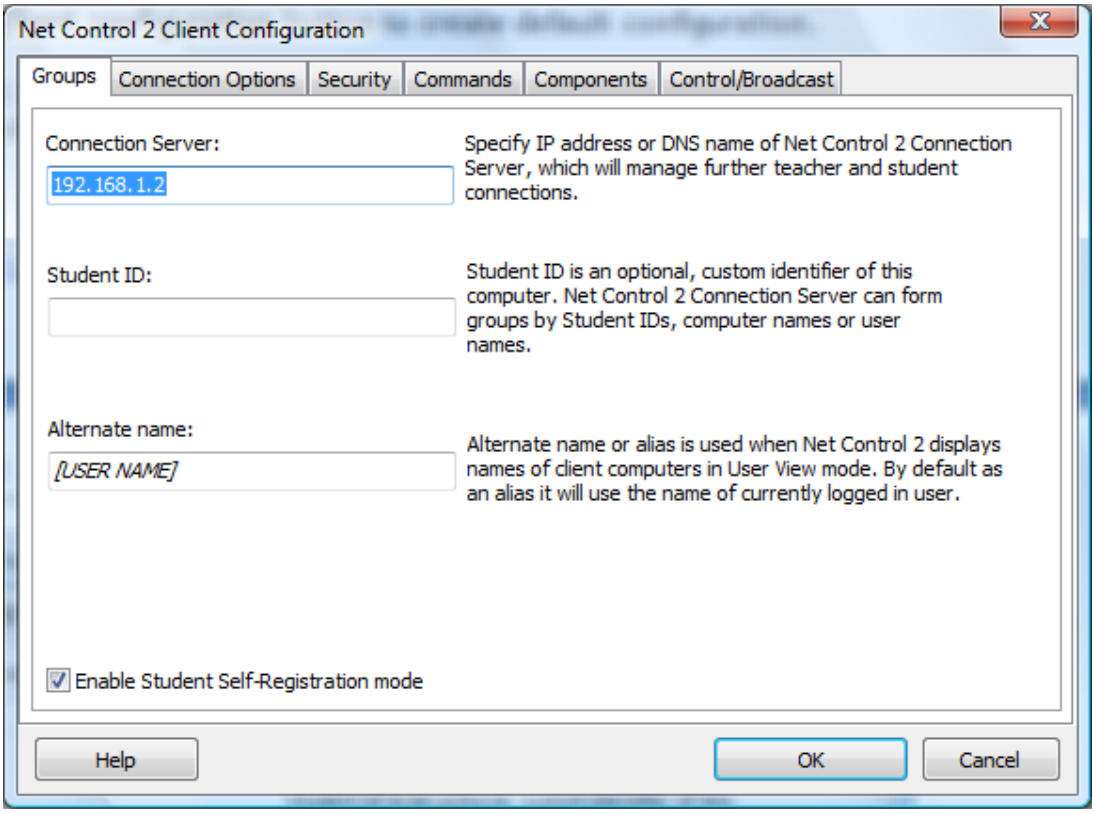
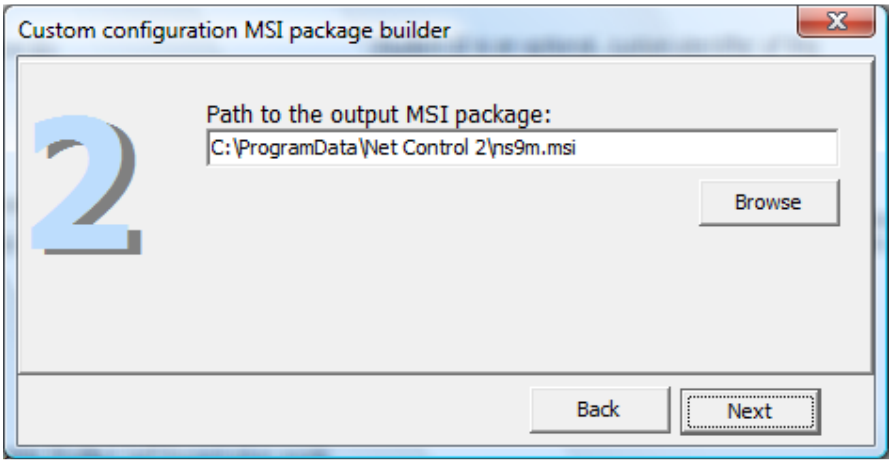


Detailed description of other parameters please see in **Chapter E** of this manual.

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



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

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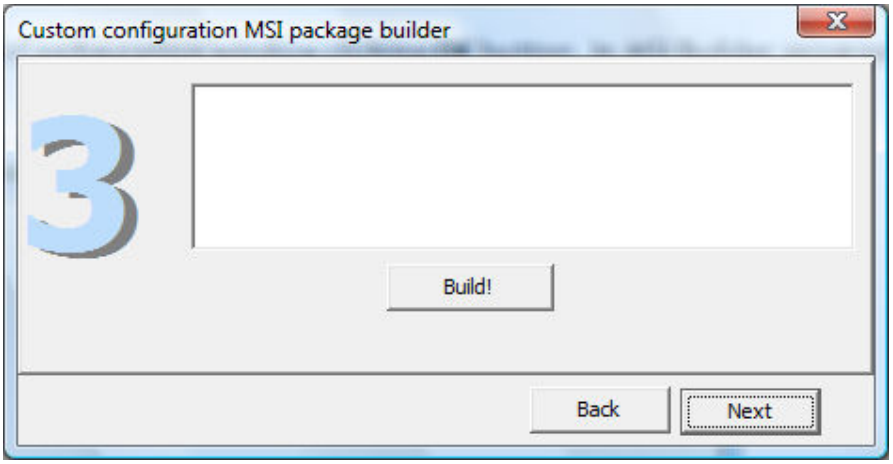


Build the package clicking Build button.

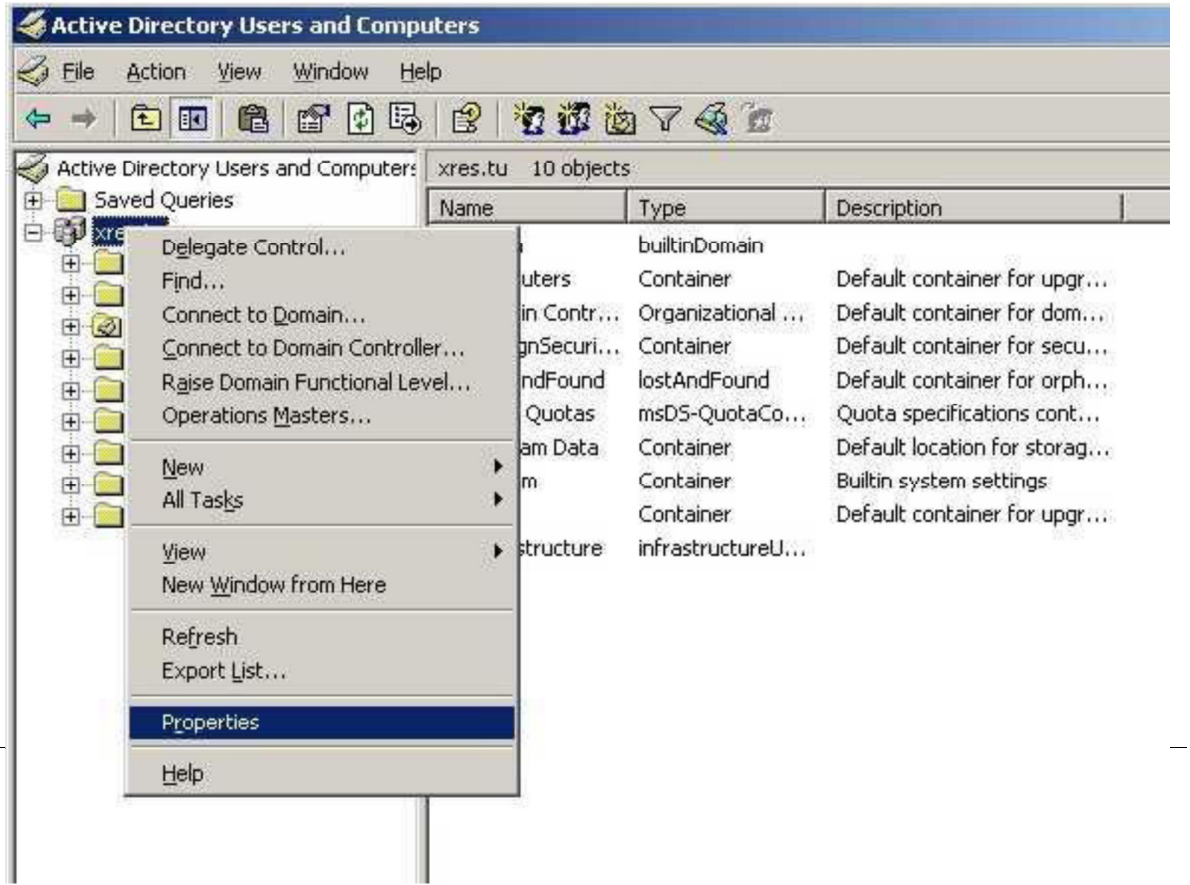
Install the built MSI package in Active Directory.

To install the MSI package:

1. Copy the MSI package to a shared folder on your network.

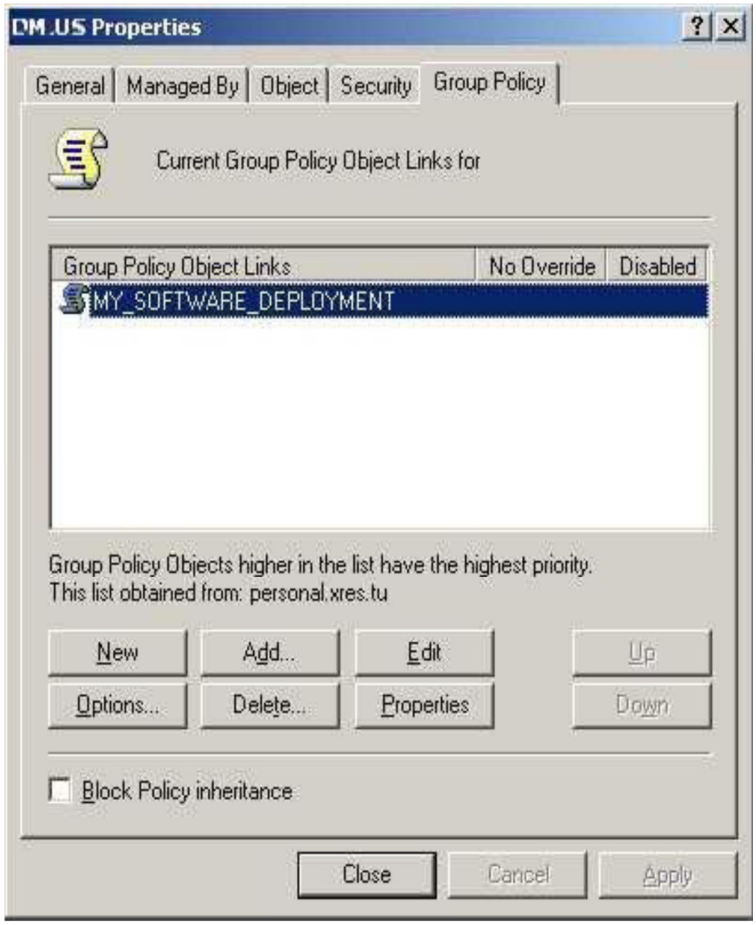
2. Log in to the Domain Controller with administrative privileges. For Windows Server 2003, click **Start -> Programs -> Administrative Tools -> Active Directory Users and Computers.**
   For **Windows Server 2008/R2** click **Start -> Administrative Tools -> Group Policy Management.**

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:

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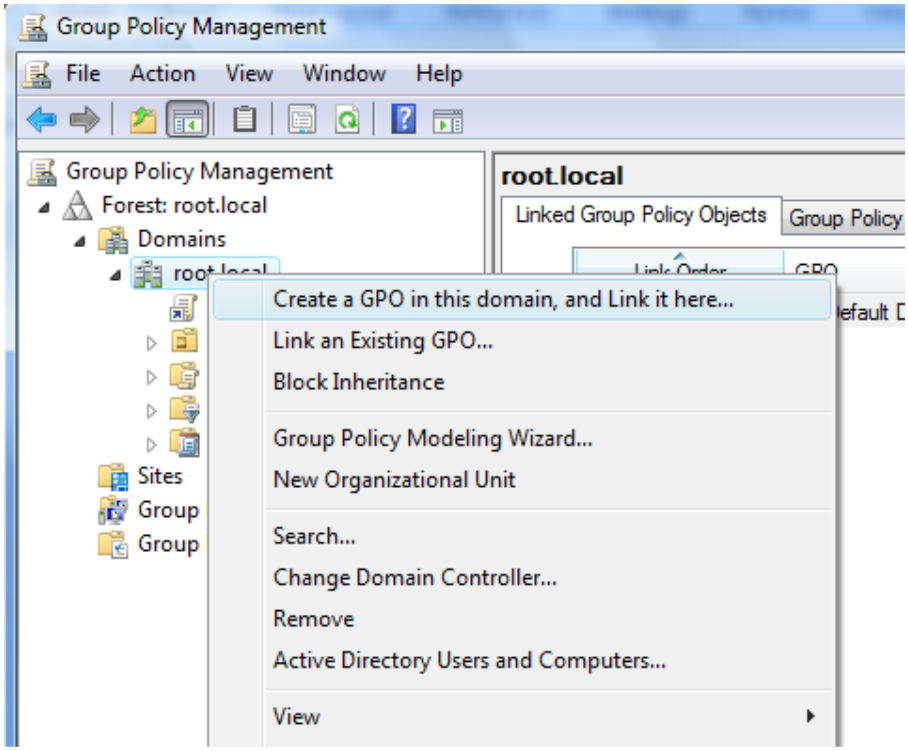
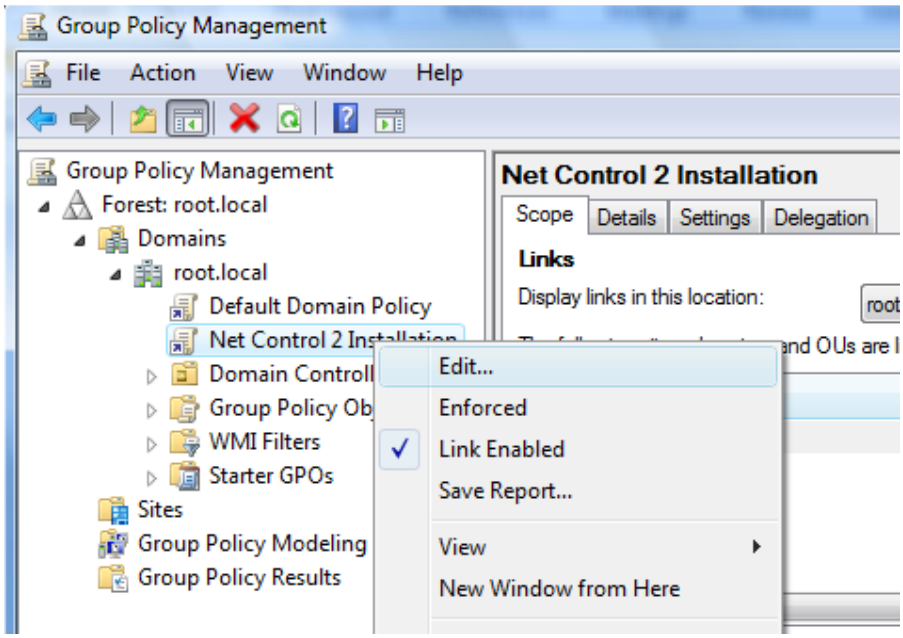


Specify a name for new Group Policy and click OK. New Group Policy will appear in the list at left pane. Right click it and select **Edit** command:



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.

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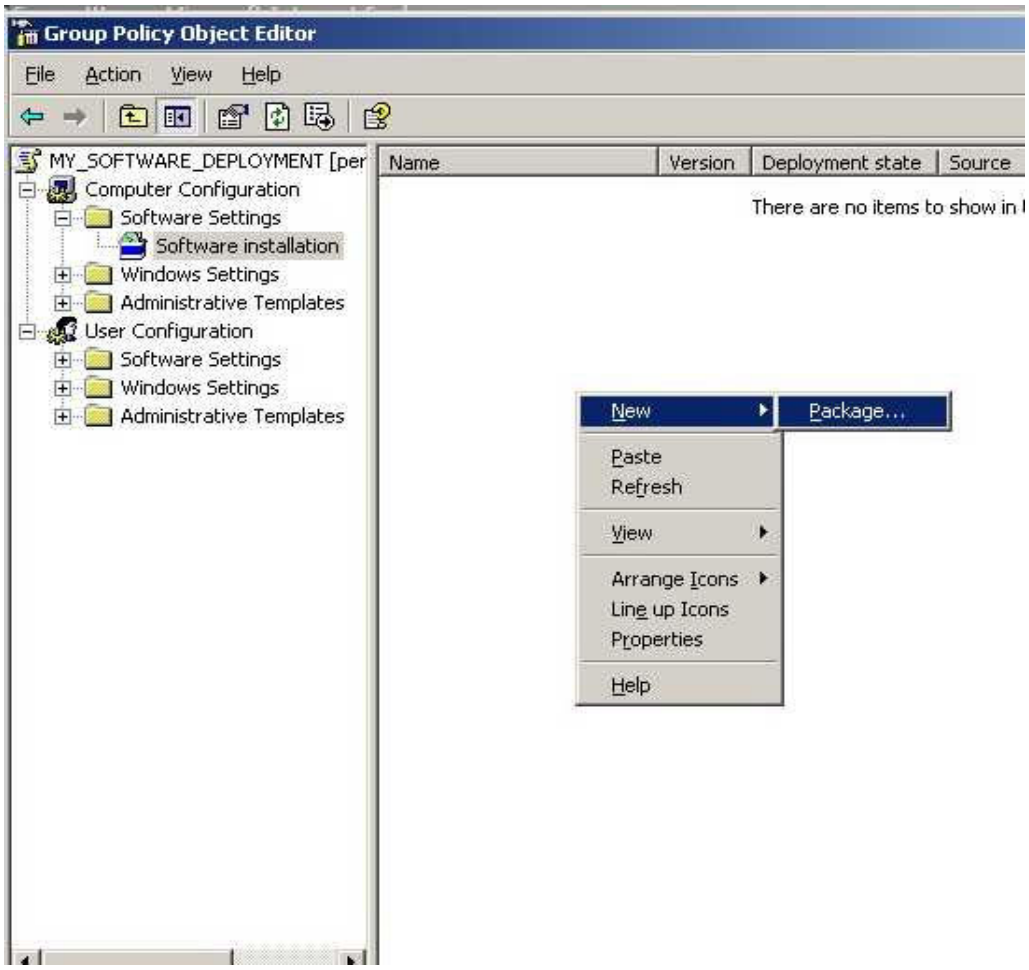
5. Browse for the network path to the Net Control 2 Server MSI package, choose "**Assigned**" and click **OK. (Please note:** You need to specify the network path to the package in this format - \\SERVER\SHARED_RESOURCE_NAME\PATH\ns.msi. This path should be valid and accessible for all user computers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

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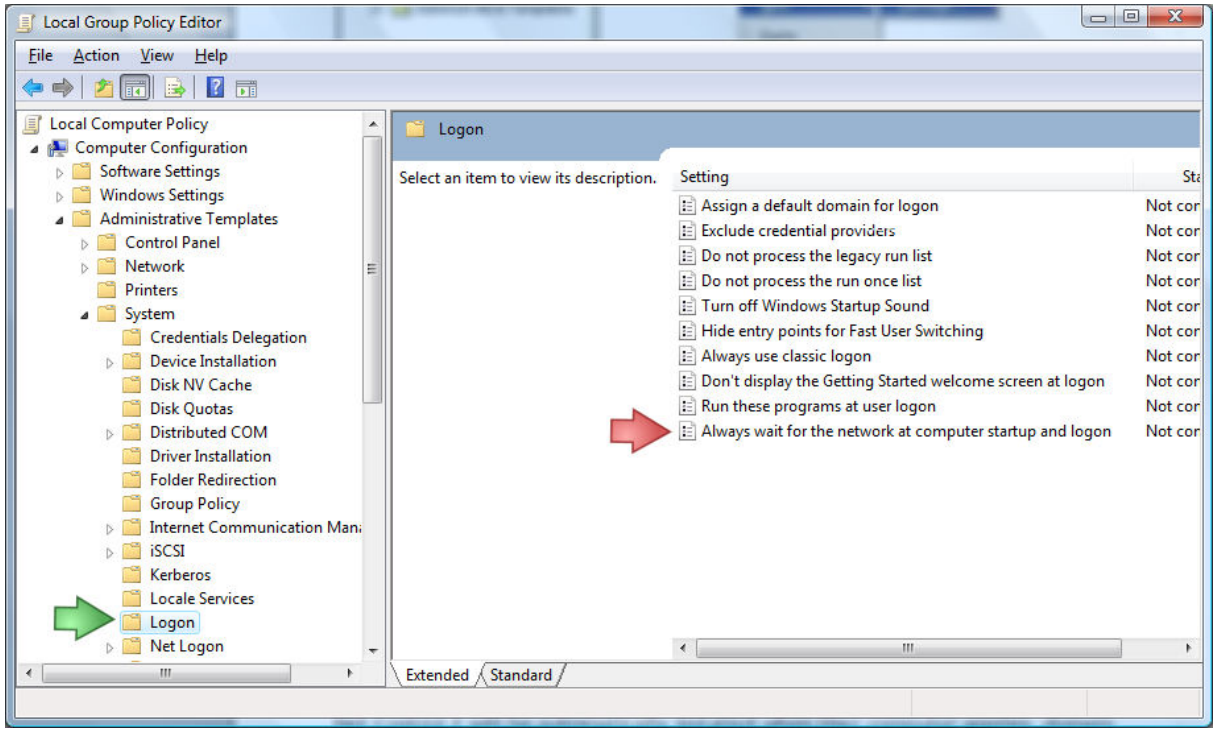

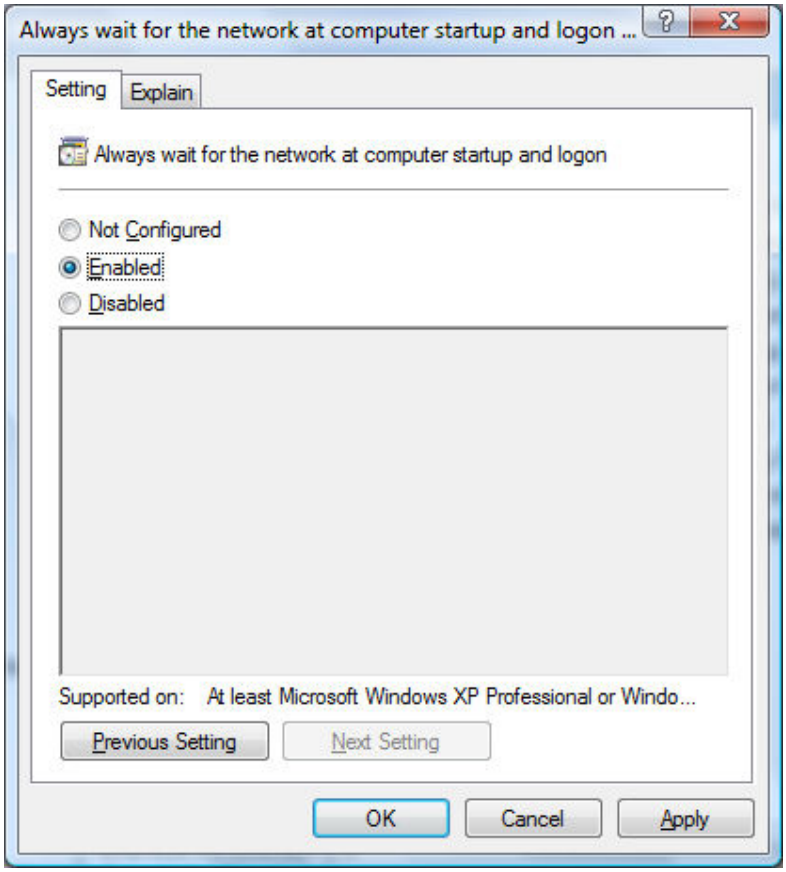

7. Close **Group Policies** and restart the user computers.

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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.

I1. 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 2003-2008R2.
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:

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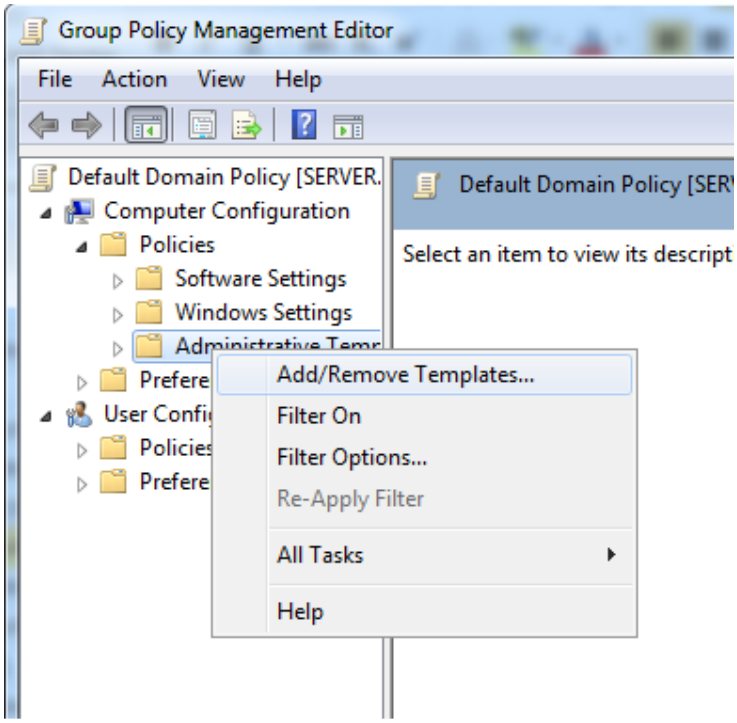
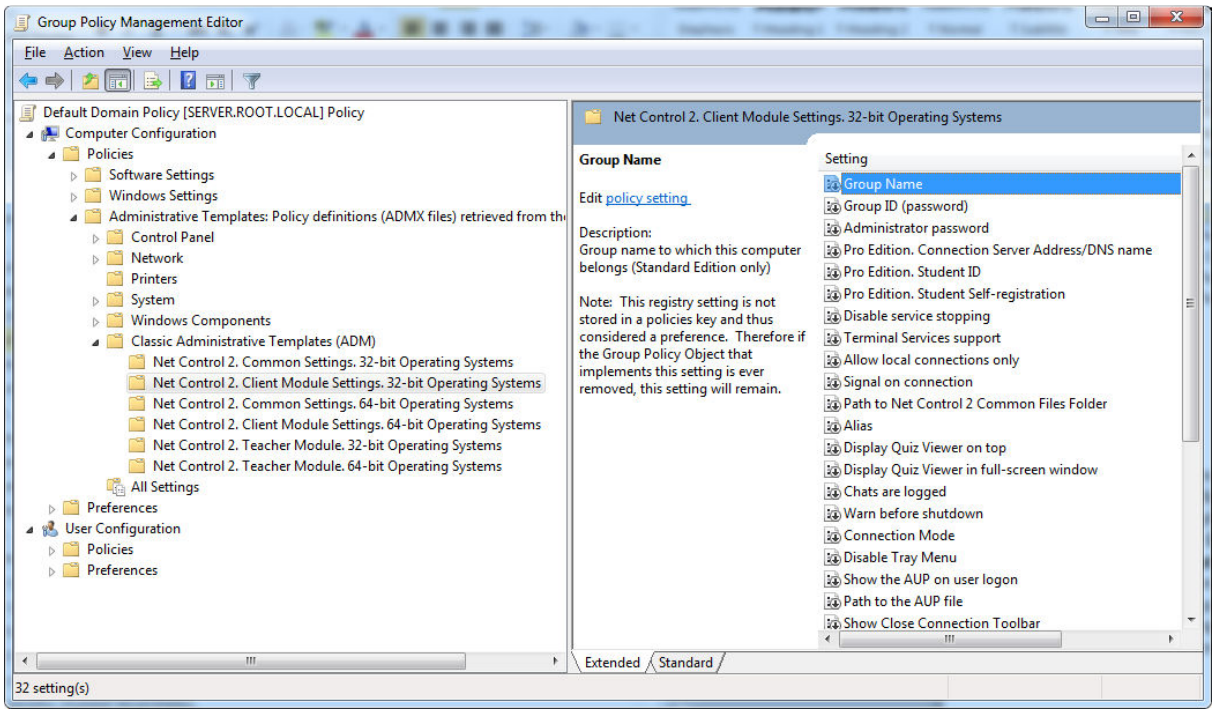


7. In **Add/Remove Templates** window click **Add** button to add Net Control 2 template files downloaded in p.1

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.

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J. SCRIPT INSTALLATION WITH STANDARD INSTALLATION PACKAGE.

To install the software using 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 installer in non-interactive mode without additional prompts

/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)

lspm\lsp – Install Internet Control Engine as Protocol Layer Mode

lspm\ho – Install Internet Control Engine as Internet Explorer Plug-in (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.

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\net900pr.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\net900pr.exe /SILENT /COMPONENTS="adm comm drv" /NORESTART

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/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.

K. INSTALLATION USER COMPONENTS OF THE SOFTWARE 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 Share (Remote 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 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:
Add the following setting to the system registry of every client computer:
Key: HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Policies\System

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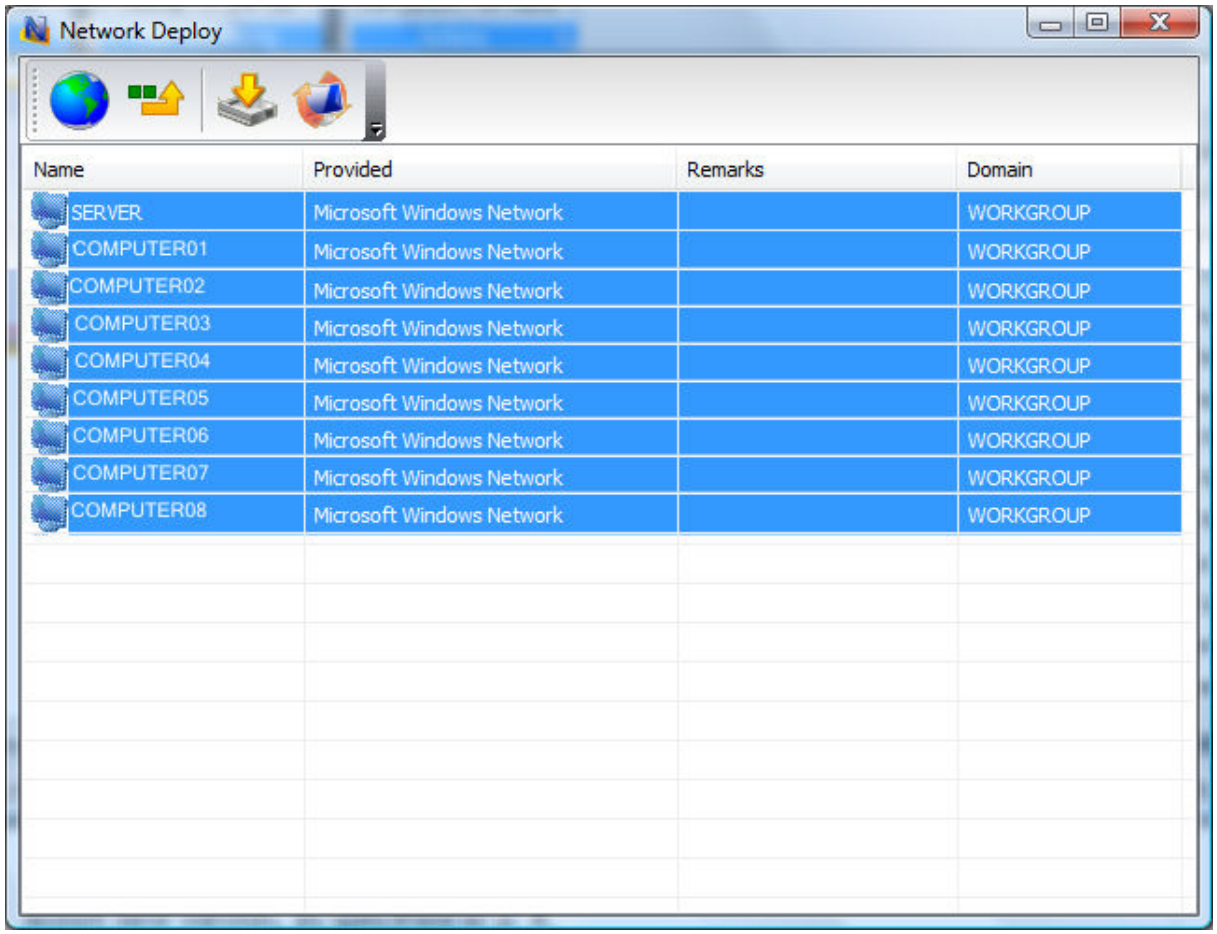
Value: LocalAccountTokenFilterPolicy **:DWORD** = 1
To apply changes after altering this setting you need to restart the client computer.

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;

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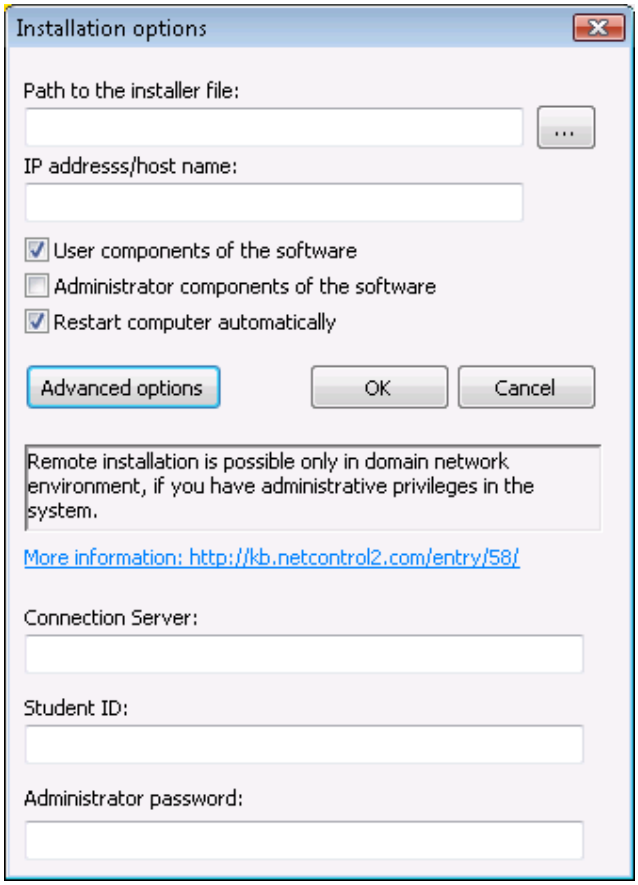

7. Click the **OK** button.

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

L. UPDATE.

1. Automatic update.

Since version 8.11, Net Control 2 has built-in automatic update tool:

- If the Teacher computer is connected to Internet
- If Automatic Update is enabled in the NC2 Main menu **N -> Options -> Control Options, Update page, Download Updates Automatically** option is enabled

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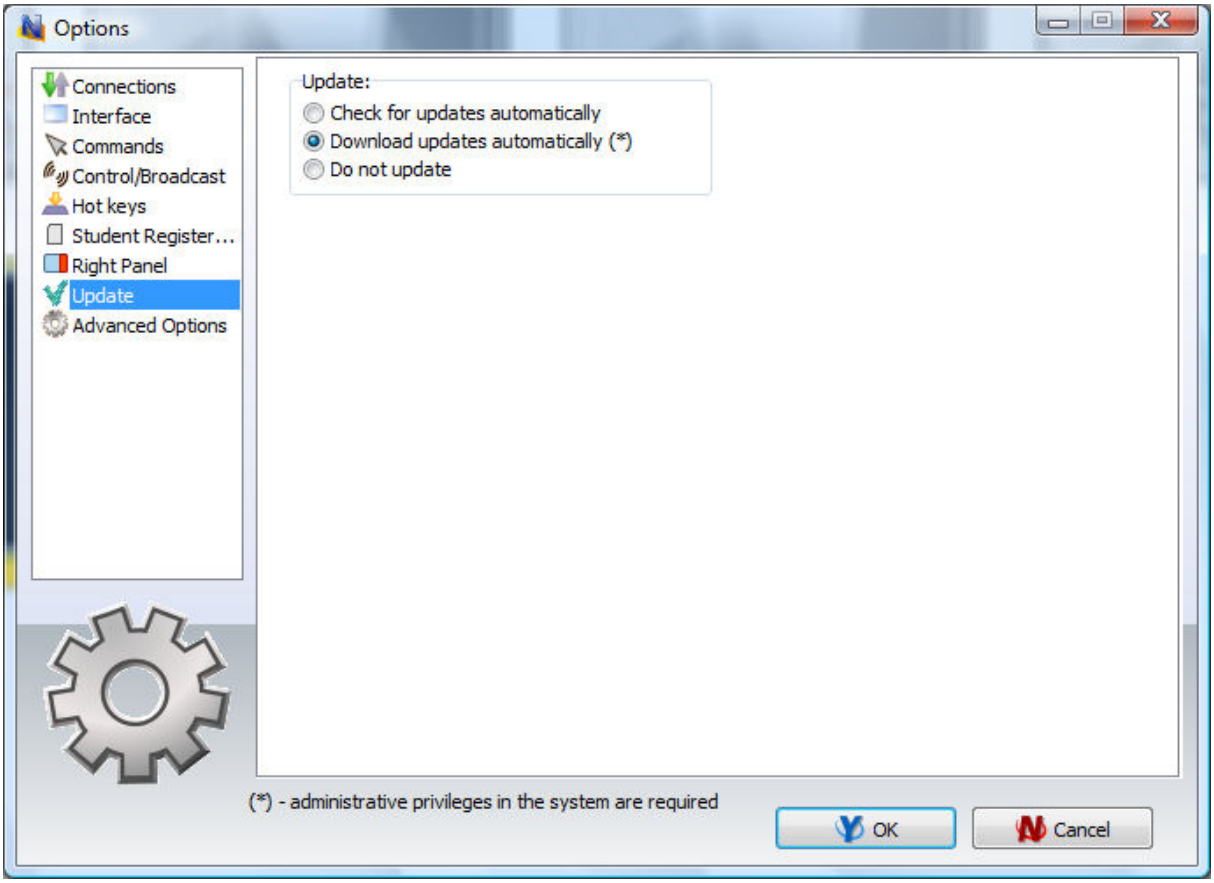

The software will check the NC2 update server every 14 days for available updates. If any update is found, the program will download it to the teacher computer and will deploy it to the user computers as soon as they are connected to the teacher computer.

Please note: To change the Update options, the program should be started with administrative privileges in the system. For Windows Vista/2008/7, you need to run the program as follows:

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

2. Manual update using 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 Net Control 2 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.

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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.

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