



EKRAN SYSTEM

Ekran Sysem Help



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EKRAN SYSTEM

About

Welcome to Ekran System!

Ekran System is an application that allows you to record the activity of the target computers with installed Clients and to view the screen captures from these computers in the form of video.



What's New

Ekran System v. 2.2 introduces the following changes:

- **Licensing process became easier and more user-friendly.** Now, you have to purchase serial keys and activate them via Internet. After this simple action, you'll be able to assign licenses to Clients for working with them. Offline activation is supported for users that don't have Internet on their Ekran System Server computer.
NOTE: If you already have the licensed Ekran System, you need to receive new serial keys from your vendor and activate them.
- **The minimal screenshot color depth is 4 bit grayscale.** Screenshots created with such color depth require less space for storing (database size reduces by more than 20%) without information value loss.
- **Windows 8.1** support is added.
- **The Ekran System Remote Clients installation wizard is changed** to make Client installation process more transparent and allow a user to avoid possible problems.
- **Ekran System Client and Ekran System Server logs are optimized.** Out-dated logs are automatically deleted. Ekran System Client work is less noticeable to the user.
- **Ekran System performance is improved.** Ekran System Server and Viewer work quicker now.
- **The help file format has been changed to PDF.** Now, you can easily print a user manual.
- **Overall stability is improved.** Possible minor problems with processing large amounts of data are fixed.



System Requirements

Ekran System claims different system requirements for each of its components. Make sure your hardware and software meet the Ekran System system requirements to avoid possible component malfunctions.

Ekran System Server requirements:

- 2 GHz or higher CPU
- 1024Mb or more RAM
- 100 Mbit/s network adapter (1 Gbit/s is recommended)
- Microsoft Windows XP, Vista, 7 (any edition except Home), 8, 8.1; Windows Server 2003, 2008. Both x86 and x64 platforms are supported.

Ekran System Monitor requirements:

- 2 GHz or higher CPU
- 1024Mb or more RAM
- 100 Mbit/s network adapter
- Microsoft Windows XP, Vista, 7, 8, 8.1; Windows Server 2003, 2008 and newer. Both x86 and x64 platforms are supported.

Ekran System Client requirements:

- 1 GHz or higher CPU
- 512 Mb or more RAM
- 100 Mbit/s network adapter
- Microsoft Windows XP, Vista, 7, 8, 8.1; Windows Server 2003, 2008 and newer. Both x86 and x64 platforms are supported.

NOTE: When Ekran System Client is installed to the terminal server, hardware requirements depend on the number of active user sessions and may increase drastically. For example, hardware requirements for Ekran System Client deployed on the terminal server hosting 10 active user sessions will be as follows:

- Intel Core i3 or similar AMD CPU
- 2048 Mb RAM



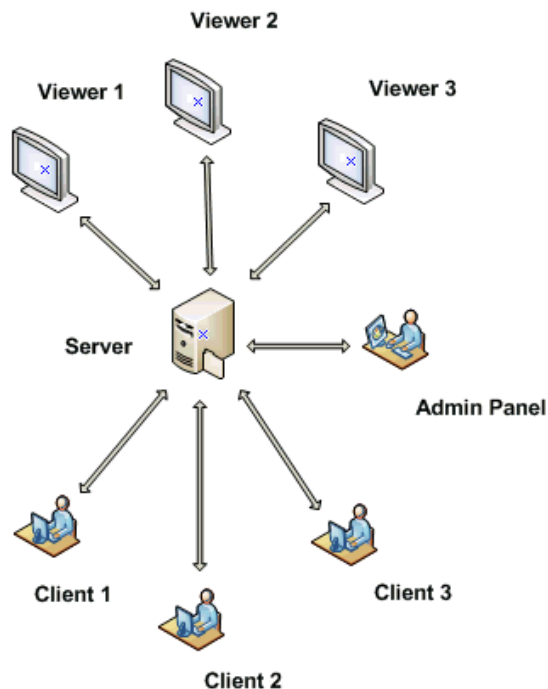
Program Structure

Program Structure

Ekran System is an application specially designed to control user activity remotely.

Ekran System includes the following components:

- **Ekran System Administrative Panel:** Is the interface part of Ekran System Server used to manage Ekran System system.
- **Ekran System Server:** It is the main part of the Ekran System used for storing the screen captures and associated information received from the Clients. The work of the Server can be started or stopped via [Server Tray](#).
- **Ekran System Monitor:** This part of the Ekran System provides a usable interface for quick review and analysis of the screen captures received from the Clients. The alert monitoring function of the Monitor is accessible via [Monitor Tray](#).
- **Ekran System Clients:** Being hosted on the remote computers, Clients create screen captures of the certain quality and the defined frequency and send them to the server. Ekran System Administrative Panel features managing the remote Clients configurations and settings.



Server Tray

The Server Tray application informs you about the Ekran System state.

It also automatically restarts the Ekran System Server in case of its failure. The first three times the restart is performed automatically. The user is informed about the Server failure in the notification area. If the Server fails for the fourth time, it does not restart.



You can start/stop Ekran System Server or hide the tray icon from the notification area.

If you want to contact the Support, you need to collect the Server log (Program Files\Ekran System\Ekran System\Server\ServerService.log) and attach it to the request.

Monitor Tray

About Monitor Tray

Ekran System Monitor Tray is a special utility that notifies the investigator about the alert events on the investigated computers. The alerts are displayed in the pop-up notifications from the Windows tray area. The notifications may be set up to be displayed immediately or with a delayed response in the **Alert global settings** accessible from the **Administrative Panel**.

Left-click on the tray icon opens the latest notification in the **Monitor**.



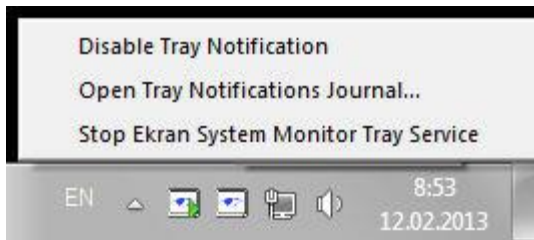
Right-click on the tray icon opens the context menu. It contains the following options:

Disable/Enable Tray Notification: Disables or enables the pop-up notifications from the Windows tray.

Open Tray Notifications Journal: Opens the journal containing the records of the latest notifications on alerts on the investigated computers.

Stop Ekran System Monitor Tray Service: Terminates the work of the utility.

NOTE: To enable automatic launch of the Monitor Tray service at system startup, you need first to log in to the Monitor at least once.



Tray Notifications Journal

Tray Notifications Journal keeps the records of the latest alert notifications from the investigated computers. The maximum number of the records in the **Tray Notifications Journal** is defined by the investigator in the **Alert global settings** in the **Ekran System Administrative Panel**. When it is reached, the oldest records are removed from the journal. The records can be cleared by clicking the **Empty Journal** button.

NOTE: Information removed from the journal is not deleted from the database.

Information is displayed in the grid containing such columns:

- **Alert:** Displays the Alert name.
- **Host:** Displays the name of the computer on which the Alert event occurred.
- **Time:** Displays the time when the Alert event occurred on the investigated computer.
- **Activity Title:** Displays the name that appeared in the title of a window when the Alert event occurred on the investigated computer.
- **Application:** Displays the name of the started application on the investigated computer when the Alert event occurred on the investigated computer.
- **Hyperlink:** This column contains the link to the Alert screen capture in the **Ekran System Monitor**. Left-click on it automatically launches the **Monitor** and takes the investigator to the Alert screen capture.

Data in all columns can be sorted by clicking on the column header.

Ekran System Tray Notifications Journal						
Alert	Host	Time	/	Activity Title	Application	Hyperlink
Facebook alert	Aleks-A-PC	12.02.2013 9:11:09		Welcome to Facebook - ...	firefox.exe	View in the Ekran System ...
Facebook alert	Aleks-A-PC	12.02.2013 9:13:02		Welcome to Facebook - ...	firefox.exe	View in the Ekran System ...
Facebook alert	Aleks-A-PC	12.02.2013 9:23:11		Ekran System Alert - Fac...	EkranMonitor.exe	View in the Ekran System ...
Twitter alert	Aleks-A-PC	12.02.2013 9:31:59		Twitter - Mozilla Firefox	firefox.exe	View in the Ekran System ...
						<button>Empty Journal</button>

Deployment and Administration

About Program Installation

The Ekran System installation consists of several steps:

1. [Installing the Ekran System Server and Administrative Panel](#): These components cannot be installed separately. The Ekran System Server is used to store and process all records sent by the Ekran System Clients hosted on the remote computers. The Ekran System Administrative Panel is used to manage Ekran System users and alerts and configure remote client settings.
2. [Assigning Ekran System System Administrator and Supervisor](#): To start working with the Ekran System, you have to assign Ekran System roles to Windows users.
3. [Installing Ekran System Clients](#): Ekran System Clients are usually installed remotely via the Ekran System Administrative Panel. A Client can be installed on any computer in the network. Ekran System Clients collect user activity data and send it to the Server.
4. [Activating serial keys](#) ([adding activated serial keys](#)): To be able to use Ekran System, you need to license it by activating purchased serial keys.
5. [Assigning licenses to Ekran System Clients](#): Licenses are to be assigned to Ekran System Clients for the Ekran System to start receiving data from them. Clients that don't have an assigned license do not collect any user activity data, even if they are installed and launched on the computers.
6. [Installing Ekran System Viewer](#): The Ekran System Viewer is used to review user activity records stored on the Ekran System Server. The Viewer can be installed on any computer in the network. A connection with the Ekran System Server is required for the Ekran System Viewer to operate.

After installing all Ekran System components and assigning roles and licenses, Ekran System is considered deployed and all its features become available.

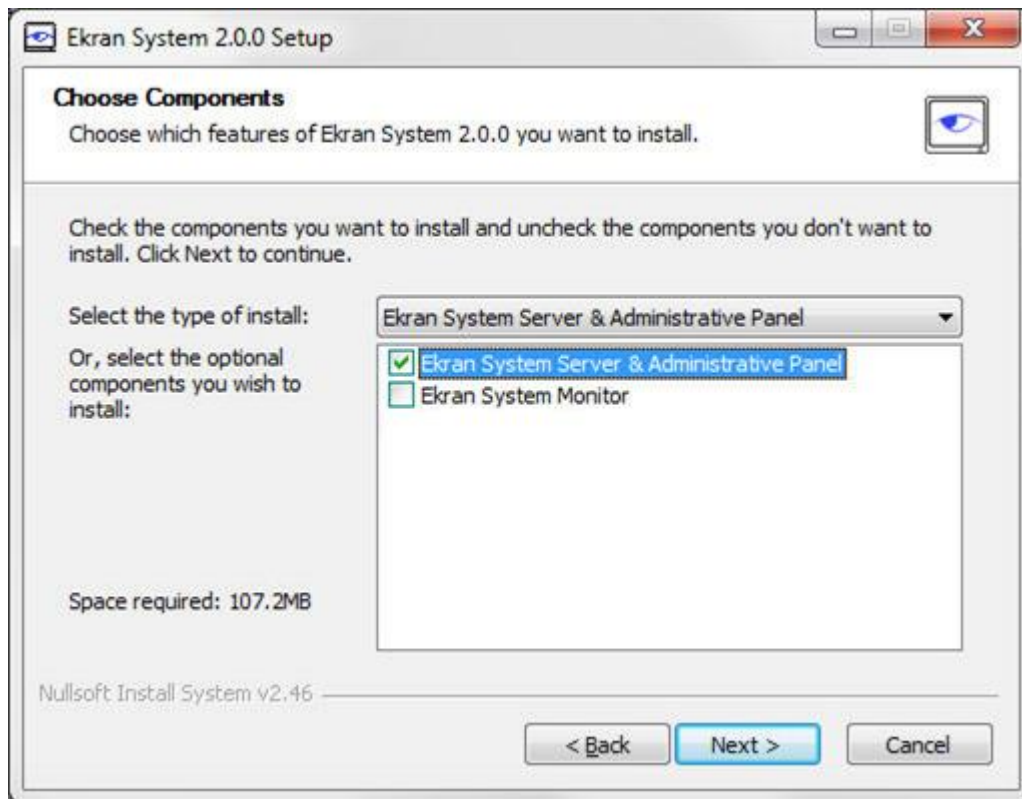
Installing/uninstalling/updating Ekran System Server

Installing Ekran System Server and Administrative Panel

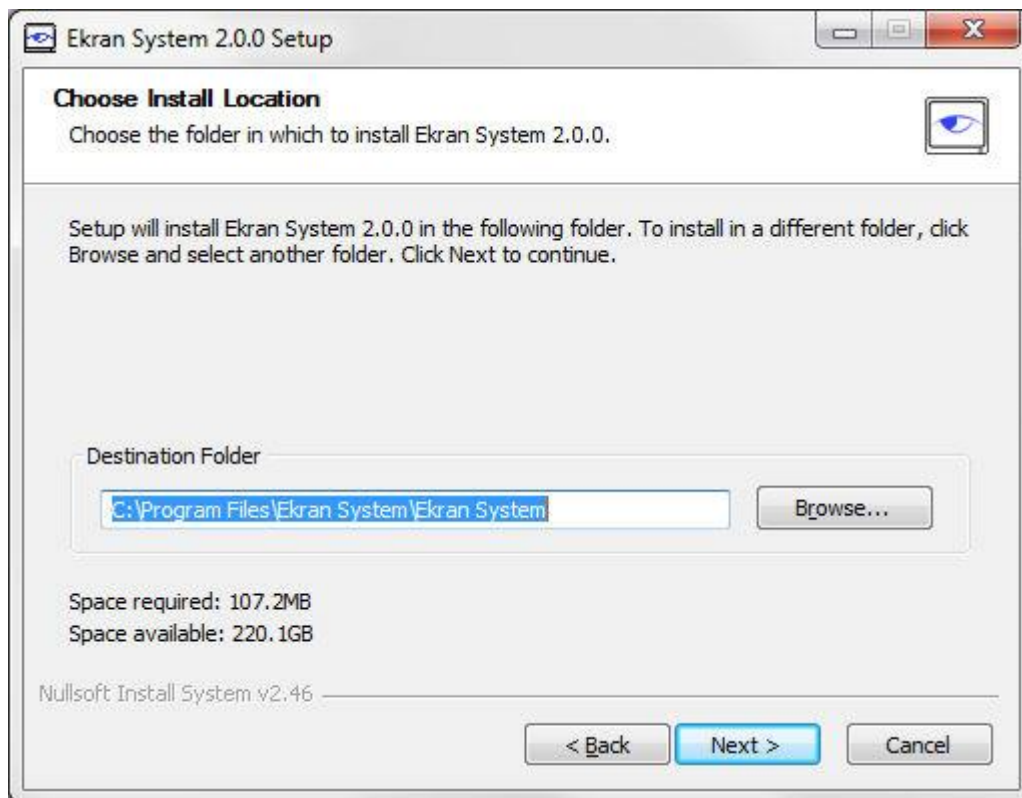
To install the Ekran System Administrative Panel, do the following:

1. Start the **Ekran System** setup wizard.
2. Click **Next** on the **Welcome** page.

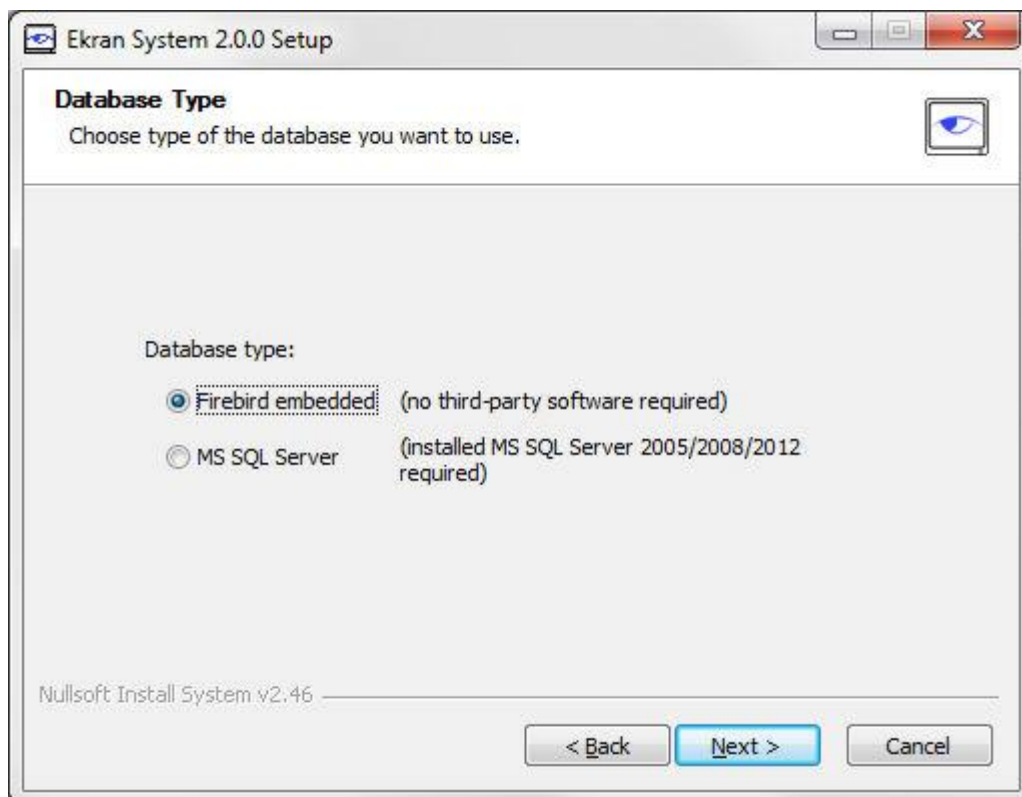
3. Carefully read the terms of the End-User Licence Agreement and click **I Agree**.
4. On the **Choose Components** page, do one of the following and click **Next**:
 - In the drop-down list, select **Server and Administrative Panel**.
 - Select **Server and Administrative Panel** in the box.



5. On the **Choose Install Location** page, enter the installation path or click **Browse** to navigate to the server installation folder. Click **Next**.



6. On the **Database Type** page, select the type of database you want to use for storing data. Click **Next**.



7. If you have selected MS SQL Server, on the **MS SQL Server Database Configuration** page, define the connection parameters and then click **Next**.

8. Define the MS SQL **Sever instance** name, which is the instance name assigned to the TCP/IP port.
 - Define the **Database name** for Ekran database.
 - Define the **User name** and **Password** of a user account via which the connection to the Server will be established.

Ekran System 2.0.0 Setup

MS SQL Server Database Configuration
Configure the connection to MS SQL Server and database.

Server instance:

Database name:

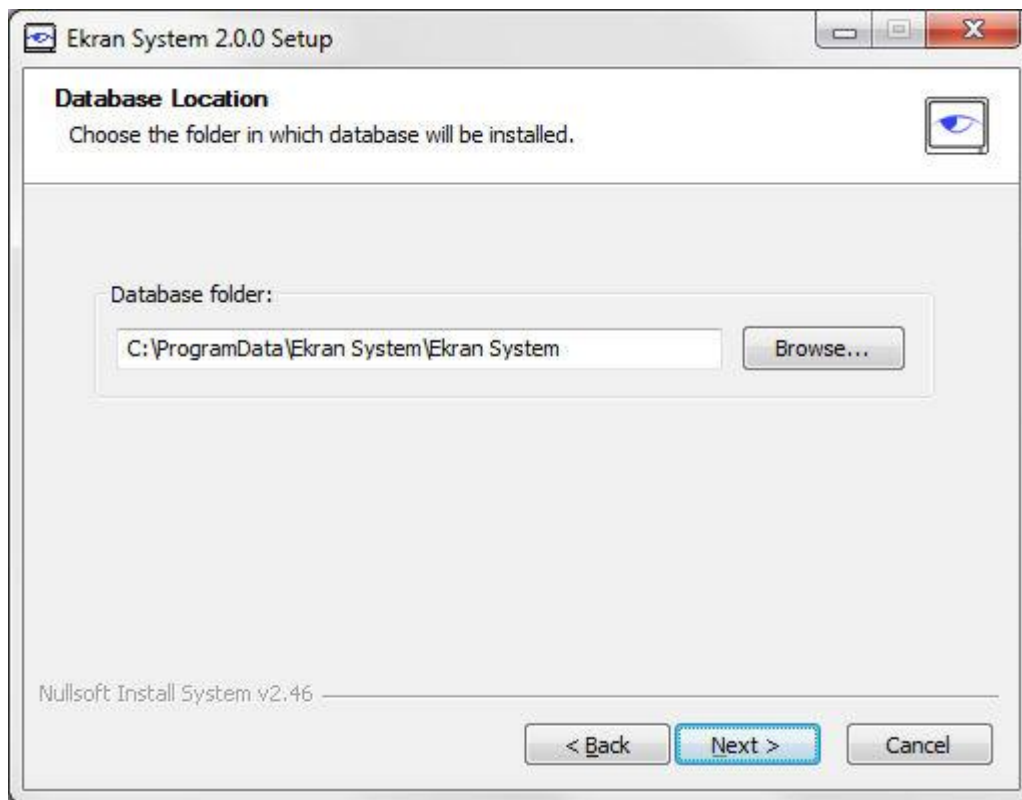
User name:

Password:

Nullsoft Install System v2.46

< Back Next > Cancel

9. On the **Database Location** page, enter the database path or click **Browse** to navigate to the database installation folder. Click **Next**.

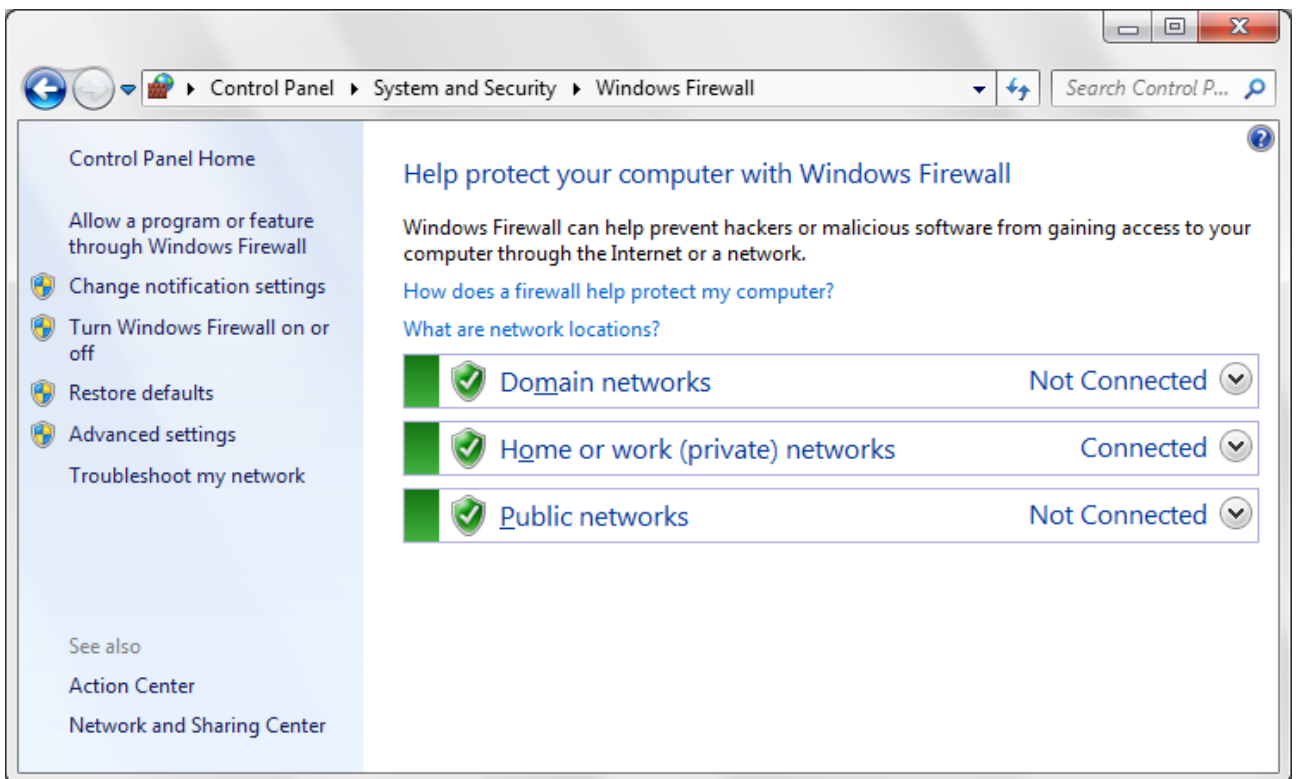


10. On the **Choose Start Menu Folder** page, define the name of the folder in the start menu to which the shortcuts will be placed. Click **Install**.
11. Installation starts.
12. After the installation finishes, click **Finish**.
13. In [Windows Firewall](#), you must allow Ekran System Server executable to accept TCP connections via ports 9446, 9447, 9449. These rules will be added to Windows Firewall automatically, if Windows Firewall is enabled during Ekran System Server installation.

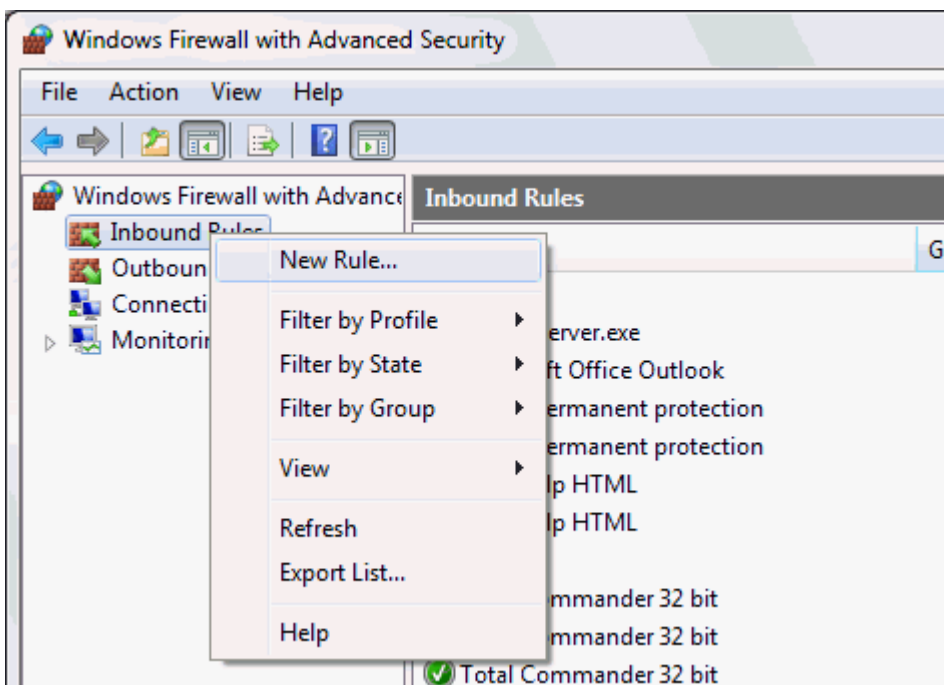
Adding Server Executable to Windows Firewall

To add Ekran System Server executable to the Windows Firewall:

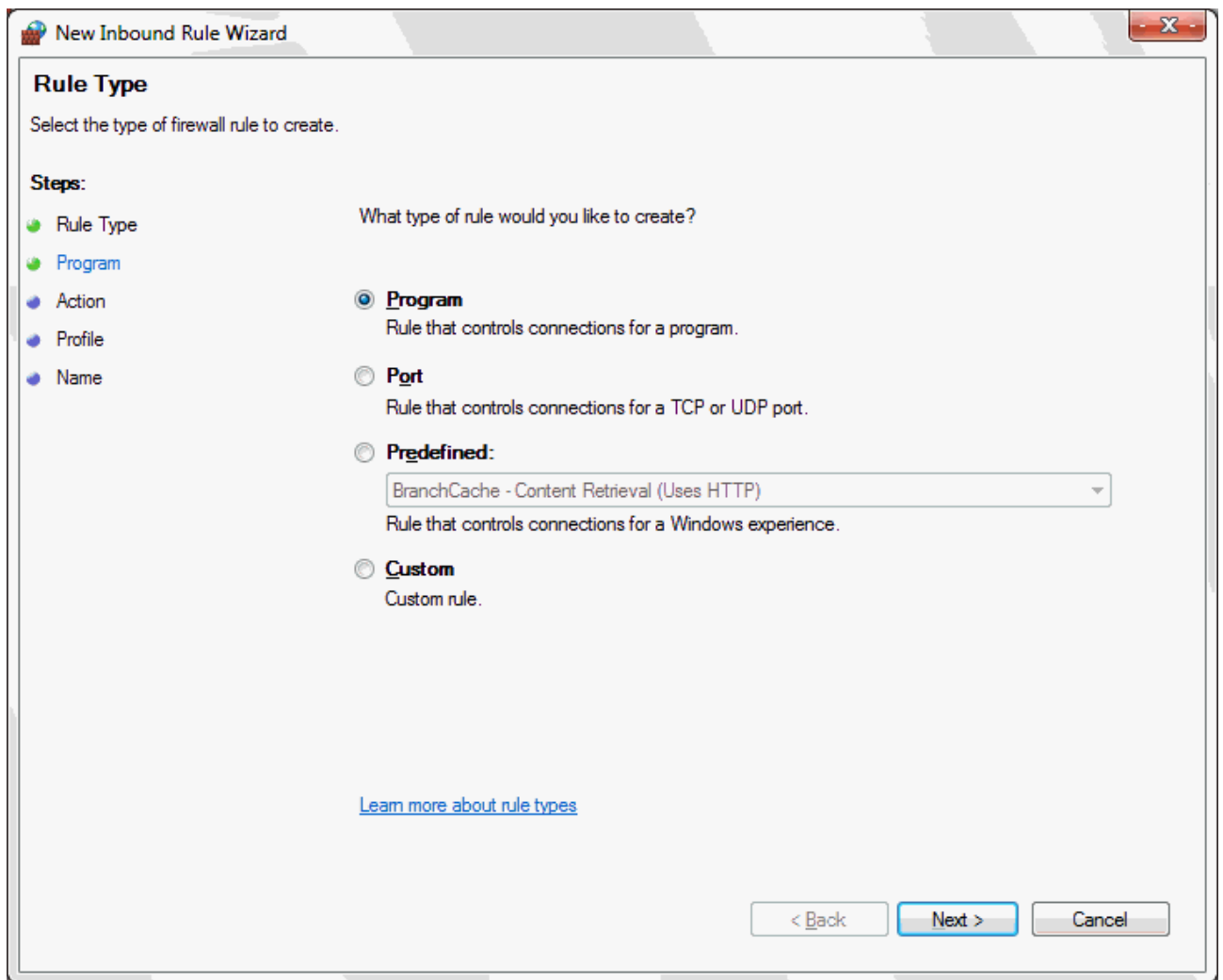
1. Select **Start > Control Panel > System and Security > Windows Firewall**.
2. The Windows Firewall window opens.



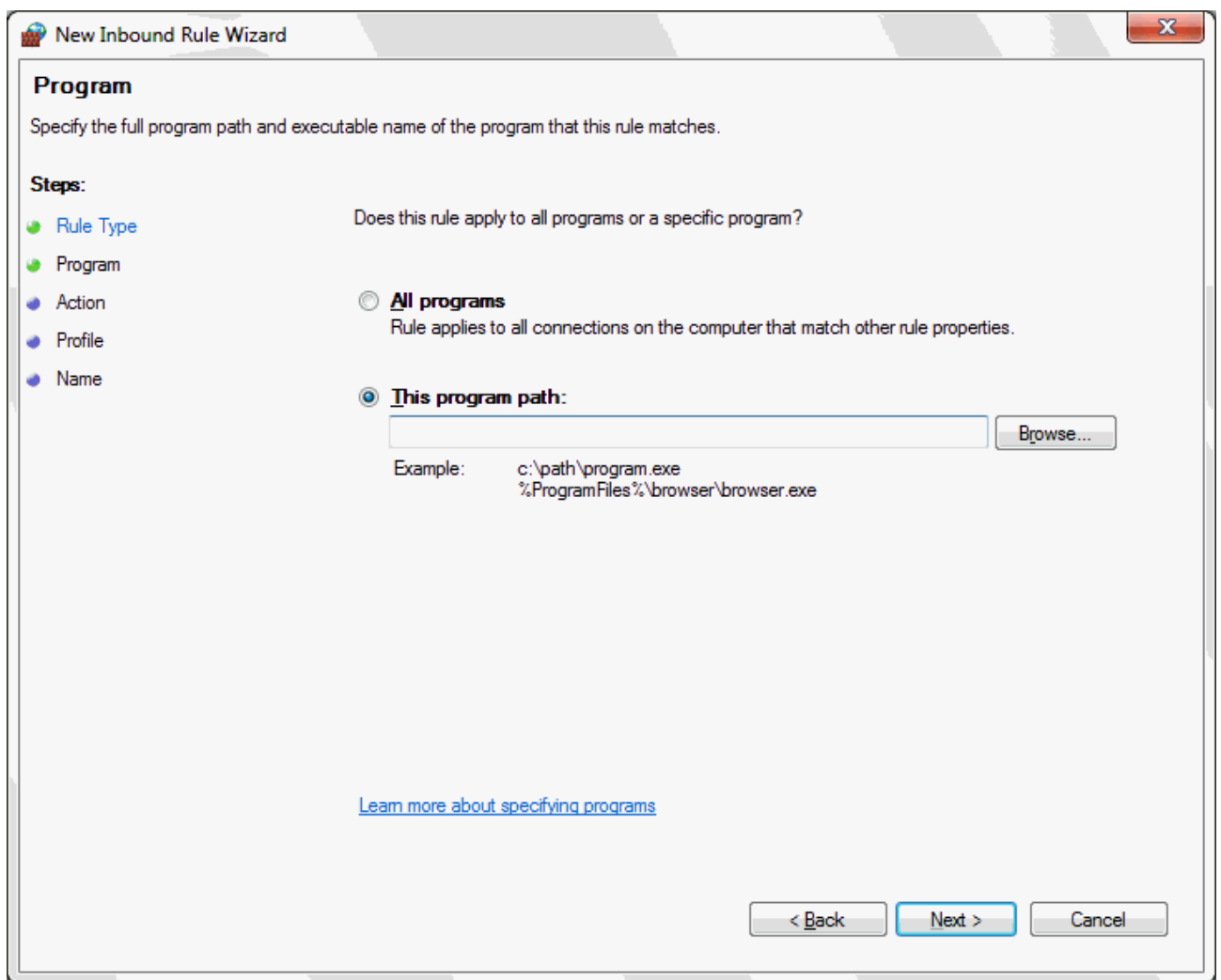
3. Click **Advanced settings**. The Windows Firewall with Advanced Security window opens.
4. Right click **Inbound Rules** and select **New rule**.



5. The New Inbound Rule Wizard opens. On the Rule Type step, select **Program** and click **Next**.



- On the **Program** step, select **This program path**, then click **Browse** and navigate to the Ekran System Server executable. The default path is "**C:\Program Files\Ekran System\Ekran System\Server\EkranServer.exe**". Click **Next**.



The image shows a screenshot of the 'New Inbound Rule Wizard' window, specifically the 'Program' step. The window has a title bar with the text 'New Inbound Rule Wizard' and a close button. The main content area is titled 'Program' and contains the instruction: 'Specify the full program path and executable name of the program that this rule matches.' On the left, there is a 'Steps:' list with five items: 'Rule Type', 'Program', 'Action', 'Profile', and 'Name'. The 'Program' step is currently selected and highlighted. The main area contains the question 'Does this rule apply to all programs or a specific program?' with two radio button options. The first option is 'All programs', which is currently unselected. The second option is 'This program path:', which is selected. Below this option is a text input field and a 'Browse...' button. An example of a program path is provided: 'c:\path\program.exe' and '%ProgramFiles%\browser\browser.exe'. At the bottom of the window, there are three buttons: '< Back', 'Next >', and 'Cancel'. A link 'Learn more about specifying programs' is also present at the bottom.

Program

Specify the full program path and executable name of the program that this rule matches.

Steps:

- Rule Type
- Program**
- Action
- Profile
- Name

Does this rule apply to all programs or a specific program?

☐ **All programs**
Rule applies to all connections on the computer that match other rule properties.

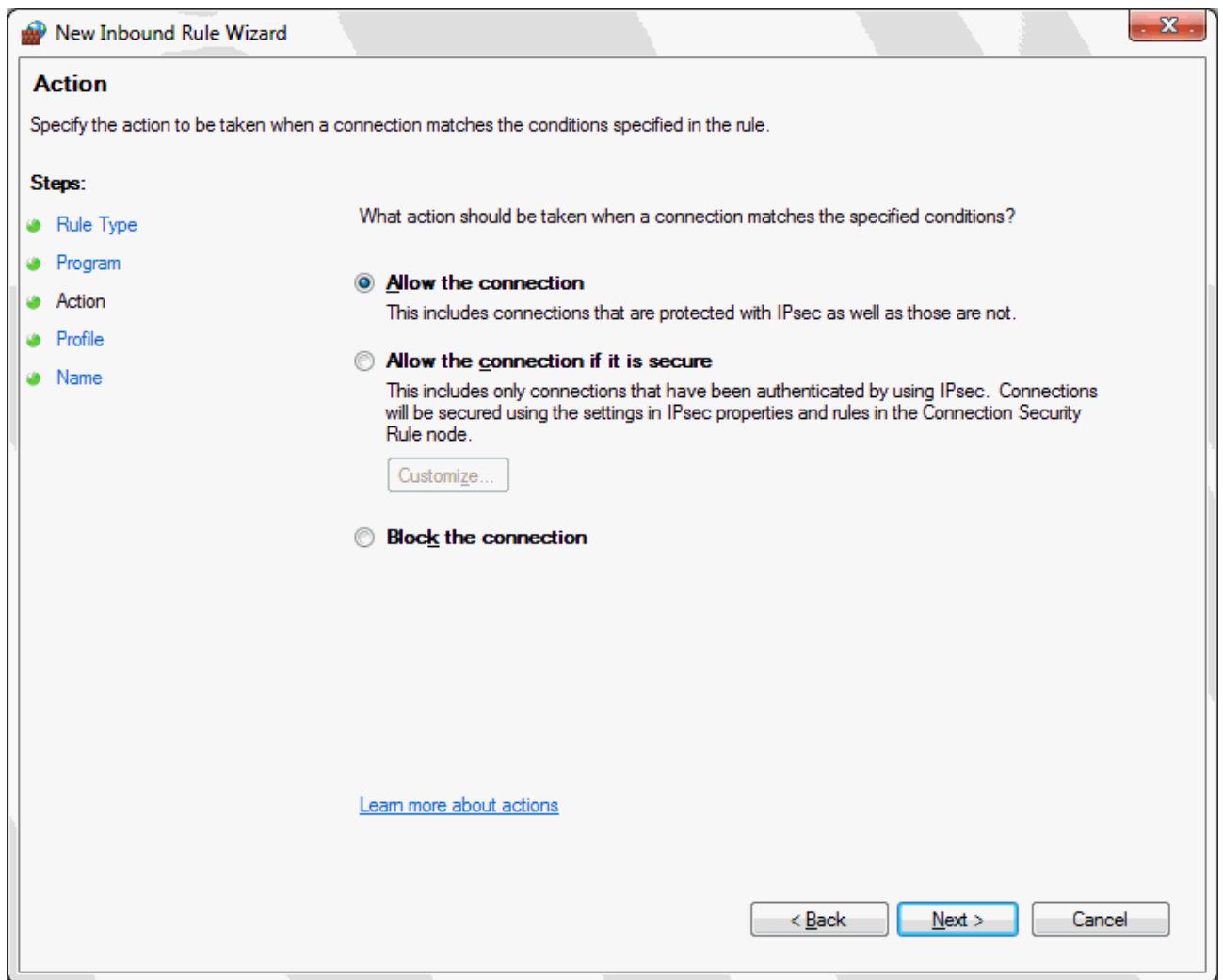
☒ **This program path:**

Example: c:\path\program.exe
%ProgramFiles%\browser\browser.exe

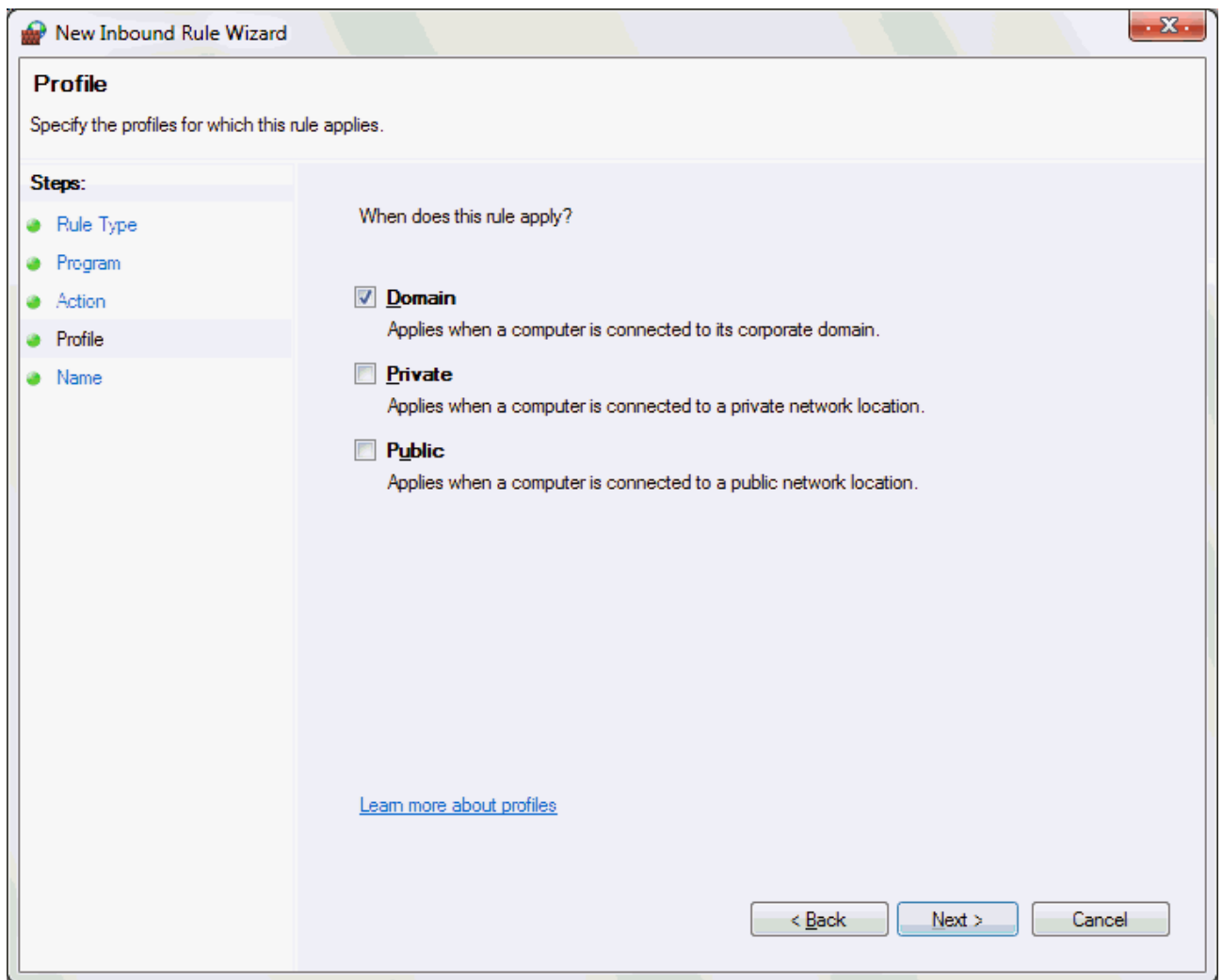
[Learn more about specifying programs](#)

< Back Next > Cancel

- On the Action step, select **Allow the connection** and then click **Next**.



- On the **Profile** step, select the profile of the network used for connecting remote computers and the Ekran System Server. Click **Next**.



- On the **Name** step, define the **Name** of the rule. Click **Finish**.

New Inbound Rule Wizard

Name

Specify the name and description of this rule.

Steps:

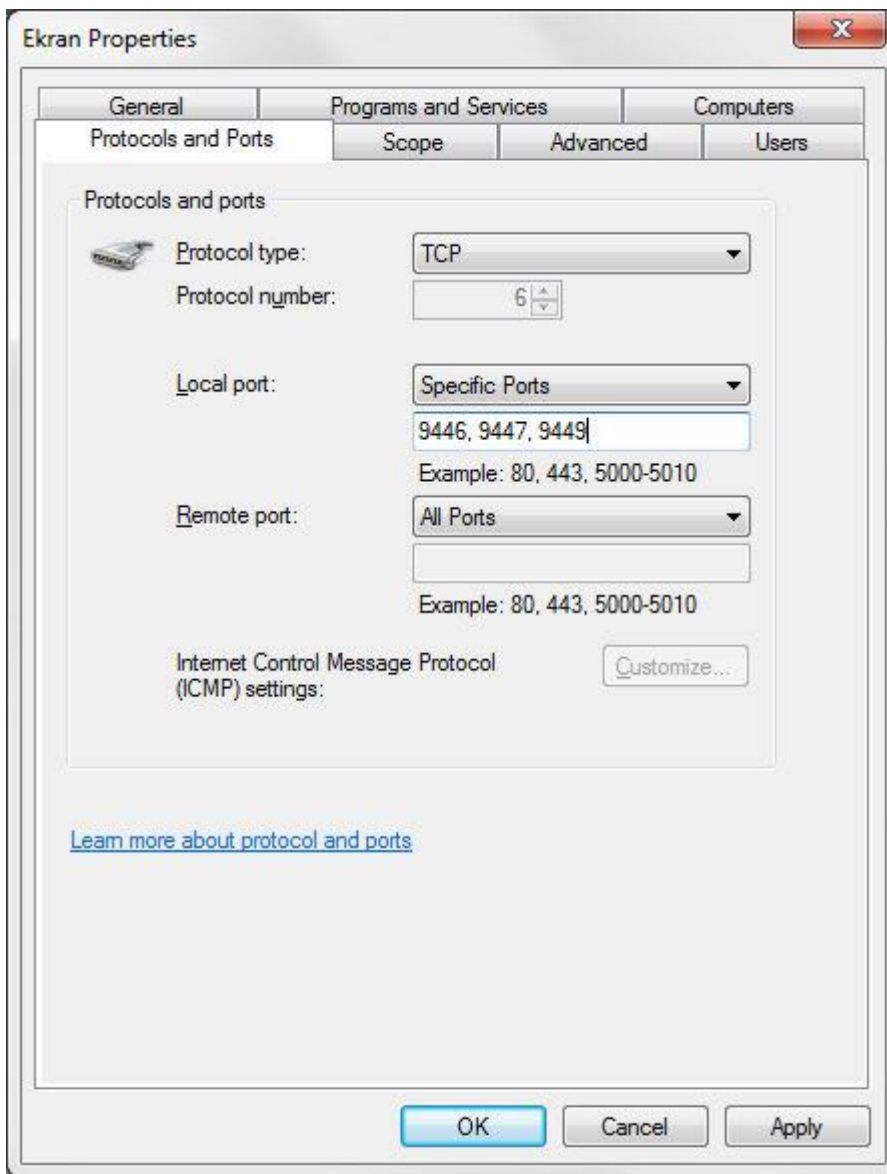
- Rule Type
- Program
- Action
- Profile
- Name**

Name: Ekran

Description (optional):

< Back Finish Cancel

10. The rule is created for the Ekran System Server application. By default, the rule allows any connections via all ports.
11. To define the protocol and ports, double click the **Ekran System** (the name you defined in the previous step) rule in the list in the Windows Firewall with Advanced Security window. The Ekran System Properties window opens.



12. In the **Protocols and Ports** tab, do the following:

- In the **Protocol Type** list, select **TCP**.
- In the **Local port** list, select **Specific Ports**. Type the port numbers (9446, 9447, 9449) in the box below.

NOTE: These rules will be added to Windows Firewall automatically, if Windows Firewall is enabled during Desktop Surveillance Server installation. If you use any other Firewall, these ports and executable must be added to it as well.

13. Click **Apply** to save changes. Click **OK** to close the window.

14. Close the Windows Firewall window.

NOTE: Unique external IP addresses should be used for cloud-based servers.

Database Types Comparison

When installing Ekran System Server and Administrative Panel, you can choose between the two types of databases (MS SQL database and Firebird database). These databases have the following differences:

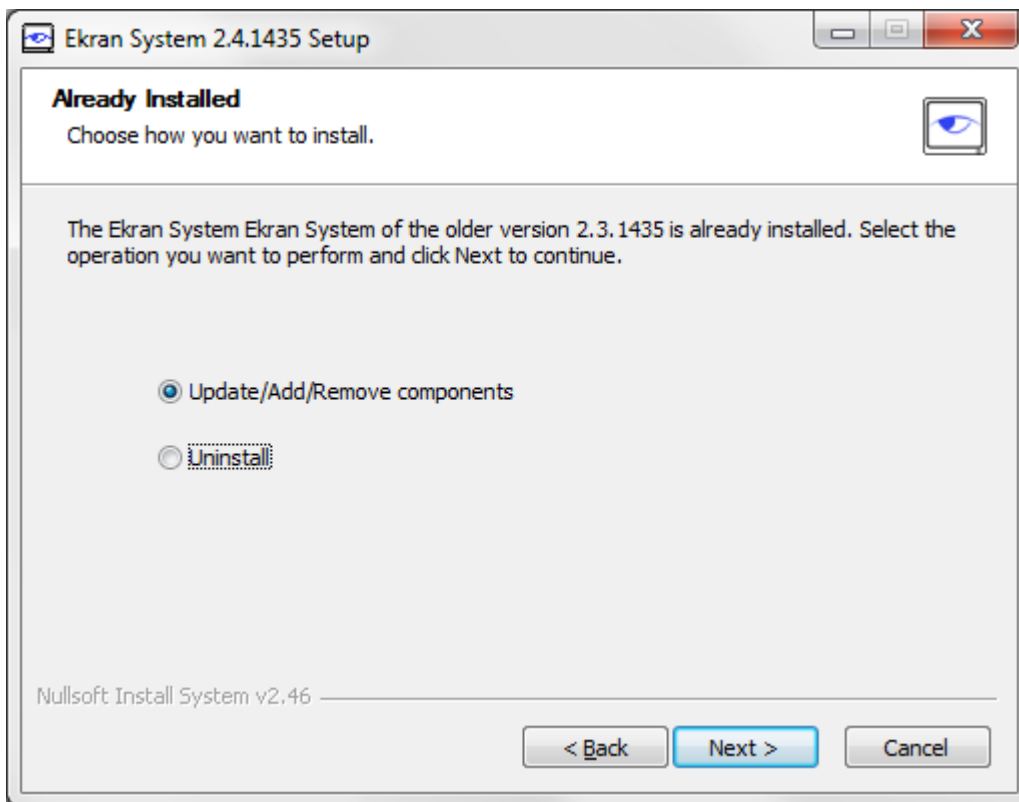
Feature	MS SQL Database	Firebird Database
Free	No (has a limited free version)	Yes
Processing speed	High	Low
Remote access to database	Yes	No
Requires additional software installation	Yes	No
Security	High	Low

Updating Ekran System Server

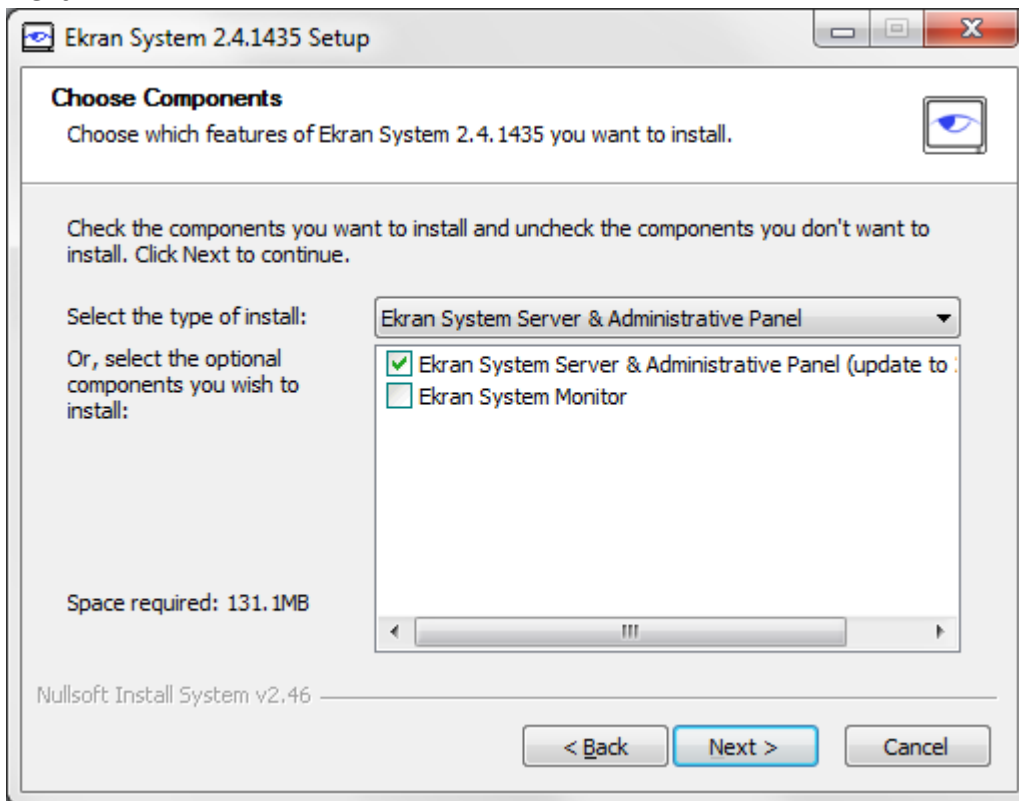
The updating of the Ekan System Server is performed via the Ekran System installation file of a newer version. During an update you may select to update the existing database to a newer version or simply reinstall it.

To update the Ekran System Server, do the following:

1. Start the **Ekran System** setup wizard.
2. On the **Welcome page**, click **Next**.
3. On the **Already Installed** page, select **Update/Add/Remove components** and click **Next**.



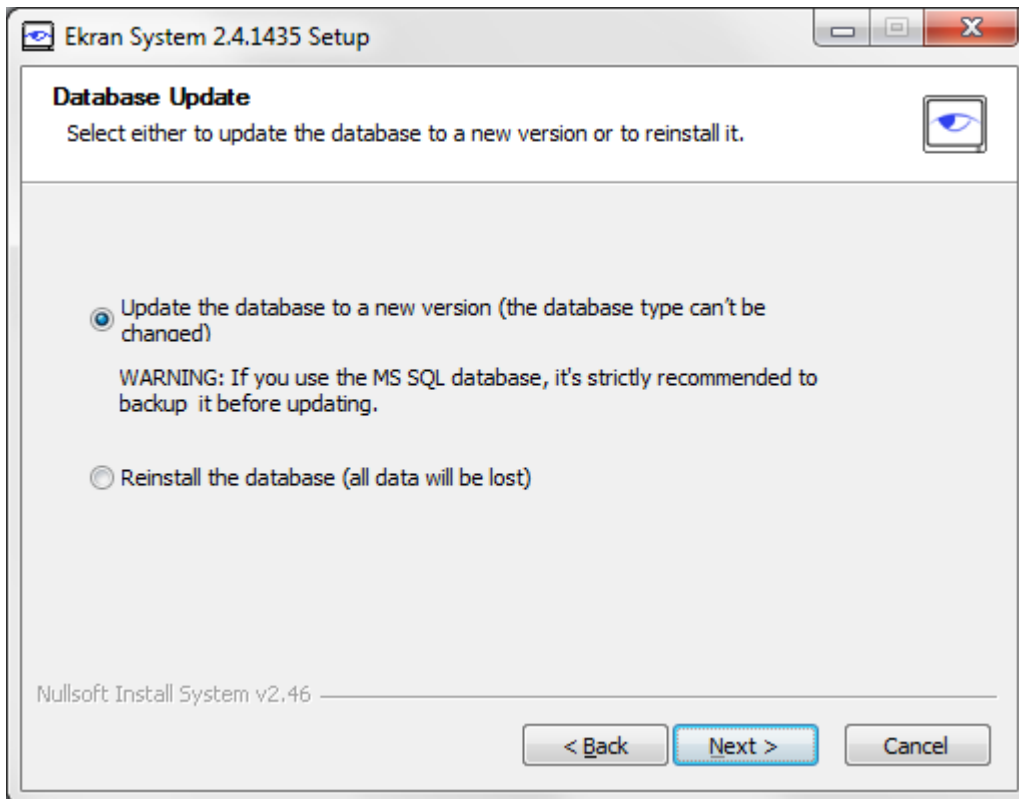
4. On the **Choose Components** page, select **Ekran System Server & Administrative Panel** and click **Next**.



NOTE: If you have Ekran System Monitor installed on the same computer, you will need to select

to update it as well, otherwise it will be removed.

5. On the **Database Update** page, if you want to keep the existing database, select **Update database to a new version**, otherwise select **Reinstall the database**. Click **Next**.



NOTE: To change the type of a database, you need to reinstall the Ekran System.

6. The update process starts.
7. If the update process finishes successfully, you will see the last page of the wizard. Click **Finish** to exit the wizard.

Uninstalling Ekran System Server

Uninstalling Ekran System Server causes installed Ekran System Administrative Panel to be removed from the current computer as well. The Ekran System database containing all the user activity records is removed too. This operation is irreversible.

Warning! During Ekran System Server uninstallation, the database is removed without any user confirmations.

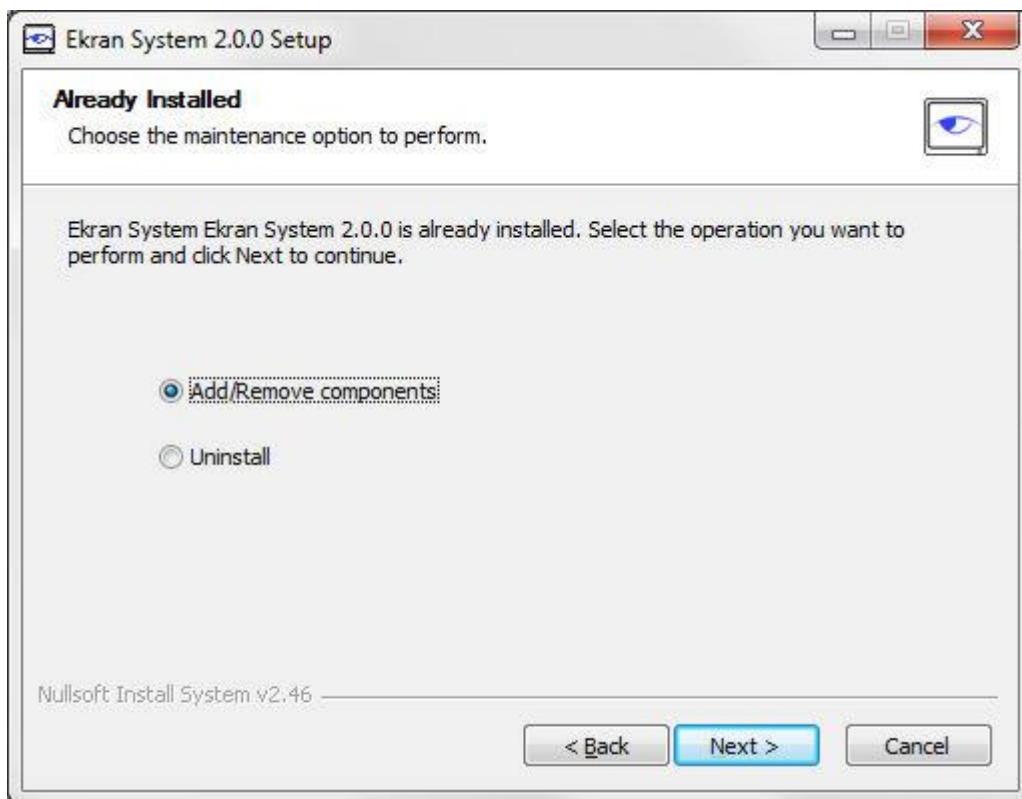
NOTE: If you reinstall the Server and there are serial keys activated online, you need to have an active Internet connection after the Server is reinstalled to synchronize the activated serial keys.

If you have added activated serial keys, after the Server is reinstalled, you need to add them again.

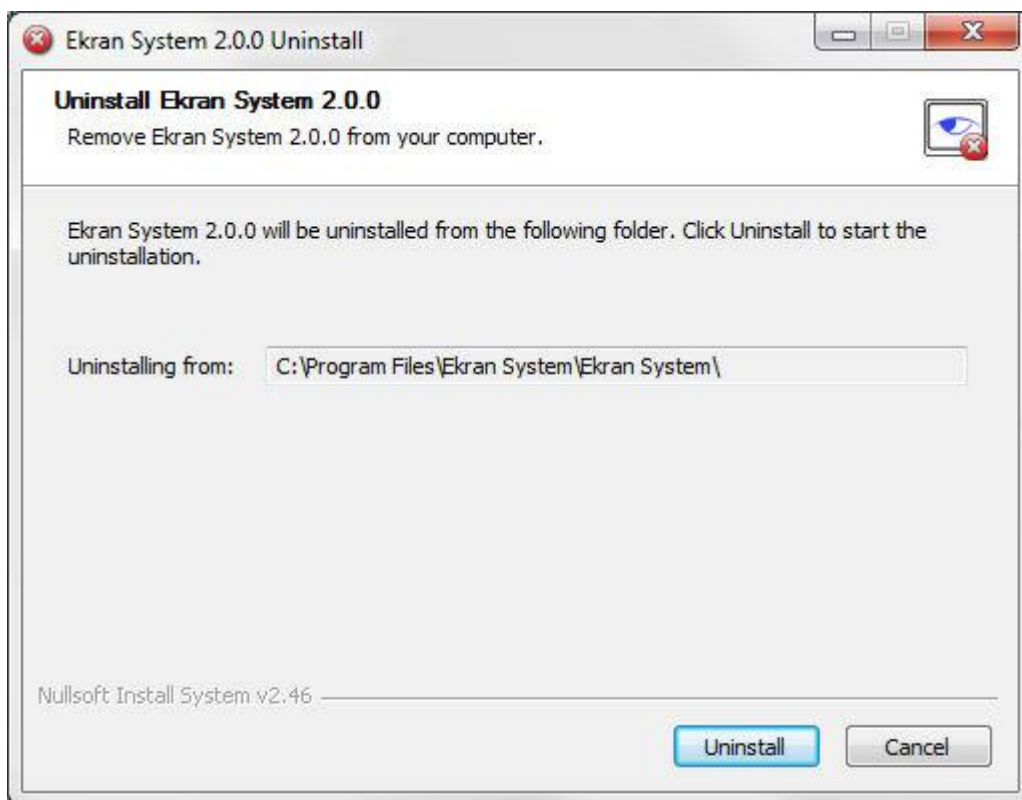
To uninstall the Ekran System Server from the local computer:

NOTE: Before uninstalling the Ekran System Server, make sure you have removed all Ekran System Clients from the remote computers. If you don't remove the Clients, they will remain installed on the remote computers and it will be impossible to remove them in a common way.

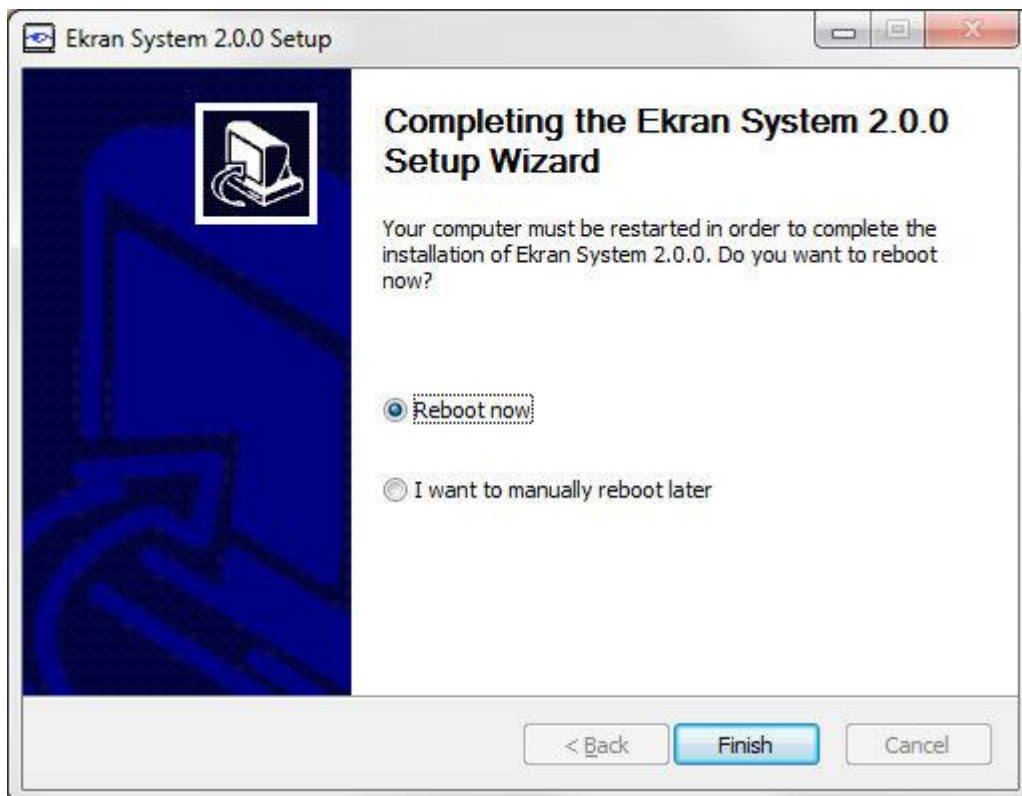
1. Start the Ekran System setup wizard by launching the setup executable (e.g. **EkranSystem-1.1.12_en.exe**) or clicking **Uninstall/Change** on the Ekran System application in the Programs and Features window of the Windows Control Panel.
2. The setup wizard opens.
3. Click **Next** on the Welcome page.
4. The Already Installed page opens. Select Uninstall and click **Next**.



5. The Uninstall Ekran System page opens. Click **Uninstall**.



6. Wait for the uninstallation process to complete. The wizard final page opens.



7. Make a selection to reboot your computer automatically now or manually later and click **Finish**.

Installing/uninstalling/updating Ekran System Monitor

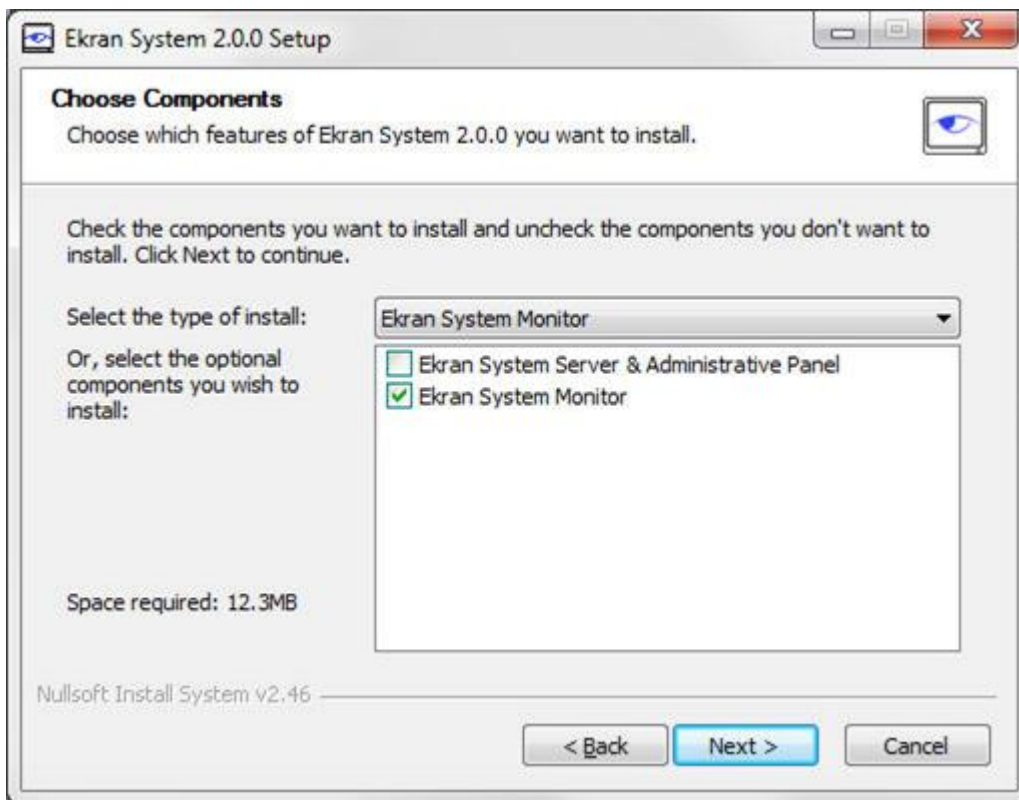
Installing Ekran System Monitor

The Ekran System Monitor is used to investigate the user activity by viewing the screen captures created by the Ekran System Clients and then sent to and stored on the Ekran System Server database.

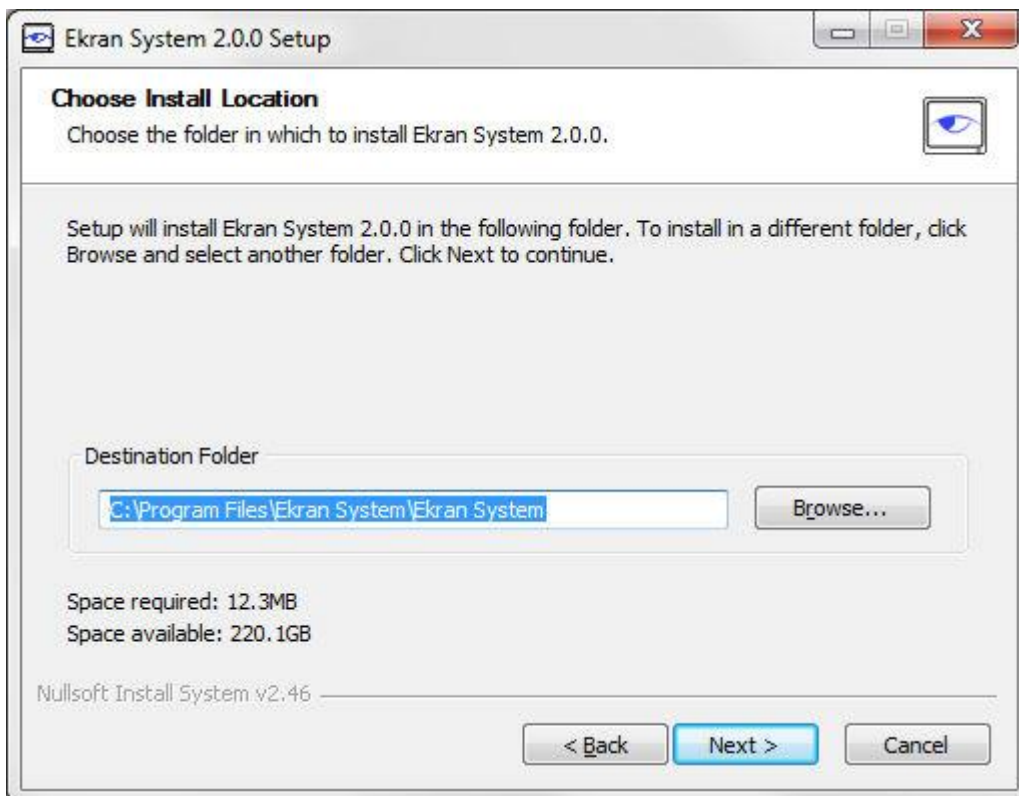
The Ekran System Monitor can be installed on any computer, but a network connection to the Ekran System Server is required for the Monitor to operate.

To install the Ekran System Monitor, do the following:

1. Start the **Ekran System** setup wizard.
2. On the **Welcome page**, click **Next**.
NOTE: If you have any other Ekran System components installed on this computer, the setup wizard will offer to add or remove components and the installation procedure will differ a bit.
3. Carefully read the terms of the End-User Licence Agreement and click **I Agree**.
4. On the **Choose Components** page, do one of the following and click **Next**:
 - In the drop-down list, select **Monitor**.
 - Select **Monitor** in the box.



5. Do one of the following to define the destination folder for the application and click **Next**:
- Click **Browse** and in the **Browse For Folder** window, define the destination folder.
 - Enter the destination folder in the corresponding field.



6. On the **Choose Start Menu Folder** page, do one of the following and click **Install**:

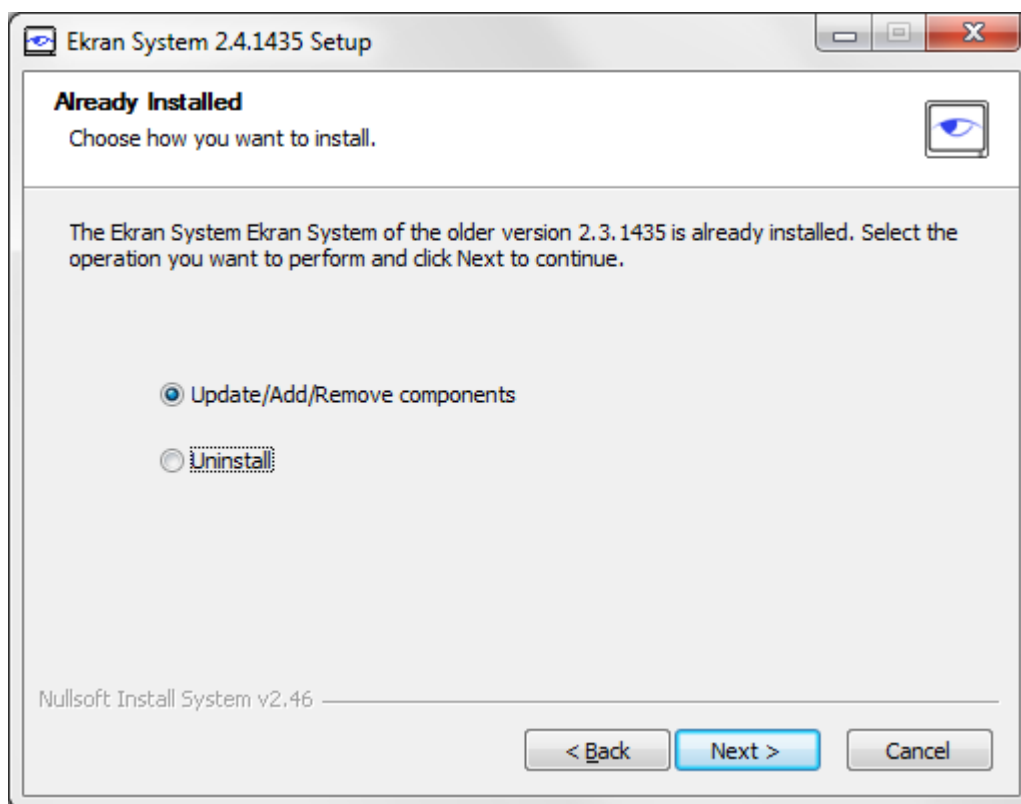
- Define the name for the program folder in the Start Menu.
 - Select **Do not create shortcuts** to not create the program shortcuts.
7. The process of installation starts. Its progress is displayed on the **Installing** page.
 8. If the installation finishes successfully, you will see the last page of the wizard. Click **Finish** to exit the wizard.

Updating the Ekran System Monitor

The updating of the Ekan System Monitor is performed via the Ekran System installation file of a newer version.

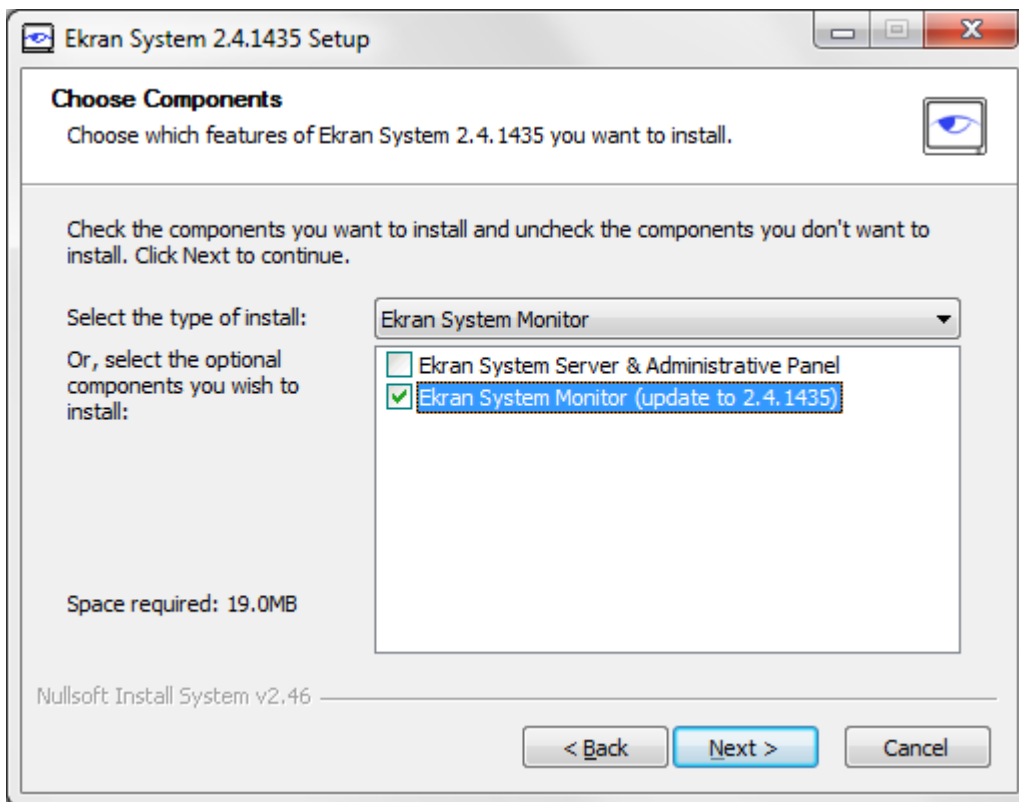
To update the Ekran System Monitor, do the following:

1. Start the **Ekran System** setup wizard.
2. On the **Welcome page**, click **Next**.
3. On the **Already Installed** page, select **Update/Add/Remove components** and click **Next**.



NOTE: If you have Ekran System Server and Administrative Panel installed on the same computer, you will need to select to update them as well, otherwise they will be removed.

4. On the **Choose Components** page, select **Ekran System Monitor** and click **Next**.



5. The update process starts.
6. If the update process finishes successfully, you will see the last page of the wizard. Click **Finish** to exit the wizard.

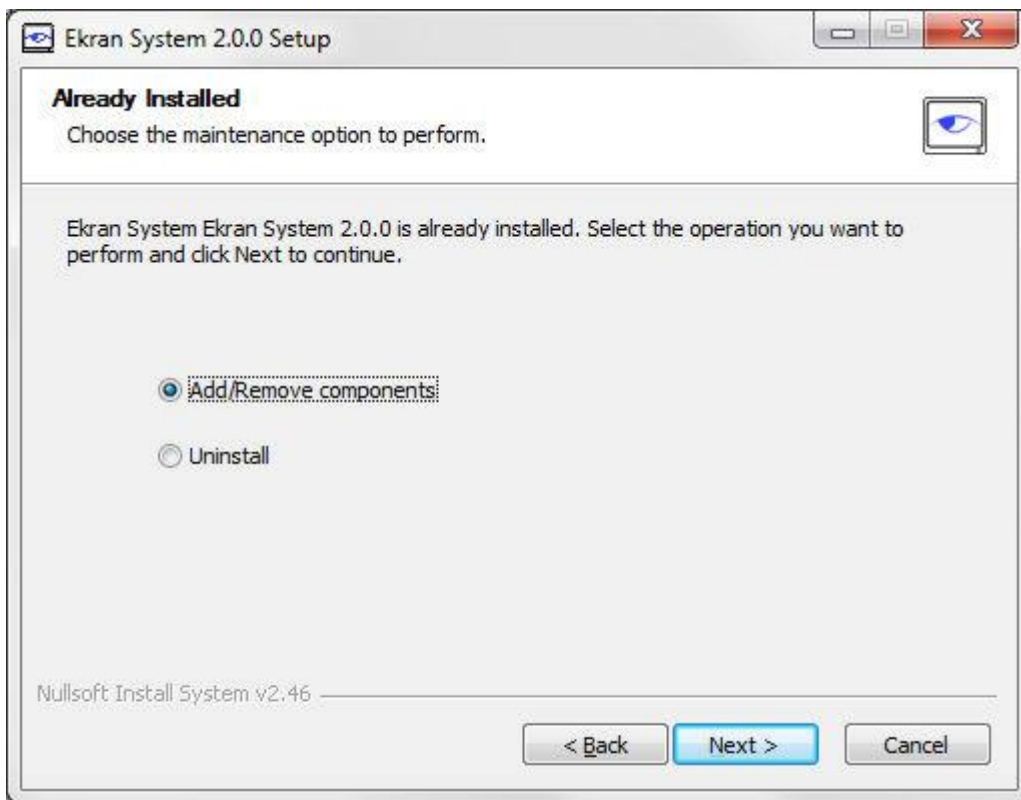
Uninstalling Ekran System Monitor

Uninstallation of the Ekran System Monitor can be performed in 2 ways:

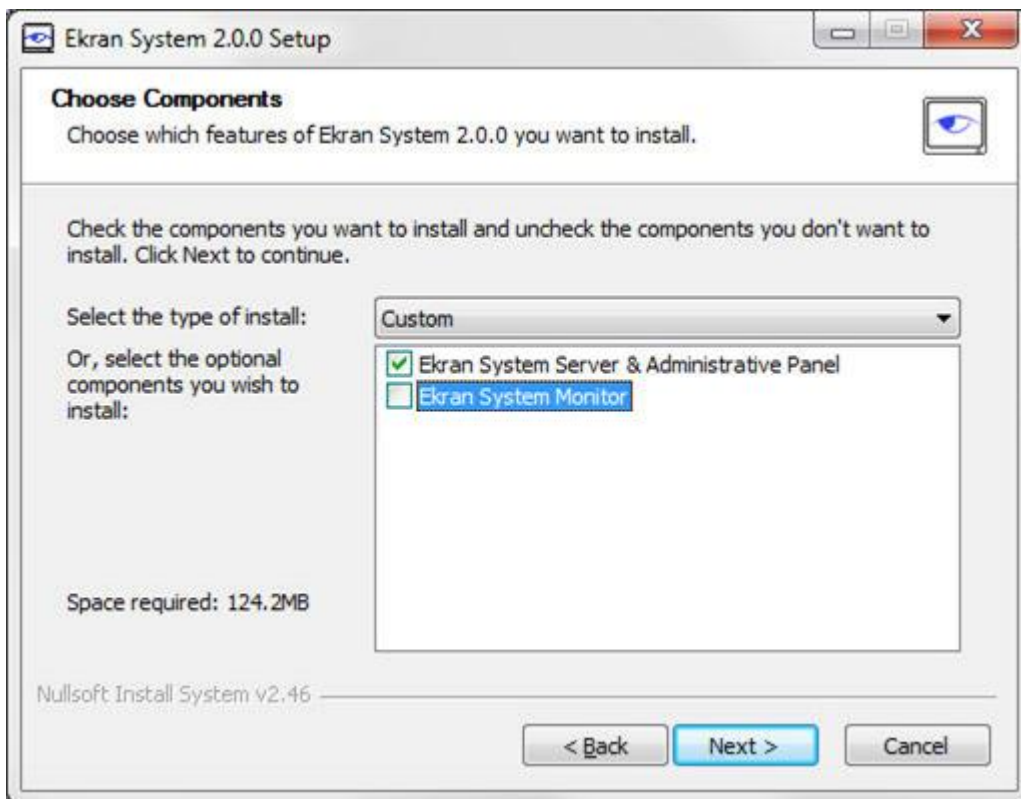
- Via the Ekran System setup wizard by choosing Add/Remove components: This method should be used when Ekran System Monitor is installed together with any other Ekran System components.
- Through Programs and Components in the Windows Control Panel: If you want to remove only Monitor application, use this method only when no other components are installed on the computer along with Ekran System Monitor. This method is intended to remove all Ekran System components installed on the current PC.

To uninstall the Monitor that is installed along with the Ekran System Server and/or Client:

1. Run the Ekran System setup package (e.g. **EkranSystem-1.1.12_en.exe**).
2. Click **Next** on the Welcome page.
3. On the Already Installed page, select Add/Remove components and click **Next**.



4. The Choose Components page opens. Clear the Monitor check box and click **Next**.

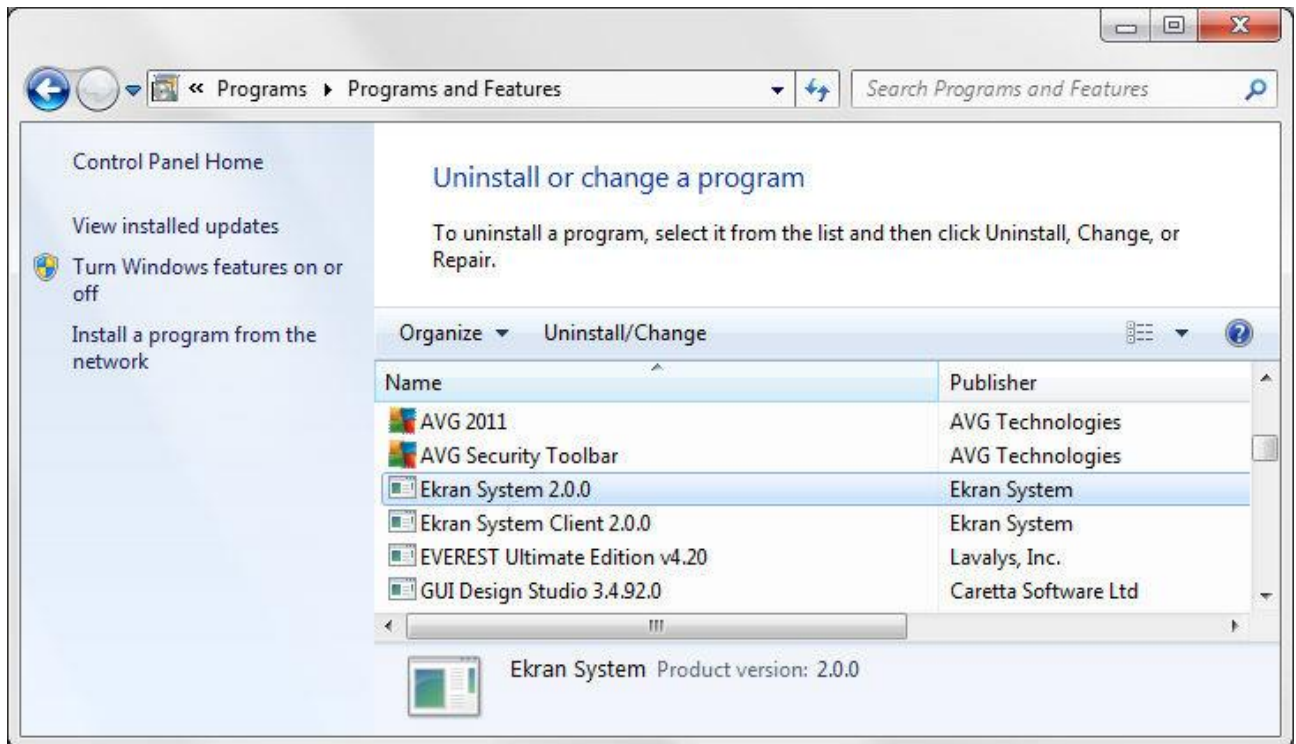


5. The setup wizard removes the unselected components.

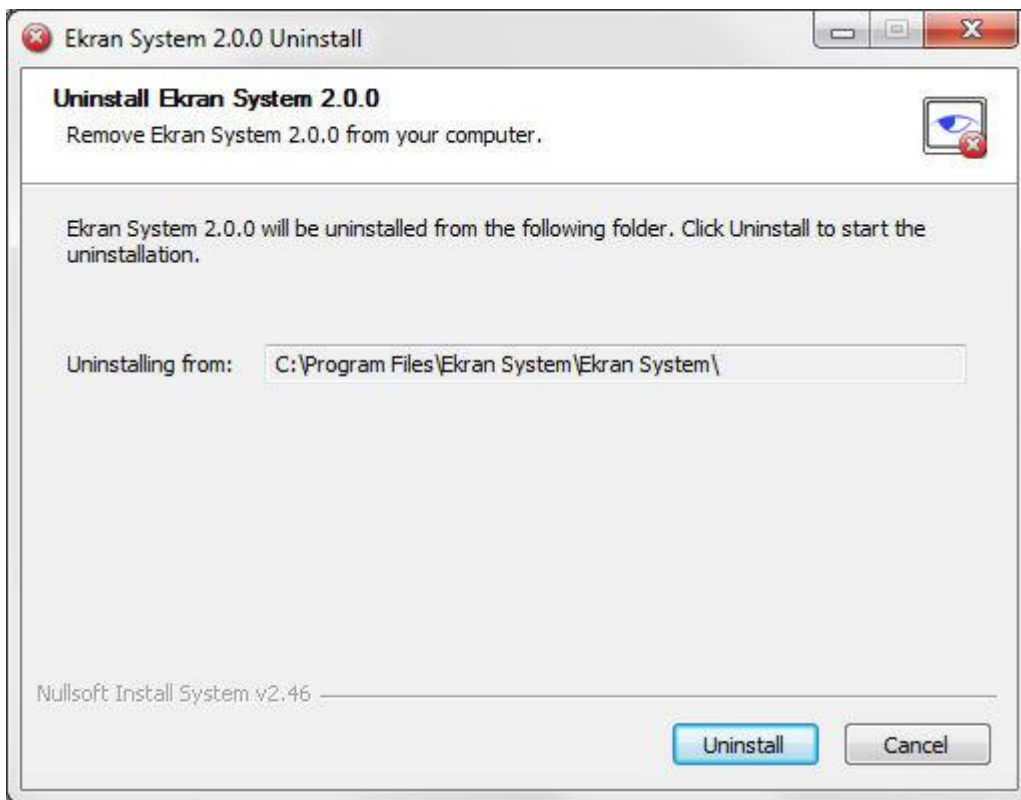
6. When uninstallation is complete, click **Finish**.

To uninstall the Monitor that is installed alone on a separate computer:

1. Open the Windows Control Panel and navigate to the Programs and Components page.
2. Select Ekran System in the programs list and click Uninstall/Change on the toolbar.



3. The Uninstall Ekran System page opens. Click **Uninstall**.



4. Wait for the setup wizard to complete uninstallation and click **Finish**.

Installing/uninstalling/updating Ekran System Clients

About Client Installation

During Ekran System deployment, remote installation of Ekran System Clients is used. Remote installation of Ekran System Clients is performed via Administrative Panel.

To ensure successful remote installation of Ekran System Clients, you have to [set up the network environment](#) beforehand. If your computers belong to a workgroup but not a domain, you need to know the administrator account credentials for each remote computer. Otherwise knowing the Domain Administrator credentials is enough.

Ekran System also features installing Clients (either local or remote) via the installation package generated in the Administrative Panel. Thus you can distribute the installation package of the Client with predefined settings among the network computers and install it. This kind of installation is useful when you experience difficulties with installing Ekran System Clients remotely

via Administrative Panel, or the computers in your network are part of a workgroup and do not have the same administrative account for each computer.

NOTE: It is possible to install the Ekran System Client locally via setup wizard. But the Ekran System Client installed this way is only capable of interacting with the local Ekran System Server. Use other installation methods instead.

Client Installation Prerequisites

Setting up Environment for Remote Installation

You might need to make changes to your network configuration for successful Ekran System installation, and for its components normal interaction.

The majority of Clients installation/uninstallation issues are caused by incorrect system or network settings.

The following conditions have to be met for successful Ekran System Client installation:

- The remote computer has to be online and accessible via network.
- Shared folders have to be accessible on the remote computer. [Simple file sharing \(Sharing Wizard\)](#) has to be disabled.
- You need to know the domain administrator or local administrator account credentials for the remote computer.
- The Server and the Remote Procedure Call (RPC) [system services have to be running](#) on the remote computer.
- [Windows XP and Vista Firewall](#) has to be disabled on the remote computer during the Clients remote installation.
- In Windows 7 and Server 2008 Firewall, [allow inbound connections](#) in the Remote Service Management (RPC) rule for the remote computers (in this case it is not necessary to disable Windows Firewall)
- In Windows Firewall on the Server side, allow Ekran System Server executable to accept TCP connections via ports 9446, 9447, 9449:

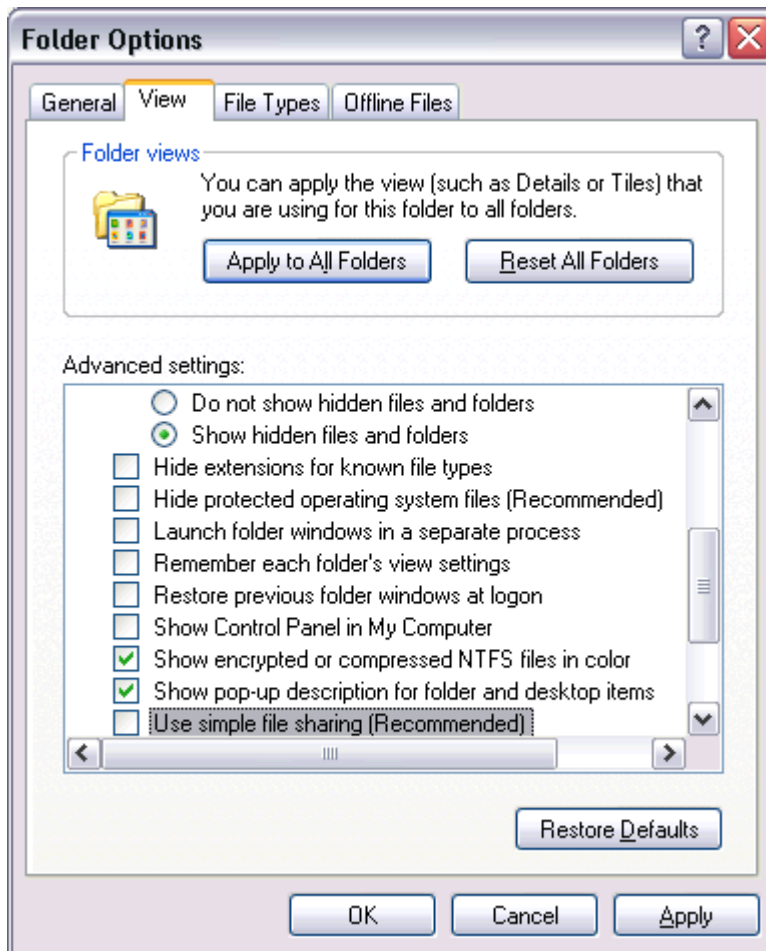
NOTE: These rules will be added to Windows Firewall automatically, if Windows Firewall is enabled during Ekran System Server installation.

Make sure the conditions mentioned above are met to avoid possible problems with Client remote installation.

Disabling Simple File Sharing in Windows XP

To disable Simple file sharing in Windows XP, do the following:

1. Open **My Computer**.
2. Select **Tools > Folder Options** in the menu.
3. The Folder Options window opens. Select the View tab.

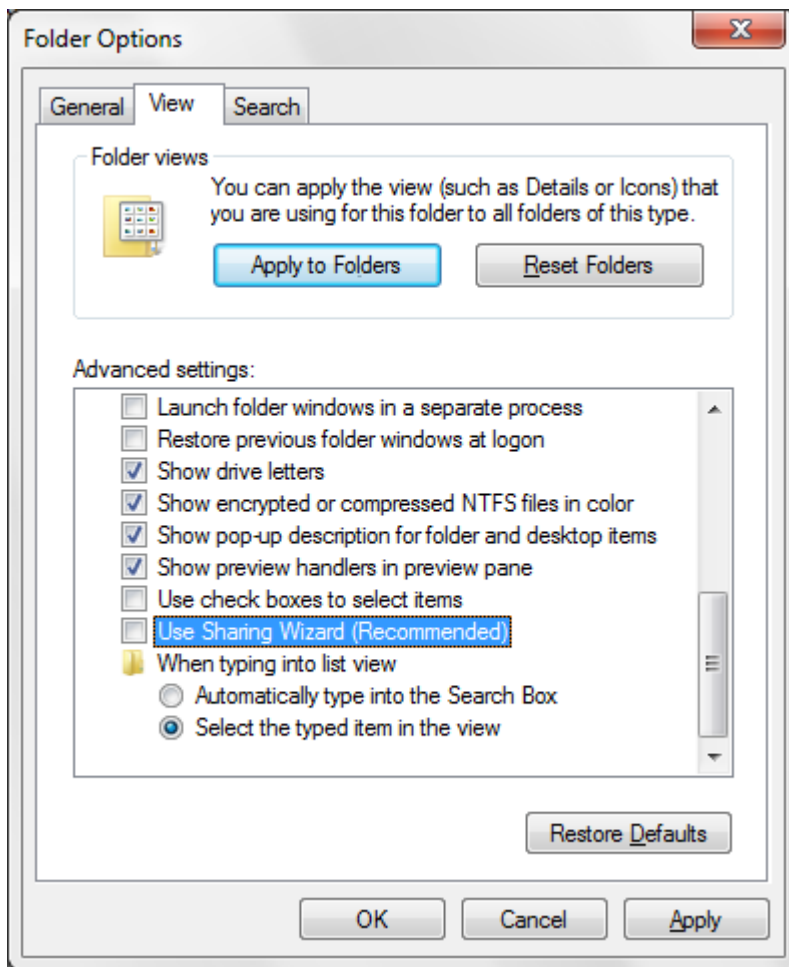


4. Clear the **Use simple file sharing** check box.
5. Click **Apply** and **OK** to close the window.

Disabling Sharing Wizard in Windows 7

To disable the Sharing wizard in Windows 7, do the following:

1. Open **Computer**.
2. Select **Organize > Folder and search options**.
3. The Folder Options window opens. Select the View tab.

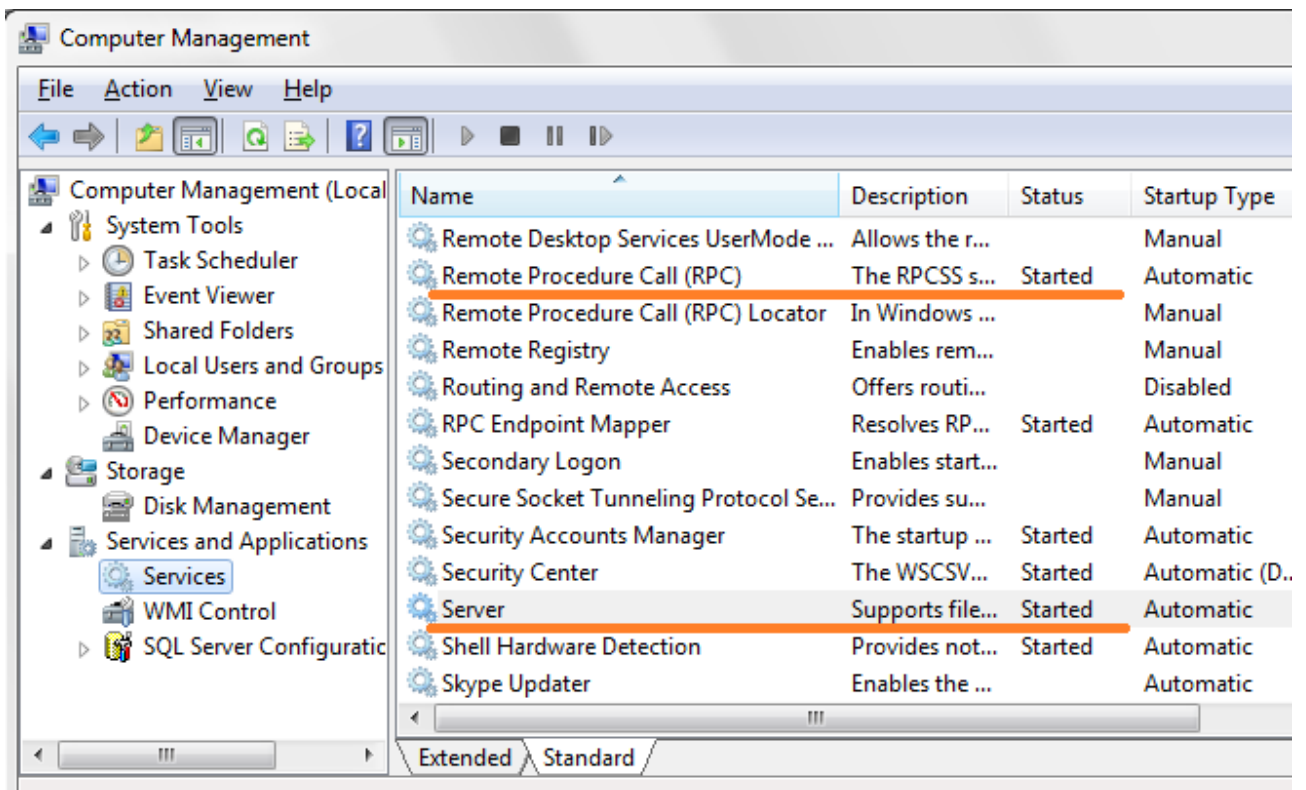


4. Clear the **Use Sharing Wizard** check box.
5. Click **Apply** and **OK** to close the window.

Checking System Services

To check that the Server and Remote Procedure Call (RPC) system services are running:

1. Right click **Computer** and select **Manage**. Computer Management opens.
2. Expand the Services and Applications node and select Services.
3. Find the Server service and the Remote Procedure Call (RPC) service in the list of services. Make sure both services are running (they status is displayed as Started).



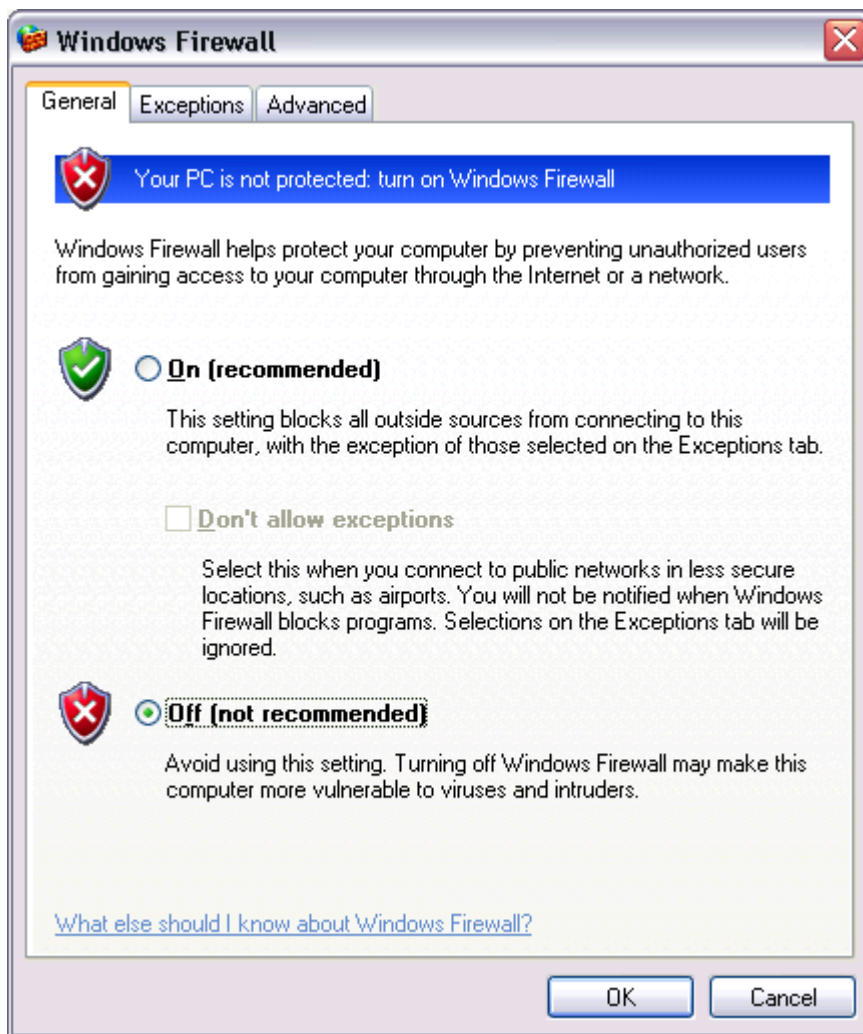
4. If one or both services are not running, start them manually. To start the service, right click it and select **Start** from the context menu. The selected service is started.

To quickly access Windows Services, press **Windows+R**, type **services.msc** in the Run text box and press **Enter**.

Disabling Windows XP/Vista Firewall

To disable Windows XP Firewall:

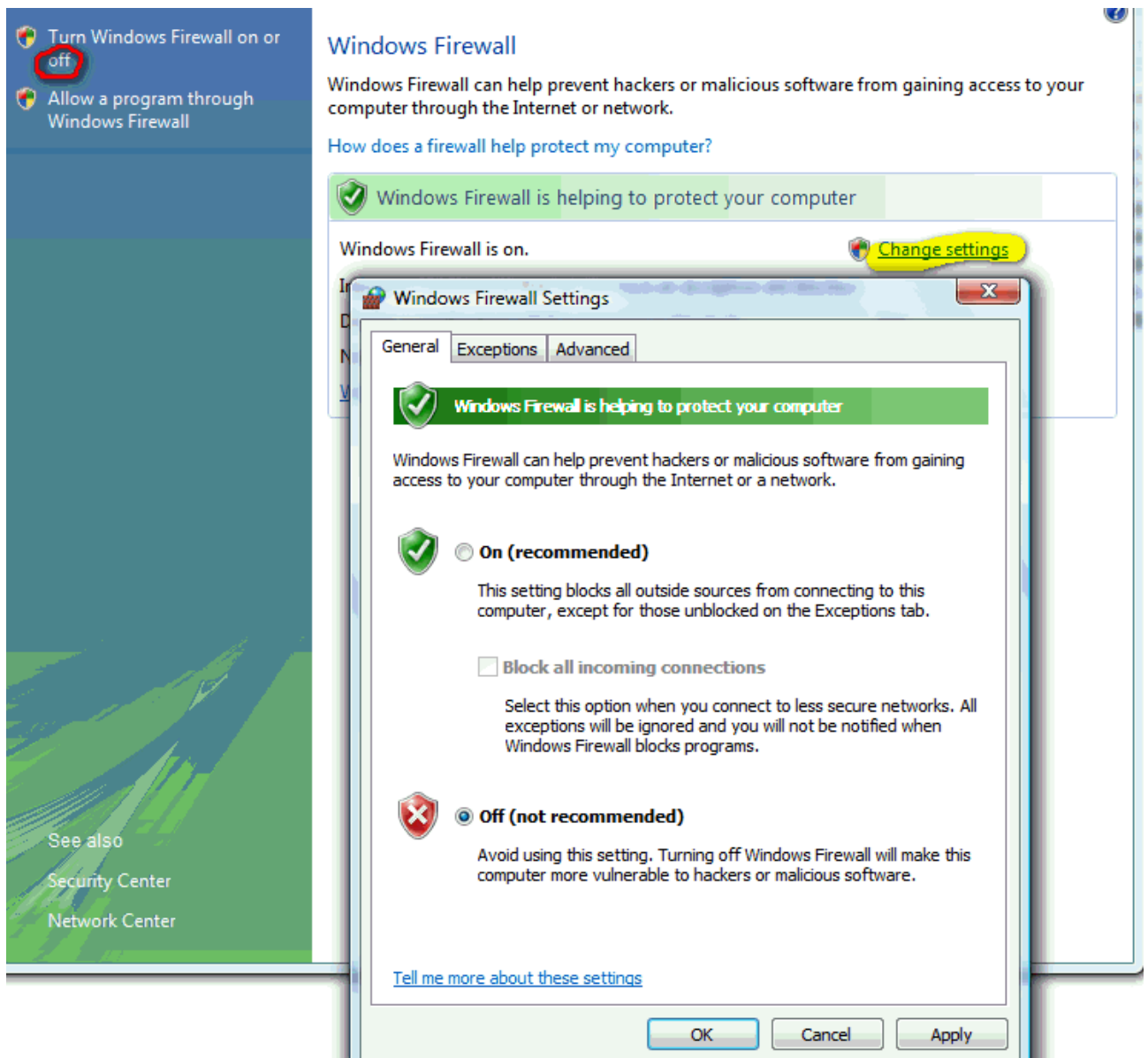
1. Select **Start > Control Panel > Windows Firewall**.
2. The Windows Firewall window opens.



3. Select **Off (not recommended)** and click **OK**.

To disable Windows Vista Firewall:

1. Select **Start > Control Panel > Security > Windows Firewall**.
2. Click **Turn Windows Firewall on or off**. Enter your administrator password if prompted to do so.



3. In the Windows Firewall Settings window, select **Off (not recommended)** and click **OK**.

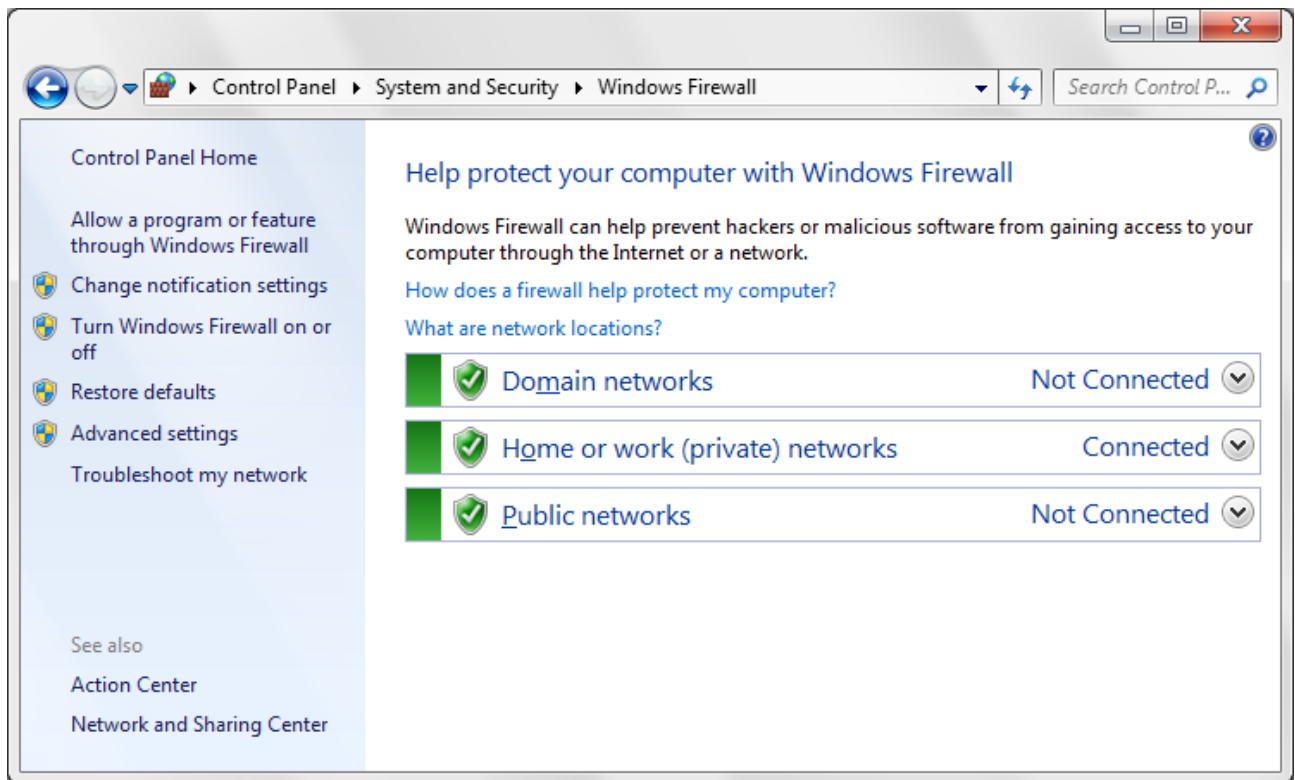
Setting Up Windows 7 Firewall

It is not necessary to disable the Windows Firewall in Windows 7 and Windows Server 2008. For successful remote installation of Ekran System Clients, you have to allow inbound connections in the Remote Service Management (RPC) rule for the remote computers.

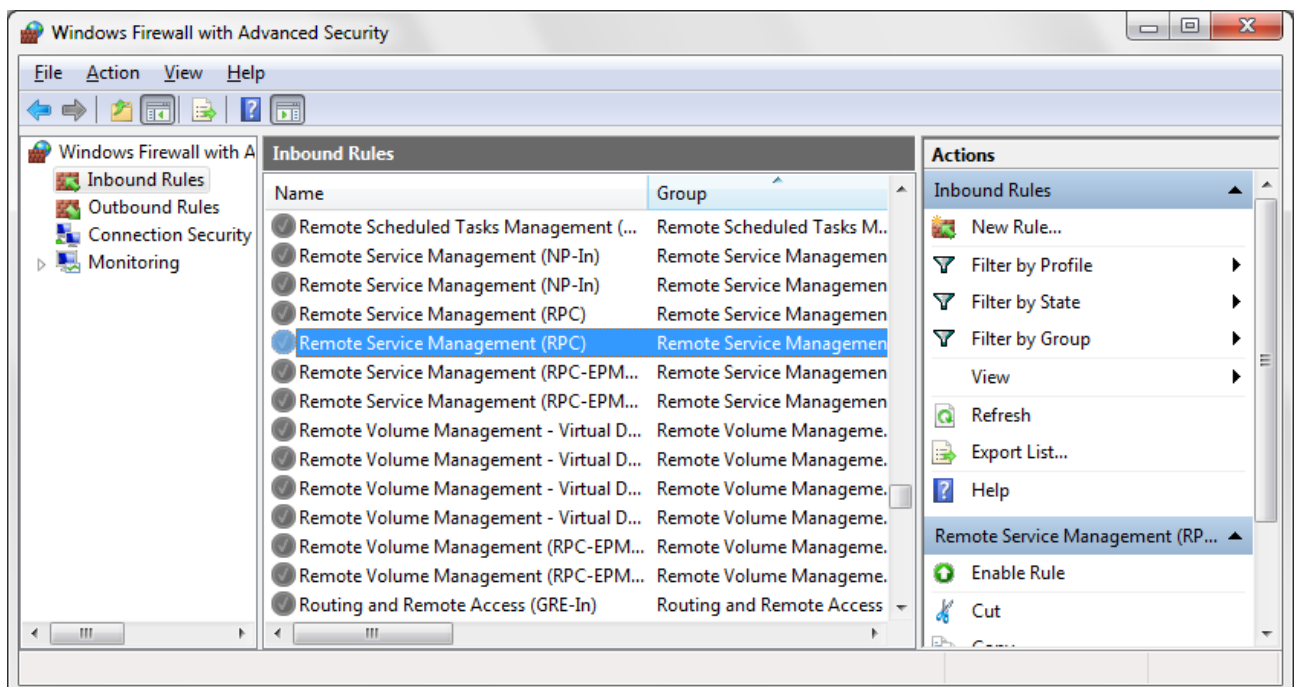
To enable inbound connections for the Remote Management Service (RPC), do the following:

1. Select **Start > Control Panel > System and Security > Windows Firewall**.

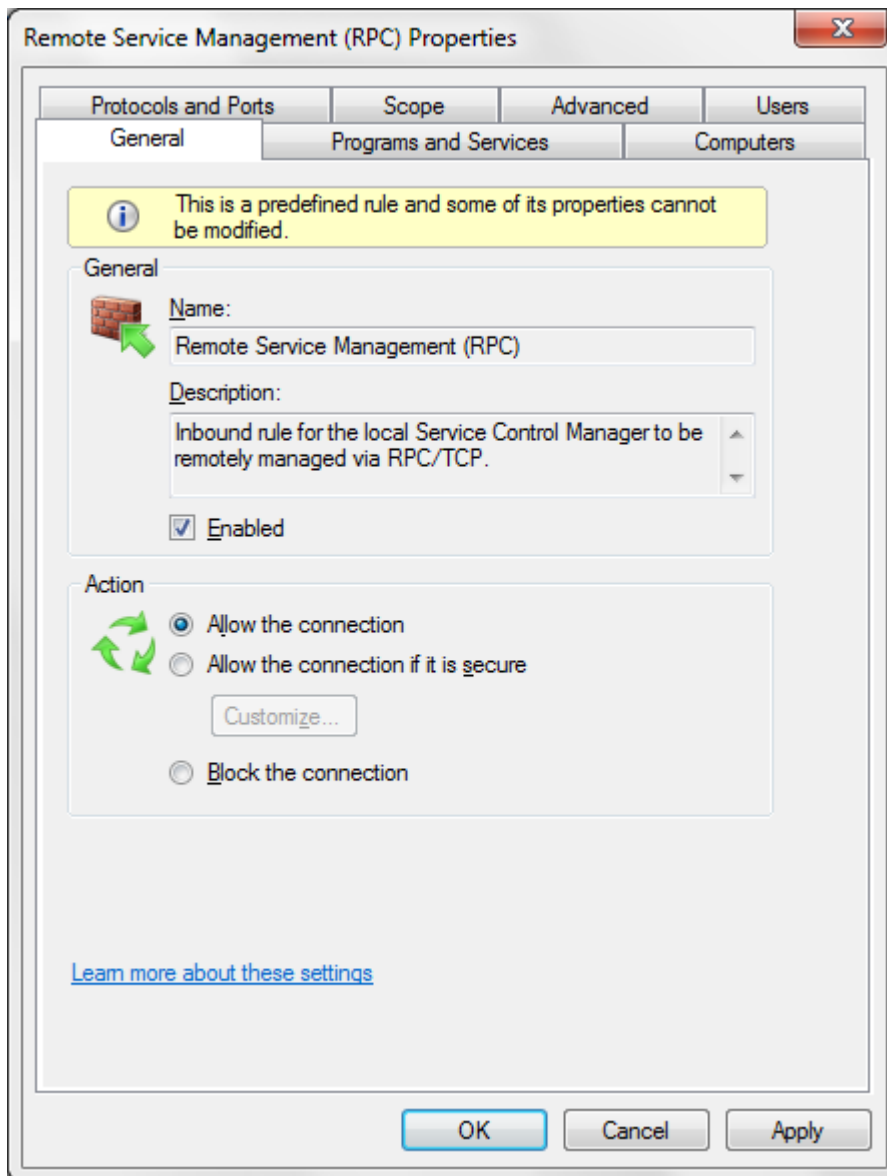
2. The Windows Firewall window opens.



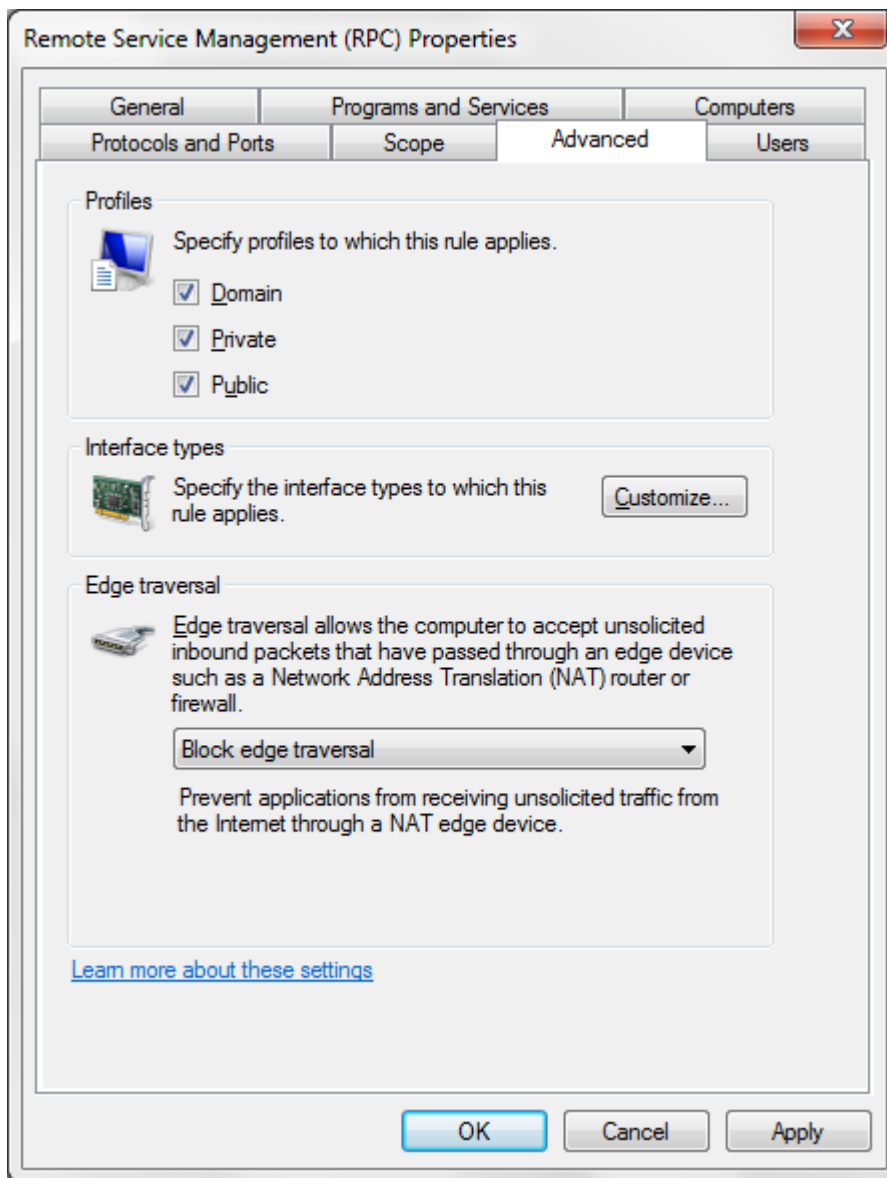
3. Click **Advanced settings**. The Windows Firewall with Advanced Security window opens.
4. Click **Inbound Rules** and then double click the **Remote Service Management (RPC)** rule in the rules list.



5. The Remote Service Management (RPC) Properties window opens.



6. In the **General** tab, select **Enabled** under **General** and click **Allow the connection** under **Action**.
7. In the **Advanced** tab, under **Profiles**, select the profile of the network used for connecting remote computers and the Ekran System Server.

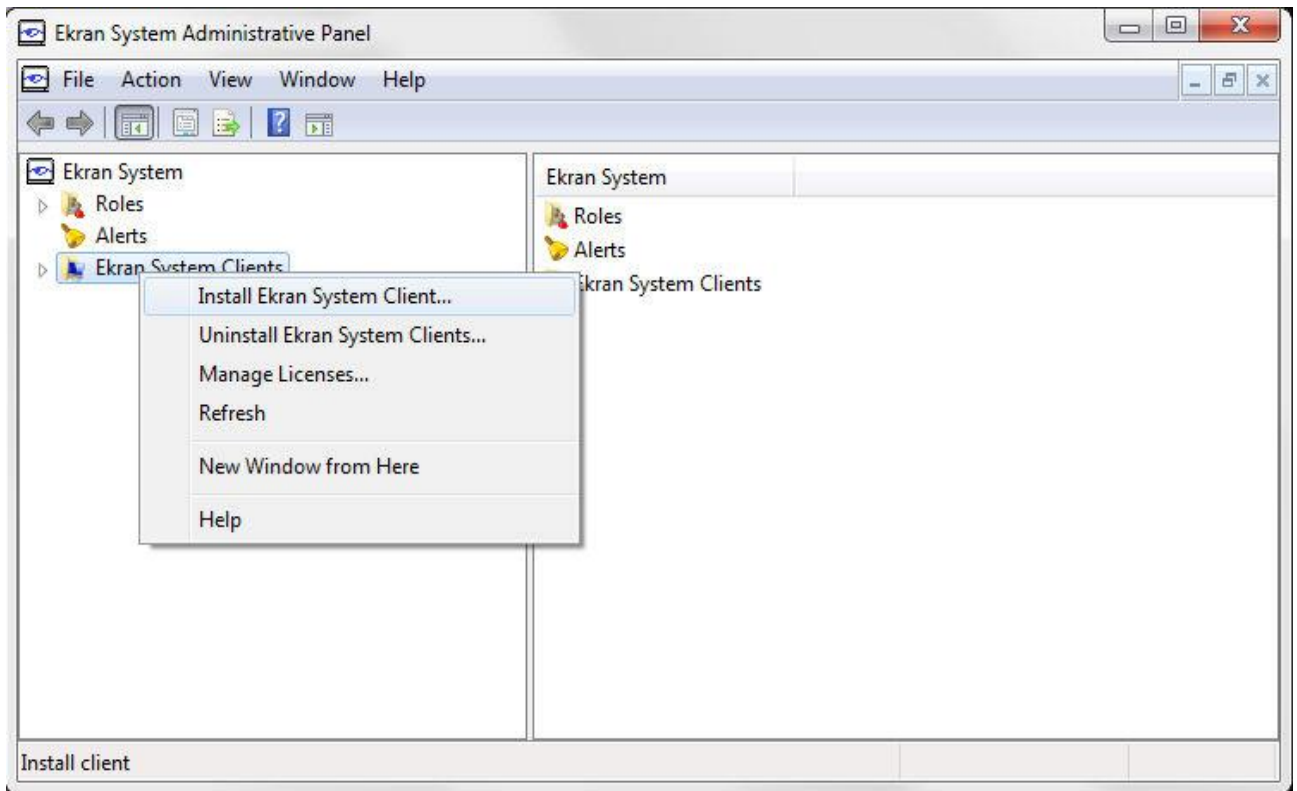


8. Click **Apply** and then **OK** to save the settings and close the Properties window.
9. Close the Windows Firewall window.
10. Create an [inbound rule](#) for Server executable.

Installing Clients via Administrative Panel

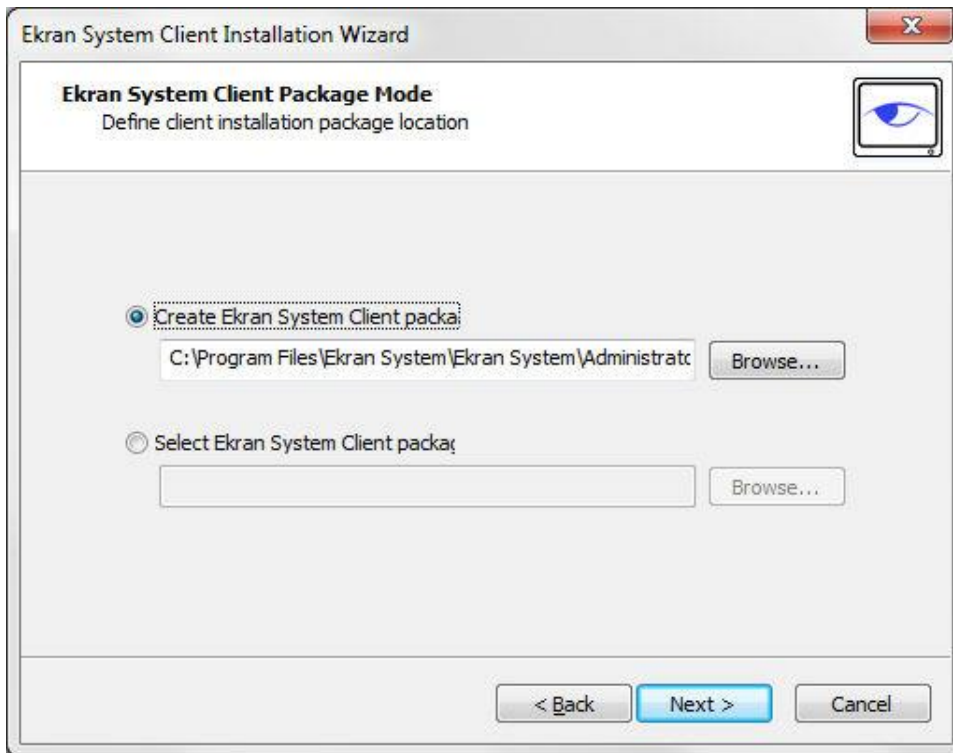
To perform the remote Client installation via Ekran System Administrative Panel, do the following:

1. Start the Ekran System Administrative Panel.
2. Select Ekran System Clients in the navigation pane or details pane.
3. Click **Action** and select **Install Ekran System Client** or right-click and select **Install Ekran System Client**.

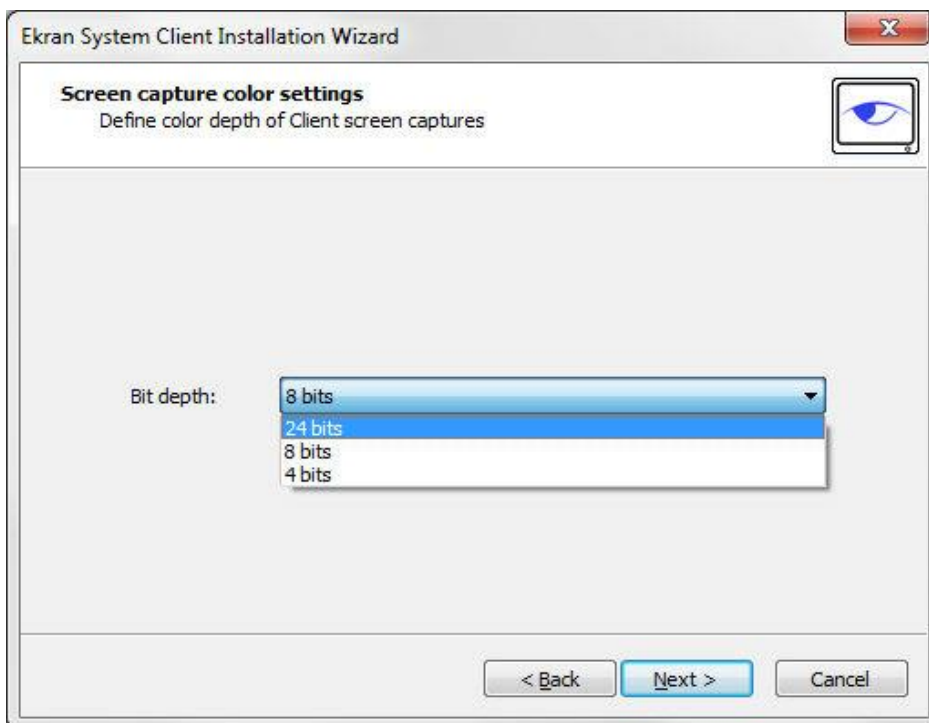


4. The **Ekran System Client Installation Wizard** opens. Click **Next** on the Welcome page.
5. On the **Ekran System Client Package Mode** page, select one of two options and click **Next**:
 - **Create Ekran System Client package**: Use this option if you haven't performed a remote installation yet. Type the path to the newly created package or click **Browse** and navigate to it.
 - **Select Ekran System Client package**: Use this option if you have performed a remote installation already. Type the path to the installation package or click **Browse** and navigate to it.

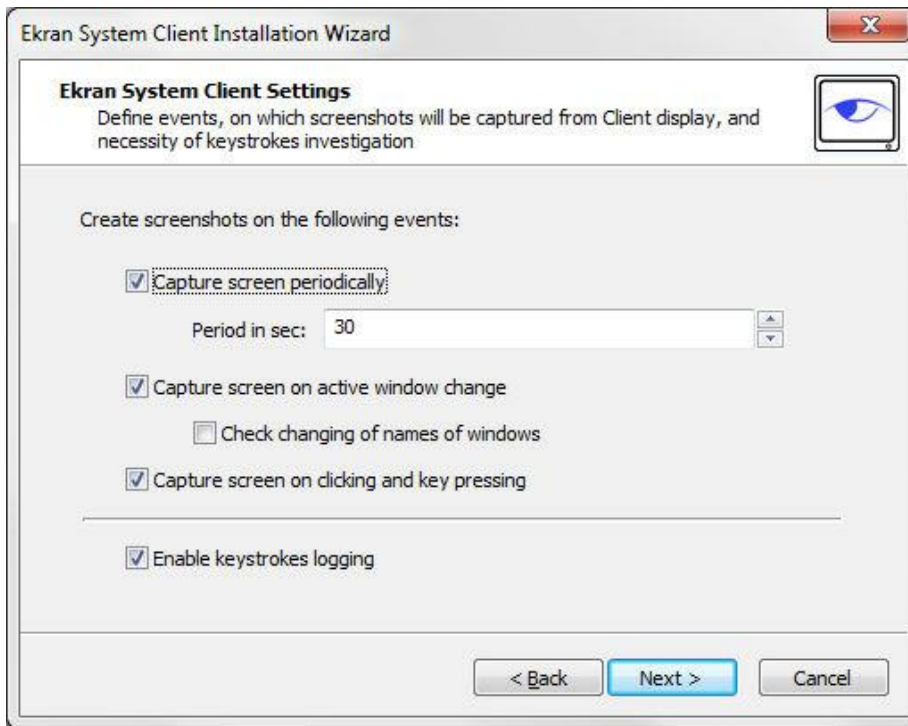
NOTE: If you select the **Select Ekran System Client package** option, steps 6,7,8 will be omitted.



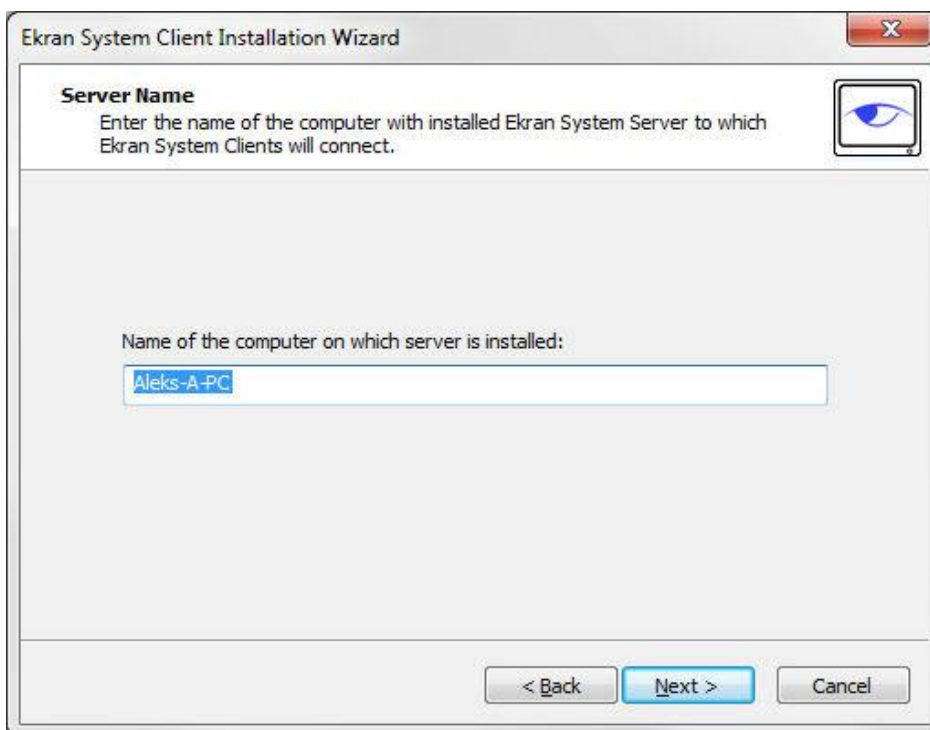
6. On the **Screen capture color settings** page, select the color depth for the created screen captures and click **Next**.



7. On the **Screen capture creation settings** page, define the frequency with which the screen captures will be created. Click **Next**.

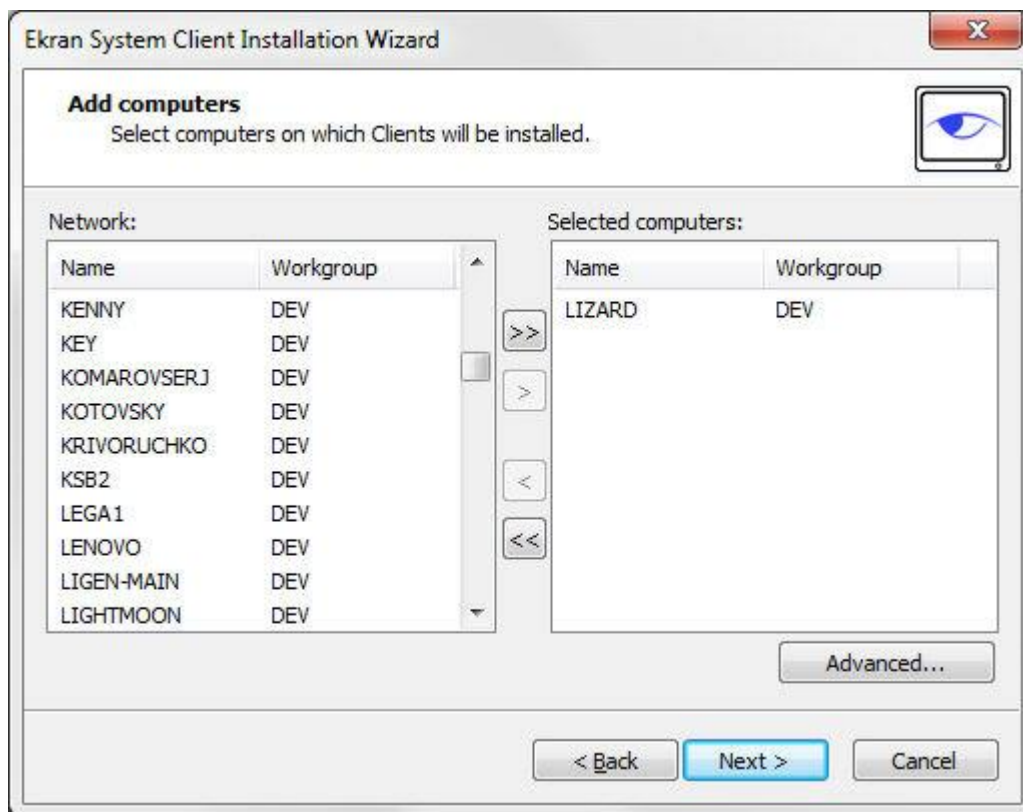


8. On the **Server Name** page, type the name or the IP-address of the computer on which the Ekran System Server and Administrative Panel are installed. Clients will connect to this server and the received screen captures will be stored on its computer. Click **Next**.



Note: The server IP address has to be static for Clients to connect to it successfully. Unique external IP addresses should be used for cloud-based servers.

9. On the **Further Actions** page, check the location to which the installation package will be saved and select the **I want to install the configured Client automatically on remote computers** option. Click **Next**.
10. On the **Remote Installation** page, read the information that will help you to install Clients on remote computers successfully and make sure that all conditions are met on computers on which Clients are to be installed. Click **Next**.
11. On the **Add computers** page, select hosts on which Clients are to be installed. Click **Next**.



12. On the **Authentication** page, enter the administrator credentials under which the Clients are to be installed and then click **Next**:
 - If the computers are in a domain, enter the domain name and domain Administrator account credentials.
 - If the computers are in workgroup, leave the **Domain** box empty and enter the credentials of a local Administrator for target computers.

NOTE: All workgroup computers must have the same Administrator account credentials. Otherwise use installation via installation package method to deploy Ekran System Clients.

Ekran System Client Installation Wizard

Authentication
Enter user credentials for Client installation.

User login:

User password:

< Back Next > Cancel

13. Package creation starts. As soon as the package is created, it is deployed on the selected host computers and the Client is installed on them.
14. Wait for the wizard to complete the installation and click **Finish**.

Installing Clients via Installation Package

You can install Ekran System Clients via the installation package in 2 ways:

- via the administrative panel using the formerly created package
- by copying the package to the remote computer and starting it there.

To create an installation package:

NOTE: Steps are the same as [steps 5-9 of the remote Client installation](#) instructions.

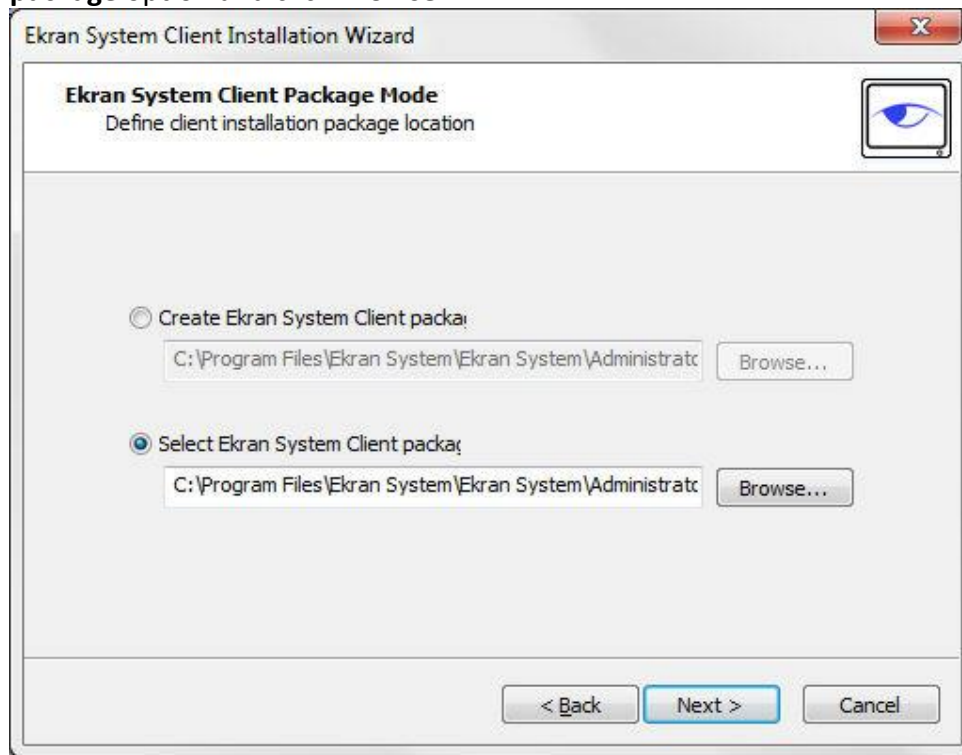
1. Start the Ekran System Administrative Panel.
2. Select Ekran System Clients in the navigation pane or details pane.
3. Click **Action** and select **Install Ekran System Client** or right-click and select **Install Ekran System Client**.
4. The **Ekran System Client Installation Wizard** opens. Click **Next** on the Welcome page.

5. On the **Ekran System Client Package Mode** page, select **Create Ekran System Client package** and click **Browse** to select a folder to which it will be saved, and then click **Next**.
6. On the **Screen capture color settings** page, select the color depth for the created screen captures and click **Next**.
7. On the **Screen capture creation settings** page, define the frequency with which the screen captures will be created. Click **Next**.
8. On the **Server Name** page, type the name or the IP-address of the computer on which the Ekran System Server and Administrative Panel are installed. Clients will connect to this server and the received screen captures will be stored on its computer. Click **Next**.
NOTE: The server IP address has to be static for Clients to connect to it successfully. Unique external IP addresses should be used for cloud-based servers.
9. On the **Further Actions** page, check the location to which the installation package will be saved and clear the **I want to install the configured Client automatically on remote computers** option. Click **Next**.
10. Package creation starts. As soon as the package creation is finished, click **Finish**.

To install Ekran System Client via the Administrative Panel using a formerly created installation package, do the following:

1. Start the **Ekran System Administrative Panel**.
2. Select the **Ekran System Clients** node to the right of the window.
3. Right click and select **Install Ekran System Client**.
4. The **Ekran System Client Installation Wizard** opens. Click **Next** on the Welcome page.

- On the **Ekran System Client Package Mode** page, choose the **Select Ekran System Client package** option and click **Browse**.



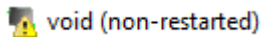
- Navigate to the formerly created package and select it. Click **Next**.
- Continue the installation as described in [common remote installation](#).

To install Ekran System Client using the installation package on the target computer:

- Copy the package to the remote computer and start it under the Administrator account. By default, the created package is saved to the following directory: **<Ekran System installation folder>\Administrative Panel\Package**.
- After the package is deployed, the name of the required computer appears as a sub-node of the **Ekran System Clients** node in the **Ekran System Administrative Panel**.

Updating the Ekran System Clients

The Ekran System Client updating is performed automatically when a Client connects to the Server of a newer version. As soon as updates are applied to a Client, you'll see a warning icon and a **non-restarted** status message near the Client name indicating that a reboot of the Client computer is required.



NOTE: Not restarted Clients do not stop the monitoring and all features of the old Client are still available to them, but new features will not be available until the Client computer is rebooted.

After a reboot you will also be able to access the monitored data of the old Client.

In some cases, if you install a newer version of the Ekran System Server, Clients of very old versions will not be able to update and you will see the **unable to update** status message near the Client name. In this case you need to uninstall the old Client and install a new version of a Client.

Cloning a Virtual Machine with Installed Client

Each Client has its own unique ID, which it receives when it connects to the Server. When you prepare a virtual machine, which is to be monitored by Ekran System, for cloning, you need to remove the Client ID to ensure the proper Client connection to Server.

To remove the Client ID:

1. Open the Windows Registry Editor.
2. In the Registry Editor window, select the following key **HKEY_LOCAL_MACHINE\SOFTWARE\EkranSystem**.
3. Double-click the **AgentGUID** value or select it and click **Modify** in the right-click menu.
4. Remove the ID from the **Value Data** box.
5. Click **OK**.

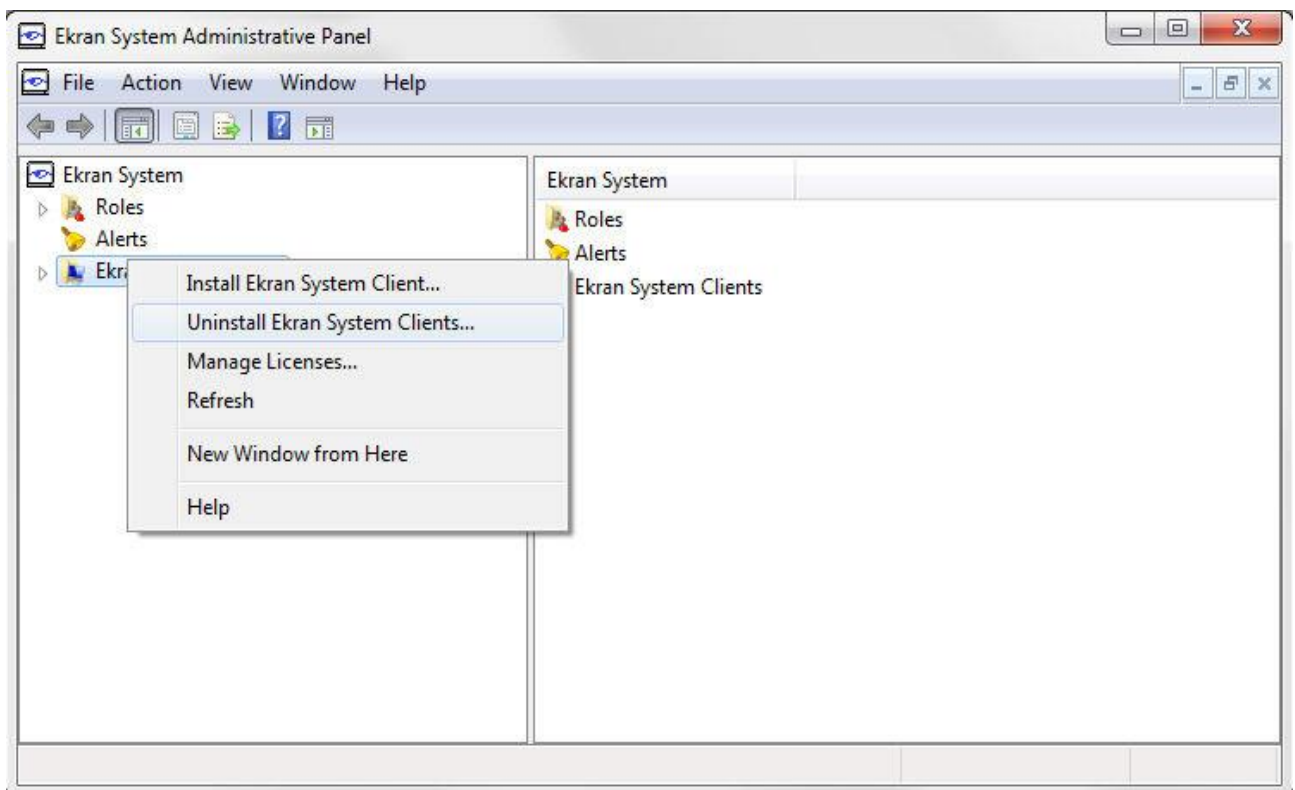
Uninstalling Ekran System Clients

You can uninstall more than one Ekran System Client from selected host(s).

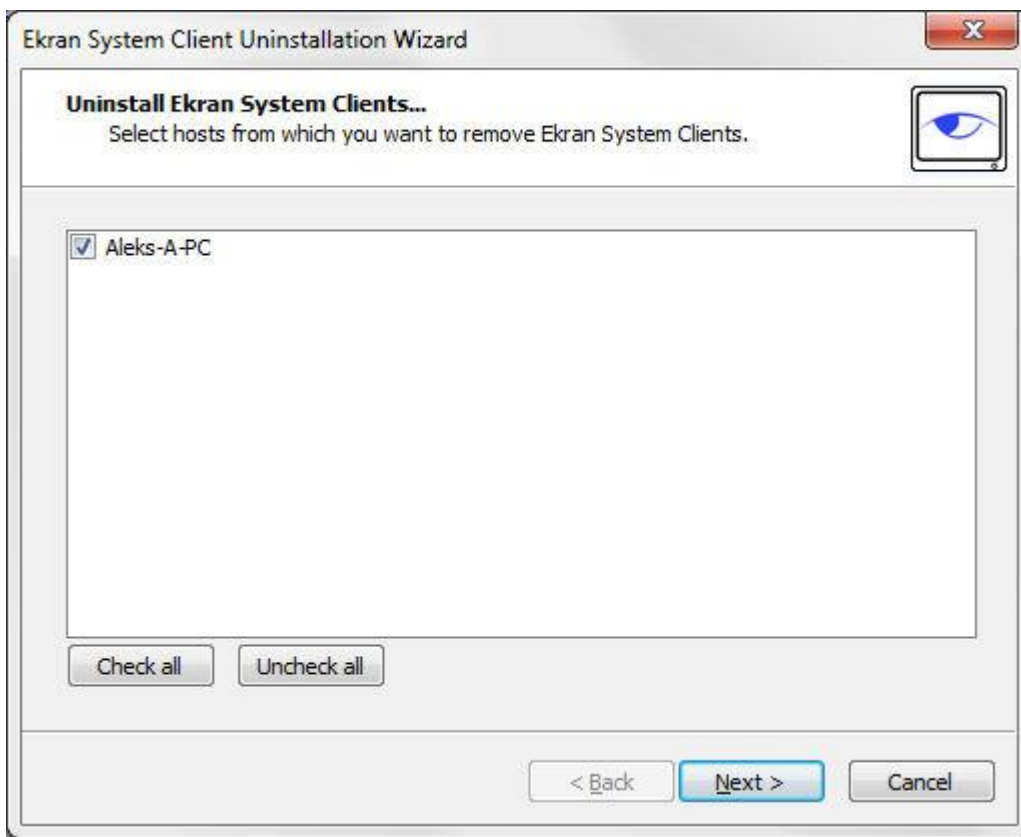
To uninstall the Client:

1. Start the Ekran System Administrative Panel.

2. Select **Ekran System Clients** in the navigation pane or details pane.
3. Select **Action > Uninstall Ekran System Client** or right-click and select **Uninstall Ekran System Client**.



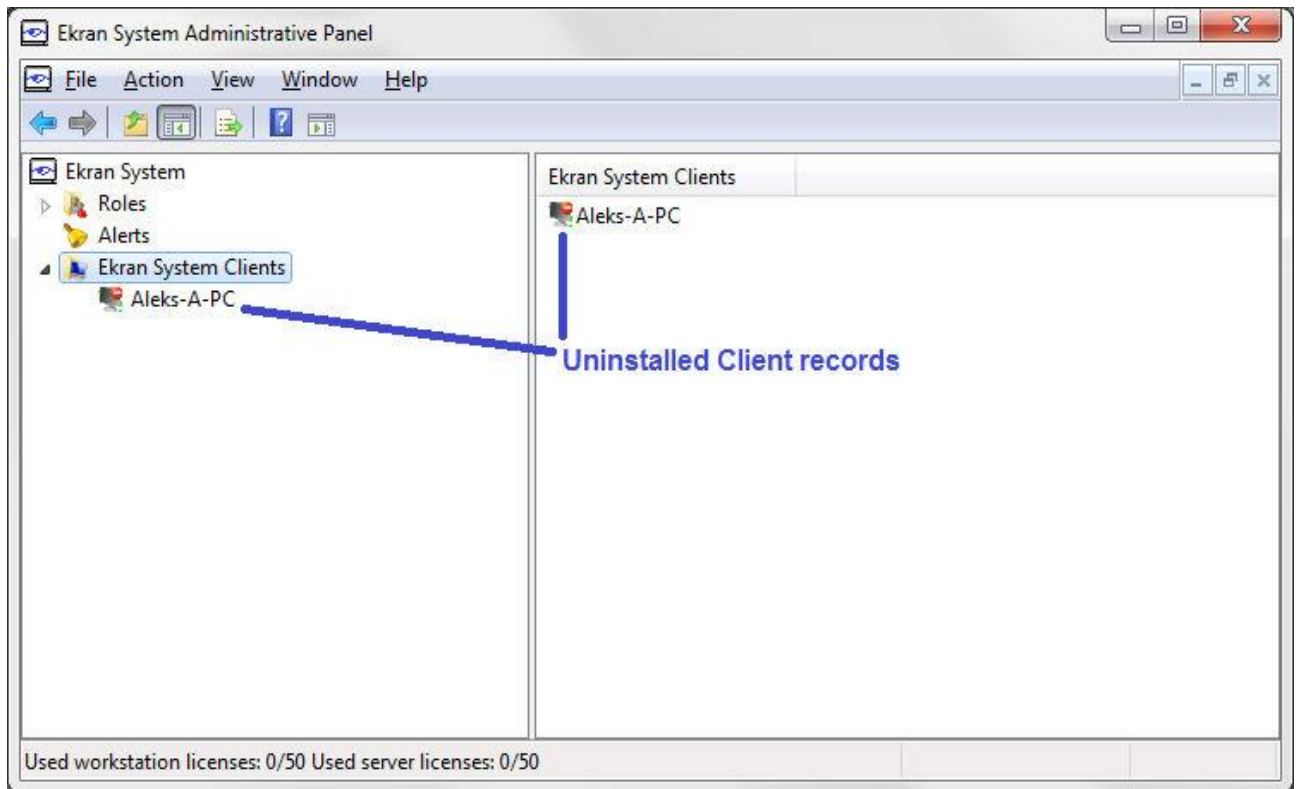
4. The **Ekran System Client Uninstallation Wizard** opens.



5. Select the hosts from which Clients will be uninstalled. Select the checkbox near the name of the corresponding host. You can use the **Check All/Uncheck All** buttons to select/deselect all Clients. Click **Next**.
6. The uninstallation process starts. After the uninstallation finishes, click **Finish** to exit the wizard.

To uninstall a single Client:

1. Start the Administrative Panel.
2. Select **Ekran System Clients** list in the navigation pane.
3. Right click the target Client and select **Uninstall Ekran System Client**.
4. Confirm the Client uninstallation.
5. If the Client had transferred any user activity records before it was removed, the corresponding host remains in the list of Ekran System Clients marked as uninstalled. The respective user activity records are kept stored on the Ekran System Server.



Licensing

General Licensing Information

To start receiving information from Ekran System Clients, you have to assign **licenses** to them. Two types of licenses are available:

- **Workstation license:** Clients with this license monitor only one session, either remote or local, on the investigated computer.
NOTE: Licenses of the workstation type cannot be assigned to a computer with Server OS.
- **Server license:** Clients with this license monitor unlimited number of remote sessions and any local sessions on the investigated computer. Remote sessions include Remote Desktop sessions, terminal sessions, etc.

Each client can have only one license assigned, either workstation or server.

Initially, when you start the Ekran System Server for the first time on a computer, you have an embedded trial serial key, which allows you to use 5 workstation licenses and 1 server license for 30 days.

To use the Ekran System permanently and with greater number of licenses, you have to license it with purchased serial keys.

NOTE: After activation of any serial key, the embedded trial key expires.

Two types of serial keys are available:

- **Standard serial keys:** These keys allow you to use licenses they contain during the unlimited period of time and allow you to update the product during 12 months from activation.
- **Trial serial keys:** These keys allow you to use the licenses they contain during 30 days from activation and update the product during this period.

Each serial key includes the following parameters:

- Subscription period
- Server licenses for Ekran System Clients
- Workstation licenses for Ekran System Clients

You can either activate serial keys online or add activated serial keys if you have no Internet connection on a computer with installed Ekran System Server. Contact your vendor for information on purchasing serial keys.

Please note, after the activation, serial keys are bound to a specific computer and cannot be used on another computer.

About Subscription

A **subscription** is a period that defines what updates can be applied to your copy of the product. Updates are defined by their release date. After the subscription expires, you can still assign licenses to Clients, but you won't be able to update Ekran System to versions released after the subscription expiration date.

The subscription end date is defined during the serial key activation (either via Ekran System Administrative Panel or on the vendor's site). It is calculated using a serial key with the longest subscription period.

For example, if you activate two keys, one with a 30 days subscription period and one with a 12 months subscription period, simultaneously, the subscription end date will be set to 12 months from the activation date.

When a new serial key is being activated, the subscription period is prolonged accordingly. Please note, if the current subscription period is longer than the one of a key being activated, current subscription period doesn't change. For example, if you activate a key with 12 months subscription period after a key with 30 days subscription period, the subscription end date will be set to 12 months since the activation date. But if you activate a key with 30 days subscription period after a key with 12 months subscription period, the subscription end date will not change. If your subscription expires, you can purchase a special **subscription extension serial key**, which does not contain any keys, but extends your subscription period, or you can activate any other serial key

To view the subscription expiration date, select **Action > Manage Serial Keys** or right-click the **Ekran System** node and select **Manage Serial Keys**.

Activating Serial Keys Online

To activate purchased serial keys online, do the following:

1. Make sure you have an active Internet connection on the computer with installed Ekran System Server.
2. Start the Ekran System Administrative Panel and select the **Ekran System** node.
3. Select **Action > Manage Serial Keys**, or right-click the **Ekran System** node and select **Manage Serial Keys**.
4. The **Ekran System Serial Keys Management** window opens.
5. Click **Activate keys online**.
6. The **Ekran System Serial Keys Online Activation** window opens.
7. Enter serial keys to be activated separating them with spaces or paragraphs and click **Activate**.
8. The progress of serial key activation is displayed in the **Ekran System Serial Key Activation** window.
9. If serial keys are successfully activated, you will see a confirmation message. Click **Close** in the message.

10. The newly activated serial keys are highlighted in bold in the **Ekran System Serial Keys Management** window.
11. The number of available server and workstation licenses and the subscription end date change.
12. Click **Close** in the **Ekran System Serial Keys Management** window.

Adding Activated Serial Keys Offline

If you have no Internet connection on a computer on which the serial keys are to be activated, you can activate them on the license site and then add the activated serial keys offline. For more information, send an email to info@ekransystem.com

To activate serial keys offline, do the following:

1. On the computer with installed Ekran System Server, start the KeyGenerator.exe file, which you can find near the Ekran System installation file.
2. The **Ekran System Serial Key Generator** window opens.
3. Click **Generate** to generate a unique identifier (serial key) for your computer.
4. When a unique identifier for your computer is generated, copy it to a text file on a removable drive.
5. Activate serial keys using the generated unique identifier on your vendor's license site.
6. After keys are activated, you will receive the activatedKeys.txt file.
7. You can copy the file to a removable drive to use it on a computer with installed Ekran System Server.

To add activated serial keys in offline mode, do the following:

1. Start the Ekran System Administrative Panel and select the **Ekran System** node.
2. Select **Action > Manage Serial Keys**, or right-click the **Ekran System** node and select **Manage Serial Keys**.
3. The **Ekran System Serial Keys Management** window opens.
4. Click **Add activated keys**.
5. The **Ekran System Activated Serial Keys Offline Adding** window opens.
6. Enter the path to the activatedKeys.txt file with activated serial keys in the empty text box or click **Browse** and navigate to the required file.
7. Click **Add**.
8. The newly added serial keys are highlighted in bold in the **Ekran System Serial Keys Management** window.
9. The number of available server and workstation licenses and the subscription end date change.
10. Click **Close** in the **Ekran System Serial Keys Management** window.

Viewing License State

You can view the information on serial keys you have activated or added and license details in the Ekran System Serial Keys Management window.

To view the license state, select **Action > Manage Serial Keys** or right-click the **Ekran System** node and select **Manage Serial Keys**.

The following information is displayed in the **Ekran System Serial Keys Management** window header:

- **Subscription end date:** The subscription end date is taken from the serial key with the longest subscription end date.
- **The number of workstation licenses used out of total number:** The number of workstation licenses is summed up from all activated serial keys.
- **The number of server licenses used out of total number:** The number of server licenses is summed up from all activated serial keys.
- **The number of not licensed Clients:** Displays the number of installed Clients with no licenses assigned.

The following information is displayed in the **Ekran System Serial Keys Management** serial key table:

- Serial key
- Activation date
- Deactivation date (for deactivated keys only)
- Number of workstation licenses
- Number of server licenses
- Key state: activated/deactivated/ expired. For a trial serial key, an expiration date is displayed near the key state.

Deactivating Serial Keys

If for some reason you've decided to discontinue using Ekran System, you can deactivate serial keys.

To deactivate a serial key, do the following:

1. Make sure you have an active Internet connection on the computer with installed Ekran System Server.
2. Start the Ekran System Administrative Panel and select the **Ekran System** node.
3. Select **Action > Manage Serial Keys**, or right-click the **Ekran System** node and select **Manage Serial Keys**.
4. The **Ekran System Serial Keys Management** window opens.

5. Select a serial key to be deactivated and click **Deactivate**.
NOTE: Expired serial keys can't be deactivated.
6. In the confirmation message, click **Deactivate**.
7. Click **Yes**, when asked to confirm the deactivation.
8. The progress of serial key deactivation is displayed in the **Ekran System Serial Key Deactivation** window.
9. If a serial key is successfully deactivated, you will see a confirmation message. Click **Close** in the message.
10. The deactivated serial key is marked as **Deactivated** in the **State** column of the **Ekran System Serial Keys Management** window.
11. The number of available server and workstation licenses and the subscription end date change.
12. Click **Close** in the **Ekran System Serial Keys Management** window.

Ekran System Client License Management

Ekran System Client license management is performed in the Administrative Panel.

You can assign a license to a Client or unassign it manually any time. The license can be assigned to an off-line Client and it will be applied after the Client is on-line. The license can be moved from one Client to another. If the Client is uninstalled, its license becomes free and can be assigned to another Client.

NOTE: When a trial serial key expires, the corresponding number of licenses is automatically unassigned from Clients.

Information about the number of used and free licenses of each type is displayed in the status bar of the Administrative Panel and in the **Ekran System Serial Keys Management** window.

You can manage either licenses for a single Client, or licenses for multiple clients.

To assign the license to one Client, do the following:

1. Start the **Ekran System Administrative Panel**.
2. Select **Ekran System Clients** in the navigation pane or details pane.
3. Navigate to the Client, to which the license should be assigned. Right click and select **Add Workstation License (Add Server License)**.
4. The license is added to the Client and it starts session monitoring.

To unassign the Client license, do the following:

1. Start the **Ekran System Administrative Panel**.
2. Select **Ekran System Clients** in the navigation pane or details pane.
3. Navigate to the Client, from which the license should be unassigned. Right click and select **Remove License**.

4. The license is removed the Client and it stops session monitoring.

NOTE: to change the Client license type you don't need to unassign the current license. This will be done automatically.

To manage licenses on several Clients, do the following:

1. Start the **Ekran System Administrative Panel**.
2. Select **Ekran System Clients** in the navigation pane or details pane.
3. Right click and select **Manage Licenses**.
4. The **Ekran System Clients Licensing Wizard** opens.
 - In the Workstation Licenses list, select the hosts to which the workstation license will be added. Check the corresponding check boxes. To select all hosts, click **Check All**. To clear selection for all hosts, click **Uncheck All**.
 - In the Server Licenses list, select the hosts to which the server license will be added. Check the corresponding check boxes. To select all hosts, click **Check All**. To clear selection for all hosts, click **Uncheck All**.

NOTE: A client can't be selected in both lists. Licenses from all hosts not selected in any list will be removed.

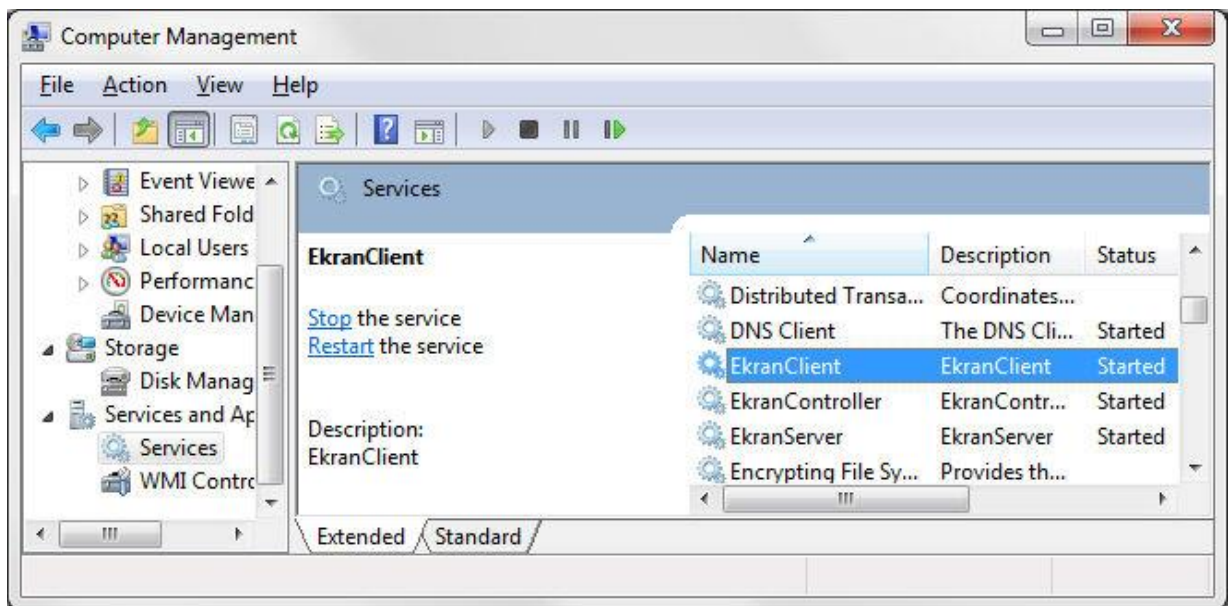
5. Click **Next**. The process of licenses adding/removing starts. When the process finishes, click **Finish**.

Troubleshooting

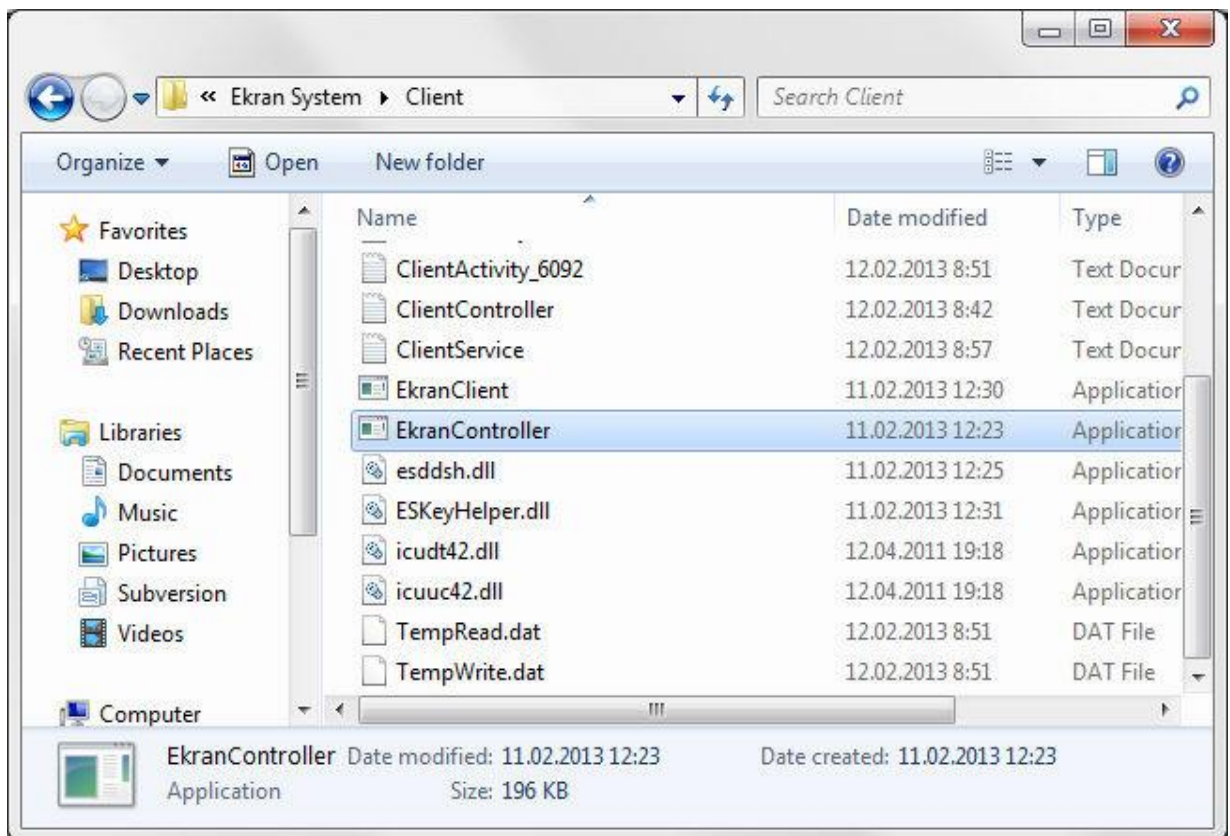
Checking that the Client Is Installed

You can check if the Ekran System Client is installed on the investigated computer in one of the following ways:

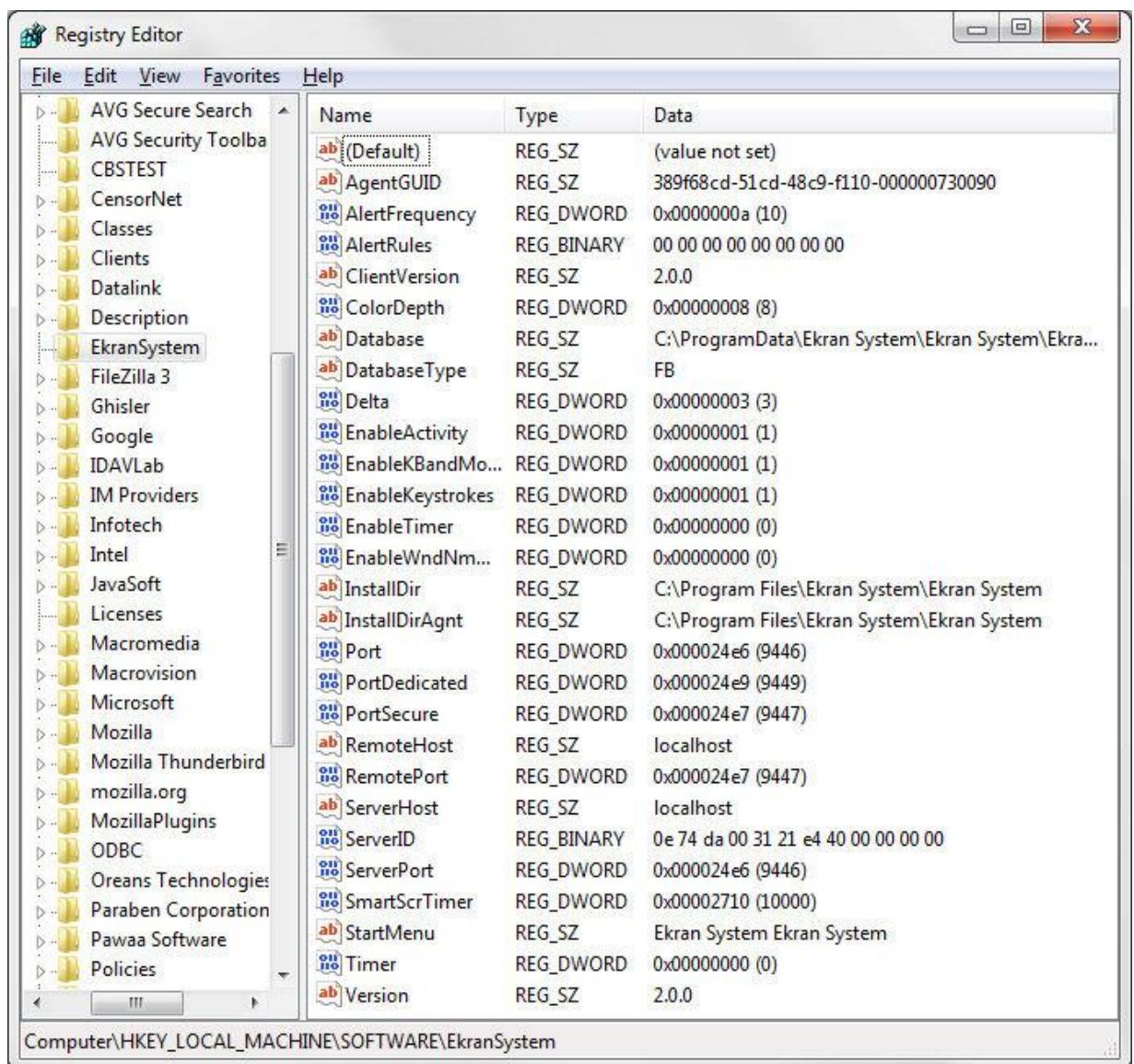
- The **EkranService.exe** process is started;
- The **EkranClient** and **EkranController** services are present;



- There is a <system disk>:\Program Files\Ekran System\Ekran System\Client\ folder with executable files;



- The HKEY_LOCAL_MACHINE\SOFTWARE\EkranSystem key has the following values:



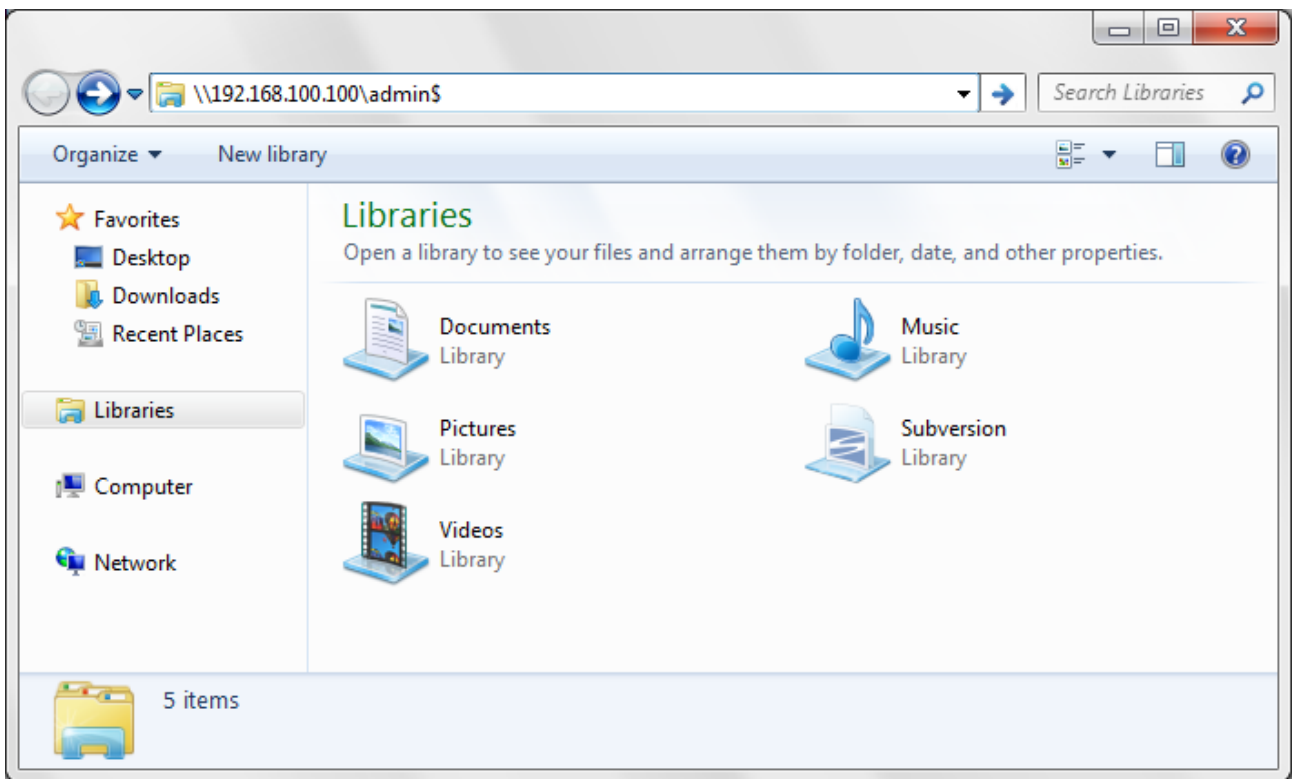
Clients Installation Issues

The common reasons of issues with remote installation or uninstallation of Ekran System Clients are the inadequate network configuration or system settings.

For successful remote installation, Ekran System needs to access the administrative shares on the target computers.

To check the administrative shares availability, do the following:

1. Open Windows Explorer.
2. In the address bar type `\\<target_computer_IP>\admin$` and press **Enter**.



3. When the Enter Network Password window opens, enter Administrator credentials and click **OK**.
4. If the login credentials are accepted, the system folder opens (by default, C:\Windows).

If you get an error after performing step 2, try the following:

- Open the Command Prompt (cmd.exe). Enter and execute the **ping <target_computer_name or IP>** command. Check the following:
 1. If you do not get ping replies, network may be down. Check the network connection and try again.
 2. If the network is up, but you don't get the ping reply, check the firewall on the remote computer. Disable the firewall on the target remote computer.
- If you are receiving ping replies, but the administrative share is still unavailable, check that the [Sharing Wizard or the Simple file sharing are disabled](#).
- If you are receiving ping replies and the sharing options are good, but you still cannot access the administrative shares, check that the Server system service is running on the remote computer.
- If none of the mentioned helps to solve the problem, contact your System Administrator.

If you get a login error after performing step 3, try the following:

- Make sure that the credentials you enter are correct. You have to enter the credentials of a Domain Administrator or a local Administrator account on the remote computer.

- Verify that the account password is not empty. Accounts with empty passwords cannot be used for remote connection.
- Try typing the username as <domain_name>\<username> if the remote computer is in a domain, or <computer_name>\<username> if the PC belongs to a workgroup.
- If none of the mentioned helps to solve the problem, contact your System Administrator.

DNS

Try using the remote computer's IP address if you cannot access it by the name. DNS service may be unavailable in your network.

UAC

If you access the administrative shares normally on the remote PC running Window Vista or Windows 7, but the Ekran System Client remote installation fails, make sure the User Account Control is disabled on the remote computer.

Remote Client Installation Issues

If you encounter problems with remote installation of Ekran System Clients in a workgroup under Windows 7/Vista, try enabling the Local Account Token Filter Policy.

NOTE: This is a known Windows issue that might block remote application installation.

To enable Local Account Token Filter Policy:

1. Open the **Windows Registry Editor**.
2. In the **Registry Editor** window, select the following key:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System
3. Double-click the LocalAccountTokenFilterPolicy value, or select it and click **Modify** in the right-click menu.
4. In the **Value data** box, type 1, and then click **OK**.
5. Close the **Windows Registry Editor**.
6. Deploy Ekran System Client.
7. Open the **Windows Registry Editor**.
8. In the **Registry Editor** window, select the following key:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System
9. Double-click the LocalAccountTokenFilterPolicy value or select it and click **Modify** in the right-click menu.
10. In the **Value data** box, type 0, and then click **OK**.

If the LocalAccountTokenFilterPolicy registry value does not exist, follow these steps:

1. In the **Windows Registry Editor** in the **Edit** menu, click **New**, and then click **DWORD Value**.
2. Type LocalAccountTokenFilterPolicy and then press ENTER.



Administrative Panel

Administrative Panel Properties

Ekran System Administrative Panel properties define main properties of data storage.

To define Ekran System properties:

1. Select **Action > Properties** or right-click on the Ekran System node and select **Properties**.
2. The **Ekran System Properties** window opens.

The screenshot shows the 'Ekran System Properties' window with the 'Storage' tab active. The 'Storage location (Firebird only)' section has a text box containing the path 'C:\ProgramData\Ekran System\Ekran System\EkranActivityDB.fdb' and a 'Browse...' button. The 'Storage cleanup' section includes a 'Define date period:' label, two date pickers both showing '18.09.2013', and a 'Remove data' button. The 'Database automatic cleanup' section features a checkbox 'Turn on automatic Server storage cleanup' (which is unchecked), a 'Leave sessions in database (days):' field with the value '7', a 'Time for cleanup operation execution:' field with the value '0:00:00', and a 'View...' button for the 'Hosts exceptions list'. The 'Shrink database (MSSQL only)' section has a 'Shrink database' button. The bottom of the window has 'OK', 'Cancel', and 'Apply' buttons.

3. Define the following settings:
 - Click **Browse** and navigate to the new storage path for screen captures saving.
 - Select the dates in the **Start date** and **End date** boxes and click **Remove data** to delete all screen captures created between the specified dates.



- Select the **Turn on automatic Server storage cleanup** check box to enable automatic database cleanup.
Define the following parameters:
 - The period for data to be stored before cleaned up automatically.
 - The time for cleanup operation execution.
- Host exceptions list is used to define the computers with Ekran System Clients installed whose data will not be deleted during the automatic Server storage cleanup.

NOTE: The exceptions are not available during manual Server storage cleanup.

4. Click **OK** to accept the changes and close the window.

The following properties are available:

- **Storage location:** This option defines where created screen captures will be saved and also allows you to [move the database to another location](#). Please make sure that you have enough free space at the selected location.
- **Storage cleanup:** This option allows you to [delete stored data](#) manually or automatically not to run out of disk space.
- **Database automatic cleanup:** This option allows you to delete stored data from the defined hosts automatically with the defined frequency.

Administrative Panel Interface

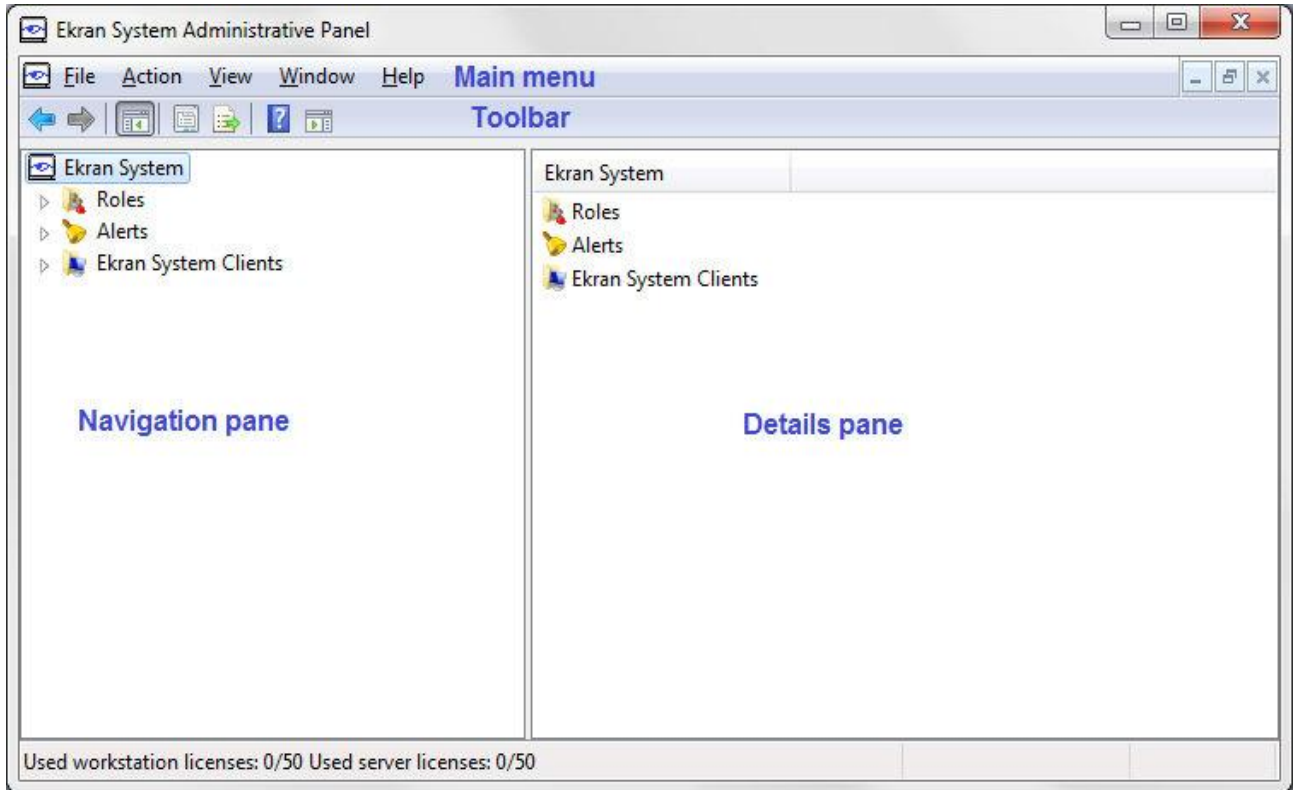
Ekran System Administrative Panel Interface

Ekran System Administrative Panel interface includes the following parts:

- **Navigation pane (Console tree):** This pane includes the tree with one main node **Ekran System** and three main sub-nodes: **Roles**, **Alerts** and **Ekran System Clients**. The Roles node gives you access to the list of users that can use the Ekran System Monitor. The **Navigation** pane can be hidden by selecting **View > Customize** and clearing the **Console tree** box.
- **Details pane:** This pane displays the contents of the node currently selected in the **Navigation** pane for Roles nodes and the Host configuration for Hosts nodes. Data in the **Details pane** can be displayed in one of four standard representations: Large icons, Small icons, List, and Details.
- **Toolbar:** The toolbar allows you to navigate between the objects quickly and adjust program interface. It includes Back, Forward, Up One Level, Show/Hide Console Tree, Export List, and Hide.
- **Main menu:** It includes four menus: File, Action, View, Window, and Help.

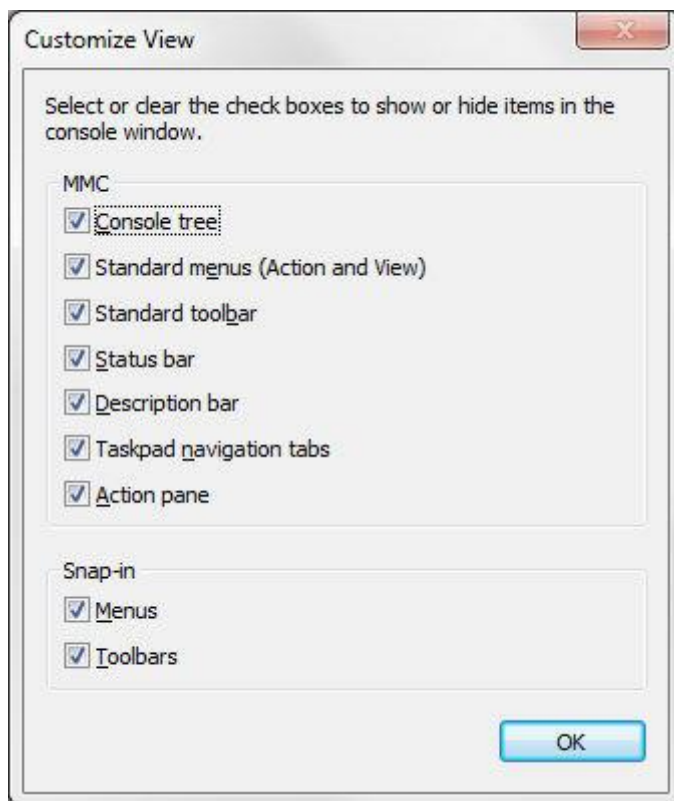


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Ekran System interface can be adjusted through the **View** menu. The following commands are available:

- **Add/Remove Columns:** Defines the number of columns displayed in the Details pane.
- **Large icons, Small icons, List, and Details:** Data representation in the Details pane.
- **Customize:** Defines interface elements to be visible. You can enable\disable displaying of the Navigation pane (Console tree), Toolbar, Action and View menus, the toolbar, the status bar (in the bottom), the description bar (above the Details pane), etc.



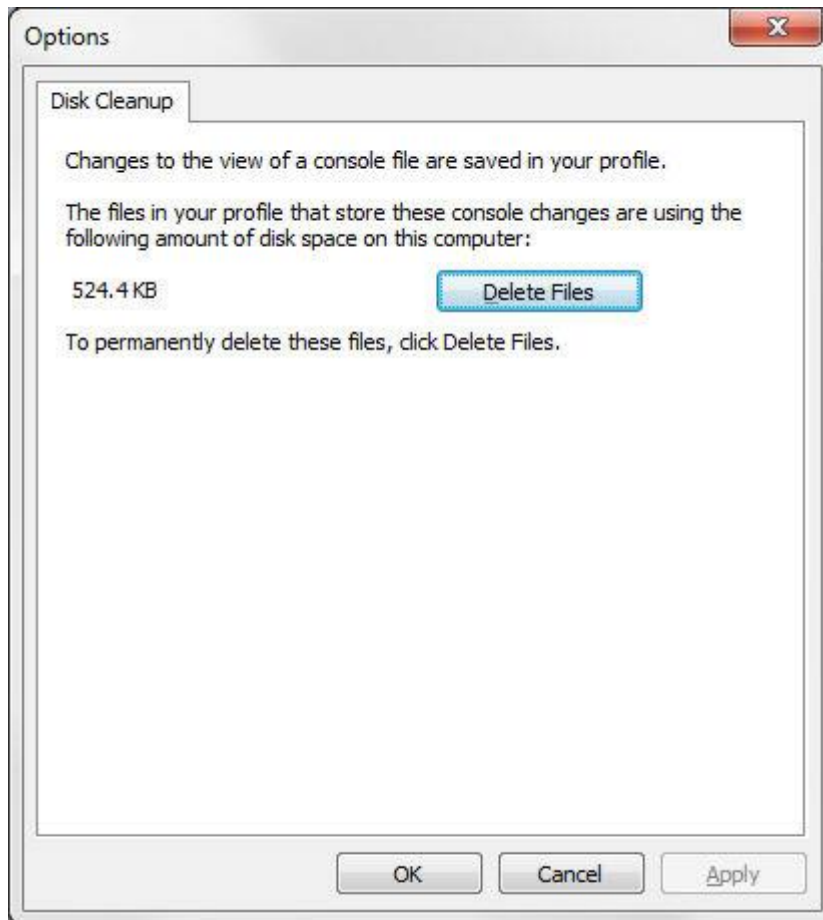
Administrative Panel Options

To get access to options, select **File > Options.**

The Administrative Panel Options allow you to clean the personal settings file records. When you modify the displaying of consoles (for example, by changing the size of a window or adding a new window), MMC saves these settings in a file that preserves your personal settings. The personal settings file records all changes that are made to a console in user mode.

Only the settings that are associated with your profile are deleted. Ekran System Administrative Panel will then display by using the default display settings.

This option is useful if you want to restore the default display settings or if disk space is low.



Users and Roles

About Roles

Roles define the sets of Windows users with certain permissions.

Two roles are available in Ekran System:

- **Administrator:** These users are allowed to start both the Ekran System Administrative Panel and the Ekran System Monitor.
- **Supervisor:** These users are allowed to start only the Ekran System Monitor.

The roles can be assigned both to users and local groups of the domain and the local computer on which the Ekran System Server and Administrative Panel are installed.

Assigning Roles to Users

There are two ways to assign a role to a user:

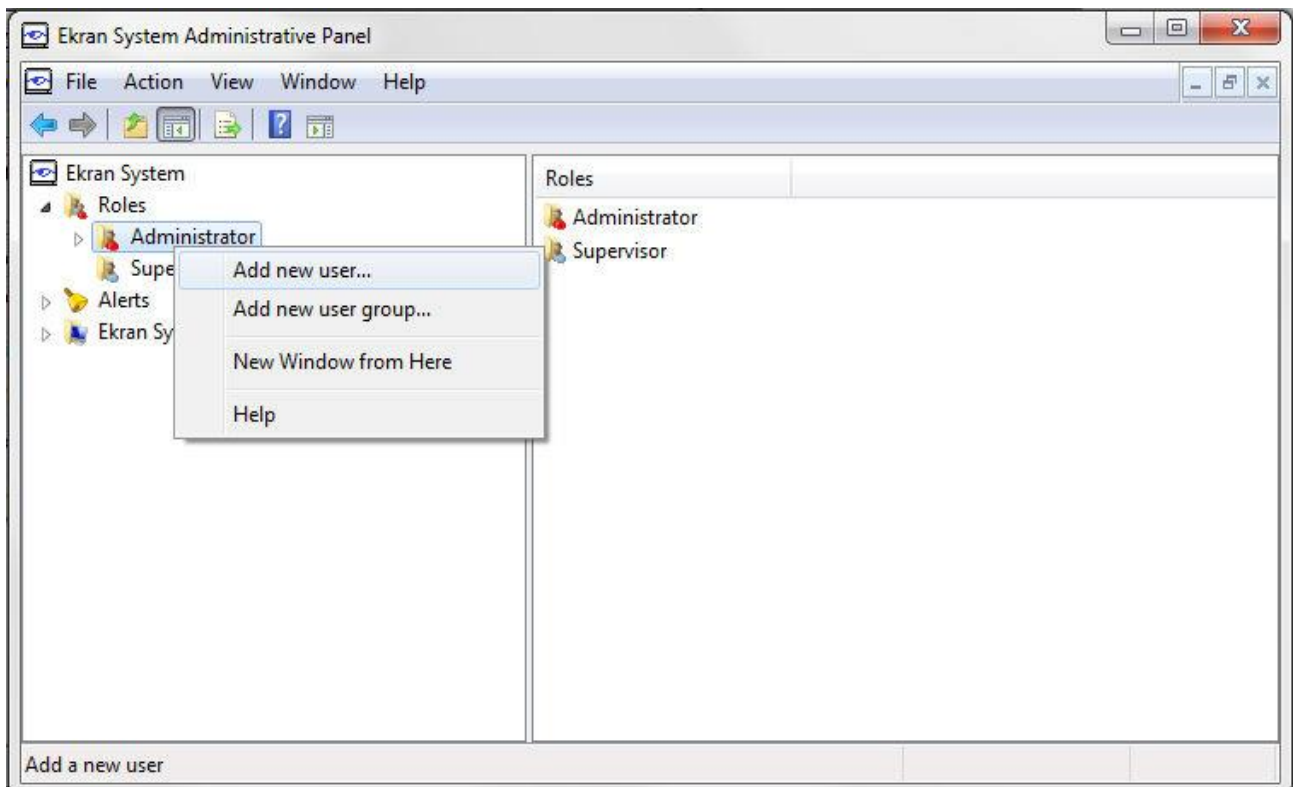


EKRAN SYSTEM

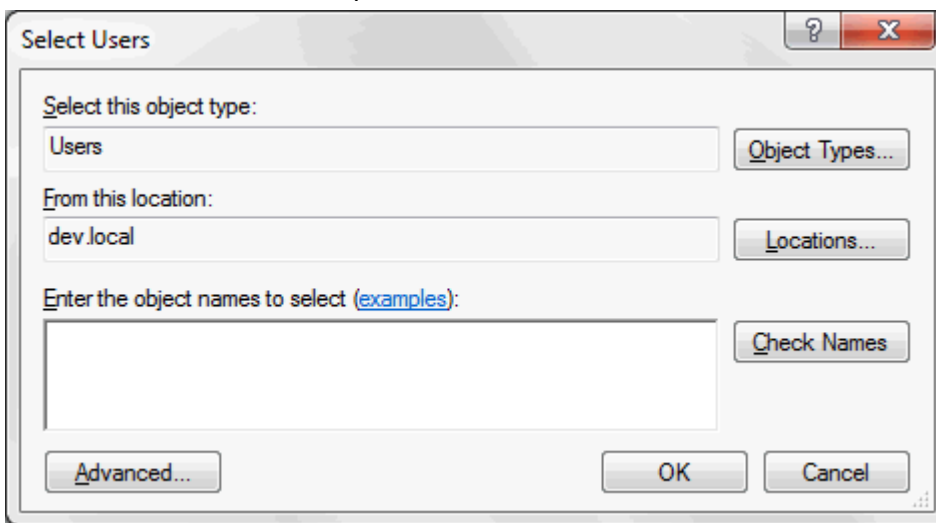
- Enter a user name manually;
- Select a user automatically.

To add a user manually, do the following:

1. Select a role (**Administrator** or **Supervisor**) in the Navigation pane or Details pane.
2. Select **Action > Add new user** or right-click and select **Add new user**.



3. The **Select Users** window opens.



4. Enter the user name in one of the following formats:
 - First Name Last Name (e.g., John Doe)

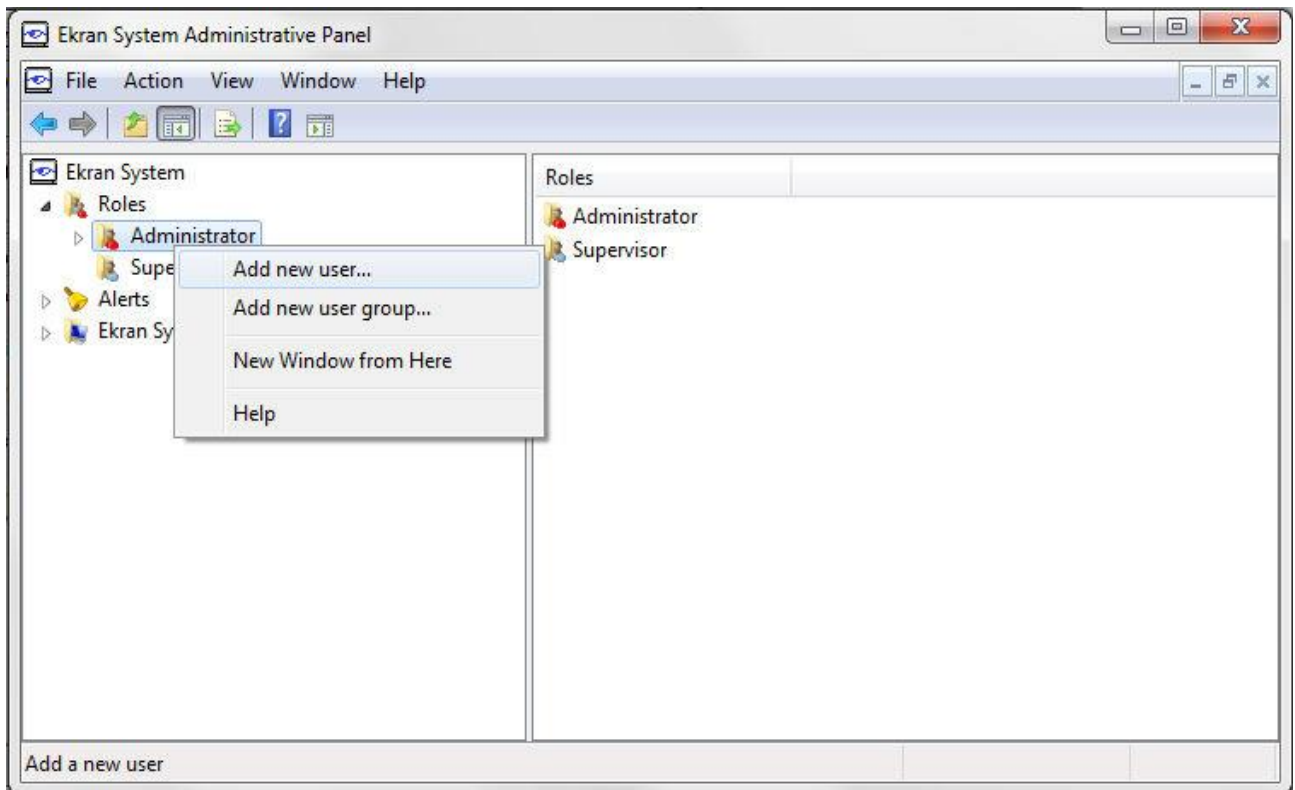


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- User name (e.g., user_john)
 - User name@Domain name (e.g., user_john@domian1)
 - Domain name\User name (e.g., domain1\user_john)
5. Click **Check Names** to check that the name is entered correctly.
 6. Click **OK** to add the user.

To add a user automatically, do the following:

1. Select a role (**Administrator** or **Supervisor**) in the Navigation pane or Details pane.
2. Select **Action > Add new user** or right-click and select **Add new user**.



3. The **Select Users** window opens.



Select Users

Select this object type:

Users Object Types...

From this location:

dev.local Locations...

Enter the object names to select (examples):

Check Names

Advanced... OK Cancel

4. Click **Advanced**.
5. The secondary dialog-window opens.

Select Users

Select this object type:

Users Object Types...

From this location:

dev.local Locations...

Common Queries

Name: Starts with

Description: Starts with

☐ Disabled accounts

☐ Non expiring password

Days since last login:

Columns...

Find Now

Stop

OK Cancel

Search results:

Name (RDN)	E-Mail Address	In Folder
------------	----------------	-----------



6. Define the query for User search:
 - In the **Name** box, define the user name condition. Select the comparison operator from the drop-down list (Starts with or Is exactly). E.g., the User Name starts with "An". This will find users Andrew, Ann, and Angele.
 - In the **Description** box, define the user description condition. Select the comparison operator from the drop-down list (Starts with or Is exactly). E.g., the User Description is exactly "John Doe". This will find a user with description John Doe.
 - Select the **Disabled accounts** options to select only users with disabled accounts.
7. Click **Find Now** to start search.
8. The users are found and displayed in the list. Select the users to be added to Ekran System and click **OK**.
9. The selected users are displayed in the corresponding field of the main **Select Users** window. Click **OK**.

Assigning Roles to User Groups

There are two ways to define a user group:

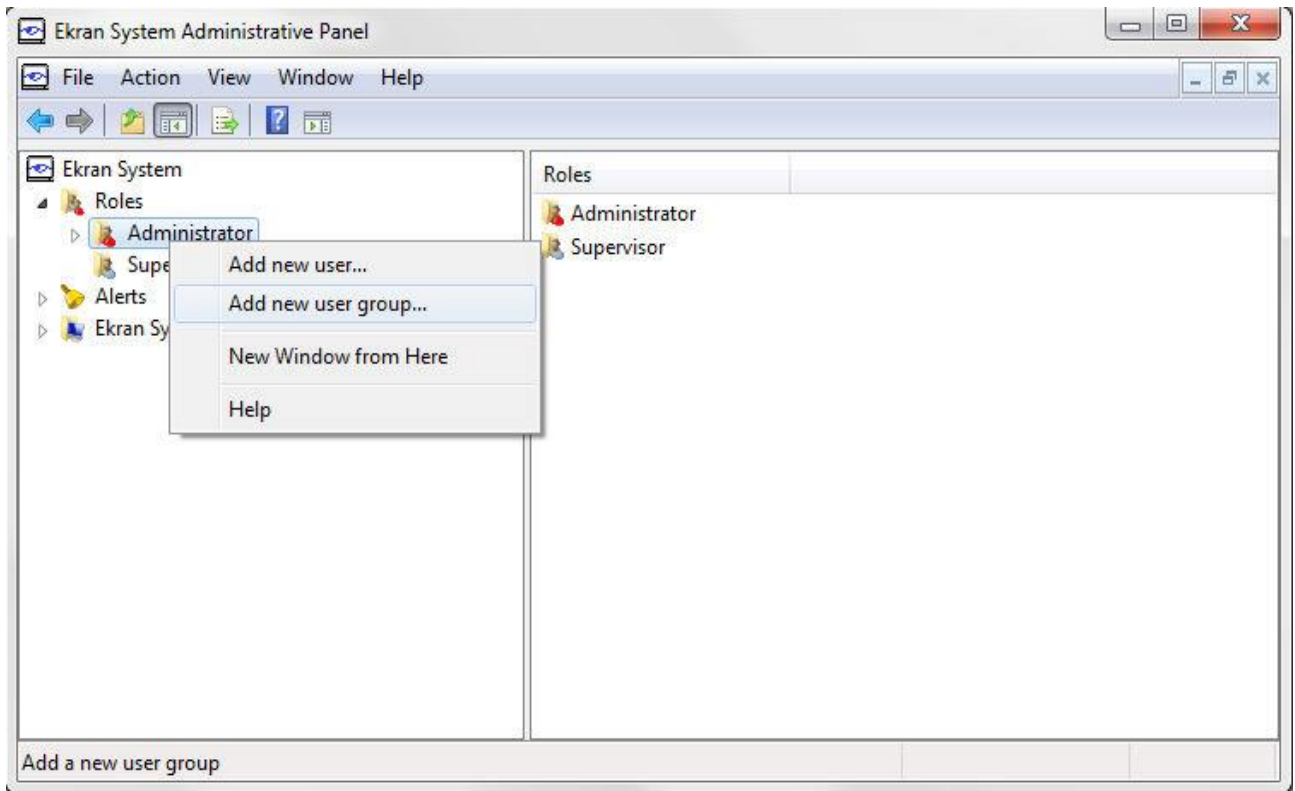
- Enter a user group name manually.
- Select a user group automatically.

To add a user group manually, do the following:

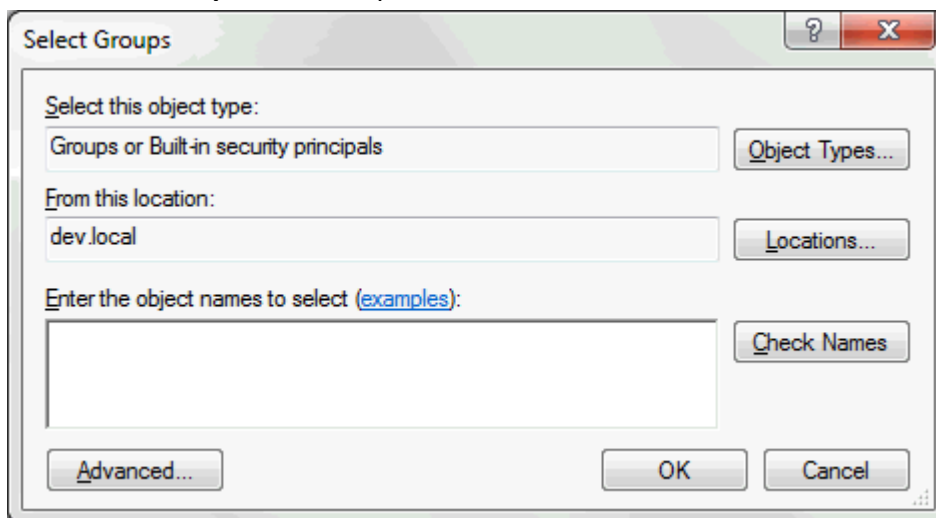
1. Select a role (**Administrator** or **Supervisor**) in the Navigation pane or Details pane.



2. Select **Action > Add new user group** or right-click and select **Add new user group**.



3. The **Select Groups** window opens.



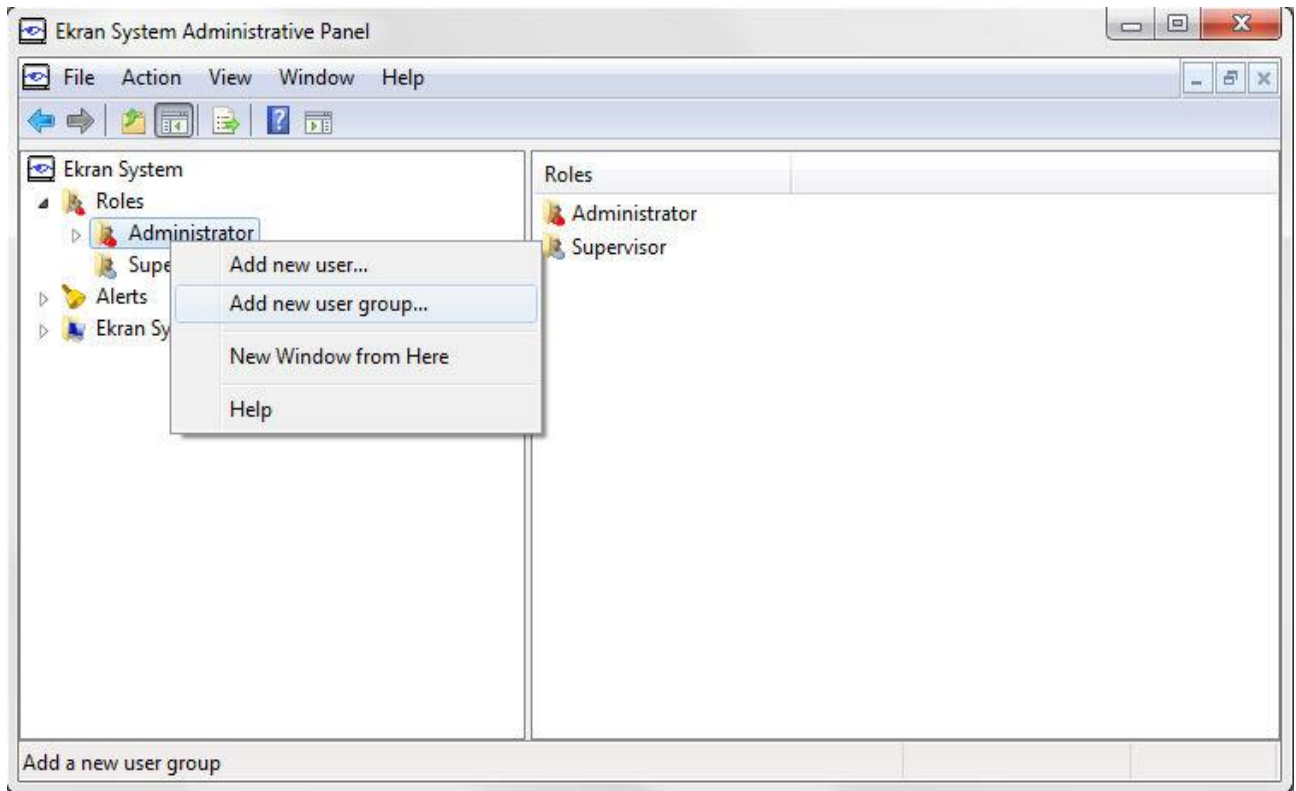
4. Enter the user group name.
5. Click **Check Names** to check that the name is entered correctly.
6. Click **OK** to add the user group.

To add a user group from the search list, do the following:

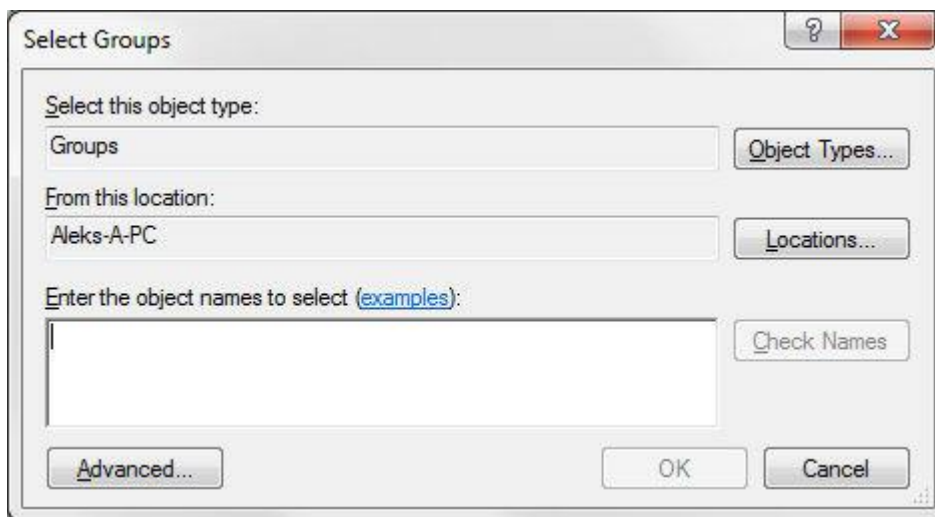
1. Select a role (**Administrator** or **Supervisor**) in the Navigation pane or Details pane.



2. Select **Action > Add new user group** or right-click and select **Add new user group**.



3. The **Select Groups** window opens.



4. Click on the **Advanced** button.
5. **Select Groups** window now displays advanced options.



Select Groups

Select this object type:
Groups Object Types...

From this location:
Aleks-A-PC Locations...

Common Queries

Name: Starts with

Description: Starts with

☐ Disabled accounts
☐ Non expiring password

Days since last logon:

Columns...
Find Now
Stop

OK Cancel

Search results:

Name (RDN)	In Folder
------------	-----------

6. Define the query for Groups search: in the **Name** box, define the user name condition. Select the comparison operator from the drop-down list (Starts with or Is exactly). E.g., the User Name starts with "An". This will find users Andrew, Ann, and Angele.
7. Click on the **Find Now** button to start search.
8. The user groups are found and displayed in the list. Select the user groups to be added to Ekran System and click **OK**.
9. The selected user groups are displayed in the corresponding field of the main **Select Groups** window. Click **OK**.

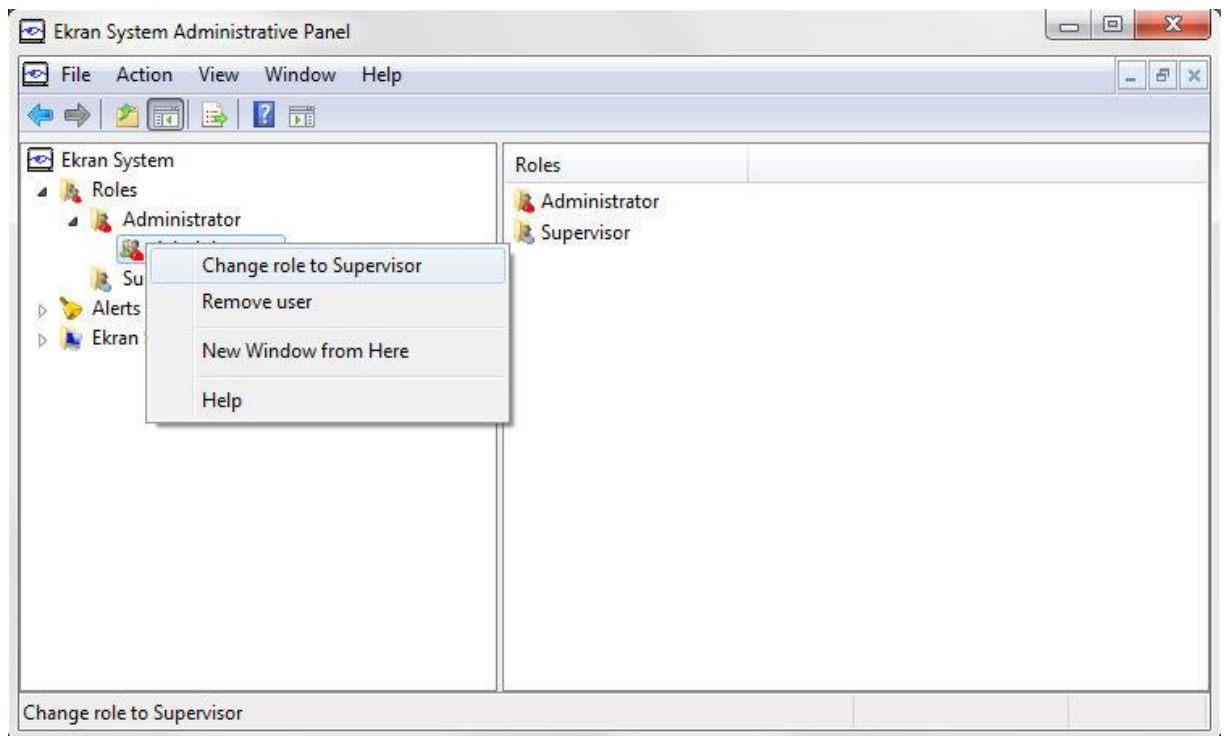


Changing Roles

You can change a user or a user group role when necessary.

To change a user or a user group role, do the following:

1. Select the target user or user group in the navigation pane or the details pane.
2. Do one of the following:
 - Right click a user or a usergroup under Administrator node and select **Change role to Supervisor**.
 - Right click a user or a usergroup under the Supervisor node and select **Change role to Administrator**.



3. The current user or user group role is changed and the target item is moved to the corresponding node.

Removing Roles

To remove a user or a user group role, do one of the following:

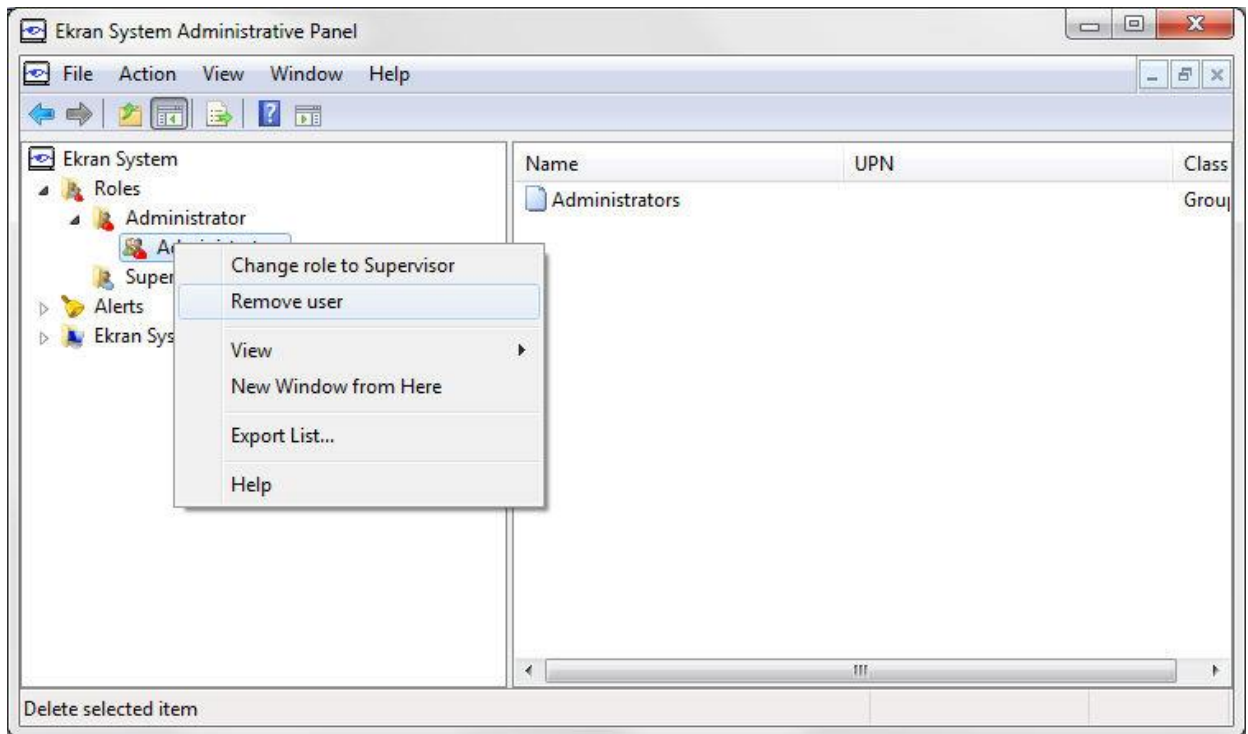
Select a required user in the **Navigation** pane or **Details** pane.

Do one of the following:

- Right-click and select **Remove user**.



- Select **Action > Remove user**.



The selected user or user group are removed from the node and deprived of the respective role.

Working with Data

Moving Ekran System Server Database

For some reason, you may need to change the location of the Ekran System Server database to another disk or directory.

To change the location for Ekran System Server database:

1. Start the Administrative Panel and select the Ekran System node.
2. Select **Action > Properties** or right-click on the Ekran System node and select **Properties**.



3. The **Ekran System Properties** window opens.

The screenshot shows the 'Ekran System Properties' window with the 'Storage' tab selected. The window has a title bar with a question mark and a close button. The 'Storage location (Firebird only)' section contains a 'Database:' label and a text box with the path 'C:\ProgramData\Ekran System\Ekran System\EkranActivityDB.fdb', followed by a 'Browse...' button. The 'Storage cleanup' section has a 'Define date period:' label, 'Start date:' and 'End date:' labels with date pickers set to '18.09.2013', and a 'Remove data' button. The 'Database automatic cleanup' section includes a checkbox 'Turn on automatic Server storage cleanup' (which is unchecked), a 'Leave sessions in database (days):' label with a spinner set to '7', a 'Time for cleanup operation execution:' label with a spinner set to '0:00:00', and a 'Hosts exceptions list:' label with a 'View...' button. The 'Shrink database (MSSQL only)' section has a 'Shrink database' button. At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

4. In the **Storage location** group of options, do one of the following:
 - In the **Database** box, enter the path to the database manually.
 - Click **Browse** and navigate to the destination folder.
5. Click **OK** to accept the changes and close the window.

Deleting Data

There are two ways to perform Ekran System Server database cleanup:

- **Manually**
- **Automatically**

To delete data from the Ekran System Server manually:

1. Start the Administrative Panel. Select the **Ekran System** node.



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2. Select **Action > Properties** or right-click on the Ekran System node and select **Properties**.
3. The **Ekran System Properties** window opens.

The screenshot shows the 'Ekran System Properties' dialog box with the 'Storage' tab selected. The window has a title bar with a question mark and a close button. The 'Storage' tab contains several sections:

- Storage location (Firebird only):** A text box labeled 'Database:' contains the path 'C:\ProgramData\Ekran System\Ekran System\EkranActivityDB.fdb'. To the right is a 'Browse...' button.
- Storage cleanup:** A section with the label 'Define date period:'. It contains two date pickers: 'Start date:' with the value '18.09.2013' and 'End date:' with the value '18.09.2013'. To the right is a 'Remove data' button.
- Database automatic cleanup:** A section with a checkbox labeled 'Turn on automatic Server storage cleanup'. Below it are two spinners: 'Leave sessions in database (days):' with the value '7' and 'Time for cleanup operation execution:' with the value '0:00:00'. To the right of the second spinner is a 'View...' button.
- Shrink database (MSSQL only):** A section with a 'Shrink database' button.

At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Apply'.

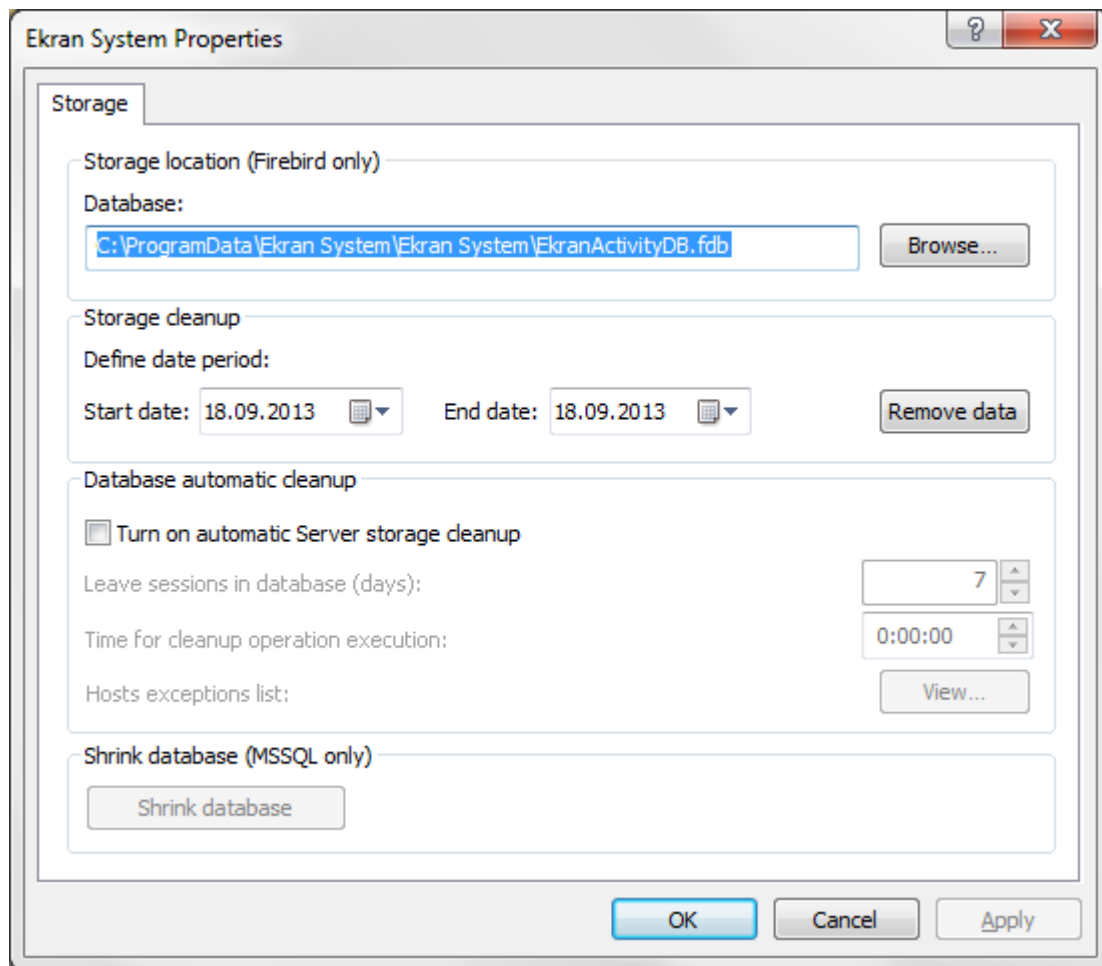
4. Under **Storage cleanup**, define the dates in the **Start date** and **End date** boxes and click **Remove data** to delete all screen captures created within the specified time range.
5. Click **OK** to accept the changes and close the window.

To delete data from Ekran System Server automatically:

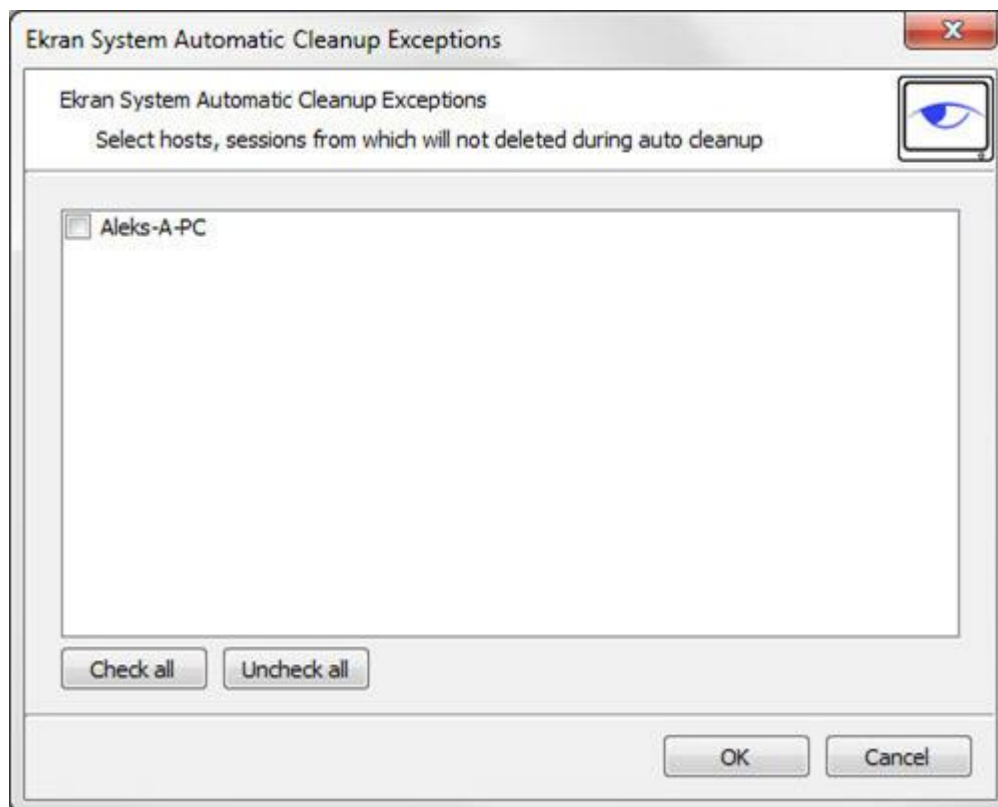
1. Start the Administrative Panel. Select the **Ekran System** node.
2. Select **Action > Properties** or right-click on the Ekran System node and select **Properties**.



3. The **Ekran System Properties** window opens.



4. Select the **Turn on automatic Server storage cleanup** check box.
5. Define the number of days to store data before deleting. Define the time to execute the clean-up operation.
6. Click **View** to define the host exceptions. Hosts in the exceptions list will not have their sessions deleted from the database.



7. Click **OK** to accept the changes and close the window.
8. Automatic database clean-up will be performed with the defined interval at the selected time.

Shrinking Database

The database shrinking feature allows you to shrink the size of the MS SQL database to the actual amount of the data stored in it by cutting the space reserved by the database, but which is not used by it.

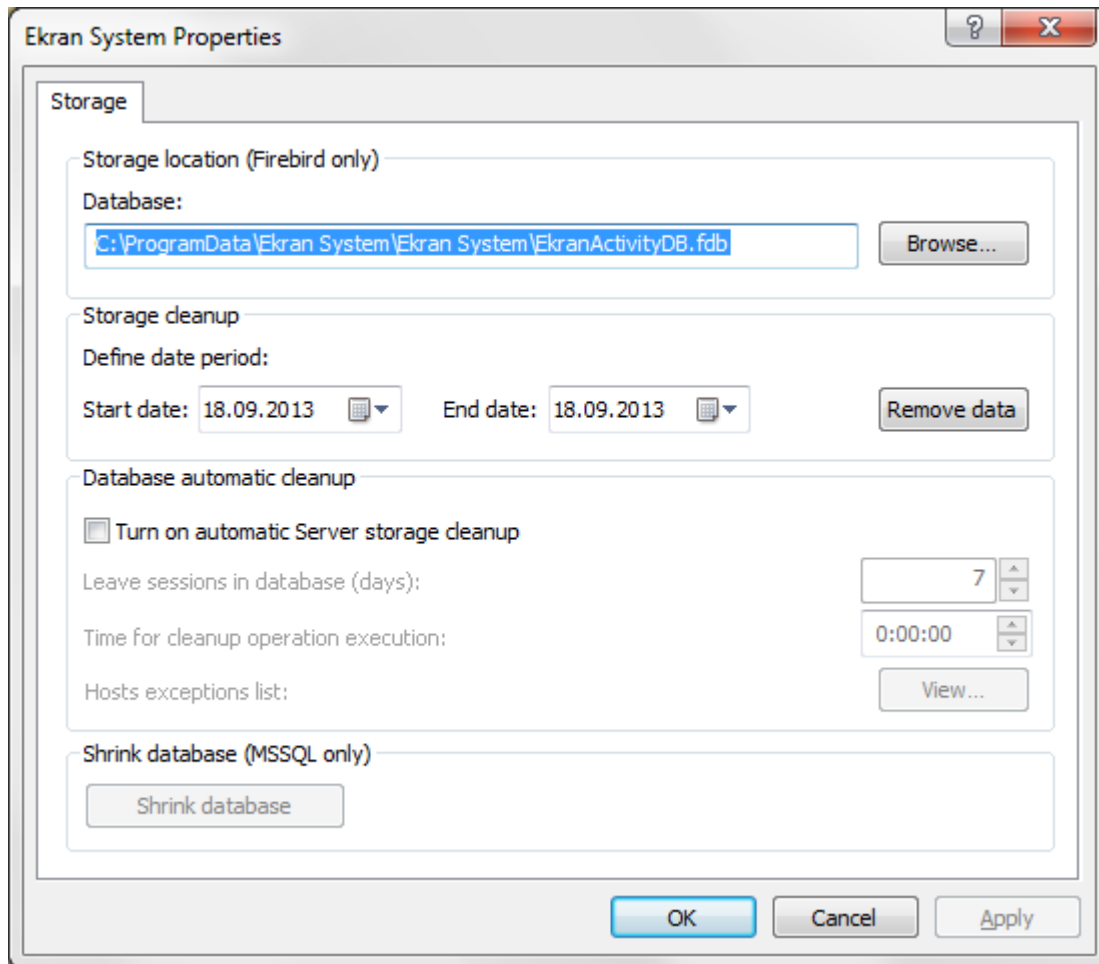
NOTE: The database shrinking procedure may take some time (up to several hours) and cause performance slowdown.

To shrink a database, do the following:

1. Start the Administrative Panel. Select the **Ekran System** node.
2. Select **Action > Properties** or right-click on the Ekran System node and select **Properties**.



3. The **Ekran System Properties** window opens.



4. Click **Shrink database**.

NOTE: The progress of the database shrinking process is not displayed in the Administrative Panel and there is no indication of the process finishing.

Alerts

About Alerts

Alerts are instances that notify the investigator of a specific activity (potentially harmful/forbidden actions) on the target computers on which Clients are installed and allow the investigator to respond to such activity quickly without performing searches.

The notifications can be received in email or tray. Besides screen captures generated on alert events are marked as Alert in the Monitor.



Alert system can be used for two purposes:

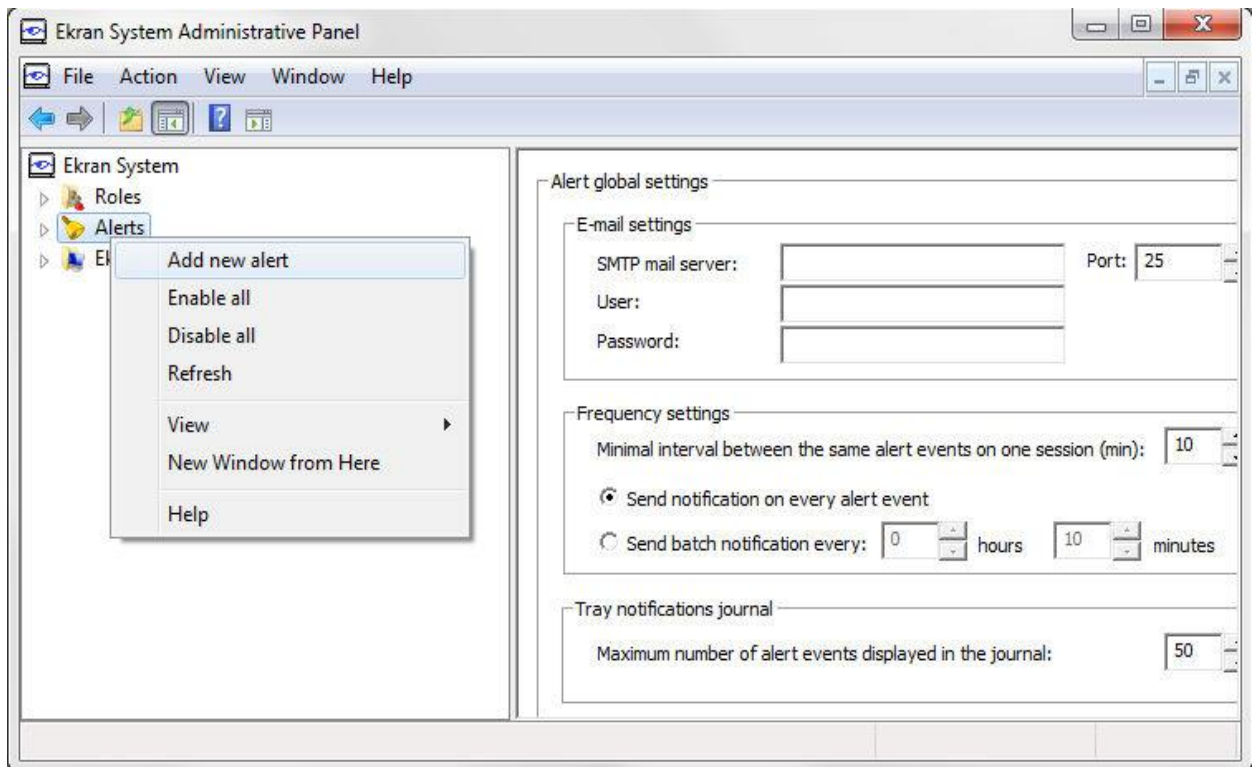
- **Immediate response:** This allows the investigator to get immediate information about the forbidden action and respond to it quickly (almost at once).
- **Delayed response:** This allows the investigator to get information on batch of forbidden actions on multiple clients, analyze them and then respond.

Alerts Management

Adding Alerts

To add an alert, do the following:

1. Right-click the **Alerts node** and select **Add new alert**.



2. A new alert sub-node appears in the tree-view.
3. The Alert editing area for the new alert opens to the right.
4. Enter a unique alert name and alert description (optional).
5. Click **Browse** and select hosts to which the Alert will be assigned.
6. Define [alert parameters](#).
7. Define at least one [rule](#).
8. Click **Save** to save the created Alert.
9. The Alert appears in the tree-view.



Editing Alerts

To edit an alert, do the following:

1. Left-click an alert sub-node in the tree-view.
2. The **Alert editing area** for the new alert opens to the right.

The screenshot shows the 'Ekran System Administrative Panel' window. On the left is a tree-view with the following structure:

- Ekran System
 - Roles
 - Alerts
 - Facebook alert
 - Twitter alert
 - NewAlert
 - Ekran System Clients

The 'NewAlert' node is selected. The main area on the right is titled 'Alert editing area' and contains the following sections:

- Enable Alert:** A checked checkbox.
- Alert Info:**
 - Alert name:** A text field containing 'NewAlert'.
 - Description:** A large text area.
 - Assign to:** A text field with a 'Browse...' button next to it.
- Actions:**
 - ☐ Send email: A text field.
 - ☐ Show warnings in Ekran System
- Rules:**
 - A table with columns: Parameter, Comparison operator, Value.
 - An 'Edit...' button next to the table.
 - A 'Save' button at the bottom right of the panel.

3. [Edit the parameters](#) you need.
4. Click **Save** button.
5. The edited parameters are saved.



Viewing Alerts

Alerts are displayed in the tree-view pane to the left. The Alerts node is displayed in the tree-view between the Roles and the Ekran System Clients nodes. Alerts are displayed as sub-nodes of the Alert node. Each alert sub-node is named with a unique Alert name.

When an alert node is selected, its [parameters](#) are displayed in the pane to the right and can be edited.

The screenshot shows the 'Ekran System Administrative Panel' window. On the left is a tree-view pane with the following structure:

- Ekran System
 - Roles
 - Alerts
 - Facebook alert
 - Twitter alert** (selected)
 - NewAlert
 - Ekran System Clients

The main pane on the right displays the configuration for the selected 'Twitter alert'.

☒ Enable Alert

Alert Info

Alert name:

Description:

Assign to:

Actions

☐ Send email:

☒ Show warnings in Ekran System

Rules

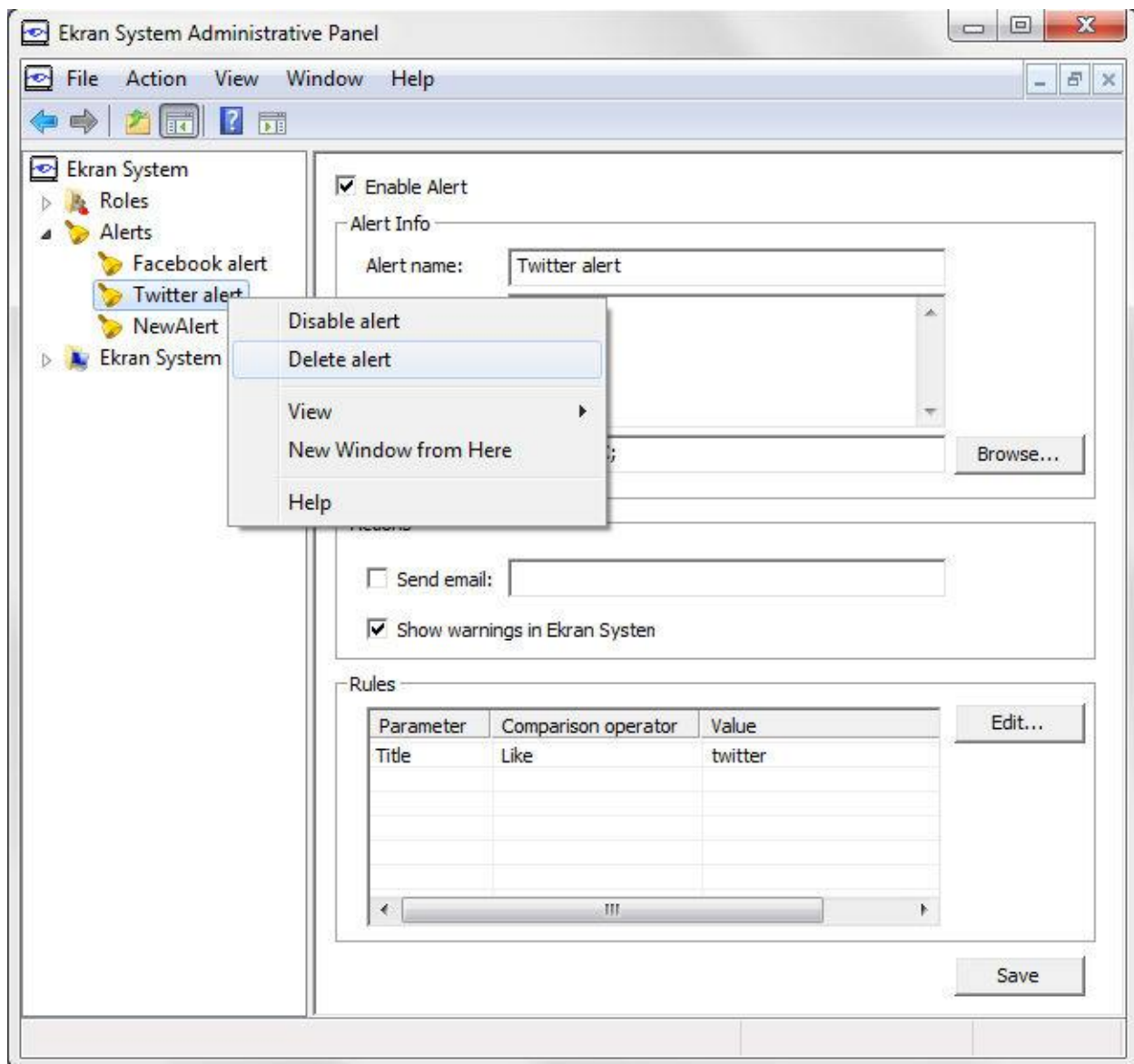
Parameter	Comparison operator	Value
Title	Like	twitter

Deleting Alerts

To delete an alert, do the following:



1. Right-click an alert sub-node in the tree-view and select **Delete alert**.



2. The confirmation message appears.
3. Click **Yes**.
4. The alert is deleted.

Alert Parameters

The **Alert editing pane** allows you to define the Alert settings and rules.

To edit the Alert Parameters, do the following:



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1. Select the required Alert from the **Alerts** node in the tree-view pane to the left.
2. The **Alert editing pane** opens to the right.

The screenshot shows the 'Ekran System Administrative Panel' window. On the left is a tree-view pane with the following structure:

- Ekran System
 - Roles
 - Alerts
 - Facebook alert
 - Twitter alert (selected)
 - NewAlert
 - Ekran System Clients

The main area on the right is the 'Alert editing pane' for the selected 'Twitter alert'. It contains the following sections:

- Enable Alert:** A checked checkbox.
- Alert Info:**
 - Alert name: Text box containing 'Twitter alert'.
 - Description: Large text area.
 - Assign to: Text box containing 'Aleks-A-PC;' with a 'Browse...' button next to it.
- Actions:**
 - Send email: Unchecked checkbox with an adjacent text box.
 - Show warnings in Ekran System: Checked checkbox.
- Rules:**

Parameter	Comparison operator	Value
Title	Like	twitter

An 'Edit...' button is located to the right of the Rules table.

A 'Save' button is located at the bottom right of the pane.

3. Enable/disable the selected Alert by checking/clearing the **Enable Alert** check box. If the Alert is disabled, you will not receive notifications on it (the screen captures will not be marked as Alerts in **Monitor** as well).
4. Create a unique name for the created Alert and enter a description to this Alert in the **Description** box, if necessary.
5. Click **Browse** to select hosts to which the Alert will be applied.
6. The **Host Assigning** window appears.
7. Check the check boxes near the target clients. Click **Check all** to apply the Alert to all clients. Click **Uncheck all** to clear all check boxes.



8. To receive email notifications on alert events, check the **Send email** check box and enter the email address to which the notifications will be sent. You can enter several email addresses, separating them with semicolon.

9. Check the **Show warnings in Monitor tray** check box to activate the tray notifications. The Alert notifications will then pop up from the tray on all computers with started **Monitor**.

10. In the **Rules** group, click **Edit** to define the [rules](#) for the created Alert. At least one rule has to be defined.

11. Click **Save** to save the changes.

Rules

Alert rules allow the investigator to determine what events on the investigated computer will be considered alert. Each alert has to have at least one rule. Rules applied to one parameter are combined with OR logic, rules applied to different parameters are combined with AND logic.

Rules are displayed in the grid in the **Rules** group in the **Alerts editing pane**.

Each rule consists of the **Parameter**, **Comparison operator** and **Value**, to which the **Parameter** will be compared.

To edit the rules, click the **Edit** in the **Alert editing pane**, the **Rules** window appears.

To define a new rule, in the **Rules** window, do the following:

1. Select **Application**, **Title** or **Name** from the **Parameter** drop-down list.
2. Select the **Comparison operator** for the selected **Parameter**.
3. Enter the **Value**.

To delete a rule, clear the **Value** box in the **Rules** window.

The following parameters are available for the rules

Parameter	Description	Example
Application	The name of the started application on the investigated computer. Set this parameter type for Alert to be activated whenever the specified value is identified as the name of a launched application.	skype.exe
Title	The name that appears in the title of a window. Set this parameter type for Alert to be activated whenever the specified value is identified in any title on the screen.	Facebook



User name	The name of the Windows user whose work is monitored by Ekran System. Set this parameter type for Alert to be activated whenever the specified user uses the computer on which the Client is installed.	John
------------------	---	------

Comparison operators for text data:

- **Equal to:** The defined value fully corresponds to the found result (e.g., John will find John, but will not find Johnny);
- **Like:** The found result includes the defined value (e.g., John will find Johnny, Johnatan, but will not find Johan);

Examples of Rules

1. To set up the alert notification about any user opening **Facebook** on the investigated computer, enter the following parameters:

The 'Rules' dialog box contains a table with three columns: 'Parameter:', 'Operator:', and 'Value:'. The 'Parameter:' column has a dropdown menu with 'Title' selected. The 'Operator:' column has a dropdown menu with 'Like' selected. The 'Value:' column has a text input field containing 'facebook'.

2. To set up the alert notification about a specific user (e.g. Stefan) opening **Facebook** on the investigated computer, enter the following parameters:

The 'Rules' dialog box contains a table with three columns: 'Parameter:', 'Operator:', and 'Value:'. The first row has 'Title' in the 'Parameter:' dropdown, 'Like' in the 'Operator:' dropdown, and 'facebook' in the 'Value:' text field. The second row has 'User name' in the 'Parameter:' dropdown, 'Equal to' in the 'Operator:' dropdown, and 'Stefan' in the 'Value:' text field.

If you enter more than one name, the alert notification will then appear if any of them (Stefan or Rick) opens **Facebook**.

The 'Rules' dialog box contains a table with three columns: 'Parameter:', 'Operator:', and 'Value:'. The first row has 'Title' in the 'Parameter:' dropdown, 'Like' in the 'Operator:' dropdown, and 'facebook' in the 'Value:' text field. The second row has 'User name' in the 'Parameter:' dropdown, 'Equal to' in the 'Operator:' dropdown, and 'Stefan' in the 'Value:' text field. The third row has 'User name' in the 'Parameter:' dropdown, 'Equal to' in the 'Operator:' dropdown, and 'Rick' in the 'Value:' text field.

3. To set up the alert notification about any user launching **skype.exe** application on the investigated computer, enter the following parameters:



The 'Rules' dialog box contains a table with three columns: 'Parameter:', 'Operator:', and 'Value:'. The first row has 'Application' in the Parameter column, 'Equal to' in the Operator column, and 'skype.exe' in the Value column.

Parameter:	Operator:	Value:
Application	Equal to	skype.exe

4. To set up the alert notification about a specific user (e.g. Stefan) launching **skype.exe** application on the investigated computer, enter the following parameters:

The 'Rules' dialog box contains two rows. The first row has 'Application' in the Parameter column, 'Equal to' in the Operator column, and 'skype.exe' in the Value column. The second row has 'User name' in the Parameter column, 'Equal to' in the Operator column, and 'Stefan' in the Value column.

Parameter:	Operator:	Value:
Application	Equal to	skype.exe
User name	Equal to	Stefan

If you enter more than one name, the alert notification will then appear if any of them (Stefan or Rick) launches **skype.exe**.

The 'Rules' dialog box contains three rows. The first row has 'Application' in the Parameter column, 'Equal to' in the Operator column, and 'skype.exe' in the Value column. The second row has 'User name' in the Parameter column, 'Equal to' in the Operator column, and 'Stefan' in the Value column. The third row has 'User name' in the Parameter column, 'Equal to' in the Operator column, and 'Rick' in the Value column.

Parameter:	Operator:	Value:
Application	Equal to	skype.exe
User name	Equal to	Stefan
User name	Equal to	Rick

5. To set up the alert notification about a specific user (e.g. Stefan) using the investigated computer, enter the following parameters:

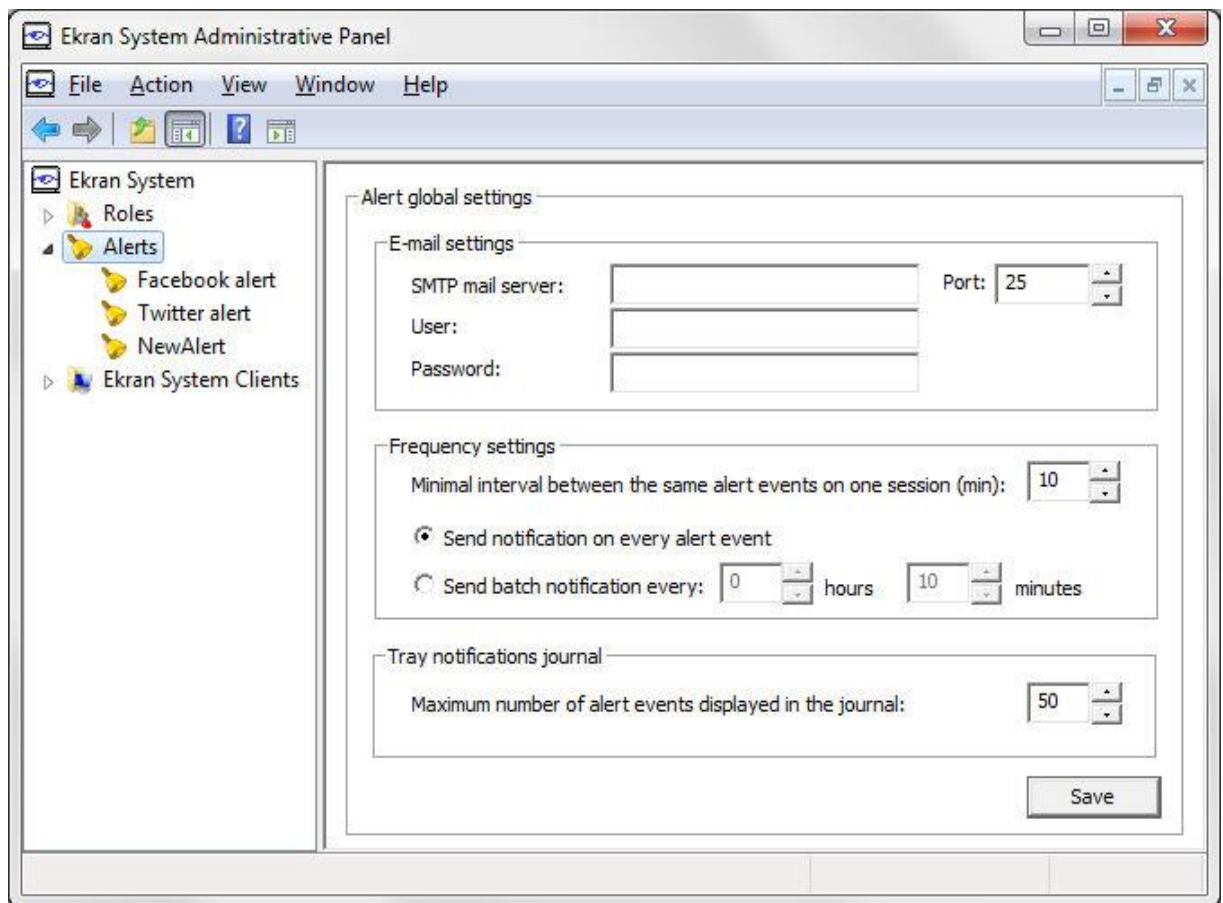
The 'Rules' dialog box contains a single row with 'User name' in the Parameter column, 'Equal to' in the Operator column, and 'Stefan' in the Value column.

Parameter:	Operator:	Value:
User name	Equal to	Stefan

Defining Alert Global Settings

Alert global settings define notification settings for all Alerts. These settings are applied to all Alert and to all **Ekran System Monitors** connected to this **Server**.

To define Alerts global settings, click the Alerts node. The **Alert global settings** pane will appear to the right.



The **E-mail settings** group allows you to define a sender of the email alert notifications.

- Define an existing **SMTP mail server**.

NOTE: The delivery of email notifications via mail servers with only NTLM authentication, such as Microsoft Exchange Server, is not supported.

- Define the number of the **Port** via which the emails will be sent.
- Define the login details (**User** and **Password**) of an existing email account, from which the email notifications will be sent.

The **Frequency settings** group allows you to define how frequently the Alert notifications will appear in the **Monitor Tray** and be sent via email.

1. Define the **Minimal interval between notifications sent for the same alert event**. This option defines how frequently the notifications about the same alert event will appear. For example, if this parameter is set to 10 minutes and a user has started Skype and works in it, the investigator will receive one notification every 10 minutes instead of receiving 10 notifications every minute or even more.
2. Define the way in which the notifications will be sent:
 - Select **Send notifications on every alert event** for the notification on every alert event to be sent to the investigator.



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- Select **Send batch notification every** for information on all alert events during defined time interval to be sent to the investigator.
- If **Send batch notification every** is selected, then define time interval in **hours** and **minutes**. Time counting starts when **Server** starts if this option is selected. Notifications are then sent with the defined frequency.

The **Tray notifications journal** group contains only one parameter that allows the investigator to define the maximum number of events displayed in the **Tray Notification Journal**. When it is reached, the oldest records are removed from the journal of all **Ekran System Monitors** (but not from the database).

Client Configuration

Hosts are computers on which Ekran System Client installed. After the Client is installed on the computer it appears in the Hosts list of the Administrative Panel to which it connects.

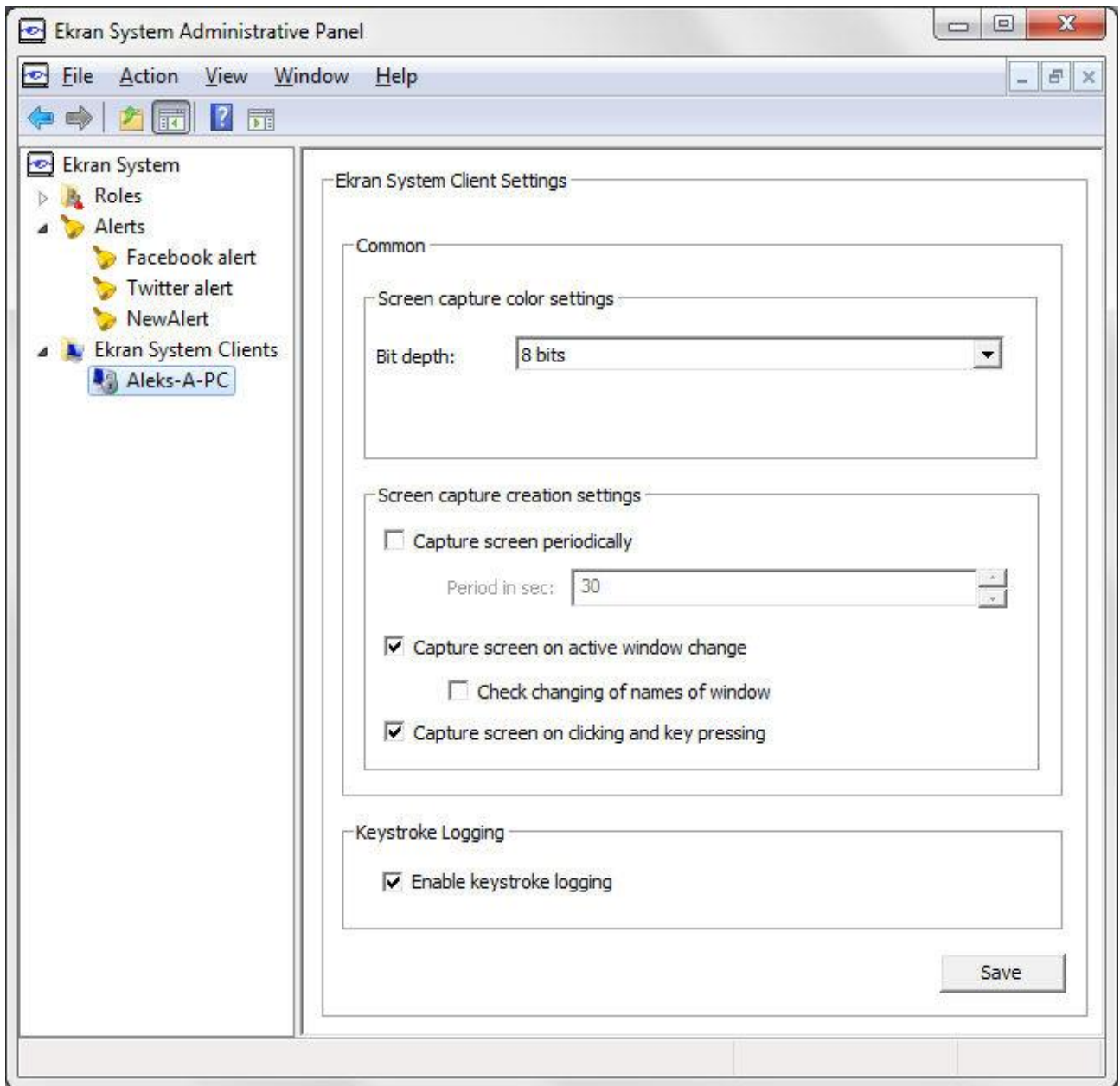
Ekran System Client configuration is defined during [installation](#) or after the installation through editing the Ekran System Client configuration.

To edit the Ekran System Client configuration:

1. Select the required host under Ekran System Clients.



2. The configuration options are displayed in the Details pane.



3. Define the required screen capture quality. This option allows you to define the color depth of the created screen captures.
4. Define the screen captures creation frequency. This option allows you to define how often the screen captures on the Client computer will be created. Screen captures can be created by three parameters:
 - **Capture screen periodically:** screen captures will be created with a certain time interval. Irrespective to whether something changes on the screen or not.
 - **Capture screen on active window change:** screen captures will be created on the change of the active window. For example, a new window opens (program



starts), a new tab in the browser opens, any secondary window opens, etc. (influences the keystroke logging as well).

- **Check changing of names of window:** screen captures will be created on the change of the name of the active window (influences the keystroke logging as well).
- **Capture screen on clicking and key pressing:** screen captures will be created on each mouse click or keyboard key pressing.

5. If you want the keystroke logging to be enabled, select the **Enable keystroke logging** checkbox.

NOTE: The keystrokes are not logged in a virtual machine session. To log keystrokes from a virtual machine session, you need to install a Client on the virtual machine.

6. Click **Save**.
7. A new configuration will be immediately applied to the host.

Exporting Data

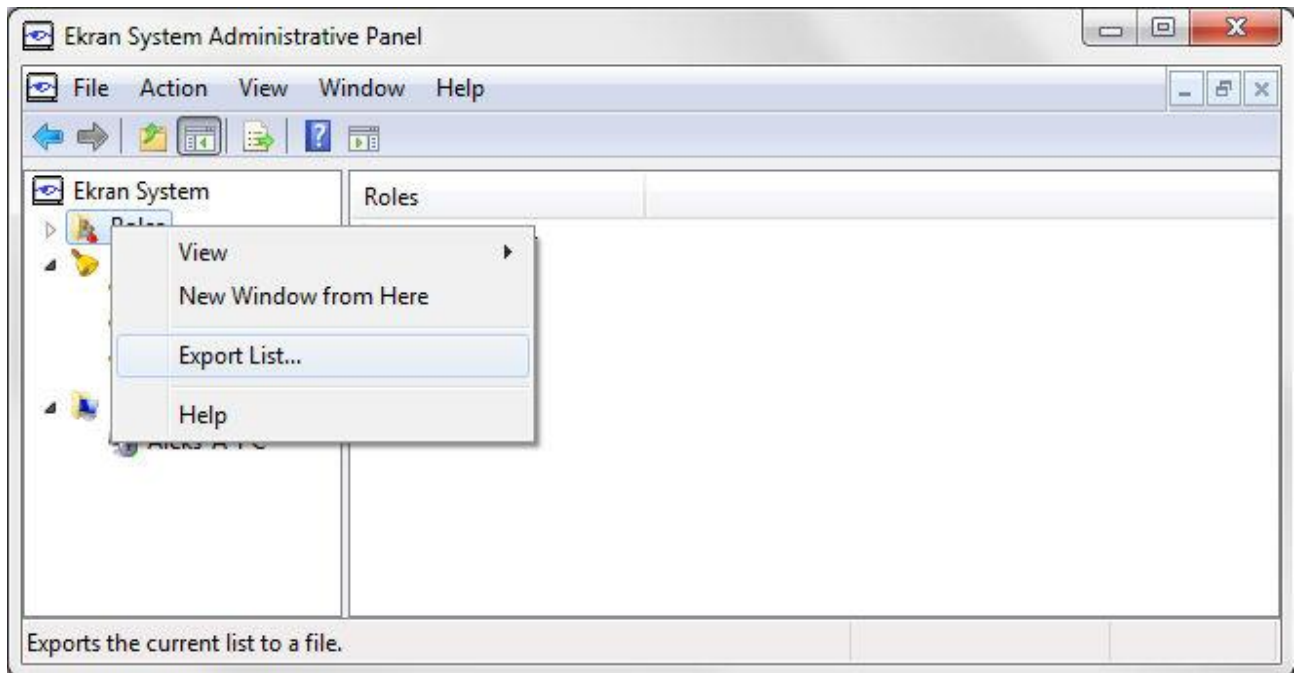
Ekran System Administrative Panel allows you to export the list of roles and/or hosts to the *.txt and *.csv format.

To export data:

1. In the Navigation pane, expand the category to be exported, e.g., Hosts (to export the lists of all hosts connected to the Administrative Panel) or Administrator (to export the list of all Windows users to whom the Administrator role is assigned).

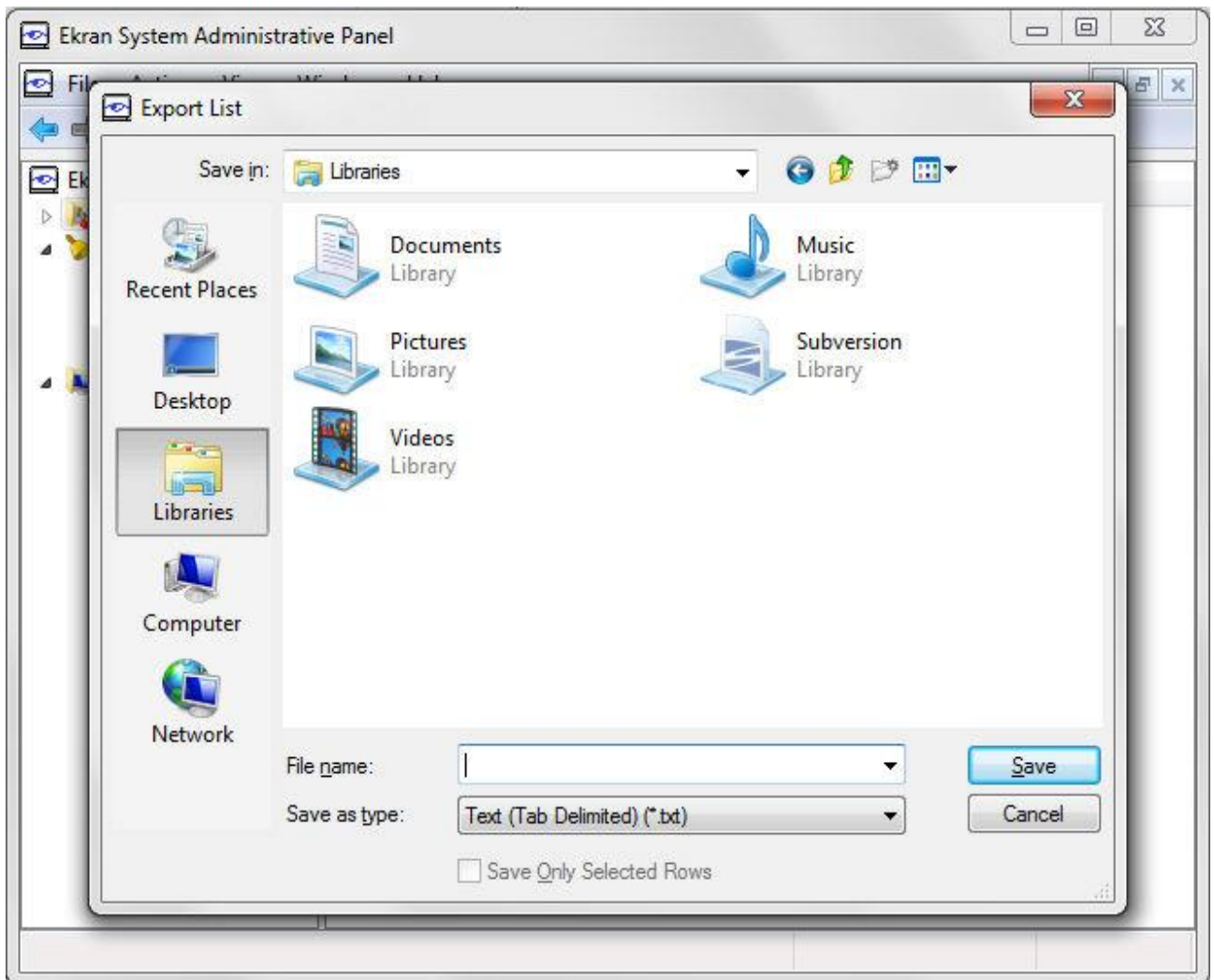


2. Select **Action > Export List** or right-click and select **Export List**.





3. Select the name of the file to which data is to be exported and its format.



4. Data is exported.



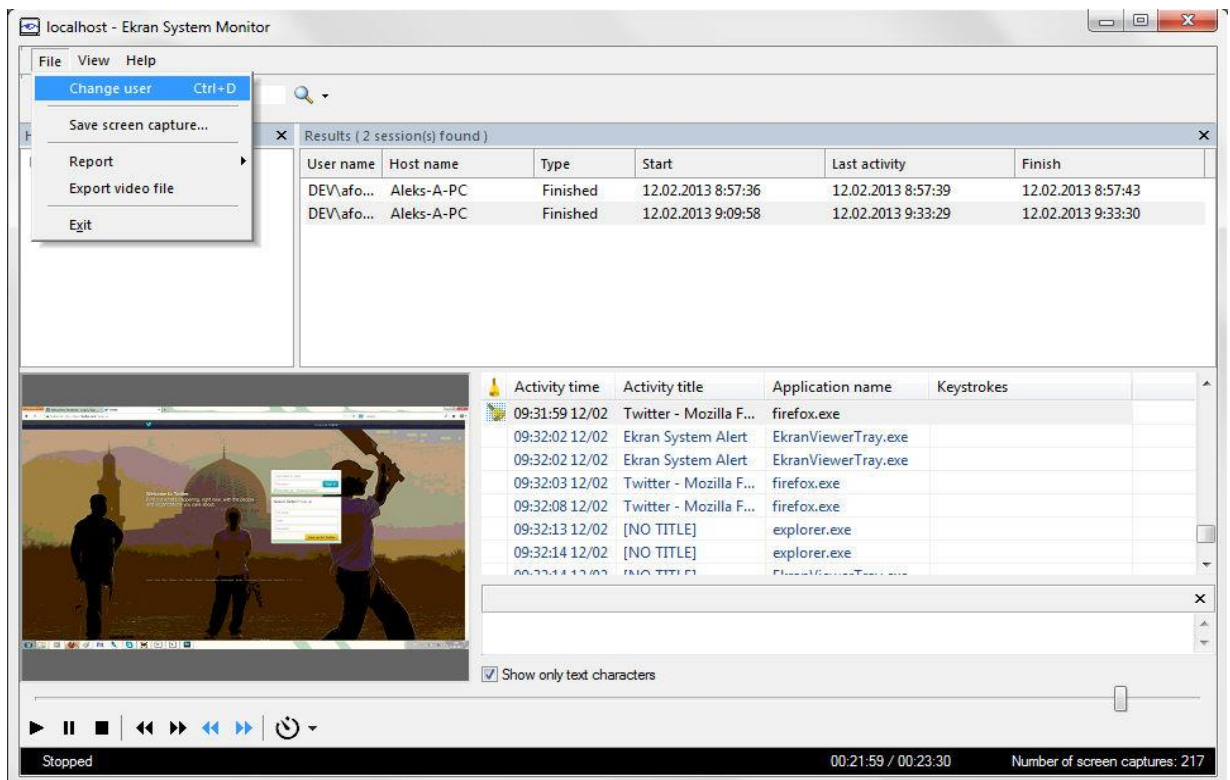
Monitor

Connecting/Disconnecting from Ekran System Server

Disconnecting from the Ekran System allows you to change the user. Only users, to which **Administrator** or **Auditor** roles are assigned in the **Ekran System Administrative Panel** (part of the Ekran System Server), can connect to the **Ekran System Monitor**.

To change the user, do the following:

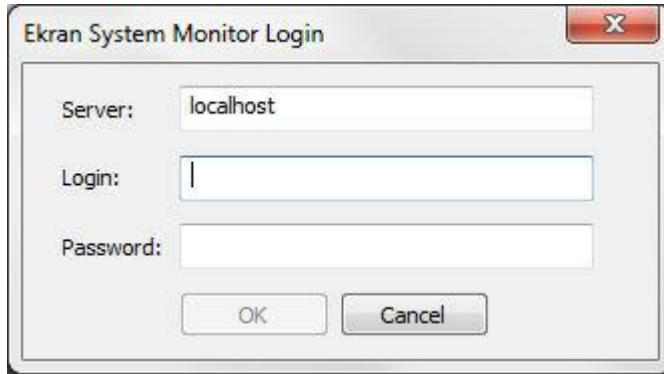
1. In the main menu, select **File - Change user** or press **Ctrl + D**.



2. The **Ekran System Login** window opens. Enter the following parameters and click **OK**:
 - **Server:** Enter the server name. It can be the IP address, name, or localhost (if the server is installed on the local computer).
 - **Login:** Enter the login name. It can be **<username>** if it is the local user and **<domainname\username>** if the user is added to the domain.
 - **Password:** Enter the Windows user password.



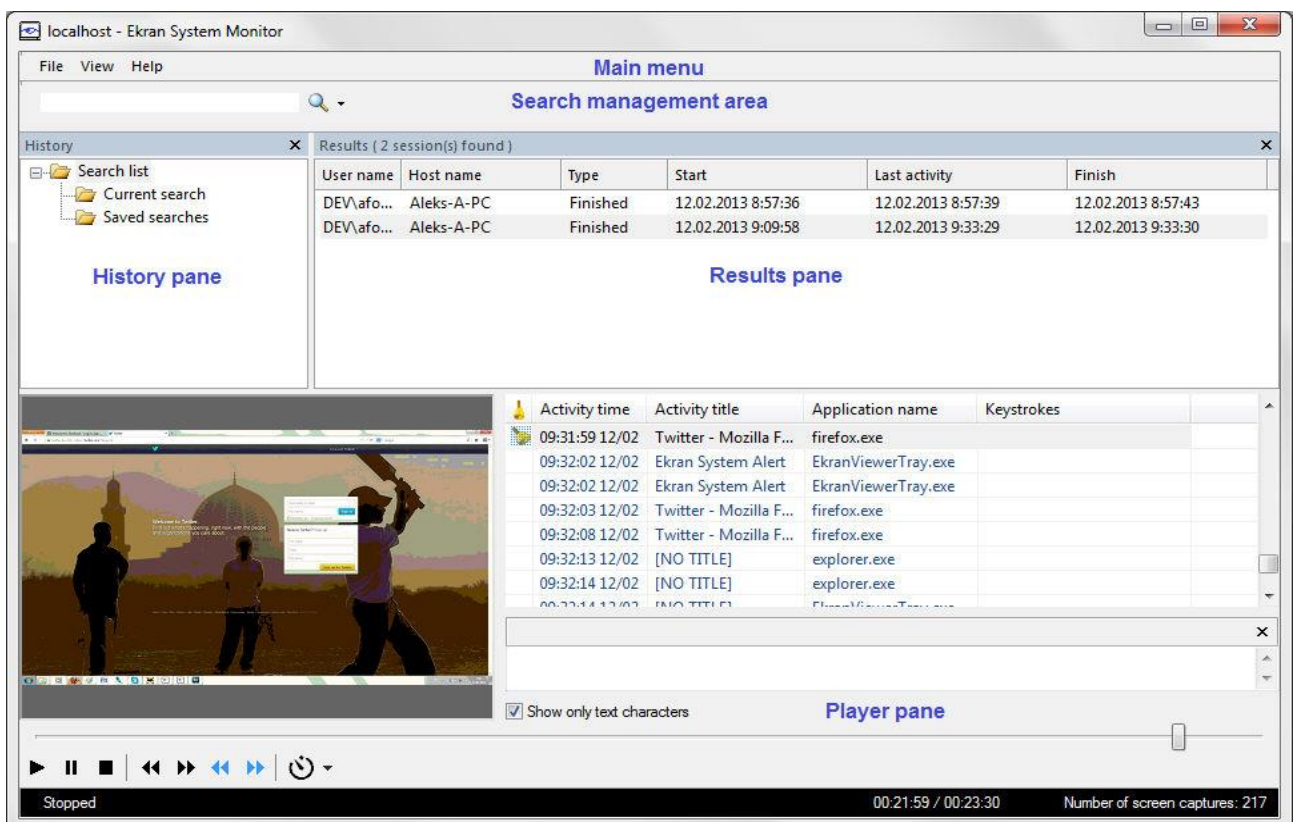
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3. The user is changed and connected to the Ekran System.

Viewer Interface

Ekran System Monitor Interface



By default, the **Ekran System Monitor** interface is divided into the following areas:

- The **Main menu**: Provides you the access to the features of the **Ekran System Monitor** program.



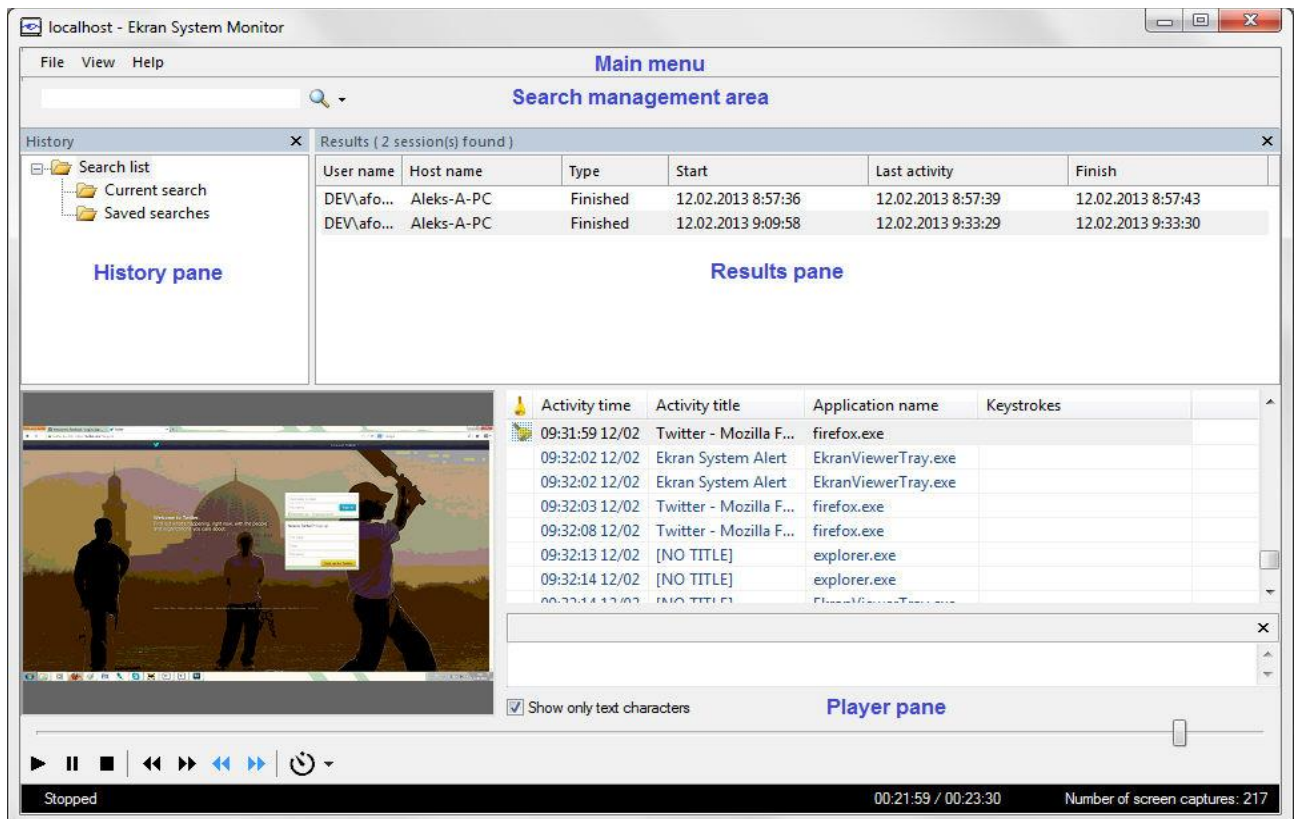
EKRAN SYSTEM

- The **Search management area**: Allows you to perform [quick](#) and [parameterized](#) searches.
- The [History pane](#): In this pane, the current and favorite searches are displayed.
- The [Results pane](#): In this pane, the detailed results of the search are displayed.
- The [Player pane](#): In this pane, the list of screen captures and the player window are displayed.

Panes

The Ekran System Monitor interface consists of four main areas:

- **Search management area**
- **History pane**
- **Results pane**
- **Player pane**



The Search management area

This area includes parameters for the search in the Ekran System sessions.

The History pane

In this pane, the **Search list** tree-view structure is displayed:



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- **Current search:** This folder contains the parameters and results of the current search.
- **Saved searches:** This folder contains the [saved user search parameters](#).

The Results pane

In this pane, the search results are displayed. The search results fields are filled when the search finishes. The results are displayed in a grid with the following columns:

- **User name:** The name of the Ekran System user.
- **Host name:** The name of the computer on which the Client is installed.
- **Type:** The search type. It can be **Finished**, **Live**, and **Non-Licensed**.
- **Start:** The date when the session started.
- **Last activity:** The date of the last made screen capture.
- **Finish:** The date when the session finished. If the session has the **Live** status, this field is empty.

The Player pane

The Player pane is divided into two areas: the list of screen captures (to the right) and the player itself (to the left).

The list of screen captures is displayed in a grid with the following columns:

- **Alert icon:** Indication, whether the screen capture belongs to alert type.
- **Activity time:** The date and time when the screen capture was made.
- **Activity title:** The name that is associated with the screen capture.
- **Application name:** The name of the application that was started on the Client computer.
- **Keystrokes:** The content of the keystrokes log associated with the selected screenshot.

NOTE: The keystrokes are not logged in a virtual machine session. To log keystrokes from a virtual machine session, you need to install a Client on the virtual machine.

You can change the size of the columns. Data is sorted by the time of the screen capture creation.

Main Menu

The main menu of the Ekran System Monitor provides the access to the features of the program.

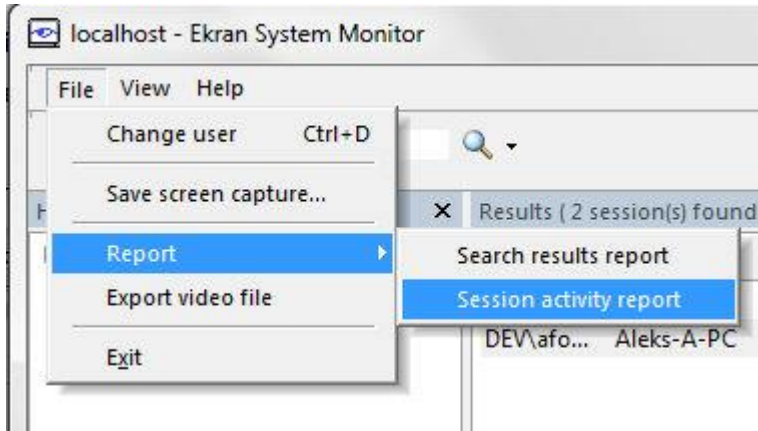
The main menu consists of three parts:

- **File menu**
- **View menu**
- **Help menu**

File menu



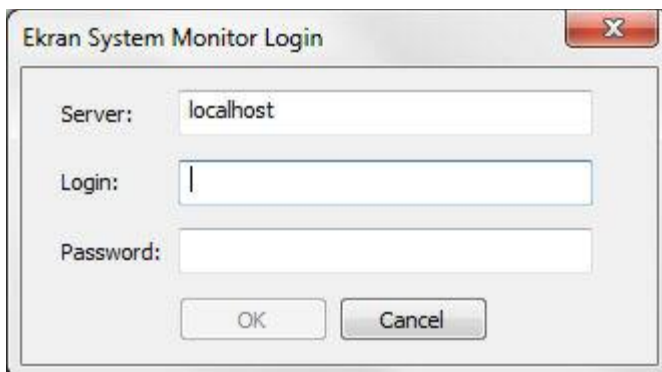
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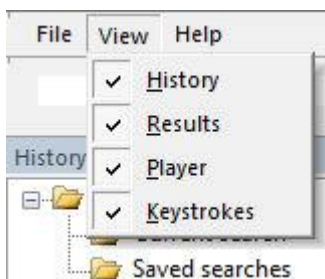
The File menu consists of four options:

- **Change user:** Allows you to change the Ekran System Monitor user.
- **Save screen capture:** Allows you to save the screen capture selected in the Player area.
- **Report:** Allows you to generate two types of reports.
- **Export video file:** Allows you to export the screen captures from the session to a video file format.
- **Exit:** Allows you to exit the Ekran System Monitor.

When disconnecting from the Ekran System Server, the **Ekran System Login** window opens. Fill the **Login** and **Password** boxes and click **OK** to connect to the Ekran System Server.



View menu



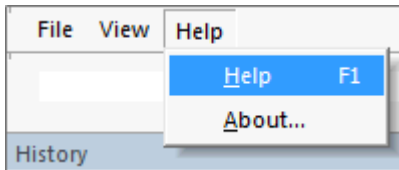
The View menu consists of four options that allows you to enable/disable panes:

- **History:** Allows you to enable/disable the [History pane](#).
- **Results:** Allows you to enable/disable the [Results pane](#).
- **Player:** Allows you to enable/disable the [Player pane](#).



- **Keystrokes:** Allows you to enable/disable the Keystrokes box in the [Player pane](#).

Help menu



The Help menu consists of two options:

- **Help:** Provides you the access to this help file.
- **About:** Provides you with information about the Ekran System Monitor application.

Search

About Searching

You can perform searches in the **Ekran System** sessions. Each session contains a set of screen captures made from the investigated computer during the specified period of time. You can search by the following parameters: name of the screen capture, the application name, user, name of the computer with installed Client, date of the session start, date of the session finish, date of the last made screen capture, and type of the session.

There are two types of searching:

- **[Quick](#):** Allows you to perform searching by the text data.
- **[Parameterized](#):** Allows you to perform searching using multiple parameters.

Quick Search

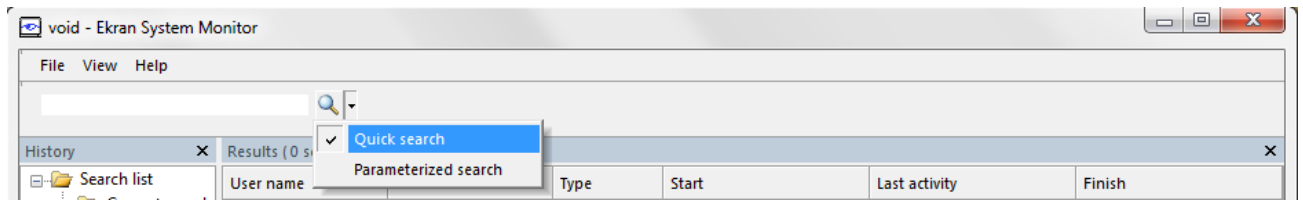
The quick search allows the user to perform searches by the text data, i.e. by the name of the application, the screen capture title, user name, host name, and the type of the session.

The quick search is enabled by default.

To perform a quick search, do the following:



1. In the **Search management area** (under the **Main menu**), click on the arrow near the **Search** button and select **Quick search**.



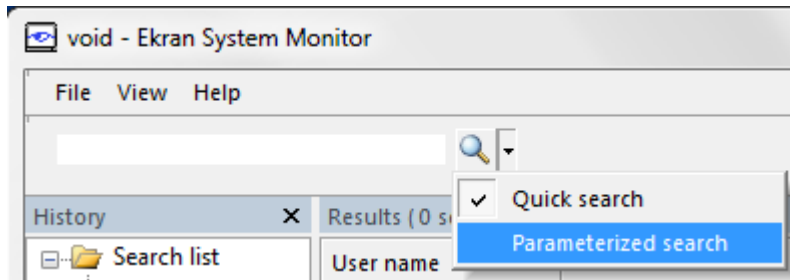
2. In the **Search** box, enter the required data by which you want to perform searching.
3. Click on the **Search** button or press **Enter**.
4. The search starts.
5. When the search finishes, the results are displayed in the **Results pane**.
6. Click the session in the **Results pane** to view the detailed information in the **Player pane**.

Parameterized Search

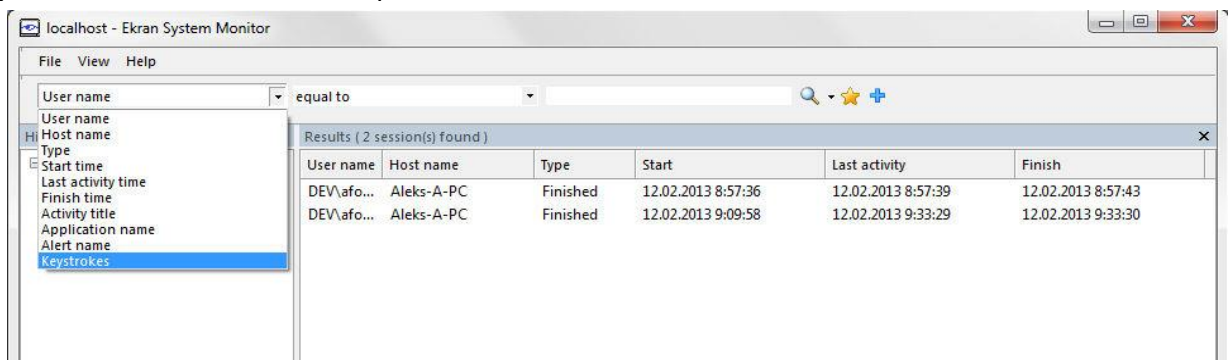
The parameterized search allows the user to perform searching in the Ekran System sessions using multiple parameters.

To perform a parameterized search, do the following:

1. In the **Search management area** (under the **Main menu**), click on the arrow near the **Search** button and select **Parameterized search**.



2. The **parameterized search area** opens.

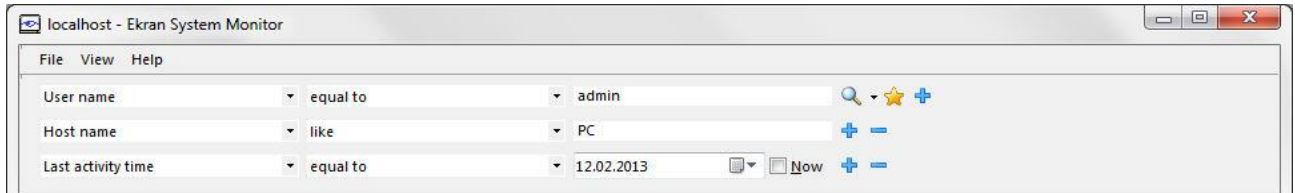


3. By default, there is only one search condition. To add another condition, click on the plus button. The new condition line will be displayed below the first one.



NOTE: Search conditions on data of one type are combined with OR logic. Search conditions on data of different types are combined with AND logic.

4. Define the [search parameters](#).
5. When adding the **Start**, **Finish time**, or **Last Activity time** condition, the **Now** option is available. Select this option to perform the search till the current computer date.



6. Click on the **Search** button or press **Enter**.
7. The search starts. When the process of searching finishes, the results are displayed in the **Results** pane.

Parameterized Search Parameters

The **parameterized search condition** consists of the **Parameter** box, **Comparison operator** box, and the **Value** box.

You can add up to 10 conditions. **To add the condition**, click the plus icon. **To delete the condition**, click on the minus icon. The conditions of different types are connected with "**AND**" logic, it means that each specified condition will be TRUE for each found session in the Results pane. The conditions of the same type are connected with "**OR**" logic, it means that at least one of the specified conditions of the same type will be TRUE for each found session in the Results pane.

Text data parameters

Search Item	Description	Example
User name	The name of the Windows user whose work is monitored by Ekran System.	John
Host name	The name of the computer on which the Client is installed.	Kenny
Type	The type of the session. The following types are available: Finished (the session is finished), Live (the session is running), Non-Licensed (the computer with the Client has	Finished, Live



	no license).	
Title	The name associated with the screen capture. It associates with the currently opened window on the investigated computer, context menu, etc.	Start menu
Application	The name of the started application on the investigated computer.	explorer.exe
Alert name	The name of the alert that occurred on the investigated computer.	Facebook alert
Keystrokes	A phrase or a word that was logged on the investigated computer.	Corporate security breach

Comparison operators for text data:

- **equal to:** the defined value fully corresponds to the found result (e.g., John will find John, but will not find Johnny);
- **like:** the found result includes the defined value (e.g., John will find Johnny, Johnatan, but will not find Johan);

Date parameters

Search Item	Comparison Operator	Example
Start time	The date of the session start.	9/13/2010
Last Activity time	The date of the last made screen capture.	12/13/2009
Finish time	The date of the session	12/12/2008



	finish.	
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Additional options:

- **Now:** Select this option to enable the searching till the current date.

Comparison operators for dates:

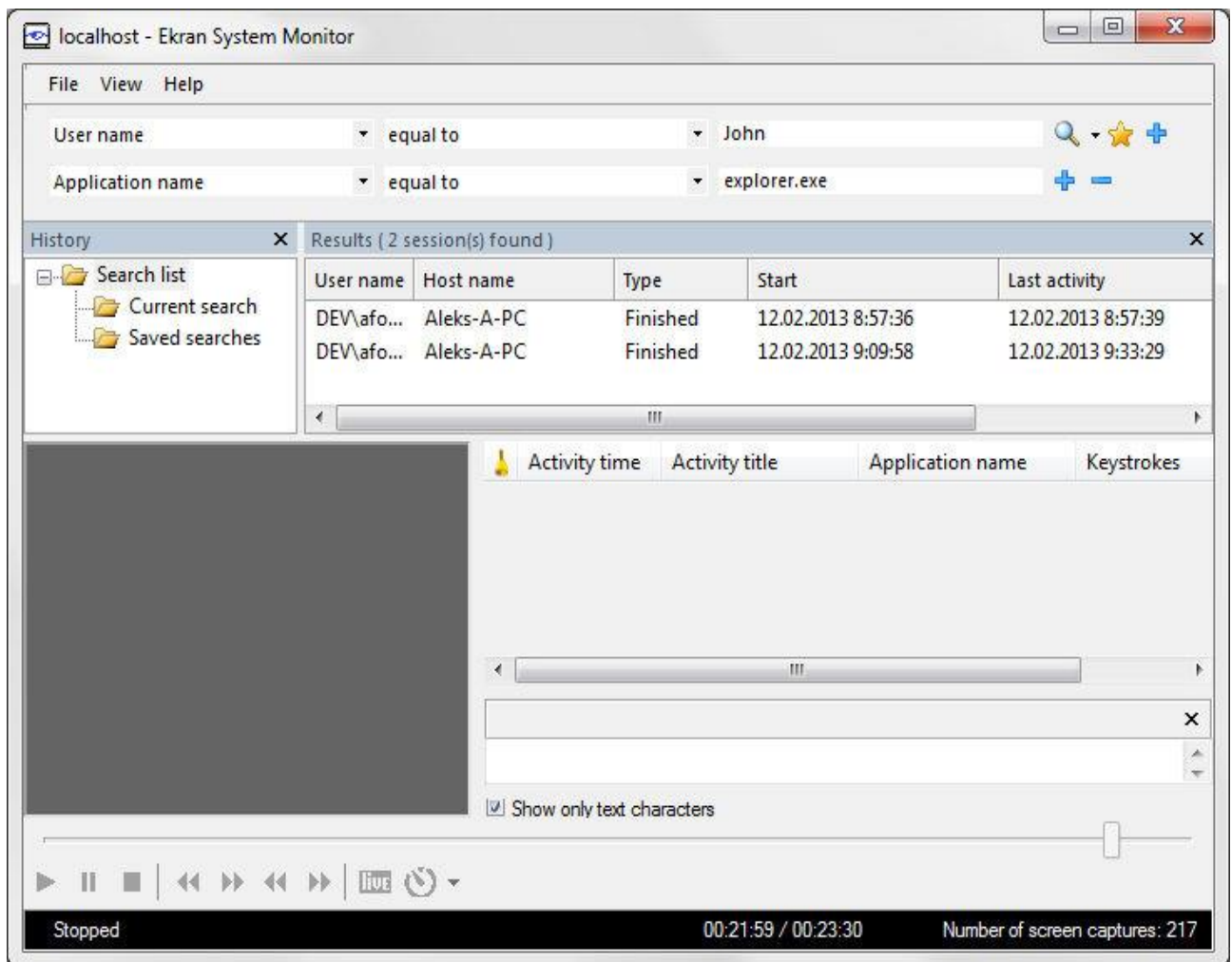
- **equal to:** the specified date fully corresponds to the found result (e.g., 12/12/2009 will find 12/12/2009 but will not find 12/11/2009);
- **before:** the found results will match all the dates till the specified one (e.g., 12/12/2009 will find 07/08/2009 but will not find 12/12/2010);
- **after:** the found results will match all dates after the specified one (e.g., 12/12/2009 will find 12/12/2010 but will not find 12/12/2008).

Saving Search Parameters

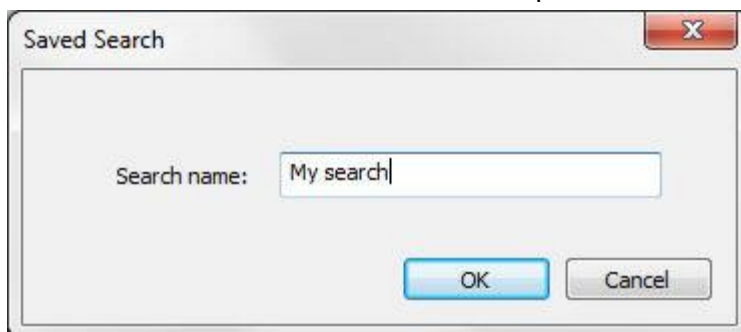
You can save the search parameters to make it easier to perform further searches. The search parameters will be saved in the **Saved searches** folder in the **History** pane. The saving of search parameters is available only for the **parameterized search**.

To save the search parameters, do the following:

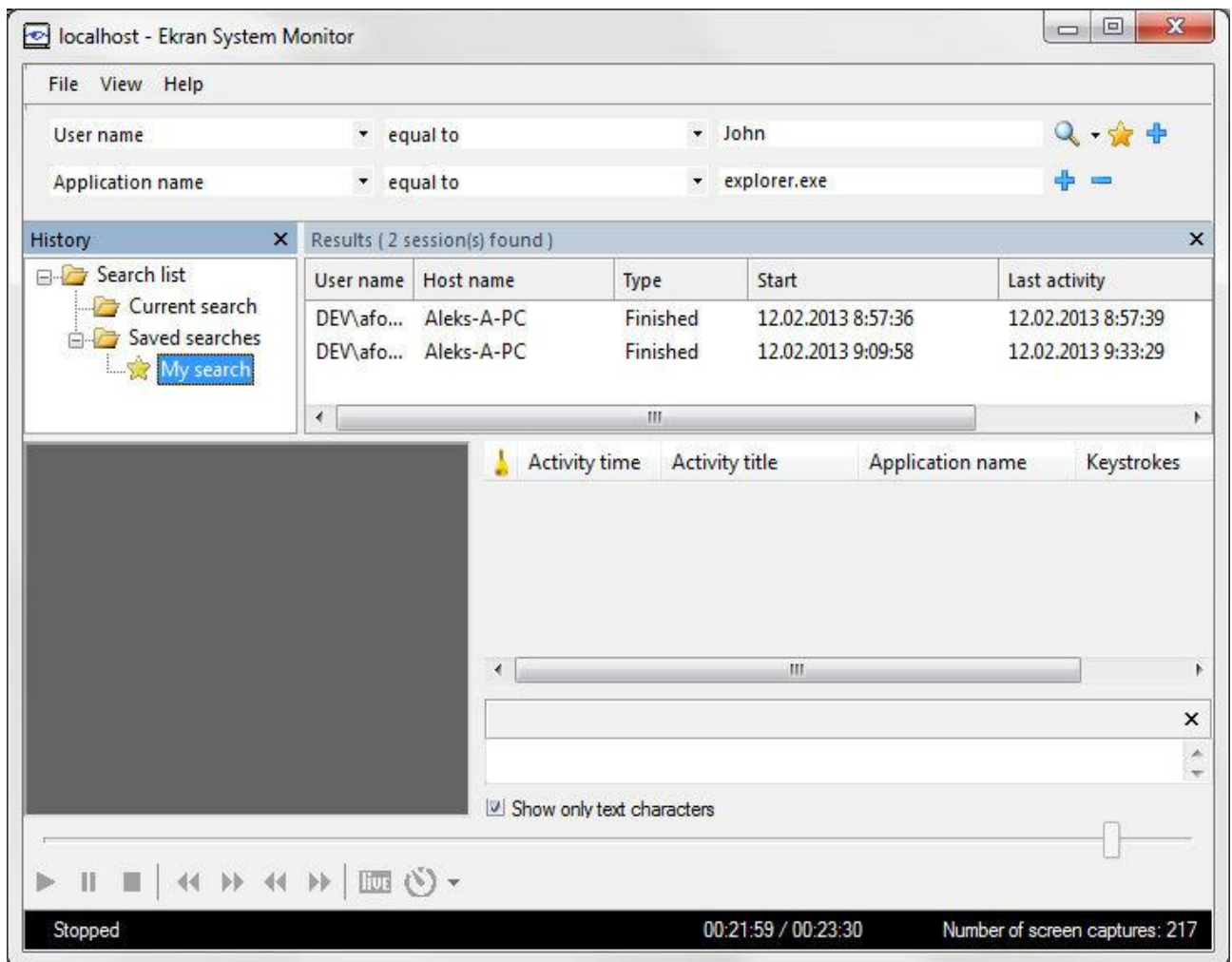
1. Define the search parameters.



2. Click on the **Save search** icon.
3. The **Saved Search** window opens.
4. Enter the name for the set of the search parameters and click **OK**.



5. The search parameters are added to the **Saved searches** folder. You can view it in the **History** pane.



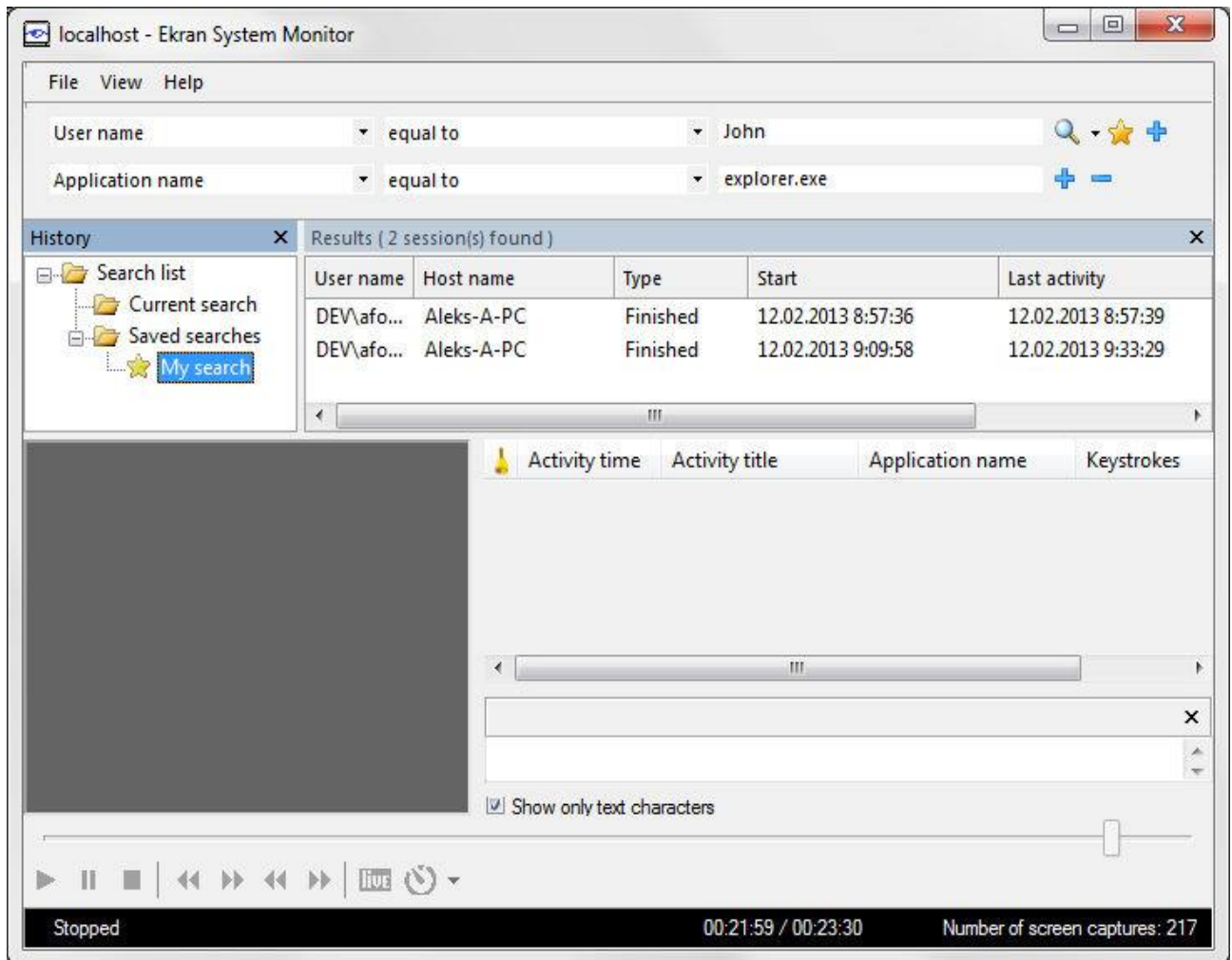
NOTE: When opening search parameters that include dates (Finish time, Start, or Last activity time) with enabled Now option, the date will be set as the current one.

Restoring Search Parameters

You can restore the saved search parameters. This makes it easier to perform further searches without defining the same parameters again.

To restore the search parameters, do the following:

1. In the **History** pane, navigate to the **Saved searches** folder in the **Search list** tree.
2. In the **Saved searches** folder, select the required folder with saved search parameters.



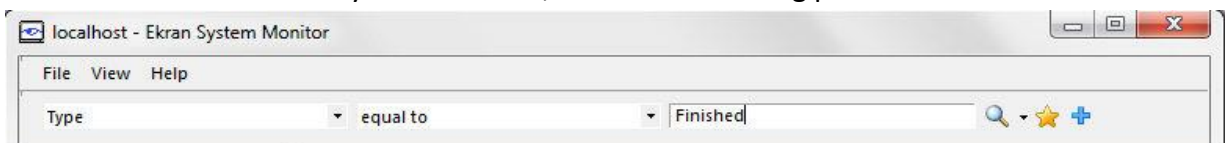
3. The saved search parameters are displayed in the **Search management area**.
4. Click on the search button or press **Enter** to start searching.

Examples of Search Parameters

1. To find all screen captures connected with the work of **explorer.exe**, enter the following parameters:



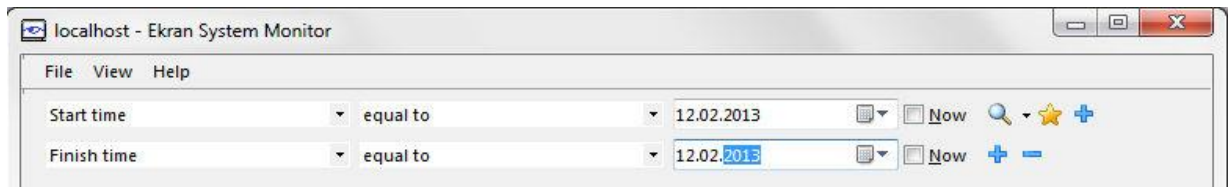
2. To find all **finished** Ekran System sessions, enter the following parameters:





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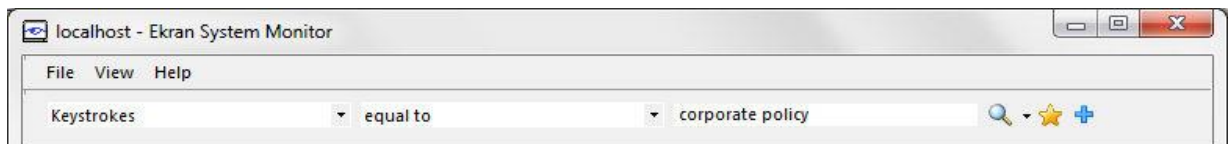
3. To find all sessions started on **February 12, 2010** and finished on **February 13, 2010**, enter the following parameters:



4. To find all sessions connected with **Facebook**, enter the following parameters:



5. To find all sessions connected with the discussion of **corporate policy**, enter the following parameters:



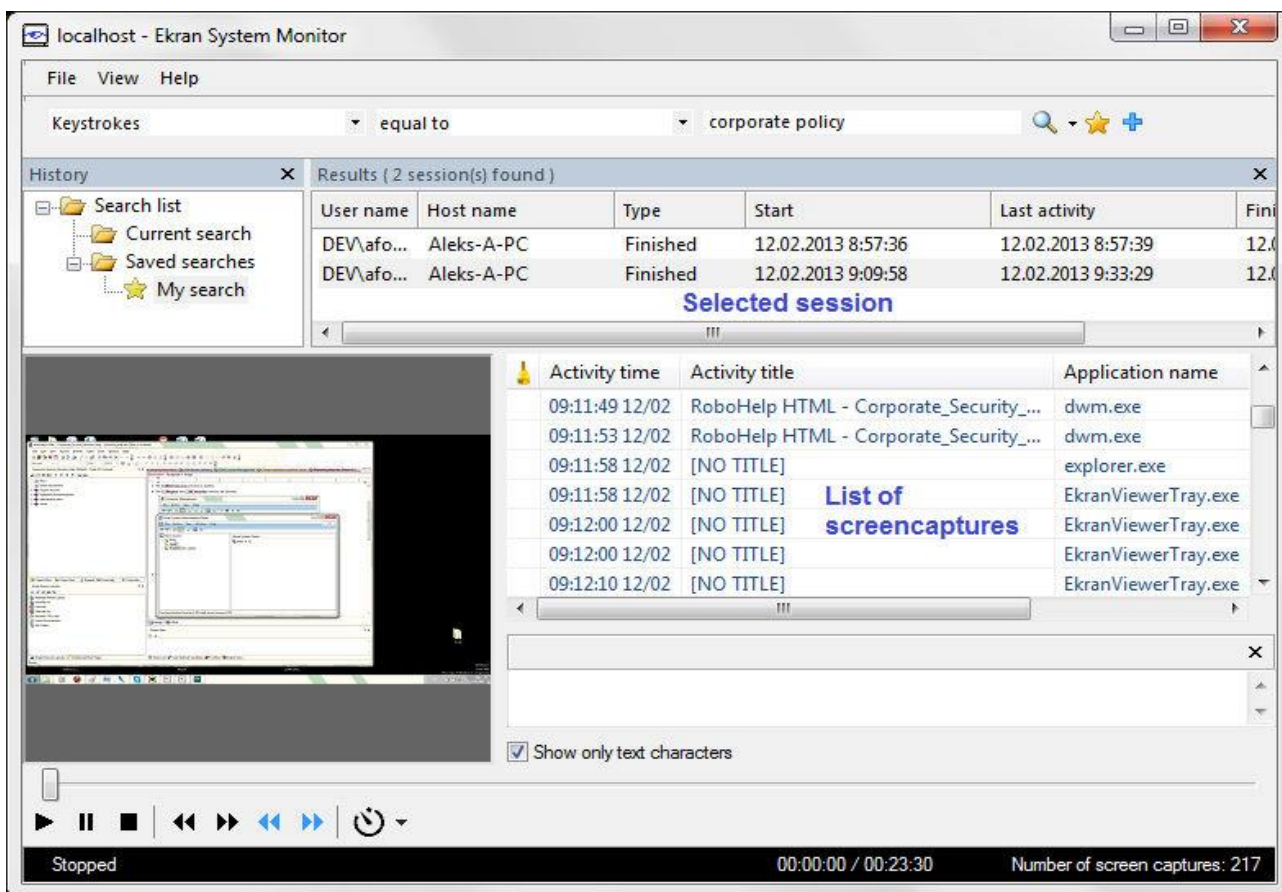
Viewing Monitored Data

Viewing Screen Captures

The Ekran System Monitor allows you to view the screen captures made from the computer on which the Client is installed. You can view them separately by selecting the required screen capture from the list or viewing all screen captures in the form of video.

To view the screen captures, do the following:

1. In the **Results pane**, select the required session.
2. The list of all screen captures from the session are displayed in the form of grid in the right part of the **Player pane**.



3. The Player is not playing by default. Do one of the following:

- In the list of screen captures, select the required screen capture. It is displayed in the **Player area**.
- In the list of screen captures, select the screen capture starting from which you want the video to be streamed. In the **Player area**, click **Play**. Screen captures are displayed in order one by one.

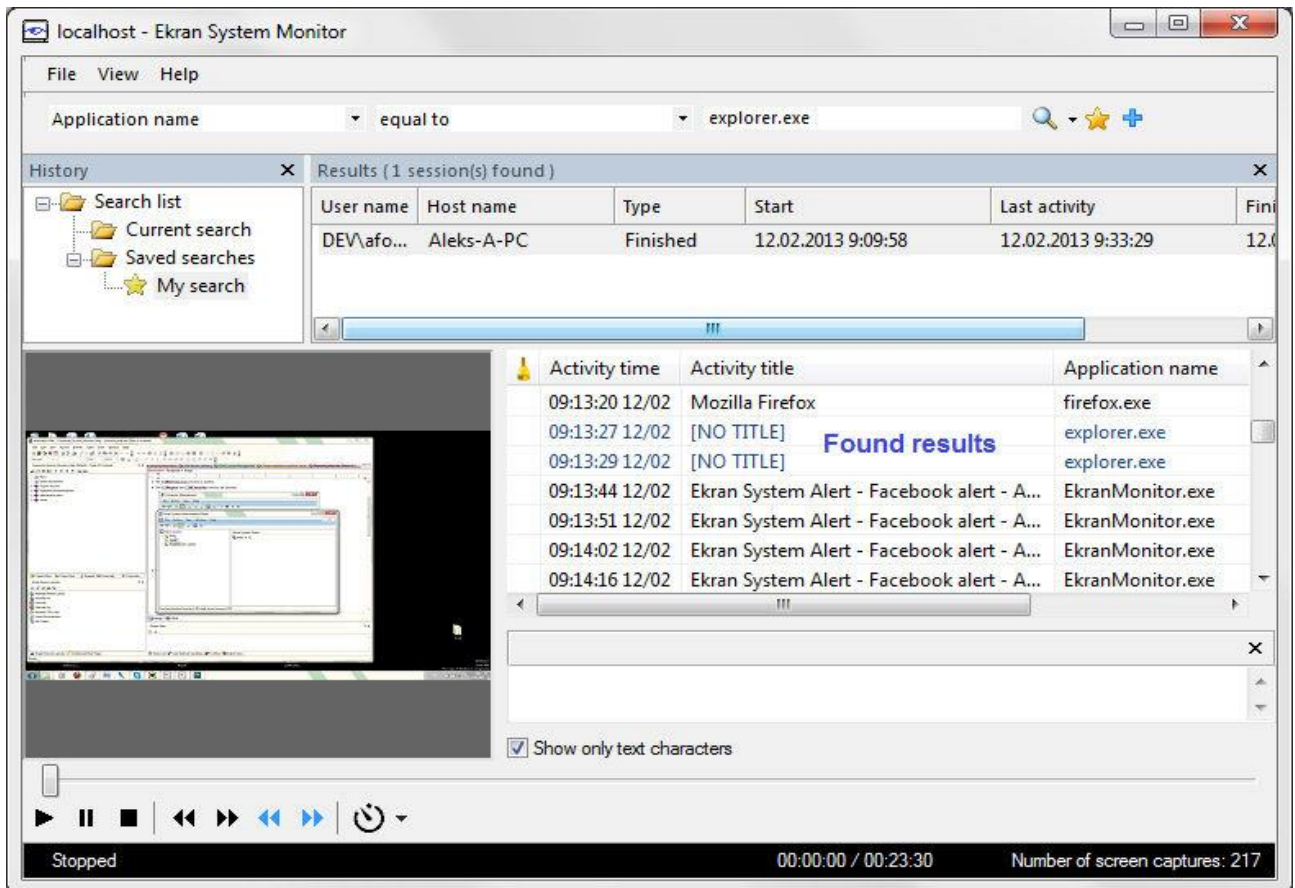
To pause/stop the video, use the corresponding **Pause** and **Stop** control buttons in the **Player area**.

To move from one screen capture to the next one, use the **Previous/Next** control buttons.

To move to the full-screen mode, double click the screen capture in the **Player area**.

You can define the speed with which screen captures will change in the **Player area**. To do this, click **Video speed** and in the drop-down list, select **Actual** to change screen captures depending on the screen capture creation time; select **1 fps** to display one screen capture per second.

If the search conditions included the **Title** and **Application** items, the additional control buttons are displayed in the **Player area**. They are marked blue and allow moving between the found search results.



When you select a screen capture, the keystrokes associated with it are displayed in the box, below the list of screen captures. By default it displays only text characters, you can enable displaying all keystrokes logged (e.g. navigation keys, functions keys, etc.) by clearing the **Show only text characters** checkbox. Then any other keys and key combinations will be displayed in inequality sign brackets. If a key was pressed repeatedly it will be displayed with an "x" sign and the number of reiterations (e.g. <F12 x 24>).

Please note that keystrokes are not logged from virtual machines.

NOTE: If the Enter key was pressed during input, the log will be split in the list of screen captures. Though to maintain text integrity, in the keystrokes box, the keystrokes lines having the same Title-Application pair will be put together.

Viewing Live Sessions

Ekran System Monitor allows you to view screen captures in a Live session (i.e., the monitoring of the Client computer is still in progress).

If the session has the **Live** status, the list of screen captures is refreshed each second and new screen captures are added to the table if any are available.



For Live sessions, the additional **button** is available in the **Player area**. When you click this button, the real-time monitoring is performed. This means that screen captures appear in the **Player area** the moment the activity was performed on the investigated computer.

NOTE: If you click this button, you will not be able to navigate between screen captures in the list.

Receiving Information on Alert Events

The investigator can receive information on Alert events in three ways:

- In the **Monitor** application, when the investigator browses the screen captures. The alert events are marked with a special icon.
- If email notifications are enabled in the **Alert Parameters**, the alert information can be received in the email alert notification that also contains the link for viewing this alert in the **Ekran System Monitor**.

NOTE: You need the Monitor to be properly installed in order to activate links in the email notifications.

- If the tray notifications are enabled in the **Alert Parameters**, the information can be displayed by clicking the **View in the Ekran System Monitor** link in the pop-up notification from the **Monitor Tray**. Or this information can be received from the **Tray Notifications Journal** called from the **Monitor Tray** context menu.

Activity time	Activity title	Application r
09:12:32 12/02	Ekran System Administrative Pa...	mmc.exe
09:12:39 12/02	Ekran System Administrative Pa...	mmc.exe
09:12:41 12/02	Ekran System Administrative Pa...	mmc.exe
09:12:42 12/02	Ekran System Administrative Pa...	mmc.exe
09:12:49 12/02	Ekran System Administrative Pa...	mmc.exe
09:13:02 12/02	Welcome to Facebook - Log In, ...	firefox.exe
09:13:02 12/02	Welcome to Facebook - Log In, ...	firefox.exe
09:13:09 12/02	Welcome to Facebook - Log In, ...	firefox.exe
09:13:14 12/02	Mozilla Firefox	firefox.exe
09:13:20 12/02	Mozilla Firefox	firefox.exe
09:13:27 12/02	[NO TITLE]	explorer.exe
09:13:29 12/02	[NO TITLE]	explorer.exe



Reports

About Reports

The user can generate a report to export search results to a separate file. The report is generated in the *.xls format.

The following two types of reports are available:

- [Search Results report](#): This type of report includes information on all found sessions. The following data is included: number of found sessions, search type, date of the report generation, types of sessions, host names, activity time, and number of screen captures. Report can also include detailed information on each found session.
- [Session Activity report](#): This type of report includes information on the user activity in one or more sessions.

Search Results Report

Search Results report includes information on all found sessions. The following information is included to the report: date of report generation, path to the report, type of the search, number of found sessions, types of sessions (live or finished), names of the investigated computers, activity time, etc. If the user used parameterized search, search parameters and their values are also included to the report.

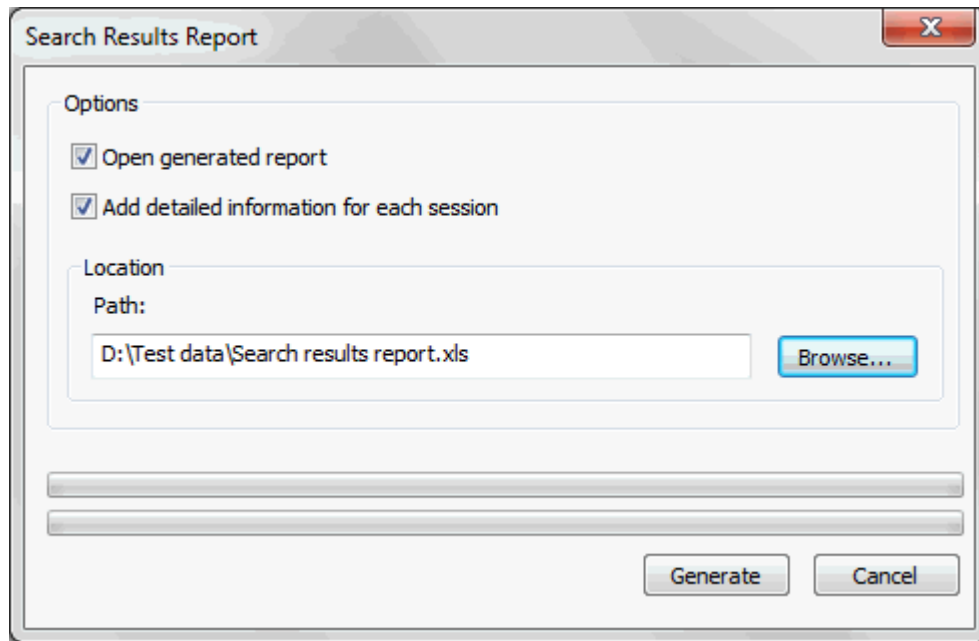
The report can also include detailed information for each found session. Information on each session is displayed in a separate tab named **<number>Session**. It includes general information on the session and the table with the names of screen captures and their creation date and time as it is displayed in the list of screen captures in the **Player pane**.

To generate the Search Results report, do the following:

1. In the main menu, select **File - Report - Search Results Report** or right click the session in the **Results pane** and select **Report - Search Results Report**.

NOTE: The report can be generated for more than one session. Multi-selection is available in the Results pane.

2. The **Search Results Report** window opens.



3. In the **Options**, select the required options. The following options are available:
 - **Open generated report**: Select this option to automatically open the report after the generation process finishes.
 - **Add detailed information for each session**: Select this option to include detailed information for each session to the report.
4. In the **Path** box, do one of the following:
 - Enter the path to the generated report manually.
 - Click **Browse** and define the location for the file with generated report.
5. Click **Generate** to generate the report.
6. When the generation process finishes, click **Finish**. The report will open automatically if the corresponding option was selected.

Session Activity Report

The Session Activity report includes general information on the user activity in the session currently opened in the Player pane. Also, detailed information on the session activity is displayed in a separate tab named **<hostname><date and time of the session start>**.

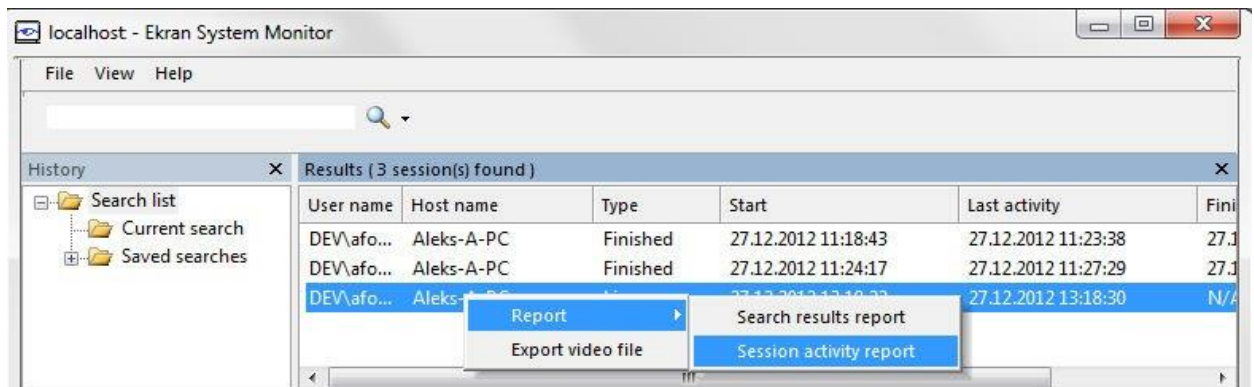
NOTE: The user can use Ctrl and Shift keys to select more than one session in the Results pane. In this case, report will include detailed information on each selected session.

To generate the Session Activity report, do the following:

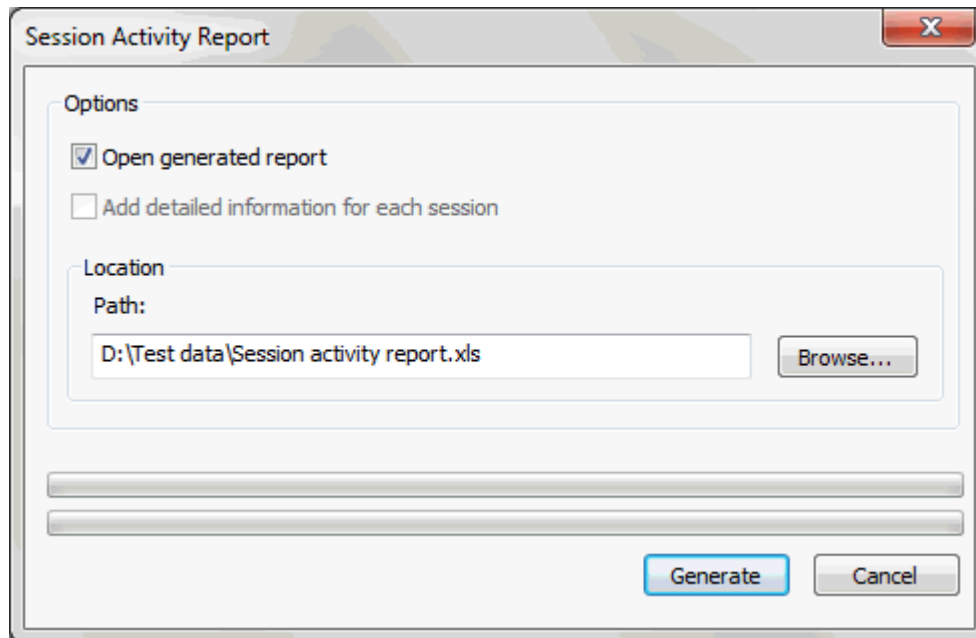
1. In the results pane, select one or several sessions.



2. In the main menu, select **File - Report - Session Activity Report** or right-click the session and select **Report - Session activity report**.



3. The **Session Activity Report** window opens.



4. Select the **Open generated report** option to automatically open the report after the generation process finishes.
5. In the **Path** box, do one of the following:
 - Enter the path to the generated report manually.
 - Click **Browse** and define the location for the file with generated report.
6. Click **Generate** to generate the report.
7. When the generation process finishes, click **Finish**. The report will open automatically if the corresponding option was selected.

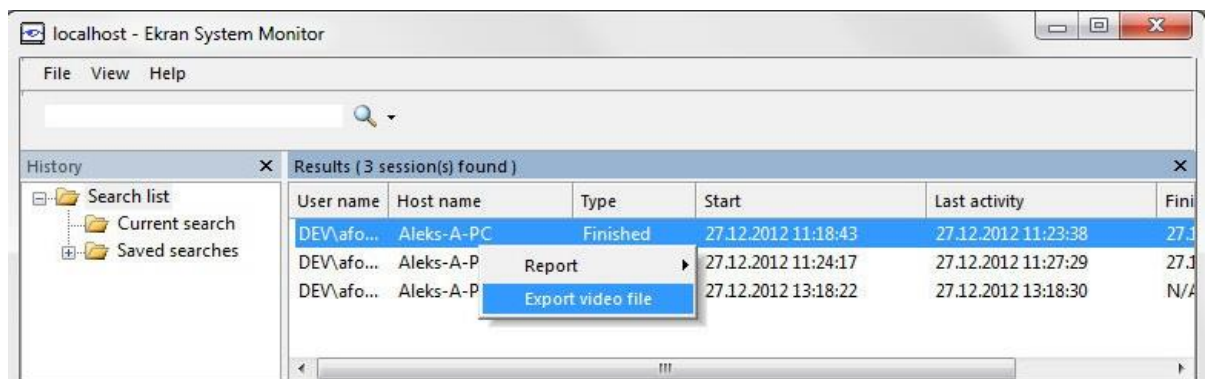


Exporting Video

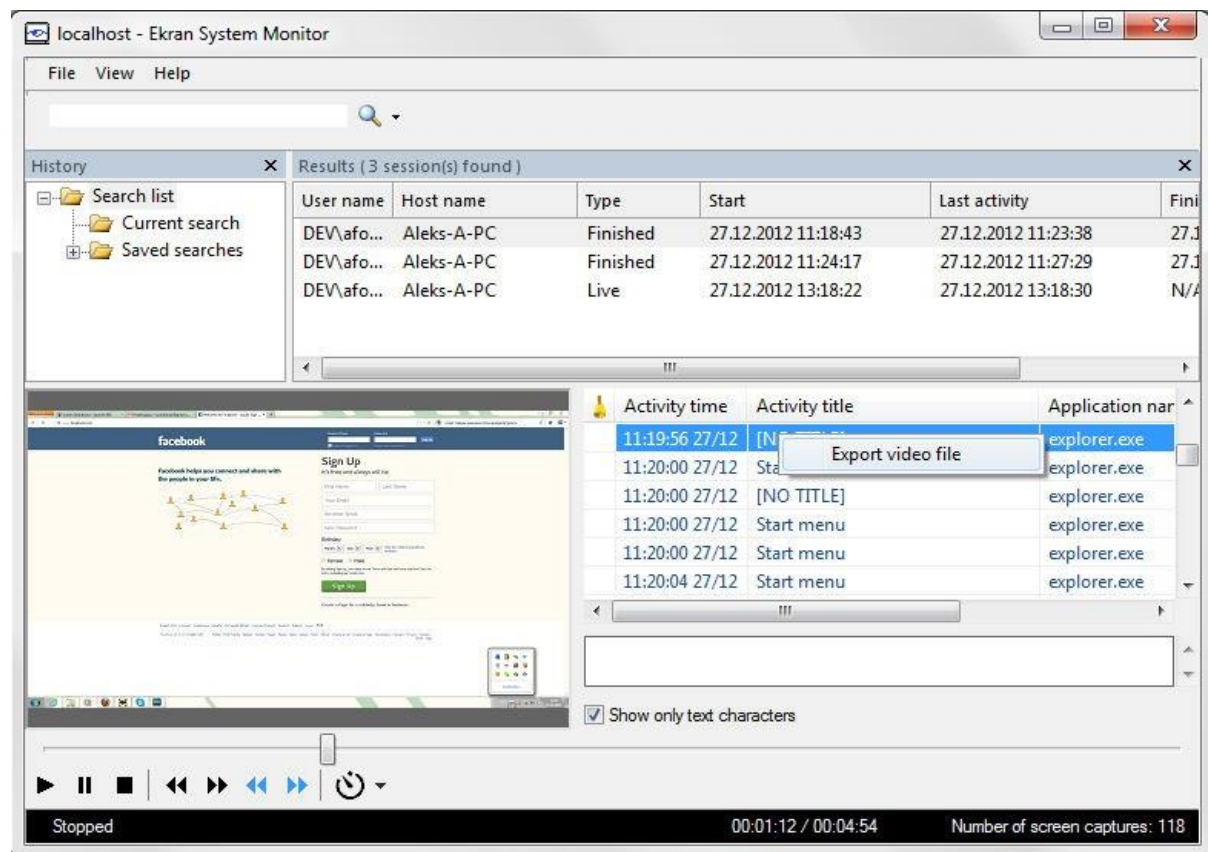
Exporting video means exporting screen captures of the session in the video format to your computer. Video is exported in the *.avi format. Video resolution will be the same as the resolution of screen captures received from the Client computer.

To export video, do the following:

1. Select the target session in the Results pane. Then do one of the following:
 - Select **File - Export Video File** from the main menu or right click the session in the **Results pane** and select **Export video file**.

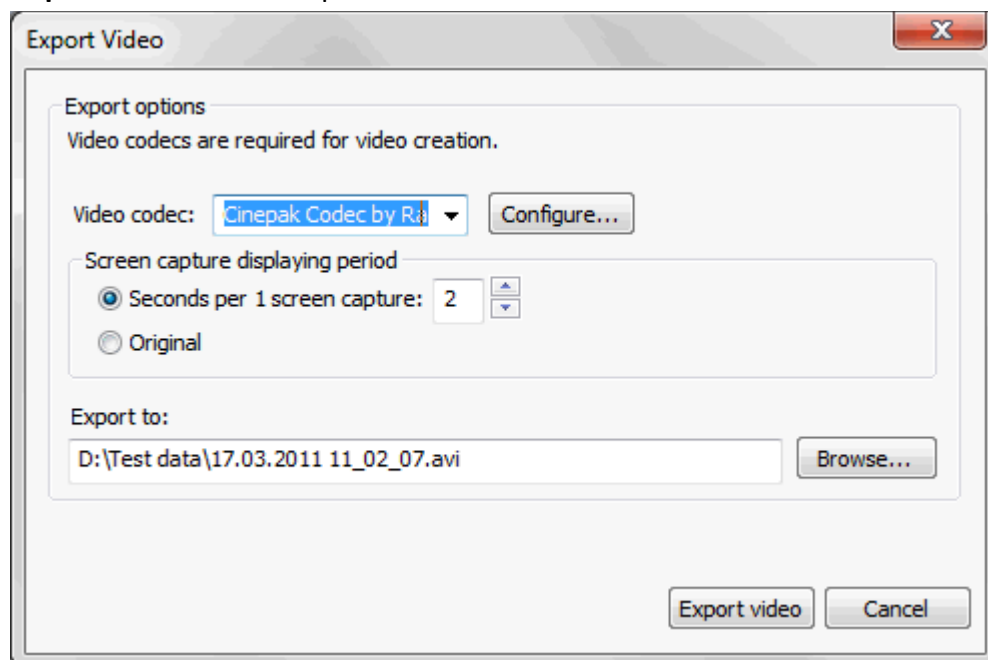


- Select one or more captures in the **Player Management pane**, right click them and select **Export video file**.



NOTE: You can export the whole session as well as a part of it. To select screen captures for exporting, use Ctrl and Shift keys.

2. The **Export Video** window opens.





3. In the **Video codec** drop-down list, select the required codecs with the help of which video will be created. Please note that the list contains only the system codecs that will be used for video creation.
4. Click **Configure** to configure the selected codec. Configuration window depends on the selected codec.
5. In the **Screen capture displaying period** group of options, select the speed with which video will play. The following options are available:
 - **Real**: Video will play with a real speed depending on the frequency of created screen captures.
 - **Custom**: Define the time interval in seconds with which screen captures will change in the video file.
6. In the **Export to** box, do one of the following:
 - Enter the path to the video file manually.
 - Click **Browse** and navigate to the location from the exported video file.
7. Click **Export video** to export the session.
8. When the export process finishes, click **Finish**.
9. Navigate to the folder with exported data.

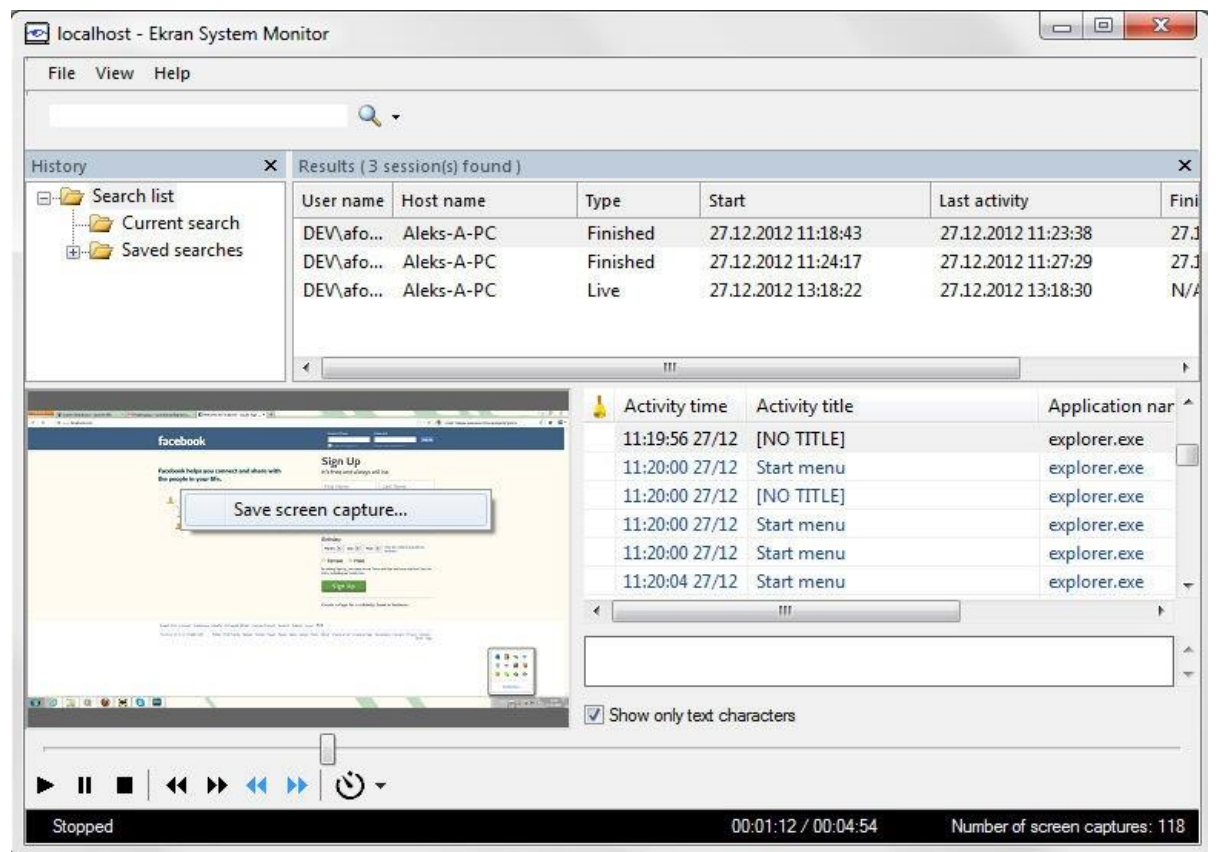
NOTE: If there was a change of resolution on the Client computer display or change of bit depth, several video files can be exported.

Saving Screen Captures

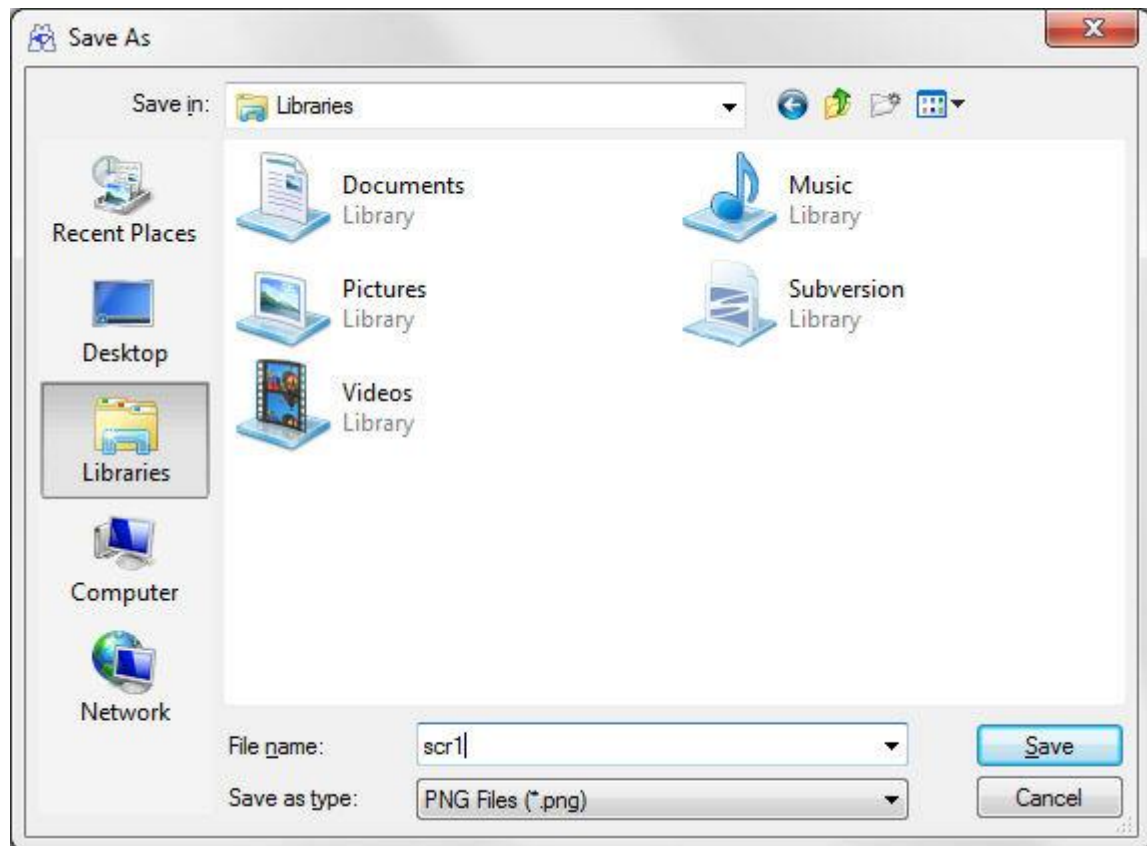
You can save the required screen capture to a file on your computer. Screen captures are saved in the *.png format.

To save the screen capture, do the following:

1. In the **Player pane**, in the list of screen captures, select the required screen capture.
2. It is displayed in the **Player** window.
3. Right click the screen capture and select **Save screen capture** or in the main menu, select **File - Save screen capture**.



4. In the **Save As** window, define the name and location for the screen capture. Click **Save**.



5. The screen capture is saved.
6. Navigate to the folder with screen capture.

NOTE: You cannot save the screen capture if the video is playing or if there is a full-screen mode.