

INFOWATCH

InfoWatch Device Monitor 5.5

User Guide

INFOWATCH DEVICE MONITOR 5.5

User Guide

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http://www.infowatch.com
Revision date: 20.04.2015

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1 InfoWatch Device Monitor Overview

InfoWatch Device Monitor (further referred to as InfoWatch Device Monitor or the System) is a mean of managing access to your computer peripherals. Moreover, the System lets you monitor data that is being transferred to removable devices from workstations and sent to printer or over network. Resulting data is analyzed by InfoWatch Traffic Monitor.

This guide contains the following sections:

- Installing and configuring InfoWatch Device Monitor. Installing, configuring, updating or uninstalling InfoWatch Device Monitor.
- Using Management Console. Using the System: managing employees' accounts registered with InfoWatch Device Monitor, security schema management, client remote installation.
- Troubleshooting. Potential issues with InfoWatch Device Monitor and troubleshooting.
- End-User License Agreement. System and Components User License.

For general System information see the following introductory sections:

- InfoWatch Device Monitor Functions. InfoWatch Device Monitor Features Overview.
- InfoWatch Device Monitor Workflow. Workflow description of InfoWatch Device Monitor system and its components.
- Security Schema Organization. Implementation of InfoWatch Device Monitor security schema and basic concepts of System operation.
- Glossary. List of terms used in software documentation and GUI.

If you have any issues regarding the product operation, please contact support:

- If you have purchased the product from InfoWatch partner, please contact partner support.
- If you purchased the product directly from InfoWatch, you can contact our support at support@infowatch.com.
- Technical Support Service is available to assist you Mon-Fri, 7 AM – 9 PM (Moscow time, GMT+4), except weekends and Russian Federation public holidays.

Before contacting support please refer to our *Knowledge Base* at: https://kb.infowatch.com. Knowledge Base may already have the answer to your question or description of the problem you are experiencing

1.1 InfoWatch Device Monitor Functions

InfoWatch Traffic Monitor Main Functions:

- realtime workstations monitoring;
- managing employee access to system peripherals;
- monitoring workstation print operations;
- supervising Instant Messengers: Skype, Yahoo (YMSG protocol), Jabber (XMPP protocol) and Mail.Ru Agent (MMP protocol);
- supervising traffic transferred by FTP and FTPS;
- supervising traffic transferred by HTTP and HTTPS;
- supervising data transferred by network connections beyond corporate network;
- supervising emails transferred by protocols SMTP, POP3 and IMAP (for MS Outlook) and protocols SMTP and POP3 (for other systems);
- retrieving data from managed workstations;

- transferring retrieved data for InfoWatch Traffic Monitor analysis.
- Microsoft RDP and Citrix ICA client control (see "Configuring Device Monitor Rule")
- cloud storage control (see "Configuring Cloud Storage Monitor Rule")
- screenshot control (see "Configuring ScreenShot Control Monitor Rule")
- application control (see "Configuring Application Monitor Rule")
- event storage management (see "Events")

Note:
Some functions are available in both regular and safe mode of your operating system (see "Operating in Safe Mode").

User (employee) actions are observed and controlled on managed workstations. ***Managed workstation*** is a workspace that gives you access to controlled files and peripherals.

Controlled files are files that must be monitored according to corporate security policy.

Monitored peripherals are system devices controlled by InfoWatch Device Monitor.

To monitor and control workstations you need a Client module. Client module includes the following interceptors: **File Monitor**, **Print Monitor, Device Monitor**, **IM Client Monitor, Ftp Monitor**, **HTTPS Monitor, Network Monitor, Mail Monitor**.

File Monitor controls writing operations on removable devices and registers successful operations. This lets you to monitor the following actions:

- creating/editing files on removable devices;
- copying/moving files to removable devices. This tracks files copied/moved from managed workstations, removable devices, or over network.

See more information on configuring interceptor rule in "Configuring File Monitor Rule" section.

Device Monitor controls access to system peripherals. Possible access levels depends on device type. See more information on configuring interceptor rule in "Configuring Device Monitor Rule" section.

Print Monitor enables monitoring printing operations on local and network printers. It creates a copy of print job and sends it to InfoWatch Traffic Monitor for analysis. See more details in "Configuring Print Monitor Rule" section.

IM Client Monitor controls access to instant messengers: Skype, Yahoo, Jabber (XMPP protocol) and Mail.Ru Agent (MMP protocol). You can completely deny application usage or just make chat copy. Also you can create shadow copies of transferred files, messages and chats. See more details in "Network Traffic Control" and "Configuring IM Client Monitor Rule" sections.

Ftp Monitor controls data exchange through FTP/FTPS protocol. You can restrict or completely deny the usage of FTP/FTPS protocol and create shadow copies of transferred files. See more details in "Configuring FTP Monitor Rule" section.

HTTPS Monitor controls data exchange through HTTPS protocol. System able to create shadow copies of transferred files. See more details in "Configuring HTTPS Monitor Rule" section.

Network Monitor enables deny of data transferring by any network connections except corporate ones or connections with specified allowed servers. See more details in "Network Traffic Control" and "Configuring Network Monitor Rule" sections.

Mail Monitor controls receiving and sending emails. System allows completely deny sending and receiving emails

or accept the receiving emails only or completely accept sending and receiving emails. See "Configuring HTTPS Monitor Rule"

All the created file copies are not stored in InfoWatch Device Monitor but transferred to InfoWatch Traffic Monitor for analysis.

1.1.1 Operation in Safe Mode

Some of InfoWatch features are still available in safe mode (with network features or without them).

The following table lists the features available in safe mode.

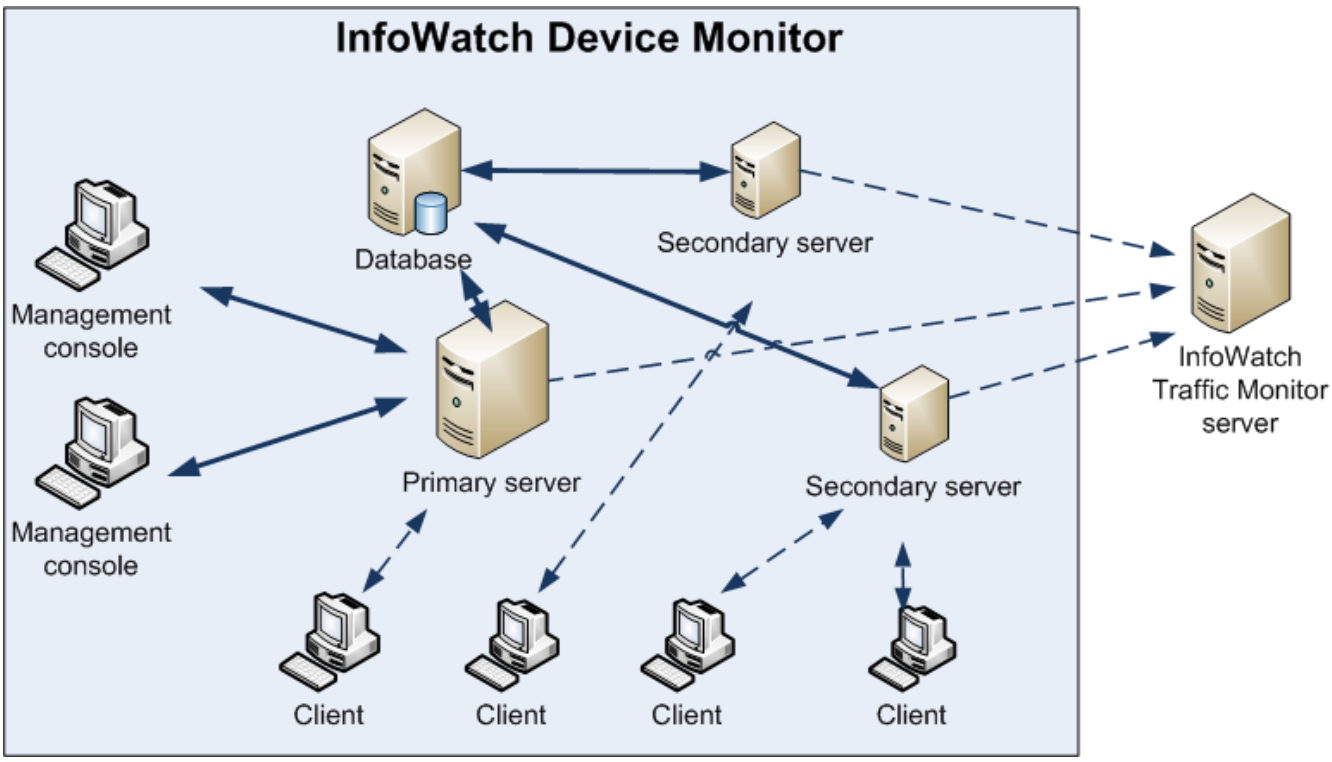
InfoWatch Device Monitor Feature	Operating system mode
Managing access to peripherals (except devices that are unavailable in safe mode)	Safe Mode Safe Mode with Networking
Write control on removable devices	Safe Mode Safe Mode with Networking
Monitoring managed workstations	Safe Mode with Networking
Managing access to instant messengers: Skype, Jabber (XMPP protocol) and Mail. Ru Agent (MMP protocol)	Safe Mode with Networking
Managing data exchange through FTP/ FTPS protocol	Safe Mode with Networking
Managing data transfer by network connections beyond corporate network	Safe Mode with Networking

1.2 InfoWatch Device Monitor Workflow

InfoWatch Device Monitor components are listed in the following table.

Component	Assign
InfoWatch Device Monitor Client (InfoWatch device monitor client application, Client)	Intercepting employee actions on managed workstations
InfoWatch Device Monitor Server (InfoWatch device monitor server, Server)	Configuring client applications, retrieving data from client applications and sending it to InfoWatch Traffic Monitor
InfoWatch Device Monitor Database (database)	Storing critical System data
InfoWatch Device Monitor Management Console (Management Console)	System Management
Servers Manager	

The following image illustrates System workflow.



The System is deployed and works as follows:

1. **Primary server** is installed first.
2. When you install the primary server you must specify the server that will be used by the **database**: DBMS can be stored separately or together with the primary server.
3. Primary server installation generates **database schema** where your **security schema** and other system parameters are stored.
4. You can install **secondary servers**, if needed, to balance the System workload.
5. **Management Console** can be installed on any computer and connect to the primary server. Use to configure security schema according to your corporate security policy.
6. Install **Device Monitor Clients** on **workstations**. They connect to any available Device Monitor server, implement and upgrade security schemas, retrieve shadow copies and send them to Device Monitor server.
7. Device Monitor server retrieves updated database versions from security schemas and distribute them over managed workstations. Managed workstations inform server about security schema events and send shadow copies. Events are submitted to the database. Shadow copies are sent to InfoWatch Traffic Monitor.

Example 1

1. At the managed workstation the employee accesses managed peripheral (for example, attempts to print a document on USB printer).
2. Client checks if the employee has a right to access the peripheral. If he doesn't, access is denied (in this case, the document won't be printed).

Printing operations on local and network printers are tracked by Print Monitor interceptor. Document copy is sent for InfoWatch Monitor Traffic analysis. Employee can send a document to print, if he/she have access to printer (this is checked by Device Monitor interceptor).

Example 2

Writing to PDF files on removable devices is monitored by System rule. According to the rule, this operation must create a shadow copy of the document.

1. At the managed workstation the employee writes to files on a removable device (for example, copying a file to USB flash drive).
2. If writing to removable device is successful, InfoWatch Device Monitor Client generates an event and creates file shadow copy.
3. If you cannot create a shadow copy (for example, if there's no free space on the hard drive), writing operation will be canceled. (In the previous example, the employee wouldn't be able to copy files.)
4. Client transmits data (event and file shadow copy) to InfoWatch Device Monitor Server. If Server connection

is unavailable, data is stored on managed workstation. Once connection has been recovered, the information will be handed over to Server.

5. Server sends data for InfoWatch Traffic Monitor analysis. If no connection to InfoWatch Traffic Monitor server is available, data is stored in the database. Once connection has been recovered, the information is handed over to InfoWatch Traffic Monitor.

Any attempts to write to files on removable devices are tracked by File Monitor interceptor. Obtained information is analyzed by InfoWatch Traffic Monitor. At the same time, access to removable device is controlled by Device Monitor interceptor. Therefore, you can write to files only if you can access the device.

Example 3

DOC files printing is tracked by System rule. According to the rule, this operation must create a shadow copy of the document.

1. At the managed workstation the employee sends a document to print.
2. If print job is created successfully, InfoWatch Device Monitor Client generates an event and creates a shadow copy of printed document.
3. If you cannot create a shadow copy of the document (for example, if there is no free space on hard drive), print operation will be canceled. (In the previous example, employee won't be able to print a file.)
4. Client transmits data (event and file shadow copy) to InfoWatch Device Monitor Server. If Server connection is unavailable, data is stored on managed workstation. Once connection has been recovered, the information is handed over to Server.
5. Server sends data for InfoWatch Traffic Monitor analysis. If no connection to InfoWatch Traffic Monitor server is available, data is stored in the database. Once connection has been recovered, the information will be handed over to InfoWatch Traffic Monitor.

1.3 Security Schema Organization

Security schema of InfoWatch Device Monitor is a set of configuration parameters for managing employee controlled by InfoWatch Device Monitor. Security schema is created during server installation and is stored in the database.

Security schema includes the following parameters:

- **Security policy** with a set of rules specified for each security policy.
- **Employee groups** registered in Device Monitor. Each employee group must have a security policy.
- **Workstation groups**. Each workstation group must have a security policy.
- **White lists** of fully accessed devices.
- **Signature categories** that apply File Monitor rules to certain file formats.

Note:
To make sure all workstations and accounts are covered by security policy, the System features: default employee group and workstation group.

Security schema can be edited multiple times. Updated security schema will be saved as a new version of the existing one. Old security schemas are stored in the database. Use Management Console to preview security schema versions.

This topic also contains:

- Security Policies and Rules
- Employees and Employee Groups
- Workstations and Workstation Groups
- Loading Security Schema to Managed Workstations

1.3.1 Security Rules and Policies

Security policy is a set of rules used for monitoring operations of data transfer to removable devices, sending documents to print and network activity; it also defines access level to managed peripherals.

The security policy is assigned to employee group or workstation group according to the following principles:

- Each employee group and each workstation group must have a security policy.

  You can't add a new employee group or workstation group without assigning a security policy. The security policy for employee group or workstation group is selected from available policies. Therefore, security policy must be created before you add a group.
- You can't assign more than one security policy to employee group or workstation group.
- One security policy can be assigned to several employee groups or workstation groups. However, it is recommended that you assign an individual security policy to each group.

> **Note:**
>
> You can't remove a security policy from security schema, if it is assigned to at least one employee group or workstation group.

Controlled files and devices access level is defined by security policies assigned to:

- employee group which the employee belongs to;
- workstation group which include the workstation used by the employee.

If employee was registered with Device Monitor for the first time, his account is automatically added to *Default* employee group. Therefore, each new employee's access level is initially defined by default employee group security policy and employee's workstation group security policies. You can change access level later by adding employee to various employee groups.

Rules are restrictions and conditions that monitor data transfer to removable devices, network activity, sending documents to print, and control access to managed peripherals. A new set of rules is created for each security policy.

Each rule has a validity period and is disabled after its expiry.

Rule types include:

- **Application Monitor Rule** provides application access control via black and white lists.
- **Cloud Storage Monitor Rule** provides web-client control.
- **Device Monitor Rule**. Lets you control employee access to selected type of peripherals.
- **File Monitor Rule**. Monitors data transfer and editing on removable devices. Rule can be configured to create file shadow copy and send it to InfoWatch Traffic Monitor when attempting to save a file to removable device.
- **FTP Monitor Rule.** Lets you control data exchange through FTP/FTPS protocol. You can restrict or completely deny the usage of FTP/FTPS protocol and create shadow copies of transferred files.
- **HTTPS Monitor** controls data exchange through HTTP and HTTPS protocol. System able to create shadow copies of transferred files.
- **IM Client Monitor Rule**. Lets you control employee access to instant messengers: Skype, XMPP, MMP (used in Mail.Ru Agent messenger), YMSG (used in Yahoo! Messenger). Rule can block access to application or just make copies of transferred files, messages and chats. InfoWatch Device Monitor sends shadow copies of files and chat sessions to InfoWatch Traffic Monitor without saving them.
- **Mail Monitor Rule** provides full control of incoming and outgoing e-mail.
- **Network Monitor Rule.** Lets you deny data transferring by any network connections except corporate ones or connections with specified allowed servers. The System has a global setting of which network segments are corporate network and which external addresses are allowed.
- **Print Monitor Rule**. Lets you to monitor printing activity. Rule can be configured to create shadow copies of print jobs, which will be sent for InfoWatch Traffic Monitor analysis.
- **ScreenShot Control Monitor Rule** allows to control screen shots on a client side.

1.3.2 Employees and Employee Groups

Employee registration rules:

- Each employee belongs to at least one employee group (default group). The reason for this requirement is that security policy can only be assigned to employee groups.

  Default group includes all accounts that have not been added to other groups (employees newly registered in Device Monitor or employees excluded from all other groups).

  You can delete an employee from "*Default*" group, if the account will be added to at least one employee group besides the *Default* group.
- After System installed, the *"Shadow copy policy"* is assigned to "*Default*" employee group. The *"Shadow copy policy"* contains following rules:
  - **Document shadow copying**. File Monitor rule which sets creating shadow copies of all files written to removable devices.
  - **Print shadow copying**. Print Monitor rule which sets creating shadow copies of all print jobs.
  - **Skype control**, **Yahoo (YMSG), XMPP control**, **MMP control**. IM Client Monitor rules which allow instant messengers and set creating shadow copies of all messages, chats and outgoing files.
  - **FTP control**. FTP Monitor rule which allows FTP/FTPS protocol and set creating shadow copies of all files sent by FTP/FTPS.
  - **HTTPS control**. HTTPS Monitor rule, which creates a post-event, without any dependence on its size, in case transfer is being performed via encrypted channel. Shadow copy is being created, in case request size, transferred via encrypted channel is not smaller than 40 B and not bigger than 40 MB.
  - **Mailing subsystem control**. Mail Monitor, which allows incoming and outgoing mail and creates shadow copies for email, sent via encrypted channel, when its size is not bigger than 40 MB.

1.3.3 Workstations and Workstation Groups

Device Monitor Workstation belongs to at least one workstation group (default group). The reason for this requirement is that security policy can only be assigned to workstation groups.

Default group includes all workstations that don't belong to other workstation groups (Device Monitor workstations newly registered in the System or workstations excluded from all other groups). "*Device policy*" is assigned to default workstation group after the System installation. This policy is empty: it does not contain any rule.

You can remove a workstation from default group only if it is added to at least one workstation group besides default group.

1.3.4 Uploading Security Schema to Managed Workstations

The security schema of managed workstations must be up to date. This is ensured by Client-Server interaction on managed workstations.

Server transmits security schema to managed workstations automatically in the following cases:

- when you save your new or edited security schema
- if the employee was registered which's access level is unidentified. Such employee is automatically added to default employee group, and security schema is updated.

If the managed workstation is disconnected from the network where InfoWatch Device Monitor is deployed, the polices will still be active, but they won't be updated and shadow copies will be stored on the hard drive. After the managed workstation has connected to InfoWatch Device Monitor server, it automatically updates policies and sends shadow copies to server.

1.4 Glossary

Term	Definition
Device Monitor	InfoWatch Device Monitor client module interceptor. It is designed to control employee access to system peripherals. See: *Interceptor*
File Monitor	InfoWatch Device Monitor client module interceptor. It is designed to monitor employee activity that involves creating files on removable devices. See: *Interceptor*
FTP Monitor	InfoWatch Device Monitor client module interceptor. It is designed to control data exchange through FTP/FTPS protocol. See: *Interceptor*
HTTPS Monitor	InfoWatch Device Monitor client module interceptor. It is designed to control data exchange through HTTPS protocol. See: *Interceptor*
IM Client Monitor	InfoWatch Device Monitor client module interceptor. It is designed to control employee access to instant messengers: Skype, Yahoo (YMSG protocol), Jabber (XMPP protocol) and Mail.Ru Agent (MMP protocol). See: *Interceptor*
InfoWatch Device Monitor	The System is designed to control employee access to peripherals, monitor file operations on removable devices, network activity, and sending documents to print.
InfoWatch Traffic Monitor	Traffic control system (SMTP, HTTP, ICQ and Lotus Notes). InfoWatch Traffic Monitor analyzes the shadow copies it receives from InfoWatch Device Monitor
Network Monitor	InfoWatch Device Monitor client module interceptor. It is designed to restrict data transferring by any network connections except corporate ones or connections with specified allowed servers. See: Interceptor
Print Monitor	InfoWatch Device Monitor client module interceptor. It is designed to monitor the activity associated with sending documents to print. See: *Interceptor*
Management Console User Activity Log	Management Console activity control. You can use log system to monitor your security schema building and management (i.e. all actions that change your security schema) and System administration. See: *Log*, *Management Console accounts*
White List	List of fully accessible devices. See: *Security Policy*
Database	See: *InfoWatch Device Monitor database*
InfoWatch Device Monitor database	Database that contains all InfoWatch Device Monitor information
Employee Group	Security schema parameter. The group includes employees covered by the same security policy according to the corporate security policy. See: *Default employee group*, *Security policy*, *Employee access level*
Default employee group	Employee group that is added automatically when you create a new security schema. This group includes all accounts that don't belong to any other employee group (when a new employee is added or if you remove a employee from all other groups). See: *Employee group*, *Security policy*
Workstation group	Security schema parameter. Workstation group includes workstations with the same security policy. Workstation groups are formed according to corporate security policy. See:*Default employee group*, *Security policy*, *Employee access level*

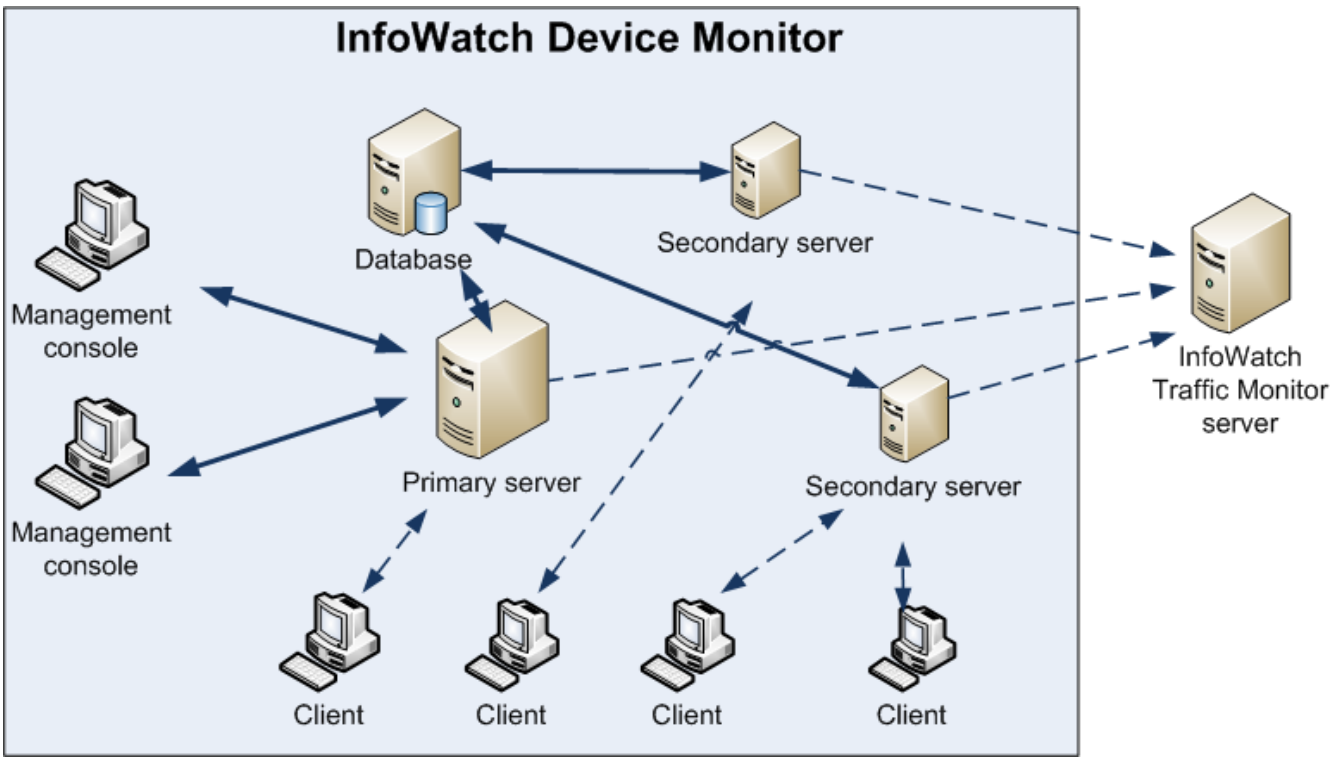
Default workstation group	Workstation group that is added automatically when you create a new security schema. This group includes workstations that don't belong to any other workstation group (when a new workstation is registered or if you remove a workstation from all other groups). See: *Employee group*, *Security policy*
Log	System management log of Management Console user. See: *User Activity Log*, *Management Console user*
Client	See: *InfoWatch Device Monitor Client*
InfoWatch Device Monitor Client	InfoWatch Device Monitor client module. It is designed to control employee activity
Management Console	See: *InfoWatch Device Monitor Management Console*
InfoWatch Device Monitor Management Console	GUI element. It is designed to control InfoWatch Device Monitor (system administration, security schema configuration, etc.)
Managed workstation	Workplaces that have access to controlled files and peripherals. The InfoWatch Device Monitor Client is installed to managed workstation.
Managed peripheral	Peripherals (printers, scanners, disk drives, etc.) controlled by InfoWatch Device Monitor. Access to peripherals is based on corporate security policy
Controlled file	File that is controlled by InfoWatch Device Monitor. Controlled files list is based on corporate security policy
Peripherals access control	Peripherals access differentiation. Peripherals access differentiation is based on corporate security policy. You can configure different access levels to certain peripherals for different employee or workstation groups
Local administrator	Management Console role which manages accounts
File mask	Matching file search pattern. You can apply a file mask in InfoWatch Device Monitor to create a rule for File Monitor and Print Monitor
Security officer	Management Console role which manages security policy and configures InfoWatch Traffic Monitor server connection
Interceptor	Client module element. Provides control over employee activity basing on security schema. Client module includes the following interceptors: File Monitor, Print Monitor, Device Monitor, IM Client Monitor, FTP Monitor, HTTPS Monitor, Network Monitor. See: *File Monitor*, *Device Monitor*, *Print Monitor*, *IM Client Monitor, FTP Monitor, HTTPS Monitor, Network Monitor*.
Security Policy	Security schema parameter. A set of file monitoring rules for removable devices, network activity, printing and configuring peripherals access level. You can only assign security policy to a group (of employee or workstations.) Employee monitoring is based on access level. See: *Security schema*, *Access level*
Employee	Any user registered in InfoWatch Device Monitor as an employee. Employee actions are monitored by client modules installed at workstations.
Management Console user	User who manages InfoWatch Device Monitor. Each user has a role assigned basing on corporate security policy.
Rule	Set of restrictions and conditions that monitor file operations on removable devices,

	network activity, printing, and configure access to managed peripherals. Each interceptor features a separate rule type. A rule can be only applied within its security policy. See: *Security Policy*
Workstation	In terms of InfoWatch Device Monitor system, a workstation is a managed workstation. See: *Managed Workstation*
Rendering print jobs	Rendering process that converts a print job into printing data.
Selector	Constant log record attribute. Describes affected object search. Selector parameter value depends on particular object and actions. See: *Log*
Server	See: *InfoWatch Device Monitor Server*
InfoWatch Device Monitor Server	InfoWatch Device Monitor Server module. It is designed to monitor managed workstations and interact with InfoWatch Traffic Monitor.
DBMS	Database management system.
Super user	Management console role with full InfoWatch Device Monitor management privileges. The purpose of this role is to configure Management Console after its installation; operation in emergency situations; deleting log records.
Security Schema	A set of configuration settings for monitoring employee actions controlled by InfoWatch Device Monitor. See: *Employee group*, *Workstation group*, *Security policy*
File shadow copy	A copy of file, recorded to removable device. It is created only after the file has been successfully saved to removable device. File shadow copies are analyzed by InfoWatch Traffic Monitor.
Transaction	Mandatory log record attribute. Consists of one elementary action (step) or more. Transaction is completed only after all steps have been performed. Otherwise, transaction remains incomplete, and the System reverts to the state it had been in prior to transaction.
Employee access level	Employee security policy set. In other words, security policies assigned to: • employee's groups; • workstation groups that include the workstation.
Windows account	Employee's Microsoft Windows account. Account credentials are used for InfoWatch Device Monitor registration.
Transaction step	Elementary action within a transaction (for example, a transaction that adds a employee to employee group consists of a single step - adding employee to a group).
Thick terminal client	Workstation with a hard drive and installed software, which is connected to terminal server
Thin terminal client	Workstation without hard drive, which is connected to terminal server. Useful for information input and software GUI display.
Terminal device	Devices, which are being connected to a terminal client
YMSG	Network protocol used by the Yahoo! Messenger instant messaging client

2 Installing and Configuring InfoWatch Device Monitor

This section contains information on installing and configuring InfoWatch Device Monitor for those, who are familiar with the basics of Microsoft Windows administration and the database in use.

The following figure shows an example of system deployment.



InfoWatch Device Monitor deployment example

You can use clustering to enhance system performance. The same database schema will be used by multiple servers to store and distribute shared security schema.

Server and database can be hosted by a single computer. To increase system performance, it is recommended that you host the database and server on separate computers.

Management Console can only connect to the main server. You can manage all servers in cluster from Management Console.

Installation procedure:

1. InfoWatch Device Monitor Server End Setup.
   Server end consists of the following elements:
   - Database
   - Device Monitor Server
   - Device Monitor Management Console.
2. Installing InfoWatch Device Monitor Client End.
   Client is installed on each workstation that should be controlled by InfoWatch Device Monitor.

System requirements are listed in the "Hardware and Software Requirements" section.

For information on System elements configuration, updating, or deleting, see:

- Configuring InfoWatch Device Monitor Server. Preparing to work with InfoWatch Device Monitor.

- Updating InfoWatch Device Monitor. InfoWatch Device Monitor components updating procedure.
- Uninstalling InfoWatch Device Monitor. Recommendations on uninstalling InfoWatch Device Monitor.

2.1 Hardware and Software Requirements

This section lists hardware and software requirements for each system component:

- Database
- InfoWatch Device Monitor Server
- InfoWatch Device Monitor Client
- Management Console

2.1.1 Database

InfoWatch Device Monitor supports the following DBMS:

- Oracle Database 11

  Attention!
  - It is necessary to use Oracle Client application with x64 digit capacity if the System is being installed on 64-bit server operating.
  - When Oracle Client 10 is connected to Oracle Database 11 and its later versions, it is necessary to remove password case sensitivity from Oracle server by executing the following command in the database:

    ```
    ALTER SYSTEM SET SEC_CASE_SENSITIVE_LOGON = FALSE
    ```

- Microsoft SQL Server 2005, 2008, 2012, 2014 (Express, Developer, Workgroup, Standard, Enterprise).

2.1.2 InfoWatch Device Monitor Server

InfoWatch Device Monitor Server software requirements:

- operating system (supports both x86, x64 and platforms):
  - Microsoft Windows Server 2003;
  - Microsoft Windows Server 2008;
  - Microsoft Windows Server 2008 R2;
  - Microsoft Windows Server 2012.
- DBMS client:
  - Oracle 10g R2 or higher.
  - Instant Client with ODBC drivers, ODP.NET (Oracle Data Provider for .NET 2.0). Both components should have the same version.

    Note:
    When installing 12g version, `tnsnames.ora` file parameters are being created during installation process. With version 10g R2 and 11g it is necessary to configure parameters of Device Monitor Server in `tnsnames.ora` file: see "Configuring ORACLE DBMS connection"
- additional programs:
  - Microsoft .NET Framework 4.0 or higher.

InfoWatch Device Monitor Server hardware requirements meet minimum OS requirements. Moreover:

- Hard disk free space must should be not less than to 200 MB
- You should have enough hard disk free space to keep intercepted copies if you don't use integration with

InfoWatch Traffic Monitor system. You can change the directory for intercepted copies using XML-file (for more information see "<applicationSettings> section", parameter `ShadowCopyTempDir`)

2.1.3 InfoWatch Device Monitor Client

InfoWatch Device Monitor Client can operate in the following operating systems (supports both x86 and x64 platforms) :

- Microsoft Windows XP Professional Service Pack 3 with all updates;
- Microsoft Windows Vista Service Pack 2;
- Microsoft Windows 7 Service Pack 1.
- Microsoft Windows 8 and 8.1.
- Microsoft Windows 2003 Server;
- Microsoft Windows Server 2008;
- Microsoft Windows Server 2008 R2;
- Microsoft Windows Server 2012.

Warning!

Client can be only installed in the above listed environments. We do not guarantee Client's correct interaction with other operating systems. Client installation in other environments may result in application malfunction, operating system and/or data damage (up to complete data destruction).

InfoWatch Device Monitor Client hardware requirements meet minimum OS requirements. Additionally:

- Minimum free hard disk space is 320 MB.

Note:

When installed applications load CPU and RAM, the following configuration is recommended for flawless system performance:

- CPU Intel Core i3 or equivalent;
- RAM 4 Gb;
- HDD 50 Gb.

2.1.4 Management Console

InfoWatch Device Monitor Management Console can operate in the following operating systems (supports both x86 and x64 platforms):

- Microsoft Windows 2003 Server Service Pack 1;
- Microsoft Windows Server 2008;
- Microsoft Windows Server 2008 R2;
- Microsoft Windows Server 2012;
- Microsoft Windows XP Professional Service Pack 2;
- Microsoft Windows Vista Service Pack 2;
- Microsoft Windows 7 Service Pack 1
- Microsoft Windows 8 and 8.1.

InfoWatch Device Monitor Management Console hardware requirements meet minimum OS requirements. Minimum free hard disk space is 35 MB.

2.1.5 Integration with Traffic Monitor versions

Further interceptor's events will be transmitted to Traffic Monitor for analysis:

To TM 4.1:

- IM-Monitor (Skype, XMPP, MMP)
- FTP-Monitor
- File-Monitor
- Print-Monitor
- HTTP, HTTPS-Monitor

To TM 5.1:

- IM-Monitor (Skype, XMPP, MMP)
- FTP-Monitor
- File-Monitor
- Print-Monitor
- HTTPS-Monitor
- MAIL-Monitor (MAPI, POP3, SMTP)

To TM 5.4 and 5.5:

- IM-Monitor (Skype, XMPP, MMP, YMSG)
- FTP-Monitor
- File-Monitor
- Print-Monitor
- HTTP, HTTPS-Monitor
- MAIL-Monitor (MAPI, POP3, SMTP)

Warning!
When integrated with TrafficMonitor 4.1, HTTP- и HTTPS-events will be transmitted and displayed as HTTP-Monitor events. When integrated with Traffic Monitor 5.1, HTTP-Monitor events won't be transmitted and displayed at all.

Note:
Some interface elements, which are not supported by Traffic Monitor 4.1 and 5.1, won't be displayed when integrated with the mentioned interceptors.

2.2 InfoWatch Device Monitor Server End Setup

InfoWatch Device Monitor server end is installed with universal Setup Wizard.

Universal Setup Wizard disk is available on your System installation CD (`Setup.Unified` directory). This program lets you install all System components except the Client: database, Device Monitor Server, and Management

Console.

Database is managed through InfoWatch Device Monitor Microsoft SQL Server, Oracle, PostgreSQL DBMS or integrated database.

Management Console connects to the main server.

For more information on installation, see:

- Database deployment under Microsoft SQL Server DBMS
- Database deployment under Oracle DBMS
- InfoWatch Device Monitor Server Setup
- InfoWatch Device Monitor Server End Installation Procedure

2.2.1 Database deployment under Microsoft SQL Server DBMS

You must install Microsoft .NET Framework 2.0 Service Pack 1 and Microsoft .NET Framework 4.0 or higher before launching database scheme generation on your computer.

Database generation account must be configured in advance. Account type depends on database server authentication. Microsoft SQL Server DBMS supports two types of authentication:

- **Windows authentication**. Authentication uses accounts within Windows domain. Authentication data is processed by Microsoft Windows security.
- **SQL Server built-in authentication**. Uses Microsoft SQL Server accounts. Authentication is carried out via DBMS.

Warning!
To ensure satisfactory safety level, we strongly recommend that you use **Windows authentication** method.

If you are going to use Windows authentication method:

1. Make sure Windows domain contains only one account that you will use for database generation. This account must have local administrator privileges on the computer used for database generation. If necessary, create a new account.
2. Add the account to Microsoft SQL Server DBMS and select **Windows authentication**.
3. Assign **dbcreator** role to the account.

If you plan to use SQL Server built-in authentication method:

1. Create a new Microsoft SQL Server account. When configuring an account: select **SQL Server built-in**, enter user name and password.
2. Assign **dbcreator** role to the account.

Note:
Integrated account name and password are specified when configuring the database (see "InfoWatch Device Monitor Server End Installation Procedure", step 6).

2.2.2 Database Deployment Under Oracle DBMS

You must install Oracle DBMS client and Microsoft.NET Framework 2.0 Service Pack 1 before launching database scheme generation on your computer.

Warning!
Due to OLE DB provider operational features, you must install only one client on source computer (i.e. it must have only one Oracle home work directory). This condition is obligatory for proper database installation.

Before you start creating a database scheme, make sure that **tnsnames.ora** file contains database server connection parameters (see "Configuring ORACLE DBMS connection").

2.2.2.1 Configuring InfoWatch Device Monitor Connection to Oracle DBMS Server

To ensure proper connection to Oracle DBMS server for each computer with Oracle DBMS client, you must configure `tnsnames.ora` files, located in `[ORACLE_HOME]\network\admin` directory.

tnsnames.ora configuration

Specify Oracle DBMS server connection settings. To do this, add the following entry to `tnsnames.ora` file:

```
tns_name =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = host_name)(PORT = port_number))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = service_name)
    )
  )
```

Specify true values for the following parameters:

- `tns_name` - Oracle DBMS server alias;
- `host_name` - Oracle DBMS domain name or IP address;
- `port_number` - server port for listening to client connections;
- `service_name` - database service name.

Example of `tnsnames.ora` file:

```
IWDM =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = iwdm.example.com)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = orcl)
    )
  )
```

Warning!
File `tnsnames.ora` is format sensitive. If you are copying the example to edit a file, make sure that copied selection do not contain any blank strings.

2.2.3 Server Setup Recommendations

To enhance system performance, we recommend that you deploy the server and database on separate computers.

Warning!
When deploying a multiple-server pool, each server must have the same InfoWatch Device Monitor server application version installed that is compatible with the appropriate up-to-date database.

While configuring the Server (see "InfoWatch Device Monitor Server End Installation Procedure"), you must specify the account that will be launching InfoWatch Device Monitor Server. Available options:

- **Local System**. Launch service from system account.
- **User**. Launch service from Windows domain account.

For Microsoft SQL Server DBMS database. If you select **Windows authentication** for database owner (see "Database deployment under Microsoft SQL Server DBMS"), while database and Server are on separate computers, select **User** variant. This rule applies even when you don't need remote Client installation.

> **Warning!**
> It is not recommended to select **Local System** option. In this case, user can obtain unlimited rights, which contradicts the security policy.

Windows domain account (**User**) must be configured in advance. To do this:

1. Allow the account to run process as a service:

a. In **Control Panel** open **Administration > Local security policy** .

b. In the following dialog select **Local policies > Assign User Rights**.

c. Double-click **Log on as service** in right **Details** pane.

d. On **Local security parameter** tab add the account.

2. Add new account to Microsoft SQL Server DBMS account list.

When setup finishes, allow the account to create new databases. When specifying database access permission, select **db_owner** role.

2.2.4 Server End Installation Procedure

> **Warning!**
> Before starting installation, see "InfoWatch Device Monitor Server Setup Recommendations".

> **Warning!**
> When deploying a multiple-server pool, each of them must have the same InfoWatch Device Monitor server application version installed compliant with the appropriate up-to-date database.

Step 1. Running the Installation Wizard

Insert the installation CD into your CD-ROM drive. Then open `Server` directory. Run platform-specific setup file from this directory.

You will be redirected to InfoWatch Device Monitor Installation Wizard welcome screen. Click **Next**.

Step 2. Accepting the License Agreement

Read the End User License Agreement. If you accept the licensing terms, select **I accept the terms in the License Agreement** and click **Next**.

Step 3. Selecting components to install

Custom Setup page has all components selected by default.

You can change the list of components you want to install. For example, if you want to use an existing Management Console with a new Server, you do not need to install this feature: click **Management Console** and select ✖ **Entire feature will be unavailable**.

Click **Next**.

Step 4. Configuring server settings

On **Type of installed server** page select:

- **Primary Server** - should be installed first. Clients and Management Console will connect to it.
- **Secondary Server** - additional server that balances Clients workload.

To ensure rapid server status updates it is recommended that you select **Publish Server in Active Directory** option.

Warning!
Workstations occasionally interact with Device Monitor server to update security policies. To let the newly added server handle workstations and notify the Clients about any possible server port changes it is recommended that you publish its details in domain during the installation.

To publish Device Monitor data in domain, the account that installs the server needs privileges to create and delete connection points.

If you have the appropriate version of Device Monitor database, deselect **Install new database** option.

Click **Next**.

Step 5. Choosing configuration file

To choose location of configuration file, click **Open.** see "Import/Export Configuration"

Click **Next.**

Step 6. Selecting database server

Specify DBMS that will control Device Monitor database by choosing one of the following options:

- Microsoft SQL Server
- Oracle

If you don't want to install a new database in Step 4 (**Install new Database** option has not been selected), you need to provide connectivity settings for existing Device Monitor database.

Click **Next**.

Step 7. Database configuration

You skip this step, if you chose to use an existing database in Step 4.

Database configuration depends on DBMS type.

If you are using Microsoft SQL Server DBMS, specify the following parameters:

- **Database server**. NetBIOS Microsoft SQL Server name where the database will be created.

  Do not enter IP address in **DB server** box, since this will prevent you from connecting to the database server.

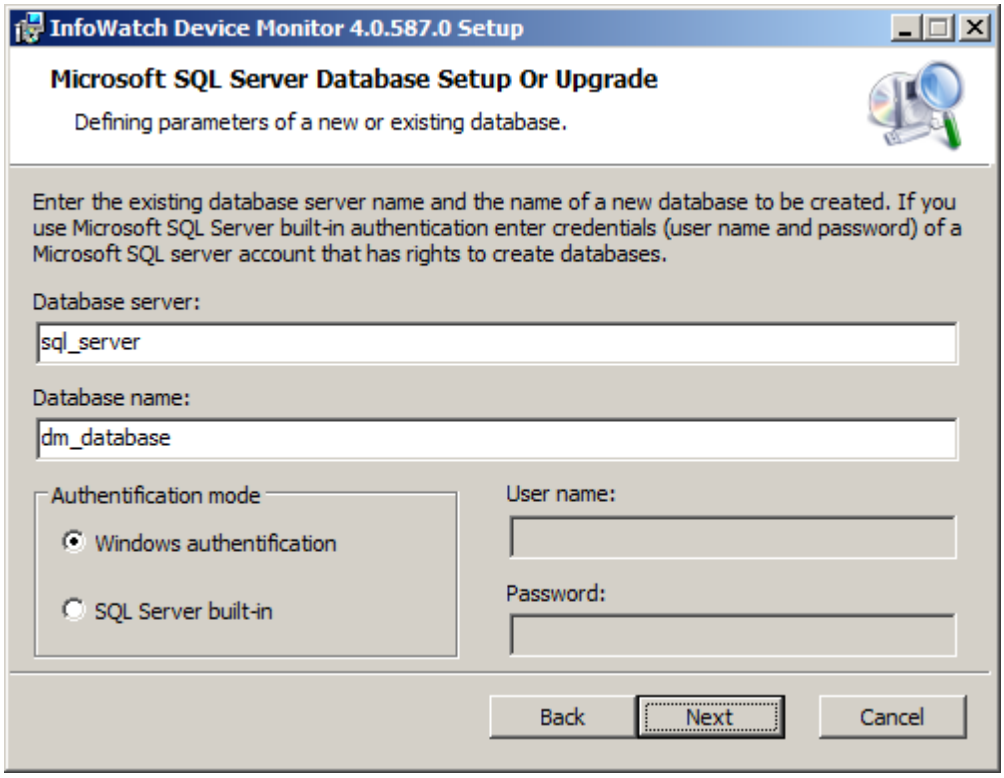
  If there are any named instances on the database server, specify server name as follows: `<server_name>\<instance_name>`.
- **Database name**. New database name.

  It may contain Latin letters, numbers, and other characters except spaces and special characters: «*», «?», «/», «\», «|», «^», «:», «"". Name must start with a Latin letter.

  Name may be 1 to 123 characters long.
- **Authentication mode**. Database owner authentication method. For this option, specify the authentication method selected during account preparation (see "Database deployment under Microsoft SQL Server DBMS ").

  If the account uses Windows authentication, select **Windows authentification**. In this case, database will be created by the domain user, who runs the installation.

  If the account uses SQL Server authentication, select **SQL Server built-in**. Then enter user name and password into **User name** and **Password** fields respectively.



Configuring Microsoft SQL Server database

When using Oracle DBMS configure the following settings:

1. Set database server connection options:
   - **Database server**. Database server name. Use server alias from `tnsnames.ora` file for this parameter.
   - **The password of 'SYSTEM' login**. SYSTEM account password.
2. Specify the parameters of database scheme owner account:

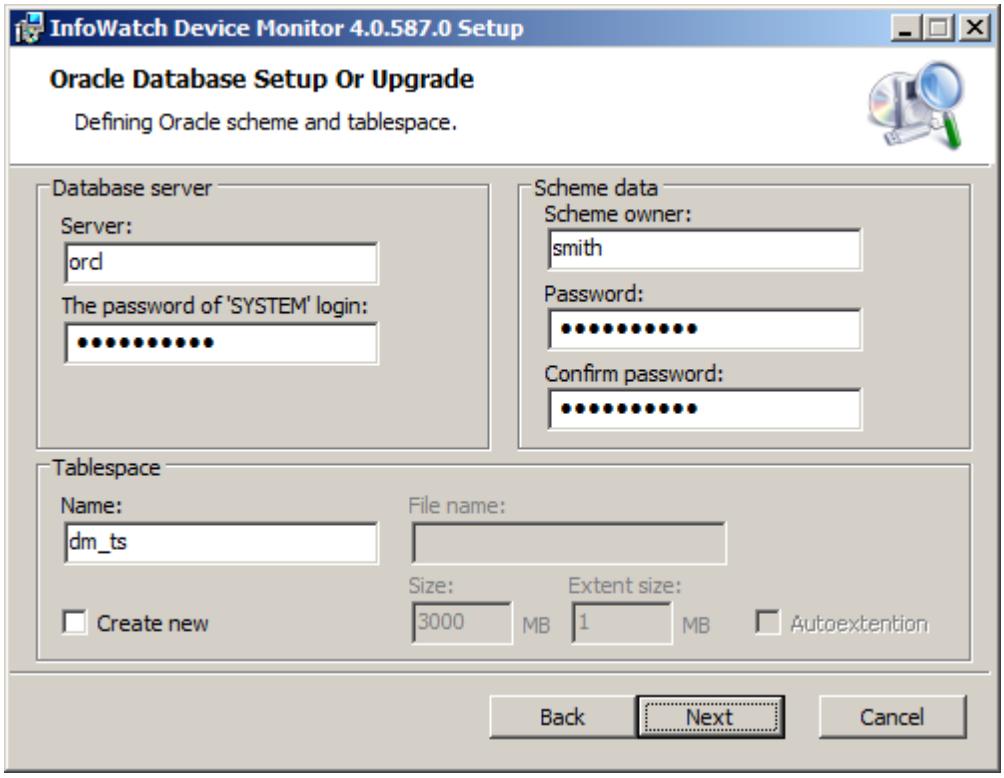
   Warning!
   It is not recommended to use existing database scheme settings.

   - **Scheme owner**. Database scheme owner account name.
   - **Password**, **Confirm password**. Database scheme owner account password.

     Password is assigned basing on requirements specified in Oracle DBMS documentation.
3. Configure tablespace settings in **Tablespace** box.

   You can use existing tablespace or create a new one. If you are using existing tablespace, enter the tablespace name in **Name** field.

   To create a new tablespace, check the **Create new** box. Then specify tablespace options:
   - **Name**. Tablespace name.
   - **File name**. Name of the file where the new tablespace will be stored.
   - **Size**. Maximum size (in MB) of the data file (default size is 3000 MB).
   - **Extent size**. Maximum size (in MB) of continuous segment in data file (the default size is 1 MB).
   - **Autoextension**. Automatic file extension via Oracle DBMS. If **Autoextension** box is selected, automatic extension is enabled (this feature is disabled by default).



Configuring Oracle DBMS

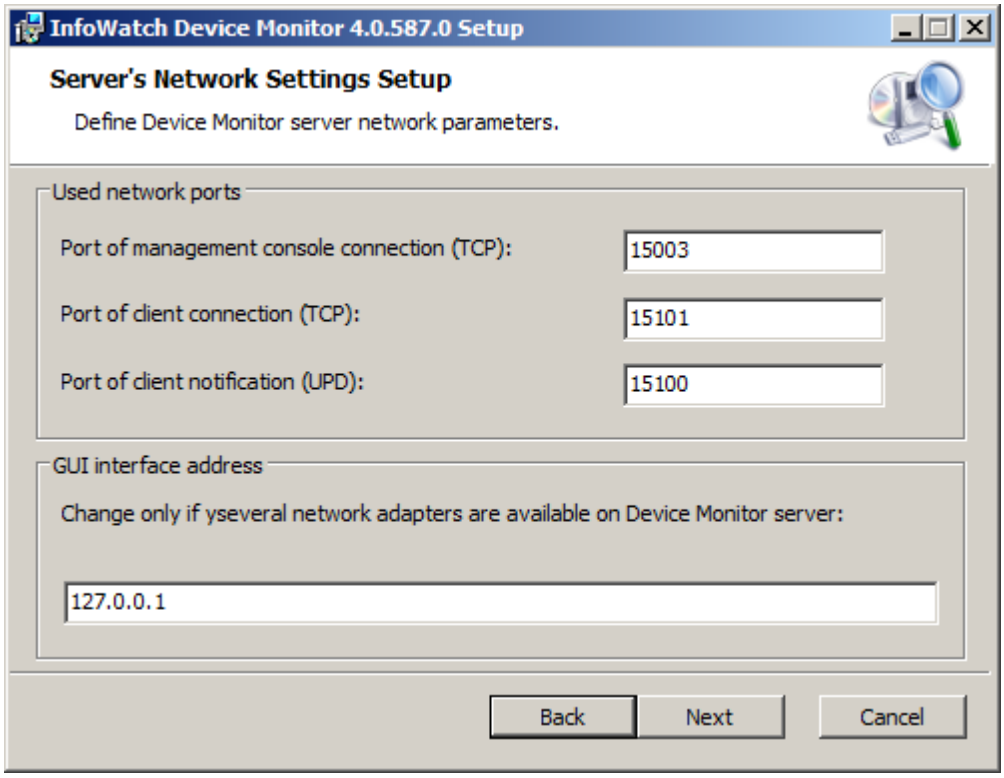
After all necessary parameters have been configured, click **Next**.

Step 8. Configuring the server

Configure Server parameters:

1. In **Used network ports** box set TCP and UDP ports used for:
   - **Management Console connection**;
   - **Clients connection** to transfer security schemas to managed workstations, send information about events and shadow copies to server;
   - **Clients notification** about security schema changes.
2. In **GUI interface address** enter the IP address that will be used for interaction between Server and Management Console.

> **Warning!**
> This value should only be changed if the Server is installed on a computer with multiple network adapters connected to different networks. If there is one network adapter, this value must remain unchanged, otherwise Management Console won't be able to connect to Server.
>
> If you add more network adapters while working with Server, you can change this setting in Server configuration file.



Configuring InfoWatch Device Monitor server parameters

After all necessary parameters have been configured, click **Next**.

Step 9. Configuring server account

Select an account that will launch InfoWatch Device Monitor according to "InfoWatch Device Monitor Server Setup Recommendations". If you select **User**, specify Windows domain account name and password. Name is entered in `DOMAIN\USERNAME` format.

Click **Next**.

Step 10. Configuring server administrator account

Provide credentials (user name and password) for server administrator account. This will be a **Super user** account (for further details, see " Administration"): it is used when you first connect to the server from Management Console.

Click **Next**.

Step 11. Configuring InfoWatch Traffic Monitor connection parameters

Specify InfoWatch Traffic Monitor interaction options:

- **TM server address**. InfoWatch Traffic Monitor server address. Interaction with Traffic Monitor Server is carried out according to *xml* scheme. Address must be entered in the following format:

  ```
  xml://host:port
  ```

  Host parameter should contain domain name or IP address of InfoWatch Traffic Monitor server. The server address is the standard URI address (Uniform Resource Identifier) with its formal syntax described in RFC 3986 http://tools.ietf.org/html/rfc3986.

  Port parameter contains InfoWatch Traffic Monitor server port that delivers events. InfoWatch Traffic Monitor default server port is 4101.
- **Number of connections**. Number of InfoWatch Traffic Monitor server connections. You can specify from 1 to 32 connections.

- if System deployment scheme is not integrated with InfoWatch Traffic Monitor, select **Work in standalone mode** box. In this case, you can save captured shadow copies in server installation directory by selecting **Save shadow copies** box.

Click **Next**.

Step 12. Completing the installation

Click **Install** to start Server installation. Follow the instructions to complete installation.

Warning!
Installing server end on Microsoft Windows Server 2012 or Microsoft Windows Server 2012 R2, you will see **Windows Security** dialog window, which installs Infowatch virtual printer, required for processing printer jobs from metro-applications. To install virtual printer press **Install**.

Note:
Signature installation may take a while (up to 30 minutes).

2.3 InfoWatch Device Monitor Client Setup

InfoWatch Device Monitor Client can be installed in the following ways:

- Local setup. It uses the Setup Wizard on each workstation.
- Remote installation with third-party software. It uses software distribution tools: for example, Microsoft Active Directory group policy.
- Remote installation through InfoWatch Device Monitor Management Console expansion tasks.

Warning!
For InfoWatch Device Monitor Client proper operation you must ban simultaneous workstation use. To fulfill this requirement, Client allows only one user session; other sessions are blocked until the active session has been completed. This may block quick user switch function (Fast User Switching) and terminal access to managed workstation.

Warning!
For InfoWatch Device Monitor Client proper operation on workstations with antivirus software installed, disable antivirus selfprotect function.

2.3.1 Standard Client Setup

Warning!
It is not recommend to install InfoWatch Device Monitor Clients on computers that have the same name. These computers will be registered as a single workstation, affected by the same policies, and register the same events, etc.

Client can be installed by computer's local administrator.

Step 1. Running the Installation Wizard

Insert the installation CD into your CD-ROM drive. Then open `Client` directory. Run platform-specific setup file from this directory.

You will be redirected to InfoWatch Device Monitor Client Installation Wizard welcome screen. Click **Next** to go to

the next installation screen.

Step 2. Choose installation directory

Specify the path to Client installation directory.

Click **Next**.

Step 3. Configuring settings

Specify InfoWatch Device Monitor server connection settings:

- **Server**. InfoWatch Device Monitor server name.
- **Port**. Port number used for communication between InfoWatch Device Monitor Client and Server (port 15101 by default).

Click **Next**.

Step 4. Completing the installation

Proceed to **Confirm installation** screen and click **Next** to start Client installation. Follow the instructions to complete installation. Restart your computer to finish installation.

2.3.2 Client Setup via Software Distribution Tools

Corporate network administrator can perform Client centralized setup via software distribution tools. This section describes installation from Microsoft Active Directory.

Client setup from Microsoft Active Directory is carried out via group policy. To do so, you have to select a group policy that covers all target workstations. This policy may be assigned to:

- Active Directory container that holds all target workstations
- the whole Active Directory domain, but not default domain policy. This policy should only cover the group that includes all controlled workstations.

Step 1. Creating Installation Package

Create `Client.en.msi` installation package as described in "Creating Installation Package". Put the installation package to the network directory that can be ready by all target computers within the domain.

Step 2. Disable Microsoft Windows XP Professional fast logon option

Before you start client setup via group policies, disable fast logon optimization for computers with Microsoft Windows XP Professional OS (so-called asynchronous logon mode). For more details on this functionality see Microsoft Knowledge Base (see KB305293).

To disable the fast logon optimization feature:

1. Open the group policy editor.
2. In console tree, select **Computer Configuration > Administrative templates > System > Logon**. In details section, select **Always wait for the network at computer startup and logon**. Then set the value of this parameter to **Enabled** in properties screen.

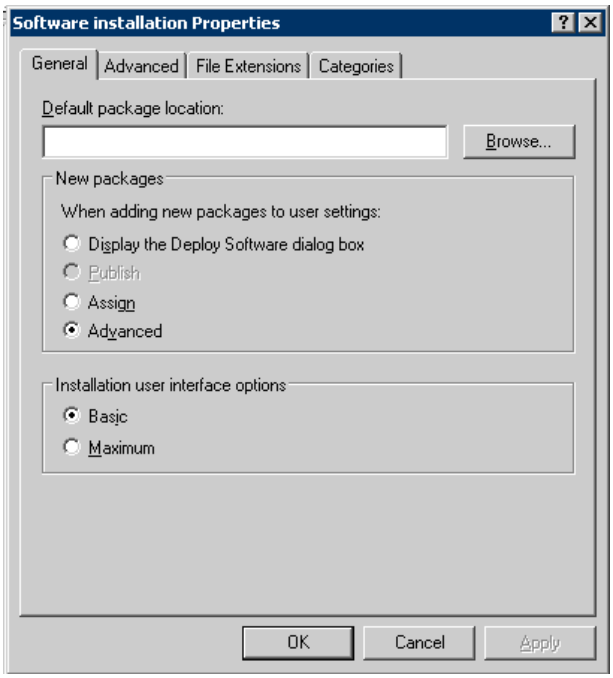
> **Note:**
> If this option has been turned off, you will need to reboot your computer again to let Windows group policy distribution mechanism finishes the installation.

Step 3. Editing Group Policy

Edit group policy before installing Client from Active Directory.

To edit group policy:

1. Open **Active directory users and computers** (**Start > Settings > Control Panel > Administrative tools > Active directory users and computers**).
2. In console tree, select Active Directory container with all target workstations.
3. Open **Group Policy**. To do this, click **Properties** in Active Directory container context menu. In the following dialog box, navigate to **Group policy** tab. On this tab, select group policy and click **Edit**.
4. In console tree, select **Software Installation** (**Computer Configuration > Software Settings**).
5. In **Software Installation** context menu select **Properties**. On **General** tab configure the following settings (see the following figure):
   - set **New packages** value to **Advanced**;
   - set **Installation user interface options** value to **Basic**.

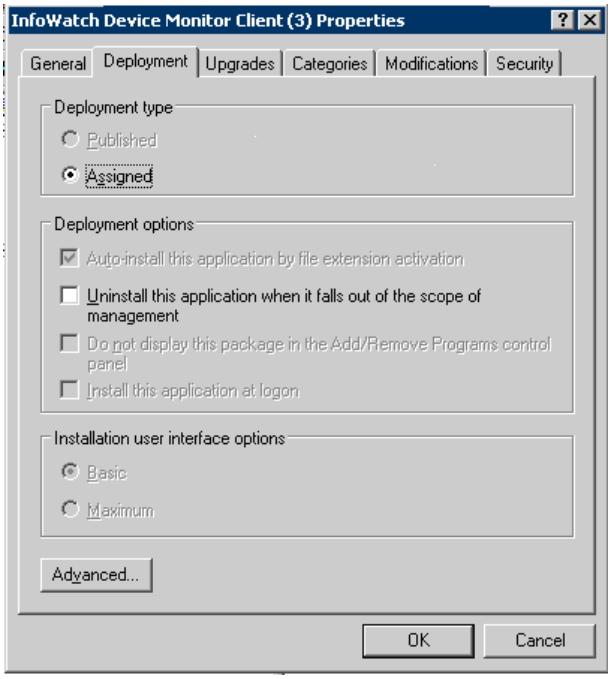


6. When the configuration is complete, click **OK**.

Step 4. Preparing Client installation task

Client installation task is created and configured on **Group Policy Object Editor** screen:

1. After opening **Group Policy Object Editor** box select **Software Settings** (**Computer Configuration > Software Settings**) in console tree. Right-click the selected item and then select **New > Package**.
2. In the following **Open** dialog specify client module installation package `Setup.Client.msi` (first move the installation package to a network directory that is readable for all installation-target computers within the domain).
3. Configure new package properties:
   - Make sure all settings in **Deployment** tab comply with the following figure.



- After all necessary settings have been configured, click **OK**.

4. In the console tree, select **Computer Configuration > Administrative templates > System > Scripts**. In details section, select **Run logon scripts synchronously**. Then set the value to **Enabled** in properties screen.

Step 5. Setup

New task appears in **Software Installation** task list. The task is carried out as soon as the target computer is restarted. InfoWatch Device Monitor Client starts automatically after its installation.

Installation method is displayed in **Deployment state** column. **Assigned** status means that installation is forced, i. e. doesn't need approval of target computer user. **Published** state means installation upon user's approval.

Warning!
You can check if the Client has been installed successfully in InfoWatch Device Monitor Management Console. All workstations the Client has been successfully installed to must appear in the list in **Workstations** area. To view all managed workstations, click **Show all workstations** at the top of Navigation Pane. To obtain up-to-date Client information, click **Update** in Toolbar.
If workstation is not in the list, check for "*Group policy application failure on Windows XP with Service Pack 2 (SP2) computer*" error. For error description and troubleshooting go to Microsoft website: http://support.microsoft.com/kb/840669/ru.

2.4 Configuring InfoWatch Device Monitor Server

Server is configured with `InfoWatch.DeviceMonitor.Server.exe.config` XML configuration file. Configuration file is stored in the same directory as Server executable file `InfoWatch.DeviceMonitor.Server.exe`.

By default, after its installation the Server is located in

```
C:\Program Files\InfoWatch\Device Monitor\Server.
```

You can view and edit configuration file with any text or XML Editor. UTF-8 File Encoding.

`<configuration>` is the root element of configuration file. Root element includes child elements (configuration sections). The following table contains configuration file structure and its partitions description. Section links provide detailed information on their configuration.

Warning!
It is extremely not recommended to edit the configuration file without InfoWatch engineer assistance.

Configuration section	Description
<configSections>	Service section. Describes all remaining sections. You should not edit this section.
<runtime>	Contains Microsoft .NET framework environment settings. These settings are required for correct Server operation. In `<runtime >` section the `gcServer` element is specified for garbage collector configuration. Element features `enabled` attribute with `true` (parallel garbage collection is enabled) or `false` value (parallel garbage collection is disabled). It is not recommended to edit this section.
<applicationSettings>	Contains individual Server modules settings, such as ports, buffer size, time-out, etc.
<system diagnostics>	Contains logging settings. Logging can be useful for Server components diagnostics.

2.4.1 <applicationSettings> section

You can use `<applicationSettings>` section to configure individual Server modules. There are six modules. All sections have the same structure: Each section includes a set of elements for module configuration. Each `<setting>` element has the following attributes:

- `name` - setting name.
- `serializeAs`- data serialization method. Data is always serialized as a string (string data type).

Module parameters are defined by `<value>` child element. For example:

```
<setting name="RemotingPort" serializeAs="String">
  <value>15003</value>
</setting>
```

Each module parameters are described in the following table.

Parameter	Description
`<InfoWatch DeviceMonitor.Server.Core.Properties.Settings.>` Server kernel configuration	
`RemotingPort`	TCP port processing Management Console service connections. Default value `15003` (it is not recommended to change this value)
`CultureName`	Language of module diagnostic and other messages. Possible values: • `ru-RU` • `en-US`
`MachineName`	IP address of network interface used by the Server to accept Management Console connections. Default value `127.0.0.1`. You can only change this value, if the Server has 2 or more network interfaces. In this case, you must explicitly specify interface address used by the Server to accept incoming connections from different instances of Management Console
`CheckServerSettingsInterval`	With clustering enabled - database synchronization period (in seconds). After

Parameter	Description
	this, the Server sends a request to security schema in order to retrieve changes implemented by the main Server that uses the same database. Default value `10`
`<InfoWatch.DeviceMonitor.Server.Database.Properties.Settings>` Settings of the module interacting with the database	
`DatabaseType`	Database types. Possible values: • `Oracle` • `Microsoft`
`ConnectionString`	Database connection string. It must comply with ADO.NET connection string rules. For example: `Data Source=isis\s2005;Initial Catalog=g1228_9;Integrated Security=`
`CultureName`	Language of module diagnostic messages and other messages. Possible values: • `ru-RU` • `en-US`
`ConnectionPoolSize`	Number of DB connections to open and use by server. Default value `20`
`CommunicationPort`	Port number used for server connection with Deploy agent when installing a Client through task engine. It is not recommended to change this value when operating. Default value `15505`
`UpdateStatusTimeOut`	Time interval of updating the job execution state at remote computer. With this interval server survey remote computers where the Client is deployed about installation state to display on the Management Console. Default value `60`
`<InfoWatch DeviceMonitor.Server.Gui.Properties.Settings.>` Management Console interface module configuration	
`CultureName`	Language of module diagnostic messages and other messages. Possible values: • `ru-RU` • `en-US`
`InitialLeaseTime`	Management Console valid connection time (in minutes)
`RenewOnCallTime`	Time (in minutes) to prolongate Console-Server connection lifetime.
`<InfoWatch.DeviceMonitor.Server.Client.Properties.Settings>` Client connections module configuration (managed workstations)	
`Backlog`	Pending client connections queue. Default value `128`
`CultureName`	Language of module diagnostic messages and other messages. Possible values: • `ru-RU` • `en-US`
`ShadowCopyTempDir`	Full path to temporary shadow copies pending submission to InfoWatch Traffic Monitor. Default value: `C:\Program Files\InfoWatch\DeviceMonitor\Server\ShadowCopyTempDir`
`DmpV1Adress`	List of IP addresses (with enumeration separator "; ") used by server for listening to ports. The following values are possible: • `AllAny` - all ports of IP addresses available for the computer (default

Parameter	Description
	value); • AllIp4 - ports of all version 4 IP addresses; • AllIp4 - ports of all version 6 IP addresses.
Dmpv1TraceLevel	Client-Server protocol trace level. Possible values: • 1 - turn tracing off (default value); • 2 - only trace packet information; • 3 - complete tracing.
Dmpv1TraceClients	List of Client IP addresses (with enumeration separator "; ") that require tracing. All means that tracing is carried out for all Clients.
Dmpv1ConnectionsLimit	Number of simultaneously processed TCP/IP connections with Clients. Default value 200.
Dmpv1ConnectionsQueueLimit	Max number of connections awaiting for processing. If the number excesses, connections are reduced to Dmpv1ConnectionsQueueLengthAfterCut parameter value. Default value 500.
Dmpv1ConnectionsQueueLengt	Number of connections after queue reduced because of max size excesses. Default value 250.
TimeoutPeriodSeconds	Timeout to close hanged Client-Server connection: partially created shadow copies will be deleted, sending of shadow copies will be repeated in next established connection. Default value 120.
<InfoWatch.DeviceMonitor.TrafficMonitor.Connector.Properties.Settings> Traffic Monitor Server connector basic configuration	
DBPollTime	Database query period (in milliseconds) checking for database events
CultureName	Language of module diagnostic messages and other messages. Possible values: • ru-RU • en-US
NumberOfConnections	Number of InfoWatch Traffic Monitor connections. Normal value 4. Maximum value 32
QueueSendLimit	Maximum number of events transferred from database to InfoWatch Traffic Monitor in a single transaction. Default value200
<InfoWatch DeviceMonitor Database.Core.Properties.Settings> Low-level database driver configuration	
CultureName	Language of module diagnostic messages and other messages. Possible values: • ru-RU • en-US

2.4.2 <system.diagnostics> section

Server diagnostics section. It includes the following elements:

- <trace>. Diagnostics module general settings.
- <sources>. Individual Server components diagnostics settings.
- <switches>. Managing diagnostic system's overall level of detail. Includes detalizer definitions. Typically,

there is a single detilizer. If different modules require different detalisation settings, you should use a filter. General detalizer's value must contain maximum detail.

<*trace*> element

Used to describe global module diagnostics settings. In this element you can specify message margins and diagnostics data saving parameters.

<*sources*> element

Used to configure individual application modules. Includes `<source>` child elements - one for each application module (see Server module list in "<applicationSettings> section").

`<source>` element has the following attributes:

- `name`. Server module name.
- `switchName`. Name of the module that defines diagnostics (detalizer's) level of detail.
- `switchType`. Type of the module that defines diagnosis level of detail. Is always set to `System.Diagnostics.SourceSwitch`.

Each <source> element also contains a definition for diagnostic messages receiver (`<listeners>`). Diagnostic messages can be received by:

- Windows application log (Application log);
- system debug output (can be viewed with special tools like DebugView);
- text file.

`<source>` element has child element `<listeners>`. This element contains parameters of diagnostic messages receiver. `<listeners>` element may contain the following child elements:

- `<add>`. Add a new diagnostic messages receiver
- `<remove>`. Deleting diagnostic messages receiver. You can only apply it to remove default message receiver (Windows application log). To this end, set element name to `Default`:

```
<remove name="Default" />
```

<*add*> element

This item adds diagnostic messages receiver to Server module. Element contains the following attributes:

- `name`. Diagnostic messages receiver name.
- `type`. Diagnostic messages receiver type.
- `initializeData`. Server module ID. Typically, this value is the same as Server module name. If Windows application log is the receiver, this information appears in the `source` column.

Receiver type is fully qualified receiver name from .NET framework library or proprietary type that implements the required diagnostic messages receiver interface.

.NET framework library contains the following diagnostic messages receiver types:

- `System.Diagnostics.EventLogTraceListener`. Windows application log
- `System.Diagnostics.ConsoleTraceListener`. Console application message output
- `System.Diagnostics.TextWriterTraceListener`. Text file output
- `System.Diagnostics.DefaultTraceListener`. Debug Windows output (enabled by default).

`<add>` element also contains diagnostic messages filter. This filter only displays the messages with level of detail exceeding the filter parameters. It features the following levels of detail (listed in descending priority order):

- `Verbose`. Debug level. All events are logged. This level can only be used for System debugging. This level does not allowed for a system running in normal mode, since it cuts the performance significantly.
- `Information`. Information level. Registers the events that are not related to errors, for example, information on server changes.
- `Warning`. Warning level. Registers non-critical System errors, such as an unexpected disconnection from the Server, connection timeout, etc.
- `Error`. Error level. Records errors that cause System malfunction (i.e., errors that require troubleshooting).
- `Critical`. Critical level. Registers serious malfunctions that can lead to System shutdown.

Example 1

Detalizer features *Verbose* logging level, while module filters feature *Warning* level. Then detalizer ignores *Warning* , *Error* and *Critical* events, but filters out *Information* and *Verbose* events.

Example 2

Detalizer features *Error* logging level, while module filters feature *Warning* level. In this case, detalizer ignores *Error* and *Critical* events, but filters out *Warning*, *Information* and *Verbose* events. This happens because overall System level of detail is *Error*, i.e. only *Error* events and higher are registered regardless the filter settings.

<*remove*> element

Deleting message receiver. It is usually used to remove default receiver that displays diagnostic messages in Windows debug output:

```
<remove name="Default" />
```

<*switches*> element

Defines Server detalizers. Typically, there is only one detalizer, which sets the global (for entire Server) level of detail the diagnostic system. If individual Server modules require lower level of detail, you can use filters.

`<switches>` element contains only one child element by default:

```
<add name="eventLog" value="Warning"/>
```

Level of detail is specified as `value` attribute.

2.5 Updating InfoWatch Device Monitor

If you have InfoWatch Device Monitor installed, you can upgrade it to a later version.

System update is similar to its installation:

1. Updating InfoWatch Device Monitor Server End (database, server, and Management Console).

   Warning!
   If you want to upgrade System version 3.4 - 4.0, delete the old server version (don't remove the database) and re-install the server, configuring the connection to existing database. Starting version 4.0, updates use standard procedure.

2. Updating InfoWatch Device Monitor Client.

   System supports earlier Client versions starting build 3.4.875. Therefore Client is upgraded when needed.

In case you need to update Device Monitor Client on a large number of Workstations, you need to take the following steps:

1. Update client on a group of 10 Workstations. Make sure that there are no performance errors for 2-3 days. Continue with the update procedure.
2. Update client on a group of 50 Workstations. Make sure that there are no performance errors for 2-3 days. Continue with the update procedure.
3. Update client on a group of 500 Workstations. Make sure that there are no performance errors for 2-3 days. Continue with the update procedure.
4. Update client on a group of 1000 Workstations. Make sure that there are no performance errors for 2-3 days. Continue with the update procedure.
5. Complete the update procedure with the rest of the Workstations.

2.5.1 Updating InfoWatch Device Monitor Server End

Warning!
If you want to upgrade System version 3.4 - 4.0, delete the old server version (don't remove the database) and re-install the server, configuring the connection to existing database. Starting version 4.0, updates use standard procedure.

Step 1. Start update

Insert the installation CD into your CD-ROM drive. Then open `Server` directory. Run platform-specific setup file from this directory.

You will be redirected to InfoWatch Device Monitor Installation Wizard welcome screen. Click **Next** to go to the next installation screen.

Step 2. Database configuration

Database is preserved during update, and **Configure Database Connection** box automatically displays old database parameters. However, depending on DBMS, you need to specify particular settings.

Built-in Database Update

Skip this step, if you are using built-in DB.

Update Database Under Microsoft SQL Server DBMS

On **Authentication Method** panel, select authentication method for the user, who updates the database. For this option, specify the authentication method selected during account preparation (see."Database deployment under Microsoft SQL Server DBMS").

If the account uses Windows authentication, select **Windows authentication**.

If the account uses built-in SQL Server authentication, select **SQL Server built-in**. Then enter login and password into **User name** and **Password** fields respectively.

Note:
You can specify old or new authentication parameters as the upgrade proceeds. For guidelines on authentication methods and account preparation see section "Database deployment under Microsoft SQL Server DBMS".

Update Database Under Oracle DBMS

On **DB Server** panel specify **Password for 'SYSTEM'** - password for SYSTEM account that manages the database, which is being updated.

On **Scheme Information** panel, fill in **Password**, **Confirm password** fields - password for database scheme owner's account used for database update.

Update PostgreSQL Database

Enter the password of the account that manages the updated database into **Password** field.

After you have configured all parameters, click **Next**.

Step 3. Upgrade Completion

Go to the next screen and click **Install** to run System server upgrade.

Follow Setup Wizard's instructions to complete System server update.

2.5.2 Updating InfoWatch Device Monitor Client

The system supports Client versions starting from build 3.4.875. Therefore, updated system components can work with older Client versions. However, you can update to a later version.

Client update is similar to its installation:

- local update using Setup Wizard;
- remote update using software distribution tools;
- centralized update via Management Console.

2.6 Uninstalling InfoWatch Device Monitor

To remove InfoWatch Device Monitor server end with Management Console:

1. Take one of the following steps:
   - Open `Setup\Unified` catalogue on the Installation CD. Run platform-specific setup file from this directory.
   - Run **Add or remove programs** from Windows Control Panel, select **InfoWatch Device Monitor Server** and click **Change**.

   You will be redirected to Installation Wizard welcome screen. Click **Next** to move to the next screen.
2. On **Change, repair or remove…** screen select **Remove**.
3. To remove the system and its database, flag **Remove database** on **Remove database…** screen. Then specify parameters for uninstalling: parameters depend on your DBMS:
   - **Integrated DB (CompactSQL)** – doesn't require additional parameters: **Database** string contains the removed DB file.
   - **Microsoft SQL Server** – specify your authentication method by selecting it in **Authentication Method** pane (see "Database deployment under Microsoft SQL Server DBMS").

     In case of SQL-server based authentication (**Integrated into SQL Server**) enter the credentials you used to connect to the database in **Login** and **Password** boxes of **Database Administrator** pane.
   - **Oracle** – enter the password into **The password of 'SYSTEM' login** box. This will remove database scheme owner account and all its objects except the tablespace.
   - **PostgreSQL** – enter the credentials used to create the DB during server setup into **User name** and **Password** boxes (see "InfoWatch Device Monitor Server End Installation Procedure").
4. After specifying the parameters click **Remove** to start uninstallation.

To remove only InfoWatch Device Monitor server end or Management Console:

1. Run **Add or remove programs** and click **Change**.
2. In **Custom Setup** click  to the left of the elements you want to remove and select **Disable this element**. Click **Next**.
3. If you selected server uninstallation at the previous step, specify whether you want to remove the database and enter the authorized account parameters, if necessary, on **Remove database…** screen (see details above).
4. Click **Change** to start uninstallation.

To remove InfoWatch Device Monitor Client:

run **Add or remove programs**, select **InfoWatch Device Monitor Client** and click **Remove**.

You can also use centralized uninstallation to remove Clients:

- with Active Directory tools (if Clients were installed via software distribution tools) as described in "Remove Client Installed via Software Distribution Tools".

- with Management Console distribution tasks, as described in "Clients Remote Setup, Updating and Uninstallation".

2.6.1 Removing Client Installed via Software Distribution Tools

If client was installed via software distribution tools, you can use them to remove it.

For example, if Clients were installed via Microsoft Active Directory, corporate network administrator can use group policy to remove the installation task. Group policy editing procedure is described in "Client setup via software distribution tools", step 3.

To remove Client from all managed workstations:

1. Select the installation task you want to remove. Then right-click the selected row and select **All tasks > Remove**.
2. Select **Remove software** in **Immediately uninstall software from users and computers** dialog.

   Note:
   Other options remove installation task without uninstalling all existing Clients. After that you won't be able to remove these Clients with Microsoft Active Directory tools.
3. Click **OK**.

Client will be removed from all computers under selected group policy.

3 Using Management Console

Management Console is designed to address the following tasks:

- access to InfoWatch Device Monitor;
- configuring workstations monitoring system;
- workstations access control.

To use Management Console you have to be familiar with Microsoft Windows OS basics.

For more information on Management Console workflow see:

- Management Console Overview. InfoWatch Device Monitor general actions (startup, interface configuration).
- Management Console User Administration . How to perform InfoWatch Device Monitor administration tasks: managing InfoWatch Device Monitor Management Console accounts, working with log, etc.
- General System Settings. Defining global settings which are common for all rules and policies.
- Managing Security Schema. How to use security schema and configure security settings.
-
- . Working with external devices and data transmitting channels at managed workstations.
- Clients Remote Installation, Updating and Uninstallation. InfoWatch Device Monitor Client installation and configuring via Management console.
- Additional Features. Secondary functions enhancing InfoWatch Device Monitor Management Console user experience: records filtering, grouping and sorting, Management Console shortcuts.

3.1 Management Console Overview

Management Console basics are available in the following subsections:

- Authorization and Connecting to InfoWatch Device Monitor Server
- Management Console Main Screen
- Management Console Sections

3.1.1 Authorization and Connecting to InfoWatch Device Monitor Server

Management Console requires constant connection to InfoWatch Device Monitor Server. This can be accomplished through **authorization** that defines, if user has access to Management Console.

First launch of Management Console uses account credentials (user name and password) of **Super user** account (super user account is created during Server installation; for more details see InfoWatch Device Monitor Server End Installation Procedure).

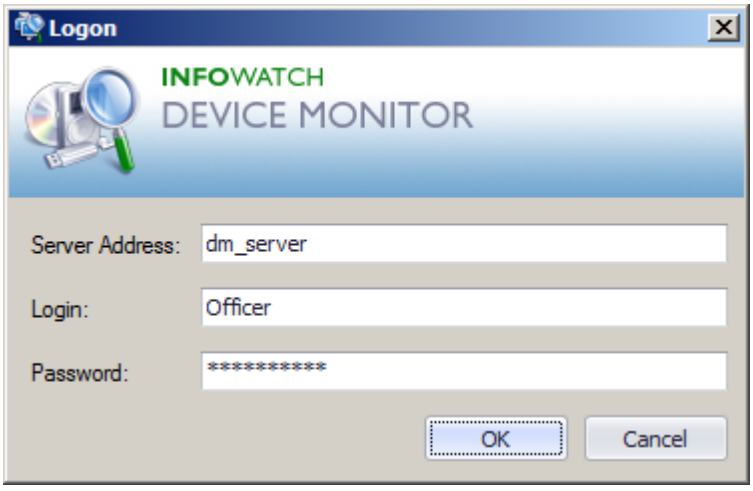
To get started with Management Console:

1. Launch Management Console. To do this, select **Start Programs > InfoWatch > Device Monitor > Management Console**.
2. Perform authorization as described below.

Successful authorization is only possible upon meeting all of the following conditions:

- database contains an account with specified parameters;
- account has a role;
- account is active (not deleted);
- account is not blocked.

Credentials are entered in logon dialog.



Parameter	Description
Server address	FQDN of the server Management Console is connecting to. Default communication port for server and Management Console is `15003`. If this port has been changed, enter server address as follows: `dm_server:port`.
Login	Username
Password	User password.

Parameter	Description
	Check the keyboard layout before entering your credentials.

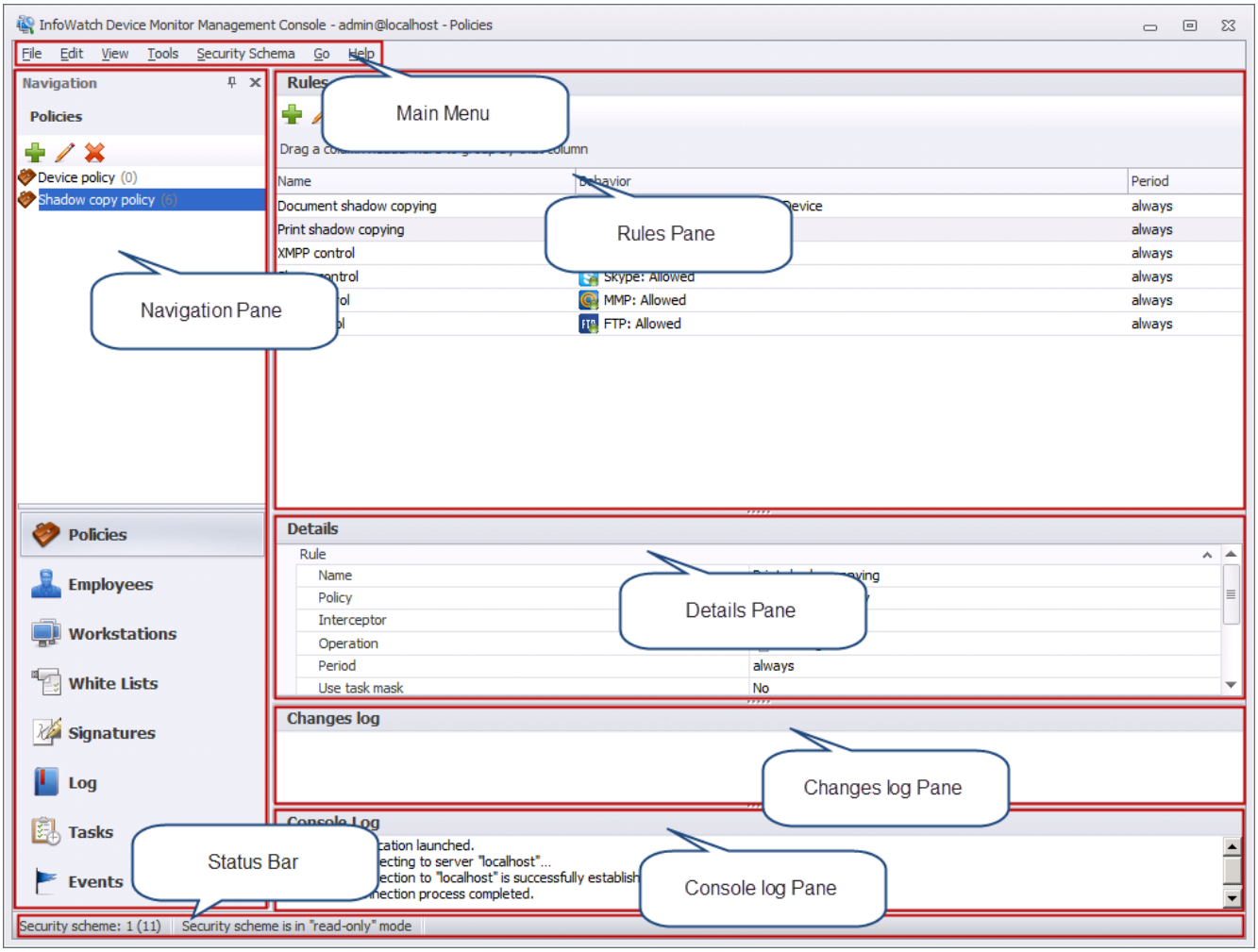
First launch of Management Console **Logon** dialog fields are empty. Later, **Server address** and **Login** fields will contain the credentials entered during the previous authorization attempt. You must fill the **Password** field each time you are trying to log in.

You can track server connection status via system messages on **Console log** panel (see Management Console Main Screen).

If you need, you can open authorization box and change your parameters: this connects you to the same or another server using any account. To do this, in the Main Menu select **File >** **Disconnect**, then connect to the Server as described above.

3.1.2 Management Console Main Screen

Successful Management Console authorization redirects you to the main screen:



For information on main screen customization see "Configuring Management Console Main Screen Elements".

Main screen contains the elements required for Management Console operation:

- **Main Menu** contains the commands that give you access to all Management Console essential features.
- **Toolbar** contains shortcuts to some of the Management Console features.
- **Navigation pane** lets you move between Management Console sections and manipulate elements groups

within a section.

- **Main screen workspace** is intended for reviewing and managing group elements.
- **Details** pane displays element's properties.
- **Console log** pane displays system messages.

If you are working with a single object, most commands are available in context menu. To open the context menu, right-click the object.

General status information is displayed on status bar at the bottom of the main screen. For example, the following information is displayed:

- current security schema version number;
- security schema mode;
- in **Workstations** section - control elements versions.

3.1.2.1 Configuring Management Console Main Screen Elements

You can customize the appearance and location of **Navigation**, **Details**, **Console log** panes.

Action	Steps
Hide pane	• Click **View** in the Main Menu and click on the bar title you want to hide. To open the pane again, repeat this step. or • Click ⊠ in the upper right corner of the pane.
Enable/disable pane automatic collapse	Click 📌 in the upper right corner of the pane.
Change pane location	Click on the pane name and drag the pane to a new location. Release the button to place the pane.
Return the pane to its original position	Double-click the title bar
Change panel size	Move the pointer to the edge of the panel. When the pointer turns into a double arrow, click and hold to drag the margin into the right direction. Release the button when the size is right.

Details panel displays individual element properties. You can collapse or expand property table for any item.

To customize Details panel,
double-click properties table title bar or use double-arrow button in the right part of the properties table header.

To hide/display toolbar or Status panel,
right-click on toolbar or status panel. In context menu, flag the elements that will be displayed (all the elements are flagged by default).

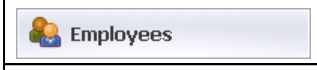
3.1.3 Management Console Sections

Management Console includes the following sections: **Policies**, **Employees**, **Workstations**, **White Lists**, **Signatures**, **Log**, **Tasks** and **Events**. Each section corresponds to similar Navigation panel area.

To go to the section, do any of the following:

- in the Main Menu select **Go**. In drop-down menu, click on the section title;
- use Navigation panel buttons.

Sections **Policies**, **Employees**, **Workstations**, **White Lists** and **Signatures** designed for managing the security schema, **Log** section for monitoring security schema management, **Tasks** - for managing Client installation and uninstallation tasks, **Events** - for viewing managed workstations events. Detailed description of section functions is available in the following table:

Section icon and name	Section assignment
	Security policy management: creating security policies, setting policy rules
	Employee management: creating employee groups, adding employees to groups
	Workstations management: creating workstation groups, adding managed workstations to groups
	Managing white lists of fully accessed devices.
	View and manage signature categories that assign File Monitor rules to certain file formats.
	Application protocol and creating application lists to permit or forbid applications start.
	Security schema management activity log (logging administrating responsibility zones and configuring security schema)
	InfoWatch Device Monitor Clients centralized installation, updating, and uninstallation on workstations
	Viewing information on employee activities at managed workstations using controlled means

3.2 Management Console Accounts Administration

The system registers a Management Console account for each security schema operator. Account credentials are used for user authorization and access to certain operations.

Management Console authorized users' rights are defined by their **roles**. Each role features a set of responsibility zone privileges. User cannot perform actions outside the assigned role.

Management Console uses the following roles to manage user privileges:

- **Security officer** - Console end-user managing security schema and Server settings.
- **Local administrator** - Console administrator managing other accounts.
- **Super user** - built-in role which have all Console privileges. Superuser role is not designed for routine System operations: it is recommended to use it only for primary Console configuring, Local administrator account creating and then - just in emergency cases.

The following table lists roles privileges.

Action	Super user	Local administrator	Security officer
Management Console first launch and configuration	+		
Work in emergency situations	+		
Unlocking security schema	+		
Viewing audit log	+		+

Export audit log records	+		+
Deleting audit log entries	+		
View Management Console accounts information	+	+	+
Add, edit, delete Management Console accounts	+	+	
Assign/delete Management Console account roles	+	+	
Block/unblock Management Console accounts	+	+	
Viewing Device Monitor Server settings. Configuring connection to Traffic Monitor server	+		+
View security schema versions	+		+
Edit security schema	+		+
Import/export security policies and rules	+		+
Viewing events	+		+
Clients Remote Installation, Updating and Uninstallation	+		+
Temporary Employee Access to Network	+		+
Temporary Employee Access to Devices	+		+

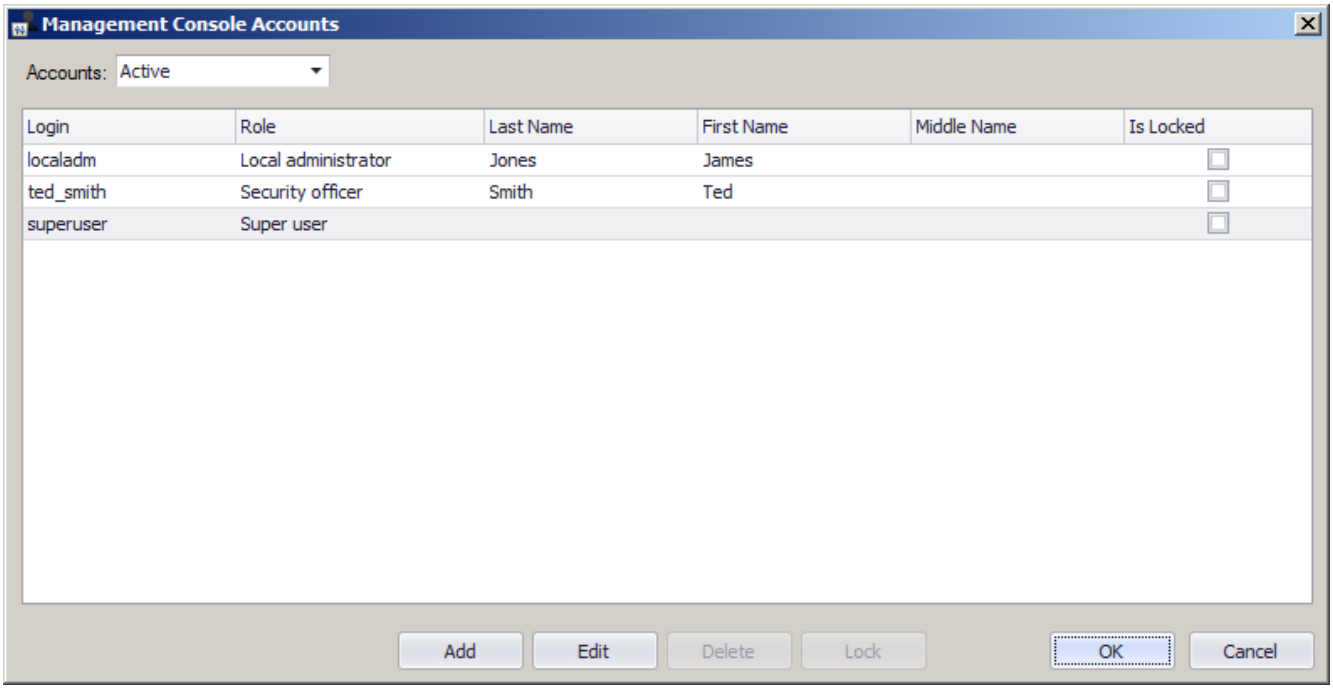
For more information on Management Console accounts management, see:

- Viewing Management Console Account Details
- Add Management Console account
- Locking or Unlocking Management Console Account
- Editing Management Console Account
- Deleting Management Console Account
- Management Console Security Schema Operation Activity Log

3.2.1 Viewing Management Console Accounts Details

To view Management Console accounts information:

1. In the Main Menu click **Tools > Management Console accounts**. This opens **Management Console Accounts** dialog box.



2. There is Show records field at the top of the dialog box. Select displayed accounts type in from the drop-down list:
   - **All**. All accounts regardless of their status.
   - **Active**. List of all active accounts.
   - **Blocked**. List of accounts, which were blocked but can be unblocked (see "Locking or Unlocking Management Console Account").
   - **Deleted**. List of accounts which were deleted and cannot be restored. However the System saves an information about actions those users performed.

> **Note:**
> Management Console can be only operated by the accounts in **Active** list. Deleted accounts can only be viewed.

Management Console account information is displayed as tabular list. Each row contains a single account. Columns contain the following account attributes values:

- **Status**. Indicates is an account is active ( ), blocked ( ) or deleted ( ).
- **Login**. Login.
- **Role**. Account role.
- **Full Name**. User's personal data.

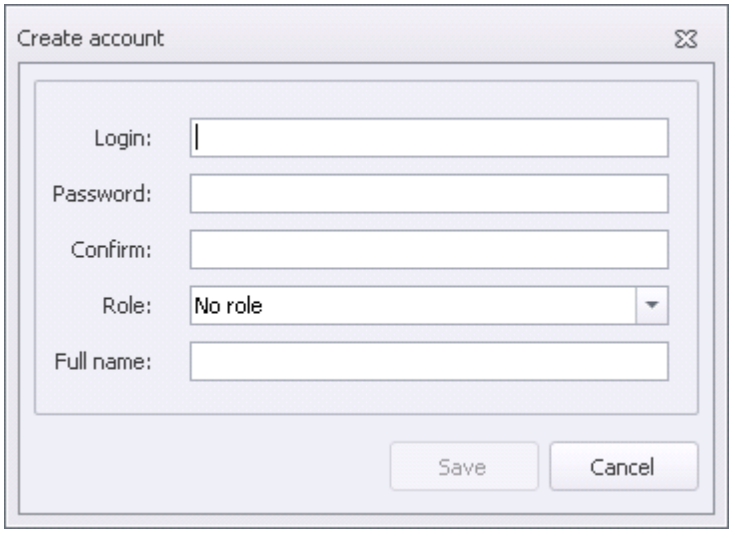
Login and password, as well as account role and status are mandatory attributes. Detailed roles' description is available in "Management Console Accounts Administration".

3.2.2 Adding New Management Console Account

To add Management Console account:

1. In the Main Menu click **Tools > Management Console Accounts**.
2. Click **Create** at the right of **Management Console Accounts** dialog box.

3. Specify account settings in **Create account** dialog box:



- **Login**
- **Password**, **Confirm**
- **Role**. Role assigned to your account. For more information on roles, see "Management Console Accounts Administration".

> **Warning!**
> Role **parameter** is set to **No role** by default. You won't be able to authorize in Management Console with this account.
> Each account can have only one role.

- **Full name**. Personal information about account owner.

4. Click **Save**.
   After this **Create account** dialog box will be closed. New account details will be displayed in **Management Console Accounts** dialog box.

> **Note:**
> New account is not locked. You can lock the account, if necessary (see "Locking or Unlocking Management Console Account").

3.2.3 Locking or Unlocking Management Console Account

Account lockout is displayed in **Management Console Accounts** dialog box.

> **Warning!**
> You can lock any account except Superuser or the account you are logged in with.
> You cannot log in with locked account.

To lock/unlock Management Console account:

1. In the Main Menu click **Tools > Management Console Accounts**. This opens **Management Console Accounts** dialog box.
2. Select the row that contains the account name.
3. Change account's lock status:
   - if the account has been locked (state), click **Unlock**.
   - if the account is unlocked (state), click **Lock**.
4. Click **Save t**o apply changes.

3.2.4 Editing Management Console Account

Warning!
Editing a role of Management Console authorized account leads to the following: After you save the changes, connection to server is automatically terminated. Then you are prompted to authorize with your new settings. However, all your unsaved data will be lost.

To edit Management Console account:

1. In the Main Menu click **Tools > Management Console accounts**. This opens **Management Console Accounts** dialog box.
2. Select the row that contains the name of the account you want to edit.
3. Click **Change** at the right of the dialog box or double-click the highlighted row.
4. In **Change account** dialog box edit account settings, as described in section "Adding New Management Console Account").
5. After all necessary settings have been configured, click **Save**.
6. To apply changes, click **OK** in the **Management Console Accounts** dialog box.

3.2.5 Deleting Management Console Account

Deleted account is moved to deleted accounts list. Account information remains in the database. You can view deleted accounts in **Management Console Accounts** dialog box. To do this, select **Obsolete** in **Accounts** drop-down list.

Warning!
Superuser account could not be deleted.
Deleted accounts cannot be recovered.

To delete Management Console account:

1. In the Main Menu click **Tools > Management Console Accounts**. This opens **Management Console Accounts** dialog box.
2. Select the row that contains the account you want to remove.
3. Click **Delete** at right of the dialog box.
4. In the confirmation dialog select **Yes**.
5. To apply changes, click **Save** in the **Management Console Accounts** dialog box.

3.2.6 Management Console Security Schema Operation Activity Log

Management Console operation involves various security schema managing activities. Records related to activities that change database information (security schema customization, System administration) are stored in the Audit Log.

For information on Audit Log see:

- Viewing Log
- Log Records Filtering
- Deleting Records from Log
- Exporting Log Records
- Analyzing Log Records in Microsoft Excel

3.2.6.1 Viewing Audit Log

You can manage audit log of Management Console users activities in **Log** section. To go to this section, click **Log** button on **Navigation** pane.

Security schema management activities are performed as transactions. Transactions appear as a set of records in the audit log. Each record contains information on one basic action (transaction step). Transaction may only contain one step and will be represented by a single record in audit log.

Configure filters to select records that meet certain criteria (for information on filters see "Log Records Filtering"). Filter list is displayed in **Log** area of Navigation pane. Records for selected filter are displayed in the main screen workspace.

Note:
Use additional options to adjust audit log records display (see "Additional Features").

To view full list of audit log records,

click **Show All Records** at the top of Navigation Pane.

To view filtered records,

click the filter name in the filter list.

Log information is displayed in a tabular list where each row contains a single record. Columns contain basic properties of log entries. Extended information on each record is available in **Details** panel.

To view advanced information for particular record,

select the row that contains the record name in the main screen workspace.

Details panel displays properties table containing the following information for selected entry:

Property	Description
Transaction number (#)	Transaction number
Step	Basic action number within selected transaction
Date and time occurred	Action date and time
Object	Target object name
Action	Activity type
Object selector	Contains information that helps identify the target object. **Selector** values interpretation is available in "Selector Values".
Field name	Object attribute changed by the action
Old value	Previous value of the attribute
New value	New value of the attribute
User	Name of Management Console account that initiated the transaction

Property	Description
Windows account	Account with credentials for Windows authorization
Workstation	Name of the workstation that initiated the action
Sequence number	Record number in the database

Piece of information, on **Details** panel is duplicated in the main screen workspace.

Number of transaction steps (and, therefore, number of log records) varies depending on the object and actions performed.

For example:

The image contains a few log records referring to different transactions.

#	Step	Date and Time ...	Object	Action	Object Selector	Field Name	Old Value	New Value	User	Seq...
10	1	5/29/2012 10:17...	Rule	Add	4/Device policy/Floppy control	Active since		1/1/1753 12:00:00 AM	1	38
10	2	5/29/2012 10:17...	Rule	Add	4/Device policy/Floppy control	Active until		12/31/9999 11:59:59 PM	1	39
10	3	5/29/2012 10:17...	Rule	Add	4/Device policy/Floppy control	Operation		Floppy: Full Access	1	40
10	4	5/29/2012 10:17...	Rule	Add	4/Device policy/Floppy control	Allow only to en...		No	1	41
10	5	5/29/2012 10:17...	Securit...	Add	4/Floppy read-only for Device Policy	Comment		Floppy read-only for Device P...	1	42
9	1	5/29/2012 9:54:...	Log	Export	Object in (Rule, Policy)				1	37
8	1	5/29/2012 9:49:...	Rule	Change	3/Device policy/CD/DVD Access	Operation	CD/DVD: Full Ac...	CD/DVD: Read Only	1	35
8	2	5/29/2012 9:49:...	Securit...	Add	3/CD/DVD read-only for Device Policy	Comment		CD/DVD read-only for Device ...	1	36

Transaction number 3 is associated with adding a comment to security schema.

Transaction number 4 corresponds to one change applied to a security schema. This was done in 9 steps. Steps 1-3 changed rule named "*New IM client rule*" in "*Test Policy"* security policy. Each step configures a single rule parameter: for example, in step 1 an operation was defined, in step 2-3 an action period was set. Steps 4-7 added a new rule, step 8 deleted another one. In step 9 a comment was added to saving security schema version.

Transaction number 5 is associated with Audit Log records export. This transaction includes one step.

3.2.6.1.1 Selector Values

Selector parameter contains instructions for target object search. **Selector** parameter value depends on particular object and performed actions. Each object has a different set of **Selector** values.

Edited security schema version is displayed for modified security schema settings followed by "/" and name of modified parameter.

When editing an object (action **Modify**) **Selector** value contains object name before modification.

The following are sample interpretations of *Selector* values.

Example 1

Audit Log includes the following record:

#	Step	Date and Time Occurred	Object	Action	Object Selector	Field Name	Old Value	New Value	User	Sequence ...
7	1	5/28/2012 3:42:42 PM	Policy	Add	2/New Policy	Policy		New Policy	1	17

This record indicates that a rule was changed in your security schema.

Selector value interpretation

Transaction took place while version 10 of security schema was active. A rule named *"New IM client rule"* was changed in policy named "*test(new)":* Skype access was denied.

Example 2

Audit Log includes the following record:

#	Step	Date and Time Occurred	Object	Action	Object Selector	Field Name	Old Value	New Value	U...	Sequence...
8	1	5/29/2012 9:49:22 AM	Rule	Change	3/Device policy/CD/DVD Access	Operation	CD/DVD: Full Access	CD/DVD: Read Only	1	35

This record is a step of transaction which adds a workstation group to the security schema.

Selector value interpretation

Transaction took place while version 3 of security schema was active. The *"Device"* policy was assigned to new workstation group.

Example 3

Audit Log includes the following record:

#	Step	Date and Time Occurred	Object	Action	Object Selector	Field Name	Old Value	New Value	User	Sequence Number
9	1	5/29/2012 9:54:04 AM	Log	Export	Object in (Rule, Policy)				1	37

This record indicates that audit log records were exported.

Selector value interpretation

All records for operation on policy and rules were exported during this transaction.

3.2.6.2 Log Records Filtering

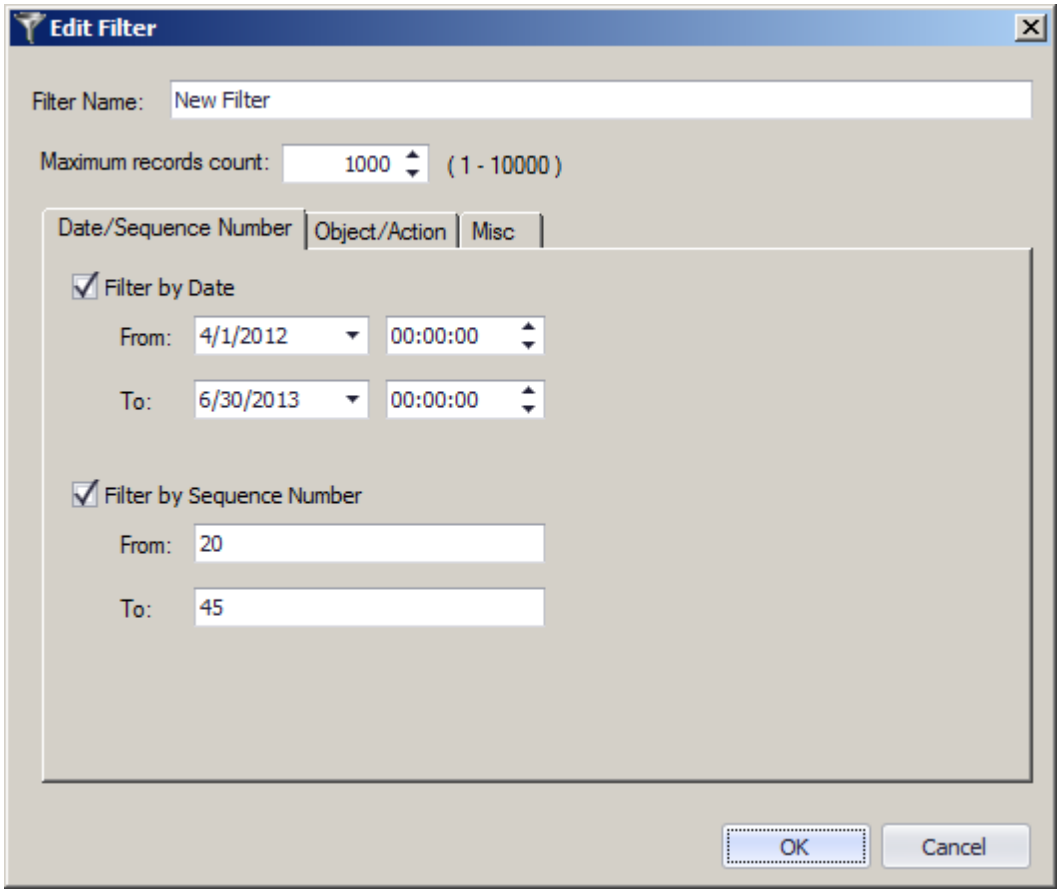
Records related to Management Console users activities that change database information (security schema customization, System administration) are stored in the Audit Log. To access Audit Log records that meet certain criteria you can use filters.

To create a new filter or modify an existing one:

1. Go to **Log**.
2. Follow the necessary steps:

Action	Steps
Creating filter	• in Main Menu select **Edit > Create Filter**; • click **Create filter** at the top of Navigation pane.
Editing filter	1. In **Log** area of Navigation pane, select the name of the filter you want to edit. 2. Take one of the following steps: • In Main Menu click **Edit > Edit filter**; • click **Edit Filter** at the top of Navigation pane. • double-click selected filter name.

These actions open dialog with filter parameters configuration.



3. Specify general filter options in filter parameters configuration dialog:
   - **Name**.
   - **Show number of records**. Limit on the number of entries displayed in Management Console workspace (1000 records by default).
4. Set filter criteria. You can configure filters at following tabs:
   - Date/Sequence Number Tab
   - Object/Action Tab
   - Additional Tab

   Warning!
   If no condition is specified in filter parameters configuration dialog, filtering parameters are disabled. When this filter is applied, all records from the Audit Log will be displayed.
5. Click **Save**.

To remove filter:

1. Go to **Log**.
2. In **Log** area of Navigation pane, select the name of the filter you want to remove.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Delete Filter**;
   - click **Delete Filter** at the top of Navigation pane.
4. In the following confirmation dialog select **Yes** to confirm that you want to remove the filter.

3.2.6.2.1 Date/Sequence Number Tab

Configure the following criteria on **Date/Sequence Number** tab:

- date and time the action took place;
- record number in the database.

To specify date and time criteria:

1. Flag **Filter by date** check box.
2. Specify the desired period.
   Starting and ending time is specified in **From** and **To** fields respectively. Set the date and time in right and left field respectively.

To filter by number:

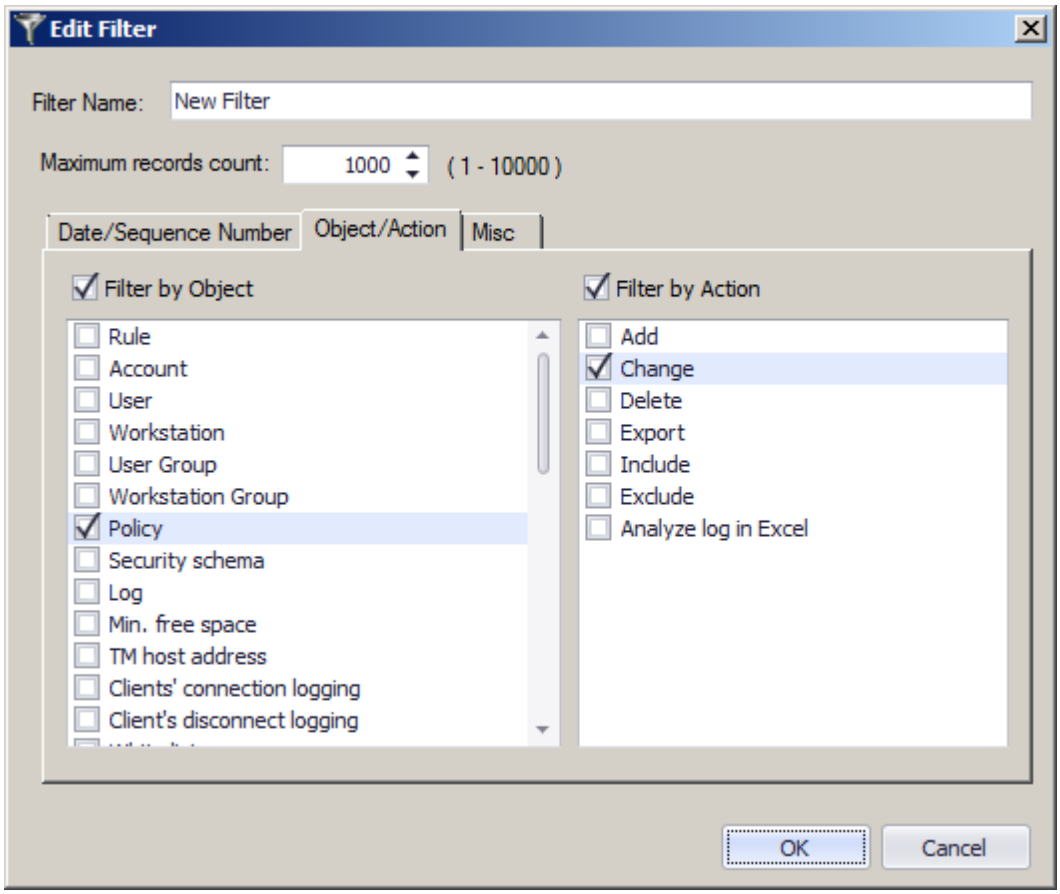
1. Flag **Filter by sequence number** check box.
2. Specify range of numbers in **From** and **To** fields respectively.
   Database record numbers start from 1.

3.2.6.2.2 Object/Action Tab

Use **Object/Action** tab to specify the following filtering criteria:

- target object;
- action performed.

Warning!
When combining object and action filtering criteria, only specify the actions that affect the object. For example, you can Add, Change or Delete an Account, or Include, Exclude, or Delete a Workstation. List of objects and actions is available in "Selector Values".



To specify filtering criteria:

1. Set object filtering criteria: in the left list flag the objects you want to filter out.
2. Set action filtering criteria: in the right list flag the actions you want to filter out.

3.2.6.2.3 Additional Tab

You can use **Additional** tab to configure additional filter settings. These settings include:

- **Object Selector**. Filter records using Selector values.
- **Field Name**. Filter records using one of the rule's attributes (for example, *Operation*, *Action* , etc.)
- **Old Value**. Filter records using the rule's previous attribute value.
- **New Value**. Filter records using the rule's modified attribute value.
- **User**. Display user's actions list.
- **Windows Account**. Display list of actions performed on behalf of selected Windows account.
- **Workstation**. Display selected workstation activity records.

To configure additional filtering parameters, enter their values in the appropriate filed.

Note:
Additional filtering values are not case-insensitive.

3.2.6.3 Deleting Records from Log

Warning!
Log records can be deleted only by Superuser.

To delete log records:

1. In Main Menu click **Edit > Delete log entries**.
2. Enter transaction number in **Delete** dialog.

   Warning!
   Note that audit log records relating to selected transaction or previous transactions will be deleted.
3. Click **OK**.

3.2.6.4 Exporting Log Records

You can export log records to XLS, HTM or TXT files. Later you will be able to view exported records with applications associated with appropriate file formats.

To export audit log records:

1. Go to **Log**.
2. Take one of the following steps:
   - To export records selected by the filter, click the filter on Navigation pane.
   - To export the whole log, click **Show All Records** at the top of Navigation pane.
3. Take one of the following steps:
   - click **Export Log** button in the top of **Records** area
   - in Main Menu click **Edit > Export Log**
4. In the next dialog, specify target file name, type and directory.
5. Click **Save**.

This exports audit log records to selected file.

3.2.6.5 Analyzing Log Records in Microsoft Excel

To enable audit log analysis in Microsoft Excel, you must install the application on the computer that will be used to run the operation.

To view Audit Log records in Excel:

1. Go to **Log**.
2. Take one of the following steps:
   - To view records selected by the filter, click the filter on Navigation pane.
   - To view the whole log, click **Show All Records** at the top of Navigation pane.
3. In the Main Menu click **Edit > Analyze Log in Excel**.

This opens selected log in Microsoft Excel.

3.3 General System Settings

The System has a set of global settings that should be general for all active polities and rules in Device Monitor system. You can configure this settings from menu: **Tools > Settings**. See more information:

- Common Settings for Clients
- Settings of Corporate Network
- Network Traffic Control
- Device Monitor Server Settings. Connecting to Traffic Monitor Server
- Connecting to LDAP Server
- Employee Notifications about Policy Violations
- Exclusion of application from interception
- Application control
- Events
- InfoWatch Device Monitor Server Manager
- Import/Export Configuration

Warning!
Modified settings will apply at managed workstations after Clients at every workstation would receive notification from Server (when checking server availability or when checking security schema changing or when checking notification templates changing) and then Clients would perform update.

3.3.1 Common Settings for Clients

In order to provide efficient operation of Device Monitor Client applications you need to specify a set of common settings.

To configure common settings for Device Monitor clients operation:

1. In the Main Menu select **Tools > Settings**.
2. At the left panel select **Common** node.
3. Change needed settings:

Parameter	Description
Connection	
Period of sending notification "Client works" to the server	Interval (sec) with which the Client sends data to Server
Period of checking server availability	Interval (sec) with which the Client checks Server availability.
Period of checking security schema changing for active client only	If a Client is in active mode (i.e. workstation could not open UDP-port for receiving Server notifications) then the Client surveys Server itself to receive data on changing security schema. This parameter sets a survey period (sec).
Period of checking notification template changing for active client only	If a Client is in active mode (i.e. workstation could not open UDP-port for receiving Server notifications) then the Client surveys Server itself to receive data on changing notification templates (see "Employee Notifications about Policy Violations"). This parameter sets a survey period (sec).
Client's disk space control	
Free clients' disk space	Minimal size of free disk space (%) of managed workstation: when it is reached, shadow copies would not be created. I.e. if when shadow copy is created, free disk space at a client workstation is less then parameter value, then neither shadow copy nor its part won't be created. See details in "Creating Shadow Copies and Blocking Operations Due to Free Space Shortage "
If there is not enough disk space the operation will	The managed workstation dedicates space for storing 30000 events at the hard drive where Device Monitor Client is installed. If Device Monitor Client did not have connections with Device Monitor Server so that there is stored more than 30000 events controlled by rules defined for employee/workstation, then any actions controlled by security schema could be denied. To deny, select **Operation is blocked**. To allow all actions performed without a control, select **Operation is allowed**.
Speed of sending data from client	
Limit the speed of sending data	Maximum speed of sending data Kbps
Events	
Event's detailisation level of Device Monitor	Level of detailing when saving information about working with external devices received by Device Monitor interceptor: see details in "Configuring Device Monitor Rule" and "Viewing Events". The following options are available: • **None** - do not save events • **Access denied** - events are created only if security policy violation is attempted - i.e. when device usage was denied, including blocking attempts of access level exceeding. The using of external devices which are not forbidden by policies, is not logged • **All** - all actions are logged (connection/usage of any devices, even from white lists)
Event's detailisation level of Network Monitor	Level of detailing when saving information about data transfer by network connections received by Network Monitor interceptor: see details in "Configuring Network Monitor Rule". The following options are available: • **None** - do not save events • **Access denied** - events are created only if security policy violation is attempted - i.e. when connection attempt was denied.

Parameter	Description
Employee notification	
Show employee notifications	Indicates if employee attempting to perform action forbidden by security policy, would receive warning message. See details in "Employee Notifications about Policy Violations"
Show tray icon interface	Indicates if Windows system tray of managed workstation displays icon. By clicking at this icon, an information on DM Client operation and list of currently controlled devices is displayed.

4. To apply changes click **Apply**.

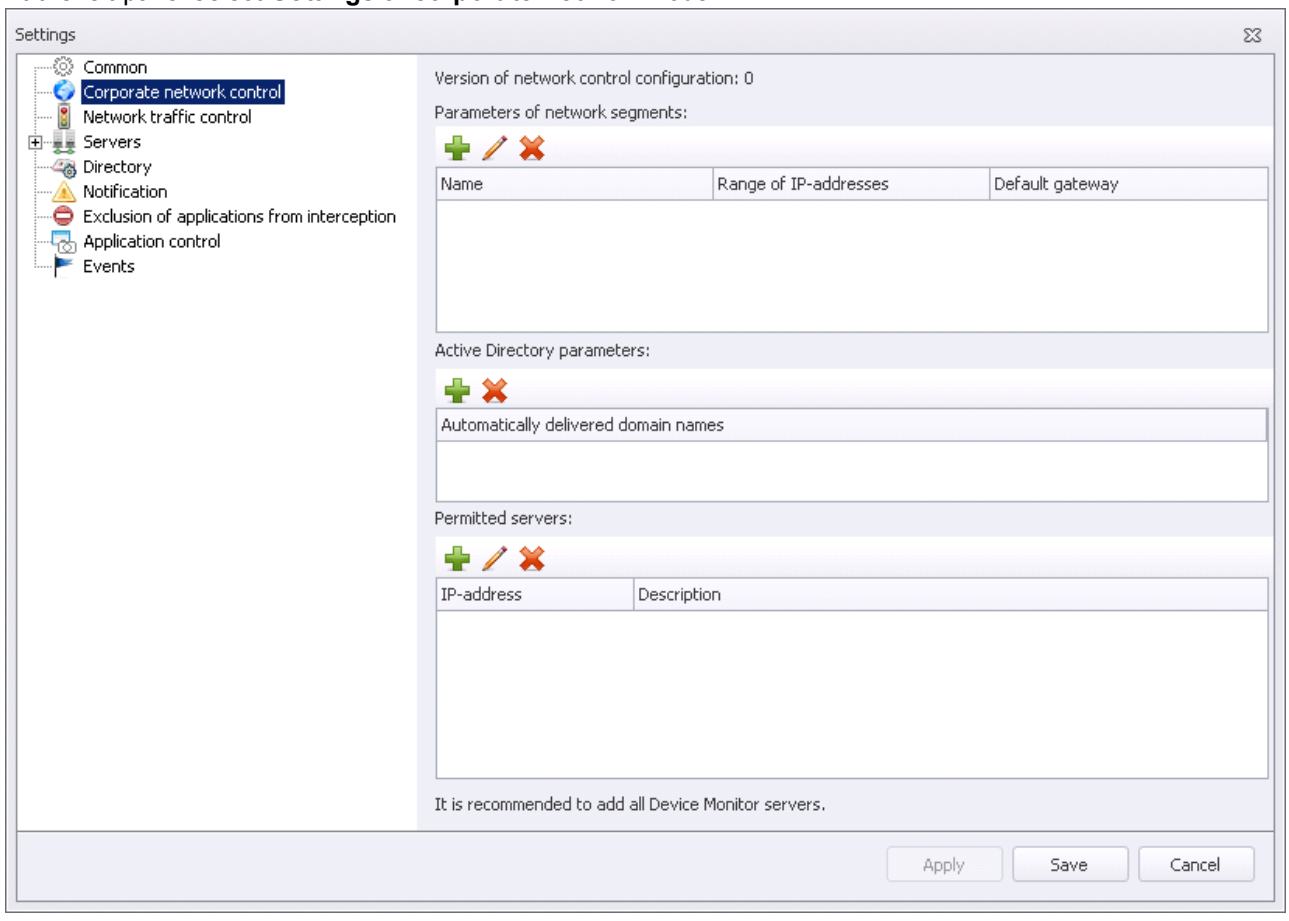
3.3.2 Settings of Corporate Network

In order to provide control of data transfer by network connections with **Network Monitor** (information on rule configuring see in "Configuring Network Monitor Rule") you should specify, which network segments are considered as a corporate network and which external addresses are permitted.

Note:
Permitting the external addresses may be necessary to provide work with external resources when the Client is outside corporate network: for example with VPN server or corporate network.

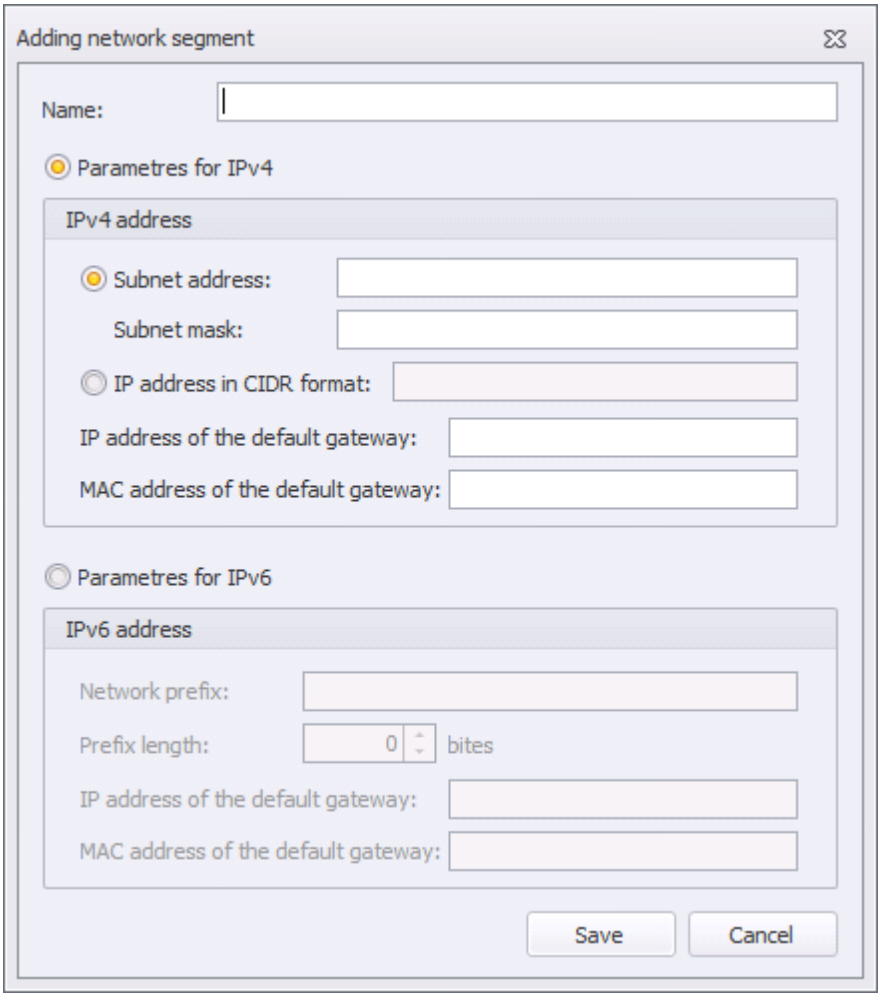
To configure corporate network settings:

1. In the Main Menu select **Tools > Settings**.
2. At the left panel select **Settings of corporate network** node.



3. To configure network segments:

a. In **Parameters of network segments** area click . This opens **Adding network segments** dialog.



b. Specify segment's name (description).

c. Select protocol in use: **IPv4** or **IPv6**.

If you selected **Parameters for IPv4**, then select address format (CIDR or address and mask) and specify required parameters. Also specify IP address and MAC address of the default gateway.

If you selected **Parameters for IPv6** , then select network prefix and its length. Also specify IP address and MAC address of the default gateway.

d. Click **Save**.

e. Repeat to add another segments.

To change segment parameters, select it from the list in **Parameters of network segments** area and click .

To delete a segment from the list, select it, click , then click **Yes** in confirmation dialog.

> **Warning!**
> When configuring the corporate network connections you should keep in mind that domain setting takes precedence over the network segments settings.

4. To define Active Directory parameters, click . Then the System automatically defines a name and GUID of a domain where Device Monitor server is deployed.
5. To set a list of servers to permit connection with:
   a. In **Permitted servers** area click .
   b. In **Add permitted server** dialog specify DNS name or IP address of a server and server description.
   c. Click **Save**.

d. Repeat for other permitted addresses.

To change server parameters, select it from the list and click .

To delete a server from the list of permitted ones, select it, click , then click **Yes** in confirmation dialog.

6. You can also refresh a key of temporary access code forming (see "Temporary Employee Access"). Click **Update**.
7. To apply changes click **Apply**.

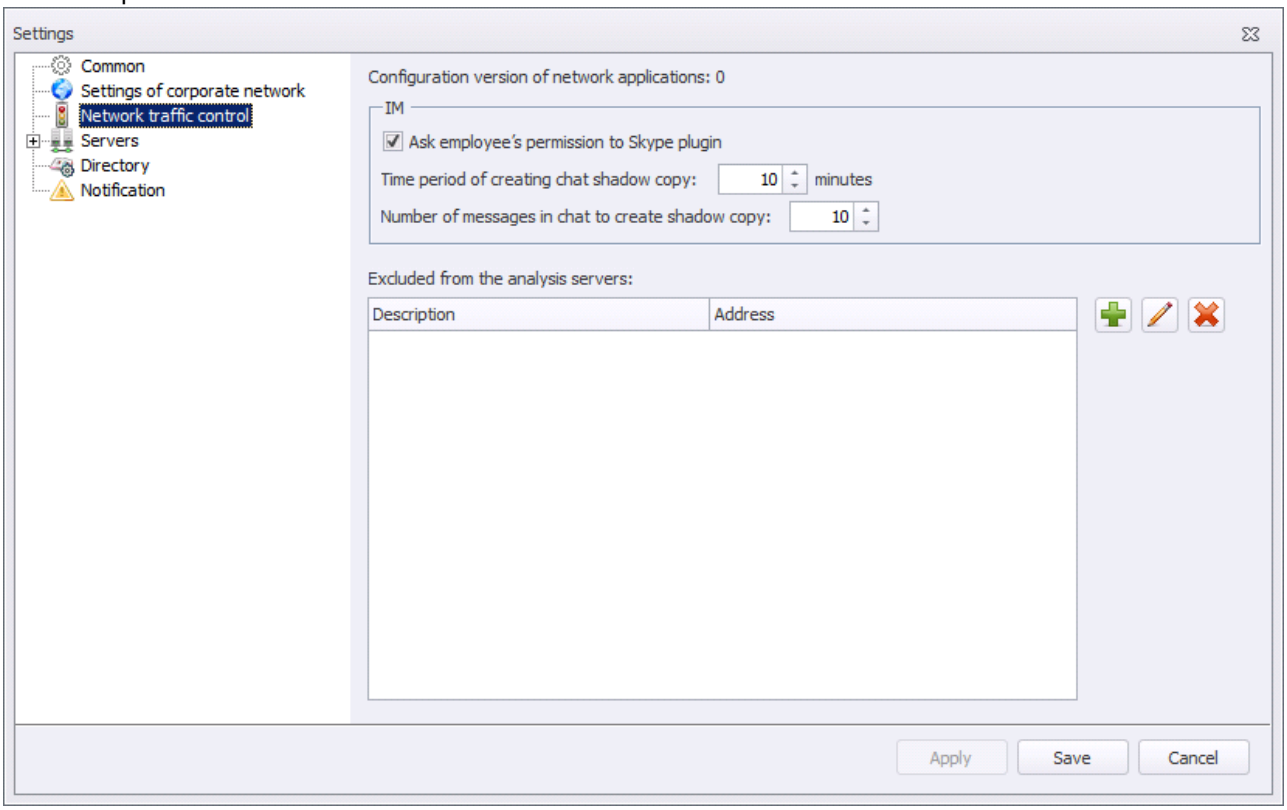
3.3.3 Network Traffic Control

In order to provide control of network traffic, Device Monitor Client acts as a transparent proxy server, to which all the connections are redirected (no matter if they are controlled protocols or not). Controlled protocols are: FTP, FTPS, POP3, SMTP, IMAP, HTTP, HTTPS, XMPP, MMP and YMSG (the last is used in Yahoo! Messenger). Then Device Monitor Client parses a protocol and defines if this protocol is a subject of interception. If data stream is protected with TLS\SSL protocol then proxy server performs "Man in the middle" attack to open traffic and defines if this stream should be controlled.

In network traffic control you can set some additional settings for instant messengers (setting rules for this interceptor see in "Configuring IM Client Monitor Rule") and FTP/FTPS traffic (see "Configuring FTP Monitor Rule"), and define excluded servers which traffic should not be controlled.

To configure network traffic control settings:

1. In the Main Menu select **Tools > Settings**.
2. At the left panel select **Network traffic control** node.



3. Specify instant messengers control parameters:
   - If you want that after Client installed, the employee would be requested a permission for interceptor work , then flag **Ask employee's permission to Skype plugin**. If this field is not flagged, then employee's confirmation to launch interceptor is not required.

Warning!

To allow Skype control, employee should enter Skype menu: **Tools -> Options -> Advanced -> Manage other programs' access to Skype**, select **DM.Client.exe** application, click **Change**, select **Allow this program to use Skype** option and click **OK**.

- If the employee agrees to launch interceptor, it will work until employee won't disable it in Skype menu. In the latter case, Skype will be forced to stop.
- If the employee blocks the interceptor, Skype will be stopped. If the the tries to start Skype later, he will be prompted to give another permission to use interceptor.

- Set a period of creating a chat shadow copy to send to Traffic Monitor. You can set a time period (in minutes) and number of messages as a criteria: the first actuated condition will be applied.
  If a file will be sent in a chat, the shadow copy is formed instantly, without accessing specified criteria.
  Details see in "Configuring IM Client Monitor Rule".

4. You can specify a list of server IP addresses which protocols won't be controlled - i.e. those servers' traffic won't be transferred to the internal proxy server.

   Note:

   Permitting external addresses can be needed for providing work with external resources and updating installed programs: for example Firefox automatic update needs **.mozilla.com* and **.mozilla.net* in the list of permitted servers, and Dropbox needs **.dropbox.com*.

   To set a list of servers excluded from analysis:

   a. In **Excluded from the analysis servers** area click .

   b. In **Add server** dialog specify DNS name or IP address of a server and server description.

   Note:

   DNS name or IP-address allows to exclude or enable interception of address or port:

   To exclude by address and port, specify address and port in the following format: address:port.

   To enable interception, specify address and port in the following format ~!address:port.

   For example, to exclude all traffic to 10.128.0.2, except to traffic to 8080, it is necessary to add exclusions in the following format: 10.128.0.2 and ~!10.128.0.2:8080. To exclude only traffic to port 80: 10.128.0.2:80

   Excluding range of addresses, # sign is being used. Example: #192.168.0.1-192.168.0.255! 192.168.0.5

   c. Click **Save**.

   d. Repeat for other permitted addresses.

   To change server parameters, select it from the list and click .

   To delete a server from the list of excluded ones, select it, click , then click **Yes** in confirmation dialog.

5. When all changes are made, click **Apply**.

3.3.4 Device Monitor Server Settings. Connecting to Traffic Monitor Server

You need to set up connection parameters to be able to send events to Traffic Monitor.

Note:

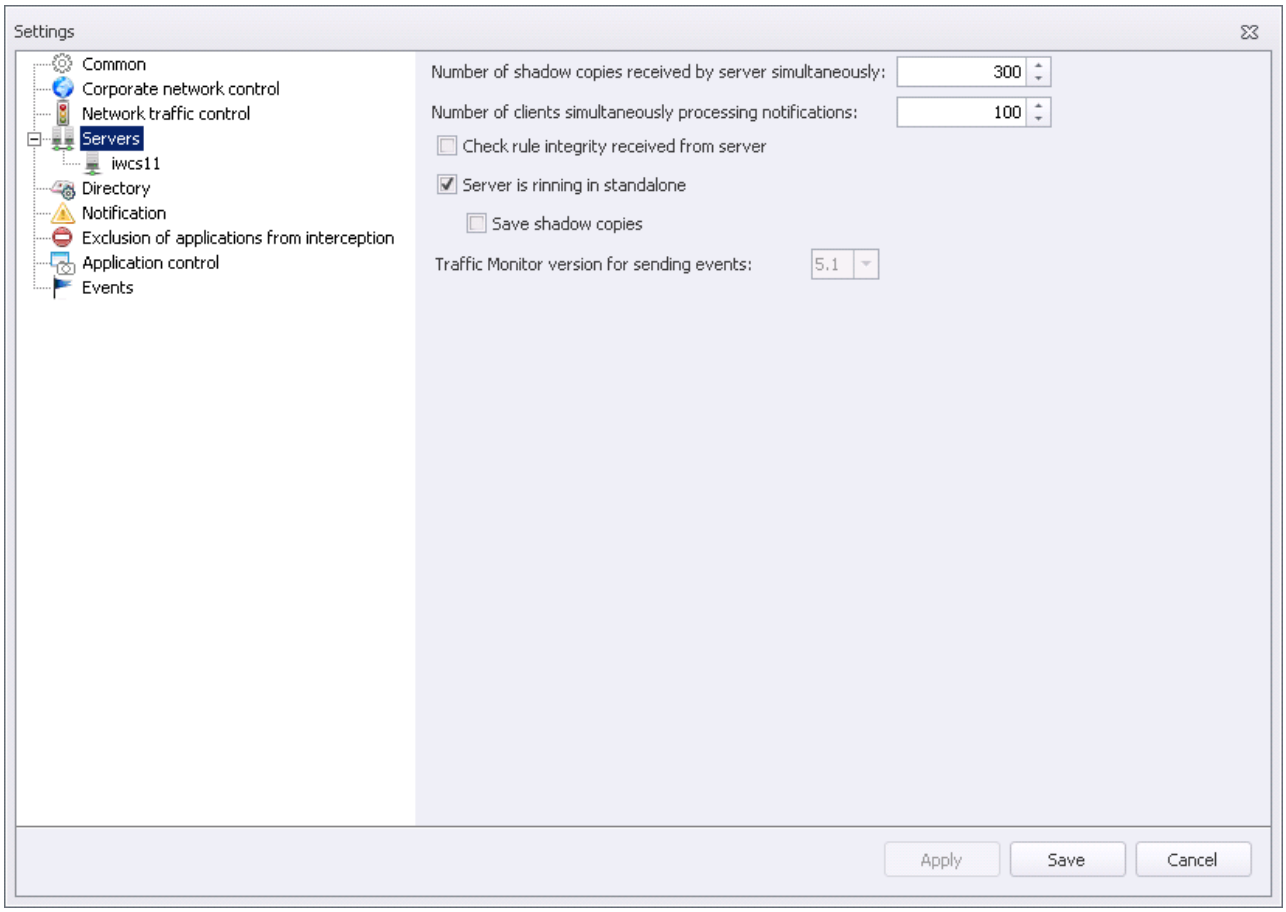
Changing server role (*General* or *Secondary*) and attribute **Notification protocol port number** and **Main protocol port number** is being executed with **InfoWatch Device Monitor Server Manager** (see "InfoWatch Device Monitor Server Manager").

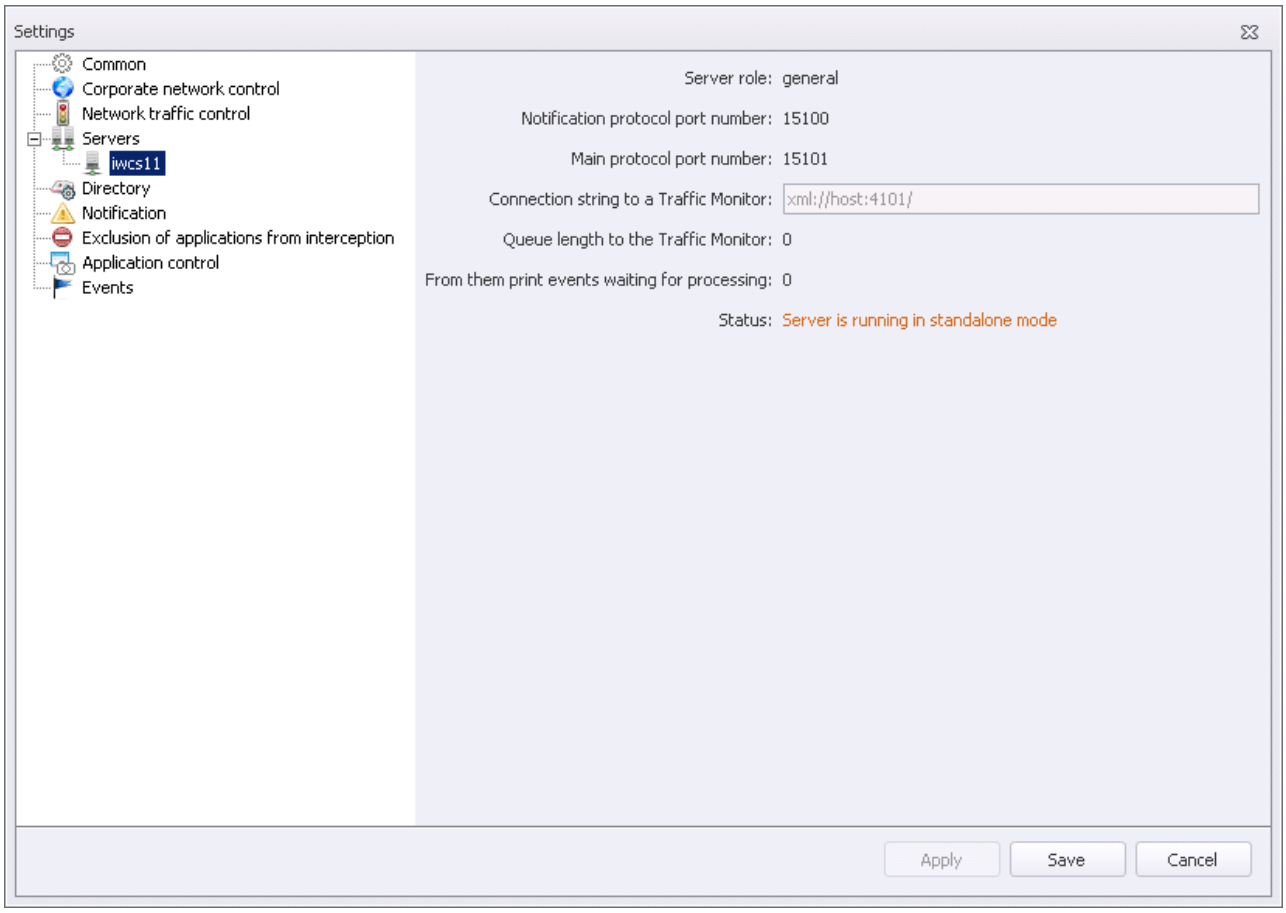
To view and set up Traffic Monitor connection parameters:

1. In main menu choose **Tools -> Settings**.

2. In **Servers** node set up the following parameters:

- **Number of shadow copies received by server simultaneously: -** determine the number of copies which can be send to Traffic Monitor Server simultaneously.
- **Number of clients simultaneously processing notifications:** determines number of clients, which can receive notifications (security schema) from server at a time.
- **Check rule integrity received from server -** compares rules on server and client to avoid management on client's side.
- **Server is running in standalone -** server is running without integration with Traffic Monitor.
  - **Save shadow copies -** shadow copies are being saved locally in **ShadowCopyTempDir**.
- **Traffic Monitor version for sending events:** - current version of used Traffic Monitor. Format of events, sent to Traffic Monitor may differ depending on a version.





You will receive information on the following connection parameters:

- **Server role** - server role (*primary* or *secondary*), assigned to this server during installation: see InfoWatch Device Monitor Server End Installation Procedure, Step 4.
- **Queue length to the Traffic Monitor** - statistics of events pending submission to InfoWatch Traffic Monitor.
- **Status -** Traffic Monitor connection state.

1. You can change the following settings:
   - **Notification protocol port number**
   - **Main protocol port number**

     Warning!
     Protocol port changes will apply only after service restarted.

   - **Connection string to a Traffic Monitor** - InfoWatch Traffic Monitor server address that will receive events. Interaction with Traffic Monitor server is based on *xml scheme*. Address must be entered in the following format:

     ```
     xml://host:port
     ```

     host parameter should contain domain name or IP address of InfoWatch Traffic Monitor server. The server address is the standard URL address (Uniform Resource Identifier) with its formal syntax described in RFC 3986 http://tools.ietf.org/html/rfc3986.

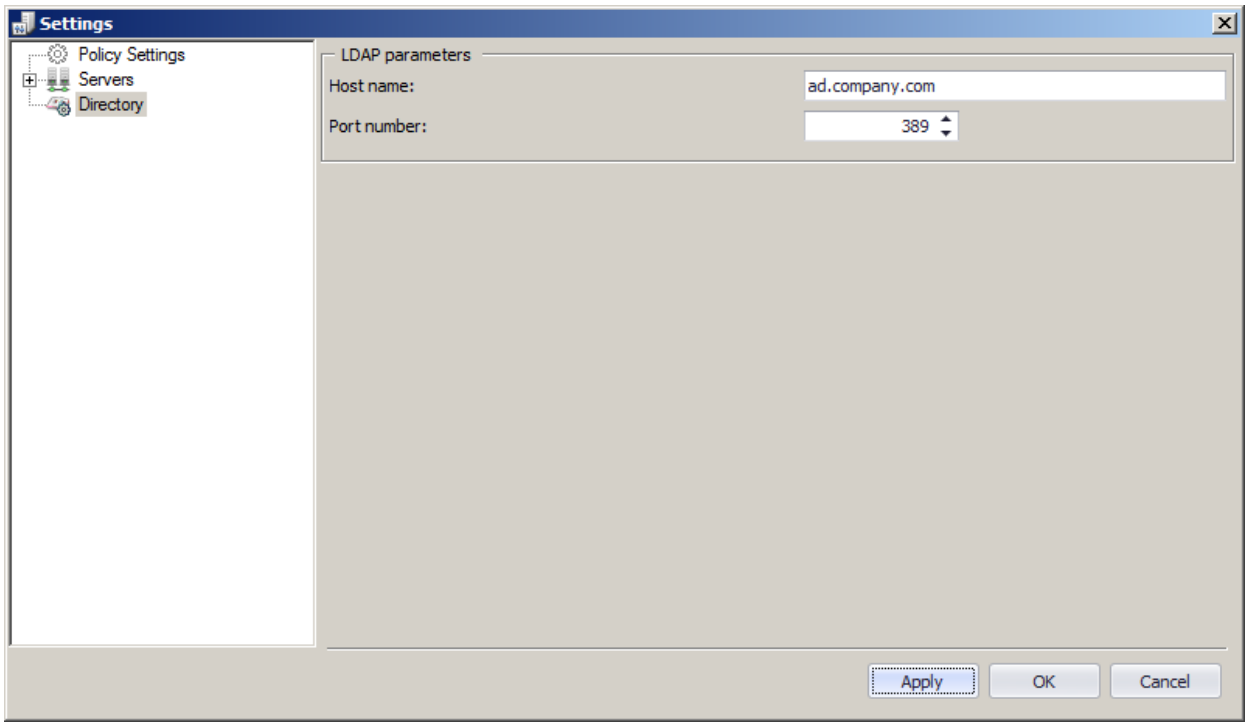
     port parameter contains InfoWatch Traffic Monitor server port that delivers events. InfoWatch Traffic Monitor default server port is 4101.
2. When all changes are made, click **Apply**.

3.3.5 Connecting to LDAP Server

In order to receive the information on workstations and employees from directory services (Active Directory or Novell eDirectory), configure Management Console connection to LDAP server.

To display and configure LDAP connection settings:

1. In the Main Menu select **Tools > Settings**.
2. At the left panel select **Directory** node.
3. In **Host name** field specify domain name or IP-address of LDAP server.
4. If needed, specify port to redirect requests when default port (**389**) is unavailable.



5. Click **Apply**.

3.3.6 Employee Notifications about Policy Violations

When an employee working at managed workstation tries to perform an action forbidden by security policy, the notification is displayed. Notifications are displayed in following cases:

- **Access to device denied** – Device Monitor rule which denies reading and writing to the device (see "Configuring Device Monitor Rule") was actuated.
- **Writing to device denied** – Device Monitor rule which denies writing to the device (see "Configuring Device Monitor Rule") was actuated.
- **Writing to open area denied** – Device Monitor rule which denies writing to unencrypted floppy drives and detachable devices (see "Configuring Device Monitor Rule") was actuated.
- **Copying/printing file denied if there is not enough space for incidents** – if Device Monitor Client did not have connections with Device Monitor Server so that there is out of dedicated space for storing information on events controlled by rules (30000 events) and common settings have **Operation is blocked** option selected (see in "Common Settings for Clients") then any operations controlled by current security policy are forbidden.
- **Data transfer via network protocols denied** – Ftp Monitor or IM Client Monitor rule which denies data transfer through FTP/XMPP/MPP/Skype/YMSG (see "Configuring FTP Monitor Rule" and "Configuring IM Client Monitor Rule") was actuated.
- **Data transfer via network protocols denied if there is not enough space for incidents** – if Device

Monitor Client did not have connections with Device Monitor Server so that there is out of dedicated space for storing information on events controlled by rules (30000 events) and common settings have **Operation is blocked** option selected (see in "Common Settings for Clients") then any operations controlled by current security policy are forbidden.

- **Skype forbidden, because the employee prohibited Skype plugin** – IM Client Monitor rule which controls Skype usage (see "Configuring IM Client Monitor Rule" and "Network Traffic Control", **Ask employee's permission to Skype plugin** option) was actuated.
- **Network connection forbidden. Reduced** – Network Monitor rule which denies data transfer through any network connections except corporate network and specified permitted servers (see "Configuring Network Monitor Rule" and "Settings of Corporate Network") was actuated.
- **Network connection forbidden. Detailed** – Network Monitor which denies denies data transfer through any network connections except corporate network and specified permitted servers was actuated. In this notification employee can request for temporary access to external connections (see "Configuring Network Monitor Rule", "Settings of Corporate Network" and "Temporary Employee Access").

To disable showing notifications for employees entirely or to enable it back**:**

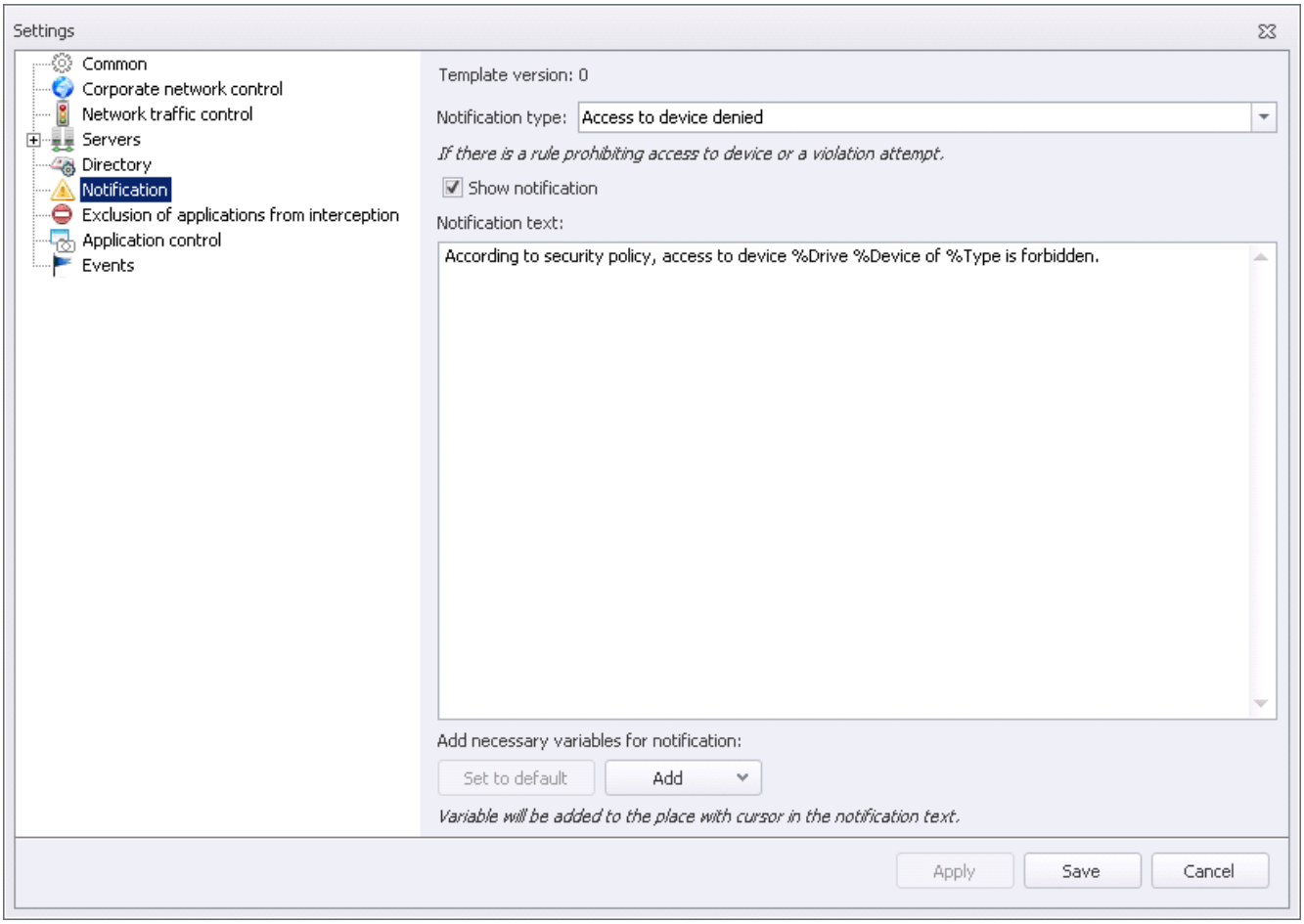
1. In the Main Menu select **Tools > Settings**.
2. At the left panel select **Common** node.
3. Deselect **Show notification** to disable showing notifications for employees, or flag it to enable notifications.
4. Click **Apply**.

If needed, you can change notification text or disable showing of any certain notification type or enable it back.

Warning!
If you disabled notifications using method described above, then notifications enabled using method described below won't displayed yet.

To change notification text:

1. In the Main Menu select **Tools > Settings**.
2. At the left panel select **Notification** node.



3. From **Notification type** list select a notification type.
4. To enable (disable) displaying notification of chosen type, select (deselect) **Show notification**.
5. Enter notification text.

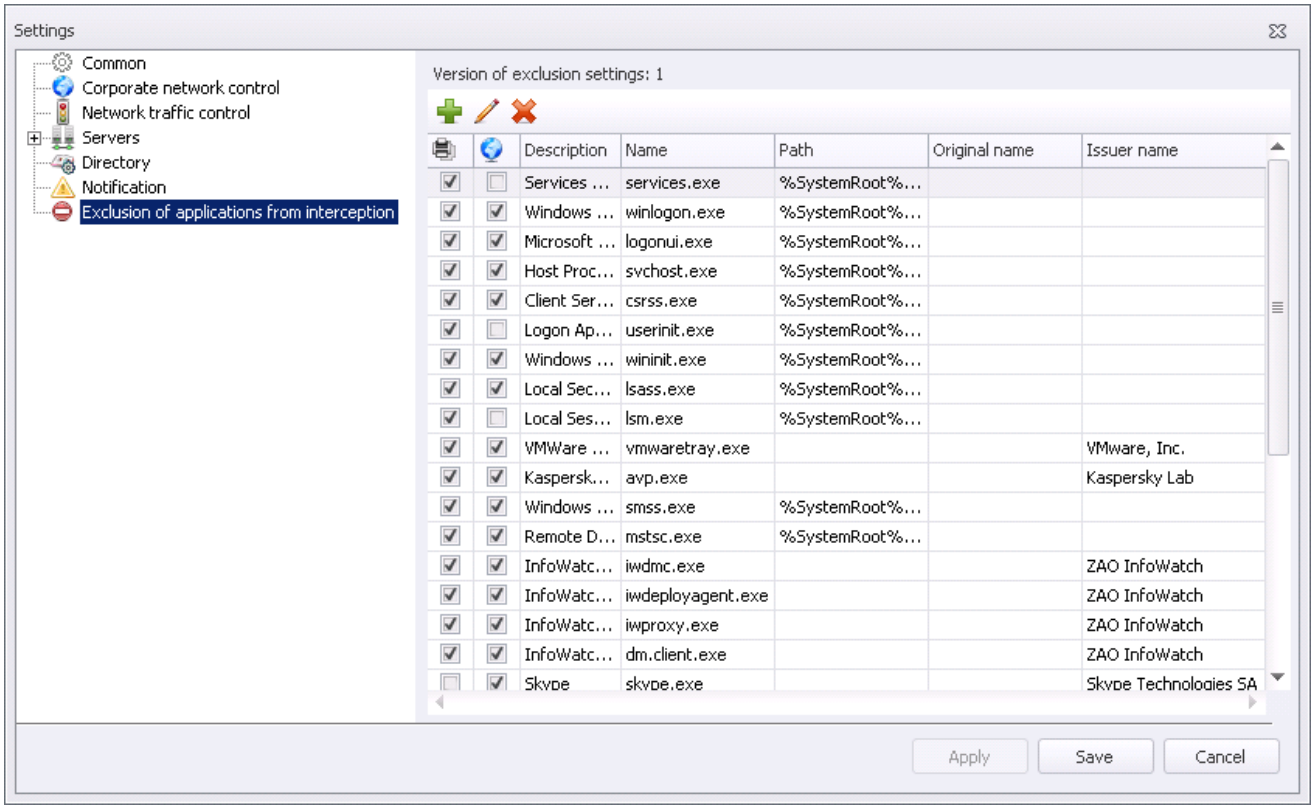
   You can use variables which would be transformed to actual data when displayed to employee: for example, type of blocked device or IP address of permitted host. To do this, set the cursor at required place of text, then click **Add** below textbox and select required variable from the list.

   To cancel changes and set default settings back, click **Set to default.**
6. Click **Apply**. If needed, change settings for other notifications by repeating steps 2-5.
7. When all changes are made, click **Apply**.

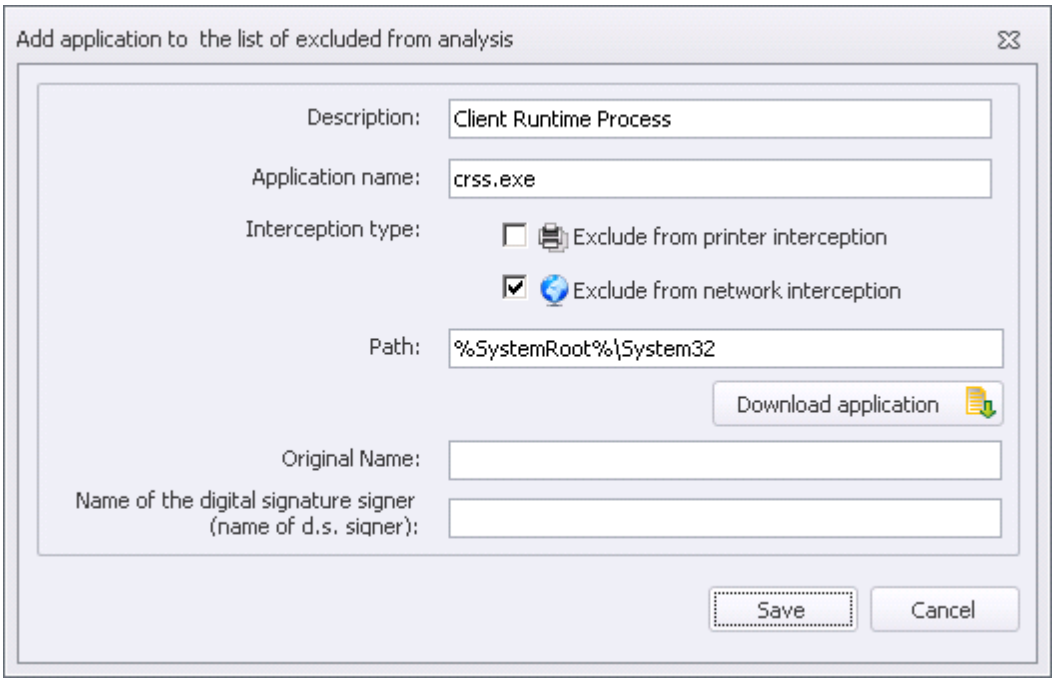
3.3.7 Exculsion of application from interception

Specify the parameters described below to exclude the application from the interception. After exclusion parameters have been set up, they will be automatically applied to a Workstation before reboot during installation process.

1. In the Main Menu select **Tools > Settings**.
2. At the left panel select **Exclusion of Application from Interception** node.

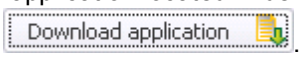


3. At the toolbar click **Add**.



4. In the **Description** field type the arbitrary text. This field must be filled.
5. In the **Application** field type the name of executed file. Excluding will be processed for the name set on this step. This field must be filled.
6. Mark the checkboxes in the **Interception type** field:
   - **Exclue from printer interception** - if you don't want to be created shadow copies of print jobs of that application;
   - **Exclue from network interception** - if you want exclude the network working from the interception (see "Network Traffic Control").

> **Note:**
> One type must be checked at least.

7. In the **Path** field define the directory contained executable file of application (you can use the system variables). If you use this parameter only the application located in defined directory is excluded. You can use the dialog box opened after clicking button 

.
8. In the **Original Name** field define the name of application (in the context menu of executable file choose **Properties**, **Details** tab, **Original filename** attribute). This field could be filled by using the Download application button (see step 7).
9. In the **Name of the digital signature signer (name of d.s. singer)** field define the property of application (in the context menu of executable file choose **Properties**, **Details** tab, **Digital signature** attribute). This field could be filled by using the Download application button (see step 7).

> **Warning!**
> While filling the **Original Name** and **Name of the digital signature signer (name of d.s. singer)** fields you can prevent for example the user's unapproved attempt to rename the application to get it's name looks like the name of application excluded from interception.

10. Click **Save**.

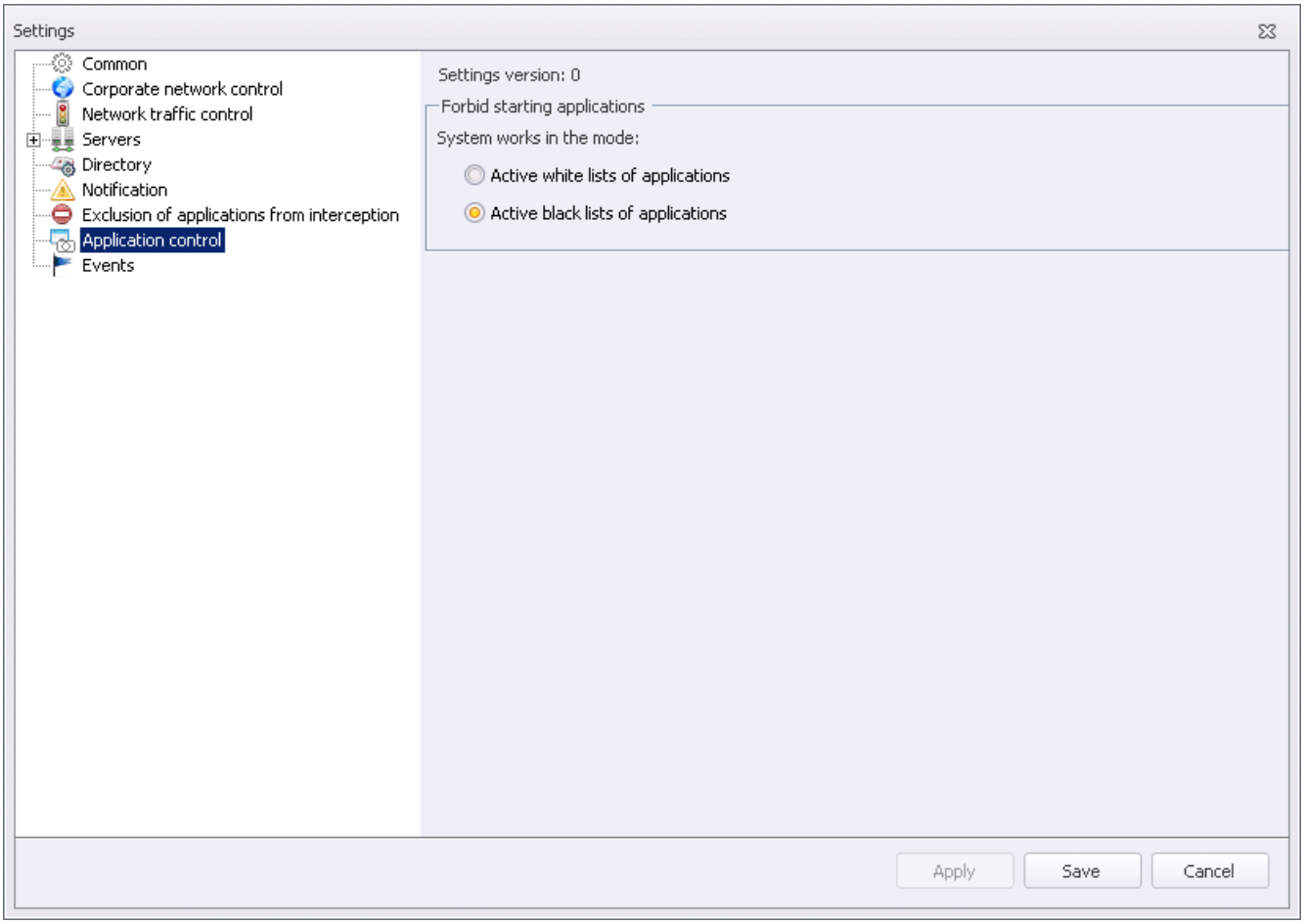
> **Warning!**
> If the **Description**, **Application** or **Interception type** fields aren't filled the warning message will appeared.

3.3.8 Application control

There are two working modes of the system to control application start on Workstations:

- Active white lists of applications- All applications from the list are permitted
- Active black list of applications - All applications from the list are forbidden

For current system mode and adding applications to lists, see "Configuring Application Monitor Rule"



Applications for both modes are mentioned in the list, which can be formed in 

tab.

For details see "Creating an application list and adding applications".

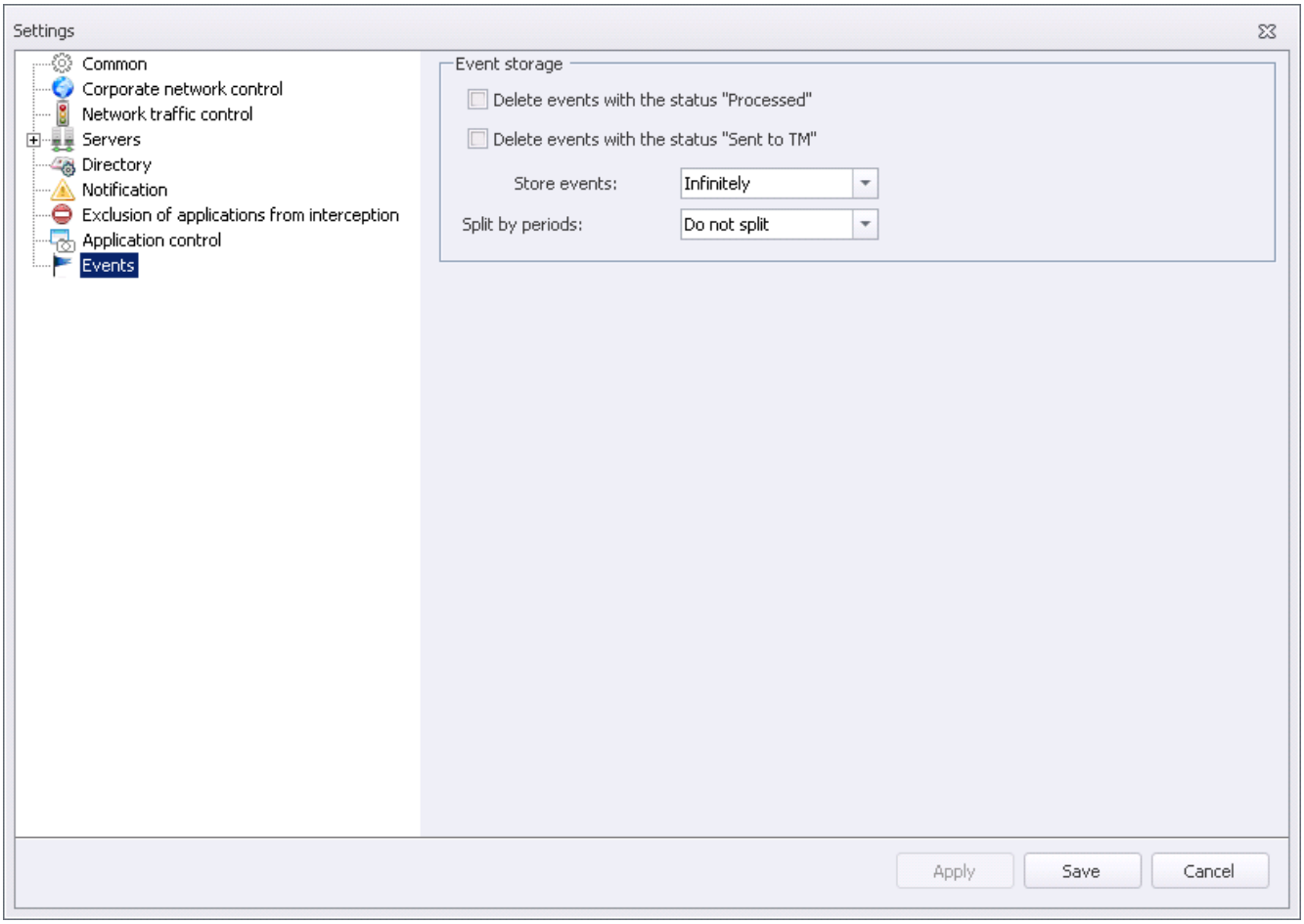
3.3.9 Events

In the **Events** tab you can set the parameters of automatic event storage and deletion.

To set up event storage:

1. Choose **Tools > Settings > Events > Event storage**
2. Mark the following boxes:

- **Delete events with the status "Processed"** - to delete processed Device Monitor events or events of a standalone server;
- **Delete events with the status "Sent to TM"** - to delete sent to TM events.



3. In drop-down line choose:
   - **Store events** - to set up the time for event to be stored in DB and be displayed in the console;
   - **Split by periods** - splitting traffic into blocks depending on the time it has been created to speed up connection process.

Note:
When **Delete events with the status "Processed"** and **Delete events with the status "Sent to TM"** options are chosen simultaneously, **Store events** becomes automatically disabled.

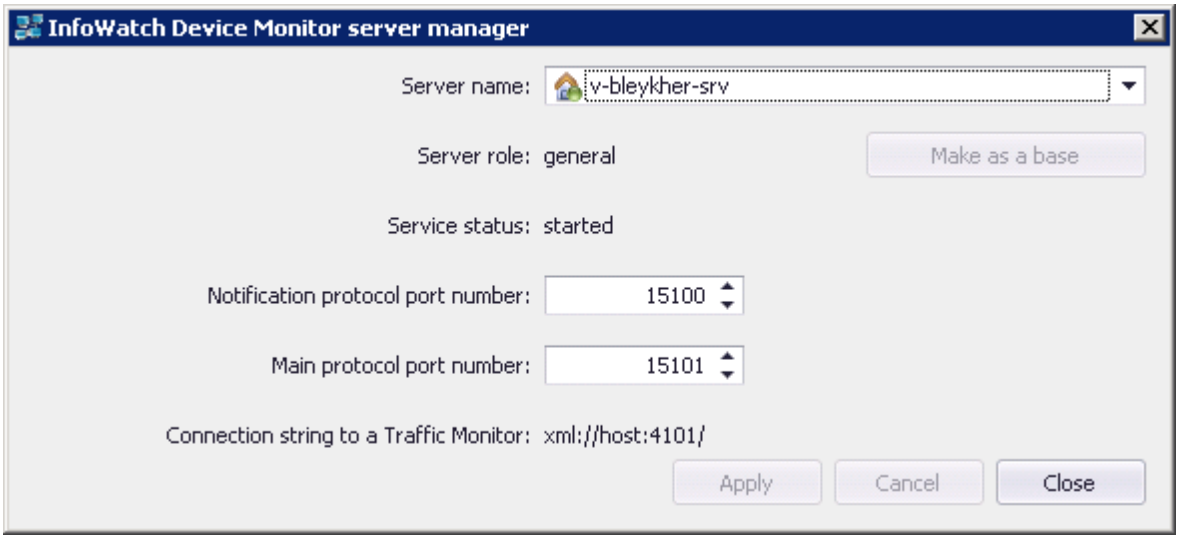
3.3.1 InfoWatch Device Monitor Server Manager

InfoWatch Device Monitor Server Manager is being used to define roles and change server settings.

Внимание!
You need to be logged into *Administrator* account on each server change server attributes.

To set up server ports, proceed with following steps:

1. Go to **Start -> All programs -> InfoWatch -> Device Monitor -> InfoWatch Device Monitor Server Manager**.



Info Watch Device Monitor server manager window will be opened.

2. From **Server name** drop-down menu pick the necessary server.
3. Edit fields **Notification protocol port number** and **Main protocol port number**.
4. Press **Apply**.
5. Click **Close**.

To assign *general* role to the server, proceed with the following steps:

1. Go to **Start -> All programs -> InfoWatch -> Device Monitor -> InfoWatch Device Monitor Server Manager**

   Info Watch Device Monitor server manager window will be opened.
2. From **Server name** drop-down menu pick the necessary server.
3. Click **Make as a base**.

> **Примечание:**
> Making one of the servers **general** makes other servers **secondary** automatically.

4. Press **Apply**.
5. Click **Close**.

3.3.1 Import/Export Configuration

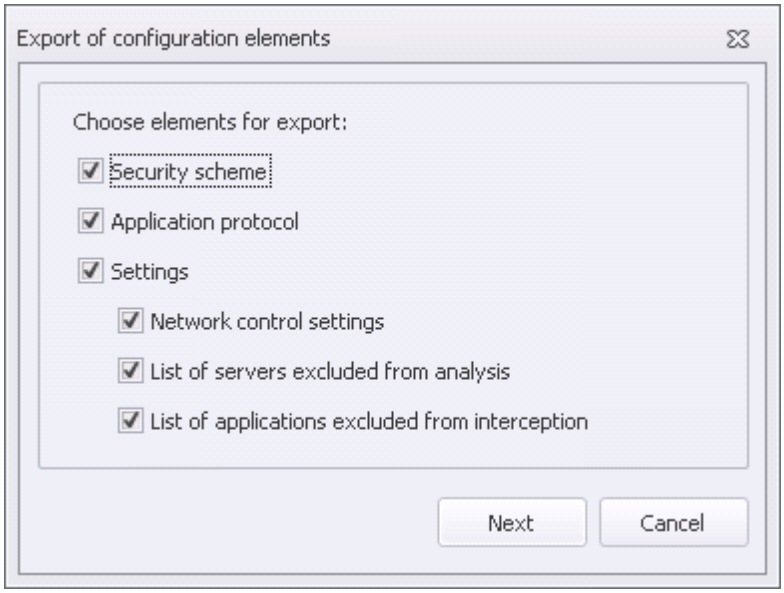
To import configuration:

1. In main menu choose **Tools -> Import Configuration**.
2. Find a .dmc file and click **Open**.

To export configuration:

1. In main menu choose **Tools -> Export Configuration**.
2. In dialog window choose object to export:
   - **Security scheme** (see "Managing security schema")
   - **Application protocol** (see "Application protocol")
   - **Network control settings** (see "Settings of corporate network")
   - **List if servers excluded from analysis** (see "Network traffic control")

- **List of applications excluded from interception** (see "Exclusion of application from interception")



3.4 Managing Security Schema

General information on the InfoWatch Device Monitor security schema is provided in "Security Schema Organization" section.

Operation procedures for security schema managing is provided in the following sections:

- Security Schemas Overview
- Security Schema Setup
- Temporary Employee Access to Network
- Temporary Employee Access to Devices

3.4.1 Security Schemas Overview

Security schema guidelines are available in the following sections:

- Viewing Active Security Schema
- Viewing Old Security Schema
- Security Schema Comments
- Editing Security Schema
- Updating Security Schema
- Exporting/Importing Security Schema

For general information on security schemas see "Security Schema Organization".

For security schema configuration guidelines see "Security Schema Setup".

3.4.1.1 Viewing Active Security Schema

Active security schema is displayed on Management Console by default.

Security schema configuration information is displayed in **Policies**, **Employees**, **Workstations**, **White Lists** and **Signatures** sections (see "Management Console Sections").

Security schema configuration is displayed as groups of elements. Section groups list are displayed in Navigation pane preview. Each group of elements has an icon (see the table).

Icon	Elements group
	Default workstation group
	Workstation group
	Default employee group
	Employee group
	Default signature category
	Signature category
	Devices white list for employee
	Devices white list for employee group
	Devices white list for workstation
	Devices white list for a group of workstations
	Audit log filter
	Security policy

To view an information about security schema section:

1. Open the section (see "Management Console Sections"). The list of element groups will be displayed on Navigation pane.
2. On Navigation pane select the element group you want to view. This will display all elements of the group in the main screen workspace.
3. To view detailed information on individual elements, click the row containing element name. This opens the element's properties table on **Details** panel.

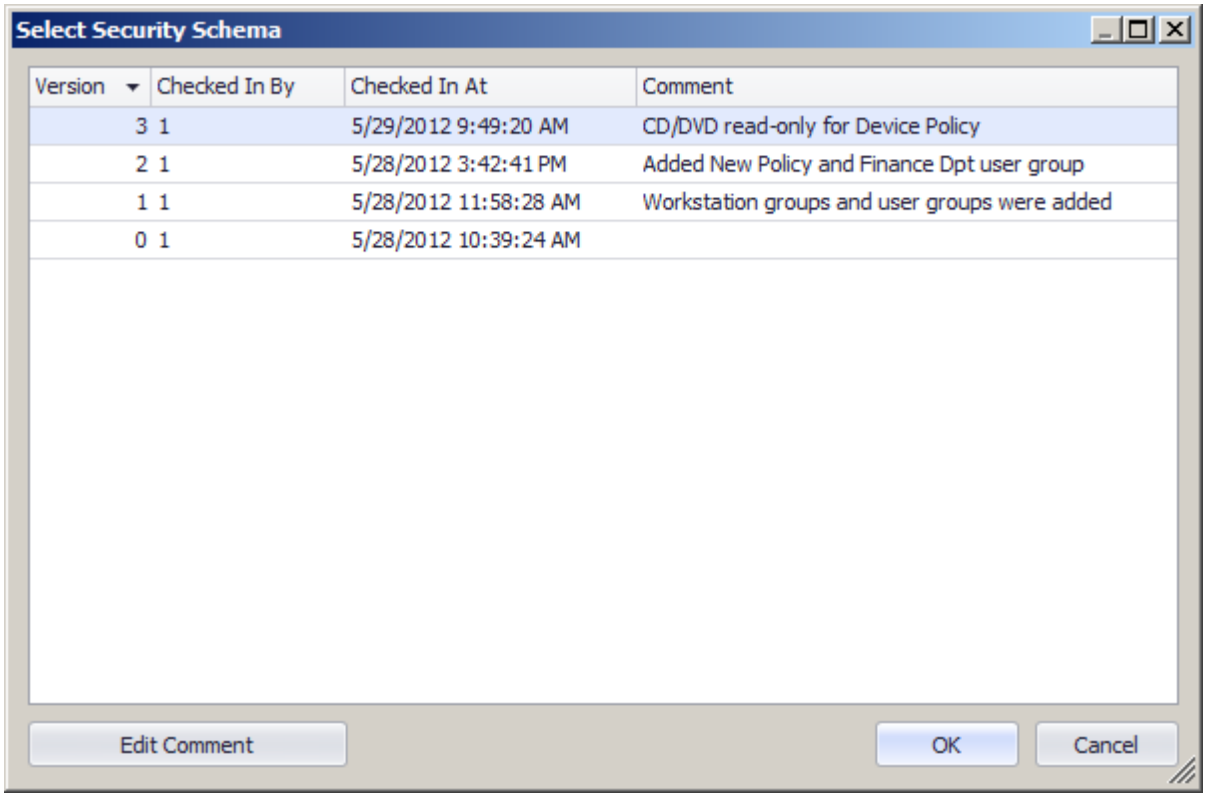
Note:
You can customize the main screen appearance (see "Main screen customization").

3.4.1.2 Viewing Old Security Schema

Note:
If you view previous security schemas in editing mode, your recent changes will be discarded.

To view older security schema:

1. In Main Menu select **Security Schema > View Old Security Schema**.
   This opens **Select security scheme** dialog.



Each security schema features the following information:

- **Version**. Security schema version number.
- **Checked in by**. Name of the version owner.
- **Checked in at**. Last saved version date and time.
- **Comment**. Additional information.

> **Note:**
> You can edit comments to any version in this screen (see "Security Schema Comments"). Information on current Management Console security schema (version number and comment) is displayed on the status bar.

2. In **Select security scheme** dialog select the row that contains the version number of security schema you want to viewed.
3. Click **OK**.

After you click **OK** the selected security schema version will be loaded into Management Console. When working with old version, the state bar displays: "*Old security schema*".

To return to preview and active security schema,

open **Security Schema > View Latest Security schema** in the Main Menu.

3.4.1.3 Security Schema Comments

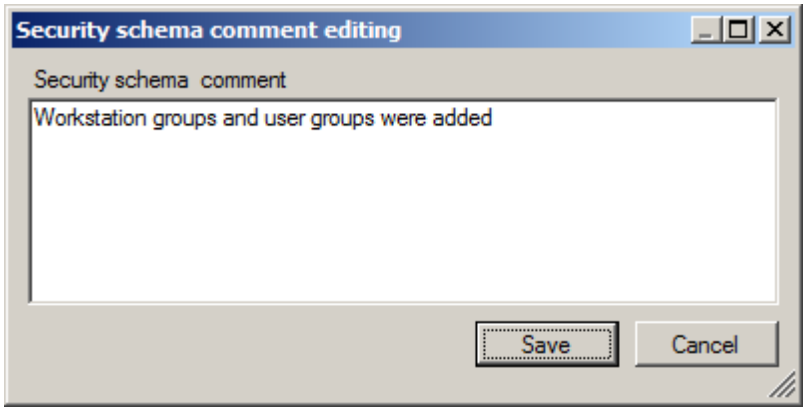
In comments you can specify additional information on your security schema. You can add comments to each version of security schema.
Comments to current security schema are displayed in brackets to the right from schema version number on the status panel.
You can view comments to all security schema versions in the **Select Security Schema** dialog (see "Viewing Old Security Schemas").

Note:
You can add comments to security schema regardless of its state (whether it is in editing mode or not).

To add/edit security schema comment:

1. Take one of the following steps:
   - *(For the current security schema only).* In Main Menu select **Security Schema > Edit Current Security Schema Comment**.
   - *(For any security schema version except the current one).* In the Main Menu select **Security schema > View Old Security Schema**. This opens **Select Security Schema** dialog. In this dialog, select the row containing the right security schema version. Then click **Edit Comment**.

   These actions open **Security schema comment editing** dialog.



2. Enter your comment in the dialog box. Maximum comment length - 512 characters.

   Note:
   For line break, press **<ENTER>** or **<CTRL>+<ENTER>**.

3. Click **Save**.

3.4.1.4 Editing Security Schema

Warning!
Security schema can be edited only by one user at a time. If security schema is edited, an information about user who edits and workstation where editing is performed, is displayed at red-highlighted string at the top of main screen. See details in "Awaiting Editing Ends. Unlocking Security Schema".

All changes are implemented in security schema editing mode. This mode protects existing security schema from potential editing errors. The System automatically switches to editing mode just after any Console user makes any change of security schema parameters. Changes are saved only by **Save** command.

Warning!
If server connection terminates during security schema editing process, all unsaved changes will be lost.

To edit security schema:

1. Take one of the following steps:
   - in the Main Menu select **Security Schema > Edit**
   - click **Edit** on Toolbar
   - make any change of security schema parameters (security policies, workstations, employee accounts, device white lists, signature categories).

   These actions open security schema editing mode.

Note:
You can edit only the latest version of security schema. Thus, **Save** command is not available when viewing previous versions. To open current security schema version, open **Security schema > View Latest Security Schema** from the main menu.
Information on security schema currently used by Management Console is displayed on the status bar.

2. Edit security schema parameters:
   - security policies (see "Security Policies")
   - workstation groups (see "Workstations")
   - employee accounts lists (see "Employees")
   - device white lists (see "White Lists")
   - file signature categories (see "Signatures").
3. When all changes are made, save your security schema. To do this, follow these steps:
   - click **Save** at the top string of main screen workspace where "*Security Schema have changed. Save changes?*" message is displayed
   - in the Main Menu select **Security schema > Save**
   - click **Save** on Toolbar.

These actions save the changes and close security schema editing mode.

Note:
To discard changes, select **Security Schema > Undo editing** or click **Undo editing** button on the toolbar. This closes schema editing mode discarding all changes.

3.4.1.4.1 Awaiting Editing Ends. Unlocking Security Schema

Security schema can be edited only by one user at a time. Changes are applied only after you have saved your security schema.

If security schema is edited, an information about user who edits and workstation where editing is performed, is displayed at red-highlighted string at the top of main screen.

If you try to edit any parameters of security schema (security policies, workstations, employee accounts, device white lists, signature categories) while security schema is editing by another user:

1. Management Console displays warning message.
2. When another user saves his changes (or cancel them) Windows system tray would display notification: "***Security schema is in "read-only" mode***".

Information about user who edits the schema currently, is displayed at the string at the top of main screen and in status bar.

Security schema might be blocked even if it is not being edited. This may occur if the last editing operation wasn't properly completed (i.e. due to disconnection from the server).

When user who blocked a schema will connect the server again, the security schema automatically unlocks and all unsaved changes made by this user are lost.

There is also a special function that targets the blocking issue - security schema unblock.

Warning!
Security schema can be unblocked only by Superuser.

To unblock security schema,

in the Main Menu click **Security Schema > Unlock**.

All unsaved changes will be lost.

3.4.1.5 Updating Security Schema

The system can be simultaneously operated by multiple users. To keep security schema details in Management Console up-to-date, run updates regularly. The schema update security is automatically (in the process of connecting to the server) or manually (when working with the Microsoft Management Console).

You might need to upgrade your security schema in the following cases:

- registering a new workstation;
- registering an unknown employee;
- modifying your security schema.

To update security schema manually, do one of the following:

- select **View > Refresh** in the Main Menu;
- click **Update** in Toolbar.

3.4.1.6 Exporting/Importing Security Schema

You might need to save existing settings of a security schema. You might want to do this, if you reinstall your operating system or InfoWatch Device Monitor.

Exporting security schema saves to XML file the current version of a security schema including:

- security policies with sets of rules;
- employee groups
- workstation groups
- device white lists
- signature categories.

You can import your saved settings into new security schema later.

To export security schema:

1. In the Main Menu select **Security Schema > Export**.
2. In the next dialog, enter a name of the XML file where your data will be exported and specify a directory for the file. After choosing the file name and directory click **Save** .

To import security schema:

1. In the Main Menu select **Security Schema > Import**.
2. In the next dialog choose the XML file that contains security policies and sets of rules and click **Open**.

This imports saved security schema settings into the active security schema. If your current security schema contains items with similar names, the system will add **1** to each imported name.

3.4.2 Security Schema Setup

After system installation, you must configure your security schema. Security schema is configured as follows:

1. Configure "*Default*" employee group and "*Default*" workstation group.
2. Configuring the rest of security settings.

Security schema configuration principles:

- Security policy must be created before you create an employee group or workstation group the policy will be assigned to.
- It is recommended that you assign an individual security policy for each employee group and workstation group.
- Each security policy assigned to a group must have a specific set of rules.

Adding workstations to security schema

There are two ways to add a managed workstation:

- add a new workstation automatically during registration;
- add workstation manually via Management Console.

In case of automatic registration a workstation is added to "*Default*" group. Later you can move it to other groups.

If you add it manually, you can select the group immediately.

Adding employee accounts to security schema

You can add new account information manually or automatically. You can register a new employee while editing your security schema. However, if an unknown employee is registered on a workstation, the account will automatically be added to security schema ("*Default*" employee group).

Adding white lists to security schema

Before you create a white list, add device models and instances to the database. Then devices white list is created for a specific employee/employee group/workstation/workstation group. These employees/workstations have access to whitelisted device models and instances regardless the policy. When a white list record expires, access rights are distributed according to the policies.

Security schema configuration details are available in the following subsections:

- Security Policies
- Rules
- Employees
- Workstations
- White Lists
- Signatures
- Application protocol
- Temporary Employee Access to Network
- Temporary Employee Access to Devices
- Awaiting Editing Ends. Unlocking Security Schema

3.4.2.1 Security Policies

Note:
For security policy configuration guidelines see "Security Policies and Rules".

Each security policy is a set of rules that define employees' level of access to controlled files and devices.

Security policies are assigned to **employee groups** and **workstation groups**. Security policy of employee group affects all the employees included to this group. Security policy of workstation group affects all the employees which work at managed workstations included to this workstation group.

Security policies are managed in **Policies** section. To go to this section, click **Policies** button in Navigation pane or select in Main Menu **Go > Policies**.

For security policy managing guidelines see:

- Viewing Security Policies
- Adding and Configuring New Security Policy
- Editing Security Policy
- Deleting Security Policy

3.4.2.1.1 Viewing Security Policies

Policies area of Navigation pane displays a list of security schema policies. Main screen workspace displays a list of security policy rules.

> **Note:**
> Use additional options to adjust list display (see "Additional Features").

To view security policy rules,

select security policy name in **Policies** area of Navigation pane.

Rules are displayed in a form of a table where each row contains a rule. Columns contain general rule properties. Each rule has an icon depicting the rule's coverage and a color mark depicting if a rule is an allowing one (green), forbidding (red) or partially restricting (yellow).

Extended information on each rule is displayed on **Details** panel.

To view all rule properties,

select the row that contains the rule name in the main screen workspace.

This opens a table containing rule information on **Details** panel.

General information:

- **Name**. Rule name.
- **Policy**. Name of security policy that contains the rule.
- **Interceptor**. Interceptor type assigned to the rule.
- **Operation**. Operation, controlled by the rule.
- **Period**. Rule starting and expiry time.

Application Monitor rules feature additional details:

- **White Lists**. White list of applications mentioned in the rule.
- **Black Lists**. Black list of applications mentioned in the rule.

Cloud Storage Monitor rules feature additional details:

- **Google drive**.Shows current access type.
- **DropBox**. Shows current access type.
- **YandexDisk**. Shows current access type.
- **OneDrive**. Shows current access type.
- **EverNote**. Shows current access type.
- **SugarSync**. Shows current access type.

File Monitor rules feature additional details:

- **Exclude from interception**. Indicates if files corresponding to mask or category won't be proceeded.
- **Use file mask**. File mask attribute.
- **File mask**. Mask that selects the files covered by the rule.
- **Use category**. Attribute of file filtering against signature categories (see "Signatures").
- **Category**. Signature category for file formats selection.
- **Create shadow copy**. Stored files shadow copying attribute.
- **Limit by minimum file size**. Attribute of minimum size restriction for shadow copied file.
- **Minimum file size**. Lower limit of file size.
- **Limit maximum file size**. Attribute of maximum size restriction for shadow copied file.
- **Maximum file size**. Upper limit of file size.

Print Monitor rules feature additional details:

- **Use task mask**. Task mask attribute.
- **Task mask**. Mask for selecting print jobs covered by the rule.
- **Use process mask**. Process mask attribute.
- **Process mask**. Mask of the process that initiated a print job.
- **Create shadow copy**. Printed document shadow copy attribute.

Device Monitor rules feature additional details:

- **Allow only for encrypted devices**. Action will be allowed, if the media is protected by supported encryption software.

IM Client Monitor rules feature additional details:

- **Create call shadow copy**. Indicates if a shadow copy of voice Skype traffic should be created.
- **Create file shadow copy**. Indicates if a shadow copy of sending files should be created.
- **Minimum file size**. Lower limit of file size.
- **Maximum file size**. Upper limit of file size.
- **Maximum call size**. Length of call (in minutes) which should be saved in one shadow copy file.

Ftp Monitor rules feature additional details:

- **Create shadow copy**. Indicates if a shadow copy of FTP/FTPS-sent file should be created.
- **Minimum file size**. Lower limit of file size.
- **Maximum file size**. Upper limit of file size.

HTTPS Monitor rules feature additional details:

- **Do not create a shadow copy of traffic of internal resources.** Does not intercept objects sent within internal resources.
- **Create shadow request copy**. Value of document shadow copy sent by HTTPS.
- **Minimum request size, Bytes** . Lower limit of file size.
- **Maximum request size, Mbytes**. Upper limit of file size.
- **Transferred via**. Indicates whether encrypted or any other traffic is being intercepted.

Network Monitor rules feature additional details:

- **Access**. Always has value "*Forbidden connections out of corporate network"*.

Mail Monitor rules feature additional details:

- **Transferred via**. Indicates whether encrypted or any other traffic is being intercepted.
- **Maximum mail size, Mbytes**. Maximum mail size.

ScreenShot Control Monitor rules feature additional details:

- **Forbid an employee to make screenshots**. Any screenshots or when particular application run only.

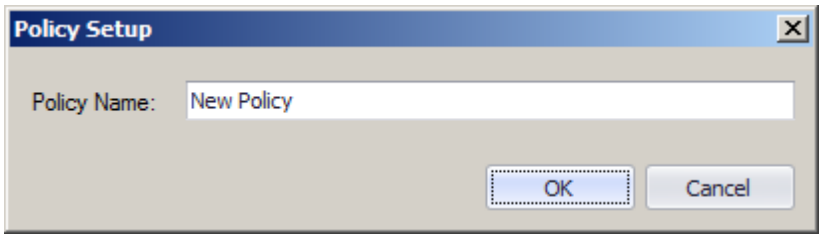
Note:
Information retrieved from some attributes is duplicated in the main screen workspace.

3.4.2.1.2 Adding and Configuring New Security Policy

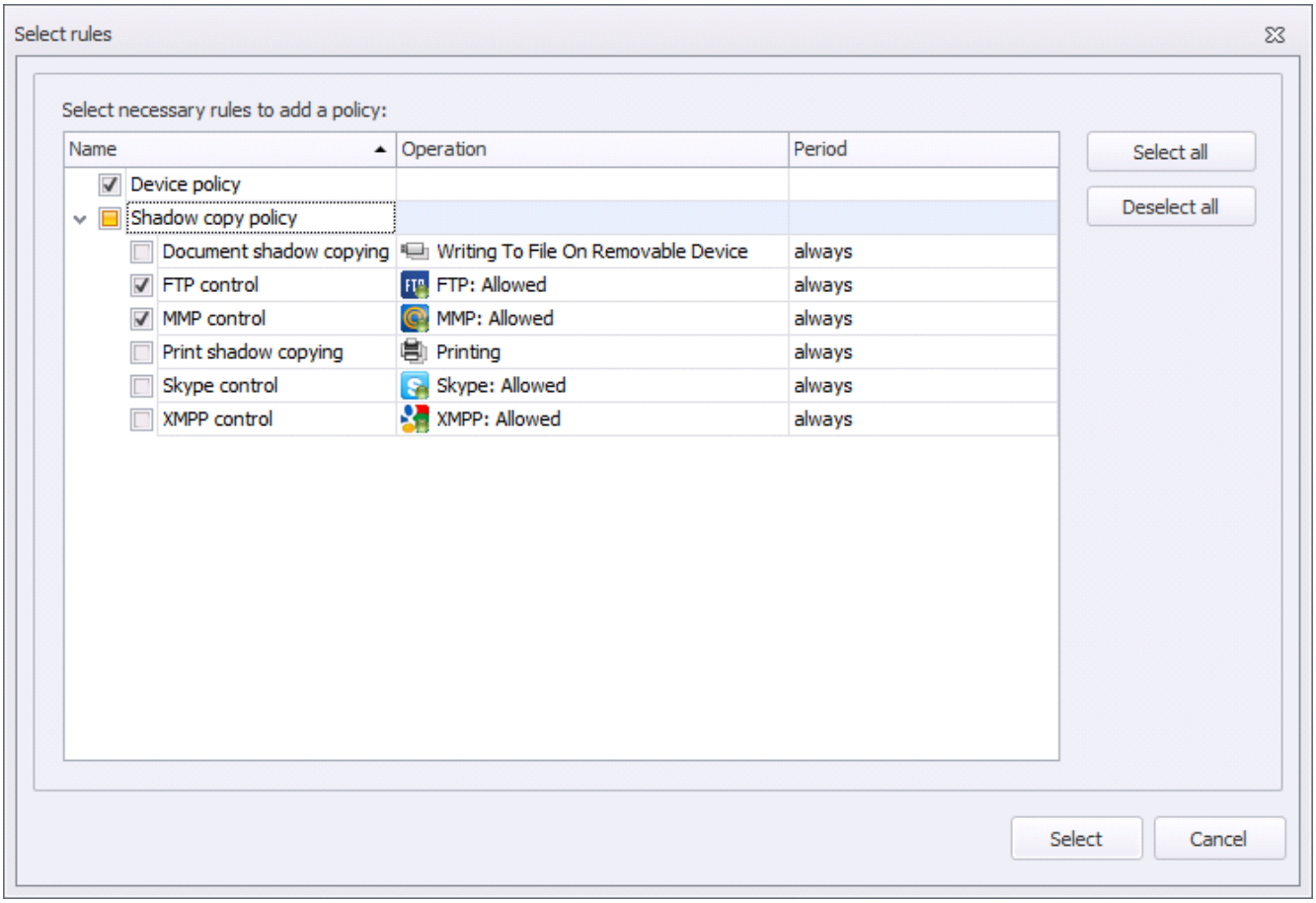
To add and configure security policy:

1. Go to **Policies**.
2. Take one of the following steps:
   - click **Create Policy** at the top of Navigation panel;
   - in Main Menu select **Edit > Create Policy**.

   This opens **Create policy** dialog.



3. In **Name** field, enter new security policy name. Maximum length is 64 characters.
4. Make a list of rules for new security policy:
   - To copy rule from another policy click **Select rules**. In new dialog flag the rules you want to copy to a new security policy.



   You can also select the whole policy - then all rules it contains will be added to a new security policy. After you mark all rules click **Select**.
   - To create a new rule click **Create** and specify rule parameters as described:
     - Configuring Application Monitor Rule
     - Configuring Cloud Storage Monitor Rule
     - Configuring Device Monitor Rule
     - Configuring File Monitor Rule

- Configuring FTP Monitor Rule
- Configuring HTTPS Monitor Rule
- Configuring IM Client Monitor Rule
- Configuring Mail Monitor Rule
- Configuring Network Monitor Rule
- Configuring Print Monitor Rule
- Configuring Screenshot Control Monitor Rule

You can also edit or delete policy rule by selecting it and clicking **Edit** or **Delete** appropriately.

5. When all rules to be included to policy are defined, click **Save**.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

Later you will be able to edit or remove security policies: (see Editing Security Policy, Removing Security Policy), as well as their rules (see Adding a Rule, Editing a Rule, Deleting a Rule, Copying a Rule).

3.4.2.1.3 Editing Security Policy

To edit security policy:

1. Go to **Policies**.
2. In **Policies** area of Navigation pane select security policy name.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Edit Policy**
   - click **Edit Policy** at the top of Navigation pane
   - double-click selected security policy name.

   These actions open **Edit Policy** dialog.
4. In this dialog, edit security policy name by entering a new one in **Name** field.
5. Click **OK**.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.1.4 Deleting Security Policy

Warning!
The policy appointed at least one employee group or workstation groups, cannot be deleted. To delete security policy make sure that this policy is not apointed to any employee group (see "Viewing Employee Details") or workstation group (see "Viewing Workstation Details").

To delete security policy:

1. Go to **Policies**.
2. In **Policies** area of Navigation pane select security policy name.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Delete Policy**
   - click **Delete Policy** at the top of Navigation pane.
4. In the following confirmation dialog select **Yes** to confirm that you want to remove security policy.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.2 Rules

Rules are used basing on the security policy they are assigned to. Each security policy has individual set of rules. Information on rules is available in the following subsections:

- Rules Application
- Adding a Rule
- Editing a Rule
- Deleting a Rule
- Copying a Rule

3.4.2.2.1 Rules Application

To make a set of rules effective, keep in mind all possible instances of their application.

The event is considered as satisfying the rule if it meets all rule parameters (for example both event time is within rule time period and a size of outgoing document is not less than minimal file size and so on).

If the event meets several rules at the same time, then in general more limiting rule overrides the permissive one. In details:

1. The excluding rule (**Exclude from interception** option is selected: see "Configuring File Monitor Rule") has a highest priority.
2. The forbidding rule overrides the permitting one. For example, **Device Monitor** rule (see "Configuring Device Monitor Rule") with ***No access*** limitation overrides rule which permits ***Read only***, and the last one overrides a rule with ***Full access to encrypting devices***. Also **FTP Monitor** rule (see "Configuring FTP Monitor Rule") with ***Forbid using FTP-protocol*** is applied instead of rule with ***Full access to encrypting devices***, and the last one - instead of rule with ***Permit using FTP-protocol***. And so on.
3. The rule creating shadow copies (**Create a shadow copy** option is selected) overrides a rule without shadow copying.
4. For **IM Client Monitor** rules which make a copy of voice traffic (**Create voice copy** option is selected: see "Configuring IM Client Monitor Rule"), the rule which has a constraint of lesser recording duration overrides a rule with longer recording duration.

Other important information on rules application:

- Device Monitor Rules Application
- Creating Shadow Copies and Blocking Operations Due to Free Space Shortage

3.4.2.2.1.1 Device Monitor Rules Application

Access to all Device Monitor interceptor controlled peripherals is a collection of rules assigned to each device.

Employee access rights are defined basing on:

- rules applied to employee groups which an employee is included in;
- rules applied to workstation groups of the workstation using for device access;
- white lists.

During Client installation controlled are fully accessible by default. Therefore, all forbidden operations with the device must be set explicitly (i.e., in form of a rule).

Initially, each new registered workstation is added to the *Default* group. This group has a *"Shadow copy policy"* which contains no rules. Device rules are nor applied to default employees. Thus, the System always allows access to all managed workstations after installation.

For example:

There is a rule that lets workstation group A write to CD/DVD drive. Workstation WS belongs only to workstation group A. Employee Smith belongs only to employee group B with no device rules. Employee Smith tries to view a CD on workstation WS. In this case, employee won't be able to view CD contents of a disk and write new data.

You can assign multiple rules, in several policies either, with various access levels to the same device. This causes rule conflict. General conflict resolution principle: higher limit means higher priority (see the table for further details).

Device type	All devices, except CD/DVD, Floppy drives and removable storage devices	CD/DVD	Floppy drives and removable storage devices
Access in descending order of priority	1. Banned from use	1. No access 2. Read-only	1. No access 2. Read-only 3. Full access to the encrypted devices only

Examples:

Example 1. There is a rule for workstation group C that forbids an access to removable storage device. There is a rule in employee group D policy that allows access to removable storage devices in read only mode. Employee Smith belongs to employee group D and tries to access removable storage device from workstation that belongs to workstation group C. Conflict is resolved in favor of more restrictive rule, i.e. employee Smith cannot read from removable storage device.

Example 2. There is a rule in employee group E policy that allows read-only access to removable storage device. There is a rule in employee group F that grants a full access only to encrypted removable storage devices. Employee Smith belongs to both groups. Conflict is resolved in favor of the more restrictive rule: i.e. employee Smith can get a read-only access: both encrypted and not encrypted (less priority rule is not applied at all).

Rules for certain controlled device types may overlap (see the table). These rules should also be considered when banning access to controlled devices.

Note:
A list of controlled devices types and a set of matching operations is provided in "Configuring Device Monitor Rule".

Rule	Overlapping rules	Notes
Floppy	No	
CD/DVD	No	
Parallel port (LPT)	Local printer (LPT) Imaging devices (LPT)	If there is no access to LPT port, the device connected to this port will be unavailable
Serial port (COM)	Modem Local printer (COM) Imaging devices (COM)	A modem connected to COM port is only accessed basing on COM port rule If there is no access to COM port, the device connected to this port will be unavailable
Removable Storage (USB and IEEE 1394 devices)	FireWire (IEEE 1394)	If there is no access to FireWire (IEEE 1394) port, the device connected to this port will be unavailable
Local Printer (with USB, IEEE 1394, SCSI connection, etc.)	FireWire (IEEE 1394)	If there is no access to FireWire (IEEE 1394), COM, LPT port, the device

Rule	Overlapping rules	Notes
	Serial port (COM) Parallel port (LPT)	connected to this port will be unavailable
Image-processing Devices (cameras, scanners)	FireWire (IEEE 1394) Serial port (COM) Parallel port (LPT)	If there is no access to FireWire (IEEE 1394), COM, LPT port, the device connected to this port will be unavailable
Bluetooth Device	No	
IrDA Device	No	
Other USB Devices	No	
FireWire	Removable storage device (IEEE 1394) Local printer (IEEE 1394) Imaging devices (IEEE 1394)	If there is no access to FireWire (IEEE 1394) port, the device connected to this port will be unavailable
Modem	Serial port (COM)	Modem access rules do not affect modems connected to COM port. A modem connected to COM port is only accessed basing on COM port rule
Smart Card Reader	No	
Tape Device	No	
Multifunctional Device	No	
PCMCI device	No	
USB Network Adapter	No	
Pocket Computer (Windows Mobile and Palm OS pocket computers)	No	

3.4.2.2.1.2 Creating Shadow Copies and Blocking Operations Due to F

Shadow copy of a file, document, message or chat is created when all conditions are met:

1. Applied rule rule creates shadow copies and file size meets the requirements.
2. Free space at managed workstation is more then minimum size required by the policy (see "Common Settings for Clients", **Free clients' disk space** setting, default value is 10%).
3. Managed workstation has more free space then shadow copy creation requires.

Warning!
If there is at least one valid rule that enables shadow copying, and there is less free space available on the workstation than required for file saving, then the controlled operation will be performed without shadow copy creation. Such an event will be displayed in a Management Console (see "Viewing Events") wit "*Error of copy creating*" state.

Besides shadow copies, managed workstation temporary (until the connection with Device Monitor Server is established) stores information about events. For this purpose the drive where Device Monitor Client is installed has dedicated space for storing up to 30000 events (about 300 MB). If:

- Device Monitor Client did not have connections with Device Monitor Server so that there is stored more than 30000 events controlled by rules defined for employee/workstation

and

- in common settings for clients the **If there is not enough disk space to save shadow copy, the**

operation will parameter **has Operation is blocked** value,

then **any employee's actions controlled by security schema will be blocked**.

3.4.2.2.2 Adding a Rule

To add a rule to security policy:

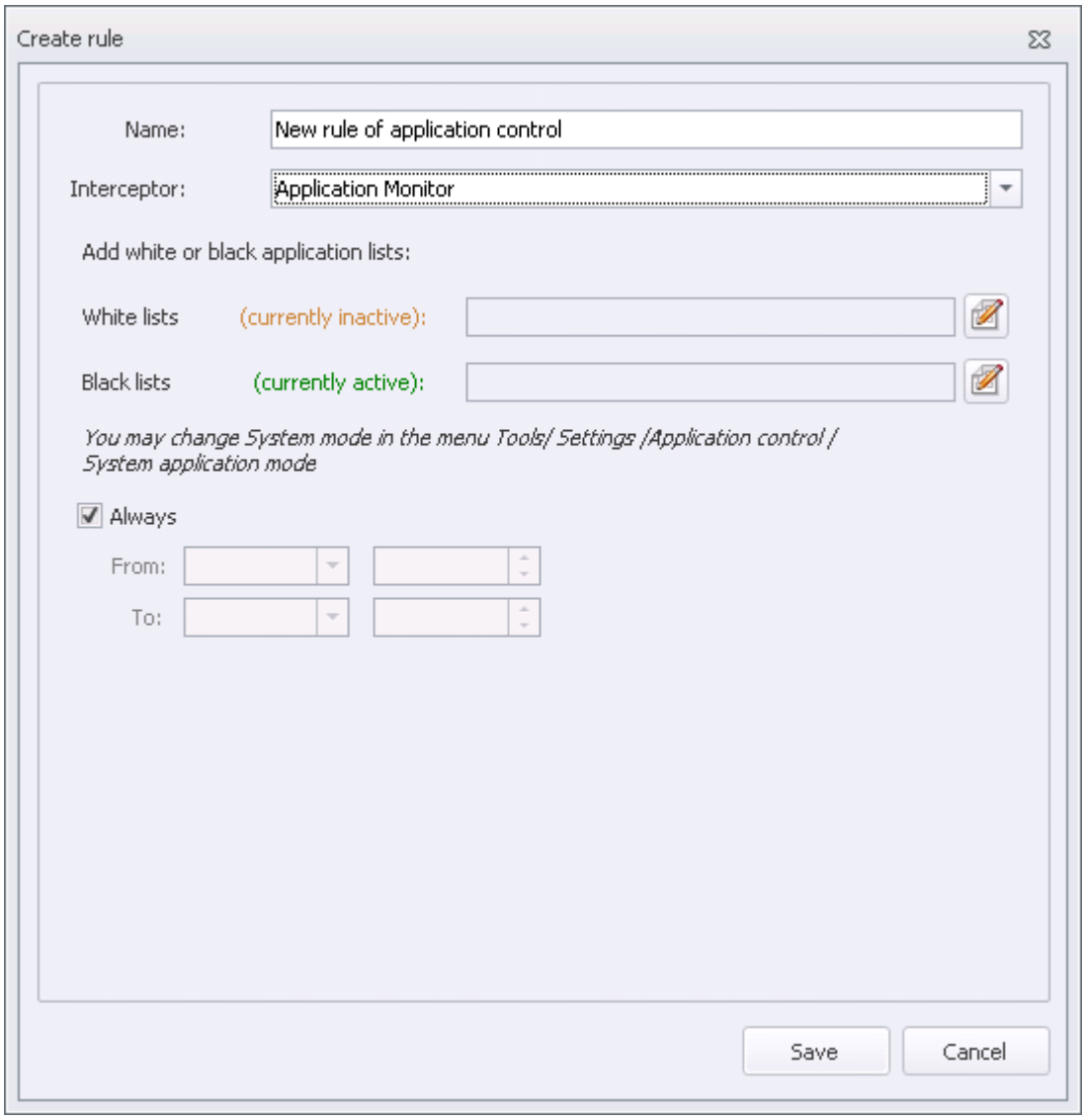
1. Go to **Policies**.
2. In **Policy** area of Navigation pane select the name of the security policy you want to add the rule to.
3. Take one of the following steps:
   - in Main Menu click **Edit > Create Rule**
   - click **Create Rule** in the top of **Policies** area
   - right-click in **Policies** area and select **Create Rule** from the drop-down list
   - press **Ctrl+Shift+N**.

   These actions open rule edit dialog.
4. Specify the interceptor rule:
   - Configuring Application Monitor Rule
   - Configuring Cloud Storage Monitor Rule
   - Configuring Device Monitor Rule
   - Configuring File Monitor Rule
   - Configuring FTP Monitor Rule
   - Configuring HTTPS Monitor Rule
   - Configuring IM Client Monitor Rule
   - Configuring Mail Monitor Rule
   - Configuring Network Monitor Rule
   - Configuring Print Monitor Rule
   - Configuring Screenshot Control Monitor Rule
5. After you have set all necessary parameters, click **OK** in rule settings.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.2.2.1 Configuring Application Monitor Rule

Application Monitor interceptor provides application access control via black and white lists.



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **Application Monitor**.
5. Enter rule name to **Name** field.
6. Add white or black lists by pressing button.
7. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields.
8. When all parameters are configured, click **Save**.

To set up the system for white list or black list mode:

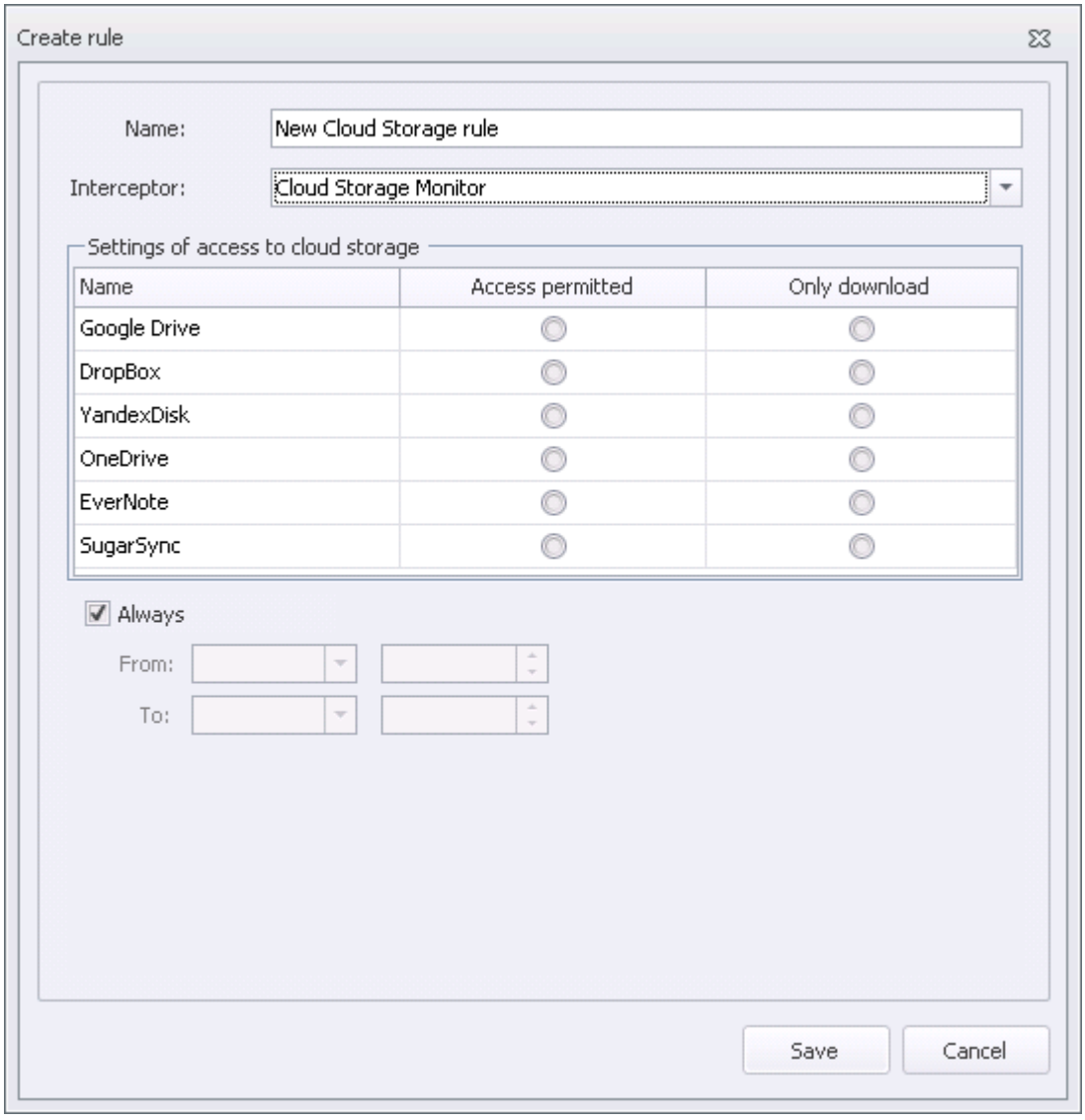
1. Go to **Tools > Settings > Application control > Forbid starting applications**
2. Pick one of two processing modes:

- **Active white lists of applications**
- **Active black lists of applications**

3.4.2.2.2.2 Configuring Cloud Storage Monitor Rule

Cloud Storage Monitor interceptor provides web-client control. One can manage the following cloud storages:

Название хранилища	**Варианты ограничения доступа на использование устройства**
Google Drive	Access Denied / Only download
DropBox	Access Denied / Only download
YandexDisk	Access Denied / Only download
OneDrive	Access Denied / Only download
EverNote	Access Denied / Only download
SugarSync	Access Denied / Only download



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **Cloud Storage Monitor**.
5. Enter rule name to **Name** field.
6. In **Setting of access to cloud storage** mark the option for access limitation (see таблицу выше).
7. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields.
8. When all parameters are configured, click **Save**.

3.4.2.2.2.3 Configuring Device Monitor Rule

Device Monitor interceptor allows you to control employee access to peripheral devices and the devices connected to the thin and thick terminal clients.

(see "Glossary").

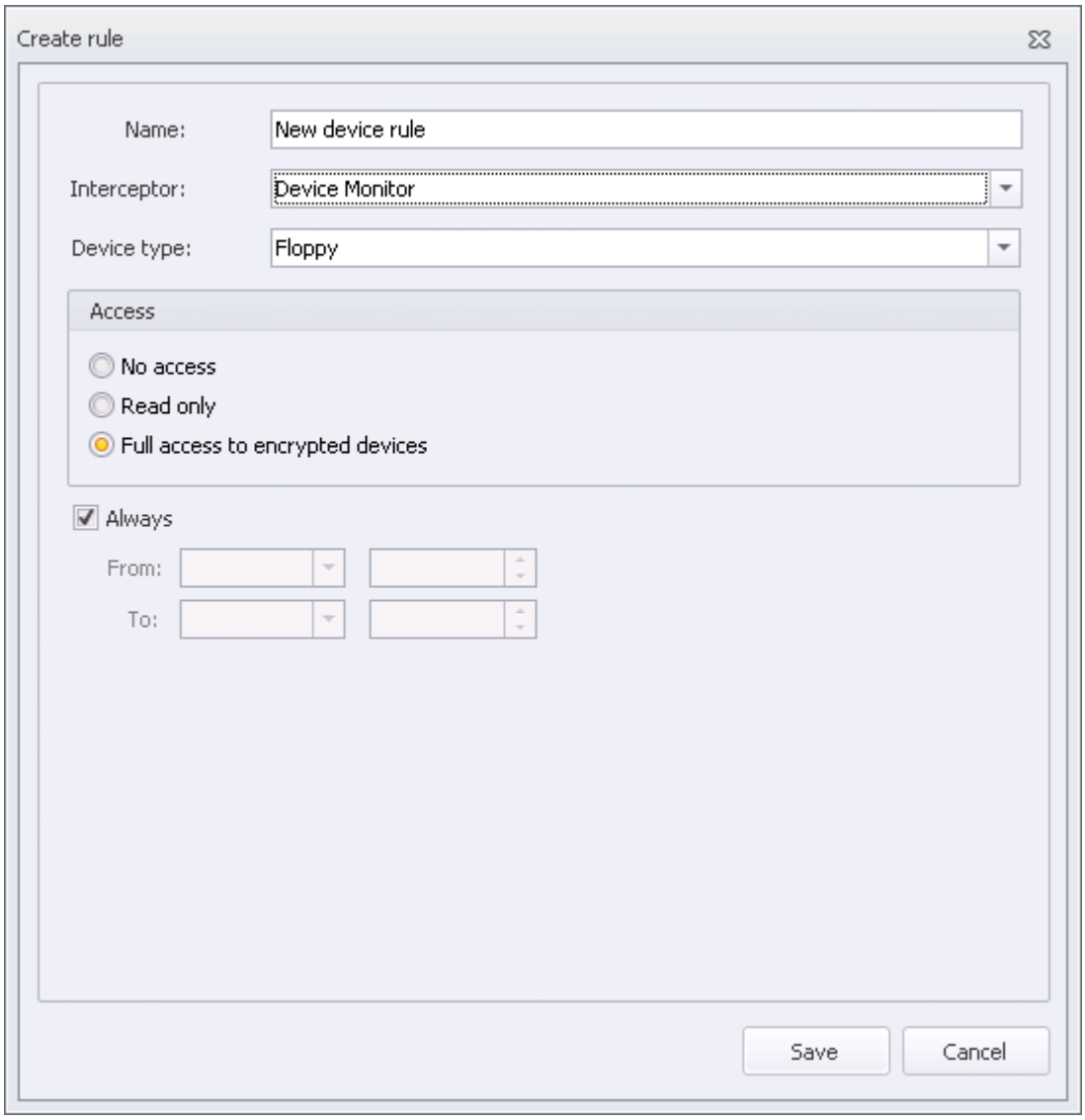
Control of terminal clients, which are connected to Device Monitor Client Workstation via Microsoft RDP or Citrix ICA can be useful in the following situation:

1. Remote user connects to Device Monitor Workstation from terminal client.
2. There is a storage or a printer connected to terminal client.
3. Remote terminal client attempts to print out/copy data from Device Monitor Workstation (Terminal storage/ printer should be connected to Device Monitor Workstation via Microsoft RDP or Citrix ICA in this case).

Name	Behavior
Floppy	Full access to encrypted devices only / Read only / Access denied
CD/DVD	Read only / Access denied
LPT port	Denied
COM port	Denied
Portable disk drives (USB and IEEE 1394 devices)	Full access to encrypted devices only / Read only / Access denied
Local Printer (with USB, IEEE 1394, SCSI connection, etc.)	Denied
Image Editing Devices (cameras and scanners)	Denied
Bluetooth Device	Denied
IrDA Device	Denied
Other USB Devices	Denied
FireWire	Denied
Modem	Denied
Smart Card Reader	Denied
Tape Drive	Denied
Multifunctional Device	Denied
PCMCI device	Denied
USB Adapter	Denied
Pocket Computer (Windows Mobile and Palm OS pocket computers)	Denied
Network printer	Denied
Microsoft RDP or Citrix ICA connection control	
Terminal printer	Denied
Terminal storage	Read only / Access denied
Terminal port (thin client port)	Denied
Terminal Plug and Play devices	Denied

Note:
InfoWatch Device Monitor supports devices encrypted by InfoWatch CryptoStorage SOHO 2.1, InfoWatch CryptoStorage Enterprise 1.0, Kaspersky KryptoStorage 1.0 and TrueCrypt 7.1.

Warning!
If event matches multiple rules, see "Rules Application" and "Device Monitor Rules Application".



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **Device Monitor**.
5. Enter rule name to **Name** field.
6. Select a peripheral type controlled by this rule from **Device type** drop-down list.
7. In **Access** area select needed access level (see table above).

8. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields.
9. When all parameters are configured, click **Save**.

3.4.2.2.2.4 Configuring File Monitor Rule

File Monitor interceptor lets to monitor operations of writing to the file at removable device, at that only successful operation accomplishment is registered. This enables monitoring following employees' actions:

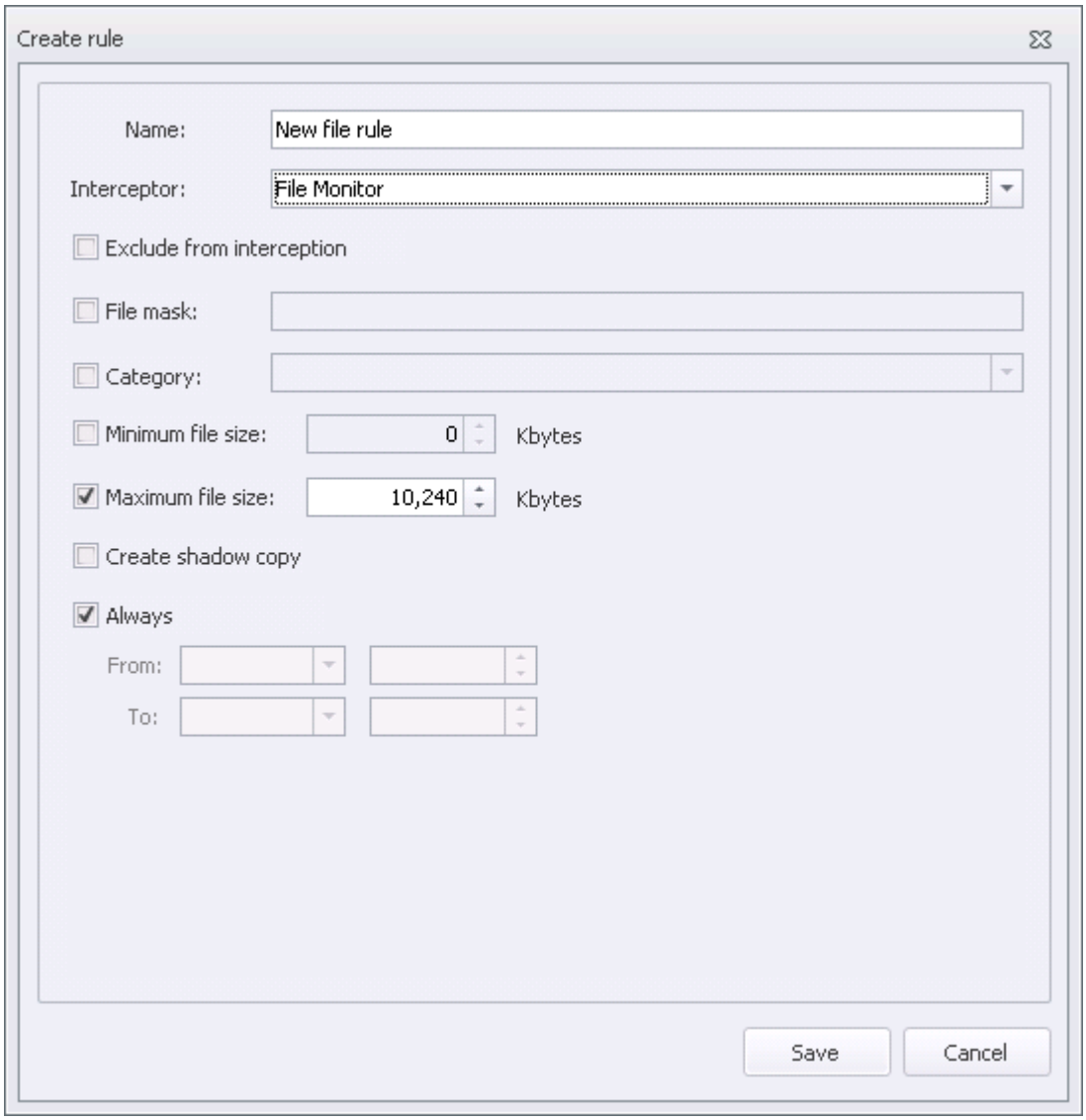
- file creating/editing at removable device
- file copying/moving to removable device. In this case operations of file copying/moving from managed workstation, another removable device or network resources are monitored.

Warning!

The file is subject to **File Monitor** rule if **ALL** file parameters meet rule conditions. For example, if the rule sets shadow copying and **maximum and minimum file size** are specified, then processed file should have a size within specified range.

Warning!

Information about rule conflict resolving see in "Rules Application".



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **File Monitor**.
5. Enter rule name to **Name** field.
6. To make a rule defining interception exclusion, flag **Exclude from interception**. There will be no events neither shadow copies created for file record operations which are subject of this rule.

   Warning!
   If file record event is a subject of several rules, the excluding rule has a highest priority.

7. You can constrain controlled files by mask. Flag **File mask** checkbox and specify mask. You can use wildcard characters when specifying a file mask: «?» to replace a character or «*» to replace a character set. For example, `*.doc`. The space character is interpreted as a part of file name.
8. You can constrain controlled files by signature category (see "Signatures"). Flag **Category** checkbox and select a category from drop-down list: the rule will be applied to files with chosen signature type.
9. You can constrain controlled files by size. Specify file size limits in **Minimum File Size** and **Maximum File Size** fields.
10. If you want to create shadow copies of outgoing files and then analyze them in Traffic Monitor, flag **Create a shadow copy**.

    Warning!
    If there is at least one valid rule for File Monitor that enables shadow copying, and there is less free space at the hard drive than required by the policy (see "Creating Shadow Copies and Blocking Operations Due to Free Space Shortage"), then file saving will be performed without shadow copy creating.

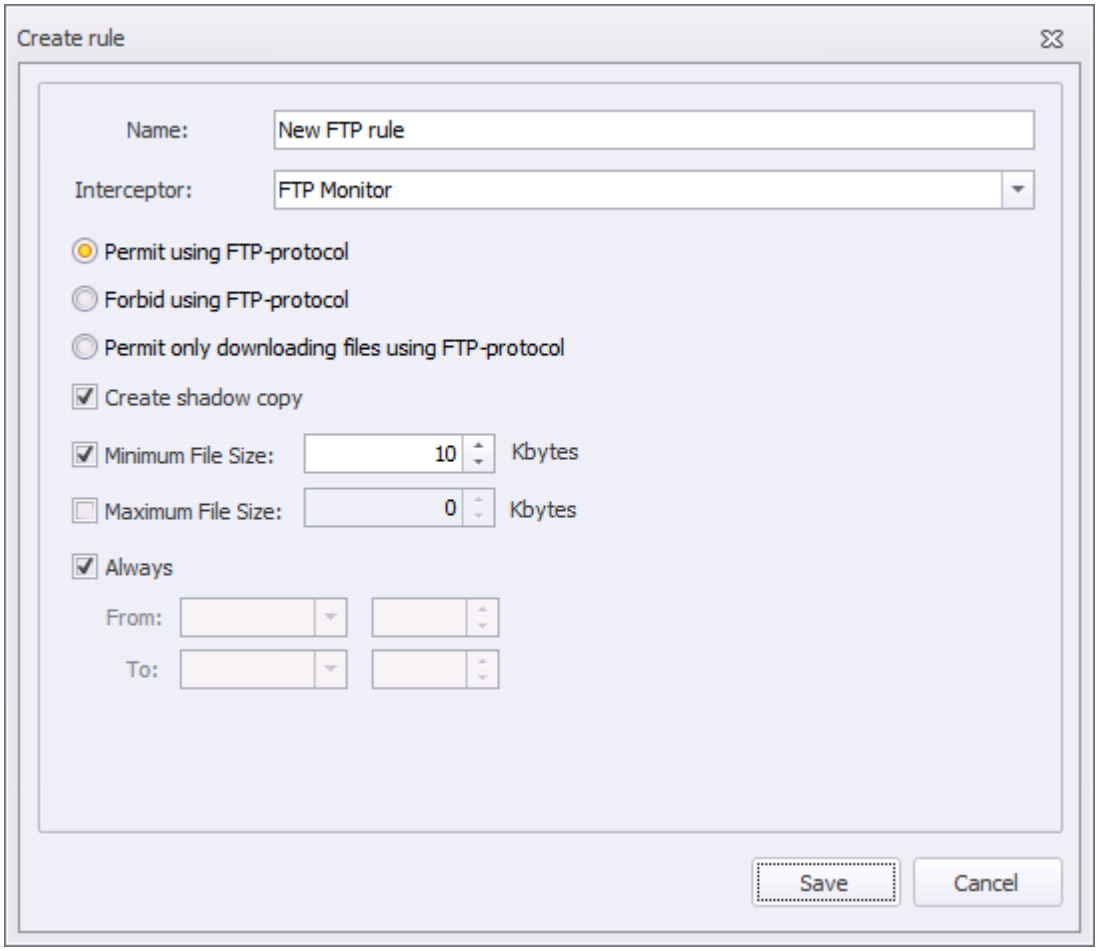
11. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields.
12. When all parameters are configured, click **Save**.

3.4.2.2.2.5 Configuring FTP Monitor Rule

FTP Monitor interceptor lets to control data transfer through FTP/FTPS protocol.

Warning!

The file is subject to **FTP Monitor** rule if **ALL** file parameters meet rule conditions **EXCEPT** maximum and minimum file size. **Maximum file size** and **Minimum file size** are taken into consideration only for shadow copying. So if file size is within specified range, then file transfer event will contain a shadow copy; otherwise event will be created without shadow copy.



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **Ftp Monitor**.
5. Enter rule name to **Name** field.
6. Select inspection level for data transfer through FTP/FTPS protocol:
   - **Permit using FTP-protocol**
   - **Forbid using FTP-protocol**
   - **Permit only downloading files using FTP-protocol**
7. If you allowed using FTP/FTPS protocol then you can also configure creating of shadow copies of outgoing files. You can select **Create a shadow copy** check box and specify additional settings:
   - **Minimum File Size**. If the check box is selected, shadow copies will be enabled only for files of specified size or larger.
   - **Maximum File Size**. If the check box is selected, shadow copies will be enabled only for files of specified size or smaller.

Warning!

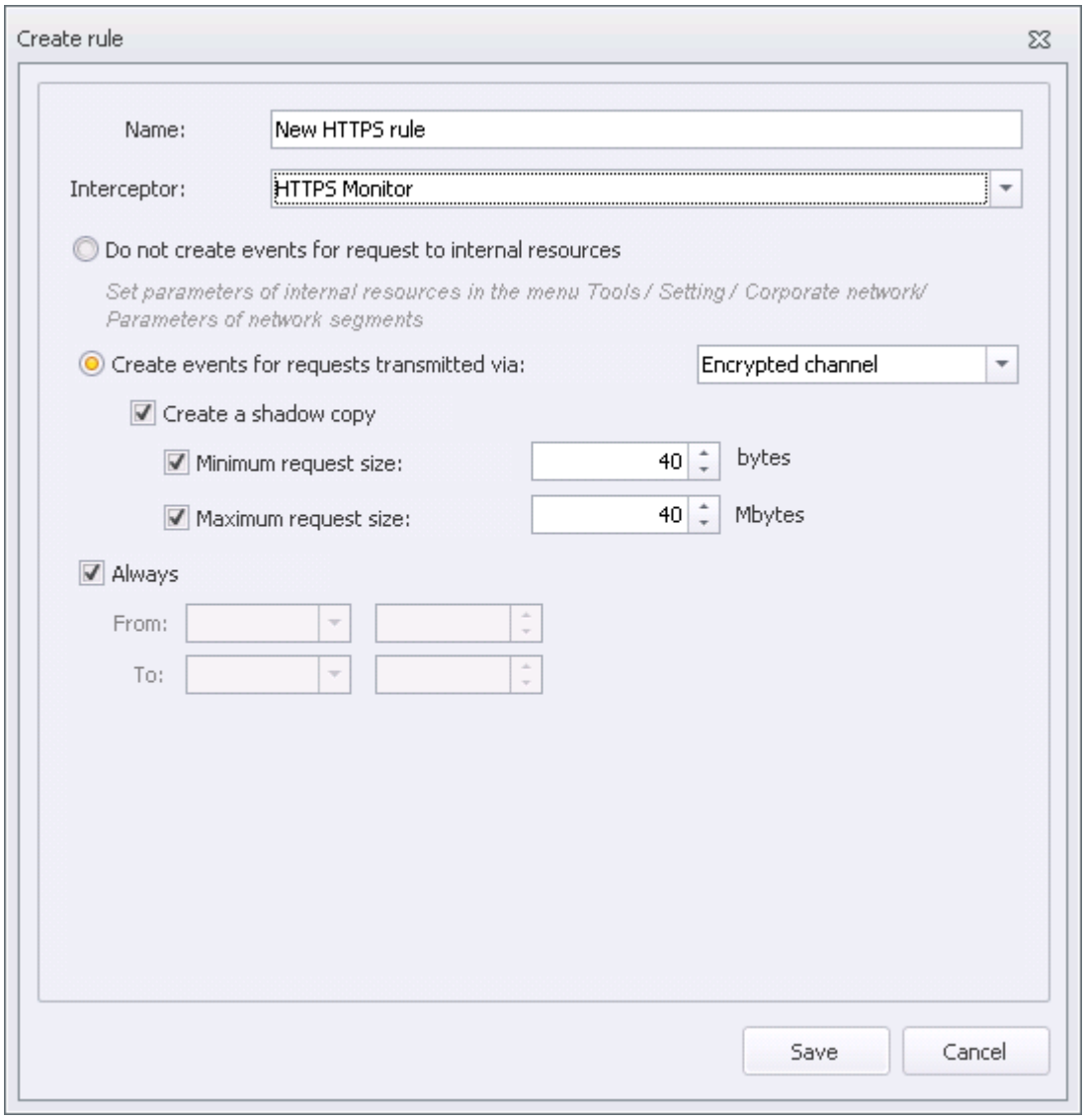
If FTP Monitor rule should create a shadow copy of file but there is less free system drive space left than required by the policy (see "Creating Shadow Copies and Blocking Operations Due to Free Space

Shortage") then shadow copies of messages still will be created but files will be sent without shadow copying.

8. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields.
9. When all parameters are configured, click **Save**.

3.4.2.2.2.6 Configuring HTTPS Monitor Rule

HTTPS Monitor interceptor allows you to control transferring data via HTTP and HTTPS protocol.



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In the **Policies** area of the Navigation pane, select a security policy to which a rule will be added.
3. Do either of the following:
   - in the main menu, select **Edit > Create rule**, or
   - click **Create rule** button at the top of **Policies** area, or
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.

4. In the **Create rule** dialog box that opens, select **HTTPS Monitor** from the **Interceptor** drop-down list.
5. Enter a name of the rule in the **Name** field.
6. Configure interception of requests for internal resources. For this, in the **Do not create events for request to internal resources**, do either of the following:
   - select the checkbox, if you do not need to intercept the requests;
   - deselect the checkbox, if you need to intercept the request.

   Warning!

   If the checkbox is selected, creating a shadow copy in this rule will become unavailable. If you need that:
   - events for requests for internal resources are not created

   and
   - shadow copies are created,

   then you create a separate rule for each case.
7. From the **Create requests for events transmitted via** drop-down list, select:
   - **Encrypted channel -** for interception of HTTPS.
   - **All channels** - for interception of HTTP and HTTPS.
8. Configure creating shadow copies of the transferred data. For this, select the **Create shadow copy** checkbox. You can also specify additional parameters for shadow copies:
   - **Minimum request size** - if the check box is selected, shadow copies will be sent only for requests of specified size or larger.
   - **Maximum request size** - if the check box is selected, shadow copies will be sent only for request of specified size or smaller.

   Warning!
   In case there is not enough space available on a Workstation (see "Creating Shadow Copies and Blocking Operations Due to Free Space Shortage"), shadow copy will not be created.
9. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify date and time in the **From** and **To** fields.
10. When all parameters are configured, click **Save**.

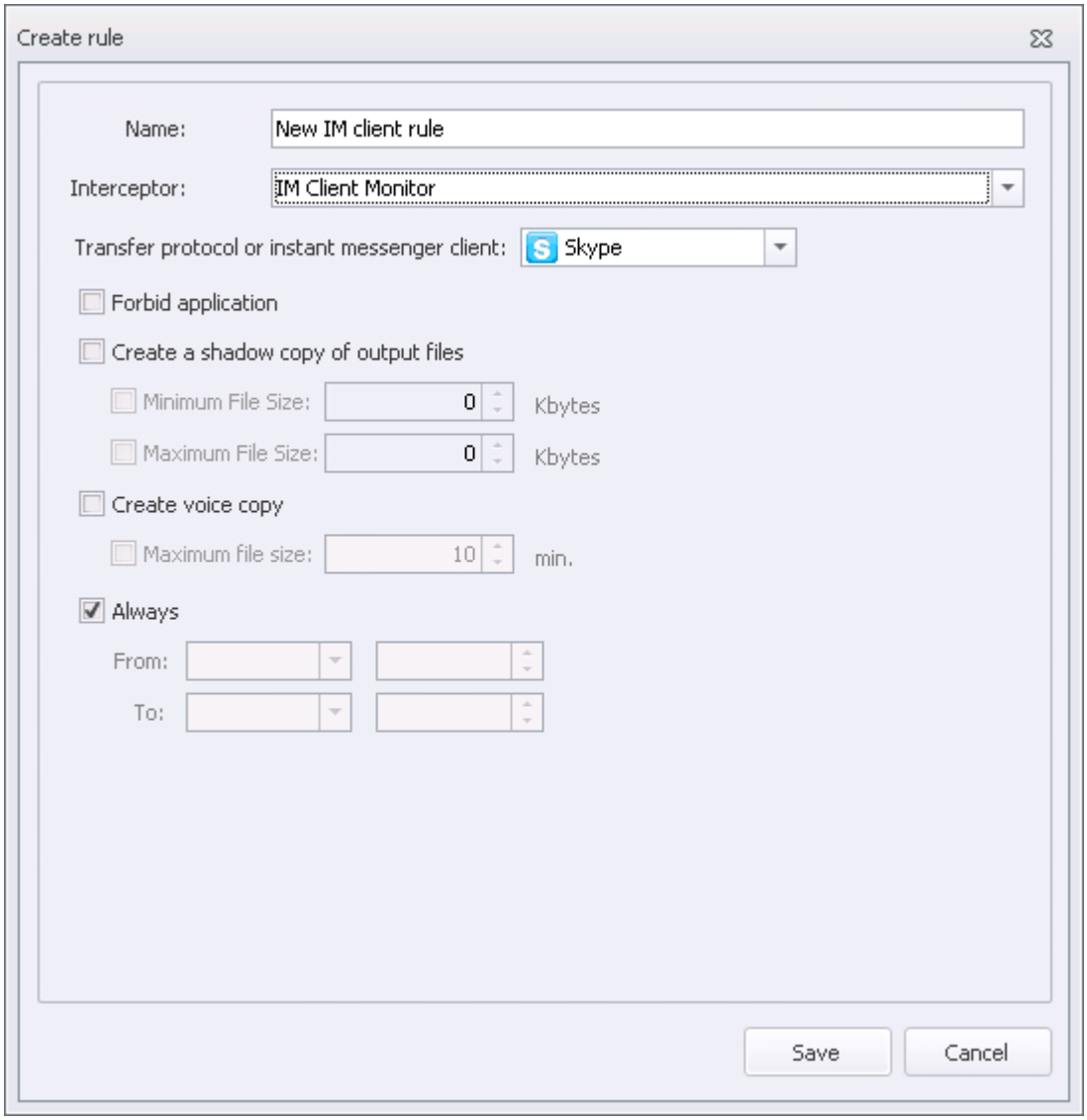
3.4.2.2.2.7 Configuring IM Client Monitor Rule

IM Client Monitor interceptor lets to control employee access to instant messengers: Skype, Jabber (XMPP protocol) and Mail.Ru Agent (MMP protocol).

Warning!
IM Client Monitor interceptor global settings (employee request to launch the interceptor, configuring chat shadow copying period) are configured along with general security policies: see "Network Traffic Control".

Warning!

The file is subject to **IM Client Monitor** rule if **ALL** file parameters meet rule conditions **EXCEPT** maximum and minimum file size. **Maximum file size** and **Minimum file size** are taken into consideration only for shadow copying. So if file size is within specified range, then file transfer event will contain a shadow copy; otherwise event will be created without shadow copy.



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area**;**
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **IM Client Monitor**.
5. Enter rule name to **Name** field.
6. In **IM Client** field select type of messenger controlled by this rule:
   - **Skype** - to control Skype usage
   - **XMPP** - to control Jabber usage
   - **MMP** - to control Mail.Ru Agent usage
   - **Yahoo!** - to control Yahoo! Messenger usage
7. If you want to completely forbid using a client of this type of messenger, flag **Forbid application**.
8. If you want to create shadow copies of outgoing files and then analyze them in Traffic Monitor, flag **Create a shadow copy of output files**. Then you can specify additional parameters of shadow copies:

- **Minimum File Size**. If the check box is selected, shadow copies will be enabled only for files of specified size or larger.
- **Maximum File Size**. If the check box is selected, shadow copies will be enabled only for files of specified size or smaller.

Warning!
Shadow copies of chats and messages are always created (regardless of **Create a shadow copy** setting value), if there is at least one **IM Client Monitor** rule in action at the workstation.

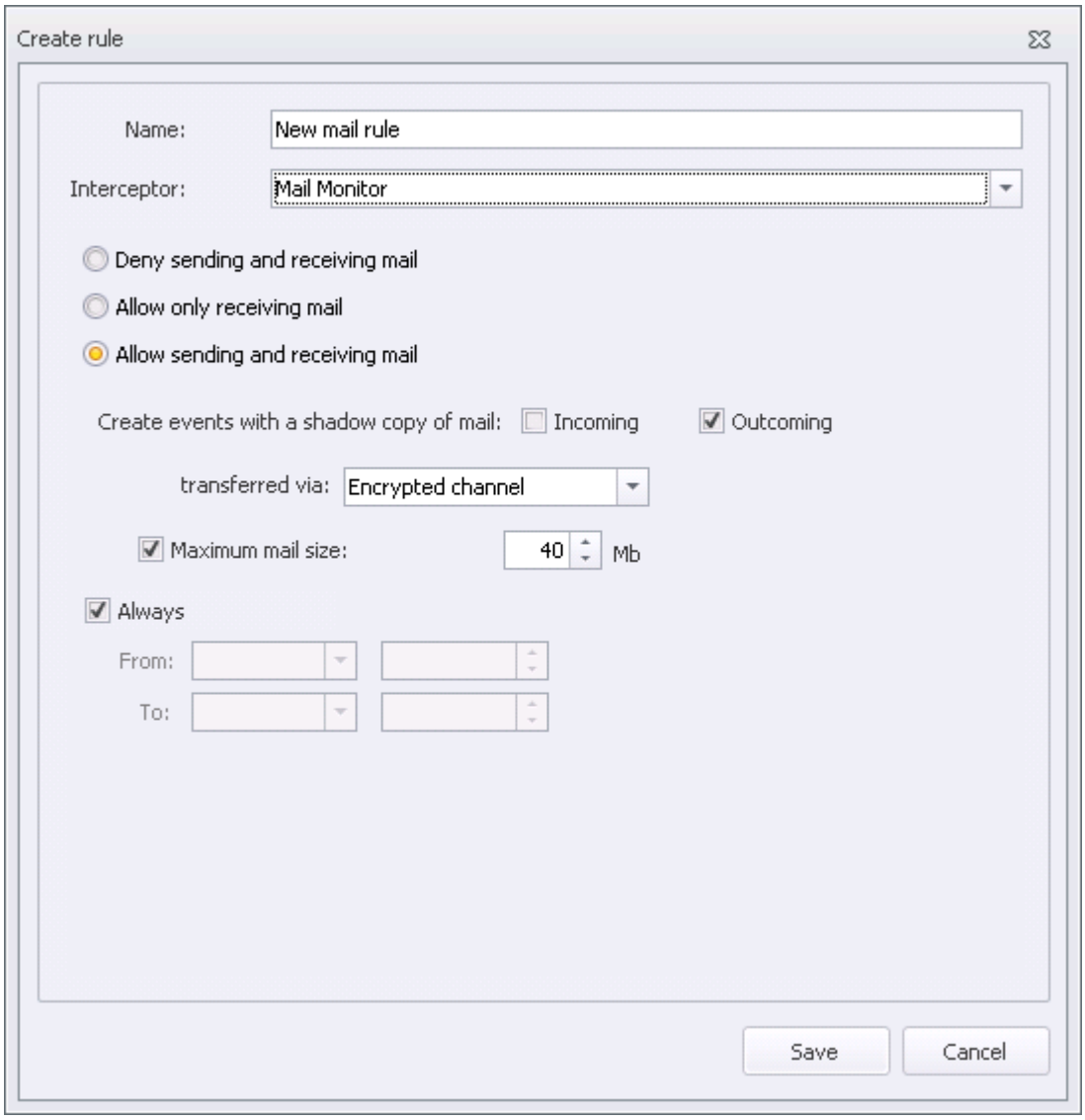
To configure chat and messages shadow copying intervals (interval and number of messages required for a shadow copy) is described in "Network Traffic Control".

9. For **Skype** client you can also save files with voice chat records. Flag **Create voice copy** field. In **Maximum File Size** field specify how the chat will be split: if the length of one conversation is longer then specified recording duration (in minutes) then there will be several shadow copies (and several events) created for one chat.
10. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields.
11. When all parameters are configured, click **Save**.

Warning!
If IM Client Monitor rule should create a shadow copy of file, message or chat but there is less free system drive space left than required by the policy (see "Creating Shadow Copies and Blocking Operations Due to Free Space Shortage") then shadow copies of messages still will be created but files will be sent without shadow copying.

3.4.2.2.2.8 Configuring Mail Monitor Rule

Mail Monitor interceptor provides full control of incoming and outgoing e-mail.



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **Mail Monitor**.
5. Enter rule name to **Name** field.
6. Select outgoing and incoming mail control method:
   - **Deny sending and receiving mail**
   - **Allow only receiving mail**
   - **Allow sending and receiving mail**

Warning!
Depending on the outgoing and incoming mail control method, the following variants of shadow copy creation are possible:

- **Deny sending and receiving mail** -shadow copies are not being created;
- **Allow only receiving mail** - for incoming mail (for shadow copy creation, tick the **Incoming** box);
- **Allow sending and receiving mail -** for incoming and outgoing mail (for shadow copy creation, tick the **Incoming** and **Outcoming**).

1. Manage shadow copy creation. Tick the **Incoming** or **Outcoming** box in a **Create events with a shadow copy of mail** line.

Warning!
Allow sending and receiving mail option requires ticking either **Incoming** or **Outgoing** box, or else a Rule won't be saved.

You can, as well, manage additional parameters of shadow copies:

- **Transferred via**. Variants possible:
  - **All channels** - to create a shadow copy of mail, transferred per any channel, but encrypted;
  - **Encrypted channel** - to create a shadow copy of mail, transferred per encrypted channels.
- **Maximum mail size**. When ticked, all created shadow copies will be for mail smaller or equal to the number mentioned.

Warning!
In case there is not enough space available on a Workstation (see. "Creating Shadow Copies and Blocking Operations Due to Free Space Shortage"), shadow copy will not be created.

2. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields.
3. When all parameters are configured, click **Save**.

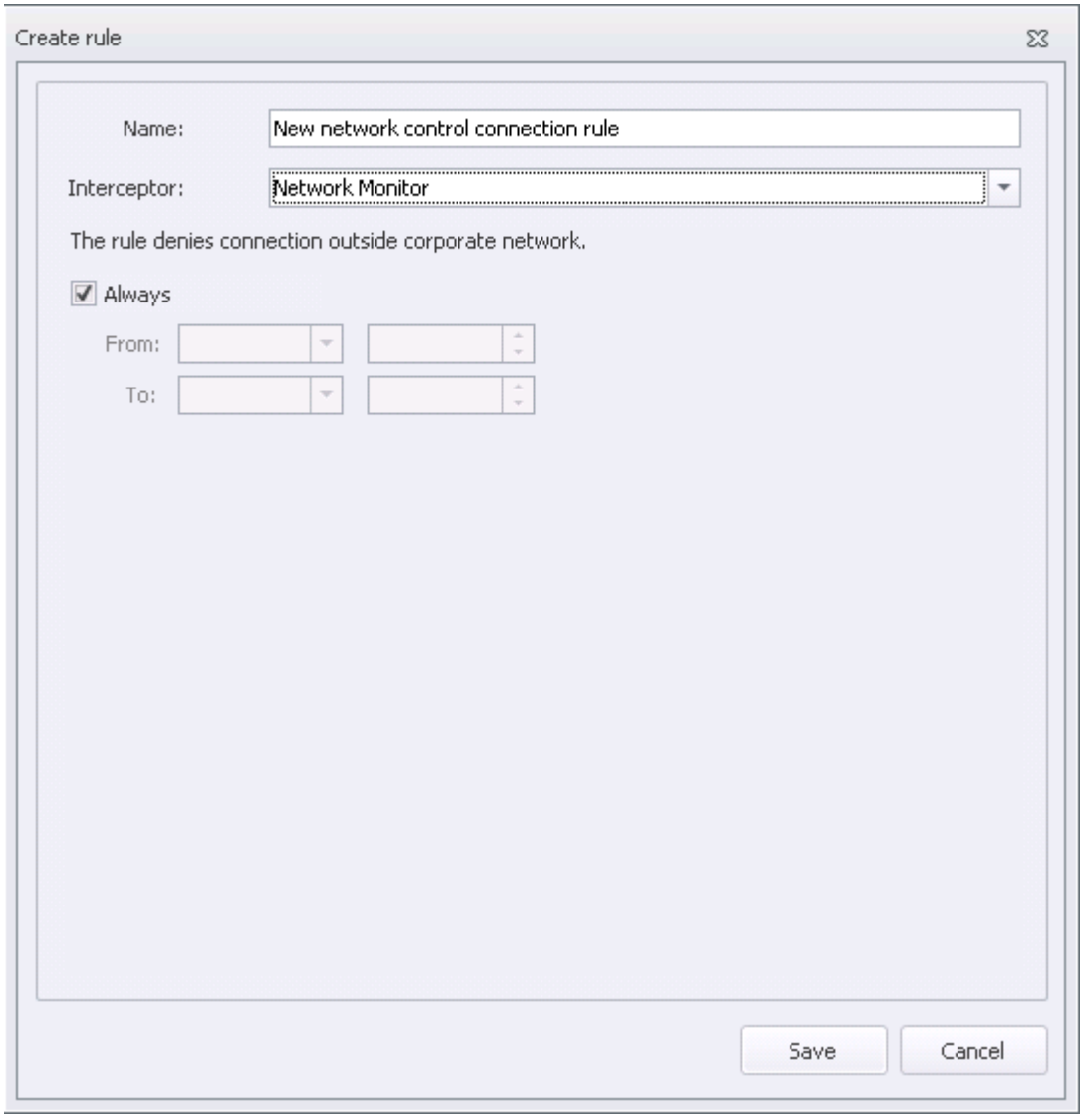
Warning!
In case existing rule has attributes:

- **Allow sending and receiving mail**;
- **Create events with a shadow copy of mail**: **Incoming** and **Outcoming**, **transferred via: All channels**

and there is a saving mail on the mail server setting configured in the mailer, then each mail sending event will generate two interception objects: one of **Outcoming** type and other of **Incoming** type. The name of the mailer option might change depending on the program in use.

3.4.2.2.2.9 Configuring Network Monitor Rule

Network Monitor interceptor lets to deny transferring data by any network connections except connections with corporate network or specified permitted servers. Configuring segments of corporate network and permitted external addresses is performed as described in "Settings of Corporate Network".

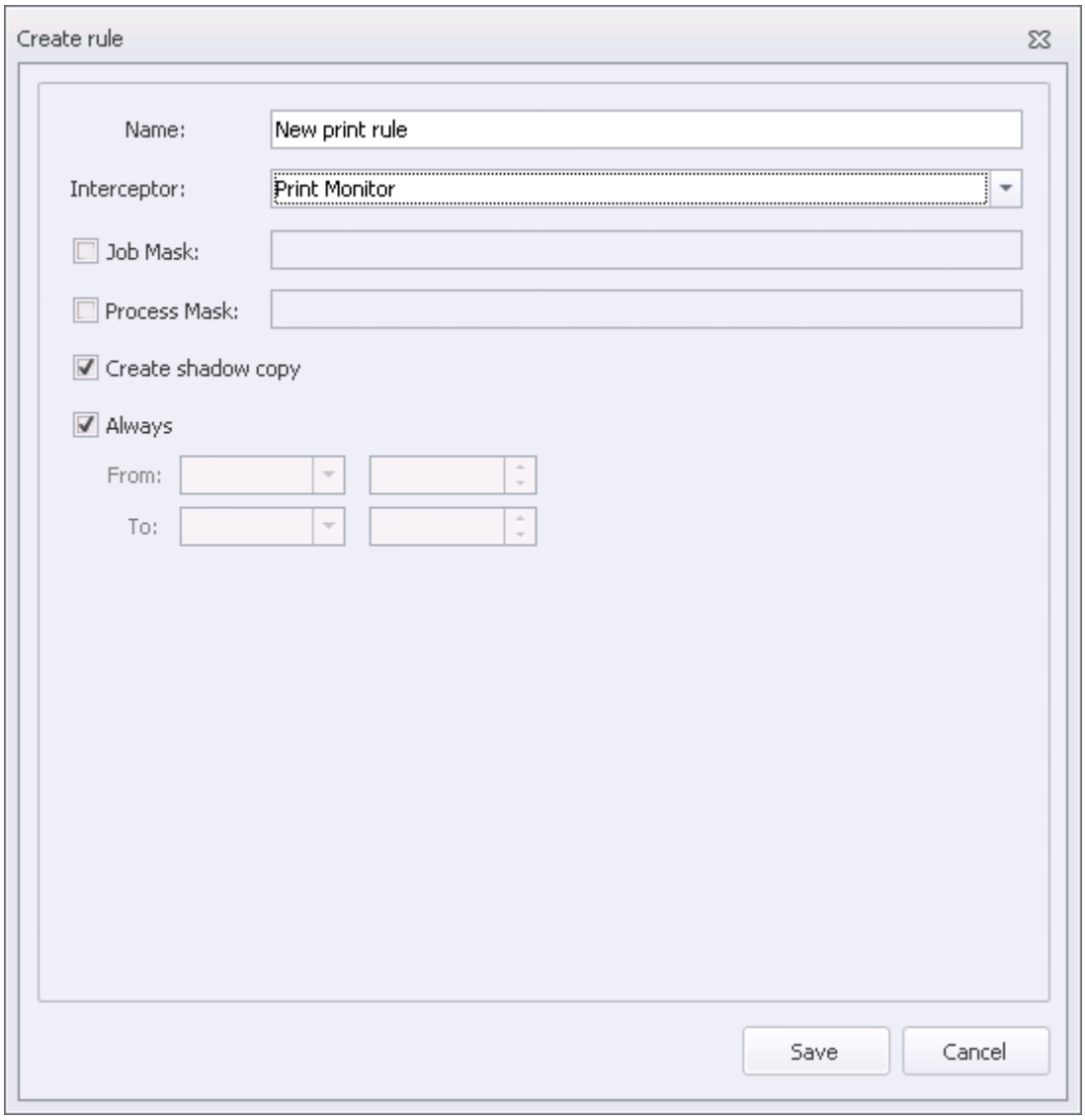


To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **Network Monitor**.
5. Enter rule name to **Name** field.
6. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields.
7. When all parameters are configured, click **Save**.

3.4.2.2.2.10 Configuring Print Monitor Rule

Print Monitor interceptor lets to monitor operations of document printing on local and network printers.



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **Print Monitor**.
5. Enter rule name to **Name** field.
6. You can constrain controlled print jobs by masks:
   - **Job mask**. Using print job (document) mask. If you want to use job mask, select this check box and specify a job mask.

     The name of print job is provided by the application that sends documents to print. Therefore, a name can be represented by any text string and doesn't have to indicate document type.

     You can use wildcard characters when specifying a job mask: «?» to replace a character or «*» to

replace a character set. The space character is interpreted as a part of job name.

- **Process mask**. Using masks for print job process. If you want to use process mask, select this check box and specify a process mask.

  Process name (full path) will be received for print job rendering process. In some cases (local LPT and COM printers) a printing subsystem can perform a rendering in a context of **Print Spooler** service. Link to service's executable file: `%SystemRoot%\system32\spoolsv.exe`.

  Select **Send directly to printer** parameter (**Printer properties> Advanced**) to make sure the process name is correctly identified. Print job will be processed by the application that sends documents to print. In this case, synchronous printing will be used, i.e. you will be unable to use the application until printing has been finished.

  Available replace symbols: «?» to replace one symbol or «*» to replace several symbols. Space character is interpreted as a part of file name.

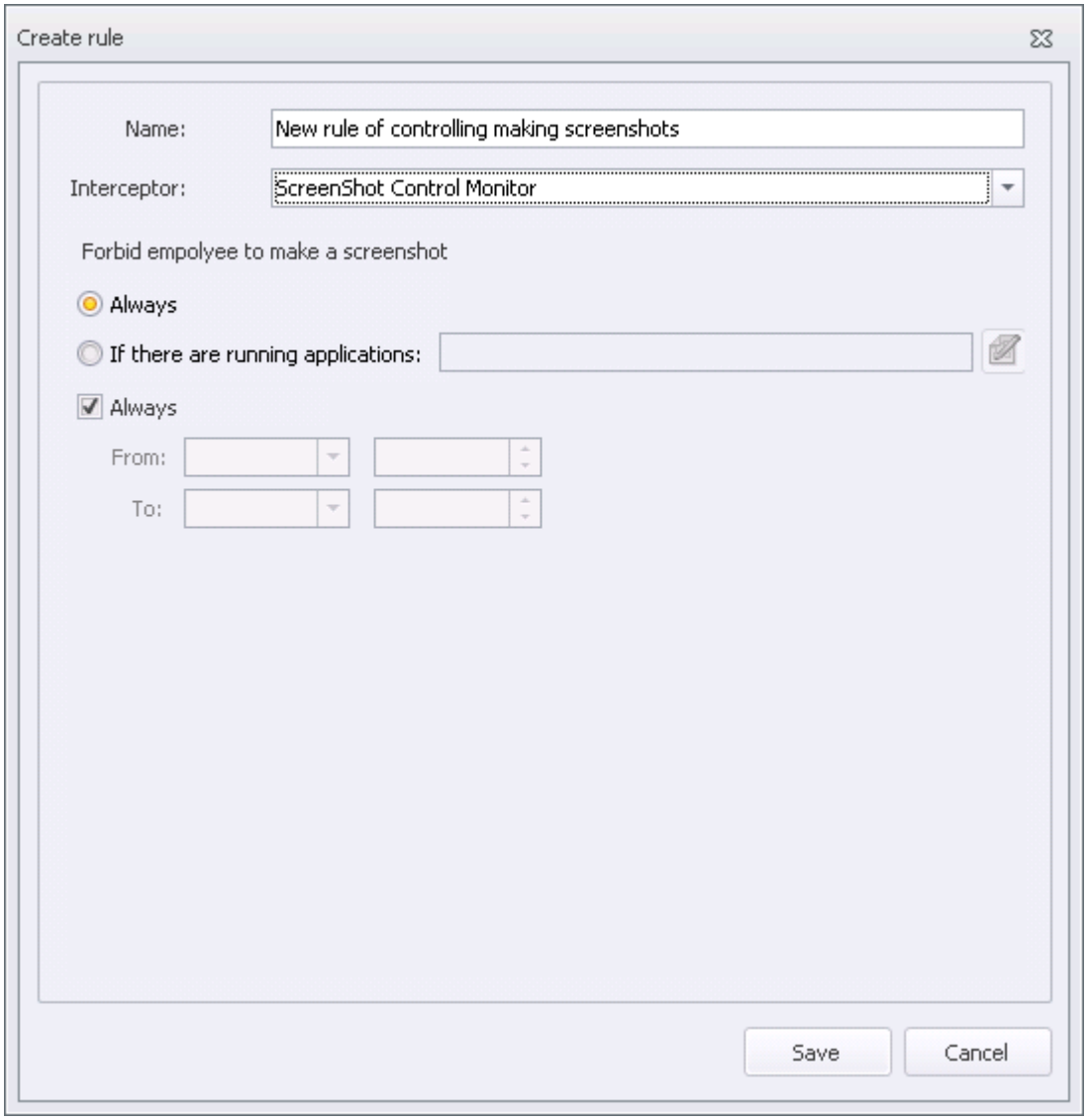
7. If you want to create shadow copies of outgoing files and then analyze them in Traffic Monitor, flag **Create a shadow copy**.

   Warning!
   If Print Monitor rule should create print job shadow copy but there is less free space at the hard drive than required by the policy (see "Creating Shadow Copies and Blocking Operations Due to Free Space Shortage"), then the printing will be performed without shadow copy creating.

8. Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields.
9. When all parameters are configured, click **Save**.

3.4.2.2.2.11 Configuring ScreenShot Control Monitor Rule

ScreenShot Control Monitor interceptor allows to control screen shots on a client side.



To configure the rule, perform the following steps:

1. Go to **Policies** section.
2. In **Policies** area at Navigation pane select a security policy which you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Create rule**
   - click **Create rule** at the top of **Policies** area
   - right-click at the empty space in **Policies** area and select **Create rule** from the drop-down list.
4. In **Create rule** dialog in **Interceptor** field select **ScreenShot Control Monitor**.
5. Enter rule name to **Name** field.
6. In area **Forbid employee to make a screenshot** define a rule period:

- **Always.** Has no time limit by default.
- **If there are running applications.** Pick a list of applications using button (see "Applications protocol").
- Define a period of rule action. By default, the rule is always in effect (**Always** option is checked). To specify

rule duration, clear **Always** check box and specify dates and time in **From** and **To** fields

7. When all parameters are configured, click **Save**.

3.4.2.2.3 Editing a Rule

To edit a rule:

1. Go to **Policies**.
2. In **Policy** area of Navigation pane select the title of security policy that contains the rule. The main window will display the full list of the policy rules.
3. Select the row with the name of the rule you want to edit.
4. Take one of the following steps:
   - in Main Menu click **Edit > Edit Rule**
   - double-click the selected row
   - click **Edit Rule** at the top of **Policy** area.

   These actions open rule configuration dialog.
5. Edit rule parameters:
   - Configuring Application Monitor Rule
   - Configuring Cloud Storage Monitor Rule
   - Configuring Device Monitor Rule
   - Configuring File Monitor Rule
   - Configuring FTP Monitor Rule
   - Configuring HTTPS Monitor Rule
   - Configuring IM Client Monitor Rule
   - Configuring Mail Monitor Rule
   - Configuring Network Monitor Rule
   - Configuring Print Monitor Rule
   - Configuring Screenshot Control Monitor Rule
6. When all changes are made click **OK** in rule configuration dialog.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.2.4 Deleting a Rule

To delete a rule:

1. Go to **Policies**.
2. In **Policy** area of Navigation panel select the name of security policy that contains the rule. The main window will display the full list of the policy rules.
3. Select the row that contains the rule you want to remove.

   Note:
   To delete multiple rules from a single security policy, select the rows with the names of all rules you want to remove.
4. Take one of the following steps:
   - in Main Menu click **Edit > Delete Rule**
   - press **Delete** keyboard button

- click **Delete Rule** at the top of **Policy** area.

5. In request box select **Yes** to confirm that you want to remove the rule.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.2.5 Copying a Rule

Rules can be copied from one security policy to another.

To copy a rule:

1. Go to **Policies**.
2. In **Policy** area of Navigation pane, select the name of the security policy that contains the rule you want to copy.
3. In main screen workspace select the row that contains the name of the rule you want to copy. You can select multiple rows to copy group rules into a single security policy.
4. Click and hold the selected row and drag the rule into **Policies** area of Navigation pane. Move the pointer over the title of security policy you are adding the rule to. Release the button when a yellow arrow appears next to the selected policy.

This copies the rule to selected security policy.

You can also copy rules from the dialog of editing the policy to which you want to add rules from other policies.

To copy a rule while editing a policy:

1. Go to **Policies**.
2. In **Policy** area of Navigation pane, select the name of the security policy that you want to add a rule to.
3. Take one of the following steps:
   - in the Main Menu select **Edit > Edit Policy**
   - click **Edit Policy** at the top of Navigation pane
   - double-click selected security policy name.
4. click **Select rules**. In new dialog flag the rules you want to copy to a new security policy. You can select the whole policy - then all rules it contains will be added to editing security policy.
5. After you mark all rules click **Select**.
6. Click **Save** to save policy.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.3 Employees

Employee and employee group management basics are available in "Employees and Employee Groups".

Existing security policies can be assigned only to employee groups. Security policy for an employee is defined by including his/her account to the employee group.

Warning!
In addition to employee group security policy, each employee is covered by workstation security policy. Information about rule conflict resolving see in "Rules Application".

To go to Console section designed for accounts management, click **Employees** button on Navigation pane.

Guidelines on account management is available in:

- Viewing Employee Details
- Viewing Resultant Policy and Resultant White List for an employee
- Adding and Editing an Employee Group
- Deleting Employee Group
- Adding Employee Account to a Group
- Editing Employee Account
- Removing Employee Account from Employee Group
- Deleting Employee Account from Security Schema

3.4.2.3.1 Viewing Employee Details

Employees area of Navigation pane displays employee group list. Selected employee group employees are listed in the main window work pane.

Note:
Use additional features to adjust employee list view (see "Additional Features").

To view information for specific employee group,

select group name in employee group list.

To view all registered employees information,

click **Show All Employees** at the top of Navigation pane.

Employee account information is represented as tabular list. Each row in the list contains a single account. Columns contain accounts' general properties. Extended information on each account is available in **Details** panel.

To view account's detailed properties,

select the row that contains the account name.
Details panel displays table properties including the following information:

- **Account**. Account name.
- **Last Name**, **First Name**, **Middle Name**. Account owner's last, first and middle name.
- **SID**. Operating System internal ID.

Note:
Some information on **Details** panel is duplicated in the main screen workspace.

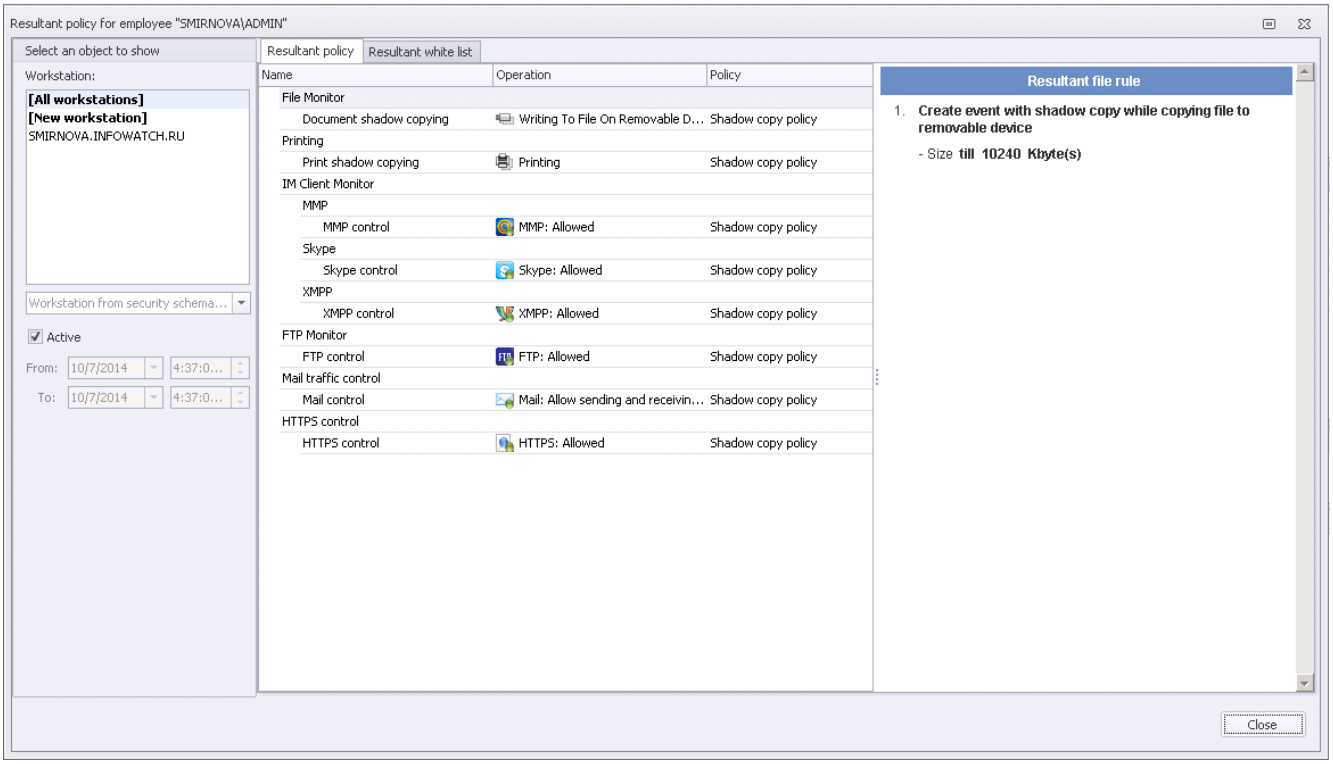
3.4.2.3.2 Viewing Resultant Policy and Resultant White List for an em

To view information about policy for an employee:

1. In the **Employee** list, pick an employee you want to view policy and white list for.
2. Proceed with one of the following actions:
   - in the Main Menu choose **Edit -> Show effective policy**.
   - on **Employees pane** click **Show effective policy**.

   As a result, a window **Resulting policy for employee ""** will be displayed.

At **Resultant policy** tab you will see resulting rules for an employee. Resulting policy contains default rules, rules for a workstation and rules for employees (see "Device Monitor Rules Application").



On a **Workstation** pane:

- **All Workstations** - resulting policy for an employee account without attachment to a workstation.

  Note: to view resulting policy of an employee for a definite workstation, pick a workstation from **Workstation** pane or drop-down list **Workstations from security schema**.
- **New workstation** - resulting policy for an employee on a new workstation (it is not yet present in the security schema).

Use drop-down list **Workstations from security schema** to view resulting policy for a definite workstation which is present in the security schema.

You can, as well, choose period for a resulting policy:

- tick **Active** box, to view current resulting policy and white list for an employee .
- untick **Active** box, to view resulting policy and white list for a definite period.

To view a set of rules for an employee on a definite workstation,

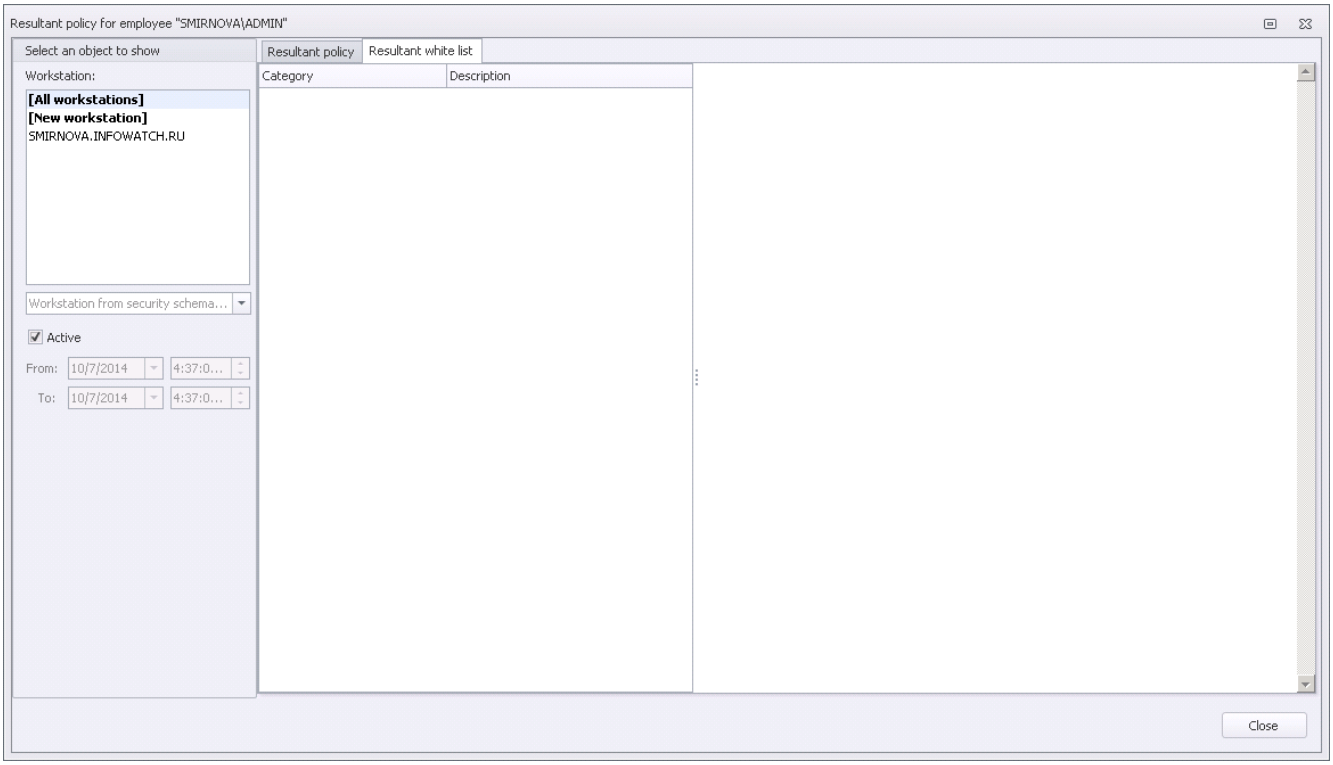
pick a required workstation on a **Workstation** pane.

To view detailed information about a rule,

pick required rule in the list of rules on **Resultant policy** tab.

Detailed information will be displayed on the right from the **Resultant policy** tab.

At **Resultant white list** tab you will see permitted devices for a concrete employee (see "White Lists").



On a **Workstation** pane:

- **All Workstations** - resulting white list for an employee account without attachment to a workstation.

  Note: to view resulting white list of an employee for a definite workstation, pick a workstation from **Workstation** pane or drop-down list **Workstations from security schema**.
- **New workstation** - resulting white list for an employee on a new workstation (it is not yet present in the security schema).

Use drop-down list **Workstations from security schema** to view resulting white list for a definite workstation which is present in the security schema.

You can, as well, choose period for a resulting white list:

- tick **Active** box, to view current resulting white list and white list for an employee .
- untick **Active** box, to view resulting white list and white list for a definite period.

To view white list for an employee on a definite workstation,

pick a required workstation on a **Workstation** pane.

To view detailed information about device on a white list,

pick required device in the list of rules on **Resultant white list** tab.

Detailed information will be displayed on the right from the **Resultant white list** tab.

3.4.2.3.3 Adding and Editing an Employee Group

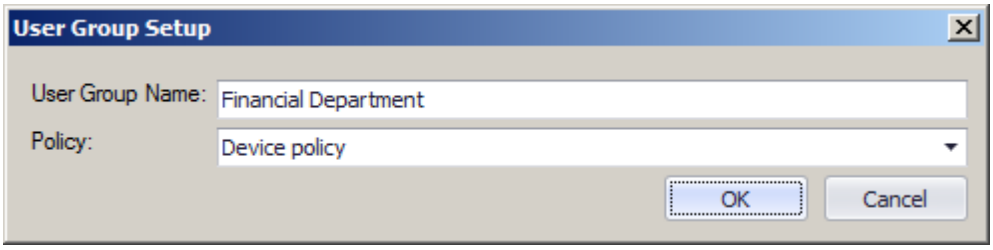
To add or edit an employee group:

1. Go to **Employees** section.
2. Take one of the following steps:

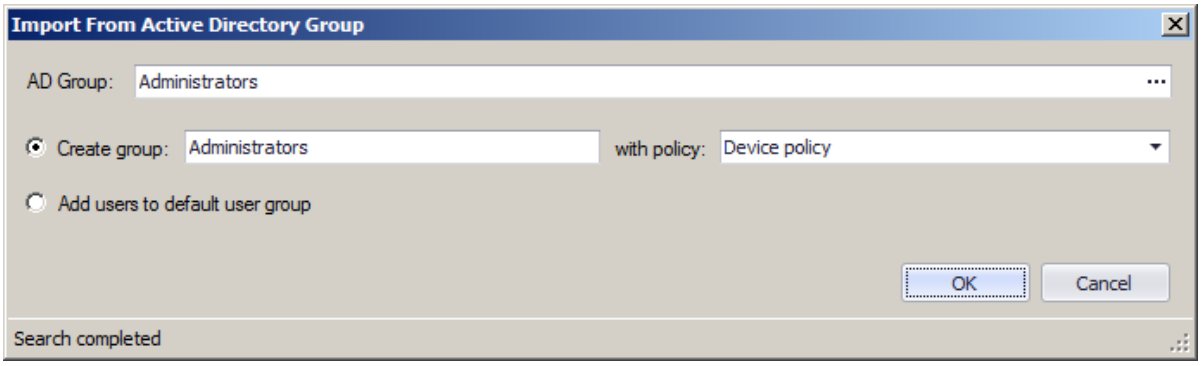
Action	Steps
Add employee group	• select **Edit > Create Employee Group** in the Main Menu; • click **Create Employee Group** at the top of the Navigation Pane.
Edit employee group	1. In **Employees** area of Navigation Pane select the employee group name.

	2. Take one of the following steps: • in the Main Menu, click **Edit > Edit Employee Group**; • click **Edit Employee Group** at the top of Navigation pane; • double-click selected employee group name.

This opens a dialog box with group parameters.



3. In this dialog, specify the following parameters:
   - **Employee Group Name**.
   - **Policy**. From drop-down list select a security policy for employee group.
4. Set a list of employees in the group:
   - To add one or several accounts, click **Add**.



The **Add employee to the group** dialog displays a list of accounts imported from the directory service (see "Connecting to LDAP Server") and already registered in the System (for example, when Device Monitor Client was installed to the workstation) and belonging to existing Device Monitor employee groups.

To add an employee, in left pane select a node in groups tree, then flag accounts you want to add to edited group.

To flag all accounts of selected node, click **Mark all**. To clear selection, click **Clear all**.

You can also make a search of account by all available elements: enter a part of account name to the field at the top and click **Find**.

After you selected all needed accounts, click **Save** to close **Add employee to the group** dialog and return to a dialog box with group parameters.

   - To edit account parameters, select it from the list of employees belonging to the group and click **Change**.
   - To delete an entry from the group, select it and click **Delete**.
5. Click **Save**.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.3.4 Deleting Employee Group

To delete employee group:

1. Go to **Employees** section.
2. Click the employee group you want to delete.
3. Take one of the following steps:
   - select **Edit > Delete Employee Group** in the Main Menu;
   - click **Delete Employee Group** at the top of **Navigation Pane**.
4. Click **Yes** in confirmation box to confirm that you want to remove employee group.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.3.5 Adding Employee Account to a Group

After InfoWatch Device Monitor Client is installed to the workstation (see "InfoWatch Device Monitor Client Setup"), data on all employees registered at it is automatically added to the Device Monitor security schema, "*Default*" employee group. Therefore the policy assigned to "*Default*" employee group will be applied to all newly registered employees. In prospect security policy for an employee is defined by including its account to different employee groups.

To move an employee account from one group to another:

1. Go to **Employees** section.
2. In **Employees** area of Navigation pane select a group containing employee's entry.
3. In **Employees** area of main screen workspace select an account which you want to add to another group. Left-click and hold the selected row and drag it to **Employees** area of Navigation pane. Move the cursor over the name of the group you want to add an account to. When a yellow arrow appears at the left of selected group, release left mouse button.

This adds an account to the selected group.

You can also manually import an information on the employee from directory service (see connection configuring description in "Connecting to LDAP Server"). Then after this employee is registered at the workstation where InfoWatch Device Monitor Client installed, this employee will be subject of policy of a group where the employee is added to.

To add one or several accounts to employee group:

1. Go to **Employees** section.
2. In **Employees** area of Navigation pane select a group which you want to add employee's account to.
3. Take one of the following steps:
   - in the Main Menu, click **Edit > Create Employee**
   - click **Create Employee** at the top of **Employees** area
   - right-click in **Employees** area and select **Create Employee** from the drop-down list
   - double-click selected employee group name.

   These actions open employees adding dialog.



4. The **Add employee to the group** dialog displays a list of accounts imported from the directory service (see "Connecting to LDAP Server") and already registered in the System (for example, when Device Monitor Client was installed to the workstation) and belonging to existing Device Monitor employee groups.
   - To add an employee, in left pane select a node in groups tree, then flag accounts you want to add to edited group.
     To flag all accounts of selected node, click **Mark all**. To clear selection, click **Clear all**.
     You can also make a search of account by all available elements: enter a part of account name to the field at the top and click **Find**.
     After you selected all needed accounts, click **Save** to close **Add employee to the group** dialog and return to a dialog box with group parameters.
   - To edit account parameters, select it from the list of employees belonging to the group and click **Change**.
   - To delete an entry from the group, select it and click **Delete**.
5. Click **Save**.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

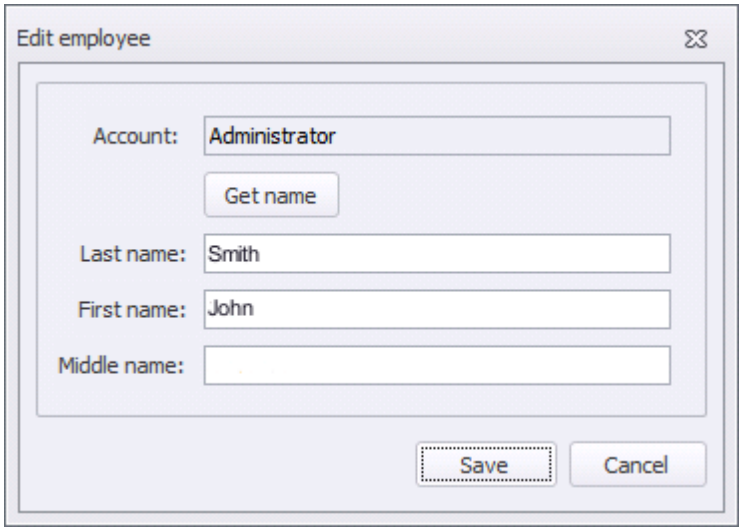
3.4.2.3.6 Editing Employee Account

Parameters of employee account are imported from directory service or while installing a InfoWatch Device Monitor Client to the computer where this employee is registered. If you want to add some information, you can enter employee's personal data as described below.

To edit an employee account:

1. Go to **Employees** section.
2. In **Employees** area of Navigation pane select the group the account belongs to.
3. Select the row that contains the name of the account you want to edit.
4. Take one of the following steps:
   - in the Main Menu, click **Edit > Edit Employee**
   - click **Edit Employee** at the top of **Employees** area
   - double-click the selected row.

   These actions open **Edit employee** dialog.



5. Edit the options in this dialog. While editing, you can modify the following optional parameters: **Last Name**, **First Name** and **Middle Name**. You can either enter new values into appropriate fields manually or import them from directory service with **Get name** button.
6. Click **Save**.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.3.7 Removing Employee Account from Employee Group

To remove an account from employee group:

1. Go to **Employees** section.
2. In **Employees** area of Navigation pane select employee group the account belongs to.
3. Select the row that contains the name of the account you want to remove from this group.

   Note:
   To remove multiple accounts from a group, select the rows with employee's accounts you want to exclude from this group.
4. Take one of the following steps:
   - In the Main Menu, click **Edit > Remove employee from group**
   - click **Remove employee from group** at the top of **Employees** area
   - press **Delete** keyboard button.

This removes employee account from selected employee group.

Note:
If employee account belongs to a single employee group, then after excluding it will be automatically added to default employee group.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.3.8 Deleting Employee Account from Security Schema

To remove employee account from security schema:

1. Go to **Employees** section.
2. In **Employees** area of Navigation pane select employee group the account belongs to.
3. Select the row that contains the account you want to remove.

   Note:
   To remove multiple accounts from security schema, select all the rows that contain the accounts you want to remove.
4. Take one of the following steps:
   - In the Main Menu, click **Edit > Delete employee from security schema**
   - click **Delete employee from security schema** at the top of **Employees** area
   - press **Shift+Delete** at the keyboard.
5. In the confirmation box click **Yes** to confirm that you want to remove the account.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.4 Workstations

InfoWatch Device Monitor workstation is a managed workstation - computer where InfoWatch Device Monitor. Client is installed.

General principles of managing workstations are described in "Workstations and Workstation Groups" section.

Actual security policies can be applied only to a workstation group. You can define a security policy for a certain workstation by including it to various workstation groups.

Warning!
Each workstation is a subject both of security policy of a workstation group and security policy of an employee which is currently authorized at that workstation. Information about rule conflict resolving see in "Rules Application".

To go to Management Console workstation section, click **Workstations** button on Navigation pane.

For more information on managed workstations see:

- Viewing Workstation Details
- Viewing Workstation Effective Policy
- Adding and Editing a Workstation Group
- Deleting Workstation Group
- Adding Workstation to a Group
- Removing Workstation from a Group
- Deleting Workstation from Security Schema
- Updating Clients at Managed Workstations

3.4.2.4.1 Viewing Workstation Details

Workstations area of Navigation pane displays a list of workstation groups. Main screen workspace displays the list of workstations in selected workstation group.

Note:
Use additional options to adjust workstations list display (for details, see "Additional Features").

To view the list of workstations that belong to a separate group,

select the group name from workstation groups list.

To view a full list of registered workstations,

click **Show All Workstations** at the top of Navigation pane.

Workstation information is displayed in tabular list. Each row in the list contains a workstation. Columns contain basic workstation properties. Extended information on each workstation is available in **Details** panel.

To view specific workstation's properties,

in the main screen workspace, select the row with workstation description.

After this, **Details** panel will display table of properties with the following workstation data:

- **Status**. Managed workstation and Client status. This parameter may have the following values:
  - **Works properly**. Managed workstation is enabled, Client is running.
  - **Inactive**. Managed workstation is disabled or unavailable for a long time. The same status is displayed, if the Client is uninstalled from the managed workstation.
- **Address**. Workstation address. When specifying the address you may use domain name or IP address.
- **Installed**. Date and time of workstation Client's first access to the server.
- **Established**. Date and time of Client launch on workstation.
- **Last check-in**. Date and time of workstation Client's last access to the Server.
- **Schema version**. Client's current security schema version number.
- **Client version**. Client version number.
- **Settings version**. General settings security policy version number (see "General System Settings").
- **Template version**. Employee notification templates version number (see "Employee Notifications about Policy Violations").
- **Network settings version**. Version number of settings of data transferring through network connections with Network Monitor (see "Settings of Corporate Network").
- **Network traffic control version**. Version number of settings of network traffic transferred through XMPP, MMP, FTP, FTPS, SMTP/IMAP/POP3,HTTP and HTTPS protocols (see "Network Traffic Control").
- **Exclusion of applications version**. Exclusion of applications from interception version number (see "Exclusion of application from interception"). In brackets you will see the number of the latest version.
- **Free disk space on shadow copy drive**. Free space on hard drive where shadow copies are stored (incl. percent) and minimum free space.

  Warning!
  If there is at least one valid rule that allows shadow copying, and there is less free space on the host drive than specified by the policy (see "Creating Shadow Copies and Blocking Operations Due to Free Space Shortage"), no data will be printed or written to removable media: even if these steps aren't covered by any rule.

Note:
Information retrieved from some attributes is duplicated in the main screen workspace.

Each registered workstation is automatically added to "default" workstation group. At the same time, "default" workstation group security policy is assigned to the new workstation.

You can do the following as you work:

- manage workstation groups:
  - add workstation groups
  - edit workstation group parameters
  - delete workstation groups.
- manage workstations:

- add computers' information to workstation groups and thus define workstation security policy
- remove workstations from workstation group
- delete workstation from security schema
- update Clients at managed workstations.

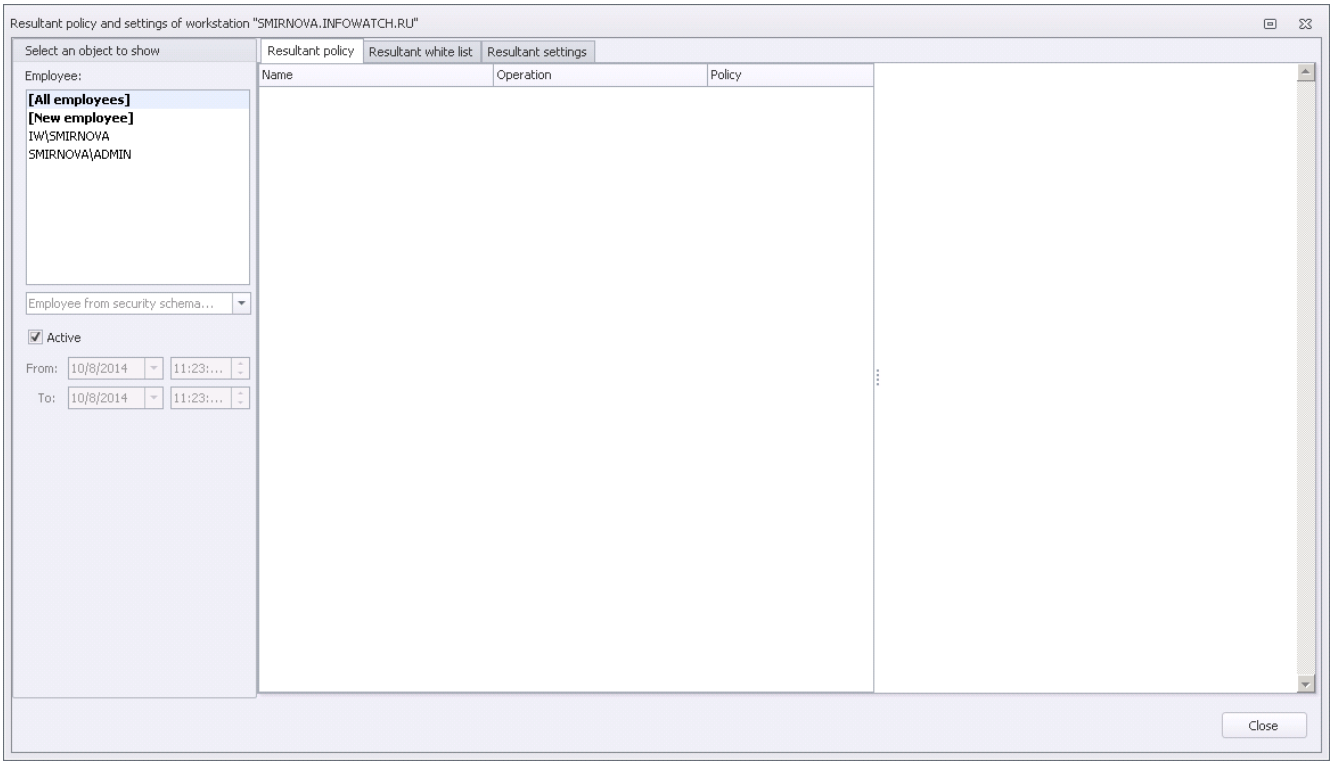
3.4.2.4.2 Viewing Resultant Policy and White List for a Workstation

To view information about policy for a workstation:

1. In the **Employee** list, pick an employee you want to view policy and white list for.
2. Proceed with one of the following actions:
   - in the Main Menu choose **Edit -> Show settings and resultant policy**.
   - on **Workstations pane** click **Show settings and resultant policy**.

   As a result, a window **Resulting policy and settings of workstation ""** will be displayed.

At **Resultant policy** tab you will see resulting rules of workstation. Resulting policy contains default rules, rules for a workstation and rules for employees (see "Device Monitor Rules Application").



On a **Employee** pane:

- **All Employees** - resulting policy for an employee account without attachment to a workstation.

  Note: to view resulting policy of an employee for a definite workstation, pick a workstation from **Employee** pane or drop-down list **Employee from security schema**.
- **New Employee** - resulting policy for a new employee (it is not yet present in the security schema).

Use drop-down list **Employee from security schema** to view resulting policy for a definite employee which is present in the security schema.

You can, as well, choose period for a resulting policy:

- tick **Active** box, to view current resulting policy for an employee .
- untick **Active** box, to view resulting policy for a definite period.

To view a set of rules for an employee,

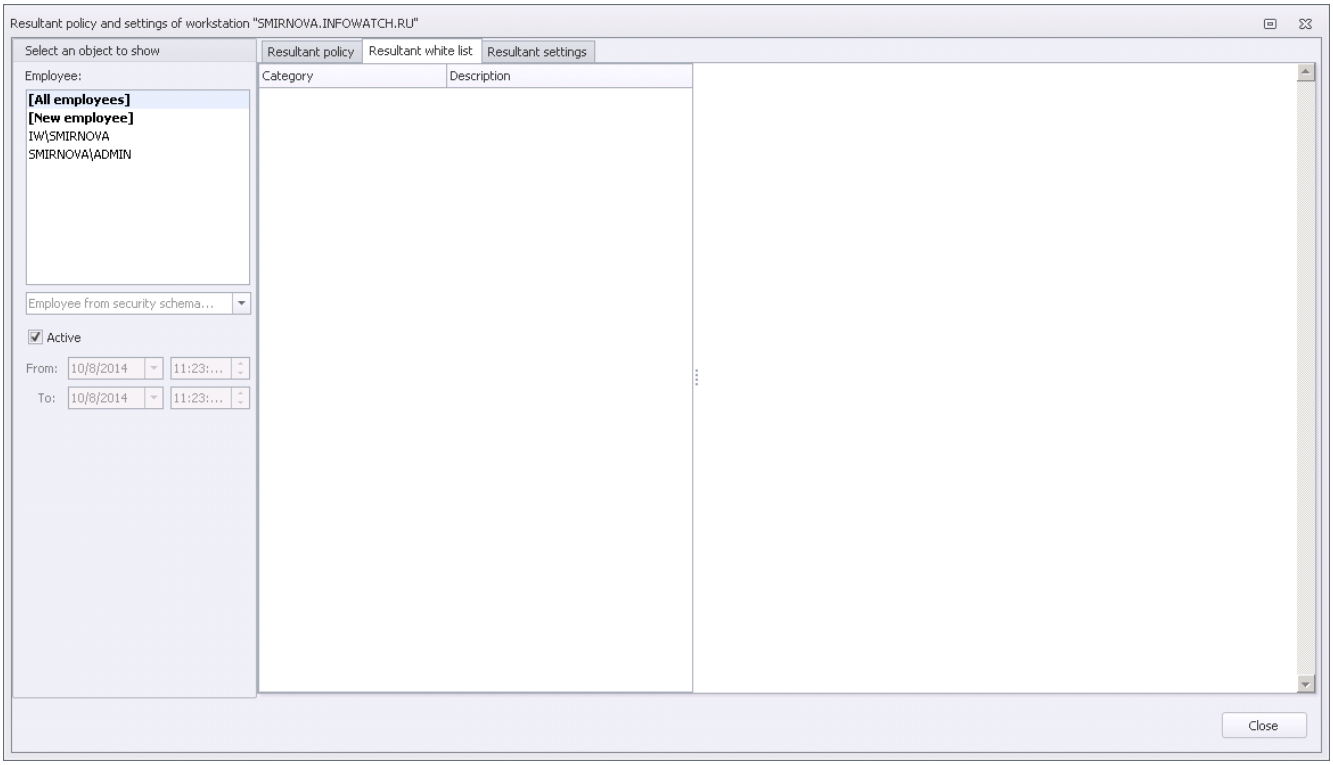
pick a required employee on a **Employee** pane.

To view detailed information about a rule,

pick required rule in the list of rules on **Resultant policy** tab.

Detailed information will be displayed on the right from the **Resultant policy** tab.

At **Resultant white list** tab you will see permitted devices for a concrete employee (see "White Lists").



On a **Employee** pane:

- **All Employees** - resultant white list for employees.
- **New Employee** - white list for a new employee (it is not yet present in the security schema).

Use drop-down list **Employee from security schema** to view white list for a definite employee which is present in the security schema.

You can, as well, choose period for a white list to be displayed:

- tick **Active** box, to view current white list for an employee .
- untick **Active** box, to view white list for a definite period.

To view a white list for an employee,

pick a required employee on a **Employee** pane.

To view detailed information about white list,

pick white list on **Resultant white list** tab.

Detailed information will be displayed on the right from the **Resultant white list** tab.

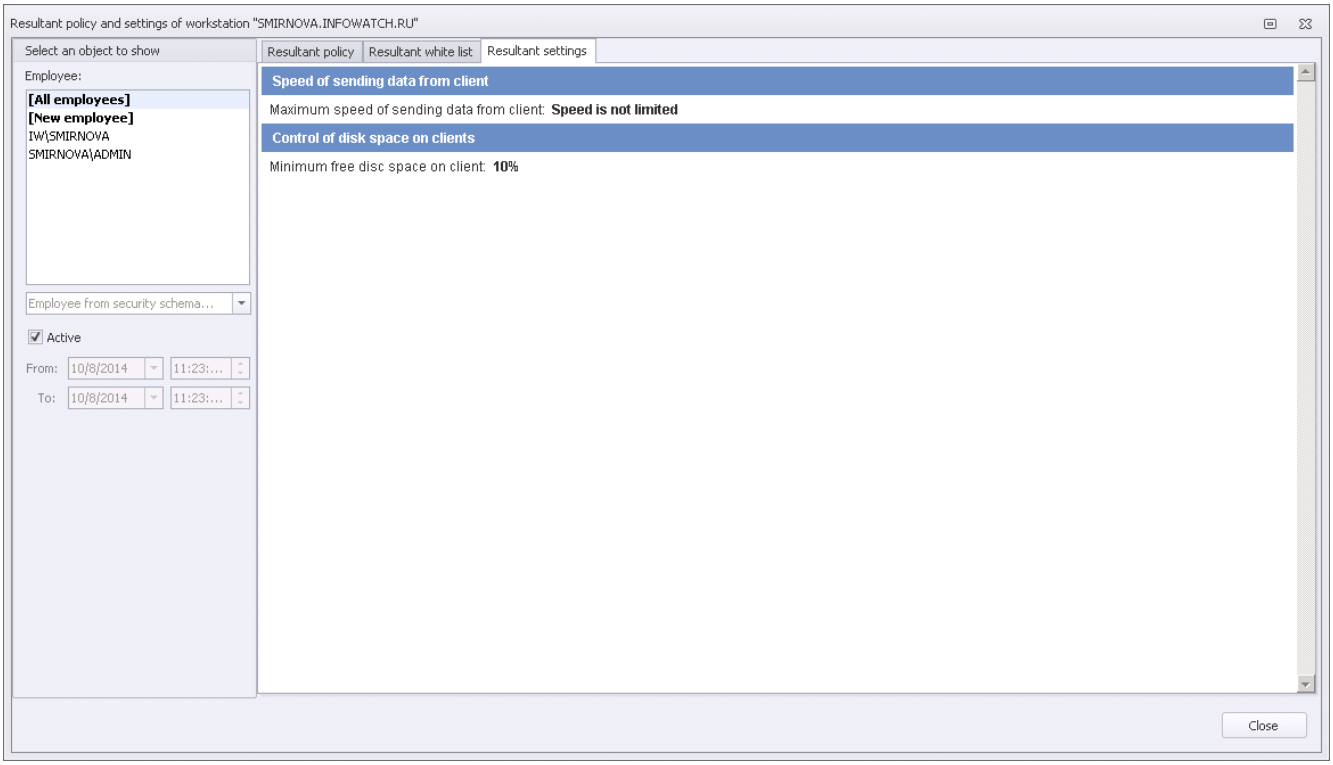
3.4.2.4.3 Viewing Resultant Settings for a Workstation

To view information about resultant settings for a workstation:

1. In the **Employee** list, pick an employee you want to view policy and white list for.
2. Proceed with one of the following actions:
   - in the Main Menu choose **Edit -> Show settings and resultant policy**.
   - on **Workstations pane** click **Show settings and resultant policy**.

As a result, a window **Resulting policy and settings of workstation ""** will be displayed.

On a **Resultant settings** pane you can see **Speed of sending data from client** and **Control of disk space on clients**, wich are resultant for a Workstation. Resultant settings contain default settings and settings for Workstation's group (see "Common settings for clients" and "Adding and editing a workstation group").



On a **Employee** pane:

- **All Employees** - resulting setting for an employee account without attachment to a workstation.
  Note: to view resulting settings of an employee for a definite workstation, pick an employee drop-down list **Employee from security schema**.
- **New Employee** - resulting settings for a new employee (it is not yet present in the security schema).

Use drop-down list **Employee from security schema** to view resulting setting for a definite employee which is present in the security schema.

You can, as well, choose period for a resulting setting:

- tick **Active** box, to view current resulting setting for an employee .
- untick **Active** box, to view resulting setting for a definite period.

To view a settings for an employee,

pick a required employee on a **Employee** pane.

3.4.2.4.4 Adding and Editing a Workstation Group

Warning!
When a new workstation is registered its information is automatically added to security schema (to "*Default*" group).

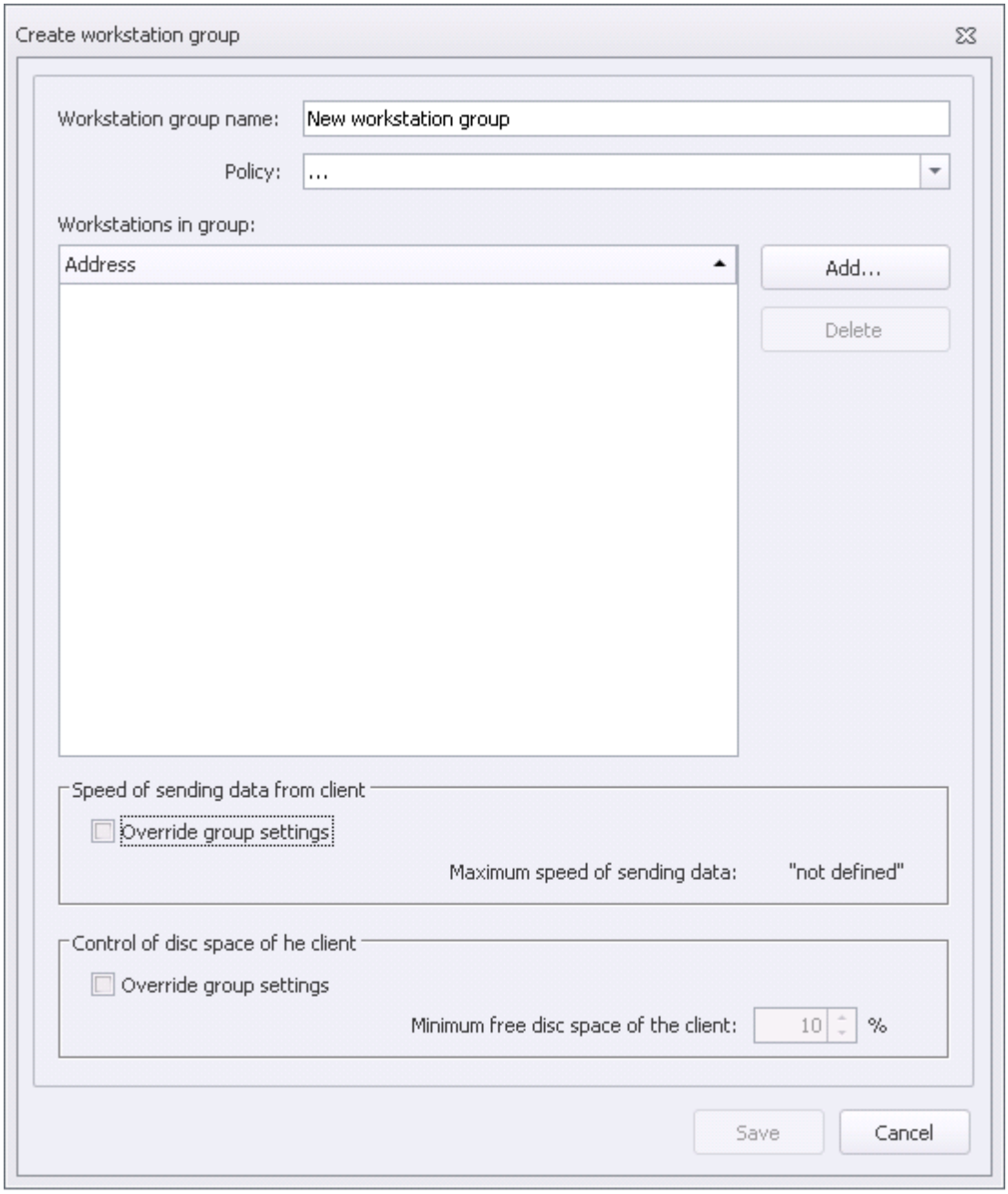
To add or edit a workstation group:

1. Go to **Workstations**.
2. Take one of the following steps:

Action	Steps

Add workstation group	• in the Main Menu, click **Edit > Create workstation group**; • click **Create Workstation Group** at the top of Navigation pane.
Edit workstation group	1. In **Workstations** area of Navigation pane select workstation group name. 2. Take one of the following steps: • in the Main Menu select **Edit > Edit** • click **Edit** at the top of Navigation pane; • double-click selected workstation group name.

This opens a dialog box with group parameters.



3. In this dialog, specify the following parameters:
   - **Workstation group name**.
   - **Policy**. From the drop-down list select security policy that will be assigned to this workstation group .
4. Define a list of workstations in a group:
   - To add one or several workstations click **Add**. In the opened **Add workstation to the group** dialog you can select workstations from:
     - directory service (for example, Active Directory)

- Microsoft Windows Network
- ones registered in System previously (for example, after manual Device Monitor Client installation) and already belonging to other Device Monitor groups.

Select a node from a tree in left panel then flag workstations which you want to add to the editing group .

You can also search a workstation: enter a part of workstation name to the upper string and click **Find**.

After you selected all needed workstations, click **Save** to close **Add workstation to the group** dialog and return to a dialog box with group parameters.

- To edit workstation parameters, select it from the list of ones belonging to the group and click **Change** .
- **Speed of sending data from client -** choose **Maximum speed of sending data** parameter for the group.
- **Control of disk space of the client -** choose **Minimum free disc space of the client** parameter for the group.
- To delete an entry from the group, select it and click **Delete**.

5. Click **Save**.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.4.5 Deleting Workstation Group

To edit or delete workstation group:

1. Go to **Workstations**.
2. In **Workstations** area of Navigation pane select workstation group name.
3. Take one of the following stepssteps:
   - in the Main Menu select **Edit > Delete**;
   - click **Delete** at the top of Navigation pane.
4. In the following confirmation dialog select **Yes** to confirm that you want to delete workstation group.

   Warning!
   The group you are deleting may contain workstations that don't belong to any other group. If you delete the only group these workstations belong to, they will be automatically added to "default" group.

5. Click **OK**.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.4.6 Adding Workstation to a Group

When installing InfoWatch Device Monitor Client (see "InfoWatch Device Monitor Client Setup"), workstation is added to "default" workstation group. All workstations inside "default" group will be affected by security policy assigned to this group. Further on, you can assign security policies by assign a workstation to various workstation groups.

To move a workstation from one workstation group to another:

1. Go to **Workstations**.
2. In **Workstations** area of Navigation pane, select workstation group that contains the workstation. Main screen will display a list of all workstations inside the group.
3. Select a row that contains the workstation you want to add to another group. Click and hold the selected row

and drag the workstation to **Workstations** area of Navigation pane. Move the pointer over the name of workstation group you want to add the workstation to. When a yellow arrow appears to the left of the selected group name, release the mouse button.

This adds workstation to selected workstation group.

You can also add information about computers without InfoWatch Device Monitor Client manually. Computer information is imported from directory service (connection configuring settings see in "Connecting to LDAP Server") or your network environment. Then after InfoWatch Device Monitor installation this workstation (see "Creating Primary Distribution Task") will be affected by the policy of the group it was added to.

Warning!
It is not recommended to add computers with similar names. These computers will be registered in InfoWatch Device Monitor system as a single workstation, affected by the same policies, and register the same events, etc.

To add workstation to a group:

1. Go to **Workstations**.
2. In **Workstations** area of Navigation pane select workstation group name. Main screen will display a list of all workstations inside the group.
3. Take one of the following steps:
   - in the main menu select **Edit > Add Workstation**
   - click **Add Workstation** located at the top of **Workstations** area
   - right-click in the workspace and select **Add Workstation** from the drop-down menu.

   In the opened dialog you can select workstations:
   - imported from directory service (for example Active Directory)
   - received from Microsoft Windows Network.
4. Flag workstations or workstation groups. Minimized groups are marked with an icon; expanded - . Double-click a group, to expand or collapse it.

   Warning!
   By marking a group you select the computers that are included in that particular group. Subgroups and subgroup computers of selected group are not selected: you have to select them separately.

   You can also specify workstation name in the line at the bottom of dialog box. When listing names, separate them with semicolons.
5. Click **OK**.

This closes **Select computer** dialog and adds the information on selected computers to workstation group.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.4.7 Removing Workstation from a Group

Workstation is added to a group basing on needed security policies. You might need to disable policy's action to the workstation. To perform this procedure, you must remove workstation from workstation group with this policy.

Note:
If you remove a workstation from a single group it belongs to, it will be automatically added to "default" group.

To exclude workstation from workstation group:

1. Go to **Workstations**.

2. In **Workstations** area of Navigation pane, select workstation group that contains the workstation. This displays a full list of workstations that belong to selected group.
3. Select a row that contains the workstation you want to remove from workstation group.
4. Take one of the following steps:
   - in the main menu select **Edit > Remove Workstation From Group**
   - click **Remove Workstation From Group** located at the top of **Workstations** area
   - press **Delete** keyboard button

This removes workstation from the group.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.4.8 Deleting Workstation from Security Schema

You can remove a workstation from the list of registered workstations (for example, workstation discontinued operation). Workstation information will not be deleted, but it will be marked as **Inactive** due to Client deactivation. If you don't want to save inactive workstation information, you can delete its record.

To remove workstation from security schema:

1. Go to **Workstations**.
2. In **Workstations** area of Navigation pane, select workstation group that contains the workstation.
3. In the Main screen workspace, select the row that contains the inactive workstation you want to remove.
4. Take one of the following steps:
   - in the Main Menu, click **Edit > Delete Workstation From Security Schema**;
   - click **Delete Workstation From Security Schema** located at the top of **Workstations** area
   - right-click workstation row and select **Delete Workstation From Security Schema**
   - press **Shift+Delete** at the keyboard.
5. In the following confirmation dialog select **Yes** to confirm that you want to remove the workstation.

This removes workstation information from all groups the workstation was assigned to.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.4.9 Updating Clients at Managed Workstations

Device Monitor Clients at managed workstations can be simply updated by the task (see task details in "Clients Remote Installation, Updating and Uninstallation" and "Creating Updating Task").

To update Device Monitor Clients at all managed workstations of the group:

1. Go to **Workstations**.
2. In **Workstations** area of Navigation pane, select workstation group.
3. Click **Update** All **Workstations** located at the top of Navigation pane.

To update Device Monitor Clients at selected managed workstations:

1. Go to **Workstations**.
2. In **Workstations** area of Navigation pane, select workstation group.
3. In the Main screen workspace, select the row(s) containing managed workstation(s). To select several workstations click at them while pressing **Shift** or **Ctrl** button.
4. Click **Update Workstations** located at the top of **Workstations** area.

This creates and runs the update task for selected workstations.

3.4.2.5 White Lists

You can manage lists of devices with full access from **White Lists** section. To go to this section, click **White Lists** button at Navigation pane.

For more information on white lists see:

- Viewing White List Details
- Adding white list
- Defining Entry Validity Period
- Editing White List
- Deleting White List

3.4.2.5.1 Viewing White List Details

White Lists area of Navigation pane displays all white lists. Main screen work pane displays devices (models and instances) in selected white list.

Note:
Use additional features to adjust white list display (see "Additional Features").

To view information for separate white list,

select white list title in the group.

White lists information is available as a list of devices grouped by their type. Each row in the list contains device model or instance. Columns contain devices' general properties. Extended information on device properties is displayed in **Details** panel.

To view detailed information on device properties,

select the row that contains device model or instance name.

Details panel displays properties table including the following information:

- **Device instance or model identifier**. Model code (VID - Vendor ID) or device instance serial number (PID-Product ID).
- **Device description**.

- **Device type**.
- **Category**. Model or instance.
- **Period**. Full access period starting and expiry date and time.
- **Detected on workstation**. Name of workstation where the device was detected.
- **Added to database at**. Date of device information submission to database (see "Adding Device to Database ").

Note:
Some of the properties on **Details** panel is duplicated in the main screen workspace.

3.4.2.5.2 Adding White List

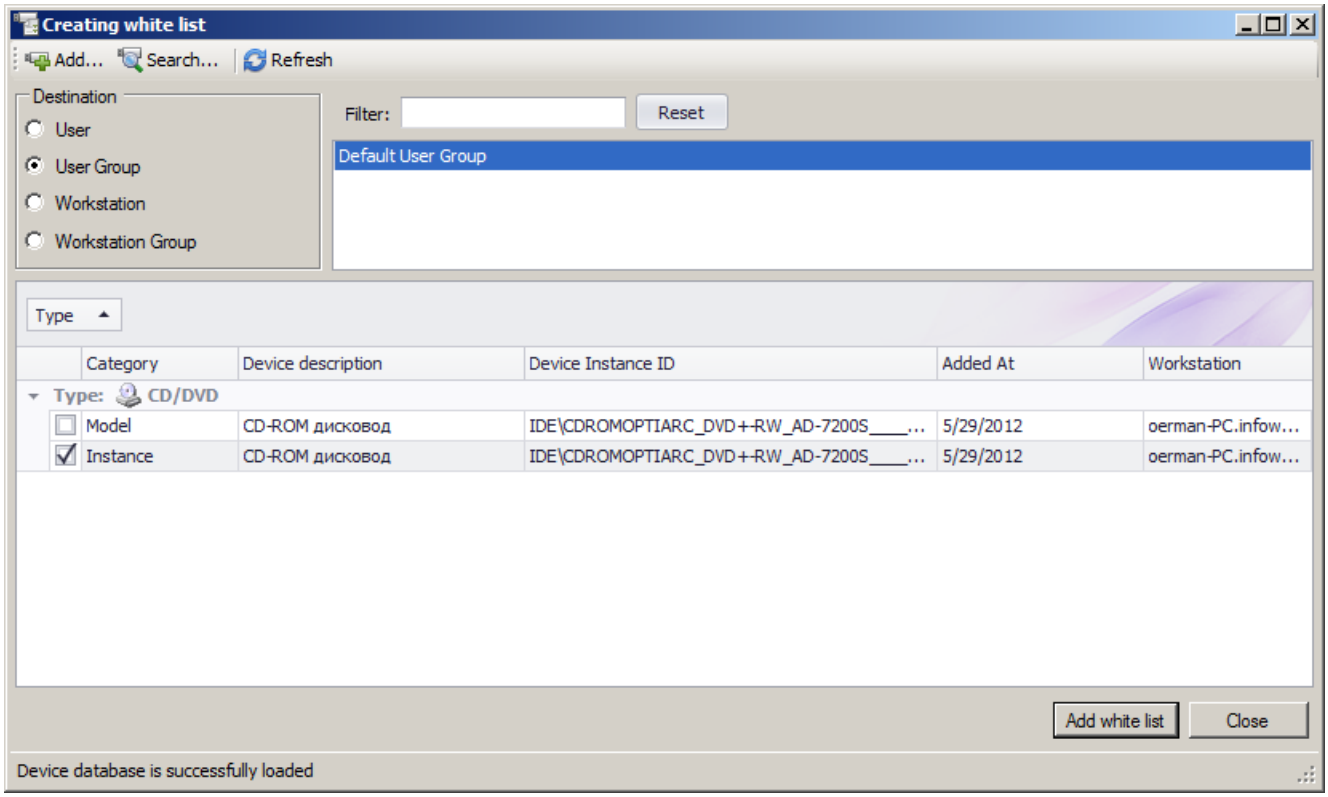
White list affects selected objects: employees, employee groups, workstations or workstation groups.

Warning!
A single object (employee, employee group, workstation or workstation group) can have only one white list assigned to.

To add white list:

1. Go to **White Lists** section.
2. Take one of the following steps:
   - select **Edit > Create White List** in the Main Menu;
   - click **Create White List** at the top of Navigation pane.

   This opens **Creating White List** dialog box.



3. In the table of devices registered in the System select models and instances which should have full access to.

Warning!

Information on creating a list of registered device models and instances see in:

- Adding Device to Database;
- Removing Device from Database.

4. In **Select, who will have access to devices** area select a filter: who will be affected to white list action:
   - employees
   - employee groups
   - workstations
   - workstation groups

   The list of entries will appear below.

   You can also use a search string by entering a name or its part.
5. Select employee / employee group / workstation / workstation group that will have full access to selected devices.
6. Click **Save**.

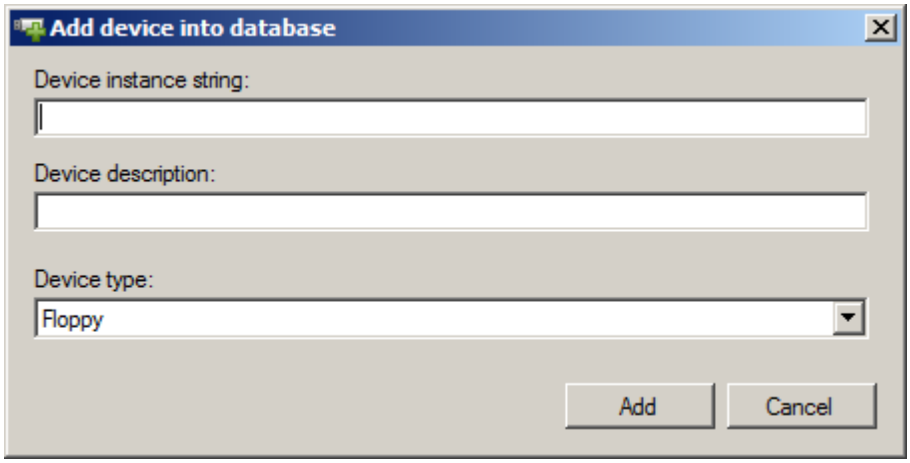
3.4.2.5.2.1 Adding Device to Database

You can add to white lists only device models and instances which were previously registered in the System. Device information is added in two ways:

- manually (if device ID is provided)
- via search engine (if device is connected to managed workstation).

To add device information manually:

1. Open **Creating White List** dialog box (see "Adding white list").
2. Click **Add** at the right.
   This opens **Add device into database** dialog box.



3. Specify device parameters:
   - select device type from **Device type** drop-down list
   - enter the device instance or model ID into **Device instance string** box

Note:

To retrieve device instance string, connect the device and use standard Windows tools (for example, **Device Manager**) to view its properties. Device instance string is displayed on **Information** tab.

Device instance string is displayed as XXX\YYY\ZZZ where XXX is device type (usually, connection type, such as USB, IDE or ACPI), YYY is device model string (Vendor ID), and ZZZ is device instance string (Product ID).

Model ID is displayed as XXX\YYY where XXX is device type and YYY is model ID string (VID).

To make sure the ID is valid, click **Check**.

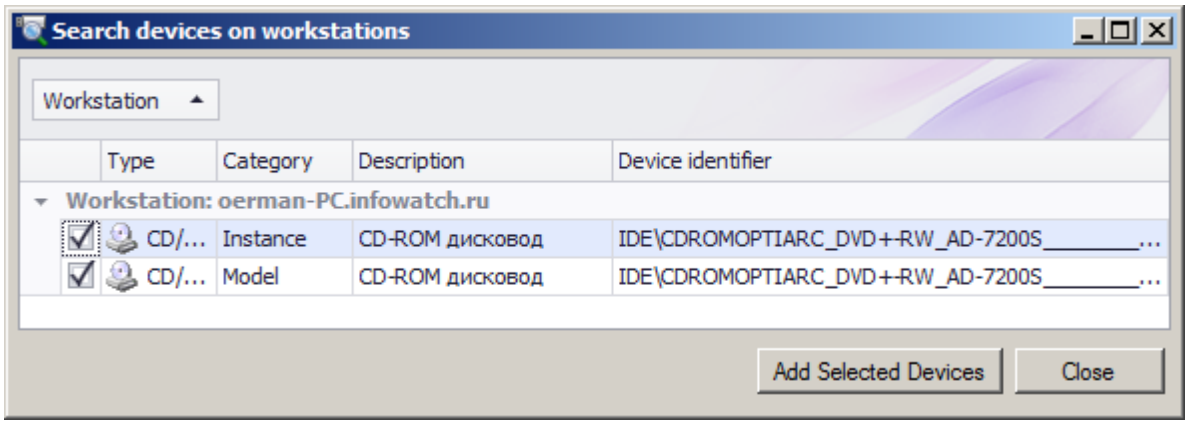
Warning!
When using instance code, take into account that some devices do not have unique ID: ID can be changed dynamically and differed evet when connecting to different ports of the same workstation. In such case using device model code is recommended.

- enter description into **Device description** box.

4. Click **Add**.

To add device information via searching devices connected to managed workstations:

1. Open **Creating White List** dialog (see "Adding white list").
2. Click **Find** at the right.
   This opens **Search devices on workstations** dialog box.



3. Use one of the following ways to select a managed workstation from the list:
   - click ▷ next to workstation;
   - double-click workstation name.

   You will see a list of devices which were connected to selected workstation during all the time Device Monitor Client was installed at the workstation.
4. Flag the devices you want to add.
5. Click **Add selected devices**.

3.4.2.5.2.2 Removing Device from Database

To remove device entry from database:

1. Open **Creating White List** dialog (see "Adding white list").
2. Select and right-click device instance or model in device database table. In the drop-down menu, select **Delete device**.
3. In confirmation screen click **OK**.

3.4.2.5.3 Defining Entry Validity Period

Each device instance or model from the white list has an access permission displayed separately. This item's (permission's) default validity period is practically infinite (from 01.01.1753 to 31.12.9999). You can limit full access period for this device. This device will be subject to general rules that apply to this device type before and after the specified period.

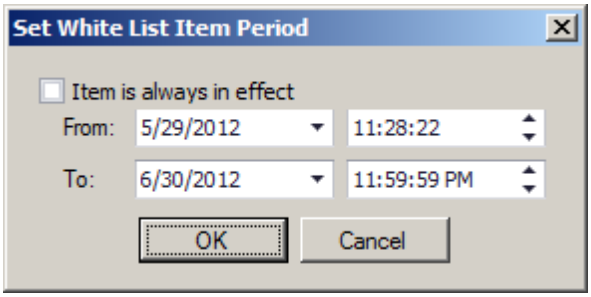
To set white list entry period:

1. Go to **White Lists**.
2. In **White Lists** area of Navigation pane select white list that contains the item.
3. If white list items are grouped in (for example, by the type of devices), expand them (see "Grouping Entries ").

   Note:
   If you set validity period for the entire group, the change will only take effect for the first item of the group.

4. Select the row that contains device instance or model you want to assign validity period to and take one of the following steps:
   - select **Edit > Edit Item** in the Main Menu
   - click **Edit Item** at the top of **Permitted devices** area
   - double-click selected entry name;
   - right-click entry row and select **Edit Item** from drop-down menu.

   This opens **Set white list item period** dialog.



5. Set item validity period and click **OK**.

3.4.2.5.4 Editing White List

To edit white list parameters:

1. Go to **White Lists**.
2. In **White Lists** area of Navigation pane select the name of white list.
3. Take one of the following steps:
   - in the Main Menu, click **Edit > Edit**;
   - click **Edit** at the top of Navigation pane;
   - double-click selected white list name.

   These actions open **Edit white list** dialog box. This dialog is similar to **Creating white list** dialog with the exception of **Select, who will have access to devices** area, which is unavailable.
4. You can add or remove devices from database, if needed (see "Adding Device to Database" and "Removing Device from Database").
5. Add or remove flags in device database table to change the catalog of models and instances in the white list.
6. Click **Save**.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.5.5 Deleting White List

To delete white list:

1. Go to **White Lists** section.
2. Click the white list you want to delete.
3. Take one of the following steps:
   - select **Edit > Delete** in the Main Menu;
   - click **Delete** at the top of Navigation pane.
4. In confirmation box click **Yes** to confirm that you want to remove the white list.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.6 Signatures

File Monitor rules can be configured to affect only files of specific structure distinguishing defined file format. To do this, InfoWatch Device Monitor defines file format basing on its **signature**.

Signatures section contains a list of signatures which the System can recognize. Signatures are conveniently grouped into **categories**.

To view existing signatures:

1. Go to **Signatures**.
   Signatures area of Navigation pane displays a list of **signature categories**.
2. Select a signature category from the list.
   Main screen workspace will display a list of all signatures in the selected category.

Warning!
Predefined signature categories cannot be edited or deleted. You can't create new signatures.

You can do the following:

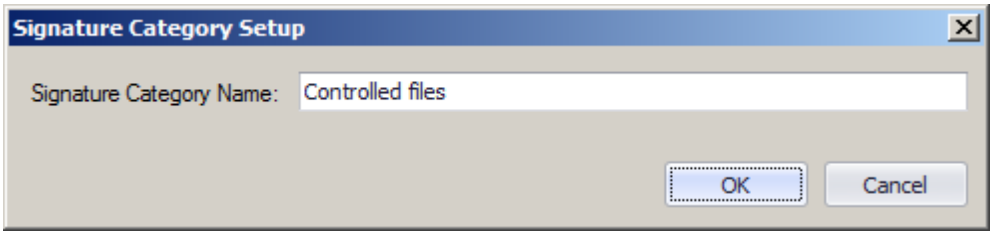
- create signature categories
- fill created categories by copying predefined signatures
- delete your signature categories, if they are not used by any rule.

3.4.2.6.1 Adding Signature Category

To add signature category:

1. Go to **Signatures**.
2. Take one of the following steps:
   - in the main menu select **Edit > Create signature category**;
   - click **Create signature category** at the top of Navigation pane.

   Create signature category dialog appears.



3. Enter new category's name.

4. In **All signatures** area you can select one of preset categories from the drop-down list. All preset signatures are displayed by default.
5. In the left panel select signatures you want to add to a new category.
   To select several signatures hold **Ctrl** or **Shift** button.
   To move selected signatures to a new category click **Add**.
   To delete signatures from the list of included to a new category selected them at the right panel **Selected signatures** and click **Delete**.
6. Click **Save**.

3.4.2.6.2 Editing Signature Category

After you have created a signature category (see "Adding Signature Category") you can fill it by:

- in signature category editing dialog (select a category and click **Edit > Edit** in the Main Menu or click **Edit** at the top of Navigation pane or double-click selected category name) define a list of signatures as described in "Adding Signature Category".

or

- by copying signatures from other categories directly at main screen workspace .

To copy signature from one category to another:

1. Go to **Signatures**.
2. In **Signatures** area of Navigation pane select the name of predefined category that contains the signature you want to copy.
3. In main screen workspace select the row that contains the name of the signature you want to copy. You can select multiple signatures at a time with **Ctrl** or **Shift**.
4. Click and hold the selected row and drag the pointer to **Signatures** area of Navigation pane. Move the pointer over the category you created earlier where signatures will be added. Release the button when a yellow arrow appears next to the selected category.

As a result, the signature will be copied into selected category.

To remove a signature from category,

select signature and do one of the following:

- click **Remove signature from category** at the top of **Signatures** area
- right-click and select **Remove signature from category** in the drop-down menu.
- press **Delete** keyboard button.

3.4.2.6.3 Deleting Signature Category

Warning!
The following categories cannot be deleted:

- signature categories used by any File Monitor rule
- predefined signature categories.

To delete a signature category:

1. Go to **Signatures**.
2. Click the signature category name.
3. Take one of the following steps:
   - in the main menu select **Edit > Delete**
   - click **Delete** at the top of Navigation pane.
4. In the next confirmation dialog select **Yes** to confirm that you want to remove signature category.

Warning!
To apply changes you have to save current security schema (see "Editing Security Schema"). If you don't save your security schema, all changes will be discarded.

3.4.2.7 Application protocol

Application protocol is a list of applications used on Workstations with Device Monitor Client installed. InfoWatch Device Monitor allows to create application protocol with applications list and to export existing lists for further use. To use application lists for white and black lists formation, see "Configuring Application Monitor Rule"

Protocol is being automatically formed after Device Monitor installation and PC reboot.

Warning!
Application protocol does not include system vital applications, so that such application could not be stopped from functioning on a Workstation.

To export Application protocol:

1. Go to **Applications** area on Navigation pane 

.
2. In menu press  and choose location.
3. Choose export location and press **Save**.
   Protocol will be exported in **.xls** format.

See also:

- Creating an application list and adding applications
- Creating and editing the application protocol filter

3.4.2.7.1 Creating an application list and adding applications

To manage white and black application list, the program offers application lists creation from **Application protocol** (see "Application protocol") or adding applications manually and automatically.

Lists are used to permit or forbid application usage on employee's Workstations.

To create an application list:

1. Click  button on Navigation panel in **List of applications** area.
2. In a **List Name** field choose a name for a list you create.
3. Click **Save**.

To choose application from protocol/list:

1. Click  on the **Rules** pane (see "Management console main screen")
2. In the search line **Select the application to add to the list** type in the name of the application.
3. Use the following buttons:
   - **Select all** - to select all the applications in the list/protocol.
   - **Deselect all** - to cancel the selection.
4. Click **Add applications to the list** and choose to:

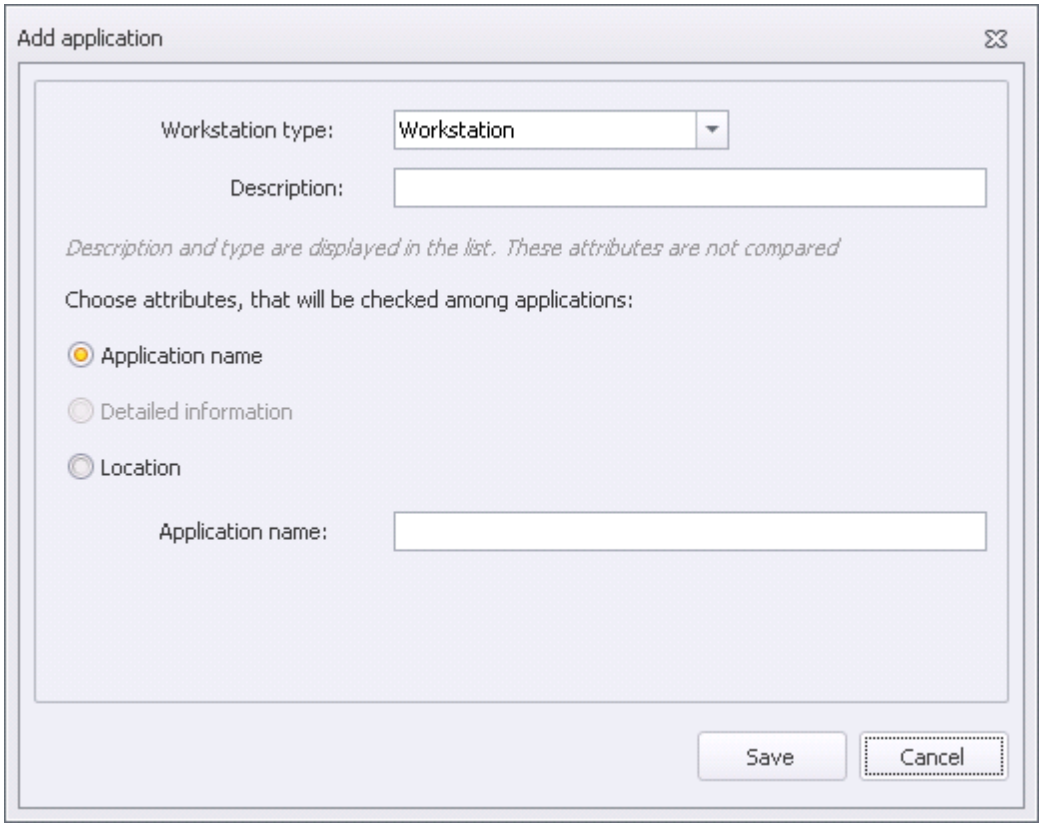
- **Add applications automatically** (see "To add application automatically" below in current topic)
- **Add applications manually** (see "To add application manually" below in current topic)

To upload application:

1. Pick an application and click button.
2. In the opened window choose the application
3. Click **Open**.
4. Choose attributes:
   - **Application name**
   - **Location**
5. Click **Save** to complete the operation.

To add application manually:

1. Pick an application and click button.
2. In the opened window, choose the application and click **Open**.
3. In the **Add application** window, type in **Description**.
4. Choose parameters which will be used to filter the application:
   - By **Application name**:
     In Application name field enter the full name of the application file.
   - By **Location**:
     Location - type in path to the file up to the folder.
     Application name - type in the file name.
   - **Detailed information** - filtering application by detailed information **Publisher**, **Product Name**, **Application Name**.



5. Click **Save** to complete the operation.

To edit application in the list:

Click button on the **Rules** pane.

You can edit details which will be used to filter the application (see To add applications manually)

To delete application from the list:

1. Click button on the **Rules** pane.
2. Click **Yes** to delete application from the security scheme.

3.4.2.7.2 Creating and editing the application protocol filter

Filters allow to configure an application protocol (see "Application protocol") to display an information on applications corresponding to your conditions only.

Warning!

Preset **Today** filter shows applications which have been started on particular day since initial installation of the Client.

All filter shows applications which have been started right upon Client installation.

To create a new filter:

1. Click button in **Application protocol** area on Navigation pane (see "Management Console Main Screen ")
2. Enter the name of the filter in **Name** field.
3. Choose the number of records you want to see in **Applications Protocol** in the **Show number of records** field. (see. "Application protocol").
4. To set up period for the records to be displayed flag the **Filter by date** option and specify parameters **From:** and **To:**.
5. In **Workstation** field choose employee's workstation.
6. In **Application name** field type in the name of the application you want to see information about.
7. In **Product name** field pick the name of the product.
8. In **Employee** field choose employee's account.
9. In **Publisher** field type in the application publisher.
10. In **Full path** use path to the application.
11. Click button to delete filter.
12. To save a filer click **Save**.

To edit filter:

Click button in **Application protocol** on **Navigation pane** (see "Management Console Main Screen") or press **Ctrl+E**.

To delete filter:

1. Click button in **Application protocol** on **Navigation pane** (see "Management Console Main Screen") or press **Ctrl+D**.
2. Click **OK** to confirm deletion.

3.4.3 Temporary Employee Access to Network

An employee for which a rule denying connections outside corporate network is active (see "Settings of Corporate Network" and "Configuring Network Monitor Rule"), can request temporary access to external connections from InfoWatch Device Monitor Client menu, **Network control** command.

Warning!

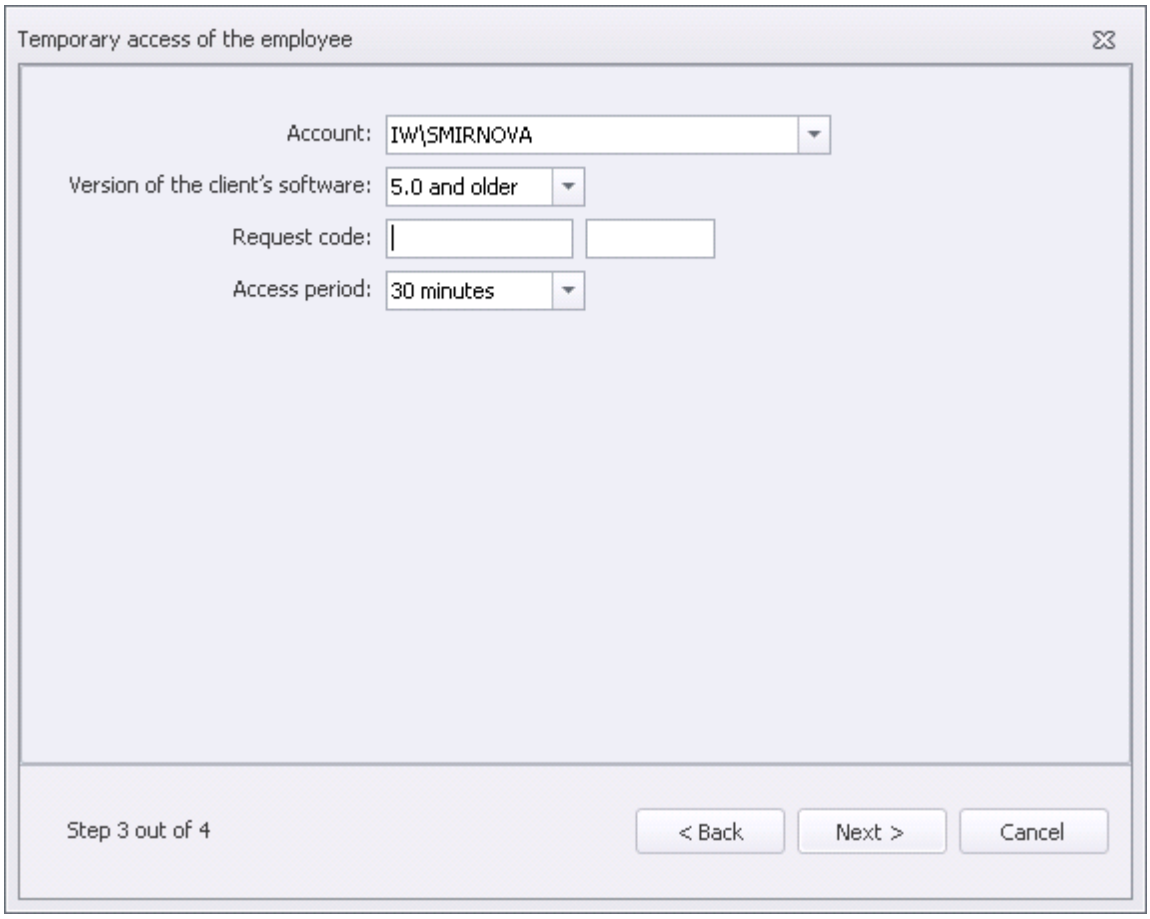
An employee can request an access only if the **Show tray icon interface** option is selected (see "Common Settings for Clients").

The way how to configure text displayed to an employee is described in "Employee Notifications about Policy Violations", "**Network connection forbidden. Detailed**" notification type.

An employee should send received request code to security officer.

To grant an access to external connections for employee:

1. In Main Menu select **Tools > Temporary employee access**.
2. In the dialog window choose **Dictated by phone**, click **Next**:
3. Choose option **To the network**, click **Next**.



4. From **Account** drop-down list select an account of employee to which a temporary access should be granted.
5. In **Version of client's software** choose version of Device Monitor Client installed on employee's Workstation.

   Note:
   When not sure about client's version, choose **4.1** or **4.2**.

6. To **Request code** field enter a code sent by employee.
7. From **Access period** drop-down list select time period for which a temporary access should be granted.

8. Click **Next**.

   The code which should be sent to employee is displayed in **Response code** field.

9. Click **Close**.

3.4.4 Temporary Employee Access to Devices

An employee, who does not have access to devices (see "Configuring Device Monitor Rule"), can request the access using **Device List** tab on client side.

> **Warning!**
>
> An employee can only request access to device if he had **Show tray icon interface** option marked (for details see "Common settings for clients").
>
> About set up on client side, see "Employee Notifications about Policy Violation", notification type **Access to device forbidden**.

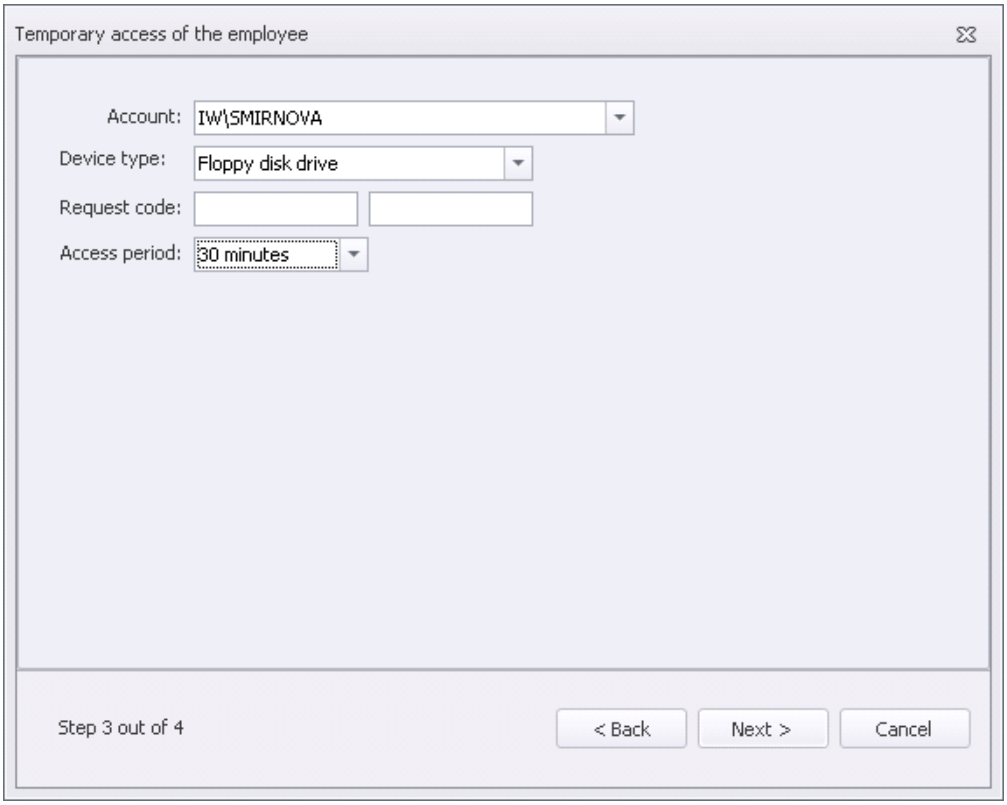
After getting a request code, and employee should hand it to the Security officer..

Depending on the situation, you can use two types of communication with an employee:

- by phone;
- by email.

To permit temporary access to devices (by phone):

1. In main menu pick **Tools -> Temporary employee access**.
2. Choose **Dictated by phone (digital text code)**, press **Next**.
3. Choose option **To device**, click **Next**.

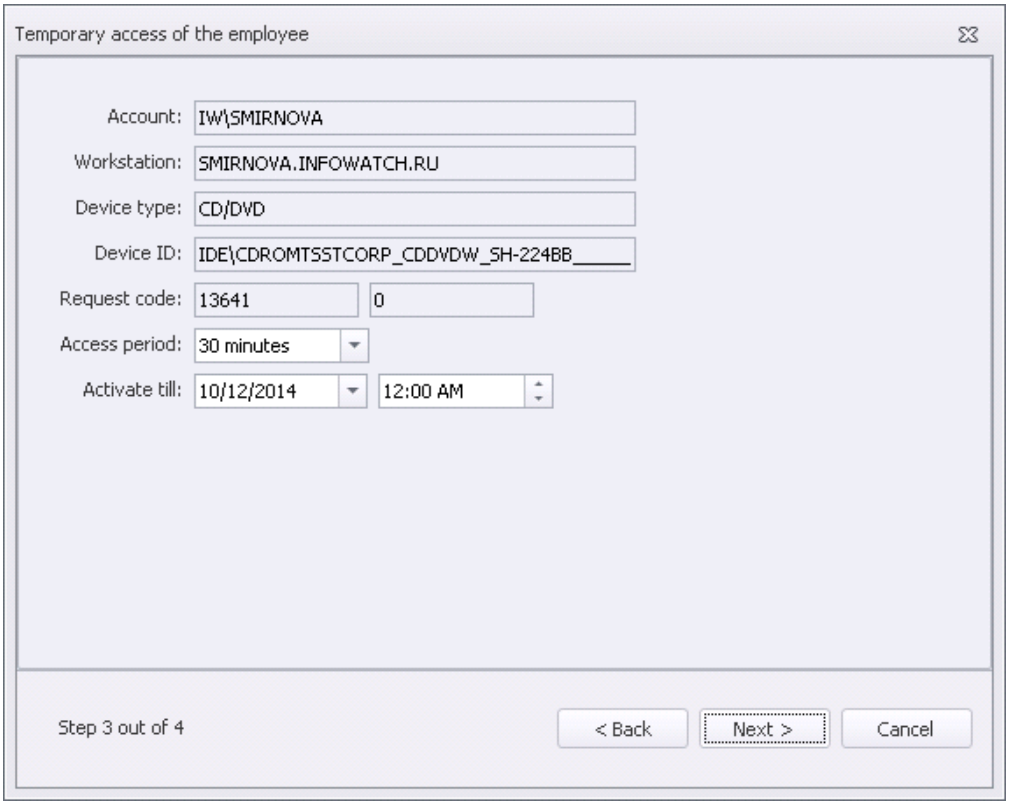


4. Choose **Account** from, drop-down list.
5. Choose **Device type** which needs to be permitted.
6. Use request code in **Request code** line.
7. Choose **Access period** from the drop-down list.

8. Click **Next**.
   In **Confirmation code** you will see the code for an employee.
9. Click **Finish**.

To permit temporary access to devices (by email):

1. In main menu pick **Tools -> Temporary employee access**.
2. Choose **Obtained via email or other means of communication (query text code)**, press **Next**.
3. Type in request code into **Enter request text** field, press **Next**.



4. Choose time for access in **Access period** field.
5. In **Activate till** choose time period when employee can manage access to device (after time has passed, access will be permitted for the time period set in **Access period**).
6. Press **Next**.
   You will see the code in the **Copy answer text to clipboard** field..
7. Click **Finish**.

3.5 Viewing Events

InfoWatch Device Monitor Clients installed at managed workstations provide keeping data on using external devices, transferring data via network connections and using instant messengers for data transfer. This information is stores as **events** and transferred to InfoWatch Device Monitor servers along with data of shadow copies. Events (unlike shadow copies) are registered in InfoWatch Device Monitor database and are available from Management Console.

You can define the information logging level (keep all information on access attempts, policy violations only or save nothing) in general settings of your security schema: for further details see "Common Settings for Clients".

You can view events in **Events** section. To go to this section, click **Events** button on Navigation pane.

To view events,

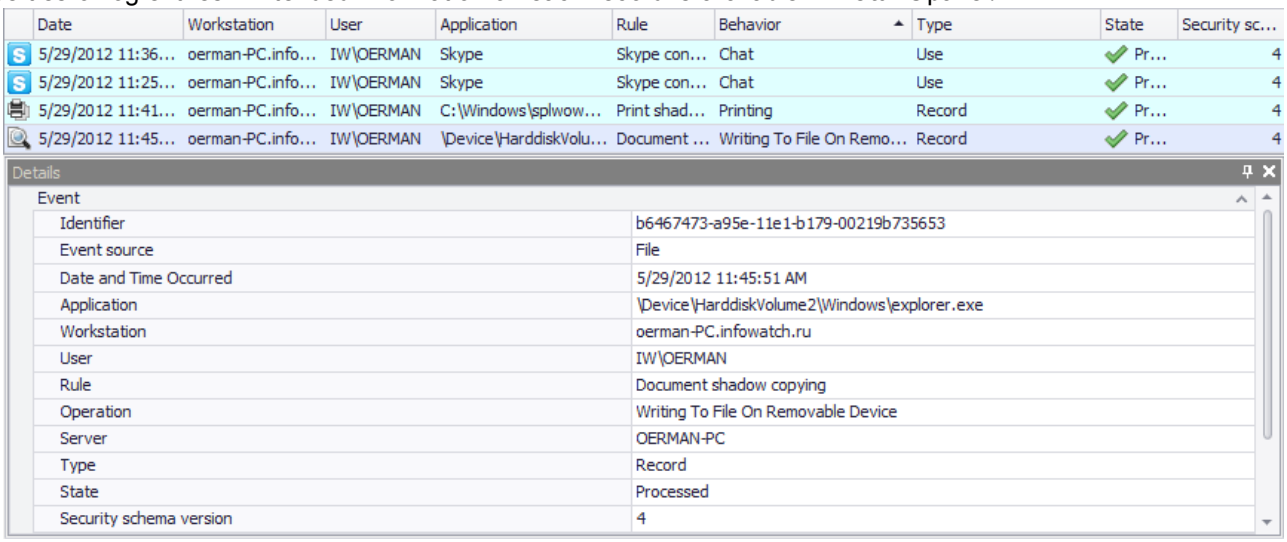
click the filter name in the filter list.

There are two predefined filters:

- **All events**
- **Today**

You can create custom filters to view events, as described in "Event Filters".

Event information is displayed in a tabular list where each row contains a single record. Columns contain basic properties of log entries. Extended information on each record is available in **Details** panel.



Attribute name	Description	Available values
Common attributes		
Identifier	Unique event number	
Event source	Interceptor-based event type	- **File** – File Monitor; - **Devices** – Device Monitor; - **Printer** – Print Monitor; - **Skype, XMPP, MMP, Yahoo (YMSG)** – IM Client Monitor; - **FTP** – FTP Monitor; - **Mail** - Mail Monitor; - **HTTPS** – HTTPS Monitor; - **Network** – Network Monitor.
Date	Event date and time (in hours and minutes) registered on workstation. Device Monitor server keeps an event in UTC, and Management Console displays it according to the local time of a computer where Console installed	
Application	Executable file name and/or name of the process responsible for the action, if detected	
Workstation	Name of the workstation that registered the event	

Employee	Name of the domain (workstation name outside the domain) and user login used for event registration or operating system reference for events outside user sessions	
Rule	Name of policy rule managing the event	
Operation	Employee initiated action or attempt	
Server	Name of InfoWatch Device Monitor server the Client transmits event information to	
Type	Action-based event type	- **Record** - adding or changing data (including renaming) on external device; sending files via messenger; sending print jobs to printer; voice chat; sending data via FTP/FTPS - **Use** - connecting an external device that allows unmonitored read/write operations or sending messages - **Violation** - IM Client interceptor user-initiated violation - **Warning** - user-initiated a ban or didn't give consent to use IM Client plug-in, while monitoring is required by security policy - **Usage forbidden** – attempt of sending data via forbidden channel
State	Status of event processing on the server	- **New** - **Processed** - **Sent to Traffic Monitor**
Security schema version	Number of security schema version that was active on the workstation when the event was registered	
Operation verdict	Attribute of allowed action. For *Devices* events (**Device Monitor** rule) the blocking is also available.	- **Allowed** - **Forbidden** – only for *Devices* events - **Unprotected data copying is disabled** – only for *Devices* events - **Allowed (in white list)** - for whitelisted device events
For events with *File* source		
Assign	Full target file name	
File size	Target file size	
Object status	Shadow copy of transferred data	- **no copies created** - rule does not require shadow copying - **copy created** - shadow copy created successfully - **copying error** - for example, if there is no free space on the client

Device description	Target device instance or model ID	
For events with *Devices* source		
Device type	For supported device types list see "InfoWatch Device Monitor Functions"	
Device instance or model identifier	Model identifier (VID) and serial number (PID) of external device or printer used for the operation	
Device description	Device description received from OS of the workstation where the Client is installed	
For events with *Skype, XMPP, MMP, Yahoo* source		
IM user ID	UIN of the user authorized in the messenger at workstation	
Object status	Shadow copy of transferred data	- **no copies created** - rule does not require shadow copying - **copy created** - shadow copy created successfully - **copying error** - for example, if there is no free space on the client
List of senders	UIN of IM users, who sent the message/file via messenger	
List of recipients	UIN of IM users, who received the message/file via messenger	
File name	Full name of transferred file	
File size	Transferred file size or voice record file size	
Shadow copy	File, message or chat shadow copy	- **No** - no shadow copy was created - **Yes** - shadow copy created successfully
For events with *Printer* source		
Document	Full name of the file sent to print	
Printer	Name of target network printer	
Object status	Result of creating shadow copy of the print job	- Shadow copy of print job was successfully created. The job contained graphic and text data. - Shadow copy of print job was not created. The job contained no graphic or text data. - An error occurred while creating a shadow copy of print job. - Shadow copy of print job was successfully created. The job contained only graphic data. - The shadow cope should not have been created. - Shadow copy of print job was partially created. Graphic data were fully processed. Text data were partially processed - Shadow copy of print job was partially created. Graphic data were

		partially processed. Text data were fully processed. - Shadow copy of print job was successfully created. The job contained only text data. - Shadow copy of print job was partially created. Graphic data were partially processed. The job contained no text data. - Shadow copy of print job was partially created. The job contained no graphic data. Text data were partially processed.
For events with *FTP/FTPS* source		
Object status	Result of creating shadow copy of transferred data	- **no copies created** - rule does not require shadow copying - **copy created** - shadow copy created successfully - **copying error** - for example, if there is no free space on the client
Sender	Name used for employee authorization at FTP server	
FTP server	Name or IP address of FTP server	
Relative path	Directory at FTP server where to the file is transferred	
File name	Full name of transferred file	
Real file size	File size calculated after transfer	
Declared file size	File size according to data of application which performs a transfer to FTP server (browser for example)	
Starting point	When file is transferred by piecemeals, position which starts the of the current part transfer.	
Shadow copy	Result of creating file shadow copy	- **No** – shadow copy was not created - **Yes** – shadow copy created successfully
For events with *HTTP* or *HTTPS* source		
State	Result of creating shadow copy	- **no copies created** - rule does not require shadow copying - **copy created** - shadow copy created successfully - **no free space on disk** – client does not have enough free space - **copying error** - for example, if there is no free space on the client
Reciever DNS	DNS name of a Workstation	
Reciever IP	IP-address of a Workstation	
Request size	Size of a request in Kbps	

Rule	Name of policy rule managing the event	
For events with *Mail* source		
State	Result of creating shadow copy	- **no copies created** - rule does not require shadow copying - **copy created** - shadow copy created successfully - **no free space on disk** – client does not have enough free space - **copying error** - for example, if there is no free space on the client
Sender	DNS name of a sender Workstation	
List of recipients	Reciever addresses	**Note:** In case there was no shadow copy setting for an event and it contains a long list of recipients, *Recipient* field will be truncated to 1024 symbols.
Subject	Mail Subject	
Transmission type	Used protocol	
Message type	Mail direction	- **Incoming** - **Outgoing**
Size, bite	Size in bites	
Channel type	Encrypted or not encrypted	- **All channels** - **Encrypted channel**
Rule	Name of policy rule managing the event	
For events with *Network* source		
Time of ban removal starts	For *Network operations temporary ban removal* operation - start of temporary access period. See details in "Temporary Employee Access".	
Time of ban removal ends	For *Network operations temporary ban removal* operation - end of temporary access period. See details in "Temporary Employee Access".	
Connection server	For *Connection forbidden* operation - address or name of forbidden server which was attempted to gain access to	
Port	For *Connection forbidden* operation - port number used for connection attempt.	

If needed, you can free some space in the database by deleting all the information about already processed events (**Processed** or **Sent to Traffic Monitor** state). See details in "Deleting Events".

3.5.1 Event Filters

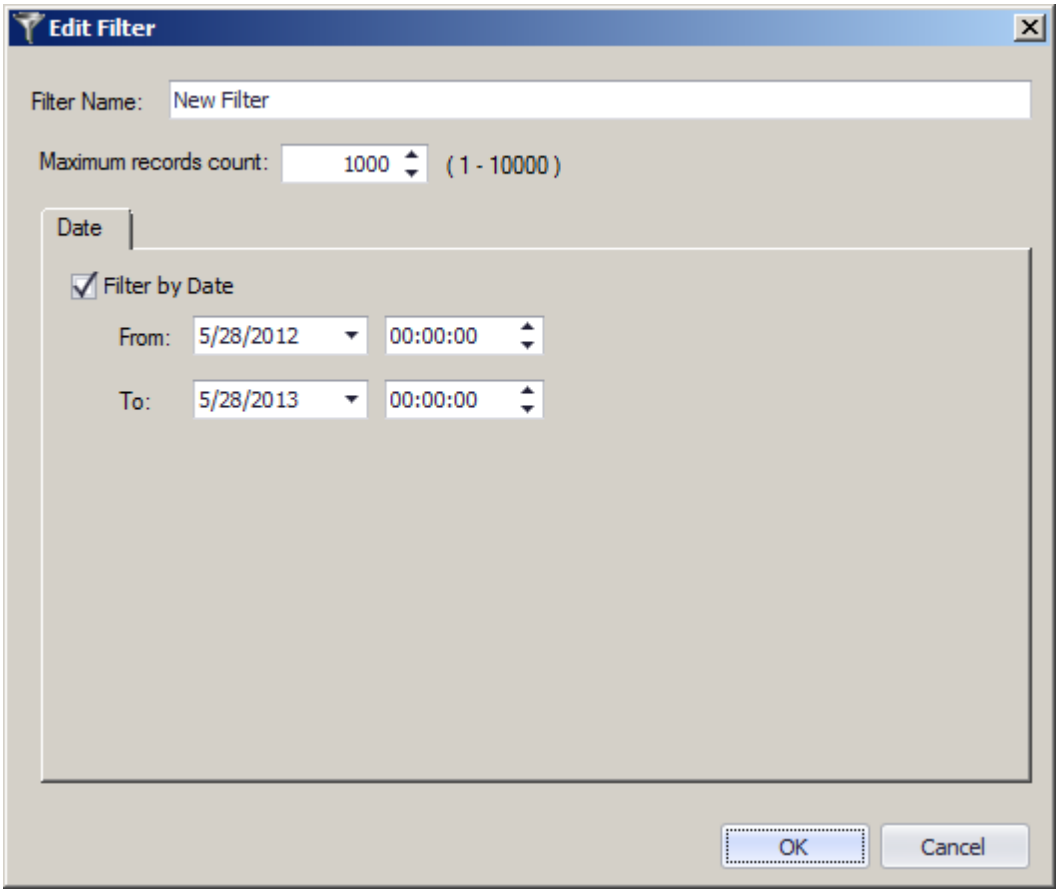
In addition to predefined filters you can create custom filters to view event information.

To add or edit a filter:

1. Go to **Events**.
2. Follow the necessary steps:

Action	Steps
Creating filter	• in Main Menu select **Edit > Add Filter**; • click **Add Filter** at the top of Navigation pane.
Editing filter	1. In **Events** area of Navigation pane, select the name of the filter you want to edit. 2. Take one of the following steps: • In Main Menu click **Edit > Edit Filter**; • click **Edit Filter** at the top of Navigation pane. • double-click selected filter name

These actions open **Edit filter** dialog.



3. Specify filter options in **Edit Filter** dialog:
   - **Filter Name**.
   - **Show number of records**. Limit on the number of entries displayed in Management Console workspace (1000 records by default).

> **Note:**
> If there is more events matching filter conditions than **Show number of records** value, then the most matching to the primary filter value will be displayed.

- To filter by a date, flag **Filter by date** box and specify the desired period in **From** and **To** fields. Set the date and time in right and left field respectively.

4. Click **Save**.

3.5.2 Deleting Events

The information about already processed events (**Processed** or **Sent to Traffic Monitor** state) can be deleted.

You can delete events:

- for certain time period;
- all matching certain filter.

To delete from the database an information about events for a period:

1. Go to **Events**.
2. Take one of the following steps:
   - click  **Delete events** at the top of Navigation pane
   - in Main Menu click **Edit > Delete events**.

   This opens **Deleting from database** dialog
3. Specify needed time period for which you want to delete events.
4. Click **Delete**.

Then a number of deleted events will be displayed.

To delete from the database an information about events matching certain filter:

1. Go to **Events**.
2. In the filter list select needer filter name.
3. Take one of the following steps:
   - click  **Delete filter events** at the top of **Events** area.
   - in Main Menu click **Edit > Delete filter events**.
4. In request box select **Yes** to confirm.

Then a number of deleted events will be displayed.

3.6 Clients Remote Installation, Updating and Uninstallation

You can install, update, or delete InfoWatch Device Monitor Clients from a workstation via InfoWatch Device Monitor Management Console. These operations are performed through **tasks**. You can run tasks to install, update or remove client software, change uninstallation password, or monitor these processes.

Remote client management is carried out by special **Distribution Agent** which requires the following:

- Target workstations must meet hardware and software requirements: see "InfoWatch Device Monitor Client Hardware and Software Requirements".
- Proactive virus protection for workstations must be turned off at the time of installation.
- Device Monitor server and target workstations should resolve each other by domain names.
- On workstations, where firewall, different from windows standard one, is installed, it should be disabled. Except for disabling, you can also allow any network connections for the following Device Monitor components: `IWDeployAgent.exe, iwdmc.exe, DM.Client.exe, IWProxy.exe, rmtlogctr.exe.`

> **Note:**
> To install Client on Windows 7 workstation, go to **Control Panel** -> **Network and sharing center** ->

Change advanced sharing settings. Enable file and printer sharing. Upon completion, **Distibution Agent** can be copied to workstation. Firewall will be automatically configured.

To go to Management Console task section, use **Tasks** button on Navigation pane.

Tasks management guidelines are available in:

- View Tasks
- Preparing Primary Client Installation
- Creating Primary Distribution Task
- Creating Update Task
- Creating Uninstallation Password Reset Task
- Creating Uninstallation Task
- Launching, Pausing, Editing, and Deleting Tasks
- Client Installation Errors

You can also install and upgrade your Client with software distribution tools (for example, via Microsoft Active Directory group policies). To run these operations, use installation package that was created as described in "Creating Installation Package".

3.6.1 View Tasks

Tasks area of Navigation pane displays a list of all created, executed and outstanding tasks. Main screen work pane displays a list of target workstations for the selected task.

Details panel displays the following parameters for selected task:

Parameter	Description
Name	Original name of the task
Description	Original description of the task
Type	One of the following task types: • primary distribution • change password • update • uninstall
Status	Current task status. Possible values: • running • stopped • completed
Restart period, min	Intervals between task launches on workstation, if the previous attempt failed, in minutes. If the task fails, it won't be launched again.
Number of restart trials	Maximum number of retries to restart distribution task on workstation . After all attempts have been used, **Task status** parameter value will be set to **Error** (for further details, see "Client Installation Errors").
For primary distribution tasks	
Ask for employee permission for loading Skype plugin	Indicates that Skype will display a request to start InfoWatch Device Monitor interceptor after Client installation. For further details, see "General System Settings" and "Creating Installation Package".
Show employee notifications	Indicates that employee's attempt to perform a banned action will trigger a warning. For further details, see "General System Settings", "Creating Installation Package" and "Employee Notifications about Policy Violations"

Show Windows interface tray icon	Indicates that an  icon will be displayed in Windows taskbar notification area on Client computer. Client information and list of controlled devices is available upon a click on this icon.
Uninstallation product password	Shows if the password requested from employee that attempts to remove Device Monitor Client.
For primary distribution and update tasks	
Installation directory	Installation directory for Device Monitor Client at target workstations.
Installation login	Name of the Console user that launches the task on workstations.
Waiting fir restart duration, hours	Workstation reboot waiting period (in hours); if the workstation is not restarted manually during this period, the System will notify the employee (if notifications are enabled), and force operating system restart.
Duration of restart notifications, hours	Period of displaying requests for rebooting computer, in hours.
Restart notifications rate, min	Time intervals between repeated reboot requests, in minutes.
Reboot messages	Text displayed to the employee in reboot request.
For change password tasks	
Uninstallation product password	Shows if the password requested from user that attempts to remove Device Monitor Client.

Each target workstation's main screen workspace displays the following parameters:

Parameter	Description
Address	Workstation IP address or domain name
Status	Current status of task for the relevant workstation. Possible values: •  **Not running** •  **Preparing** •  **In progress** •  **Waiting for reboot** (only for installation and upgrade tasks) •  **Error** (for further details, see "Client Installation Errors") •  **No access** •  **Completed**
Client version	Client version currently installed on workstation
Operation system	Workstation operating system.
System type	Type of operating system on the workstation: x64 or x32.
Connections count	Number of connection attempts to unavailable workstation.
Time	Date and time of the last connection to workstation.

3.6.2 Preparing Primary Client Installation. Distribution Agent

Remote client installation is carried out by InfoWatch Device Monitor special **Distribution Agent**.

Correct remote client installation via InfoWatch Device Monitor requires the following:

- Target workstations must meet hardware and software requirements: see "InfoWatch Device Monitor Client

Hardware and Software Requirements".

- Proactive virus protection for workstations must be turned off.
- Workstations with the firewall that differ from Windows firewall, that firewall:

o should be disabled

or

o should have a permission for InfoWatch Device Monitor Distribution Agent

or

o should have **15505** port (default port by which the Distribution Agent awaits for a connection) opened for incoming connections, if it was not changed in connection settings (see "<applicationSettings> section", **CommunicationPort** parameter).

- The root centers of certification must be up-to-date at the workstations.

Additional requirements vary depending on distribution method:

Method 1:

Distribute `Setup.DeployAgent.msi` installation package (provided along with installation software) to target workstations.

Method 2:

Transmit Distribution agent through shared administrative resources:

- Workstation firewalls must be either turned off, or set required exceptions: see "Firewall Settings".
- Specify settings for network access to shared resources: see "Enabling Shared Administrative Resources ".

If all requirements are met, you can start creating and then start primary distribution tasks.

3.6.2.1 Enabling Shared Administrative Resources

To transfer InfoWatch Device Monitor distribution agent to target workstations through shared administrative resources, the following requirements must be met:

- If workstation with Windows XP is outside a domain, in security policy settings of this workstation set **Network access configuration parameter: Sharing and security model for local accounts** value to `Classic`.
- Workstations must have their shared administrative resources (like `\\computername\admin$`) enabled (in Windows Vista and Windows 7 they are disabled by default). To enable them:
  1. Make sure that sharing of files and printers is enabled. In Control Panel, open **Network and sharing Center -> Change advanced sharing settings**. In desired profile enable file sharing and printer sharing.
  2. In the registry, in `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System` path, add **DWORD (32-bit)** parameter named **LocalAccountTokenFilterPolicy**. Set its value to **1**.

3.6.2.2 Firewall Settings

Firewall settings requirements:

Application protocol	Transport protocol	Port
RPC	TCP	135
RPC over HTTPS	TCP	593

Application protocol	Transport protocol	Port
NetBIOS Datagram Service	UDP	138
NetBIOS Name Resolution	UDP	137
NetBIOS Session Service	TCP	139
SMB	TCP	445

For workstation availability defining quickness the ICMP protocol should be permitted.

For Windows firewall the "**File printing and sharing**" preset rule should be permitted.

3.6.3 Creating Primary Distribution Task

Primary distribution (installation from Management Console) of InfoWatch Device Monitor Client using **installation agents**. Installation agent is an executable file. It is passed on to workstations and starts automatically during task execution, receiving Client updates from server.

Warning!

If server account doesn't have administrator rights on all target workstations, primary Device Monitor Client distribution will require credentials of an account having administrator rights at:

- all target workstations
- computer where Management Console is running
- computer where Device Monitor server is running

If a password of used account is expiring (Windows warns that the password expires in 3 days and need to be changed) then primary distribution task cannot run on behalf of this user.

If you are unable to enter administrator name and password, you can create your own InfoWatch Device Monitor Client installation package ("Creating Installation Package") and install it by other means ("Standard InfoWatch Device Monitor Client Setup" and "Client Setup via Software Distribution Tools").

To create a primary InfoWatch Device Monitor client application distribution task:

1. Go to **Tasks**.
2. Take one of the following steps:
   - in the Main Menu select **Edit > Add Task**;
   - click **Add Task** at the top of Navigation pane.

   These actions open **Deployment task wizard** dialog.
3. Select **Initial deployment task**, enter task name and description and click **Next**.
4. Create a list of workstations which you need to install Device Monitor Client to. To add workstation (or several workstations):
   a. Click **Add**. **Select computer** dialog will display a list of workstations from:
      - directory service (Active Directory for example)
      - Microsoft Windows Network
      - ones registered before (for example, after manual Client installation) and belonging to workstation groups (**DM server computers** node).

   b. Flag workstations or workstation groups. Minimized groups are marked with an icon; expanded - . Double-click a group, to expand or collapse it.

   Warning!

   By marking a group you select the computers that are included in that particular group. Subgroups and subgroup computers of selected group are not selected: you have to select them separately.

You can also specify workstation name or IP address in the line at the bottom of dialog box. When listing addresses, separate them with semicolons.

c. After you specify the workstations you want to add, click **OK**. **Select computers** dialog will be closed. Selected workstations list will be displayed in **Task target computers list** area.

To remove a workstation from the list, select it and click **Remove**.

When you make a full list of workstations click **Next**.

5. Then InfoWatch Device Monitor servers currently registered in the System are displayed.
You can change Client installation directory (`%Program Files%\Infowatch\DeviceMonitor\Client` is used by default) .
Click **Next**.
6. Configure task running settings:
   - Task retry parameters: they will be used in case the task wasn't launched at first attempt; if launching failed, the task won't be launched again. Specify the number of attempts and their intervals, in minutes.
   - **Wait while employee reboots computer**. If this check box is flagged, the Client will await for workstation reboot for specified time (in hours) without any employee notifications.
   - **Remind employee about reboot**. If this check box is flagged, then after "silent" reboot awaiting ends (see **Wait while employee reboots computer** setting), or just after installation, Device Monitor Client starts to notify employee that the reboot is required. If needed, change notifications duration and intervals and edit the message text.

     Warning!
     If neither **Wait while employee reboots computer** setting, no **Remind employee about reboot** setting do not flagged or their durations are expired but employee did not reboot theworkstation, then the Client displays a notification about forced reboot and allows 5 minutes to end operations. Then the computer will be forced to reboot.

   Click **Next**.
7. Configure Client settings:
   - To protect Client application from deleting by employee, enter the password that will be requested when trying to uninstall the Client and confirm it.
   - **Ask employee permission to work Skype plug-in** - after installation of the Client, Skype will display a requesting to launch Skype interceptor:
     - If employee agrees to launch interceptor, it will work until it is disabled in Skype menu (**Tools -> Options -> Advanced settings -> Manage other programs' access to Skype**). In the latter case, Skype will be forced to stop.
     - If the employee blocks the interceptor, Skype will be stopped. If you try start Skype later, you will be prompted to give another permission to use interceptor.
     - If this box is not flagged, interceptor doesn't require employee's permission.

     Warning!
     Not notifying the user about interceptor operation may contradict the applicable laws of your country.
   - **Show employee notifications** - if employee attempts to perform an action restricted by security policy, a warning will be displayed. For further details, see "Employee Notifications about Policy Violations"
   - **Show Windows tray icon interface** - an icon will be displayed in Windows taskbar notification area at managed workstation. Upon a click on this icon the Client information and list of controlled devices is available.
   - **Install the component of network interception -** installs **iw_proxy** component on a Workstation. Component will not be installed if you leave the checkbox empty.
   - **Install the component of network control -** installs **Network Monitor** interceptor on a Workstation. Component will not be installed if you leave the checkbox empty.

> **Warning!**
> You should not install the component of network control to the server with Citrix Provisioning Services: this can lead to the serious problems concerning server operation.

- **Hide the program in the list of "Installed programs" -** makes the client impossible to delete from Workstation.
- To launch a task immediately after saving, flag **Run task immediately** check box.
- Enter the credentials for the account that launches the task.This account must have administrator rights on all target workstations.

> **Warning!**
> The **Warning** does not save passwords for accounts used to launch tasks.
> If the new task is not launched immediately, you will have to use password next time to launch it from Management Console.
> If a password of used account is expiring (Windows warns that the password expires in 3 days and need to be changed) then primary distribution task cannot run on behalf of this user.

Click **Next**.

8. Look through the task summary. If you need to change any settings click **Back** to return. If all settings are correct, click **Finish**.

3.6.4 Creating Update Task

InfoWatch Device Monitor client applications update is required after InfoWatch Device Monitor server upgrade: for further details, see "Updating InfoWatch Device Monitor Server End".

> **Note:**
> Beside the following method, you can create update task with a simplified function as described in "Updating Clients at Managed Workstations".

To create and schedule InfoWatch Device Monitor client applications update task:

1. Go to **Tasks**.
2. Take one of the following steps:
   - in the Main Menu select **Edit > Add Task**;
   - click **Add Task** at the top of Navigation pane.

   These actions open **Deployment task wizard** dialog.
3. Select **Update task**, enter task name and description and click **Next**.
4. Create a list of workstations that require Device Monitor Client update. To add workstation (or several workstations):
   a. Click **Add**. The **Select computers** dialog, **DM server computers** node, contains the list of workstations where Device Monitor Client version does not match Device Monitor Server version but can be automatically updated (client software version should be 4.0.651 and higher).
   b. Flag workstations or workstation groups. Minimized groups are marked with an icon; expanded - . Double-click a group, to expand or collapse it.

   > **Warning!**
   > By marking a group you select the computers that are included in that particular group. Subgroups and subgroup computers of selected group are not selected: you have to select them separately.

   c. Use **Filter by workstation name** field to specify Workstation. Press **Find**.
   d. After you specify the workstations you want to add, click **OK**. **Select computers** dialog will be closed. Selected workstations list will be displayed in **Task target computers list** area.

   To remove a workstation from the list, select it and click **Remove**.

   When you make a full list of workstations click **Next**.
5. Please specify reboot settings:

- **Wait for reboot without notifying**. Start to notify immediately (*Do not wait* parameter), after mentioned time period (Wait for hour(s) parameter - you need to specify time before notification), Do not notify before forced reboot (*Wait infinitely* parameter).
- **Notify the employee about reboot necessity and wait for reboot**. After "silent mode" wait to notify (see **Wait for reboot without notifying** setting), or right after update process completion, Device Monitor client will start to notify the employee about reboot necessity during specified time period (*Notify within hour(s) within: minutes* parameter) or infinitely (*Notify infinitely every x minutes*), or do not notify (*Do not notify*). When necessary, change lenght and frequency and specify text of the message, which will be displayed along with notification.
- **Show a warning before reboot** - is a parameter to specify whether forced reboot notification will be displayed (an employee can complete current tasks within 5 minutes before forced reboot) or forced reboot will be performed without any additional text.

6. Specify:
   - Task retry parameters: they will be used in case the task wasn't launched at first attempt; if launching failed, the task won't be launched again. Specify the number of attempts and their intervals, in minutes.
   - To launch a task immediately after saving, flag **Run task immediately** check box.

   Click **Next**.
7. Look through the task summary. If you need to change any settings click **Back** to return. If all settings are correct, click **Finish**.

3.6.5 Creating Uninstallation Password Reset Task

To create uninstallation password change task, InfoWatch Device Monitor client application:

1. Go to **Tasks**.
2. Take one of the following steps:
   - in the Main Menu select **Edit > Add Task**;
   - click **Add Task** at the top of Navigation pane.

   These actions open **Deployment task wizard** dialog.
3. Select **Change uninstall password task**, enter task name and description and click **Next**.
4. Create a list of workstations that need their uninstallation passwords to be changed on **Deployment target computers** screen. To add workstation (or several workstations):
   a. Click **Add**. The **Select computers** dialog, **DM server computers** node, contains the list of workstations where Device Monitor Client is installed.
   b. Flag workstations or workstation groups. Minimized groups are marked with an icon ; expanded - . Double-click a group, to expand or collapse it.

      Warning!
      By marking a group you select the computers that are included in that particular group. Subgroups and subgroup computers of selected group are not selected: you have to select them separately.

   c. Use **Filter by workstation name** field to specify Workstation. Press **Find**.
   d. After you specify the workstations you want to add to task, click **OK**. **Select computers** dialog will be closed. Selected workstations list will be displayed in **Task target computers list** area.

   To remove a workstation from the list, select it and click **Remove**.

   When you make a full list of workstations click **Next**.
5. Specify:
   - The password that will be requested when trying to uninstall the Client. Confirm it.
   - Task retry parameters: they will be used in case the task wasn't launched at first attempt; if launching failed, the task won't be launched again. Specify the number of attempts and their intervals, in minutes.
   - To launch a task immediately after saving, flag **Run task immediately** check box.

   Click **Next**.

6. Look through the task summary. If you need to change any settings click **Back** to return. If all settings are correct, click **Finish**.

3.6.6 Creating Uninstallation Task

To create a centralized task that removes InfoWatch Device Monitor client applications:

1. Go to **Tasks**.
2. Take one of the following steps:
   - in the Main Menu select **Edit > Add Task**;
   - click **Add Task** at the top of Navigation pane.

   These actions open **Deployment task wizard** dialog.
3. Select **Uninstall task**, enter task name and click **Next**.
4. Create a list of workstations you are removing Device Monitor Client from in **Deployment target computers** screen. To add workstation (or several workstations):
   a. Click **Add**. The **Select computers** dialog, **DM server computers** node, contains the list of workstations where Device Monitor Client is installed.
   b. Flag workstations or workstation groups. Minimized groups are marked with an icon; expanded -. Double-click a group, to expand or collapse it.

      Warning!
      By marking a group you select the computers that are included in that particular group. Subgroups and subgroup computers of selected group are not selected: you have to select them separately.

   c. Use **Filter by workstation name** field to specify Workstation. Press **Find**.
   d. After you specify the workstations you want to add, click **OK**. **Select computers** dialog will be closed. Selected workstations list will be displayed in **Task target computers list** area.

   To remove a workstation from the list, select it and click **Remove**.

   When you make a full list of workstations click **Next**.
5. Specify:
   - Task retry parameters: they will be used in case the task wasn't launched at first attempt; if launching failed, the task won't be launched again. Specify the number of attempts and their intervals, in minutes.
   - To launch a task immediately after saving, flag **Run task immediately** check box.

   Click **Next**.
6. Look through the task summary. If you need to change any settings click **Back** to return. If all settings are correct, click **Finish**.

   Warning!
   In case you use Kaspersky Internet Security on a workstation with InfoWatch Device Monitor Client, you need to disable Kaspersky Internet Security selfprotect option, to uninstall the Client.

3.6.7 Launching, Pausing, Editing, and Deleting Tasks

If you flagged **Launch task immediately** when creating a task, it will start immediately. Otherwise, you will need to manually launch thetask. You might need this option, if for some reason you had to stop the task and want to start it again.

For instructions see the following table.

To perform any of these procedures, you must first select a task from the list on **Tasks** panel.

Action	Steps
Start task	• in the Main Menu select **Edit > Run**;

Action	Steps
	• click **Run** located at the top of Navigation pane.
Stop task	• in the Main Menu select **Edit >Stop**; • click **Stop** at the top of Navigation pane.
Edit list of workstations in task	Right-click workstation row and select **Add workstation to task** or **Delete workstation from task**. **Warning!** You can't remove a workstation if the task is running and not completed.
Edit task	• in the Main Menu select **Edit > Edit task**; • click **Edit task** at the top of Navigation pane. • right-click on task name and select **Edit task**. Specify new settings for the task like it is done for a new task (see "Creating Primary Distribution Task", "Creating Updating Task", "Creating Uninstallation Password Reset Task", "Creating Uninstallation Task")
Delete task	• in the Main Menu select **Edit > Delete task**; • click **Delete task** at the top of Navigation Pane. • right-click on task name and select **Delete task**. **Warning!** You can't remove a task with workstation that has a running task.
View workstation error log	• right click workstation row and select **Workstation Log**; • double-click target workstation row.

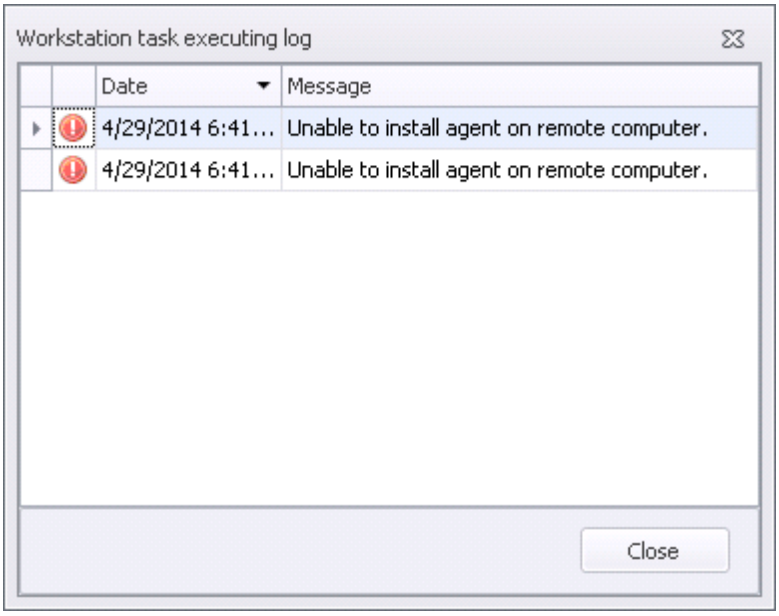
3.6.8 Client Installation Errors

You may encounter installation problems during remote InfoWatch Device Monitor client applications installation tasks to workstations. This will be indicated by **Task status** value in the list of tasks: see "View Tasks".

To view task errors:

1. Go to **Tasks**.
2. On **Tasks** panel select the task you want to review.
3. In **Status** column select filter value **Error** (for more information on filters see "Applying Standard Filters").

   Note:
   Status **No access** indicates that workstation is not available (switched off or disconnected from network).
4. In target workstation row, do one of the following:
   - right-click and select **Workstation Log**;
   - double-click target workstation row.



5. To view detailed error information, click the row. This opens a screen with Windows error description.

For detailed information on the error see its description, error code, or log in error's description. In particular, the errors may be caused by the following things:

- workstation is not available (switched off or disconnected from network);
- the installation process or reboot is blocked by another task or user (common description could be "*Other task is running*");
- target workstation does not allow administrative resources;
- account in use doesn't have enough rights on target workstation.

If all remote Client installation conditions listed in "Preparing Primary Client Installation" are met and the task is not blocked by the user, but the error persists, contact InfoWatch technical support at support@infowatch.com and attach error description and log.

3.6.9 Creating Installation Package

Supplied InfoWatch Device Monitor Client installation package contains the following default settings:

- Client installation directory on workstation system drive - `%Program Files%\Infowatch\DeviceMonitor\Client`.
- There is no uninstallation password.
- After installation Device Monitor Client starts to remind an employee that a reboot is required. Message text - "*Please reboot your computer as soon as possible*". Reminders are displayed infinitely, with 10 min intervals.

To change these settings create your own installation package.

To create InfoWatch Device Monitor Client installation package:

1. In the Main Menu select **Tools > Create install package**.
   This opens distribution task manager dialog box.
2. At **InfoWatch Device Monitor servers pool** InfoWatch Device Monitor servers currently registered in the System are displayed. Client will use them for primary installation.
   If necessary, change Client installation directory at workstations.
   Specify local or network directory where to the installation packages will be saved.
   Click **Next**.
3. Specify options of workstation reboot:

- **Wait while employee reboots computer**. If this check box is flagged, the Client will await for workstation reboot for specified time (in hours) without any employee notifications.
- **Remind employee about reboot**. If this check box is flagged, then after "silent" reboot awaiting ends (see **Wait while employee reboots computer** setting), or just after installation, Device Monitor Client starts to notify employee that the reboot is required. If needed, change notifications duration and intervals and edit the message text.

> **Warning!**
> If neither **Wait while employee reboots computer** setting, no **Remind employee about reboot** setting do not flagged or their durations are expired but employee did not reboot theworkstation, then the Client displays a notification about forced reboot and allows 5 minutes to end operations. Then the computer will be forced to reboot.

Click **Next**.

4. Define Client settings before it connects to the server for the first time:
   - **Ask employee permission to work Skype plug-in** - when Client installation is finished, Skype will display a request to launch Skype interceptor:
     - If employee agrees to launch interceptor, it will work until it is disabled in Skype menu (**Tools -> Options -> Advanced settings -> Manage other programs' access to Skype**). In the latter case, Skype will be forced to stop.
     - If the employee blocks the interceptor, Skype will be stopped. If you try start Skype later, you will be prompted to give another permission to use interceptor.
     - If this box is not flagged, interceptor doesn't require employee's permission.

   > **Warning!**
   > Not notifying the user about interceptor operation may contradict the applicable laws of your country.

   - **Show employee notifications** - if employee attempts to perform an action restricted by security policy, a warning will be displayed. For further details, see "Employee Notifications about Policy Violations"
   - **Show Windows tray icon interface** - an  icon will be displayed in Windows taskbar notification area at managed workstation. Upon a click on this icon the Client information and list of controlled devices is available.
   - **Install the component of network interception -** installs **iw_proxy** component on a Workstation. Component will not be installed if you leave the checkbox empty.
   - **Install the component of network control -** installs **Network Monitor** interceptor on a Workstation. Component will not be installed if you leave the checkbox empty.

   > **Warning!**
   > You should not install the component of network control to the server with Citrix Provisioning Services: this can lead to the serious problems concerning server operation.

   Click **Next**.
5. Look through the task summary. If you need to change any settings click **Back** to return. If all settings are correct, click **Finish**.

Client installation package will be saved in the folder you specified at the first step.

3.7 Additional Features

You can use the following functions to enhance your Management Console experience: filtering, grouping and sorting table entries.

Certain functions can be also accessed with hotkeys.

3.7.1 Filter Table Contents

You can filter table contents against one parameter or more with various filters. A filter makes a table display only the entries that comply with filtering conditions.

More information on filters is available in the following subsections:

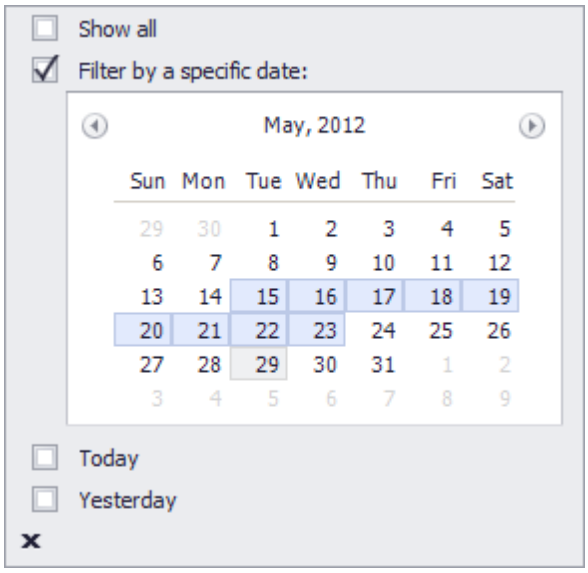
- Filter by Date
- Applying Standard Filters
- Custom Filter
- Editing Filters
- Removing a Filter

3.7.1.1 Filtering by Date

If the table shows temporary parameter characteristics (for example, Client installation date and time, Console log time, last workstation access, registered event date, etc.), you can filter the column against the desired date or period.

To view the records for specific date or period:

1. Move the pointer over the time/date attribute in the column header.
2. Click the button to the right of the column header.



3. Select one of the following filters:
   - **Show all** - select this check box to view all records regardless the date.
   - **Filter by a specific date** - select the date in the calendar.

     To select a period, select it holding the mouse button.

     To go from date to month or year display, click the month/year.

     Use arrows to go forward or backward.
   - **Today**; **Yesterday**; **Last week**; **Earlier this week**; **Earlier this year** fields depend on column values: for example, if there are no records for the date, **Today** field won't be displayed. Check this box to display only the records inside specific date range.
4. Click to apply the filter and close the form.

3.7.1.2 Applying Standard Filters

To filter table entries against a single attribute:

1. Move the pointer over the column header that contains required attribute.
2. To view filter list, click ▽ to the right of the column.
3. Select one of the following filters from the list:
   - **Blanks**. Display records with `<Is Null>` value (the field is empty).
   - **Non blanks**. Display records with `<Is Not Null>` value (i.e., the field contains attribute value).
   - `<attribute value>`. Display records that contain selected attribute.

> **Note:**
> **Custom** option lets you configure your filtering criteria (for more info see "Custom Filter").

The table will only display filtered values.

To filter values against several attributes,

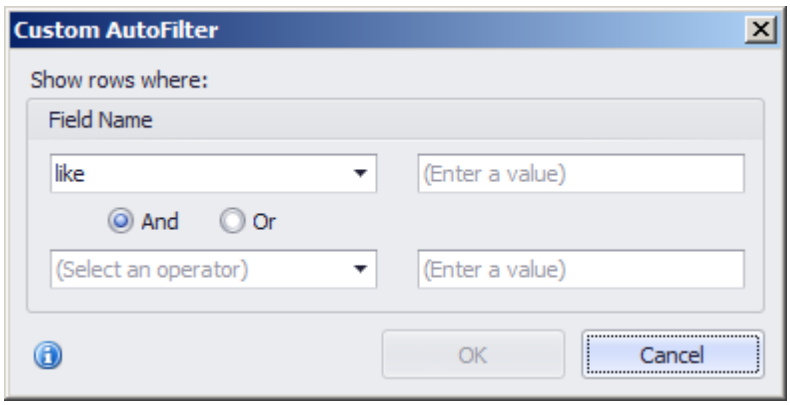
repeat simple filtering procedure against all filter attributes you want to apply.

Complex filter reduces the table contents to records filtered against several attributes.

3.7.1.3 Custom Filter

To specify your own filtering criteria for table entries:

1. Move the pointer over the column header that contains required attribute.
2. Expand filter list by clicking ▽ to the right of the column header.
3. In the drop-down list, select **Custom**. This opens **Custom AutoFilter** dialog.



4. In this box, specify filtering criteria:
   - Select conditions from the drop-down list in the upper-left box.

> **Note:**
> You can use comparison operators to limit filtering criteria: *equal*, *not equal*, *greater than*, *greater than or equal to*, *less than*, *less than or equal to*; values *empty* (blank) and *nonempty* (non-blank field); or text filter with a mask. To get a text filter syntax tip, click ⓘ.

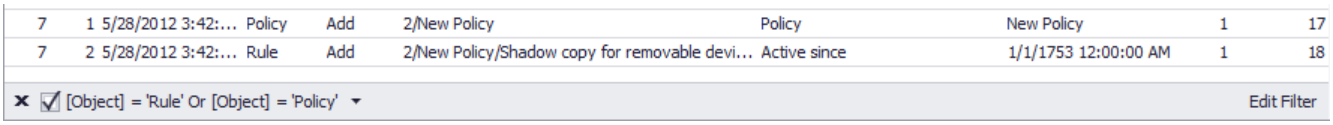
   - Enter condition value into the top right box.
   - Specify additional criteria, if needed, by selecting a logical operator for and entering the second condition at the bottom.

> **Note:**
> Choose logical operator **AND**, if you want the items that match both conditions at the same time.

Select logical operator **OR** filters the items that match at least one condition.

5. Click **OK** to apply the filter.

Filtered table only displays the items that match filtering criteria. Filtering criteria string is at the bottom of the screen that contains filtered items.



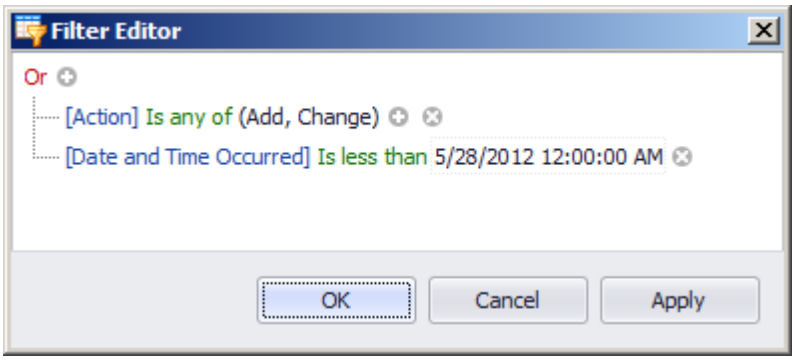
To remove filter and view all items, clear the check box in filter string. To apply the filter again, select the check box.

To re-use a filter, click the filter string and select filter from drop-down filter history list. Custom filters are stored until you close the window with filtered content.

3.7.1.4 Editing Filters

To edit active filter:

1. Click **Edit Filter** at the end of the filtering conditions string. The following dialog box displays Filter Editor.



2. Edit filtering criteria. Available actions:

Action	Steps
Edit an attribute, attribute value or operator	1. Click attribute/value name of attribute/operator 2. Select the value from the menu
Add a simple condition	Click the button ⊕ to the right of the logical operator or Click **Add Condition** in logical operator menu
Delete condition	Click the button ⊗ at the end of condition string
Add criteria group	1. Click the logical operator name 2. Select **Add Group** in the menu
Delete criteria group	1. Click the name of operator criteria group 2. Select **Delete Group** in the menu
Delete all criteria	Click **Clear All** in logical operator menu

3. Click **Apply**, to filter and view the filtered results without closing **Filter Editor** screen.
4. Click **OK**.

3.7.1.5 Removing a Filter

To remove a filter,

take one of the following steps:

- Click filtered column header and select **All** from the drop-down filter list.

  If you are using complex filter, repeat the step for every condition you want to remove.
- Remove the flag in filter conditions string.
- Click ✖ in filter conditions string. This closes filter conditions string.

3.7.2 Grouping or Sorting Entries

Grouping function is intended for managing table entries according to selected schema. Group scheme is displayed on the group panel over the column title row. Contents are grouped basing on a single attribute or more (table columns).

To group the contents basing on an attribute:

1. In table's title row, click the column title that corresponds to the attribute name.
2. Click and hold the title to drag it over the group panel. Name of the grouping attribute appears on the group panel.

To group the contents basing on multiple attributes, repeat steps 1-2 for all attributes participating in the process.

Note:
You can change the grouping procedure by changing the order of column titles in group scheme. The column with the title is at the top right of the group scheme is processed first.

Grouped entries appear collapsed. To view information for a specific entry, click ⊞ on the left of the record you want to expand. To minimize entry, click ⊟ to the entry's left.
You can ungroup entries basing on one or more attributes, removing columns from the group scheme.

To ungroup entries basing on any attribute:

1. In group panel, click and hold the column title you want to remove from the group scheme and drag it into table title row. Column location is indicated with a rectangular frame.
2. Move column title over the title row to the desired position and release the button. This will move the column to specified location.

Use sorting feature to display table contents in ascending or descending order of any attribute.

To change attribute values sorting order of the in a column,

move the pointer over the column title you want to use for sorting. Click the selected title. This will sort all table contents in ascending/descending order of the attribute values.

To go back to the old sorting order,

click the selected header once again.

3.7.3 Hotkeys

The following table lists the keys and key combinations, used for quick access to various system functions.

Feature name	Hotkeys
Server connection	

Feature name	Hotkeys
Connect to server	F4
Exit Console	Alt+F4
Main screen customization	
Hide/show Navigation bar	Ctrl+Shift+1
Hide/show Details	Ctrl+Shift+2
Hide/show Console log	Ctrl+Shift+3
Management Console sections	
Go to Policies	Ctrl+2
Go to Employees	Ctrl+3
Go to Workstations	Ctrl+4
Go to White Lists	Ctrl+5
Go to Signatures	Ctrl+6
Go to Log	Ctrl+7
Go to Tasks	Ctrl+8
Go to Events	Ctrl+9
Manage security schema (overview)	
Go to security schema editing mode	F11
Save security schema	F12
Cancel saving security schema	Shift+F11
Unblock security schema (Superuser only)	Ctrl+Shift+U
Update security schema	F5
Go to the latest security schema version (when viewing an earlier version)	F9
Manage security policies	
Add security policy	Ctrl+N
Edit security policy	Ctrl+E

Feature name	Hotkeys
Delete security policy	Ctrl+D
Manage rules	
Add rule	Ctrl+Shift+N
Edit rule	Ctrl+Shift+E
Delete rule	Delete
Manage employee groups	
Add new employee group	Ctrl+N
Edit employee group	Ctrl+E
Delete employee group	Ctrl+D
Manage employee accounts	
Add employee account to a group	Ctrl+Shift+N
Edit employee account	Ctrl+Shift+E
Remove employee account from a group	Delete
Delete employee account from security schema	Shift+Delete
Manage workstation groups	
Add new workstation group	Ctrl+N
Edit workstation group	Ctrl+E
Delete workstation group	Ctrl+D
Manage workstations	
Add workstation	Ctrl+Shift+I
Remove workstation from a group	Delete
Delete workstation from security schema	Shift+Delete
Manage white lists	
Add white list	Ctrl+N
Edit white list	Ctrl+E

Feature name	Hotkeys
Delete white list	Ctrl+D
Edit white list entries	Ctrl+Shift+E
Manage signatures	
Add signature category	Ctrl+N
Edit signature category	Ctrl+E
Delete signature category	Ctrl+D
Remove signature from category	Delete
Configure filters for Audit Log and Event Viewer	
Add filter	Ctrl+N
Edit filter	Ctrl+E
Delete filter	Ctrl+D
Manage Client remote installation and upgrade tasks	
Add task	Ctrl+N
Edit task	Ctrl+E
Delete task	Ctrl+D
Add workstation to selected task	Ctrl+Shift+N
Remove workstation from selected task	Delete
Display target workstation error log	Ctrl+L

4 Troubleshooting

If a server error occurs, you can view all server module error and informational messages in Windows Application Log. For server error code descriptions, see Windows Application Log section "Viewing Server Messages".

Here are several examples of potential problems, their sources and solutions.

Problem: Security Officer can't edit security schema
Reason: Security schema editing commands aren't active.

Solution: You can edit only the latest version of security schema. Status bar contains information on security schema that is being loaded to Management Console (if the latest security schema is used, the status bar displays security schema version and mode). To exit old security schema mode, click **Edit > View the latest security schema** in the Main Menu or press **F9** .

Problem: Managed workstation was removed from security schema, but its information is displayed in **Workstations** section

Description: Removed workstation record remains in security schema with **Agent Disabled** status.

Solution: You can delete managed workstations records manually, if necessary. You can find more information on how to remove a workstation from security schema in "Removing Workstation from Security Schema".

4.1 Viewing Server Messages

If a server error occurs, you can view all server module error and informational messages in Windows Application Log. The following table describes potential server error codes in Windows Application Log.

Warning!

If the problem persists, please contact InfoWatch support and specify the following information:

- problem description,
- error code,
- error message text,
- what actions have been taken to address the problem.

Error code	Severity	Description
`InfoWatch.DeviceMonitor.Server.Client` Module (server facade for clients) Event source in Windows Log: `InfoWatch.DeviceMonitor.Server.Client` Error module base number: 1000		
1000	Critical error	Packaging error prior to sending data to client. Contact InfoWatch support.
1001	Error	Unable to write client disconnection/connection event to database. Typically, the problem is caused by disconnection from the database. Occasionally, it can be caused by server code errors. More in-depth diagnostic information should be maintained basing on the error message text
1002	Error	Unable to register new workstation in the database. Typically, the problem is caused by disconnection to the database. Very occasionally, it can be caused by server code errors. More in-depth diagnostic information should be maintained basing on the error message text
1003	Error	Client connection has been lost. Can be caused by anything, starting from network problems to code errors. More in-depth diagnostic information should be maintained basing on the error message text
1004	Warning	Client connection timeout. Generally, this is caused by network problems or client-end errors (unexpected shutdown, etc.)
1005	Warning	Connection to client closed (socket closed). Generally, this is caused by network problems.
1006	Error	Raw server error. Occurs because of client connection errors or raw errors due to server service termination.

Error code	Severity	Description
1007	Error	Occurs because workstation DB update errors. Typically, the problem is caused by disconnection from the database. Occasionally, it can be caused by server code errors. More in-depth diagnostic information should be maintained basing on the error message text
1008	Error	Error occurs because of inactive workstations monitoring errors (exceptions). Caused by network problems or server code errors. More in-depth diagnostic information should be maintained basing on the error message text.
1009	Warning	Unable to find specified computer name on the network. Error occurs when monitoring inactive workstations. Caused by networking problems or inability to recognize names on the network, or absence of host (if it was removed). We recommend that you remove workstation from security schema (see "Removing Workstation from Security Schema").
1010	Error	Unable to connect to the Client. Error caused by network problems or server code errors. More in-depth diagnostic information should be maintained basing on the error message text
1011	Error	Failed to prepare data for sending to client. Almost always caused by errors in Server facade code for clients. Contact InfoWatch support.
1012	Error	Client data parsing error. May be caused by errors in server facade code for clients, damaged network packets, or packaging errors on client-end. More in-depth diagnostic information should be maintained basing on the error message text
1013	Critical error	Invalid package signature. Signature doesn't adhere to the protocol. May be caused by errors in server facade code for clients, damaged network packets, packaging errors on client-end. More in-depth diagnostic information should be maintained basing on the error message text
1014	Error	Packet (excluding users package) exceeds maximum length. Error might be caused by damaged network packets or packaging errors on client-end. More in-depth diagnostic information should be maintained basing on the error message text
1015	Error	User packet exceeds maximum length. Error might be caused by damaged network packets or packaging errors on client-end. More in-depth diagnostic information should be maintained basing on the error message text.
1016	Error	Unsupported package type. Error might be caused by damaged network packets or packaging errors on client-end. More in-depth diagnostic information should be maintained basing on the error message text
1017	Error	Event package parsing error. May be caused by errors in server facade code for clients, damaged network packets, packaging errors on client-end. More in-depth diagnostic information should be maintained basing on the error message text.
1018	Warning	Empty event packet received. The packet might also contain "bad events" that caused the parsing error. May be caused by errors in server facade code for clients, damaged network packets, packaging errors on client-end. More in-depth diagnostic information should be maintained basing on the error message text
1019	Error	DB event saving error. May be caused by violation of integrity constraints: for example, event contains an unknown server rule ID. This error may also occur, if you attempt saving a duplicate event.
1020	Information	Server facade for clients is running.
1021	Information	Server facade for clients has been stopped.
1022	Warning	Server received a bad security schema checksum (hash) from the client. Client's security schema may be corrupted or deliberately changed.
1023	Warning	Maximum number of client connections in Demo version has been exceeded.

Error code	Severity	Description
`InfoWatch.DeviceMonitor.TrafficMonitor.Connector` Module (Traffic Monitor connector) Event source in Windows Log: `InfoWatch.DeviceMonitor.TrafficMonitor.Connector` Error module base number: 2000		
2000	Error	A negative value of TM connections in server's configuration file. Change configuration file (see "<applicationSettings> section", `NumberOfConnections` setting).
2001	Warning	TM connections value (> 32) in server configuration file is too large. Number of connections is set to 32. Change configuration file (see "<applicationSettings> section", `NumberOfConnections` setting).
2002	Error	Failed to connect to DB while sending events to TM. Check DB state and availability.
2003	Error	DB request error while sending events to TM. May be caused by blockage or very occasionally by server code errors. More in-depth diagnostic information should be maintained basing on the error message text.
2004	Error	Unknown error when sending messages to TM. More in-depth diagnostic information should be maintained basing on the error message text.
2005	Error	Error reading queue length from DB. Check DB state and availability.
2006	Information	TM connection change.
2007	Error	Unable to delete shadow copy. Shadow copy file may be opened by another application or missing . Can also be caused by server code error. More in-depth diagnostic information should be maintained basing on the error message text.
2008	Error	TM response reading error. May be caused by invalid message format, network problems, etc. More in-depth diagnostic information should be maintained basing on the error message text.
2009	Error	An error occurred during network communication. Verify that the network is functioning.
2010	Error	TM connection has been lost. May be caused by network problems or TM stop. More in-depth diagnostic information should be maintained basing on the error message text.
2011	Error	Unknown TM messaging error. More in-depth diagnostic information should be maintained basing on the error message text.
2012	Error	Attempt to add an exhausted connection to a filled pool. Contact InfoWatch support.
2013	Warning	The event must have a shadow copy, but it's not on the DM server. It might not be transmitted by the client or lost during transmission.
2014	Critical error	TM connector is misconfigured. Server configuration file contains errors. Check server configuration file (see section 5.9 on page 93). More in-depth diagnostic information should be maintained basing on the error message text.
2015	Information	Sending the message to TM was cancelled.
2016	Warning	E-mail message that contains the event exceeds maximum size. Applies to TM 2.5
2017	Warning	Invalid login format for transmission to TM 2.5. DOMAIN\LOGIN is expected. The problem may be caused by the client that sent an invalid login. Invalid login could also be added manually from Management Console.
2018	Information	Connected to TM.
2019	Warning	TM sent an empty response. An issue on TM end.
2020	Warning	Unable to read message type attribute from TM 3.x response. The problem is caused by TM response formatting errors.
2021	Warning	Invalid TM 3.x message type. The problem is caused by TM response formatting errors.

Error code	Severity	Description
`InfoWatch.DeviceMonitor.Server.Core` Module (server startup code) Event source in Windows Log: `InfoWatch.DeviceMonitor.Server.Core` Error module base number: 3000		
3000	Critical error	GUI facade TCP port (15003 by default) is already in use. Check if any running applications use this port, and modify their settings or server configuration by assigning it to a different GUI facade port in server configuration file
3001	Critical error	Unable to connect to database. Server launches and will attempt to establish a connection to DB. Check DB state and availability.
3002	Critical error	Unable to launch TM connector. More in-depth diagnostic information should be maintained basing on the error message text.
3003	Error	Error deleting GUI facade channel registration. Contact InfoWatch support.
`InfoWatch.DeviceMonitor.Server.Database` Module (DB interaction Module) Event source in Windows Log: `InfoWatch.DeviceMonitor.Server.Database` Error module base number: 4000		
4000	Critical error	Unsupported DBMS. Server configuration file error. Check server configuration file
4001	Error	Failed to read server settings from DB. More in-depth diagnostic information should be maintained basing on the error message text
4002	Error	Error copying new server settings to DB. More in-depth diagnostic information should be maintained basing on the error message text
4003	Error	Error updating server settings in DB. More in-depth diagnostic information should be maintained basing on the error message text
4004	Warning	Error reading security schema version from DB. The problem is caused by absence of security schema. Create a new security schema
4005	Warning	Reading ban has been converted into No access rule.
4006	Warning	Writing ban has been converted into Read Only rule.
4007	Warning	Writing permission has been converted into Full Access.
4008	Information	Security schema doesn't contain the workstation specified in the message.
4009	Information	Failed to read last event number from log.
4010	Critical error	Unsupported database type. Contact InfoWatch support.
4011	Error	Empty user list received from the client. Investigate client end or packet parsing.
4012	Warning	DB has been upgraded from version 3.1 to 3.2
4013	Warning	DB has been upgraded from version 3.2 to 3.3
4014	Warning	To hard drive rule is not supported and has been deleted from security schema.

5 Licensing Information

End-User License Agreement

The system contains third-party software components:

- **WiX toolset** – WiX Common Public License

5.1 WiX Common Public License

WiX Common Public License

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