GFI EventsManager™

ADMINISTRATOR GUIDE

Learn how to configure advanced features and use GFI EventsManager.

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Contents

1 Introduction

The enormous volume of system event logs generated daily is of growing importance to organizations that must record information for forensic and compliance purposes. It is essential to perform real-time network-wide event log monitoring, analysis and reporting to address any incidents or security concerns and combat threats to business continuity.

GFI EventsManager assists with this monumental task by automatically and centrally monitoring and managing event logs - supporting a wide range of event types generated both by applications and devices from top vendors as well as for custom ones.

The following topics provide information on how to evaluate GFI EventsManager:

1.1 About GFI EventsManager

The enormous volume of system event logs generated daily is of growing importance to organizations that must record information for forensic and compliance purposes. It is essential to perform real-time network-wide event log monitoring, analysis and reporting to address any incidents or security concerns and combat threats to business continuity.

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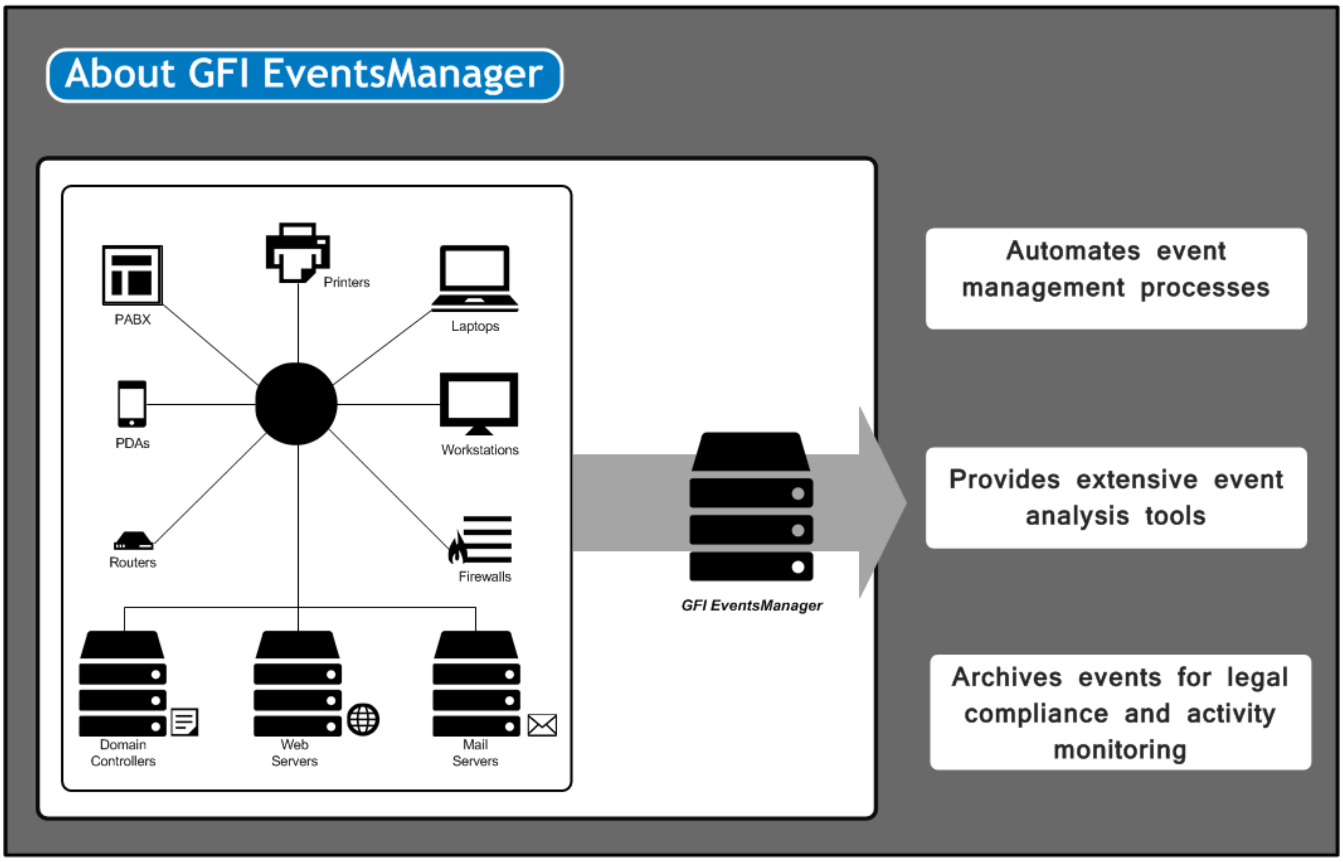

About GFI EventsManager
PABX
Printers
Laptops
PDAs
Workstations
Routers
Firewalls
Domain Controllers
Web Servers
Mail Servers
GFI EventsManager
Automates event management processes
Provides extensive event analysis tools
Archives events for legal compliance and activity monitoring

Screenshot 1: GFI EventsManager integrates into any existing IT infrastructure

GFI EventsManager is a results oriented event log management solution which integrates into any existing IT infrastructure, automating and simplifying the tasks involved in network-wide events management.

Through the features supported by GFI EventsManager, you are able to:

- Automatically monitor computers and network devices through GFI EventsManager's wide range of event log support; such as Text Logs, Windows® Event Logs, Syslogs, SNMP Traps Messages, Active Monitoring Events and even custom event logs
- Monitor computers and services running on your network through active monitoring features such as continuous checking of HTTP/HTTPS/FTP site availability, server roles queries, firewall queries and more
- Optimize security and performance while tracking operational issues by auditing your critical systems/devices; such as routers, firewall, sensors, servers and database engines
- Create and maintain an automated network security system which detects intrusion attacks
- Achieve compliance with various regulations and acts including SOX, PCI DSS, Code of Connection, HIPAA, data protection laws and others
- Proactively detect events which will lead to disaster such as hardware failure. When such events are processed, GFI EventsManager provides an early warning to give you control and take corrective action
- Minimize the risk and business loss due to systems downtime and misconfiguration
- Easily browse events from any number of databases through the extensive Events Browser; which helps you carry out forensic investigations with minimal human input
- Automatically processes and archives event logs, collecting and highlighting the information you need to know about the most important events occurring in your network so you are never caught off guard
- Generate technical IT level and management level reports from the extensive list of reports and also create new ones from existing reports or collected events
- Protect your business by tracking the security events in your network. Find who is responsible for security breaches and network threats

> For a full list of features, refer to: https://www.gfi.com/eventsmanager#features

1.2 How GFI EventsManager works

The operational functionality of GFI EventsManager is divided in the following stages:

- Stage 1: Event Collection
- Stage 2: Event Processing

1.2.1 Stage 1: Event Collection

During the Event Collection stage, GFI EventsManager collects logs from specific event sources. This is achieved through the use of two event collection engines: The **Event Retrieval Engine** and the **Event Receiving Engine**.

Engine	Description
The Event Retrieval Engine	Used to collect Windows® Event Logs and Text Logs from networked event sources. During the Event Collection process this engine will: 1. Log-on to the event source(s) 2. Collect events from the source(s) 3. Send collected events to GFI EventsManager Server 4. Log-off from the event source(s). The Event Retrieval Engine collects events at specific time intervals. The event collection interval is configurable from the GFI EventsManager management console

Engine	Description
The SQL Server® Listener	The listener receives trace messages from the scanned Microsoft® SQL Server® in real time. On receipt, GFI EventsManager processes the message immediately.
The Oracle Retrieval Engine	The Oracle Retrieval Engine connects periodically to Oracle servers and collects audits from a specific auditing table. Similar to the Microsoft® Windows® Event Retrieval Engine, GFI EventsManager processes events generated by the Oracle server.
Log Receiving Engine	The Event Receiving Engine acts as a Syslog and an SNMP Traps server; it listens and collects Syslog and SNMP Trap events/messages sent by various sources on the network. As opposed to the Event Retrieval Engine, the Event Receiving Engine receives messages directly from the event source; therefore it does not require to remotely log-on to the event sources for event collection. Further to this, Syslog and SNMP Trap events/messages are collected in real-time and therefore no collection time intervals need to be configured. By default, the Event Receiving Engine listens to Syslog messages on port 514 and to SNMP Trap messages on port 162. Both port settings are however customizable via the GFI EventsManager management console.

1.2.2 Stage 2: Event Processing

During this stage, GFI EventsManager runs a set of Event Processing Rules against collected events. Event Processing rules are instructions that:

- Analyze collected logs and classify processed events as Critical, High, Medium, Low or Noise (unwanted or repeated events)
- Filter events that match specific conditions
- Trigger email, SMS and network alerts on key events
- Trigger remediation actions such as the execution of executable files or scripts on key events
- Optionally archive collected events in the database backend.

GFI EventsManager can be configured to archive events without running events processing rules. In such cases, even though no rules are applied against collected logs, archiving is still handled at the Event Processing stage.

> **Important**
> Some of the key modules in GFI EventsManager must run under administrative privileges. For more information on these modules refer to the following article: http://go.gfi.com/?pageid=esm_process_rights

1.3 Conventions used in this guide

The table below describes the common terms and conventions used in this Guide:

Term	Description
Note	Additional information and references essential for the operation of GFI EventsManager.
Important	Important notifications and cautions regarding potential issues that are commonly encountered.
>	Step by step navigational instructions to access a specific function.
Bold text	Items to select such as nodes, menu options or command buttons.
Italics text	Parameters and values that you must replace with the applicable value, such as custom paths and filenames.
`Code`	Indicates text values to key in, such as commands and addresses.

2 Getting Started with GFI EventsManager

Want to try out GFI EventsManager? This topic provides a quick list of actions to help you set up a GFI EventsManager account.

1 **Sign up to GFI EventsManager**
Go to http://go.gfi.com/?pageid=esm_trial and sign up for GFI EventsManager. Follow the instructions to create your account and download your trial version. A 30-day evaluation key will be sent to you by email within a few minutes.

2 **Prepare your GFI EventsManager server**
Before installing GFI EventsManager on your server, ensure that the following guidelines are met:
System requirements
Deployment scenarios

3 **Install GFI EventsManager**
Installing GFI EventsManager is easy. You just need to follow the steps in the following topic: Installing GFI EventsManager. Run the installer as a domain administrator or an account with administrative rights over all the remote computers managed by GFI EventsManager.

4 **Test the GFI EventsManager installation**
Perform a test to ensure GFI EventsManager is working correctly. For more information, refer to Testing the installation (page 35).

5 **Monitoring your Network with GFI EventsManager**
Monitor your network and detect events such as security incidents, downtimes, system health problems and configuration problems. GFI EventsManager offers five main features and locations to help you stay in touch with the main events occurring in your network:

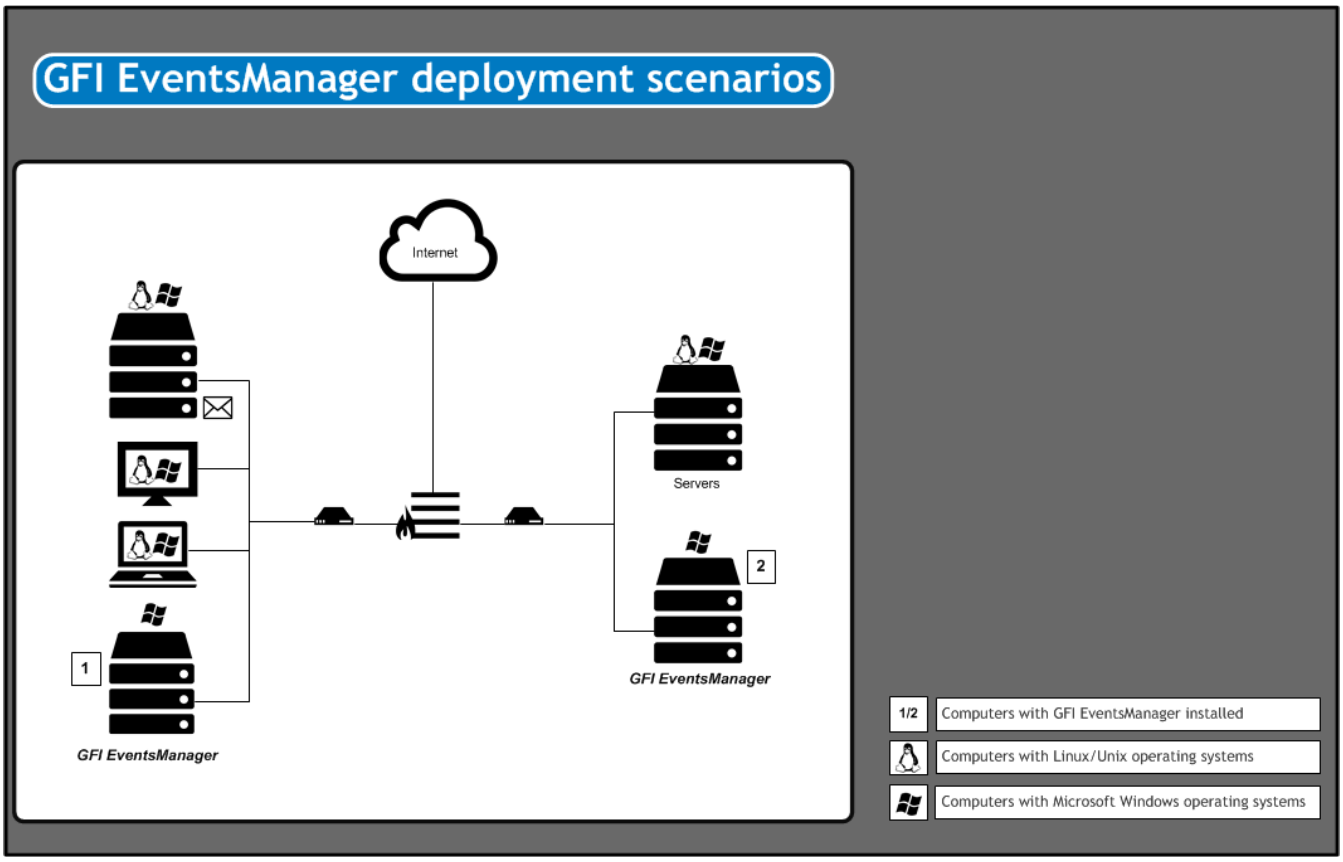
- Events Processing Rules
- Alerts
- Dashboard
- Events browser
- Reporting

2.1 Deployment scenarios

GFI EventsManager can be installed on any computer which meets the minimum system requirements irrespective of the location on your network. If you want to collect event logs from Microsoft® Windows® Vista or later operating systems, GFI EventsManager must be installed on a machine running Microsoft® Windows® Vista, 7, Server 2008 or later.

Use GFI EventsManager to manage event logs generated by:

- The same computer where it is installed
- All the servers, workstations and network devices that are reachable from the computer on which it is installed on.


GFI EventsManager deployment scenarios
Internet
Servers
2
GFI EventsManager
1
GFI EventsManager
1/2
Computers with GFI EventsManager installed
Computers with Linux/Unix operating systems
Computers with Microsoft Windows operating systems

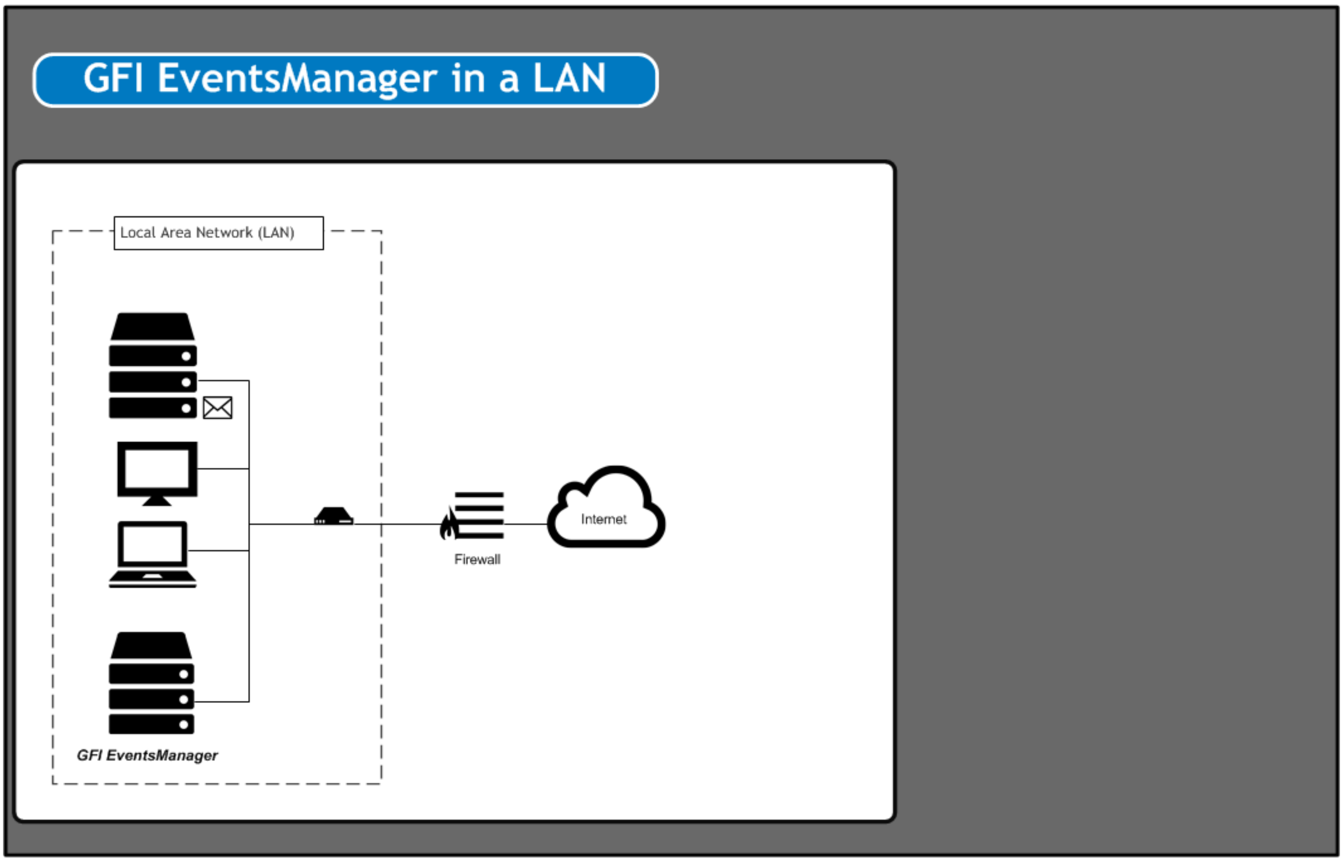
Screenshot 2: GFI EventsManager deployment scenario

This section contains information about deploying GFI EventsManager in a:

- Local Area Network (LAN) - Monitor activity of the main production network, servers and workstations
- Demilitarized Zone (DMZ) - Monitor events generated by public service servers, such as mail servers, web servers and DNS servers
- Wide Area Network (WAN) - Monitor events generated by computers and network devices spread across different geographical locations.

2.1.1 GFI EventsManager within in a Local Area Network (LAN)

GFI EventsManager can be deployed on Windows® based networks as well as on mixed environments where Linux and Unix systems are being used as well.



Screenshot 3: Deployment of GFI EventsManager in LAN

When installed on a Local Area Network (LAN) GFI EventsManager can manage Windows® events, Text Logs, Syslog messages, SNMP Trap and SQL Server® audit messages generated by any hardware or software that is connected to the LAN, including:

Device	Example
Workstations and laptops	End-user computers and systems.
Servers	Web servers, Mail servers, DNS servers and more.
Network devices	Routers, switches and any other device that generates performance logs.
Software	Including GFI EndPointSecurity, GFI LanGuard and other applications that generate logs.
Specialized Services	Microsoft® Internet Information Server – IIS.
PABXs, Keyless Access Systems, Intrusion detections systems and more	GFI EventsManager enables you to monitor any device that is attached to the network.

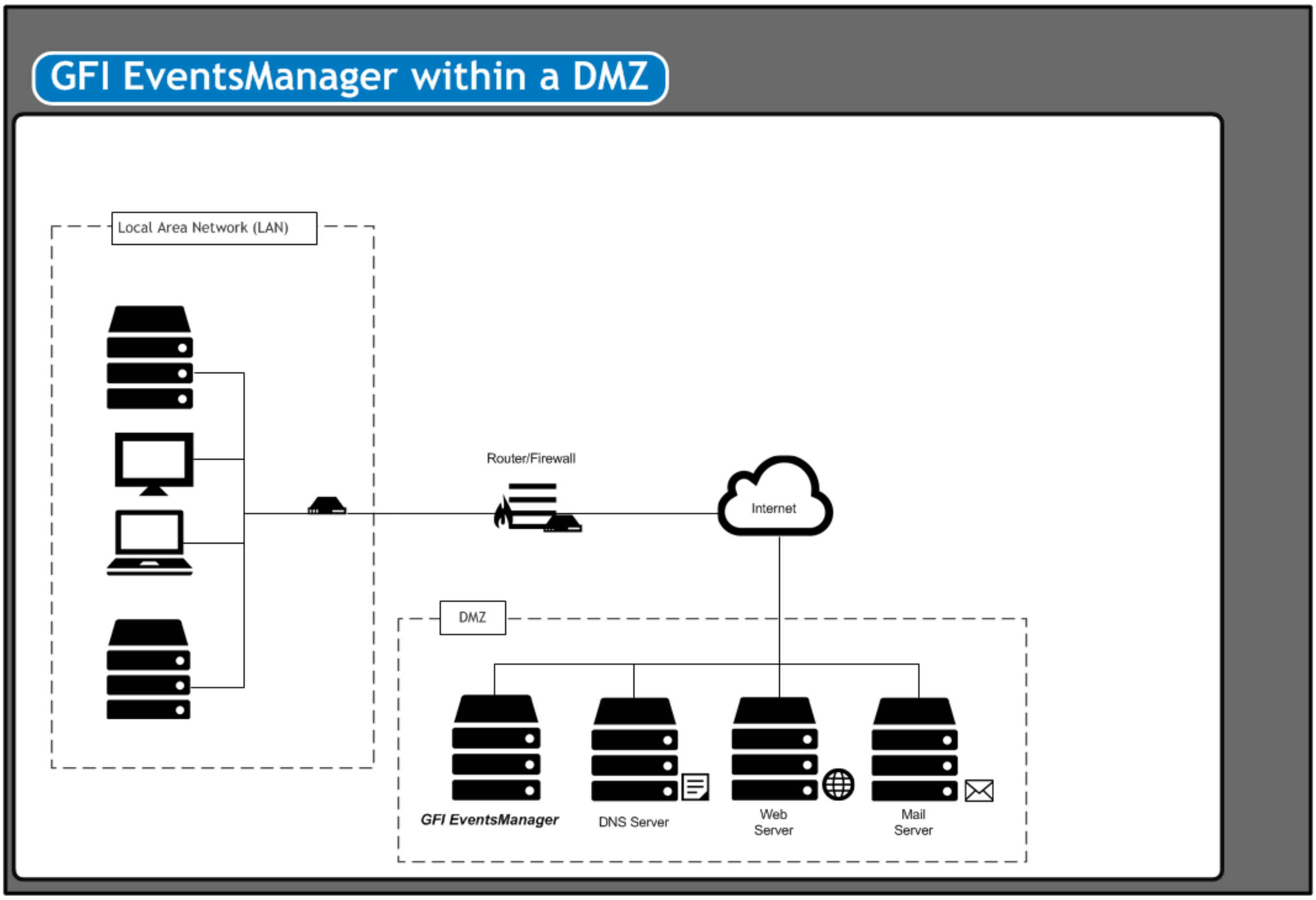
2.1.2 GFI EventsManager within a Demilitarized Zone (DMZ)

GFI EventsManager is able to monitor events generated by machines in a DMZ, from being installed within the LAN or by being installed directly in the DMZ. Since a firewall or a router usually protects this zone with network traffic filtering capabilities, you must make sure that:

- The communication ports used by GFI EventsManager are not blocked by the firewall. For more information on the communication ports used by GFI EventsManager refer to: http://go.gfi.com/?pageid=esm_ports.
- GFI EventsManager has administrative privileges over the computers that are running on the DMZ.

Important

GFI recommends to install GFI EventsManager directly in the DMZ as opposed to enabling firewall ports and permissions to allow communication between LAN and DMZ computers, servers and network devices.



Screenshot 4: The DMZ sits between the internal LAN and the Internet

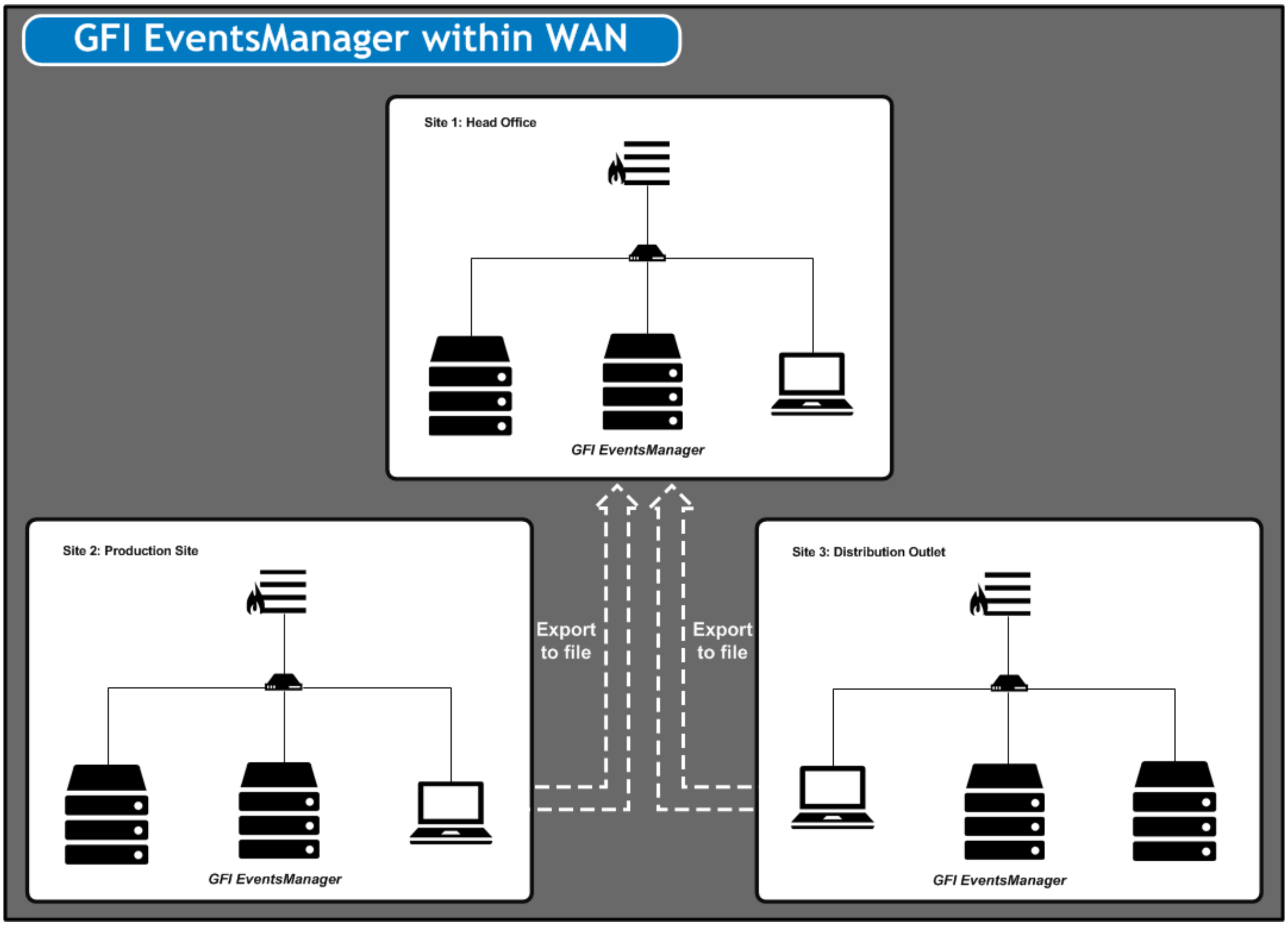
A DMZ is the neutral network which sits between the "internal" corporate network and the "outside world" (Internet). The deployment of GFI EventsManager in a DMZ helps you automate the management of events generated by DMZ hardware and software systems; such as:

DMZ Automation	Description
Automate management of Web and Mail server events	DMZ networks are normally used for the running of hardware and software systems that have Internet specific roles such as HTTP servers, FTP servers, and Mail servers. Hence, you can deploy GFI EventsManager to automatically manage the events generated by: » Web-servers including the W3C web-logs generated by Apache web-servers on LAMP web platforms » Windows® based web-servers including the W3C web-logs generated by Microsoft® Internet Information Servers (IIS) » Linux/Unix and Windows® based mail-servers including the Syslog auditing services messages generated by Sun Solaris v. 9 or later » Automate management of DNS server events » If you have a public DNS server, there's a good chance that you are running a DNS server on the DMZ. Hence you can use GFI EventsManager to automatically collect and process DNS server events including those stored in your Windows® DNS Server logs.
Automate management of DNS server events	If you have a public DNS server, there's a good chance that you are running a DNS server on the DMZ. Hence you can use GFI EventsManager to automatically collect and process DNS server events including those stored in your Windows® DNS Server logs.

DMZ Automation	Description
Automate management of network appliance events	Routers and firewalls are two network appliances commonly found in a DMZ. Specialized routers and firewalls (example: Cisco IOS series routers) not only help protect your internal network, but provide specialized features such as Port Address Translation (PAT) that can augment the operational performance of your systems. By deploying GFI EventsManager on your DMZ, you can collect the events generated by such network appliances. For example, you can configure GFI EventsManager to act as a Syslog Server and collect in real-time the Syslog messages generated by Cisco IOS routers.

2.1.3 GFI EventsManager within a Wide Area Network (WAN)

GFI EventsManager can be installed in environments that have multiple sites in different geographical locations.



Screenshot 5: Export data from remote sites to the main instance of GFI EventsManager

This is achieved by installing an instance of GFI EventsManager at each location. Periodically (based on a schedule), you can export events from the remote sites and import them into the central database for complete consolidation of event logs.

Events for the remote site can then be viewed through the Events Browser. Reports with information relevant to remote sites can also be generated using data from the central database. Use the Switch Database option to view or report on information stored on remote databases.

Note

For more information refer to Switching File Storage Databases.

> **Note**
> For more information refer to Database Maintenance.

2.2 System requirements

To install GFI EventsManager, the host computer must meet the system requirements specified below. If you plan to manage a large number of event sources in a high traffic network, consider using a computer with greater system specs. Refer to the following sections for information about:

- Hardware requirements
- Supported operating systems and other software
- Firewall ports, protocols and permissions
- Event source settings

2.2.1 Software requirements

Software	Description
Supported operating systems (32-bit and 64-bit)	GFI EventsManager can be installed on a computer running any of the following operating systems: » Windows® Server 2016 - Essentials, Standard or Datacenter » Windows® Server 2012 R2- Essentials, Standard or Datacenter » Windows® Server 2012 - Essentials, Standard or Datacenter » Windows® Server 2008 R2 – Standard or Enterprise » Windows® Server 2008 - Standard or Enterprise » Windows® SBS 2011 - Standard or Premium » Windows® SBS 2008 - Standard or Premium » Windows® 10 - Pro or Enterprise » Windows® 8 - Pro or Enterprise » Windows® 7 - Enterprise, Professional or Ultimate » Windows® Vista SP1 - Enterprise, Business or Ultimate **NOTE** GFI EventsManager cannot be installed on Server Core Installations.
Other software components	The following required components can be installed automatically when installing GFI EventsManager. For more information, refer to Installing GFI EventsManager (page 19). » Visual C++ 2010 redistributable » Microsoft® .NET Framework 2.0 » Microsoft® .NET Framework 4.0 » Microsoft® SQL Server® Compact 3.5 SP2 » MSXML6 » Microsoft® SQL Server® Native Client » Microsoft® SQL Server® Management Objects Collection.
DLib Database Server	DLib Database Server is the component where GFI EventsManager stores processed logs. The database server can be installed on the same computer that is running GFI EventsManager as well as on a separate remote computer or network drive.
Optional recommended software	Install the following recommended software components to ensure full functionality of GFI EventsManager: » Microsoft® Data Access Components (MDAC) 2.8 or later downloadable from http://go.gfi.com/?pageid=esm_mdac » A mail server (when email alerting is required).

> **NOTE**
>
> When GFI EventsManager is using a non-domain account to collect events from Windows® Vista machines or later, target machines must have User Account Control (UAC) disabled. For more information, refer to Disabling User Account Control (UAC) (page 293).

2.2.2 Hardware requirements

The following table contains hardware requirements for GFI EventsManager:

Hardware Component	Specification
Processor	2.5 GHz dual core or higher.
RAM	3 GB.
Hard disk	10 GB free space.

> **Note**
>
> Hard disk size depends on your environment, the size specified in the requirements is the minimum required to install and archive events.

2.2.3 Storage requirements

The storage requirements below are based on the average size of an event log, being 535 bytes per event. The following specifications indicate the required hard disk size, that caters for your infrastructure's requests:

Hard Disk Space	Number of Events
Events stored per 1 Gb of storage space	2,006,994
Events stored in 500 Gb of storage space	1,003,497,032

2.2.4 Firewall ports and protocols

The following table contains ports and protocols that must be allowed by the firewall of the GFI EventsManager host:

Port	Protocols	Description
135	UDP and TCP	Target machines use this port to publish information regarding available dynamic ports. GFI EventsManager uses this information to be able to communicate with the target machines.
139 and 445	UDP and TCP	Used by GFI EventsManager to retrieve the event log descriptions from target machines.
162	UDP and TCP	Used by GFI EventsManager to receive SNMP traps. Ensure that this port is open on the machine where GFI EventsManager is installed.
514	UDP and TCP	Used by GFI EventsManager to receive SYSLOG messages.
1433	UDP and TCP	Used by GFI EventsManager to communicate with the SQL Server® database backend. Ensure that this port is enabled on Microsoft® SQL Server® and on the machine where GFI EventsManager is installed.

Port	Protocols	Description
1521	UDP and TCP	Used to collect Oracle Server audit logs. Port 1521 is the default port for this connection. If the port is changed manually in the Oracle Listener's configuration, adjust firewall settings accordingly.
49153	UDP and TCP	Used by GFI EventsManager to collect events from event sources with Microsoft® Windows® Vista or Microsoft® Windows® 7.

2.2.5 Firewall permissions

The following list contains permissions that must be allowed by the firewall of the GFI EventsManager host:

- Remote Event Log Management
- File and Printer Sharing
- Network Discovery

2.2.6 Antivirus exceptions

If an antivirus application installed on the computer where GFI EventsManager is running, make sure that:

- Traffic is not blocked on the ports in use by GFI EventsManager.
- **esmui.exe** and **esmproc.exe** are allowed access through the firewall(s).
- GFI EventsManager folders are excluded from real-time antivirus scanning.

2.2.7 Event source settings

The following table contains settings that must be configured on your event sources. Event sources are computers that you want to monitor by GFI EventsManager:

Log Type	Description
Windows® event log processing	Enable remote registry.
Text log processing	The source folders must be accessible via Windows® shares.
Syslog and SNMP Traps processing	Configure sources/senders to send messages to the computer/IP where GFI EventsManager is installed.
Scanning machines with Windows® Vista or later	Install GFI EventsManager on a computer running Windows® Vista or later.
System auditing	Enable auditing on event sources. For information, refer to Enabling event source permissions manually and Enabling event source permissions automatically.

2.2.8 Computer identification considerations

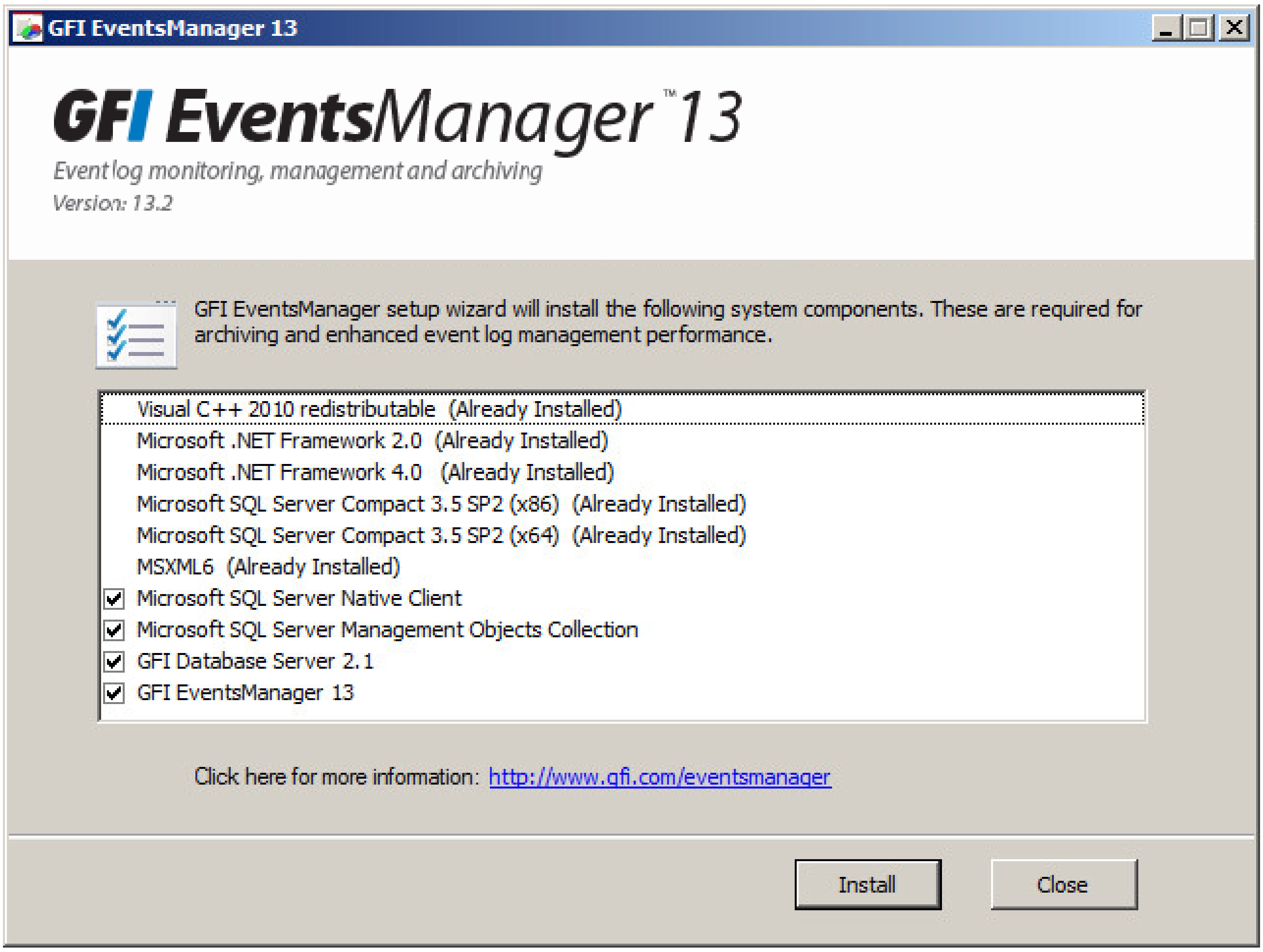
GFI EventsManager identifies computers via computer name or IP. If NETBIOS-compatible computer names are used, ensure that your DNS service is properly configured for name resolution. Unreliable name resolution downgrades overall system performance. If you disable NETBIOS over TCP/IP, you can still use GFI EventsManager, however you must specify computer name by IP.

2.3 Installing GFI EventsManager

To install GFI EventsManager:

1. Right-click the GFI EventsManager installer and choose **Properties**. From the **General** tab, click **Unblock** and then **Apply**. This step is required to prevent the operating system from blocking certain actions by the installer.

2. Launch the installer.



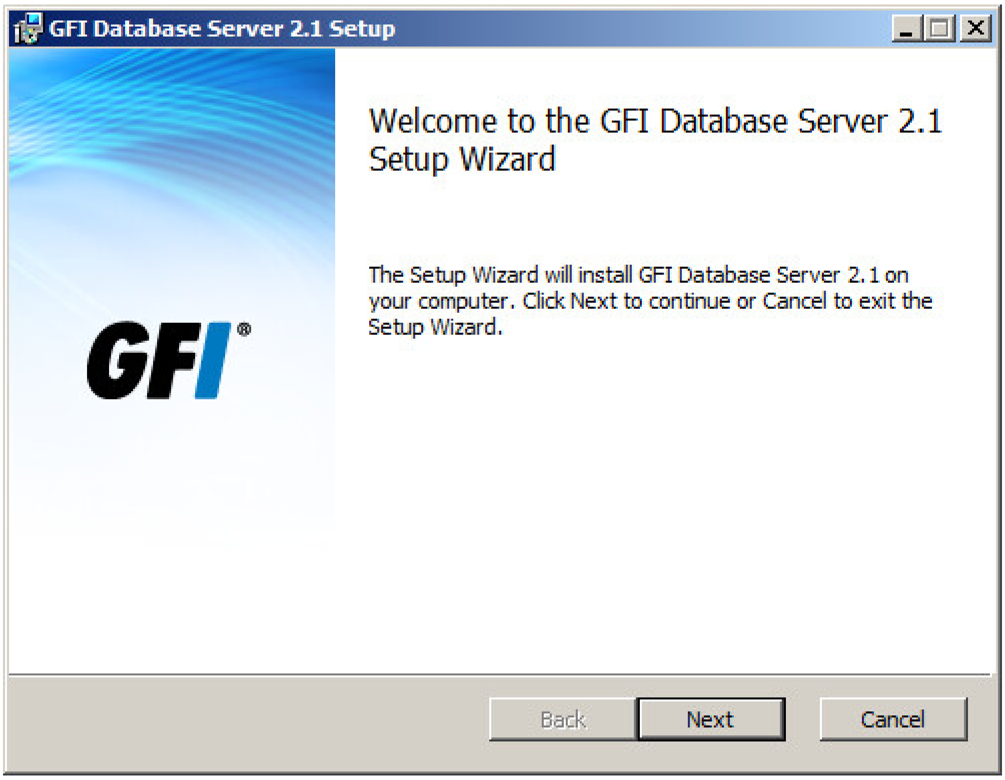
GFI EventsManager setup wizard will install the following system components. These are required for archiving and enhanced event log management performance.

- Visual C++ 2010 redistributable (Already Installed)
- Microsoft .NET Framework 2.0 (Already Installed)
- Microsoft .NET Framework 4.0 (Already Installed)
- Microsoft SQL Server Compact 3.5 SP2 (x86) (Already Installed)
- Microsoft SQL Server Compact 3.5 SP2 (x64) (Already Installed)
- MSXML6 (Already Installed)
- ☑ Microsoft SQL Server Native Client
- ☑ Microsoft SQL Server Management Objects Collection
- ☑ GFI Database Server 2.1
- ☑ GFI EventsManager 13

Click here for more information: http://www.gfi.com/eventsmanager

Screenshot 6: Prerequisite check

3. The installer displays a list of system components that must be installed prior to installing the product. Click **Install** to start the installation of missing system components (if necessary).

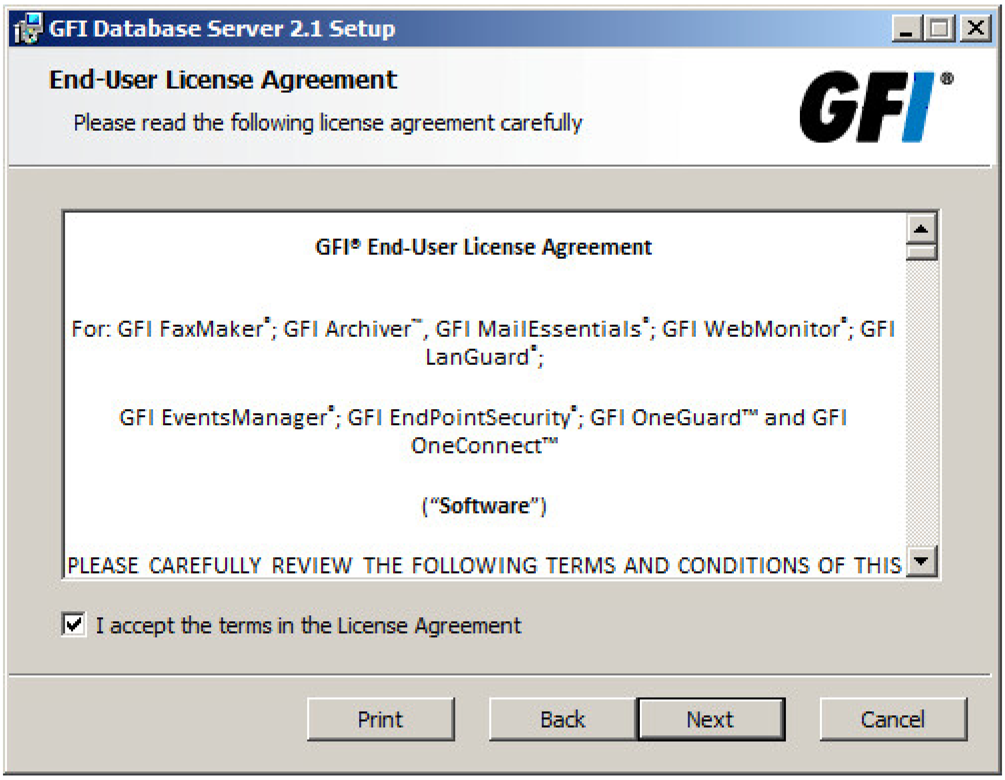

GFI Database Server 2.1 Setup

Welcome to the GFI Database Server 2.1 Setup Wizard

The Setup Wizard will install GFI Database Server 2.1 on your computer. Click Next to continue or Cancel to exit the Setup Wizard.

Screenshot 7: DLib Database Server

4. The DLib Database Server install wizards opens automatically after system components are installed. Click **Next** at the wizard welcome screen.


GFI Database Server 2.1 Setup

End-User License Agreement

Please read the following license agreement carefully

GFI® End-User License Agreement

For: GFI FaxMaker®; GFI Archiver™, GFI MailEssentials®; GFI WebMonitor®; GFI LanGuard®;

GFI EventsManager®; GFI EndPointSecurity®; GFI OneGuard™ and GFI OneConnect™

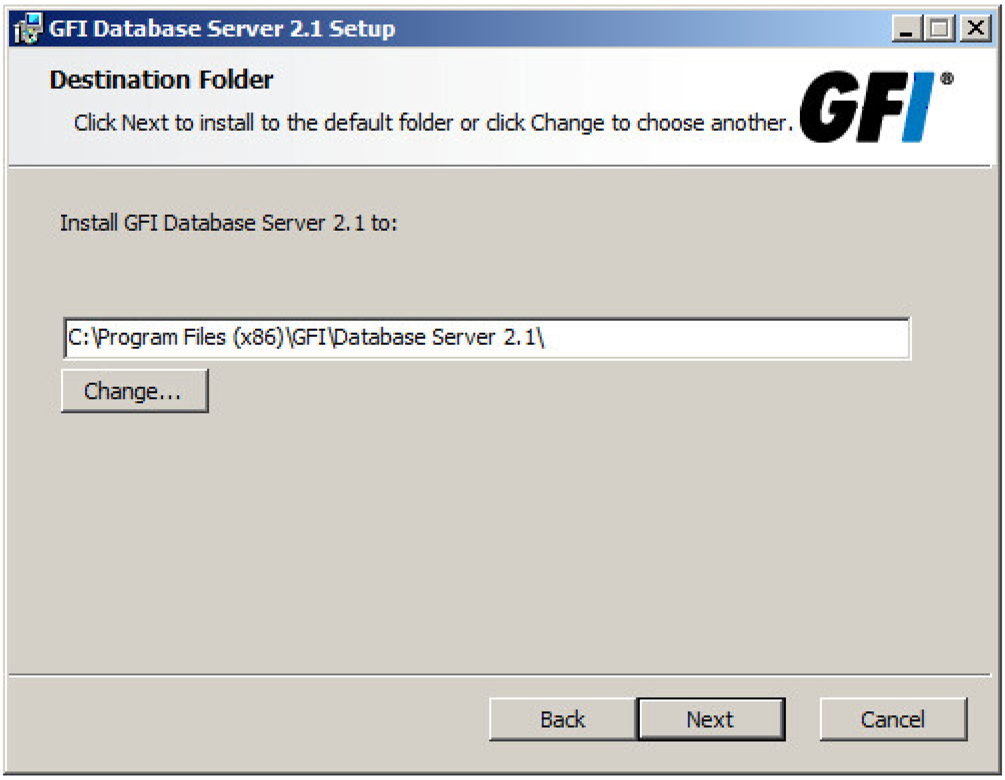
("Software")

PLEASE CAREFULLY REVIEW THE FOLLOWING TERMS AND CONDITIONS OF THIS

☑ I accept the terms in the License Agreement

Screenshot 8: DLib Database Server EULA

5. Read the license agreement. Select **I accept the terms in the License Agreement** and click **Next**.


GFI Database Server 2.1 Setup

Destination Folder

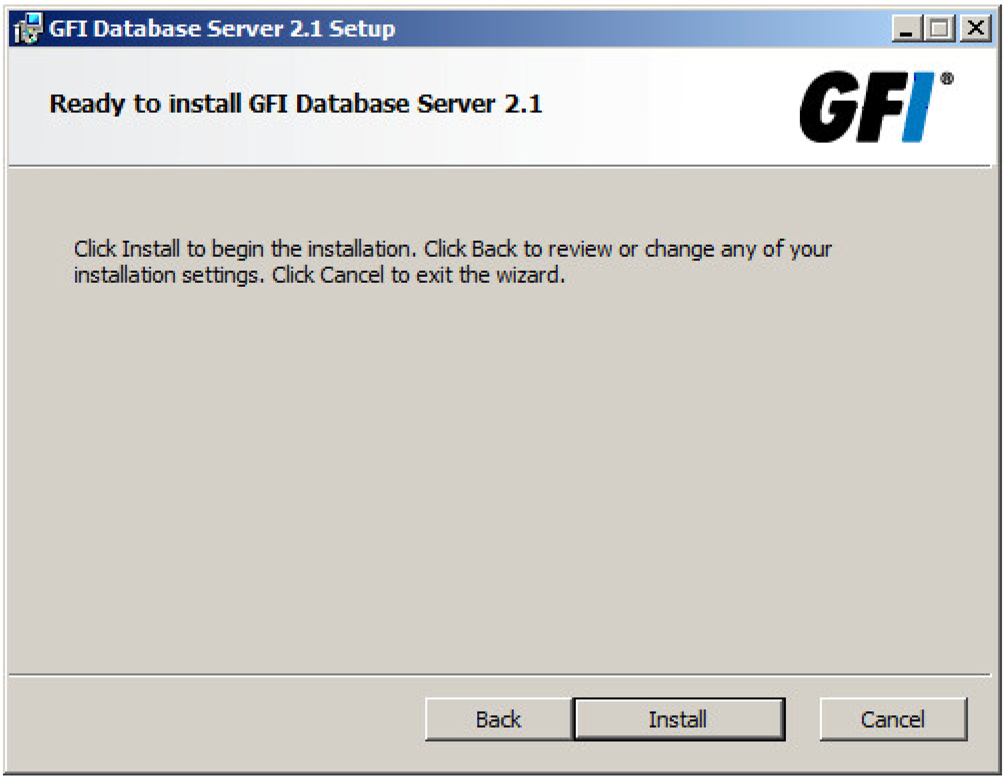
Click Next to install to the default folder or click Change to choose another.

Install GFI Database Server 2.1 to:

C:\Program Files (x86)\GFI\Database Server 2.1\

Screenshot 9: DLib install folder

6. Click **Next** to install the database server in the default folder or click **Change...** to select an alternate folder where it is installed.


GFI Database Server 2.1 Setup

Ready to install GFI Database Server 2.1

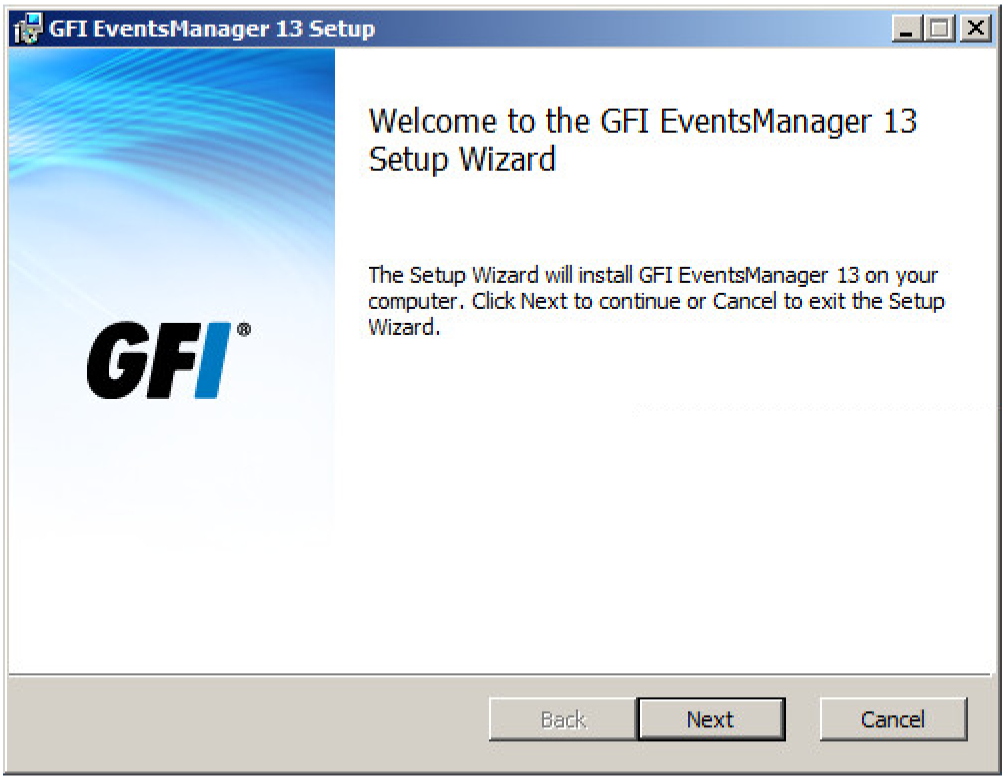
Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.

Screenshot 10: Start installing DLib Database Server

7. Click **Install** to start installing DLib Database Server. Click **Finish** when prompted.

Note

After the database server is installed, the installer automatically opens the install wizard of GFI EventsManager Management Console.

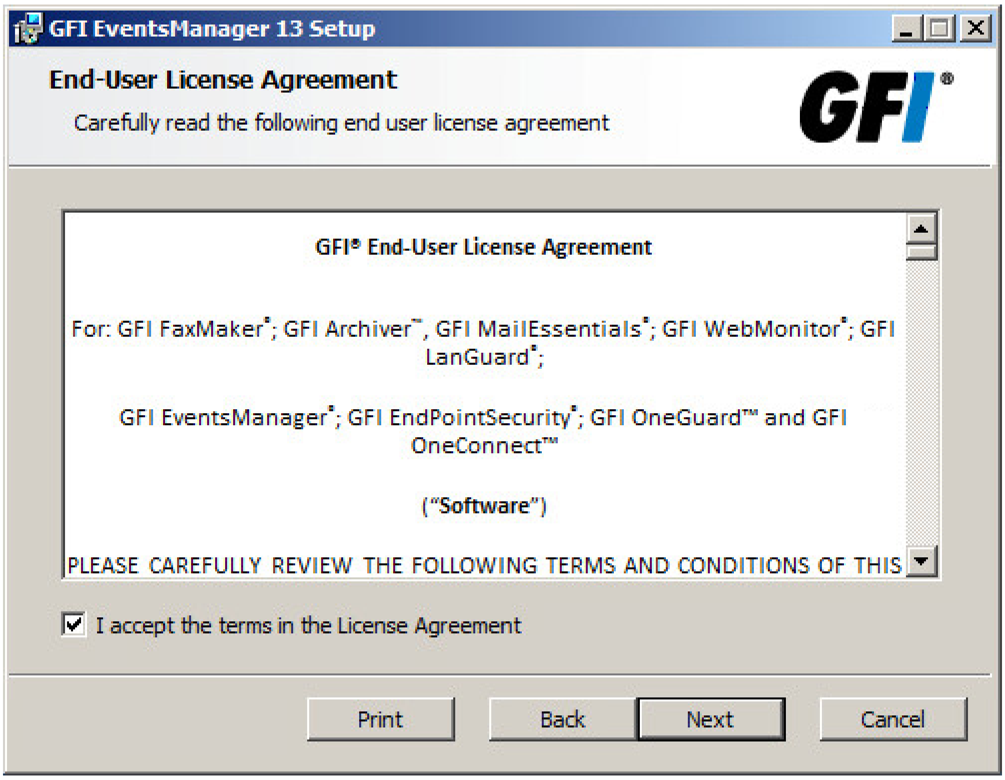


Welcome to the GFI EventsManager 13 Setup Wizard

The Setup Wizard will install GFI EventsManager 13 on your computer. Click Next to continue or Cancel to exit the Setup Wizard.

Screenshot 11: GFI EventsManager setup wizard welcome screen

8. Click **Next** at the wizard welcome screen.



End-User License Agreement

Carefully read the following end user license agreement

GFI® End-User License Agreement

For: GFI FaxMaker®; GFI Archiver™, GFI MailEssentials®; GFI WebMonitor®; GFI LanGuard®;

GFI EventsManager®; GFI EndPointSecurity®; GFI OneGuard™ and GFI OneConnect™

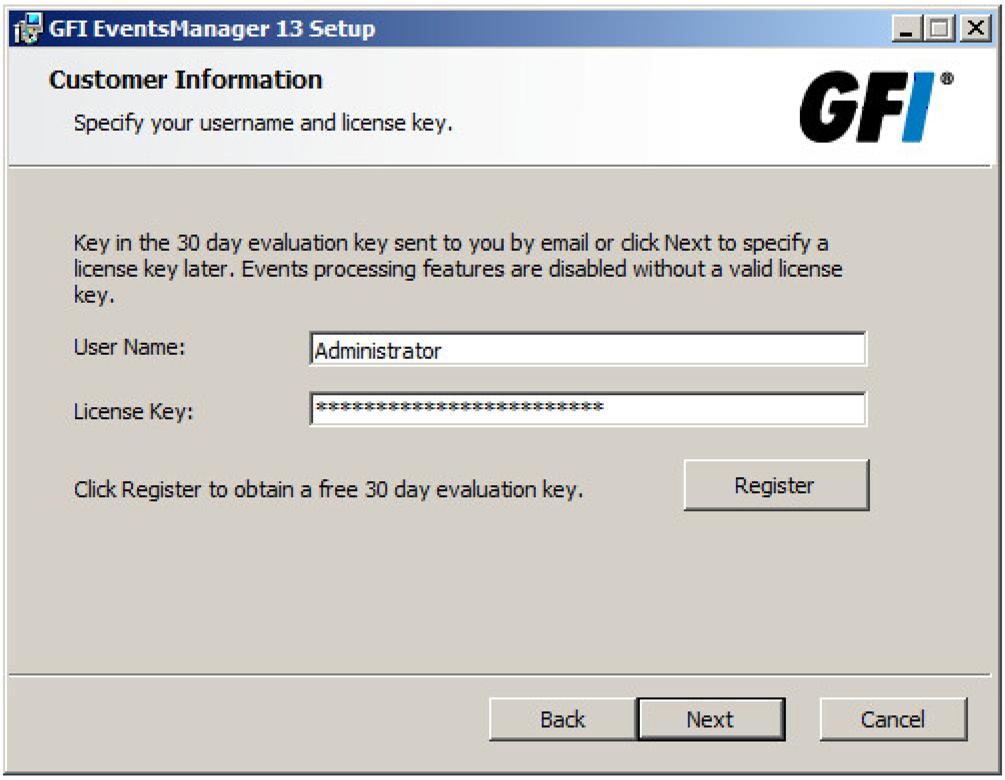
(“**Software**”)

PLEASE CAREFULLY REVIEW THE FOLLOWING TERMS AND CONDITIONS OF THIS

☑ I accept the terms in the License Agreement

Screenshot 12: GFI EventsManager EULA

9. Carefully read the license agreement. Select **I accept the terms in the License Agreement** and click **Next**.



Customer Information

Specify your username and license key.

Key in the 30 day evaluation key sent to you by email or click Next to specify a license key later. Events processing features are disabled without a valid license key.

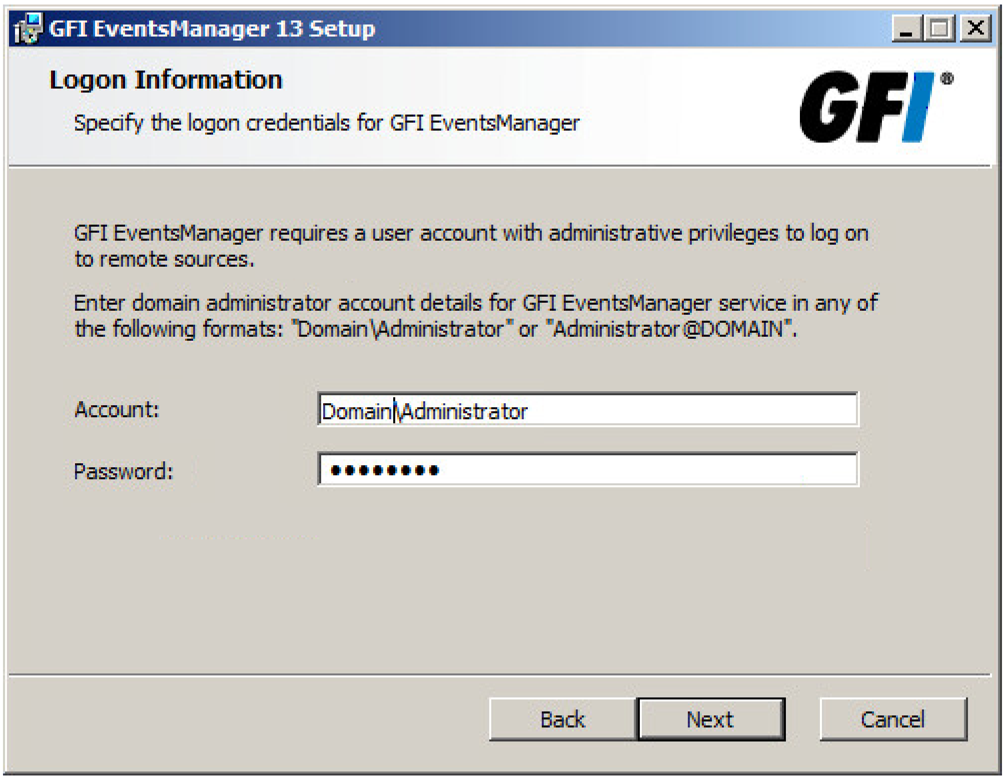
User Name: Administrator

License Key: *************************

Click Register to obtain a free 30 day evaluation key.

Screenshot 13: GFI EventsManager registration details

10. Key in your user name and license key in the **User Name** and **License Key** fields. To register for a free 30 day evaluation license key, click **Register**. Click **Next**.



Logon Information

Specify the logon credentials for GFI EventsManager

GFI EventsManager requires a user account with administrative privileges to log on to remote sources.

Enter domain administrator account details for GFI EventsManager service in any of the following formats: "Domain\Administrator" or "Administrator@DOMAIN".

Account: Domain\Administrator

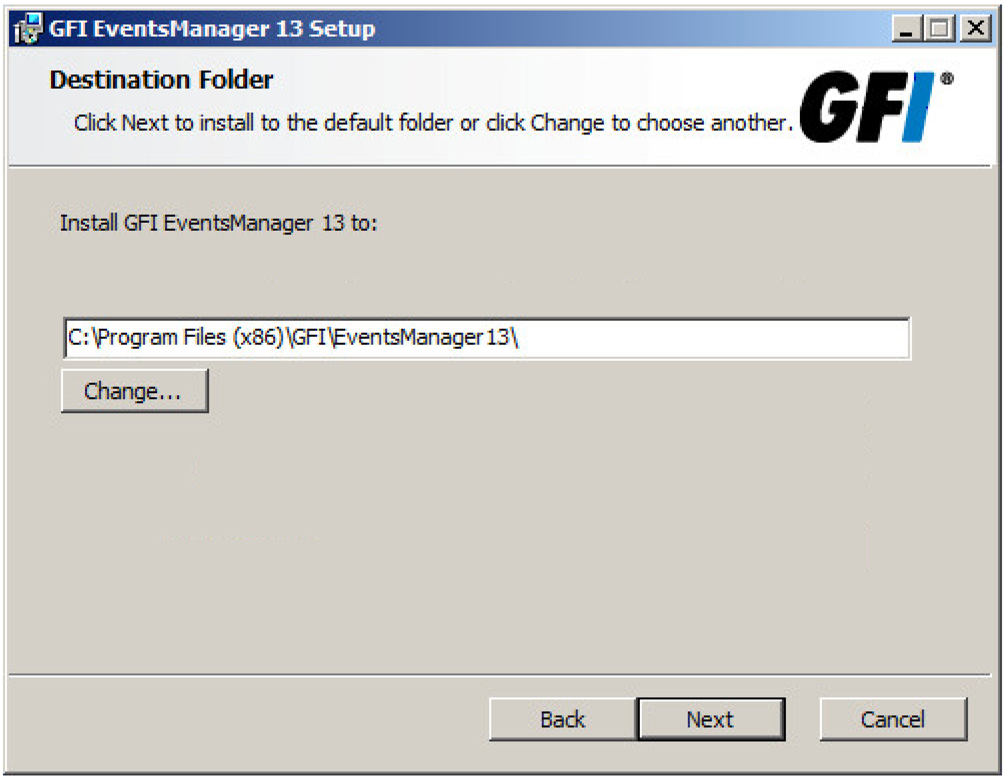
Password: ••••••••

Screenshot 14: Remote logon credentials for event log monitoring

11. Key in the logon credentials that GFI EventsManager uses to log onto remote computers.

NOTE

It is recommended to use a domain administrator or an account with administrative rights over all the remote computers managed by GFI EventsManager.



Destination Folder

Click Next to install to the default folder or click Change to choose another.

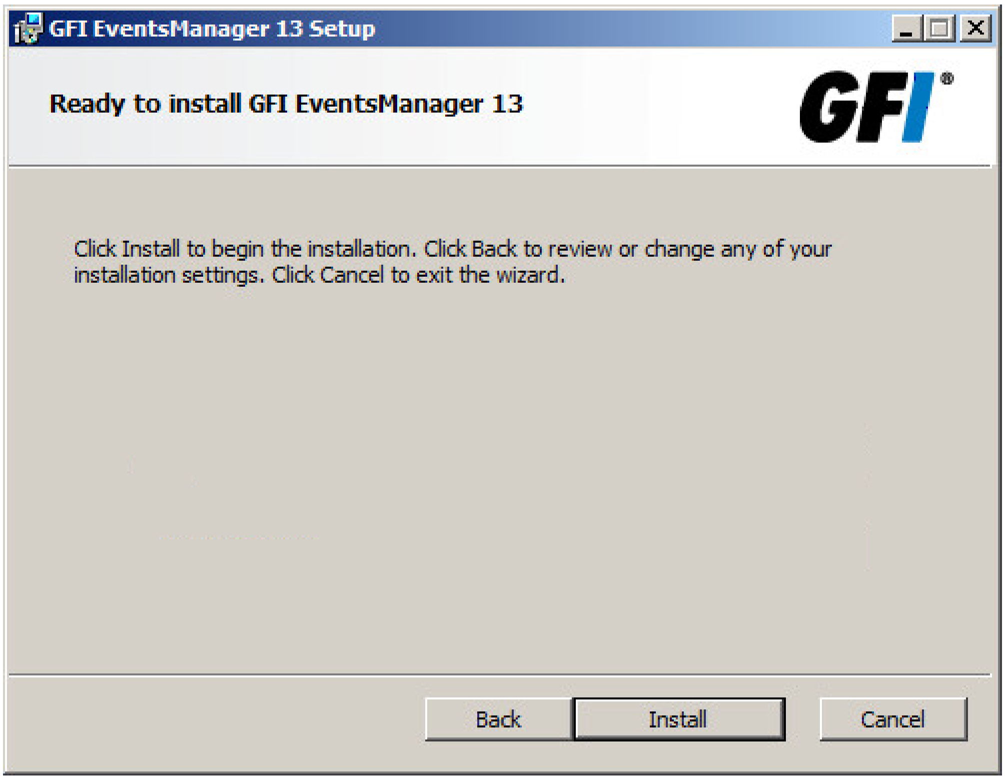
Install GFI EventsManager 13 to:

C:\Program Files (x86)\GFI\EventsManager13\

Change...

Screenshot 15: GFI EventsManager install folder

12. Click **Next** to install the Management Console in the default folder or click **Change...** to select an alternate folder where it is installed.



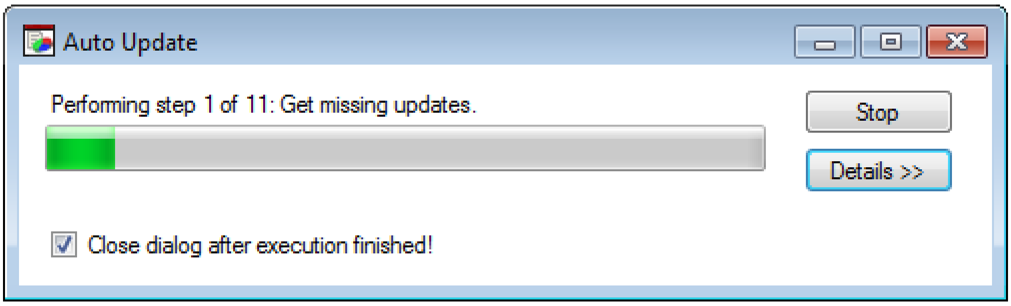
Ready to install GFI EventsManager 13

Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.

Screenshot 16: GFI EventsManager installation completed

13. Click **Install** to start the installation.

14. When the installation is complete, click **Finish**.

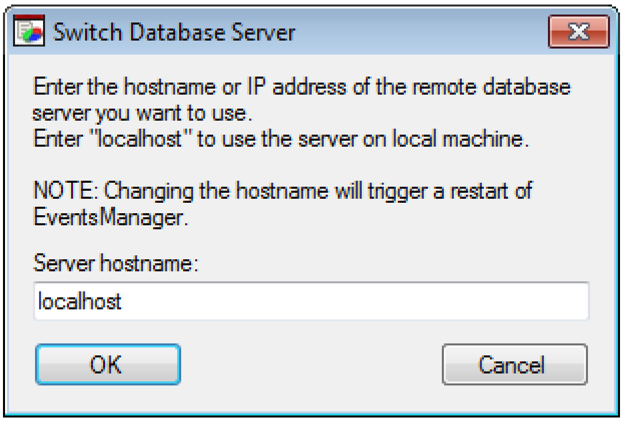


Performing step 1 of 11: Get missing updates.

☑ Close dialog after execution finished!

Screenshot 17: Auto updates check

15. If GFI EventsManager detects an Internet connection, it automatically attempts to download product updates from GFI updates servers. Click **Details** to expand the information section of the Auto Update dialog and view the updates that are being downloaded.



Switch Database Server

Enter the hostname or IP address of the remote database server you want to use.
Enter "localhost" to use the server on local machine.

NOTE: Changing the hostname will trigger a restart of EventsManager.

Server hostname:

localhost

Screenshot 18: Set the database backend

> **NOTE**
> After product updates are applied, the **Switch Database Server** dialog opens. This dialog is used to link the management console to a database server. You can switch database servers from the Management Console. For more information about switching databases go to http://go.gfi.com/?pageid=esm_adminguide#cshid=1049

16. Specify the computer that has D-Lib Database Server installed on it. If the database you want to use is on:

    - A remote computer - key in the **computer name** or **IP address**
    - The localhost - key in **localhost** (default).

Click **OK**

> **NOTE**
> Once the installation is complete, the Management Console opens automatically. To launch it manually, click **Start > All Programs > GFI EventsManager > Management Console**.

> **NOTE**
> Test the installation to ensure that all the components were successfully installed. For more information refer to Testing the installation.

3 Quick Start Guide

This topic is intended to guide you through the key steps needed to get the product running on default settings.

3.1 Step 1: Enable system configuration for event log management

Ensure that the GFI EventsManager host and the computers that need to be managed by GFI EventsManager meet the minimum system requirements to ensure full communication and functionality between all the components. For more information, refer to System requirements (page 17).

3.2 Step 2: Using GFI EventsManager for the first time – Quick Launch Console

Launch GFI EventsManager from **Start > Programs > GFI EventsManager > Management Console**. The **Quick Launch Console** is configured to launch automatically on startup. Use this console to customize GFI EventsManager settings and audit the localhost, local domain or a group of selected machines. For more information, refer to Testing the installation (page 35).

3.3 Step 3: Process events - Local computer

This option enables you to automatically add the localhost as an event source and start processing logs generated by it.

1. From the **Quick Launch Console**, click **Process events - Local computer**.

2. After the localhost logs start processing, you can:

» **Browse events** - Access the built-in events and forensic tools that will help you to locate, analyze and filter key events. For more information, refer to Browsing Stored Events (page 122).

» **Generate reports** - Access reporting features including instant/scheduled report generations and automated report distribution. For more information, refer to Reporting (page 140).

» **View dashboard** - Access the GFI EventsManager status dashboard. This enables you to view graphical representations of the most important events collected and processed by GFI EventsManager. For more information, refer to Activity Monitoring (page 133).

» **Customize default settings** - Customize GFI EventsManager settings, such as enabling Syslog, SNMP Trap processing, system checks, key events notifications, and more.

3.4 Step 4: Process events - Local domain

This option enables you to add one or more computers that are on the same domain or workgroup as GFI EventsManager. The Automatic Network Discovery wizard enables you to select the type of event sources you want to add and then lists the sources that are detected.

1. From the **Quick Launch Console**, click **Process events - Local domain**. This opens the **Automatic Network Discovery** wizard.

2. Click **Next** at the wizard welcome screen.

3. Select the type of event sources that the wizard will attempt to detect on your network. Click **Next**.

4. Select a computer from the list and key in the username and password. Click **OK** to close the **Alternative Credentials** dialog. Repeat this step until all the required sources are added.

5. Click **Next** and **Finish**.

NOTE: To automatically add new computers that are joined to the same domain/workgroup as GFI EventsManager, you must configure Synchronization Options. For more information, refer to Adding event sources automatically (page 67).

3.5 Step 5: Process events – Selected machines

This option enables you to add specific computers manually, by:

- Specifying computer names and/or IP addresses
- Selecting computers from reachable domains and workgroups
- Importing computers from a text file containing a single computer name per line.

1. From the **Quick Launch Console**, click **Process events - Selected machines**. This opens the **Add New Event Source** dialog.

2. Add new event sources by using the following options:

- **Add** - Key in the computer name or IP address in the **Add the following computers** field. Click **Add** to add the specified computer to the **Computer** list. Repeat this step until you add all the event sources to the selected group.
- **Remove** - Select one or more computers from the **Computer** list and click **Remove** to delete them from the list.
- **Select...** - Click **Select...** to launch the **Select Computers...** dialog. Key in the domain or workgroup you want to scan and select computers from the results list.
- **Import...** - Click **Import...** to import computers from a text file. Ensure that the text file contains only one computer name or IP address per line.

3. Click **Finish** to finalize your settings. GFI EventsManager immediately attempts to scan the new event sources using the default logon credentials. For more information, refer to Adding event sources manually (page 66).

3.6 Step 6: Analyze events

1. From the **Quick Launch Console**, click **Browse events**. This displays the **Events Browser** tab in GFI EventsManager.

2. From the left pane, browse collected events through different views or select an action to perform. For more information, refer to Browsing Stored Events (page 122).

3.7 Step 7: Monitoring GFI EventsManager

The status monitor shows the status of GFI EventsManager and provides statistical information related to the events collected, processed and archived. For more information, refer to Activity Monitoring (page 133).

The status monitor consists of three different views:

- **General** – Shows the status of the GFI EventsManager event processing engine and other statistical information such as the number of logon events, critical events and service status events.
- **Job Activity** - Provides information about the current event collection and processing activity. This includes active event collection jobs as well as Syslog messaging history on all machines.
- **Statistics** - Shows the daily event activity trends and statistics of a particular computer or of the entire network.
- **Monitoring Statistics** - Displays status information about active monitoring checks running on event sources. Select a row and click **View Events** to view the pertaining logs that were generated when the check failed, succeeded or both.

4 Syslog Parsing Schemas

GFI EventsManager supports parsing of Syslog events, based on regular expressions. This enables you to manually define a set of expressions to parse Syslog events. This set of expressions is called a Parsing Schema. The Syslog parsing schema is stored in ***%GFI EventsManager install directory%*\Data\toolcfg_syslogSchemas.xml**. Editing this file requires knowledge of XML and regular database expressions. Use the below schema as a guide for structuring your XML file. The XML elements in the Syslog Parsing Schema are described below.

4.1 Syslog Parsing Schema – XML Structure

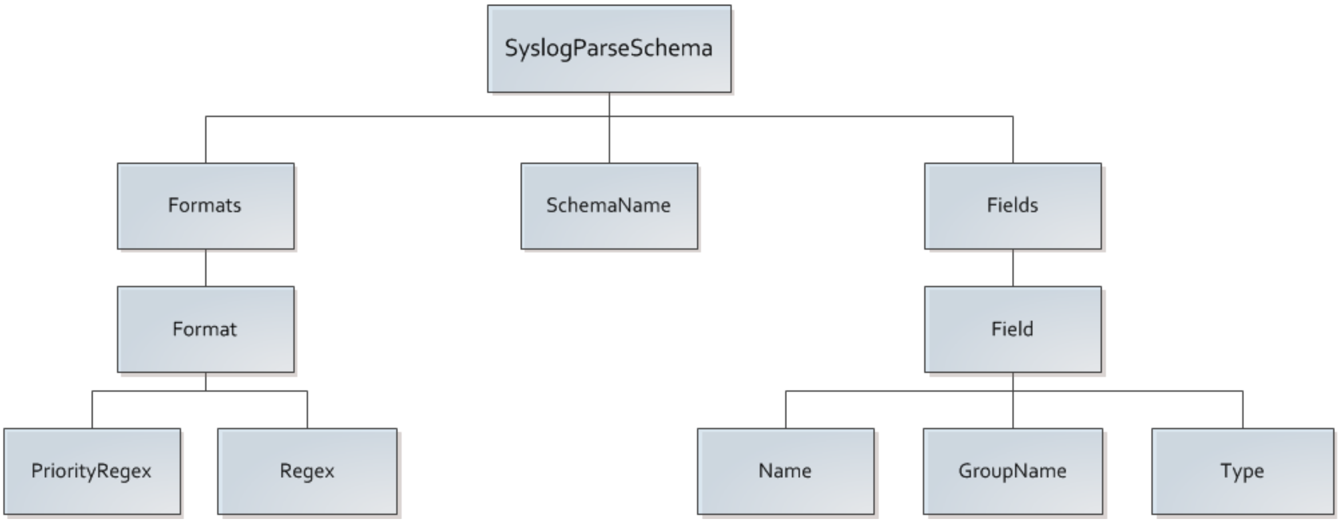
```
<SyslogParseSchema>
<SchemaName>Standard linux message</SchemaName>
  <Formats>
    <Format>
      <PriorityRegex>.*</PriorityRegex>
      <Regex><![CDATA[(?<timestamp>\w{3}\s*\d{1,2}\s\d{2}:\d{2}:\d{2})\s(?<host>\w*)\s(?<source_process>\w*):\s.*]]></Regex>
    </Format>
    <Format>
      <PriorityRegex>.*</PriorityRegex>
      <Regex><![CDATA[(?<source_process>\w*)\(.*\)\[(?<source_pid>\d*)\]:\s.*]]></Regex>
    </Format>
    <Format>
      <PriorityRegex>.*</PriorityRegex>
      <Regex><![CDATA[(?<source_process>\w*)\[(?<source_pid>\d*)\]:\s.*]]></Regex>
    </Format>
    <Format>
      <PriorityRegex>.*</PriorityRegex>
      <Regex><![CDATA[(?<source_process>\w*):\s.*]]></Regex>
    </Format>
  </Formats>
  <Fields>
    <Field>
      <Name>timestamp</Name>
      <GroupName>timestamp</GroupName>
      <Type>DateTime</Type>
    </Field>
    <Field>
      <Name>host</Name>
```

```
            <GroupName>host</GroupName>
            <Type>String</Type>
        </Field>
        <Field>
            <Name>source process</Name>
            <GroupName>source_process</GroupName>
            <Type>String</Type>
        </Field>
        <Field>
            <Name>source pid</Name>
            <GroupName>source_pid</GroupName>
            <Type>Int32</Type>
        </Field>
    </Fields>
</SyslogParseSchema>
```

4.2 Schema parsing elements

Syslog Parsing Schema	XML Tag Description
SchemaName	The display name of the schema. The provided name is displayed in GFI EventsManager Management Console.
Formats	A collection of Format nodes, each containing a regular expression for parsing. Format nodes contain: » A regular expression for parsing the message and a regular expression to test the priority. Before testing the priority with regular expressions, the node is formatted as a string in the form of **facility.severity** » A standard **.net regex** element used for parsing expressions. For more information, refer to http://msdn.microsoft.com/en-us/library/az24scfc%28v=vs.71%29.aspx.
Fields	A collection of Field nodes, each containing information about: » **Name** – the display name of the field. The provided name appears in Events Browser » **GroupName** – represents the group name from a regular expression corresponding to the field. This is used to get the field value after parsing » **Type** – data type of the field. Example: String and Date.

4.3 XML Document Map



Screenshot 19: XML Document Map

5 Text Log Parsing Schemas

GFI EventsManager supports parsing of Text Logs, based on regular expressions. This enables you to manually define a set of expressions to parse Text Log events, such as W3C Logs (Webserver), CSV Logs or custom logs. This set of expressions is called a Parsing Schema. The Text Log parsing schema is stored in ***%GFI EventsManager install directory*%\Data\toolcfg_textlogParseSchemas.xml**. All schemas are stored in the **ArrayOfTextLogParseSchema** tag in this XML file, and for each schema, there is a **TextLogParseSchema**, as described below.

Editing this file requires knowledge of XML and regular database expressions. Use the below schema as a guide for structuring your XML file. The elements are described below.

5.1 Text Logs Parse Schemas – XML Structure

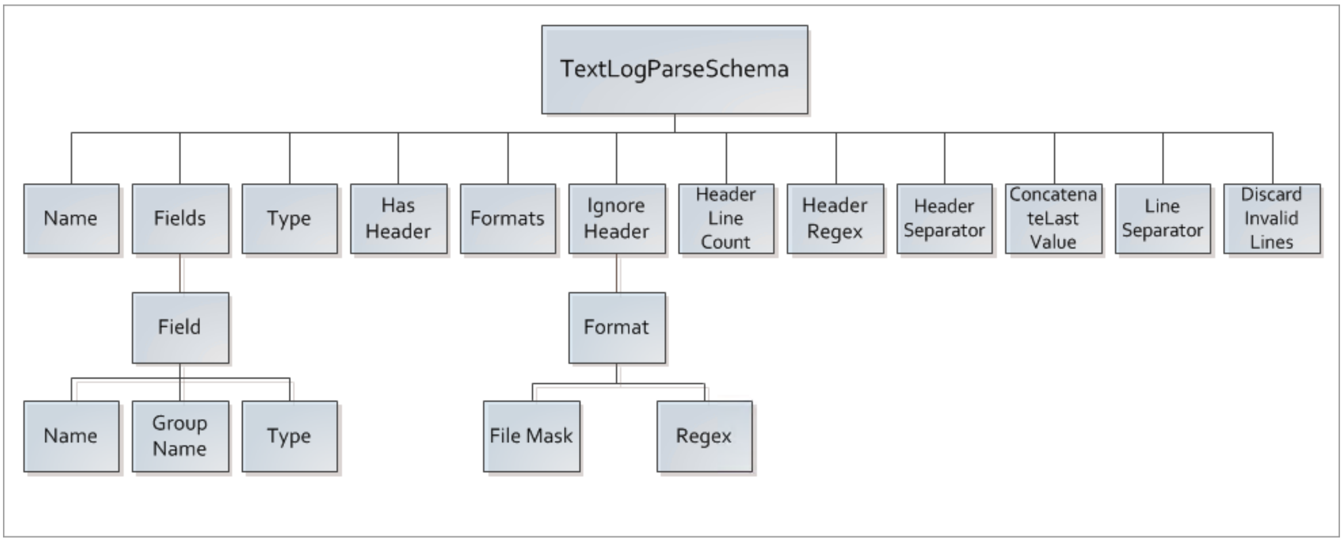
```
<TextLogParseSchema>
    <Name>ESM Logs(sample)</Name>
    <Type>Custom</Type>
    <Fields>
        <Field>
            <Name>date str</Name>
            <GroupName>date_str</GroupName>
            <Type>String</Type>
        </Field>
        <Field>
            <Name>time str</Name>
            <GroupName>time_str</GroupName>
            <Type>String</Type>
        </Field>
        <Field>
            <Name>miliseconds</Name>
            <GroupName>miliseconds</GroupName>
            <Type>String</Type>
        </Field>
        <Field>
            <Name>process id</Name>
            <GroupName>process_id</GroupName>
            <Type>String</Type>
        </Field>
        <Field>
            <Name>method</Name>
            <GroupName>method</GroupName>
            <Type>String</Type>
        </Field>
        <Field>
            <Name>description</Name>
            <GroupName>description</GroupName>
            <Type>String</Type>
        </Field>
    </Fields>
    <Formats>
        <Format>
            <FileMask>*.csv</FileMask>
            <Regex><![CDATA[(?<date_str>\d{4}-\d{2}-\d{2}),\s(?<time_str>\d{2}:\d{2}:\d{2}),\s(?<miliseconds>\d{3}),\s(?<process_id>\w+),\s(?<thread_id>\w+),\s(?<event_type>\w+),\s(?<source>.+),\s(?<method>.+),\s(?<description>.+),\s]]></Regex>
        </Format>
    </Formats>
    <HasHeader>false</HasHeader>
    <IgnoreHeader>true</IgnoreHeader>
    <HeaderLineCount>2</HeaderLineCount>
    <HeaderRegEx />
    <HeaderSeparator>,</HeaderSeparator>
    <ConcatenateLastValue>true</ConcatenateLastValue>
    <LineSeparator>,</LineSeparator>
    <DiscardInvalidLines>true</DiscardInvalidLines>
</TextLogParseSchema>
```

5.2 Schema parsing elements

Text Log Parsing Schema	XML Tag Description
Name	The display name of the schema. The provided name is displayed in GFI EventsManager Management Console user interface.
Type	Represents the type of the schema. Supported values for this node include **W3C**, **CSV**, **XML**, **DHCP logs**, **SAP logs**, **SKI Data logs** as well as **Custom text logs**; example: MySchema. **Fields** and **Formats** nodes are unavailable for **W3C** and **CSV**.
Formats	A collection of Format nodes, each containing a regular expression for parsing. Format nodes contain: » A regular expression for parsing the message and a mask to test files. The mask is in standard command line format and uses **"?"** and **"*"** as wildcard characters » A standard **.net regex** element used for parsing expressions. For more information, refer to http://msdn.microsoft.com/en-us/library/az24scfc%28v=vs.71%29.aspx.

Text Log Parsing Schema	XML Tag Description
Fields	A collection of Field nodes, each containing information about: » **Name** – the display name of the field. The provided name appears in Events Browser » **GroupName** – represents the group name from a regular expression corresponding to the field. This is used to get the field value after parsing » **Type** – data type of the field. Example: String and Date.
IgnoreHeader	Ignores the column header if the value is **True**. Otherwise, **False**.
HeaderLineCount	Specify the number of lines in the column header row. Example: **<HeaderLineCount>2</HeaderLineCount>**
HeaderRegex	Regular expression for parsing the header. Example: **<HeaderRegEx />**
HeaderSeparator	When no regex is present, specify the separator used to parse fields in the header. Example: **<HeaderSeparator>,</HeaderSeparator>**
ConcatenateLast Value	Concatenates remaining values to the last field value. Example: if a line is parsed into ten fields and there are only eight header fields, field nine and ten are concatenated to field eight.
LineSeparator	Specify a character for line separation. Example: **<LineSeparator>/</LineSeparator>**
DiscardInvalidLines	Discards lines that cannot be parsed if the value is **True**. Otherwise, **False**.

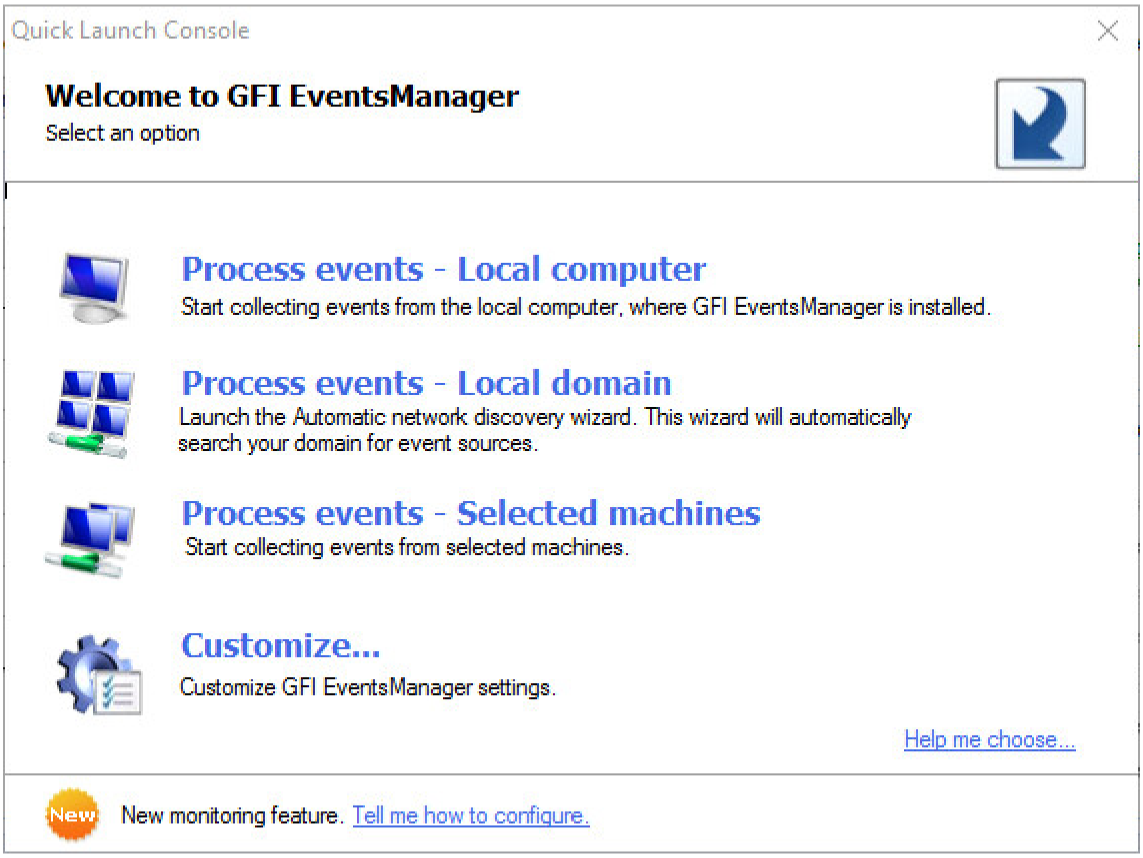
5.3 XML Document Map



Screenshot 20: XML Document Map

5.4 Testing the installation

After all the required components are installed, the Management Console opens automatically. By default, it is configured to launch the **Quick Launch Console** on start up.



Quick Launch Console

Welcome to GFI EventsManager

Select an option

Process events - Local computer

Start collecting events from the local computer, where GFI EventsManager is installed.

Process events - Local domain

Launch the Automatic network discovery wizard. This wizard will automatically search your domain for event sources.

Process events - Selected machines

Start collecting events from selected machines.

Customize...

Customize GFI EventsManager settings.

Help me choose...

New monitoring feature. Tell me how to configure.

Screenshot 21: Running GFI EventsManager for the first time

Select an option from the Quick Launch Console to process events or customize default settings:

Option	Description
Process events - Local computer	Start processing logs generated by the GFI EventsManager host. **Note** For more information refer to Process events - Local computer.
Process events - Local domain	Start processing logs generated by computers and network devices within the same domain as the GFI EventsManager host. **Note** For more information refer to Process events - Local domain.
Process events - Selected machines	Start processing logs generated by specific computer(s). **Note** For more information refer to Process events - Selected machines.
Customize...	Customize default settings, such as: » Event sources and log types » Events processing rules » Database operations » Alert recipients » Alerting options » Active monitoring.

5.4.1 How to process events for the Local computer

This option enables you to automatically add the localhost as an event source and start processing logs generated by it.

To process events from the local computer:

1. Open the GFI EventsManager Quick Launch Console. In the welcome page, click **Process events - Local computer**.

2. After the localhost logs start processing, you can:

Icon	Description
🔍	**Browse events** Access the built-in events and forensic tools that will help you locate, analyze and filter key events.
📊	**Generate reports** Access reporting features including instant/scheduled report generations and automated report distribution.
🖥	**View dashboard** Access GFI EventsManager status dashboard. This enables you to view graphical representations of the most important events collected and processed by GFI EventsManager.
⚙	**Customize** Customize GFI EventsManager settings, such as enabling Syslog, SNMP Trap processing, system checks, key events notifications, and more.

> **Note**
>
> To confirm that logs are successfully processed, go to **Status** tab **>** **Job Activity** and check that there are activity logs under the **Operational History** section.

5.4.2 How to process events for the Local domain

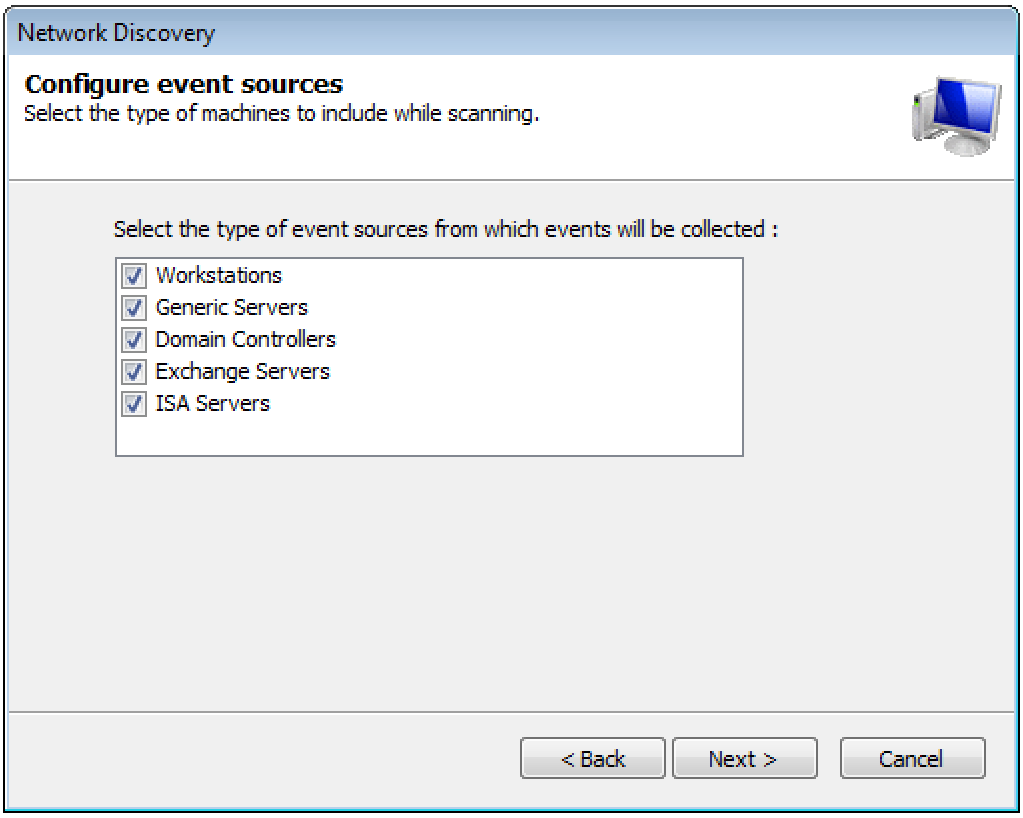
This option enables you add one or more computers that are on the same domain or workgroup as GFI EventsManager. The Automatic Network Discovery wizard enables you to select the type of event sources you want to add and then lists the sources that are detected.

To process event from computers on the same domain/workgroup:

1. Open the GFI EventsManager Quick Launch Console. In the welcome page, click **Process events - Local domain**. This opens the **Automatic Network Discovery** wizard.

> **Note**
>
> The wizard can also be launched from **Configuration** tab **>** **Event Sources**. From the left pane, right-click **All event sources** and select **Scan local domain**.

2. Click **Next** at the wizard welcome screen.



Network Discovery

Configure event sources

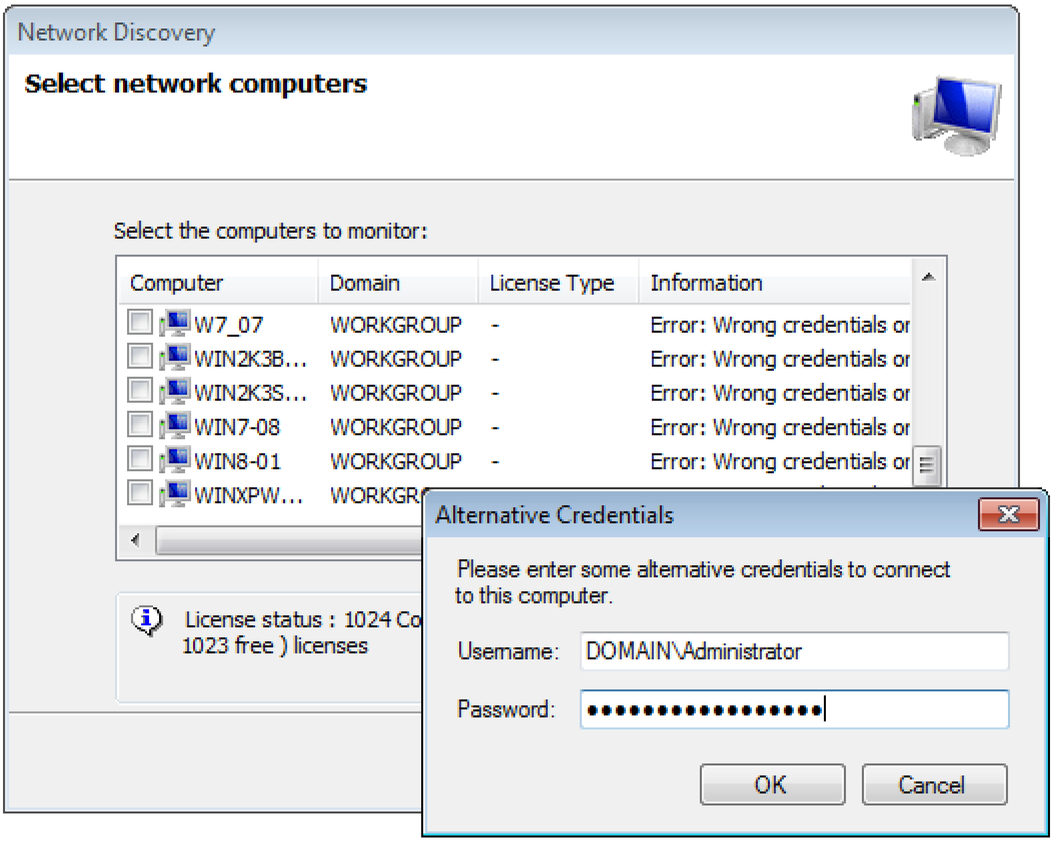
Select the type of machines to include while scanning.

Select the type of event sources from which events will be collected :

- ☑ Workstations
- ☑ Generic Servers
- ☑ Domain Controllers
- ☑ Exchange Servers
- ☑ ISA Servers

Screenshot 22: Select event source types to detect on your network

3. Select the type of event sources that the wizard will attempt to detect on your network. Click **Next**.



Network Discovery

Select network computers

Select the computers to monitor:

Computer	Domain	License Type	Information
□ W7_07	WORKGROUP	-	Error: Wrong credentials or
□ WIN2K3B...	WORKGROUP	-	Error: Wrong credentials or
□ WIN2K3S...	WORKGROUP	-	Error: Wrong credentials or
□ WIN7-08	WORKGROUP	-	Error: Wrong credentials or
□ WIN8-01	WORKGROUP	-	Error: Wrong credentials or
□ WINXPW...	WORKGR		

License status : 1024 Co
1023 free) licenses

Alternative Credentials

Please enter some alternative credentials to connect to this computer.

Username: DOMAIN\Administrator

Password: ●●●●●●●●●●●●●●●●●

Screenshot 23: Search network progress

> **Note**
>
> If GFI EventsManager detects computers that cannot be logged onto using the supplied credentials, it enables you to specify alternate logon credentials for each computer you select.

4. Select a computer from the list and key in the username and password. Click **OK** to close the **Alternative Credentials** dialog. Repeat this step until all the required sources are added.

5. Click **Next** and **Finish**.

> **Note**
>
> To automatically add new computers that are joined to the same domain/workgroup as GFI EventsManager, you must configure Synchronization Options.

5.4.3 How to process events for Selected machines

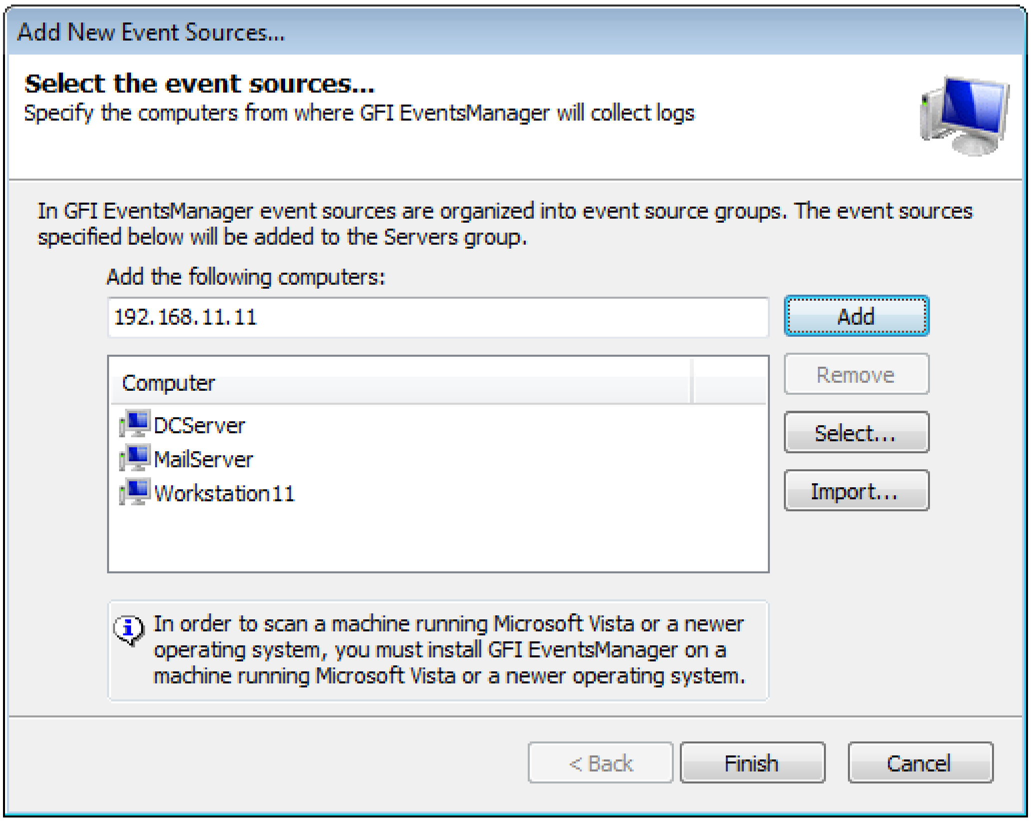
This option enables you to add specific computers manually, by:

- Keying in computer names and IPs
- Selecting computers from reachable domains and workgroups
- Importing computers from a text file containing a single computer name per line.

To process events of selected machines:

1. Open the GFI EventsManager Quick Launch Console. In the welcome page, click **Process events - Selected machines**.

2. This opens the **Add New Event Source** dialog.



Add New Event Sources...

Select the event sources...

Specify the computers from where GFI EventsManager will collect logs

In GFI EventsManager event sources are organized into event source groups. The event sources specified below will be added to the Servers group.

Add the following computers: 192.168.11.11

Computer
DCServer
MailServer
Workstation11

In order to scan a machine running Microsoft Vista or a newer operating system, you must install GFI EventsManager on a machine running Microsoft Vista or a newer operating system.

Screenshot 24: Add new event source wizard

3. The following table describes the available options:

Option	Description
Add	Key in the computer name or IP address in the **Add the following computers** field. Click **Add** to add the specified computer to the **Computer** list. Repeat this step until you add all the event sources to the selected group. **Note** Since Syslog and SNMP traps use IP addresses to determine the source of an event, it is recommended to use the source IP address instead of the computer name when adding Syslog and SNMP Traps sources.
Remove	Select one or more computers from the **Computer** list and click **Remove** to delete them from the list.
Select...	Click **Select...** to launch the **Select Computers...** dialog: 1. From the **Domain** drop-down menu, select the domain you want to scan for available sources and click **Search**. 2. From the search results list, select the computers you want to add. 3. Click **OK** to close the **Select Computers...** dialog and return to the **Add New Event Sources...** dialog.
Import...	Click **Import...** to import computers from a text file. Ensure that the text file contains only one computer name or IP address per line.

4. Click **Finish** to finalize your settings. GFI EventsManager immediately attempts to scan the added event sources, using the default logon credentials.

> **Note**
>
> If synchronization is not enabled, you can use the **Network Discovery Wizard** to automatically search and add events sources. To launch **Network Discovery Wizard**, right-click **All event sources** from the event sources tree and select **Scan local domain**.

> **Note**
>
> To confirm that logs are successfully processed, go to **Status** tab > **Job Activity** and check that there are activity logs under the **Operational History** section.

5.5 Upgrading GFI EventsManager

Choose your current GFI EventsManager version for information on how to upgrade to the latest version while retaining all settings:

- GFI EventsManager 2013
- GFI EventsManager 2012

> **NOTE**
>
> Direct upgrades from version 2011 or earlier are not supported and it is recommended to uninstall and reconfigure GFI EventsManager.

5.5.1 Upgrading from version 2013

This topic describes how to upgrade a GFI EventsManager 2013 installation to the latest version while retaining all settings.

Important notes when upgrading

- Upgrade is not reversible; you cannot downgrade to the previous version that you had installed.

- Use the same license key of version 2013. If the key is not at hand you can get it from the GFI Customer Area.
- During upgrade, GFI EventsManager services and operation are stopped.
- Check the system requirements before proceeding with upgrade. For more information, refer to System requirements (page 17).
- Installation files that are customized may be overriden during upgrade. Backup modified files and restore them after upgrade. Common custom files in the GFI EventsManager installation folder include `\Data\scan_profile.trc` for custom SQL traces and `\Data\Reports\reportsheader.xml` for custom reports.
- Ensure that you are logged in as Administrator or using an account with administrative privileges.
- Before starting installation, save and close all open applications on the machine.
- Disable anti-virus software on the server machine during the upgrade installation. Re-enable it once upgrade is complete.

Upgrade procedure

1. Export the GFI EventsManager configuration. For more information, refer to Exporting configurations to a file (page 212).

2. Download the latest build of GFI EventsManager on the server where GFI EventsManager is currently installed. Go to http://go.gfi.com/?pageid=esm_trial, click **Login** and key in your GFI Account credentials.

3. Right-click the newly downloaded installer and choose **Properties**. From the **General** tab, click **Unblock** and then **Apply**. This step is required to prevent the operating system from blocking certain actions by the installer.

4. Launch the newly downloaded installer and follow on-screen instructions to first install any pre-requisites, such as the GFI Database Server if installed on the local server.

5. The wizard now uninstalls the currently installed version of GFI EventsManager. Click **Yes** to confirm the deletion of files.

6. On uninstall completion, the wizard runs the latest version of the GFI EventsManager installer. Follow on-screen instructions to complete all wizard steps. When prompted, use the license key for GFI EventsManager 2013.

7. When installation is complete and GFI EventsManager detects an Internet connection, it automatically attempts to download product updates from GFI updates servers.

8. Choose the server that hosts the GFI Database Server. Key in localhost if this is installed on the local server, or the computer name or IP address if the database is hosted on a remote computer.

9. Import the configuration file that was previously exported. For more information, refer to Importing configurations from a file (page 216).

10. Test the installation to ensure that all the components were successfully installed.

5.5.2 Upgrading from version 2012

This topic describes how to upgrade a GFI EventsManager 2012 installation to the latest version while retaining all settings.

Important notes when upgrading

- Upgrade is not reversible; you cannot downgrade to the previous version that you had installed.
- Login to the GFI Customer Area to get a new license key. Click the blue key icon on the right and select **Upgrade License Key**, or click **Renewal** to extend your maintenance agreement.

- During upgrade, GFI EventsManager services and operation are stopped.

- Check the system requirements before proceeding with upgrade. For more information, refer to System requirements (page 17).

- Installation files that are customized may be overriden during upgrade. Backup modified files and restore them after upgrade. Common custom files in the GFI EventsManager installation folder include `\Data\scan_profile.trc` for custom SQL traces and `\Data\Reports\reportsheader.xml` for custom reports.

- Ensure that you are logged in as Administrator or using an account with administrative privileges.

- Before starting installation, save and close all open applications on the machine.

- Disable anti-virus software on the server machine during the upgrade installation. Re-enable it once upgrade is complete.

Upgrade procedure

1. Export the GFI EventsManager configuration. For more information, refer to Exporting configurations to a file (page 212).

2. Download the latest build of GFI EventsManager on the server where GFI EventsManager is currently installed. Go to http://go.gfi.com/?pageid=esm_trial, click **Login** and key in your GFI Account credentials.

3. Right-click the newly downloaded installer and choose **Properties**. From the **General** tab, click **Unblock** and then **Apply**. This step is required to prevent the operating system from blocking certain actions by the installer.

4. Launch the newly downloaded installer and follow on-screen instructions to first install any pre-requisites, such as the GFI Database Server if installed on the local server.

5. The wizard now uninstalls the currently installed version of GFI EventsManager. Click **Yes** to confirm the deletion of files.

6. On uninstall completion, the wizard runs the latest version of the GFI EventsManager installer. Follow on-screen instructions to complete all wizard steps. When prompted, use the license key obtained from the GFI Customer Area.

7. When installation is complete and GFI EventsManager detects an Internet connection, it automatically attempts to download product updates from GFI updates servers.

8. Choose the server that hosts the GFI Database Server. Key in localhost if this is installed on the local server, or the computer name or IP address if the database is hosted on a remote computer.

9. Import the configuration file that was previously exported. For more information, refer to Importing configurations from a file (page 216).

10. Test the installation to ensure that all the components were successfully installed.

6 Evaluation plan

The enormous volume of system event logs generated daily is of growing importance to organizations that must record information for forensic and compliance purposes. It is essential to perform real-time network-wide event log monitoring, analysis and reporting to address any incidents or security concerns and combat threats to business continuity.

GFI EventsManager assists with this monumental task by automatically and centrally monitoring and managing event logs - supporting a wide range of event types generated both by applications and devices from top vendors as well as for custom ones.

GFI EventsManager can help you:

- Boost your security by monitoring security-relevant activity, mechanisms and applications.
- Cut costs and increase productivity by automating IT management
- Understand what is happening in your IT environment
- Benefit from network uptime and identify problems through real-time alerts and dashboard
- Protect your network by detecting and analyzing security incidents through event log data analysis
- Achieve regulatory compliance with SOX, PCI DSS, HIPAA etc

6.1 Before starting the evaluation

Register to download and evaluate GFI EventsManager free for 30 days at: http://go.gfi.com/?pageid=esm_trial

During evaluation our support and sales teams are ready to assist you with any questions you may have. The easiest way to get in touch with our representatives is to use the contact details shown on the GFI website: https://www.gfi.com/contact-us or directly via Support at http://kb.gfi.com/supportcontact.

7 Evaluating GFI EventsManager

Installing GFI EventsManager is easy. Follow the guidelines in our Getting Started with GFI EventsManager to review system requirements and learn how to prepare your environment and deploy the product.

After installing GFI EventsManager, go through the following topics to learn how to configure GFI EventsManager for first time use. Here you will find information on how to browse events and observe history logs through the Quick Launch Console:

7.1 Configuring GFI EventsManager for evaluation

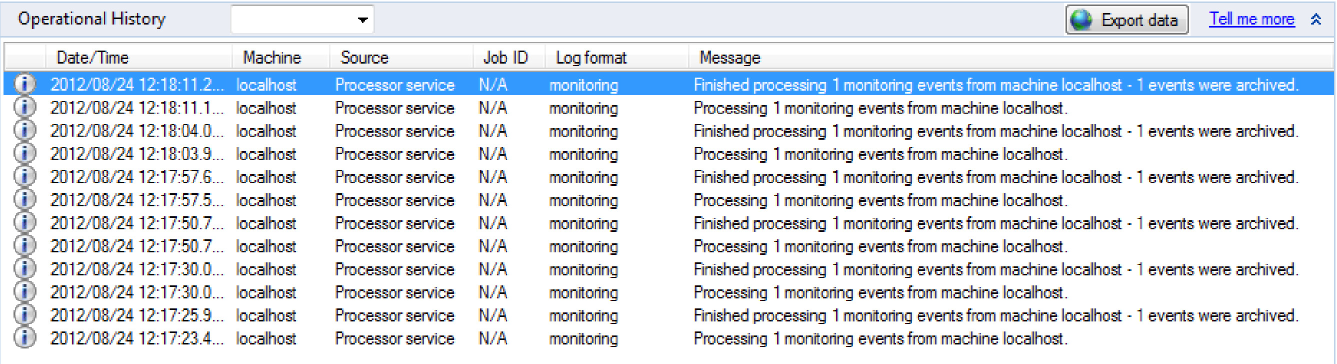
GFI EventsManager has many features that apply to several log types. Event logs from the localhost are collected and processed automatically upon first startup of GFI EventsManager. For best results, you should enable Audit Policy on all categories on the machines listed below. More information can be obtained using this link: http://go.gfi.com/?pageid=esm_adminguide#cshid=AuditPolicy.

- The local machine or a workstation (a Windows 7 machine is recommended)
- A Windows server in your network (ensure the GFI EventsManager service account you specified during the installation has admin rights on that machine)

7.1.1 Observing operational history logs of the localhost

To confirm that event logs of the localhost are being processed:

1. Open GFI EventsManager and from **Status** tab click **>Job Activity**.



Date/Time	Machine	Source	Job ID	Log format	Message
2012/08/24 12:18:11.2...	localhost	Processor service	N/A	monitoring	Finished processing 1 monitoring events from machine localhost - 1 events were archived.
2012/08/24 12:18:11.1...	localhost	Processor service	N/A	monitoring	Processing 1 monitoring events from machine localhost.
2012/08/24 12:18:04.0...	localhost	Processor service	N/A	monitoring	Finished processing 1 monitoring events from machine localhost - 1 events were archived.
2012/08/24 12:18:03.9...	localhost	Processor service	N/A	monitoring	Processing 1 monitoring events from machine localhost.
2012/08/24 12:17:57.6...	localhost	Processor service	N/A	monitoring	Finished processing 1 monitoring events from machine localhost - 1 events were archived.
2012/08/24 12:17:57.5...	localhost	Processor service	N/A	monitoring	Processing 1 monitoring events from machine localhost.
2012/08/24 12:17:50.7...	localhost	Processor service	N/A	monitoring	Finished processing 1 monitoring events from machine localhost - 1 events were archived.
2012/08/24 12:17:50.7...	localhost	Processor service	N/A	monitoring	Processing 1 monitoring events from machine localhost.
2012/08/24 12:17:30.0...	localhost	Processor service	N/A	monitoring	Finished processing 1 monitoring events from machine localhost - 1 events were archived.
2012/08/24 12:17:30.0...	localhost	Processor service	N/A	monitoring	Processing 1 monitoring events from machine localhost.
2012/08/24 12:17:25.9...	localhost	Processor service	N/A	monitoring	Finished processing 1 monitoring events from machine localhost - 1 events were archived.
2012/08/24 12:17:23.4...	localhost	Processor service	N/A	monitoring	Processing 1 monitoring events from machine localhost.

Screenshot 25: Operational history logs of the localhost

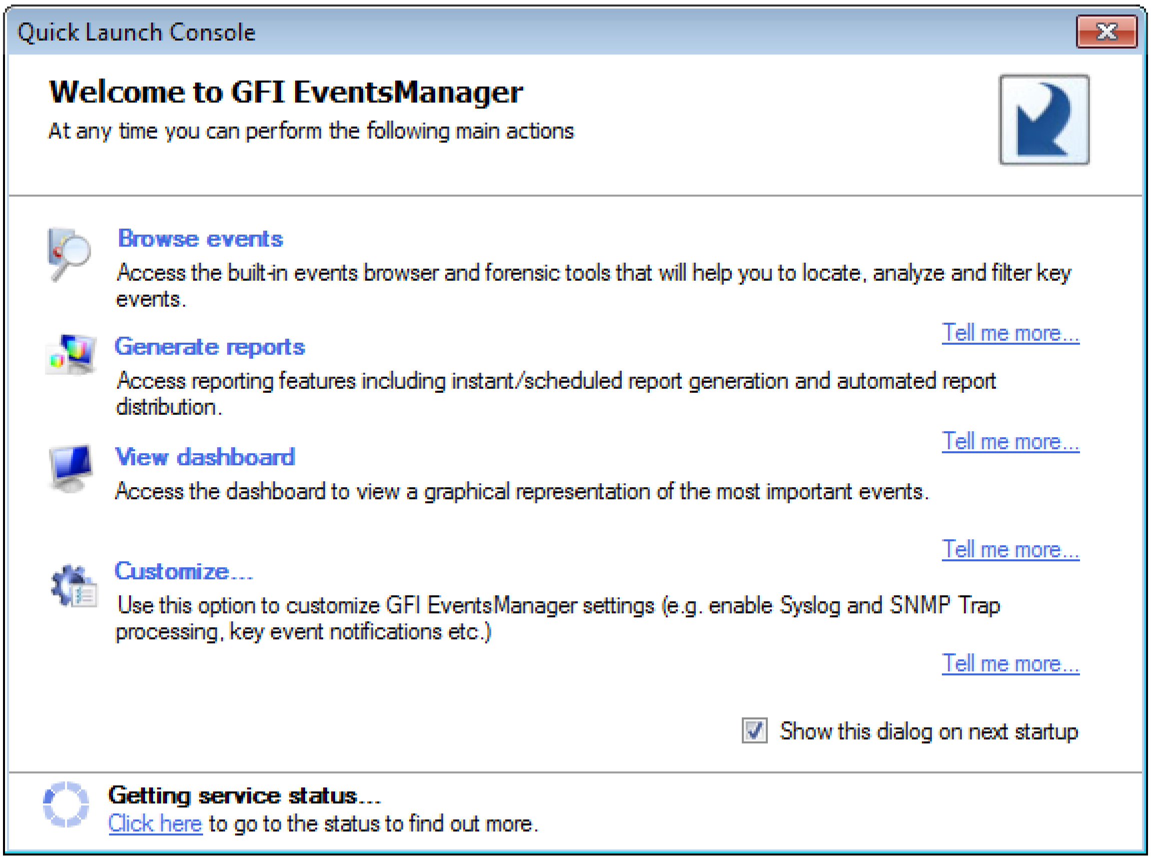
2. Check that there is activity logs under the **Operational History** section.

> **Note**
>
> If the installation is functioning properly, this section is instantly populated.

7.2 Using the Quick Launch Console

When the Management Console is opened, the Quick Launch Console is automatically displayed.

> **Note**
>
> To stop the console from opening automatically, unselect **Show this dialog on next startup**.


Quick Launch Console

Welcome to GFI EventsManager

At any time you can perform the following main actions

Browse events

Access the built-in events browser and forensic tools that will help you to locate, analyze and filter key events.

Tell me more...

Generate reports

Access reporting features including instant/scheduled report generation and automated report distribution.

Tell me more...

View dashboard

Access the dashboard to view a graphical representation of the most important events.

Tell me more...

Customize...

Use this option to customize GFI EventsManager settings (e.g. enable Syslog and SNMP Trap processing, key event notifications etc.)

Tell me more...

☑ Show this dialog on next startup

Getting service status...

Click here to go to the status to find out more.

Screenshot 26: GFI EventsManager Quick Launch Console

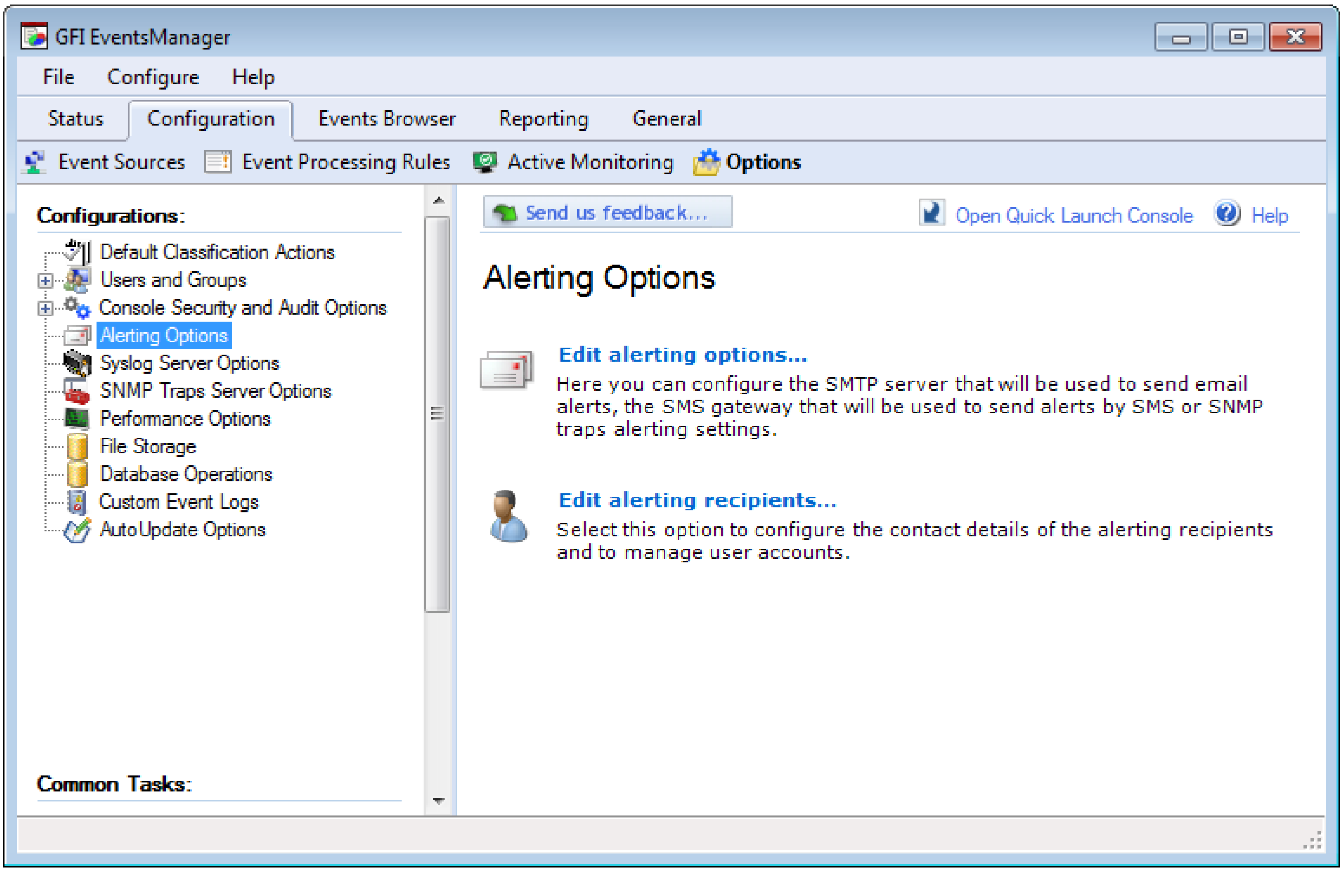
The following table describes the available options of the Quick Launch Console:

Icon	Description
	Browse events Access the built-in events and forensic tools that will help you locate, analyze and filter key events.
	Generate reports Access reporting features including instant/scheduled report generations and automated report distribution.
	View dashboard Access GFI EventsManager status dashboard. This enables you to view graphical representations of the most important events collected and processed by GFI EventsManager.
	Customize Customize GFI EventsManager settings, such as enabling Syslog, SNMP Trap processing, system checks, key events notifications, and more.

7.3 How to configure Alerting Options

To complete the setup configure alerting options to be notified in real time when important events occur. Alerting options enable you to configure what alerts are triggered when particular event(s) are collected. For example, you can configure GFI EventsManager to send an email and SMS alert to one or more recipients when a Critical event is processed.

To configure these options click: **Configuration**>**Options**>**Alerting Options**.



Alerting Options

Edit alerting options...
Here you can configure the SMTP server that will be used to send email alerts, the SMS gateway that will be used to send alerts by SMS or SNMP traps alerting settings.

Edit alerting recipients...
Select this option to configure the contact details of the alerting recipients and to manage user accounts.

Screenshot 27: Configuring Alerting Options

7.3.1 How to process events for the Local computer

This option enables you to automatically add the localhost as an event source and start processing logs generated by it.

To process events from the local computer:

1. Open the GFI EventsManager Quick Launch Console. In the welcome page, click **Process events - Local computer**.

2. After the localhost logs start processing, you can:

Icon	Description
🔍	**Browse events** Access the built-in events and forensic tools that will help you locate, analyze and filter key events.
	Generate reports Access reporting features including instant/scheduled report generations and automated report distribution.
	View dashboard Access GFI EventsManager status dashboard. This enables you to view graphical representations of the most important events collected and processed by GFI EventsManager.
	Customize Customize GFI EventsManager settings, such as enabling Syslog, SNMP Trap processing, system checks, key events notifications, and more.

> **Note**
>
> To confirm that logs are successfully processed, go to **Status** tab > **Job Activity** and check that there are activity logs under the **Operational History** section.

7.3.2 How to process events for the Local domain

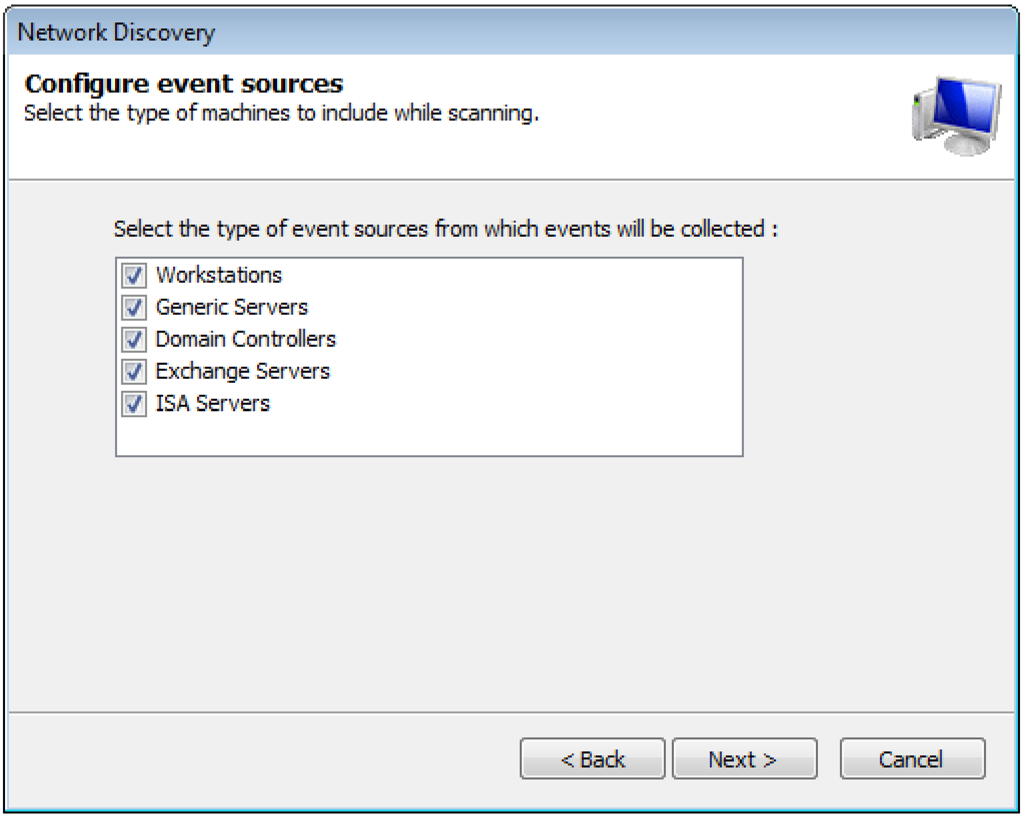
This option enables you add one or more computers that are on the same domain or workgroup as GFI EventsManager. The Automatic Network Discovery wizard enables you to select the type of event sources you want to add and then lists the sources that are detected.

To process event from computers on the same domain/workgroup:

1. Open the GFI EventsManager Quick Launch Console. In the welcome page, click **Process events - Local domain**. This opens the **Automatic Network Discovery** wizard.

> **Note**
>
> The wizard can also be launched from **Configuration** tab > **Event Sources**. From the left pane, right-click **All event sources** and select **Scan local domain**.

2. Click **Next** at the wizard welcome screen.


Network Discovery

Configure event sources

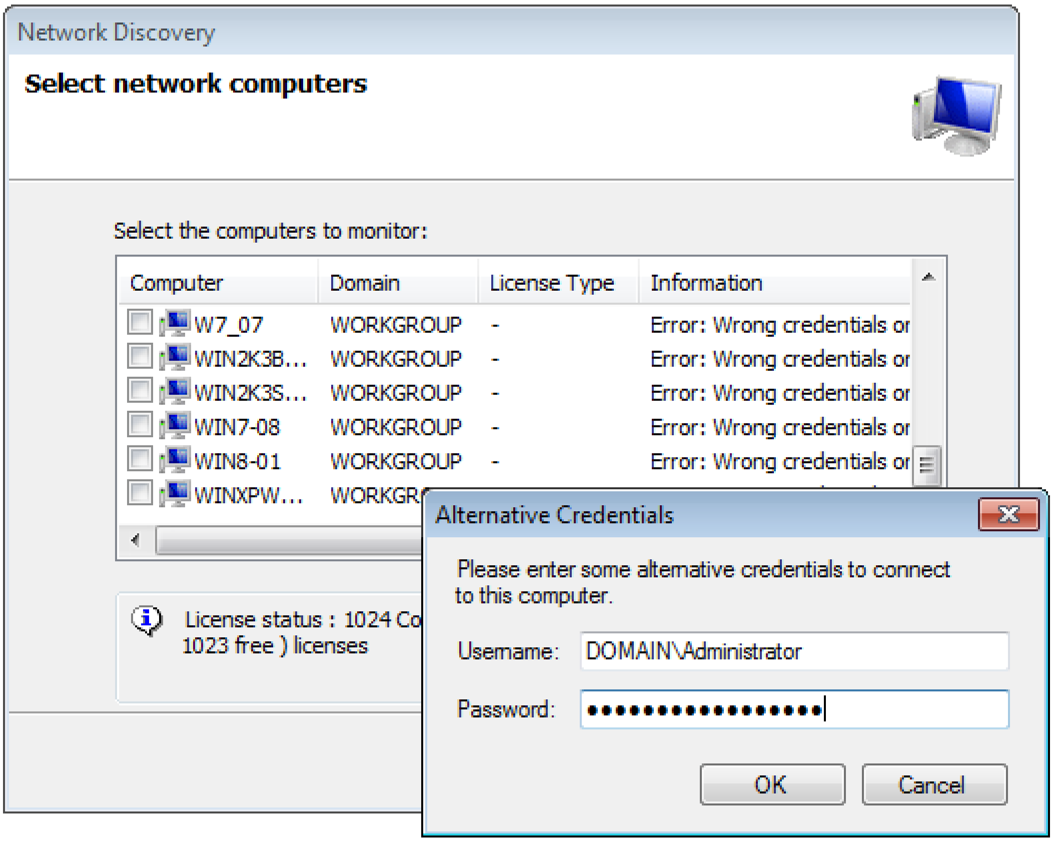
Select the type of machines to include while scanning.

Select the type of event sources from which events will be collected :

☑ Workstations
☑ Generic Servers
☑ Domain Controllers
☑ Exchange Servers
☑ ISA Servers

Screenshot 28: Select event source types to detect on your network

3. Select the type of event sources that the wizard will attempt to detect on your network. Click **Next**.



Network Discovery

Select network computers

Select the computers to monitor:

Computer	Domain	License Type	Information
□ W7_07	WORKGROUP	-	Error: Wrong credentials or
□ WIN2K3B...	WORKGROUP	-	Error: Wrong credentials or
□ WIN2K3S...	WORKGROUP	-	Error: Wrong credentials or
□ WIN7-08	WORKGROUP	-	Error: Wrong credentials or
□ WIN8-01	WORKGROUP	-	Error: Wrong credentials or
□ WINXPW...	WORKGR		

License status : 1024 Co
1023 free) licenses

Alternative Credentials

Please enter some alternative credentials to connect to this computer.

Username: DOMAIN\Administrator

Password: ●●●●●●●●●●●●●●●●●

Screenshot 29: Search network progress

> **Note**
>
> If GFI EventsManager detects computers that cannot be logged onto using the supplied credentials, it enables you to specify alternate logon credentials for each computer you select.

4. Select a computer from the list and key in the username and password. Click **OK** to close the **Alternative Credentials** dialog. Repeat this step until all the required sources are added.

5. Click **Next** and **Finish**.

> **Note**
>
> To automatically add new computers that are joined to the same domain/workgroup as GFI EventsManager, you must configure Synchronization Options.

7.3.3 How to process events for Selected machines

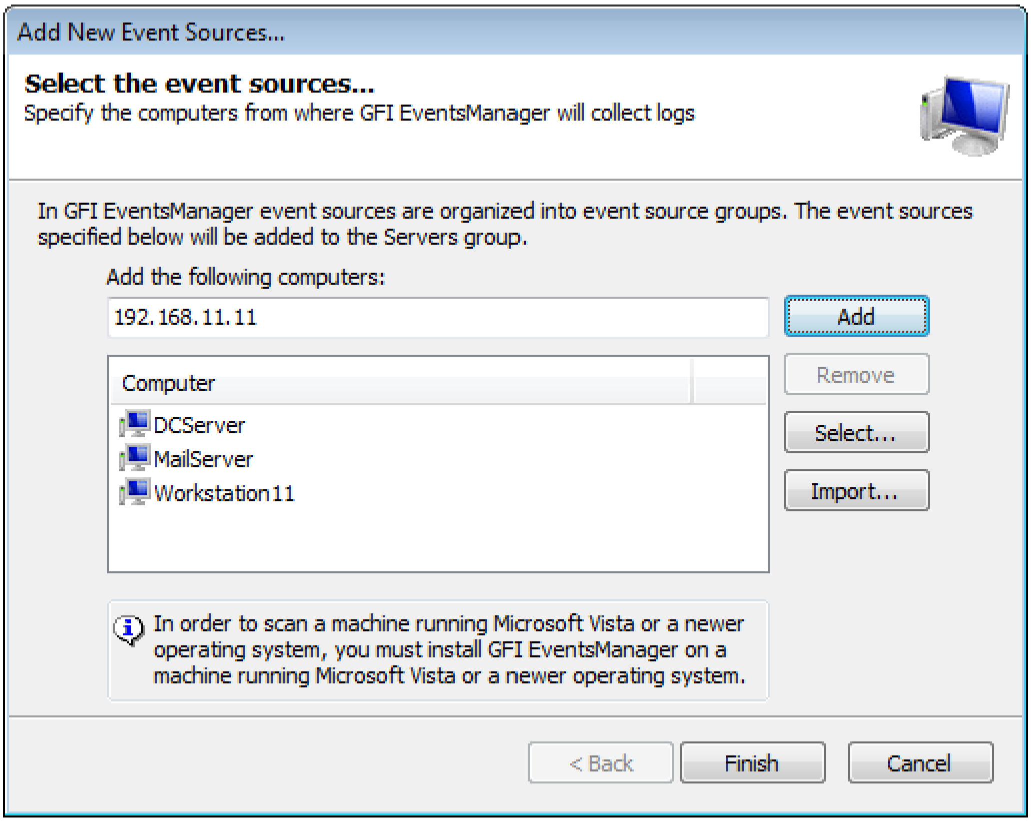
This option enables you to add specific computers manually, by:

- Keying in computer names and IPs
- Selecting computers from reachable domains and workgroups
- Importing computers from a text file containing a single computer name per line.

To process events of selected machines:

1. Open the GFI EventsManager Quick Launch Console. In the welcome page, click **Process events - Selected machines**.

2. This opens the **Add New Event Source** dialog.


Add New Event Sources...

Select the event sources...

Specify the computers from where GFI EventsManager will collect logs

In GFI EventsManager event sources are organized into event source groups. The event sources specified below will be added to the Servers group.

Add the following computers: 192.168.11.11

Computer
DCServer
MailServer
Workstation11

In order to scan a machine running Microsoft Vista or a newer operating system, you must install GFI EventsManager on a machine running Microsoft Vista or a newer operating system.

Screenshot 30: Add new event source wizard

3. The following table describes the available options:

Option	Description
Add	Key in the computer name or IP address in the **Add the following computers** field. Click **Add** to add the specified computer to the **Computer** list. Repeat this step until you add all the event sources to the selected group. **Note** Since Syslog and SNMP traps use IP addresses to determine the source of an event, it is recommended to use the source IP address instead of the computer name when adding Syslog and SNMP Traps sources.
Remove	Select one or more computers from the **Computer** list and click **Remove** to delete them from the list.
Select...	Click **Select...** to launch the **Select Computers...** dialog: 1. From the **Domain** drop-down menu, select the domain you want to scan for available sources and click **Search**. 2. From the search results list, select the computers you want to add. 3. Click **OK** to close the **Select Computers...** dialog and return to the **Add New Event Sources...** dialog.
Import...	Click **Import...** to import computers from a text file. Ensure that the text file contains only one computer name or IP address per line.

4. Click **Finish** to finalize your settings. GFI EventsManager immediately attempts to scan the added event sources, using the default logon credentials.

> **Note**
>
> If synchronization is not enabled, you can use the **Network Discovery Wizard** to automatically search and add events sources. To launch **Network Discovery Wizard**, right-click **All event sources** from the event sources tree and select **Scan local domain**.

Note

To confirm that logs are successfully processed, go to **Status** tab **> Job Activity** and check that there are activity logs under the **Operational History** section.

7.4 Monitoring your network with GFI EventsManager

GFI EventsManager can help monitor your network and detect various events, including: security incidents, downtimes, system health problems and configuration problems. GFI EventsManager offers five main features and locations to help you stay in touch with the main events occurring in your network.

7.4.1 Events Processing Rules

Events processing rules are checks that are run against event logs when they are collected. Based on the conditions configured in a rule, events processing rules help you:

- **Classify processed events** - assign a severity rating to collected logs. This enables you to trigger actions or notifications if a certain severity log is processed. By default, events are classified using five main ratings, however, more ratings can be added
- **Filter out noise (repeated events) or unwanted events** - remove duplicate logs or logs that are not important for you and archive important event data only. This reduces database growth and saves storage space
- **Trigger Email, SMS and Network alerts on key events** - send notifications to configured recipients upon detection of certain events. You can configure an event processing rule to send notifications to recipients when the rule conditions are met
- **Attempt remedial actions** - run executable files, commands and scripts upon detection of specific events. This enables you to automatically perform remedial actions to mitigate or completely eliminate a detected problem
- **Filter events that match specific criteria** - remove event logs that are not important for you. Example, you can run a rule which filters out low severity or duplicate events
- **Archive filtered events** - event archiving is based on the severity of the event and on the configuration settings of the event processing rules. Example: you can configure GFI EventsManager to archive only events that are classified as critical or high in severity and discard all the rest.

7.4.2 Alerts

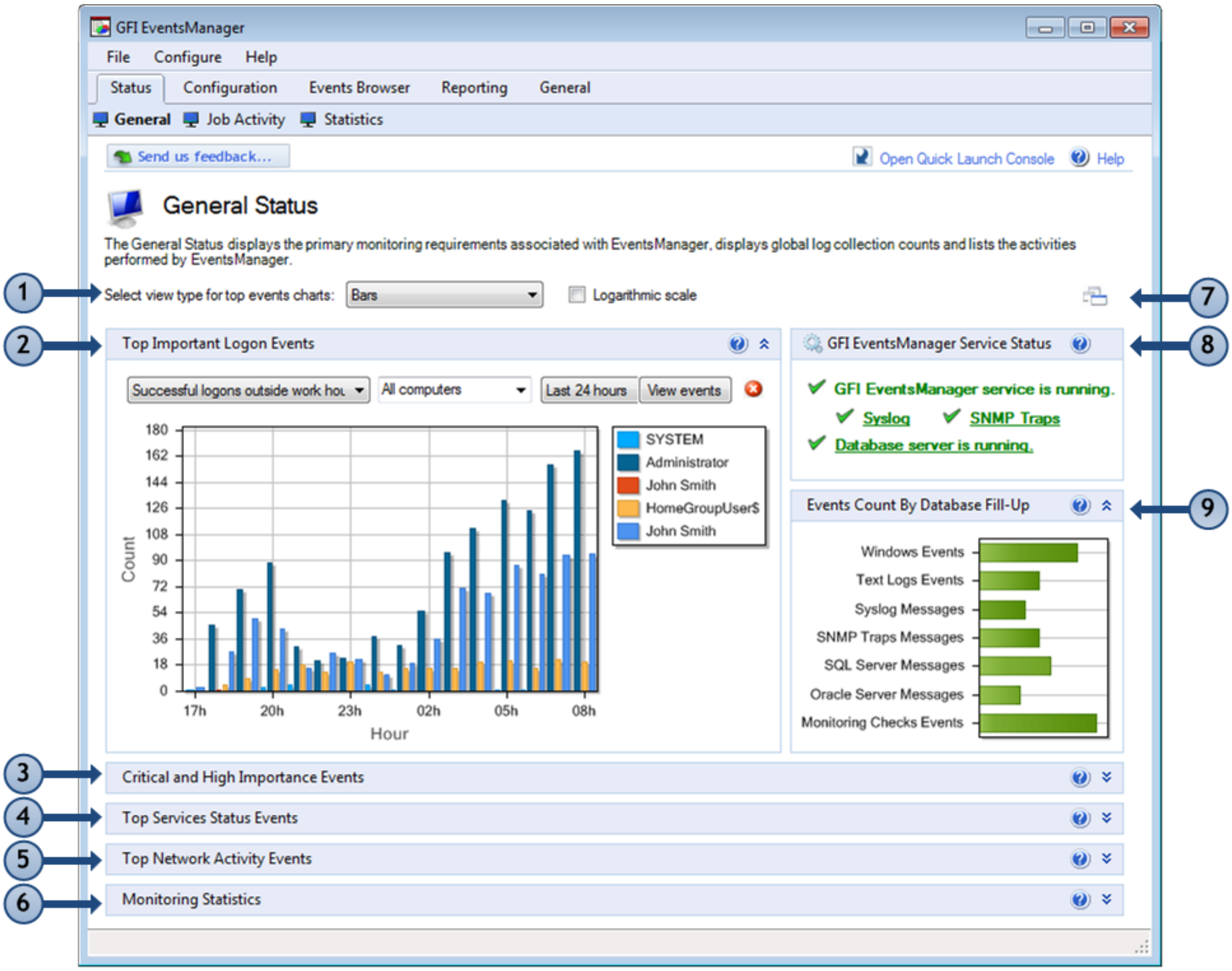
Alerting options enable you to configure what alerts are triggered when particular event(s) are encountered. For example, you can configure GFI EventsManager to send an email and SMS alert to one or more recipients when a **Critical** event is processed.

7.4.3 Dashboard

This General Status view is used to:

- View the status of the GFI EventsManager event processing engine
- Access statistical information such as the number of logon events, critical events and service status events.

To access the **General** view, go to **Status** tab > **General**.



GFI EventsManager
File Configure Help
Status Configuration Events Browser Reporting General
General Job Activity Statistics
Send us feedback...
Open Quick Launch Console
Help
General Status

The General Status displays the primary monitoring requirements associated with EventsManager, displays global log collection counts and lists the activities performed by EventsManager.

Select view type for top events charts: Bars

☐ Logarithmic scale

✓ GFI EventsManager service is running.

✓ Syslog ✓ SNMP Traps

✓ Database server is running.

Screenshot 31: GFI EventsManager Status: General view

The General view consists of the sections described below:

Section	Description
1	Use this section to select the chart type for top events.
2	The **Top Important Log Events** section provides statistical information about: » Top 10 successful Logon events outside working hours » Top 10 important Logon events during working hours » Top 10 failed Logon events. Events in this section are filtered by: » **Machine**: Select a machine or key in a machine name in the drop down list » **Period**: The time period when the events occurred (Last hour, Last 24 hours, Last 7 days or a specific date).

Section	Description
3	The **Critical and High Importance Events** section provides statistical/graphical information about critical events collected from all event sources. Here you can also view the vulnerability results monitored by GFI LanGuard. This graph shows the rules that collected and processed events for a particular period. From the drop down lists, select the type of information to display. Select from: » **Grouping**: Determines how events are grouped; such as Events, Computers, Computer groups, Events/Computers or Events/Computer groups » **Event type**: Select the type of data to display (Windows®, Text Logs, Syslog, SNMP, Active Monitoring Logs, SQL and Oracle audit) » **Alert type**: Specify the alert severity; such as All alerts, Critical or High » **Period**: Specify the time period when the events occurred (Last hour, Last 24 hours, Last 7 days or a specific date). **NOTE** For detailed information about the different types of important events shown in this view, download the Microsoft® Security Monitoring and Attack Detection Planning Guide from http://go.gfi.com/?pageid=esm_smad_plan.
4	The **Top Service Status Events** displays the top 10 services that caused the selected event. A service can generate events when: » Terminated with an error » Failed to load » Failed to start » Timed out » Stopped » Started. The graph shows the frequency of these events sorted by service type and/or by computer generating the event. Select a machine or service from the drop down lists or key in the required criteria to customize the graph results. **Note** To collect services information, event sources must have Audit system events policy enabled.
5	The **Top Network Activity Events** section displays details of the top 10 network activities (inbound and outbound) for computers running Microsoft® Windows® Vista or later. Network activity consists of all type of traffic generated by various protocols including SMTP, HTTP, FTP and MSN traffic. The network activities displayed can be filtered by: » Applications » Source Addresses » Destination Addresses » Computers » Ports » Users. Select parameters from the drop down lists or key in the values to filter the type of chart displayed. **Note** To collect network activities, event sources must have Object auditing and Process tracking enabled.
6	The **Monitoring Statistics** section displays status information about active Active Monitoring you are running on event sources. The information displayed in this section is refreshed every 20 seconds and you provides the: » Check name » Success/Fail count » Number of generated events » Check date and time » Check type. Select a row and click **View Events** to view the pertaining logs that were generated when the check failed/succeeded.
7	Click the **Arrange Window** icon to automatically fit all graphs in the management console.

Section	Description
8	The GFI EventsManager **Service Status** is used to view: » The operational status of GFI EventsManager service/event processing engine » The operational status of the Syslog server » The operational status of the SNMP Traps server » The operational status of the database server currently in use by GFI EventsManager. **Note** » Click the service name to edit the service settings. » Click **Database server is running** to switch between different databases.
9	The **Events Count By Database Fill-Up** displays: » The horizontal bars represent the number of events stored in the database backend, sorted by event log type » The date and time of the last backup » The date and time of the next scheduled backup. The bar color turns from green to red as the database is populated with events.

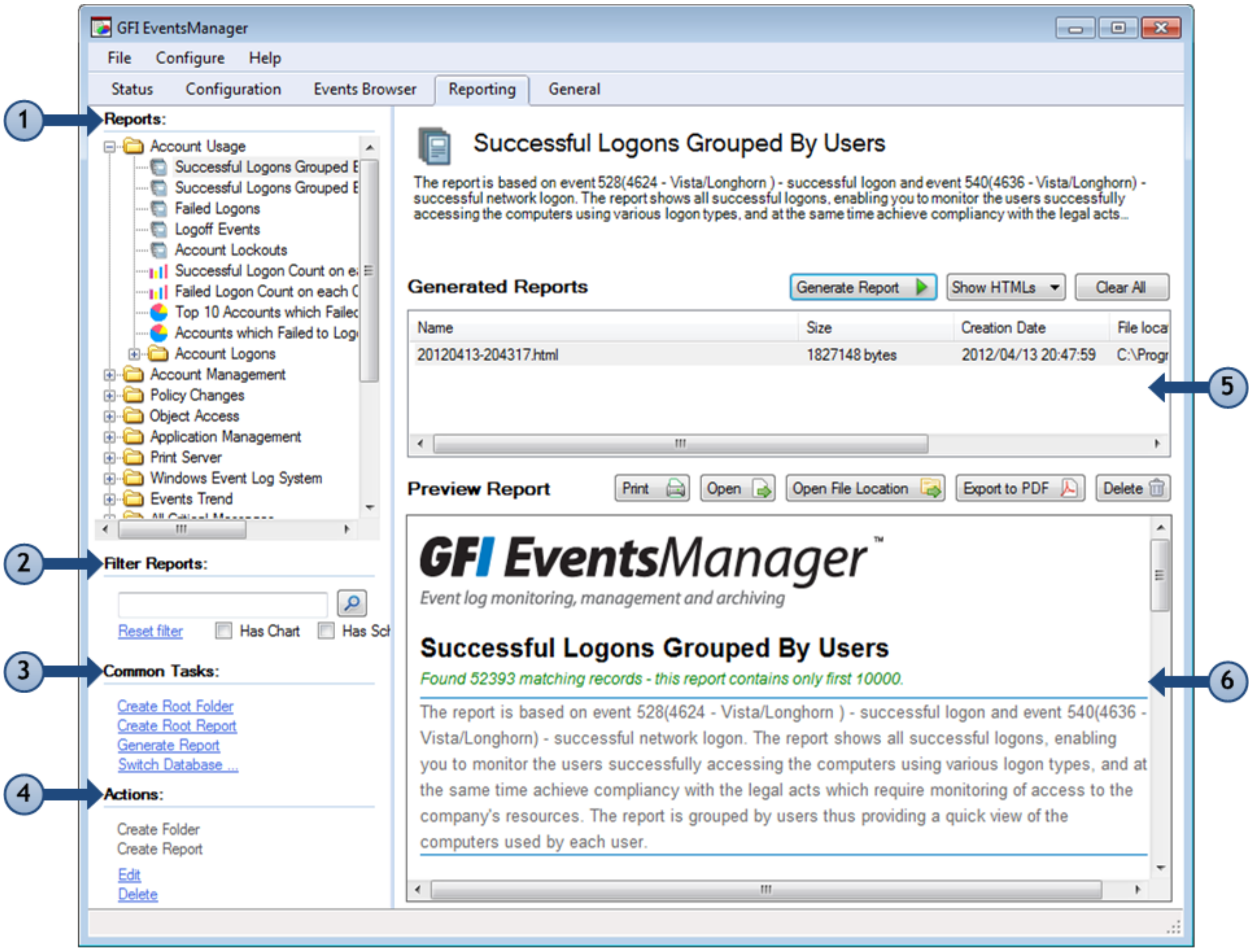
> **Note**
>
> Double-click the graph to open the graph in a new window. When a 3D graph is selected, the new window allows you to rotate, zoom or resize the graph. Use the **Export to image** button to export the graph.

7.4.4 Events browser

The Events Browser is equipped with tools for event analysis and forensic investigation. It also enables you to easily browse through multiple events databases as well as export events to encrypted databases for legal compliance purposes. The Events Browser allows you to monitor the most important events from a common location. For more information refer to the **Using the Events Browser** section in the **Administrator Guide**.

7.4.5 Reporting

The Reporting tab enables you to generate various reports about important events that occur on your network.



Successful Logons Grouped By Users

The report is based on event 528(4624 - Vista/Longhorn) - successful logon and event 540(4636 - Vista/Longhorn) - successful network logon. The report shows all successful logons, enabling you to monitor the users successfully accessing the computers using various logon types, and at the same time achieve compliancy with the legal acts...

Name	Size	Creation Date	File loca
20120413-204317.html	1827148 bytes	2012/04/13 20:47:59	C:\Progr

GFI EventsManager™

Event log monitoring, management and archiving

Successful Logons Grouped By Users

Found 52393 matching records - this report contains only first 10000.

The report is based on event 528(4624 - Vista/Longhorn) - successful logon and event 540(4636 - Vista/Longhorn) - successful network logon. The report shows all successful logons, enabling you to monitor the users successfully accessing the computers using various logon types, and at the same time achieve compliancy with the legal acts which require monitoring of access to the company's resources. The report is grouped by users thus providing a quick view of the computers used by each user.

Screenshot 32: Navigating the Reporting UI

The Reporting tab consists of the sections described below:

Section	Description
1	The **Reports** section contains all the predefined reports that ship with the product. Use this section to organize and generate various reports from technical to executive type.
2	Find reports rapidly, using the available filtering options. Through **Filter Reports** options, you are able to search for reports that contain charts and are generated based on a schedule.
3	The **Common Tasks** section enables you to quickly launch typical operations such as creating folder and report views to organize reports and generating reports.
4	From **Actions**, create, edit or delete reports according to your needs.
5	Use the **Generated Reports** section to view the history of a selected report (from Section 1). This enables you to regenerate and export the report to HTML and/or PDF.
6	The **Preview Report** section provides a view of a selected, generated report. Use the control buttons to Print, Open, Export or Delete reports directly from this section.

7.5 Using GFI EventsManager to demonstrate compliance

Most of the regulations' logs are deemed instrumental for tracking the activity occurring on systems that process personal data. Consequently, most of the regulations require that logs are regularly archived and reviewed . GFI

EventsManager helps you demonstrate regulatory compliance through four main features:

Feature	Achieving Compliance
Event reporting	GFI EventsManager is automatically configured with general and predefined reports covering common compliance acts, such as: HIPAA, FISMA, GLBA, Payment Cards Industry Data Security Standard (PCI DSS) and Code of Connection. For more information, refer to Available reports (page 142).For more information, refer to Available reports (page 142).
Event processing rules	Dedicated rules used to identify and categorize Windows events that are relevant for different PCI DSS requirements. For more information, refer to Events Processing Rules (page 173).
Event archival	The GFI EventsManager storage engine archives event data in files that can be compressed and encrypted. Your event data can be stored locally or in a central location. For more information, refer to Database Maintenance (page 223).
Event consolidation	GFI EventsManager provides three layers of consolidation for your log data: » Encrypted storage » Controlled and audited access to the log data » Hash values for log data to detect outside tampering

At this stage of the evaluation it is recommended that you to go to the **Reporting** tab:

- Select the report set applicable to your regulation and run a few reports.
- If you don't find a dedicated report set for your regulation, check the general reports and select the ones that match your requirements. For example, **Account Usage reports** that show Logon/Logoff information are useful for most compliance acts.

> **NOTE**
>
> If you need to comply with the Payment Card Industry Data Security Standard (PCI-DSS), review GFI white papers on PCI DSS Compliance at http://go.gfi.com/?pageid=EM_PCIDSS. This offers very detailed information on how GFI can assist with each PCI requirement.

7.6 Using GFI EventsManager for forensic analysis

GFI EventsManager enables you to perform thorough investigations when incidents occur. This is done using the drill-down, filtering and sorting capabilities available from the **Events Browser**.

At this stage we recommend you become familiar with the views and filters in the browser by following these steps:

- From the **Windows Events** view and sort events by clicking the column names in the grid.
- From the **Properties** panel on the right side of the window, select **Fields** view. Click any field value to drill-down event data.
- Create a custom view, right click on a value and select **Create Query From Field**.
- To customize the view, open **Properties** and choose **Edit** . Check the fields available for you.

8 Advanced features of GFI EventsManager

This section provides you with information about configuring advanced features of GFI EventsManager.

8.1 How to customize events processing rules

Processing rules present information about event logs. They can help you identify and categorize events and trigger alerts or other actions for some of them. You will need to know how the rules work to master and configure them correctly:

» Once defined, rules need to be manually assigned to event sources .

» Rules have priorities (the order in which they are evaluated).

» When an event is collected from a source, each rule assigned to that event source is evaluated against that event in order of priority.

» When an event matches a rule, the actions of that rule are triggered and no additional rules will be evaluated for that event.

See this short video to familiarize yourself with these rules:

» https://www.gfi.com/products-and-solutions/network-security-solutions/gfi-eventsmanager/videos/event-processing-rules

Try out some of these rules:

1. Go to **Configuration** > **Event Processing Rules** tab.

2. Create a new folder (for example: **My rule folder**) and create a new rule set (for example: **My rule set**) within that folder.

3. Add a new rule to the rule set (for example: **Rule One**) that applies to Windows Security events with a specific event ID.

4. Set the rule to classify the matching events as **High**.

5. Create another rule called **Rule Two** with the same filter as **Rule One**; however, set this one to classify the events as **Medium**.

Assign these rules to your local machine:

1. Go to **Configuration**> **Event Sources** tab.

2. Choose the **All event sources** node from the tree and locate your local machine

3. Open the machine **Properties** and go to the **Windows event log**.

4. Uncheck the **Inherit Settings** option and add **Security Log** to the log list. Choose **Process using these Rule Sets** and check **My rule folder.**

> **NOTE**
> Wait until more events are generated and check the browser. You should see that all the events with the event ID you specified in the rule definition have triggered **Rule One**.

5. Go back to **Rule configuration** to change the priority of the rules.

8.2 How to get systems information not present in log data

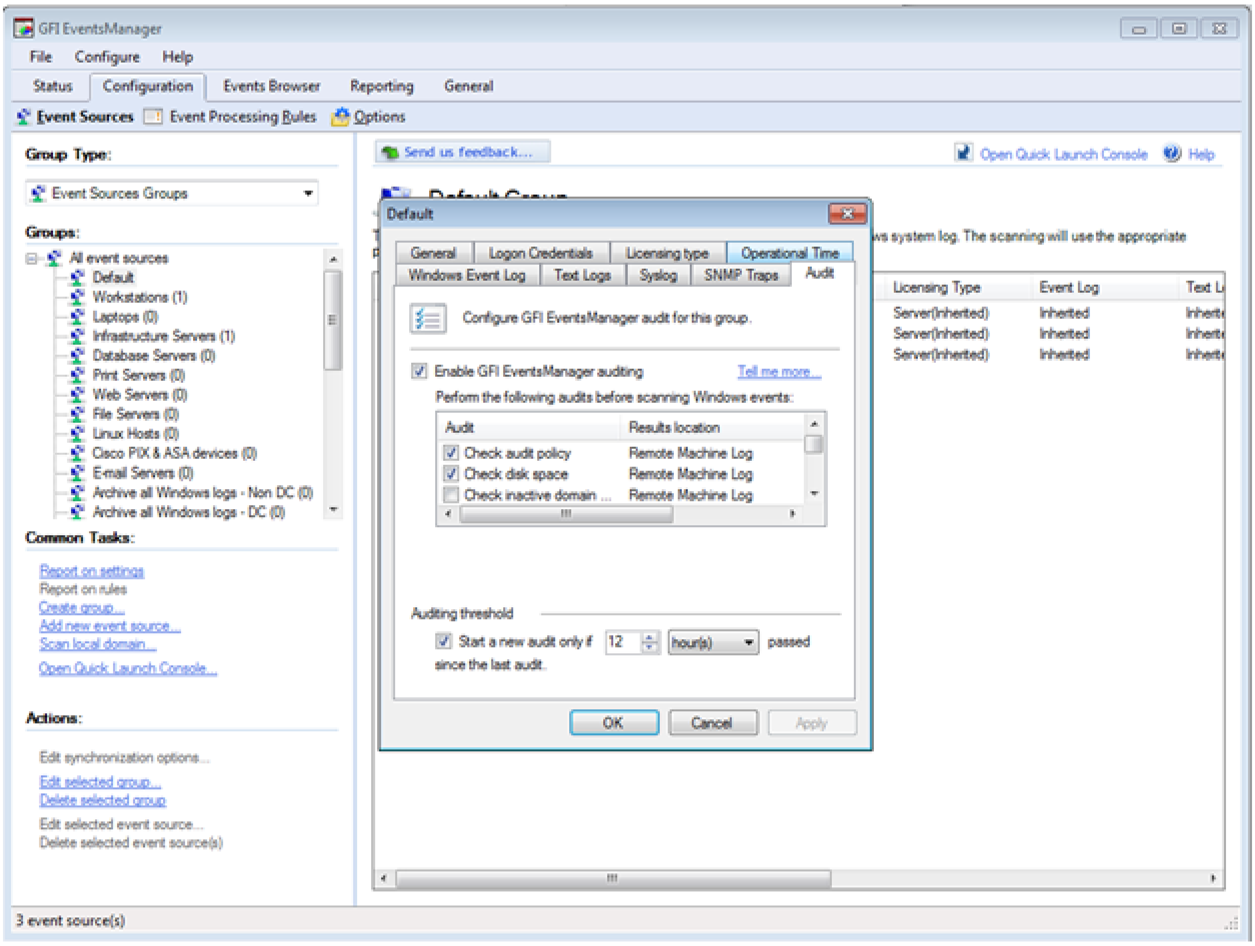
Although most of the information you receive about the systems you monitor comes from logs, GFI EventsManager has also its own audit system based on checks that can detect various situations occurring on Windows machines. For example, this audit can detect the presence of inactive accounts, disks becoming full, inactive domain machines, Microsoft firewall not enabled and more.

When such situations occur, the checks generate custom events that can be processed similar to any other regular event.

To test these checks:

1. Open the **Properties** of the local machine and enable the checks from the **Audit** tab.

> **NOTE**
>
> The checks are executed when the next event scan begins. We also recommend you set the **Auditing threshold** to 12 hours as shown below.


GFI EventsManager
File Configure Help
Status Configuration Events Browser Reporting General
Event Sources Event Processing Rules Options
Group Type:
Event Sources Groups
Groups:
All event sources
Default
Workstations (1)
Laptops (0)
Infrastructure Servers (1)
Database Servers (0)
Print Servers (0)
Web Servers (0)
File Servers (0)
Linux Hosts (0)
Cisco PIX & ASA devices (0)
E-mail Servers (0)
Archive all Windows logs - Non DC (0)
Archive all Windows logs - DC (0)
Common Tasks:
Report on settings
Report on rules
Create group...
Add new event source...
Scan local domain...
Open Quick Launch Console...
Actions:
Edit synchronization options...
Edit selected group...
Delete selected group
Edit selected event source...
Delete selected event source(s)
Send us feedback...
Open Quick Launch Console
Help
Default Group
...ws system log. The scanning will use the appropriate
Licensing Type Event Log Text L
Server(Inherited) Inherited Inherit
Server(Inherited) Inherited Inherit
Server(Inherited) Inherited Inherit
3 event source(s)
Default
General Logon Credentials Licensing type Operational Time
Windows Event Log Text Logs Syslog SNMP Traps Audit
Tell me more...
OK Cancel Apply

Configure GFI EventsManager audit for this group.

☑ Enable GFI EventsManager auditing

Perform the following audits before scanning Windows events:

Audit	Results location
☑ Check audit policy	Remote Machine Log
☑ Check disk space	Remote Machine Log
□ Check inactive domain ...	Remote Machine Log

Auditing threshold

☑ Start a new audit only if 12 hour(s) passed since the last audit.

Screenshot 33: Setting the auditing threshold

8.3 How to detect possible hacker activities

For Windows machines running a Microsoft Vista or newer operating system, GFI EventsManager has special features that enable you to analyze the network activity occurring on those machines based on **Filtering Platform Connection** events. The **Top Activity Network Events** graph from the dashboard enables you to quickly analyze the network activity on various computers based on protocol, port, addresses, user name and application names.

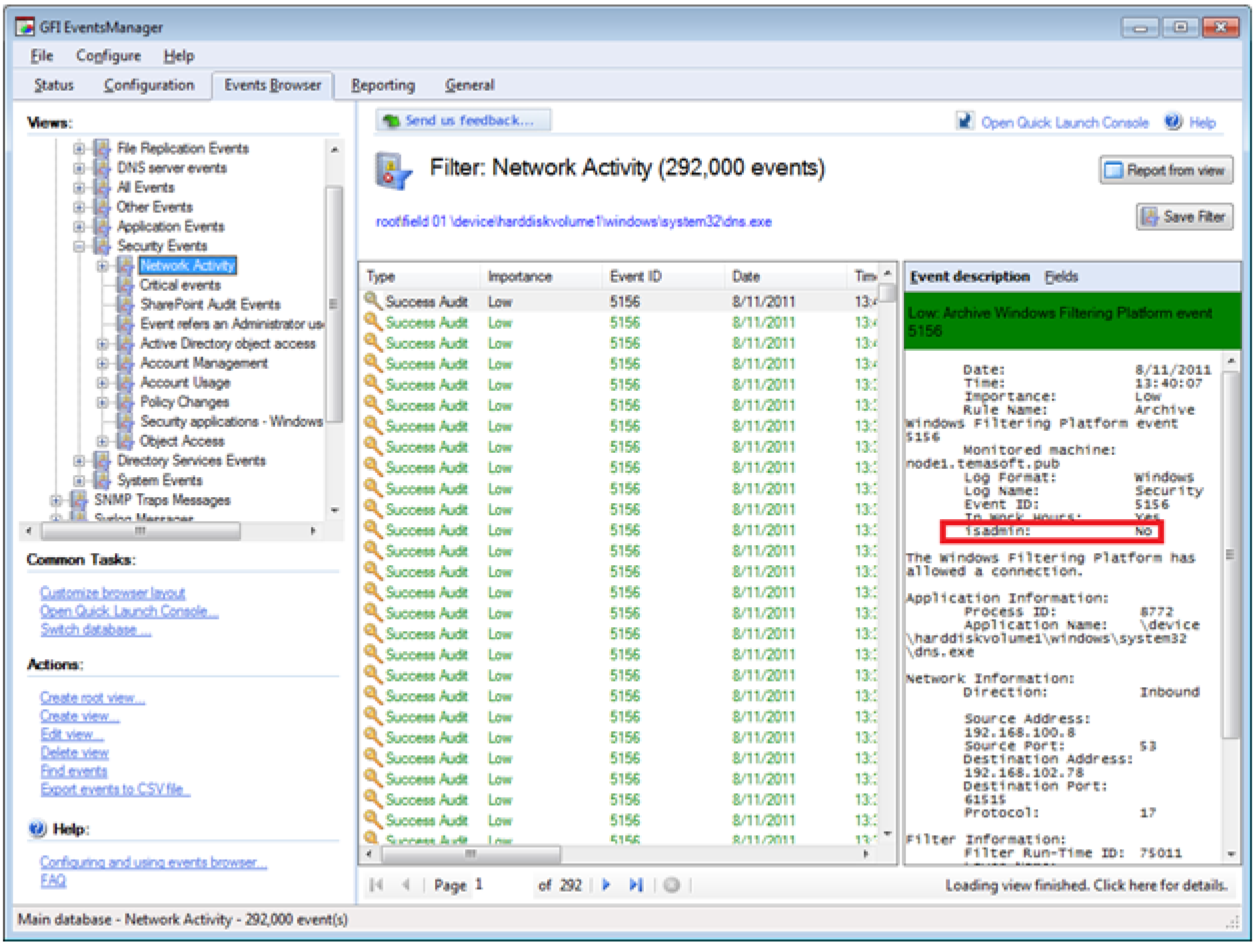
One of the immediate applications of this analysis capability is to detect possible hacker activity. GFI EventsManager has predefined rules that can detect :

- Suspicious Email activity on the machine.
- DNS queries originating from system applications.
- Connections opened by different applications.

At this stage, we recommend you use the **Top Activity Network Events** graph and note the network activity occurring on the two machines you monitor.

8.4 How to detect events that refer to administrators

GFI EventsManager enables you to detect Windows events that refer to administrators.



Filter: Network Activity (292,000 events)

rootfield 01 \device\harddiskvolume1\windows\system32\dns.exe

Type	Importance	Event ID	Date	Tim
Success Audit	Low	5156	8/11/2011	13:4
Success Audit	Low	5156	8/11/2011	13:4
Success Audit	Low	5156	8/11/2011	13:4
Success Audit	Low	5156	8/11/2011	13:4
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:
Success Audit	Low	5156	8/11/2011	13:

Low: Archive Windows Filtering Platform event 5156

```
        Date:                   8/11/2011
        Time:                   13:40:07
        Importance:             Low
        Rule Name:              Archive
Windows Filtering Platform event
5156
        Monitored machine:
node1.tenasoft.pub
        Log Format:             Windows
        Log Name:               Security
        Event ID:               5156
        In Work Hours:          Yes
        isadmin:                No

The Windows Filtering Platform has
allowed a connection.

Application Information:
        Process ID:              8772
        Application Name:        \device
\harddiskvolume1\windows\system32
\dns.exe

Network Information:
        Direction:               Inbound

        Source Address:
        192.168.100.8
        Source Port:             53
        Destination Address:
        192.168.102.78
        Destination Port:
        61515
        Protocol:                17

Filter Information:
        Filter Run-Time ID:  75011
```

Screenshot 34: Detect events generated by users with administrative privilege

NOTE

For each Windows event there is a field that describes if the event refers to an administrator. You can define filters, rules or custom reports based on this field.

NOTE

For practice/evaluation purposes, we suggest you go to the **Browser** tab>**Windows Events** and create a view that will show only the Security events that refer to administrators.

8.5 How to anonymize personal data from events

If you need to comply with laws that require personal data from logs that should only be revealed to authorized persons, you can use the **Anonymization** feature in GFI EventsManager since it encrypts the personal data found in Windows Security logs, SQL Server and Oracle audit logs.

If you are interested in this feature we recommend:

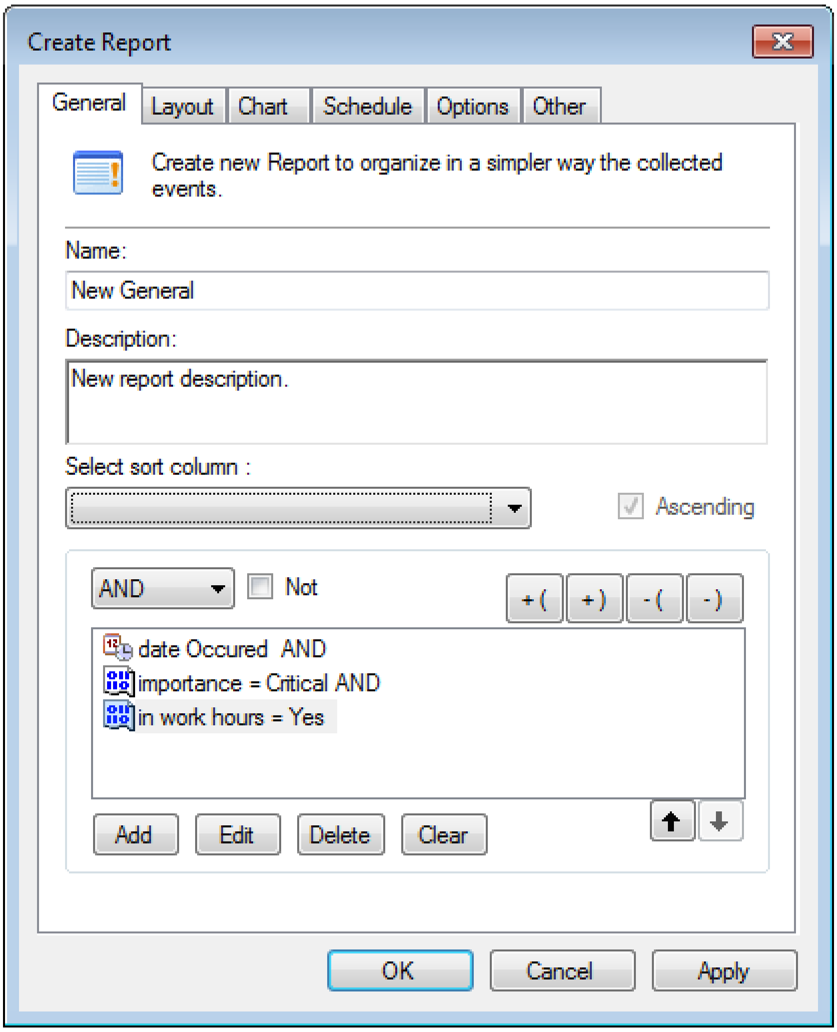
- Enabling anonymization from **Configuration** > **Options** > **Console Security** > **Audit Options** > **Anonymization**
- Collecting a few Windows events and see how the anonymized columns look in the Browser.
- Decrypting the anonymized data by turning off the anonymization.

8.6 How to create custom reports

GFI EventsManager includes a reporting engine with many predefined reports you can customize, run or schedule as you like. The reporting engine also enables you to define new reports with flexible layouts. You can also generate reports on the fly, directly from a view in the **Event Browser**.

To create custom reports:

1. From **Reporting** tab **>** **Reports**, right-click a root folder/folder/root report and select **Create Report**.



Create new Report to organize in a simpler way the collected events.

Name:
New General

Description:
New report description.

Select sort column :

☑ Ascending

AND □ Not

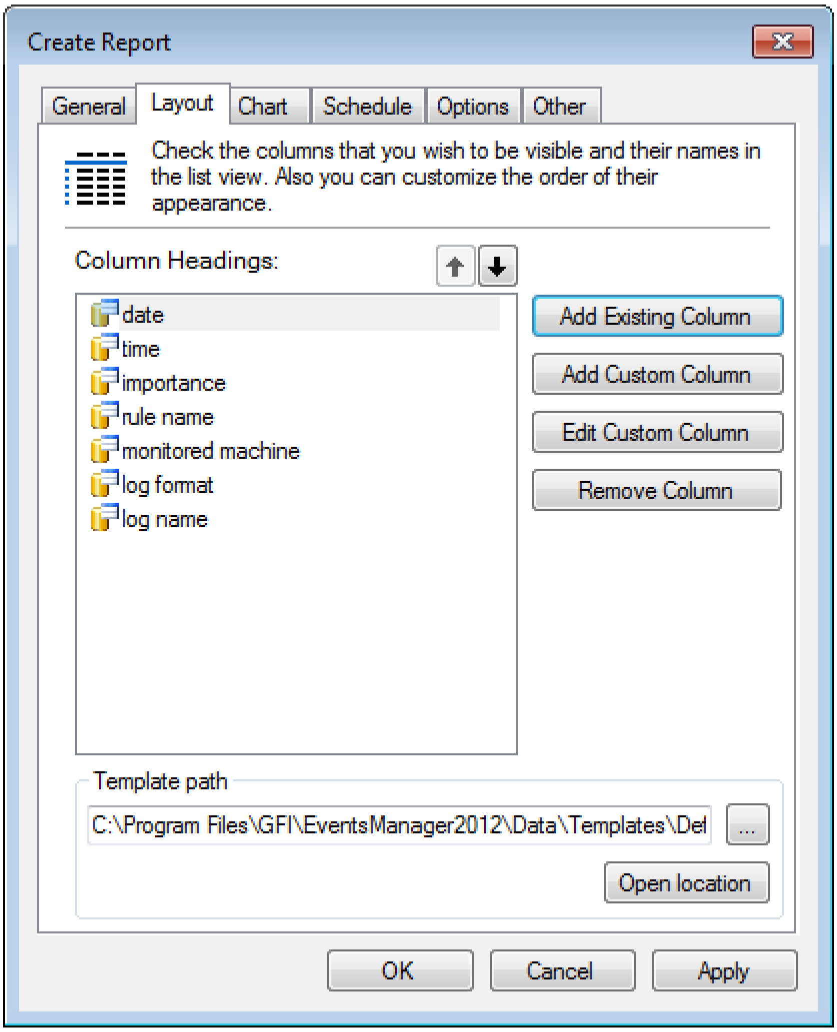
date Occured AND
importance = Critical AND
in work hours = Yes

Screenshot 35: Creating a root report

2. From the **General** tab, specify a name and description (optional) for the new root report.

3. Click **Add** to select a field on which to base the query condition. For the selected field, specify the **Field Operator** and **Field Value**. Click **OK**

> **Note**
>
> Repeat this step until all the required fields are selected.



Create Report

Check the columns that you wish to be visible and their names in the list view. Also you can customize the order of their appearance.

Column Headings:

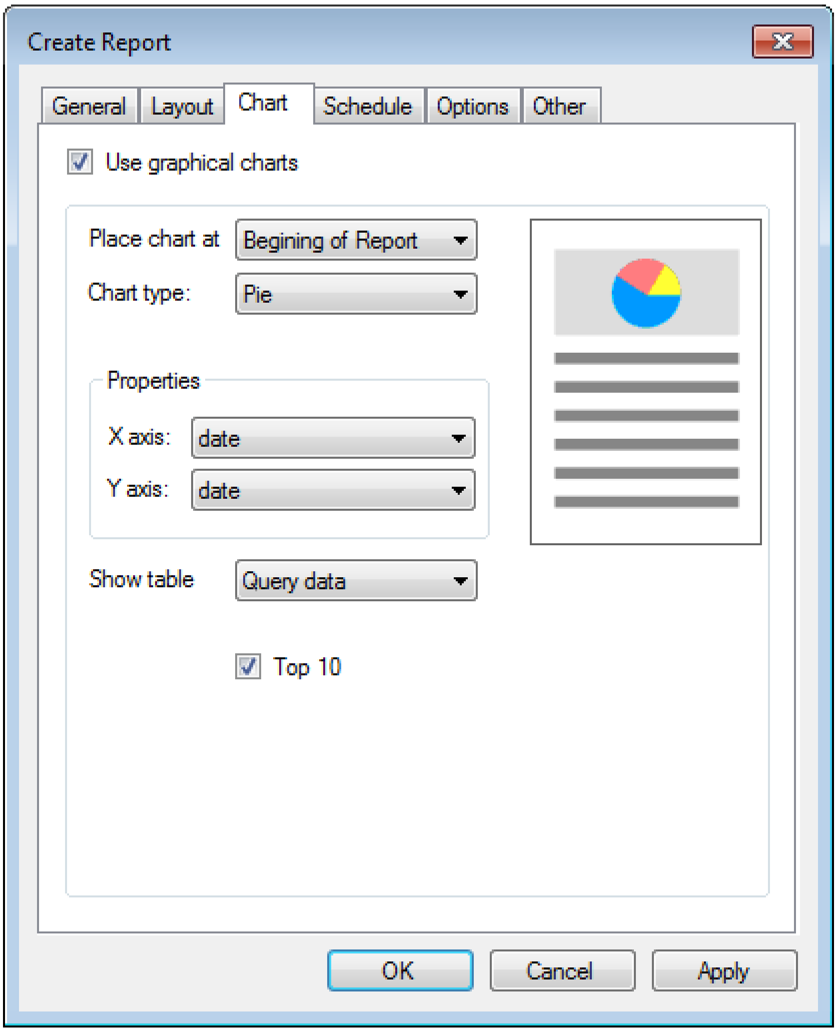
- date
- time
- importance
- rule name
- monitored machine
- log format
- log name

Template path

C:\Program Files\GFI\EventsManager2012\Data\Templates\Def

Screenshot 36: Configuring new root report layout options

4. Click **Layout** tab and add the column headings that you want to be visible in the report. If you have a saved report template, click **Open location** to browse and load your template.



☑ Use graphical charts

Place chart at: Begining of Report

Chart type: Pie

Properties

X axis: date

Y axis: date

Show table: Query data

☑ Top 10

Screenshot 37: Inserting a chart in a new root report

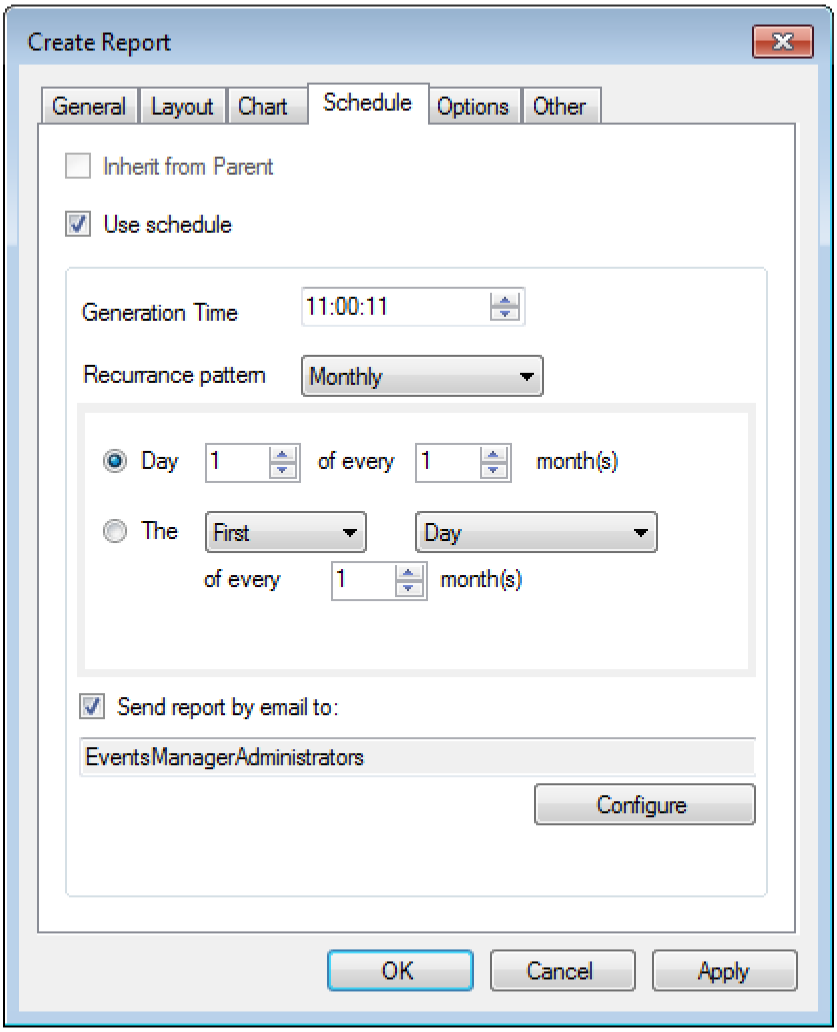
5. (Optional) Click **Chart** tab and select **Use graphical charts** to include graphs in your report.

6. From the **Place chart at** drop-down menu, specify the location of the chart. Select from:

- Beginning of Report
- End of Report.

7. From **Properties > X axis** and **Y axis**, configure the X and Y Axis properties. I.e. select the data represented in the chart.

8. Select **Top 10** to view the Top 10 records only.



□ Inherit from Parent

☑ Use schedule

Generation Time 11:00:11

Recurrance pattern Monthly

● Day 1 of every 1 month(s)

○ The First Day of every 1 month(s)

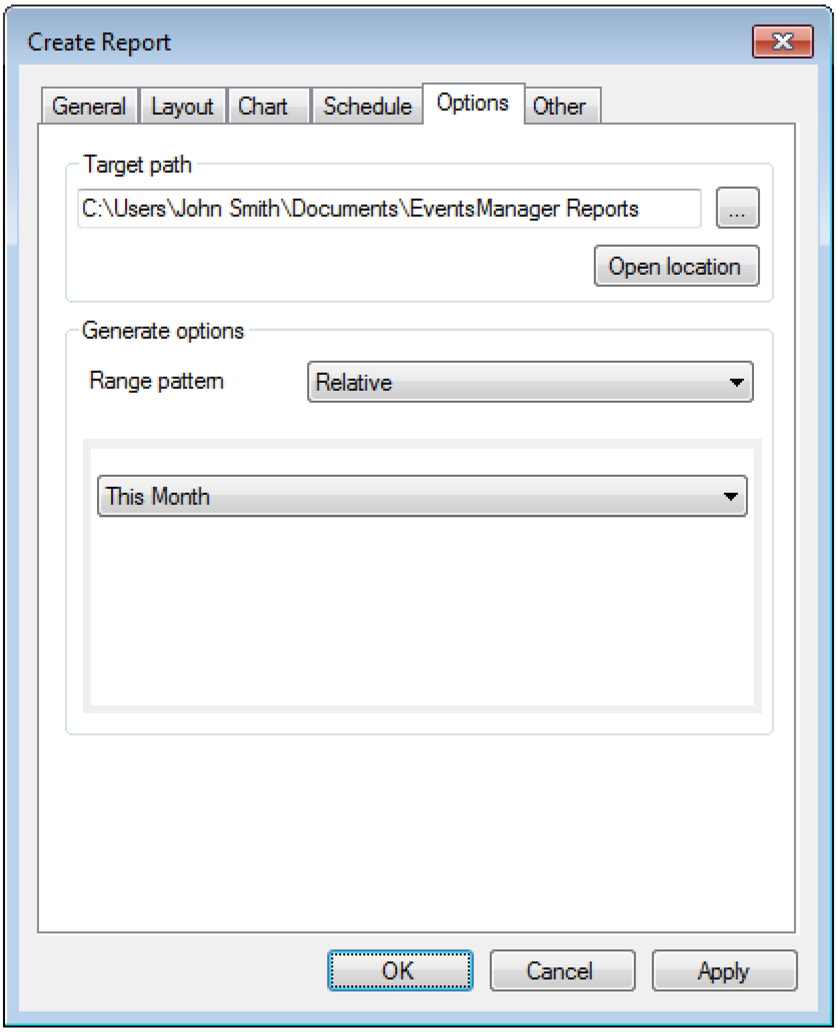
☑ Send report by email to:

EventsManagerAdministrators

Screenshot 38: Configuring the schedule for when the report is generated

9. (Optional) Click **Schedule** tab and configure schedule settings.

10. Select **Send report by email to** and click **Configure** to select the recipients of this report.



Create Report

Target path

C:\Users\John Smith\Documents\EventsManager Reports

Generate options

Range pattern: Relative

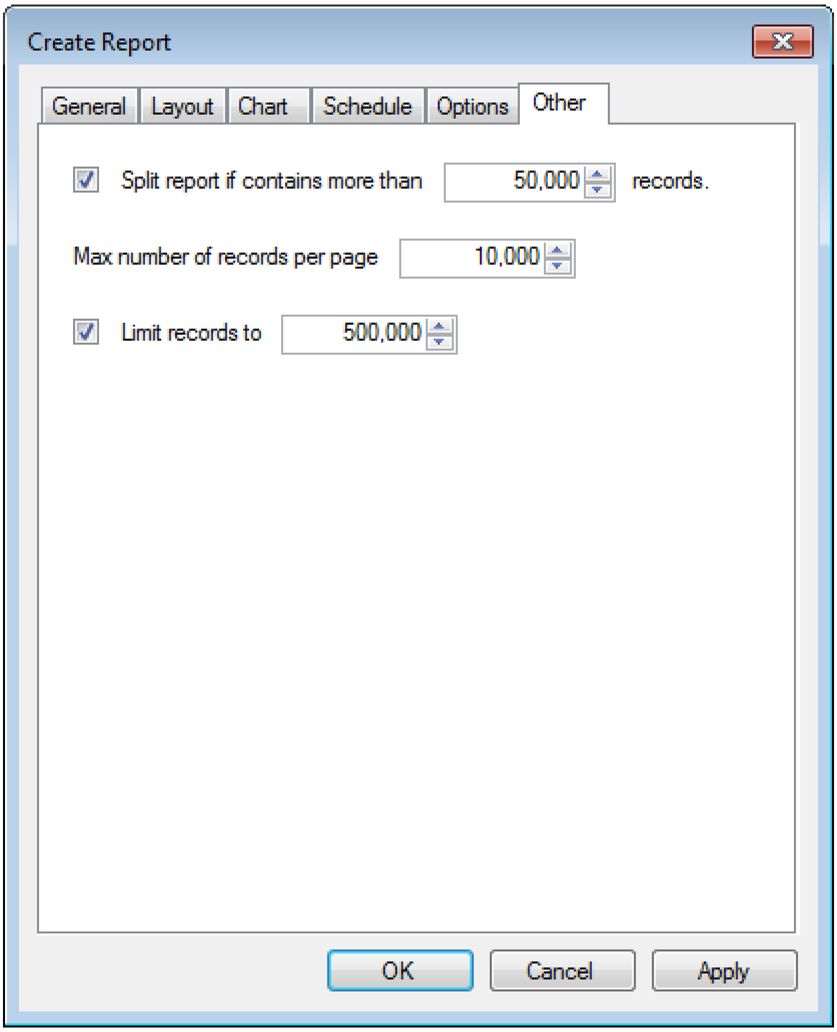
This Month

Screenshot 39: Create new report Options

11. Click **Options** tab and specify the path to where the report generates to in the **Target path** area.

12. From the **Range pattern** drop-down menu, select the options described in the table below:

Pattern	Description
All Time	Select **All Time** to generate the report based on information from all the related logs.
Relative	Generate the report based on events from: » Today » Yesterday » Last 7 Days » This Month » Last Month.
Day	Specify a single day that you want to base your report on.
Month	Specify a month and year that you want to base your report on.
Date Range	Specify a **From** and **To** date to base report information on events collected in the specified time period.



☑ Split report if contains more than 50,000 records.

Max number of records per page 10,000

☑ Limit records to 500,000

Screenshot 40: Record limit settings

13. Click **Other** tab to configure report record limits. Available options are described in the table below:

Option	Description
Split report if it contains more than {X} records	Select the checkbox to enable record limit per report. GFI EventsManager automatically creates a new report for every number of records you specify. Example: if you key in 50, 000 and the report contains 150, 000 records, GFI EventsManager generates three reports.
Max number of records per page	Specify the number of records that are displayed in a single page.
Limit records to	Specify the maximum number of records that are included in the report. Records that exceed the limit are ignored.

9 Managing Event Sources

This section provides you with information about adding and managing your event sources. Event sources are networked computers and devices that are accessed and processed by GFI EventsManager. The Events Sources sub-tab, enables you to organize your event sources into specific groups. You can create new groups or use the default ones to distinctively configure and organize event sources.

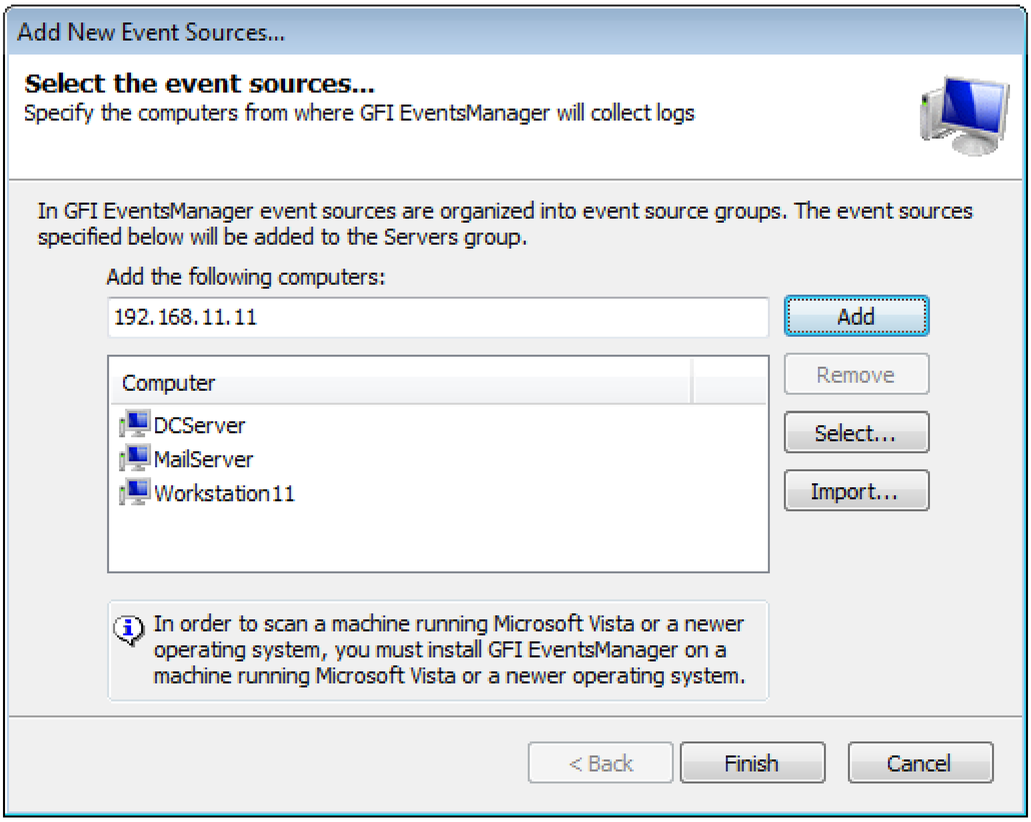
Topics in this section:

9.1 Adding event sources manually

To manually add a new event sources to a computer group:

1. Click **Configuration** tab **> Event Sources** and from **Group Type**, select **Event Sources Groups**.

2. Right-click a computer group of your choice and select **Add new event source…**



Add New Event Sources...

Select the event sources...

Specify the computers from where GFI EventsManager will collect logs

In GFI EventsManager event sources are organized into event source groups. The event sources specified below will be added to the Servers group.

Add the following computers: 192.168.11.11

Computer
DCServer
MailServer
Workstation11

In order to scan a machine running Microsoft Vista or a newer operating system, you must install GFI EventsManager on a machine running Microsoft Vista or a newer operating system.

Screenshot 41: Add new event source wizard

3. The following table describes the available options:

Option	Description
Add	Key in the computer name or IP address in the **Add the following computers** field. Click **Add** to add the specified computer to the **Computer** list. Repeat this step until you add all the event sources to the selected group. **Note** Since Syslog and SNMP traps use IP addresses to determine the source of an event, it is recommended to use the source IP address instead of the computer name when adding Syslog and SNMP Traps sources.
Remove	Select one or more computers from the **Computer** list and click **Remove** to delete them from the list.
Select...	Click **Select...** to launch the **Select Computers...** dialog: 1. From the **Domain** drop-down menu, select the domain you want to scan for available sources and click **Search**. 2. From the search results list, select the computers you want to add. 3. Click **OK** to close the **Select Computers...** dialog and return to the **Add New Event Sources...** dialog.
Import...	Click **Import...** to import computers from a text file. Ensure that the text file contains only one computer name or IP address per line.

4. Click **Finish** to finalize your settings. GFI EventsManager immediately attempts to scan the added event sources, using the default logon credentials.

> **Note**
>
> If synchronization is not enabled, you can use the **Network Discovery Wizard** to automatically search and add events sources. To launch **Network Discovery Wizard**, right-click **All event sources** from the event sources tree and select **Scan local domain**.

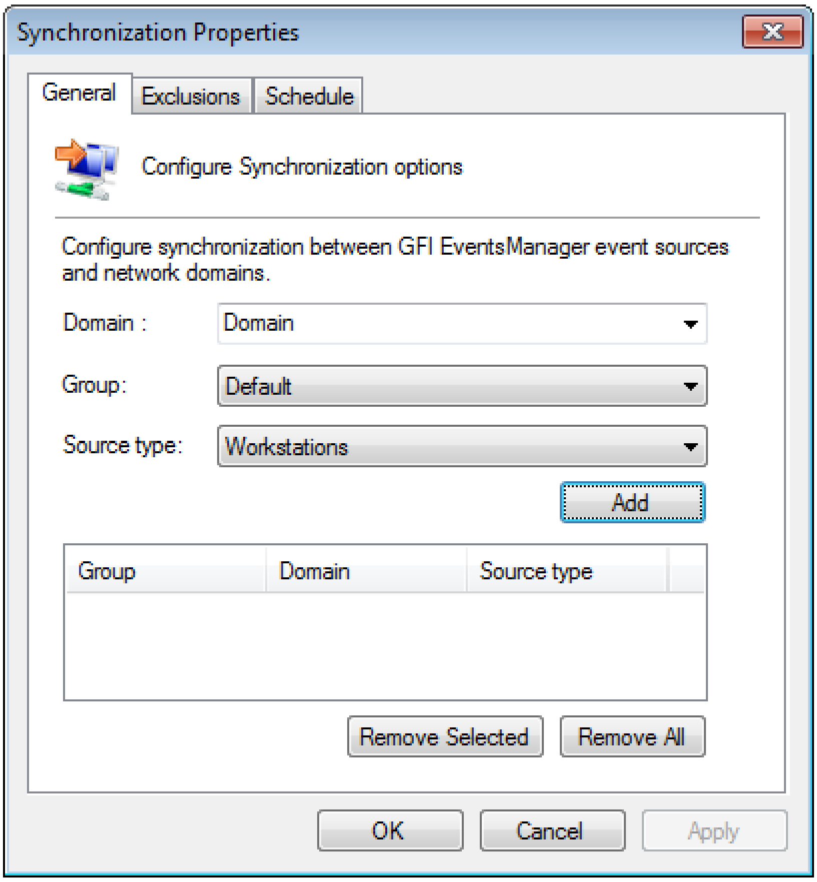
9.2 Adding event sources automatically

GFI EventsManager enables you to automatically synchronize domains with event sources groups. When synchronization is configured, every new domain member is automatically added to GFI EventsManager's event source list.

To enable auto synchronization:

1. Click **Configuration** tab > **Event Sources** and from **Group Type**, select **Event Sources Groups**.

2. Right-click **All event sources** and select **Edit synchronization options**.


Synchronization Properties

General | Exclusions | Schedule

Configure Synchronization options

Configure synchronization between GFI EventsManager event sources and network domains.

Domain : Domain

Group: Default

Source type: Workstations

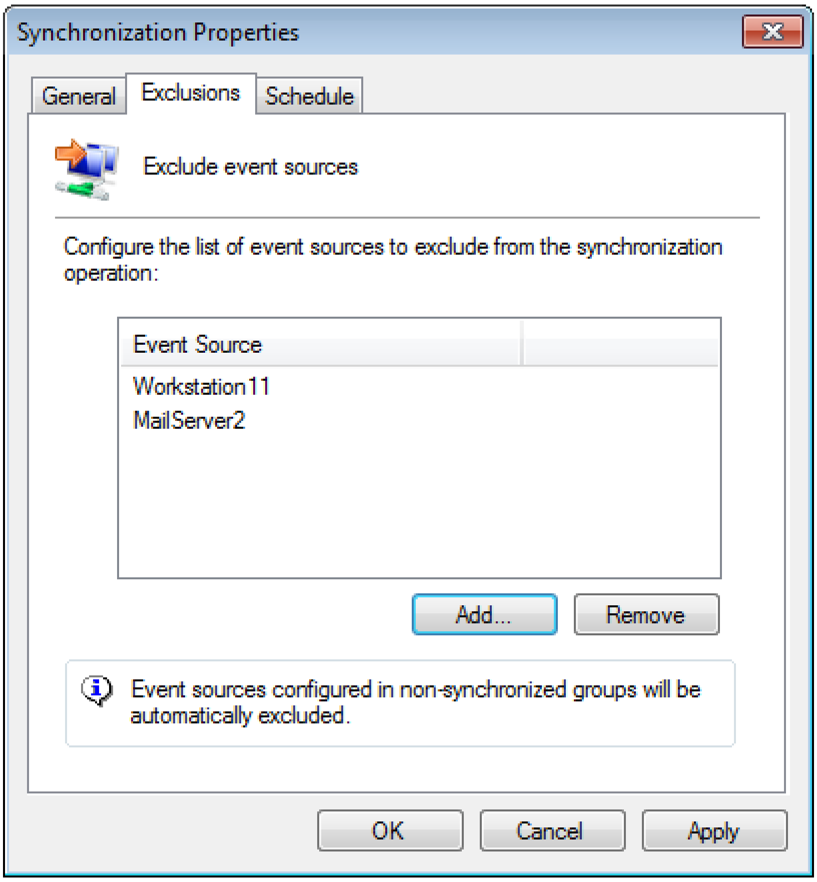
Screenshot 42: Synchronization properties - General tab

3. Select **General** tab and configure the options described below:

Option	Description
Domain	Select the domain name from the list or key in a valid domain name.
Group	Select the GFI EventsManager group name where to add the discovered event sources.
Source type	Select the type of event sources that GFI EventsManager scans for, in the specified domain.

4. To include the synchronization click **Add**.

5. Repeat steps 3 to 4 for each domain you want to synchronize.



Configure the list of event sources to exclude from the synchronization operation:

Event Source
Workstation11
MailServer2

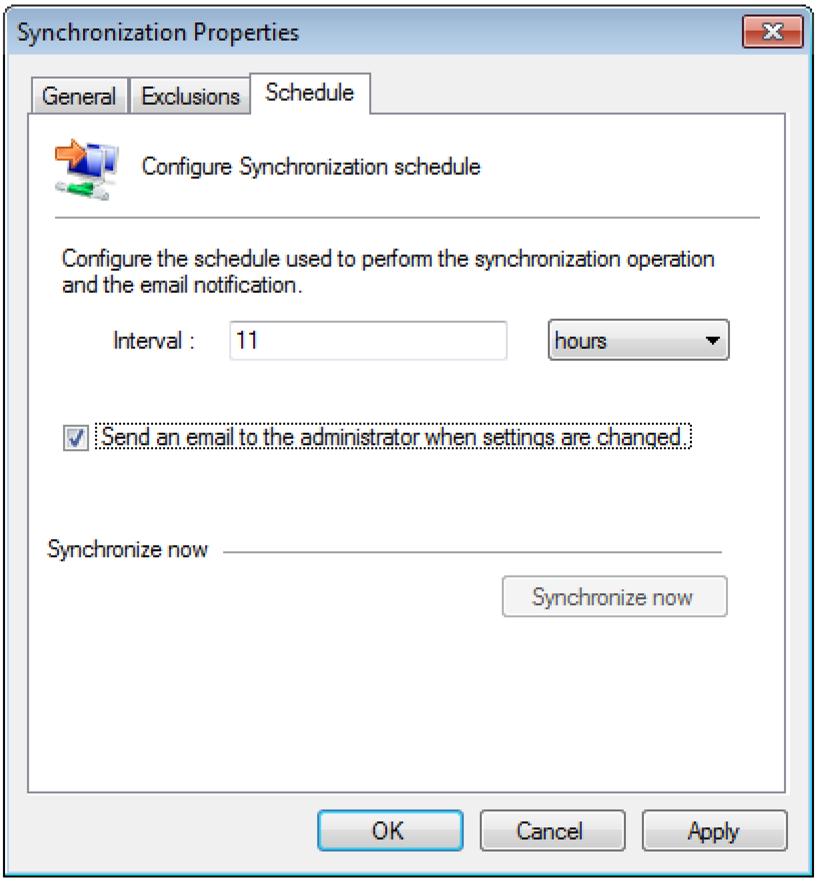
Event sources configured in non-synchronized groups will be automatically excluded.

Screenshot 43: Excluding computers from automatic synchronization

6. (Optional) Select **Exclusions** tab to configure the list of computers that will be excluded from synchronization. Click **Add** and key in a computer name to exclude.

> **Note**
>
> Event sources that are already part of an event source group will be automatically excluded from synchronization.

7. Select **Schedule** tab to configure when the synchronization should be performed.


Synchronization Properties
General
Exclusions
Schedule
Configure Synchronization schedule

Configure the schedule used to perform the synchronization operation and the email notification.

Interval : 11 hours

☑ Send an email to the administrator when settings are changed.

Screenshot 44: Synchronization properties -Schedule tab

8. Key in a valid interval in hours or days.

9. (Optional) Select **Send an email to the…** to send an email notification when event sources are changed after synchronization.

10. (Optional) Click **Synchronize now** to synchronize event sources immediately.

11. Click **Apply** and **OK**

> **Note**
> Adding event sources manually to a synchronized group is not allowed in GFI EventsManager.

9.3 Creating a new event source group

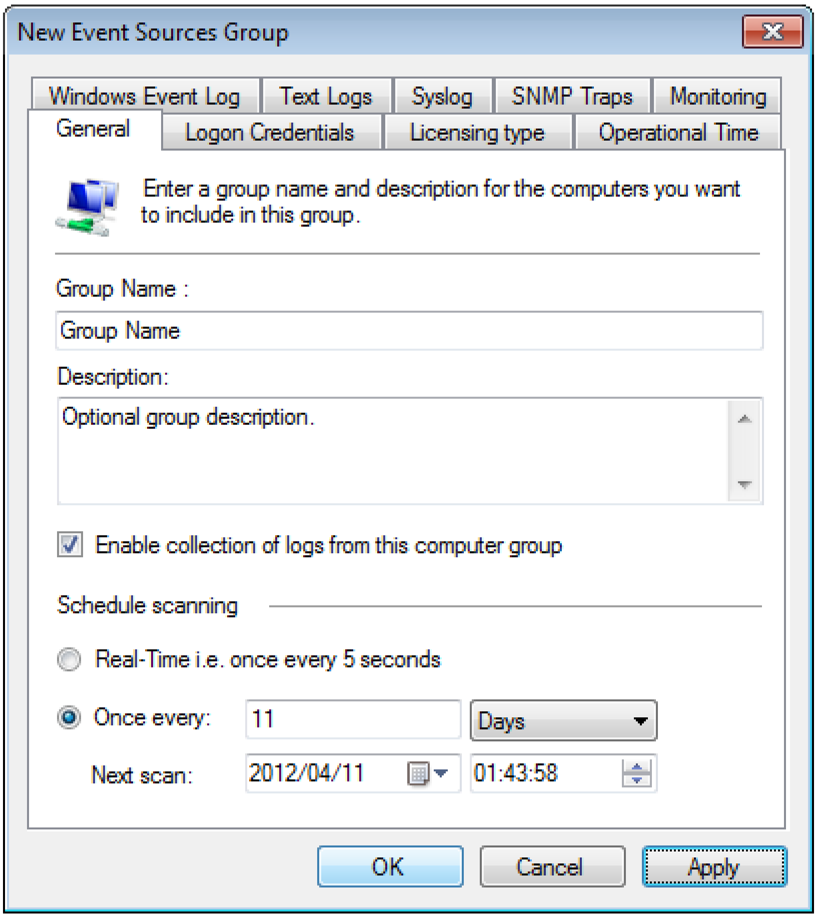
Grouping event sources into Event Source Groups improves the speed at which you configure event sources. Once an event source group is configured, every member of that particular group inherits the same settings.

To create a new event source group:

1. Click **Configuration** tab **>** **Event Sources** and from **Group Type**, select **Event Sources Groups**.

2. Right-click **All event sources** and select **Create group…**

3. Select the license type. Choose between **Complete** or **Active Monitoring** license. For more information refer to Configuring event source license type.



Enter a group name and description for the computers you want to include in this group.

Group Name :

Group Name

Description:

Optional group description.

☑ Enable collection of logs from this computer group

Schedule scanning

○ Real-Time i.e. once every 5 seconds

● Once every: 11 Days

Next scan: 2012/04/11 01:43:58

Screenshot 45: Add new event source group

4. Key in a unique name and an optional description. Select the tabs described below, and configure the available options:

Tab Name	Description
General	Enable collection of events and schedule the scanning process. For more information refer to Configuring general event source properties.
Logon credentials	Configure the username and password used to login target machines and collect information. For more information refer to Configuring event source logon credentials.
Licensing type	Select the type of license to use. Select between **Active Monitoring** or **Complete**. For more information refer to Configuring event source license type.
Operational time	Configure the operational time that computers are normally used. For more information refer to Configuring event source operational time.
Monitoring	Enable GFI EventsManager active monitoring on target computers and configure the audits to perform. Monitoring checks enable administrators to identify system problems at the very early stages to prevent system down-time. For more information refer to Configuring event source monitoring.
Windows Event Log	Specify the logs to collect and configure archive settings for Windows® event logs. For more information refer to Collecting Windows® events.
Text Logs	Specify the logs to collect and configure settings for W3C/HTTP/CSV logs. This tab is only available when creating a server group. For more information refer to Collecting Text logs.
Syslog	Specify the logs to collect and configure archive settings for Syslogs. This tab is only available when creating a server group. For more information refer to Collecting Syslogs.

Tab Name	Description
SNMP Traps	Specify the logs to collect and configure archive settings for SNMP Traps. This tab is only available when creating a server group. For more information refer to Collecting SNMP Traps Messages.

5. Click **Apply** and **OK**

9.4 Configuring event source properties

GFI EventsManager allows you to customize the event source parameters to suit the operational requirements of your infrastructure. You can configure these parameters on single event sources or at event source group. Any member of a configured group inherits the same configuration, automatically.

This section contains information about:

- Configuring general event source properties
- Configuring event source logon credentials
- Configuring event source license type
- Configuring event source operational time
- Configuring event source monitoring
- Configuring event processing parameters

9.4.1 Configuring general event source properties

Use the **General** tab in the properties dialog to:

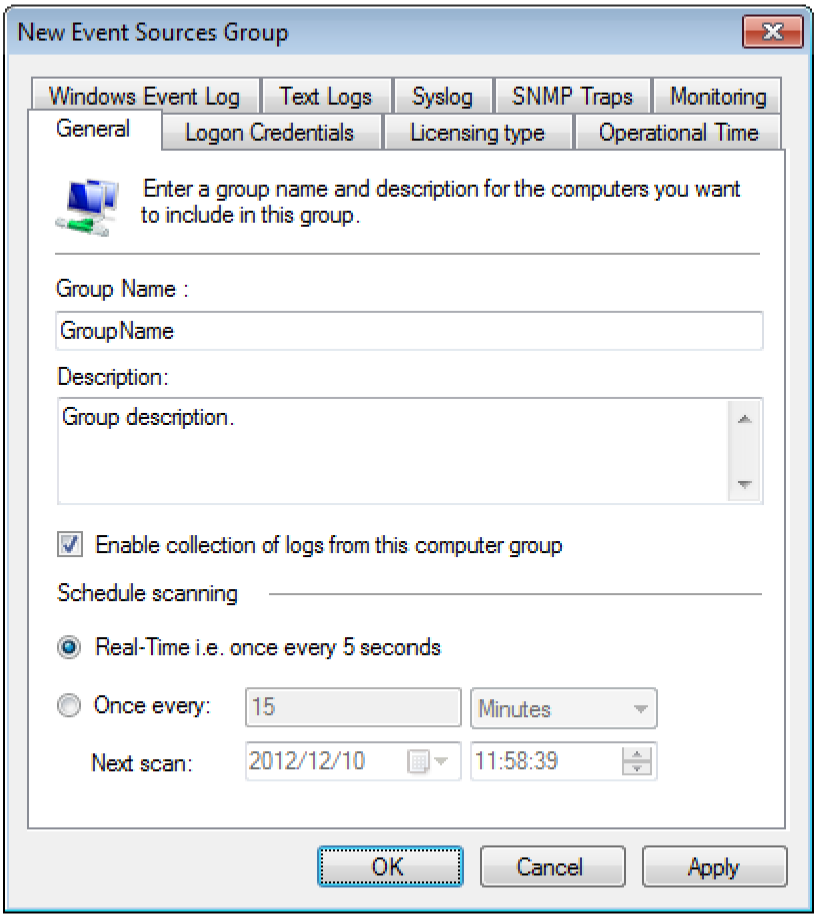
- Change the name of a computer group
- Enable/disable log collection and processing for the computers in a group
- Configure log collection and processing frequency.

To configure event source properties:

1. From **Configuration** tab **> Event Sources > Group Type**, select **Event Sources Groups**.

2. To configure settings of a:

- **Computer group** - right-click on the computer group to configure, and select **Properties**
- **Single event source** - right-click on the source to configure, and select **Properties**.



Enter a group name and description for the computers you want to include in this group.

Group Name : GroupName

Description: Group description.

☑ Enable collection of logs from this computer group

Schedule scanning

● Real-Time i.e. once every 5 seconds

○ Once every: 15 Minutes

Next scan: 2012/12/10 11:58:39

Screenshot 46: Event sources properties dialog

3. From the **General** tab, configuring the options described below:

Option	Description
Group Name	Key in a unique name for the computer group.
Description	(Optional) Key in a description.
Enable collection of logs from this computer group	Select/unselect this option to enable/disable event log collection from the group.
Real-Time i.e. once every 5 seconds	Select this option to check for new event logs every 5 seconds. **Note** This is not recommended if members of this group generate high volumes of event logs because it may disrupt your network performance.
Once every	Specify a custom schedule for when GFI EventsManager checks for new event logs.

4. Click **Apply** and **OK**

9.4.2 Configuring event source logon credentials

Use the **Logon Credentials** tab in the properties dialog to:

- View logon credentials settings
- Edit logon credentials settings.

During event processing, GFI EventsManager must remotely log-on to the target computers. This is required in order to collect log data that is currently stored on the target computers and to pass this data on to the event processing engine (s).

To collect and process logs,GFI EventsManager must have administrative privileges over the target computers. By default, GFI EventsManager will log-on to target computers using the credentials of the account under which it is currently running; however, certain network environments are configured to use different credentials to log on to workstations and servers with administrative privileges.

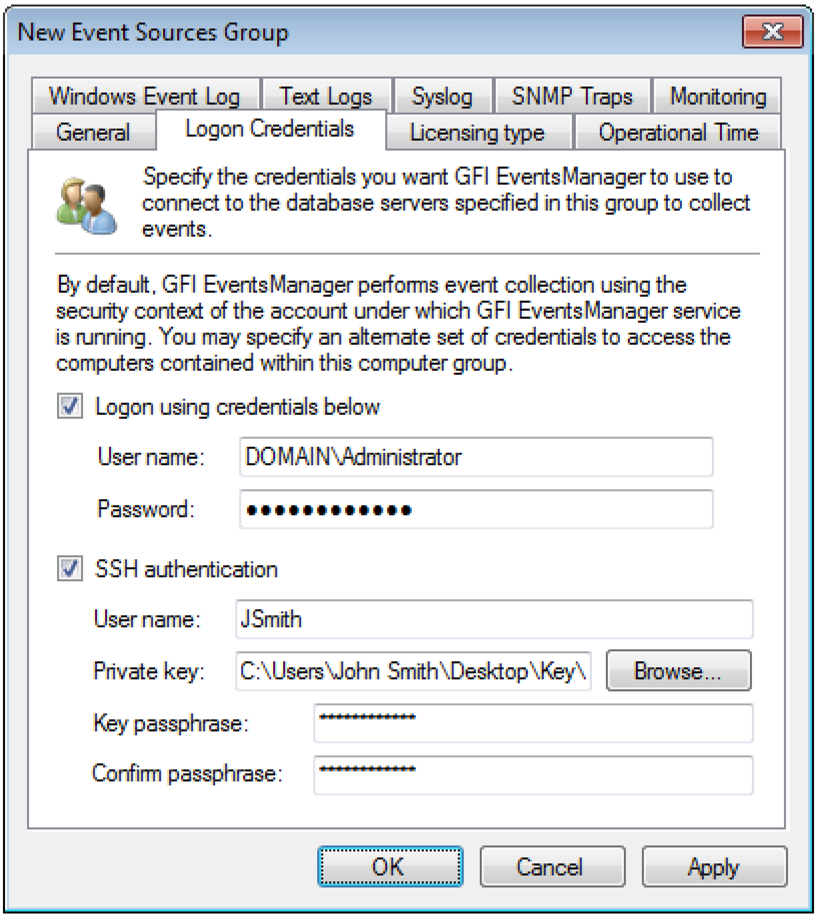
As an example, for security purposes, you might want to create an administrator account that has administrative privileges over workstations only and a different account that has administrative privileges over servers only.

To configure event source properties:

1. From **Configuration** tab > **Event Sources** > **Group Type**, select **Event Sources Groups**.

2. To configure settings of a:

- **Computer group** - right-click on the computer group to configure, and select **Properties**
- **Single event source** - right-click on the source to configure, and select **Properties**.



New Event Sources Group

Specify the credentials you want GFI EventsManager to use to connect to the database servers specified in this group to collect events.

By default, GFI EventsManager performs event collection using the security context of the account under which GFI EventsManager service is running. You may specify an alternate set of credentials to access the computers contained within this computer group.

☑ Logon using credentials below

User name: DOMAIN\Administrator

Password: ●●●●●●●●●●●●

☑ SSH authentication

User name: JSmith

Private key: C:\Users\John Smith\Desktop\Key\

Key passphrase: **************

Confirm passphrase: **************

Screenshot 47: Configuring alternative logon credentials

3. Click **Logon Credentials** tab.

4. Select/unselect **Logon using credentials below** to use/stop using alternate logon credentials. Key in a username and password.

> **Note**
>
> Alternate logon credentials enable you to use different usernames and passwords to log into remote computers. You can set alternate credentials for a group of event sources or for each event source.
>
> Members of an event source group can be configured to inherit credentials from the parent group.

5. Select/unselect **SSH authentication** to use/stop using SSH authentication.

> **Note**
>
> SSH uses public-key cryptography to authenticate the remote computer and allow it to authenticate the user, if necessary. This is a security protocol for Linux and Unix based computers.

6. Click **Browse...** to select the **Private key** file.

7. Key in the **key passphrase** and reenter it for confirmation.

8. Click **Apply** and **OK**.

9.4.3 Configuring event source license type

The **Licensing type** tab is used to configure the licensing mode of an event source or event group. This determines the type of logs that must be collected from the configured source/group. The following table describes the available license types:

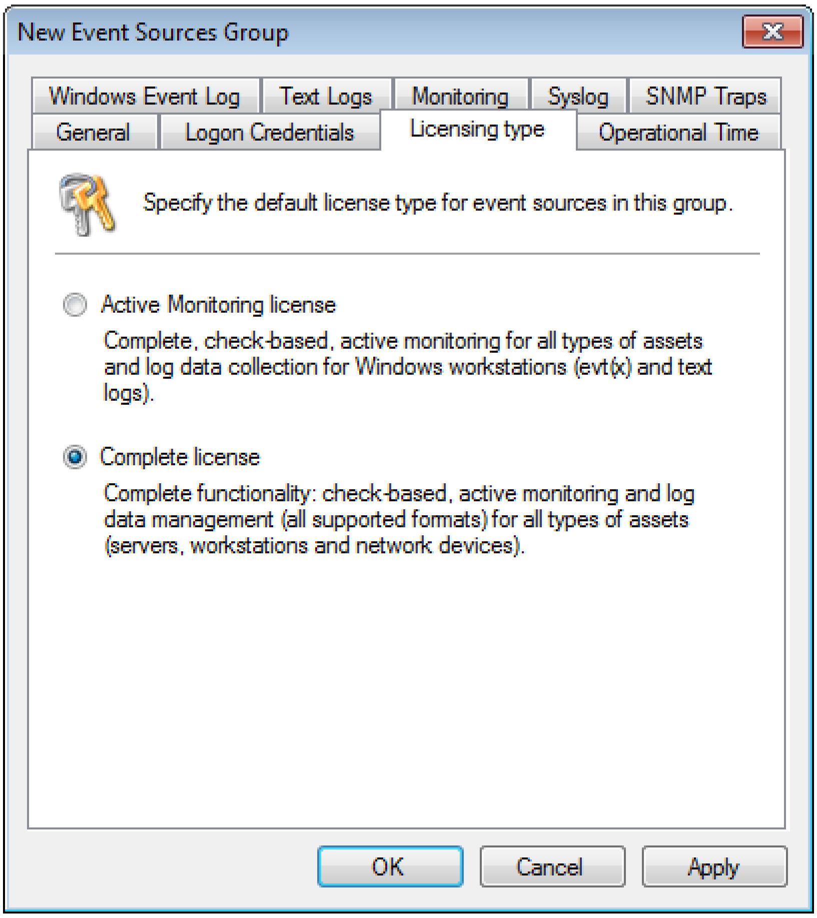
License Type	Description
Active Monitoring license	This license enables you to collect and process: » Microsoft® Windows® Event Logs » Text logs, such as W3C, CSV, XML, DHCP, SAP Logs, SKIDATA Logs and Custom logs from Windows® and non-Windows® workstations » Active Monitoring event logs If Windows® Server is detected on a source using this license, event log processing is disabled.
Complete license	Enables full functionality and support for Windows® and non-Windows® based servers, workstations and network devices. Use this license to collect and process: » Microsoft® Windows® Event Logs » Text logs, such as W3C, CSV, XML, DHCP, SAP Logs, SKIDATA Logs and Custom logs from Windows® and non-Windows® workstations » Active Monitoring event logs » SNMP Traps Messages » Syslogs » Custom Logs » SQL Server® Audits » Oracle Server Audits.

To configure event source properties:

1. From **Configuration** tab **> Event Sources > Group Type**, select **Event Sources Groups**.

2. To configure settings of a:

- **Computer group** - right-click on the computer group to configure, and select **Properties**
- **Single event source** - right-click on the source to configure, and select **Properties**.



Specify the default license type for event sources in this group.

○ Active Monitoring license

Complete, check-based, active monitoring for all types of assets and log data collection for Windows workstations (evt(x) and text logs).

● Complete license

Complete functionality: check-based, active monitoring and log data management (all supported formats) for all types of assets (servers, workstations and network devices).

Screenshot 48: Configuring event source license type

3. Click **Licensing type** tab and select the license you want to use for the event source or group that is being configured.

4. Click **Apply** and **OK**.

9.4.4 Configuring event source operational time

GFI EventsManager includes an Operational Time option through which you specify the normal working hours of your event source groups. This is required so that GFI EventsManager can keep track of the events that occur both during and outside working hours.

Use the operational time information for forensic analysis; to identify unauthorized user access, illicit transactions carried outside normal working hours and other potential security breaches that might be taking place on your network.

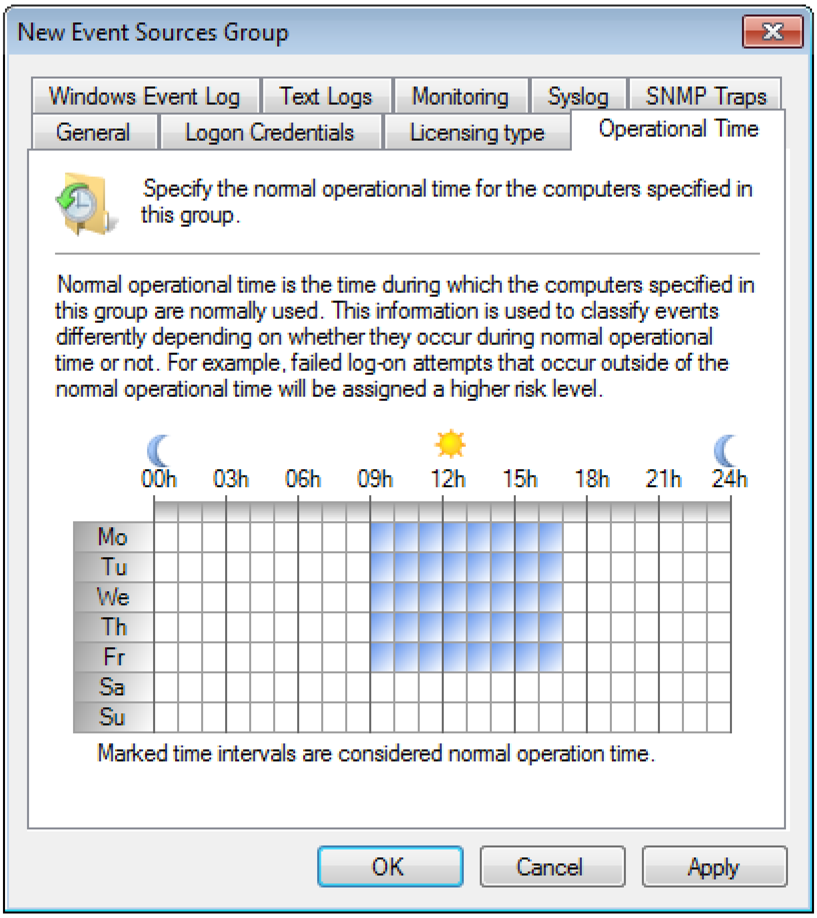
Operational time is configurable on computer group basis. This is achieved by marking the normal working hours on a graphical operational time scale which is divided into one hour segments.

To configure event source properties:

1. From **Configuration** tab **> Event Sources > Group Type**, select **Event Sources Groups**.

2. To configure settings of a:

- **Computer group** - right-click on the computer group to configure, and select **Properties**
- **Single event source** - right-click on the source to configure, and select **Properties**.



New Event Sources Group

Specify the normal operational time for the computers specified in this group.

Normal operational time is the time during which the computers specified in this group are normally used. This information is used to classify events differently depending on whether they occur during normal operational time or not. For example, failed log-on attempts that occur outside of the normal operational time will be assigned a higher risk level.

Marked time intervals are considered normal operation time.

Screenshot 49: Specify operational time

3. From **Operational Time** tab, mark the time intervals of your normal working hours.

> **Note**
>
> Cells marked blue represent your normal working hours.

4. Click **Apply** and **OK**

9.4.5 Configuring event source monitoring

GFI EventsManager is able to collect additional information about your event sources through Active Monitoring. These checks generate specific events which in turn, trigger real-time notifications or execute an action.

For example, when monitoring **CPU usage** checks, GFI EventsManager queries that event source and detects whether the target machine is performing at the specified CPU usage levels.

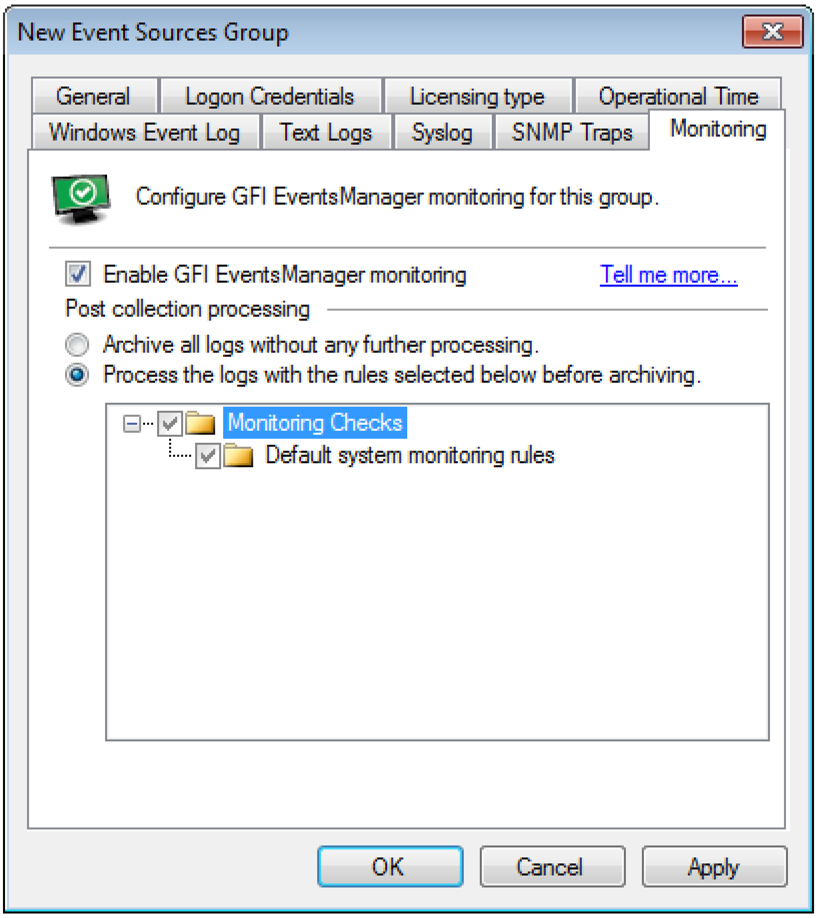
> **Note**
>
> For more information refer to Active Monitoring.

To configure event source properties:

1. From **Configuration** tab > **Event Sources** > **Group Type**, select **Event Sources Groups**.

2. To configure settings of a:

- **Computer group** - right-click on the computer group to configure, and select **Properties**
- **Single event source** - right-click on the source to configure, and select **Properties**.



Configure GFI EventsManager monitoring for this group.

☑ Enable GFI EventsManager monitoring

Post collection processing

○ Archive all logs without any further processing.

● Process the logs with the rules selected below before archiving.

- ☑ Monitoring Checks
  - ☑ Default system monitoring rules

Screenshot 50: Event source properties - Monitoring tab

3. From **Monitoring** tab, configure the options described below:

Option	Description
Inherit event log collection and processing from parent group	This option is available when enabling monitoring on a single event source. If you enabled monitoring on the group containing the event source, leave this option selected to obtain the same settings.
Enable GFI EventsManager monitoring	Select/unselect this option to enable/disable Active Monitoring processing.
Perform the following checks	Expand the list of checks and select the ones which you want to apply to your event source/event source group. For information about creating monitoring checks, refer to Creating a new monitoring check.
Archive all logs without any further processing	Select this option to store events without applying any further checks (from Events Processing Rules).
Process the logs with the rules selected below before archiving	Expand the list of rules which are applied to the collected logs. GFI EventsManager enables you to create custom rules and configure them to trigger when one of the active monitoring check generates an event. Then, through the configuration of the selected Event Processing Rule, actions are executed and/or alerts are generated. Once a monitoring check is enabled, browse for the event that it generates and create a rule based on that event. For more information refer to Creating new rules from existing events.

4. Click **Apply** and **OK**

9.4.6 Configuring event processing parameters

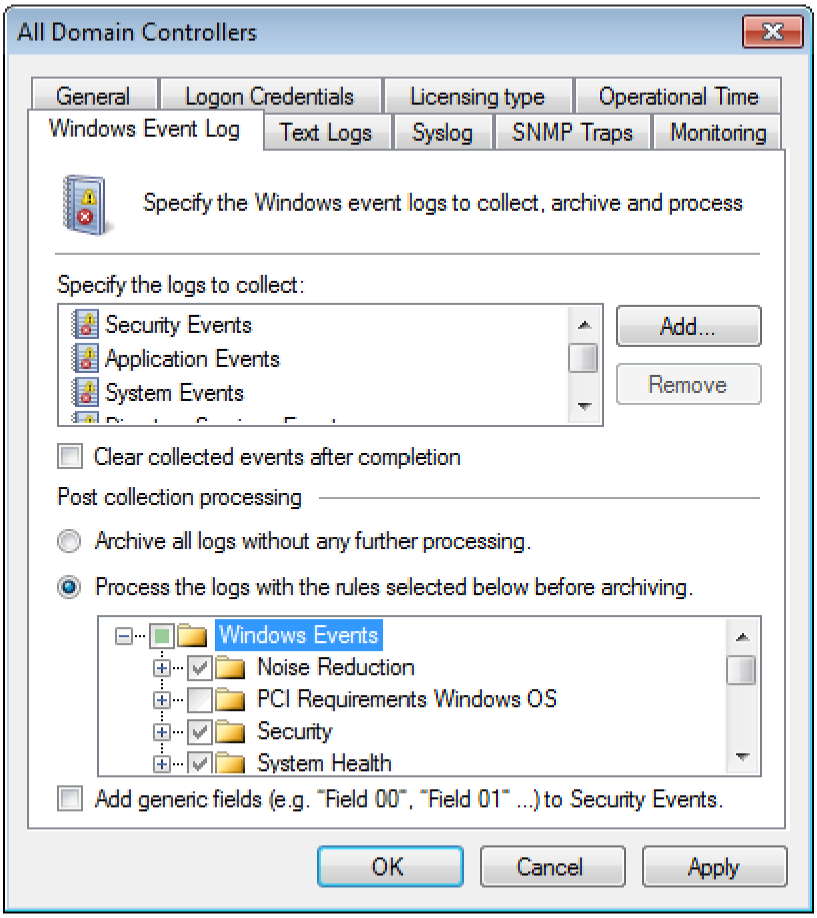
Event processing parameters are enabled only for event sources/groups licensed as Servers. Server event sources posses more settings than normal workstations, in order to collect Windows® event logs, Text logs, Syslogs and SNMP Traps.

To configure event source properties:

1. From **Configuration** tab > **Event Sources** > **Group Type**, select **Event Sources Groups**.

2. To configure settings of a:

- **Computer group** - right-click on the computer group to configure, and select **Properties**
- **Single event source** - right-click on the source to configure, and select **Properties**.



Specify the Windows event logs to collect, archive and process

Specify the logs to collect:

- Security Events
- Application Events
- System Events

□ Clear collected events after completion

Post collection processing

○ Archive all logs without any further processing.

● Process the logs with the rules selected below before archiving.

- Windows Events
  - ☑ Noise Reduction
  - □ PCI Requirements Windows OS
  - ☑ Security
  - ☑ System Health

□ Add generic fields (e.g. "Field 00", "Field 01" ...) to Security Events.

Screenshot 51: Event processing configuration tabs

3. Use the **Windows Event Log**, **Text Logs**, **Syslog** and **SNMP Traps** tabs configure the required event processing parameters.

4. Click **Apply** and **OK**

Note

For more information, refer to:

- Collecting Windows® Event Logs
- Collecting Text logs
- Collecting Syslogs
- Collecting SNMP Traps.

9.5 Database sources

GFI EventsManager can monitor and process events from database servers. Database event sources require specific configuration settings to collect and process events generated by database activity. GFI EventsManager is able to audit and monitor activity from the following database servers:

- Microsoft® SQL Server®
- Oracle Server

9.5.1 Microsoft® SQL Server® Sources

This section contains information about:

- Creating a new Microsoft® SQL Server® group
- Adding a new Microsoft® SQL Server® event source

Creating a new Microsoft® SQL Server® group

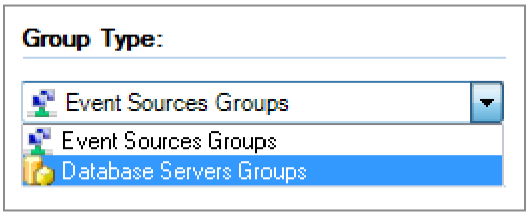
IMPORTANT

GFI EventsManager supports only as Events Source Microsoft SQL 2008 R2 or earlier. Newer versions of Microsoft SQL Server are not supported.

To create a Microsoft® SQL Server® group:

1. Click **Configuration** tab **> Event Sources**.

2. From **Group Type**, select **Database Servers Groups**.

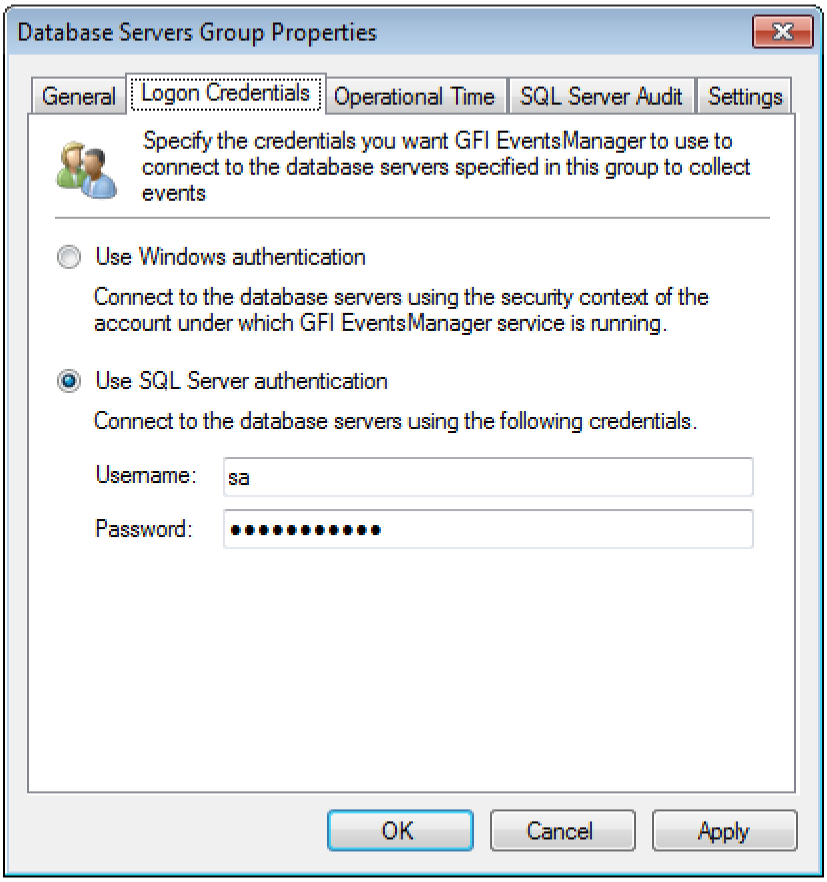


Screenshot 52: Database Servers Groups

3. From **Groups**, right-click **Microsoft® SQL Server®** and select **Create group...**

4. Select **Microsoft® SQL Server®** as the server type and from **General** tab configure the options described in below:

Option	Description
Group Name	Key in a group name to identify the Microsoft® SQL Server® group.
Description	(Optional) Key in a description.
Collects logs from the database servers included in this group	Enable option to collect database events from all servers in this group.



Specify the credentials you want GFI EventsManager to use to connect to the database servers specified in this group to collect events

○ Use Windows authentication

Connect to the database servers using the security context of the account under which GFI EventsManager service is running.

● Use SQL Server authentication

Connect to the database servers using the following credentials.

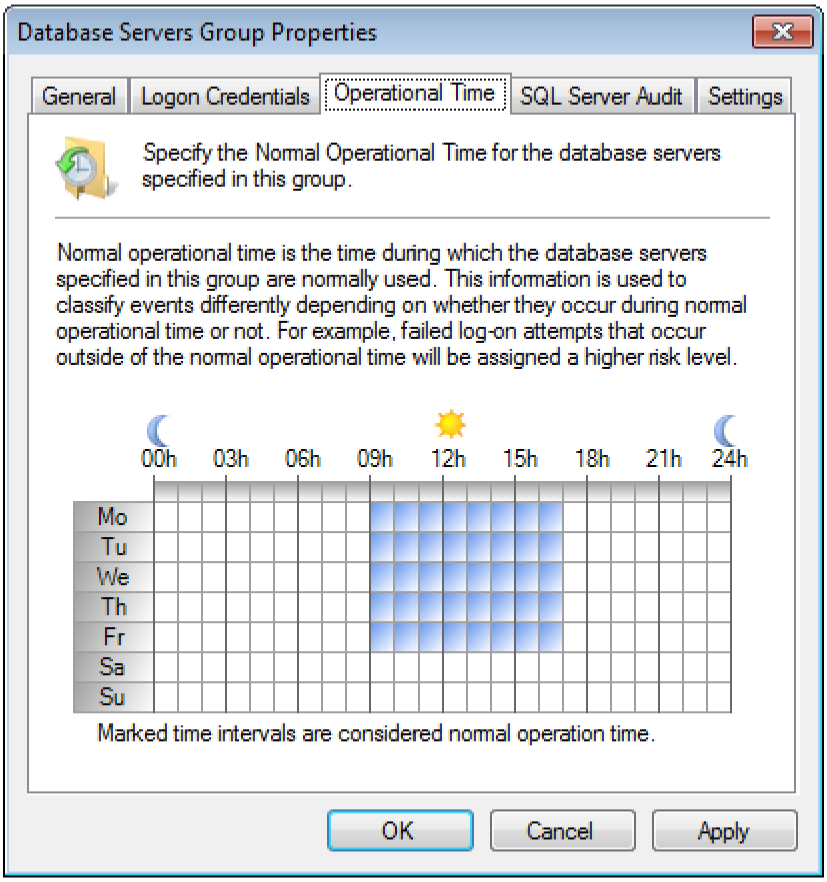
Username: sa

Password: ●●●●●●●●●●●

Screenshot 53: Configure logon settings from the Logon Credentials tab

4. Select **Logon Credentials** tab and configure the options described below:

Option	Description
Use Windows authentication	Connect to the Microsoft® SQL Database using windows authentication.
Use SQL Server® authentication	Connect to Microsoft® SQL Database using a Microsoft® SQL Database user account. Key in a username and password.



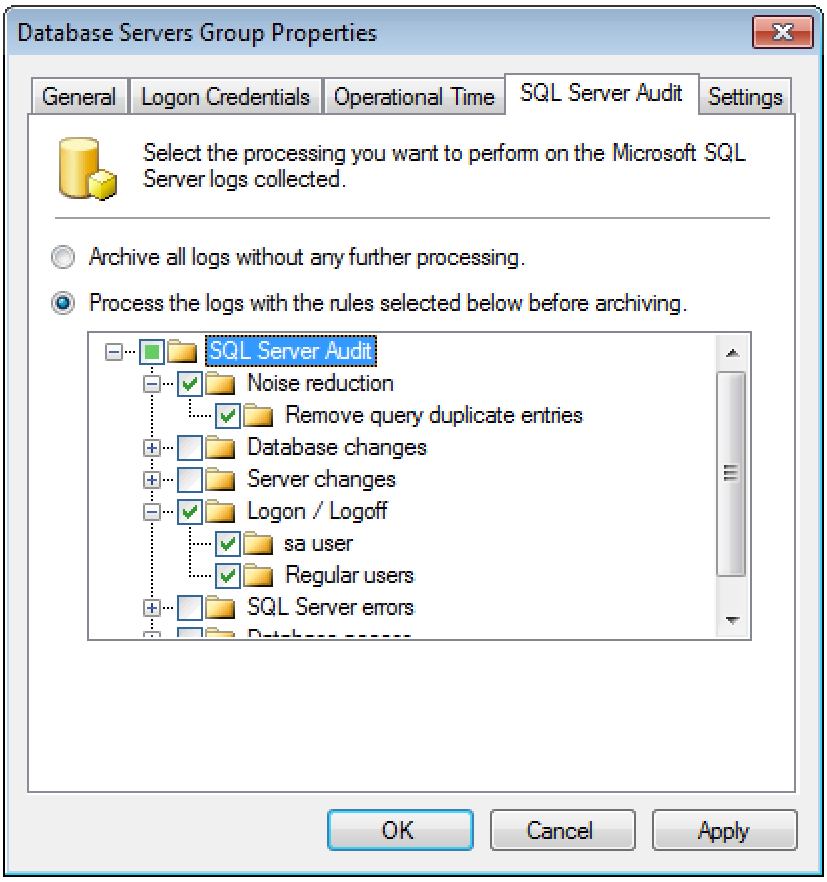
Specify the Normal Operational Time for the database servers specified in this group.

Normal operational time is the time during which the database servers specified in this group are normally used. This information is used to classify events differently depending on whether they occur during normal operational time or not. For example, failed log-on attempts that occur outside of the normal operational time will be assigned a higher risk level.

Marked time intervals are considered normal operation time.

Screenshot 54: Configure the normal working hours from Operational Time tab

5. Select **Operational Time** and configure the operational time when the database is normally used. Marked time intervals are considered normal working hours.


Database Servers Group Properties

Select the processing you want to perform on the Microsoft SQL Server logs collected.

○ Archive all logs without any further processing.

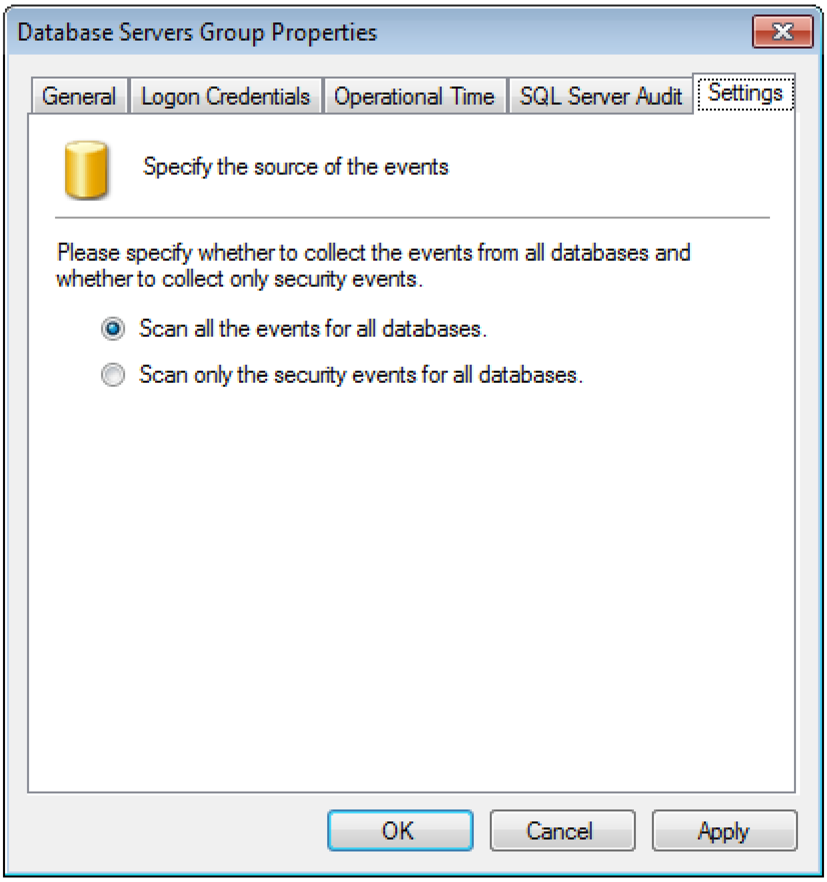
● Process the logs with the rules selected below before archiving.

- 🟩 SQL Server Audit
  - ☑ Noise reduction
    - ☑ Remove query duplicate entries
  - □ Database changes
  - □ Server changes
  - ☑ Logon / Logoff
    - ☑ sa user
    - ☑ Regular users
  - □ SQL Server errors

Screenshot 55: Configure SQL Server Auditing from SQL Server Audit tab

6. Select **SQL Server® Audit** tab and configure the options described below:

Option	Description
Archive all logs without further processing	Archive events in GFI EventsManager database backend without applying processing rules.
Process the logs with the rules selected below before archiving	Specify the rules to perform before archiving events in GFI EventsManager database backend.



Specify the source of the events

Please specify whether to collect the events from all databases and whether to collect only security events.

● Scan all the events for all databases.

○ Scan only the security events for all databases.

Screenshot 56: Database servers group properties

7. Select **Settings** tab and configure the options described in below:

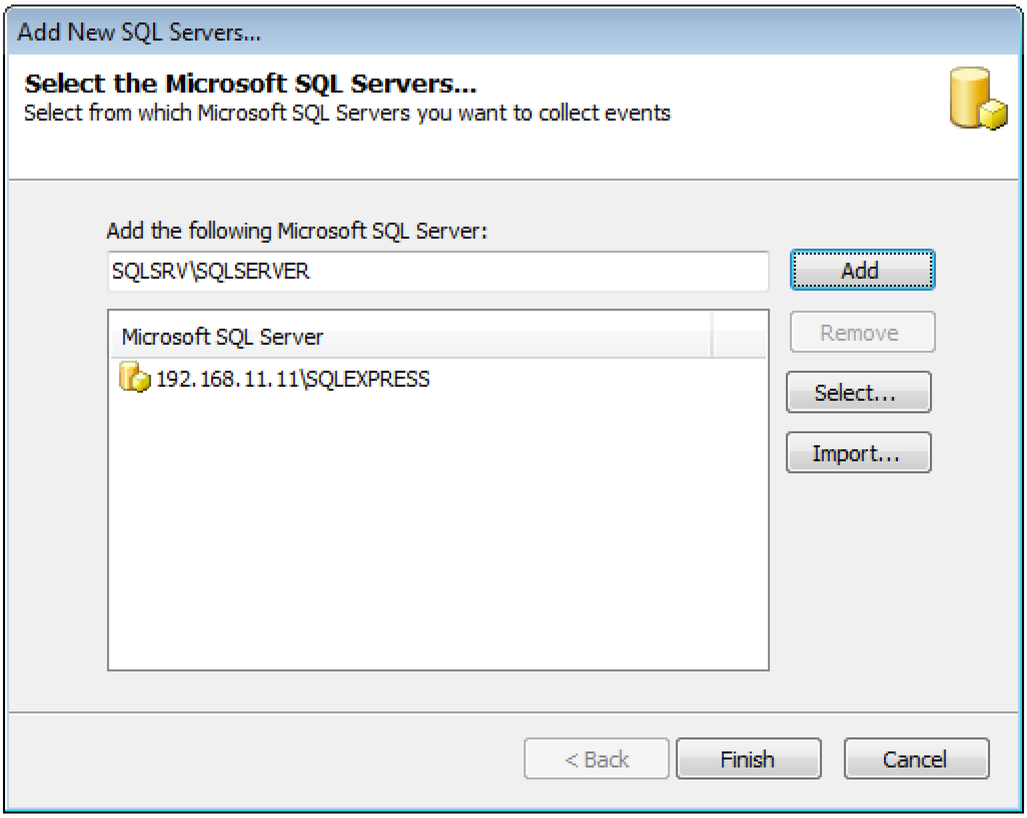
Option	Description
Scan all the events for all databases	All Microsoft® SQL Server® events are collected and processed by GFI EventsManager.
Scan only security events for all databases	Only security events are collected and processed by GFI EventsManager.

8. Click **Apply** and **OK**

Adding a new Microsoft® SQL Server® event source

To add a new Microsoft® SQL Server® source:

1. Right-click a database group and select **Add new SQL Server® ...**



Add New SQL Servers...

Select the Microsoft SQL Servers...

Select from which Microsoft SQL Servers you want to collect events

Add the following Microsoft SQL Server:

SQLSRV\SQLSERVER

Add

Microsoft SQL Server

192.168.11.11\SQLEXPRESS

Remove

Select...

Import...

< Back

Finish

Cancel

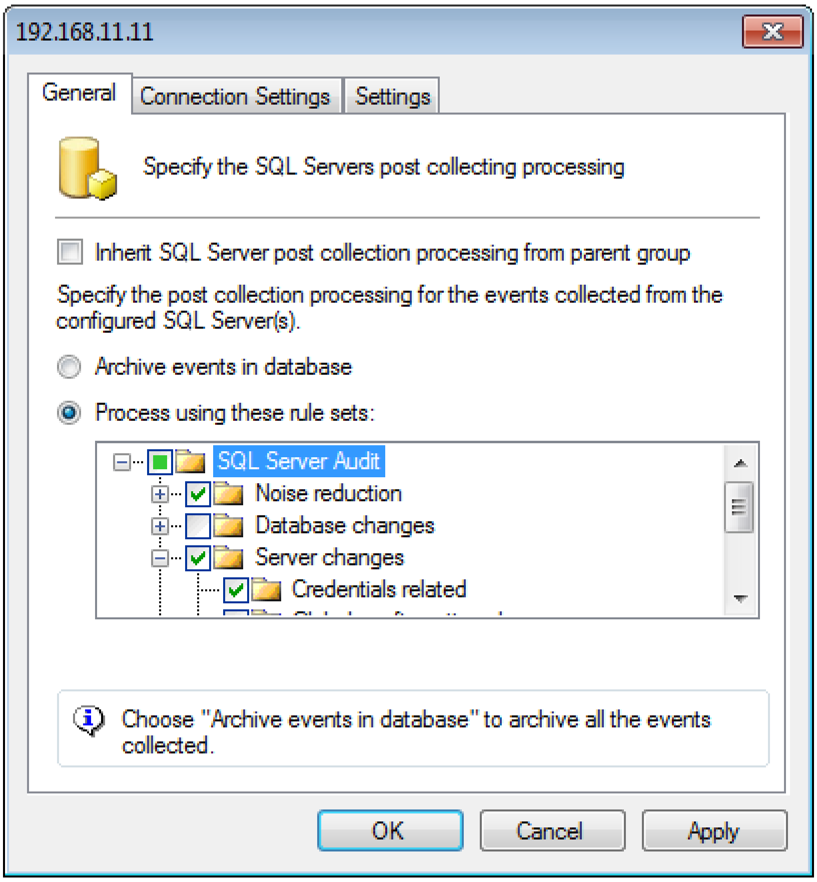
Screenshot 57: Add new Microsoft® SQL server

2. Key in the server name or IP and click **Add**.

> **Note**
>
> Use **Select** and **Import** to search the network for SQL Server® or import list of SQL servers from a text file respectively.

3. Click **Finish** and the Add New SQL Servers dialog closes.

4. From **Groups**, select **SQL Servers** and from the right pane, double-click the new Microsoft® SQL Database instance.



Specify the SQL Servers post collecting processing

☐ Inherit SQL Server post collection processing from parent group

Specify the post collection processing for the events collected from the configured SQL Server(s).

○ Archive events in database

● Process using these rule sets:

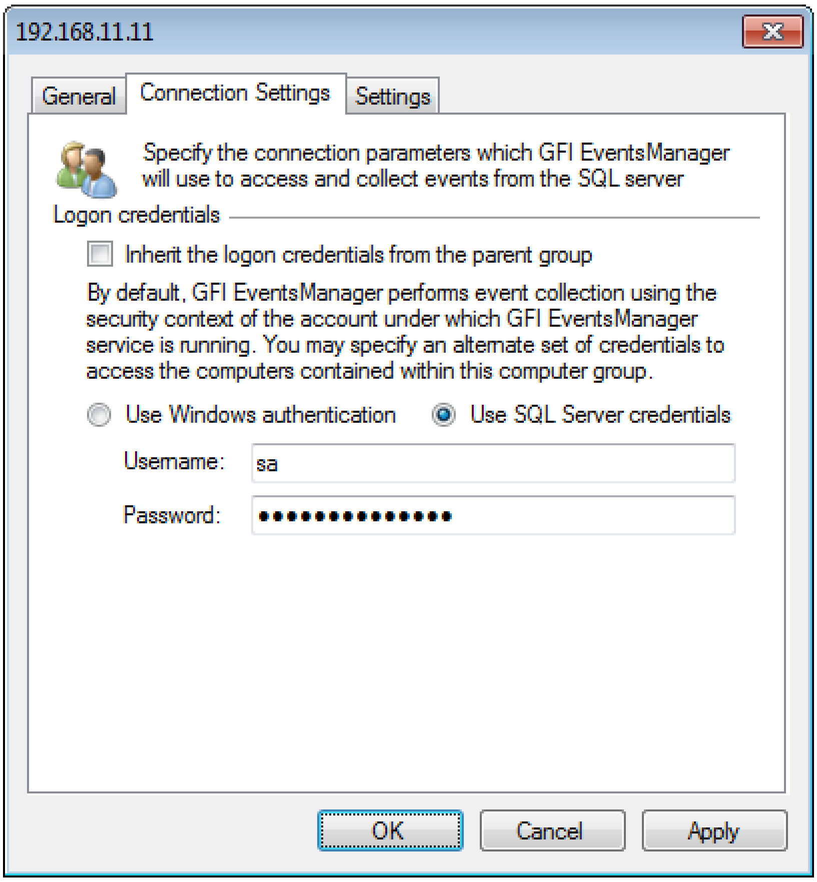
- ▪ SQL Server Audit
  - ☑ Noise reduction
  - ☐ Database changes
  - ☑ Server changes
    - ☑ Credentials related

Choose "Archive events in database" to archive all the events collected.

Screenshot 58: Microsoft® SQL Database properties: General tab

5. From **General** tab, configure the options described below:

Option	Description
Inherit SQL Server post collecting processing from parent group	Inherits all settings from the parent group.
Archive events in database	Archive events in GFI EventsManager database backend without applying processing rules.
Process using these rule sets	Specify the rules to perform before archiving events in GFI EventsManager database backend.



192.168.11.11

Specify the connection parameters which GFI EventsManager will use to access and collect events from the SQL server

Logon credentials

□ Inherit the logon credentials from the parent group

By default, GFI EventsManager performs event collection using the security context of the account under which GFI EventsManager service is running. You may specify an alternate set of credentials to access the computers contained within this computer group.

○ Use Windows authentication ● Use SQL Server credentials

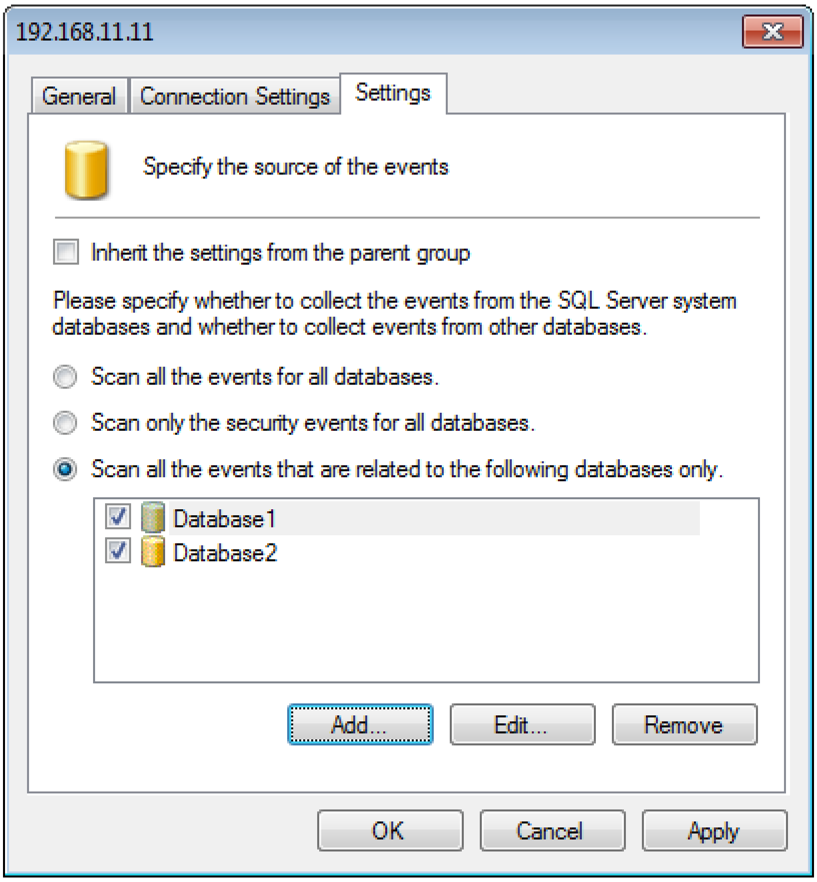
Username: sa

Password: ••••••••••••••

Screenshot 59: Microsoft® SQL Database properties: Connection Settings tab

6. Select **Connection Settings** and configure the options described below:

Option	Description
Inherit the logon credentials from the parent group	Select this option to inherit login settings from the parent group.
Use Windows authentication	Connect to Microsoft® SQL Database using windows authentication.
Use SQL Server credentials	Connect to Microsoft® SQL Database using a Microsoft® SQL Database user account. Key in a username and password.



Specify the source of the events

□ Inherit the settings from the parent group

Please specify whether to collect the events from the SQL Server system databases and whether to collect events from other databases.

○ Scan all the events for all databases.

○ Scan only the security events for all databases.

● Scan all the events that are related to the following databases only.

☑ Database1
☑ Database2

Screenshot 60: Microsoft® SQL Database properties: Settings tab

7. Select **Settings** tab and configure the options described below:

Option	Description
Inherit the settings from the parent group	Inherits settings from the parent group.
Scan all the events for all databases	Scan all databases and collect all events from the Microsoft® SQL Server®.
Scan only the security events for all databases	Scan all databases and collect only security events from the Microsoft® SQL Server®.
Scan all the events that are related to the following databases only	Collect all events from the selected databases. Use Add, Edit and Remove to manage database sources.

8. Click **Apply** and **OK**

9.5.2 Oracle server sources

GFI EventsManager enables you to collect and process events generated by Oracle Relational database management systems. The following audits are collected and processed by GFI EventsManager:

Audit	Description
Session auditing	Audit user sessions and database access.
Statement auditing	Audit processed SQL statements.
Object auditing	Audit queries and statements related to specific objects.

The following Oracle Database versions are supported:

- Oracle Database 9i
- Oracle Database 10g
- Oracle Database 11g

This section contains information about:

- Pre-configuration settings for Oracle Servers event sources
- Creating a new Oracle Server group
- Adding a new Oracle Server event source

Pre-configuration settings for Oracle Servers event sources

Before adding Oracle Server event sources, follow the steps below on each Oracle Server instance you want to monitor:

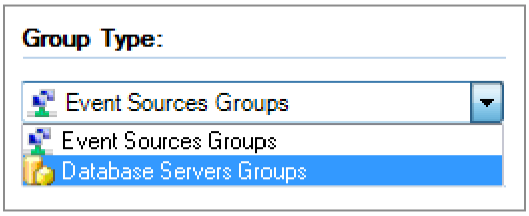
Pre-configuration Step	Description
Step 1	Ensure the logon credentials used to connect, set audits and access the audit table has the necessary permissions.
Step 2	Enable auditing on the Oracle Server by changing startup parameters. To enable auditing: 1. Startup parameters for the Oracle servers are stored in: `<Oracle Home Directory>\admin\<Oracle SID>\pfile\init.ora.` 2. Locate and open the parameters file using a text editor. 3. Locate **AUDIT_TRAIL** parameter and change the default value to '**db**' or '**db_extended**' ('db,extended' on latest versions of Oracle). 4. Save and restart the Oracle server.

Adding a new Oracle Server group

To add a new Oracle Database group:

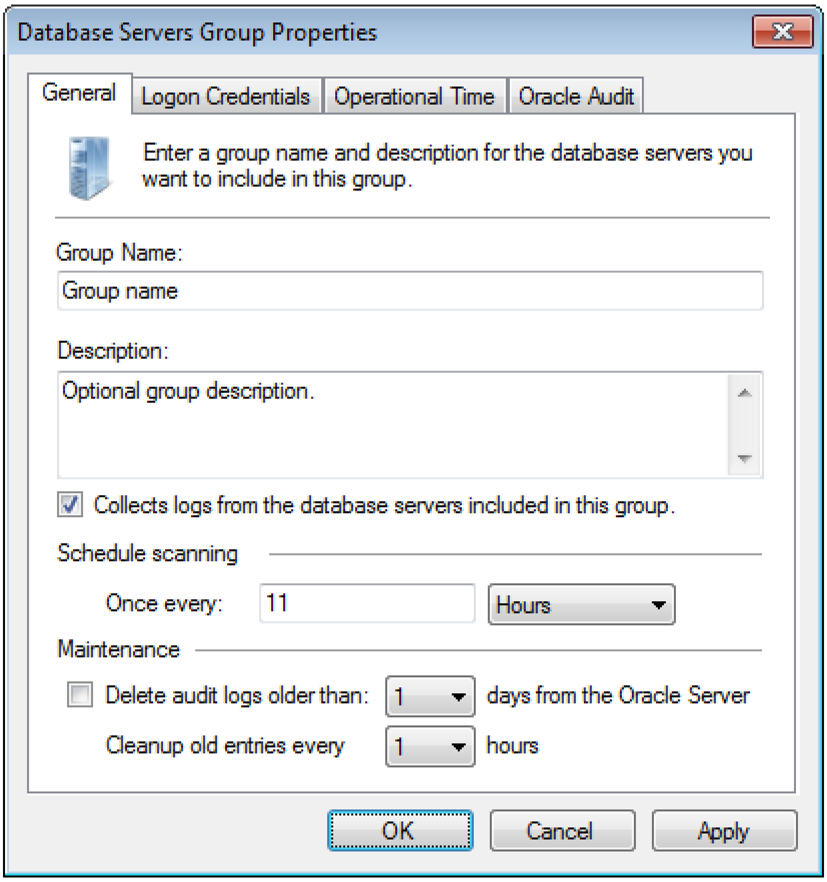
1. Click **Configuration** tab > **Event Sources**.

2. From **Group Type**, select **Database Servers Groups**.



Screenshot 61: Database Servers Groups

3. From **Groups**, right-click **Oracle Servers** and select **Create group...**


Database Servers Group Properties

Enter a group name and description for the database servers you want to include in this group.

Group Name: Group name

Description: Optional group description.

☑ Collects logs from the database servers included in this group.

Schedule scanning

Once every: 11 Hours

Maintenance

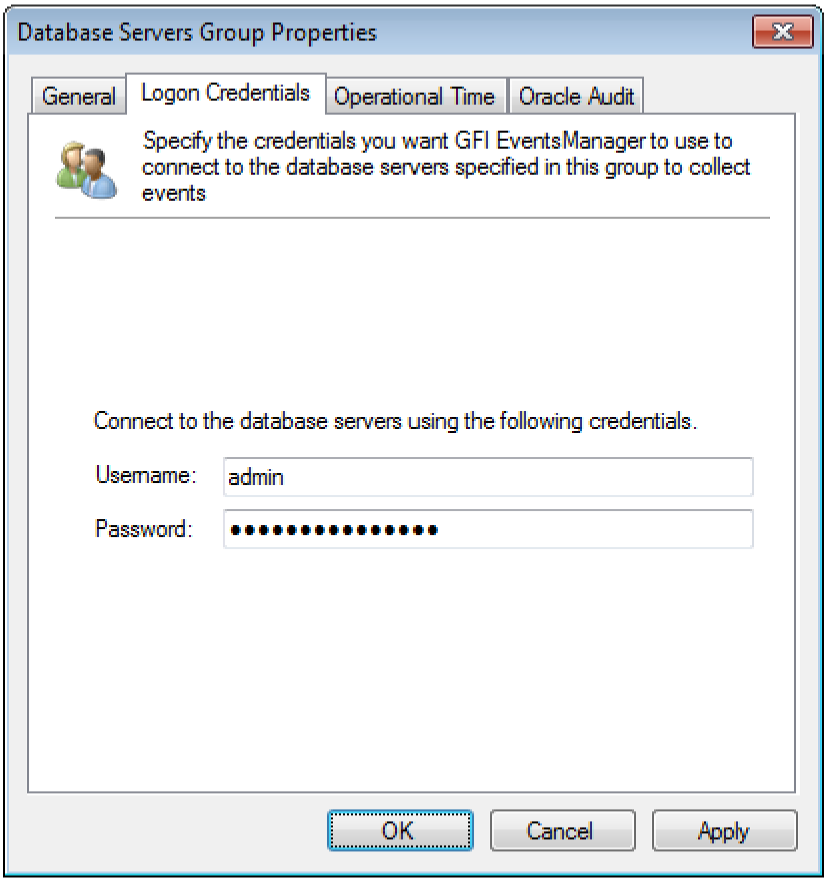
□ Delete audit logs older than: 1 days from the Oracle Server

Cleanup old entries every 1 hours

Screenshot 62: Oracle Database group - General tab

4. From **General** tab, configure the options described in below:

Option	Description
Group Name	Key in a group name to identify the Oracle Database group.
Description	Optionally, key in a description.
Collects logs from the database servers included in this group	Collects events from the event sources in the Oracle group. Once this option is enabled, configure the Schedule scanning and Maintenance options.
Schedule scanning	Specify the frequency to collect events on a pre-defined schedule.
Maintenance	Oracle audit events are stored in a specific audit table on the Oracle server. To prevent excessive audit table growth, configure the options in this section to delete audit logs and old entries on a pre-defined time.



Specify the credentials you want GFI EventsManager to use to connect to the database servers specified in this group to collect events

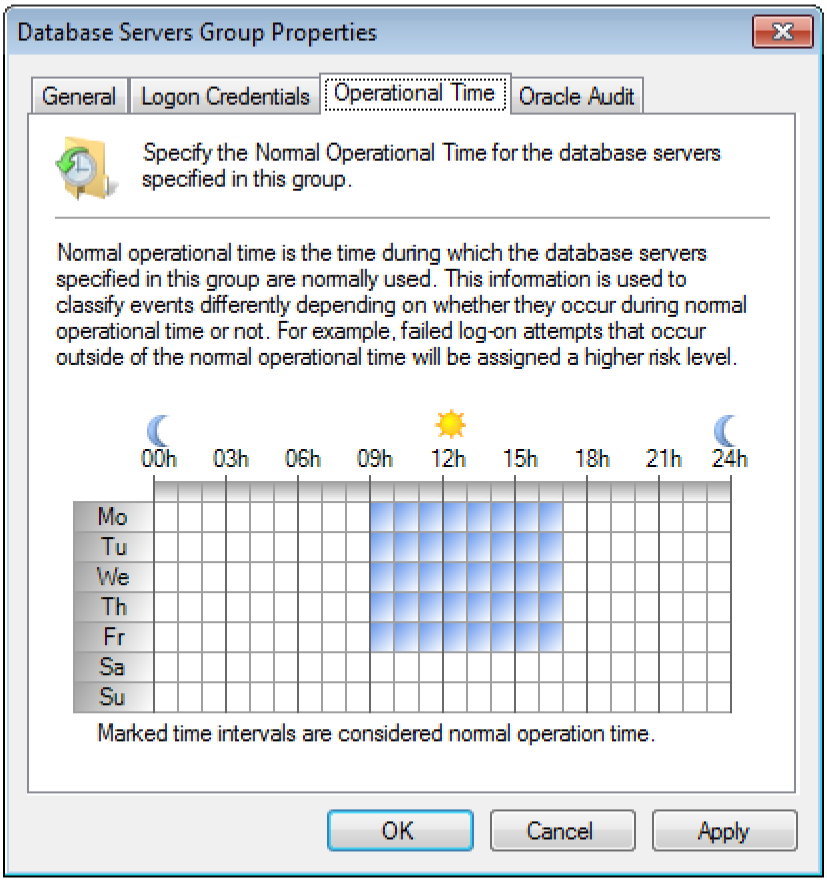
Connect to the database servers using the following credentials.

Username: admin

Password: •••••••••••••••

Screenshot 63: Oracle Database group - Logon Credentials tab

5. Select **Logon Credentials** tab and key in a valid username and password to connect to the Oracle server.



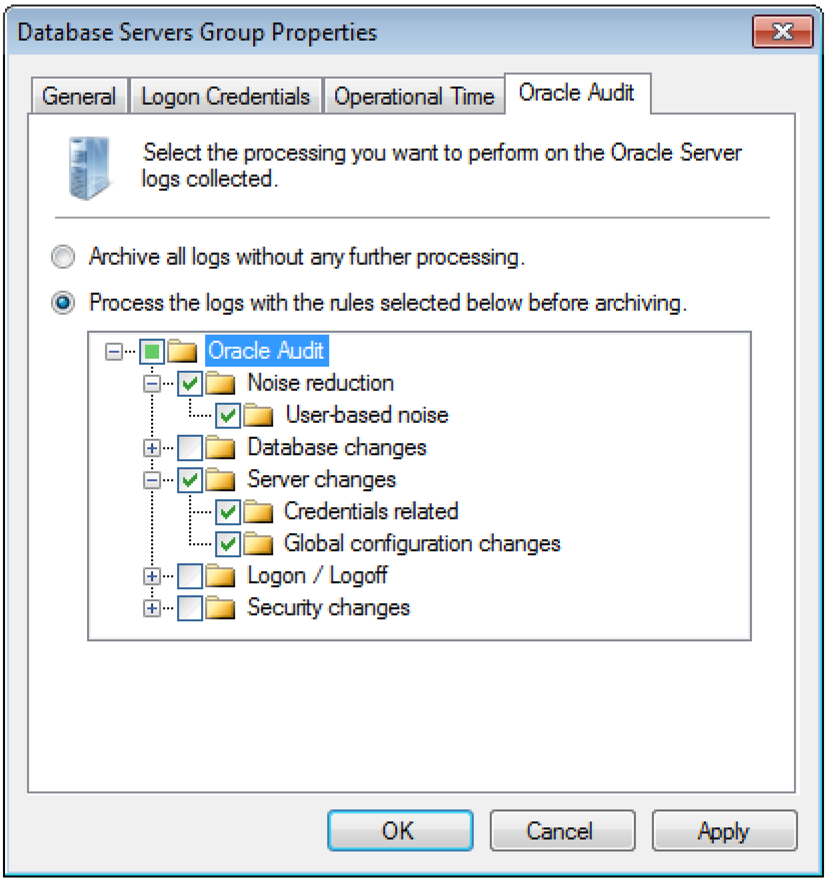
Specify the Normal Operational Time for the database servers specified in this group.

Normal operational time is the time during which the database servers specified in this group are normally used. This information is used to classify events differently depending on whether they occur during normal operational time or not. For example, failed log-on attempts that occur outside of the normal operational time will be assigned a higher risk level.

Marked time intervals are considered normal operation time.

Screenshot 64: Oracle Database group - Operational Time tab

6. Select **Operational Time** tab and configure the normal operational time of the Oracle Database servers in this group.



Select the processing you want to perform on the Oracle Server logs collected.

○ Archive all logs without any further processing.

● Process the logs with the rules selected below before archiving.

- ▨ Oracle Audit
  - ☑ Noise reduction
    - ☑ User-based noise
  - □ Database changes
  - ☑ Server changes
    - ☑ Credentials related
    - ☑ Global configuration changes
  - □ Logon / Logoff
  - □ Security changes

Screenshot 65: Oracle Database group - Oracle Audit tab

7. Select **Oracle Audit** and configure the options described below:

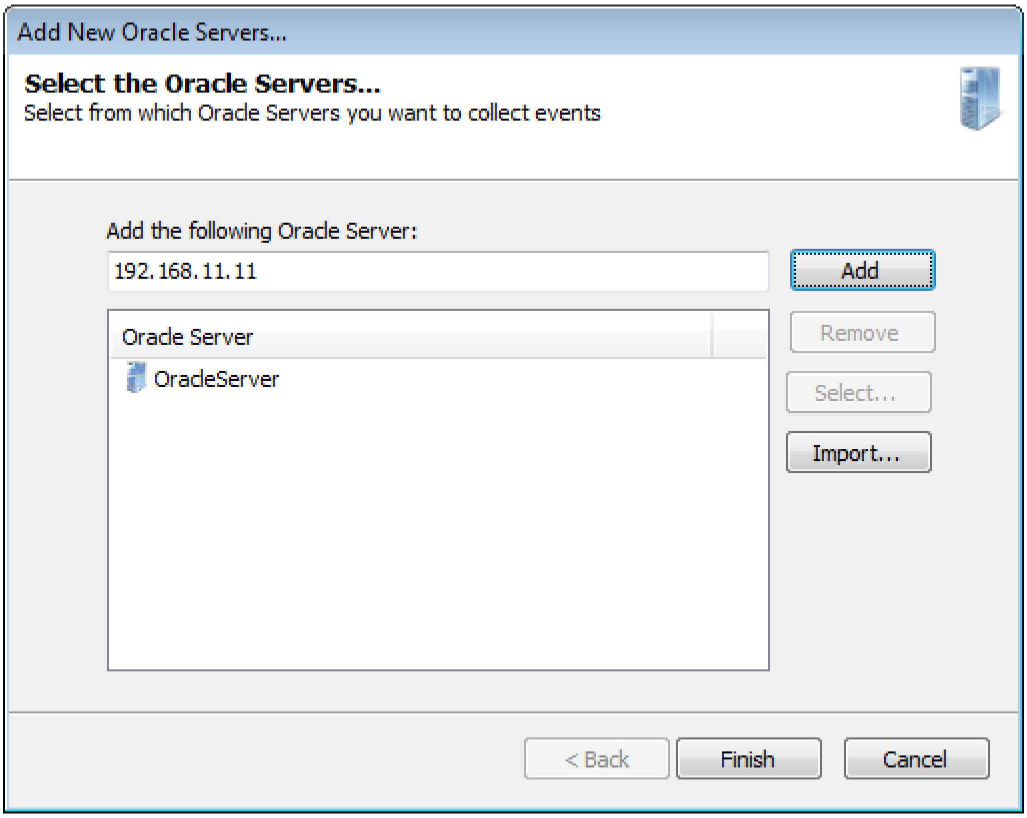
Option	Description
Archive all logs without further processing	Archive events in GFI EventsManager database backend without applying processing rules.
Process the logs with the rules selected below before archiving	Specify the rules to perform before archiving events in GFI EventsManager database backend.

8. Click **Apply** and **OK**

Adding a new Oracle Server event source

To add a new Oracle Database to a database group:

1. Right-click an Oracle Server group and select **Add new Oracle Server...**


Add New Oracle Servers...

Select the Oracle Servers...

Select from which Oracle Servers you want to collect events

Add the following Oracle Server: 192.168.11.11

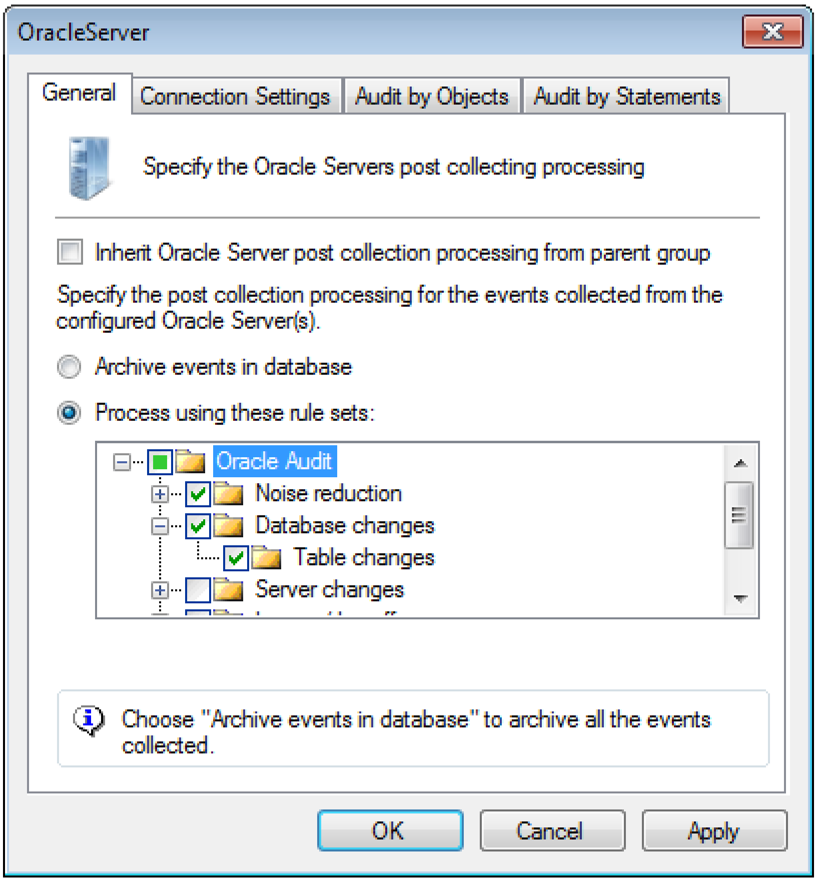
Oracle Server
OracleServer

Screenshot 66: Add new Oracle server

2. Key in the server name or IP and click **Add**.

3. Click **Finish** and the Add New Oracle Servers dialog closes.

> **Note**
>
> Use **Select** and **Import** to search the network for SQL Server® or import list of SQL Server® from a text file respectively.



Specify the Oracle Servers post collecting processing

□ Inherit Oracle Server post collection processing from parent group

Specify the post collection processing for the events collected from the configured Oracle Server(s).

○ Archive events in database

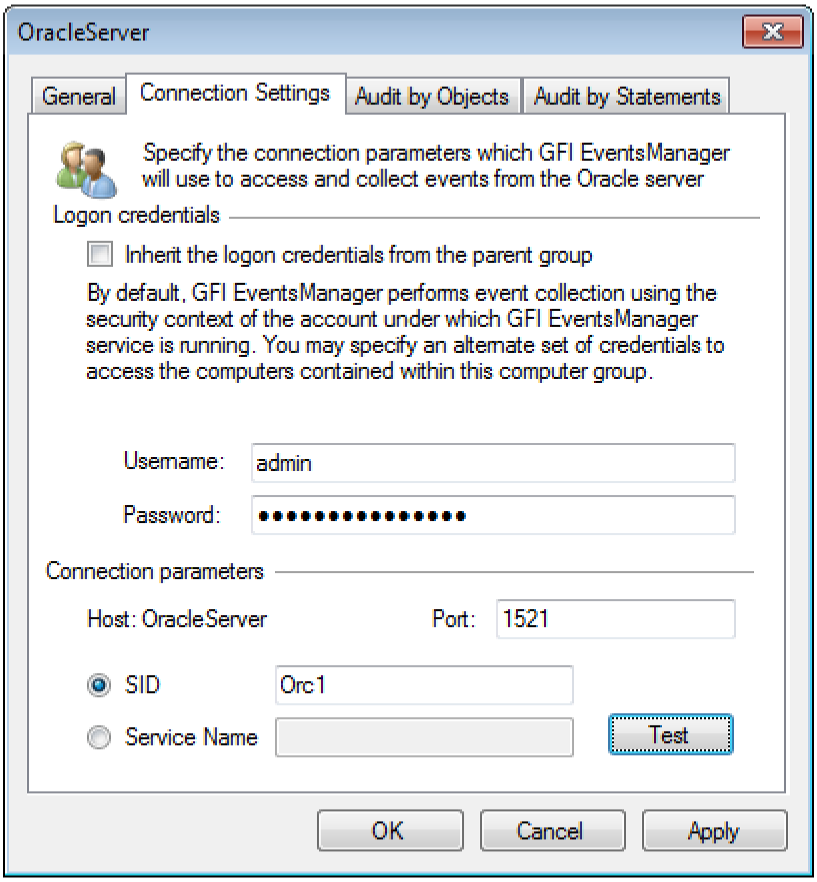
● Process using these rule sets:

Choose "Archive events in database" to archive all the events collected.

Screenshot 67: Oracle Server properties - General tab

4. From the right pane, double-click the new oracle server event source and configure the options described below:

Option	Description
Inherit Oracle Server post collecting processing from parent group	Select to inherit all settings from the parent group.
Archive events in database	Archive events in GFI EventsManager database backend without applying processing rules.
Process using these rule sets	Specify the rules to perform before archiving events in GFI EventsManager database backend.



Specify the connection parameters which GFI EventsManager will use to access and collect events from the Oracle server

Logon credentials

□ Inherit the logon credentials from the parent group

By default, GFI EventsManager performs event collection using the security context of the account under which GFI EventsManager service is running. You may specify an alternate set of credentials to access the computers contained within this computer group.

Username: admin

Password: •••••••••••••••

Connection parameters

Host: OracleServer

Port: 1521

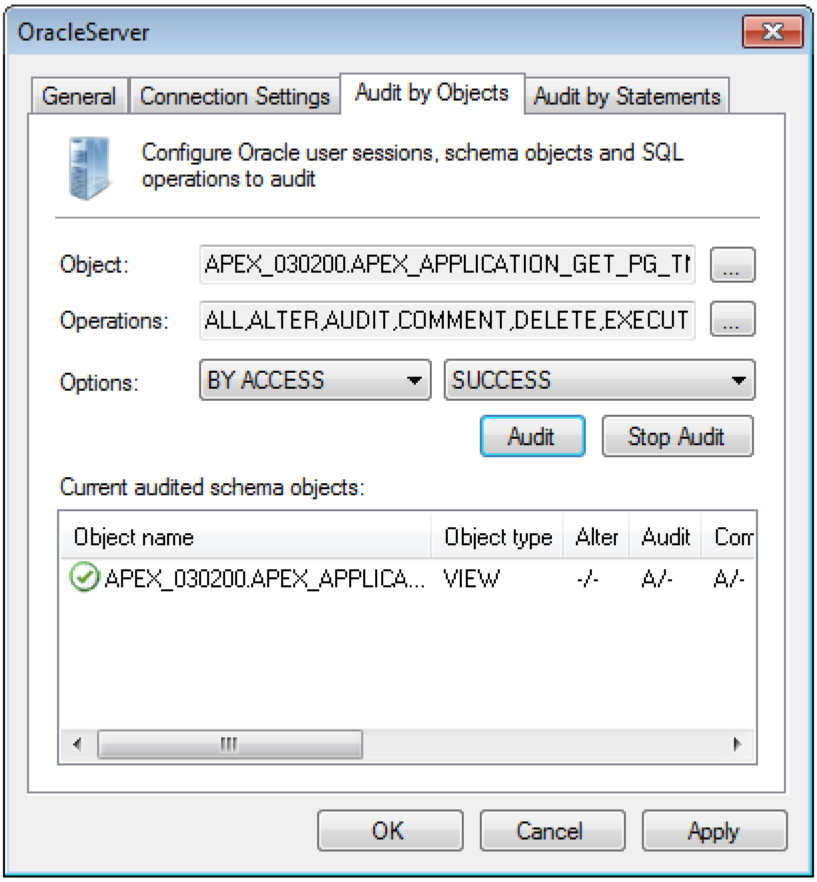
● SID Orc1

○ Service Name

Screenshot 68: Oracle Server properties - Connection Settings tab

5. Select **Connection Settings** and configure the options described below:

Option	Description
Inherit the logon credentials from the parent group	Select to inherit login settings from the parent group.
Port	Key in the port to use to connect to the Oracle Database.
SID	The SID is a unique name to identify an Oracle Database instance. Key in the SID of the database to audit.
Service Name	The Service name is the alias used to identify the Oracle Database. Key in the Service name of the database to audit.
Test	Test the connection with the Oracle Database server.



Object: APEX_030200.APEX_APPLICATION_GET_PG_TI

Operations: ALL,ALTER,AUDIT,COMMENT,DELETE,EXECUT

Options: BY ACCESS SUCCESS

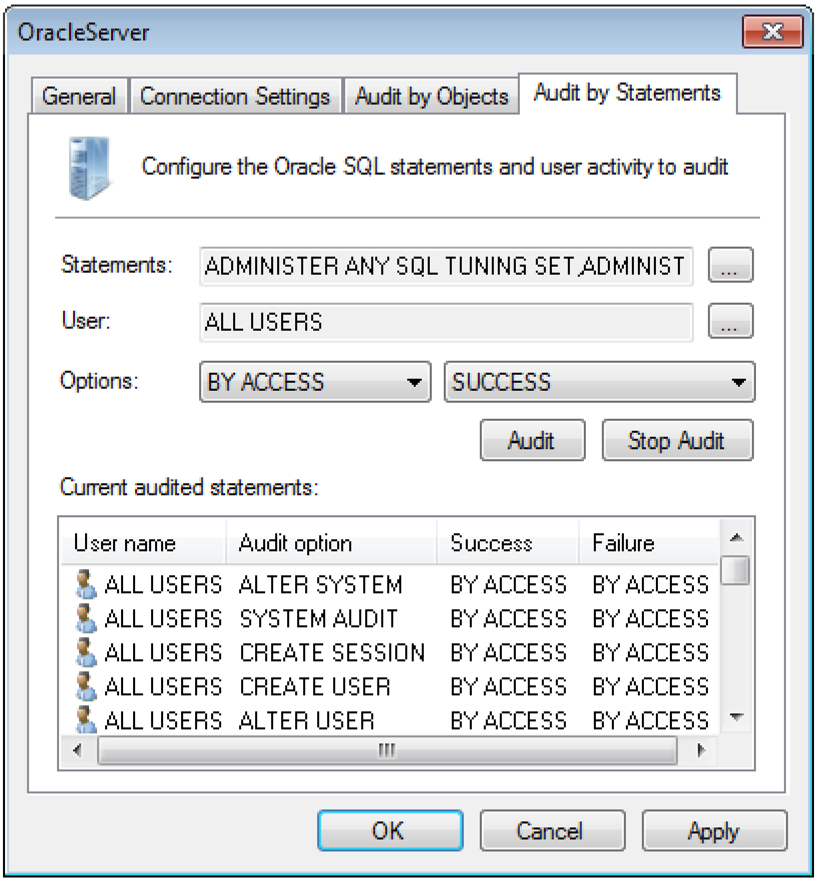
Current audited schema objects:

Object name	Object type	Alter	Audit	Com
✓ APEX_030200.APEX_APPLICA...	VIEW	-/-	A/-	A/-

Screenshot 69: Oracle Server properties - Audit by Objects tab

6. Select **Audit by Objects** and configure the options described below:

Option	Description
Object	Click **Browse** to launch a list of available Oracle objects. Select the object to audit and click **OK**. **NOTE**: Amongst others, Oracle objects can be procedures, views, functions and tables.
Operations	Operations are actions that modify or query an object. Click **Browse** to launch a list of available operations. Select the operations to audit and click **OK**.
Options	Select the audit options: » **By Access** - Creates an audit log per object operation execution. » **By Session** - Creates an audit log per operation and per schema object. A session is the time between a connection and a disconnection to/from the database. » **Success** - Select to process only successful audits. » **Failure** - Select to process only failed audits. Oracle will create an audit log if an audit fails to complete. » **Both** - Select to process all audit logs.
Audit	Choose this option to instruct the Oracle server to start auditing the server activities corresponding to the selected parameters (like users, statements, etc.)
Stop Audit	Choose this option to instruct the Oracle server to stop auditing the server activities corresponding to the selected parameters (such as users, statements, etc.)
Current audited schema objects	A list that displays all current Oracle audited schema.



Configure the Oracle SQL statements and user activity to audit

Statements: ADMINISTER ANY SQL TUNING SET,ADMINIST

User: ALL USERS

Options: BY ACCESS | SUCCESS

Current audited statements:

User name	Audit option	Success	Failure
ALL USERS	ALTER SYSTEM	BY ACCESS	BY ACCESS
ALL USERS	SYSTEM AUDIT	BY ACCESS	BY ACCESS
ALL USERS	CREATE SESSION	BY ACCESS	BY ACCESS
ALL USERS	CREATE USER	BY ACCESS	BY ACCESS
ALL USERS	ALTER USER	BY ACCESS	BY ACCESS

Screenshot 70: Oracle Server properties - Audit by Statements tab

7. Select **Audit by Statements** and configure the options described below:

Option	Description
Statements	Click **Browse**to launch a list of available Oracle statements. Select the Oracle statements to audit and click **OK**. **NOTE**: Amongst others, Oracle statements can be **ALTER**, **CREATE** and **SELECT** .
User	Oracle enables you to audit statements for a specific user. Click **browse** button to launch a list of available users. Select the user and click **OK**.
Options	Select audit options: » **By Access** - Creates one audit log for each statement execution. » **By Session** - Creates one audit log per user and per schema object. A session is the time between a connection and a disconnection to/from the database. » **Success** - Processes only successful audits. » **Failure** - Select option to process only failed audits. Oracle will create an audit log if an audit fails to complete. » **Both** - Select option to process all audit logs.
Audit	Choose this option to instruct the Oracle server to start auditing the server activities corresponding to the selected parameters (such as users, statements, etc.)
Stop Audit	Choose this option to instruct the Oracle server to stop auditing the server activities corresponding to the selected parameters (such as users, statements, etc.)
Current audited statements	A list that displays all current Oracle audited statements.

8. Click **Apply** and **OK**.

10 Collecting Event Logs

This section provides you with information about how to configure your event sources to apply events processing rules to collected events. Assign existing or custom events processing rules to precisely process the events wanted only.

Topics in this section:

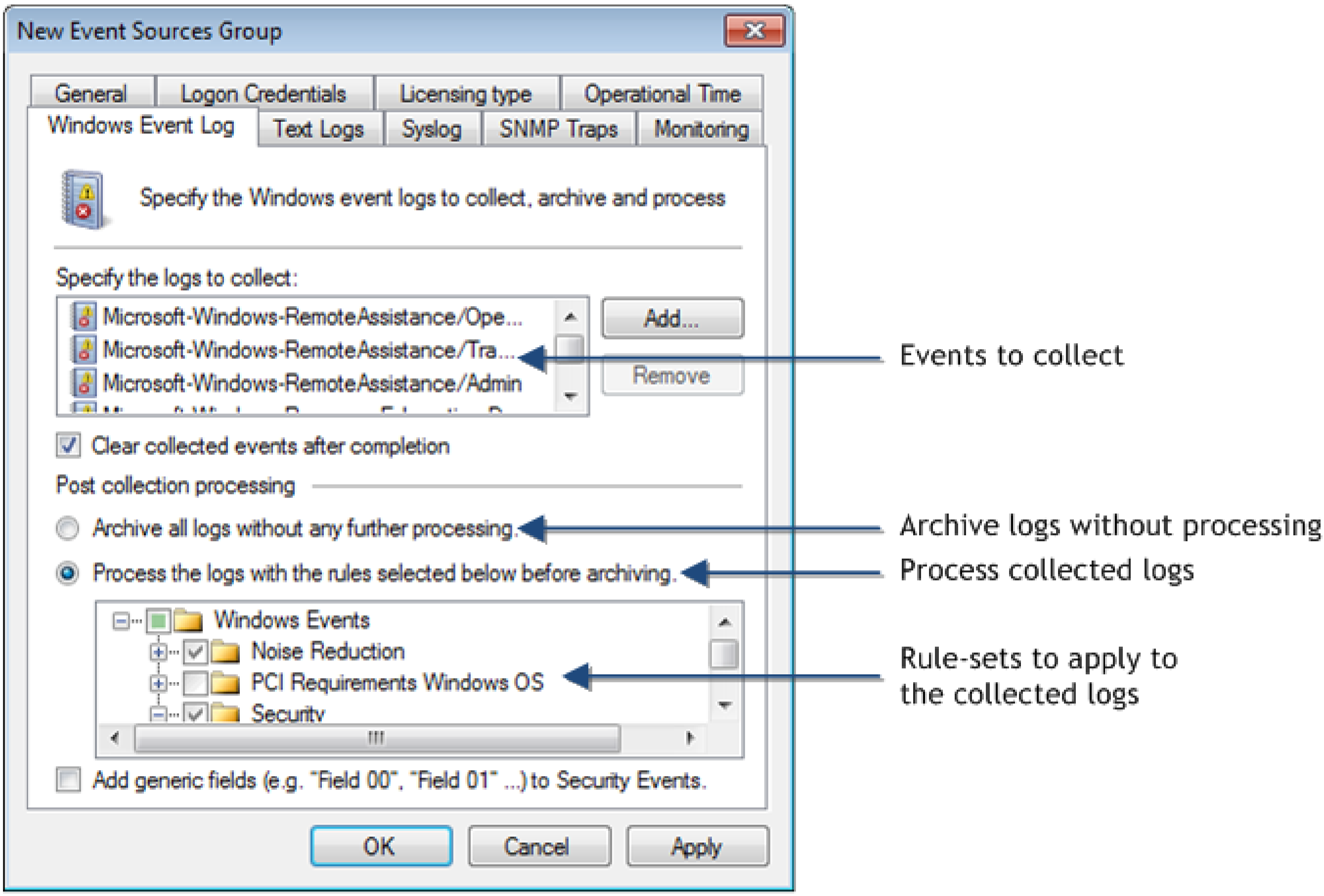
10.1 Collecting Windows® event logs

Windows® events are organized into specific log categories; by default computers running on Windows® NT or higher, record errors, warnings and information events in three logs namely **Security**, **Application** and **System logs**.

Computers that have more specialized roles on the network such as Domain Controllers, and DNS Servers have additional event log categories.

As a minimum, Windows® Operating Systems record events in the following logs:

Log Type	Description
Security event log	This log contains security related events through which you can audit successful or attempted security breaches. Typical events found in the Security Events log include valid and invalid logon attempts.
Application event log	This log contains events recorded by software applications/programs such as file errors.
System event log	This log contains events logged by operating system components such as failures to load device drivers.
Directory service log	This log contains events generated by the Active Directory including successful or failed attempts to make to update the Active Directory database.
File Replication service log	This log contains events recorded by the Windows® File Replication service. These including file replication failures and events that occur while domain controllers are being updated with information about Sysvol.
DNS server log	This log contains events associated with the process of resolving DNS names to IP addresses.
Application and Services Logs	These logs contain events associated with Windows® VISTA and the relative services/functionality it offers.



New Event Sources Group

General | Logon Credentials | Licensing type | Operational Time
Windows Event Log | Text Logs | Syslog | SNMP Traps | Monitoring

Specify the Windows event logs to collect, archive and process

Specify the logs to collect:

- Microsoft-Windows-RemoteAssistance/Ope...
- Microsoft-Windows-RemoteAssistance/Tra...
- Microsoft-Windows-RemoteAssistance/Admin

☑ Clear collected events after completion

Post collection processing

○ Archive all logs without any further processing.

● Process the logs with the rules selected below before archiving.

- Windows Events
  - ☑ Noise Reduction
  - □ PCI Requirements Windows OS
  - ☑ Security

□ Add generic fields (e.g. "Field 00", "Field 01" ...) to Security Events.

Events to collect

Archive logs without processing

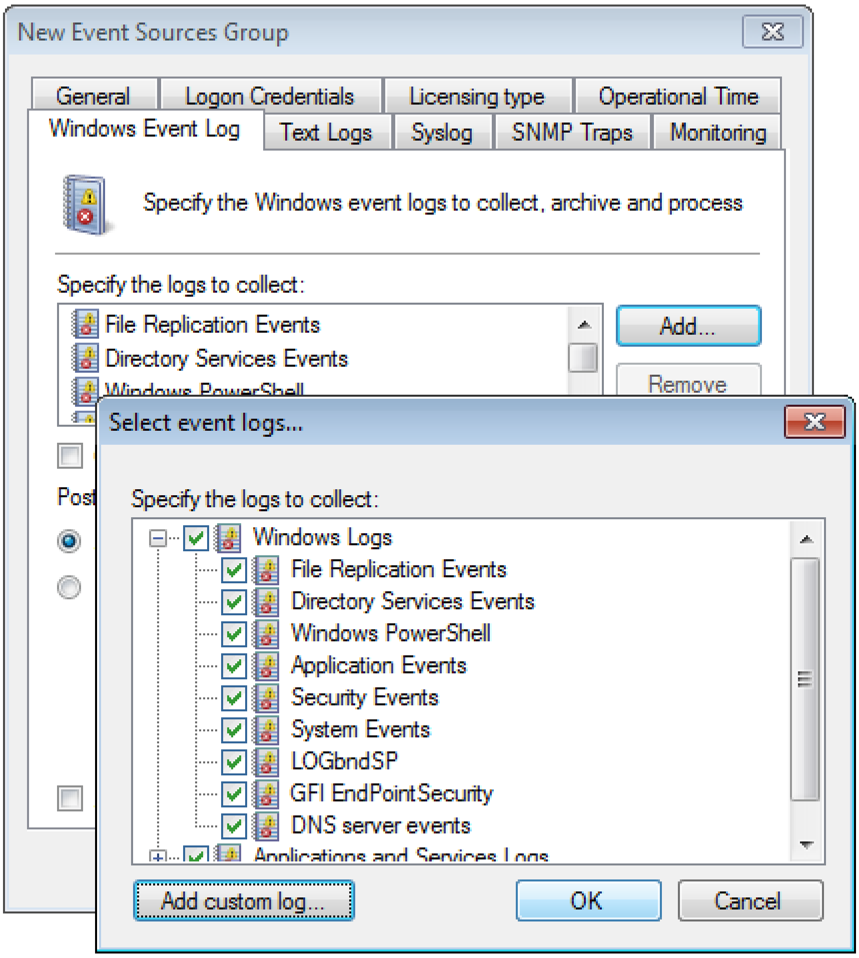
Process collected logs

Rule-sets to apply to the collected logs

Screenshot 71: Computer group properties: Configuring Windows® Event Logs parameters

To configure Windows® Event Log collection and processing parameters:

1. From **Configuration** tab **> Event Sources**, right-click an event source or group and select **Properties**.



Specify the Windows event logs to collect, archive and process

Specify the logs to collect:

- File Replication Events
- Directory Services Events
- Windows PowerShell

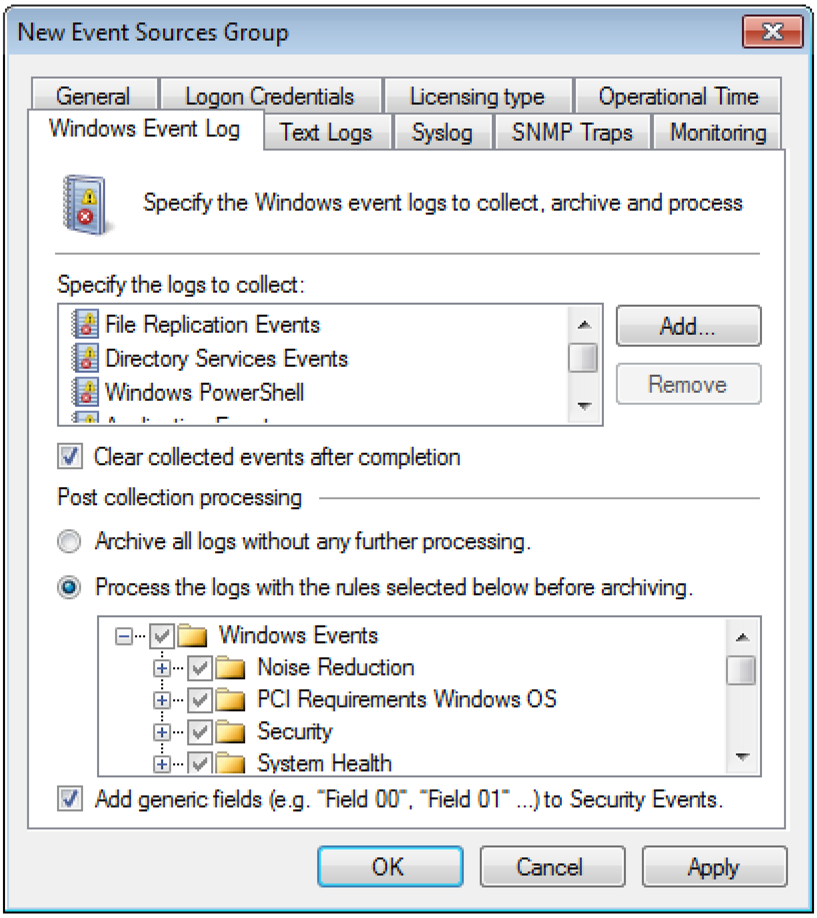
Specify the logs to collect:

- ☑ Windows Logs
  - ☑ File Replication Events
  - ☑ Directory Services Events
  - ☑ Windows PowerShell
  - ☑ Application Events
  - ☑ Security Events
  - ☑ System Events
  - ☑ LOGbndSP
  - ☑ GFI EndPointSecurity
  - ☑ DNS server events
- ☑ Applications and Services Logs

Screenshot 72: Selecting event logs to collect

2. Click **Windows Event Log** tab **> Add...** to select the logs you want to collect. Expand **Windows Logs** and/or **Applications and Services Logs** and select from the list of available logs.

3. (Optional) Click **Add custom log...** and key in a unique name for the unlisted event log.


New Event Sources Group

Specify the Windows event logs to collect, archive and process

Specify the logs to collect:

- File Replication Events
- Directory Services Events
- Windows PowerShell

☑ Clear collected events after completion

Post collection processing

○ Archive all logs without any further processing.

● Process the logs with the rules selected below before archiving.

- ☑ Windows Events
  - ☑ Noise Reduction
  - ☑ PCI Requirements Windows OS
  - ☑ Security
  - ☑ System Health

☑ Add generic fields (e.g. "Field 00", "Field 01" ...) to Security Events.

Screenshot 73: Configuring Windows Event Log Processing parameters

4. Select **Clear collected events after completion** to clear the collected events from the respective event source.

5. Select **Archive events in database** to archive collected events without applying events processing rules.

6. Select **Process using these rule sets** and select the rule sets you want to run against the collected events.

7. Select **Add generic fields** to add extended fields to the database. Extended fields contain data from event descriptions and are added by a common name (example: "Field01", "Custom field name").

8. Click **Apply** and **OK**

Important

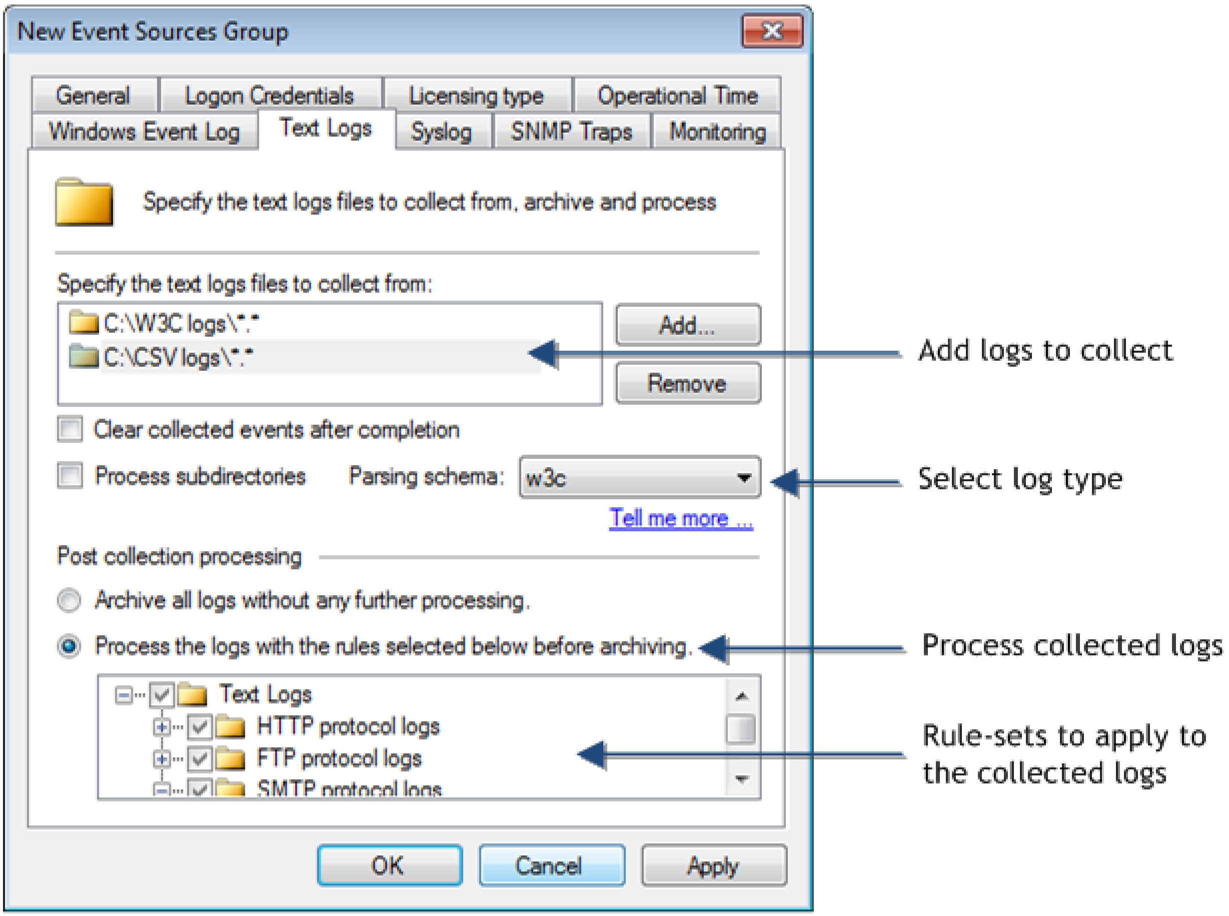
Deleting event logs without archiving may lead to legal compliance penalties.

10.2 Collecting Text logs

Text Logs are other log formats supported by GFI EventsManager. W3C logs are text-based flat files containing various event details delimited by special characters.

The W3C log format is most commonly used by hardware systems (Example: servers and appliances) which have Internet specific roles. Microsoft® Internet Information Server (IIS) service and Apache web servers for example, can collect web related events such as web logs, in the form of W3C formatted text files.

In GFI EventsManager, the configuration process of W3C log parameters is identical to that performed for Windows® event processing, with one exception. Unlike Windows® Event Logs, there is no standard which dictates a specific or centralized folder location where W3C log files are stored on disk. Therefore, in order to collect W3C logs, you must specify the complete path to these text-based log files.



New Event Sources Group

Specify the text logs files to collect from, archive and process

Specify the text logs files to collect from:

- C:\W3C logs*.*
- C:\CSV logs*.*

□ Clear collected events after completion

□ Process subdirectories Parsing schema: w3c

Post collection processing

○ Archive all logs without any further processing.

● Process the logs with the rules selected below before archiving.

- ☑ Text Logs
  - ☑ HTTP protocol logs
  - ☑ FTP protocol logs
  - ☑ SMTP protocol logs

Add logs to collect

Select log type

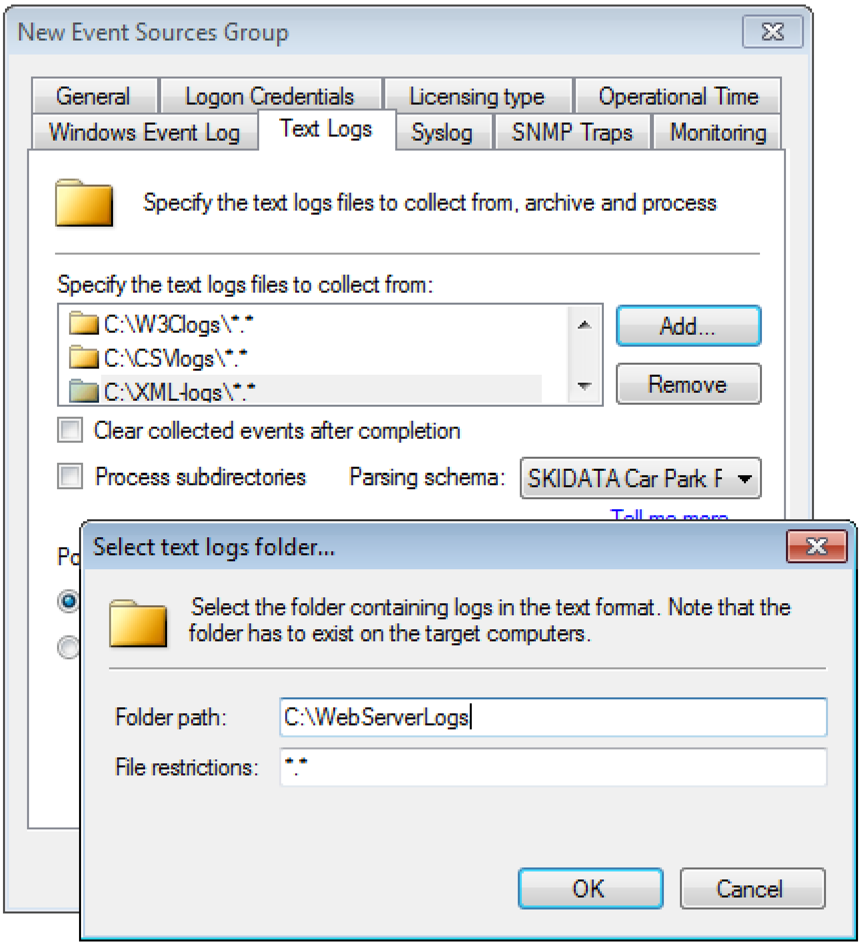
Process collected logs

Rule-sets to apply to the collected logs

Screenshot 74: Text logs options

To collect Text logs:

1. From **Configuration** tab **> Event Sources**, right-click an event source or group and select **Properties**.



Specify the text logs files to collect from, archive and process

Specify the text logs files to collect from:

- C:\W3Clogs\*.*
- C:\CSVlogs\*.*
- C:\XML-logs\*.*

☐ Clear collected events after completion

☐ Process subdirectories Parsing schema: SKIDATA Car Park F

Select the folder containing logs in the text format. Note that the folder has to exist on the target computers.

Folder path: C:\WebServerLogs

File restrictions: *.*

Screenshot 75: Adding folders containing Text Logs

2. Click **Text Logs** tab > **Add...** to add folder paths containing Text Logs.

3. From the **Select text logs folder...** dialog, key in the path to the folder containing the text logs files and Click **OK**

4. Select **Clear collected events after completion** to clear the collected events from the respective event source.

5. Select **Process subdirectories** to recursively scan the specified path that contains the text logs.

6. From **Parsing schema** drop-down menu, select the schema in which Text Logs are interpreted. Select from:

- W3C
- CSV
- DHCP
- XML
- SAP Logs
- ESM Logs
- SKI Data Car Park Payments.

7. Select **Archive events in database** to archive collected events without applying events processing rules.

8. Select **Process using these rule sets** and select the rule sets you want to run against the collected events.

9. Click **Apply** and **OK**

Important

Deleting event logs without archiving may lead to legal compliance penalties.

10.3 Collecting Syslogs

Syslog is a data logging service that is most commonly used by Linux and UNIX based systems. The concept behind Syslogs is that the logging of events and information is entirely handled by a dedicated server called 'Syslog Server'.

Unlike Windows® and Text log based systems, Syslog enabled devices send events in the form of data messages (technically known as 'Syslog Messages') to a Syslog server that interprets and manages message and saves the data in a log file.

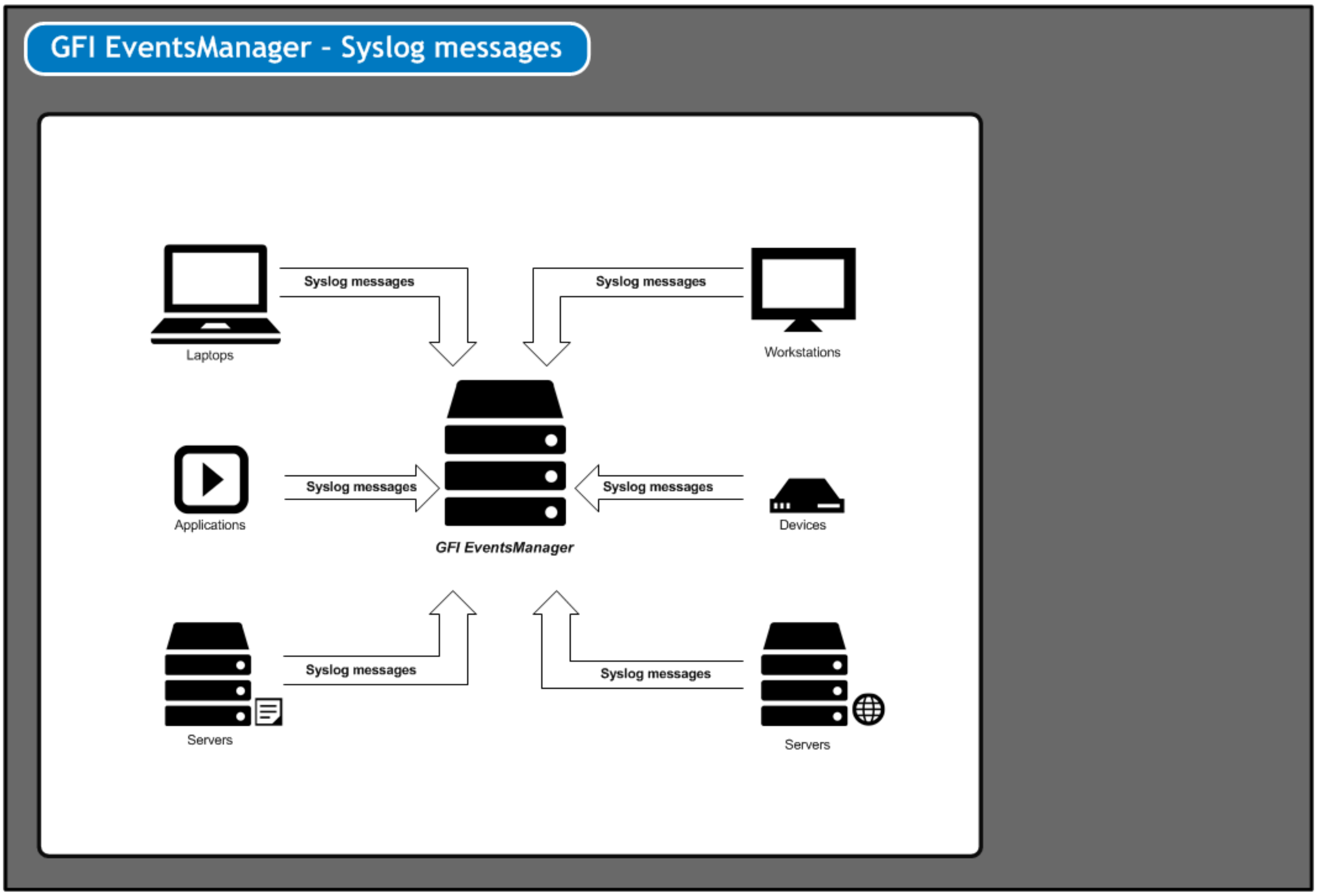
In order to process Syslog messages, GFI EventsManager ships with a built-in Syslog Server. This Syslog server will automatically collect, in real-time, all Syslog messages/events sent by Syslog sources and pass them on to the event processing engine. Out-of-the-box, GFI EventsManager supports events generated by various network devices manufactured by leading providers including Cisco and Juniper.

Note

For more information about supported devices visit the following KBASE article: http://go.gfi.com/?pageid=esm_syslog_snmp_support

Note

A built-in buffer allows the Syslog server to collect, queue and forward up to 30 Syslog messages at a time. Buffered logs are by default passed on to the event processing engine as soon as the buffer fills up or at one minute intervals; whichever comes first.

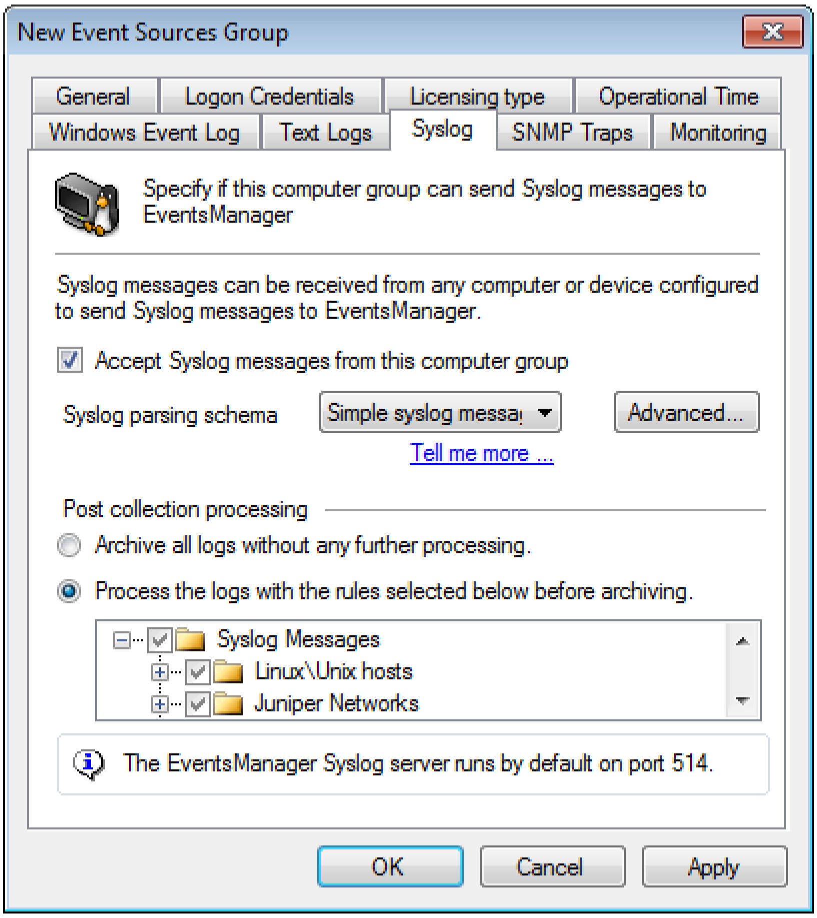


Screenshot 76: Syslog messages must be directed to the computer running GFI EventsManager

> **Important**
> Before you start collecting Syslogs, every Syslog event source (workstations, servers and/or network devices) must be configured to send their Syslog Messages to the computer name or IP where GFI EventsManager is installed.

To collect Syslogs:

1. From **Configuration** tab **> Event Sources**, right-click an event source or group and select **Properties**.



Specify if this computer group can send Syslog messages to EventsManager

Syslog messages can be received from any computer or device configured to send Syslog messages to EventsManager.

☑ Accept Syslog messages from this computer group

Syslog parsing schema: Simple syslog messa

Post collection processing

○ Archive all logs without any further processing.

● Process the logs with the rules selected below before archiving.

- ☑ Syslog Messages
  - ☑ Linux\Unix hosts
  - ☑ Juniper Networks

The EventsManager Syslog server runs by default on port 514.

Screenshot 77: Collecting Syslogs - Syslogs options

2. Click **Syslog** tab and select **Accept Syslog messages to EventsManager** to enable the collection of Syslogs from that event source/event source group.

3. From the **Syslog parsing schema** drop-down, select the method that GFI EventsManager Syslog Server interprets Syslog Messages from network devices. Select from:

- Simple Syslog message
- Standard Linux message
- Juniper Network Firewall
- Cisco ASA.

4. Click **Advanced…** to use custom windows code page. Specify the code and click **OK**

> **Note**
>
> Windows® code page is used to encode international characters to ASCII strings. Since Syslog is not Unicode compliant, GFI EventsManager uses a code page to decode the events. This is only applicable if GFI EventsManager is installed on a machine using a different language than the monitored machines. For more information, refer to: http://go.gfi.com/?pageid=esm_code_page

5. Select **Archive events in database** to archive collected events without applying events processing rules.

6. Select **Process using these rule sets** and select the rule sets you want to run against the collected events.

7. Click **Apply** and **OK**

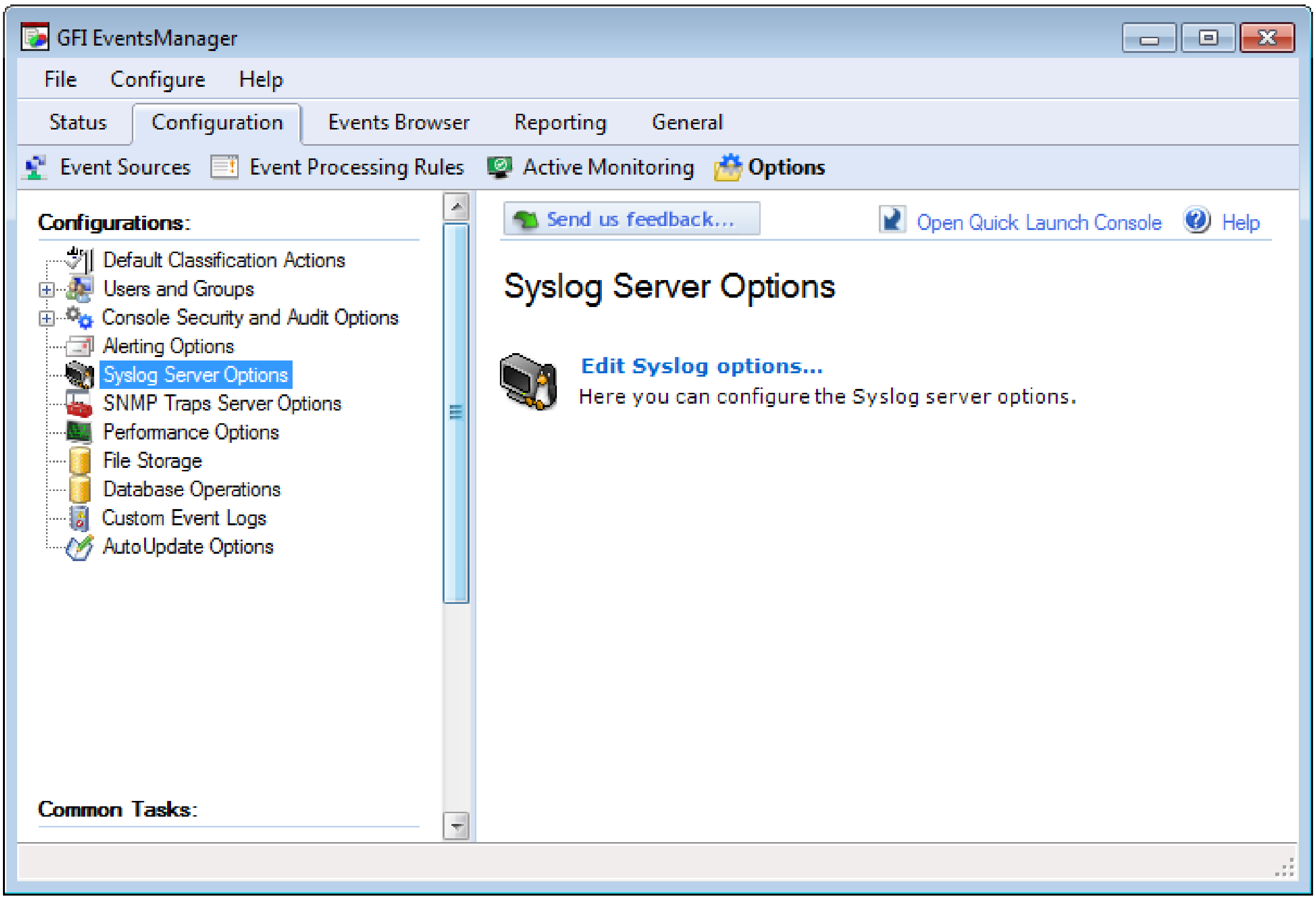
Note

The GFI EventsManager Syslog server is by default configured to listen for Syslog messages on port **514**. For more information refer to Configuring the Syslog server communications port.

Important

Deleting event logs without archiving may lead to legal compliance penalties.

10.3.1 Configuring the Syslog server communications port

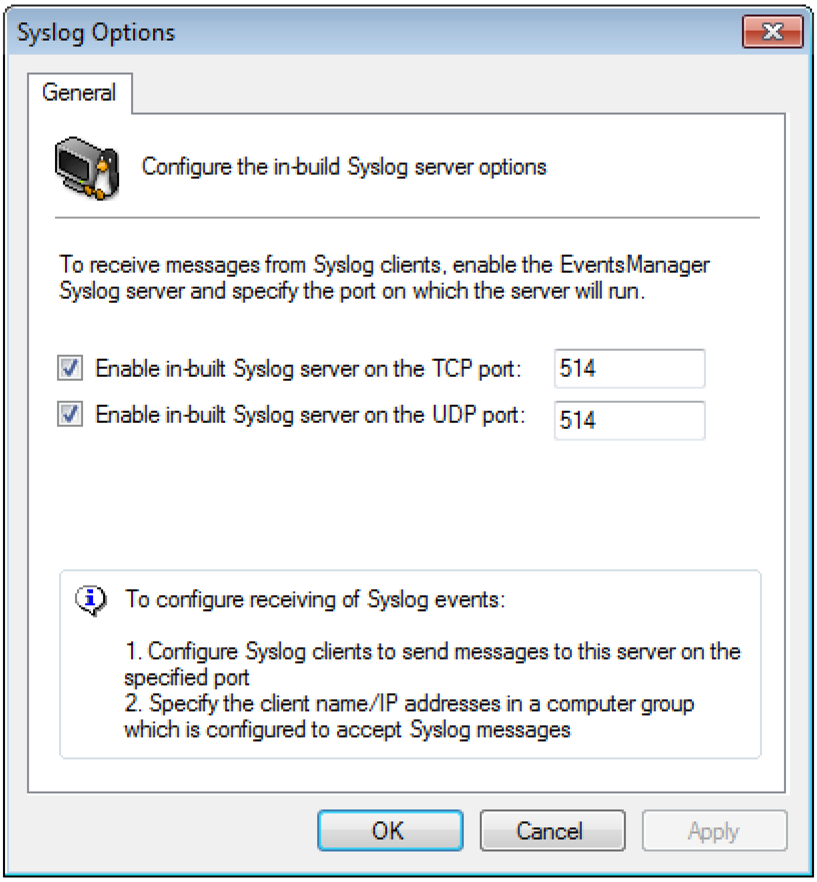


Screenshot 78: Configuring Syslog Server communication port

To change the default Syslog ports settings:

1. Click **Configuration** tab > **Options**.

2. Right-click **Syslog Server Options** and select **Edit Syslog options...**



Configure the in-build Syslog server options

To receive messages from Syslog clients, enable the EventsManager Syslog server and specify the port on which the server will run.

☑ Enable in-built Syslog server on the TCP port: 514

☑ Enable in-built Syslog server on the UDP port: 514

To configure receiving of Syslog events:

1. Configure Syslog clients to send messages to this server on the specified port
2. Specify the client name/IP addresses in a computer group which is configured to accept Syslog messages

Screenshot 79: Syslog server options

4. Select **Enable in-built Syslog server on TCP port:** and specify the TCP port on which GFI EventsManager will receive/listen for Syslog messages.

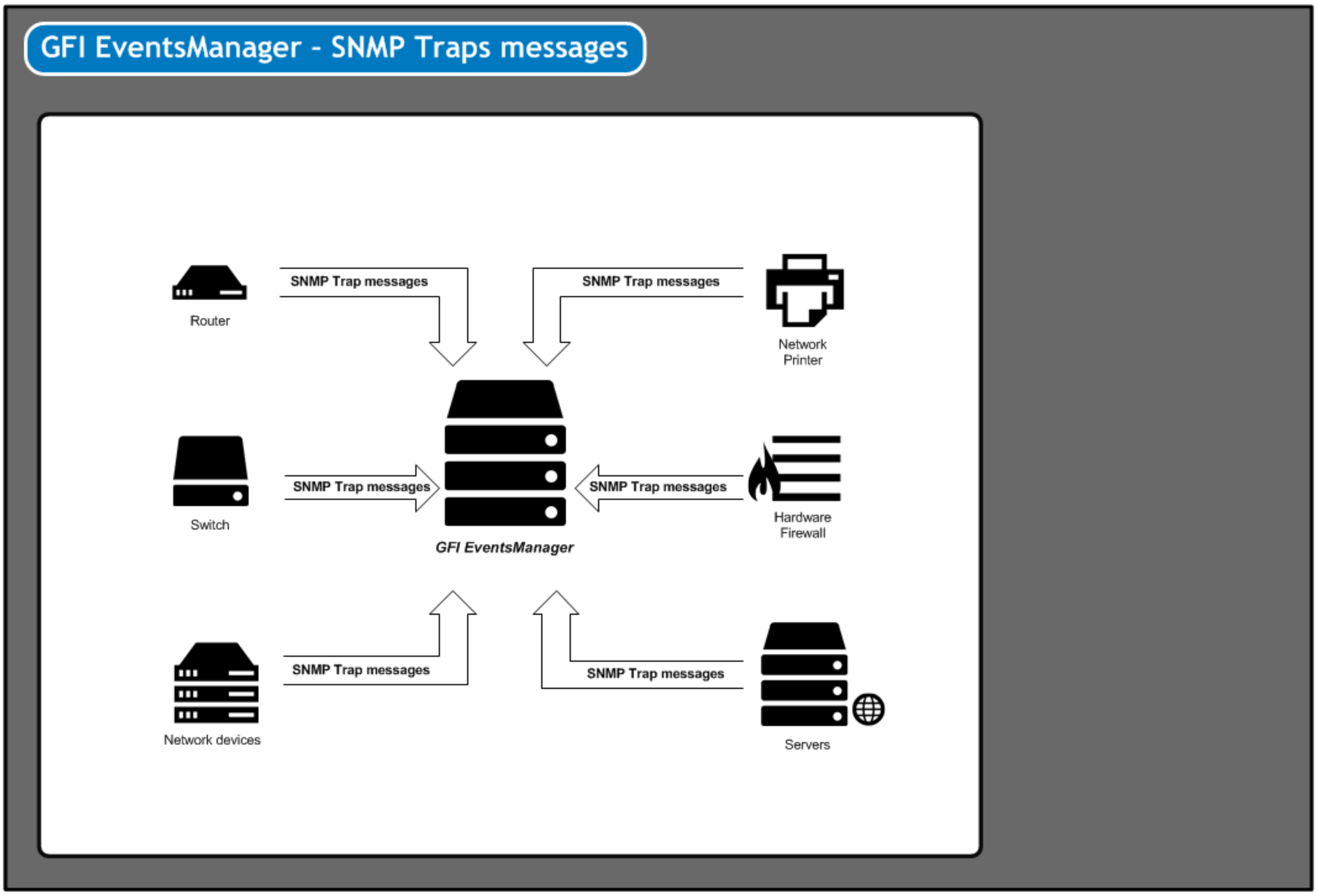
5. Select **Enable in-built Syslog server on UDP port:** and specify the UDP port on which GFI EventsManager will receive/listen for Syslog messages.

6. Click **Apply** and **OK**

> **Note**
>
> When configuring Syslog server port settings, make sure that the configured port is not already in use by other installed applications. This may affect the delivery of Syslog messages to GFI EventsManager.

10.4 Collecting SNMP Traps Messages

SNMP is a data logging service that enables networked devices to log events and information through data messages (technically known as SNMP Traps). SNMP messaging technology is similar in concept to Syslogs - where unlike Windows® and Text logs based environments, devices that generate SNMP messages do not record events data in local logs. Instead events information is sent in the form of data messages to an SNMP Trap Server which manages and saves SNMP message data in a local (centralized) log file.



Screenshot 80: SNMP Trap messages must be directed to the computer running GFI EventsManager

Note

GFI EventsManager natively supports an extensive list of SNMP devices and Management Information Bases (MIBs). For a full list of supported devices, view the following KBASE article: http://go.gfi.com/?pageid=esm_syslog_snmp_support

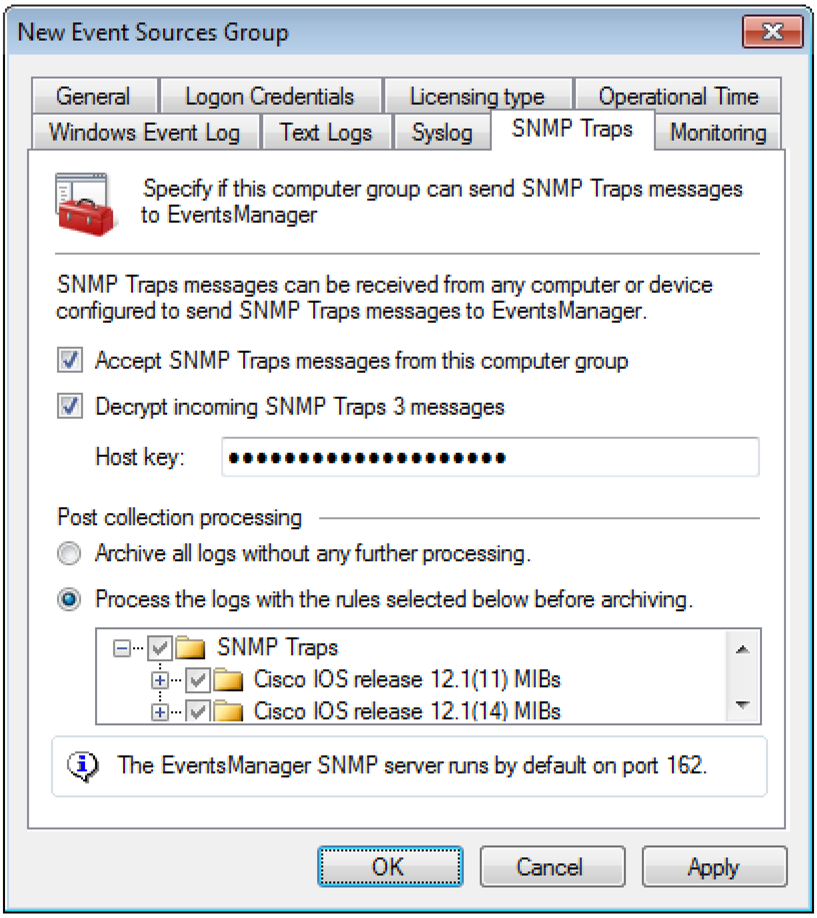
GFI EventsManager includes a dedicated SNMP Trap Server through which SNMP Traps are handled. A built-in buffer allows the SNMP Trap Server to collect, queue and forward up to 30 SNMP Trap at a time. Buffered logs are by default passed on to the event processing engine as soon as the buffer fills up or at one minute intervals; whichever comes first.

Important

Before you start collecting SNMP Traps messages, every SNMP event source (workstations, servers and/or network devices) must be configured to send their SNMP Traps Messages to the computer name or IP where GFI EventsManager is installed.

To collect SNMP Traps:

1. From **Configuration** tab > **Event Sources**, right-click an event source or group and select **Properties**.



Specify if this computer group can send SNMP Traps messages to EventsManager

SNMP Traps messages can be received from any computer or device configured to send SNMP Traps messages to EventsManager.

☑ Accept SNMP Traps messages from this computer group

☑ Decrypt incoming SNMP Traps 3 messages

Host key: ••••••••••••••••••••

Post collection processing

○ Archive all logs without any further processing.

● Process the logs with the rules selected below before archiving.

- ☑ SNMP Traps
  - ☑ Cisco IOS release 12.1(11) MIBs
  - ☑ Cisco IOS release 12.1(14) MIBs

The EventsManager SNMP server runs by default on port 162.

Screenshot 81: Collecting SNMP Traps

2. Click **SNMP Traps** tab and select **Accept SNMP Traps messages from this event source** to enable the collection of SNMP Traps.

3. Select **Decrypt incoming SNMP Traps 3 messages** and specify the security key in the **Host key** text box.

4. Select **Archive events in database** to archive collected events without applying events processing rules.

5. Select **Process using these rule sets** and select the rule sets you want to run against the collected events.

6. Click **Apply** and **OK**

Note

The GFI EventsManager SNMP Trap Server is by default configured to listen for SNMP Trap messages on port **162**. For more information refer to Configuring the SNMP Traps server.

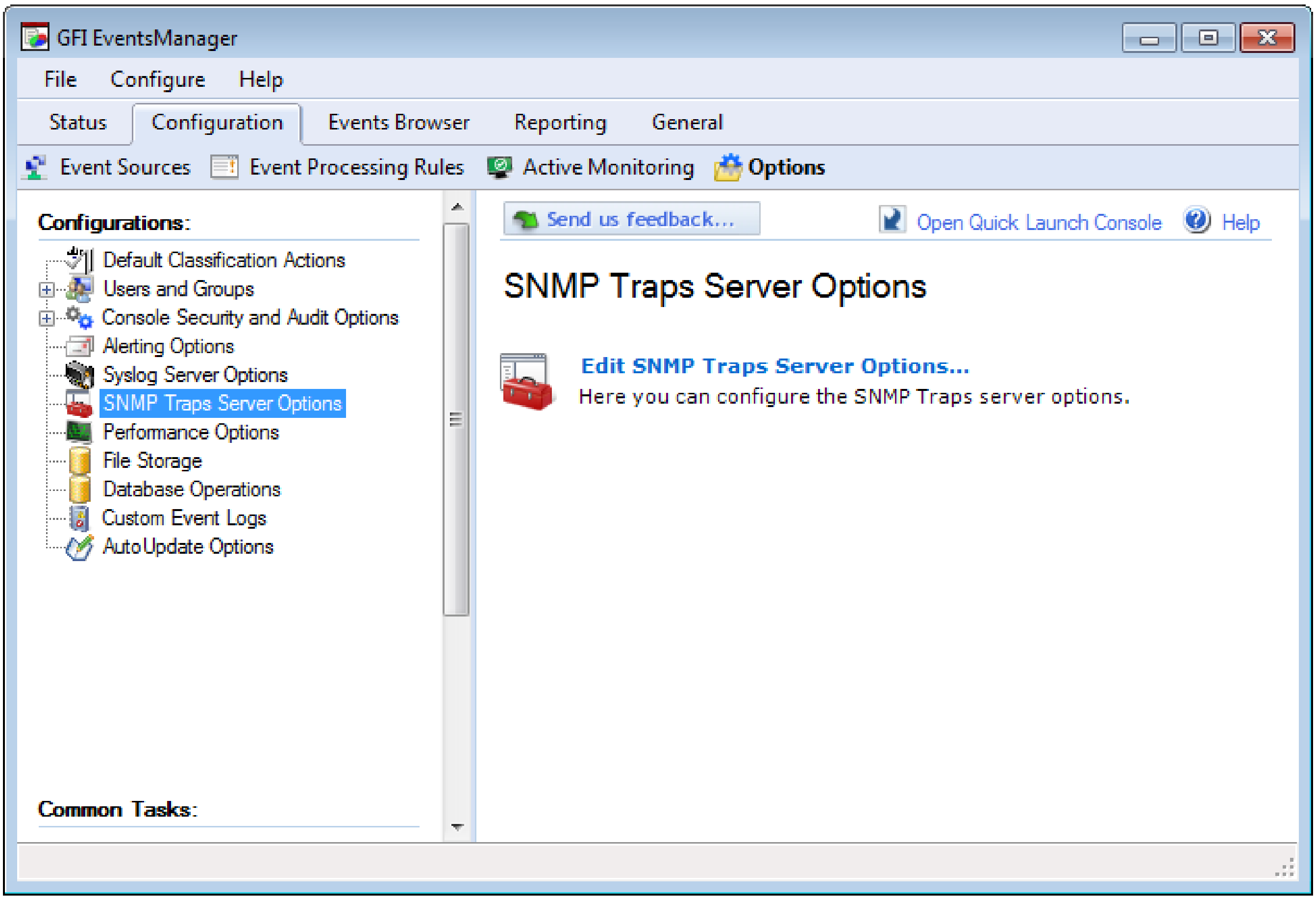
Note

The built in SNMP Trap Server supports SNMP version 3 Traps with encryption. For encrypted SNMP messages the encryption host key must be provided in the decrypt incoming SNMP Traps 3 message field.

Important

Deleting event logs without archiving may lead to legal compliance penalties.

10.4.1 Configuring the SNMP Trap server



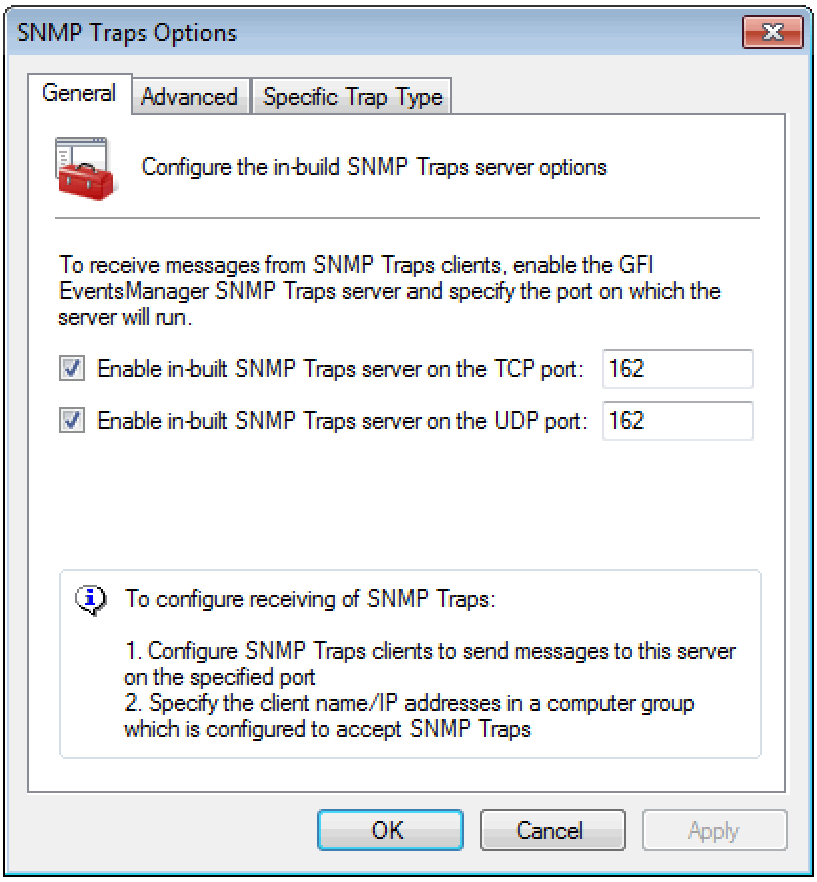
Here you can configure the SNMP Traps server options.

Screenshot 82: Configuring SNMP Traps

To change the default SNMP Trap Server settings:

1. Click **Configuration** tab **> Options**.

2. Right-click **SNMP Traps Options** and select **Edit SNMP Traps options…**


SNMP Traps Options

Configure the in-build SNMP Traps server options

To receive messages from SNMP Traps clients, enable the GFI EventsManager SNMP Traps server and specify the port on which the server will run.

☑ Enable in-built SNMP Traps server on the TCP port: 162

☑ Enable in-built SNMP Traps server on the UDP port: 162

To configure receiving of SNMP Traps:

1. Configure SNMP Traps clients to send messages to this server on the specified port
2. Specify the client name/IP addresses in a computer group which is configured to accept SNMP Traps

Screenshot 83: SNMP Traps options

3. Enable the required TCP/UDP SNMP server. Specify the TCP/UDP port on which GFI EventsManager will listen for SNMP messages.

4. Click **Advanced** tab to add, edit or remove SNMP Trap object identifiers (OIDs).

5. Click **Specific Trap Type** tab to add, edit or remove trap types.

6. Click **Apply** and **OK**

Note

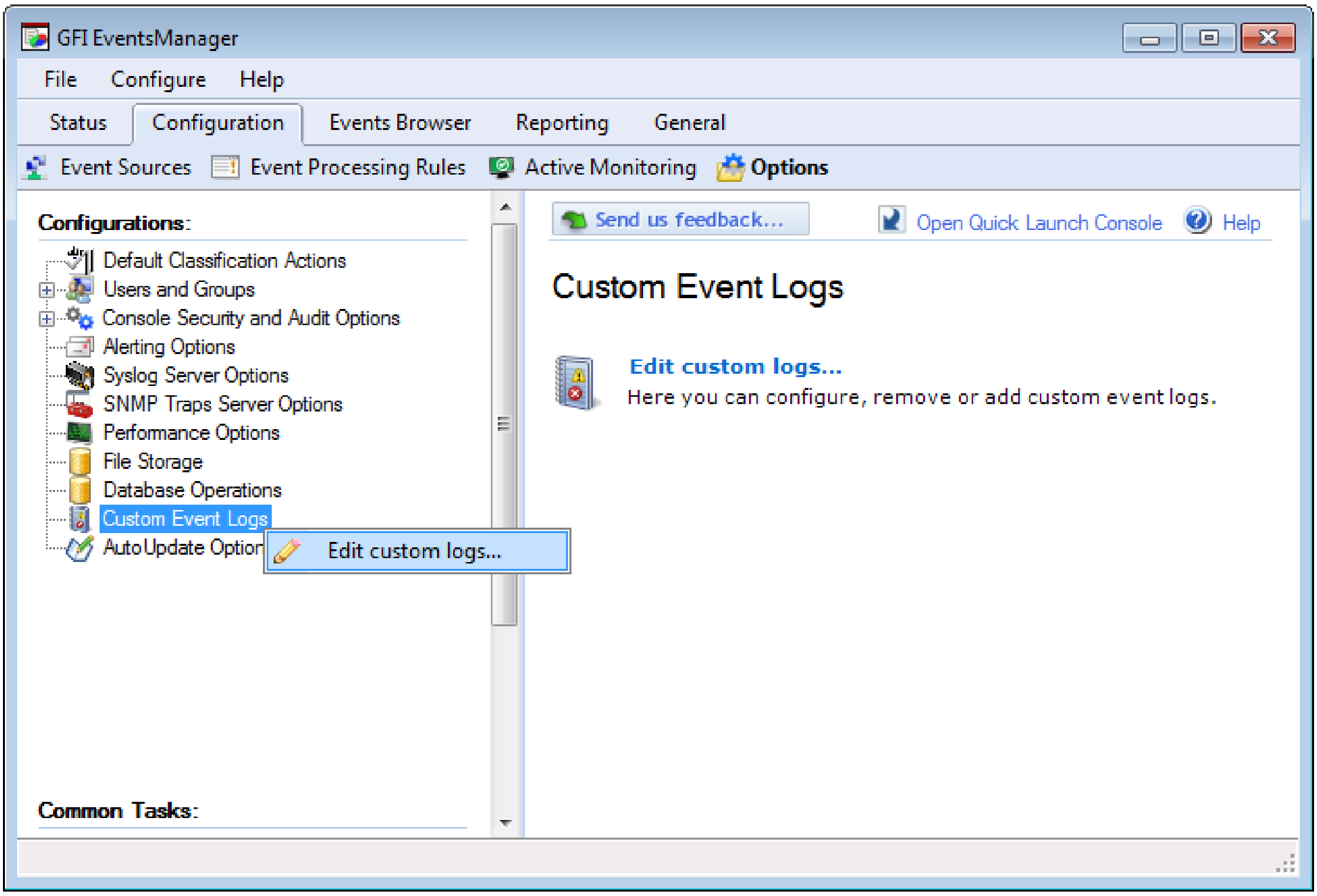
When configuring SNMP Trap Server port settings, make sure that the configured TCP or UDP port is not already in use by other installed applications. This may affect the delivery of SNMP Trap messages to GFI EventsManager.

10.5 Collecting custom logs

GFI EventsManager is configured to collect and process standard event logs. However, GFI EventsManager can also be configured to manage events recorded in third party application logs such as anti-virus logs, software firewall logs and other security software.

To configure custom events:

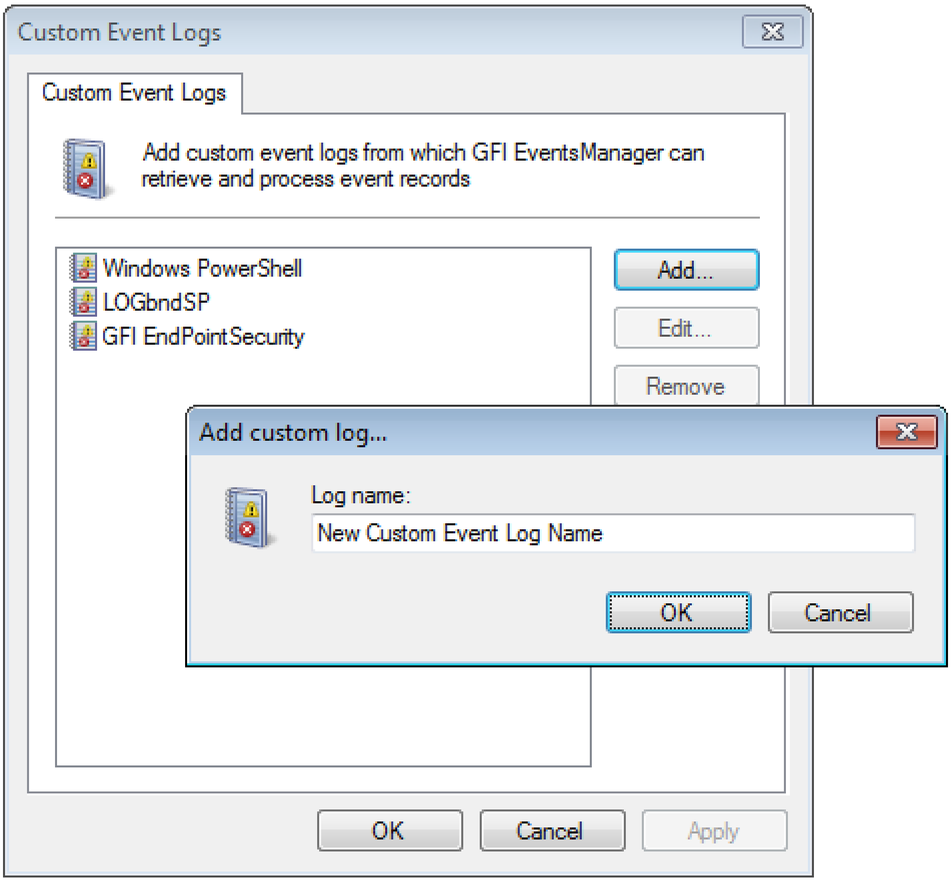
1. Click **Configuration** tab > **Options**.



Here you can configure, remove or add custom event logs.

Screenshot 84: Custom event logs setup

2. From **Configurations**, right-click **Custom Event Logs** and select **Edit custom logs…**



Screenshot 85: Custom event logs dialog

3. Click **Add…** button and specify the name of your custom event log.

4. Click **OK**

5. (Optional) Click **Edit** to rename the selected custom event, or click **Remove** to delete the selected custom event.

6. Click **Apply** and **OK**

10.6 Collecting GFI LanGuard event logs

GFI EventsManager enables you to monitor events generated by GFI LanGuard. GFI LanGuard is a network vulnerability scanner that audits your network for weaknesses that can be exploited by users for malicious purposes. During network audits, GFI LanGuard creates events in the '**Application Log**' of the machine where it is installed.

For each machine scanned by GFI LanGuard, an 'Application log' entry having '**Event ID: 0**' and '**Source**' set as **GFI LanGuard** will be generated. These events denote network vulnerability information extracted from scanned computers including:

Gathered Information	Description
Threat level	Gather information about the overall network threat level. This rating is generated through an extensive algorithm after GFI LanGuard audits the network.
Missing patches and service packs	Find out which machines have missing updates and which updates need to be installed to strengthen the security level.
Open ports	Discover any unwanted open TCP and/or UDP ports.

Gathered Information	Description
Antivirus operational and malware definition status	GFI LanGuard is able to check if your virus database definitions are up to date. If it is not, you will be alerted and GFI LanGuard will attempt to update it.
Applications detected on scanned targets	GFI LanGuard enumerates applications installed on scan targets. You can create an inventory of wanted and/or unwanted applications and configure GFI LanGuard to automatically uninstall applications categorized as unwanted.

> **Note**
>
> For more information about GFI LanGuard, refer to https://www.gfi.com/network-security-vulnerability-scanner.

> **Note**
>
> GFI EventsManager can process events generated by GFI LanGuard version 9.5 or later.

10.6.1 How to enable GFI LanGuard event logging?

There are two key steps needed to enable event log integration between GFI LanGuard and GFI EventsManager:

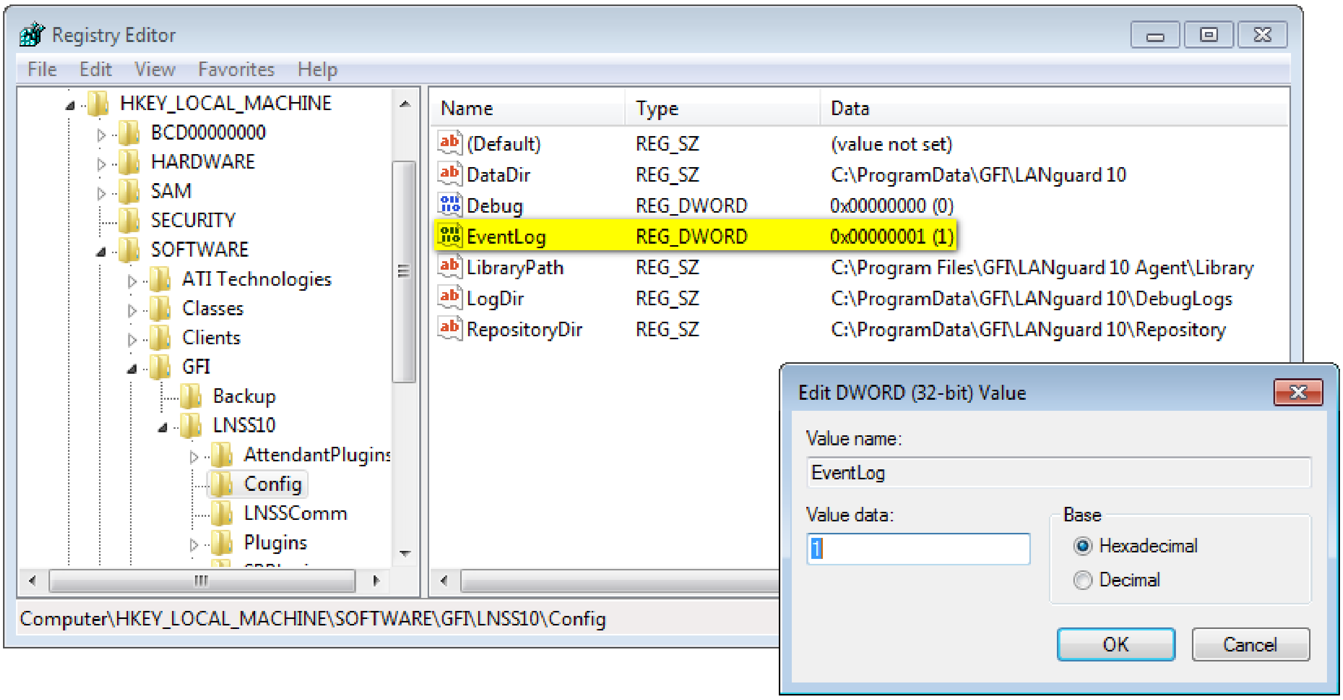
- Step 1: Enable logging
- Step 2: Configure GFI EventsManager to collect Application Logs

Step 1: Enable GFI LanGuard logging

To enable GFI LanGuard to output event logs on completion of system audits:

1. Add the machine where GFI LanGuard is installed as an event source.

2. Click **Start > Run** and key in **regedit**. Press **Enter**.



Name	Type	Data
(Default)	REG_SZ	(value not set)
DataDir	REG_SZ	C:\ProgramData\GFI\LANguard 10
Debug	REG_DWORD	0x00000000 (0)
EventLog	REG_DWORD	0x00000001 (1)
LibraryPath	REG_SZ	C:\Program Files\GFI\LANguard 10 Agent\Library
LogDir	REG_SZ	C:\ProgramData\GFI\LANguard 10\DebugLogs
RepositoryDir	REG_SZ	C:\ProgramData\GFI\LANguard 10\Repository

Computer\HKEY_LOCAL_MACHINE\SOFTWARE\GFI\LNSS10\Config

Value name: EventLog

Value data: 1

Base: ● Hexadecimal ○ Decimal

Screenshot 86: Enabling GFI LanGuard logging through the registry

3. Go to the following registry key and edit the value to enable event logging:

- **Windows® x86 platforms:**
    - `HKEY_LOCAL_MACHINE\SOFTWARE\GFI\LNSS[n]\Config`
    - Set value of **REG_DWORD EventLog** to **1**
    - **Windows® x64 platforms:**
    - `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\GFI\LNSS[n]\Config`
    - Set value of **REG_DWORD EventLog** to **1**

Important

[n] is the major version number of GFI LanGuard.

Example: HKEY_LOCAL_MACHINE\SOFTWARE\GFI\LNSS**9**\Config\EventLog = 1 (dword)

Note

To stop GFI LanGuard from generating 'Application Log' entries, remove the registry value described above or change the registry value to **0**.

Step 2: Configure GFI EventsManager to collect Application logs

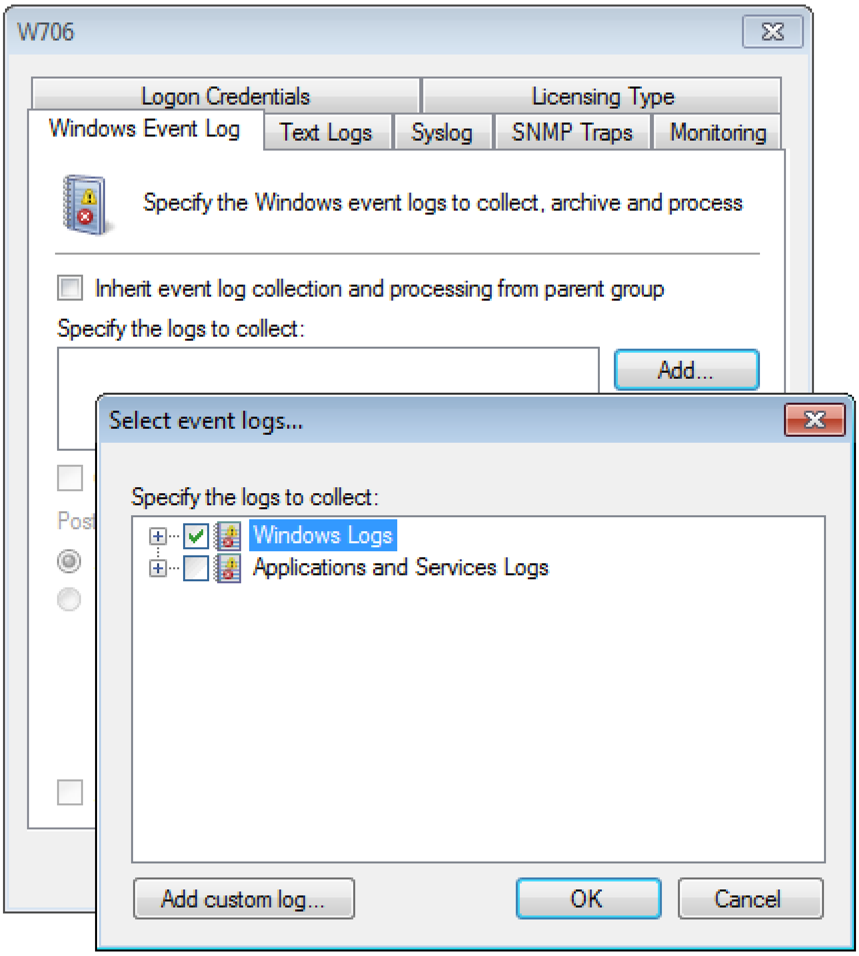
GFI LanGuard outputs windows event logs to the 'Application Log' category. Ensure that the collection of Application logs is enabled on the GFI LanGuard event source.

To enable processing of GFI LanGuard events:

1. Open GFI EventsManager Management Console.

2. Click **Configuration** tab > **Event Sources**.

3. Right-click on the GFI LanGuard event source and select **Properties**.



W706

Logon Credentials | Licensing Type

Windows Event Log | Text Logs | Syslog | SNMP Traps | Monitoring

Specify the Windows event logs to collect, archive and process

□ Inherit event log collection and processing from parent group

Specify the logs to collect:

Add...

Select event logs...

Specify the logs to collect:

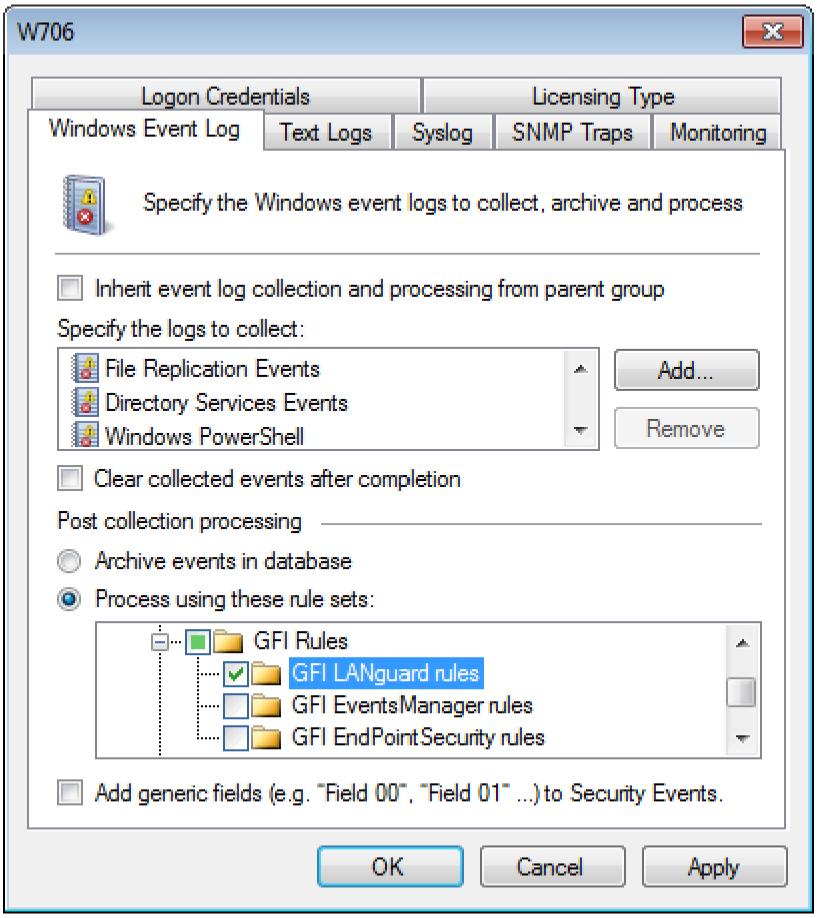
☑ Windows Logs

□ Applications and Services Logs

Add custom log... | OK | Cancel

Screenshot 87: Add Windows® Application logs

4. From **Windows® Event Log** tab, click **Add** and select **Windows® Logs**. Click **OK**.



Specify the Windows event logs to collect, archive and process

☐ Inherit event log collection and processing from parent group

Specify the logs to collect:

- File Replication Events
- Directory Services Events
- Windows PowerShell

☐ Clear collected events after completion

Post collection processing

○ Archive events in database

● Process using these rule sets:

- GFI Rules
  - ☑ GFI LANguard rules
  - ☐ GFI EventsManager rules
  - ☐ GFI EndPointSecurity rules

☐ Add generic fields (e.g. "Field 00", "Field 01" ...) to Security Events.

Screenshot 88: Add GFI LanGuard rules

5. Select **Process using these rule sets**. Expand **Windows Events > GFI Rules** node and select **GFI LanGuard rules**.

6. Click **OK**.

> **Note**
>
> GFI EventsManager has built-in processing rules for GFI LanGuard events that are enabled by default. To monitor events generated by GFI LanGuard, select **Status** tab **> General** and locate the **Critical and High Importance Events** section.

> **Note**
>
> To configure GFI LanGuard event processing rules, click **Configuration** tab **> Event Processing Rules**. From the left pane select **GFI Rules > GFI LanGuardrules**. For more information refer to Events Processing Rules.

Testing and troubleshooting

To check if GFI LanGuard events are being generated:

1. Open GFI LanGuard and run a security audit scan on the localhost.

2. When the scan finishes, open **Event Viewer** from **Start > Run** and key in **eventvwr**. Press **Enter**.

3. Go to Event Viewer (local) Windows Logs Application.

4. Once the stored events are loaded, search for an entry with:

- Source: GFI LanGuard
- Event ID: 0.

In case the event log is not created, typically the GFI LanGuard scan was already initiated once the registry key to output event logs was modified. Re-run the scan. Alternatively ensure that the registry value was created in the right location as the location for x86 platforms is different from that of x64 platforms.

10.7 Collecting GFI EndPointSecurity events

GFI EndPointSecurity enables you to maintain data integrity by preventing unauthorized access, and, the transfer of content to and from the following devices or connection ports:

Device	Example
USB Ports	Flash/Memory card readers and pen drives.
Firewire ports	Digital cameras and Fire-wire card readers.
Wireless devices	Bluetooth and Infrared dongles
Floppy disk drives	Internal and external (USB) floppy drives.
Optical drives	CD, DVD and Blu-ray discs.
Magneto Optical drives	Internal and external (USB) drives.
Removable storage	USB hard-disk drives.
Other drives such as Zip drives and tape drives	Internal or External (USB/Serial/Parallel) drives.

> **Note**
> For more information about GFI EndPointSecurity, refer to https://www.gfi.com/endpointsecurity.

Enable GFI EndPointSecurity logging

By default, GFI EndPointSecurity generates logs with information about:

- The GFI EndPointSecurity service
- Devices connected and disconnected on your network
- Access allowed or denied by GFI EndPointSecurity to users.

To configure logging options in GFI EndPointSecurity:

1. From the machine running GFI EndPointSecurity machine, launch GFI EndPointSecurity Management Console.

2. Click **Configuration** tab **> Protection Policies**.

3. From the left pane, select the protection policy and click **Set Logging Options**.

4. Customize the settings available in Logging Option dialog.

> **Note**
> For more information on how to configure GFI EndPointSecurity logging options, refer to the GFI EndPointSecurity documentation available from https://www.gfi.com/products/gfi-endpointsecurity/manual.

Monitor GFI EndPointSecurity Events

GFI EventsManager has built-in processing rules for GFI EndPointSecurity events that are enabled by default. To monitor events generated by GFI EndPointSecurity, select **Status** tab **> General** and locate the **Critical and High Importance Events** section.

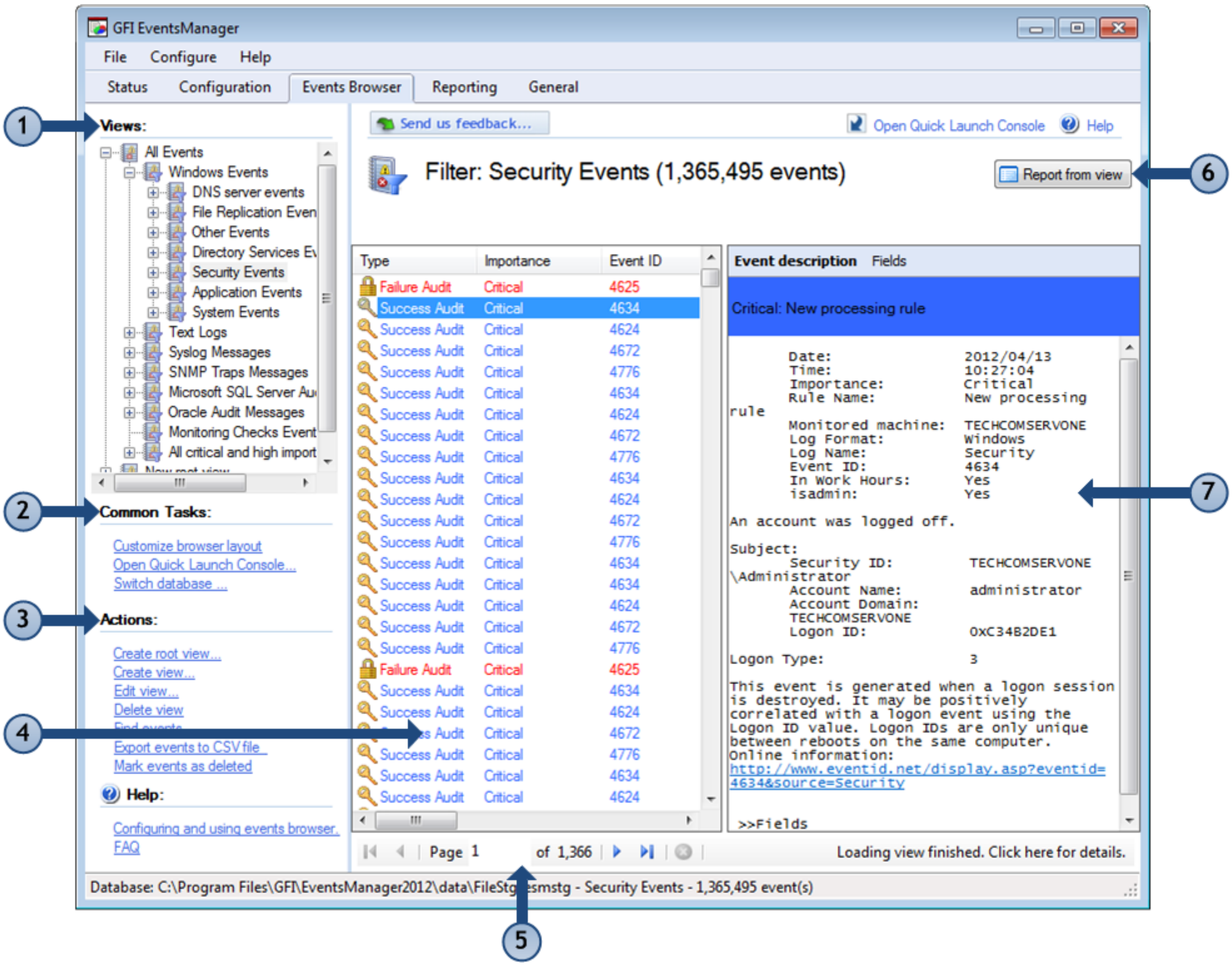
To configure GFI EndPointSecurity event processing rules, click **Configuration** tab **> Event Processing Rules**. For more information refer to Events Processing Rules.

11 Browsing Stored Events

This section provides you with information about using the Events Browser. The Events Browser is equipped with tools for event analysis and forensic investigation. It also enables you to easily browse through multiple events databases as well as export events to encrypted databases for legal compliance purposes.

Topics in this section:

11.1 Navigating the Events Browser



Type	Importance	Event ID
Failure Audit	Critical	4625
Success Audit	Critical	4634
Success Audit	Critical	4624
Success Audit	Critical	4672
Success Audit	Critical	4776
Success Audit	Critical	4634
Success Audit	Critical	4624
Success Audit	Critical	4672
Success Audit	Critical	4776
Success Audit	Critical	4634
Success Audit	Critical	4624
Success Audit	Critical	4672
Success Audit	Critical	4776
Success Audit	Critical	4634
Success Audit	Critical	4634
Success Audit	Critical	4624
Success Audit	Critical	4672
Success Audit	Critical	4776
Failure Audit	Critical	4625
Success Audit	Critical	4634
Success Audit	Critical	4624
s Audit	Critical	4672
Success Audit	Critical	4776
Success Audit	Critical	4634
Success Audit	Critical	4624

Critical: New processing rule

```
       Date:                    2012/04/13
       Time:                    10:27:04
       Importance:              Critical
       Rule Name:               New processing
rule
       Monitored machine:       TECHCOMSERVONE
       Log Format:              Windows
       Log Name:                Security
       Event ID:                4634
       In Work Hours:           Yes
       isadmin:                 Yes

An account was logged off.

Subject:
       Security ID:             TECHCOMSERVONE
\Administrator
       Account Name:            administrator
       Account Domain:
       TECHCOMSERVONE
       Logon ID:                0xC34B2DE1

Logon Type:                     3

This event is generated when a logon session
is destroyed. It may be positively
correlated with a logon event using the
Logon ID value. Logon IDs are only unique
between reboots on the same computer.
Online information:
http://www.eventid.net/display.asp?eventid=
4634&source=Security

>>Fields
```

Screenshot 89: Events Browser

The Events Browser is made up of the following sections:

	Section	Description
1	**Views**	The **Views** section includes a wide range of predefined views. Use this section to view specific logs such as Windows® Event Logs, Text Logs, SQL Server® audits and more.
2	**Common Tasks**	**Common Tasks** enable you to customize the look of the Events Browser and switch database to view exported and/or archived event logs.
3	**Actions**	Use the **Actions** section to run common functions related to analyzing event logs. This enables you create or edit custom views, export events for further analysis and more.
4	**Events**	The **Events** section is used to browse through the events categorized under the selected view (from section 1).
5	**Navigation controls**	Use the navigation controls to browse through collected events.
6	**Reporting**	The **Report from view** option enables you to generate graphical and statistical reports based on the selected view (from section 1).
7	**Event Description Pane**	The **Events Description Pane** provides an extensive breakdown of the selected event (from section 4). Use this section to analyze the event details and find out when the event was generated, what was the cause and by whom it was generated. The header color coding enables you to quickly identify the severity of the event. The description section enables you to switch between two views: » **General** - Contains event information in the legacy format that was standard for pre-Microsoft® Windows® Vista event logs. » **Fields** – Contains a list of event information categorized by fields. The link provided in the event description gives you access to: » A more detailed description of the event » Information and links that explain what causes this type of event » Hints and tips on how to possibly solve any existing issues.

11.2 Using the Events Browser

Event analysis is a demanding task; GFI EventsManager is equipped with specialized tools that simplify this process. Use the Events Browser for forensic analysis of events. All events accessible through the Events Browser are organized by log type in the **Views** section. The following sections describe how to use the Events Browser to manage your events:

- Exporting events to CSV
- Creating reports from events browser views
- Deleting events
- Searching stored events
- Identifying rules using the rule finder tool

11.2.1 Exporting events to CSV

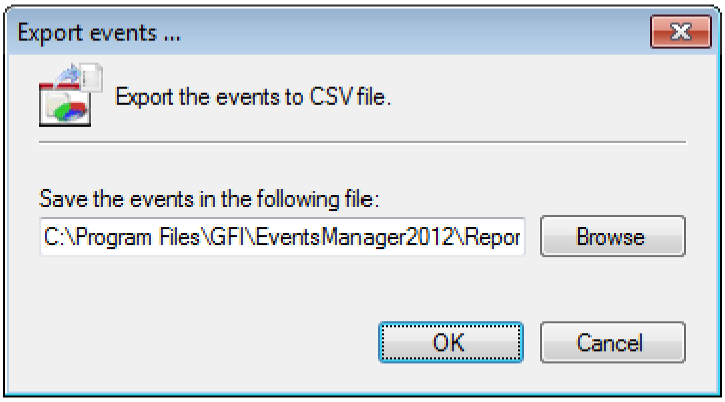
GFI EventsManager enables you to export event data to CSV files directly from Events Browser. This is extremely convenient especially when further processing of event data is required. This includes:

- Distribution of key event data via email
- Running automated scripts that convert CSV exported events data to HTML for upload on web/company intranet
- Generation of graphical management reports and statistical data using native tools such as Microsoft® Excel®

- Generation of custom reports using third party applications
- Interfacing events data with applications and scripts built in-house.

To export events to CSV:

1. From **Events Browser > Views**, right-click a view and select **Export events**.



Export events ...

Export the events to CSV file.

Save the events in the following file:

C:\Program Files\GFI\EventsManager2012\Repor

Screenshot 90: Export events tool

2. Specify or browse to the location where exported events are saved. Click **OK**

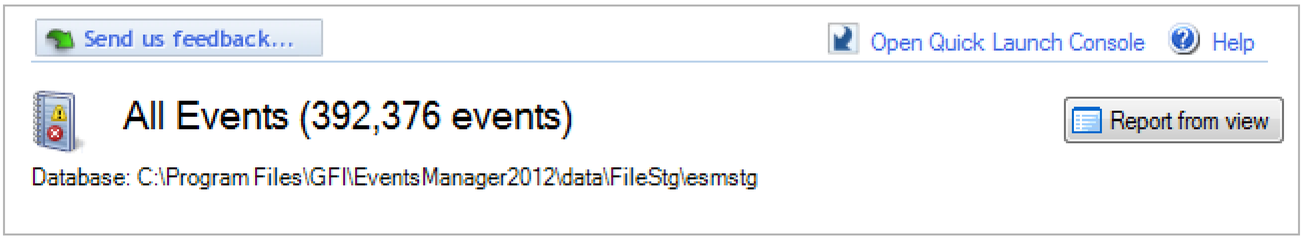
11.2.2 Creating reports from views

GFI EventsManager enables you to build your own custom reports (with graphs and statistics) based on a selected View from Events Browser.

> **Note**
>
> GFI EventsManager ships a selection of predefined reports. We recommend that you check the available reports prior to creating new ones to avoid having duplicate reports.

To generate a report from a view:

1. From **Events Browser > Views**, select a view.



All Events (392,376 events)

Database: C:\Program Files\GFI\EventsManager2012\data\FileStg\esmstg

Screenshot 91: Report from view button

2. From the top-right corner of the Events Browser, click **Report from view**.

3. From the **Create Report** dialog, configure the options from the tabs described below:

Tab	Description
General	Specify the new report name and add conditions.
Layout	Select the columns that you want to be visible in the report. You can also customize the order of appearance.

Tab	Description
Chart	Select **Use graphical charts** to generate a report showing information in a chart. The available chart types are: » Pie chart » Bar chart » Line graph.
Schedule	Select **Use schedule** to enable report scheduling. Configure the generation date and frequency for the new report.

> **Note**
> For more information refer to Creating custom reports.

11.2.3 Deleting events

When collecting and processing event logs from a significantly large number of event sources, a number of unwanted logs are collected. To help you remove such event logs, GFI EventsManager includes a delete option. When events are deleted, they are:

- Removed from events browser
- No longer included in export/import jobs
- No longer included in reports.

After deleting an event, every other event of the same type, category and containing view are deleted as well.

> **Important**
> Before you delete event logs, ensure that you are abiding by legal compliance regulations. Deleting event logs may lead to legal penalties.

To delete events:

1. From **Events Browser** tab **> Views**, select a view.

2. Select an event that you want to delete. From **Actions**, click **Mark events as deleted**.

3. Click **Yes** to confirm delete or click **No** to cancel.

Viewing deleted events

Deleted event logs are stored in a separate database and can be viewed from the Events Browser.

To view deleted event logs:

1. Click **Events Browser** tab.

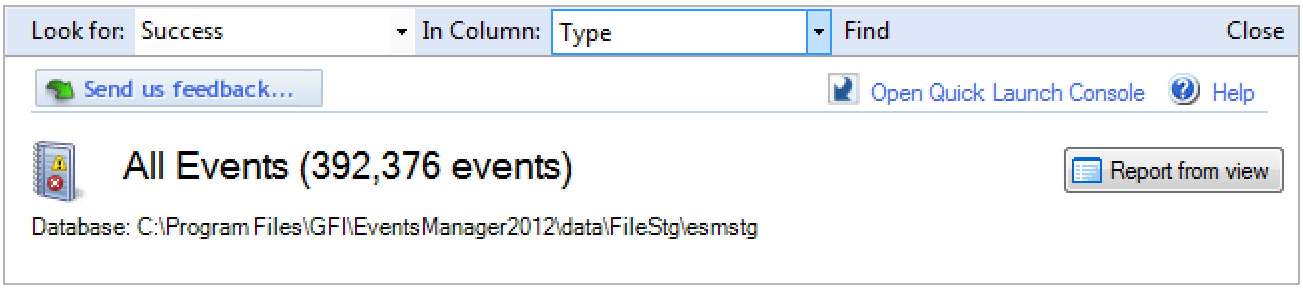
2. From the top-right pane, click **View deleted events**. The Events Browser automatically switches the database.

> **Note**
> To completely remove event logs from GFI EventsManager, you must run a **Commit Deletion** job on the selected database. For more information refer to Commit deletions.

11.2.4 Searching stored events

Use the event finder tool to search and locate specific events using simple customizable filters. To search for a particular event:

1. Click **Events Browser > Actions > Find events**.



Look for: Success

In Column: Type

All Events (392,376 events)

Database: C:\Program Files\GFI\EventsManager2012\data\FileStg\esmstg

Screenshot 92: Event finder tool

2. Configure the event search parameters through the options provided on top of the right pane. To trigger a case sensitive search, click **Options** and select **Match whole word**.

3. Click **Find** to start searching.

11.2.5 Identifying rules using the rule finder tool

GFI EventsManager enables you to identify the event processing rule which triggered the selected event log.

To identify the rule(s) used for a specific event:

1. From **Events Browser**, right-click an event log.

2. Click **Find Rule**. Doing so will take you to **Configuration** tab **> Event Processing Rules**. For more information refer to Events Processing Rules.

11.3 Managing Events Browser views

Event logs are automatically categorized in different folders, according to the event log type and the source from which it was generated. In GFI EventsManager, these folders are referred to as Views.

GFI EventsManager includes a comprehensive list of views that enable you to start categorizing processed event logs upon installation. New views can be created and the existing ones can be modified. The following sections provide with information about managing the Events Browser views:

- Creating Root Views and Views
- Editing a view
- Deleting a view

11.3.1 Creating Root Views and Views

In Events Browser, GFI EventsManager enables you to create the two different types of views described below:

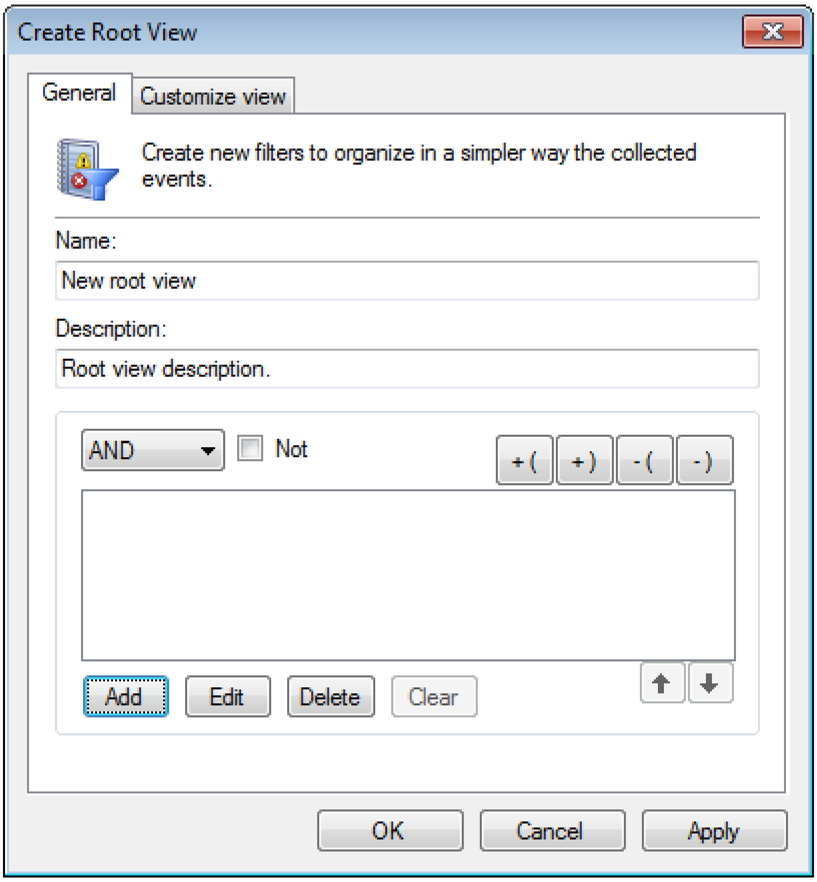
View	Description
Create root view…	Enables you to create top-level views which may contain a number of sub-views. This creates a new set of views beneath the ones that ship with the product (Example: **All Events** view).
Create view…	Create views within root views. Custom views can be added to the default root views and views.

To create a Root view/View:

1. From **Events Browser > Actions**, click **Create root view…/Create view…**

Note

Both options launch the same **Create view** dialog and are both configured in the same way. The difference is the positioning of the new custom view.



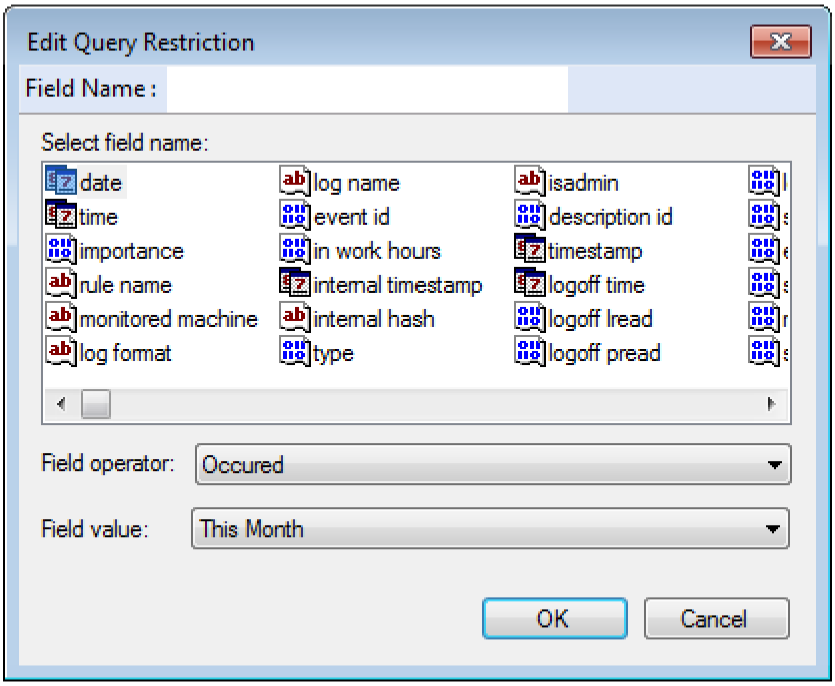
Name: New root view

Description: Root view description.

Screenshot 93: Custom view builder

2. Key in a name and description for the new view.

3. Click **Add** to add filtering conditions to your view. If no conditions are specified, the view will display information from every event that is generated.

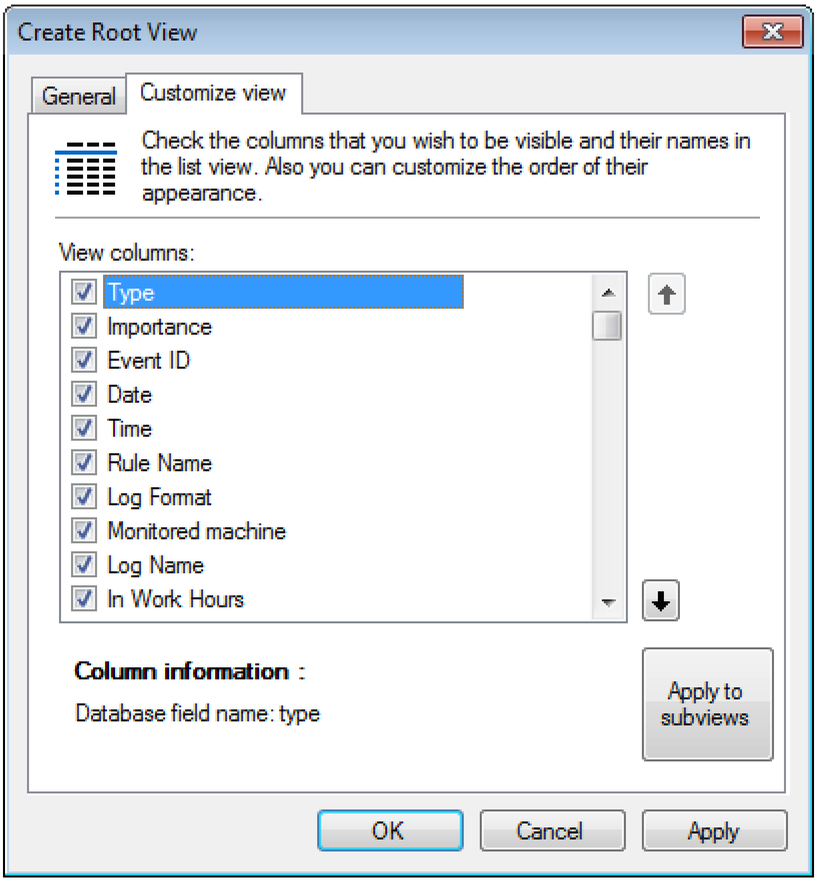


Field operator: Occured

Field value: This Month

Screenshot 94: Edit view restriction

4. Select a field from the list of available fields and specify the **Field operator** and **Field value**. Repeat this step until all required conditions are specified. Click **OK** For more information, refer to Defining Restrictions.


Create Root View
General
Customize view
Check the columns that you wish to be visible and their names in the list view. Also you can customize the order of their appearance.
View columns:
Apply to subviews
OK
Cancel
Apply

☑ Type
☑ Importance
☑ Event ID
☑ Date
☑ Time
☑ Rule Name
☑ Log Format
☑ Monitored machine
☑ Log Name
☑ In Work Hours

Column information :

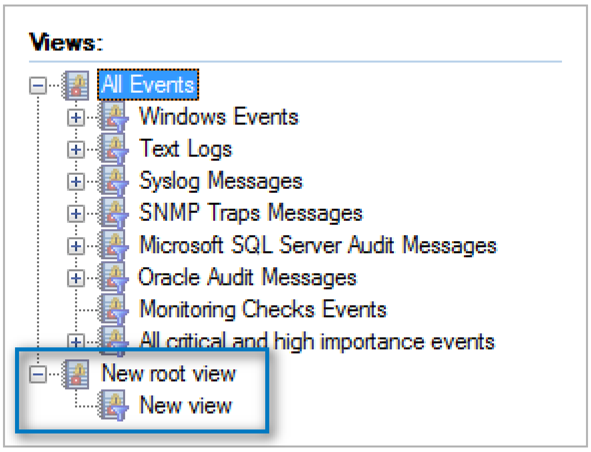
Database field name: type

Screenshot 95: Customize View tab

4. Click **Customize view** tab to select the columns to show in the new custom view. You can also arrange their order of appearance using the **Up** and **Down** arrow buttons.

5. (Optional) Click **Apply to subviews** to apply the selected columns to all subviews of the root view.

6. Click **Apply** and **OK**.



Views:

- All Events
  - Windows Events
  - Text Logs
  - Syslog Messages
  - SNMP Traps Messages
  - Microsoft SQL Server Audit Messages
  - Oracle Audit Messages
  - Monitoring Checks Events
  - All critical and high importance events
- New root view
  - New view

Screenshot 96: Sample: New Root Views and Views

11.3.2 Editing a view

1. From **Events Browser > Views**, select the view to edit.

2. From **Actions** click **Edit view…**

3. From the View Properties dialog, add, edit or delete conditions according to your requirements.

11.3.3 Deleting a view

1. From **Events Browser > Views**, select the view to delete.

2. From **Actions**, click **Delete view**. Alternatively, right-click on the view you want to delete and select **Delete view**.

11.4 Customizing Events Browser layout

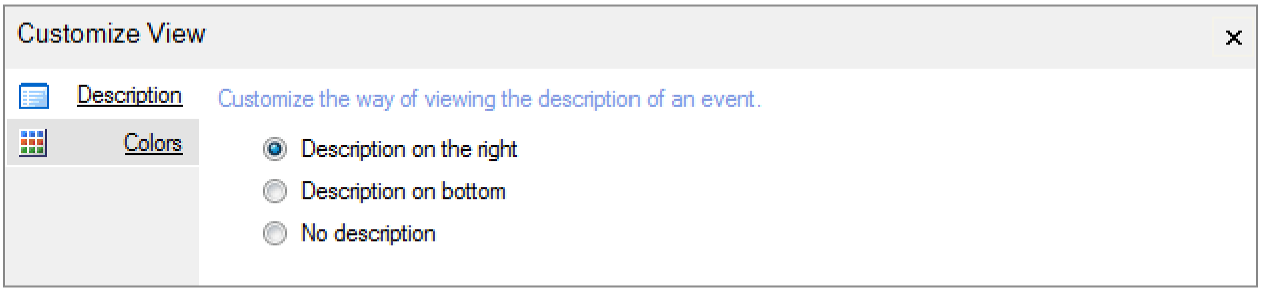
GFI EventsManager enables you to customize the Events Browser according to your preferences. You can reposition the description pane as well as modify event log color-coding options, used to facilitate identification of important events. The following sections provide you with information about customizing the Events Browser:

- Customizing description position
- Event color-coding options

11.4.1 Customizing description position

To change the position of the event description pane:

1. From **Events Browser > Common Tasks**, click **Customize browser layout > Description**.



Customize the way of viewing the description of an event.

● Description on the right

○ Description on bottom

○ No description

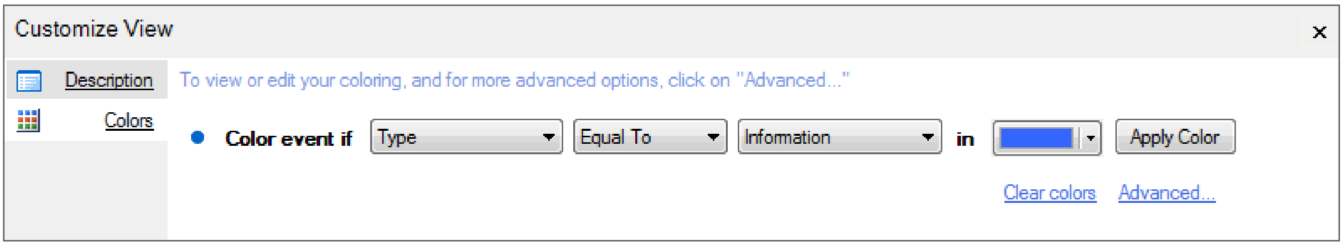
Screenshot 97: Customize browser description

2. Select one of the options described below:

Option	Description
Description on the right	Places the description pane to the right of the events list.
Description on bottom	Places the description pane at the bottom of the events list.
No description	Removes description pane.

11.4.2 Event color-coding options

Use the event color-coding tool to tint key events in a particular color. This way the required events are easier to locate during event browsing.



To view or edit your coloring, and for more advanced options, click on "Advanced..."

Color event if Type Equal To Information in

Screenshot 98: Color coding configuration

To assign a color code to a specific event:

1. From **Events Browser > Common Tasks** select **Customize browser layout > Colors**.

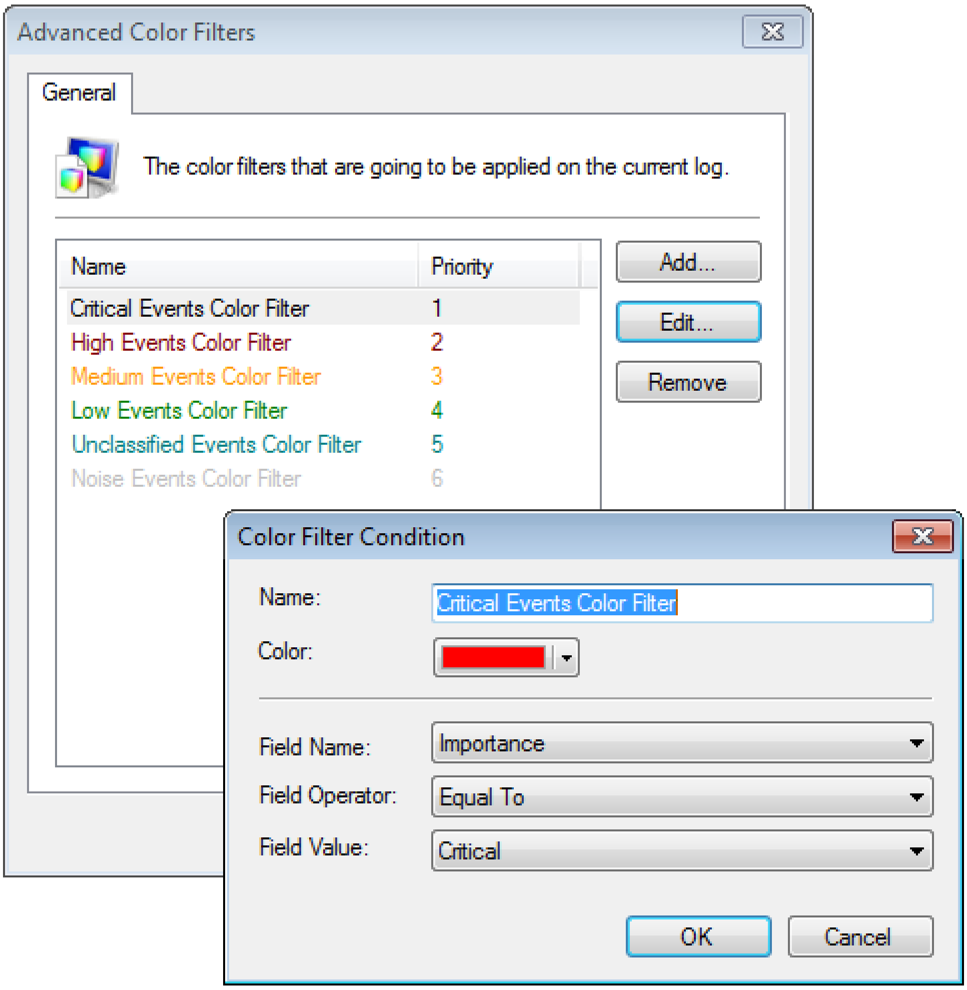
2. Specify event filtering parameters including the color to be applied to the sifted events.

3. Click **Apply Color**.

> **Note**
>
> Use the **Clear color** option to clear all color settings.

To assign different color-codes to multiple events:

1. From **Events Browser > Common Tasks** select **Customize view > Colors > Advanced…**



The color filters that are going to be applied on the current log.

Name	Priority
Critical Events Color Filter	1
High Events Color Filter	2
Medium Events Color Filter	3
Low Events Color Filter	4
Unclassified Events Color Filter	5
Noise Events Color Filter	6

Name: Critical Events Color Filter

Color: 🟥

Field Name: Importance

Field Operator: Equal To

Field Value: Critical

Screenshot 99: Advanced Color Filter

2. Click **Add** button. Specify filter name and configure event filter parameters.

3. Click **OK**

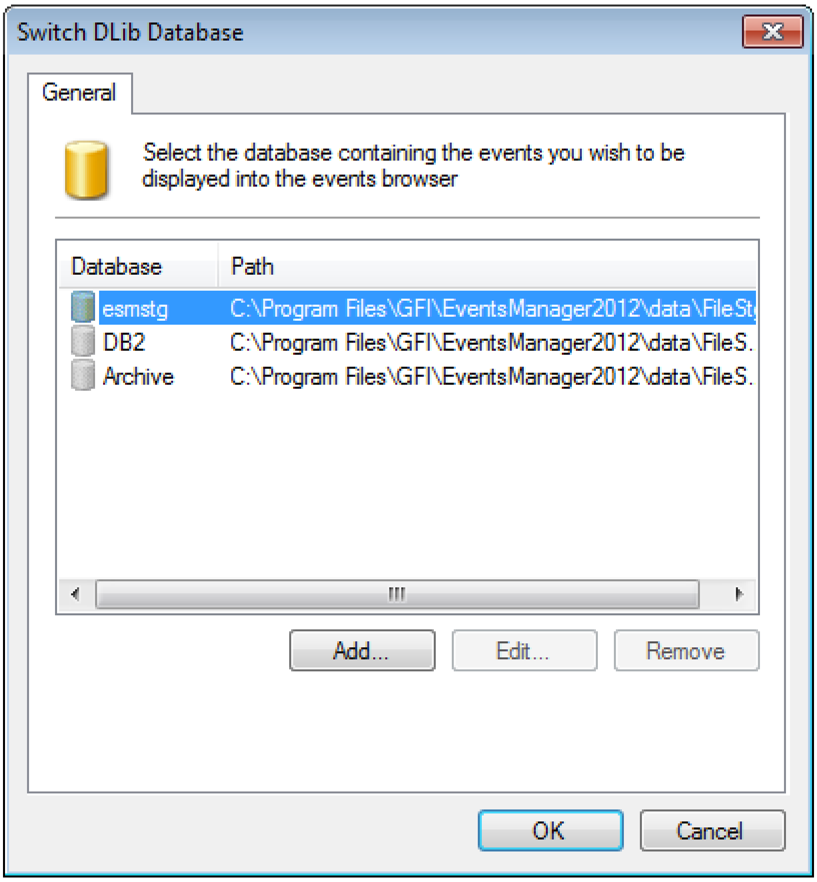
4. Repeat until all required event filter conditions have been configured. Click **OK**

11.5 Browsing events from different databases

GFI EventsManager enables you to switch between different databases. Use this feature to browse events that have been exported or archived for further analysis or stored in different databases.

To switch databases:

1. Click **Events Browser > Common Tasks > Switch database**.



Select the database containing the events you wish to be displayed into the events browser

Database	Path
esmstg	C:\Program Files\GFI\EventsManager2012\data\FileSt
DB2	C:\Program Files\GFI\EventsManager2012\data\FileS.
Archive	C:\Program Files\GFI\EventsManager2012\data\FileS.

Screenshot 100: Switch database dialog

2. Select the database from the list of databases and click **OK**

> **Note**
>
> You can click **Add…** to specify a path and a unique name to create a new database. Click **Edit…** to edit the specified information.

12 Activity Monitoring

This section provides you with information about monitoring the events collection processes. The **Status** tab is a dashboard that shows the status of GFI EventsManager as well as statistical information related to the events collected, processed and archived. The status monitor consists of three different dashboard views: **General** view, **Job Activity** view and **Statistics** view.

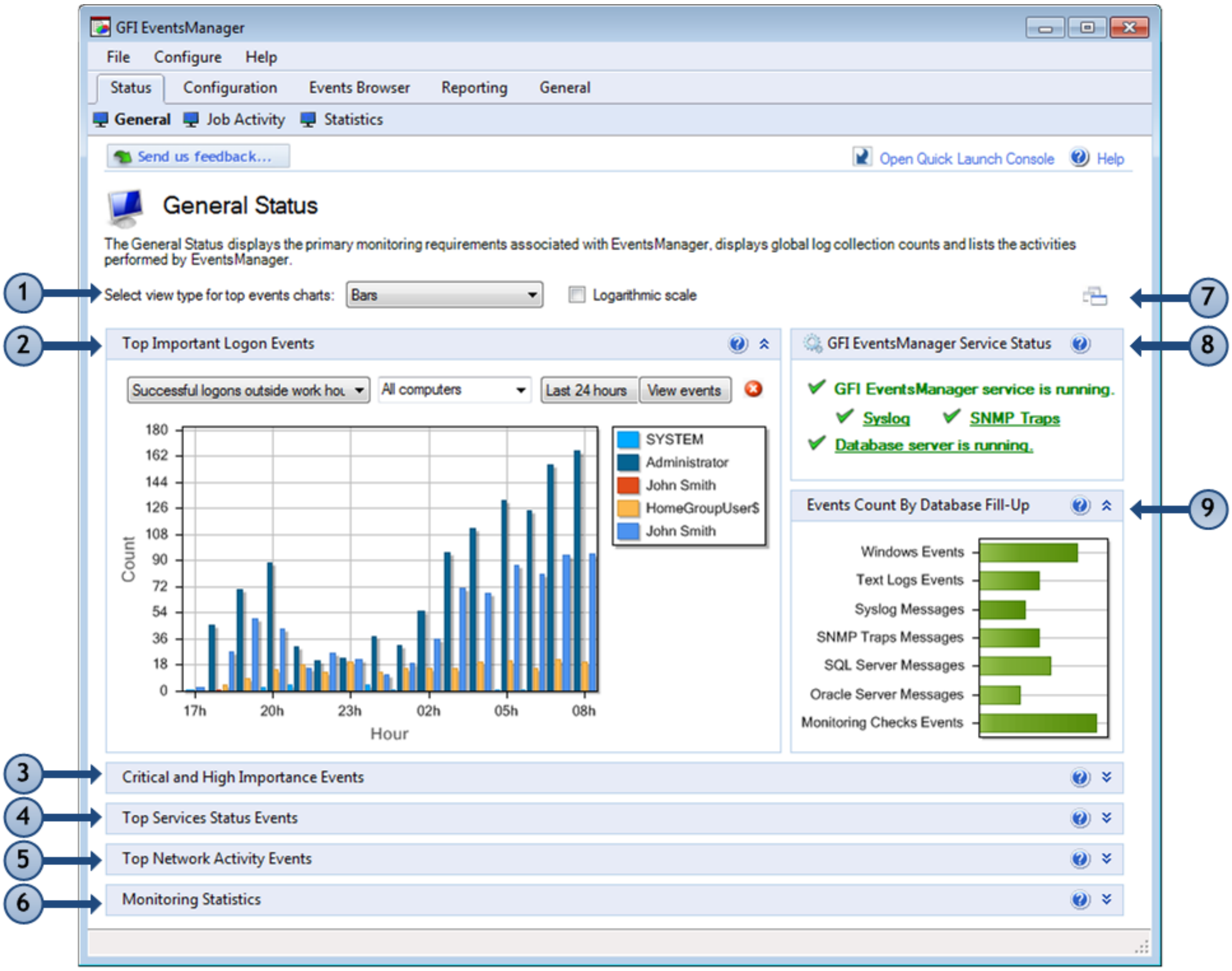
Topics in this section:

12.1 General Status view

This General Status view is used to:

- View the status of the GFI EventsManager event processing engine
- Access statistical information such as the number of logon events, critical events and service status events.

To access the **General** view, go to **Status** tab > **General**.



General Status

The General Status displays the primary monitoring requirements associated with EventsManager, displays global log collection counts and lists the activities performed by EventsManager.

Select view type for top events charts: Bars

☐ Logarithmic scale

Successful logons outside work hou | All computers | Last 24 hours

✓ GFI EventsManager service is running.

✓ Syslog ✓ SNMP Traps

✓ Database server is running.

Screenshot 101: GFI EventsManager Status: General view

The General view consists of the sections described below:

Section	Description
1	Use this section to select the chart type for top events.
2	The **Top Important Log Events** section provides statistical information about: » Top 10 successful Logon events outside working hours » Top 10 important Logon events during working hours » Top 10 failed Logon events. Events in this section are filtered by: » **Machine**: Select a machine or key in a machine name in the drop down list » **Period**: The time period when the events occurred (Last hour, Last 24 hours, Last 7 days or a specific date).

Section	Description
3	The **Critical and High Importance Events** section provides statistical/graphical information about critical events collected from all event sources. Here you can also view the vulnerability results monitored by GFI LanGuard. This graph shows the rules that collected and processed events for a particular period. From the drop down lists, select the type of information to display. Select from: » **Grouping**: Determines how events are grouped; such as Events, Computers, Computer groups, Events/Computers or Events/Computer groups » **Event type**: Select the type of data to display (Windows®, Text Logs, Syslog, SNMP, Active Monitoring Logs, SQL and Oracle audit) » **Alert type**: Specify the alert severity; such as All alerts, Critical or High » **Period**: Specify the time period when the events occurred (Last hour, Last 24 hours, Last 7 days or a specific date). **NOTE** For detailed information about the different types of important events shown in this view, download the Microsoft® Security Monitoring and Attack Detection Planning Guide from http://go.gfi.com/?pageid=esm_smad_plan.
4	The **Top Service Status Events** displays the top 10 services that caused the selected event. A service can generate events when: » Terminated with an error » Failed to load » Failed to start » Timed out » Stopped » Started. The graph shows the frequency of these events sorted by service type and/or by computer generating the event. Select a machine or service from the drop down lists or key in the required criteria to customize the graph results. **Note** To collect services information, event sources must have Audit system events policy enabled.
5	The **Top Network Activity Events** section displays details of the top 10 network activities (inbound and outbound) for computers running Microsoft®Windows® Vista or later. Network activity consists of all type of traffic generated by various protocols including SMTP, HTTP, FTP and MSN traffic. The network activities displayed can be filtered by: » Applications » Source Addresses » Destination Addresses » Computers » Ports » Users. Select parameters from the drop down lists or key in the values to filter the type of chart displayed. **Note** To collect network activities, event sources must have Object auditing and Process tracking enabled.
6	The **Monitoring Statistics** section displays status information about active Active Monitoring you are running on event sources. The information displayed in this section is refreshed every 20 seconds and you provides the: » Check name » Success/Fail count » Number of generated events » Check date and time » Check type. Select a row and click **View Events** to view the pertaining logs that were generated when the check failed/succeeded.
7	Click the **Arrange Window** icon to automatically fit all graphs in the management console.

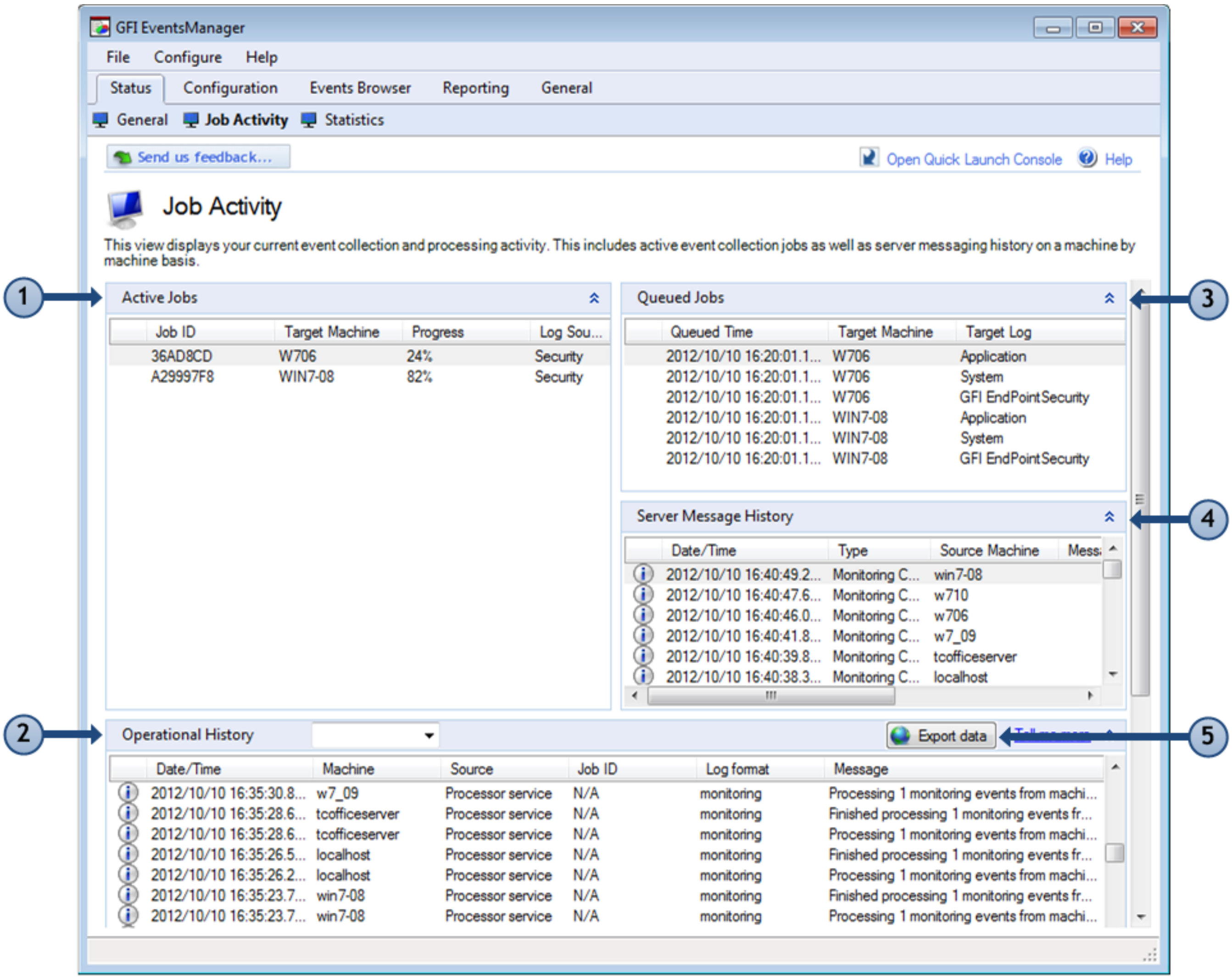
Section	Description
8	The GFI EventsManager **Service Status** is used to view: » The operational status of GFI EventsManager service/event processing engine » The operational status of the Syslog server » The operational status of the SNMP Traps server » The operational status of the database server currently in use by GFI EventsManager. **Note** » Click the service name to edit the service settings. » Click **Database server is running** to switch between different databases.
9	The **Events Count By Database Fill-Up** displays: » The horizontal bars represent the number of events stored in the database backend, sorted by event log type » The date and time of the last backup » The date and time of the next scheduled backup. The bar color turns from green to red as the database is populated with events.

> **Note**
>
> Double-click the graph to open the graph in a new window. When a 3D graph is selected, the new window allows you to rotate, zoom or resize the graph. Use the **Export to image** button to export the graph.

12.2 Job Activity view

This view displays your current event collection and processing activity. This includes active event collection jobs as well as server messaging history on a machine by machine basis.

To access the **Job Activity** view, go to **Status** tab **> Job Activity**.



Job Activity

This view displays your current event collection and processing activity. This includes active event collection jobs as well as server messaging history on a machine by machine basis.

Active Jobs

Job ID	Target Machine	Progress	Log Sou...
36AD8CD	W706	24%	Security
A29997F8	WIN7-08	82%	Security

Queued Jobs

Queued Time	Target Machine	Target Log
2012/10/10 16:20:01.1...	W706	Application
2012/10/10 16:20:01.1...	W706	System
2012/10/10 16:20:01.1...	W706	GFI EndPointSecurity
2012/10/10 16:20:01.1...	WIN7-08	Application
2012/10/10 16:20:01.1...	WIN7-08	System
2012/10/10 16:20:01.1...	WIN7-08	GFI EndPointSecurity

Server Message History

Date/Time	Type	Source Machine	Mess
2012/10/10 16:40:49.2...	Monitoring C...	win7-08	
2012/10/10 16:40:47.6...	Monitoring C...	w710	
2012/10/10 16:40:46.0...	Monitoring C...	w706	
2012/10/10 16:40:41.8...	Monitoring C...	w7_09	
2012/10/10 16:40:39.8...	Monitoring C...	tcofficeserver	
2012/10/10 16:40:38.3...	Monitoring C...	localhost	

Operational History

Date/Time	Machine	Source	Job ID	Log format	Message
2012/10/10 16:35:30.8...	w7_09	Processor service	N/A	monitoring	Processing 1 monitoring events from machi...
2012/10/10 16:35:28.6...	tcofficeserver	Processor service	N/A	monitoring	Finished processing 1 monitoring events fr...
2012/10/10 16:35:28.6...	tcofficeserver	Processor service	N/A	monitoring	Processing 1 monitoring events from machi...
2012/10/10 16:35:26.5...	localhost	Processor service	N/A	monitoring	Finished processing 1 monitoring events fr...
2012/10/10 16:35:26.2...	localhost	Processor service	N/A	monitoring	Processing 1 monitoring events from machi...
2012/10/10 16:35:23.7...	win7-08	Processor service	N/A	monitoring	Finished processing 1 monitoring events fr...
2012/10/10 16:35:23.7...	win7-08	Processor service	N/A	monitoring	Processing 1 monitoring events from machi...

Screenshot 102: GFI EventsManager Status: Job Activity view

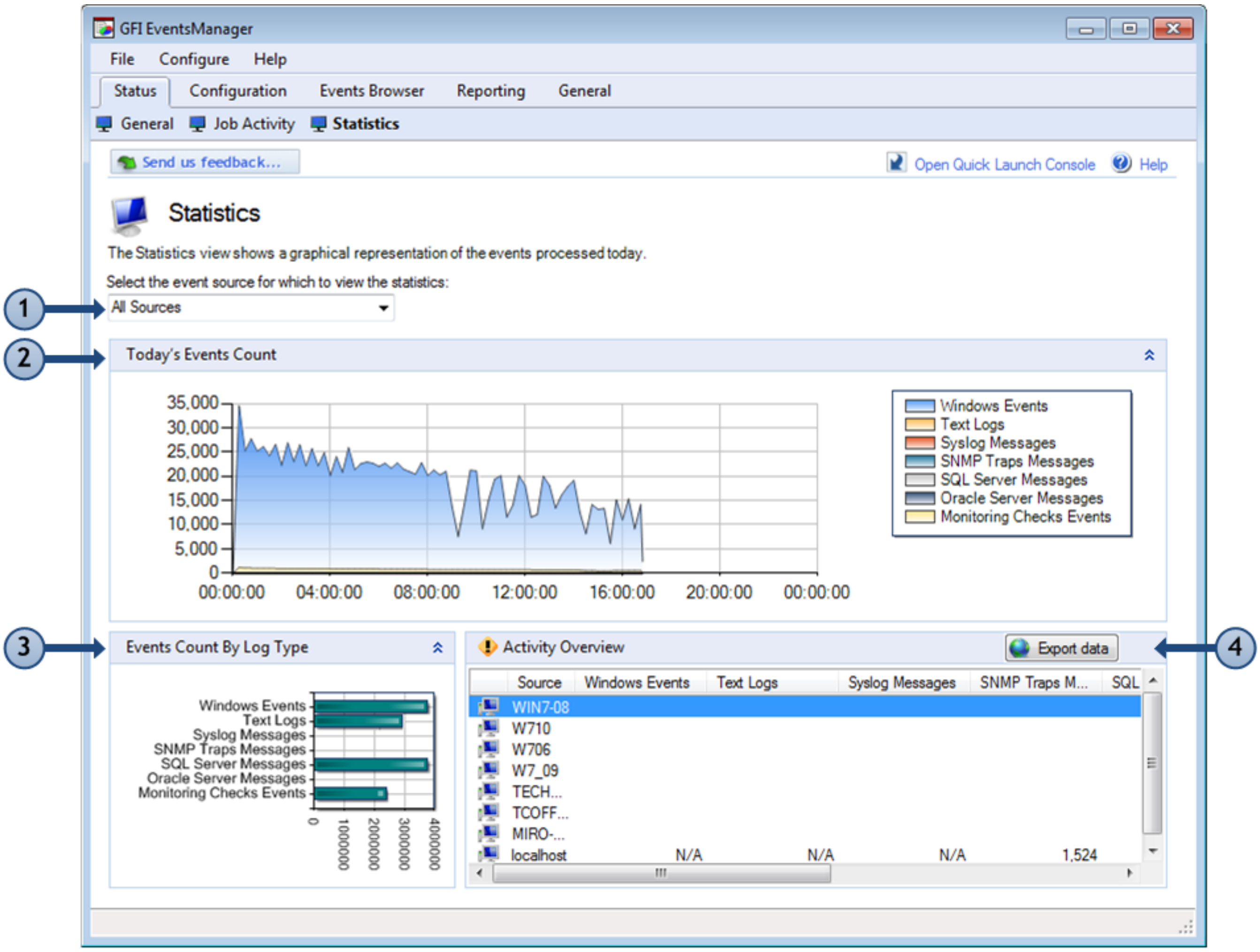
The information provided in this view is divided into the following dedicated sections:

Section	Description
1	The **Active Jobs** section provides a list of all event collection jobs currently taking place on every event source/machine. The information provided includes the job progress as well as the Log Source from which events are being collected.
2	The **Operational History** section shows an audit trail of the event collection operations performed by GFI EventsManager. The information provided includes errors and information messages generated during the event collection process as well as the name of the log file that was being processed on the event source. **NOTE** Operational history logs can be exported using the Export data button. For more information refer to Generating reports.
3	The **Queued Jobs** section provides a list of all pending event collection jobs on a machine by machine basis. The information provided includes the event source from which events will be collected as well as the queuing time and type of log to collect.
4	The **Server Message History** section displays a list of all server messages (SNMP Traps and Syslog) that were received by GFI EventsManager. The information provided includes the total number of messages sent by every event source, message count and the date/time when the last message was received.
5	Click **Export data** to generate Operational History reports.

12.3 Statistics view

The **Statistics** view is used to display the daily event activity trends and statistics of a particular computer or entire network.

To access the **Statistics** view, go to **Status** tab > **Statistics**.



The Statistics view shows a graphical representation of the events processed today.

Select the event source for which to view the statistics:

All Sources

Source	Windows Events	Text Logs	Syslog Messages	SNMP Traps M...	SQL
WIN7-08					
W710					
W706					
W7_09					
TECH...					
TCOFF...					
MIRO-...					
localhost	N/A	N/A	N/A	1,524	

Screenshot 103: GFI EventsManager Status: Statistics view

The information provided in this view is divided into the following dedicated sections:

Section	Description
1	Use this drop-down menu to select what information is displayed. Select between **All sources** or select specific sources to view their information accordingly.
2	The **Today's Events Count** graphically represents the daily event collection trend on a machine by machine basis as well as on a network by network basis. A color scheme is used to differentiate between Windows®, Text Logs, Active Monitoring Logs, Syslog and SNMP Traps events.
3	The **Events Count By Log Type** represents the number of Windows®, Text Logs, Syslog and SNMP Traps events collected by GFI EventsManager from a particular machine or network.

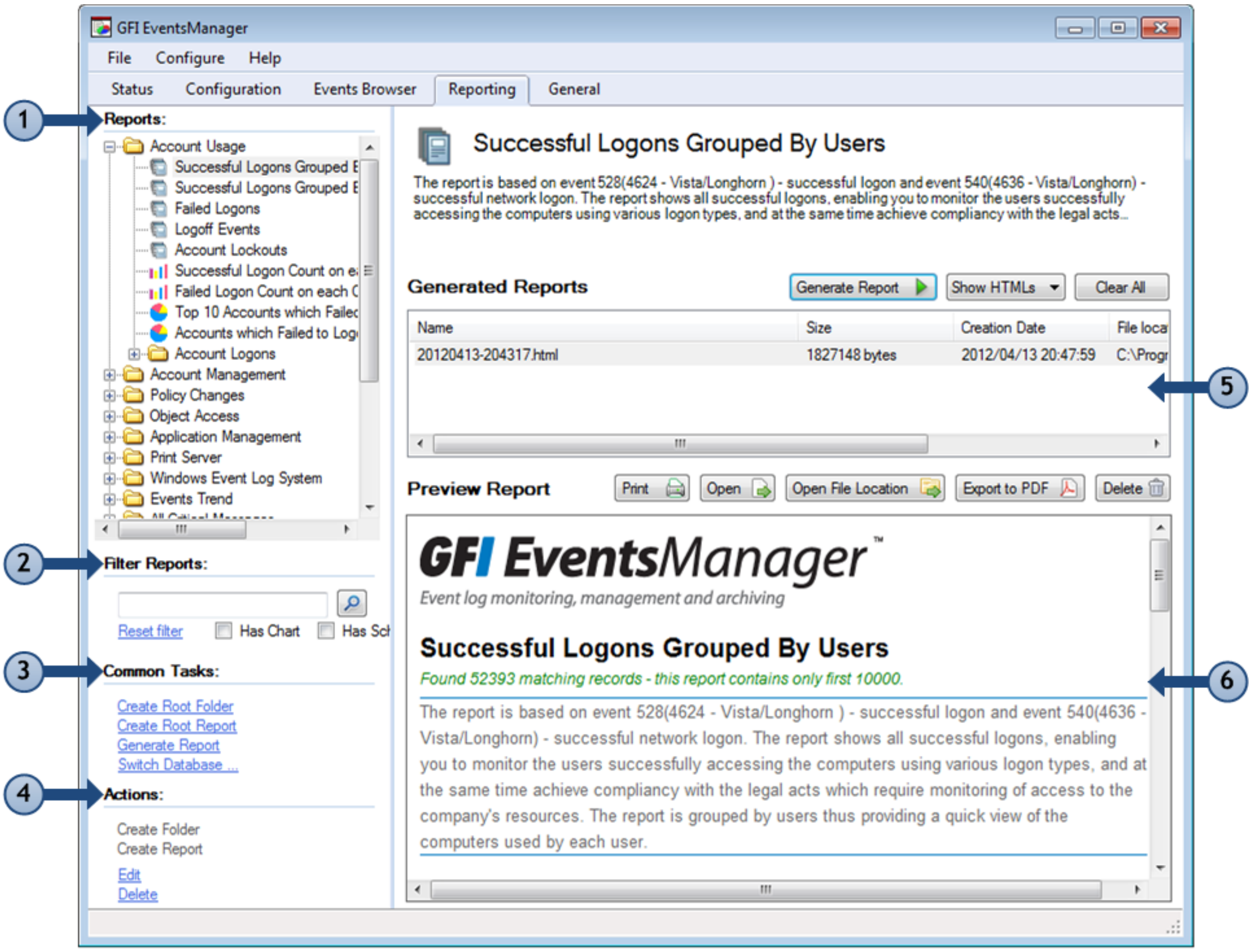
Section	Description
4	The **Activity Overview** section provides information about: » The total number of Windows®, Text Logs, Active Monitoring Logs, Syslog and SNMP Traps events processed on a machine by machine basis » The date/time of the last event collection performed from every machine. Click **Export data** to generate Activity Overview reports.

13 Reporting

This section provides information about the fully-fledged reporting engine of GFI EventsManager. It ships with a number of reports including technical and executive level reports showing graphical and statistical information based on hardware and software managed by GFI EventsManager.

Topics in this section:

13.1 Navigating the Reports tab



Successful Logons Grouped By Users

The report is based on event 528(4624 - Vista/Longhorn) - successful logon and event 540(4636 - Vista/Longhorn) - successful network logon. The report shows all successful logons, enabling you to monitor the users successfully accessing the computers using various logon types, and at the same time achieve compliancy with the legal acts...

Name	Size	Creation Date	File loca
20120413-204317.html	1827148 bytes	2012/04/13 20:47:59	C:\Progr

Successful Logons Grouped By Users

Found 52393 matching records - this report contains only first 10000.

The report is based on event 528(4624 - Vista/Longhorn) - successful logon and event 540(4636 - Vista/Longhorn) - successful network logon. The report shows all successful logons, enabling you to monitor the users successfully accessing the computers using various logon types, and at the same time achieve compliancy with the legal acts which require monitoring of access to the company's resources. The report is grouped by users thus providing a quick view of the computers used by each user.

Screenshot 104: Navigating the Reporting UI

The Reporting tab consists of the sections described below:

Section	Description
1	The **Reports** section contains all the predefined reports that ship with the product. Use this section to organize and generate various reports from technical to executive type.
2	Find reports rapidly, using the available filtering options. Through **Filter Reports** options, you are able to search for reports that contain charts and are generated based on a schedule.
3	The **Common Tasks** section enables you to quickly launch typical operations such as creating folder and report views to organize reports and generating reports.
4	From **Actions**, create, edit or delete reports according to your needs.
5	Use the **Generated Reports** section to view the history of a selected report (from Section 1). This enables you to regenerate and export the report to HTML and/or PDF.
6	The **Preview Report** section provides a view of a selected, generated report. Use the control buttons to Print, Open, Export or Delete reports directly from this section.

13.2 Available reports

GFI EventsManager's extensive report list contains reports for various requirements designed to facilitate reporting as much as possible. The following report categories are included in GFI EventsManager by default. GFI EventsManager allows you to use the existing reports as templates to create your own ones. Each category in the table below contains a number of reports that can be used out of the box or customized to fit your requirements:

Category	Description
Account Usage	Use the reports in this category to identify user logon issues. The event details shown in these reports include successful/failed user logons and locked user accounts.
Account Management	Use the reports in this category to generate a graphical overview of important events that took place across your entire network. The event details shown in these reports include changes in user and computer accounts as well as changes in security group policies.
Policy Changes	Use the reports in this category to identify policy changes effected on your network.
Object Access	Use the reports in this category to identify object access issues. The event details shown in these reports include successful/failed object access and objects that have been deleted.
Application Management	Use the reports in this category to identify faulty applications and application installation and removal issues. The event details shown in these reports include applications that have been installed or removed as well as applications, which are crashing and hanging.
Print Server	Use the reports in this category to display details related to printing events. Details provided in these reports include documents that have been printed, the users that triggered the printing event and the date/time when the printing operation took place.
Windows Event Log System	Use the reports in this category to identify audit failures and important Windows® event log issues. Details provided in these reports include the starting and stopping of event log services, clear log operations as well as errors generated during event logging.
Events Trend	Use the reports in this category to display statistical information related to event generation. Charts provided enumerate the 10 computers and users with most events. Other reports provide event counts on a network-wide basis as well as on a computer-by-computer basis. Reports in this category can be generated for each main time – by hour, day, week or month.
All Critical	Use the reports in this category to display information related to critical Windows® events, Syslog, Text Logs, Custom Events, SNMP Traps and SQL Server® Audit events. The charts provided enumerate the 10 most critical events.
Miscellaneous, Customizable	Use the reports in this category to generate reports that offer broad customization. These can be used to generate reports based on any Windows® event log, using filtering conditions and grouping modes that are not covered by the other default reports.
PCI DSS Compliance / GCSx Code of Connection Requirements / SOX Compliance / HIPAA Compliance / GLBA Compliance	Use the reports in these categories to generate legal compliance regulations reports.
General and Security Requirements	Use the reports in this category to generate various reports required by several GCSx Code of Connection memos.
LOGbinder SP reports	Use the reports in this category to generate reports related to Microsoft® SharePoint® audit events.

13.3 Managing reports

Reports are organized in a tree structure enabling you to easily find and generate the required report. GFI EventsManager includes various options that allow you to easily maintain the reports structure as the number of reports increase by time.

This section contains information about:

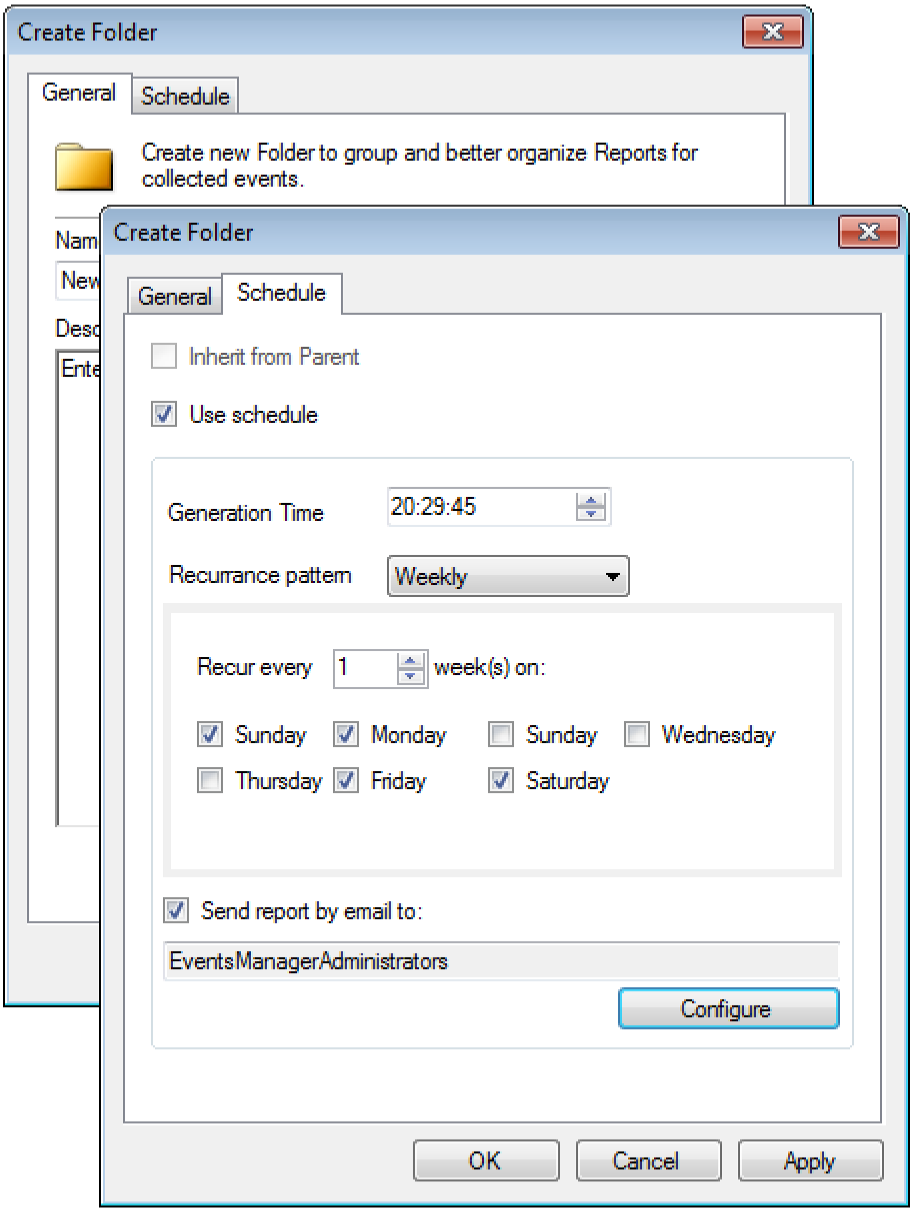
- Creating a root folder
- Creating a folder
- Creating a root report
- Creating custom reports
- Defining column headings

13.3.1 Creating a root folder

Root folders are top-level folders which may contain one or more sub-folders or reports.

To create a root folder:

1. From **Reporting** tab **> Common Tasks**, click **Create Root Folder**.



Create new Folder to group and better organize Reports for collected events.

Nam

New

Desc

Ente

☐ Inherit from Parent

☑ Use schedule

Generation Time 20:29:45

Recurrance pattern Weekly

Recur every 1 week(s) on:

☑ Sunday ☑ Monday ☐ Sunday ☐ Wednesday

☐ Thursday ☑ Friday ☑ Saturday

☑ Send report by email to:

EventsManagerAdministrators

Screenshot 105: Create Report Folder dialog

2. From the **General** tab, specify a name and a description (optional) for the new folder.

3. Click **Schedule** tab and select **Use schedule** to configure a schedule for the reports included in this new folder. Configure the options described below:

Option	Description
Inherit from Parent	Select when the new folder is part of a root folder that already has scheduling configured.
Use schedule	Select **Use Schedule** to enable scheduling of the reports contained in the new folder.
Generation time	Specify the time when reports are generated.
Recurrence pattern	Specify the report generation frequency. Select from **Daily**, **Weekly** or **Monthly** pattern and configure the respective parameters.
Send report by email to	Select this option to enable email notifications. Click Configure to select the users from the Select users and groups… dialog. **NOTE** Configure alerting options before using this feature.

4. Click **Apply** and **OK**

13.3.2 Creating a folder

GFI EventsManager allows you to create as many recurring folders as required.

To create a folder:

1. From **Reporting** tab > **Reports**, right-click a root or sub-folder and select **Create Folder**.

2. From the **General** tab, specify the name and description (optional) for the new group.

3. Click **Schedule** tab and configure the required schedule settings.

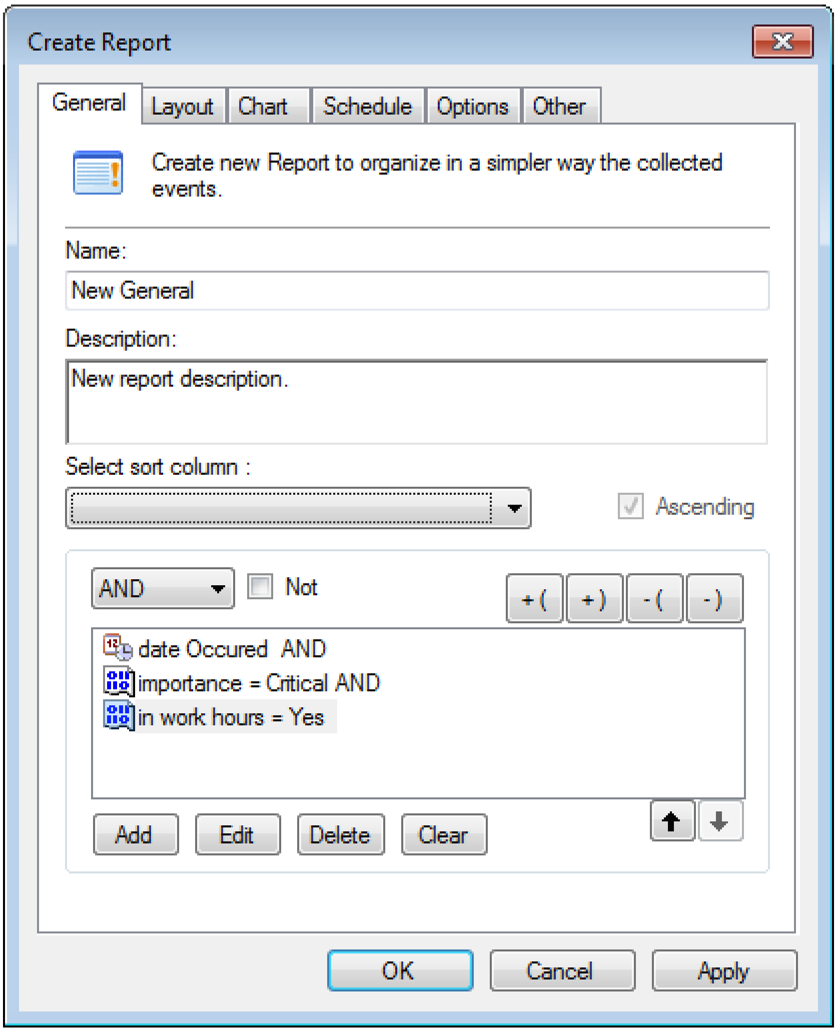
4. Click **Apply** and **OK**

13.4 Creating a root report

Root reports behave in the same way as root folders. These are created at the top level and may contain a number of sub reports. For example, you can create a root report that generates on monthly basis, and contains information about successful logons, failed logons and account lockouts. It's sub-reports would only contain information about specific parts of the root report, such as failed logons only, generated on daily basis.

To create a root report:

1. From **Reporting** tab > **Common Tasks**, click **Create Root Report**.



Create Report

Create new Report to organize in a simpler way the collected events.

Name: New General

Description: New report description.

Select sort column :

☑ Ascending

AND ☐ Not

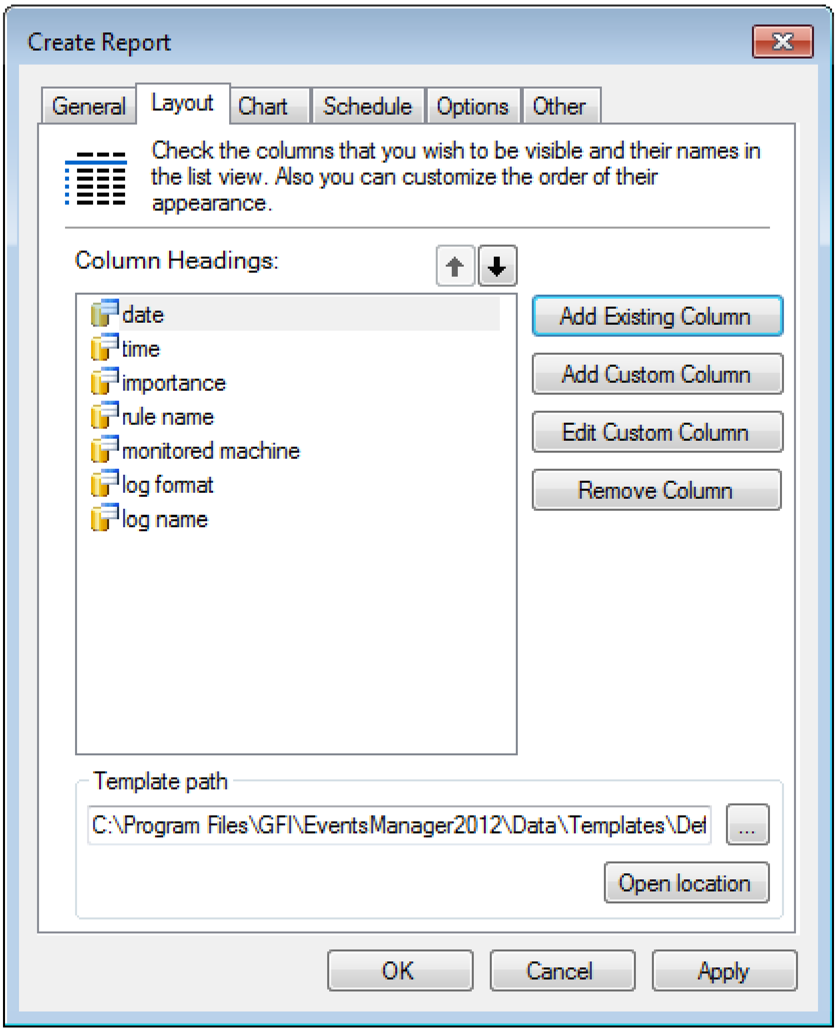
date Occured AND
importance = Critical AND
in work hours = Yes

Screenshot 106: Creating a root report

2. From the **General** tab, specify a name and description (optional) for the new root report.

3. Click **Add** to select a field on which to base the query condition. For the selected field, specify the **Field Operator** and **Field Value**. Click **OK**

> **Note**
>
> Repeat this step until all the required fields are selected.



Check the columns that you wish to be visible and their names in the list view. Also you can customize the order of their appearance.

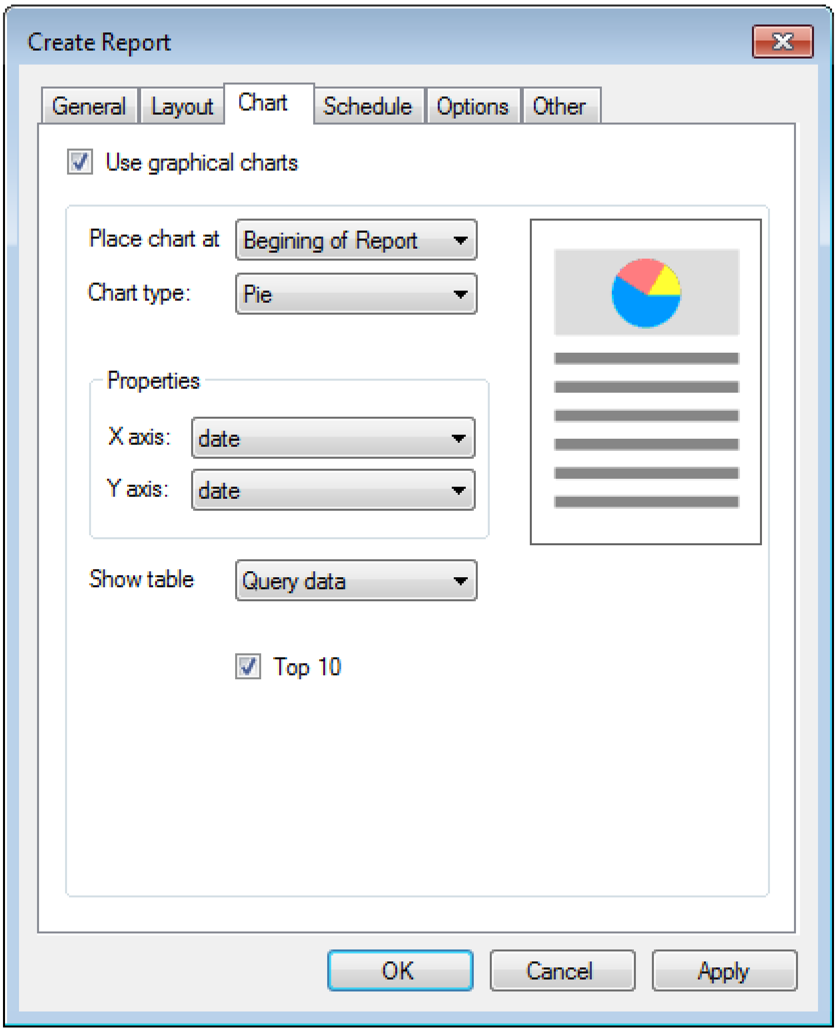
Column Headings:

- date
- time
- importance
- rule name
- monitored machine
- log format
- log name

Template path: C:\Program Files\GFI\EventsManager2012\Data\Templates\Def

Screenshot 107: Configuring new root report layout options

4. Click **Layout** tab and add the column headings that you want to be visible in the report. If you have a saved report template, click **Open location** to browse and load your template.



☑ Use graphical charts

Place chart at: Begining of Report

Chart type: Pie

Properties

X axis: date

Y axis: date

Show table: Query data

☑ Top 10

Screenshot 108: Inserting a chart in a new root report

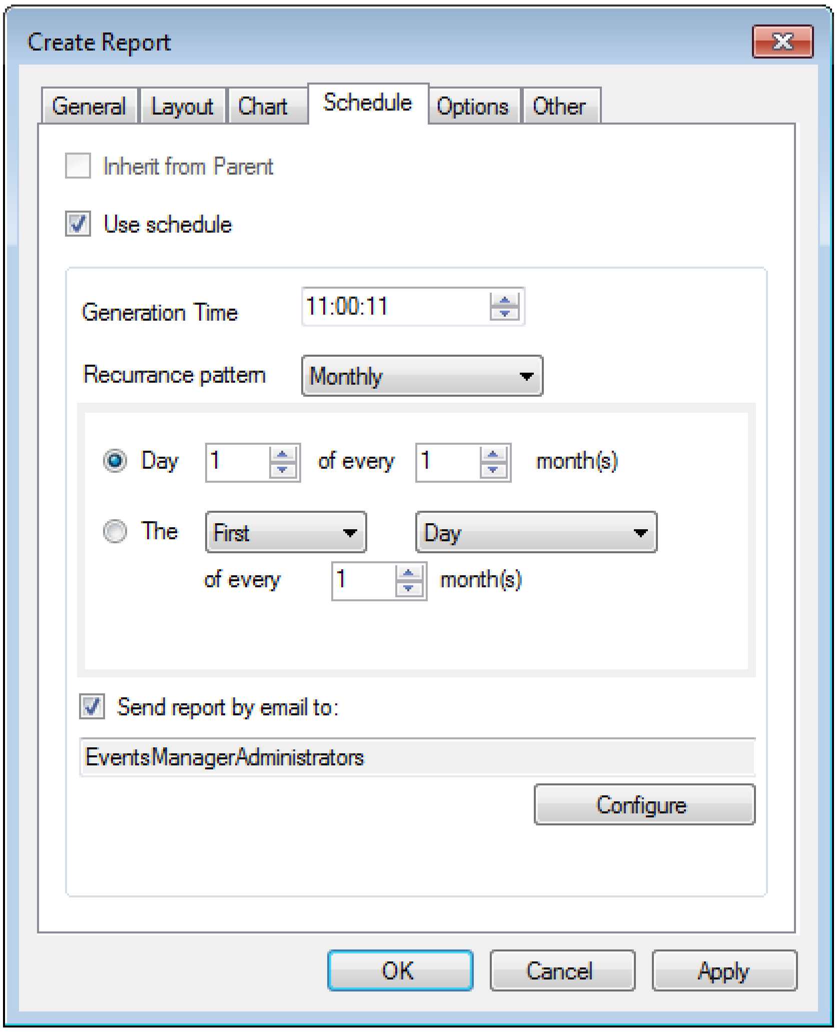
5. (Optional) Click **Chart** tab and select **Use graphical charts** to include graphs in your report.

6. From the **Place chart at** drop-down menu, specify the location of the chart. Select from:

- Beginning of Report
- End of Report.

7. From **Properties > X axis** and **Y axis**, configure the X and Y Axis properties. I.e. select the data represented in the chart.

8. Select **Top 10** to view the Top 10 records only.



□ Inherit from Parent

☑ Use schedule

Generation Time 11:00:11

Recurrance pattern Monthly

● Day 1 of every 1 month(s)

○ The First Day of every 1 month(s)

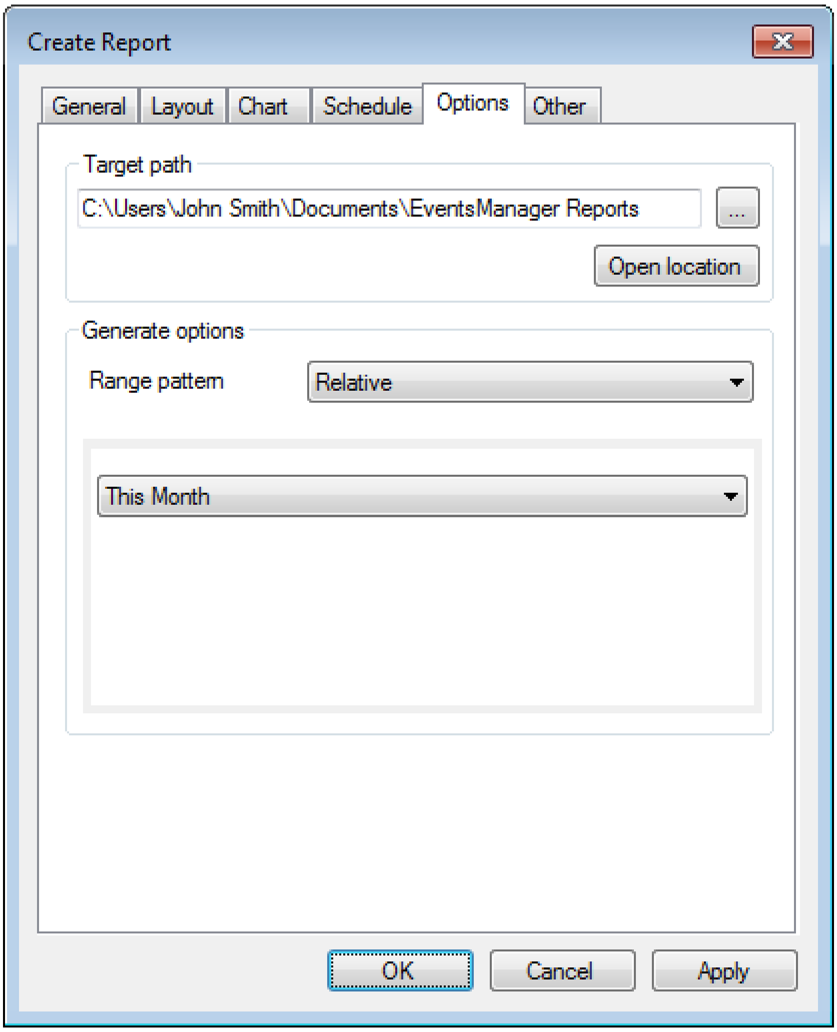
☑ Send report by email to:

EventsManagerAdministrators

Screenshot 109: Configuring the schedule for when the report is generated

9. (Optional) Click **Schedule** tab and configure schedule settings.

10. Select **Send report by email to** and click **Configure** to select the recipients of this report.



Target path: C:\Users\John Smith\Documents\EventsManager Reports

Generate options

Range pattern: Relative

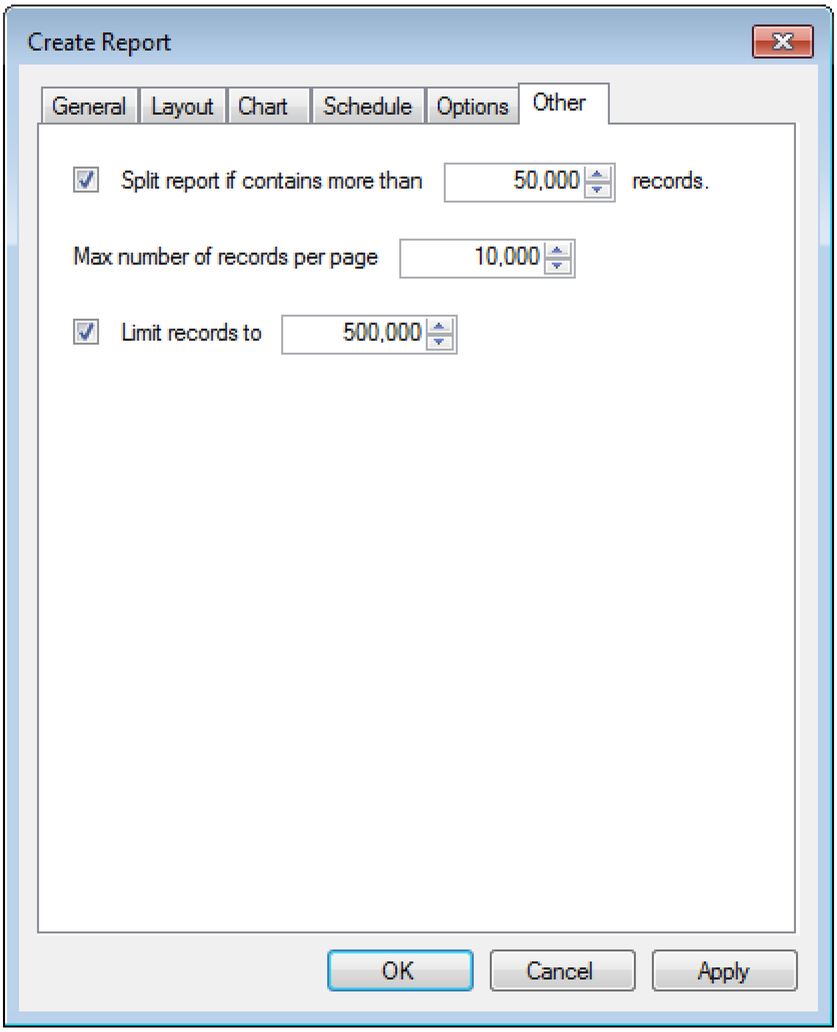
This Month

Screenshot 110: Create new report Options

11. Click **Options** tab and specify the path to where the report generates to in the **Target path** area.

12. From the **Range pattern** drop-down menu, select the options described in the table below:

Pattern	Description
All Time	Select **All Time** to generate the report based on information from all the related logs.
Relative	Generate the report based on events from: » Today » Yesterday » Last 7 Days » This Month » Last Month.
Day	Specify a single day that you want to base your report on.
Month	Specify a month and year that you want to base your report on.
Date Range	Specify a **From** and **To** date to base report information on events collected in the specified time period.



☑ Split report if contains more than 50,000 records.

Max number of records per page 10,000

☑ Limit records to 500,000

Screenshot 111: Record limit settings

13. Click **Other** tab to configure report record limits. Available options are described in the table below:

Option	Description
Split report if it contains more than {X} records	Select the checkbox to enable record limit per report. GFI EventsManager automatically creates a new report for every number of records you specify. Example: if you key in 50, 000 and the report contains 150, 000 records, GFI EventsManager generates three reports.
Max number of records per page	Specify the number of records that are displayed in a single page.
Limit records to	Specify the maximum number of records that are included in the report. Records that exceed the limit are ignored.

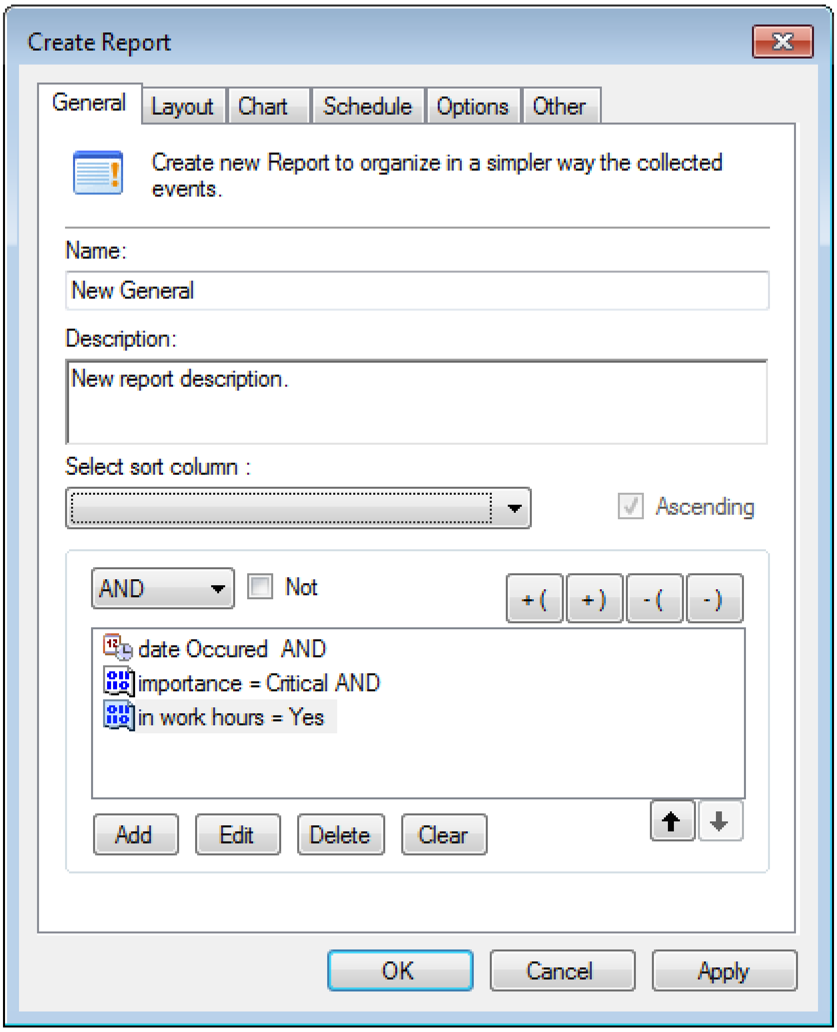
14. Click **Apply** and **OK**

13.5 Creating custom reports

Creating custom reports requires planning while setting up conditions. Conditions are set to determine what is filtered and presented in the report. Failing to configure conditions properly generates unwanted noise and inaccurate information.

To create a new custom report:

1. From **Reporting** tab > **Reports**, right-click a root folder/folder/root report and select **Create Report**.



Create new Report to organize in a simpler way the collected events.

Name:
New General

Description:
New report description.

date Occured AND
importance = Critical AND
in work hours = Yes

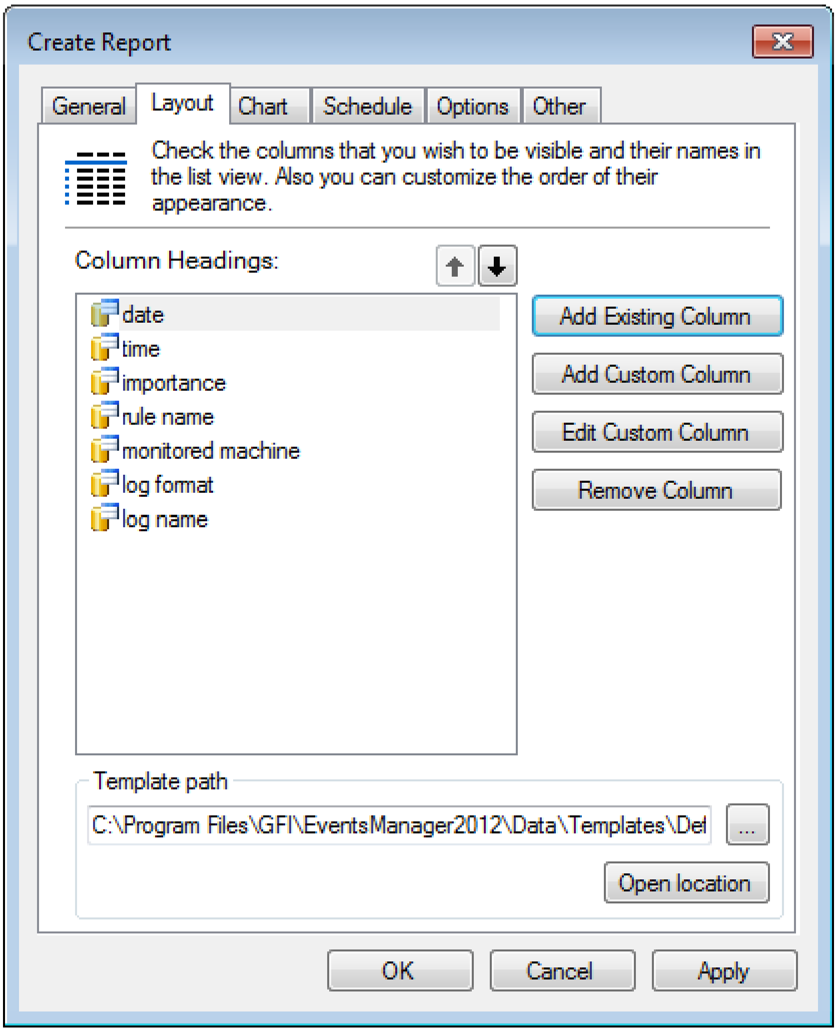
Screenshot 112: Creating a root report

2. From the **General** tab, specify a name and description (optional) for the new root report.

3. Click **Add** to select a field on which to base the query condition. For the selected field, specify the **Field Operator** and **Field Value**. Click **OK**

Note

Repeat this step until all the required fields are selected.



Check the columns that you wish to be visible and their names in the list view. Also you can customize the order of their appearance.

Column Headings:

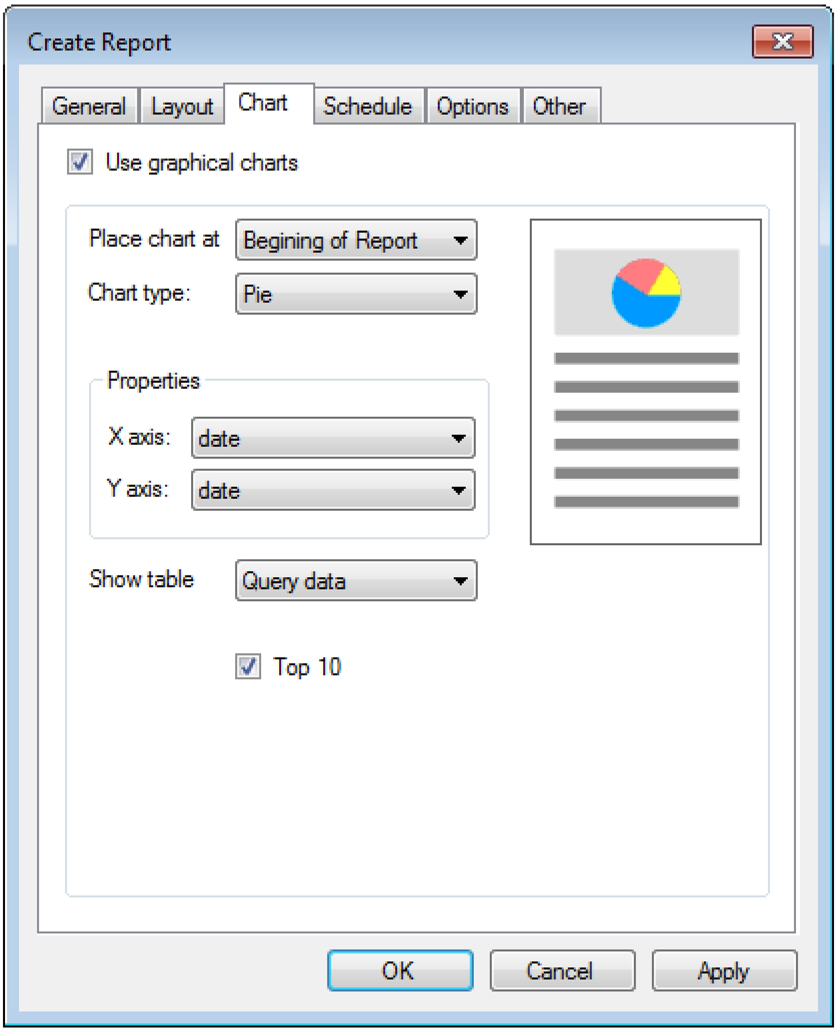
- date
- time
- importance
- rule name
- monitored machine
- log format
- log name

Template path

C:\Program Files\GFI\EventsManager2012\Data\Templates\Def

Screenshot 113: Configuring new root report layout options

4. Click **Layout** tab and add the column headings that you want to be visible in the report. If you have a saved report template, click **Open location** to browse and load your template.



☑ Use graphical charts

Place chart at: Begining of Report

Chart type: Pie

Properties

X axis: date

Y axis: date

Show table: Query data

☑ Top 10

Screenshot 114: Inserting a chart in a new root report

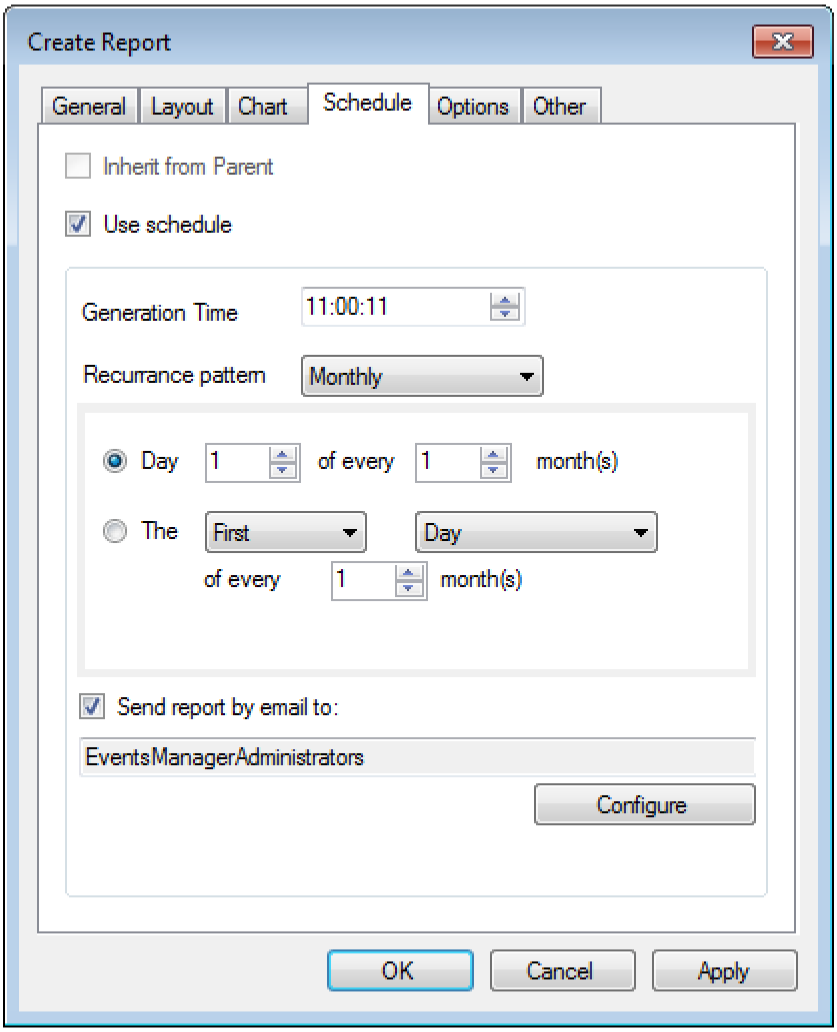
5. (Optional) Click **Chart** tab and select **Use graphical charts** to include graphs in your report.

6. From the **Place chart at** drop-down menu, specify the location of the chart. Select from:

- Beginning of Report
- End of Report.

7. From **Properties > X axis** and **Y axis**, configure the X and Y Axis properties. I.e. select the data represented in the chart.

8. Select **Top 10** to view the Top 10 records only.



☐ Inherit from Parent

☑ Use schedule

Generation Time 11:00:11

Recurrance pattern Monthly

● Day 1 of every 1 month(s)

○ The First Day of every 1 month(s)

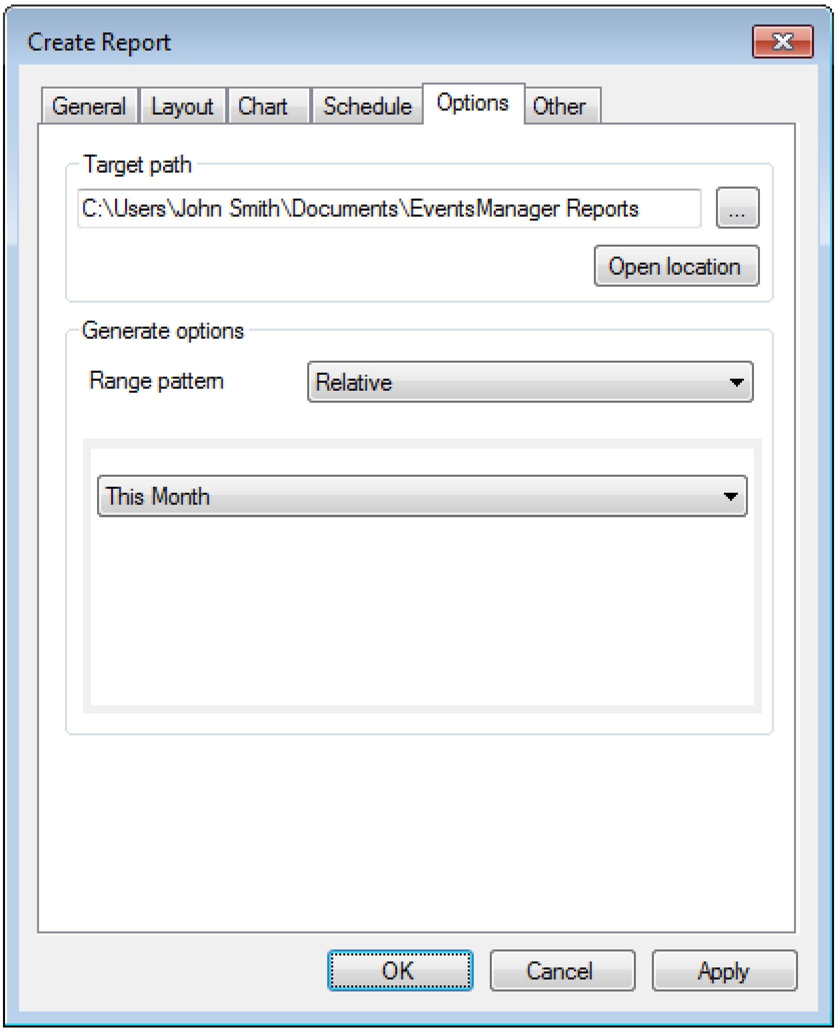
☑ Send report by email to:

EventsManagerAdministrators

Screenshot 115: Configuring the schedule for when the report is generated

9. (Optional) Click **Schedule** tab and configure schedule settings.

10. Select **Send report by email to** and click **Configure** to select the recipients of this report.



Target path: C:\Users\John Smith\Documents\EventsManager Reports

Generate options

Range pattern: Relative

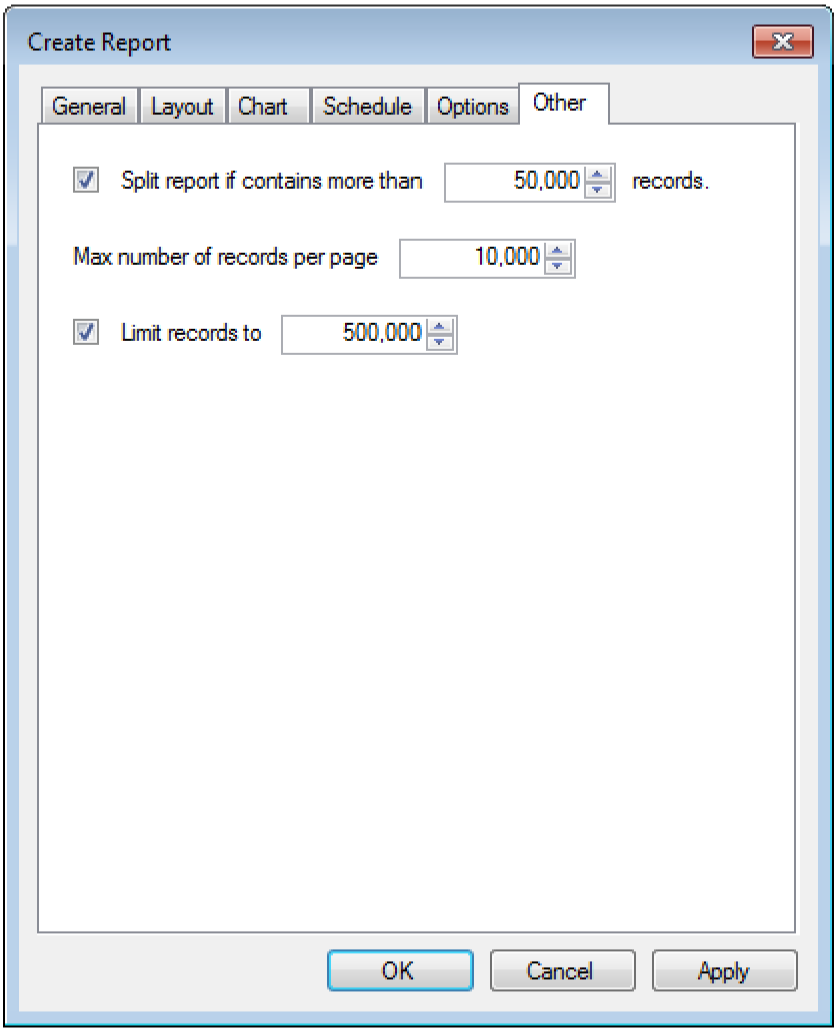
This Month

Screenshot 116: Create new report Options

11. Click **Options** tab and specify the path to where the report generates to in the **Target path** area.

12. From the **Range pattern** drop-down menu, select the options described in the table below:

Pattern	Description
All Time	Select **All Time** to generate the report based on information from all the related logs.
Relative	Generate the report based on events from: » Today » Yesterday » Last 7 Days » This Month » Last Month.
Day	Specify a single day that you want to base your report on.
Month	Specify a month and year that you want to base your report on.
Date Range	Specify a **From** and **To** date to base report information on events collected in the specified time period.



☑ Split report if contains more than 50,000 records.

Max number of records per page 10,000

☑ Limit records to 500,000

Screenshot 117: Record limit settings

13. Click **Other** tab to configure report record limits. Available options are described in the table below:

Option	Description
Split report if it contains more than {X} records	Select the checkbox to enable record limit per report. GFI EventsManager automatically creates a new report for every number of records you specify. Example: if you key in 50, 000 and the report contains 150, 000 records, GFI EventsManager generates three reports.
Max number of records per page	Specify the number of records that are displayed in a single page.
Limit records to	Specify the maximum number of records that are included in the report. Records that exceed the limit are ignored.

14. Click **Apply** and **OK**

13.6 Generating reports

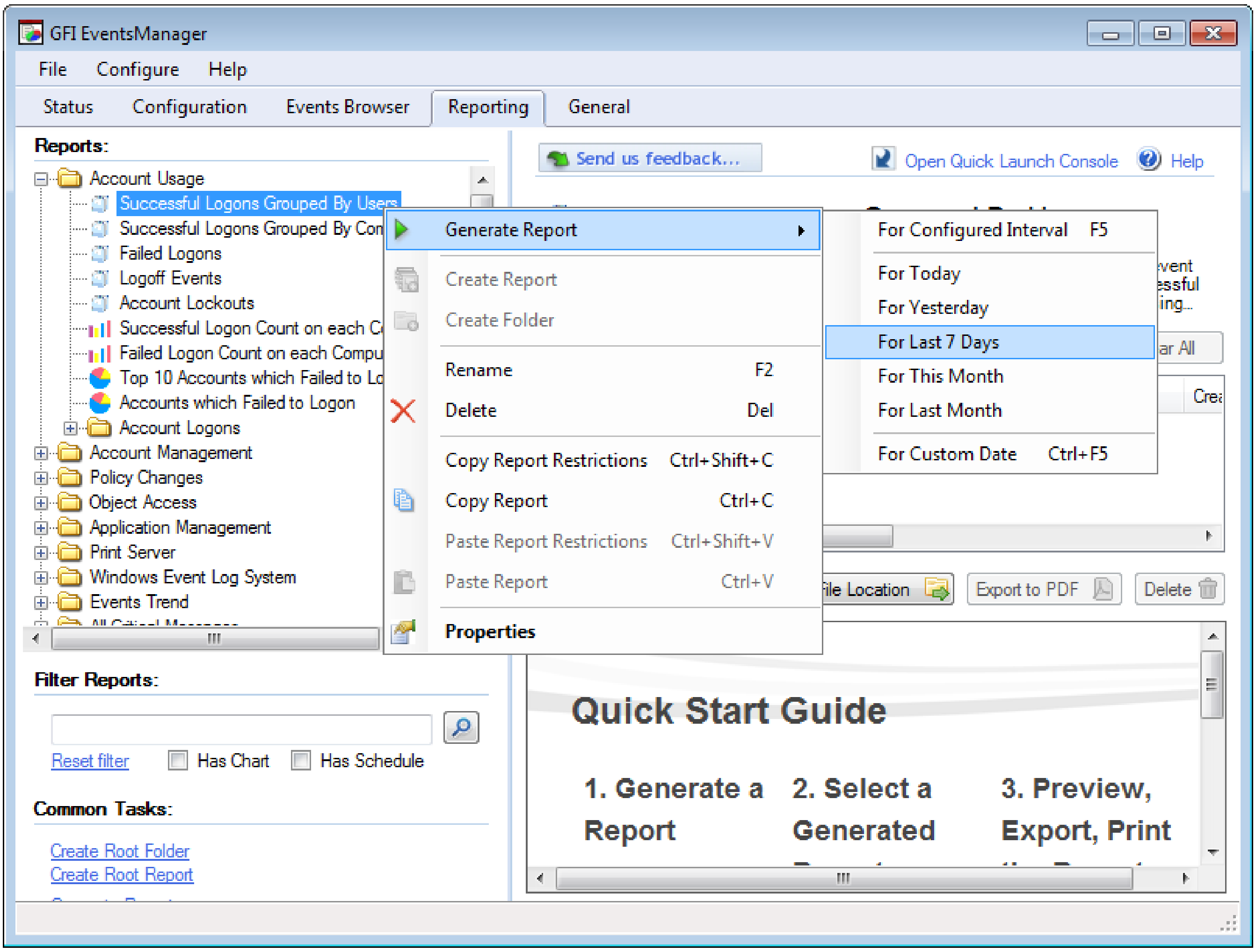
GFI EventsManager enables you to generate a number of different reports, containing information about GFI EventsManager configuration settings, network activity and product activity.

This section contains information about:

13.6.1 Generating a report

To generate a report:

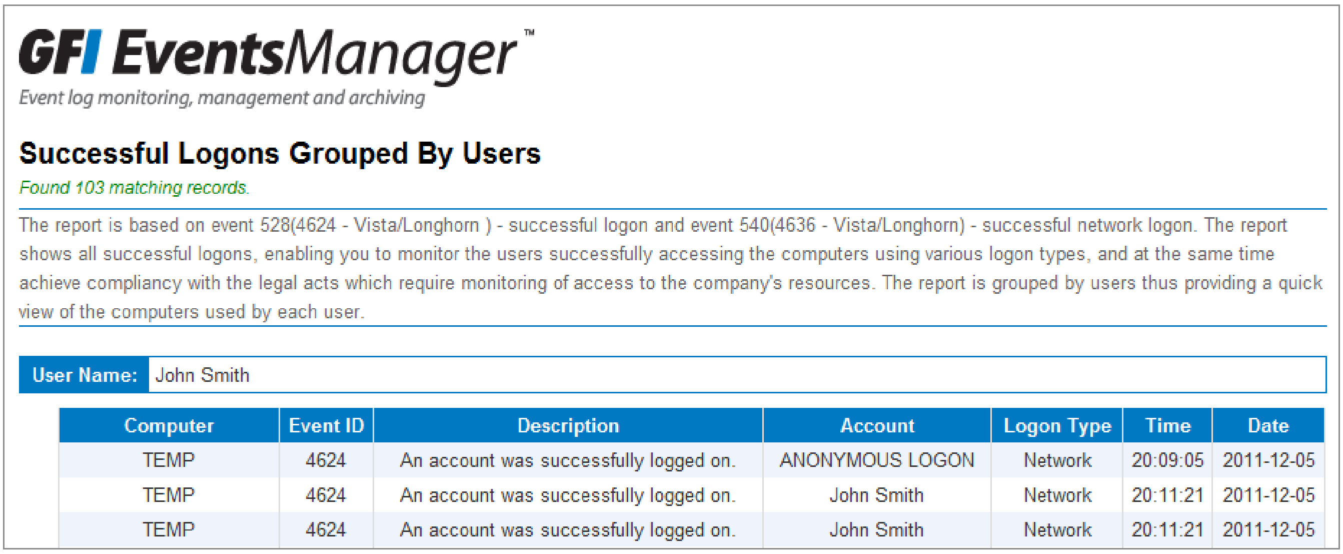
1. From **Reporting** tab **>** **Reports**, right-click a report and select **Generate Report**.



Screenshot 118: Generating a report

2. Wait for the report to generate and view results in **Preview Report** section.

> **Note**
>
> Reports can also be generated by selecting a report from the list and clicking **Generate Report** at the top of the reporting page.



GFI EventsManager™

Event log monitoring, management and archiving

Successful Logons Grouped By Users

Found 103 matching records.

The report is based on event 528(4624 - Vista/Longhorn) - successful logon and event 540(4636 - Vista/Longhorn) - successful network logon. The report shows all successful logons, enabling you to monitor the users successfully accessing the computers using various logon types, and at the same time achieve compliancy with the legal acts which require monitoring of access to the company's resources. The report is grouped by users thus providing a quick view of the computers used by each user.

User Name: John Smith

Computer	Event ID	Description	Account	Logon Type	Time	Date
TEMP	4624	An account was successfully logged on.	ANONYMOUS LOGON	Network	20:09:05	2011-12-05
TEMP	4624	An account was successfully logged on.	John Smith	Network	20:11:21	2011-12-05
TEMP	4624	An account was successfully logged on.	John Smith	Network	20:11:21	2011-12-05

Screenshot 119: Report sample

13.6.2 Generating daily digest reports

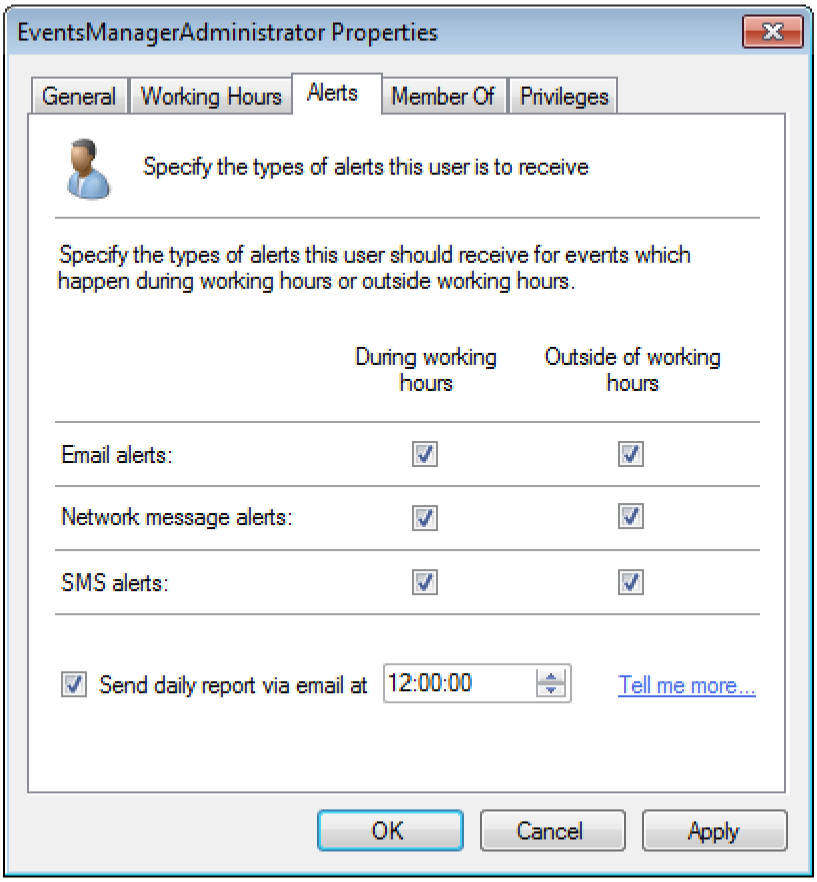
GFI EventsManager can be configured to send a summary report by email on a daily basis. The report contains a summary of the most important events collected and processed during the last 24 hours. To configure a user to receive Daily Digest emails:

1. From **Configuration** tab **> Options**. Expand **Users and Groups** and select **Users**.

2. Right-click a user from the right pane and select **Properties**.

3. From the **General** tab, ensure that a valid email address is configured.

4. From the **Alerts** tab, select **Send daily report via email**.



EventsManagerAdministrator Properties

Specify the types of alerts this user is to receive

Specify the types of alerts this user should receive for events which happen during working hours or outside working hours.

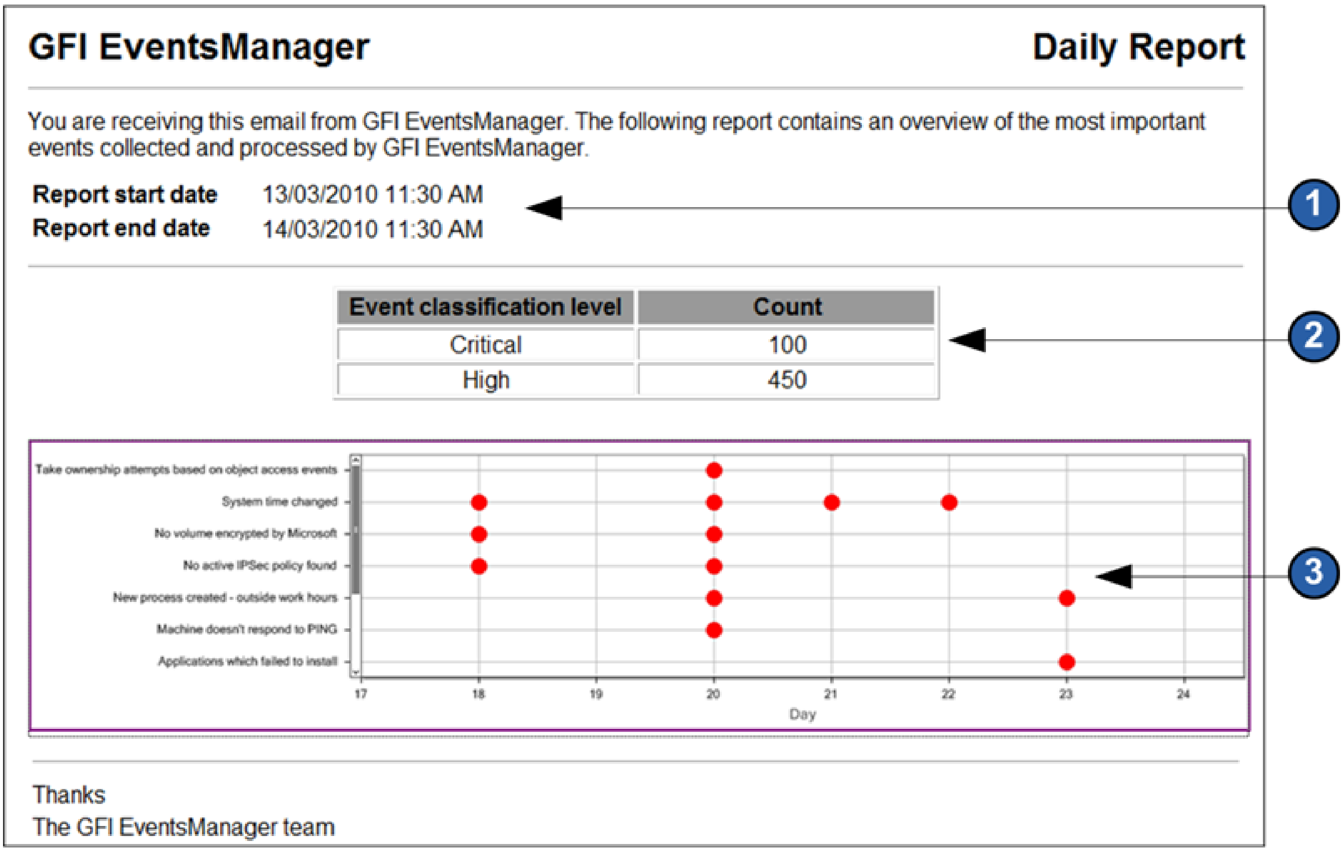
	During working hours	Outside of working hours
Email alerts:	☑	☑
Network message alerts:	☑	☑
SMS alerts:	☑	☑

☑ Send daily report via email at 12:00:00

Screenshot 120: Daily Digest email settings

5. Configure the time when the Daily Digest email is sent.

6. Click **Apply** and **OK**



1
2
3
Take ownership attempts based on object access events
System time changed
No volume encrypted by Microsoft
No active IPSec policy found
New process created - outside work hours
Machine doesn't respond to PING
Applications which failed to install
17
18
19
20
21
22
23
24
Day

GFI EventsManager **Daily Report**

You are receiving this email from GFI EventsManager. The following report contains an overview of the most important events collected and processed by GFI EventsManager.

Report start date	13/03/2010 11:30 AM
Report end date	14/03/2010 11:30 AM

Event classification level	Count
Critical	100
High	450

Thanks
The GFI EventsManager team

Screenshot 121: Daily digest email

Section	Description
1	The start and end date of the report. The report displays the most important events collected by GFI EventsManager between the start and end date.
2	The number of Critical and High events collected in the last 24 hours.
3	This graph provides statistical information about critical events collected from all event sources in the last 24 hours.

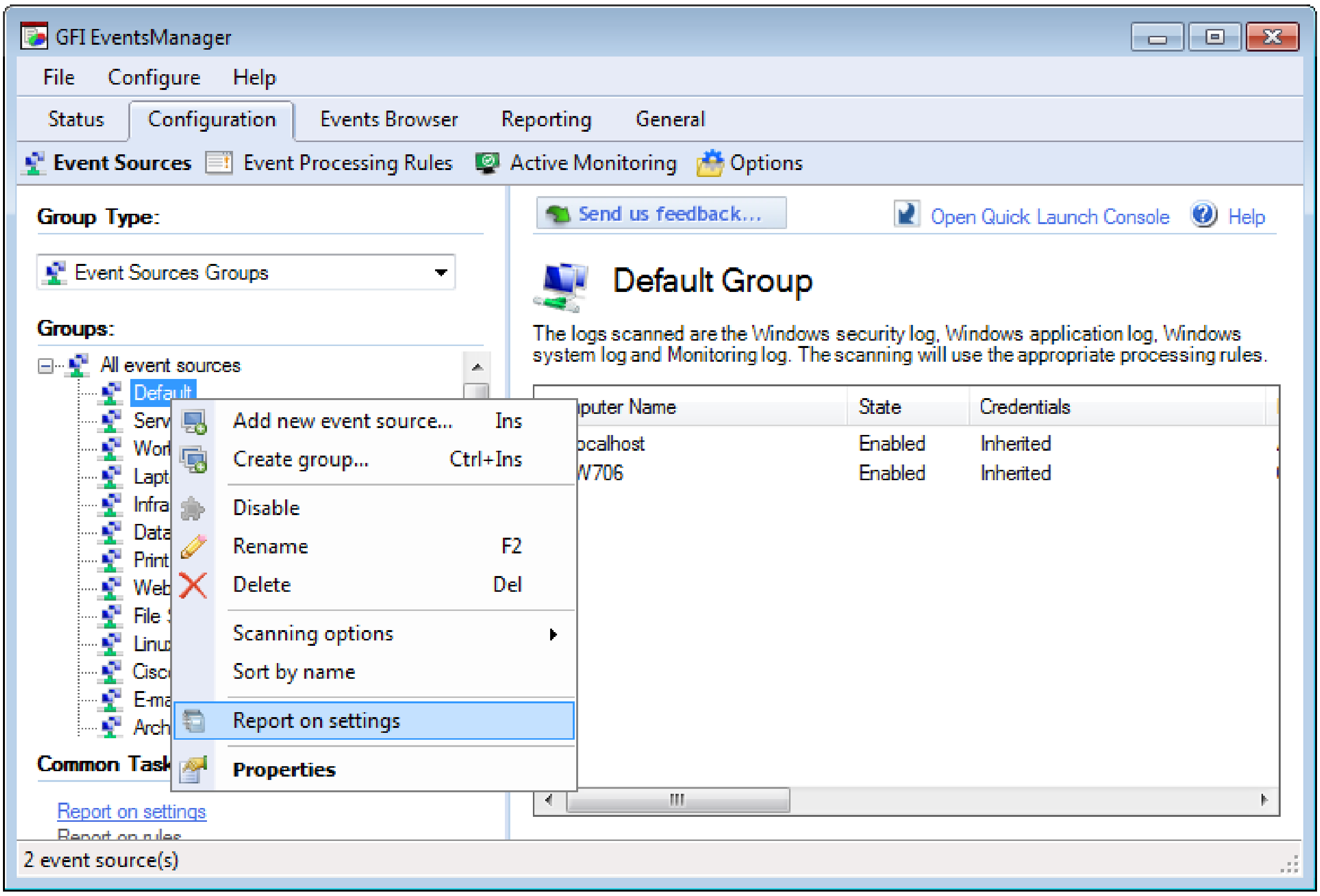
13.6.3 Generating settings reports

GFI EventsManager enables you to generate settings reports on event source groups. The provided information is described below:

Heading	Description
Group name	The name of the group the report is based on.
Computer name	A list of every event source in the selected group.
Scan intervals	Scanning interval for every event source in the selected group; shown in **Days : Hours : Minutes : Seconds**.
Rules folder	Provides a list of rule categories applied to the selected group, such as: » Noise reduction » Security » System health » PCI DSS requirements.
Rule sets	A granular list of rules applied on the selected group.

To generate settings report:

1. Click **Configuration** tab > **Event Sources**.



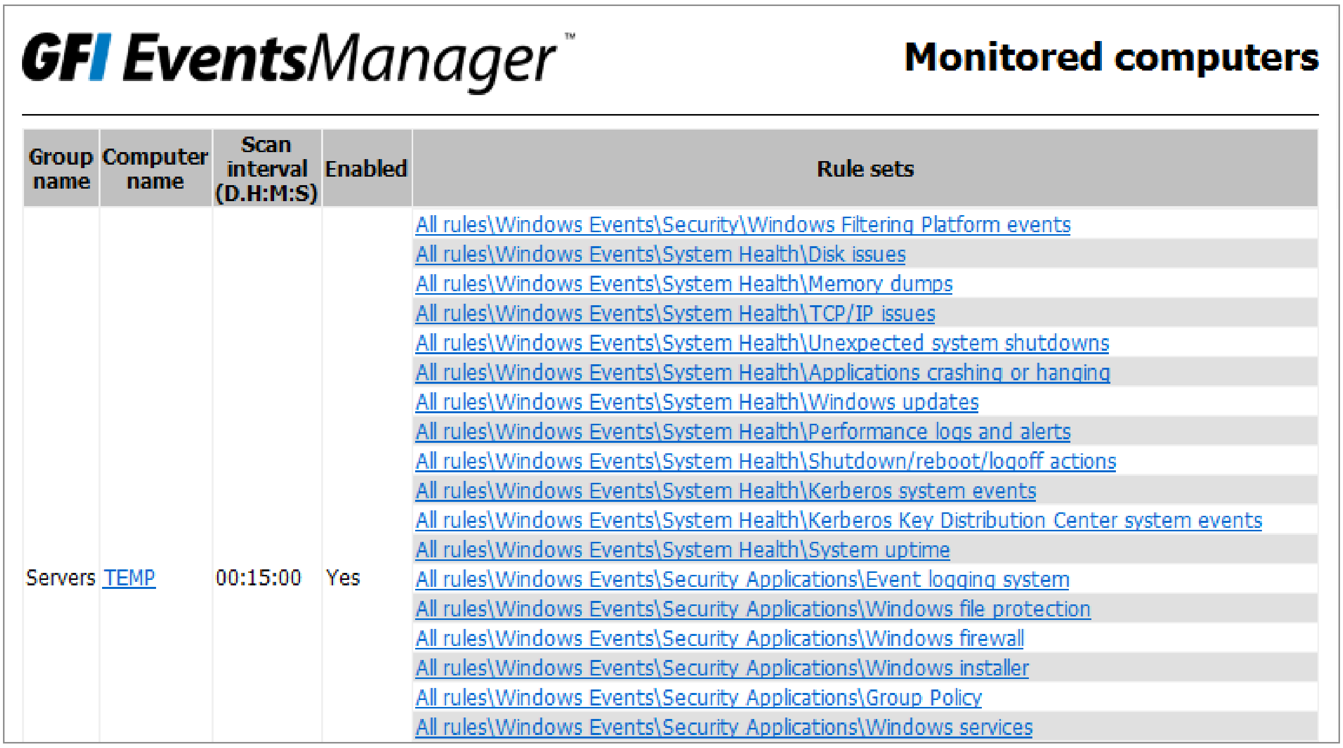
Default Group

The logs scanned are the Windows security log, Windows application log, Windows system log and Monitoring log. The scanning will use the appropriate processing rules.

puter Name	State	Credentials
ocalhost	Enabled	Inherited
W706	Enabled	Inherited

Screenshot 122: Generate configuration report

2. Right-click an event source group and select **Report on settings**.



Monitored computers

Group name	Computer name	Scan interval (D.H:M:S)	Enabled	Rule sets
Servers	TEMP	00:15:00	Yes	All rules\Windows Events\Security\Windows Filtering Platform events
				All rules\Windows Events\System Health\Disk issues
				All rules\Windows Events\System Health\Memory dumps
				All rules\Windows Events\System Health\TCP/IP issues
				All rules\Windows Events\System Health\Unexpected system shutdowns
				All rules\Windows Events\System Health\Applications crashing or hanging
				All rules\Windows Events\System Health\Windows updates
				All rules\Windows Events\System Health\Performance logs and alerts
				All rules\Windows Events\System Health\Shutdown/reboot/logoff actions
				All rules\Windows Events\System Health\Kerberos system events
				All rules\Windows Events\System Health\Kerberos Key Distribution Center system events
				All rules\Windows Events\System Health\System uptime
				All rules\Windows Events\Security Applications\Event logging system
				All rules\Windows Events\Security Applications\Windows file protection
				All rules\Windows Events\Security Applications\Windows firewall
				All rules\Windows Events\Security Applications\Windows installer
				All rules\Windows Events\Security Applications\Group Policy
				All rules\Windows Events\Security Applications\Windows services

Screenshot 123: Settings report sample

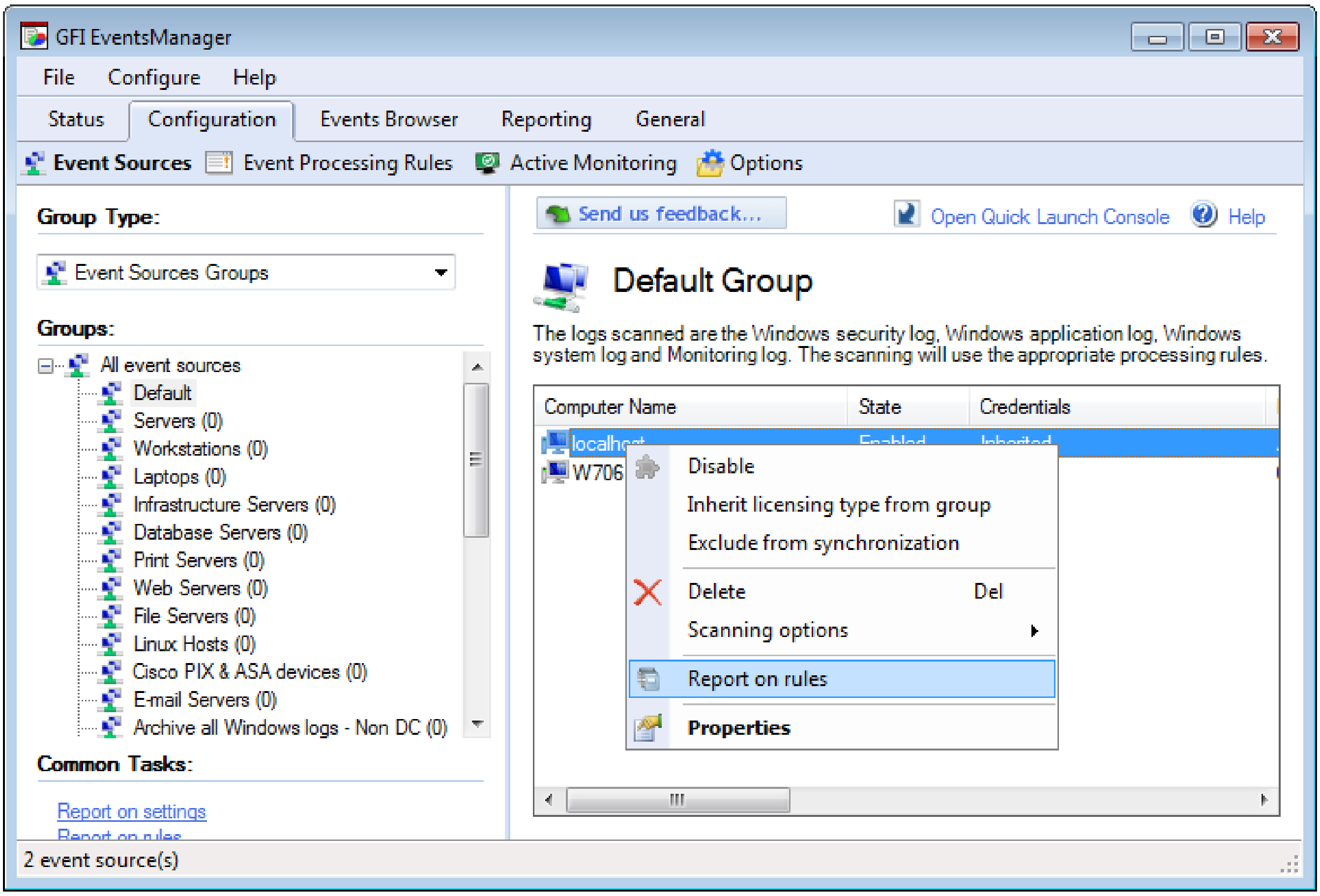
13.6.4 Generating rules reports

Rules repots provide a detailed view of applied rules on event sources. The information provided in rules reports are described below:

Heading	Description
Rule name	Name of the applied rule.
Importance	The classified importance level of the collect event log, such as: » Critical » High » Medium » Low » Noise event.
Logfile monitored	Provides the category name of the collected event log, such as: » Security » System Health » Application » System.
Conditions	The processing condition(s) for the selected rule. This includes: » Event IDs » Source » Category » User » Type » Advanced.
Actions	Describes the actions taken when the event is processed, including: » Archiving settings » Mail to settings » Threshold settings.

To generate rules report:

1. Click **Configuration** tab **> Event Sources**.



The logs scanned are the Windows security log, Windows application log, Windows system log and Monitoring log. The scanning will use the appropriate processing rules.

Screenshot 124: Generate configuration report

2. Right-click an event source and select **Report on rules**.

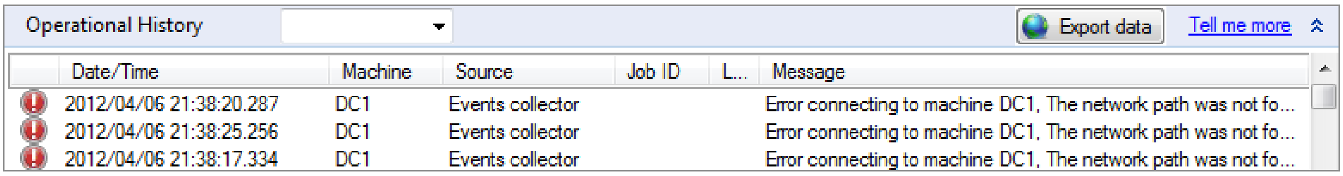
13.6.5 Generating operational history reports

GFI EventsManager's operational history can be exported for further analysis and archiving purposes. Operational history messages provide administrators with information as described below:

Date/Time	Date and time when the message was generated.
Machine	Event source that generated the message.
Source	Source operation that cause the message to be generated. Amongst others these include: » **EvtCollector** – message generated while collecting event logs » **SNMP TrapsServer** – message generated while collecting SNMP Traps Messages » **EnetrpriseMaintenance** – message generated during database maintenance jobs.
Job ID	An internal ID associated with the job.
Log file/name	Type of logs collected. Amongst others: Application Security Logs generated by other applications such as GFI LanGuard and GFI EndPointSecurity.
Message	The actual message generated while performing the job.

To generate Operational History reports:

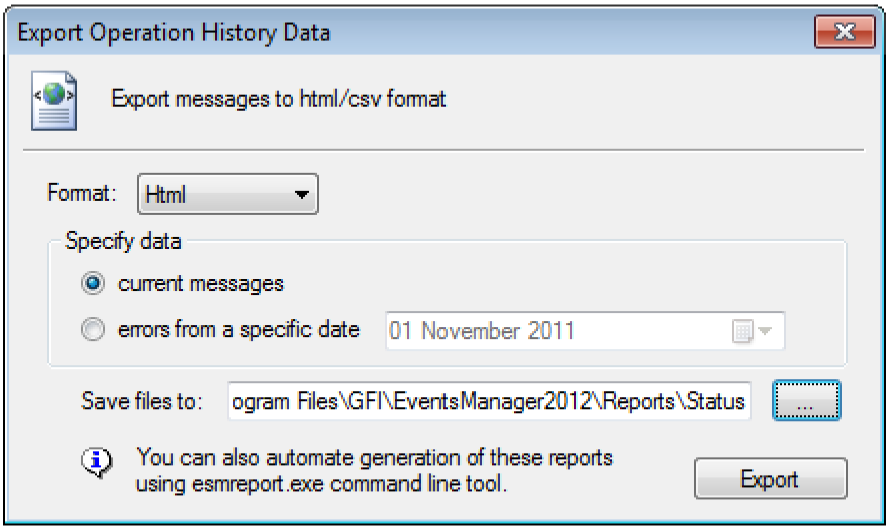
1. Click **Status** tab > **Job Activity**.



Date/Time	Machine	Source	Job ID	L...	Message
2012/04/06 21:38:20.287	DC1	Events collector			Error connecting to machine DC1, The network path was not fo...
2012/04/06 21:38:25.256	DC1	Events collector			Error connecting to machine DC1, The network path was not fo...
2012/04/06 21:38:17.334	DC1	Events collector			Error connecting to machine DC1, The network path was not fo...

Screenshot 125: Operational History report

2. Click **Export data**.


Export Operation History Data
Export messages to html/csv format

Format: Html

Specify data

● current messages

○ errors from a specific date 01 November 2011

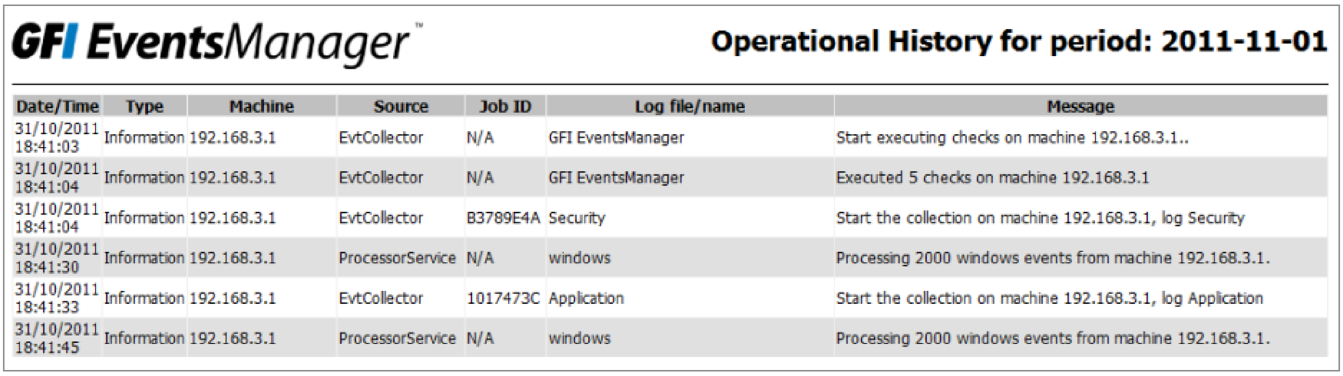
Save files to: ogram Files\GFI\EventsManager2012\Reports\Status

You can also automate generation of these reports using esmreport.exe command line tool.

Screenshot 126: Operational History dialog

3. Specify the options described below and click **Export**.

Option	Description
Format	Select the report output format. Available formats are HTML and CSV.
Current messages	Export all messages displayed in Job Activity tab.
Errors from a specific date	Specify a date and export all the messages generated on that date.
Save file to	Select checkbox to specify output location. If not selected, reports are saved in the default location within the GFI EventsManager directory.



Operational History for period: 2011-11-01

Date/Time	Type	Machine	Source	Job ID	Log file/name	Message
31/10/2011 18:41:03	Information	192.168.3.1	EvtCollector	N/A	GFI EventsManager	Start executing checks on machine 192.168.3.1..
31/10/2011 18:41:04	Information	192.168.3.1	EvtCollector	N/A	GFI EventsManager	Executed 5 checks on machine 192.168.3.1
31/10/2011 18:41:04	Information	192.168.3.1	EvtCollector	B3789E4A	Security	Start the collection on machine 192.168.3.1, log Security
31/10/2011 18:41:30	Information	192.168.3.1	ProcessorService	N/A	windows	Processing 2000 windows events from machine 192.168.3.1.
31/10/2011 18:41:33	Information	192.168.3.1	EvtCollector	1017473C	Application	Start the collection on machine 192.168.3.1, log Application
31/10/2011 18:41:45	Information	192.168.3.1	ProcessorService	N/A	windows	Processing 2000 windows events from machine 192.168.3.1.

Screenshot 127: Operational History report sample

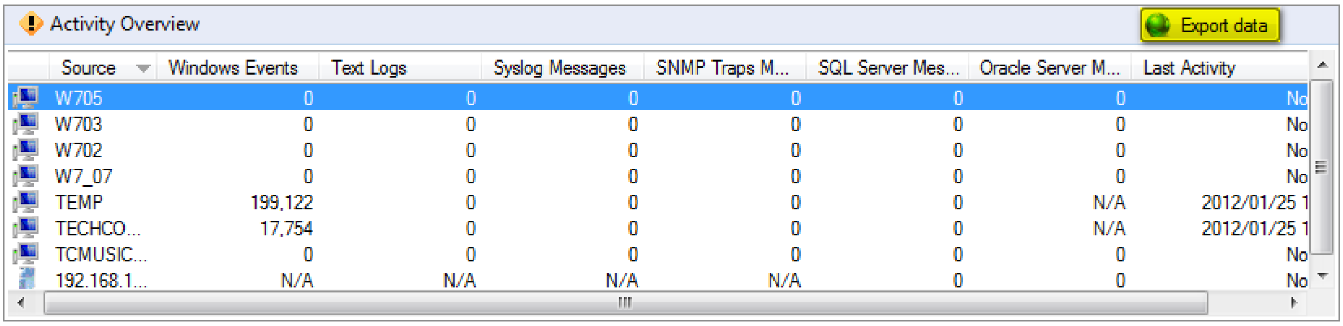
13.6.6 Generating activity overview reports

GFI EventsManager enables you to export Activity Overview data. Activity overview reports provide the information described below:

Heading	Description
Date/Time	Date and time when the message was generated.
Machine	Event source that generated the message.
Source	Source operation that cause the message to be generated. Amongst others these include: » **EvtCollector** – message generated while collecting event logs » **SNMP Traps Server** – message generated while collecting SNMP Traps Messages » **EnetrpriseMaintenance** – message generated during database maintenance jobs.
Job ID	An internal ID associated with the job.
Log file/name	Type of logs collected. Amongst others: » Application » Security » Logs generated by other applications such as GFI LanGuard and GFI EndPointSecurity
Message	The actual message generated while performing the job.

To export Activity Overview:

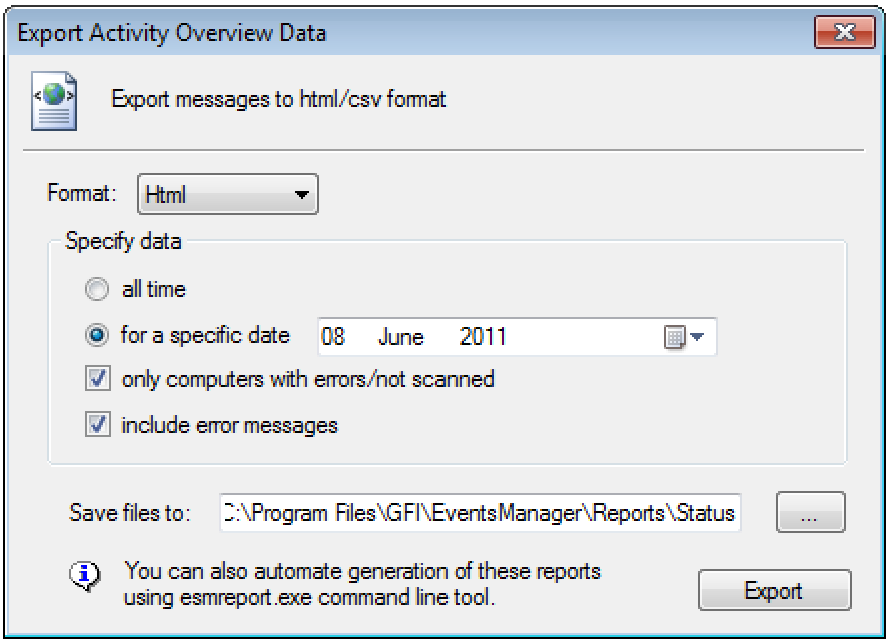
1. Click **Status > Statistics**.



Source	Windows Events	Text Logs	Syslog Messages	SNMP Traps M...	SQL Server Mes...	Oracle Server M...	Last Activity
W705	0	0	0	0	0	0	No
W703	0	0	0	0	0	0	No
W702	0	0	0	0	0	0	No
W7_07	0	0	0	0	0	0	No
TEMP	199,122	0	0	0	0	N/A	2012/01/25 1
TECHCO...	17,754	0	0	0	0	N/A	2012/01/25 1
TCMUSIC...	0	0	0	0	0	0	No
192.168.1...	N/A	N/A	N/A	N/A	0	0	No

Screenshot 128: Activity overview : Export button

2. Click **Export data**.



Export Activity Overview Data

Export messages to html/csv format

Format: Html

Specify data

○ all time

● for a specific date 08 June 2011

☑ only computers with errors/not scanned

☑ include error messages

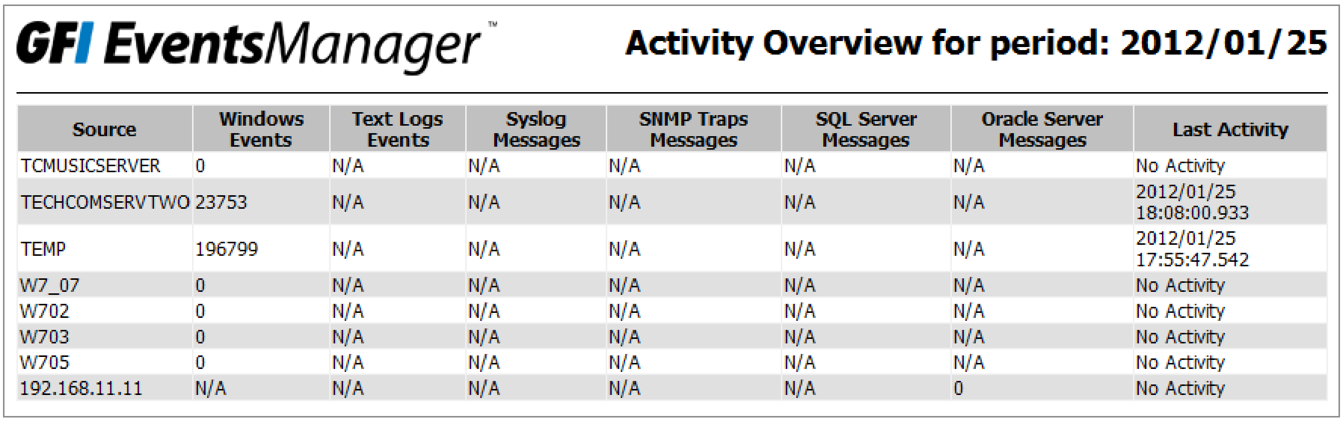
Save files to: :\Program Files\GFI\EventsManager\Reports\Status

You can also automate generation of these reports using esmreport.exe command line tool.

Screenshot 129: Activity overview dialog

3. Configure the options described in and click **Export**.

Option	Description
Format	The report output format. Available formats are HTML and CSV.
All time	Export all messages displayed Activity Overview.
From a specific date	Specify a date to export all messages generated on that date.
Only computers with errors/not scanned	Export only data of computers with scanning issues.
Include error messages	Select this option to include the generated error message.
Save files to	Displays the default export location.

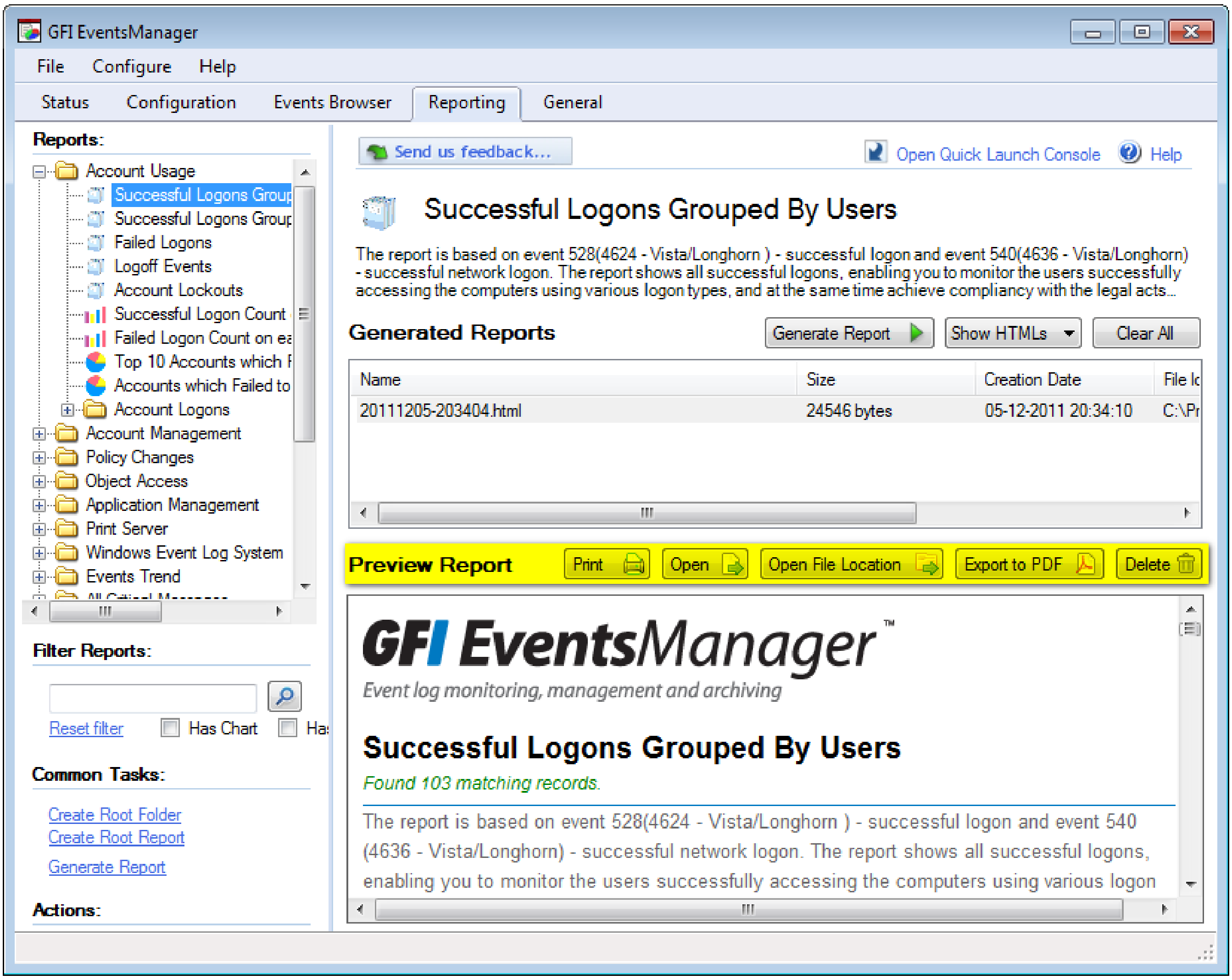


GFI EventsManager™ **Activity Overview for period: 2012/01/25**

Source	Windows Events	Text Logs Events	Syslog Messages	SNMP Traps Messages	SQL Server Messages	Oracle Server Messages	Last Activity
TCMUSICSERVER	0	N/A	N/A	N/A	N/A	N/A	No Activity
TECHCOMSERVTWO	23753	N/A	N/A	N/A	N/A	N/A	2012/01/25 18:08:00.933
TEMP	196799	N/A	N/A	N/A	N/A	N/A	2012/01/25 17:55:47.542
W7_07	0	N/A	N/A	N/A	N/A	N/A	No Activity
W702	0	N/A	N/A	N/A	N/A	N/A	No Activity
W703	0	N/A	N/A	N/A	N/A	N/A	No Activity
W705	0	N/A	N/A	N/A	N/A	N/A	No Activity
192.168.11.11	N/A	N/A	N/A	N/A	N/A	0	No Activity

Screenshot 130: Activity overview report sample

13.7 Analyzing reports



Successful Logons Grouped By Users

The report is based on event 528(4624 - Vista/Longhorn) - successful logon and event 540(4636 - Vista/Longhorn) - successful network logon. The report shows all successful logons, enabling you to monitor the users successfully accessing the computers using various logon types, and at the same time achieve compliancy with the legal acts...

Name	Size	Creation Date	File lo
20111205-203404.html	24546 bytes	05-12-2011 20:34:10	C:\Pr

Successful Logons Grouped By Users

Found 103 matching records.

The report is based on event 528(4624 - Vista/Longhorn) - successful logon and event 540 (4636 - Vista/Longhorn) - successful network logon. The report shows all successful logons, enabling you to monitor the users successfully accessing the computers using various logon

Screenshot 131: Analyzing reports

The reporting system of GFI EventsManager comes with dedicated tools to help you analyze and export reports. Once a report is generated, select it from the list of Generated Reports and use the common controls which help you run common report analysis commands. The available tools are described below:

Option	Description
Print	Use the **Print** option to view a print preview, configure printer settings and print the selected report.
Open	Use the **Open** button to open the selected report in a browser. GFI EventsManager uses your default browser to view reports in HTML.
Open File Location	**Open File Location** enables you access the folder containing the report for backup or archiving purposes.
Export to PDF	Use **Export to PDF** to export the selected report to Portable Document Format.
Delete	Click **Delete** to remove a generated report from the list.

13.8 Defining column headings

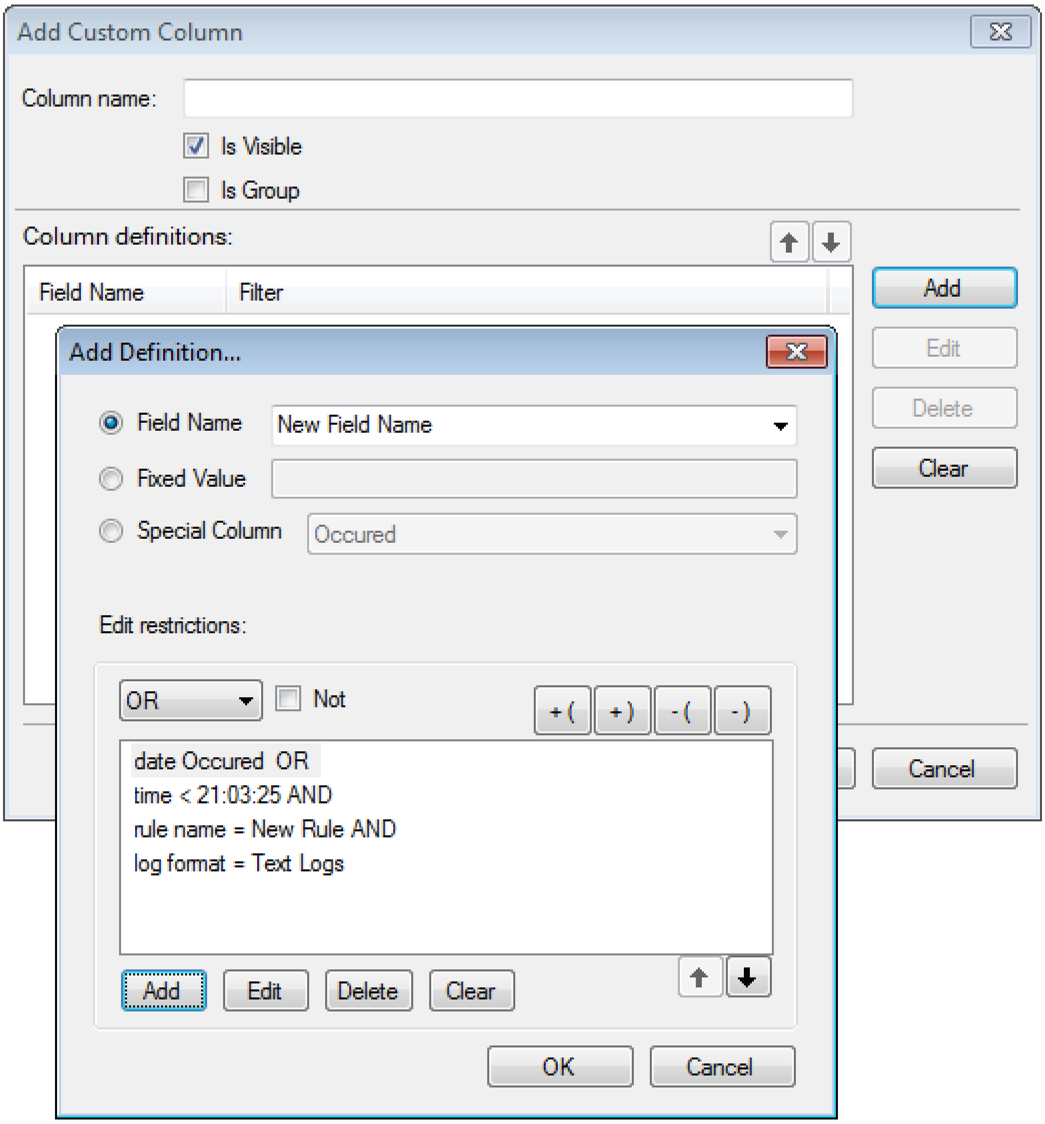
GFI EventsManager enables you to create custom columns through the **Add Custom Columns** dialog. This dialog allows you specify conditions, create a new field and add them to your report(s). Also based on conditions, this dialog enables you to further customize existing or new reports.

To add custom columns:

1. From **Reporting** tab **> Actions**, click **Create Report**.

2. Click **Layout** tab **> Add Existing Column**, to add default columns.

3. Click **Add Custom Column** to launch the **Add Custom Columns** dialog.



date Occured OR
time < 21:03:25 AND
rule name = New Rule AND
log format = Text Logs

Screenshot 132: Define custom column conditions

4. From the **Add Custom Column** dialog click **Add**.

5. From the **Add Definition…** dialog, configure the options described below:

Option	Description
Field Name	Specify a name for the new field.
Fixed Value	Select **Fixed Value** if the value of the new field is going to be fixed. Specify a value as a field name. For example, to check that events always occur after 5pm, specify 5 as the fixed value instead of defining a time field and assign a value of 5.
Special Column	Special columns are predefined columns that may be used in your condition.
Edit restrictions	This section enables you to add, edit or delete field restrictions.

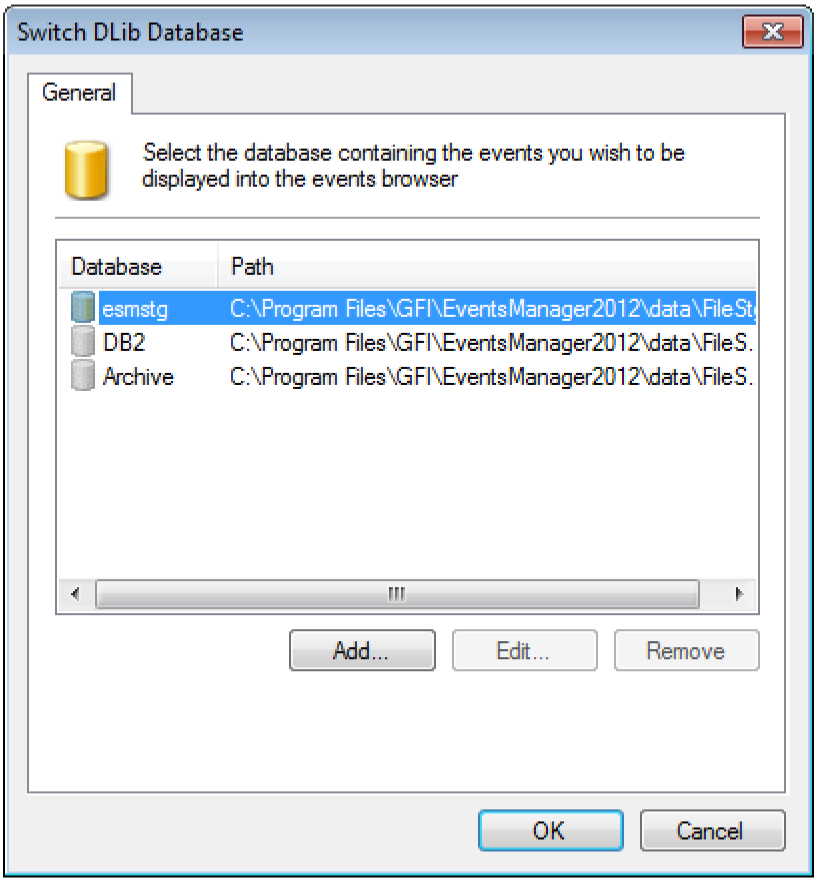
6. Click **Apply** and **OK**

13.8.1 Reporting on events from different databases

For reporting purposes, GFI EventsManager enables you to switch between different databases. Use this feature to report on events that have been exported/archived for further analysis or stored in different databases.

To switch database:

1. From **Reports** tab **> Common Tasks**, click **Switch database**.



Select the database containing the events you wish to be displayed into the events browser

Database	Path
esmstg	C:\Program Files\GFI\EventsManager2012\data\FileSt
DB2	C:\Program Files\GFI\EventsManager2012\data\FileS.
Archive	C:\Program Files\GFI\EventsManager2012\data\FileS.

Screenshot 133: Switch database dialog

2. Select the database from the list of databases and click **OK** Click **Add…** to specify a new database name and it's relevant path. Click **Edit…** to edit the specified information.

13.9 Customizing HTML reports

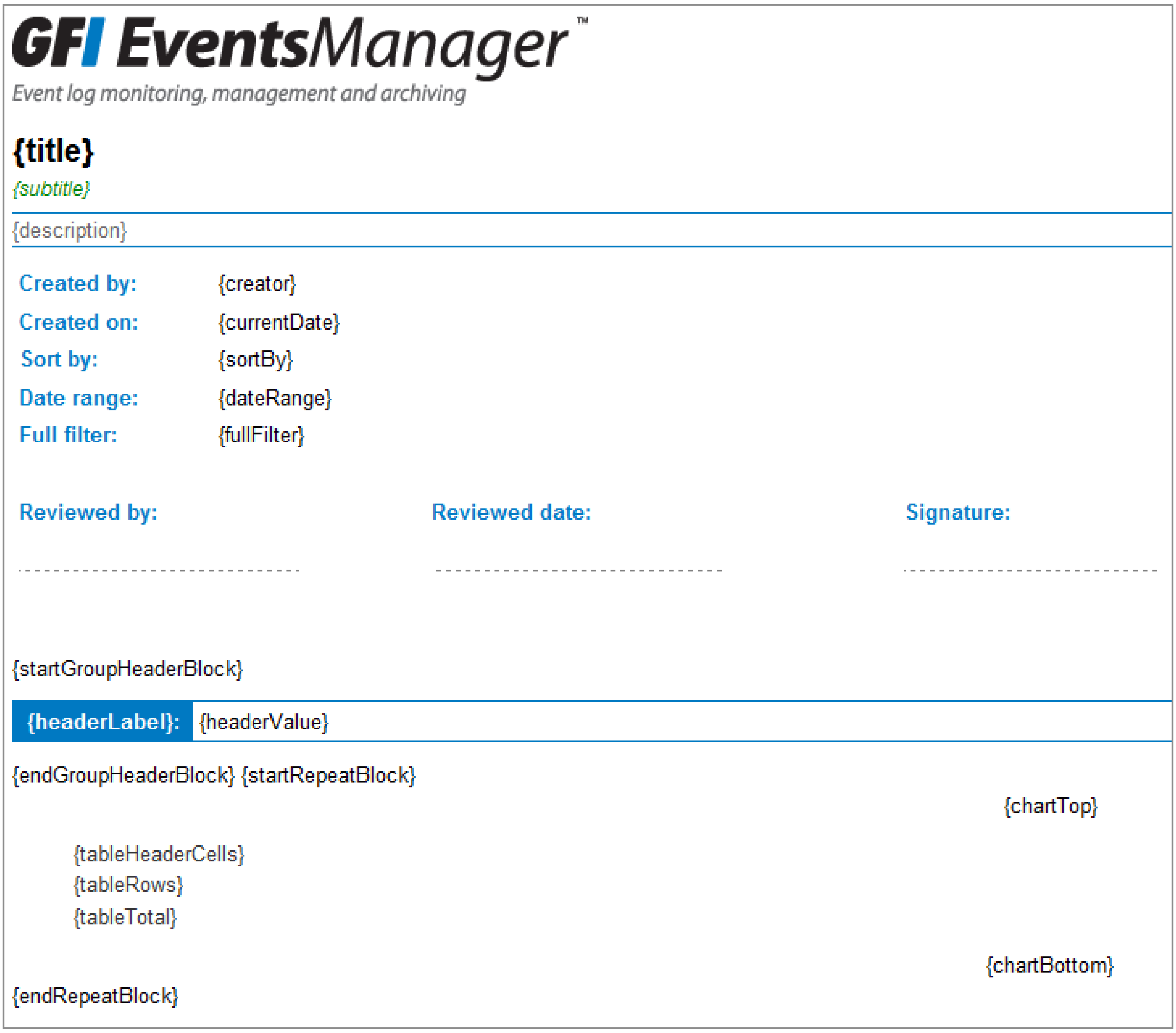
HTML report templates are customizable, enabling you to further tweak GFI EventsManager to suit your daily requirements. To edit the available templates, knowledge of HTML and CSS is required.

> **Important**
>
> Before editing the default report template, save a copy of the original so that you can easily revert to default for troubleshooting.

To edit the layout of HTML reports:

1. Go to GFI EventsManager install directory:

```
%Program Files\GFI\EventsManager2012\Data\Templates\DefaultReportLayout
```



GFI EventsManager™

Event log monitoring, management and archiving

{title}

{subtitle}

{description}

Created by:	{creator}
Created on:	{currentDate}
Sort by:	{sortBy}
Date range:	{dateRange}
Full filter:	{fullFilter}

Reviewed by:	Reviewed date:	Signature:
------------------------------	------------------------------	------------------------------

{startGroupHeaderBlock}

{headerLabel}: {headerValue}

{endGroupHeaderBlock} {startRepeatBlock}

{chartTop}

{tableHeaderCells}
{tableRows}
{tableTotal}

{chartBottom}

{endRepeatBlock}

Screenshot 134: Editing HTML report templates

2. From **DefaultReportLayout** folder, edit the templates described below:

Template	Description
template_group_new.html	This template is used when generating reports which contain data about grouped sources. Grouping can be by users, sources, event data and more.
template_new.html	Use this template to generate statistical and graphical reports which do not organize data into groups.

3. Using an HTML editor, edit the following elements of the templates:

Section	Description
Report logo	Replace GFI EventsManager logo with a logo of your choice. Add more logos or completely remove them from your reports.
Labels and text	Rename and reposition labels according to your needs.
Placeholders	Although you are able to move placeholders around the report, renaming them will cause GFI EventsManager reporting engine to fail to return the respective data.

Available placeholders include:

Placeholder	Description
{title}	Title of report.
{subtitle}	Subtitle of report.
{description}	Description of report.
{creator}	User who generated report.
{currentDate}	Date when report is generated.
{sortBy}	Sort field.
{dateRange}	Report data is gathered from the specified time period.
{fullFilter}	List of Restrictions set for the Report.
{startGroupHeaderBlock}	Beginning of Header section of the repetitive block.
{headerLabel}	Name of grouping header.
{headerValue}	Value of grouping header.
{endGroupHeaderBlock}	Ending of Header section of the repetitive block.
{startRepeatBlock}	Beginning of the Body section of the repetitive block.
{tableHeaderCells}	The Header section of the table data.
{tableRows}	The Body section of the table data.
{tableTotal}	For charts. Contains the Sum or Count value of the computed field.
{chartTop}	Places the chart at the beginning of the report.
{chartBottom}	Places the chart at the end of the report.
{endRepeateBlock}	Ending of the Body section of the repetitive block.

4. Save the HTML template and generate a report using the new layout. For more information, refer to Generating reports (page 156).

Note

Using the same HTML/CSS conventions of the HTML templates, you are also able to create your own customized templates. Copy the template, rename it and reuse the same placeholders.

14 Events Processing Rules

During events processing, GFI EventsManager runs a configurable set of rules against the collected logs in order to classify events and trigger alerts/actions accordingly. By default, GFI EventsManager ships with a pre-configured set of events processing rules that allow you to gain network-wide control over computer logs - with negligible configuration effort. You can also customize these default rules or create tailored ones for your organization's requirements.

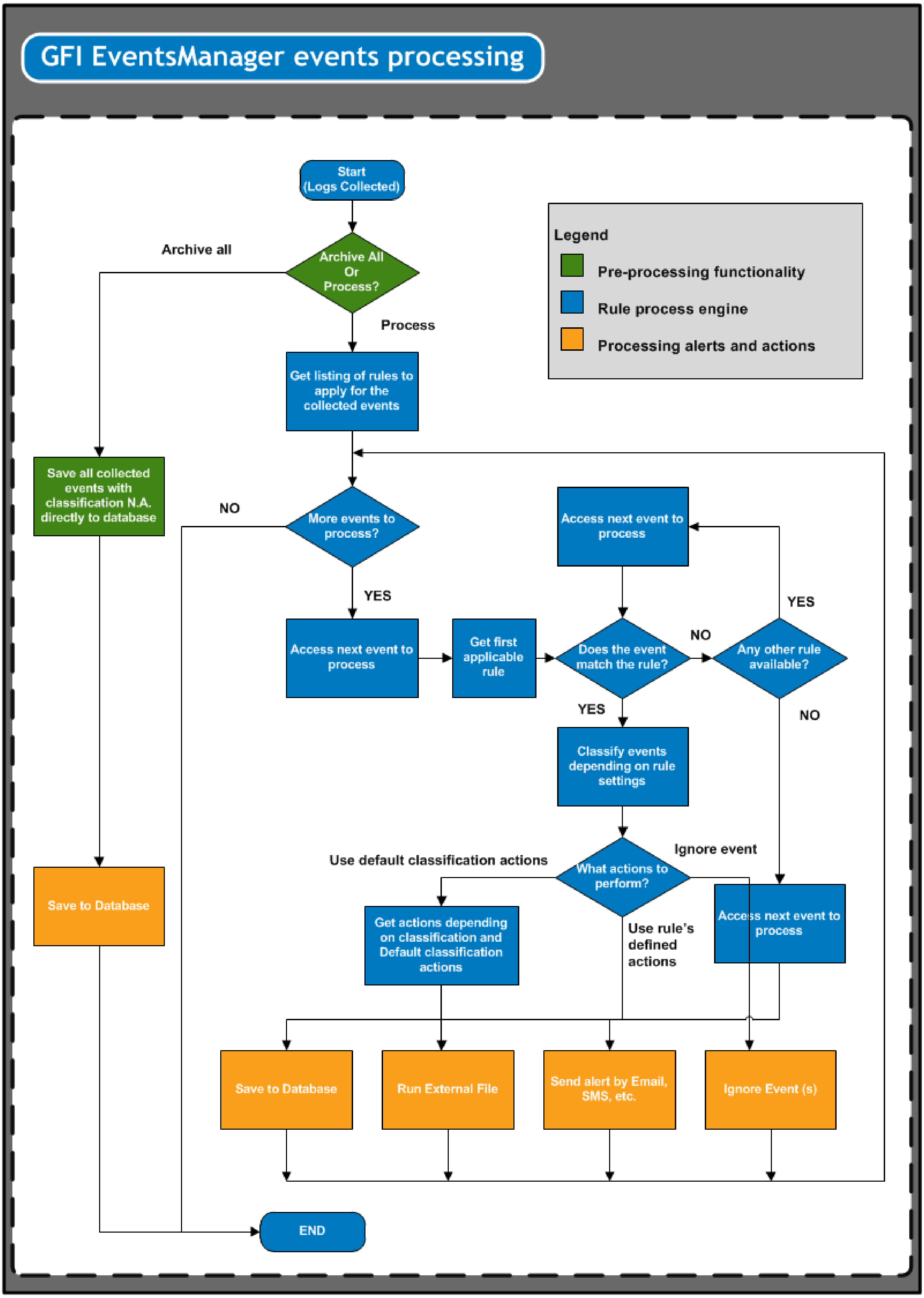
Topics in this section:

14.1 About events processing rules

Events processing rules are checks that are run against event logs when they are collected. Based on the conditions configured in a rule, events processing rules help you:

- **Classify processed events** - assign a severity rating to collected logs. This enables you to trigger actions or notifications if a certain severity log is processed. By default, events are classified using five main ratings, however, more ratings can be added
- **Filter out noise (repeated events) or unwanted events** - remove duplicate logs or logs that are not important for you and archive important event data only. This reduces database growth and saves storage space
- **Trigger Email, SMS and Network alerts on key events** - send notifications to configured recipients upon detection of certain events. You can configure an event processing rule to send notifications to recipients when the rule conditions are met
- **Attempt remedial actions** - run executable files, commands and scripts upon detection of specific events. This enables you to automatically perform remedial actions to mitigate or completely eliminate a detected problem
- **Filter events that match specific criteria** - remove event logs that are not important for you. Example, you can run a rule which filters out low severity or duplicate events
- **Archive filtered events** - event archiving is based on the severity of the event and on the configuration settings of the event processing rules. Example: you can configure GFI EventsManager to archive only events that are classified as critical or high in severity and discard all the rest.

The flowchart chart below illustrates the event processing stages performed by GFI EventsManager:


GFI EventsManager events processing
Start (Logs Collected)
Archive All Or Process?
Archive all
Process
Legend
🟩 Pre-processing functionality
🟦 Rule process engine
🟧 Processing alerts and actions
Get listing of rules to apply for the collected events
Save all collected events with classification N.A. directly to database
NO
More events to process?
YES
Access next event to process
Get first applicable rule
Does the event match the rule?
NO
Any other rule available?
YES
NO
Access next event to process
YES
Classify events depending on rule settings
What actions to perform?
Use default classification actions
Ignore event
Use rule's defined actions
Get actions depending on classification and Default classification actions
Access next event to process
Save to Database
Save to Database
Run External File
Send alert by Email, SMS, etc.
Ignore Event (s)
END

Screenshot 135: How Events Processing Rules work

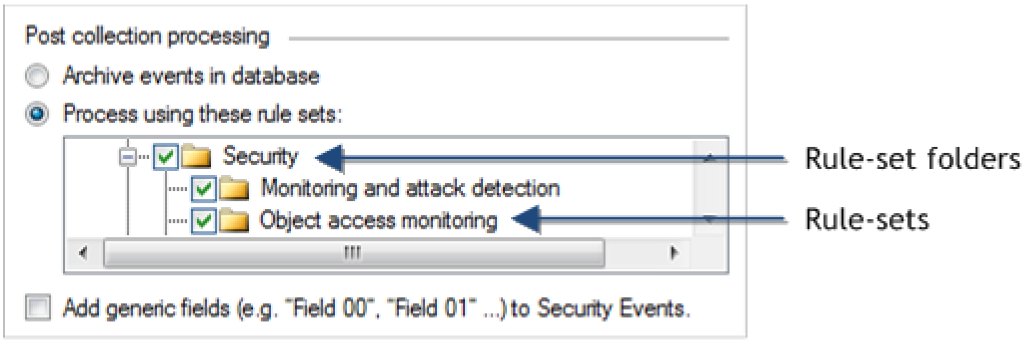
14.1.1 Event classification

Event classification is based on the configuration of the rules that are executed against the collected logs. Events that don't satisfy any event classification conditions are tagged as unclassified. Unclassified events may also be used to trigger the same alerts and actions available for classified events.

GFI EventsManager classifies events in the standard importance levels such as Critical, High, Medium, Low and Noise (unwanted or repeated log entries).

14.2 Managing rules-set folders

In GFI EventsManager, event processing rules are organized into rule-sets and every rule-set can contain one or more specialized rules which can be run against collected logs.


Post collection processing

○ Archive events in database

● Process using these rule sets:

- ☑ Security
  - ☑ Monitoring and attack detection
  - ☑ Object access monitoring

□ Add generic fields (e.g. "Field 00", "Field 01" ...) to Security Events.

Screenshot 136: Rule-sets folder and Rule-sets

Rule-sets are further organized into Rule-set Folders. This way you can group rule-sets according to the functions and actions that the respective rules perform. By default, GFI EventsManager ships with pre-configured folders, rule-sets and event processing rules that can be further customized to suite your event processing requirements.

This topic contains information about:

- Available rule-sets
- Adding a rule-set folder
- Renaming and Deleting rule-set folders

14.2.1 Available rule-sets

The following table provides you with the available rules-set folders available when you install GFI EventsManager. Each rule-set folder contains multiple rule-sets and/or events processing rules:

Rule-Set Folder	Description
Windows Events	Contains rules tailored for Windows® servers and workstations; These include: » Noise reduction rules » PCI DSS Requirements rules » Security rules » System Health rules » Security Application rules » Infrastructure Server rules » Database Server rules » Web Server rules » Print Server rules » GFI rules » Terminal Services rules » Email Server rules » File Replication rules » Directory Service rules » Custom rules » Reporting rules » SharePoint Audit rules.
Text Logs	Contains rules tailored for the processing of web transfer protocols. These include: » HTTP rules » FTP rules » SMTP rules.
Syslog Messages	Contains rules tailored for the processing LINUX and UNIX system logs. These include: » Linux\Unix hosts rules » Juniper Networks rules » Cisco PIX and ISA rules » Rules by severity » IBM iSeries rules.
SNMP Traps	Contains rules tailored for SNMP Traps Messaging. These include: » Cisco IOS release 12.1 (11) MIBs rules » Cisco IOS release 12.1 (14) MIBs rules » Cisco IOS release 12.2 (20) MIBs rules » Cisco IOS release 12.2 (25) MIBs rules » Allied Telesis AT-AR-700 Family rules.
SQL Server® Audits	Contains rules tailored for SQL Server® Audit monitoring. These include: » Noise reduction rules » Database changes rules » Server changes rules » Logon/Logoff rules » SQL Server® rules » Database access rules.
Oracle Audits	Contains rules tailored for Oracle Server Audit monitoring. Amongst others, these include: » Noise reduction rules » Database changes rules » Server changes rules » Logon/Logoff rules » Security changes rules.
Monitoring Checks	Contains rules that enable you to monitor active monitoring messages. These include rules pertaining to the default set of monitoring checks. Monitoring checks generate event logs. These event logs can be processed by events processing rules to trigger an action or notification when a fault is detected.

14.2.2 Adding a rule-set folder

To create a new rule-set folder:

1. Click **Configuration** tab and select **Event Processing Rules**.

2. From **Common Tasks**, select **Create folder**.

3. Specify a unique name for the new rule-set folder.

> **Note**
>
> To create sub rule-set folders, right-click on the parent folder and select **Create new folder…**

14.2.3 Renaming and Deleting a rule-set folder

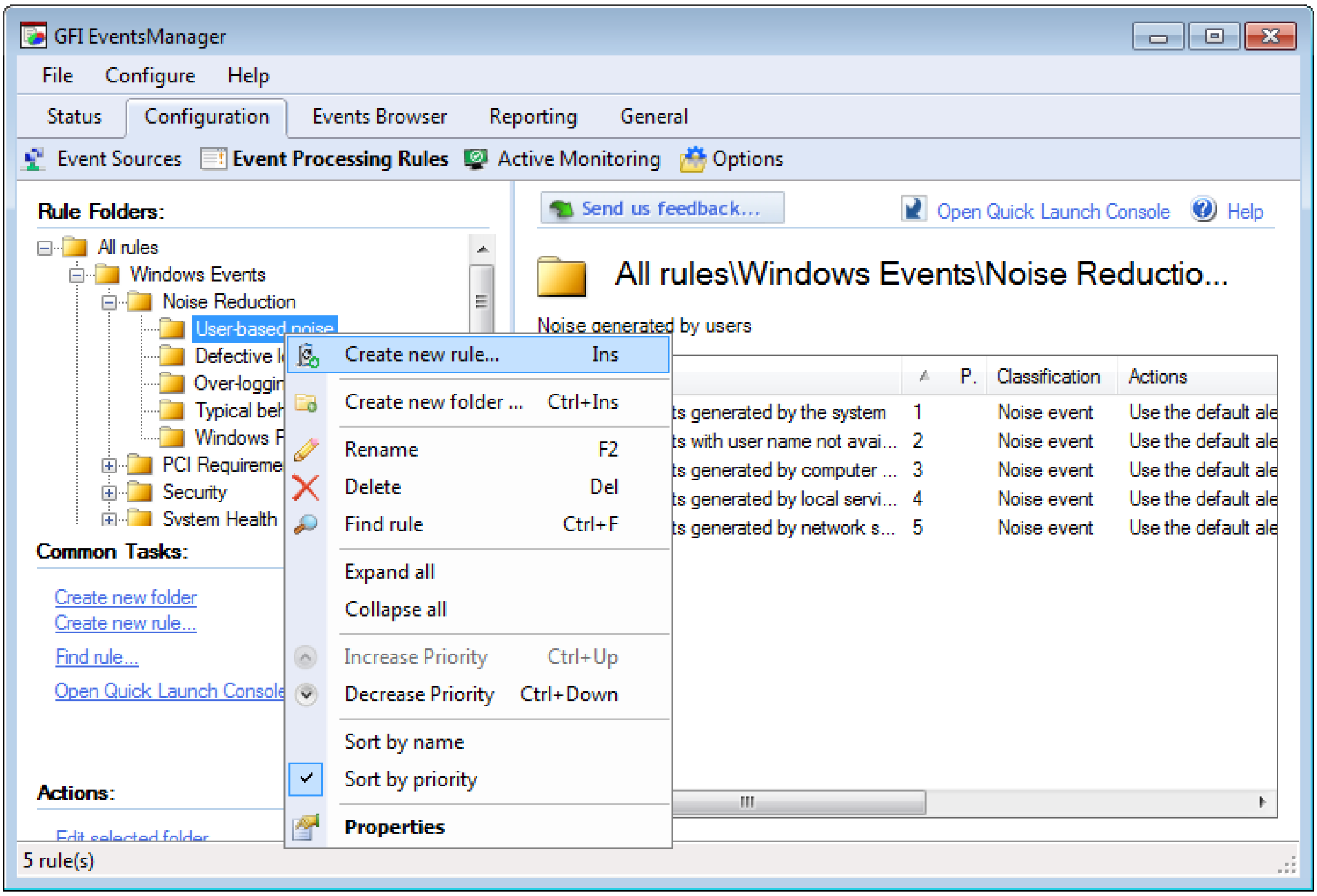
To rename or delete existing rule-set folders, right-click on the target rule-set folder and select **Rename** or **Delete** accordingly.

> **Important**
>
> Deleting a rule-set folder will lead to the deletion of all the rules and rule-sets contained within the deleted folder.

14.3 Creating new events processing rules

To create a new event processing rule:

1. Click **Configuration** tab **>** **Event Processing Rules**.



All rules\Windows Events\Noise Reductio...

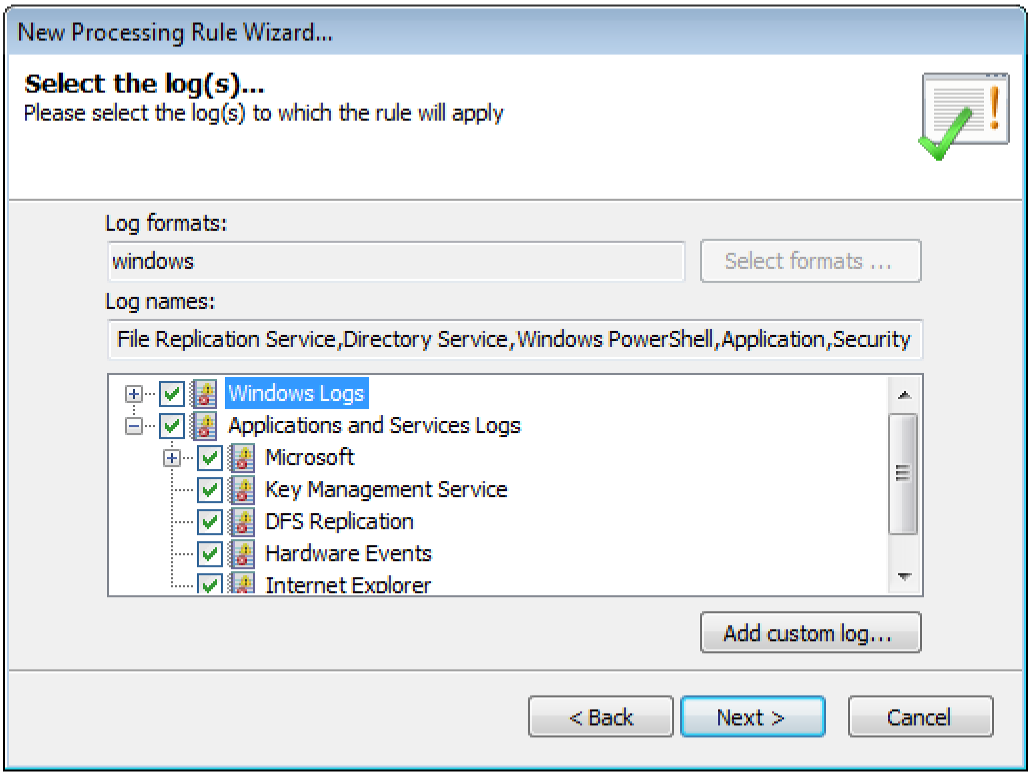
Noise generated by users

	P.	Classification	Actions
ts generated by the system	1	Noise event	Use the default ale
ts with user name not avai...	2	Noise event	Use the default ale
ts generated by computer ...	3	Noise event	Use the default ale
ts generated by local servi...	4	Noise event	Use the default ale
ts generated by network s...	5	Noise event	Use the default ale

Screenshot 137: Creating a new rule

2. Right-click the rule-set where the new rule will be created and click **Create new rule…**

3. Specify the name and description (optional) for the new rule. Click **Next**.



Select the log(s)...

Please select the log(s) to which the rule will apply

Log formats: windows

Log names: File Replication Service,Directory Service,Windows PowerShell,Application,Security

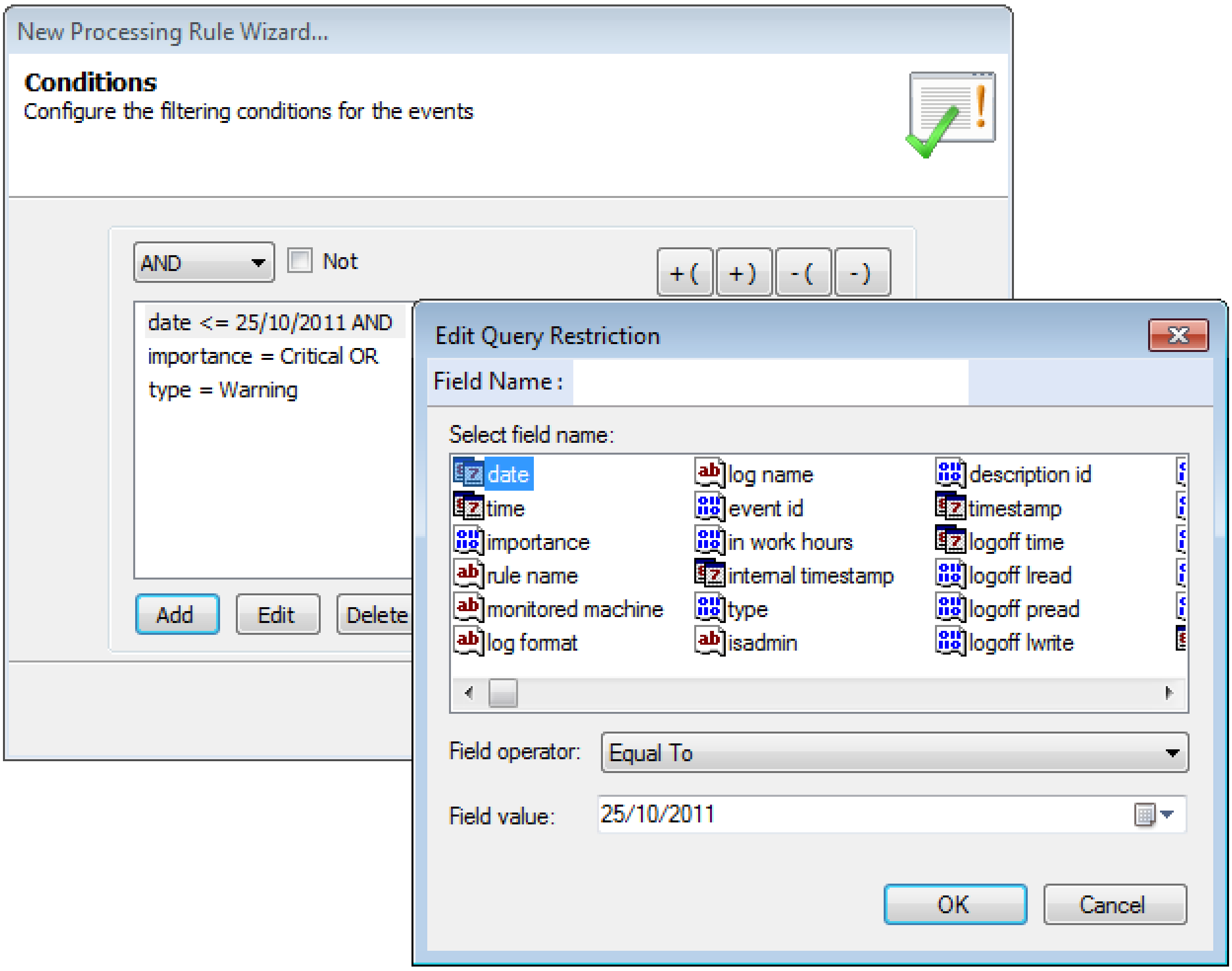
- ☑ Windows Logs
- ☑ Applications and Services Logs
  - ☑ Microsoft
  - ☑ Key Management Service
  - ☑ DFS Replication
  - ☑ Hardware Events
  - ☑ Internet Explorer

Screenshot 138: Select the logs which the rule will be applied to

4. Select the event logs to which the rule applies.

5. (Optional) Click **Add custom log…** to insert an event log which you pre-configured. Click **Next**. For more information refer to Collecting custom events.

> **Note**
>
> For SQL Audit, Oracle Audit, Syslogs, Text Logs and SNMP Traps messages, specify the full path of the object's log folder; example: "**C:\W3C\logs**".



date <= 25/10/2011 AND
importance = Critical OR
type = Warning

□ Not

Field operator: Equal To

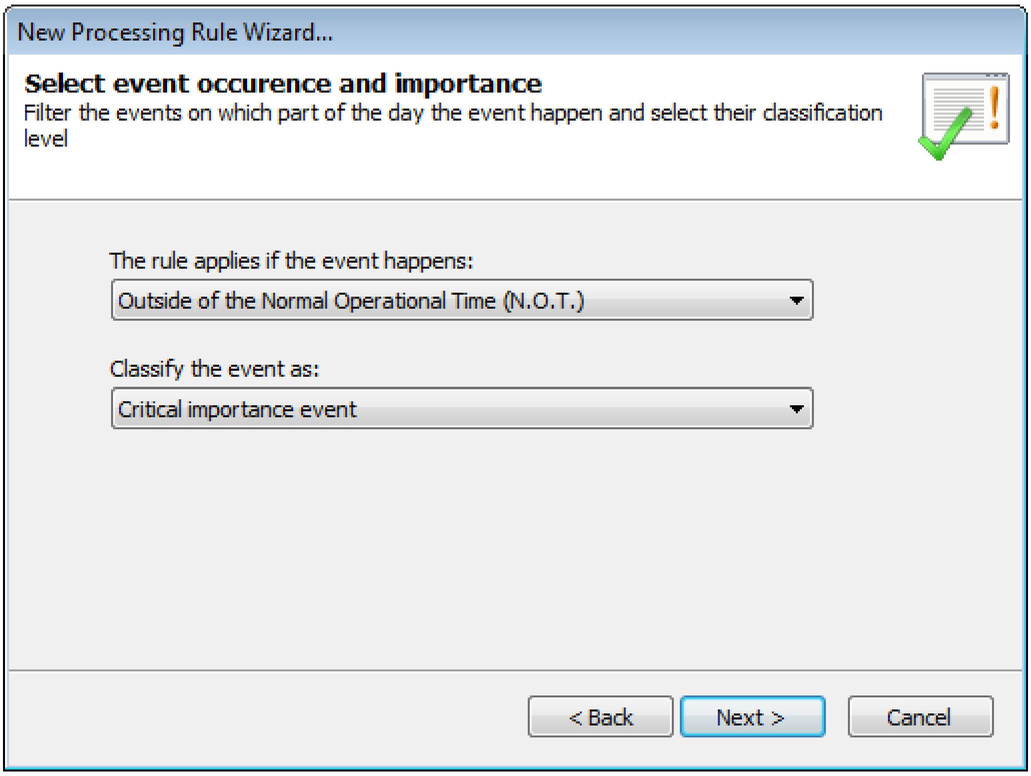
Field value: 25/10/2011

Screenshot 139: Configure the rule conditions

6. Click **Add** to select a field on which to base the query condition. For the selected field, specify the **Field Operator** and **Field Value**. Click **OK**.

> **Note**
>
> Repeat this step until all the required fields are selected.

> **Note**
>
> To filter events that refer to an administrator user (events having the security identifier SID that identifies a logon administrator session), ensure that if the event source is a domain member, the domain controller must also be added as an event source. For more information refer to Creating a new event source group.



New Processing Rule Wizard...

Select event occurence and importance

Filter the events on which part of the day the event happen and select their classification level

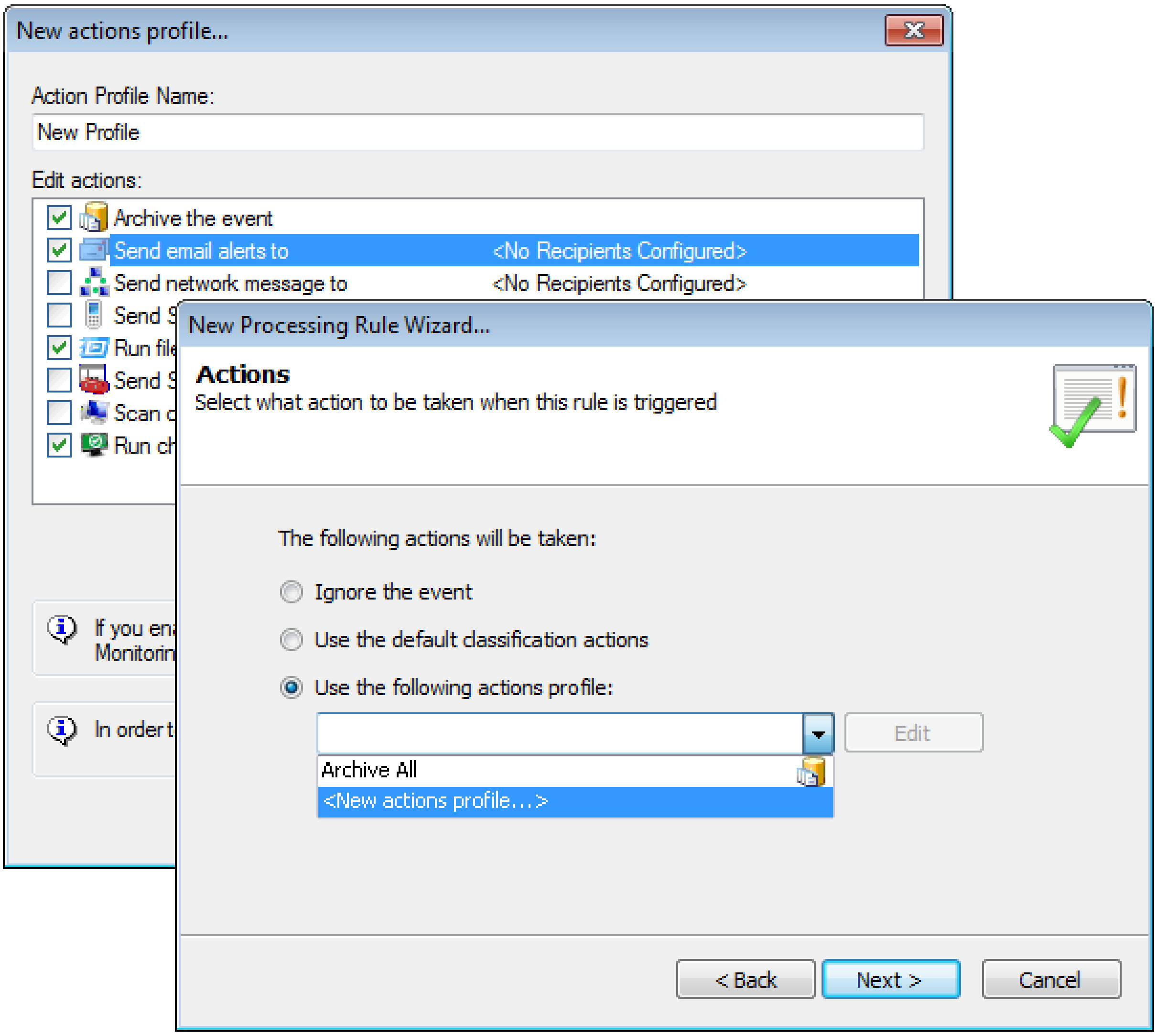
The rule applies if the event happens: Outside of the Normal Operational Time (N.O.T.)

Classify the event as: Critical importance event

Screenshot 140: Select event occurrence and importance

7. Specify the time when the rule is applicable. Example: anytime, during working hours or outside working hours. Working and non-working hours are based on the operational time parameters configured for your event sources. For more information refer to Configuring event source operational time.

8. Select the classification (critical, high, medium, low or noise) that will be assigned to events that satisfy the conditions in this rule. Click **Next**.



New actions profile...

Action Profile Name: New Profile

Edit actions:

- ☑ Archive the event
- ☑ Send email alerts to <No Recipients Configured>
- ☐ Send network message to <No Recipients Configured>
- ☐ Send S
- ☑ Run file
- ☐ Send S
- ☐ Scan c
- ☑ Run ch

If you ena Monitorin

In order t

New Processing Rule Wizard...

Actions

Select what action to be taken when this rule is triggered

The following actions will be taken:

- ○ Ignore the event
- ○ Use the default classification actions
- ● Use the following actions profile:

Screenshot 141: Select the triggered action

9. Specify which actions are triggered by this rule and click **Next**. Available actions are:

Action	Description
Ignore the event	Select this option so that GFI EventsManager will ignore the event and not trigger any actions or notifications.
Use the default classification actions	Select this option to use the pre-configured **Default Classification Actions**.

Action	Description
Use the following actions profile	The Archive All profile is added by default. To create a new profile: 1. From the drop-down menu, select **<New actions profile...>**. This launches the **New actions profile...** dialog. 2. Specify a name for the new profile in the **Action Profile Name** text box. 3. Select the actions that you want the profile to perform. The following actions are available: » Archive the event » Send email alerts to » Send network message to » Send SMS message to » Run file » Send SNMP Message » Scan computer » Run checks on computer. **Note** If Run checks on computer is selected, ensure that the computer has monitoring checks processing enabled. For more information refer to Configuring event source monitoring. 4. For each action you select, click **Configure** to set the parameters.

10. Click **Apply** and **OK**

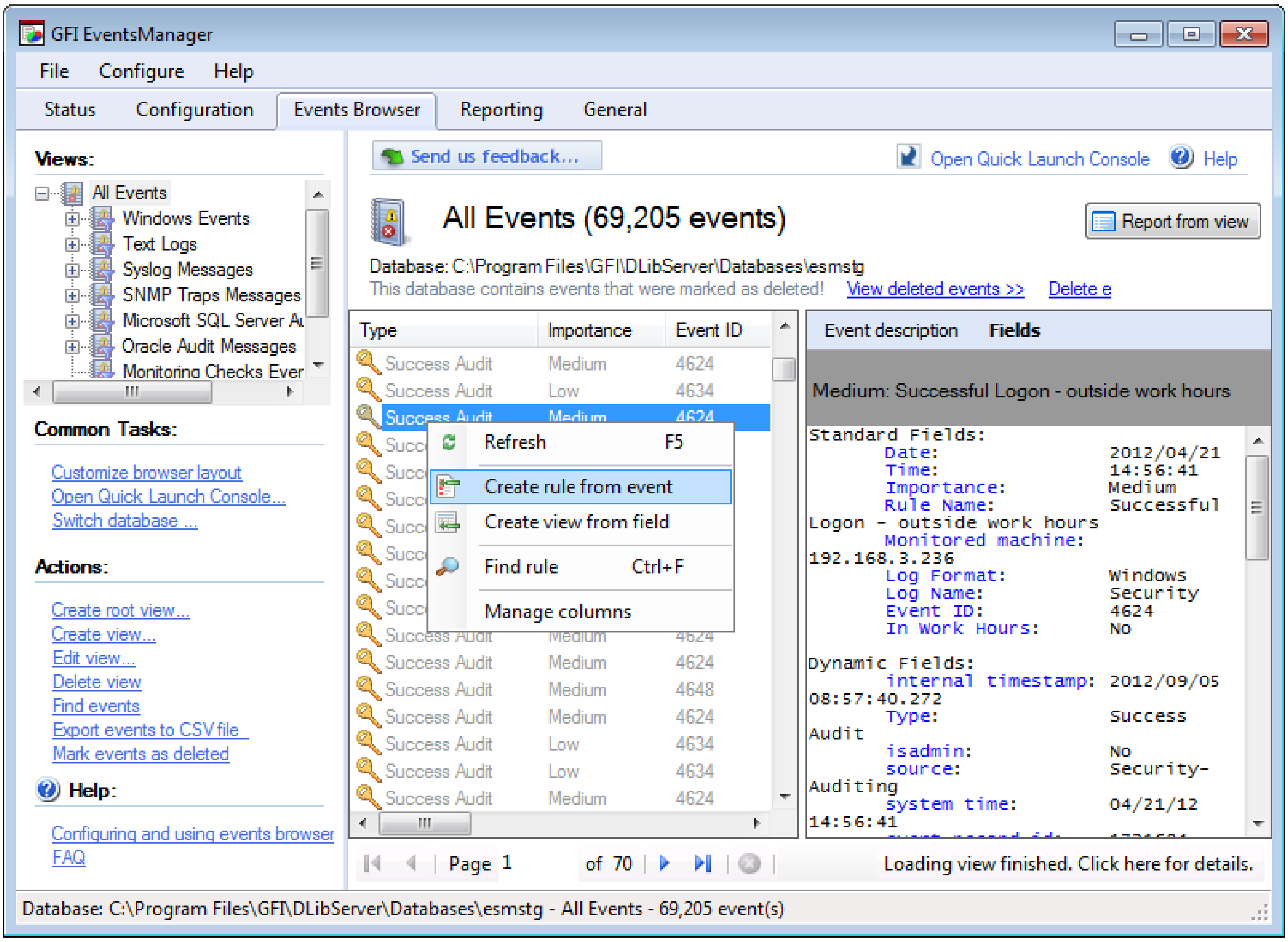
> **Note**
>
> Assign the new rule(s) to your event sources. For information about how to collect event logs and process them using the specified events processing rules, refer to Collecting Event Logs.

14.4 Creating new rules from existing events

GFI EventsManager enables you to create new rules based on the information of existing events.

To create a new rule from an existing event:

1. From **Events Browser**, locate the event log that you want to base the rule upon.



Database: C:\Program Files\GFI\DLibServer\Databases\esmstg

This database contains events that were marked as deleted!

Type	Importance	Event ID
Success Audit	Medium	4624
Success Audit	Low	4634
Success Audit	Medium	4624
Success Audit	Medium	4624
Success Audit	Medium	4648
Success Audit	Medium	4624
Success Audit	Low	4634
Success Audit	Low	4634
Success Audit	Medium	4624

Medium: Successful Logon - outside work hours

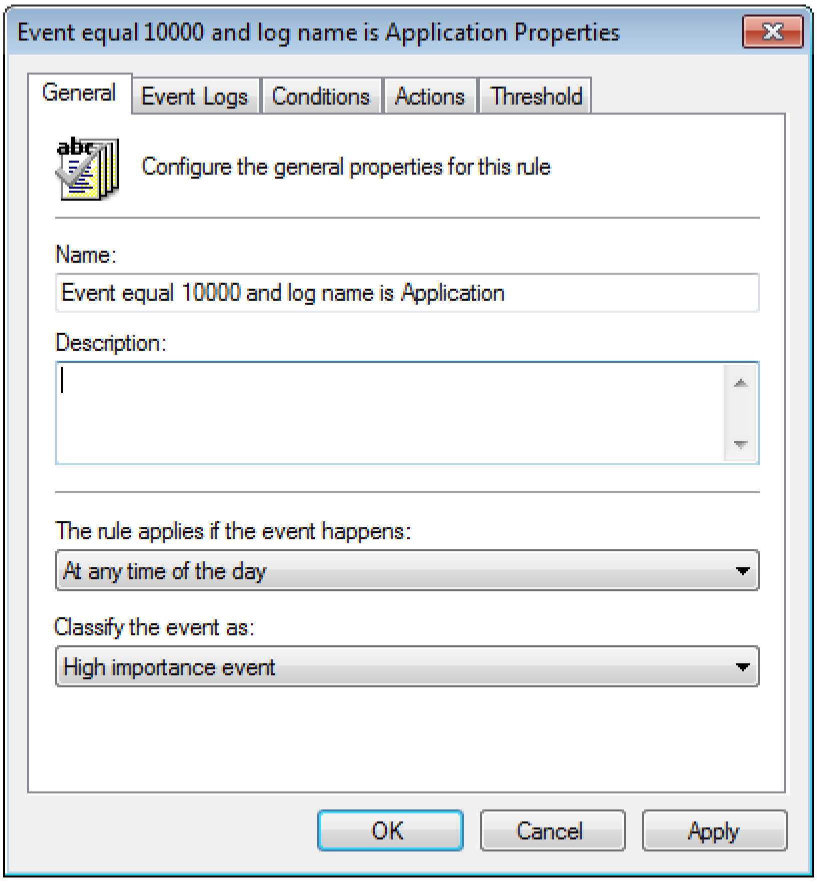
```
Standard Fields:
        Date:                   2012/04/21
        Time:                   14:56:41
        Importance:             Medium
        Rule Name:              Successful
Logon - outside work hours
        Monitored machine:
192.168.3.236
        Log Format:             Windows
        Log Name:               Security
        Event ID:               4624
        In Work Hours:          No

Dynamic Fields:
        internal timestamp:  2012/09/05
08:57:40.272
        Type:                   Success
Audit
        isadmin:                No
        source:                 Security-
Auditing
        system time:            04/21/12
14:56:41
```

Database: C:\Program Files\GFI\DLibServer\Databases\esmstg - All Events - 69,205 event(s)

Screenshot 142: Creating a rule from an existing event

2. Right-click the event and select **Create rule from event**.



Configure the general properties for this rule

Name: Event equal 10000 and log name is Application

Description:

The rule applies if the event happens: At any time of the day

Classify the event as: High importance event

Screenshot 143: New rule from event - General settings

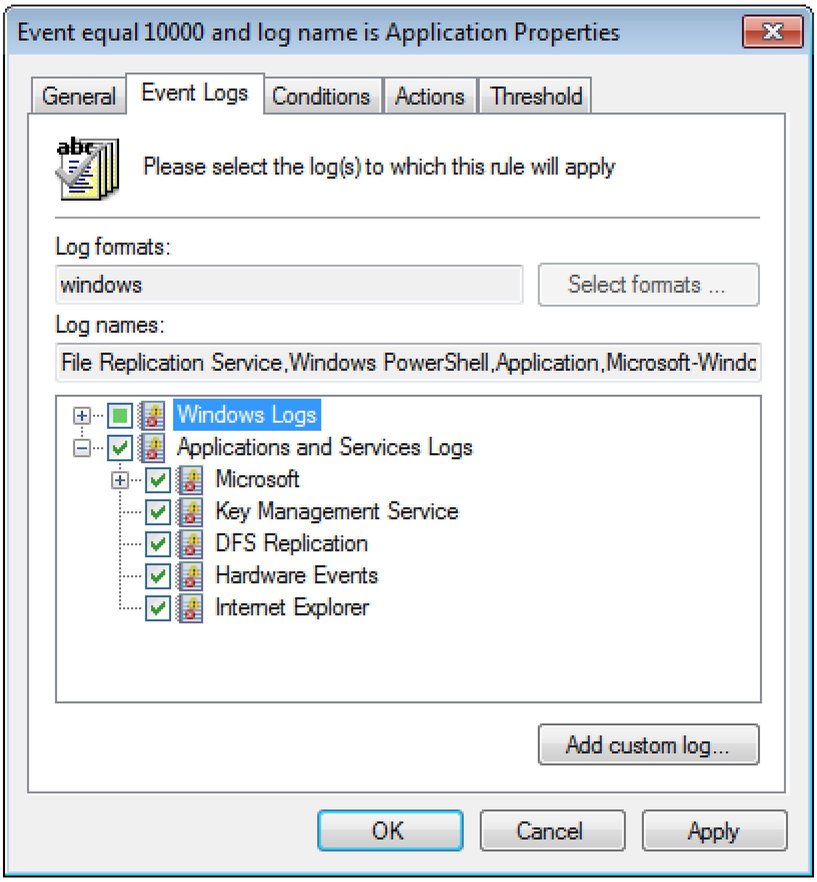
3. Specify a unique name and an optional description for the new rule.

4. From **The rule applies if the event happens** drop-down menu, select the time when the rule is applicable. Select from:

- At any time of the day
- During Normal Operational Time
- Outside the Normal Operational Time.

> **Note**
>
> For more information refer to Configuring event source operational time.

5. From the **Classify the event as** drop-down menu, select the classification level you want to assign to the event when it is generated.



Event equal 10000 and log name is Application Properties

Please select the log(s) to which this rule will apply

Log formats: windows

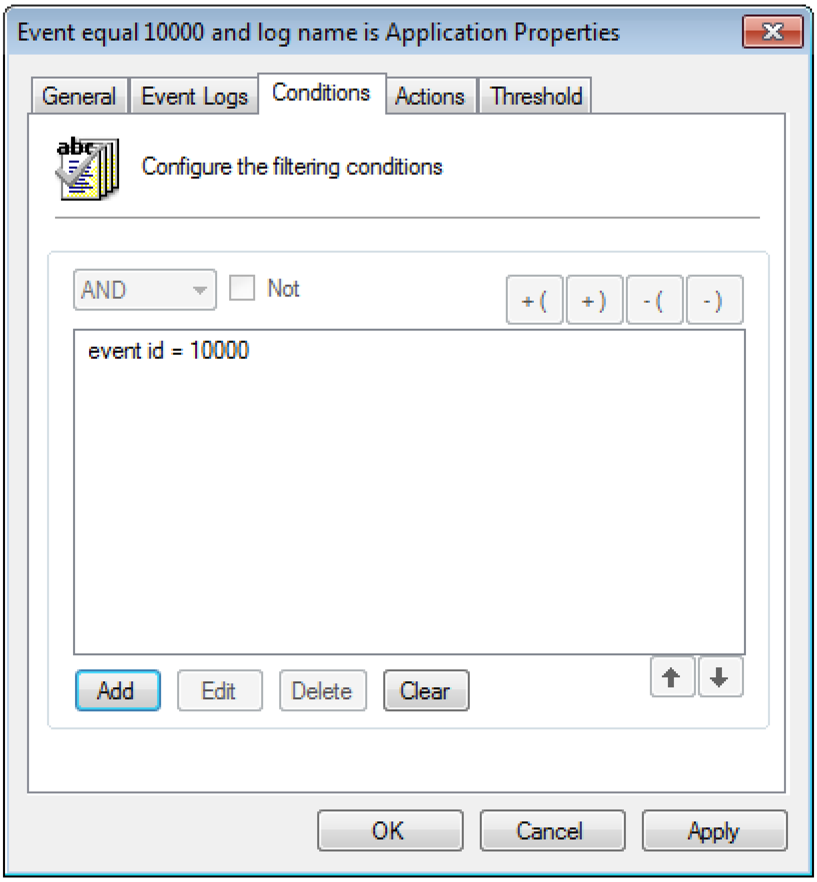
Log names: File Replication Service,Windows PowerShell,Application,Microsoft-Windc

- ▪ Windows Logs
- ☑ Applications and Services Logs
  - ☑ Microsoft
  - ☑ Key Management Service
  - ☑ DFS Replication
  - ☑ Hardware Events
  - ☑ Internet Explorer

Screenshot 144: New rule from event - Select logs to collect

6. From the **Event Logs** tab, select the logs you want to collect. To add custom logs, click **Add custom log...**, specify the custom log name and click **OK**

> **Note**
>
> For more information refer to Collecting custom logs.


Event equal 10000 and log name is Application Properties
General
Event Logs
Conditions
Actions
Threshold
Configure the filtering conditions
AND
Not
+(
+)
-(
-)
Add
Edit
Delete
Clear
OK
Cancel
Apply

event id = 10000

Screenshot 145: New rule from event - Add conditions

7. Click the **Conditions** tab.Click **Add** to select a field on which to base the query condition. For the selected field, specify the **Field Operator** and **Field Value**. Click **OK**

> **Note**
>
> Repeat this step until all the required fields are selected.

8. Click **Actions** tab and select what action is performed when the rule is triggered. Available options are described below:

Option	Description
Ignore the event	Ignores the event until a new instance of the event is generated.
Use the default classification actions	Use the actions configured in Default Classification Actions. For more information refer to Configuring Default Classification Actions.
Use the following actions profile	From the drop-down menu, select a profile or <New action profile...> and click **Edit** to configure the action profile.

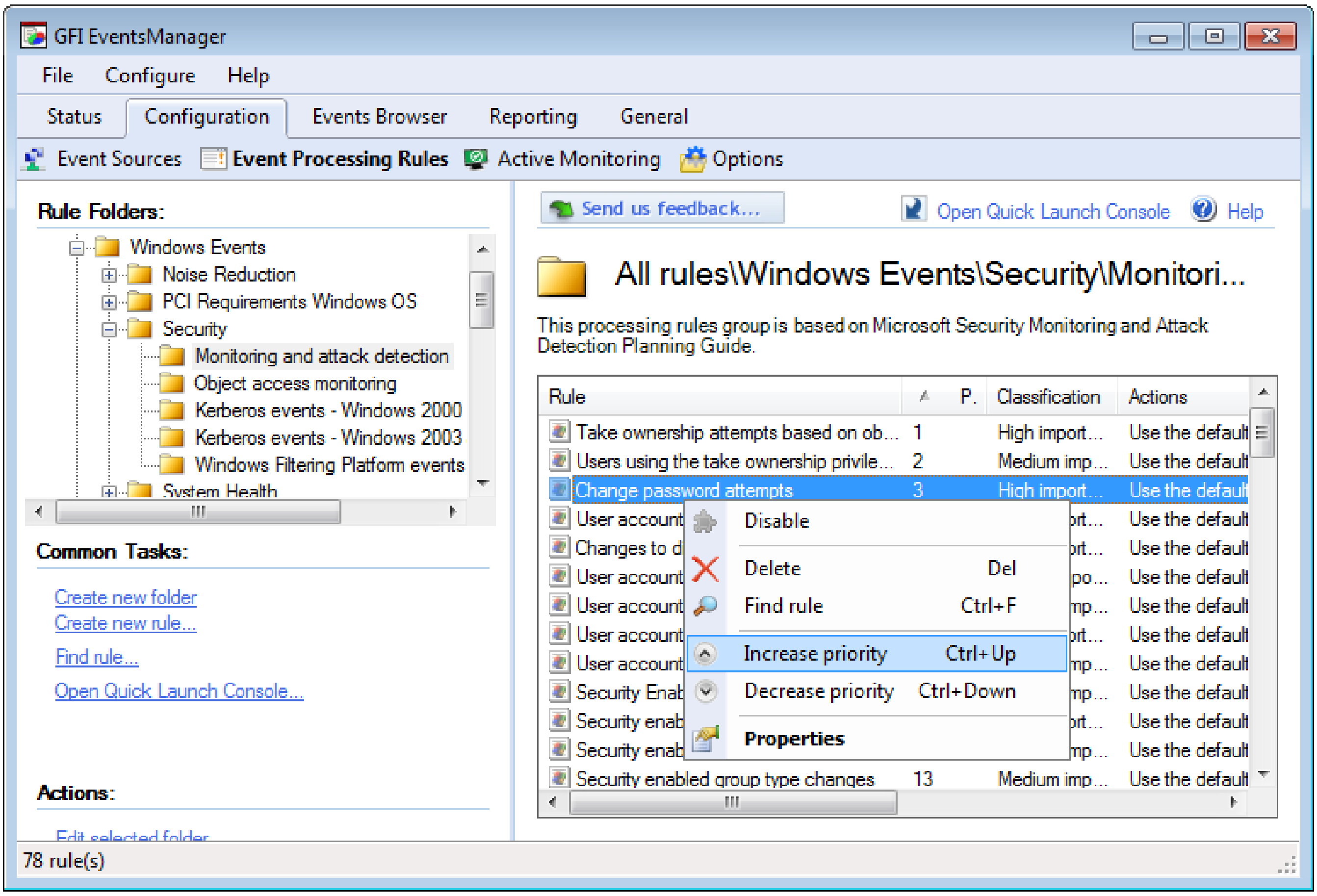
9. Click **Threshold** tab and configure the event threshold value. I.e. the number of times that an event must be detected prior to triggering alerts and remedial actions. This helps reducing false positives triggered by noise (repeated events) in your event logs.

10. Click **Apply** and **OK**

14.5 Prioritizing events processing rules

Events Processing Rules are executed in order of priority. To change the order of execution:

1. From **Configuration** tab > **Events Processing Rules** > **Rule Folders**, expand a rule-set folder.



All rules\Windows Events\Security\Monitori...

This processing rules group is based on Microsoft Security Monitoring and Attack Detection Planning Guide.

Rule	P.	Classification	Actions
Take ownership attempts based on ob...	1	High import...	Use the default
Users using the take ownership privile...	2	Medium imp...	Use the default
Change password attempts	3	High import...	Use the default
User account		ort...	Use the default
Changes to d		ort...	Use the default
User account		po...	Use the default
User account		mp...	Use the default
User account		ort...	Use the default
User account		mp...	Use the default
Security Enab		mp...	Use the default
Security enab		ort...	Use the default
Security enab		mp...	Use the default
Security enabled group type changes	13	Medium imp...	Use the default

78 rule(s)

Screenshot 146: View event processing rules

2. From the right pane, right-click a rule and select **Increase priority** or **Decrease priority** accordingly. Alternatively, select a rule and press **Ctrl+Up** to increase or **Ctrl+Down** to decrease priority.

15 Active Monitoring

Event logs are useful to track different operational aspects of devices, computers and servers, but in many cases users need more than logs to inspect this activity in further detail. To mitigate this problem, GFI EventsManager uses Active Monitoring Checks. Monitoring checks help you detect failures or irregularities automatically, so you can identify and proactively fix unexpected problems before they happen.

GFI EventsManager ships with a set of predefined checks, specifically designed to cater for Windows® operating systems, Linux/Unix operating systems, SNMP devices and Network/Internet protocols and services.

These topics provide you with information about managing, creating and using Active Monitoring Checks.

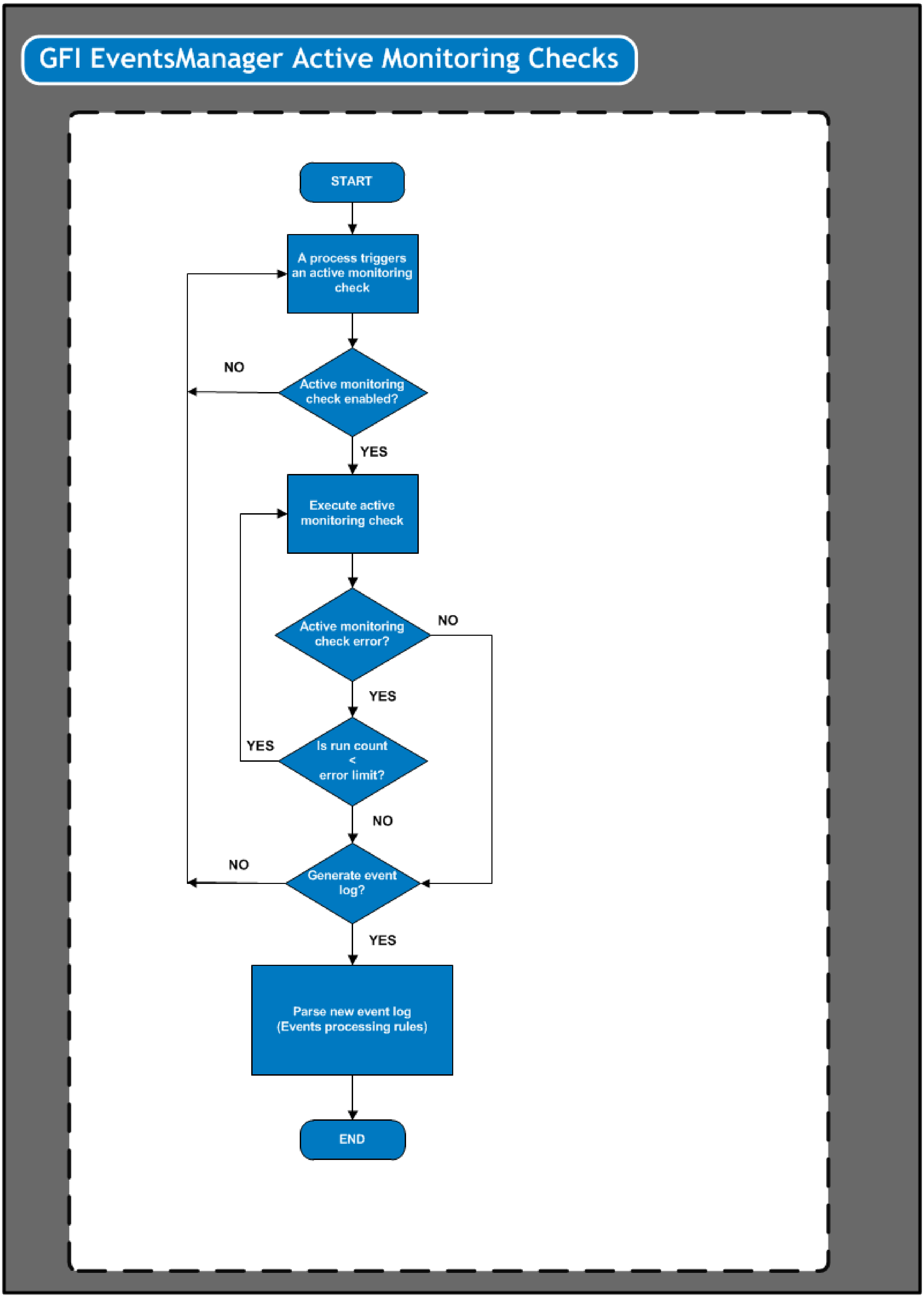
Topics in this section:

15.1 About Active Monitoring Checks

A monitoring check is a pre-configured rule, bound to a system's component or activity operation, such as CPU Usage or Ping Requests, that are used to check system availability. Active monitoring checks continuously scan event sources to determine if the configured parameter conditions are being met.

Whether a monitoring check fails or succeeds, it generates an event log from the computer that it scanned. GFI EventsManager assigns a severity rating to the generated event log.

An event processing rule can be created from the generated event log. Events processing rules can automatically trigger alerts, run additional checks and run scripts/applications to fix the problem that generated the log.



GFI EventsManager Active Monitoring Checks
START
A process triggers an active monitoring check
NO
Active monitoring check enabled?
YES
Execute active monitoring check
Active monitoring check error?
NO
YES
YES
Is run count < error limit?
NO
NO
Generate event log?
YES
Parse new event log (Events processing rules)
END

Screenshot 147: How Active Monitoring Checks work

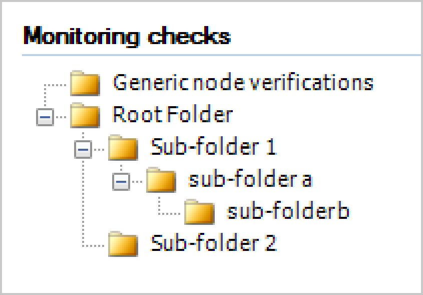
Example

You configure a monitoring check to generate an event log when a computer's free hard disk spaces reaches a pre-configured limit. To achieve this:

1. When the limit is reached and the monitoring check generates an event, locate it in Events Browser and create an event processing rule based on it. For more information refer to Creating new rules from existing events.

2. Configure the new events processing rule conditions to ignore non-matching events. For more information refer to Creating new events processing rules.

3. Configure the new rule to trigger an alert or action, to resolve the problem. For more information refer to Configuring Default Classification Actions.



Screenshot 148: Root folder and sub-folder structure

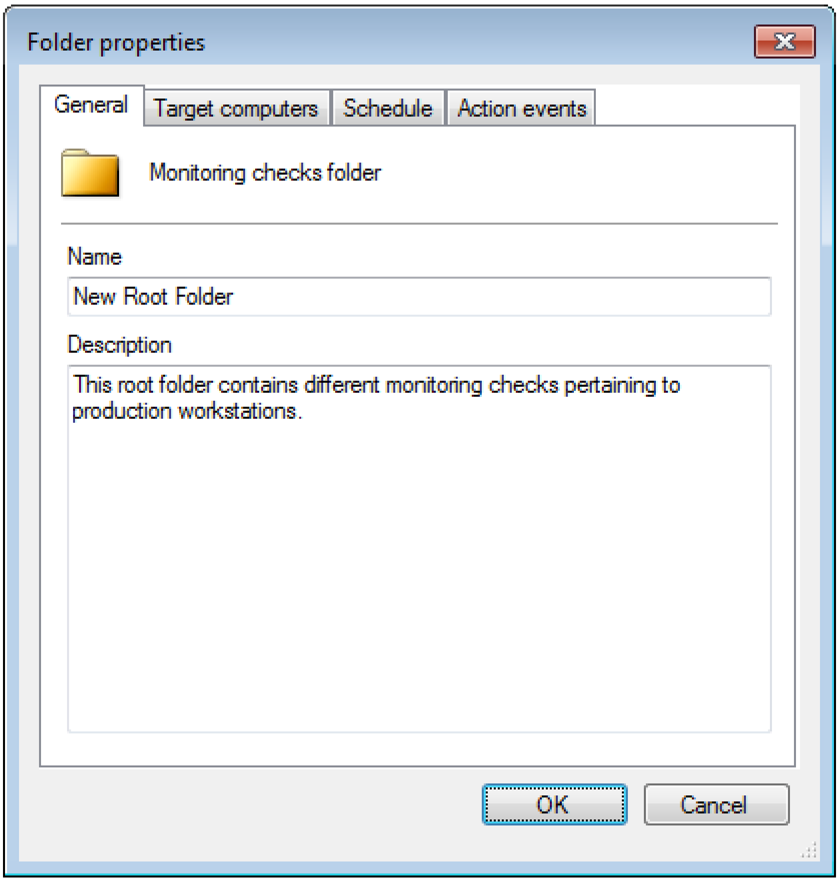
Checks are organized in Root Folders and Sub-Folders. Objects inherit settings from their parent folder. This enables you to configure a number of monitoring checks simultaneously.

15.2 Creating and configuring a root folder

A root folder is a parent folder that can contain a set of sub-folders and Active Monitoring. Every child object of a root folder inherits the same settings. This enables swift configuration of multiple monitoring checks and sub-folder.

To create a new root folder:

1. From **Configuration** tab > **Active Monitoring** > **Common Tasks**, click **Create root folder**. This opens the **Folder properties** dialog.

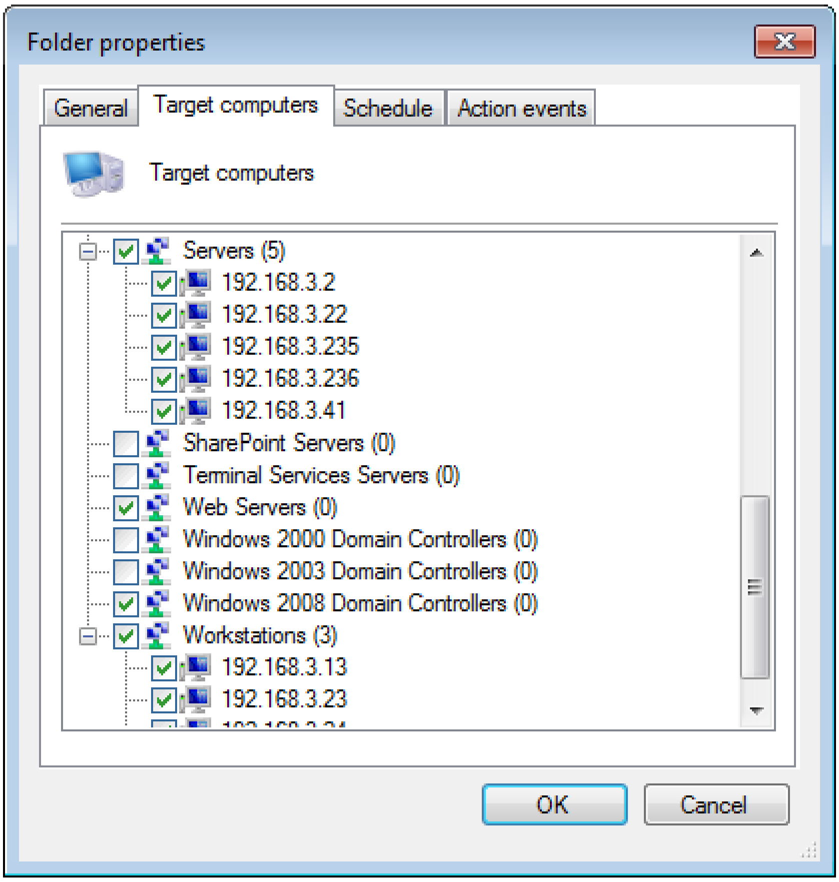


Name: New Root Folder

Description: This root folder contains different monitoring checks pertaining to production workstations.

Screenshot 149: Folder properties - General tab

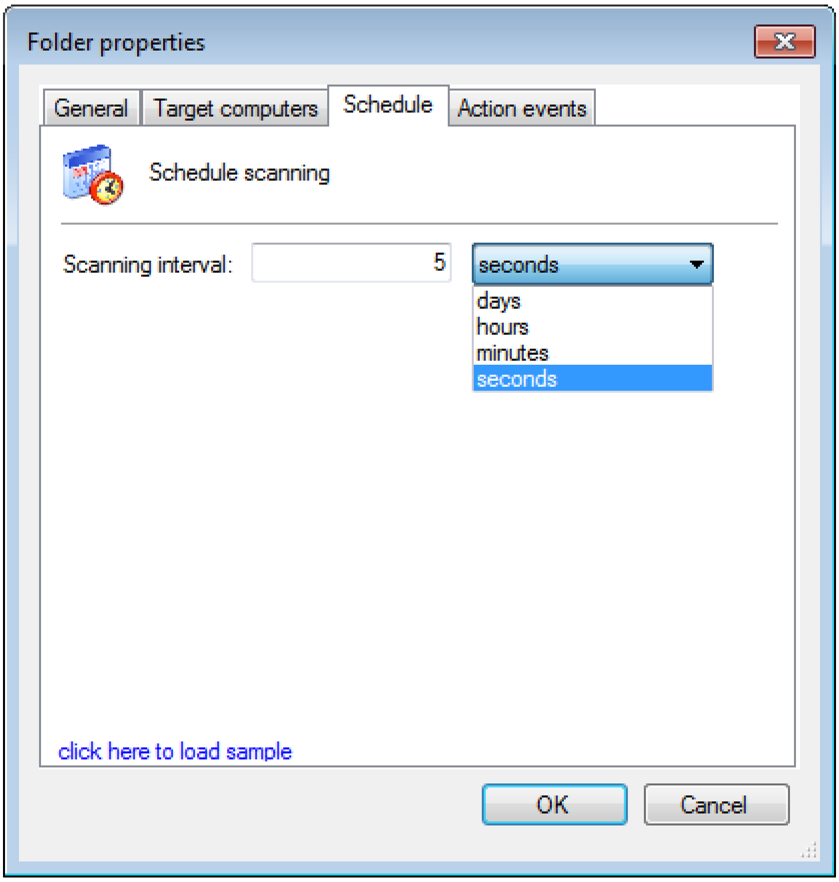
2. Specify a unique name and an optional description in the **Name** and **Description** fields.



- ☑ Servers (5)
  - ☑ 192.168.3.2
  - ☑ 192.168.3.22
  - ☑ 192.168.3.235
  - ☑ 192.168.3.236
  - ☑ 192.168.3.41
- □ SharePoint Servers (0)
- □ Terminal Services Servers (0)
- ☑ Web Servers (0)
- □ Windows 2000 Domain Controllers (0)
- □ Windows 2003 Domain Controllers (0)
- ☑ Windows 2008 Domain Controllers (0)
- ☑ Workstations (3)
  - ☑ 192.168.3.13
  - ☑ 192.168.3.23

Screenshot 150: Folder properties - Target computer tab

3. Click **Target computers** tab and select the event sources. Active Monitoring added to this new folder are applied to the selected event sources.

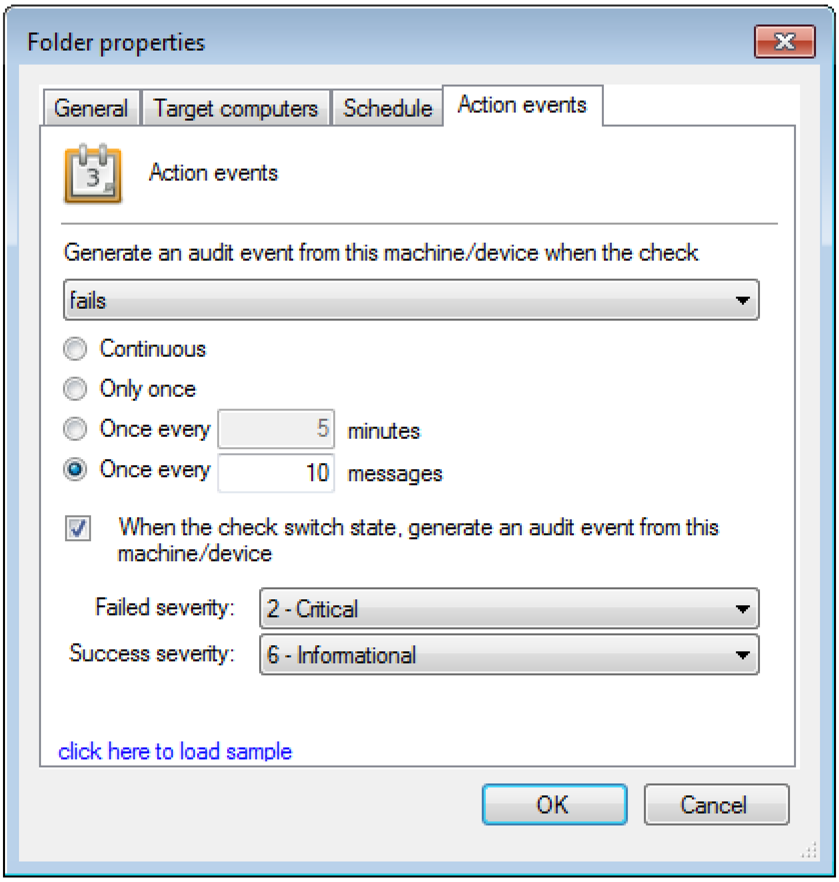


Folder properties

Scanning interval: 5 seconds

Screenshot 151: Folder properties - Schedule tab

4. From the **Schedule** tab, set the time interval when GFI EventsManager runs the monitoring check(s) on the selected event sources. By default, a monitoring check interval is set to 5 seconds.


Folder properties

Action events

Generate an audit event from this machine/device when the check

fails

○ Continuous

○ Only once

○ Once every 5 minutes

● Once every 10 messages

☑ When the check switch state, generate an audit event from this machine/device

Failed severity: 2 - Critical

Success severity: 6 - Informational

Screenshot 152: Folder properties - Action events tab

> **Note**
>
> Regardless of whether Active Monitoring fails or succeeds, the computer that it checks generates an event log. This event log can be processed by events processing rules which can trigger alerts or run scripts/applications for remedial operations. For more information refer to Creating new rules from existing events.

5. From the **Action events** tab, configure when event logs are generated and how GFI EventsManager classifies the generated events.

Available options are described in the following table:

Option	Description
Generate an audit event from this machine/device when the check	GFI EventsManager enables you to generate event logs after the event source is checked for irregularities. From the drop-down menu, select: » **Fails** - generate an event log when the conditions of the check fails » **Succeeds** - generate an event log when the conditions of the check succeeds » **Fails or Succeeds** - generates an event log every time the check is run on the specified event source(s).
Continuous	Generates an event log every time the check fails/succeeds/both.
Only once	Generates an event log the first time the check fails/succeeds/both.
Once every {X} minutes	Generates an event log once every number of minutes you specify.
Once every {X} messages	Generates an event log once every number of messages you specify. Example: if you key in 10, only one event log is generated for every 10 times the check fails/succeeds/both.

Option	Description
When the check switch state, generate an audit event from this machine/device	Generate an event log when the check changes state from Fail to Succeed or vice versa.
Failed severity	Select the severity rating that GFI EventsManager assigns to the event log of a failed system check.
Success severity	Select the severity rating that GFI EventsManager assigns to the event log of a successful system check.

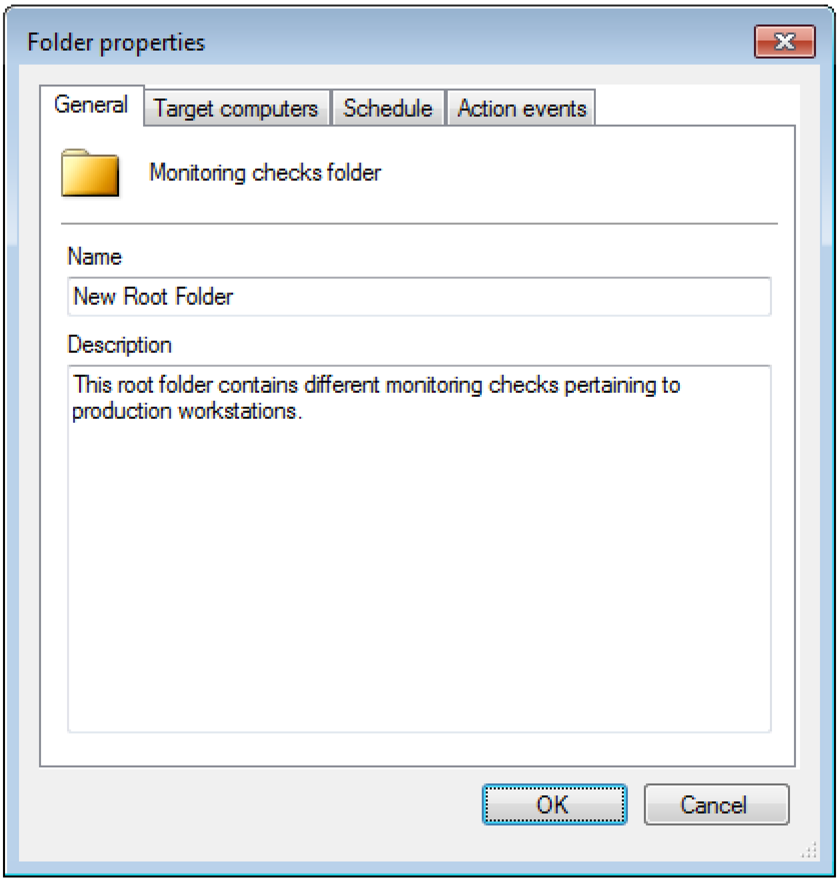
6. Click **OK**.

15.3 Adding sub-folders to a root folder

Sub-folders are used to sub-divide a group of monitoring checks that share some common properties, but may (for example) be targeted towards different types of event sources.

To add a new sub-folder:

1. From **Configuration** > **Active Monitoring** > **Monitoring checks**, right-click a root folder/sub-folder and select **Create new folder**.

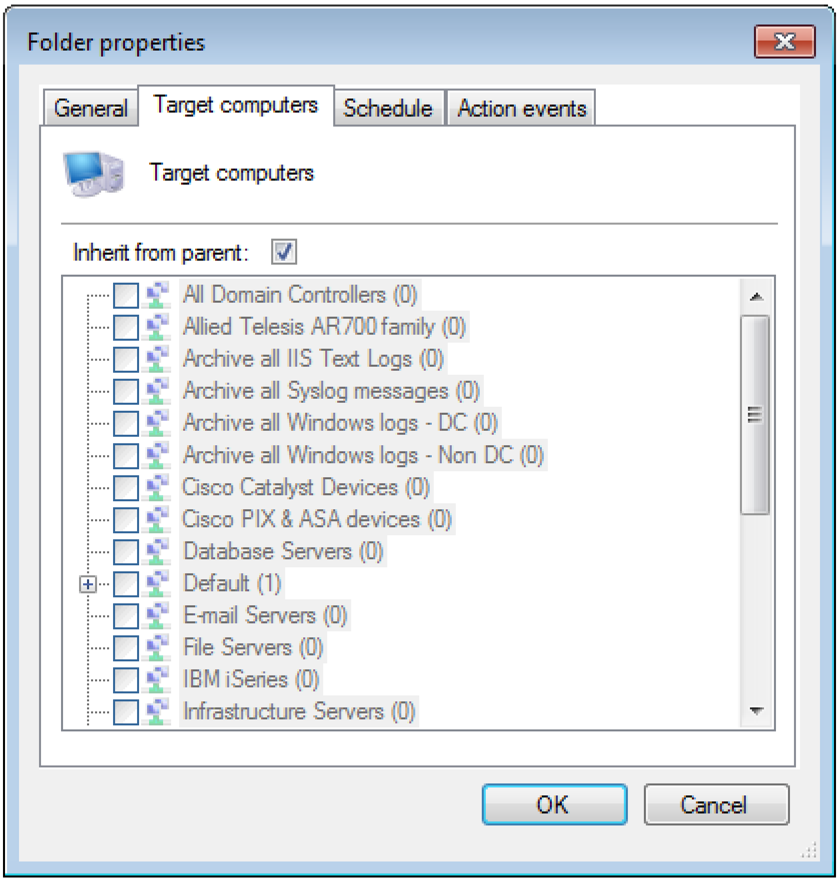


Name
New Root Folder

Description
This root folder contains different monitoring checks pertaining to production workstations.

Screenshot 153: Folder properties - General tab

2. From the **General** tab, key in a name for the new folder and an optional description.



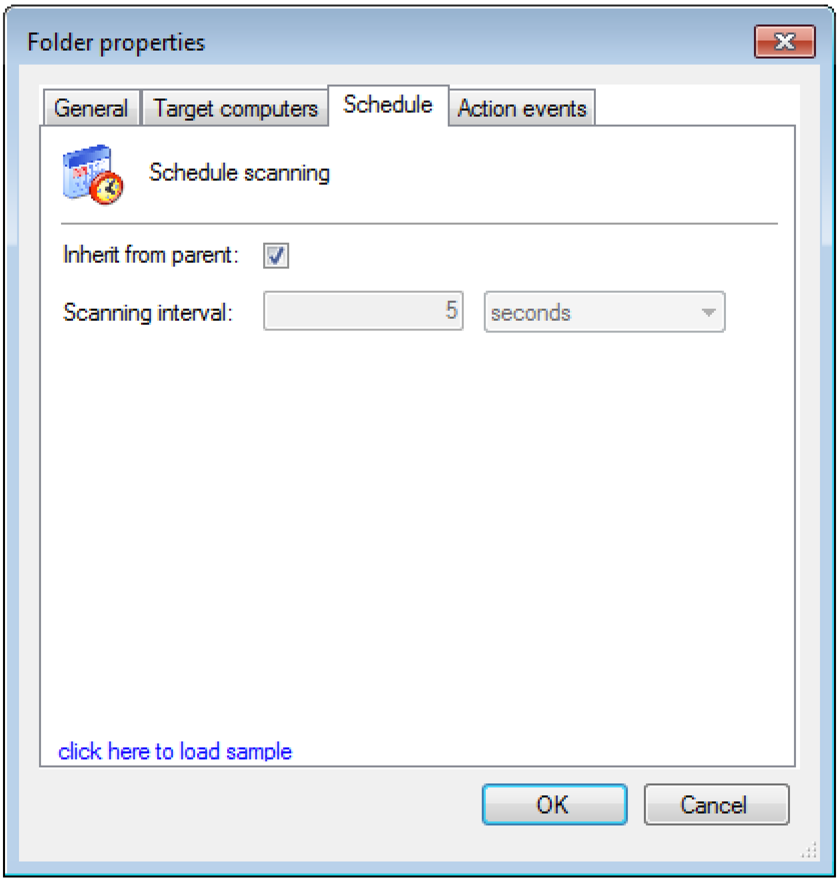
Inherit from parent: ☑

- □ All Domain Controllers (0)
- □ Allied Telesis AR700 family (0)
- □ Archive all IIS Text Logs (0)
- □ Archive all Syslog messages (0)
- □ Archive all Windows logs - DC (0)
- □ Archive all Windows logs - Non DC (0)
- □ Cisco Catalyst Devices (0)
- □ Cisco PIX & ASA devices (0)
- □ Database Servers (0)
- □ Default (1)
- □ E-mail Servers (0)
- □ File Servers (0)
- □ IBM iSeries (0)
- □ Infrastructure Servers (0)

Screenshot 154: Folder properties - Target computer tab

> **Note**
>
> Select **Inherit from parent** to use the same settings as the parent folder.

3. Click the **Target computers** tab and select the event sources. Active Monitoring that are added to this new folder are applied to the selected event sources.



Schedule scanning

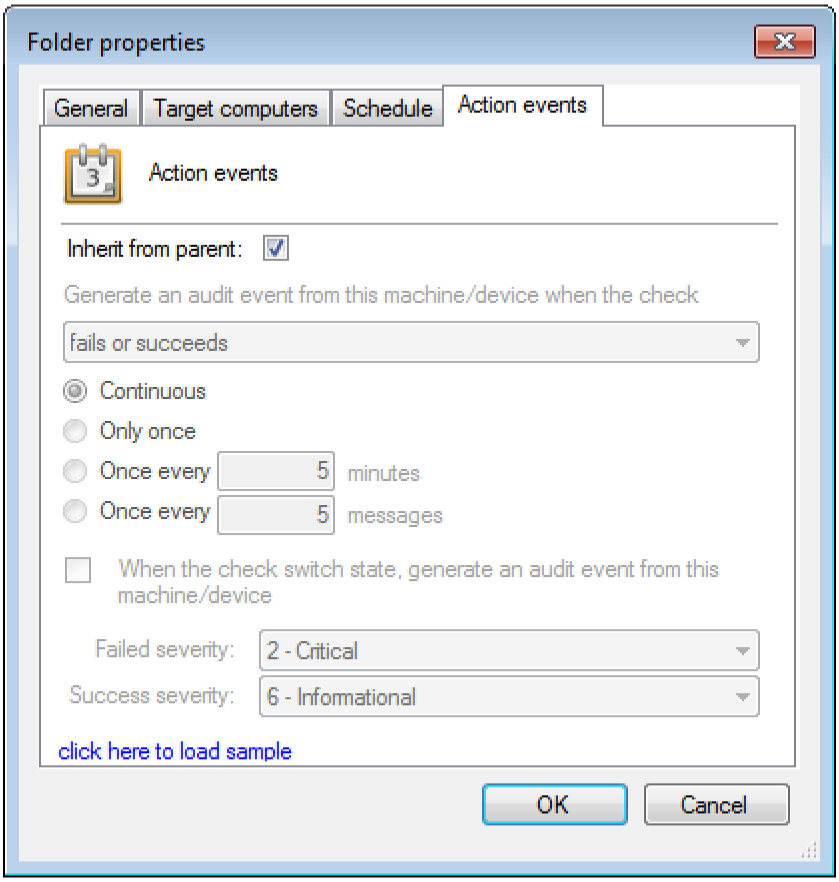
Inherit from parent: ☑

Scanning interval: 5 seconds

Screenshot 155: Folder properties - Schedule tab

> **Note**
>
> Select **Inherit from parent** to use the same settings as the parent folder.

4. From the **Schedule** tab, set the interval when GFI EventsManager runs the monitoring check(s) on the selected event sources. By default, a monitoring check interval is set to 5 seconds.



Folder properties

Inherit from parent: ☑

Generate an audit event from this machine/device when the check

fails or succeeds

● Continuous
○ Only once
○ Once every 5 minutes
○ Once every 5 messages

□ When the check switch state, generate an audit event from this machine/device

Failed severity: 2 - Critical

Success severity: 6 - Informational

Screenshot 156: Folder properties - Action events tab

> **Note**
>
> Regardless of whether Active Monitoring fails or succeeds, the computer that it checks generates an event log. This event log can be processed by events processing rules which can trigger alerts or run scripts/applications for remedial operations. For more information refer to Creating new rules from existing events.

> **Note**
>
> Select **Inherit from parent** to use the same settings as the parent folder.

5. From the **Action events** tab, configure when event logs are generated and how GFI EventsManager classifies the generated events.

Available options are described in the following table:

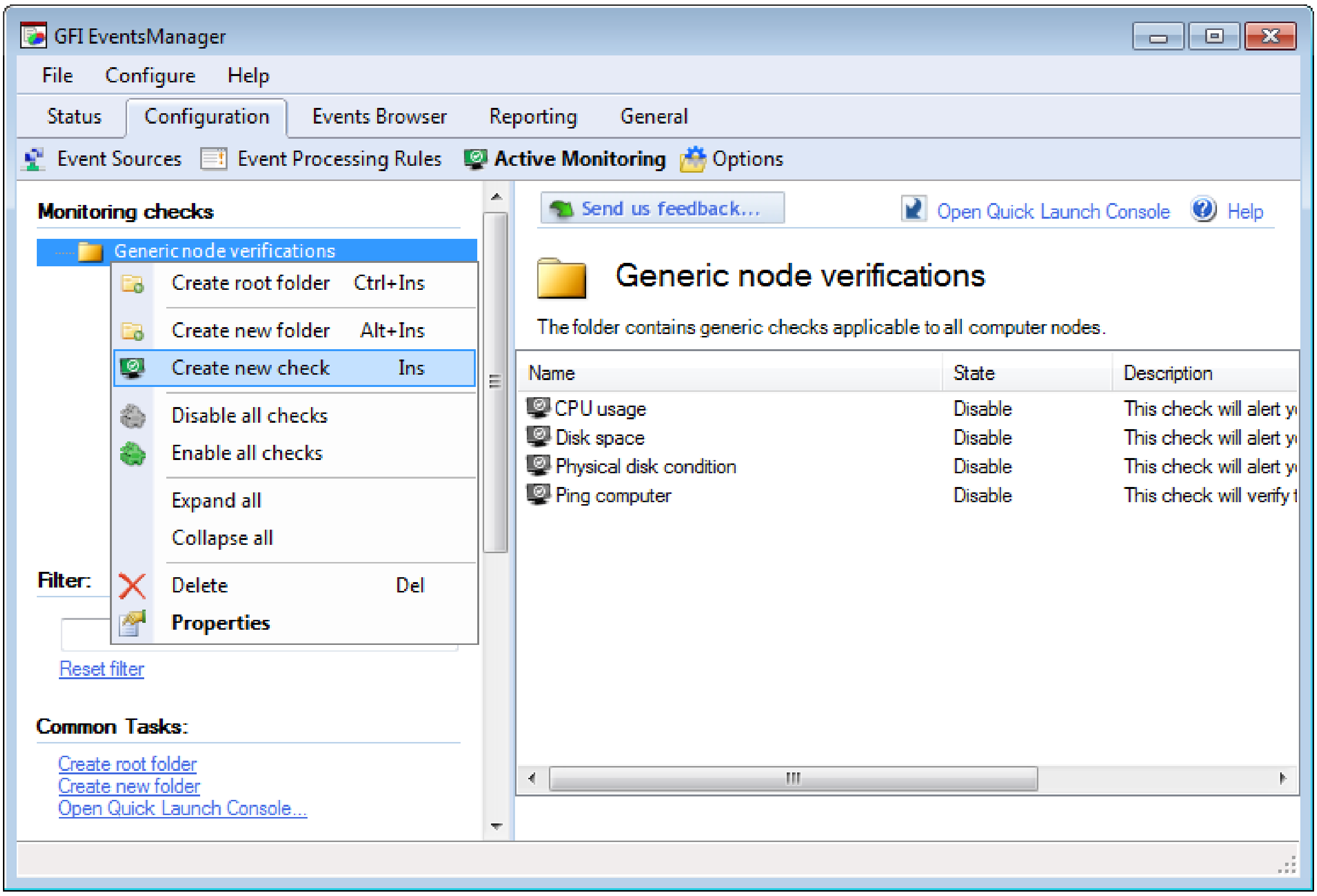
Option	Description
Generate an audit event from this machine/device when the check	GFI EventsManager enables you to generate event logs after the event source is checked for irregularities. From the drop-down menu, select: » **Fails** - generate an event log when the conditions of the check fails » **Succeeds** - generate an event log when the conditions of the check succeeds » **Fails or Succeeds** - generates an event log every time the check is run on the specified event source(s).
Continuous	Generates an event log every time the check fails/succeeds/both.
Only once	Generates an event log the first time the check fails/succeeds/both.

Option	Description
Once every {X} minutes	Generates an event log once every number of minutes you specify.
Once every {X} messages	Generates an event log once every number of messages you specify. Example: if you key in 10, only one event log is generated for every 10 times the check fails/succeeds/both.
When the check switch state, generate an audit event from this machine/device	Generate an event log when the check changes state from Fail to Succeed or vice versa.
Failed severity	Select the severity rating that GFI EventsManager assigns to the event log of a failed system check.
Success severity	Select the severity rating that GFI EventsManager assigns to the event log of a successful system check.

6. Click **OK**

15.4 Creating and configuring active monitoring checks

To create a new active monitoring check:



Generic node verifications

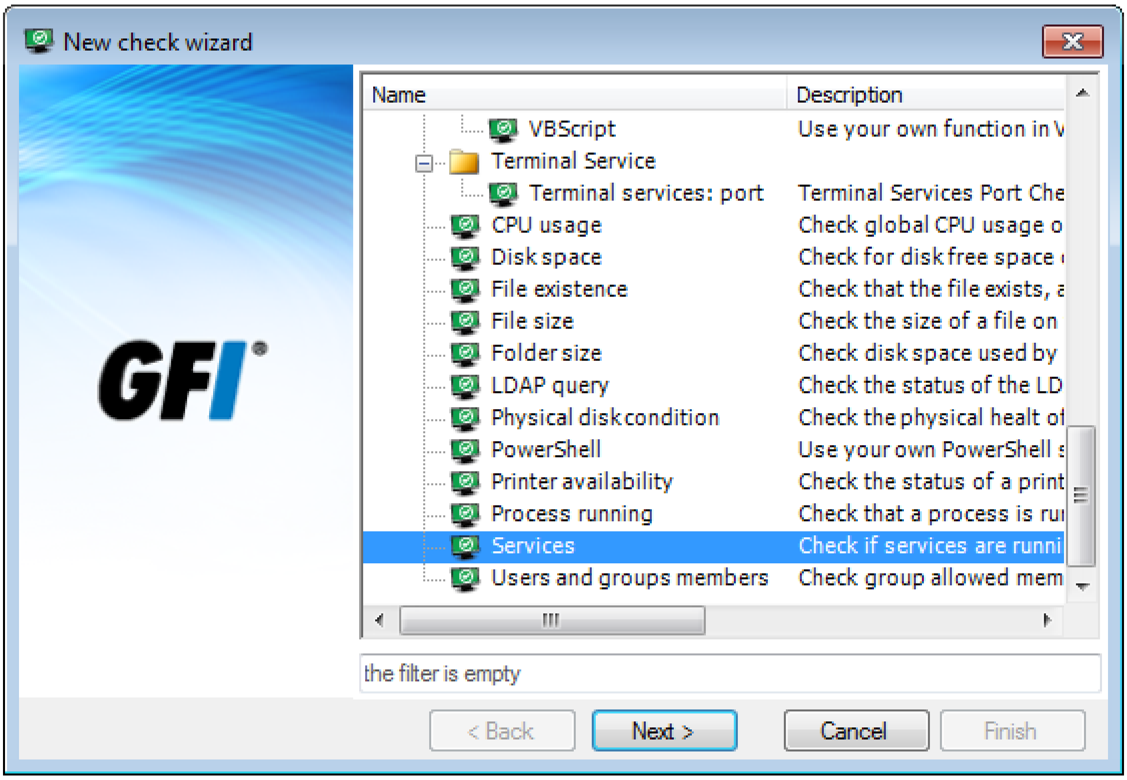
The folder contains generic checks applicable to all computer nodes.

Name	State	Description
CPU usage	Disable	This check will alert y
Disk space	Disable	This check will alert y
Physical disk condition	Disable	This check will alert y
Ping computer	Disable	This check will verify t

Screenshot 157: Creating a new active monitoring check

1. Click **Configuration > Active Monitoring**.

2. Right-click the root/sub-folder where you want the new monitoring check to be saved and select **Create new check**

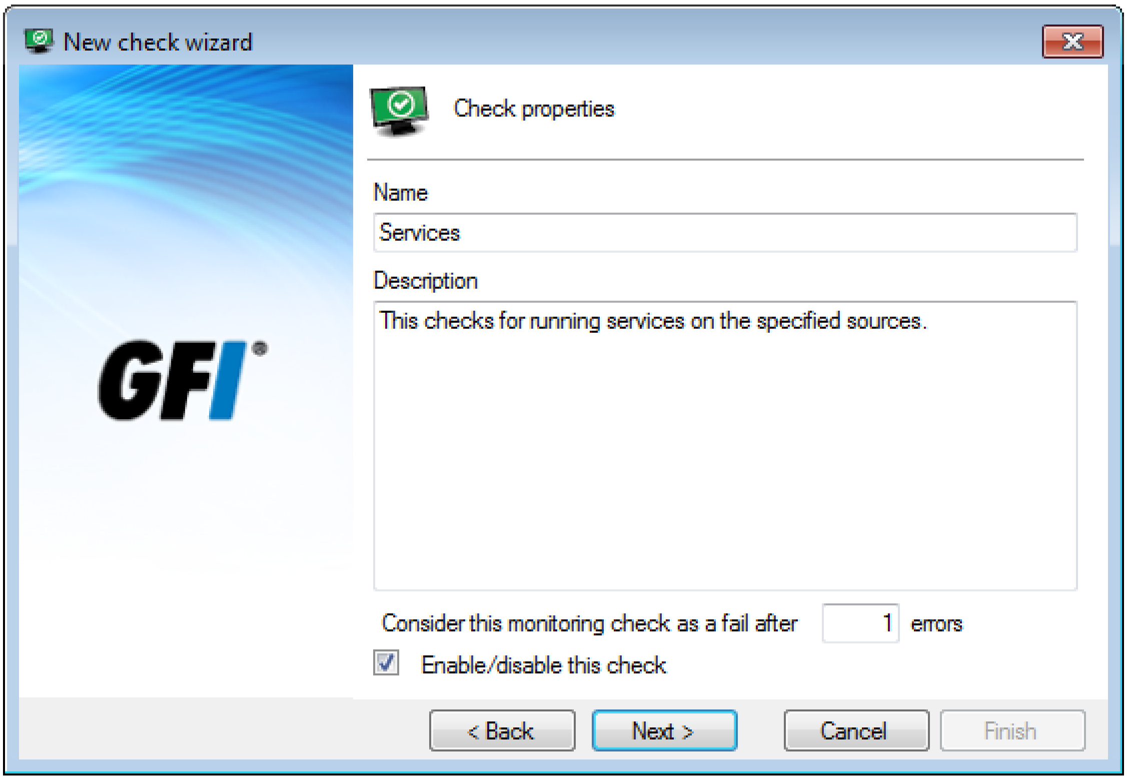


Name	Description
VBScript	Use your own function in V
Terminal Service	
Terminal services: port	Terminal Services Port Che
CPU usage	Check global CPU usage o
Disk space	Check for disk free space
File existence	Check that the file exists, a
File size	Check the size of a file on
Folder size	Check disk space used by
LDAP query	Check the status of the LD
Physical disk condition	Check the physical healt of
PowerShell	Use your own PowerShell s
Printer availability	Check the status of a print
Process running	Check that a process is ru
Services	Check if services are runni
Users and groups members	Check group allowed mem

the filter is empty

Screenshot 158: Select check type

3. Select the check type and click **Next**.



Name: Services

Description: This checks for running services on the specified sources.

Consider this monitoring check as a fail after 1 errors

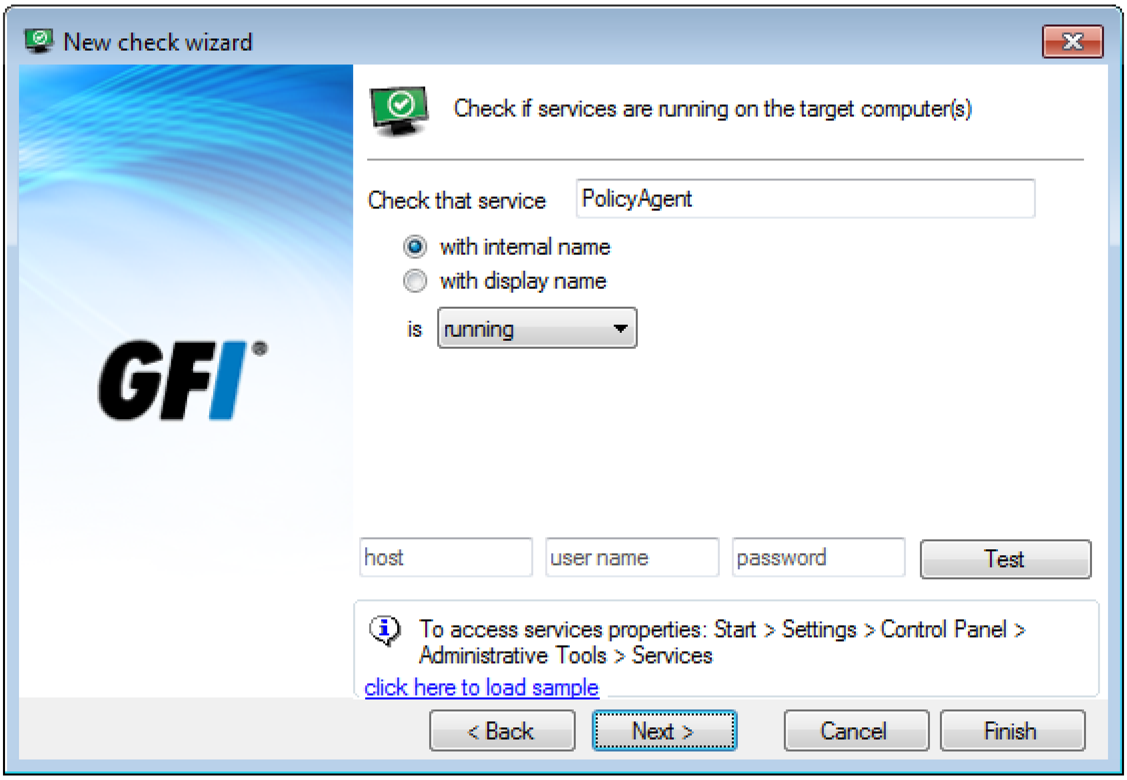
☑ Enable/disable this check

Screenshot 159: Configure general check properties

4. Specify a unique name and an optional description in the **Name** and **Description** fields.

5. In **Consider this monitoring check as fail after {X} errors** text box specify the number of errors that must occur, before the new checks is classified as **Failed**.

6. Select/unselect **Enable/disable this check**, to turn on/off the new monitoring check. Click **Next**.



New check wizard
GFI
Check if services are running on the target computer(s)

Check that service PolicyAgent

● with internal name

○ with display name

is running

host
user name
password
Test

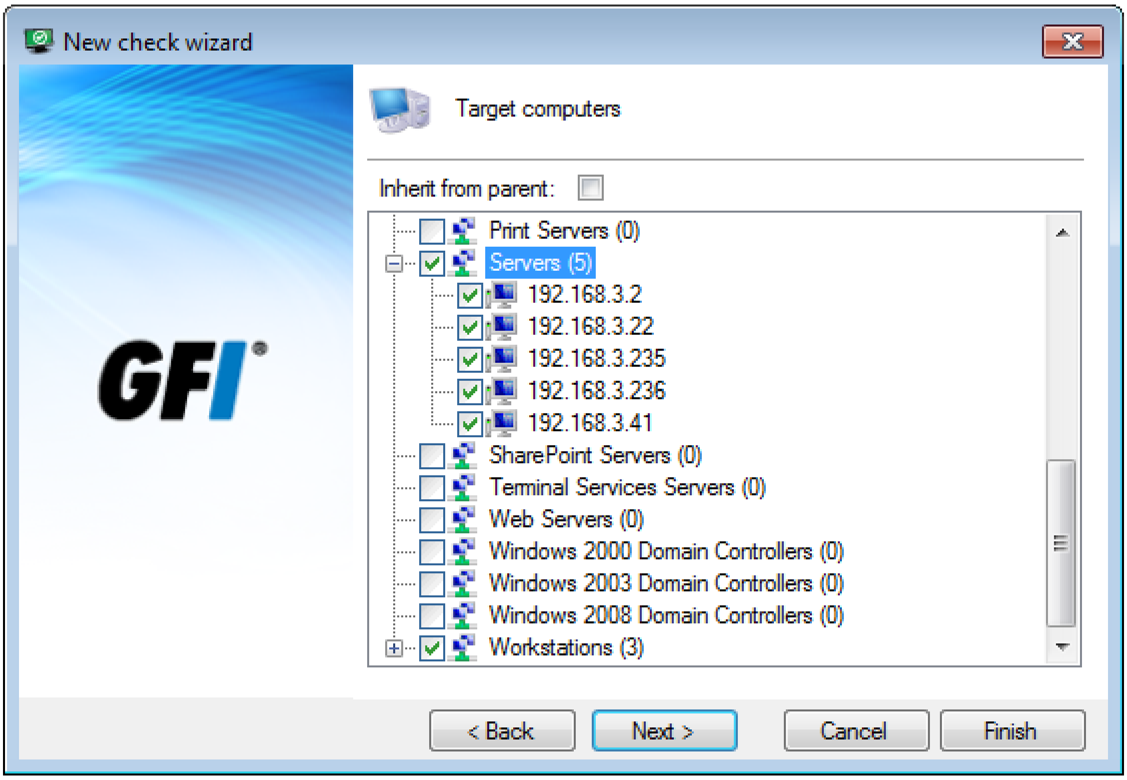
To access services properties: Start > Settings > Control Panel > Administrative Tools > Services

click here to load sample
< Back
Next >
Cancel
Finish

Screenshot 160: Configure monitoring check parameters

7. Configure the parameters that have to be checked and click **Next**.

> **Note**
>
> This step is different for each different type of check you select in step 3.



New check wizard

Target computers

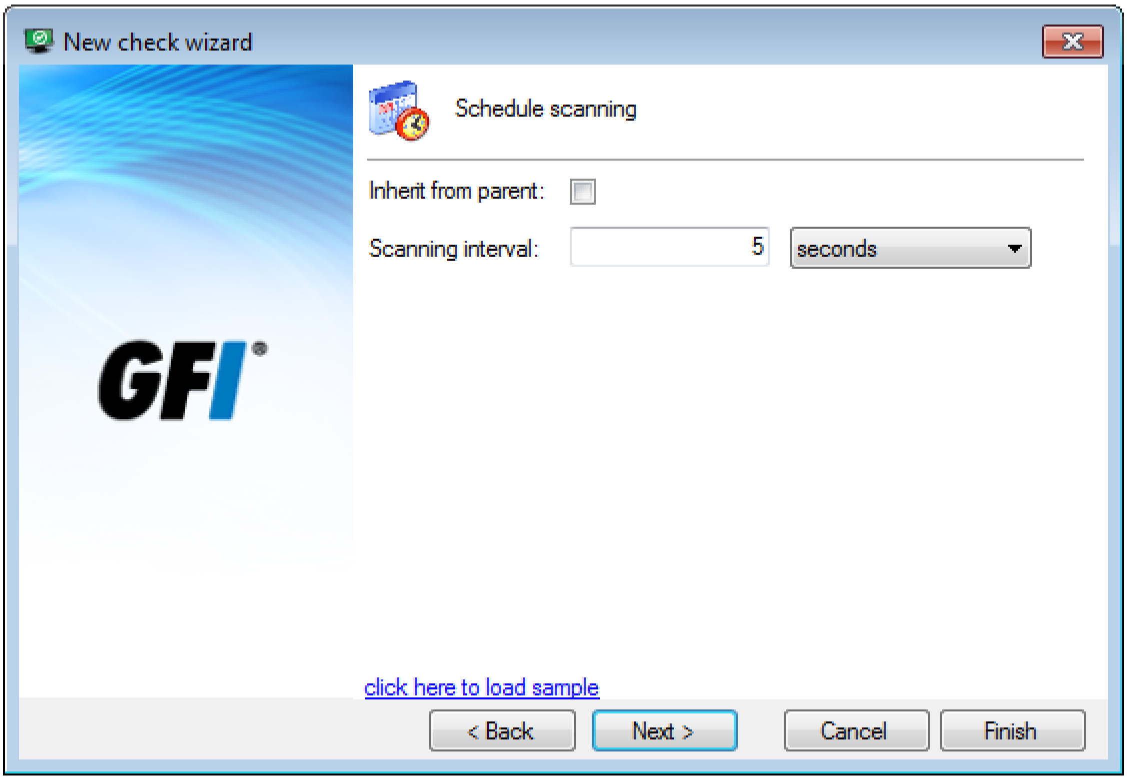
Inherit from parent: □

- □ Print Servers (0)
- ☑ Servers (5)
  - ☑ 192.168.3.2
  - ☑ 192.168.3.22
  - ☑ 192.168.3.235
  - ☑ 192.168.3.236
  - ☑ 192.168.3.41
- □ SharePoint Servers (0)
- □ Terminal Services Servers (0)
- □ Web Servers (0)
- □ Windows 2000 Domain Controllers (0)
- □ Windows 2003 Domain Controllers (0)
- □ Windows 2008 Domain Controllers (0)
- ☑ Workstations (3)

Screenshot 161: Select the effected sources

> **Note**
>
> Select **Inherit from parent** to use the same settings as the parent folder.

8. From the list of event sources, select the computers to monitor by this new check. Click **Next**.



New check wizard

Schedule scanning

Inherit from parent: □

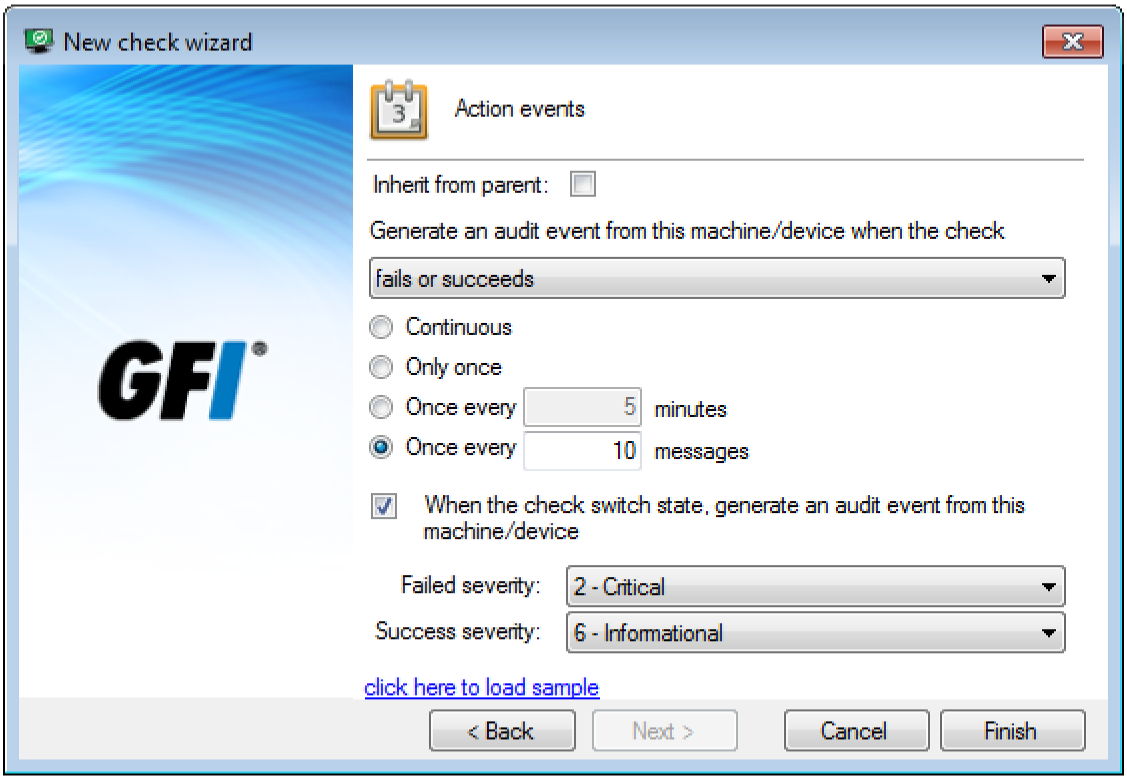
Scanning interval: 5 seconds

Screenshot 162: Set the scan time interval

Note

Select **Inherit from parent** to use the same settings as the parent folder.

9. Configure the scan interval schedule for the new check. By default, the check scans the selected source(s) once every 5 seconds.



Inherit from parent: □

Generate an audit event from this machine/device when the check

fails or succeeds

○ Continuous

○ Only once

○ Once every 5 minutes

● Once every 10 messages

☑ When the check switch state, generate an audit event from this machine/device

Failed severity: 2 - Critical

Success severity: 6 - Informational

Screenshot 163: Configure event log actions

Note

Select **Inherit from parent** to use the same settings as the parent folder.

10. A monitoring check generates an event log regardless of whether it fails or succeeds. From **Action events**, when event logs are generated and how GFI EventsManager classifies the generated logs.

Available options are described in the following table:

Option	Description
Generate an audit event from this machine/device when the check	GFI EventsManager enables you to generate event logs after the event source is checked for irregularities. From the drop-down menu, select: » **Fails** - generate an event log when the conditions of the check fails » **Succeeds** - generate an event log when the conditions of the check succeeds » **Fails or Succeeds** - generates an event log every time the check is run on the specified event source(s).
Continuous	Generates an event log every time the check fails/succeeds/both.
Only once	Generates an event log the first time the check fails/succeeds/both.
Once every {X} minutes	Generates an event log once every number of minutes you specify.
Once every {X} messages	Generates an event log once every number of messages you specify. Example: if you key in 10, only one event log is generated for every 10 times the check fails/succeeds/both.

Option	Description
When the check switch state, generate an audit event from this machine/device	Generate an event log when the check changes state from Fail to Succeed or vice versa.
Failed severity	Select the severity rating that GFI EventsManager assigns to the event log of a failed system check.
Success severity	Select the severity rating that GFI EventsManager assigns to the event log of a successful system check.

11. Click **Finish**.

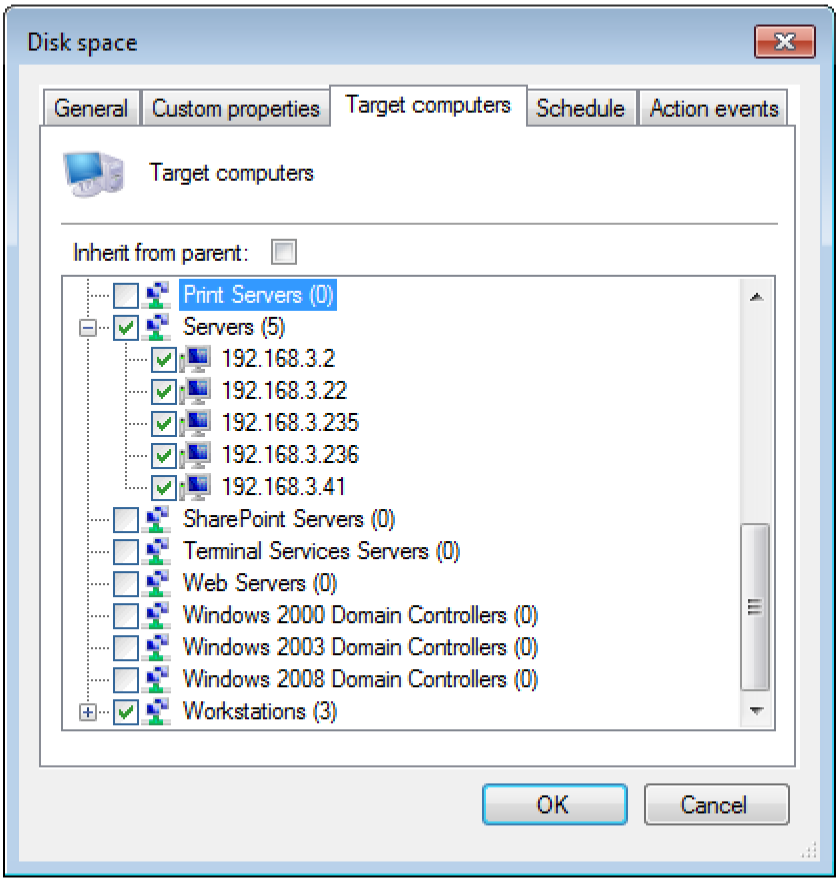
15.5 Applying active monitoring checks

Active Monitoring can be applied to single event sources or groups of event sources. Event sources can be selected on a check-by-check basis or at root folder level. Configuring settings at folder level enables the pertaining checks to inherit the same event source settings.

To assign a pre-configured monitoring check:

1. Go to **Configuration > Active Monitoring**.

2. Right-click on the monitoring check/folder that you want to assign to your event sources and select **Properties**.



Inherit from parent: □

- □ Print Servers (0)
- ☑ Servers (5)
  - ☑ 192.168.3.2
  - ☑ 192.168.3.22
  - ☑ 192.168.3.235
  - ☑ 192.168.3.236
  - ☑ 192.168.3.41
- □ SharePoint Servers (0)
- □ Terminal Services Servers (0)
- □ Web Servers (0)
- □ Windows 2000 Domain Controllers (0)
- □ Windows 2003 Domain Controllers (0)
- □ Windows 2008 Domain Controllers (0)
- ☑ Workstations (3)

Screenshot 164: Target computers tab

3. From the **Target computers** tab, select the event source or group of event sources.

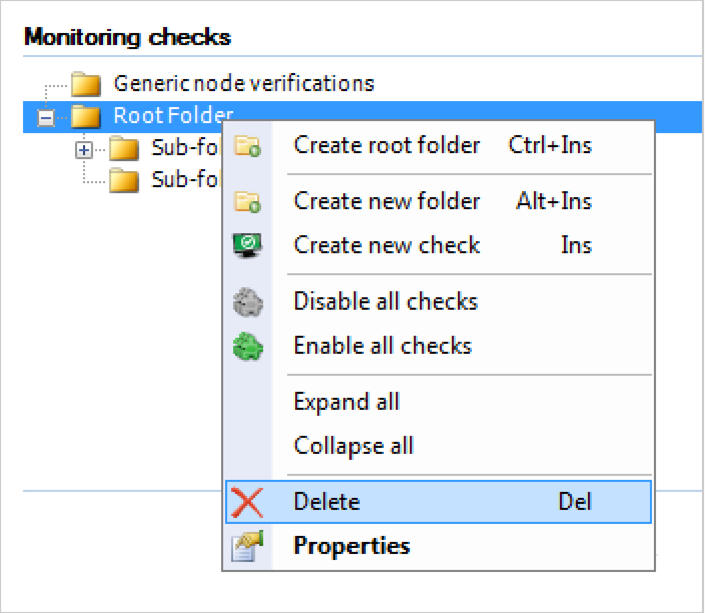
4. Click **OK**

> **Note**
> Select **Inherit from parent** to use the same settings as the parent folder.

15.6 Deleting folders and monitoring checks

To delete a folder/monitoring check:

1. Go to **Configuration > Active Monitoring**.



Screenshot 165: Deleting folders and monitoring checks

2. From the **Monitoring checks** section, right-click the folder/monitoring check to delete and select **Delete**.

> **Important**
> Deleting a root folder (parent folder), deletes all the contents as well. Make sure that you delete unwanted items only.

16 Configuring

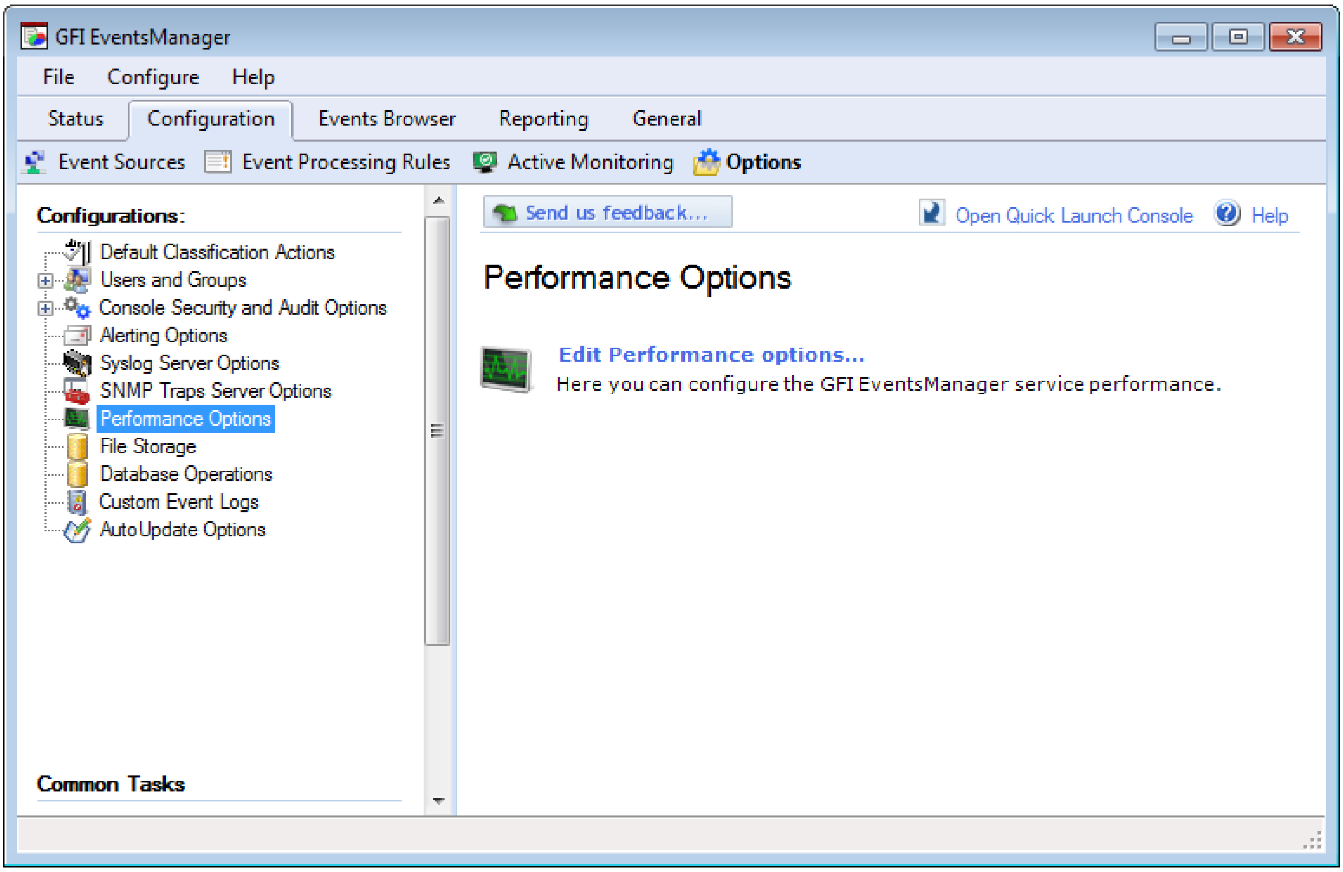
This section provides you with information about configuring general settings of GFI EventsManager, such as product licensing, performance options and product updates.

Topics in this section:

16.1 Performance options

GFI EventsManager provides you with options which enable you to set the performance level of the GFI EventsManager service.

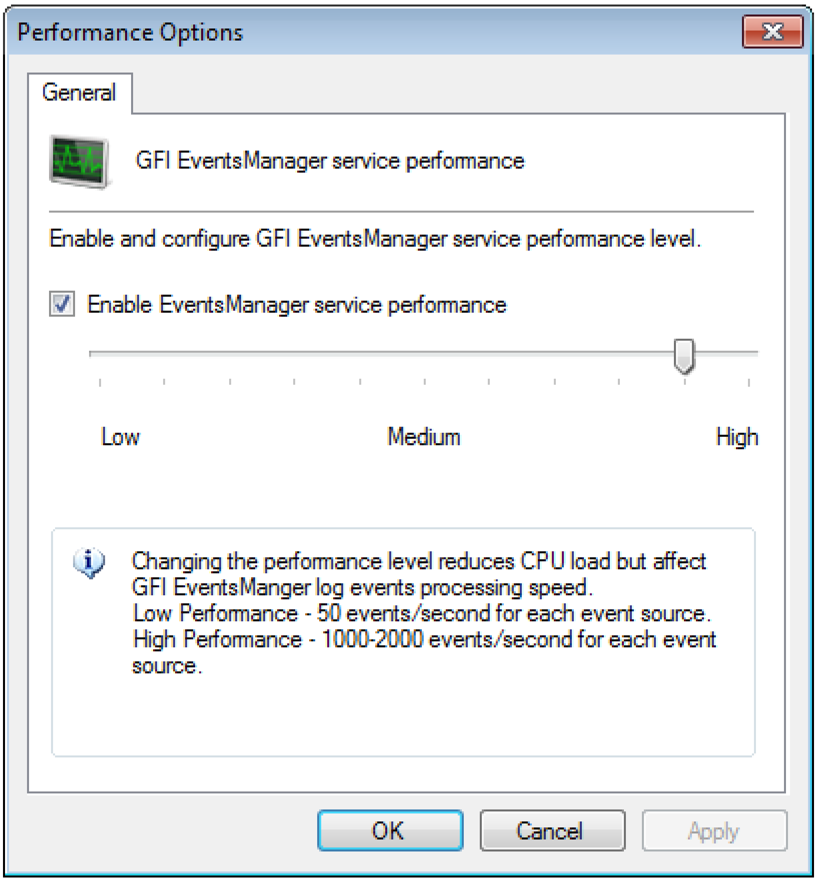
To configure the performance level:



Here you can configure the GFI EventsManager service performance.

Screenshot 166: GFI EventsManager Performance Options

1. From **Configuration** tab > **Options** > **Configurations**, right-click **Performance Options** and select **Edit Performance Options**.



Enable and configure GFI EventsManager service performance level.

☑ Enable EventsManager service performance

Changing the performance level reduces CPU load but affect GFI EventsManger log events processing speed.
Low Performance - 50 events/second for each event source.
High Performance - 1000-2000 events/second for each event source.

Screenshot 167: Performance Options dialog

2. Select/Unselect **Enable EventsManager service performance** to enable/disable service performance options.

3. Move the slider left (low) to right (high) until you reach the required performance level.

4. Click **Apply** and **OK**.

> **Note**
>
> Setting the performance level on **low** is estimated to process **50 events per second per event source**, while setting the bar on **high** processes **1,000 - 2,000 events per second per event source**.

16.2 Product updates

Periodically, GFI releases product updates to improve or add functionality to GFI EventsManager. Product updates are important to download and install because they fix issues with underlying technologies as well as increase compatibility with different technologies and devices.

When the GFI EventsManager host is connected to the Internet, products updates can be downloaded directly from the Management Console. Where Internet access is limited or there is none at all, product updates can be downloaded from an alternate location and then placed in the updates repository manually. Refer to the following sections for information about:

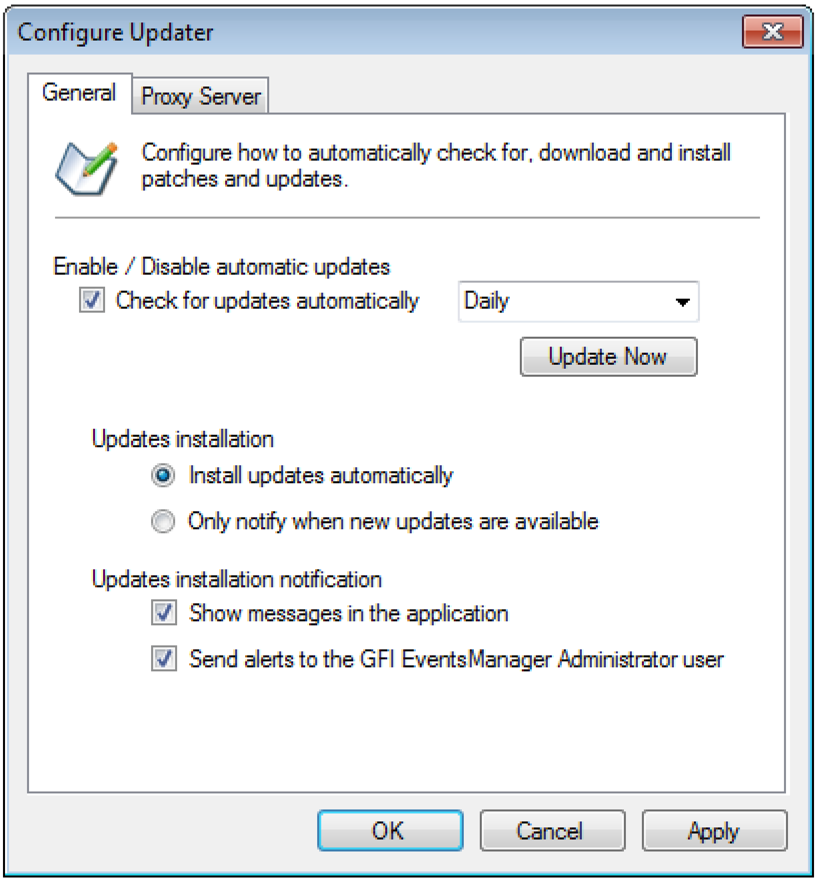
» Downloading updates directly

16.2.1 Downloading updates directly

GFI EventsManager enables users to configure how to automatically check for, download and install product updates.

To configure Auto Update options:

1. From **Configuration** tab > **Options** > **Configurations**, right-click **Auto Update Options** and select **Edit updater options...**



Configure Updater

Configure how to automatically check for, download and install patches and updates.

Enable / Disable automatic updates

☑ Check for updates automatically — Daily

Updates installation

● Install updates automatically

○ Only notify when new updates are available

Updates installation notification

☑ Show messages in the application

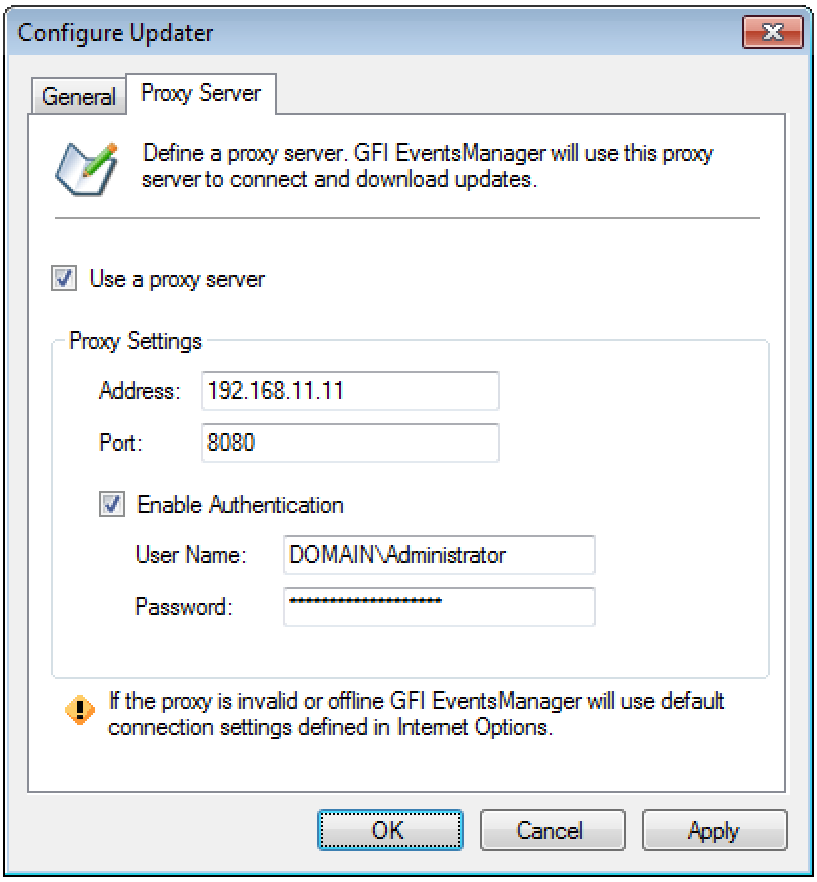
☑ Send alerts to the GFI EventsManager Administrator user

Screenshot 168: Configure auto update options

2. Configure the options described below:

Options	Description
Check for updates automatically	If selected, GFI EventsManager will check for updates automatically on a daily or weekly basis.
Update Now	If **Check for updates automatically** is not selected, use this option to manually check for updates and install missing updates.
Install updates automatically	Installs downloaded updates automatically.
Only notify me when updates are available	Available updates are shown in the **Missing Updates** section but are not installed.
Show messages in the application	Shows a message at the bottom of the application page. Click on the displayed message to action the updates.
Send alerts on GFI EventsManager Administrator user	Sends an email alert on the configured GFI EventsManager Administrator account. For more information refer to Configuring the administrator account.

3. If product updates must be downloaded through a proxy server, click the **Proxy Server** tab.


Configure Updater

General | Proxy Server

Define a proxy server. GFI EventsManager will use this proxy server to connect and download updates.

☑ Use a proxy server

Proxy Settings

Address: 192.168.11.11

Port: 8080

☑ Enable Authentication

User Name: DOMAIN\Administrator

Password: ********************

If the proxy is invalid or offline GFI EventsManager will use default connection settings defined in Internet Options.

Screenshot 169: Configuring proxy settings to download product updates

4. Select **Use a proxy server** and key in the proxy server address and listening port in the **Address** and **Port** fields.

5. (Optional) If the proxy server requires authentication, select **Enable Authentication** and key in the proxy login credentials.

6. Click **Apply** and **OK**

16.3 Product licensing

GFI EventsManager is licensed by event source/computer. All devices that generate a log are considered to be an event source. Refer to the sections below for more information about GFI EventsManager licensing options.

16.3.1 Viewing license details

To view license distribution details:

1. From **General** tab **>** **General**, click **Licensing**.

2. From the right pane, click **Show details** to expand the details section. This will show the number of event sources configured and respective license type (such as Workstation or Server).

16.3.2 Updating license key

To update your current license key:

1. From **General** tab **>** **General**, right-click **Licensing** and select **Update key...**

2. Specify your license key and click **OK**

16.3.3 Obtaining a free 30-day trial license key

GFI EventsManager allows you to register your version of the product and receive a free 30-day trial. Once the trial period is expired, all event log monitoring and management services are disabled and a full license key is required.

To register and receive a 30-day trial license key:

1. From **General** tab **>** **General**, click **Licensing**.

2. Click the provided link. This will take you to GFI website where you are able to enter you details and receive the license key by email. The email address you provide in the registration form is where your free 30-day trial key will be sent. If you have a spam filtering system, make sure the email is not blocked as spam.

16.3.4 Purchasing a license key

To purchase a license key:

1. From **General** tab **>** **General**, click **Licensing**.

2. From the right pane, click **Buy now!**. This takes you to GFI website where you can view further information about licensing and purchase a valid key.

> **Note**
>
> For more information, refer to:
>
> » Licensing Information - https://www.gfi.com/page/13789/products/gfi-events-manager/pricing/licensing/licensing
>
> » Pricing Information - https://www.gfi.com/products/gfi-eventsmanager/pricing

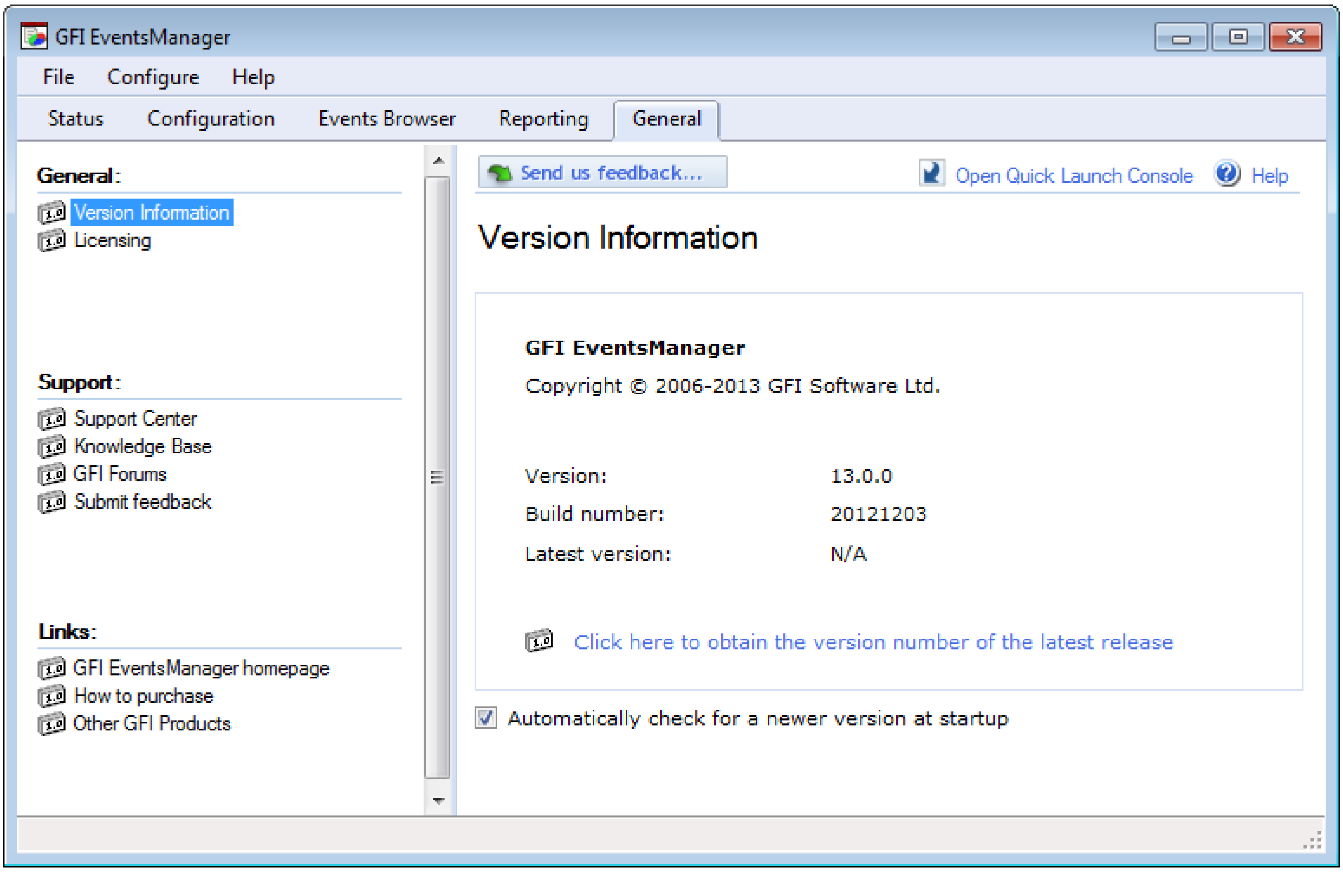
16.4 Product version information

GFI recommends that you keep GFI EventsManager up-to-date and use the latest product version for full feature support and device compatibility. Version information can also be useful to troubleshoot functionality errors with a technical support representative. Refer to the following sections for information about:

16.4.1 Checking your GFI EventsManager version

To check your version information details:

1. From **General** tab **>** **General**, click **Version Information**.



Version Information

GFI EventsManager

Copyright © 2006-2013 GFI Software Ltd.

Version: 13.0.0

Build number: 20121203

Latest version: N/A

Click here to obtain the version number of the latest release

☑ Automatically check for a newer version at startup

Screenshot 170: Version Information screen

2. View version information details from the right pane.

3. (Optional) Click **Click here to obtain the version number of the latest release** to get the latest version information from GFI servers.

16.4.2 Checking for newer versions

To check for newer builds of GFI EventsManager:

1. From **General** tab **>** **General**, right-click **Version Information** and select **Check for newer builds...**

2. (Optional) From the right pane, select/unselect **Automatically check for a newer version at startup** to check for new versions automatically. By default, this option is enabled.

16.5 Importing and Exporting settings

The provided import and export tool, enables you to seamlessly move configurations from one instance of GFI EventsManager to another. This can also be done as part of a disaster recovery plan, to avoid having to reconfigure GFI EventsManager in case of a disaster. The following settings can be imported/exported using GFI EventsManager:

- Event Sources
- Event Processing Rules
- Events Browser Filters
- Options (including Default Classification Actions, Alerting Options, Database operations and more).

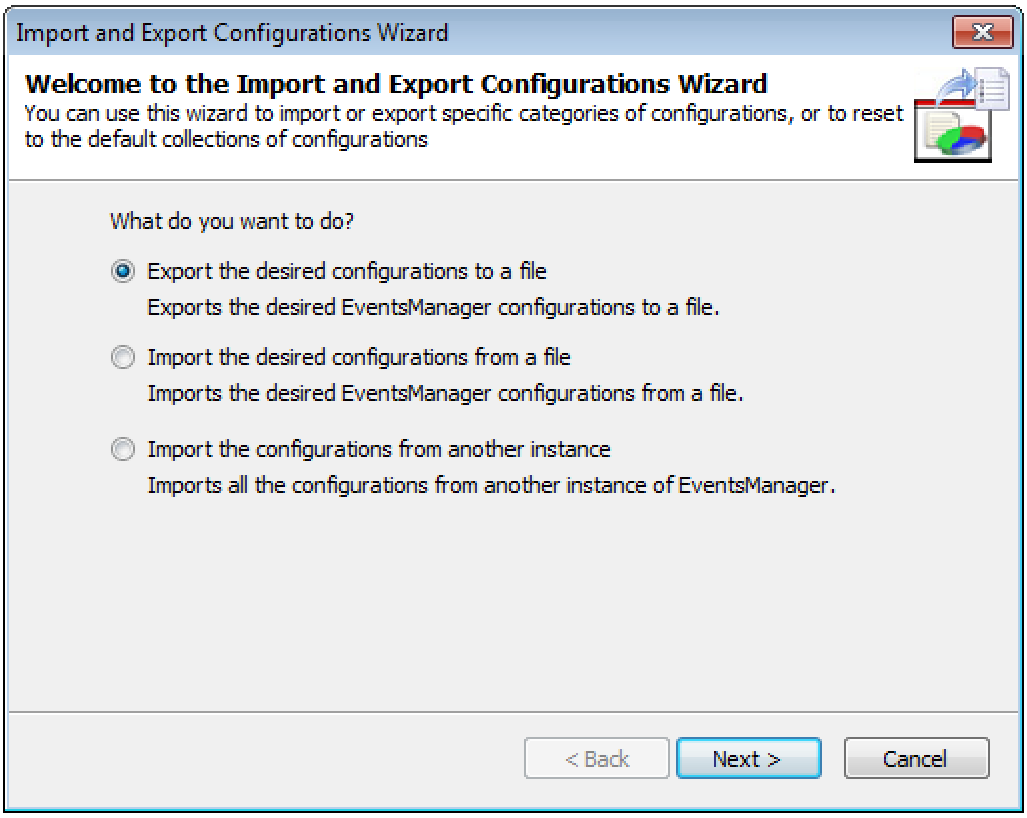
This section contains information about:

- Exporting configurations to a file
- Importing configurations from a file
- Importing configurations from another instance

16.5.1 Exporting configurations to a file

To export you GFI EventsManager configurations:

1. Click **File > Import and Export Configurations...**.



Import and Export Configurations Wizard

Welcome to the Import and Export Configurations Wizard

You can use this wizard to import or export specific categories of configurations, or to reset to the default collections of configurations

What do you want to do?

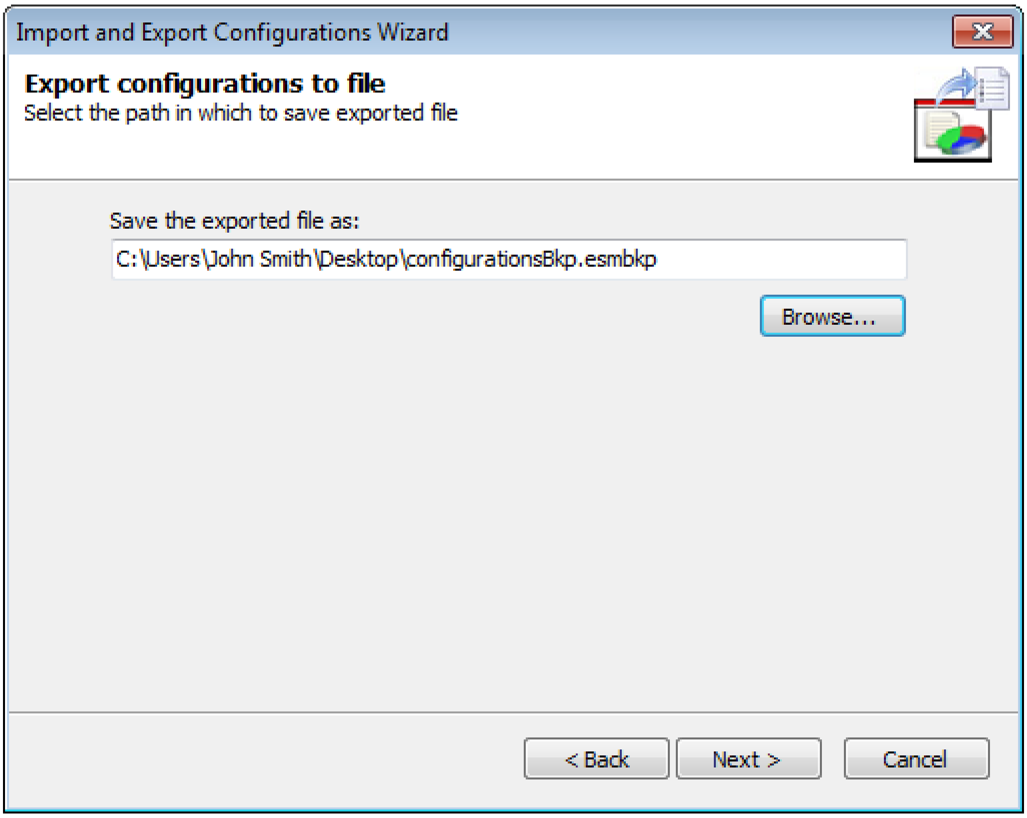
● Export the desired configurations to a file
Exports the desired EventsManager configurations to a file.

○ Import the desired configurations from a file
Imports the desired EventsManager configurations from a file.

○ Import the configurations from another instance
Imports all the configurations from another instance of EventsManager.

Screenshot 171: Export configurations to a file

2. Select **Export the desired configurations to a file** and click **Next**.


Import and Export Configurations Wizard

Export configurations to file

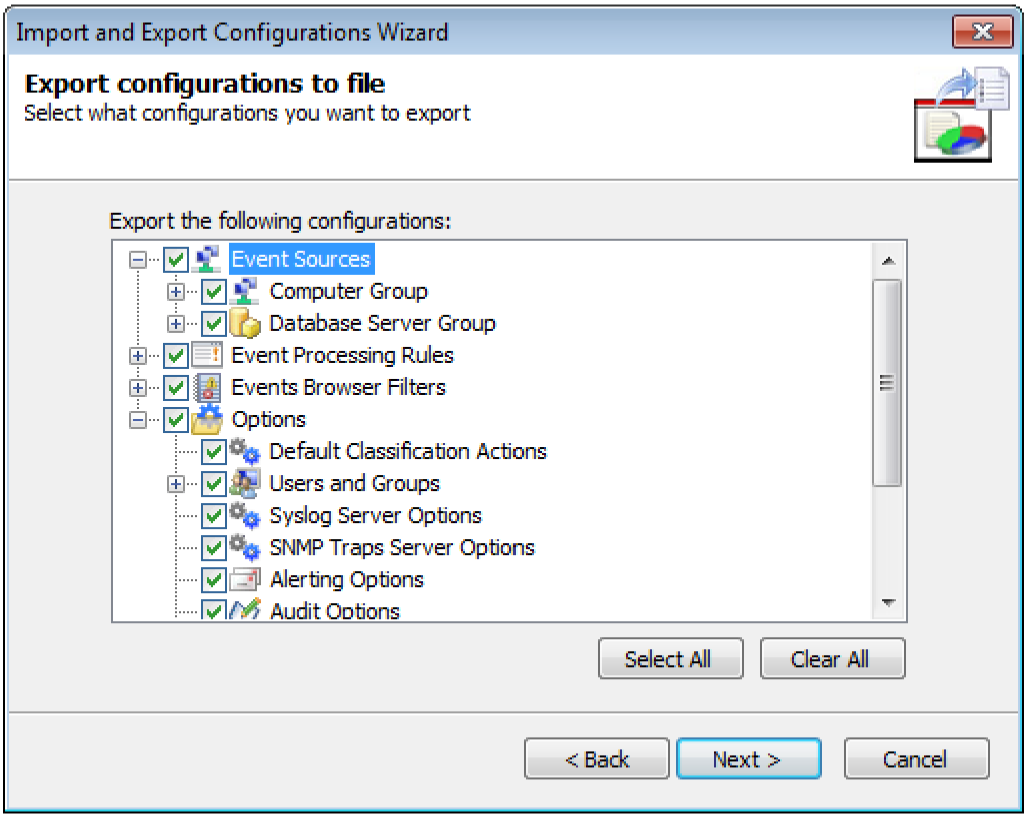
Select the path in which to save exported file

Save the exported file as:

C:\Users\John Smith\Desktop\configurationsBkp.esmbkp

Screenshot 172: Specify export destination

3. Specify the location where the exported file will be saved or click **Browse...** to look for the location. Click **Next**.


Import and Export Configurations Wizard

Export configurations to file

Select what configurations you want to export

Export the following configurations:

- ☑ Event Sources
  - ☑ Computer Group
  - ☑ Database Server Group
- ☑ Event Processing Rules
- ☑ Events Browser Filters
- ☑ Options
  - ☑ Default Classification Actions
  - ☑ Users and Groups
  - ☑ Syslog Server Options
  - ☑ SNMP Traps Server Options
  - ☑ Alerting Options
  - ☑ Audit Options

Screenshot 173: Select export configurations

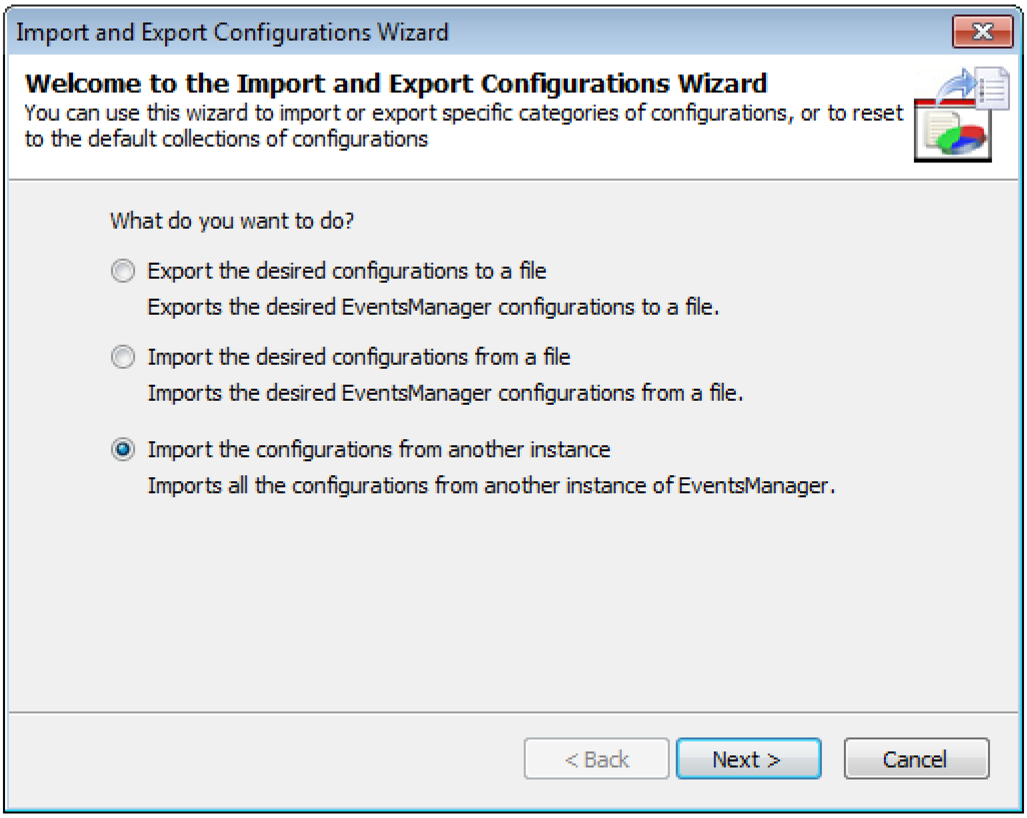
4. Select the configurations you want to export and click **Next**.

5. Wait for GFI EventsManager to export the configuration and click **OK**

16.5.2 Importing configurations from another instance

To import configurations from another instance of GFI EventsManager:

1. Click **File > Import and Export Configurations...**



Import and Export Configurations Wizard

Welcome to the Import and Export Configurations Wizard

You can use this wizard to import or export specific categories of configurations, or to reset to the default collections of configurations

What do you want to do?

○ Export the desired configurations to a file

Exports the desired EventsManager configurations to a file.

○ Import the desired configurations from a file

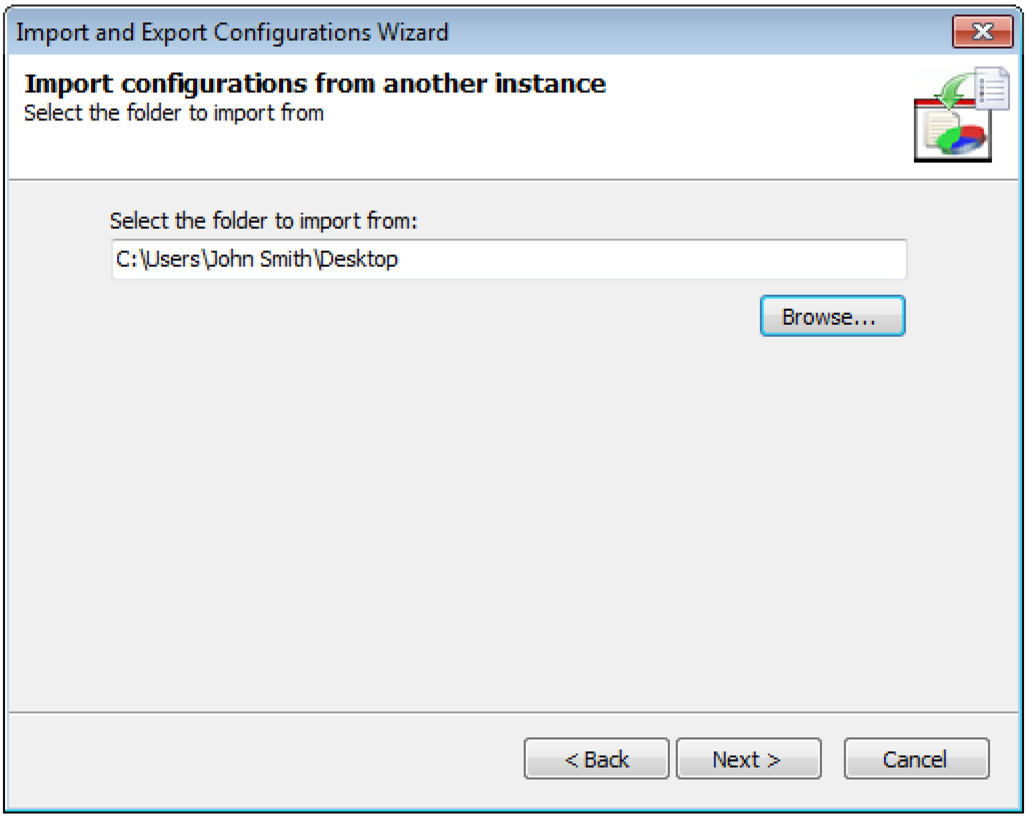
Imports the desired EventsManager configurations from a file.

● Import the configurations from another instance

Imports all the configurations from another instance of EventsManager.

Screenshot 174: Import configurations from another instance of GFI EventsManager

2. Select **Import the configurations from another instance** and click **Next**.


Import and Export Configurations Wizard

Import configurations from another instance

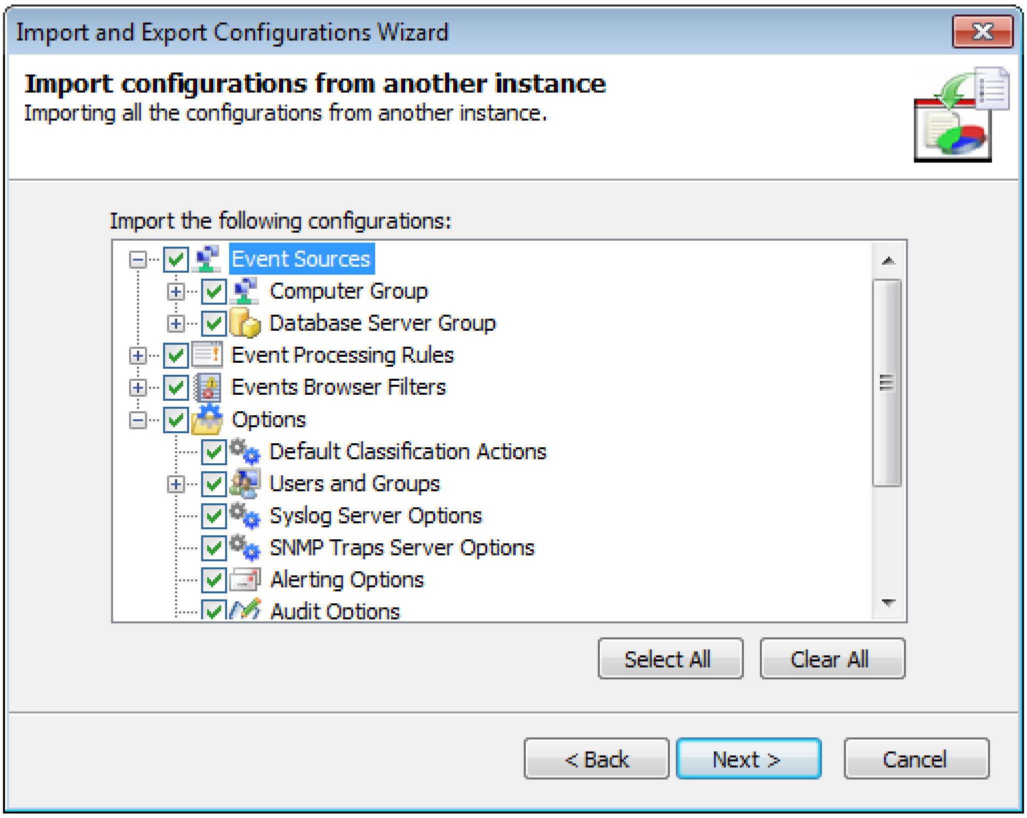
Select the folder to import from

Select the folder to import from:

C:\Users\John Smith\Desktop

Screenshot 175: Specify instance location

3. Specify the installation folder path of the instance you want to import configurations from. Alternatively, click **Browse...** to look for it. Click **Next**.


Import and Export Configurations Wizard

Import configurations from another instance

Importing all the configurations from another instance.

Import the following configurations:

- ☑ Event Sources
  - ☑ Computer Group
  - ☑ Database Server Group
- ☑ Event Processing Rules
- ☑ Events Browser Filters
- ☑ Options
  - ☑ Default Classification Actions
  - ☑ Users and Groups
  - ☑ Syslog Server Options
  - ☑ SNMP Traps Server Options
  - ☑ Alerting Options
  - ☑ Audit Options

Screenshot 176: Select configurations to import from another instance of GFI EventsManager

4. Select the configurations you want to import and click **Next**.

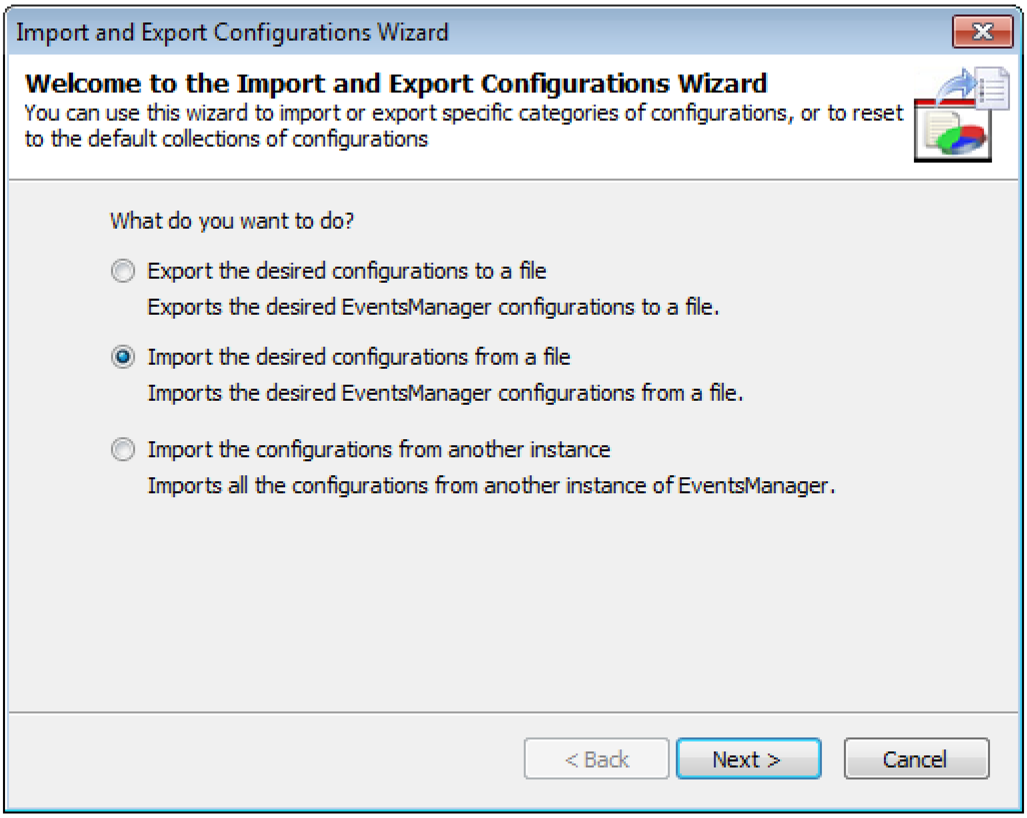
5. Wait for the configurations to import and click **OK**

> **Note**
>
> If GFI EventsManager detects other configurations, it will ask you if you want to override or merge both configurations.

16.5.3 Importing configurations from a file

To import configurations from a file:

1. Click **File > Import and Export Configurations...**.



Import and Export Configurations Wizard

Welcome to the Import and Export Configurations Wizard

You can use this wizard to import or export specific categories of configurations, or to reset to the default collections of configurations

What do you want to do?

○ Export the desired configurations to a file

Exports the desired EventsManager configurations to a file.

● Import the desired configurations from a file

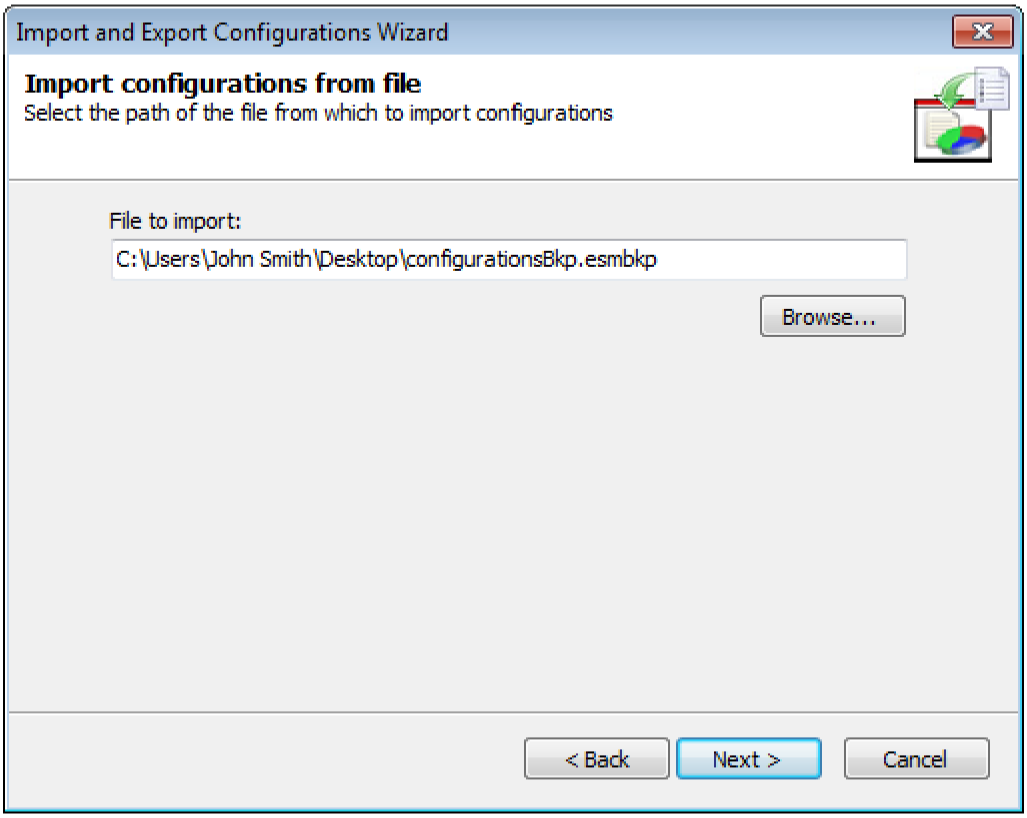
Imports the desired EventsManager configurations from a file.

○ Import the configurations from another instance

Imports all the configurations from another instance of EventsManager.

Screenshot 177: Import configurations from a file

2. Select **Import the desired configurations from a file** and click **Next**.



Import and Export Configurations Wizard

Import configurations from file

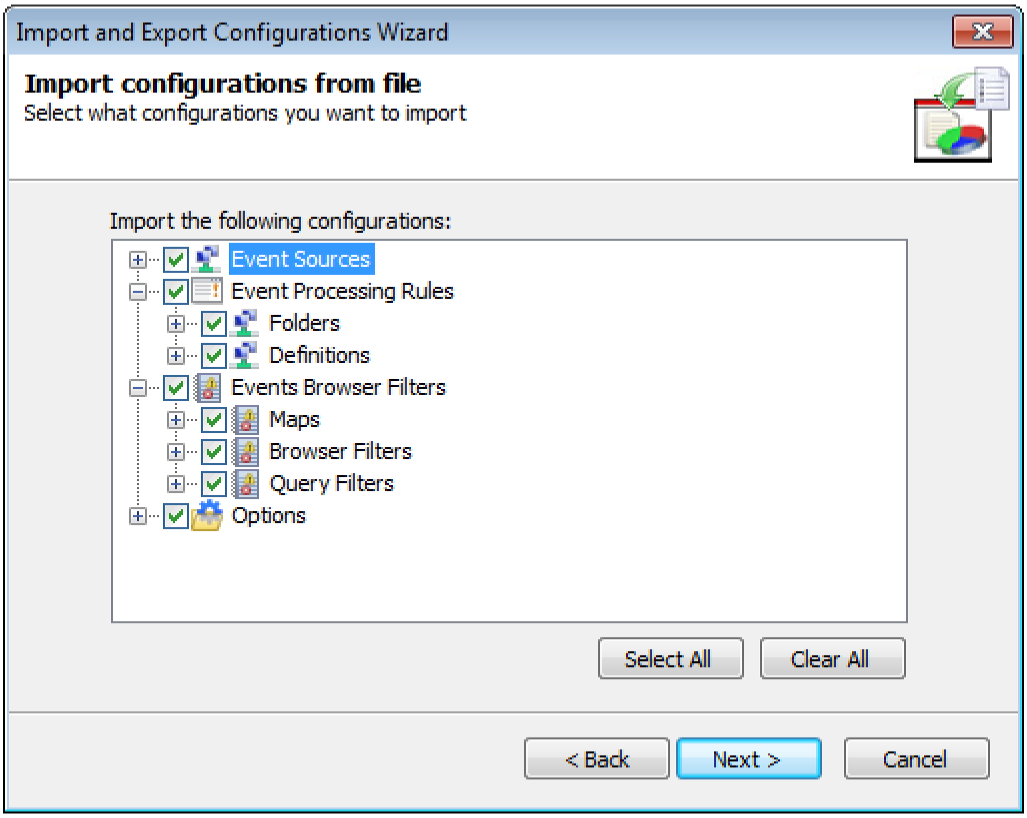
Select the path of the file from which to import configurations

File to import:

C:\Users\John Smith\Desktop\configurationsBkp.esmbkp

Screenshot 178: Specify configuration file location

3. Specify the path where the import file is stored or click **Browse...** to look for it. Click **Next**.



Import and Export Configurations Wizard

Import configurations from file

Select what configurations you want to import

Import the following configurations:

- ☑ Event Sources
- ☑ Event Processing Rules
  - ☑ Folders
  - ☑ Definitions
- ☑ Events Browser Filters
  - ☑ Maps
  - ☑ Browser Filters
  - ☑ Query Filters
- ☑ Options

Screenshot 179: Select configurations to import

4. Select the configurations you want to import and click **Next**.

5. Wait for GFI EventsManager to import the configurations and click **OK**

Note

If GFI EventsManager detects other configurations, it will ask you if you want to override or merge both configurations.

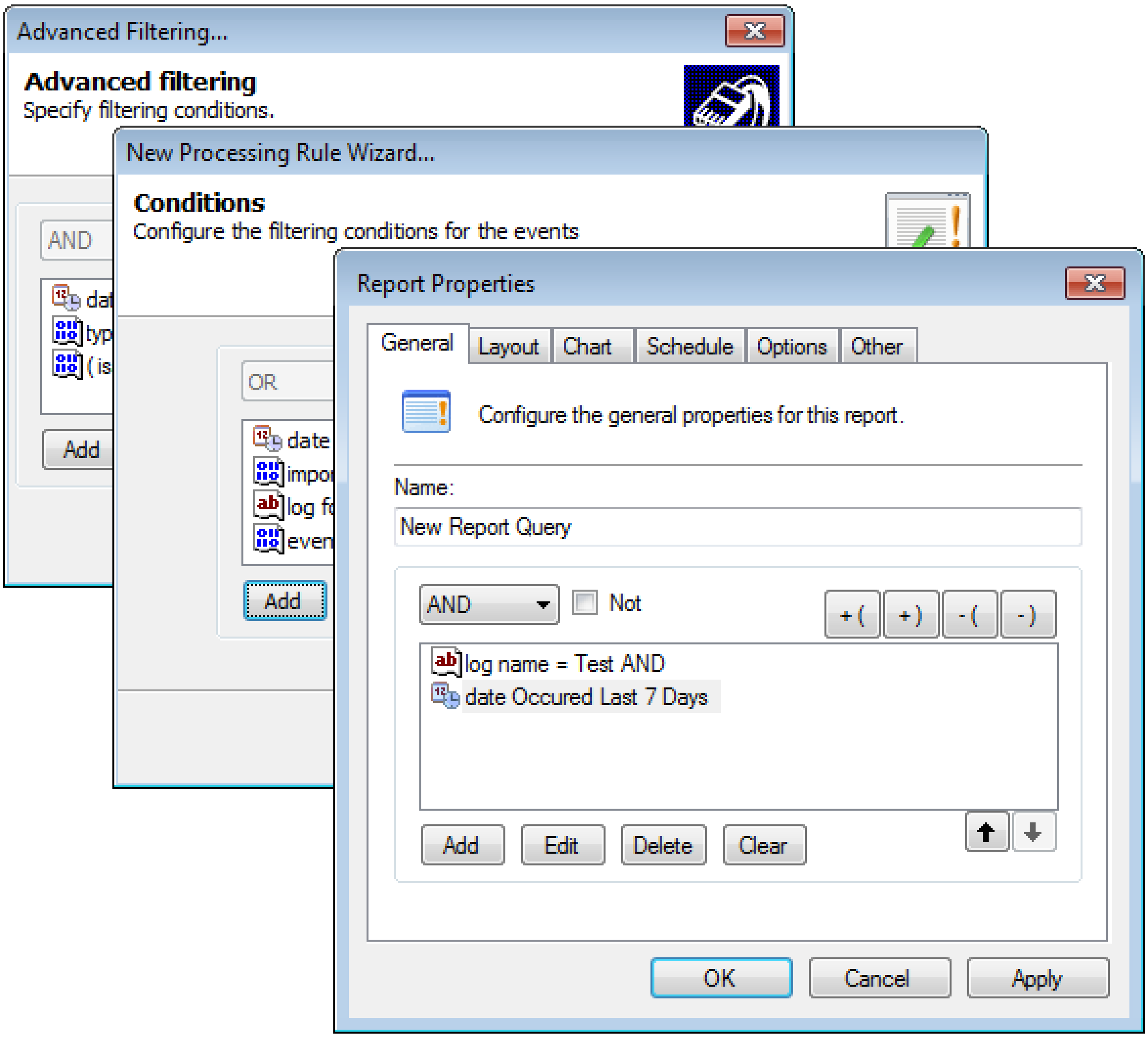
16.6 Building query restrictions

GFI EventsManager enables you to build custom queries, using the **Edit Query Restriction** dialog. For more information, refer to Using the Edit Query Restriction dialog (page 219).

Queries are instructions GFI EventsManager sends to the database backend when storing and retrieving data. They are also used to configure rules to trigger actions and alerts when certain attribute values are detected.

The following scenarios use the Edit Query Restriction dialog for granular configuration:

Use	Description
Configuring reports	Build queries to filter report information and generate reports pertaining to specific attributes.
Configuring user accounts	Prevent GFI EventsManager Management Console users from displaying unauthorized information about other users, event logs or network activity.
Configuring events processing rules	Scan collected event logs for attributes that match values configured in events processing queries. This enables you to inspect network activity in granular detail, which helps you to proactively resolve network issues before evolving into serious problems.



Name: New Report Query

log name = Test AND
date Occured Last 7 Days

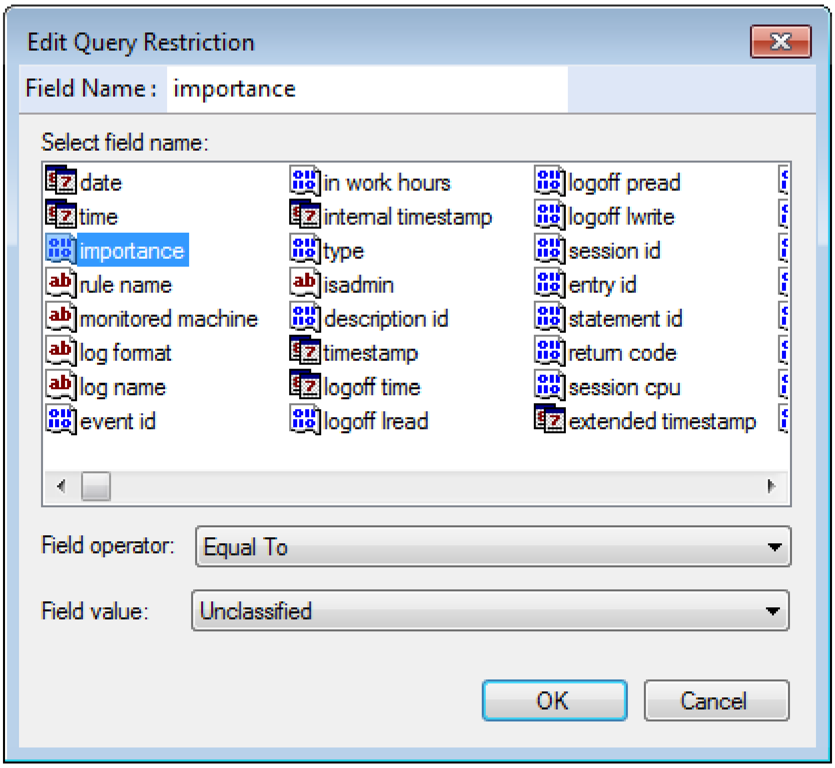
Screenshot 180: Users, Events processing rules and Report queries

16.6.1 Using the Edit Query Restriction dialog

To edit query restrictions for granular filtering and configuration:

1. The following table describes how to launch the Edit Query Restriction dialog for users, reports and processing rules:

Configure...	Procedure
Users	To launch the query restrictions dialog: 1. Click **Configuration** tab **> Options > Users and Groups > Users**. 2. From the right-pane, right-click the user to edit and select **Properties**. 3. From the **User Properties** dialog, click **Filter** tab **> Advanced...** 4. From the **Advanced filtering** dialog, click **Add**.
Reports	To launch the query restrictions dialog: 1. Click **Reporting** tab. 2. From the **Reports** list, right-click the report to edit and select **Properties**. 3. From the **General** tab, click **Add**.
Events processing rules	To launch the query restrictions dialog: 1. Click **Configuration** tab **> Events Processing Rules**. 2. From the **Rule Folders** list, right-click the events processing rule to edit and select **Properties**. 3. From the processing rule properties dialog, click **Conditions** tab **> Add**.



Edit Query Restriction

Field Name : importance

Select field name:

date, time, importance, rule name, monitored machine, log format, log name, event id, in work hours, internal timestamp, type, isadmin, description id, timestamp, logoff time, logoff lread, logoff pread, logoff lwrite, session id, entry id, statement id, return code, session cpu, extended timestamp

Field operator: Equal To

Field value: Unclassified

Screenshot 181: Defining restrictions: Editing a query restriction

2. From the list of available fields, select a field. Optionally, key in the name in **Field Name** text box to search for the required field.

3. Specify a **Field Operator** for the selected field. Available operators include:

Field Operator	Description
Equal To	When the event field is equal to the value configured.
Less than	When the event field is has a smaller value than the value configured.
Greater than	When the event field is has a larger value than the value configured.
Occurred (Related to date/time fields)	When the event field date occurred before the value date.
Like	When the event field has similar text as the value text.
Contains	When the event field contains the value text.
Value in List	When the event field is equal to one of the values in a list.

4. Specify a **Field Value** for the selected field and operator. Some fields have predefined values; others require you to specify a value.

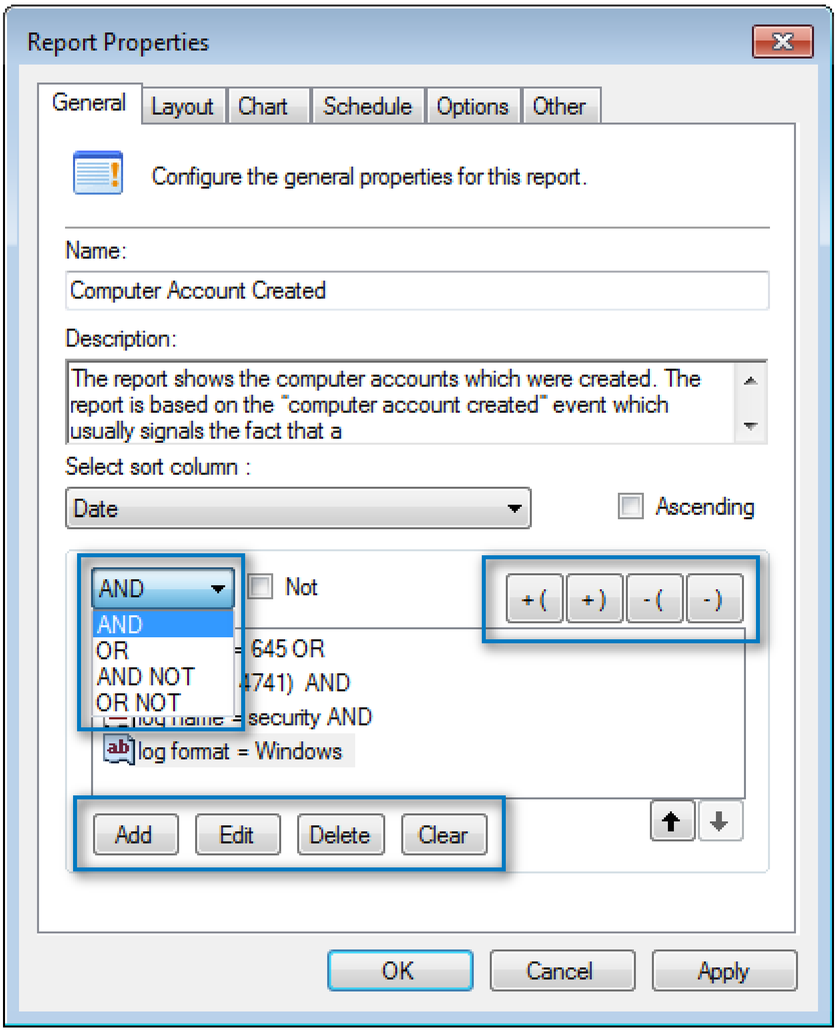
5. Click **OK**

Note

Repeat steps 1 to 4 to add all the fields you want to include in the query.

Note

You can copy report restrictions from existing reports. From **Reporting** tab > **Reports**, right-click a report and select **Copy Report Restrictions**.



Screenshot 182: Defining restrictions: Customizing the condition

6. Once all the restrictions are defined, use the options described below to customize the query conditions:

Options	Description
AND	Select the condition to configure and select AND. The selected condition AND the following condition(s) must be met for the query to be valid.
OR	Select the condition to configure and select OR. The selected condition OR the following condition(s) must be met for the query to be valid.
AND NOT	Select the condition to configure and select AND NOT. This means that the selected condition has to match the restriction parameters but the following conditions must not.
OR NOT	Select the condition to configure and select OR NOT. This means that the selected condition has to match the restriction parameters OR the following conditions must not.
+ (	Click '+ (' to add an opening bracket to the selected condition. Conditions enclosed in brackets are processed first.
+)	Click '+)' to add a closing bracket to the selected condition. Conditions enclosed in brackets are processed first.
- (	Click '- (' to remove an opening bracket from the selected condition.
-)	Click '-)' to remove a closing bracket from the selected condition.
Add	Click Add to launch the restrictions dialog and add more fields to the condition.

Options	Description
Edit	Click Edit to access the restrictions dialog and customize the selected condition.
Delete	Click Delete to delete a condition.
Clear	The Clear button deletes all the query conditions.
Up arrow	Use the Up arrow key to move the selected condition up in the list.
Down arrow	Use the Down arrow key to move the selected condition down in the list.

7. Click **Apply** and **OK**

17 Database Maintenance

This section provides information about the storage system that GFI EventsManager uses to store processed events. This system allows great scalability with its fast read/write capabilities; even when processing high volumes of data. To help you maintain your database backend, GFI EventsManager provides you with dedicated maintenance job options.

Database maintenance jobs provide advanced functionality to administrators, allowing them to:

- Centralize events collected by other remote GFI EventsManager instances into one database backend
- Optimize GFI EventsManager performance by actively controlling database backend growth hence keeping it in good shape
- Import and export data to and from older versions of GFI EventsManager without data inconsistencies.
- Import and export events to and from a storage folder minimizing data loads from the database.

Topics in this section:

17.1 Managing the database backend

This section describes how you can easily manage your backend database through GFI EventsManager Management Console.

This section contains information about:

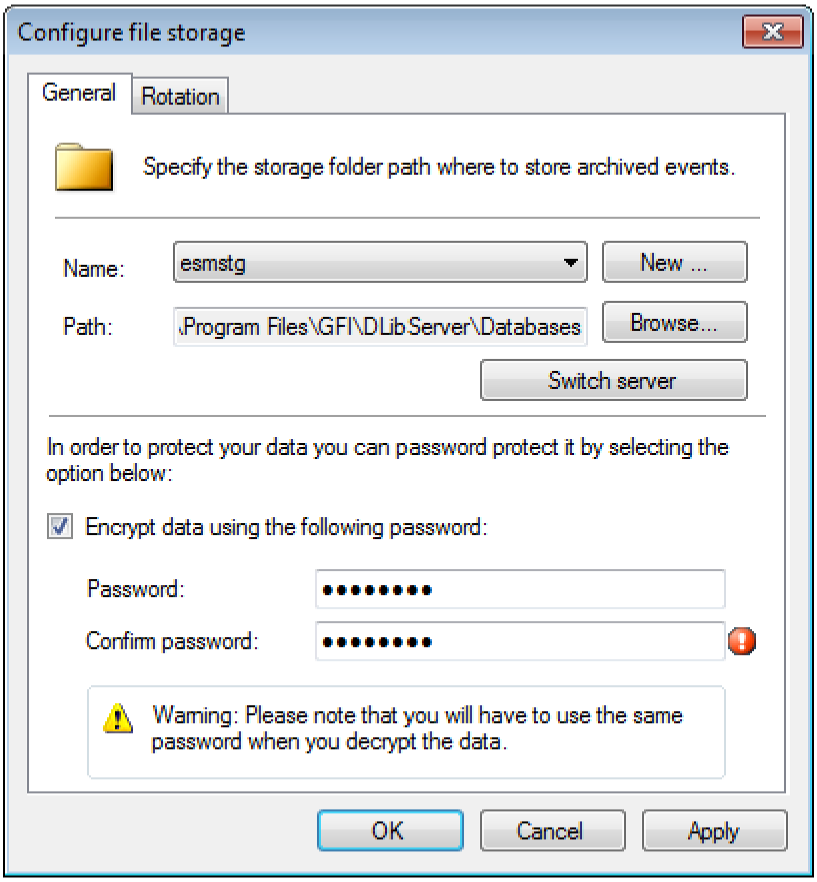
- Creating a new database
- Protecting your database
- Enabling database record hashing
- Switching databases
- Configuring database rotation options

17.1.1 Creating a new database

GFI EventsManager enables you to have multiple databases to store processed event logs. Through the Events Browser, Reporting tab and other locations, you can easily switch from one database to another, allowing you to view events or generate reports from multiple databases. Databases can be further secured by encrypting them with a password.

To create a new database:

1. From **Configuration** tab **> Options > Configurations**, right-click **File Storage** and select **Configure file storage…**.



Specify the storage folder path where to store archived events.

Name: esmstg

Path: .Program Files\GFI\DLibServer\Databases

In order to protect your data you can password protect it by selecting the option below:

☑ Encrypt data using the following password:

Password: ●●●●●●●●

Confirm password: ●●●●●●●●

Warning: Please note that you will have to use the same password when you decrypt the data.

Screenshot 183: File storage system dialog

2. Click **New** and key in the new database name. Click **OK** to close the Create new database dialog.

3. Click **Browse** to select a location other than the default database store.

4. (Optional) Select **Encrypt data using the following password** and specify the encryption password used to secure information in the new database.

> **Note**
>
> ❗ Indicates that the specified passwords do not match.

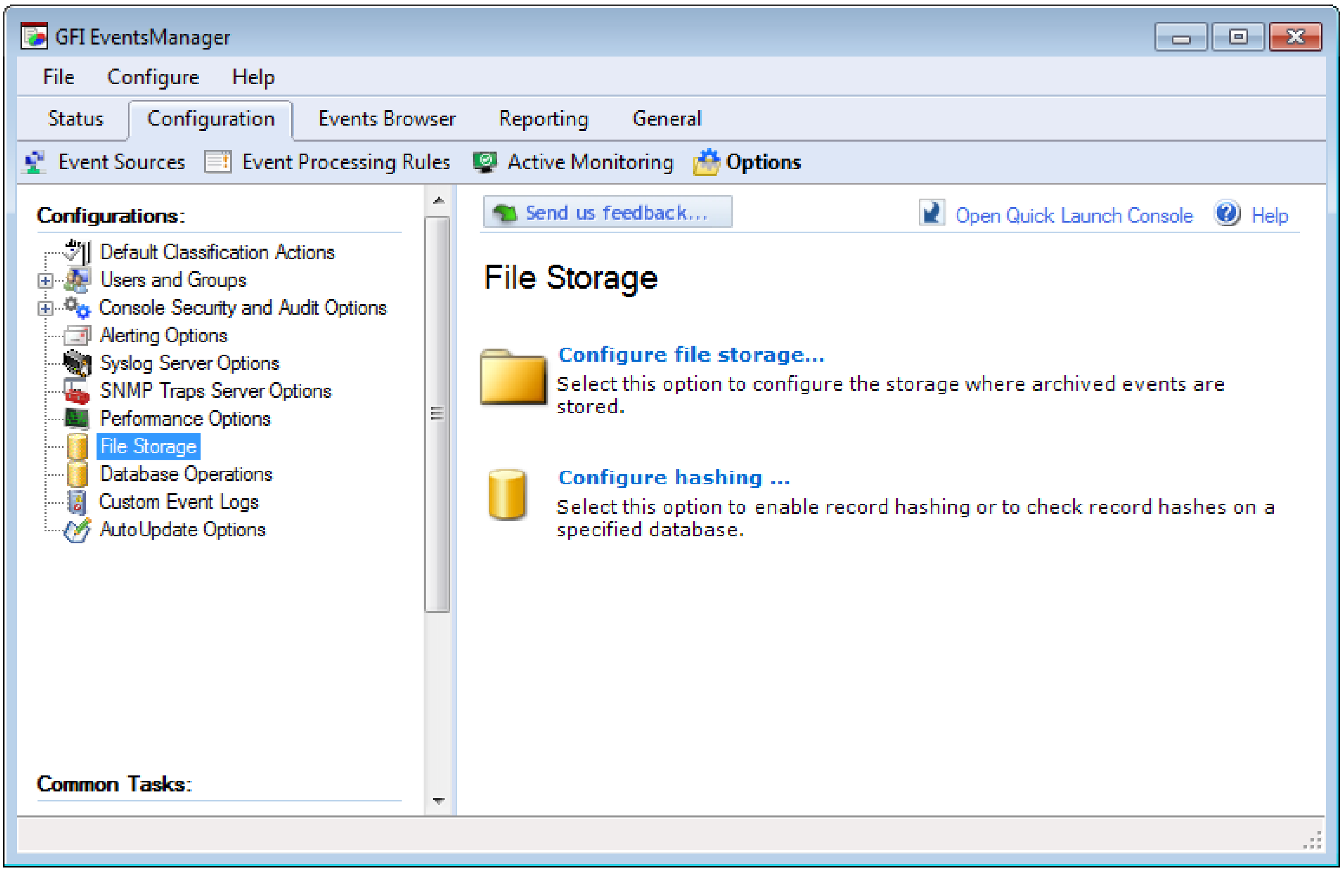
5. Click **Apply** and **OK**

17.1.2 Protecting your database

GFI EventsManager enables you protect your database with an encryption key. Encrypting the database will prevent unauthorized personnel from viewing or accessing event logs.

> **Important**
>
> Encrypting the database will cause the **Status Monitor** and **Events Browser** to stop viewing sensitive information.

To encrypt the database backend:



File Storage

Configure file storage...

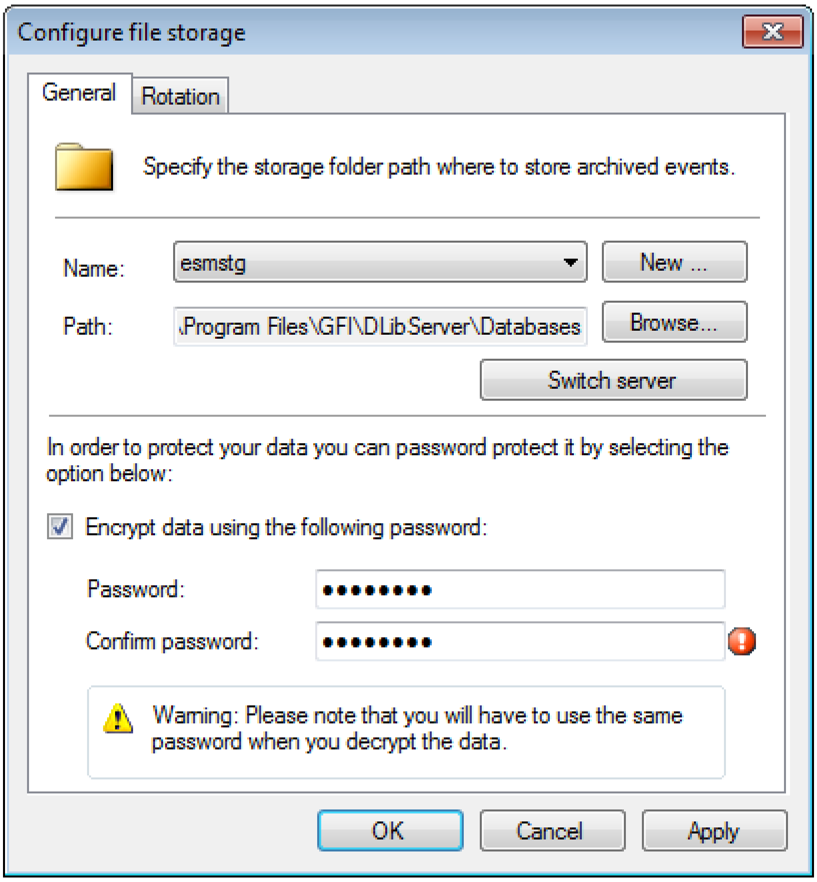
Select this option to configure the storage where archived events are stored.

Configure hashing ...

Select this option to enable record hashing or to check record hashes on a specified database.

Screenshot 184: Editing file storage settings

1. Click **Configuration** tab > **Options**, right-click **File Storage** and select **Configure file storage...**.



Specify the storage folder path where to store archived events.

Name: esmstg

Path: \Program Files\GFI\DLibServer\Databases

In order to protect your data you can password protect it by selecting the option below:

☑ Encrypt data using the following password:

Password: ••••••••

Confirm password: •••••••• ❗

⚠ Warning: Please note that you will have to use the same password when you decrypt the data.

Screenshot 185: Enabling encryption

2. From **General** tab, select **Encrypt data using the following password** to enable encryption.

3. Specify the password and confirmation password.

> **Note**
>
> ❗ Indicates that the specified passwords do not match.

4. Click **Apply** and **OK**

> **Note**
>
> The live database (the database you are currently using) cannot be encrypted from this dialog. Only new or offline databases can be encrypted from here. To encrypt the live database, use the provided CMD tool: **esmdlibm.exe**. For more information refer to Using Esmdlibm.exe.

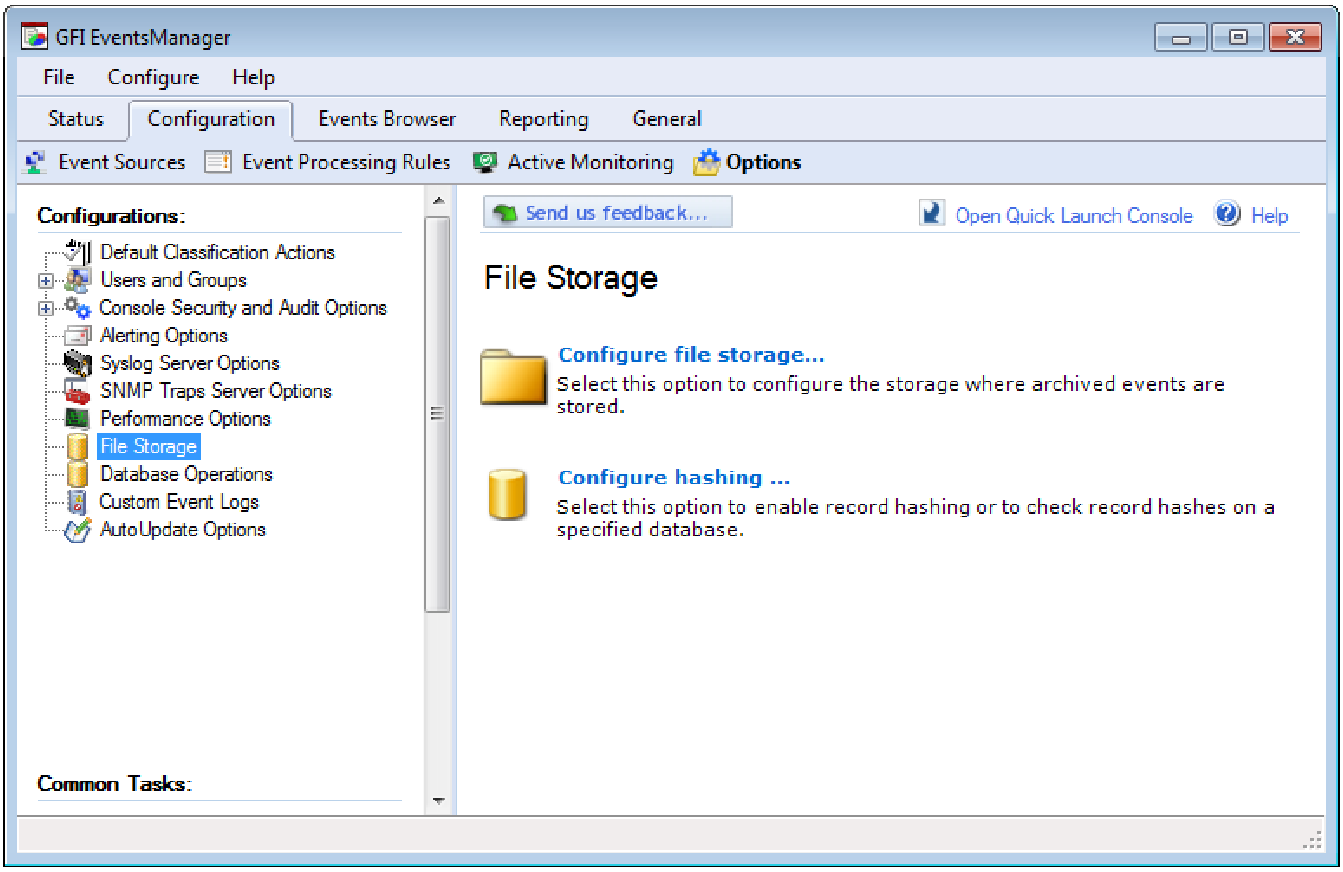
17.1.3 Database record hashing

To further protect your data, GFI EventsManager provides you with record hashing capabilities. Hashing new records is a method used to ensure that data in your databases remains unmodified. When record hashing is enabled, a hash is created for every collected log, at collection time. The hash is built based on the data contained in the event log itself and created as soon as the event log is collected to ensure that it is the original version. When data of a hashed record is modified (even a character from a word), the hash value changes, indicating that someone could be tampering with stored records.

Important

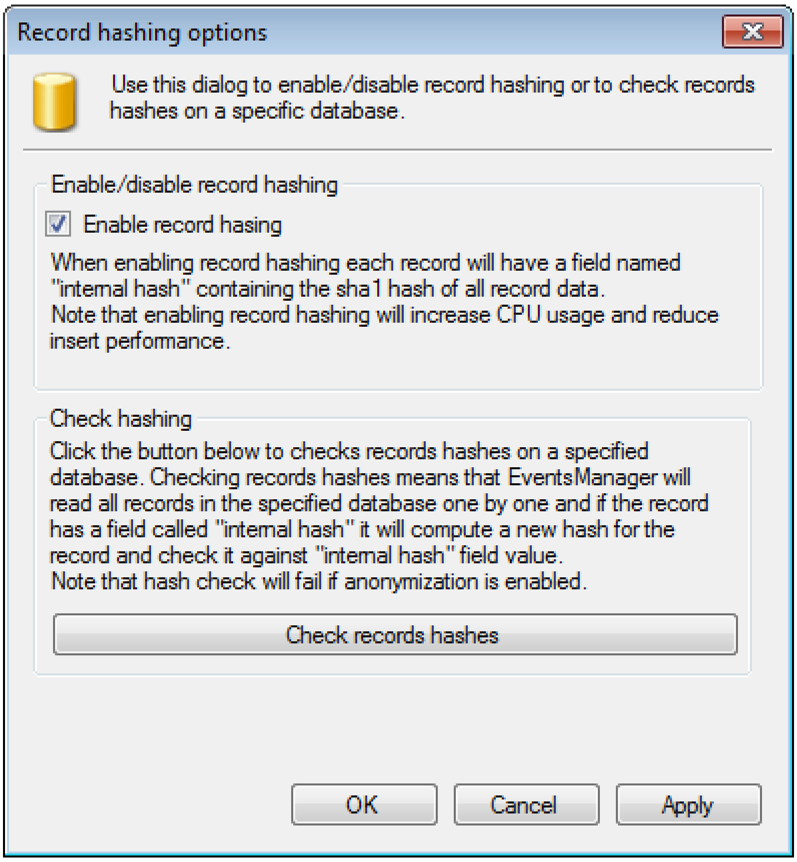
Hashing will fail if anonymization is enabled.

To configure hashing:



Screenshot 186: Enabling / disabling record hashing

1. From **Configuration** tab > **Options** > **Configurations**, click **File Storage** > **Configure hashing...**.



Record hashing options

Use this dialog to enable/disable record hashing or to check records hashes on a specific database.

Enable/disable record hashing

☑ Enable record hasing

When enabling record hashing each record will have a field named "internal hash" containing the sha1 hash of all record data.
Note that enabling record hashing will increase CPU usage and reduce insert performance.

Check hashing

Click the button below to checks records hashes on a specified database. Checking records hashes means that EventsManager will read all records in the specified database one by one and if the record has a field called "internal hash" it will compute a new hash for the record and check it against "internal hash" field value.
Note that hash check will fail if anonymization is enabled.

Screenshot 187: Record hashing dialog

2. Select/unselect **Enable record hashing** to turn on/off hashing features.

3. Click **Check records hashes** to run hash checks on the selected database. Select a database from the list and click **OK** to start the check.

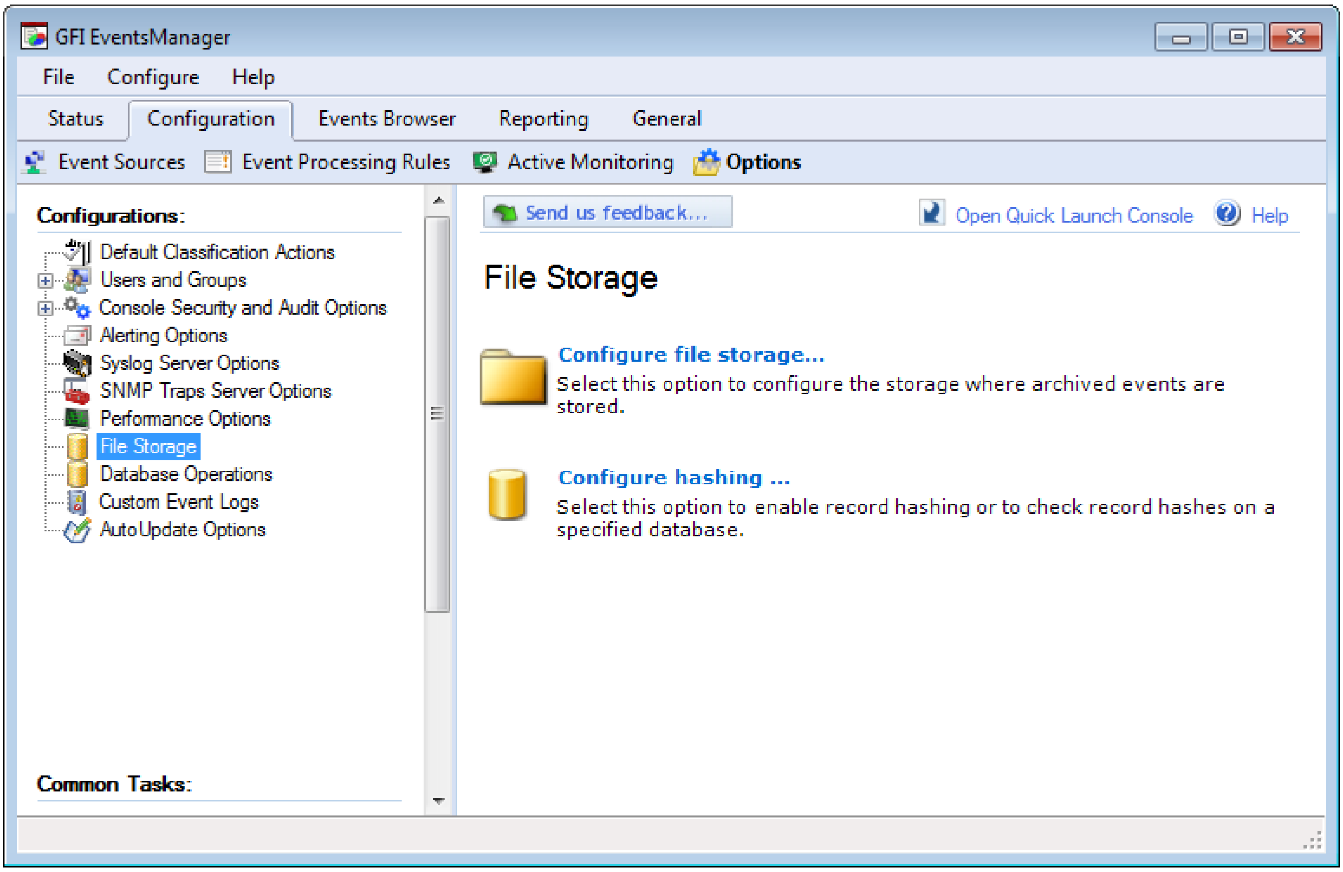
4. Click **Apply** and **OK**.

17.1.4 Switching between file storage databases

GFI EventsManager enables you to use multiple databases, stored in different locations on the same computer or on any remote computer within your LAN.

To switch between databases:

1. Go to **Configuration** > **Options**.

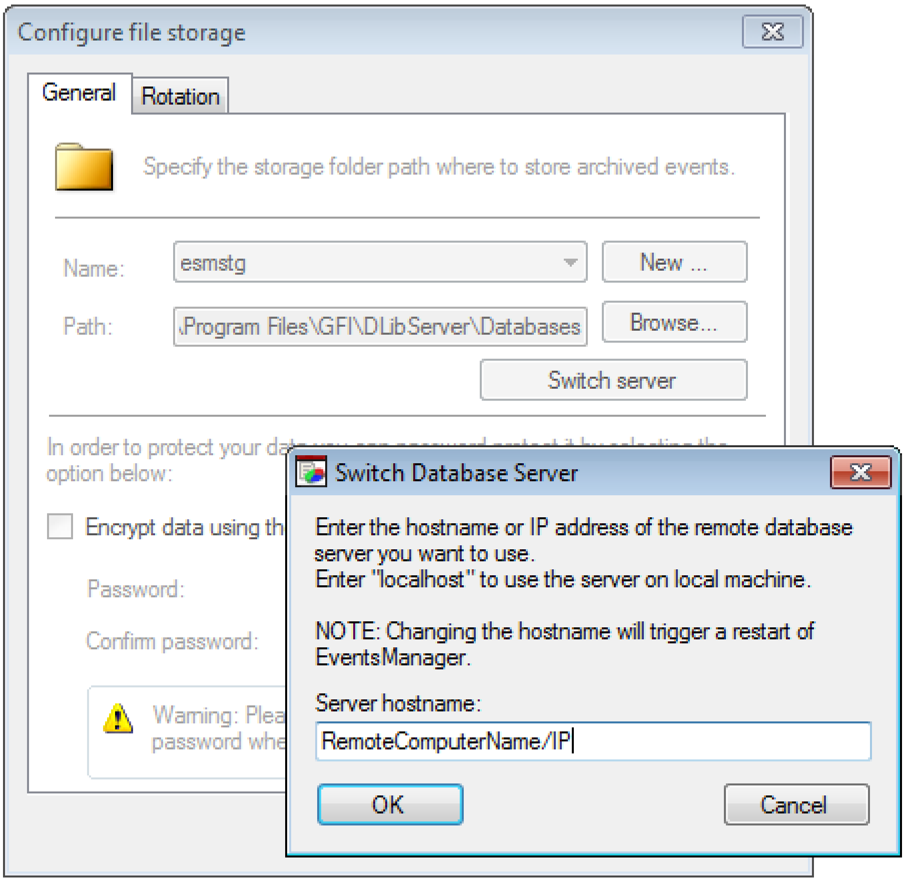


Select this option to configure the storage where archived events are stored.

Select this option to enable record hashing or to check record hashes on a specified database.

Screenshot 188: Options tab

2. From the left pane, right-click **File Storage** and select **Configure file storage...**



Switch Database Server

Enter the hostname or IP address of the remote database server you want to use.
Enter "localhost" to use the server on local machine.

NOTE: Changing the hostname will trigger a restart of EventsManager.

Server hostname: RemoteComputerName/IP

Screenshot 189: Keying in the server hostname

3. From the Configure file storage dialog, click **Switch server**. This opens the Switch Database Server dialog.

4. In the **Server hostname** text box, key in the **Computer Name** or **IP address** of the database machine. Click **OK**

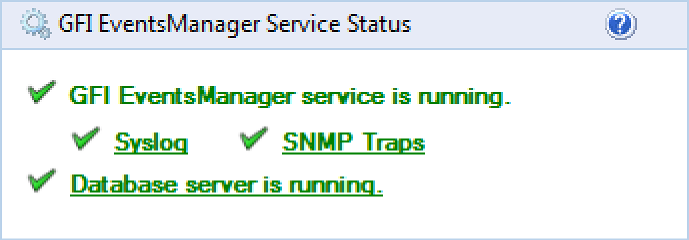
5. Click **Apply** and **OK**

Switching databases from the dashboard

The General dashboard view enables you to switch to a different database without having to access the configuration tab. This is useful when comparing event logs or assessing the overall status of events management within your environment.

To switch to a different database from the dashboard:

1. Click **Status > General**.



GFI EventsManager Service Status

✓ GFI EventsManager service is running.

✓ Syslog ✓ SNMP Traps

✓ Database server is running.

Screenshot 190: Switch between databases from the dashboard

2. From the **GFI EventsManager Service Status** section, click **Database server is running**.

3. From the Configure file storage dialog, click **Switch server** and key in the database server **Name** or **IP** address. Click **OK**

4. Click **Apply** and **OK**

17.1.5 Configuring database rotation options

When processing events from a large number of event sources, it is important to configure database rotation options. These options instruct GFI EventsManager to automatically switch to a new database when a certain condition is met. Doing so helps you maintain a pool of fixed size databases which enable GFI EventsManager to perform better.

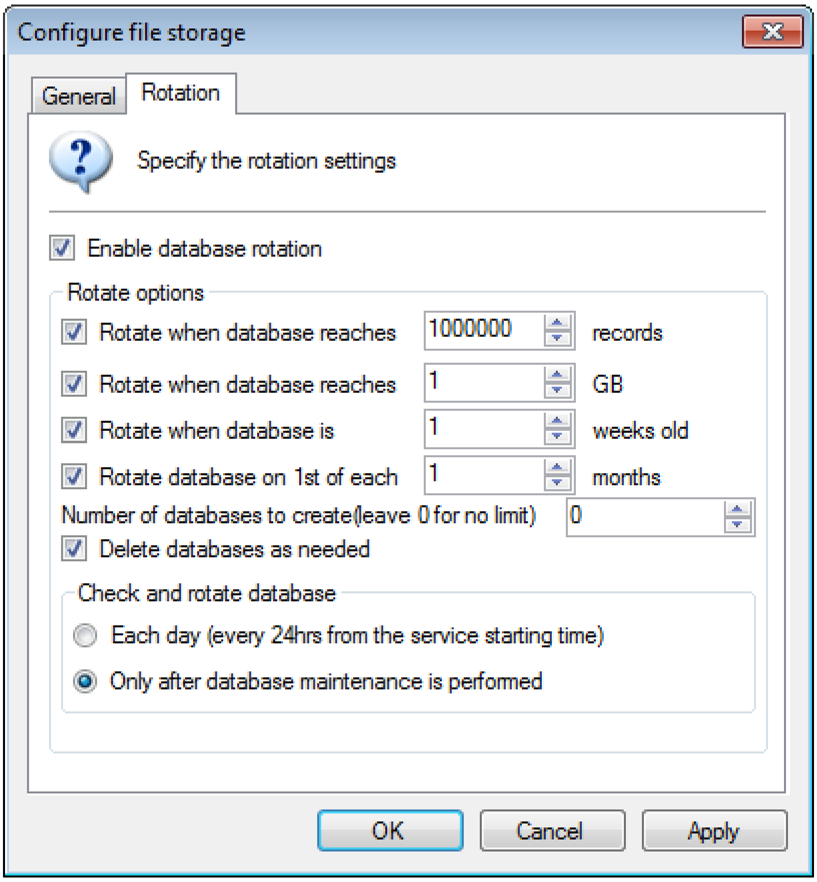
When a database becomes too large in size, queries take longer to complete so therefore, GFI EventsManager performance is affected negatively.

For example, if your event sources normally generate a lot of small sized event logs, enable database rotation for when a maximum number of records is reached. On the other hand, if the size of event logs that your event sources are generating is large, configure database rotation for when the database reaches the size limit.

To configure database rotation options:

1. Click **Configuration** tab **>** **Options**.

2. From **Configurations**, click **File storage** **>** **Configure file storage…**



Configure file storage

General | Rotation

Specify the rotation settings

☑ Enable database rotation

Rotate options

☑ Rotate when database reaches 1000000 records

☑ Rotate when database reaches 1 GB

☑ Rotate when database is 1 weeks old

☑ Rotate database on 1st of each 1 months

Number of databases to create(leave 0 for no limit) 0

☑ Delete databases as needed

Check and rotate database

○ Each day (every 24hrs from the service starting time)

● Only after database maintenance is performed

Screenshot 191: Configuring database rotation options

3. Click **Enable database rotation**.

4. Configure the options described below:

Option	Description
Rotate when database reaches {X} Records	Specify the number of records that the database has to contain before rotating to a new one. **Note** Minimum value = 1,000, 000 records.

Option	Description
Rotate when database reaches {X} GB	Rotate to a new database when the current one reaches the specified size in Giga Bytes (GB) **Note** Minimum value = 1GB.
Rotate when database is {X} weeks old	Rotate database when the current one is older than the specified number of weeks. **Note** Minimum value = 1 week.
Rotate database on 1st of each {X} months	Select this option to rotate databases on the 1st of each number of specified months. Example, rotate database on the 1st of every month, 1st of every two months or 1st of every six months.
Number of databases to create	Specify the maximum number of databases that GFI EventsManager is able to create. Leave the value at **0** so that an unlimited number of databases can be created.
Delete database as needed	Select this option so that when the maximum number of databases is reached, GFI EventsManager automatically deletes the oldest database to free space for new ones.
Each day (every 24hrs from the service starting time)	Select this option to create and use a new database every 24 hours. 24 hours are calculated from the time the GFI EventsManager service starts.
Only after database maintenance is performed	Create and use a new database, after an existing database performs maintenance operations.

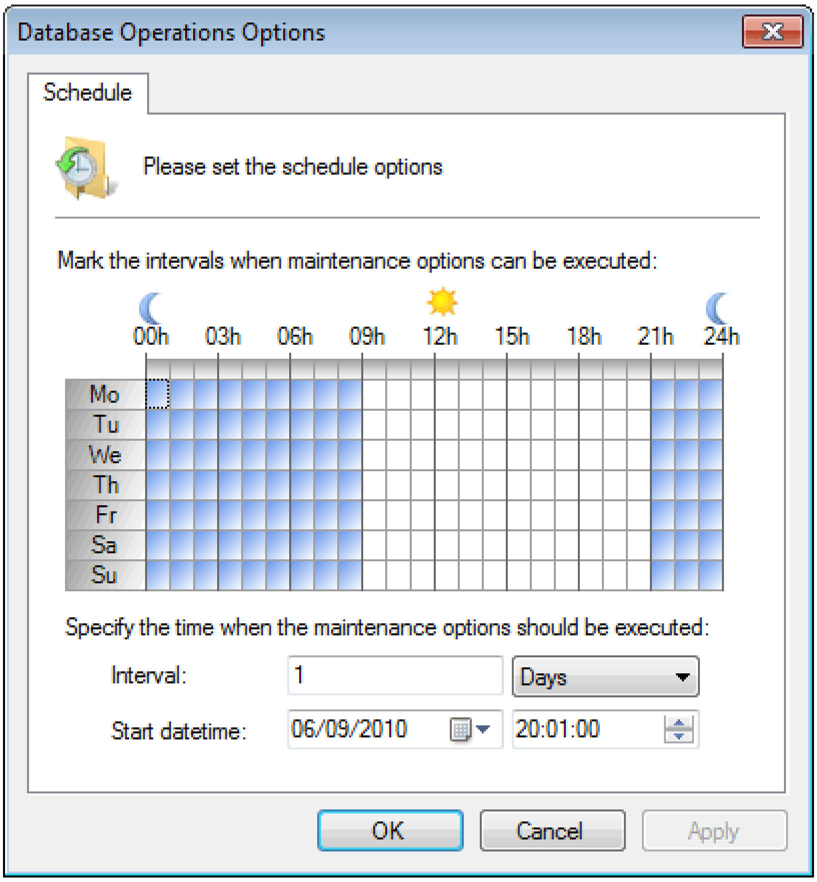
5. Click **Apply** and **OK**.

17.1.6 Configuring Database Operations

To configure Database Operations:

1. Click **Configuration** tab > **Options**.

2. From **Configurations**, right-click **Database Operations** and select **Properties**.


Database Operations Options
Schedule
Please set the schedule options
Mark the intervals when maintenance options can be executed:
00h
03h
06h
09h
12h
15h
18h
21h
24h
Mo
Tu
We
Th
Fr
Sa
Su
OK
Cancel
Apply

Specify the time when the maintenance options should be executed:

Interval: 1 Days

Start datetime: 06/09/2010 20:01:00

Screenshot 192: Database Operations Options dialog

3. Configure the options from the tabs described below:

Tab	Description
General	Specify the unique identifier by which this instance of GFI EventsManager will be identified on the network. This identifier is used as part of the export file-name during Export to file operations.
Schedule	Through the Schedule tab, specify: » Hours of the day during which maintenance jobs can be executed » The interval in hours/days with which maintenance jobs will be executed » The scheduled date/time when maintenance jobs will start being executed.

4. Click **Apply** and **OK**

> **Note**
>
> Schedule options can also be modified from **Configuration** tab > **Options** > **Actions** and click **Edit schedule options...**.

17.2 Creating maintenance jobs

With GFI EventsManager you can schedule maintenance jobs to be executed on a specific day, at a specific time and at specific intervals. Database maintenance operations may require high utilization of resources. This can degrade server and GFI EventsManager performance. Schedule maintenance jobs to be executed after office hours to maximize the availability of your system resources and avoid any possible disruptions to workflow.

GFI EventsManager supports two types of maintenance jobs as described below:

Job type	Description
Import\Export Job	Import/export data from/to other instances of GFI EventsManager. Export data and import them in other instances as part of the data centralization process.
Legacy Import Job	Import data from older versions of the product. Import data from Microsoft® SQL Server® databases, legacy files and legacy file storage. The import jobs supported by this job type are all based on the database backend types of older versions of GFI EventsManager.

Read the following sections for information about creating the following maintenance jobs:

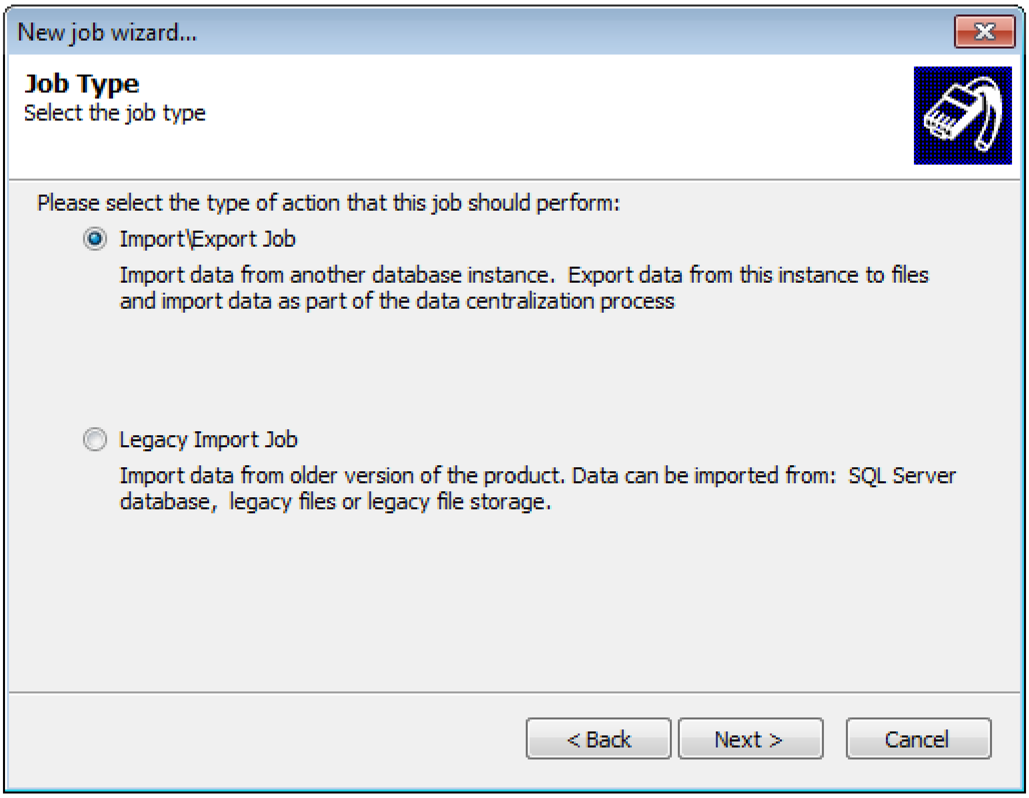
- Import from file
- Export to file
- Export to SQL
- Copy data
- Commit deletions
- Import from SQL Server® databases
- Import from legacy files
- Import from legacy file storage

17.2.1 Import from file

Import from file enables you to import event data to the GFI EventsManager database, that was previously exported to a file.

To create an Import from file job:

1. Click **Configuration** tab and select **Options**.
2. From **Configurations**, right-click **Database Operations** node and select **Create new job…**
3. Click **Next** at the wizard welcome screen.



Please select the type of action that this job should perform:

● Import\Export Job

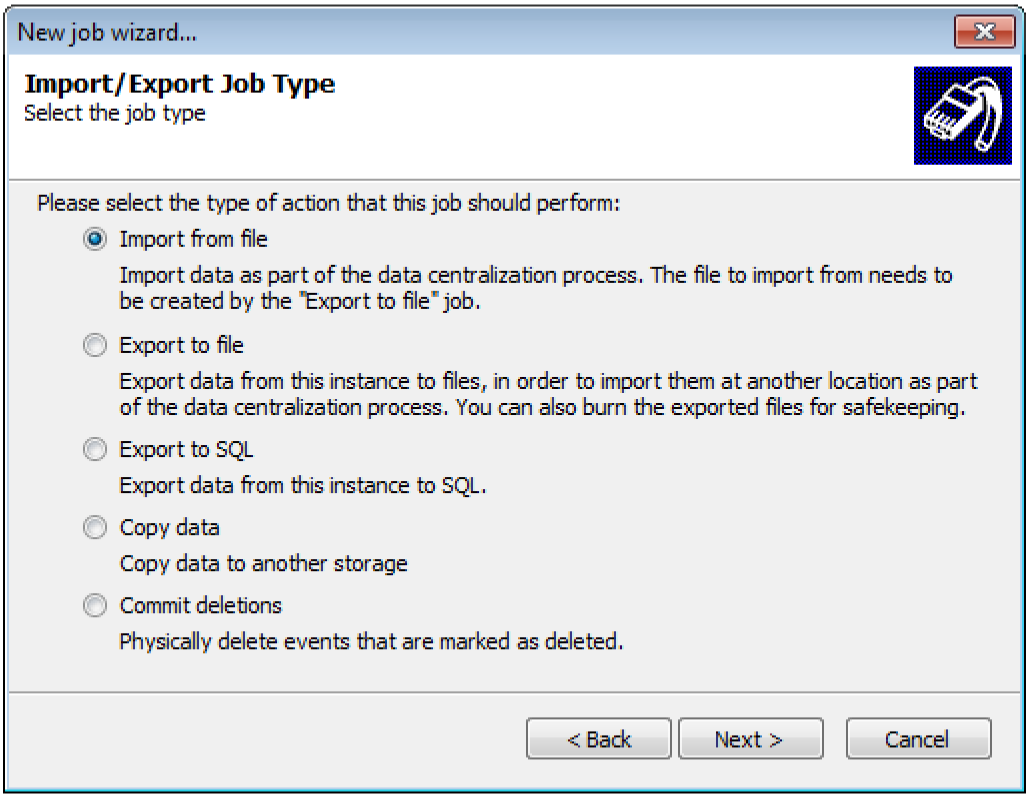
Import data from another database instance. Export data from this instance to files and import data as part of the data centralization process

○ Legacy Import Job

Import data from older version of the product. Data can be imported from: SQL Server database, legacy files or legacy file storage.

Screenshot 193: Creating Import\Export jobs

4. Select **Import/Export Job** and click **Next**.



Please select the type of action that this job should perform:

● Import from file

Import data as part of the data centralization process. The file to import from needs to be created by the "Export to file" job.

○ Export to file

Export data from this instance to files, in order to import them at another location as part of the data centralization process. You can also burn the exported files for safekeeping.

○ Export to SQL

Export data from this instance to SQL.

○ Copy data

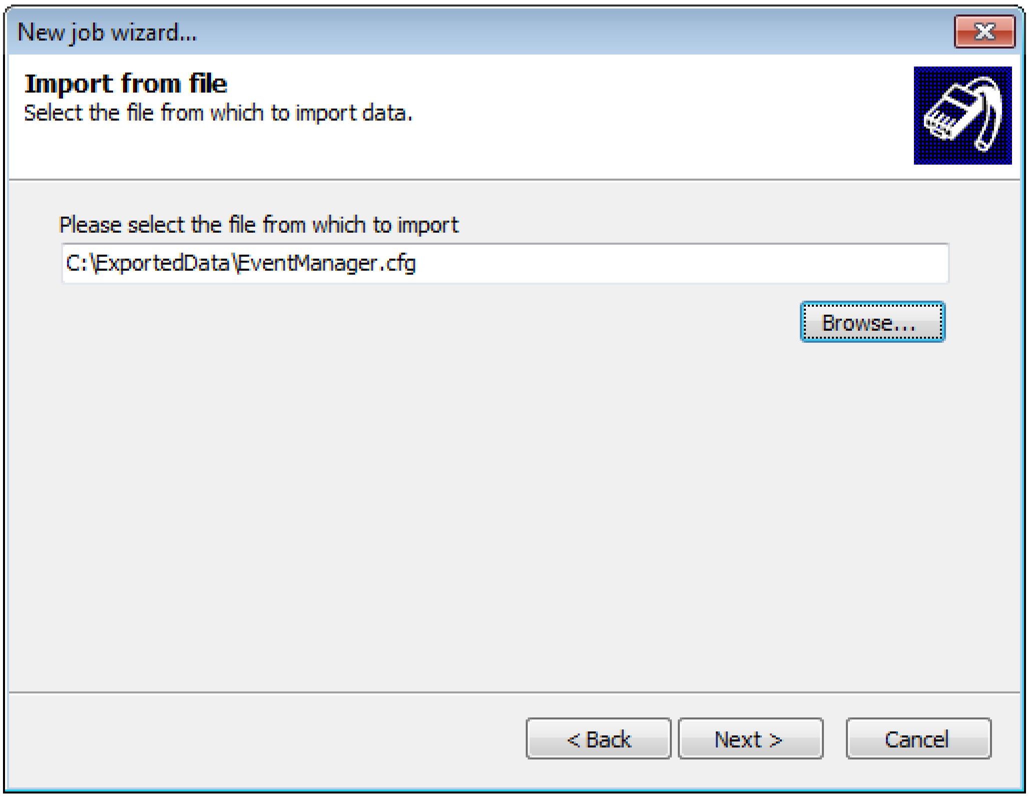
Copy data to another storage

○ Commit deletions

Physically delete events that are marked as deleted.

Screenshot 194: Import from file

5. Select **Import from file** and click **Next**.



New job wizard...

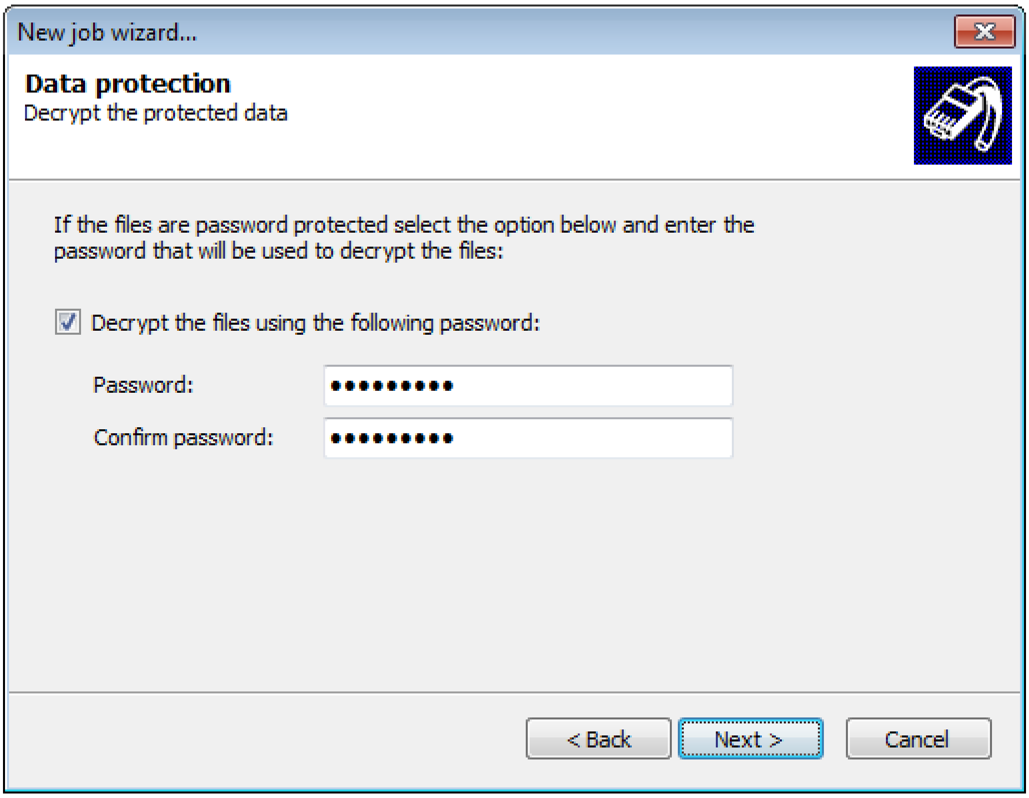
Import from file
Select the file from which to import data.

Please select the file from which to import

C:\ExportedData\EventManager.cfg

Screenshot 195: Import from file - Specify import file path

6. Specify the path to the configuration file that contains data you want to import. Optionally, click **Browse** to look for the location. Click **Next**.



New job wizard...

Data protection
Decrypt the protected data

If the files are password protected select the option below and enter the password that will be used to decrypt the files:

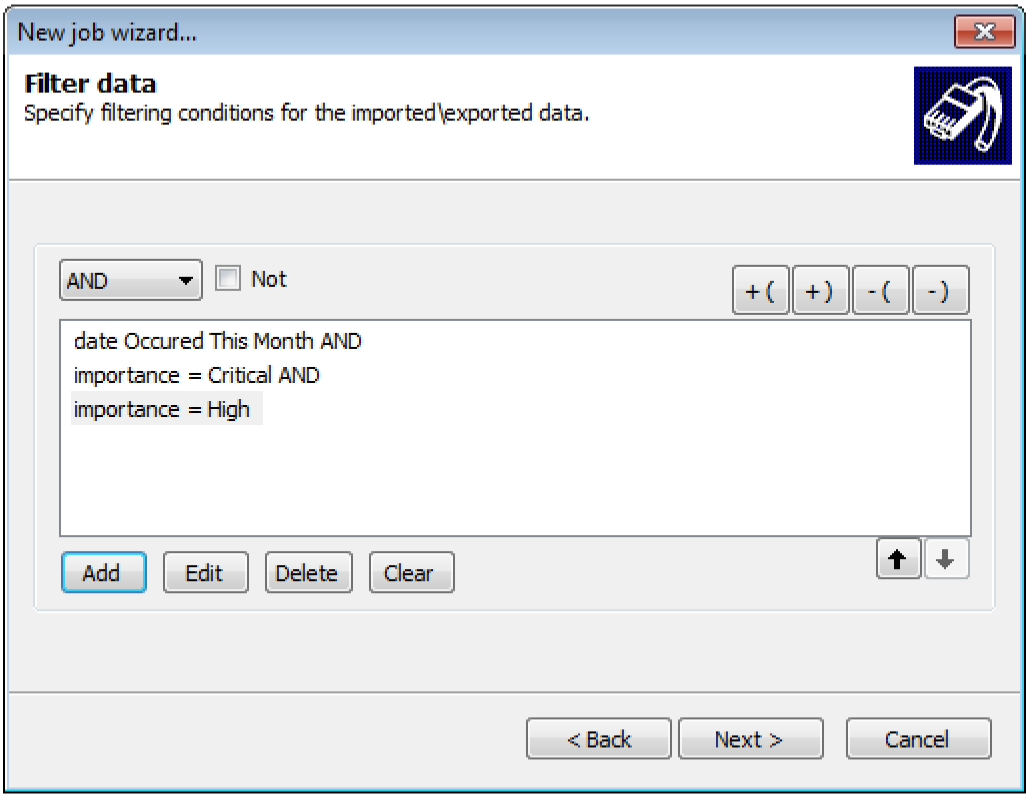
☑ Decrypt the files using the following password:

Password: ●●●●●●●●●

Confirm password: ●●●●●●●●●

Screenshot 196: Decrypt secure import files

7. If the file you are importing is encrypted, select **Decrypt the files using the following password** and specify the password used to encrypt the file. Click **Next**.



Filter data

Specify filtering conditions for the imported\exported data.

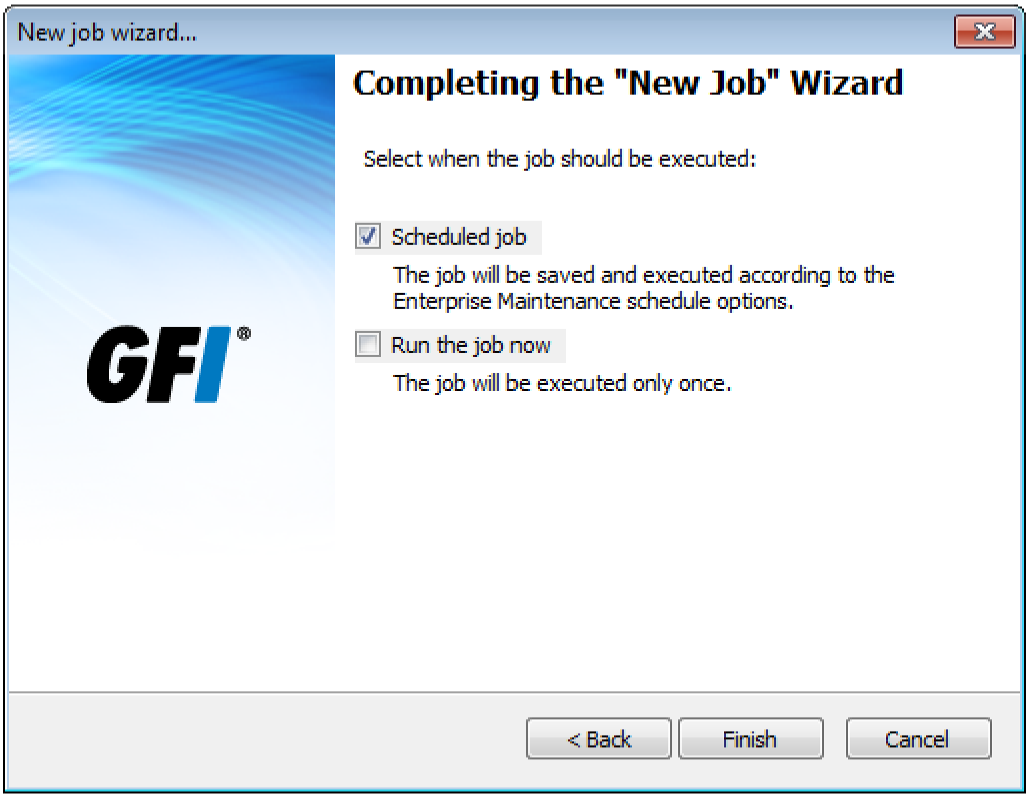
☐ Not

date Occured This Month AND
importance = Critical AND
importance = High

Screenshot 197: Add filtering conditions

8. Add advanced filtering parameters to import specific events only. Leave empty to import all the event logs from the file.

> **Note**
>
> For more information refer to Building Query Restrictions.



Completing the "New Job" Wizard

Select when the job should be executed:

☑ Scheduled job

The job will be saved and executed according to the Enterprise Maintenance schedule options.

□ Run the job now

The job will be executed only once.

Screenshot 198: Execute job options

9. Select when the job is executed and click **Finish**:

Options	Description
Schedule job	The job will be saved and executed according to the database operations schedule.
Run the job now	Job is executed immediately. Unscheduled jobs only run once and cannot be reused.

17.2.2 Export to file

Export to file enables you to export events to a configuration file that can be imported by another instance of GFI EventsManager.

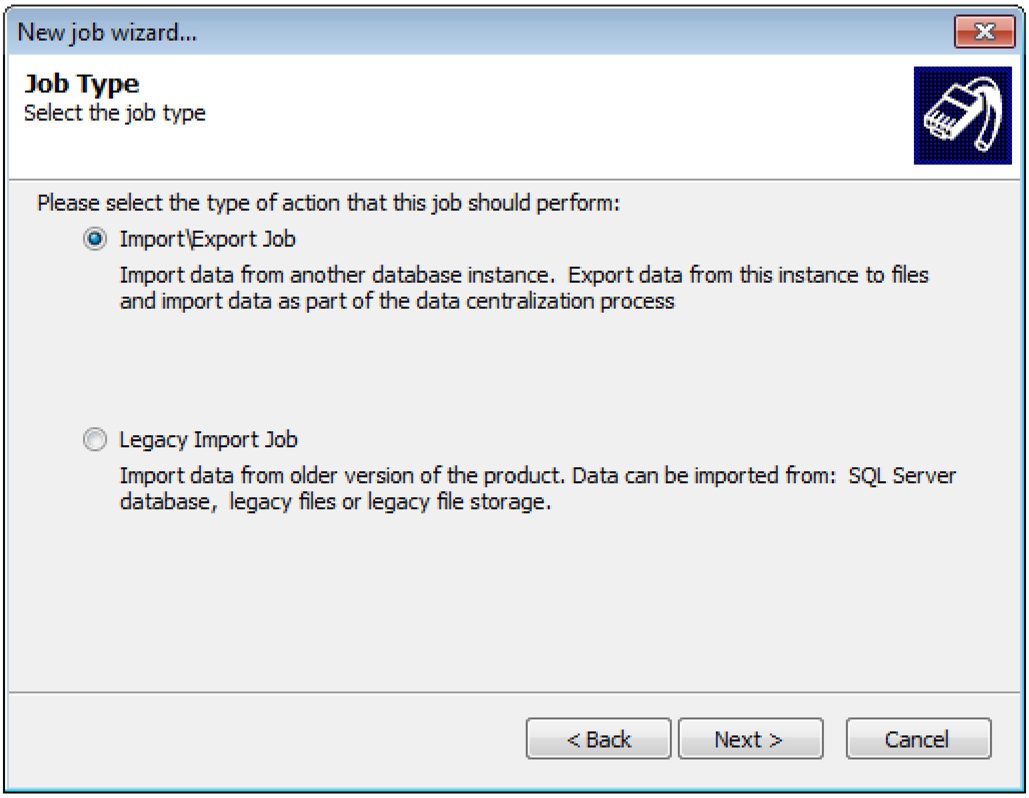
> **NOTE**
> The **Import to File** and **Export to File** feature can be time and resources consuming. It is advisable to create multiple files with a smaller amount of data, rather and a single and large file.

To create an export to file job:

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, right-click **Database Operations** node and select **Create new job…**

3. Click **Next** at the wizard welcome screen.



Job Type

Select the job type

Please select the type of action that this job should perform:

● Import\Export Job

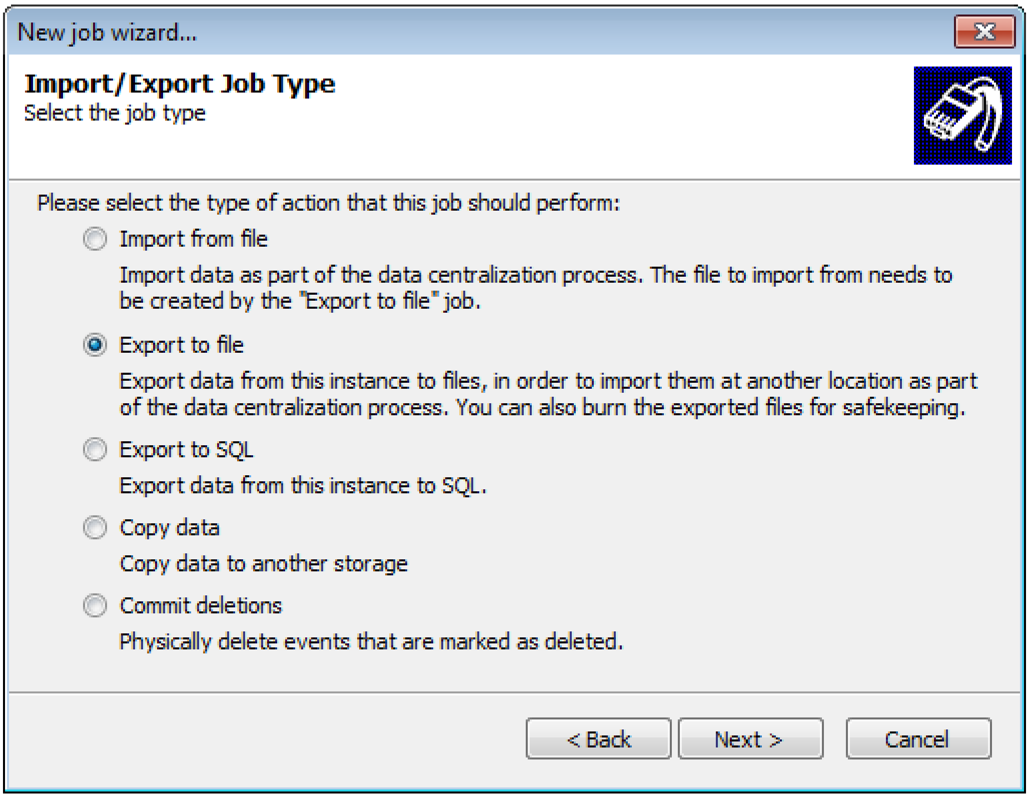
Import data from another database instance. Export data from this instance to files and import data as part of the data centralization process

○ Legacy Import Job

Import data from older version of the product. Data can be imported from: SQL Server database, legacy files or legacy file storage.

Screenshot 199: Creating Import\Export jobs

4. Select **Import/Export Job** and click **Next**.



Import/Export Job Type

Select the job type

Please select the type of action that this job should perform:

○ Import from file

Import data as part of the data centralization process. The file to import from needs to be created by the "Export to file" job.

● Export to file

Export data from this instance to files, in order to import them at another location as part of the data centralization process. You can also burn the exported files for safekeeping.

○ Export to SQL

Export data from this instance to SQL.

○ Copy data

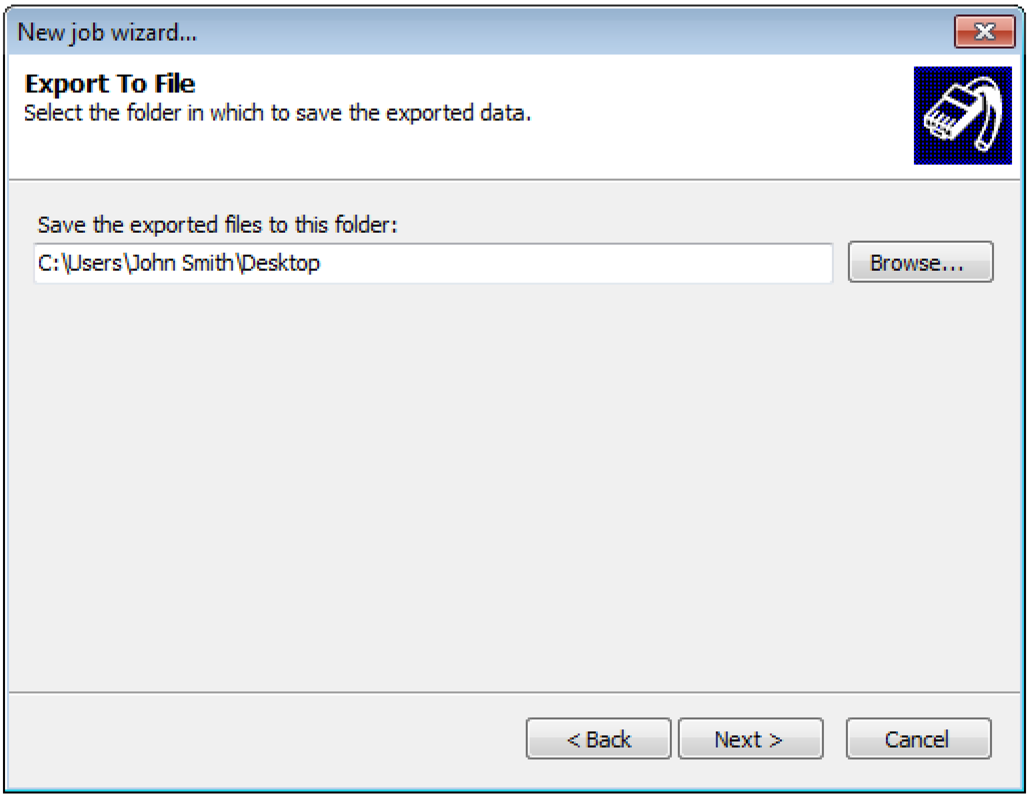
Copy data to another storage

○ Commit deletions

Physically delete events that are marked as deleted.

Screenshot 200: Export to file

5. Select **Export to file** and click **Next**.



Export To File

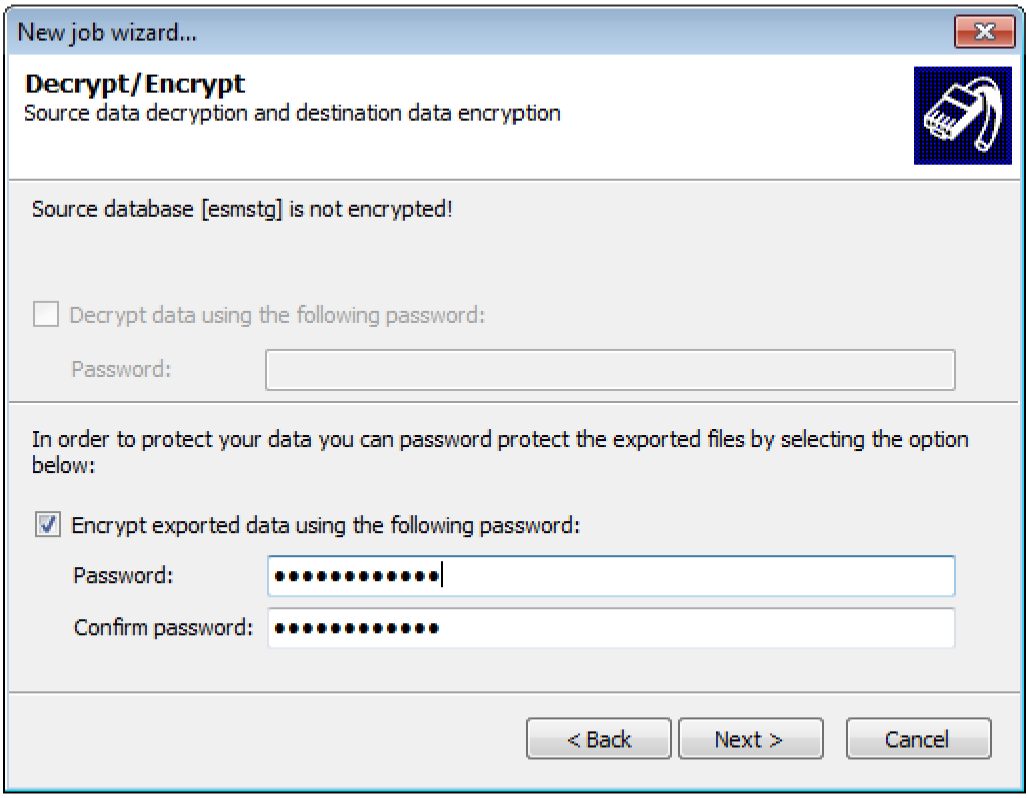
Select the folder in which to save the exported data.

Save the exported files to this folder:

C:\Users\John Smith\Desktop

Screenshot 201: Export to file: enter destination path

6. Key in the path to the folder where exported files are saved to. Alternatively, click **Browse** to look for the location. Click **Next**.



Decrypt/Encrypt

Source data decryption and destination data encryption

Source database [esmstg] is not encrypted!

□ Decrypt data using the following password:

Password:

In order to protect your data you can password protect the exported files by selecting the option below:

☑ Encrypt exported data using the following password:

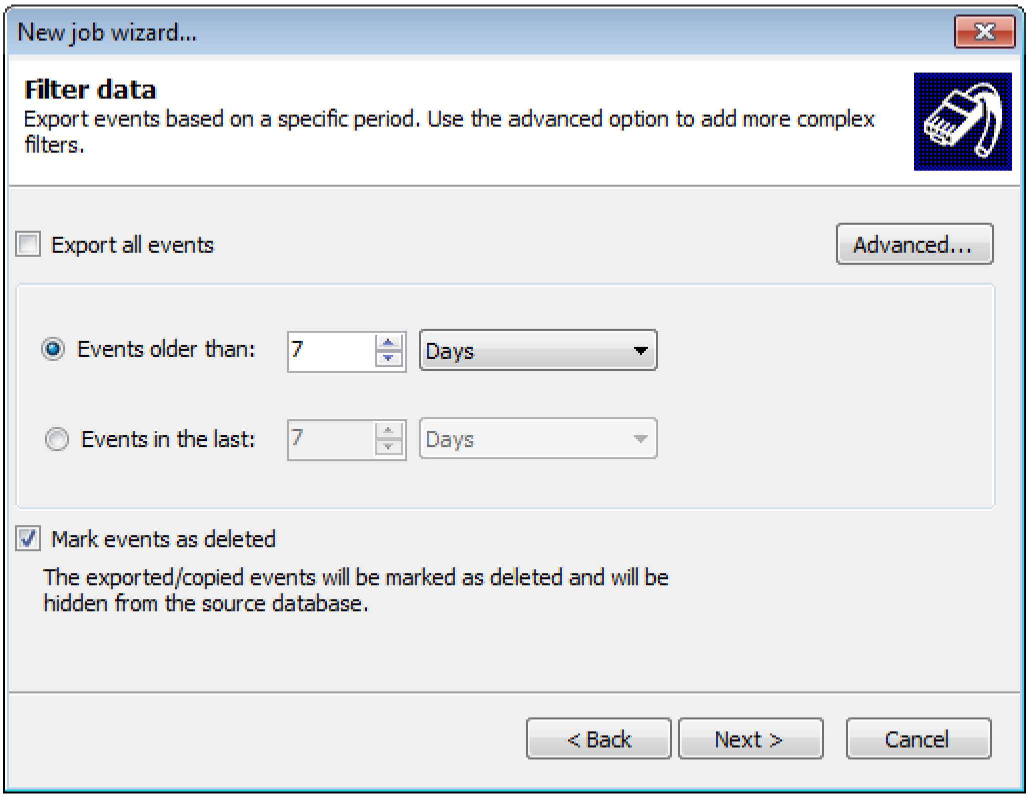
Password: ●●●●●●●●●●●●

Confirm password: ●●●●●●●●●●●●

Screenshot 202: Decrypt/Encrypt data

7. If the source database (esmstg) is encrypted, select **Decrypt data using the following password** and key in the decryption key in the **Password** field.

8. To encrypt export data, select **Encrypt exported data using the following password** and key in an encryption key in the **Password** and **Confirm password** fields. Click **Next**.



Filter data

Export events based on a specific period. Use the advanced option to add more complex filters.

□ Export all events

● Events older than: 7 Days

○ Events in the last: 7 Days

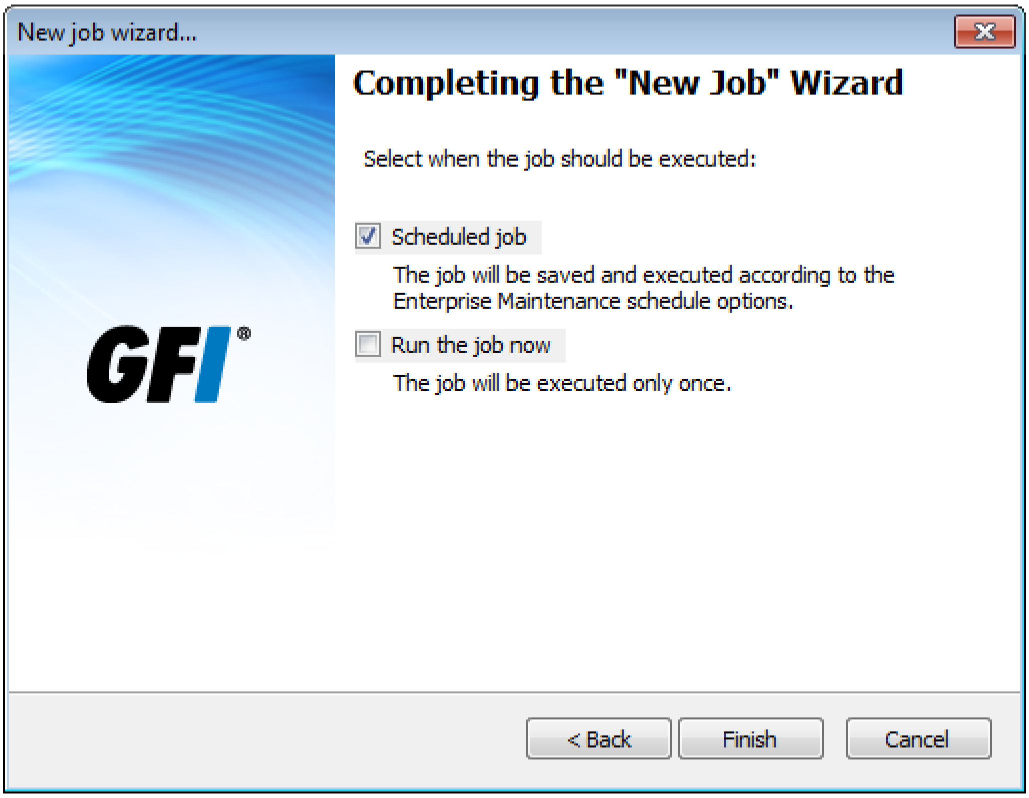
☑ Mark events as deleted

The exported/copied events will be marked as deleted and will be hidden from the source database.

Screenshot 203: Filtering export data

9. Configure the following filtering options and click **Next**:

Option	Description
Export all events	Export all events from the database.
Events older than	Only export events older than the specified number of days/weeks/months.
Events in the last	Only export events that occurred in the last specified number of days/weeks/months.
Mark events as deleted	Hide events from the source database after they are exported. To completely remove these events from the database, you must run a Commit Deletions job. For more information refer to Commit deletions.
Advanced...	Click **Advanced...** to launch the Advanced Filtering dialog. This enables you to configure granular filtering parameters to export specific events only. For more information refer to Building query restrictions.



Completing the "New Job" Wizard

Select when the job should be executed:

☑ Scheduled job

The job will be saved and executed according to the Enterprise Maintenance schedule options.

□ Run the job now

The job will be executed only once.

Screenshot 204: Execute job options

10. Select when the job is executed and click **Finish**:

Options	Description
Schedule job	The job will be saved and executed according to the database operations schedule.
Run the job now	Job is executed immediately. Unscheduled jobs only run once and cannot be reused.

Export filename

The convention used by GFI EventsManager to name the export file is shown and described below:

```
[ESM ID]_[Job ID]_[Date From]_[Date To].EXP
```

Name Section	Description
ESM ID	Refers to the unique identifier given to each GFI EventsManager instance running in the organization.
Job ID	Refers to the unique identifier given to each maintenance job created.
Date From	Refers to the date of the earliest event exported.
Date To	Refers to the date of the latest event exported.
.EXP	This is the file extension given to all export files.

17.2.3 Export to SQL

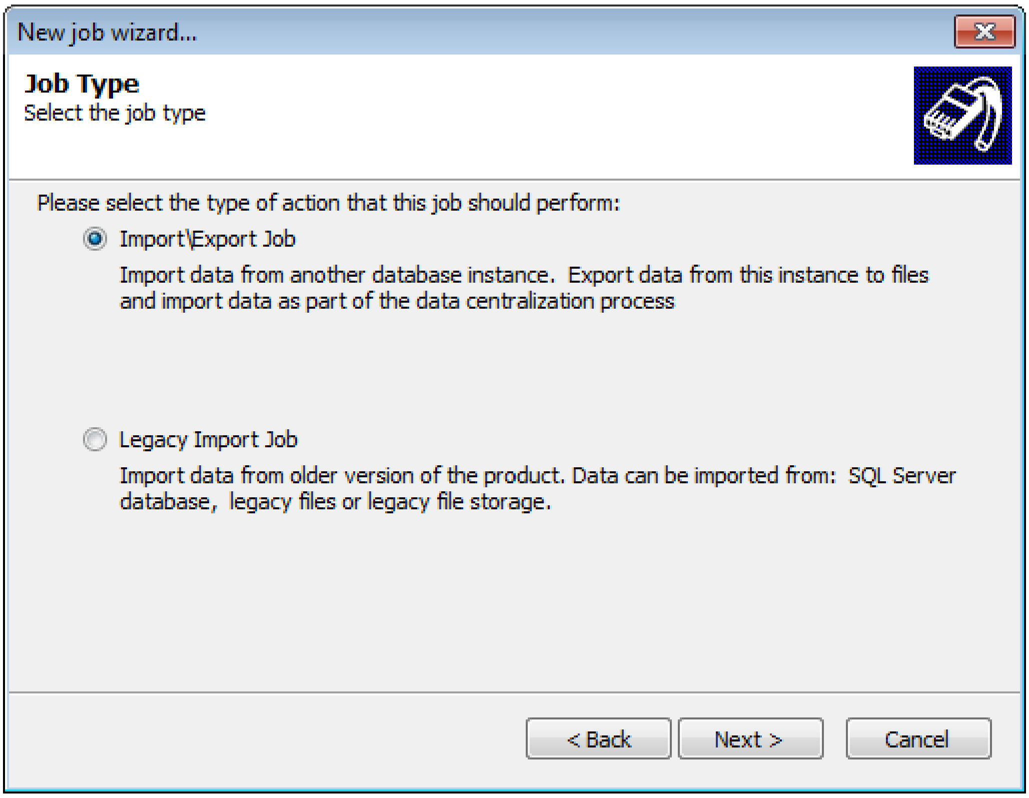
Export to SQL enables you to export items directly to an SQL Server instance that is reachable by the GFI EventsManager host.

To create an export to SQL job:

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, right-click **Database Operations** node and select **Create new job…**

3. Click **Next** at the wizard welcome screen.



New job wizard...

Job Type

Select the job type

Please select the type of action that this job should perform:

● Import\Export Job

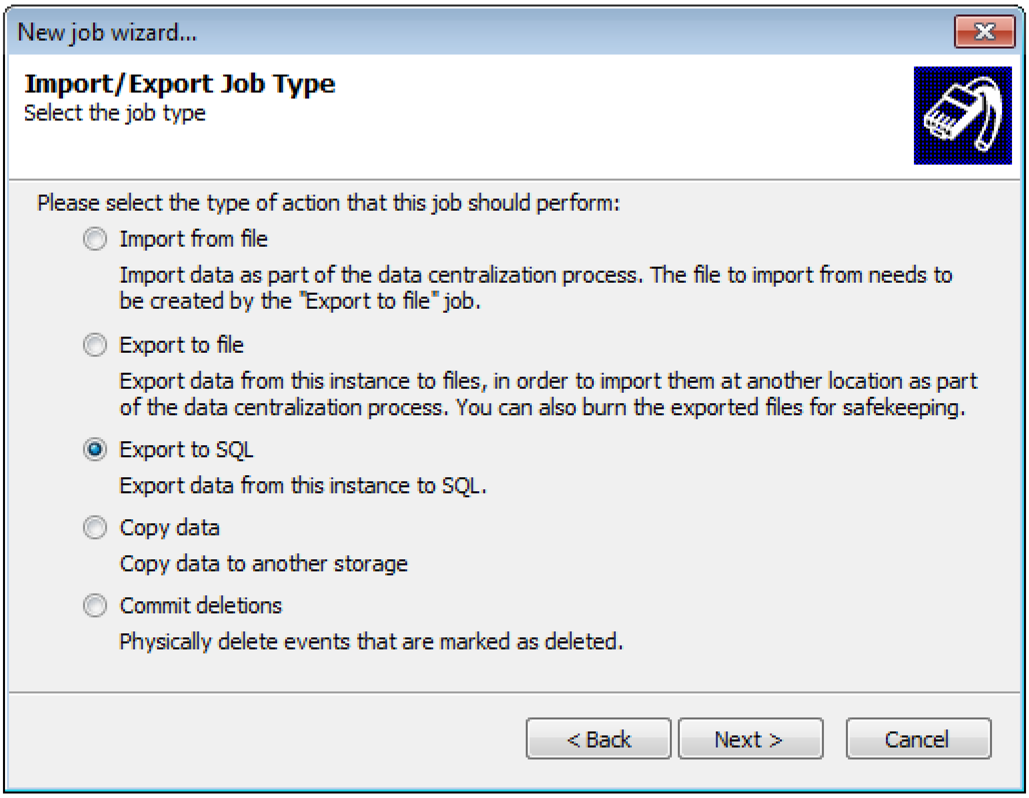
Import data from another database instance. Export data from this instance to files and import data as part of the data centralization process

○ Legacy Import Job

Import data from older version of the product. Data can be imported from: SQL Server database, legacy files or legacy file storage.

Screenshot 205: Creating Import\Export jobs

4. Select **Import/Export Job** and click **Next**.



New job wizard...

Import/Export Job Type

Select the job type

Please select the type of action that this job should perform:

○ Import from file

Import data as part of the data centralization process. The file to import from needs to be created by the "Export to file" job.

○ Export to file

Export data from this instance to files, in order to import them at another location as part of the data centralization process. You can also burn the exported files for safekeeping.

● Export to SQL

Export data from this instance to SQL.

○ Copy data

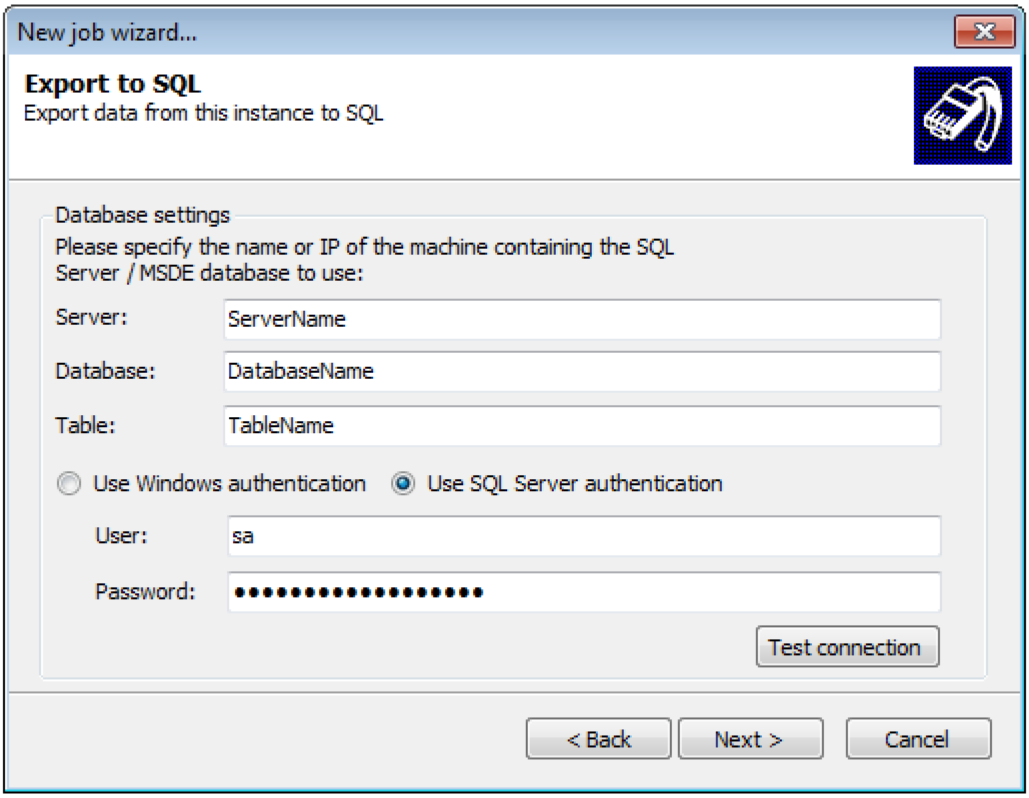
Copy data to another storage

○ Commit deletions

Physically delete events that are marked as deleted.

Screenshot 206: Export to SQL

5. Select **Export to SQL** and click **Next**.


New job wizard...

Export to SQL
Export data from this instance to SQL

Database settings
Please specify the name or IP of the machine containing the SQL Server / MSDE database to use:

Server: ServerName

Database: DatabaseName

Table: TableName

○ Use Windows authentication ● Use SQL Server authentication

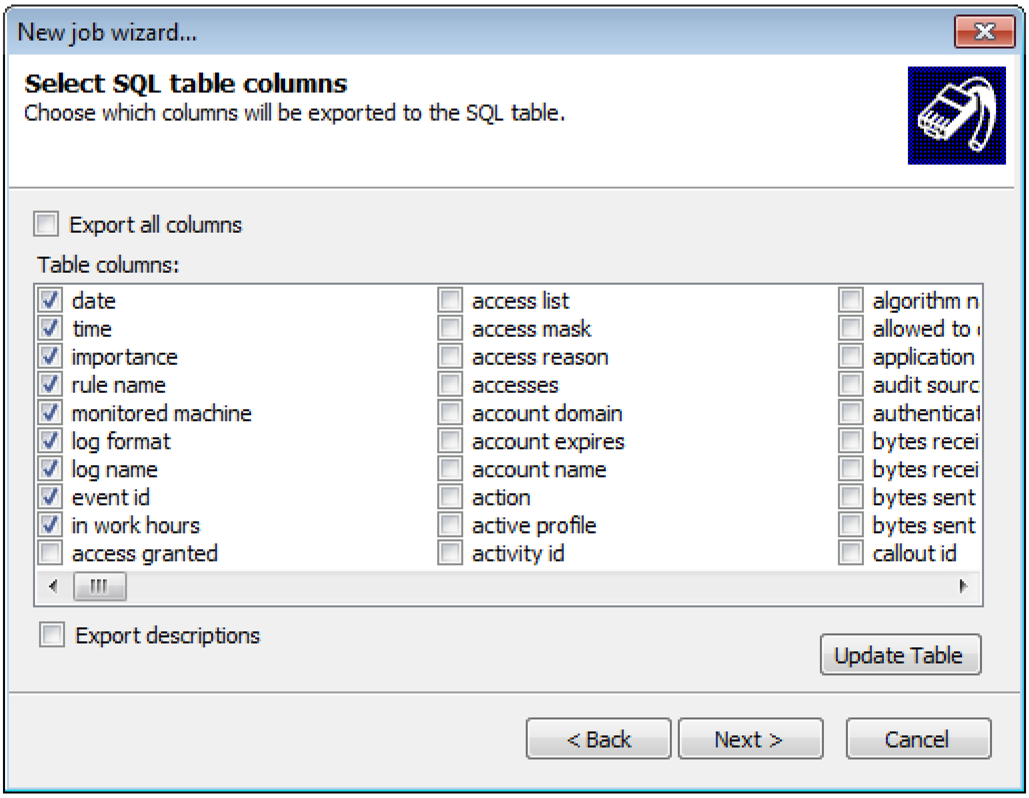
User: sa

Password: ••••••••••••••••••

Screenshot 207: Specifying SQL Server details

6. Configure the following server options and click **Next**:

Option	Description
Server	Key in the name of the machine that is running SQL Server.
Database	Key in the name of the destination database. **Note** If the specified database does not exist, GFI EventsManager creates it for you.
Table	Key in the name of the destination table. **Note** If the specified table does not exist, GFI EventsManager creates it for you.
Use Windows authentication	Use the same logon credentials used to log on to Windows®. The SQL Server® must support this type of authentication mode to be able to connect and copy information to the server.
Use SQL Server authentication	Use the logon credentials configured in your SQL Server®. Key in the username in the **User** field and the password in the **Password** field.
Test connection	Click **Test Connection** to attempt to connect to the SQL Server® using the specified settings. **Note** GFI EventsManager tests the connection automatically after you click **Next**.



New job wizard...

Select SQL table columns

Choose which columns will be exported to the SQL table.

□ Export all columns

Table columns:

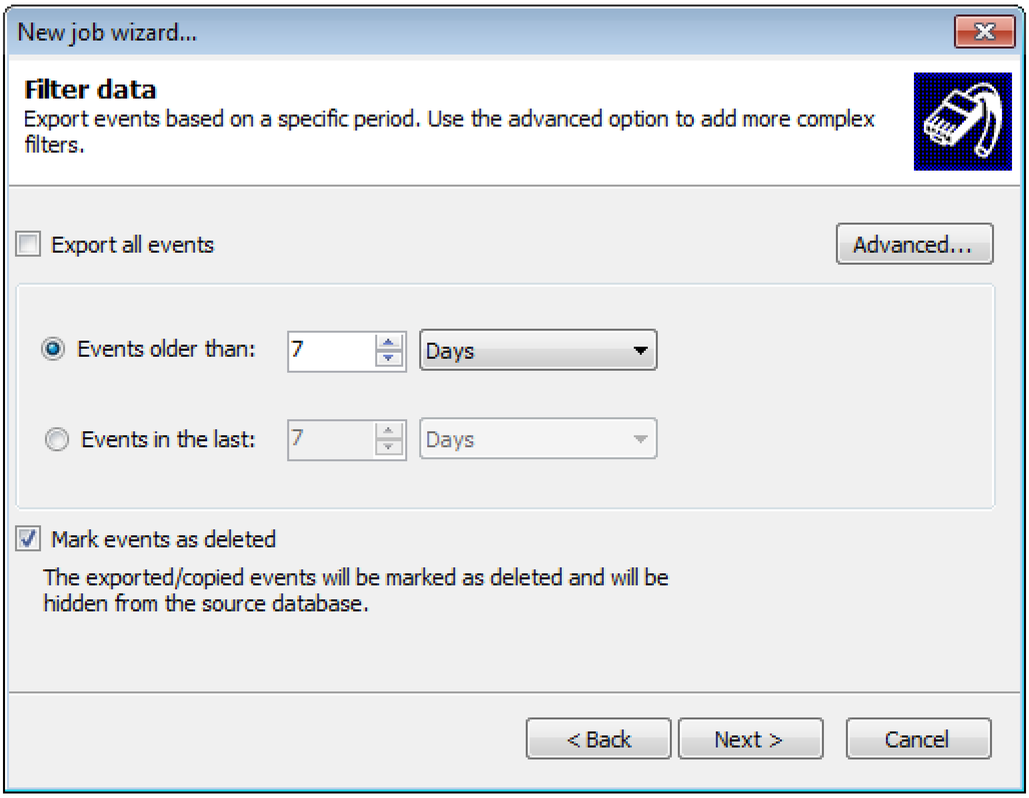
☑ date
☑ time
☑ importance
☑ rule name
☑ monitored machine
☑ log format
☑ log name
☑ event id
☑ in work hours
□ access granted
□ access list
□ access mask
□ access reason
□ accesses
□ account domain
□ account expires
□ account name
□ action
□ active profile
□ activity id
□ algorithm n
□ allowed to
□ application
□ audit sourc
□ authenticat
□ bytes recei
□ bytes recei
□ bytes sent
□ bytes sent
□ callout id

□ Export descriptions

Screenshot 208: Select columns to export

7. Select the columns you want to export and click **Next**.

> **Note**
>
> To export all columns, select **Export all columns**.



New job wizard...

Filter data

Export events based on a specific period. Use the advanced option to add more complex filters.

□ Export all events

● Events older than: 7 Days

○ Events in the last: 7 Days

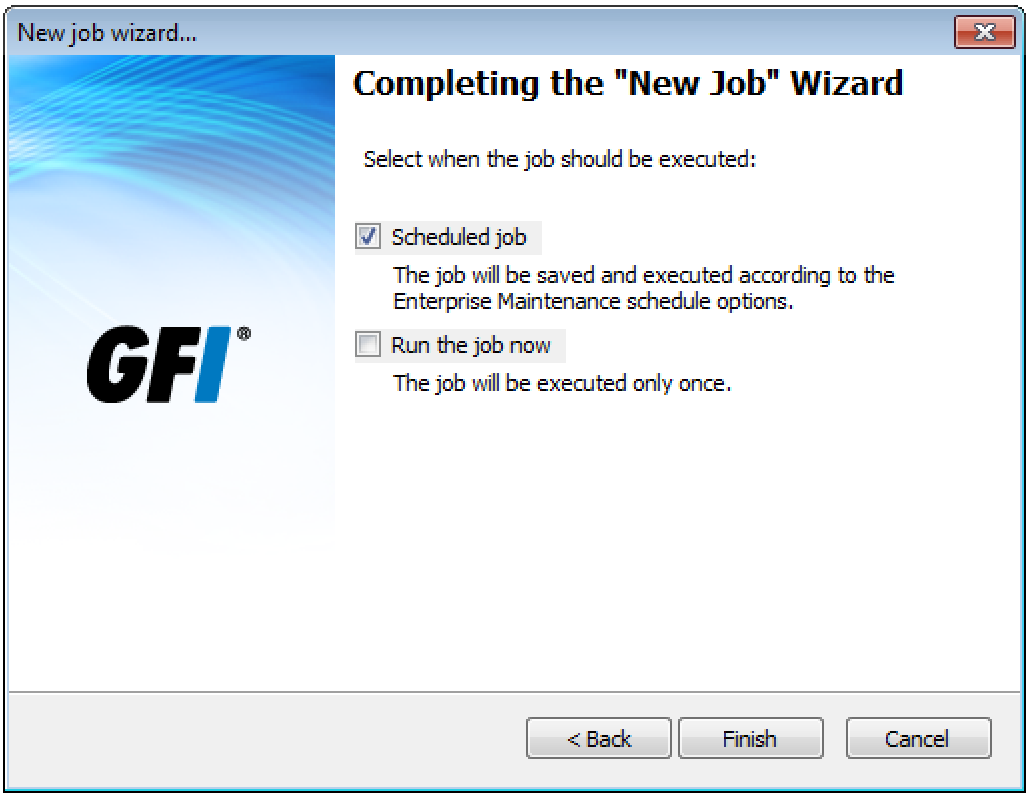
☑ Mark events as deleted

The exported/copied events will be marked as deleted and will be hidden from the source database.

Screenshot 209: Filtering export data

8. Configure the following filtering options and click **Next**:

Option	Description
Export all events	Export all events from the database.
Events older than	Only export events older than the specified number of days/weeks/months.
Events in the last	Only export events that occurred in the last specified number of days/weeks/months.
Mark events as deleted	Hide events from the source database after they are exported. To completely remove these events from the database, you must run a Commit Deletions job. For more information refer to Commit deletions.
Advanced...	Click Advanced... to launch the Advanced Filtering dialog. This enables you to configure granular filtering parameters to export specific events only. For more information refer to Building query restrictions.



Completing the "New Job" Wizard

Select when the job should be executed:

☑ Scheduled job

The job will be saved and executed according to the Enterprise Maintenance schedule options.

□ Run the job now

The job will be executed only once.

Screenshot 210: Execute job options

9. Select when the job is executed and click **Finish**:

Options	Description
Schedule job	The job will be saved and executed according to the database operations schedule.
Run the job now	Job is executed immediately. Unscheduled jobs only run once and cannot be reused.

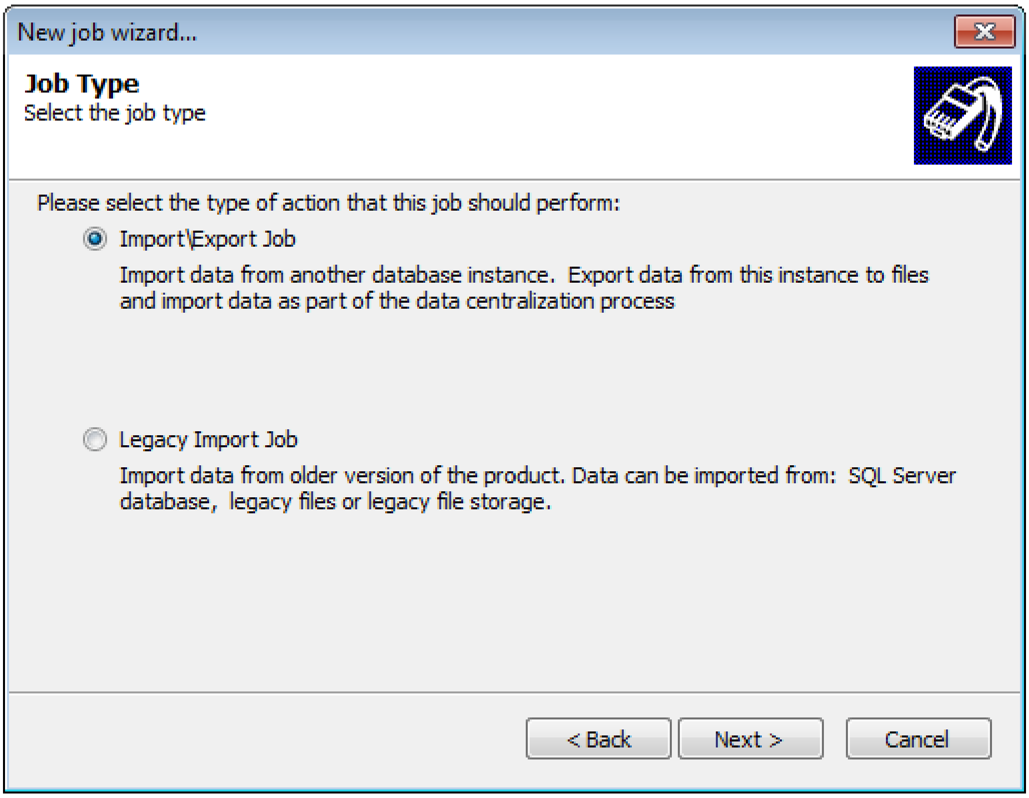
17.2.4 Copy data

To create Copy data jobs:

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, right-click **Database Operations** node and select **Create new job…**

3. Click **Next** at the wizard welcome screen.



New job wizard...

Job Type

Select the job type

Please select the type of action that this job should perform:

● Import\Export Job

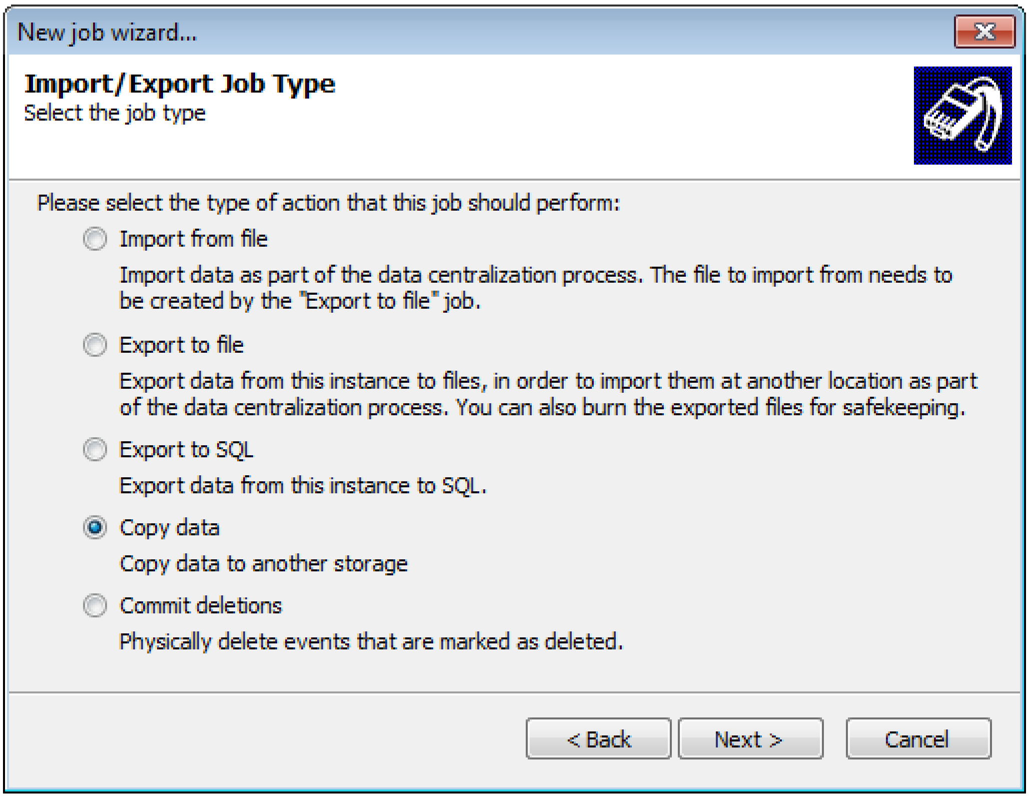
Import data from another database instance. Export data from this instance to files and import data as part of the data centralization process

○ Legacy Import Job

Import data from older version of the product. Data can be imported from: SQL Server database, legacy files or legacy file storage.

Screenshot 211: Creating Import\Export jobs

4. Select **Import/Export Job** and click **Next**.



New job wizard...

Import/Export Job Type

Select the job type

Please select the type of action that this job should perform:

○ Import from file

Import data as part of the data centralization process. The file to import from needs to be created by the "Export to file" job.

○ Export to file

Export data from this instance to files, in order to import them at another location as part of the data centralization process. You can also burn the exported files for safekeeping.

○ Export to SQL

Export data from this instance to SQL.

● Copy data

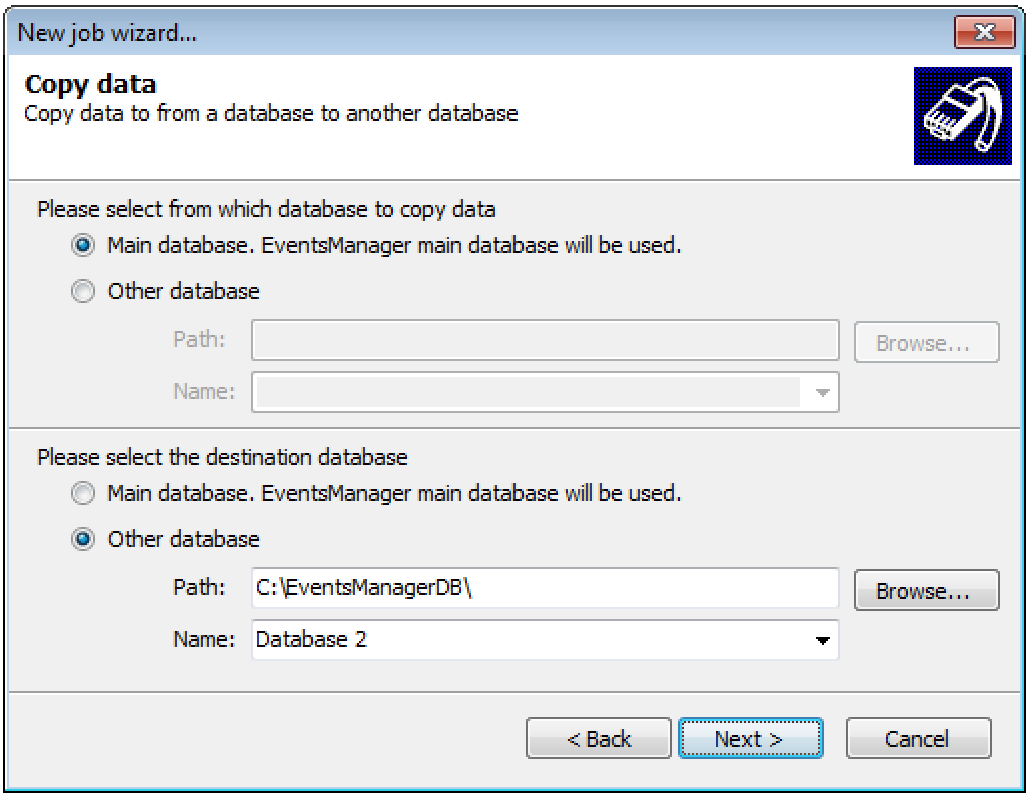
Copy data to another storage

○ Commit deletions

Physically delete events that are marked as deleted.

Screenshot 212: Select Copy data job

5. Select **Copy data** and click **Next**.


New job wizard...

Copy data

Copy data to from a database to another database

Please select from which database to copy data

● Main database. EventsManager main database will be used.

○ Other database

Path:

Name:

Please select the destination database

○ Main database. EventsManager main database will be used.

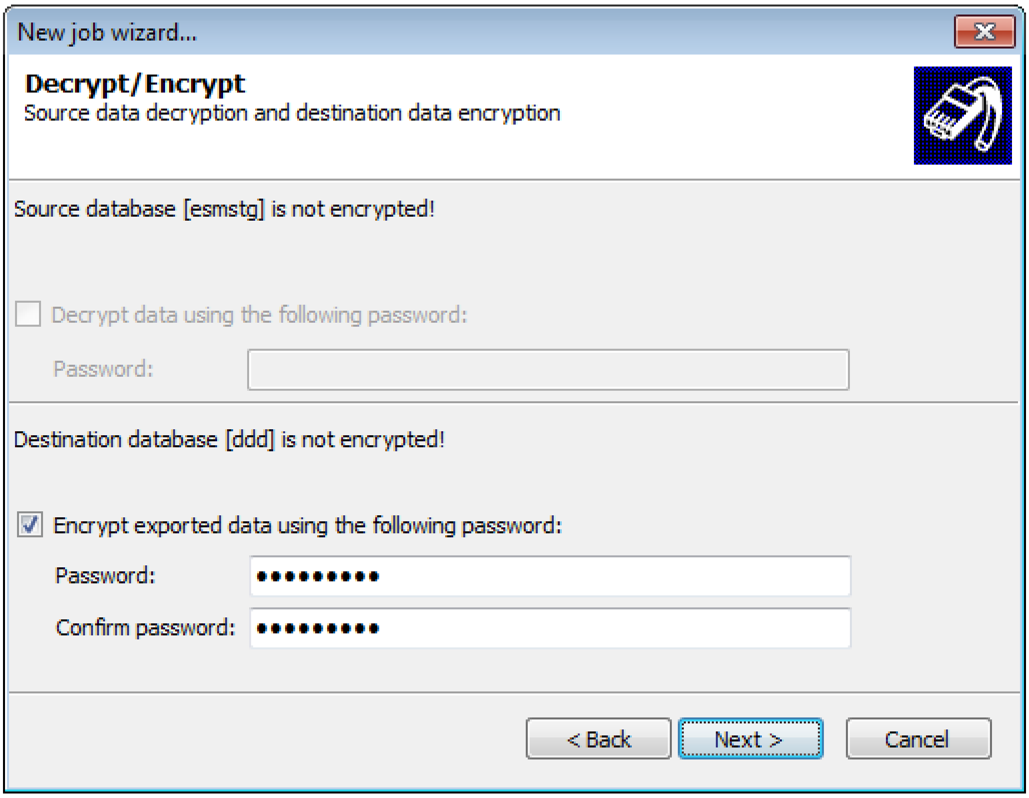
● Other database

Path: C:\EventsManagerDB\

Name: Database 2

Screenshot 213: Specify source and destination databases

6. Select the source and destination databases. Click **Next**.


New job wizard...

Decrypt/Encrypt

Source data decryption and destination data encryption

Source database [esmstg] is not encrypted!

□ Decrypt data using the following password:

Password:

Destination database [ddd] is not encrypted!

☑ Encrypt exported data using the following password:

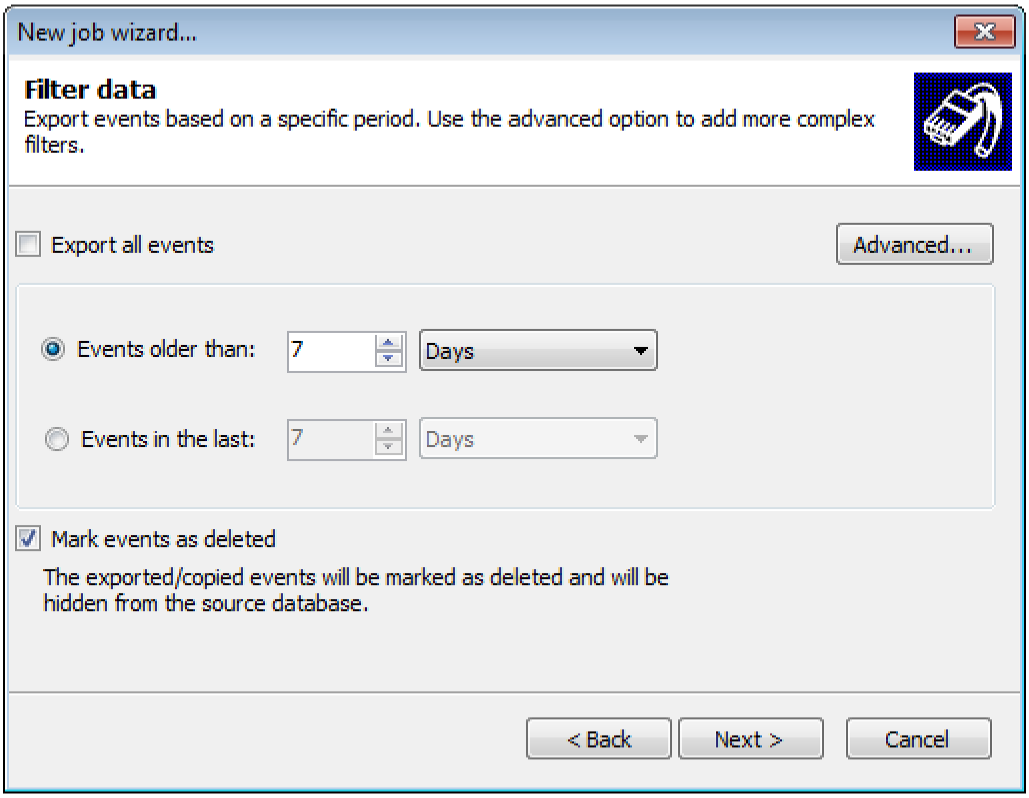
Password: •••••••••

Confirm password: •••••••••

Screenshot 214: Decrypt source and encrypt destination databases

7. If the source database is encrypted, select **Decrypt data using the following password** and specify the password used to encrypt the database.

8. If you want to encrypt the source data, select **Encrypt exported data using the following password**. Specify the encryption password and click **Next**.



New job wizard...

Filter data

Export events based on a specific period. Use the advanced option to add more complex filters.

☐ Export all events

● Events older than: 7 Days

○ Events in the last: 7 Days

☑ Mark events as deleted

The exported/copied events will be marked as deleted and will be hidden from the source database.

Screenshot 215: Filtering export data

9. Configure the following filtering options and click **Next**:

Option	Description
Export all events	Export all events from the database.
Events older than	Only export events older than the specified number of days/weeks/months.
Events in the last	Only export events that occurred in the last specified number of days/weeks/months.
Mark events as deleted	Hide events from the source database after they are exported. To completely remove these events from the database, you must run a Commit Deletions job. For more information refer to Commit deletions.
Advanced...	Click Advanced... to launch the Advanced Filtering dialog. This enables you to configure granular filtering parameters to export specific events only. For more information refer to Building query restrictions.

10. Select when the job is executed and click **Finish**:

Options	Description
Schedule job	The job will be saved and executed according to the database operations schedule.
Run the job now	Job is executed immediately. Unscheduled jobs only run once and cannot be reused.

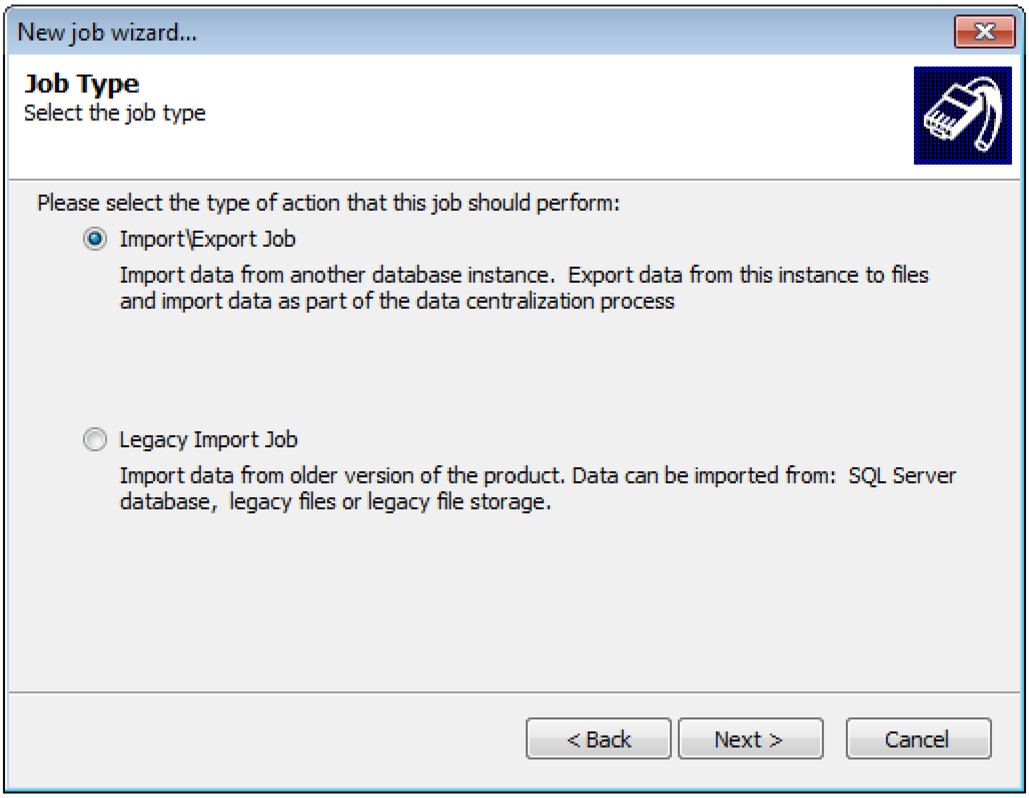
17.2.5 Commit deletions

To create Commit deletions jobs:

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, right-click **Database Operations** node and select **Create new job…**

3. Click **Next** at the wizard welcome screen.



New job wizard...

Job Type

Select the job type

Please select the type of action that this job should perform:

● Import\Export Job

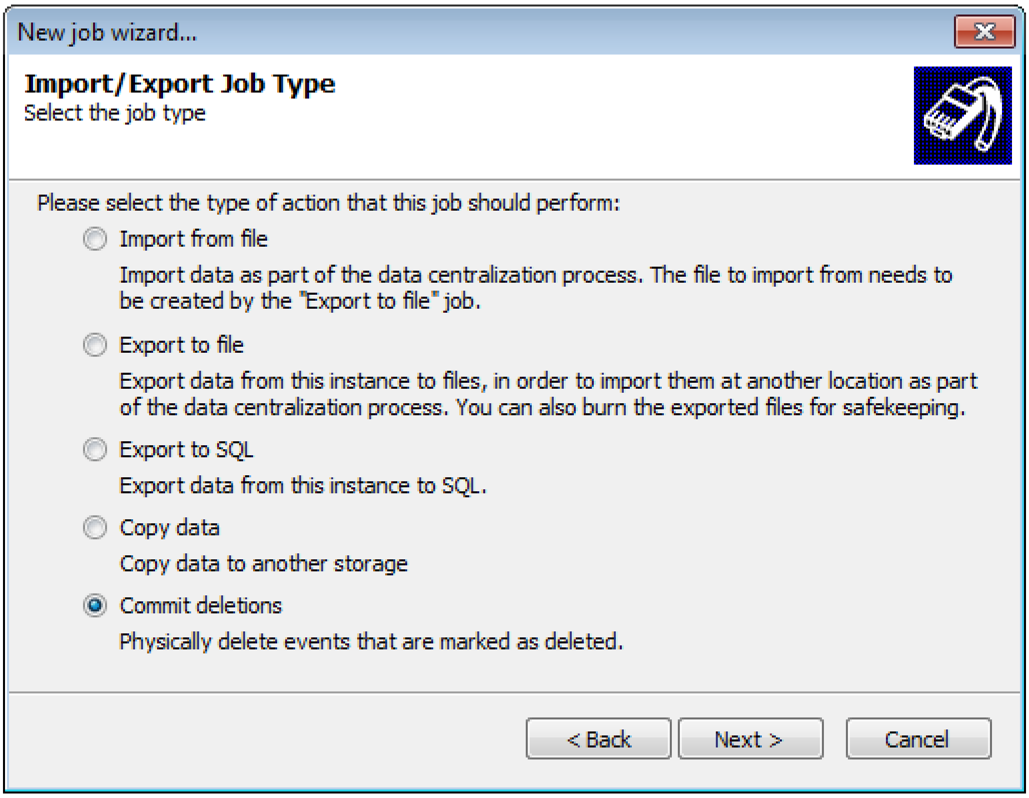
Import data from another database instance. Export data from this instance to files and import data as part of the data centralization process

○ Legacy Import Job

Import data from older version of the product. Data can be imported from: SQL Server database, legacy files or legacy file storage.

Screenshot 216: Creating Import\Export jobs

4. Select **Import/Export Job** and click **Next**.



New job wizard...

Import/Export Job Type

Select the job type

Please select the type of action that this job should perform:

○ Import from file

Import data as part of the data centralization process. The file to import from needs to be created by the "Export to file" job.

○ Export to file

Export data from this instance to files, in order to import them at another location as part of the data centralization process. You can also burn the exported files for safekeeping.

○ Export to SQL

Export data from this instance to SQL.

○ Copy data

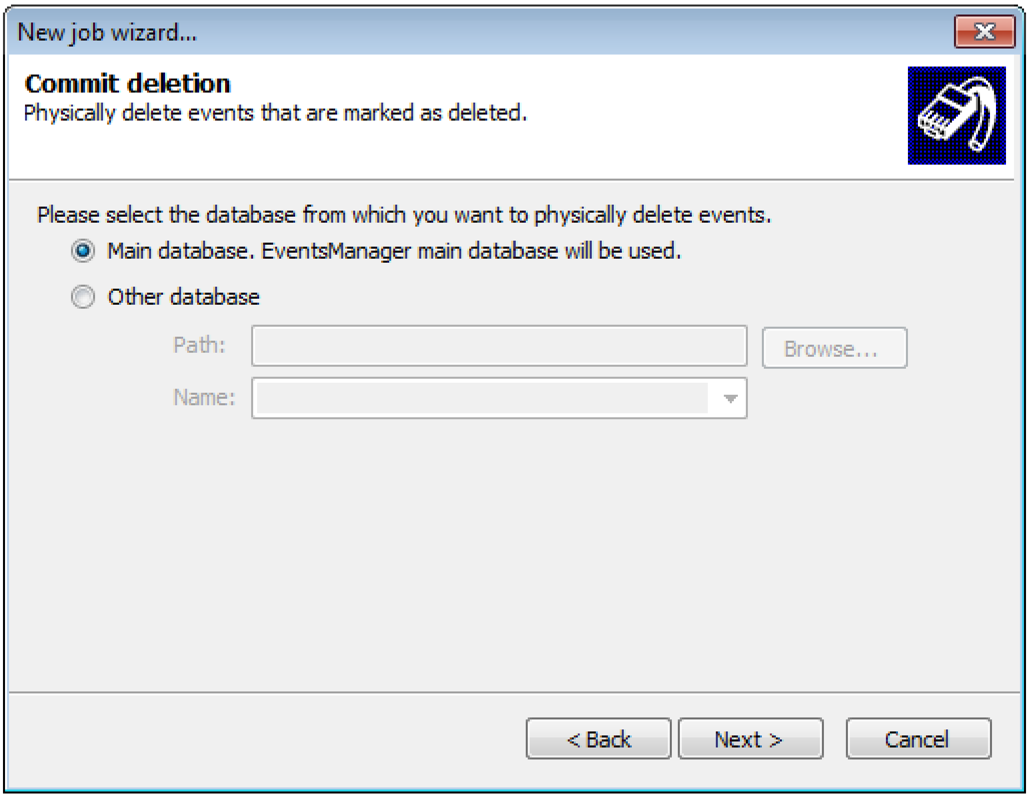
Copy data to another storage

● Commit deletions

Physically delete events that are marked as deleted.

Screenshot 217: Create commit deletion jobs

5. Select **Commit deletions** and click **Next**.


New job wizard...

Commit deletion

Physically delete events that are marked as deleted.

Please select the database from which you want to physically delete events.

● Main database. EventsManager main database will be used.

○ Other database

Screenshot 218: Select database to delete records from

6. Select the database to delete records from. Click **Next**.

7. Select when the job is executed and click **Finish**:

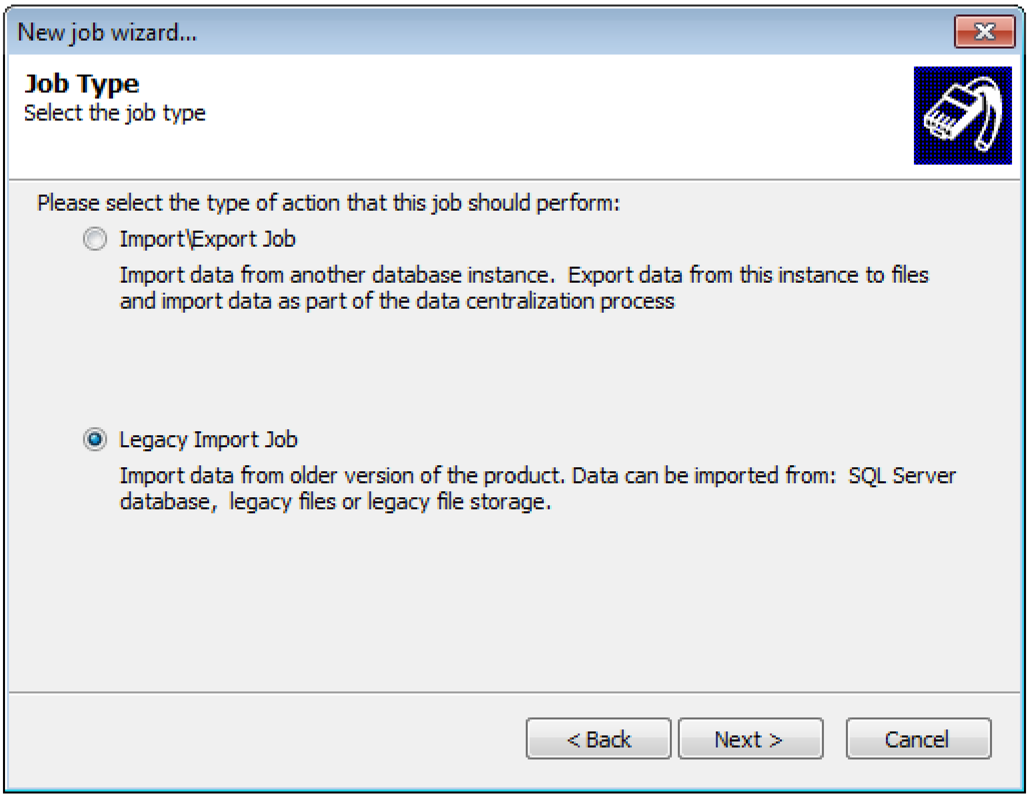
Options	Description
Schedule job	The job will be saved and executed according to the database operations schedule.
Run the job now	Job is executed immediately. Unscheduled jobs only run once and cannot be reused.

17.2.6 Import from SQL Server® Database

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, right-click **Database Operations** node and select **Create new job…**

3. Click **Next** at the wizard welcome screen.


New job wizard...

Job Type
Select the job type

Please select the type of action that this job should perform:

○ Import\Export Job

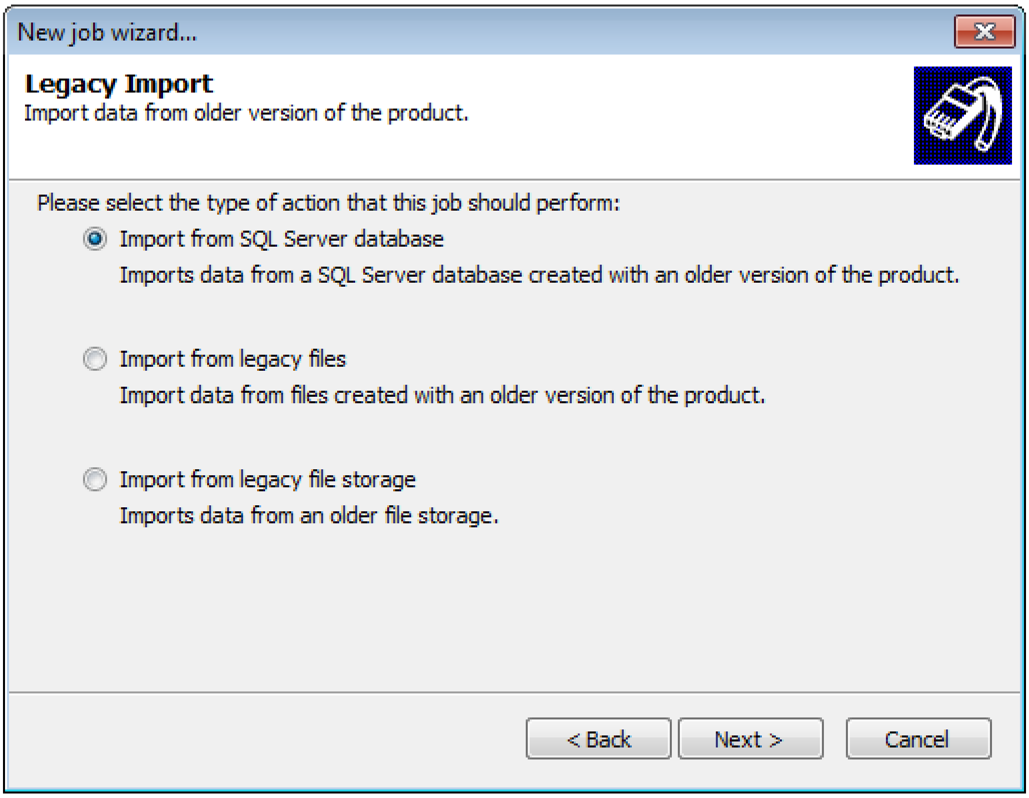
Import data from another database instance. Export data from this instance to files and import data as part of the data centralization process

● Legacy Import Job

Import data from older version of the product. Data can be imported from: SQL Server database, legacy files or legacy file storage.

Screenshot 219: Creating Import\Export jobs

4. Select **Legacy Import Job** and click **Next**.


New job wizard...

Legacy Import
Import data from older version of the product.

Please select the type of action that this job should perform:

● Import from SQL Server database

Imports data from a SQL Server database created with an older version of the product.

○ Import from legacy files

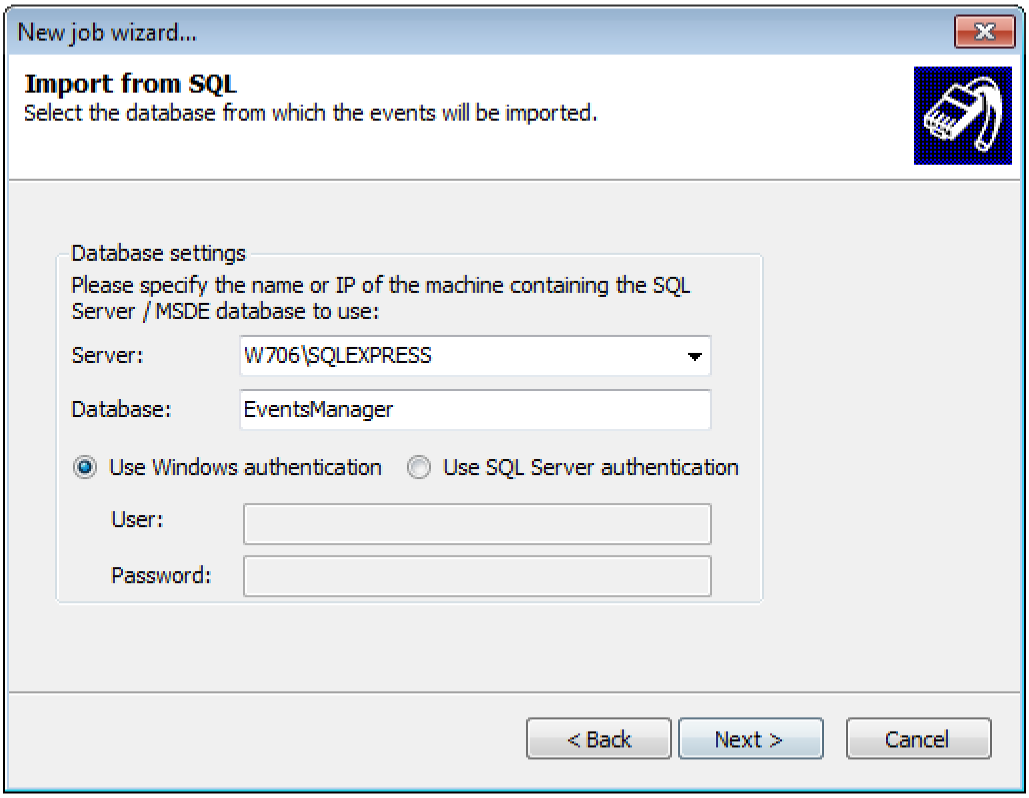
Import data from files created with an older version of the product.

○ Import from legacy file storage

Imports data from an older file storage.

Screenshot 220: Select Import from SQL Server Database

5. Select **Import from SQL Server® database** and click **Next**.



New job wizard...

Import from SQL

Select the database from which the events will be imported.

Database settings

Please specify the name or IP of the machine containing the SQL Server / MSDE database to use:

Server: W706\SQLEXPRESS

Database: EventsManager

● Use Windows authentication ○ Use SQL Server authentication

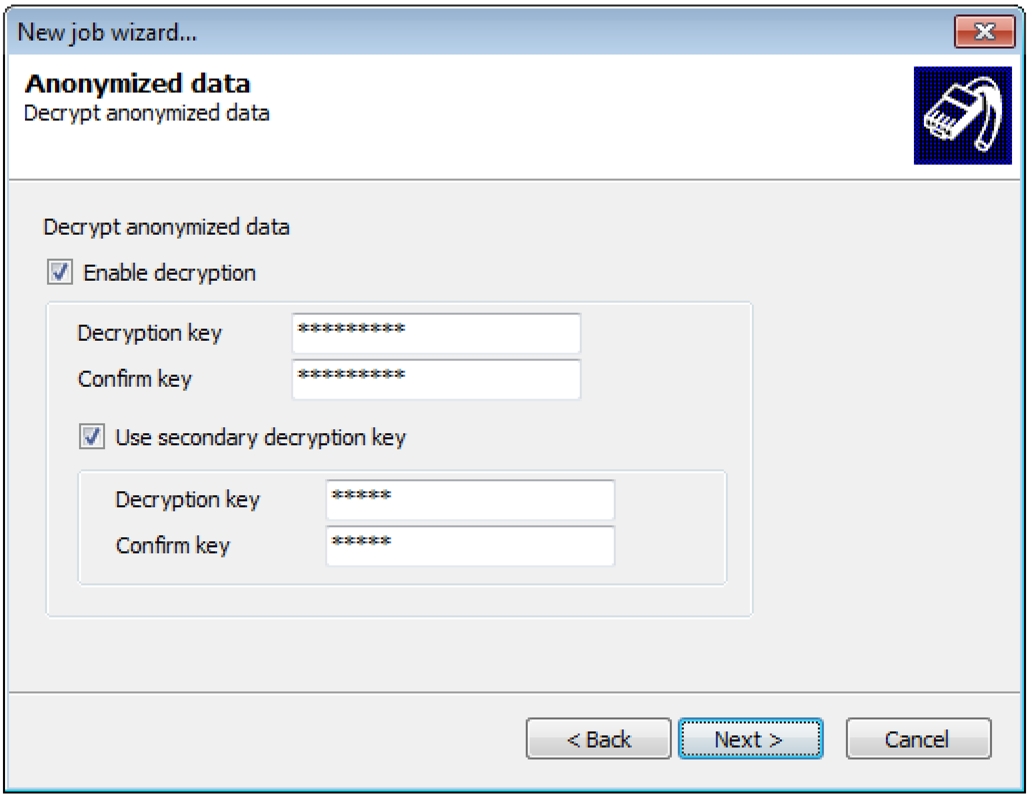
User:

Password:

Screenshot 221: Specify SQL Server address and login details

6. Configure the following server options and click **Next**:

Option	Description
Server	Key in the name of the machine that is running SQL Server.
Database	Key in the name of the source database.
Use Windows authentication	Use the same logon credentials used to log on to Windows®. The SQL Server® must support this type of authentication mode to be able to connect and copy information from the server.
Use SQL Server authentication	Use the logon credentials configured in your SQL Server®. Key in the username in the **User** field and the password in the **Password** field.



New job wizard...

Anonymized data

Decrypt anonymized data

Decrypt anonymized data

☑ Enable decryption

Decryption key: **********

Confirm key: **********

☑ Use secondary decryption key

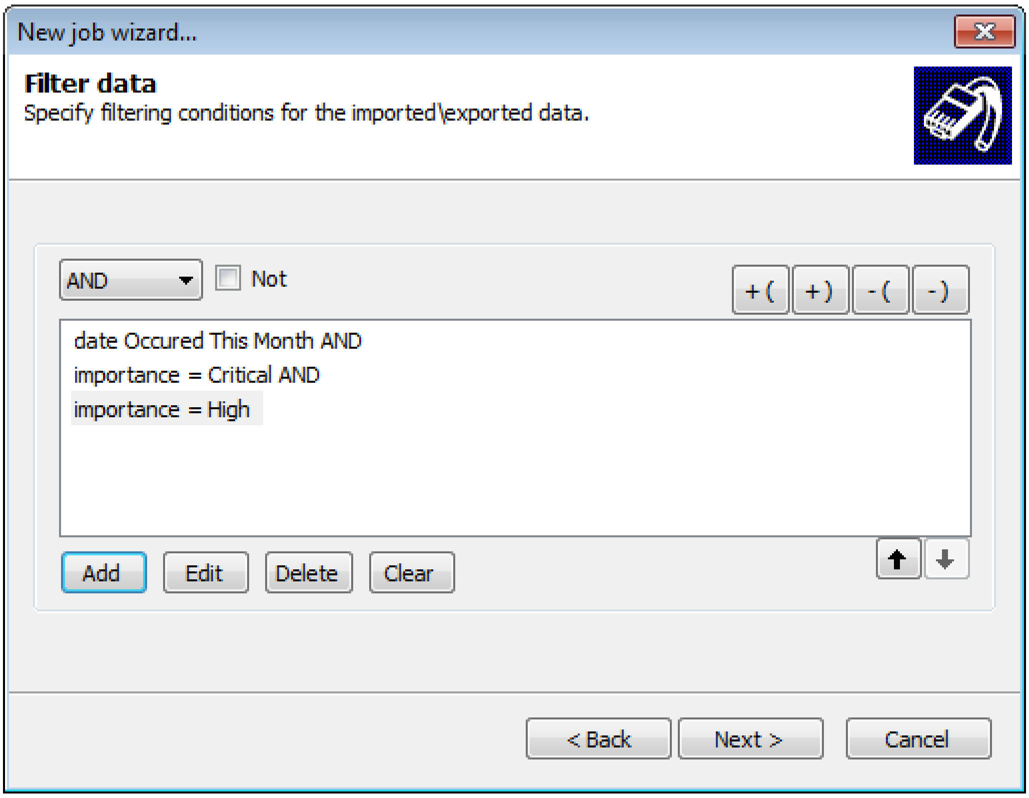
Decryption key: *****

Confirm key: *****

Screenshot 222: Decrypt anonymized databases

7. (Optional) If the SQL Server® database is anonymized, select **Enable decryption** and specify the password used to anonymize the database.

8. (Optional) If the SQL Server database was anonymized using two password, select **Use secondary decryption key** and specify the second security password used to anonymize the database. Click **Next**.



New job wizard...

Filter data

Specify filtering conditions for the imported\exported data.

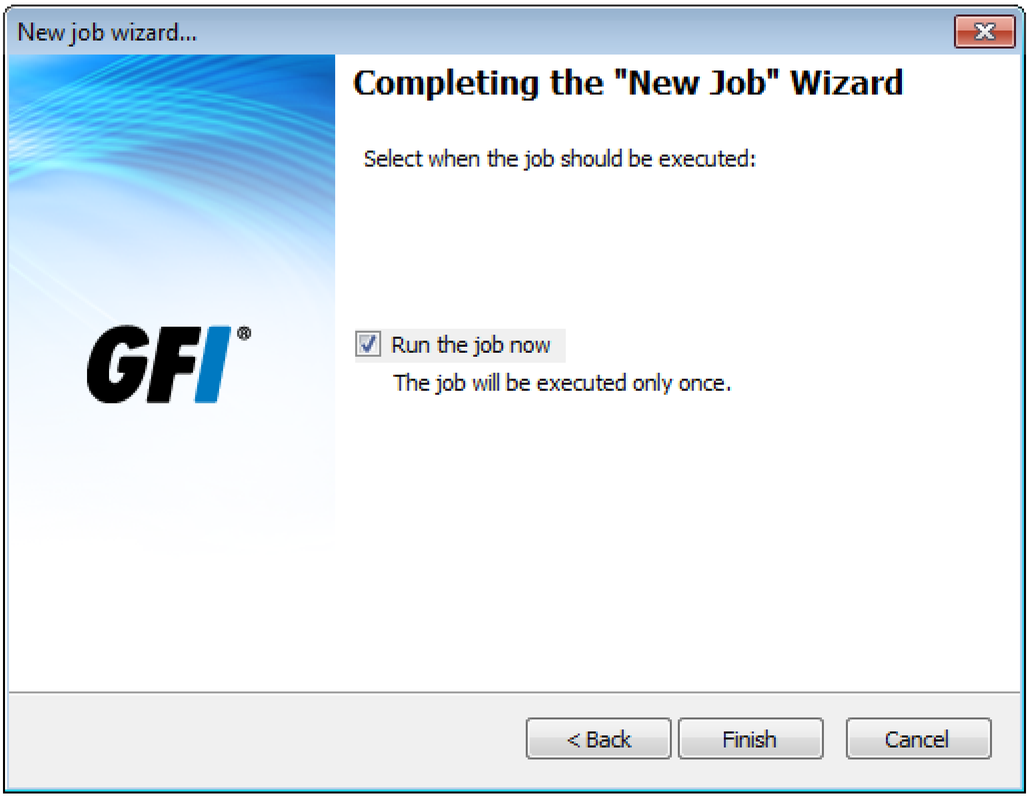
AND □ Not

date Occured This Month AND
importance = Critical AND
importance = High

Screenshot 223: Add filtering conditions to filter unwanted data

9. Add advanced filtering parameters to import specific data only. Leave blank to import all the event logs.

> **Note**
> For more information refer to Building Query Restrictions.



Completing the "New Job" Wizard

Select when the job should be executed:

☑ Run the job now

The job will be executed only once.

Screenshot 224: Specify when the maintenance job is executed

Select **Run the job now** and click **Finish**.

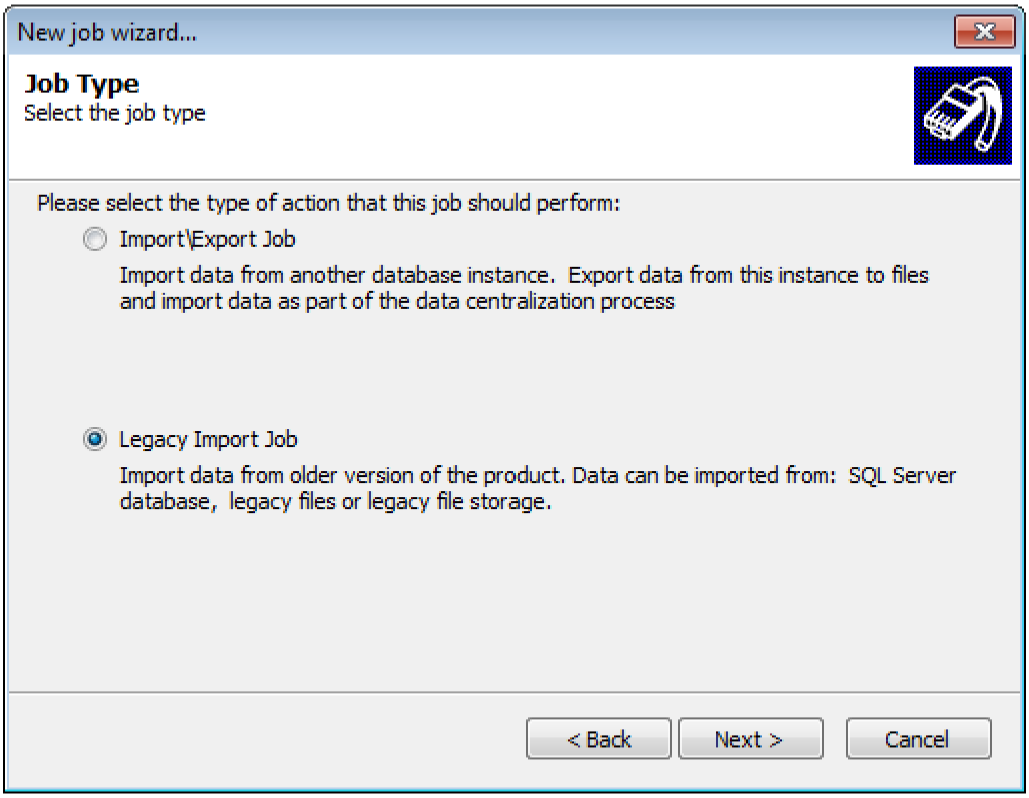
17.2.7 Import from legacy files

To create Import from legacy files jobs:

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, right-click **Database Operations** node and select **Create new job...**

3. Click **Next** at the wizard welcome screen.


New job wizard...

Job Type
Select the job type

Please select the type of action that this job should perform:

○ Import\Export Job

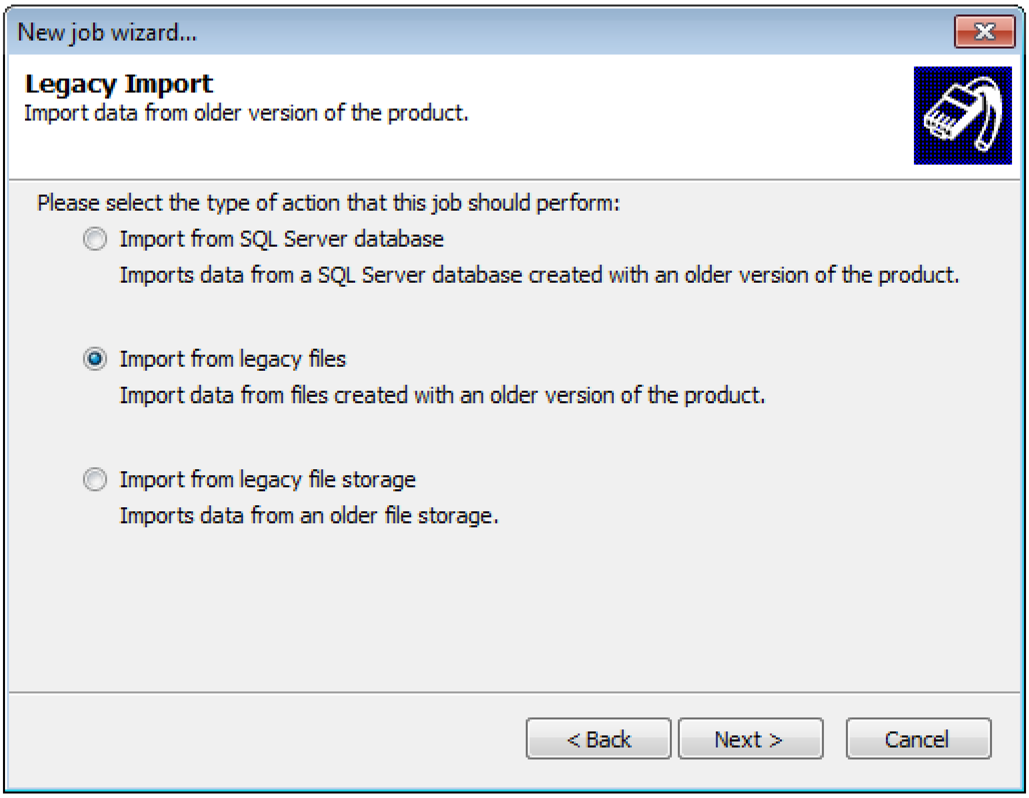
Import data from another database instance. Export data from this instance to files and import data as part of the data centralization process

● Legacy Import Job

Import data from older version of the product. Data can be imported from: SQL Server database, legacy files or legacy file storage.

Screenshot 225: Creating Import\Export jobs

4. Select **Legacy Import Job** and click **Next**.


New job wizard...

Legacy Import
Import data from older version of the product.

Please select the type of action that this job should perform:

○ Import from SQL Server database

Imports data from a SQL Server database created with an older version of the product.

● Import from legacy files

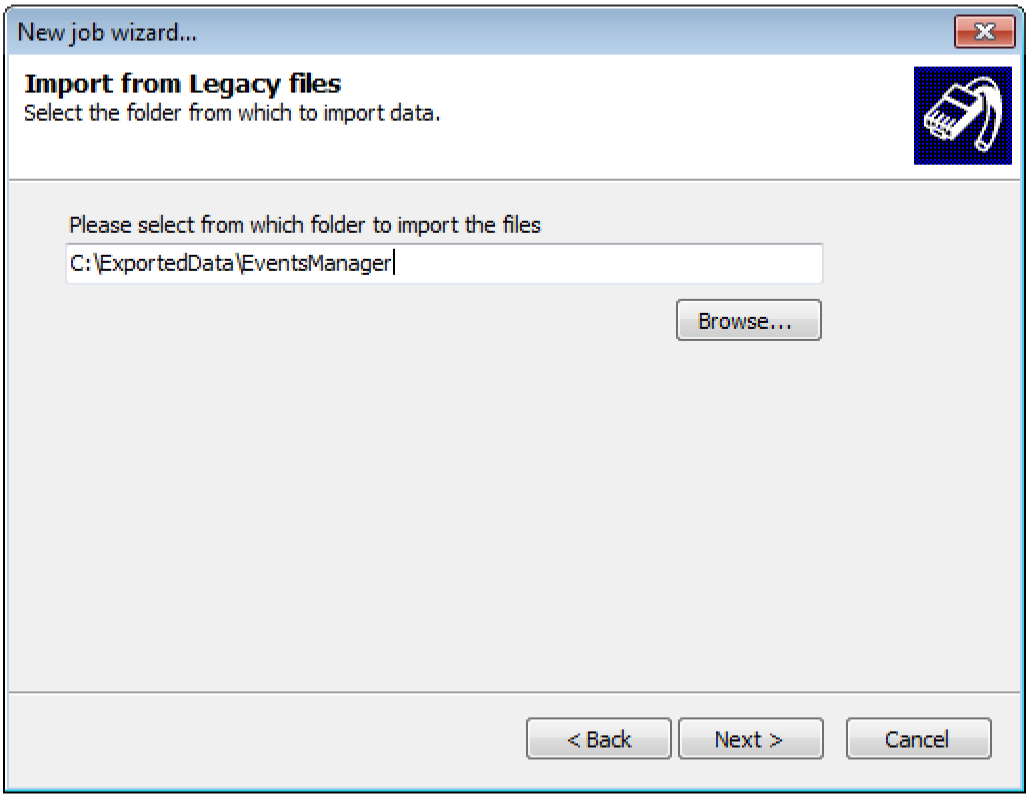
Import data from files created with an older version of the product.

○ Import from legacy file storage

Imports data from an older file storage.

Screenshot 226: Import from legacy files

5. Select **Import from legacy files** and click **Next**.

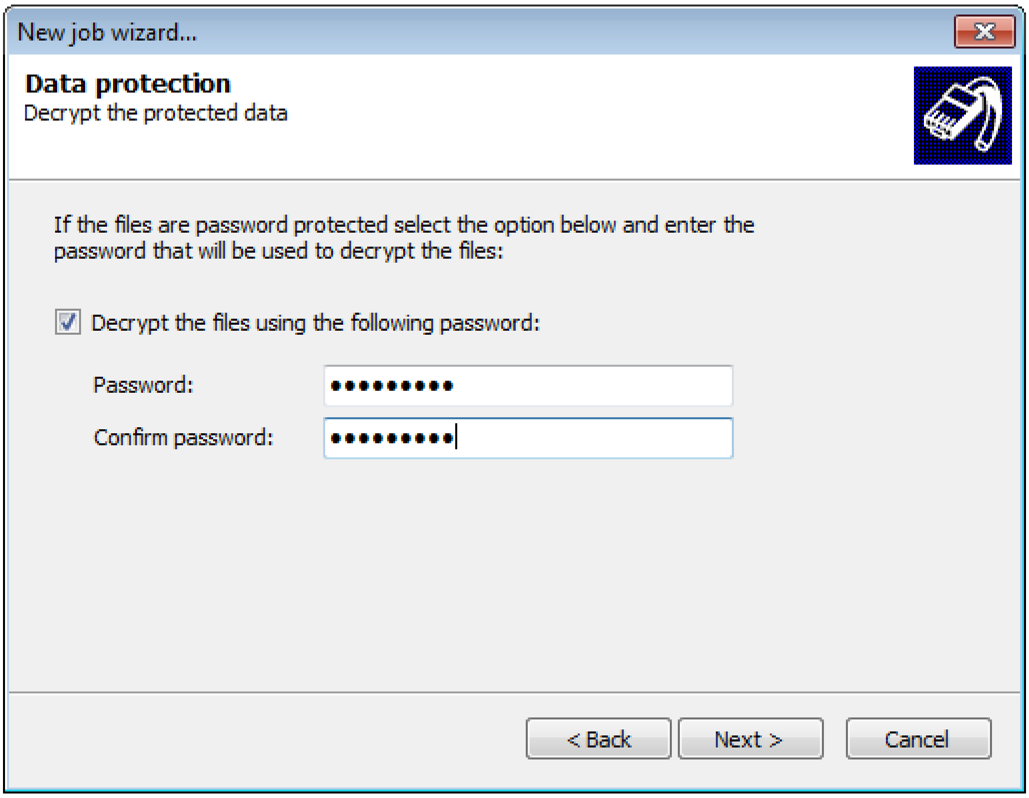


Please select from which folder to import the files

C:\ExportedData\EventsManager

Screenshot 227: Specify import file location

6. Specify the path to the configuration file that contains data you want to import. Optionally, click **Browse** to look for the location. Click **Next**.



If the files are password protected select the option below and enter the password that will be used to decrypt the files:

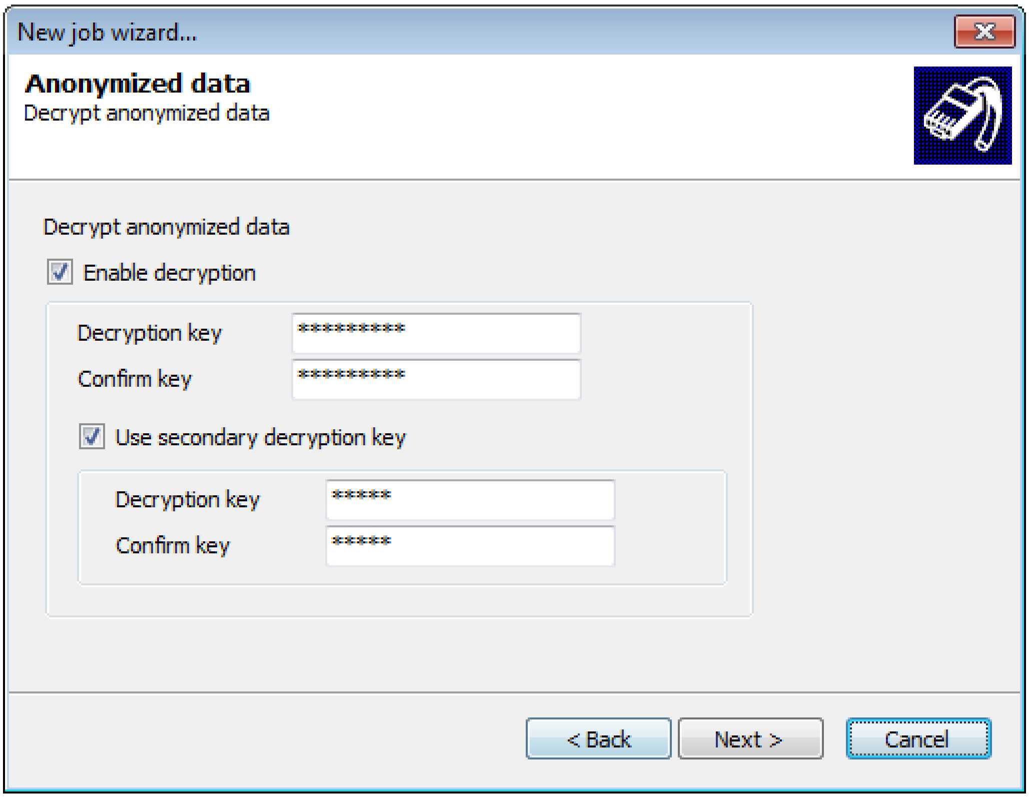
☑ Decrypt the files using the following password:

Password: •••••••••

Confirm password: •••••••••

Screenshot 228: Decrypt the information in the import file

7. (Optional) If the file was encrypted, select **Decrypt the files using the following password** and specify the password used to encrypt the file. Click **Next**.



Decrypt anonymized data

☑ Enable decryption

Decryption key: **********

Confirm key: **********

☑ Use secondary decryption key

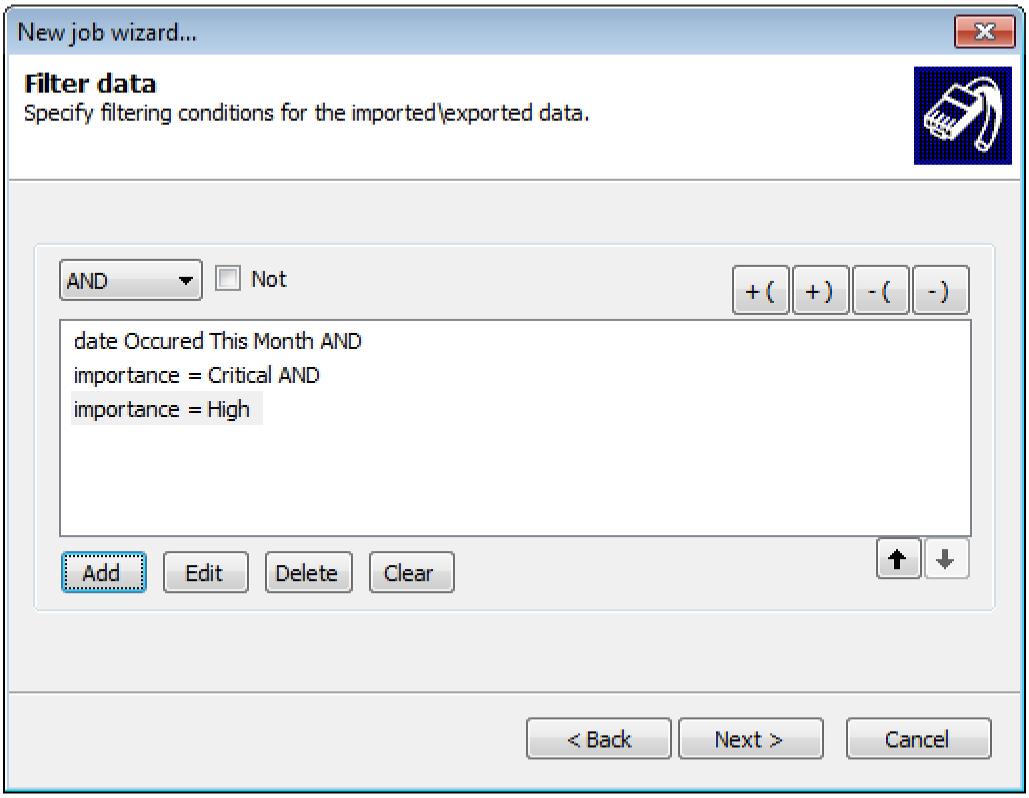
Decryption key: ******

Confirm key: ******

Screenshot 229: Remove anonymization

8. (Optional) If the file is anonymized, select **Enable decryption** and specify the password used to anonymize the data.

9. (Optional) If the file was anonymized using two passwords, select **Use secondary decryption key** and specify the second key used to anonymize the data within the file. Click **Next**.



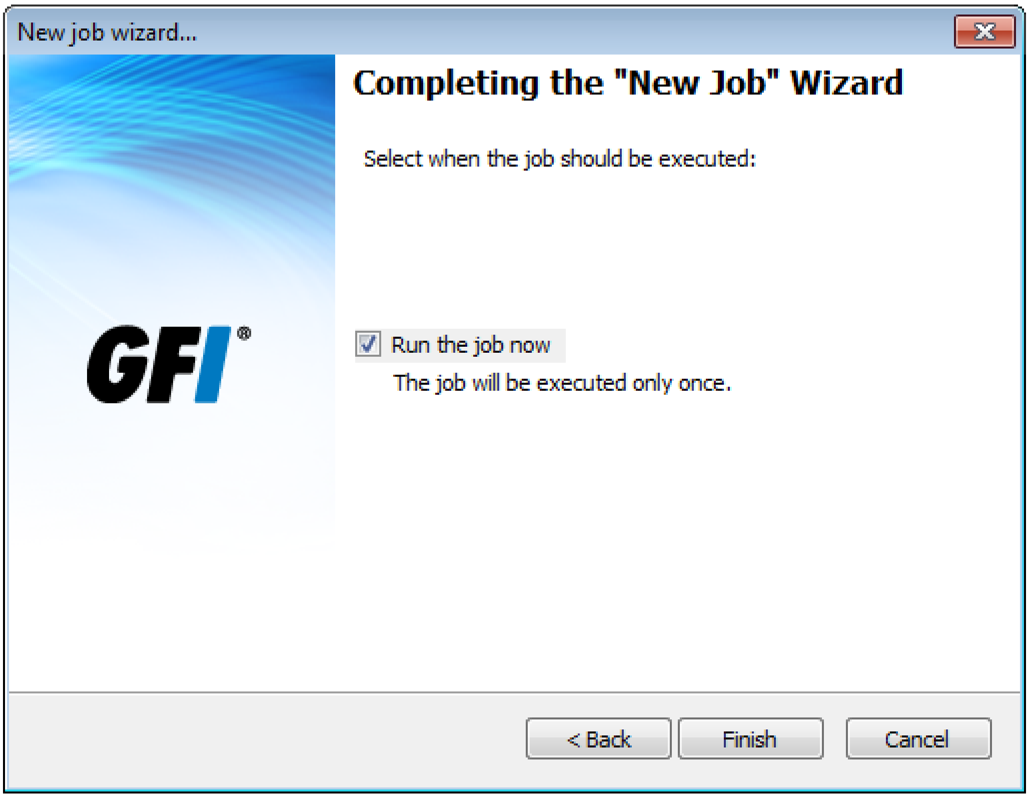
date Occured This Month AND
importance = Critical AND
importance = High

Screenshot 230: Filter unwanted events through filtering conditions

10. Add advanced filtering parameters to import specific data only. Leave blank to import all the event logs.

Note

For more information refer to Building Query Restrictions.



Completing the "New Job" Wizard

Select when the job should be executed:

☑ Run the job now

The job will be executed only once.

Screenshot 231: Specify when the maintenance job is executed

Select **Run the job now** and click **Finish**.

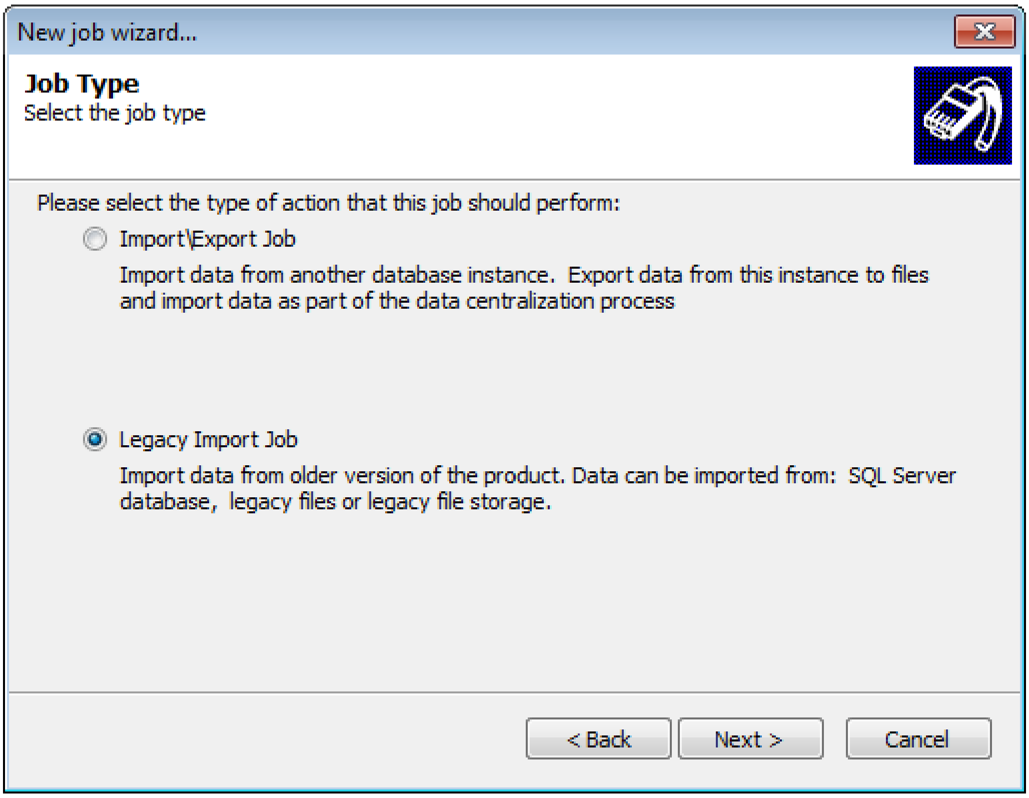
17.2.8 Import from legacy file storage

To create Import from legacy files jobs:

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, right-click **Database Operations** node and select **Create new job…**

3. Click **Next** at the wizard welcome screen.



Job Type

Select the job type

Please select the type of action that this job should perform:

○ Import\Export Job

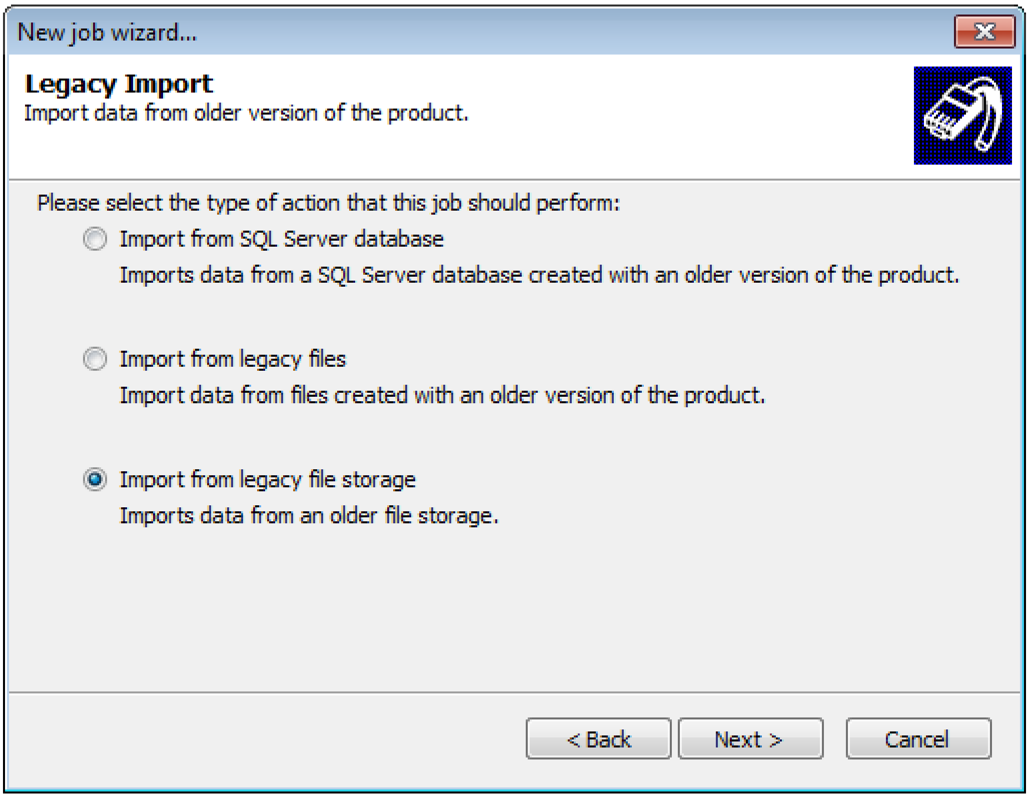
Import data from another database instance. Export data from this instance to files and import data as part of the data centralization process

● Legacy Import Job

Import data from older version of the product. Data can be imported from: SQL Server database, legacy files or legacy file storage.

Screenshot 232: Creating Import\Export jobs

4. Select **Legacy Import Job** and click **Next**.



Legacy Import

Import data from older version of the product.

Please select the type of action that this job should perform:

○ Import from SQL Server database

Imports data from a SQL Server database created with an older version of the product.

○ Import from legacy files

Import data from files created with an older version of the product.

● Import from legacy file storage

Imports data from an older file storage.

Screenshot 233: Import legacy file storage data

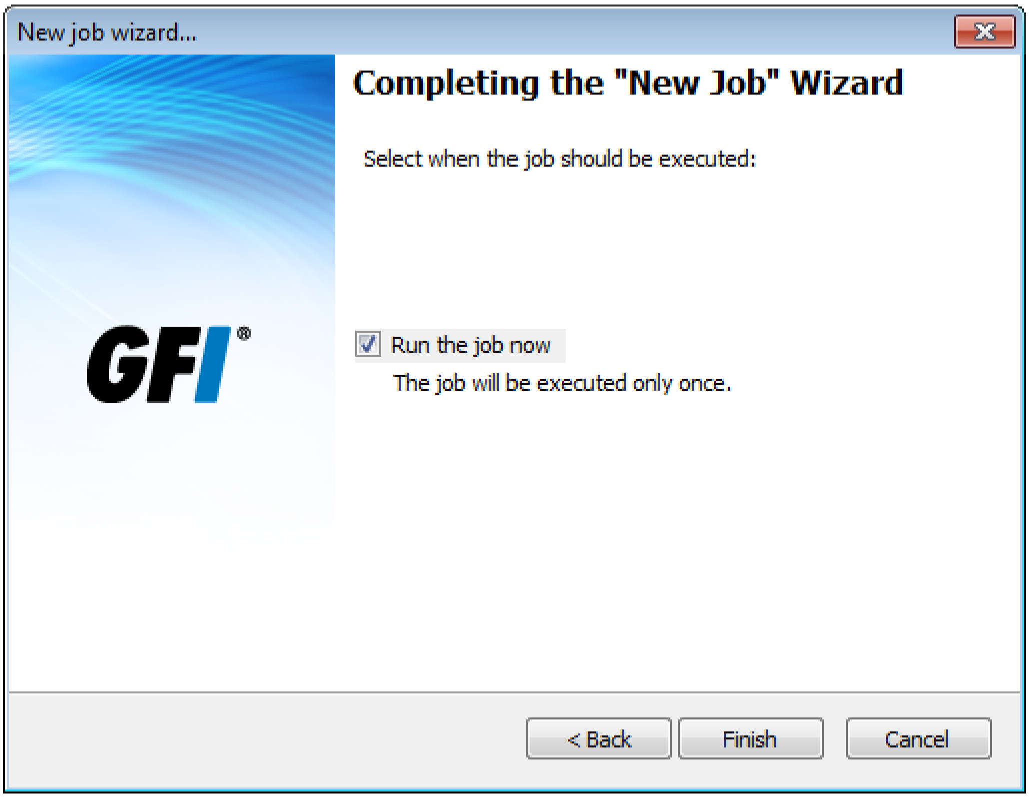
5. Select **Import from legacy file storage** and click **Next**.

6. Specify the path to where the import file is located. Alternatively, click **Browse** and look for the location.

7. (Optional) If the data is anonymized, select **Enable decryption** and specify the password used to encrypt the data.

8. (Optional) If the data is encrypted by two passwords, select **Use secondary decryption** key and key in the secondary password. Click **Next**.

9. (Optional) Specify filtering conditions to filter out unwanted data. Leave it blank to export all the data in the database. For more information, refer to Defining Restrictions. Click **Next**.



Select when the job should be executed:

☑ Run the job now

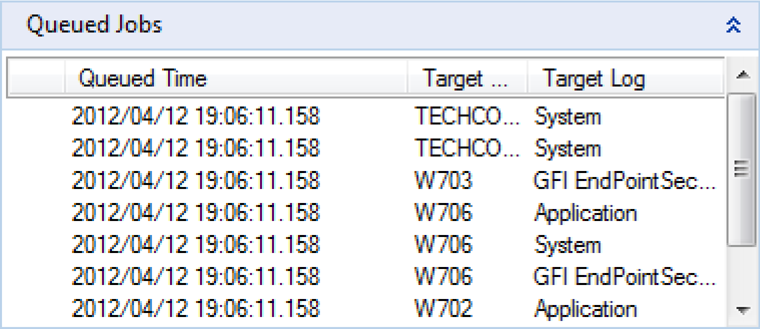
The job will be executed only once.

Screenshot 234: Specify when the maintenance job is executed

Select **Run the job now** and click **Finish**.

17.3 Editing maintenance jobs

To view the progress of scheduled maintenance jobs:



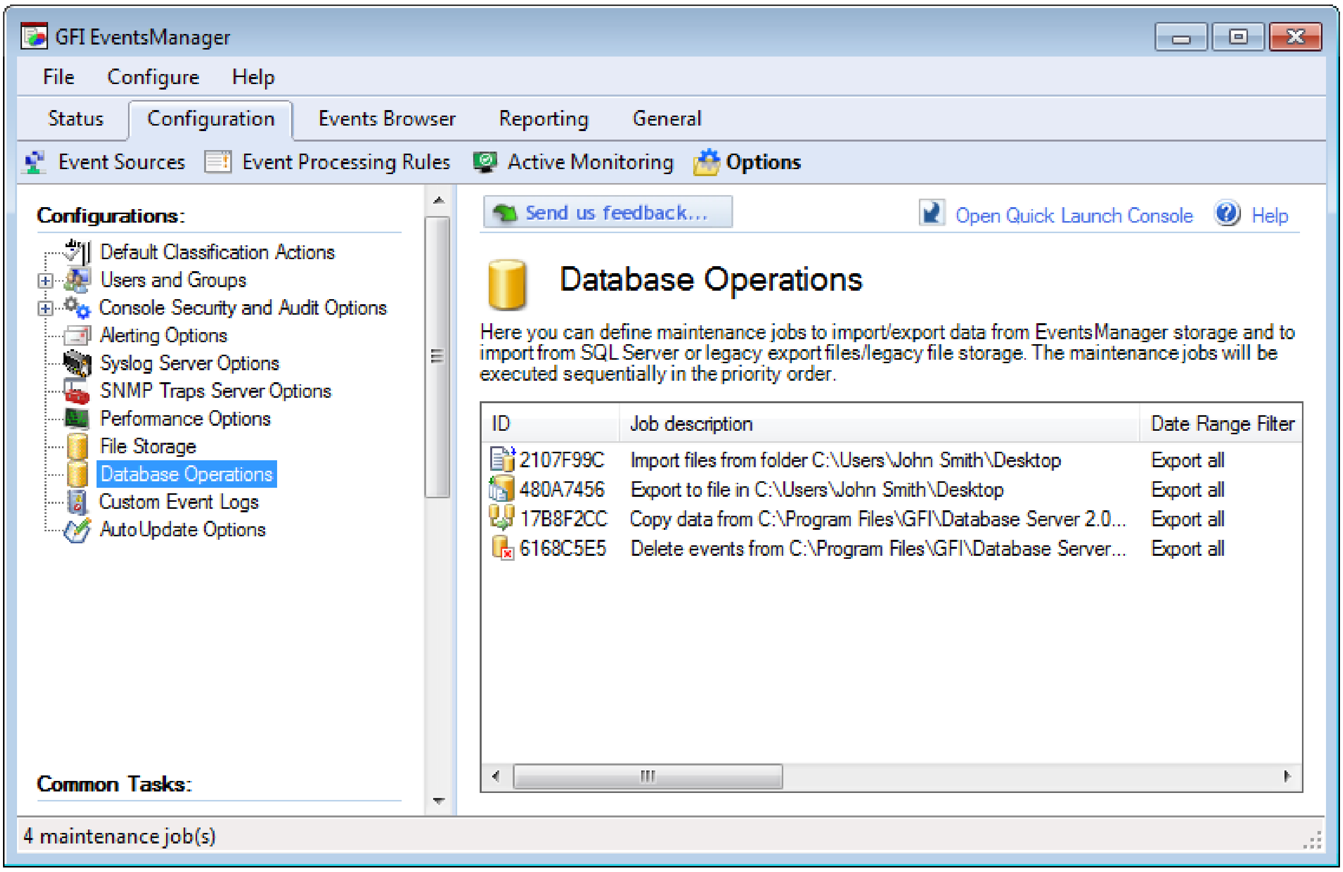
Queued Jobs

Queued Time	Target ...	Target Log
2012/04/12 19:06:11.158	TECHCO...	System
2012/04/12 19:06:11.158	TECHCO...	System
2012/04/12 19:06:11.158	W703	GFI EndPointSec...
2012/04/12 19:06:11.158	W706	Application
2012/04/12 19:06:11.158	W706	System
2012/04/12 19:06:11.158	W706	GFI EndPointSec...
2012/04/12 19:06:11.158	W702	Application

Screenshot 235: Maintenance job activity

Click **Status** tab **> Job Activity**. The status of all maintenance jobs will be displayed in the **Queued Jobs** section.

To view created maintenance jobs:



Database Operations

Here you can define maintenance jobs to import/export data from EventsManager storage and to import from SQL Server or legacy export files/legacy file storage. The maintenance jobs will be executed sequentially in the priority order.

ID	Job description	Date Range Filter
2107F99C	Import files from folder C:\Users\John Smith\Desktop	Export all
480A7456	Export to file in C:\Users\John Smith\Desktop	Export all
17B8F2CC	Copy data from C:\Program Files\GFI\Database Server 2.0...	Export all
6168C5E5	Delete events from C:\Program Files\GFI\Database Server...	Export all

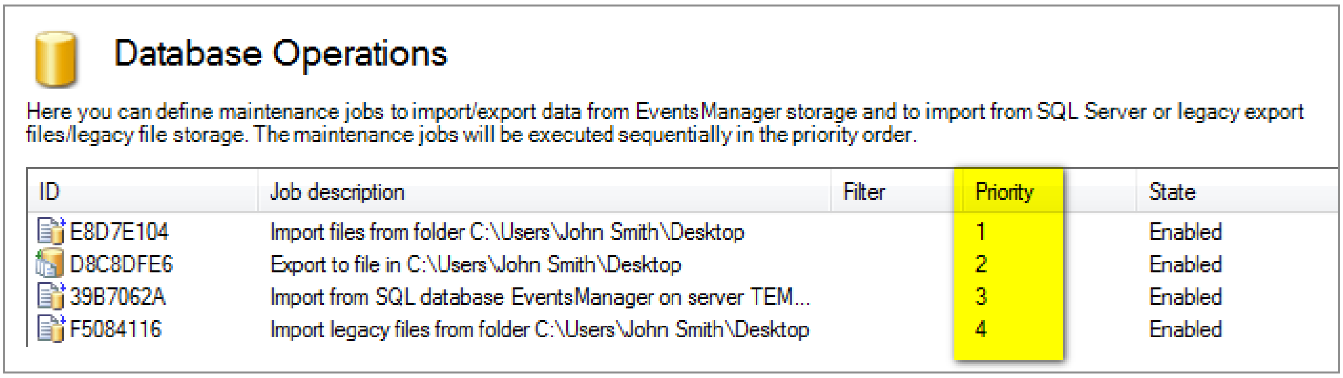
4 maintenance job(s)

Screenshot 236: Viewing scheduled maintenance jobs

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, select the **Database Operations** node. Scheduled maintenance jobs are displayed in the right pane.

17.3.1 Changing maintenance jobs priority



Database Operations

Here you can define maintenance jobs to import/export data from EventsManager storage and to import from SQL Server or legacy export files/legacy file storage. The maintenance jobs will be executed sequentially in the priority order.

ID	Job description	Filter	Priority	State
E8D7E104	Import files from folder C:\Users\John Smith\Desktop		1	Enabled
D8C8DFE6	Export to file in C:\Users\John Smith\Desktop		2	Enabled
39B7062A	Import from SQL database EventsManager on server TEM...		3	Enabled
F5084116	Import legacy files from folder C:\Users\John Smith\Desktop		4	Enabled

Screenshot 237: Maintenance job priorities

By default maintenance jobs are executed according to the sequence with which the jobs are created (First-in-First-out). Thus the priority of maintenance jobs is determined by the sequence in which jobs are executed.

To increase or decrease the priority of a maintenance job:

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, select **Database Operations** node.

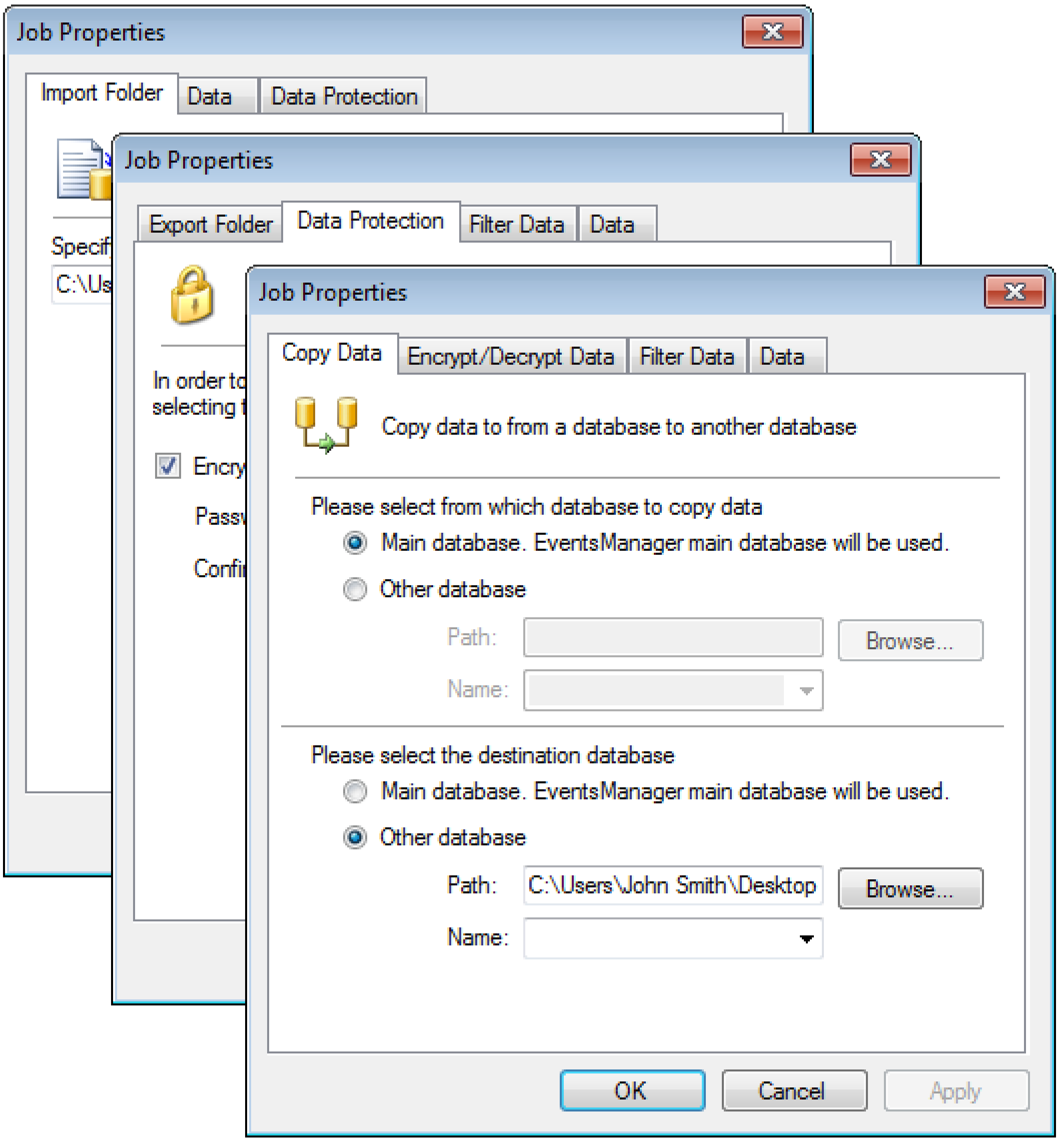
3. From the right pane, right-click the maintenance job and select **Increase Priority** or **Decrease Priority** accordingly.

17.3.2 Editing maintenance job properties

To edit maintenance jobs properties:

1. From **Configuration** tab **> Options > Configurations**, click **Database Operations**.

2. From the right pane, right-click on a maintenance job and select **Properties**.



Job Properties

Copy Data | Encrypt/Decrypt Data | Filter Data | Data

Copy data to from a database to another database

Please select from which database to copy data

● Main database. EventsManager main database will be used.

○ Other database

Path:

Name:

Please select the destination database

○ Main database. EventsManager main database will be used.

● Other database

Path: C:\Users\John Smith\Desktop

Name:

Screenshot 238: Maintenance job properties dialog

3. From the Job Properties dialog, you can modify the settings you configured while creating the job; such as:

- Encryption/decryption passwords
- Database names and addresses
- Source/destination paths
- General job details.

4. Click **Apply** and **OK**

> **Note**
> For more information refer to Creating maintenance jobs.

17.3.3 Deleting a maintenance job

To delete maintenance jobs:

1. Click **Configuration** tab and select **Options**.

2. From **Configurations**, select **Database Operations** node.

3. From the right pane, right-click on the maintenance job to delete and select **Delete**.

> **Note**
> Before deleting maintenance jobs ensure that all data is backed up.

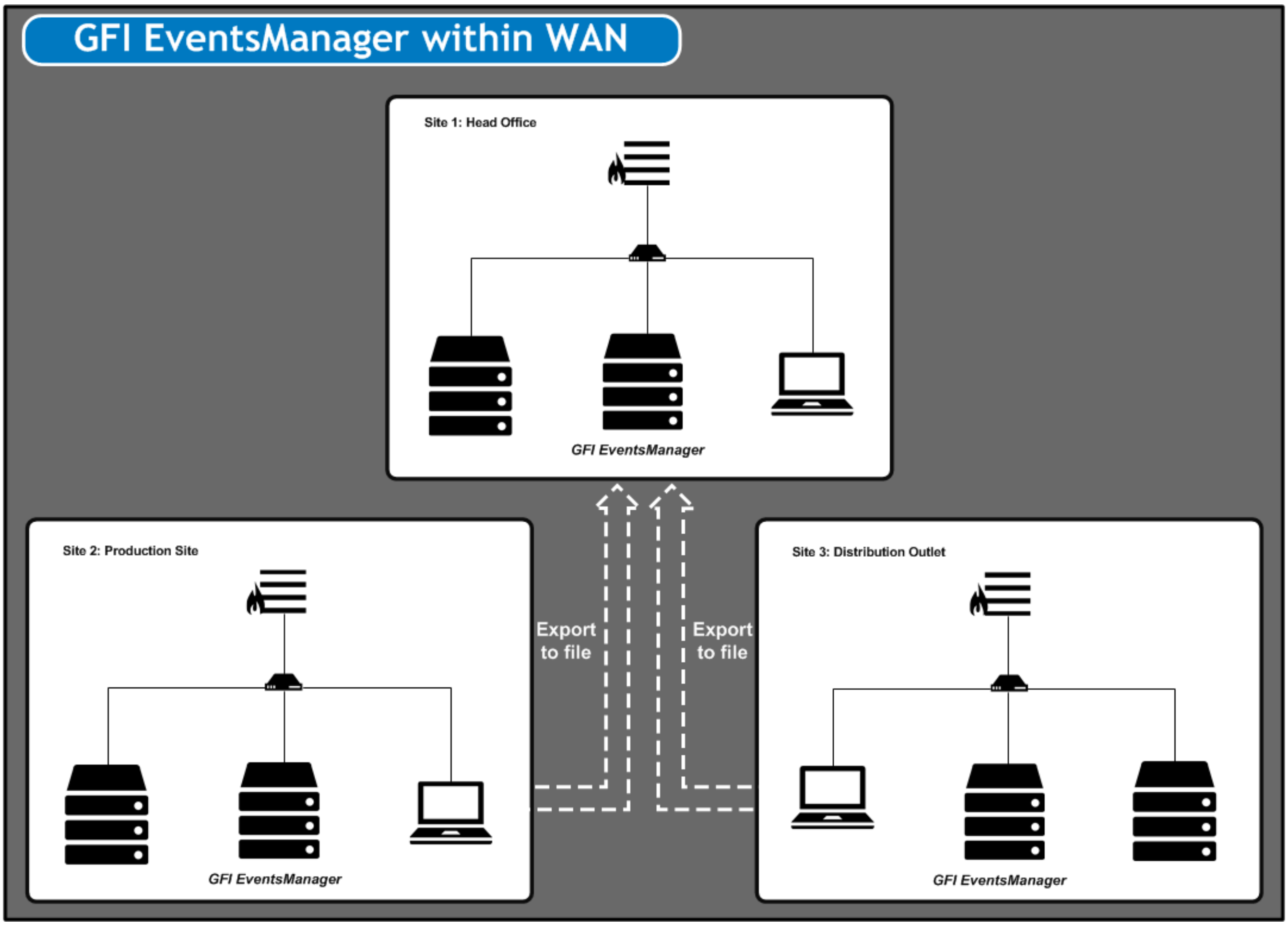
17.4 Consolidation of events in a WAN environment

Organizations that have multiple installations of GFI EventsManager located in remote geographical sites can consolidate all events into a single database. This facilitates reporting and monitoring procedures.

The consolidation of data consists of two steps:

1. Export events from each remote site.

2. Import the exported events to a central instance of GFI EventsManager.



Screenshot 239: Export data from remote sites to the main instance of GFI EventsManager

Step 1: Export events from each remote location

Use the **Export to file** feature to export events from the local database. GFI EventsManager compresses and encrypts the data to a file and exports the file to be processed to a central location. For more information, refer to Export to file (page 238).

> **NOTE**
> The **Import to File** and **Export to File** feature can be time and resources consuming. It is advisable to create multiple files with a smaller amount of data, rather and a single and large file.

Step 2: Import events in a central location

The **Import to file** is executed at the central location, importing the events file exported in Step 1 above, into the central database. For more information, refer to Import from file (page 234).

When the import is complete, events for the remote site can then be viewed through the Events Browser. Reports with information relevant to the remote site can also be generated using data from the central database.

18 How to use command line tools

GFI EventsManager provides you with command line tools through which you can perform various functions without accessing the Management Console. The available CMD tools are located in the GFI EventsManager install folder.

Topics in this section:

18.1 Using ESMCmdConfig.exe

ESMCmdConfig.exe enables you to configure general settings for GFI EventsManager; such as:

- GFI EventsManager logon credentials
- License key
- Mail server settings
- Administrator account
- Create/Remove Group shortcuts
- Get computer names.

To use ESMCmdConfig.exe:

1. Click **Start > Run** and key in **CMD**.

2. Click **Ctrl + Shift + Enter** to run CMD with elevated privileges.

3. Change the directory to the GFI EventsManager install directory. Example:

```
CD C:\Program Files\GFI\EventsManager
```

4. Key in **ESMCmdConfig.exe** followed by the functions described below:

- /op:registerService
- /op:enable
- /op:disable
- /op:SetLicense
- /op:configureAlerting
- /op:setAdminEmail
- /op:createProgramGroupShortcuts

- /op:removeProgramGroupShortcuts
- /op:getComputers

18.1.1 /op:registerService

This function enables you to register GFI EventsManager services, using an administrator account. The following parameters are supported:

Parameter	Description
/username:<*username*>	Specify the username of an administrator account. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/pass:<*password*>	Specify the password for the account specified in the **/username** parameter.

Example

```
ESMCmdConfig.exe /op:registerService /username:Domain\Administrator /pass:p@ss
```

18.1.2 /op:enable

This function enables you to turn on events management features and does not support additional parameters.

Example

```
ESMCmdConfig.exe /op:enable
```

18.1.3 /op:disable

This function enables you to turn off events management features and prompts the user with a custom message. The following parameter is supported:

Parameter	Description
/message:<*message*>	Specify a custom message that is shown to the user before events management features are disabled. **Note** Parameters that contain spaces must be enclosed in double quotes (“).

Example

```
ESMCmdConfig.exe /op:disable /message:"Events Management Disabled!"
```

18.1.4 /op:SetLicense

This function enables you to enter the product license key. The following parameter is supported:

Parameter	Description
/licenseKey:<*key*>	Specify the product license key.

Example

```
ESMCmdConfig.exe /op:SetLicense /licenseKey:*********
```

18.1.5 /op:configureAlerting

This function enables you to turn on and configure email alerting options. The following parameters are supported:

Parameter	Description
/Server:<*server*>	Specify the mail server IP address or fully qualified domain name (FQDN).
/SenderEmail:<*email*>	Specify the sender email address. Notifications appear to have been sent from the specified address.
/Port:<*port*>	Specify the TCP port used to send emails.
/RequiresAuthentication:<*true*|*false*>	Specify if the mail server requires authentication. Supported values are: » True » False.
/User:<*username*>	Specify the username of the email address specified in the **/SenderEmail** parameter. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/Pass:<*password*>	Specify the password for the username specified in the **/User** parameter.

Example

```
ESMCmdConfig.exe /op:configureAlerting /Server:192.168.11.11
/SenderEmail:jsmith@domain.com /Port:25 /RequiresAuthentication:True /User:jsmith
/Pass:p@ss
```

18.1.6 /op:setAdminEmail

This function enables you to configure the EventsManagerAdministrator email address. The following parameter is supported:

Parameter	Description
/email:<*email*>	Specify the EventsManagerAdministrator email address.

Example

```
ESMCmdConfig.exe /op:setAdminEmail /email:esmadmin@domain.com
```

18.1.7 /op:createProgramGroupShortcuts

This function enables you to create group shortcuts and has no additional parameters.

Example

```
ESMCmdConfig.exe /op:createProgramGroupShortcuts
```

18.1.8 /op:removeProgramGroupShortcuts

This function enables you to remove group shortcuts and has no additional parameters.

Example

```
ESMCmdConfig.exe /op:removeProgramGroupShortcuts
```

18.1.9 /op:getComputers

This function enables you to retrieve a text file containing the names of event sources managed by GFI EventsManager. The following parameter is supported:

Parameter	Description
/filename:<*fileName*>	Specify the full path where the text file is exported to including the name of the text file. **Note** Parameters that contain spaces must be enclosed in double quotes (**"**).

Example

```
ESMCmdConfig.exe /op:getComputers /filename:C:\ComputerNames.txt
```

18.2 Using EsmDlibM.exe

EsmDlibM.exe enables you to run operations against the file storage system where processed events are stored (database backend). Such operations include Importing or Exporting data.

To use EsmDlibM.exe:

1. Click **Start > Run** and key in **CMD**.

2. Click **Ctrl + Shift + Enter** to run CMD with elevated privileges.

3. Change the directory to the GFI EventsManager install directory. Example:

```
        CD C:\Program Files\GFI\EventsManager
```

4. Key in **EsmDlibM.exe** followed by the functions described below:

» /importFromSQL

» /importFromDlib

» /copyData

» /importFromLegacyFile

» /exportToFile

» /importFromFile

» /commitDeletedRecords

» /exportToSQL

18.2.1 /importFromSQL

This function enables you to import data from an SQL Server® database. The data must be exported from an older version of GFI EventsManager. The following parameters are supported:

Parameter	Description
/server:<*serverName*>	Specify the SQL Server® IP address or machine name.

Parameter	Description
/database:<*(maindb)|(backup-db)|databaseName*>	Specify the type and name of the source database to import data from . **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/dbauth:<*SQL|WIN*>	Specify the authentication mode configured in the source SQL Server®. Supported values include: » **SQL**: to use SQL Server® authentication » **WIN**: to use Windows® authentication.
/username:<*username*>	Specify a username that has access to the database from which you want to import data. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/password:<*password*>	Specify the password for the username specified in the **/username** parameter.
/anonpass1:<*password*>	(Optional) If the source database is anonymized, key in the primary anonymization password to decrypt import data.
/anonpass2:<*password*>	(Optional) If the source database is anonymized, using two anonymization keys, key in the secondary anonymization password to decrypt import data.

Example

```
EsmDlibM.exe /importFromSQL /server:192.168.11.11 /database:EventsDatabase
/dbauth:SQL /username:sa /password:p@ss /anonpass1:p@ss
```

18.2.2 /importFromDlib

This function enables you to import data that was exported from a database server (DLIB) of an older version of GFI EventsManager. The following parameters are supported:

Parameter	Description
/path:<*path*>	Specify the path to the DLib database server. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/name:<*name*>	Specify the name of the DLib database you want to import. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/anonpass1:<*password*>	(Optional) If the source database is anonymized, key in the primary anonymization password to decrypt import data.
/anonpass2:<*password*>	(Optional) If the source database is anonymized, using two anonymization keys, key in the secondary anonymization password to decrypt import data.

Example

```
EsmDlibM.exe /importFromDlib /path:C:\DLibServer /name:EventsData
/anonpass1:p@ss
```

18.2.3 /copyData

This function enables you to copy data from one DLib database server to another. The following parameters are supported:

Parameter	Description
/destinationPath:<*destinationPath*>	Specify the destination database server. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/destinationName:<*destinationName*>	Specify the destination database name. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/destinationEncPass:<*password*>	(Optional) Specify a password to encrypt data at the destination.
/sourcePath:<*sourcePath*>	Specify the path to the source database server. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/sourceName:<*sourceName*>	Specify the name of the source database. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/sourceEncPass:<*password*>	(Optional) Specify an encryption key to encrypt source data.
/anonpass1:<*password*>	(Optional) Specify the primary anonymization password to anonymize source data.
/anonpass2:<*password*>	(Optional) Specify a secondary anonymization password to anonymize source data using two keys.
/period:<***type***><***number***><***unit***>	Enables you to filter by event date to get events from the last days/weeks/months or older than days/weeks/months. For instance, to filter events that happened in the Last 24 Days, the parameter value is: **l24d**. And to filter events Older than 3 Weeks, the parameter value is **O3W**. Supported values include: » <type>: - **o** - older than - **l** - last » <number> - specify the number of days/weeks/months » <unit>: - **d** - days - **w** - weeks - **m** - months.
/markEventsAsDeleted	(Optional) Mark copied events as deleted from the source database. These events will no longer be visible in the management console but will still remain in the database. To completely remove them from the database, run **Commit Deletions** job.

Parameter	Description
/log_format:<***value***> /machine:<***value***> /importance:<value> /occured:<***value***>	These parameters provide the user a convenient way to filter events by the corresponding columns. Any of these filters are optional. When used together, they are linked in an AND condition on the source data. Except for machine, where the user may enter the targeted machine name as displayed in events browser, the other parameters have predefined values with obvious meaning, that are listed below. Supported values are: » log_format: ● "windows ● sql audit ● oracle audit ● text logs ● syslog messages ● snmp traps ● monitoring » importance ● Unclassified ● Low ● Medium ● High ● Critical ● Noise » occurred ● Today ● Yesterday ● Last 7 days ● Last 30 days ● This month ● Last month.

Example

```
EsmDlibM.exe /copyData /destinationPath:Z:\DestServ /destinationName:DestData
/sourcePath:C:\SourServ /sourceName:SourData /sourceEncPass:p@ss
/markEventsAsDeleted
```

18.2.4 /importFromLegacyFile

This function enables you to import data that was exported to files from an older version of GFI EventsManager. The following parameters are supported:

Parameter	Description
/path:<*path*>	Specify the path to the import file. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/logTypes:<*application, custom, directory, security, dns, filereplication, syslog, system, snmp, oracle, sql, text*>	(Optional) Specify the log types you want to import. Exclude parameter to import all log types.
/password:<*password*>	(Optional) Specify a password to decrypt import data.
/anonpass1:<*password*>	(Optional) Specify the primary anonymization password to anonymize import data.
/anonpass2:<*password*>	(Optional) Specify a secondary anonymization password to anonymize import data using two keys.

Example

```
EsmDlibM.exe /importFromLegacyFile /path:C:\ImportData\Configuration.cfg
/password:p@ss /anonpass1:p@ss
```

18.2.5 /exportToFile

This function enables you to export data from a DLib database server to another one as part of the data centralization process. You can also use this function to backup your data for safekeeping. The following parameters are supported:

Parameter	Description
/path:<*path*>	Specify the folder path where data is exported to. **Note** Parameters that contain spaces must be enclosed in double quotes (**"**).
/sourceEncPass:<*password*>	(Optional) Specify a password to encrypt source data.
/destinationEncPass:<*password*>	(Optional) Specify a password to encrypt destination data.
/anonpass1:<*password*>	(Optional) If the source database is anonymized, key in the primary anonymization password to decrypt exported data.
/anonpass2:<*password*>	(Optional) If the source database is anonymized using two anonymization keys, key in the secondary anonymization password to decrypt export data.
/period:<***type***><***number***><***unit***>	Enables you to filter by event date to get events from the last days/weeks/months or older than days/weeks/months. For instance, to filter events that happened in the Last 24 Days, the parameter value is: **l24d**. And to filter events Older than 3 Weeks, the parameter value is **O3W**. Supported values include: » <type>: - **o** - older than - **l** - last » <number> - specify the number of days/weeks/months » <unit>: - **d** - days - **w** - weeks - **m** - months.
/markEventsAsDeleted	(Optional) Mark copied events as deleted from the source database. These events will no longer be visible in the management console but will still remain in the database. To completely remove them from the database, run **Commit Deletions** job.

Parameter	Description
/log_format:<***value***> /machine:<***value***> /importance:<value> /occured:<***value***>	These parameters provide the user a convenient way to filter events by the corresponding columns. Any of these filters are optional. When used together, they are linked in an AND condition on the source data. Except for machine, where the user may enter the targeted machine name as displayed in events browser, the other parameters have predefined values with obvious meaning, that are listed below. Supported values are: » log_format: • "windows • sql audit • oracle audit • text logs • syslog messages • snmp traps • monitoring » importance • Unclassified • Low • Medium • High • Critical • Noise » occurred • Today • Yesterday • Last 7 days • Last 30 days • This month • Last month.

Example

```
EsmDlibM.exe /exportToFile /path:C:\ExportedDataFolder /sourceEncPass:p@ss
/markEventsAsDeleted /importance:High
```

18.2.6 /importFromFile

This function enables you to import data from a file as part of the data centralization process. The import file must be created from an **Export to File** job. The following parameters are supported:

Parameter	Description
/path:<*path*>	Specify the path to where the import file is saved. **Note** Parameters that contain spaces must be enclosed in double quotes (**"**).
/password:<*password*>	(Optional) If the import file is password protected, key in the password.

Parameter	Description
/log_format:**<*value*>** /machine:**<*value*>** /importance: <value> /occured:**<*value*>**	These parameters provide the user a convenient way to filter events by the corresponding columns. Any of these filters are optional. When used together, they are linked in an AND condition on the source data. Except for machine, where the user may enter the targeted machine name as displayed in events browser, the other parameters have predefined values with obvious meaning, that are listed below. Supported values are: » log_format: • "windows • sql audit • oracle audit • text logs • syslog messages • snmp traps • monitoring » importance • Unclassified • Low • Medium • High • Critical • Noise » occurred • Today • Yesterday • Last 7 days • Last 30 days • This month • Last month.

Example

```
EsmDlibM.exe /importFromFile /path:C:\ImportFolder\Import.cfg /password:p@ss
/machine:MS11.domain.com /occured:true
```

18.2.7 /commitDeletedRecords

This function enables you to delete events that are marked as deleted from the database. The following parameters are supported:

Parameter	Description
/dbPath:<*dbPath*>	Specify the path to the database server which contains events marked as deleted. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/password:<*password*>	(Optional) If the database is password protected, key in the password.
/anonpass1:<*password*>	(Optional) If the database is anonymized, key in the password to remove anonymization.
/anonpass2:<*password*>	(Optional) If the database is anonymized using two anonymization keys, key in the secondary key.

Example

```
EsmDlibM.exe /commitDeletedRecords /dbpath:C:\DatabaseServerFolder /password:p@ss
/anonpass1:pa$$
```

18.2.8 /exportToSQL

This function enables you to export specified event to SQL Server®. The following parameters are supported:

Parameter	Description
/server:<*server-Name*>	Specify the IP address or computer name running SQL Server®. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/database:<*maindb|backupdb*>	Specify the name of the destination database. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/dbauth:<*SQL|WIN*>	Specify the authentication mode configured in the source SQL Server®. Supported values include: » **SQL**: to use SQL Server® authentication » **WIN**: to use Windows® authentication.
/username:<*user-name*	Specify a username that has access to the database from which you want to import data. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/password:<*pass-word*>	Specify the password for the username specified in the **/username** parameter.
/table:<*table*>	Specify the name of the destination table. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/period:<*type*><*number*><*unit*>	Enables you to filter by event date to get events from the last days/weeks/months or older than days/weeks/months. For instance, to filter events that happened in the Last 24 Days, the parameter value is: **l24d**. And to filter events Older than 3 Weeks, the parameter value is **O3W**. Supported values include: » <type>: • **o** - older than • **l** - last » <number> - specify the number of days/weeks/months » <unit>: • **d** - days • **w** - weeks • **m** - months.
/sourceEncPass:<*password*>	(Optional) If the source data is encrypted, key in the password to decrypt exported data.
/anonpass1:<*pass-word*	(Optional) If the source database is anonymized, key in the primary anonymization password to decrypt exported data.
/anonpass2:<*pass-word*>	(Optional) If the source database is anonymized using two anonymization keys, key in the secondary anonymization password to decrypt export data.

Example

```
EsmDlibM.exe /exportToSQL /server:192.168.11.11 /database:EventsDatabase
/dbauth:SQL /username:sa /password:p@ss /table:EventsTable /anonpass1:pa$$
```

18.3 Using DLibAdm.exe

DLibAdm.exe is used to run administrative operations on DLib Database Servers installed on the network.

To use DLibAdm.exe:

1. Click **Start > Run** and key in **CMD**.

2. Click **Ctrl + Shift + Enter** to run **CMD** as an administrator.

3. Change the active directory to the install folder of DLib Database Server. Key in (example):

```
    CD C:\Program Files\GFI\Database Server 2.1
```

Press **Enter**.

4. Key in **DLibAdm.exe** followed by the functions described below:

- /decryptDatabase
- /encryptDatabase
- /displayAllDLib
- /copyMoveDLib

18.3.1 /decryptDatabase

This function enables you to decrypt an encrypted DLib database. The following parameters are supported:

Parameter	Description
/dbPath:<*path*>	Specify the path to the database you want to decrypt. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/dbName:<*name*>	Specify the name of the database you want to decrypt. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/password:<*password*>	Specify the password used to decrypt the database.

Example

```
DLibAdm.exe /decryptDatabase /dbPath:"C:\Program Files\GFI\Database Server 2.1"
/dbName:EventsDatabase /password:p@ss
```

18.3.2 /encryptDatabase

This function enables you to encrypt a specified database. The following parameters are supported:

Parameter	Description
/dbPath:<*path*>	Specify the path to the database you want to encrypt. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/dbName:<*name*>	Specify the name of the database you want to encrypt. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/password:<*password*>	Specify the password used to encrypt the database.

Example

```
DLibAdm.exe /encryptDatabase /dbPath:"C:\Program Files\GFI\Database Server 2.1"
/dbName:EventsDatabase /password:p@ss
```

18.3.3 /displayAllDLib

This function enables you to list all the valid DLib Database Servers running in a specified folder. The following parameter is supported:

Parameter	Description
/path:<*path*>	Specify the folder path where you want to scan for valid DLib Database Servers. **Note** Parameters that contain spaces must be enclosed in double quotes (").

Example

```
DLibAdm.exe /displayAllDLib /path:"C:\Program Files\GFI\Database Server 2.1"
```

18.3.4 /copyMoveDLib

This function enables you to copy or move a DLib database to a specified location. The following parameters are supported:

Parameter	Description
/sourcePath:<*sourcePath*>	Specify the path to the source database (database you want to move or copy). **Note** Parameters that contain spaces must be enclosed in double quotes (").
/destinationPath:<*destinationPath*>	Specify the path to the destination folder. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/copyMove:<c|*m*>	Specify the action to perform on the database. Supported values: » c (for copying). » m (for moving).

Parameter	Description
/dbName:<*dbName*>	Specify the name of the database you want to copy or move. **Note** Parameters that contain spaces must be enclosed in double quotes (“).

Exmaple

```
DLibAdm.exe /copyMoveDLib /sourcePath:"C:\Program Files\GFI\Database Server 2.1"
/destinationPath:C:\EventsDatabases /copyMove:m /dbName:EventsDatabase
```

18.4 Using EsmReport.exe

EsmReport.exe enables you to generate in-product reports such as configuration and job activity reports.

To use EsmReport.exe:

1. Click **Start > Run** and key in **CMD**.

2. Click **Ctrl + Shift + Enter** to run CMD with elevated privileges.

3. Change the directory to the GFI EventsManager install directory. Example:

```
CD C:\Program Files\GFI\EventsManager
```

4. Key in **EsmReport.exe** followed by any of the following functions:

- Generate Configuration reports
- Generate Status reports
- Generate Events reports

18.4.1 Generate Configuration reports

This function enables you to generate Configuration reports about a single or group of event sources. The following parameters are supported:

Parameter	Description
/type:<*configuration|status|events*>	Specify the type of report you want to generate. Supported values are: » configuration » status » events. Key in **/type:configuration** to generate a configuration report.
/target:<*path*>	Specify the folder path where the generated report is saved. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/format:<*html|csv*>	Specify the format of the report. Supported values are: » html » csv.

Parameter	Description
/source:<*name*>	Specify the event source name. Use this parameter to generate a configuration report about a single event source. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/group:<*name*>	Specify the event source group name. Use this parameter to generate a configuration report about a group of event sources. **Note** Parameters that contain spaces must be enclosed in double quotes (“).

Example

```
EsmReport.exe /type:configuration /target:C:\ReportsFolder /format:html
/group:"Domain Controllers"
```

18.4.2 Generate Status reports

This function enables you to generate GFI EventsManager Status reports. The following parameters are supported:

Parameter	Description
/type:<*configuration|status|events*>	Specify the type of report you want to generate. Supported values are: » configuration » status » events. Key in **/type:status** to generate a status report.
/subtype:<*messages|stats*>	Specify the type of status report you want to generate. Supported values are: » **messages** - when messages is specified, the following parameters can be used: ● **/period:<*current|date*>** - key in **current** to generate a report containing messages generated on the same day. Else key in a date to generate a status report containing messages generated on the specified date. » **stats** - when stats is specified as a subtype, the following parameters can be used: ● **/format:<*html|csv*>** - specify the format of the report. Supported values are **HTML** and **CSV** ● **/period:<*"all time"|date*>** - specify the timeframe that the report is based on. Supported values include **"all time"** or else a specific date ● **/options:<*"error messages"|"only with issues"*>** - specify the type of stats to generate. Supported values are **"error messages"** and **"only with issues"** ● **/target:<*path*>** - specify the folder path where the report is saved. **Note** Parameters that contain spaces must be enclosed in double quotes (“).

Messages example

```
EsmReport.exe /type:status /subtype:messages /period:"current date"
```

Stats example

```
EsmReport.exe /type:status /subtype:stats /format:html /period:20130111
/options:"error messages" /target:C:\StatsReports
```

18.4.3 Generate Events reports

This function enables you to generate Events reports. The following parameters are supported:

Parameter	Description
/type:<*configuration|status|events*>	Specify the type of report you want to generate. Supported values are: - configuration - status - events. Key in **/type:events** to generate an events report.
/repname:<*fullReportName*>	Specify a name for the generated report. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/repid:<*reportID*>	Specify a unique ID for the generated report. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/target<*path*>	Specify the folder path where the report is saved. **Note** Parameters that contain spaces must be enclosed in double quotes (").
/format:<*html|csv*>	Specify the format of the report. Supported values are: - html - csv.
/datefrom:<*startDate*>	Specify the start date of the timeframe to report on.
/dateto:<*endDate*>	Specify the end date of the timeframe to report on.
/scheduled	Specify this parameter to generate the report based on schedule settings configured in the Management Console.

Example

```
EsmReport.exe /type:events /repname:"New Events Report" /repid:11
/target:C:\ReportsFolder /format:html /datefrom:20121201 /dateto:20130111
```

18.4.4 Using ImportSettings.exe

Importsettings.exe enables you to import configuration from a data folder or from a configuration file that was exported from another instance of GFI EventsManager. Use this tool to backup configuration settings of the Management Console.

To use ImportSettings.exe:

1. Click **Start > Run** and key in **CMD**.

2. Click **Ctrl + Shift + Enter** to run CMD with elevated privileges.

3. Change the directory to the GFI EventsManager install directory. Example:

```
CD C:\Program Files\GFI\EventsManager
```

4. Key in **ImportSettings.exe** followed by the parameters described below:

Parameter	Description
/operation:<*operation*>	Specify the operation to perform. Supported values are: » importFile » importFolder.
/destination: <*folder*>	Specify the destination folder where configuration is imported. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/sourceFile:<*filename*>	Specify the file name that contains exported configurations. Use this parameter to define the file name when running an **importFile** operation. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/sourceFolder: <*foldername*>	Specify the folder name that contains exported configurations. Use this parameter to define the folder name when running an **importFolder** operation. **Note** Parameters that contain spaces must be enclosed in double quotes (“).
/id:<*EsmInstanceID*>	This parameter can only be used when you want to change the instance ID of GFI EventsManager. If no value is specified, the same ID is preserved. If you do not use this parameter, **/operation**, **/destination**, **/sourceFile** or **/sourceFolder** parameters are mandatory.

Example

```
ImportSettings.exe /operation:importFile /destination:C:\NewDestination
/sourceFile:C:\ExportedSettings
```

OR

```
ImportSettings.exe /id:newInstanceID
```

18.4.5 Using ExportSettings.exe

ExportSettings.exe enables you to export configuration settings from GFI EventsManager to a configuration file.

To use ExportSettings.exe:

1. Click **Start > Run** and key in **CMD**.

2. Click **Ctrl + Shift + Enter** to run CMD with elevated privileges.

3. Change the directory to the GFI EventsManager install directory. Example:

```
        CD C:\Program Files\GFI\EventsManager
```

4. Key in **ExportSettings.exe** followed by the parameters described below:

Parameter	Description
/destination: <*fileName*>	Specify a valid folder path including file name where settings are exported to. Unless specified, **.esmbkp** is appended as an extension to the file name. **Note** Parameters that contain spaces must be enclosed in double quotes (“).

Parameter	Description
/folder: *<folder>*	This parameter is used to instruct the tool to export settings from another location than the default Data folder. Specify the folder path containing GFI EventsManager data settings to be exported. **Note** Parameters that contain spaces must be enclosed in double quotes (").

Example

```
ExportSettings.exe /destination:C:\NewDestination
```

18.5 Using ESMConvertHTML2PDf.exe

ESMConvertHTML2PDf.exe is a tool that ships with GFI EventsManager that enables you to export GFI EventsManager HTML reports to Portable Document Format (PDF).

To use ESMConvertHTML2PDf.exe:

1. Click **Start > Run** and key in **CMD**.

2. Click **Ctrl + Shift + Enter** to run CMD with elevated privileges.

3. Change the directory to the GFI EventsManager install directory. Example:

```
        CD C:\Program Files\GFI\EventsManager
```

4. Key in **ESMConvertHTML2PDf.exe** followed by the following parameters:

Parameter	Description
`/source:<path to HTML files>`	Set the source path which contains the HTML reports to convert.
`/target:<path to PDF file>`	Specify the destination folder where to store the converted PDFs.

Example:

```
ESMConvertHTML2PDf.exe /source:C:\Program Files\EventsManager 13
/target:C:\PDFReports\EventsManager
```

5. Press **Enter** to run the command.

19 Configuring Third-Party components

This section provides you with information related to configuring Third-Party components required for GFI EventsManager auditing operations. Learn how to configure UAC, audit and firewall settings to allow a seamless communication between GFI EventsManager and the clients machines.

Topics in this section:

19.1 Enabling event source permissions and audit policy manually

This section describes how to configure permissions required by GFI EventsManager to audit systems and process the necessary events. This process has to be done on each machine to scan.

This section contains information about:

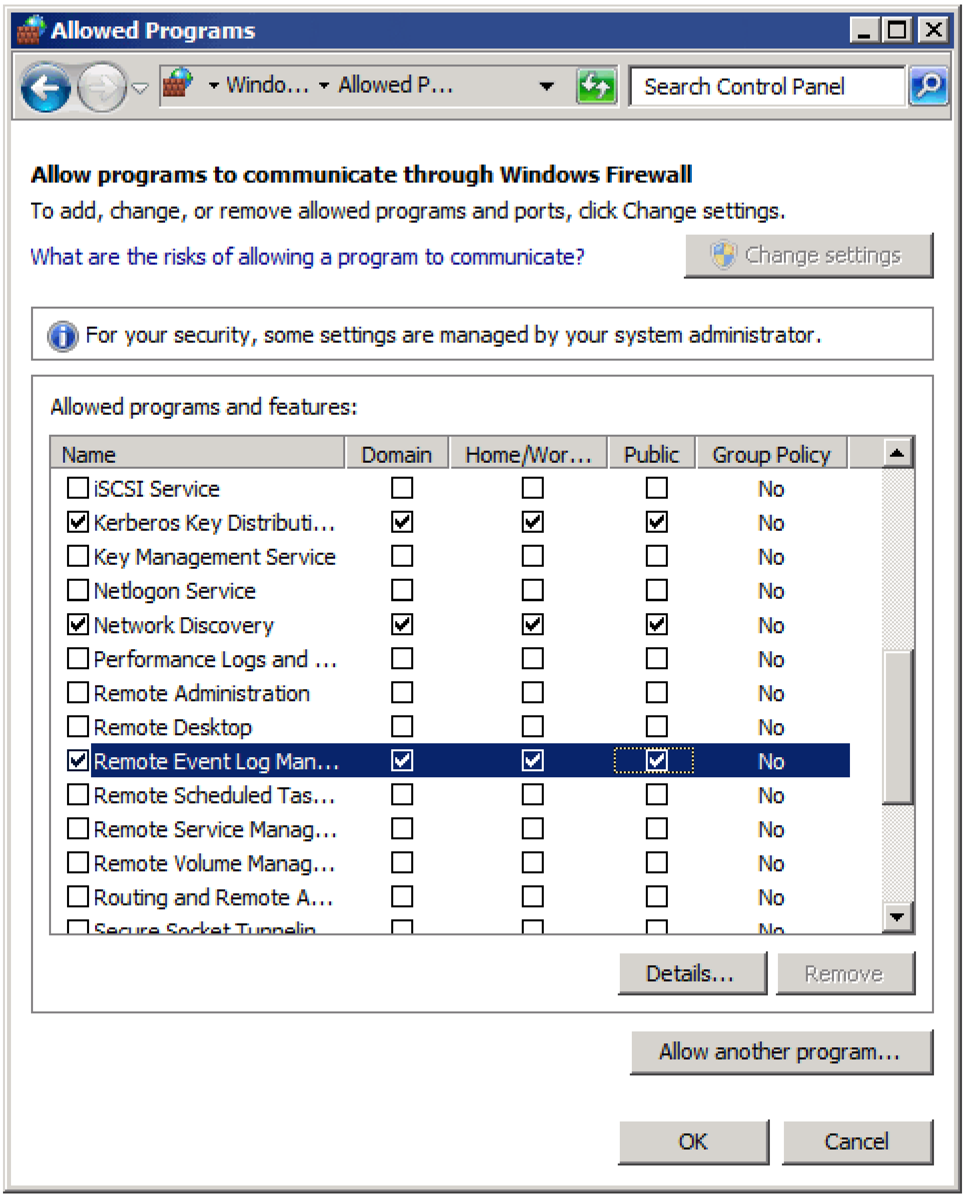
- Enabling permissions on Windows® clients
- Enabling permissions on Windows® servers
- Enabling audit on Windows® clients

> **NOTE**
>
> In an active directory environment, permissions can be set automatically via Group Policy Object (GPO). For more information, refer to Enabling event source permissions automatically (page 288).

19.1.1 Enabling firewall permissions manually on Windows® clients

To manually enable firewall rules on Microsoft® Windows® clients:

1. Click **Start > Control Panel > System and Security** and click **Allow a program through Windows Firewall**, under Windows Firewall category.



Allow programs to communicate through Windows Firewall

To add, change, or remove allowed programs and ports, click Change settings.

What are the risks of allowing a program to communicate?

For your security, some settings are managed by your system administrator.

Allowed programs and features:

Name	Domain	Home/Wor...	Public	Group Policy
☐ iSCSI Service	☐	☐	☐	No
☑ Kerberos Key Distributi...	☑	☑	☑	No
☐ Key Management Service	☐	☐	☐	No
☐ Netlogon Service	☐	☐	☐	No
☑ Network Discovery	☑	☑	☑	No
☐ Performance Logs and ...	☐	☐	☐	No
☐ Remote Administration	☐	☐	☐	No
☐ Remote Desktop	☐	☐	☐	No
☑ Remote Event Log Man...	☑	☑	☑	No
☐ Remote Scheduled Tas...	☐	☐	☐	No
☐ Remote Service Manag...	☐	☐	☐	No
☐ Remote Volume Manag...	☐	☐	☐	No
☐ Routing and Remote A...	☐	☐	☐	No
☐ Secure Socket Tunnelin	☐	☐	☐	No

Screenshot 240: Allowed programs in Microsoft® Windows® Vista or later

2. From **Allowed programs and features** list, enable the following rules:

- Remote Event Log Management
- File and Printer Sharing
- Network Discovery.

3. Select **Domain**, **Private** and **Public** for each rule mentioned above.

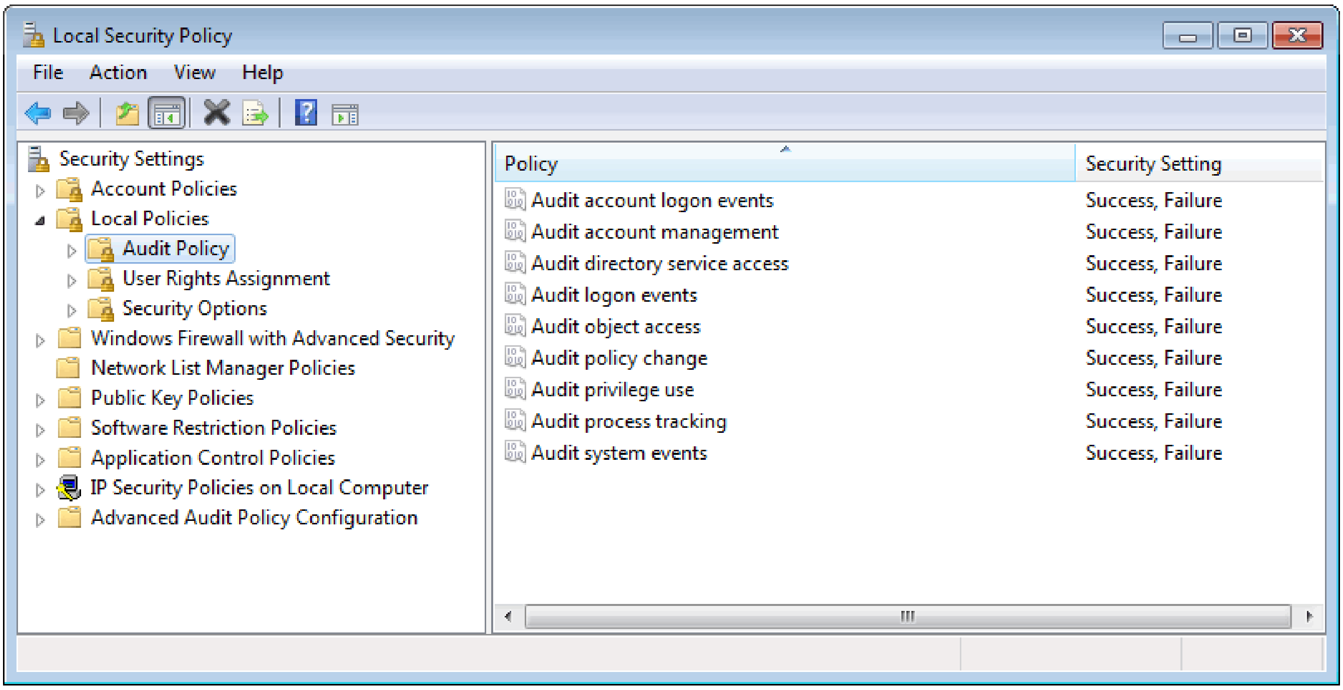
4. Click **OK**

19.1.2 Enable Audit Policy manually on clients

To configure audit settings on machines running Microsoft® Windows® Vista or later:

1. Click **Start > Run** and key in **secpol.msc**. Press **Enter**.

2. From the **Security Settings** node, expand **Local Policies > Audit Policy**.

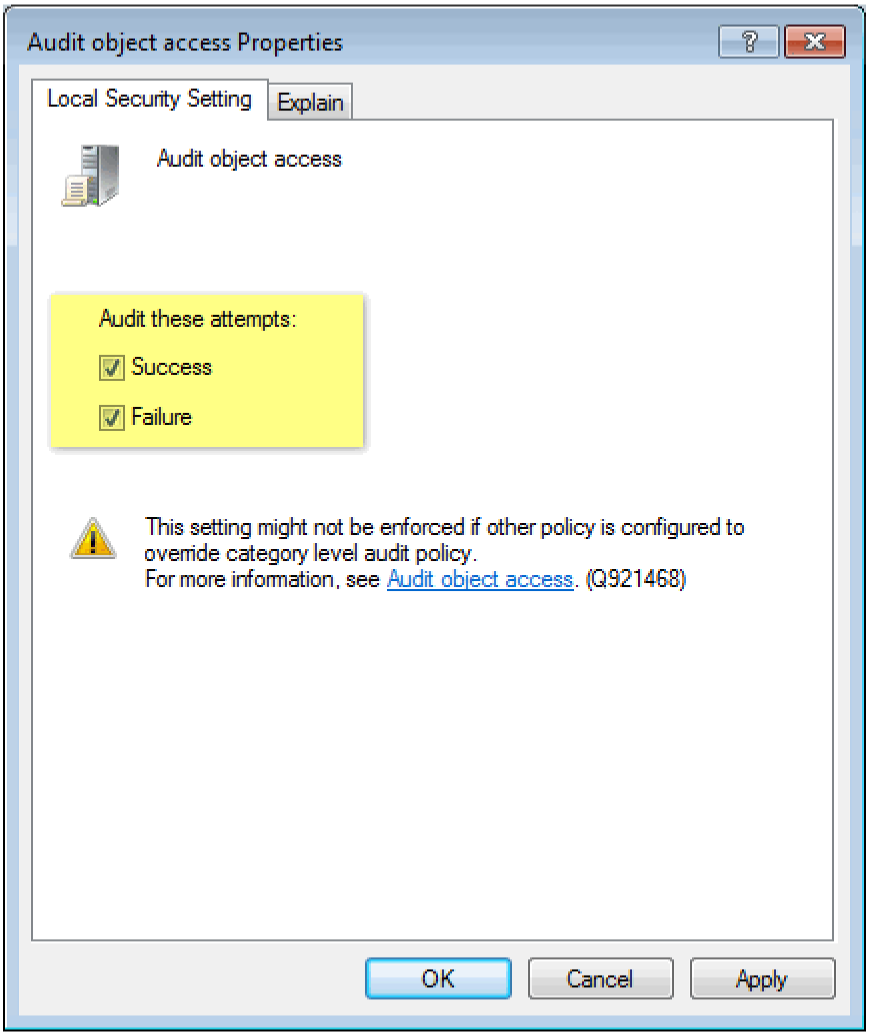

Local Security Policy
File Action View Help
Security Settings
Account Policies
Local Policies
Audit Policy
User Rights Assignment
Security Options
Windows Firewall with Advanced Security
Network List Manager Policies
Public Key Policies
Software Restriction Policies
Application Control Policies
IP Security Policies on Local Computer
Advanced Audit Policy Configuration

Policy	Security Setting
Audit account logon events	Success, Failure
Audit account management	Success, Failure
Audit directory service access	Success, Failure
Audit logon events	Success, Failure
Audit object access	Success, Failure
Audit policy change	Success, Failure
Audit privilege use	Success, Failure
Audit process tracking	Success, Failure
Audit system events	Success, Failure

Screenshot 241: Local security policy window

3. From the right panel, double-click **Audit object access**.

4. From **Audit object access Properties**, select **Success** and **Failure**. Click **OK**



Audit object access

Audit these attempts:

☑ Success

☑ Failure

This setting might not be enforced if other policy is configured to override category level audit policy.
For more information, see Audit object access. (Q921468)

Screenshot 242: Audit object access Properties

5. From the right pane, double-click **Audit Process tracking**.

6. From **Audit process tracking Properties**, select **Success** and **Failure**. Click **OK**

7. From the right panel, double-click **Audit account management**.

8. From **Audit account management Properties**, select **Success** and **Failure**. Click **OK**

9. From the right panel, double-click **Audit system events**.

10. From **Audit system events Properties**, select **Success** and **Failure**. Click **OK**

11. Close the local Security Policy window.

19.1.3 Enabling permissions manually on Microsoft® Windows® servers

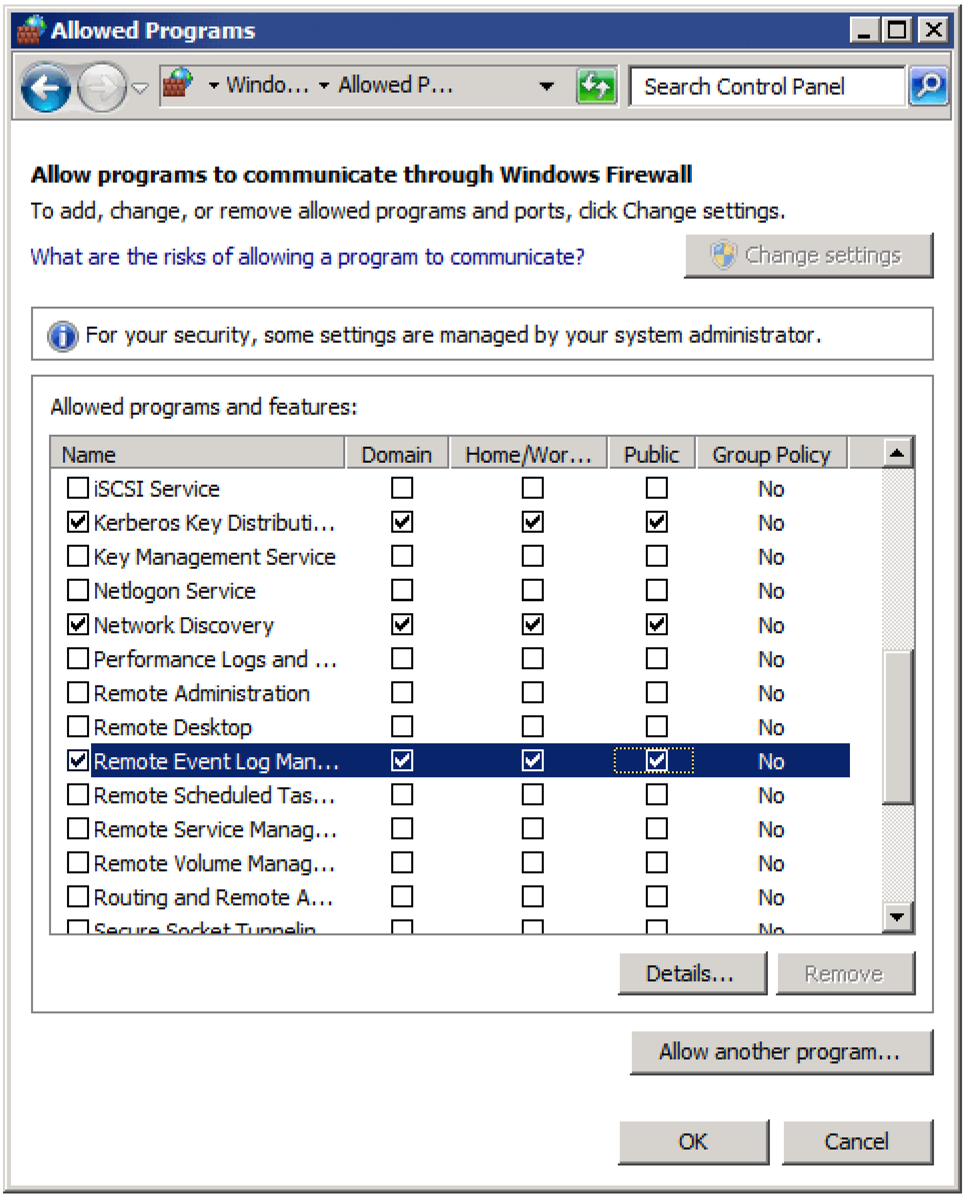
To manually enable firewall rules on Microsoft® Windows® servers:

1. Click **Start > Control Panel > Security** and click **Allow a program through Windows Firewall** under **Windows Firewall** category.

2. In the list of programs, enable the following:

- File and Printer Sharing
- Network Discovery

- Remote Event Log Management.



Allow programs to communicate through Windows Firewall

To add, change, or remove allowed programs and ports, click Change settings.

What are the risks of allowing a program to communicate?

For your security, some settings are managed by your system administrator.

Allowed programs and features:

Name	Domain	Home/Wor…	Public	Group Policy
□ iSCSI Service	□	□	□	No
☑ Kerberos Key Distributi…	☑	☑	☑	No
□ Key Management Service	□	□	□	No
□ Netlogon Service	□	□	□	No
☑ Network Discovery	☑	☑	☑	No
□ Performance Logs and …	□	□	□	No
□ Remote Administration	□	□	□	No
□ Remote Desktop	□	□	□	No
☑ Remote Event Log Man…	☑	☑	☑	No
□ Remote Scheduled Tas…	□	□	□	No
□ Remote Service Manag…	□	□	□	No
□ Remote Volume Manag…	□	□	□	No
□ Routing and Remote A…	□	□	□	No
□ Secure Socket Tunnelin	□	□	□	No

Screenshot 243: Firewall rules on Microsoft® Windows® Server

3. Click **OK**

> **NOTE**
>
> In Windows® Server 2008 R2 or later, ensure to select **Domain**, **Private** and **Public** for each rule mentioned above.

19.2 Enabling event source permissions automatically

This section contains information about:

» Enabling permissions via GPO

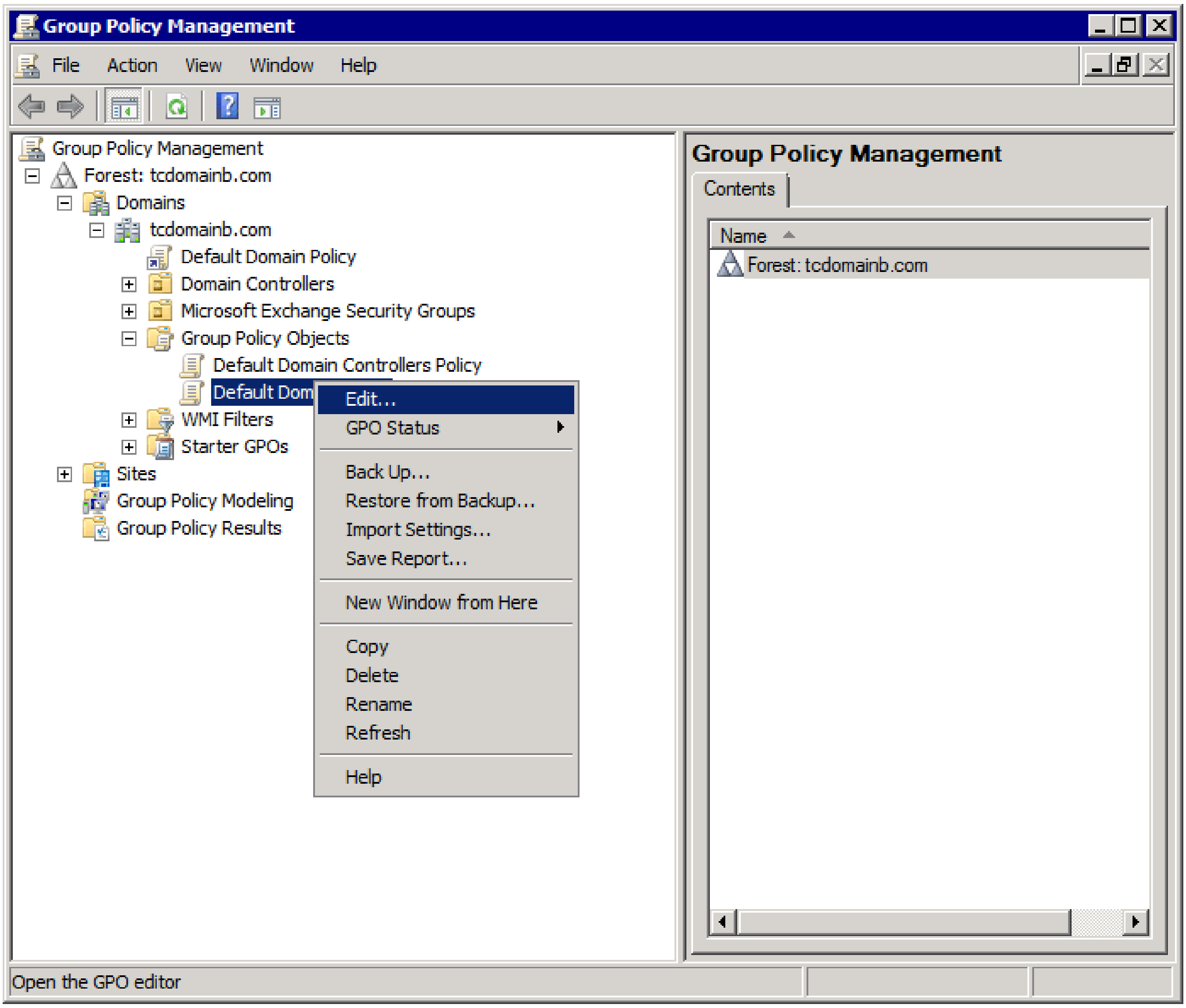
» Enabling audit via GPO

19.2.1 Enabling permissions via GPO

To enable permissions on all domain clients:

1. Click **Start** > **Administrative Tools** > **Group Policy Management**.

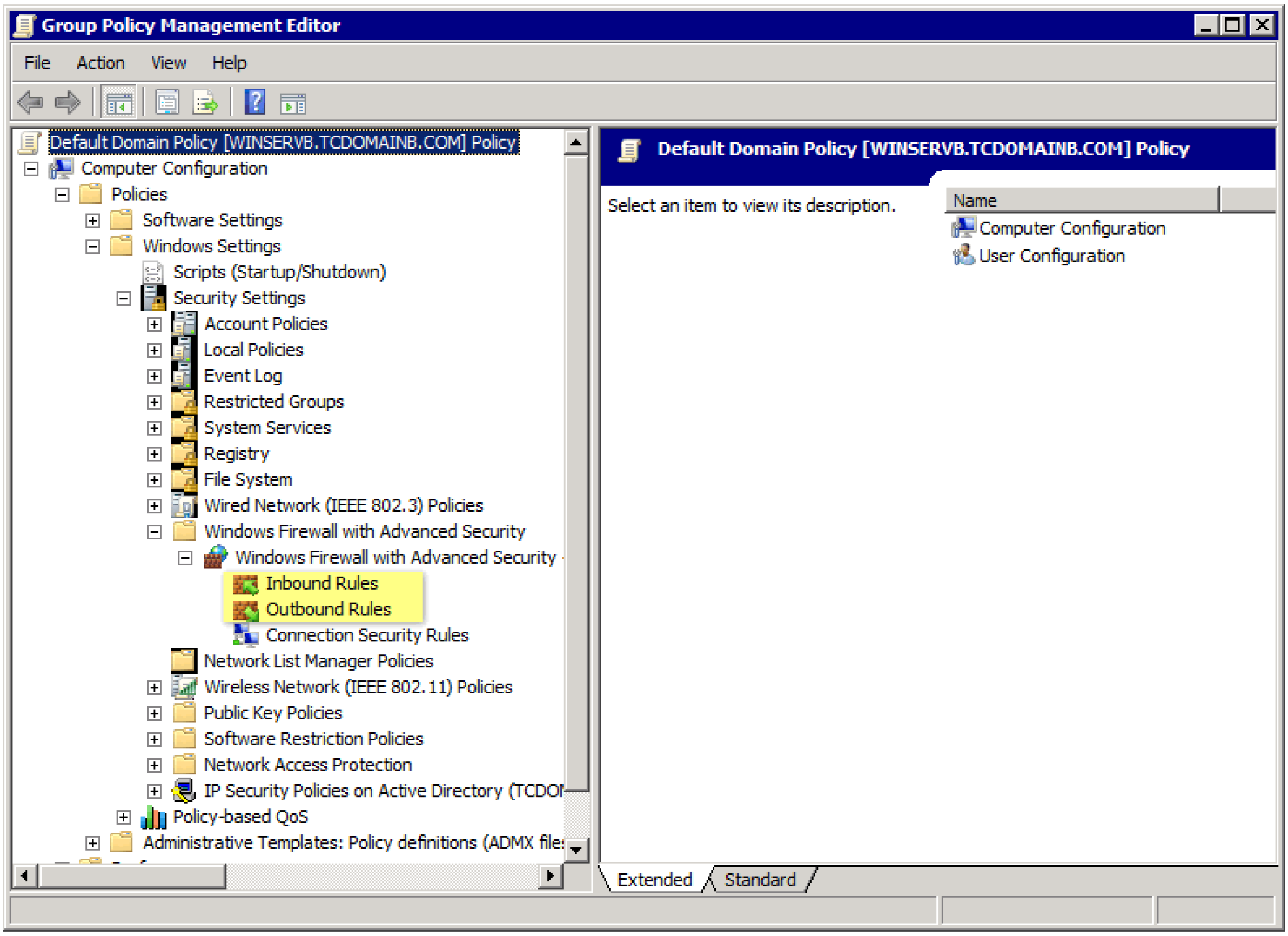
2. Expand **Group Policy Management** > **Forest** > **Domains** > <***Domain name***> > **Group Policy Objects.**



Screenshot 244: Group Policy Management in Microsoft® Windows® Server 2008 R2

3. Right-click **Default Domain Policy** and select **Edit**.

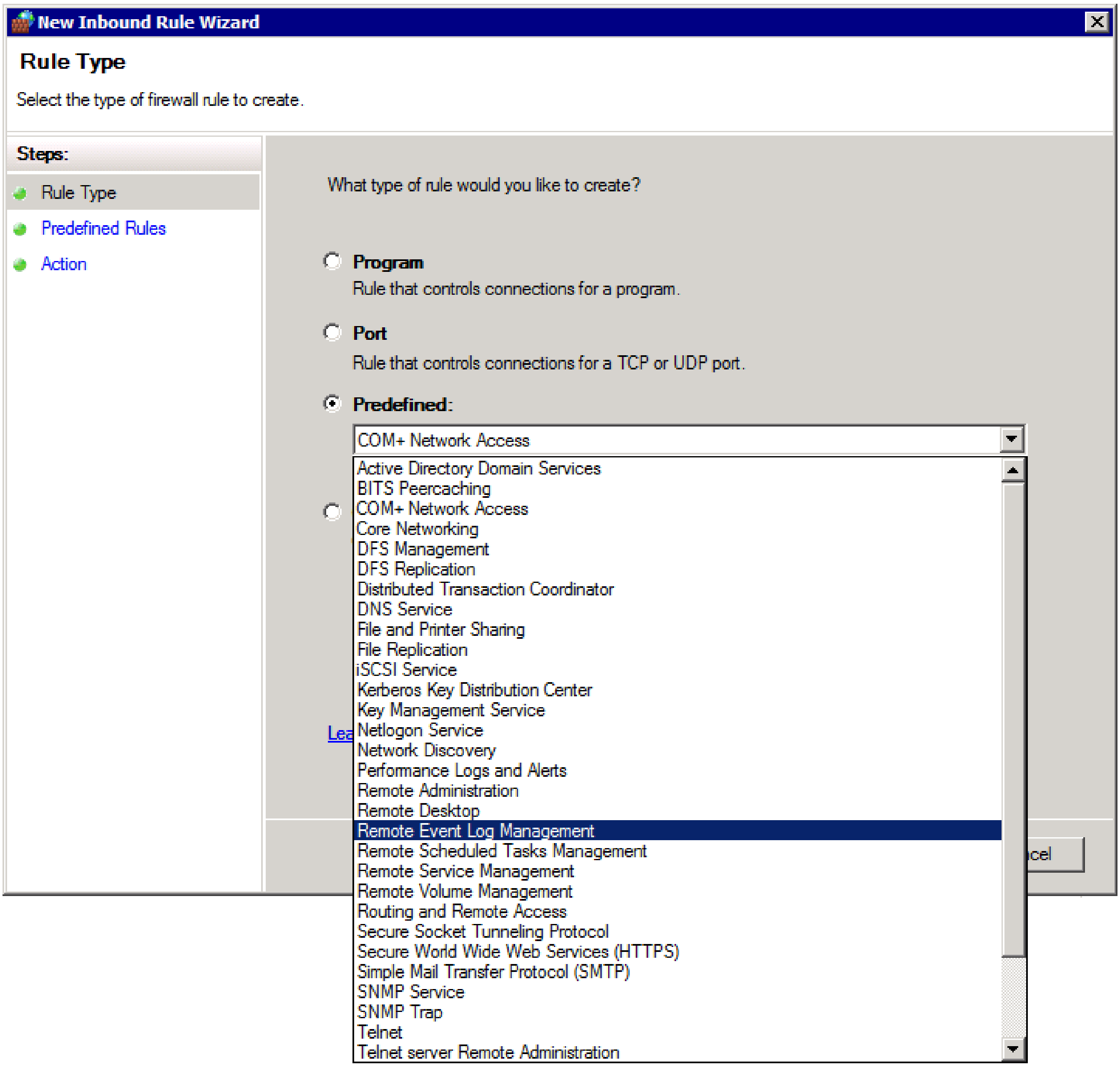
4. Expand **Computer Configuration** > **Policies** > **Windows Settings** > **Security Settings** > **Windows Firewall with Advanced Security**, right-click **Inbound Rules** and select **New Rule…**



Group Policy Management Editor
File
Action
View
Help
Default Domain Policy [WINSERVB.TCDOMAINB.COM] Policy
Computer Configuration
Policies
Software Settings
Windows Settings
Scripts (Startup/Shutdown)
Security Settings
Account Policies
Local Policies
Event Log
Restricted Groups
System Services
Registry
File System
Wired Network (IEEE 802.3) Policies
Windows Firewall with Advanced Security
Windows Firewall with Advanced Security
Inbound Rules
Outbound Rules
Connection Security Rules
Network List Manager Policies
Wireless Network (IEEE 802.11) Policies
Public Key Policies
Software Restriction Policies
Network Access Protection
IP Security Policies on Active Directory (TCDOI
Policy-based QoS
Administrative Templates: Policy definitions (ADMX file
Default Domain Policy [WINSERVB.TCDOMAINB.COM] Policy
Select an item to view its description.
Name
Computer Configuration
User Configuration
Extended
Standard

Screenshot 245: Group Policy Management Editor

5. In the **New Inbound Rule** Wizard, select **Predefined** and select **File and Printer Sharing**.



New Inbound Rule Wizard

Rule Type

Select the type of firewall rule to create.

Steps:

- Rule Type
- Predefined Rules
- Action

What type of rule would you like to create?

○ **Program**
Rule that controls connections for a program.

○ **Port**
Rule that controls connections for a TCP or UDP port.

● **Predefined:**

COM+ Network Access

- Active Directory Domain Services
- BITS Peercaching
- COM+ Network Access
- Core Networking
- DFS Management
- DFS Replication
- Distributed Transaction Coordinator
- DNS Service
- File and Printer Sharing
- File Replication
- iSCSI Service
- Kerberos Key Distribution Center
- Key Management Service
- Netlogon Service
- Network Discovery
- Performance Logs and Alerts
- Remote Administration
- Remote Desktop
- Remote Event Log Management
- Remote Scheduled Tasks Management
- Remote Service Management
- Remote Volume Management
- Routing and Remote Access
- Secure Socket Tunneling Protocol
- Secure World Wide Web Services (HTTPS)
- Simple Mail Transfer Protocol (SMTP)
- SNMP Service
- SNMP Trap
- Telnet
- Telnet server Remote Administration

Screenshot 246: Predefined rules

6. Click **Next**.

7. Select all rules and click **Next**.

8. Select **Allow the connection** and click **Finish**.

9. Repeat steps 5 to 8 for each of the following rules:

- Remote Event Log Management
- Network discovery.

10. From **Group Policy Management Editor**, expand **Computer Configuration** > **Policies** > **Windows Settings** > **Security Settings** > **Windows Firewall with Advanced Security**, right click **Outbound Rules** and select **New Rule…**

11. Repeat Steps 5 to 9 while at step 9 enable only **Network Discovery**.

12. Close **Group Policy Management Editor**.

13. From **Group Policy Management**, expand **Group Policy Management > Forest > Domains >** ***<Domain name>*** **> Default Domain Controllers Policy**.

14. Repeat steps 4 to 13.

15. Click **File > Save** to save the management console. The group policy comes into effect the next time each machine is restarted.

19.2.2 Enabling audit via GPO

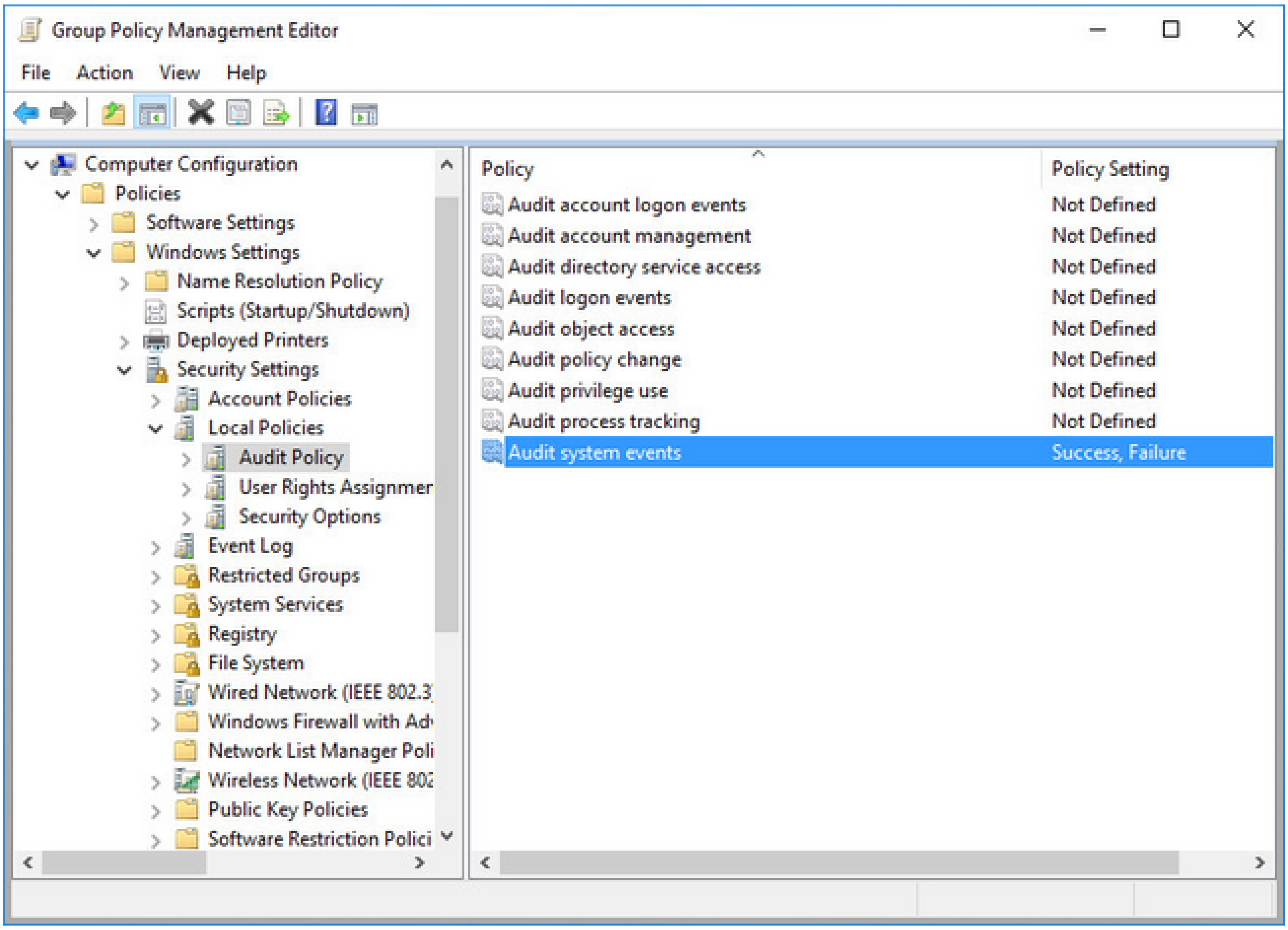
To configure audit settings on all domain clients:

1. Click **Start > Administrative Tools > Group Policy Management**.

2. Expand **Group Policy Management > Forest > Domains >** ***<Domain name>*** **> Group Policy Objects.**

3. Right-click **Default Domain Policy** and select **Edit**.

4. Expand **Computer Configuration > Policies > Windows Settings > Security Settings > Audit Policy**.



Policy	Policy Setting
Audit account logon events	Not Defined
Audit account management	Not Defined
Audit directory service access	Not Defined
Audit logon events	Not Defined
Audit object access	Not Defined
Audit policy change	Not Defined
Audit privilege use	Not Defined
Audit process tracking	Not Defined
Audit system events	Success, Failure

Screenshot 247: Group Policy Management Editor

5. From the right panel, right-click **Audit system events**.

6. From **Audit system events Properties**, check **Define these policy settings** and select **Success** and **Failure**. Click **OK**

7. Repeat step 6 for the following policies:

- Audit process tracking
- Audit object access

- Audit account management

8. Click **File > Save** to save the management console. The group policy comes into effect the next time each machine is restarted.

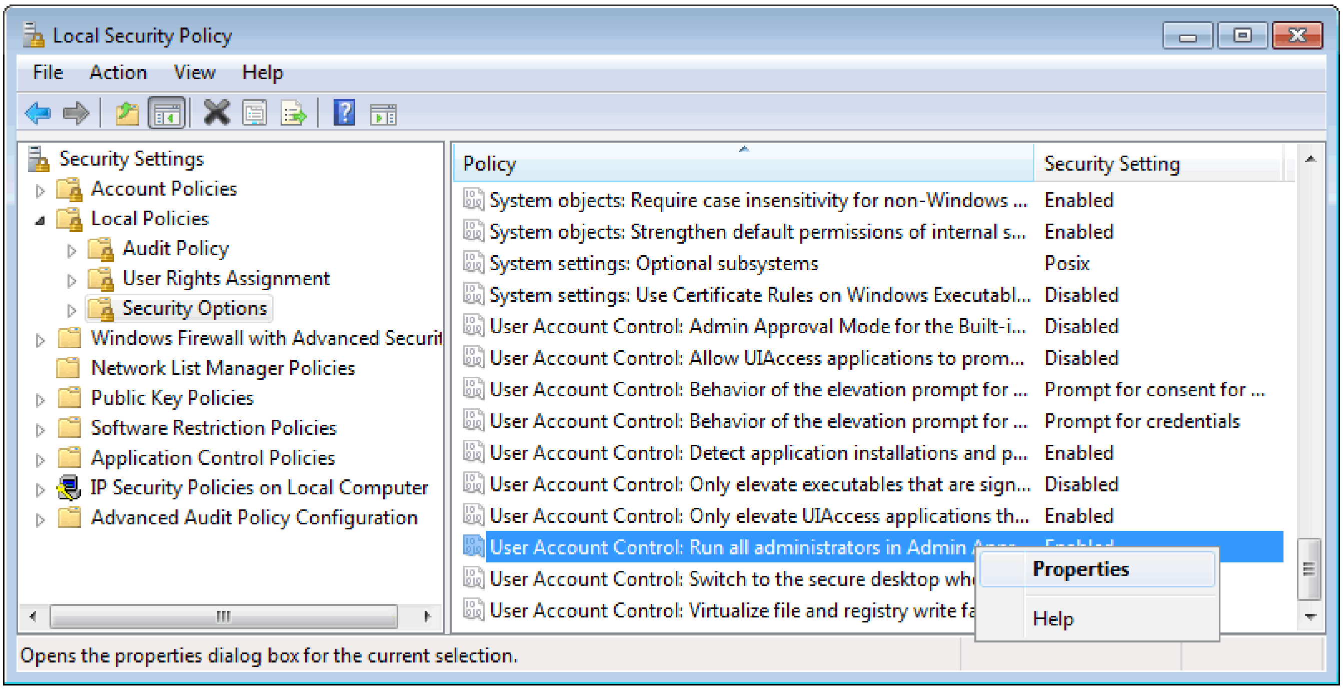
19.3 Disabling User Account Control (UAC)

When GFI EventsManager is configured to collect events using a local account target machines must have **User Account Control (UAC)** disabled. To disable UAC on Microsoft® Windows® Vista machines or later:

1. Click **Start > Run**, key in **secpol.msc** and press **Enter**.

2. From **Security Settings**, expand **Local Policies** and click **Security Options**.

3. Right-click **User Account Control: Run all administrators in Admin Approval Mode** and select **Properties**.



Local Security Policy
File
Action
View
Help
Security Settings
Account Policies
Local Policies
Audit Policy
User Rights Assignment
Security Options
Windows Firewall with Advanced Securit
Network List Manager Policies
Public Key Policies
Software Restriction Policies
Application Control Policies
IP Security Policies on Local Computer
Advanced Audit Policy Configuration
Properties
Help

Policy	Security Setting
System objects: Require case insensitivity for non-Windows ...	Enabled
System objects: Strengthen default permissions of internal s...	Enabled
System settings: Optional subsystems	Posix
System settings: Use Certificate Rules on Windows Executabl...	Disabled
User Account Control: Admin Approval Mode for the Built-i...	Disabled
User Account Control: Allow UIAccess applications to prom...	Disabled
User Account Control: Behavior of the elevation prompt for ...	Prompt for consent for ...
User Account Control: Behavior of the elevation prompt for ...	Prompt for credentials
User Account Control: Detect application installations and p...	Enabled
User Account Control: Only elevate executables that are sign...	Disabled
User Account Control: Only elevate UIAccess applications th...	Enabled
User Account Control: Run all administrators in Admin	
User Account Control: Switch to the secure desktop wh	
User Account Control: Virtualize file and registry write fa	

Opens the properties dialog box for the current selection.

Screenshot 248: Disabling UAC

4. From the **Local Security Settings** tab, select **Enabled** and click **OK**.

5. Close the Local Security Policy window.

20 Console Security and Audit Options

Console security and audit options enable you to protect GFI EventsManager from unauthorized access and malicious intent. The provided audit options enable you to accurately monitor GFI EventsManager activity.

Topics in this section:

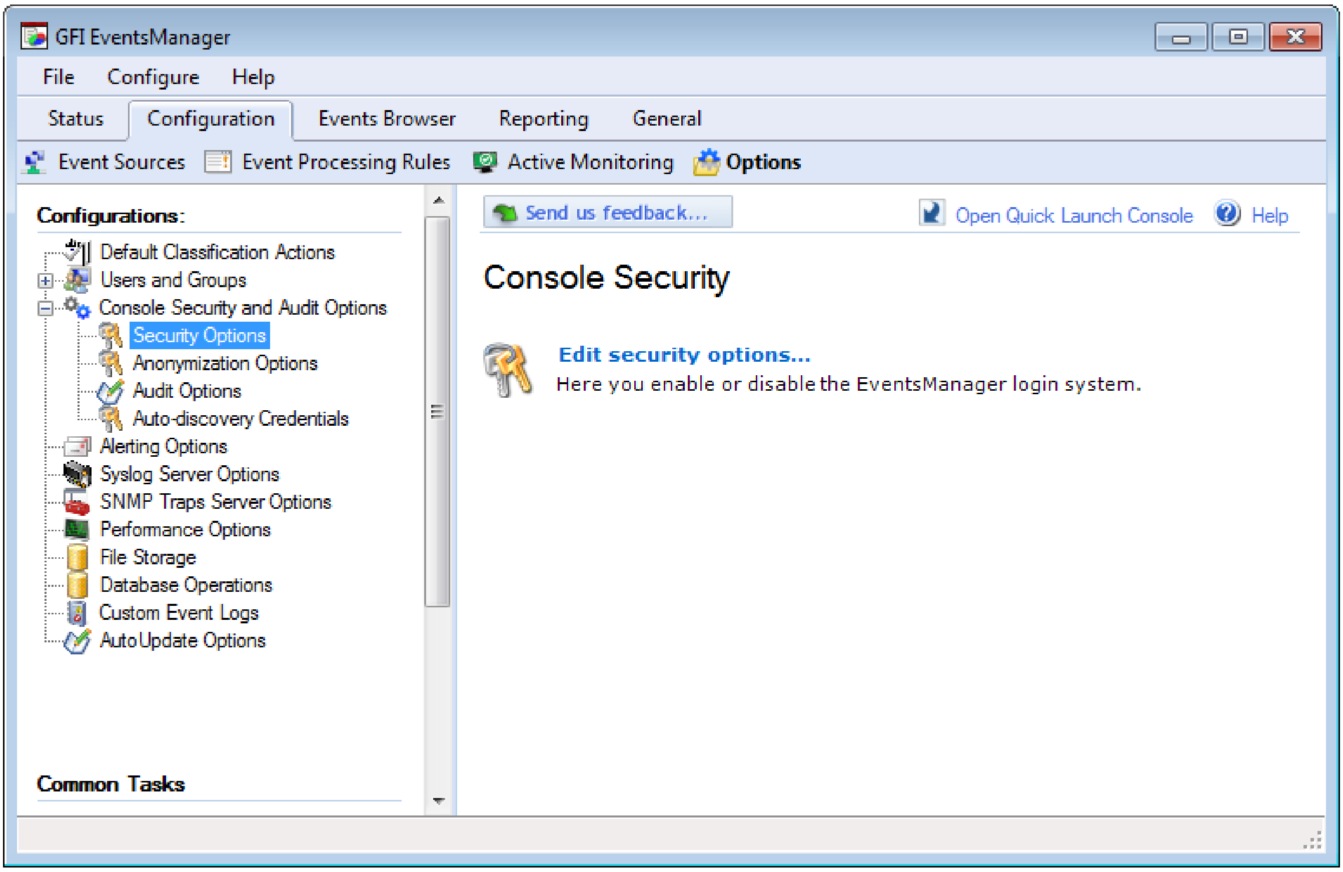
20.1 Enabling login system

When the login system is enabled all users will be asked to specify their credentials every time they launch the GFI EventsManager management console.

> **Note**
>
> Before you enable the login system, you must configure your mail server settings. For more information refer to Configuring Alerting Options.

To enable the log-in system:

1. From **Configuration** tab **> Options** expand **Console Security and Audit Options** node.



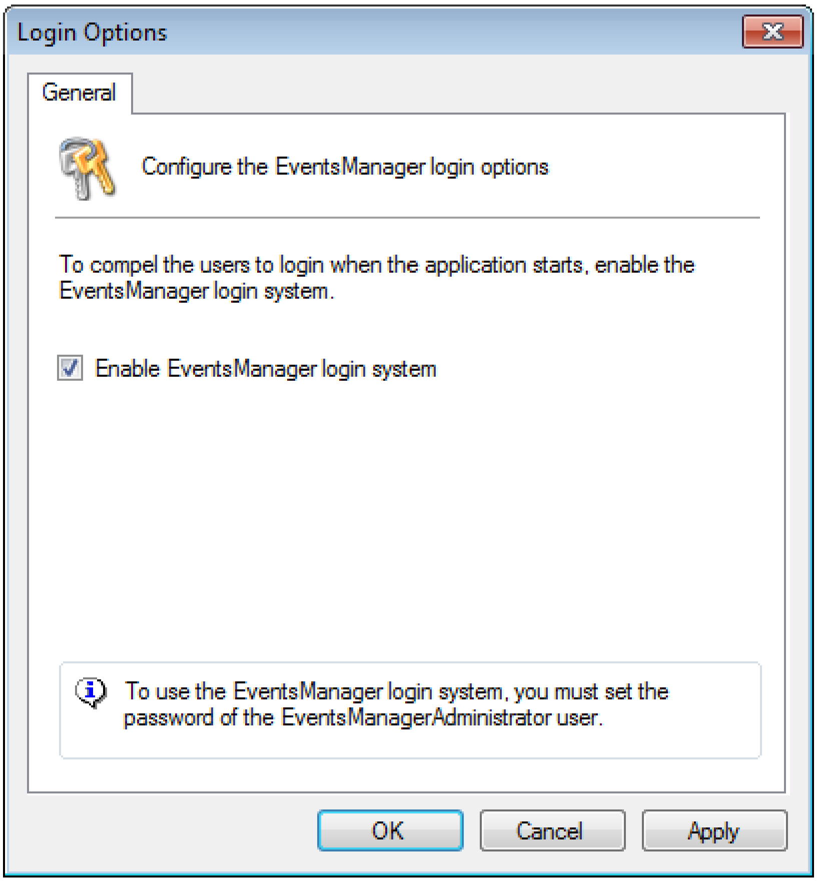
Console Security

Edit security options...

Here you enable or disable the EventsManager login system.

Screenshot 249: Editing console security options

2. Expand **Console Security and Audit Options** node, right-click **Security Options** node and select **Edit security options…**.



Configure the EventsManager login options

To compel the users to login when the application starts, enable the EventsManager login system.

☑ Enable EventsManager login system

To use the EventsManager login system, you must set the password of the EventsManagerAdministrator user.

Screenshot 250: Enabling EventsManager login system

3. Select **Enable EventsManager login system** to enable login.

4. Click **Apply** and **OK**

Note

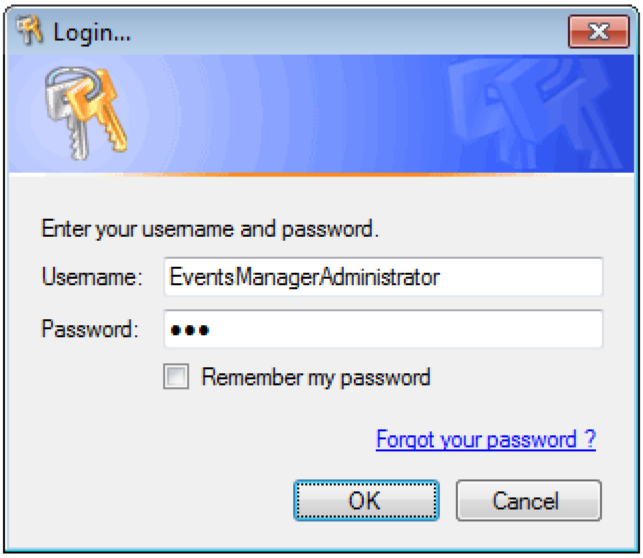
To configure or edit user passwords go to **Configuration** tab **> Users and Groups > Users**, right-click the user account and select **Change Password**.

Important

Once the login system is enabled, users must login to the console by specifying their username and password and must have a valid email configured to be able to retrieve lost passwords. For more information refer to Managing user accounts.

20.1.1 Password recovery

When GFI EventsManager login system is enabled, all users are requested to enter a valid user name and password to access the management console.



Enter your username and password.

Username: EventsManagerAdministrator

Password: ●●●

□ Remember my password

Screenshot 251: Login credentials prompt

If a password is forgotten or lost:

1. Key in your username.

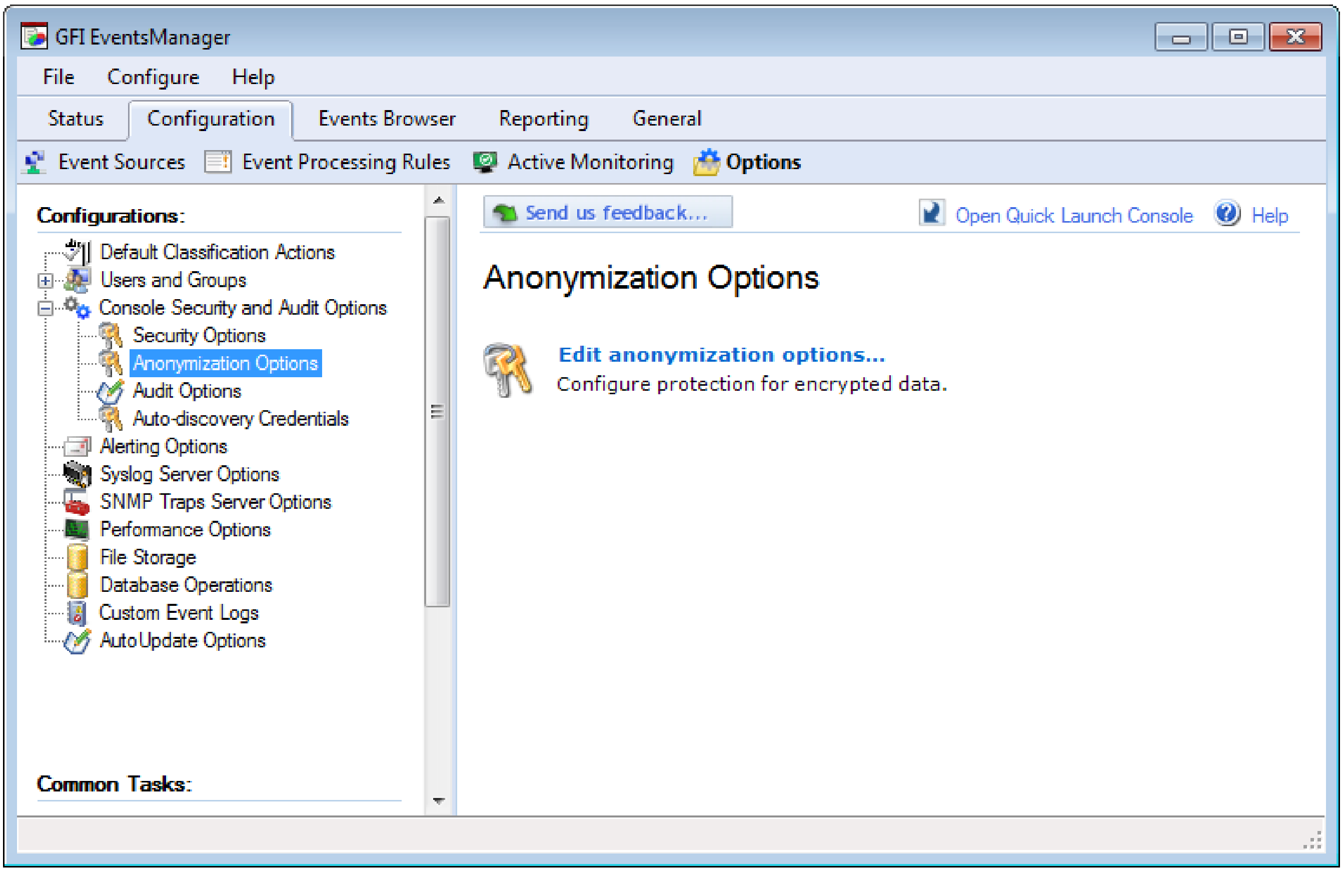
2. Click **Forgot your password?** link. GFI EventsManager will send an email containing your login password on the email address supplied during the user account setup.

20.2 Anonymization

In some countries privacy laws state that it is against the law not to encrypt personal information retrieved by monitoring applications for privacy protection. GFI EventsManager enables you to encrypt personal information when exporting and/or viewing event logs.

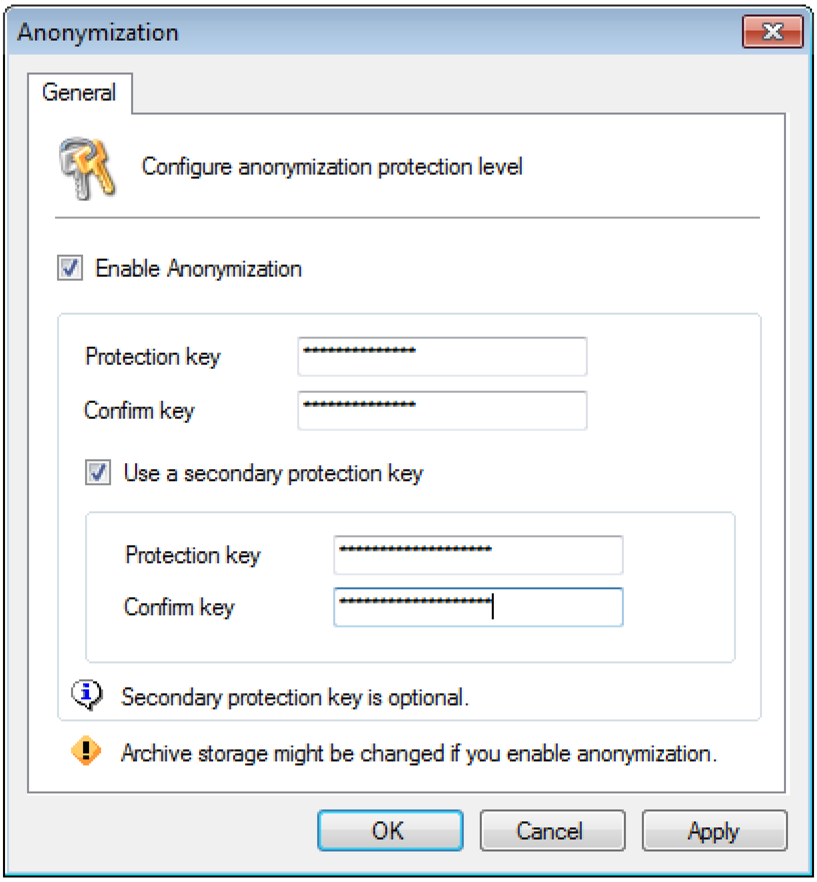
Enable anonymization to encrypt all personal information. The Events Browser and Dashboard can recognize such information and do not display it. Instead, they display **<encrypted>** or **Anonymized data** messages instead.

To configure anonymization:



Screenshot 252: Enable console anonymization

1. From **Configuration** tab > **Options**, expand **Console Security and Audit Options** node, right-click **Anonymization** and click **Edit anonymization options…**


Anonymization

General

Configure anonymization protection level

☑ Enable Anonymization

Protection key: ****************

Confirm key: ****************

☑ Use a secondary protection key

Protection key: **********************

Confirm key: **********************

Secondary protection key is optional.

Archive storage might be changed if you enable anonymization.

Screenshot 253: Anonymization options

2. Select **Enable Anonymization** and enter the encryption password.

3. (Optional) Select **Use a secondary protection key** to use two passwords for event log encryption. Event logs can only be decrypted by providing two decryption passwords.

4. Click **Apply** and **OK**

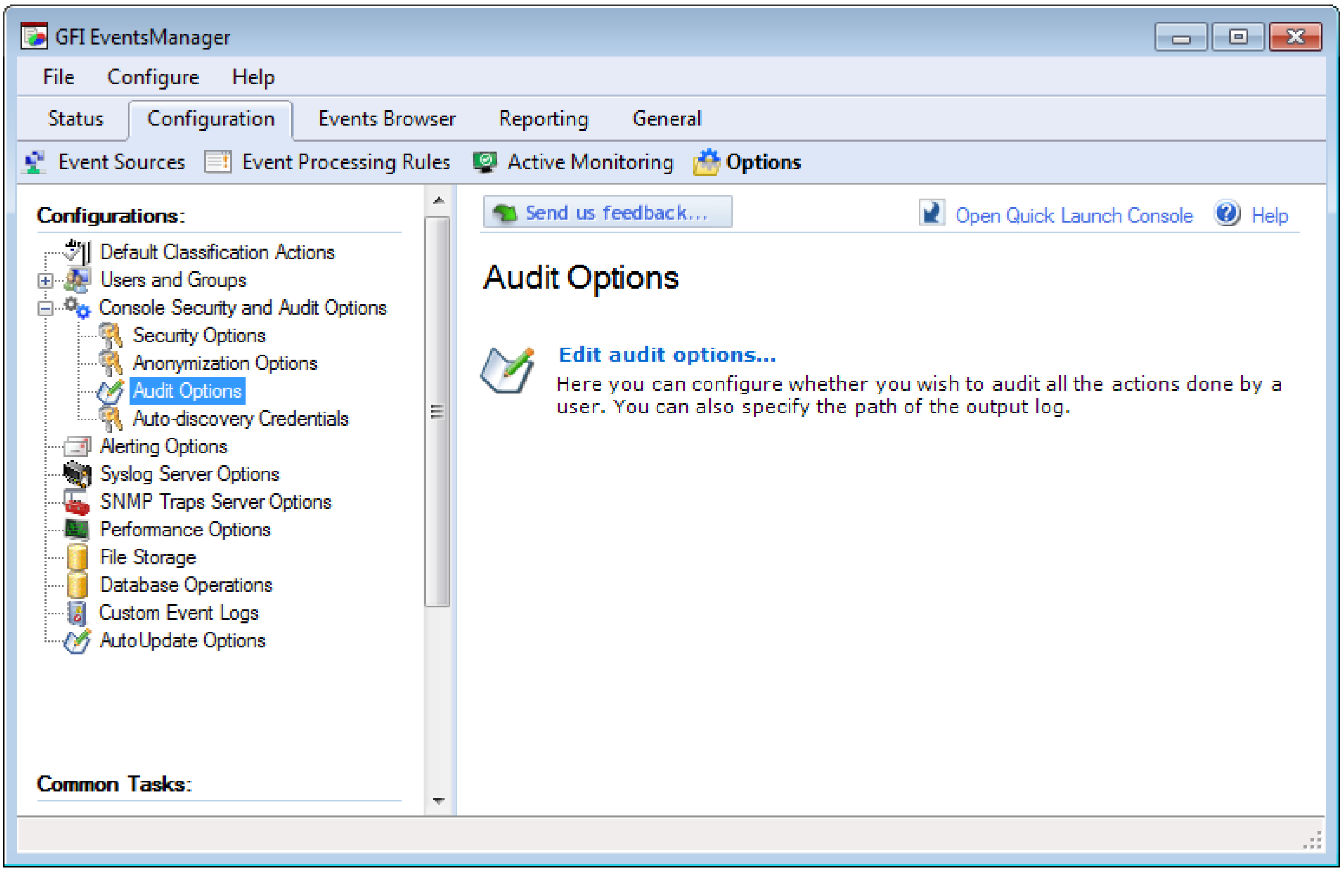
Note

Once anonymization is enabled, personal data is hidden in:

- Any of the Status views (General, Job Activity and Statistics)
- Events Browser
- Reports
- Exported/archived event logs (you can remove anonymization when importing the exported logs).

20.3 Auditing console activity

GFI EventsManager can save console activity to external logs. To configure console activity auditing:



GFI EventsManager

File Configure Help

Status | Configuration | Events Browser | Reporting | General

Event Sources | Event Processing Rules | Active Monitoring | **Options**

Configurations:

- Default Classification Actions
- Users and Groups
- Console Security and Audit Options
  - Security Options
  - Anonymization Options
  - Audit Options
  - Auto-discovery Credentials
- Alerting Options
- Syslog Server Options
- SNMP Traps Server Options
- Performance Options
- File Storage
- Database Operations
- Custom Event Logs
- AutoUpdate Options

Common Tasks:

Send us feedback... | Open Quick Launch Console | Help

Audit Options

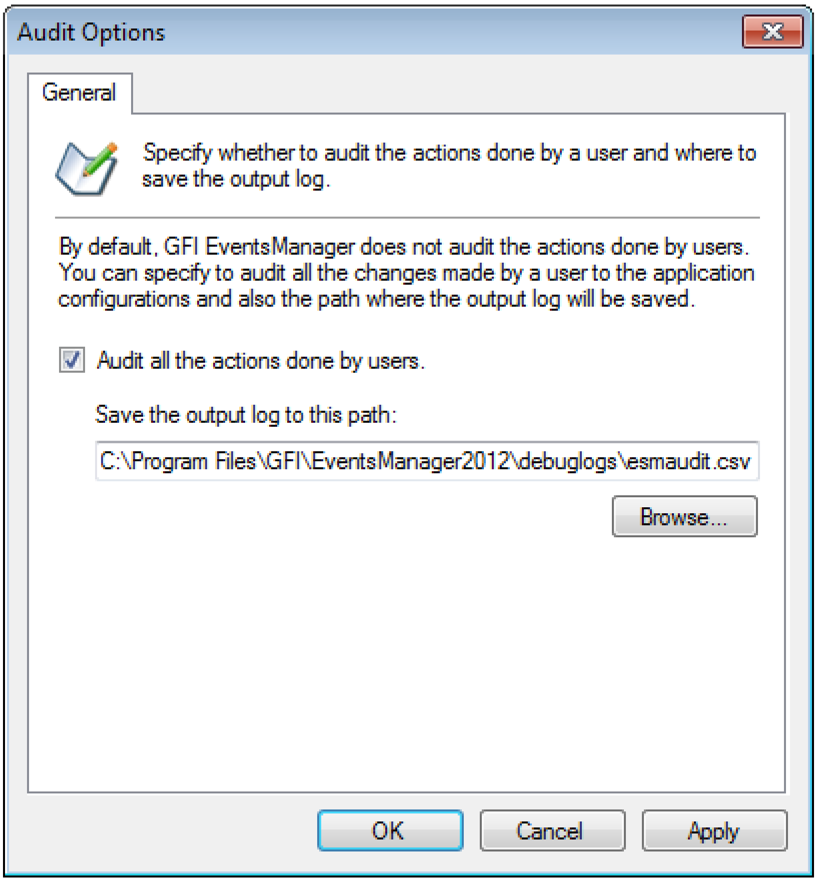
Edit audit options...

Here you can configure whether you wish to audit all the actions done by a user. You can also specify the path of the output log.

Screenshot 254: Enabling console user activity auditing

1. From **Configuration** tab > **Options**, expand **Console Security and Audit Options** node.

2. Right-click **Audit Options** and select **Edit audit options...**.



Specify whether to audit the actions done by a user and where to save the output log.

By default, GFI EventsManager does not audit the actions done by users. You can specify to audit all the changes made by a user to the application configurations and also the path where the output log will be saved.

☑ Audit all the actions done by users.

Save the output log to this path:

C:\Program Files\GFI\EventsManager2012\debuglogs\esmaudit.csv

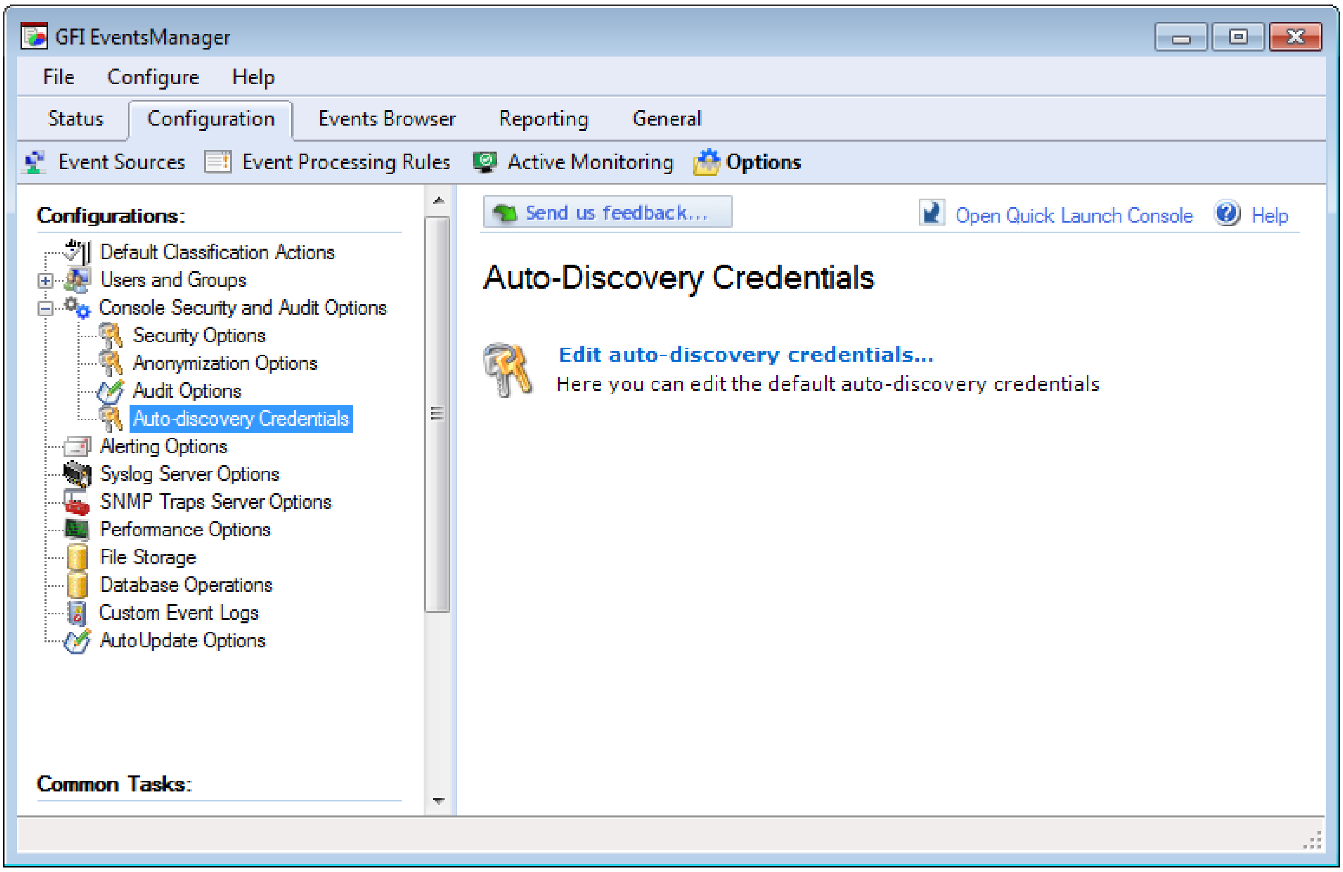
Screenshot 255: Audit Options dialog

3. Select **Audit all the actions done by users** option and specify the location where the output log file will be saved.

4. Click **Apply** and **OK**

20.4 Auto-discovery credentials

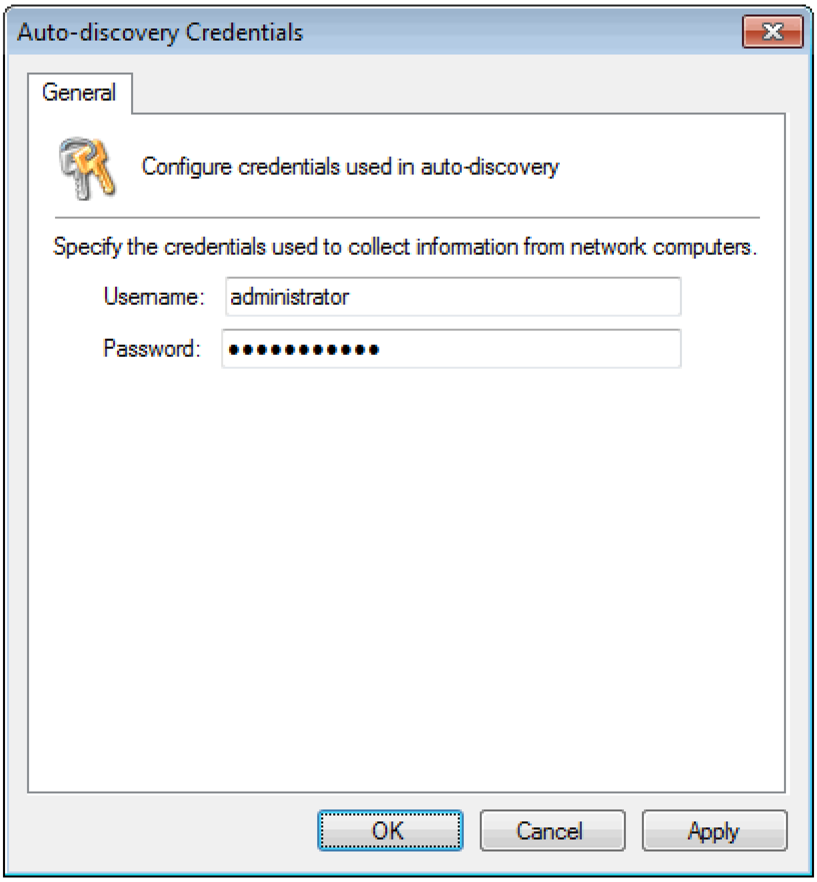
Auto-discovery credentials are used by GFI EventsManager to login target machines and collect information when performing an automatic search for event sources. To configure the auto-discovery credentials:



Screenshot 256: Configuring Auto-Discovery Credentials

1. From **Configuration** tab > **Options**, expand **Console Security and Audit Options** node.

2. Right-click **Auto-discovery credentials** and select **Edit auto-discovery credentials**.



Configure credentials used in auto-discovery

Specify the credentials used to collect information from network computers.

Username: administrator

Password: ●●●●●●●●●●●

Screenshot 257: Specify Auto-discovery credentials

3. Key in a valid username and password.

4. Click **Apply** and **OK**

21 How to configure User Groups

This section provides you with information related to creating and managing users and groups. Through the Users and Groups node, users and groups can be created and specific alerts, working hours and other properties can be assigned to each user and group; while different console access rights can be assigned to each user from the Console Security and Audit Options node.

Topics in this section:

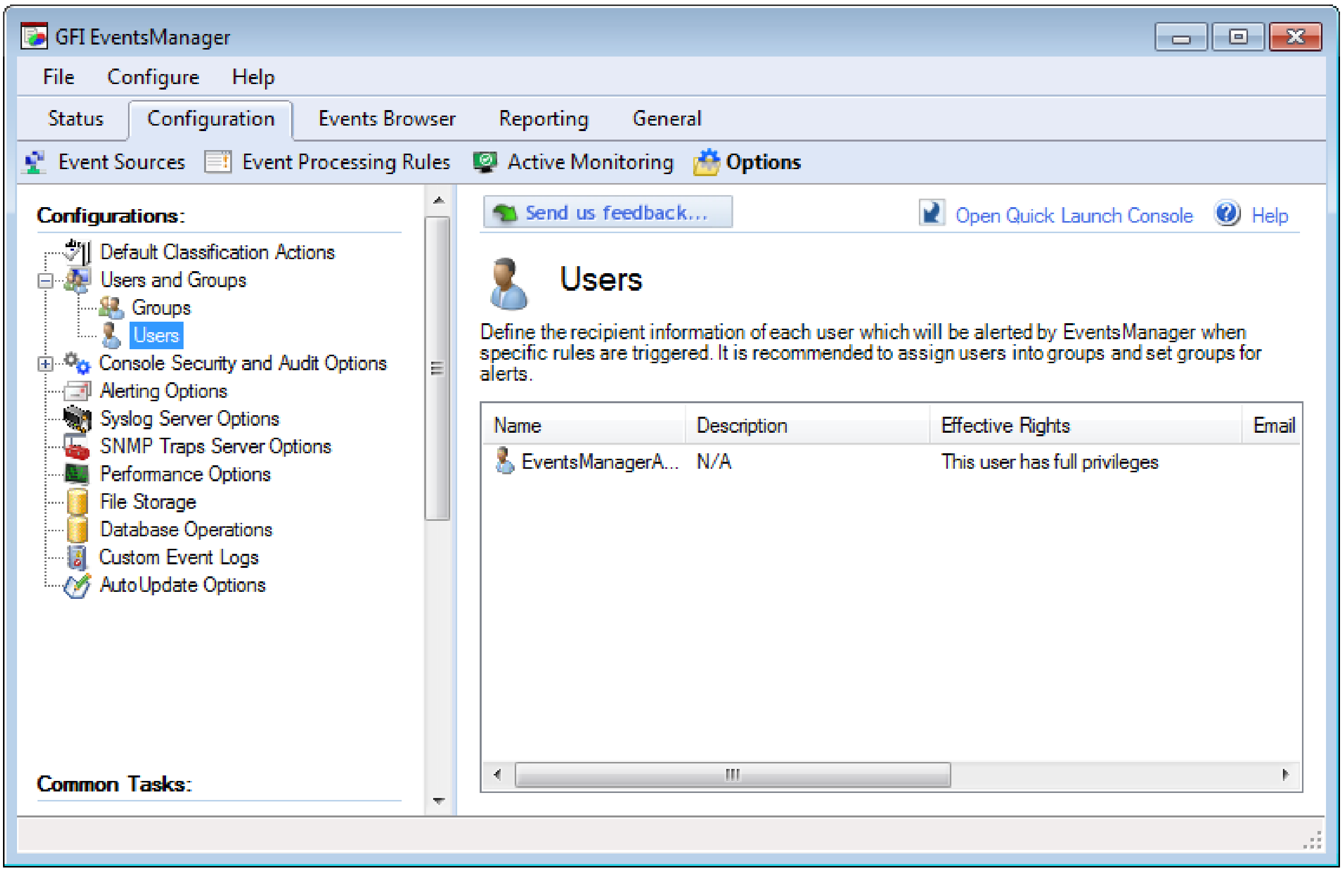
21.1 Configuring the administrator account

GFI EventsManager automatically creates an **EventsManagerAdministrator** account. However, you must still configure some properties such as the notification addresses and account security.

> **Note**
>
> GFI EventsManager requires a valid administrator email address in order to distribute automatic alerts when particular events are discovered.

To configure the GFI EventsManager Administrator account:

1. From **Configuration** tab **> Options**, expand **Users and Groups > Users**.



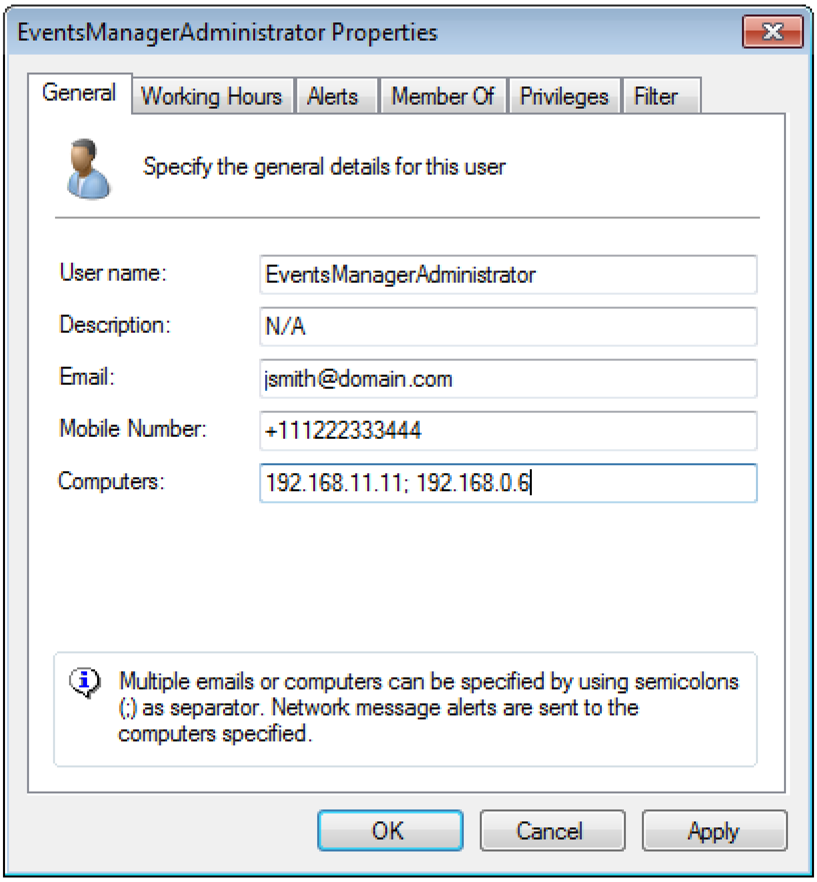
Users

Define the recipient information of each user which will be alerted by EventsManager when specific rules are triggered. It is recommended to assign users into groups and set groups for alerts.

Name	Description	Effective Rights	Email
EventsManagerA...	N/A	This user has full privileges	

Screenshot 258: Configuring EventsManagerAdministrator account

2. From the right pane, right-click **EventsManagerAdministrator** and click **Properties**.



EventsManagerAdministrator Properties

Specify the general details for this user

User name: EventsManagerAdministrator

Description: N/A

Email: jsmith@domain.com

Mobile Number: +111222333444

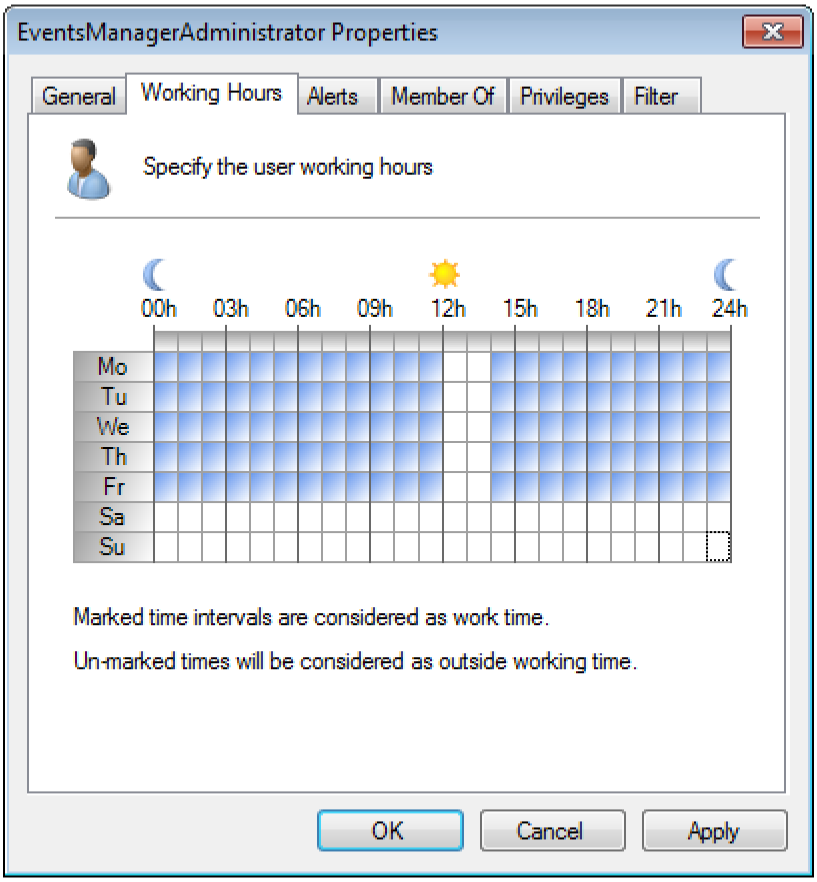
Computers: 192.168.11.11; 192.168.0.6

Multiple emails or computers can be specified by using semicolons (;) as separator. Network message alerts are sent to the computers specified.

Screenshot 259: EventsManagerAdministrator properties

3. From the **General** tab specify:

- A username for GFI EventsManager administrator account
- (Optional) A description for the account
- A valid email address for email alerts distribution
- A valid mobile number for SMS alerts distribution
- Valid computer names/IPs for network alerts distribution.



Specify the user working hours

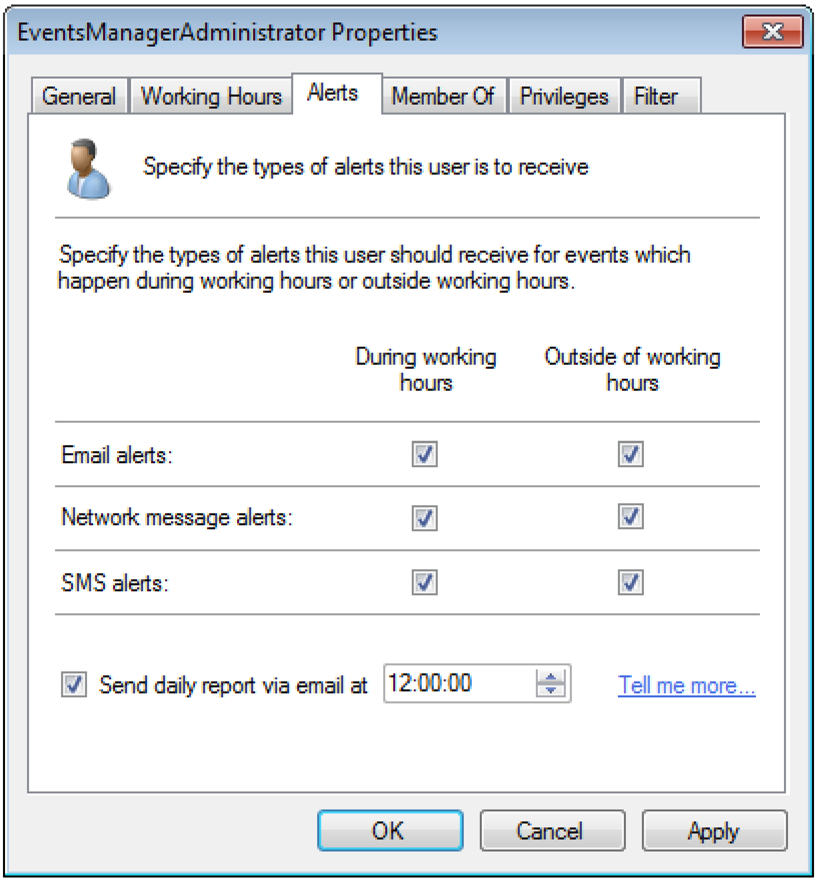
Mo	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦			🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦
Tu	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦			🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦
We	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦			🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦
Th	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦			🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦
Fr	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦			🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦
Sa																								
Su																								

Marked time intervals are considered as work time.

Un-marked times will be considered as outside working time.

Screenshot 260: Configuring user typical working hours

4. Click **Working Hours** tab and specify the typical working hours of the administrator. Marked time intervals are considered as working hours.



Specify the types of alerts this user is to receive

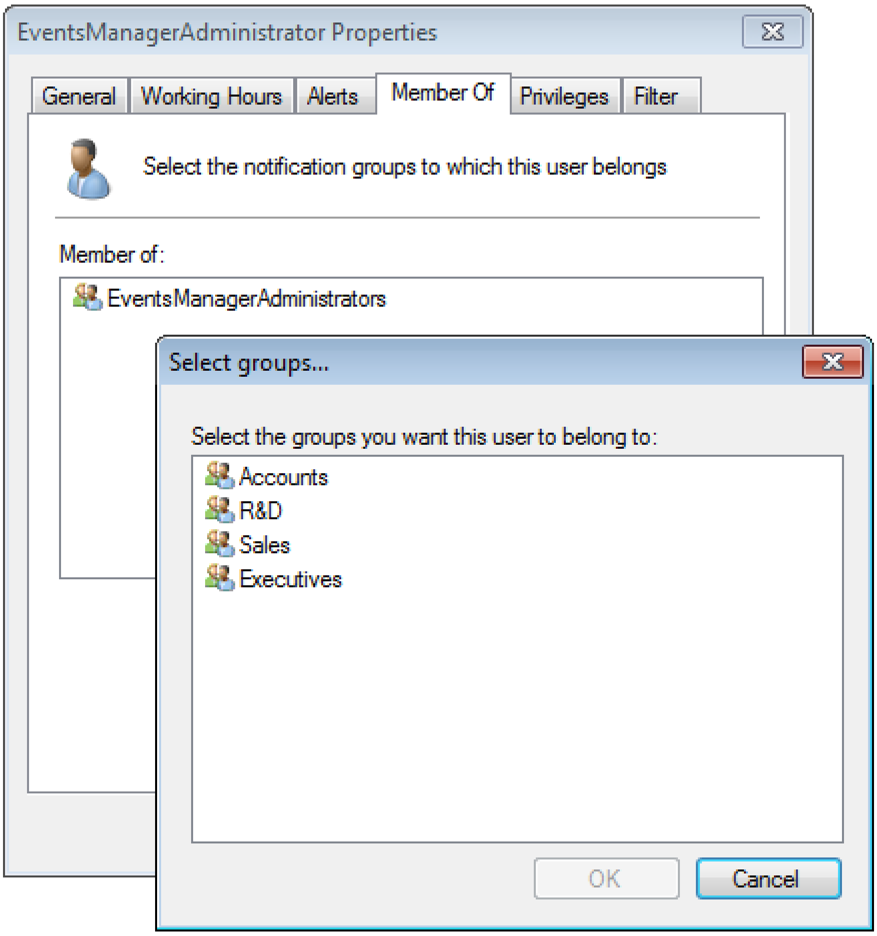
Specify the types of alerts this user should receive for events which happen during working hours or outside working hours.

	During working hours	Outside of working hours
Email alerts:	☑	☑
Network message alerts:	☑	☑
SMS alerts:	☑	☑

☑ Send daily report via email at 12:00:00

Screenshot 261: Configure alerts outside working hours

5. Click **Alerts** tab and select the alerts sent during and outside working hours. Optionally, select **Send daily report via email at** and specify the time to send an email containing daily activity.



Select the notification groups to which this user belongs

Member of:

EventsManagerAdministrators

Select the groups you want this user to belong to:

Accounts

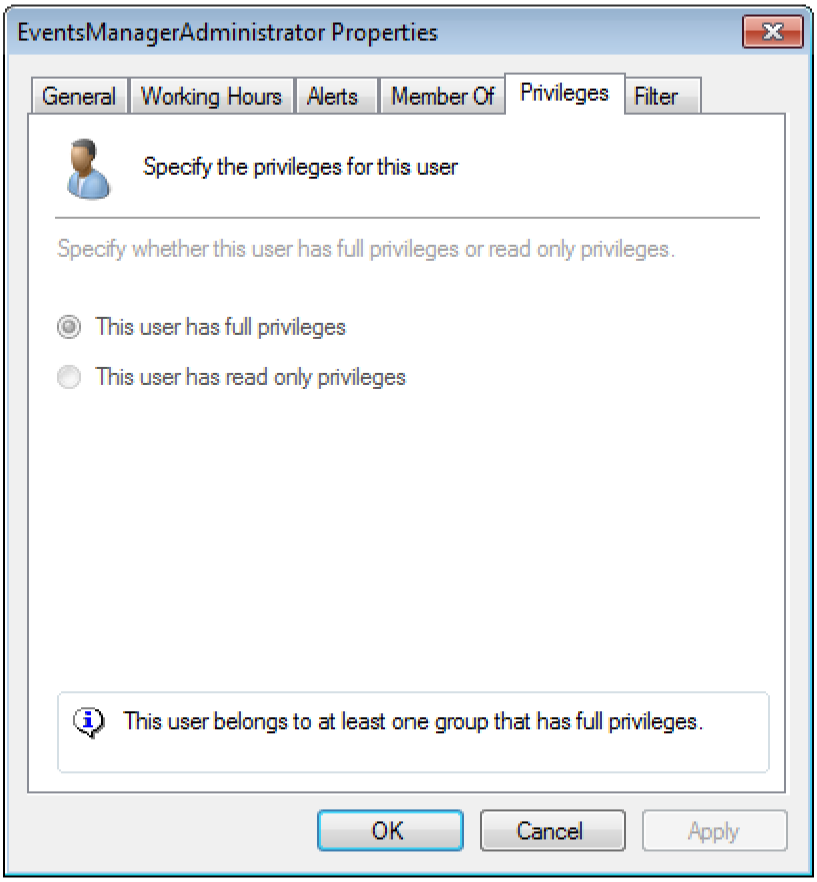
R&D

Sales

Executives

Screenshot 262: Select the group which the user account is a member of

6. Click **Member Of** tab and select the notification groups to which the user belongs. By default the administrator is a member of the **EventsManagerAdministrators** notification group.



Specify the privileges for this user

Specify whether this user has full privileges or read only privileges.

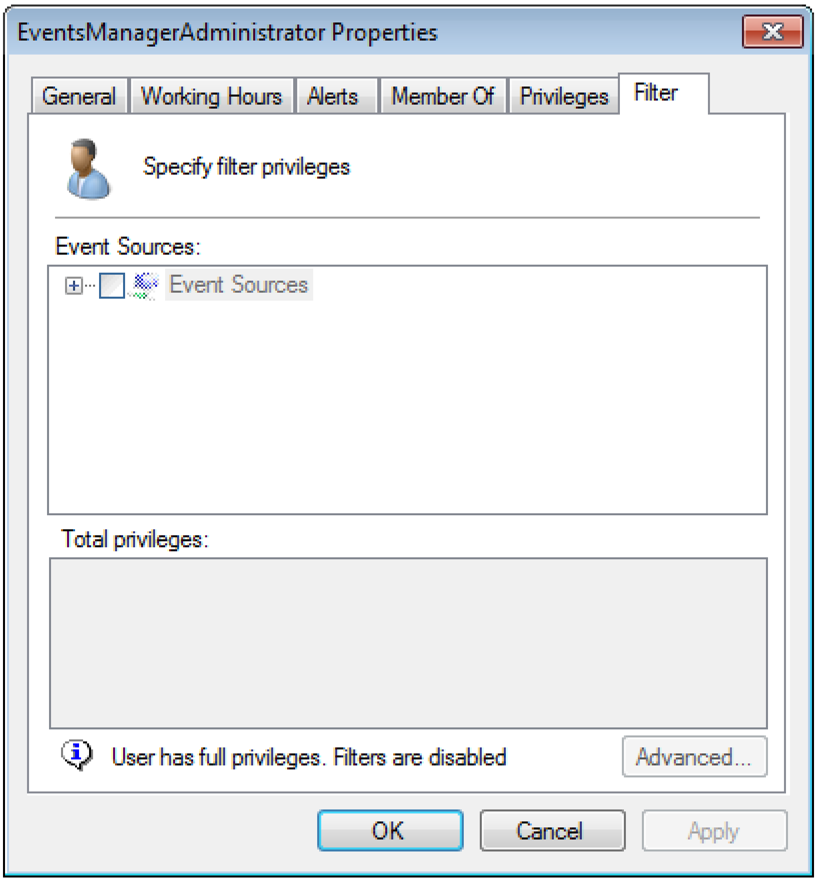
● This user has full privileges

○ This user has read only privileges

This user belongs to at least one group that has full privileges.

Screenshot 263: Configuring user account privileges

7. Click **Privileges** tab to edit the user privileges. By default the EventsManagerAdministrator account has full privileges and cannot be modified.



Screenshot 264: User account filtering

8. Click **Filter** tab to edit what the administrator can see in the management console. By default, this tab is disabled for the EventManagerAdministartor account.

9. Click **Apply** and **OK**

21.2 Managing user accounts

GFI EventsManager allows you to create a custom list of users which you can organize into groups to speed up administrative tasks.

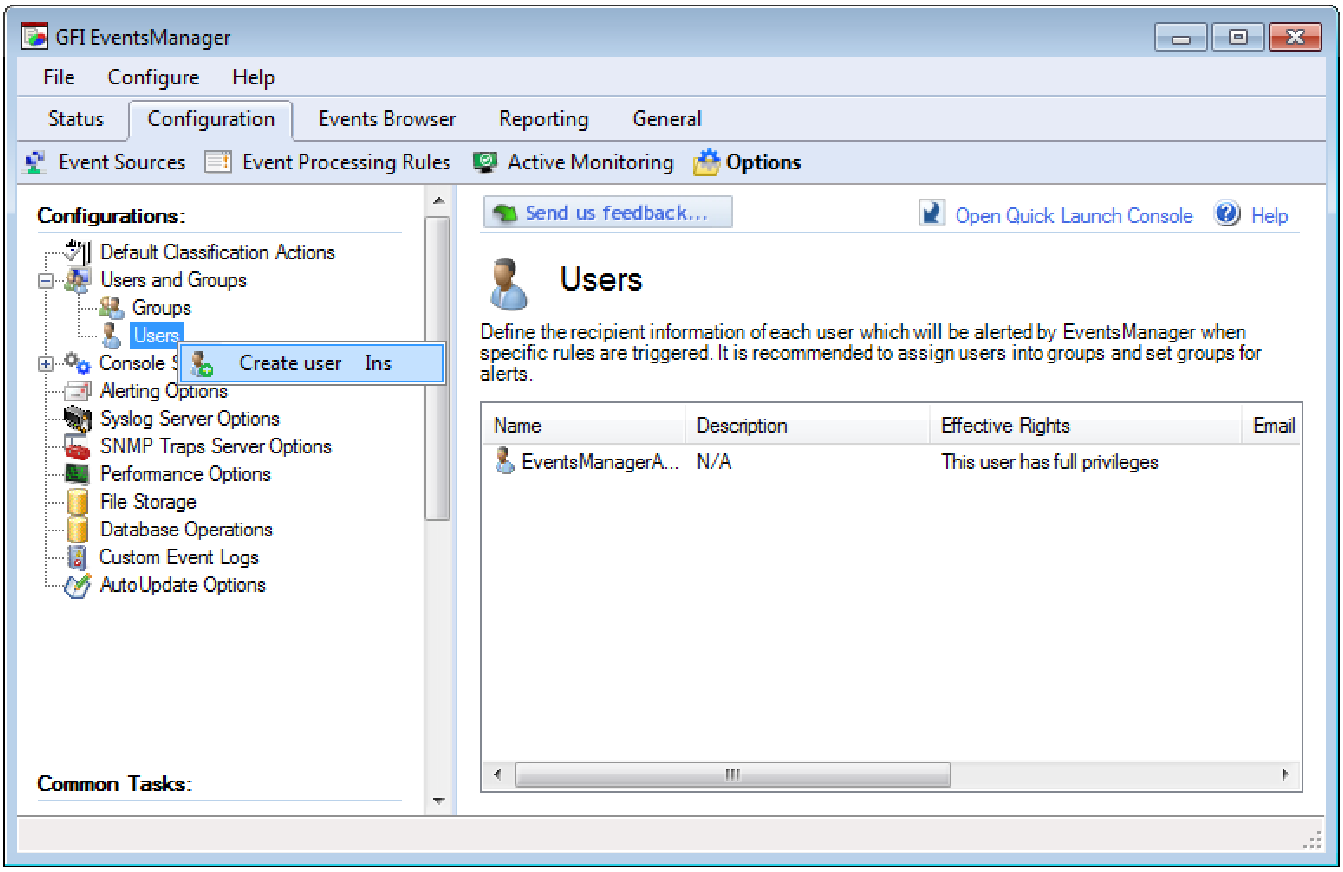
This section contains information about:

- Creating a new user account
- Changing user account properties
- Deleting a user account

21.2.1 Creating a new user account

To create a new user:

1. From **Configuration** tab **>** **Options**, expand the **Users and Groups** node.

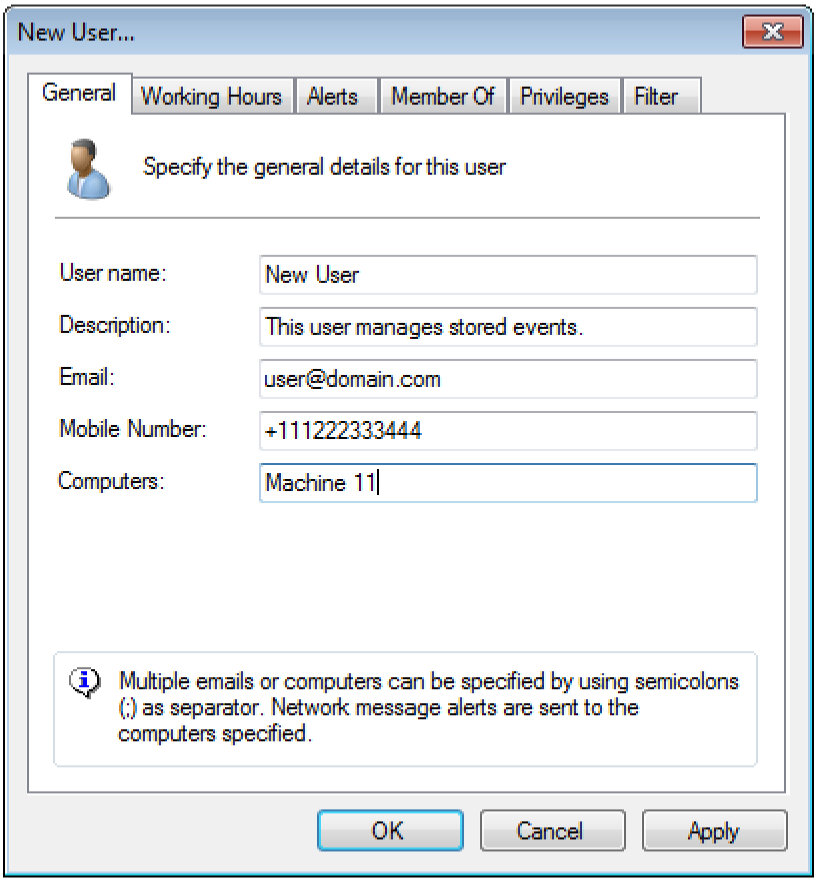


Define the recipient information of each user which will be alerted by EventsManager when specific rules are triggered. It is recommended to assign users into groups and set groups for alerts.

Name	Description	Effective Rights	Email
EventsManagerA...	N/A	This user has full privileges	

Screenshot 265: Creating a new user

2. Right-click **Users** sub-node and select **Create user…**



Specify the general details for this user

User name: New User

Description: This user manages stored events.

Email: user@domain.com

Mobile Number: +111222333444

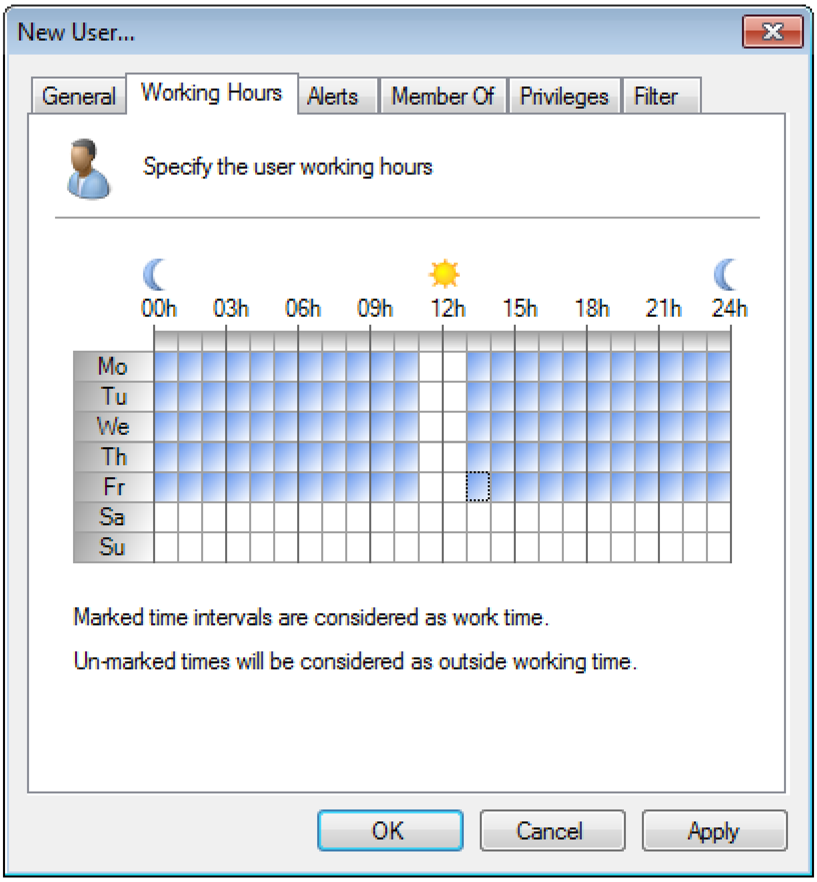
Computers: Machine 11

Multiple emails or computers can be specified by using semicolons (;) as separator. Network message alerts are sent to the computers specified.

Screenshot 266: Creating a new user - General properties

3. From the **General** tab specify:

- A username for the user account
- (Optional) A description for the account
- A valid email address for email alerts distribution
- A valid mobile number for SMS alerts distribution
- Valid computer names/IPs for network alerts distribution.



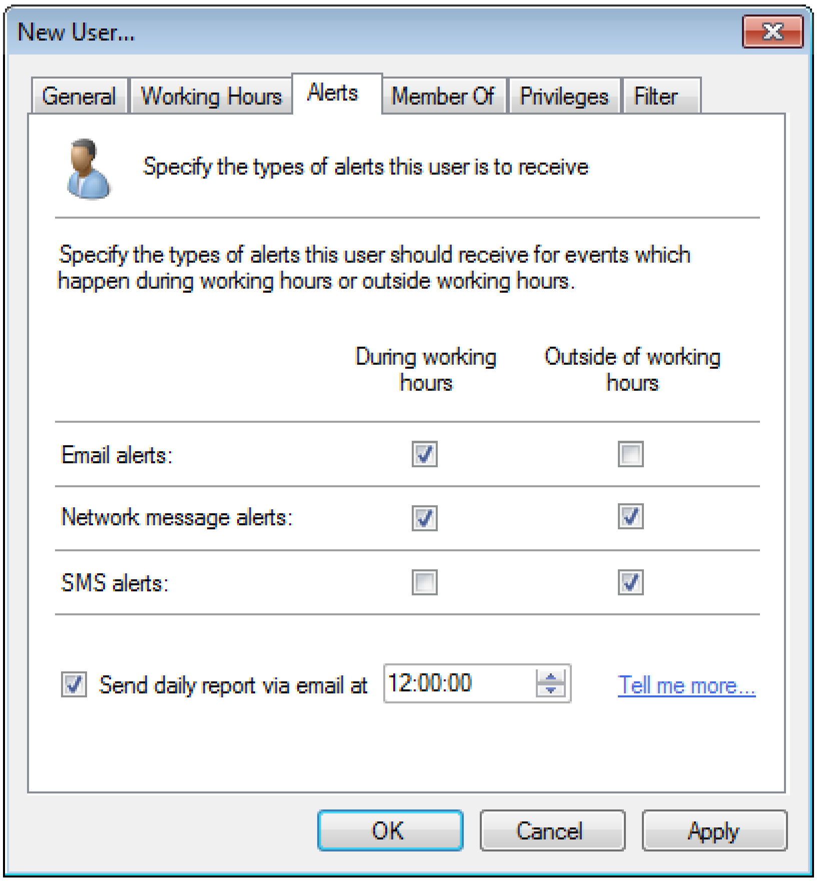
Specify the user working hours

Marked time intervals are considered as work time.

Un-marked times will be considered as outside working time.

Screenshot 267: Creating a new user - Working hours

4. Click **Working Hours** tab and specify the typical working hours of the new user. Marked time intervals are considered as working hours.



Specify the types of alerts this user is to receive

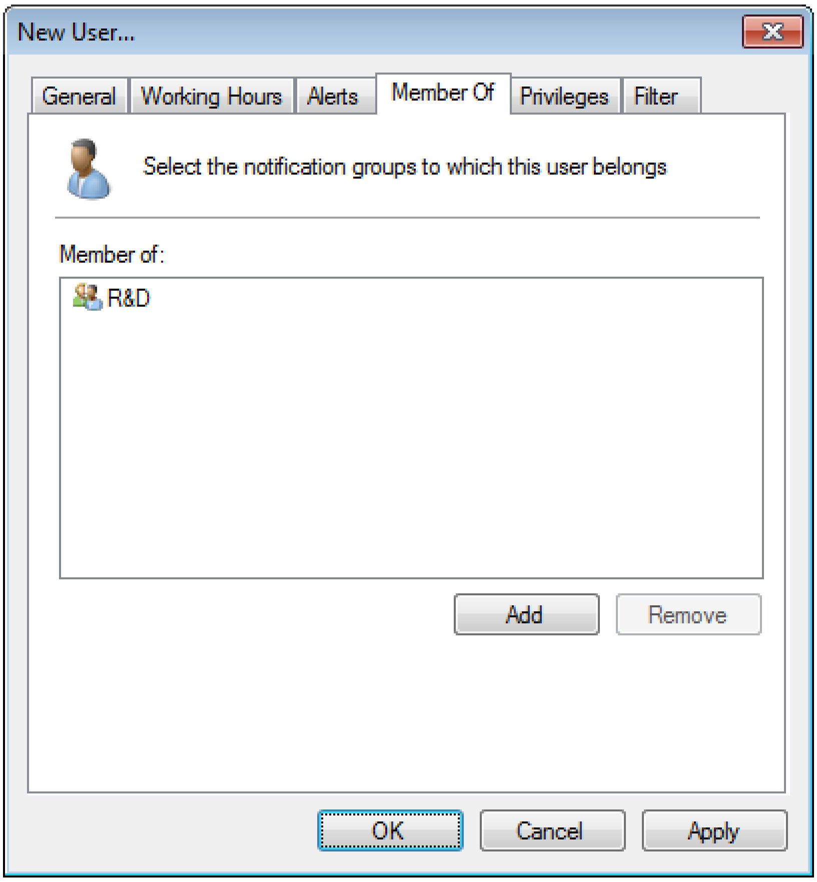
Specify the types of alerts this user should receive for events which happen during working hours or outside working hours.

	During working hours	Outside of working hours
Email alerts:	☑	□
Network message alerts:	☑	☑
SMS alerts:	□	☑

☑ Send daily report via email at 12:00:00

Screenshot 268: Creating a new user - Alerting options

5. Click **Alerts** tab and select the alerts sent during and outside working hours. Optionally, select **Send daily report via email at** and specify the time to send an email containing daily activity. For more information, refer to How to configure alerts (page 322).



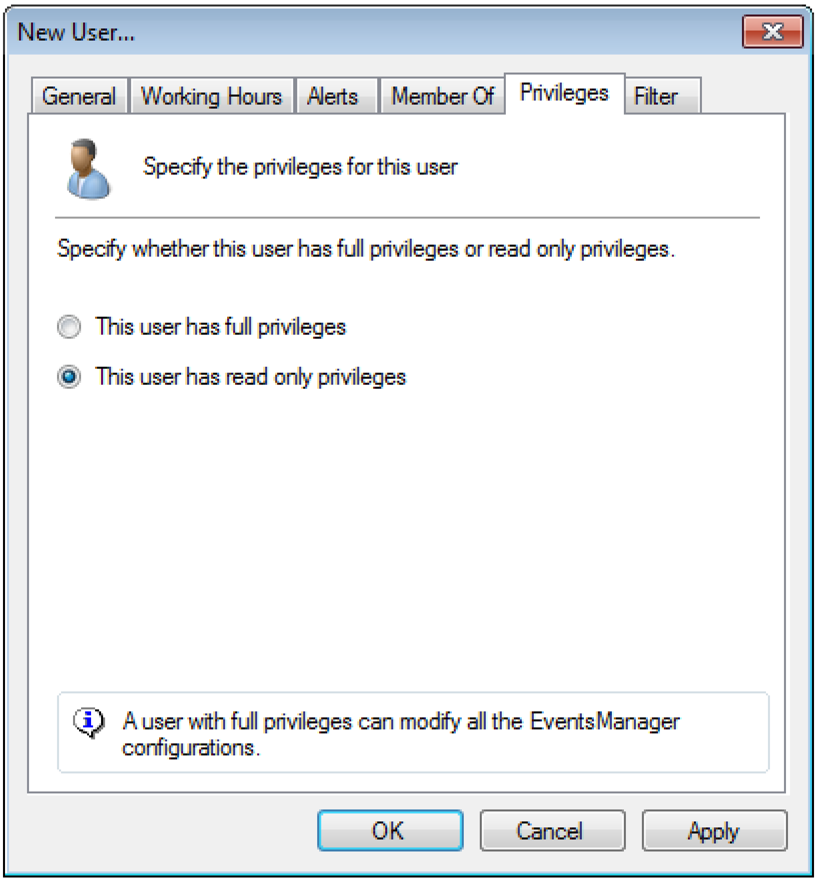
Select the notification groups to which this user belongs

Member of:

R&D

Screenshot 269: Creating a new user - Select notification group(s)

6. Click **Member Of** tab and click **Add**. Select the notification groups to which the user belongs and click **OK**



Specify the privileges for this user

Specify whether this user has full privileges or read only privileges.

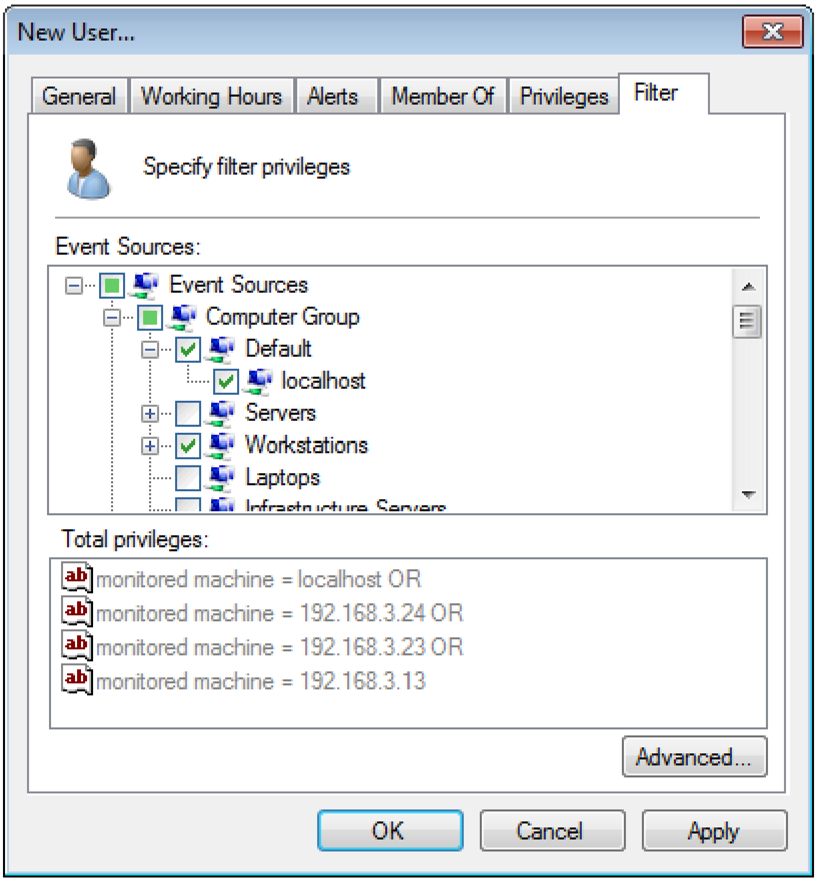
○ This user has full privileges

● This user has read only privileges

A user with full privileges can modify all the EventsManager configurations.

Screenshot 270: Creating a new user - Privileges

7. Click **Privileges** tab to configure user privileges. By default, new user accounts have read only privileges.



monitored machine = localhost OR
monitored machine = 192.168.3.24 OR
monitored machine = 192.168.3.23 OR
monitored machine = 192.168.3.13

Screenshot 271: User filtering options

8. Click **Filter** tab to configure what the new user is allowed to display in the management console. The following table describes the available options:

Option	Description
Event Sources	GFI EventsManager provides you with a set of pre-configured conditions for filtering event sources. Select the event sources that you want to be visible for this user.
Total privileges	Click **Advanced...** to launch the **Advanced Filtering** dialog. This dialog enables you to build your own conditions for granular filtering, allowing you to filter events containing specific attributes. To add a condition: 1. From the **Advanced Filtering** dialog, click **Add** and select a field from the list. Example: Date, Importance, Log format. 2. For the selected field, select an operator from the **Field operator** drop-down menu. Example: Equal to, Less than, Greater than. 3. Specify a value for the operator in the **Field value** text box. 4. Click **OK** 5. Repeat steps 1 to 4 to add more than one field name. **Note** For more information refer to Defining query restrictions.

9. Click **Apply** and **OK**

21.2.2 Changing user account properties

To edit user properties:

1. From **Configuration** tab > **Options**, expand the **Users and Groups** node.

2. From **Users** sub-node, right-click a user and select **Properties**.

3. Make the required changes in the tabs available and click **OK**.

21.2.3 Deleting a user account

To delete a user:

1. From **Configuration** tab **>** **Options**, expand the **Users and Groups** node and select **Users**.

2. From right pane, right-click a user and select **Delete**.

21.3 Managing user groups

GFI EventsManager enables you to assign users to a group. Once the group properties have been configured, every member of the group inherits the same settings.

This section contains information about:

» Creating a new group

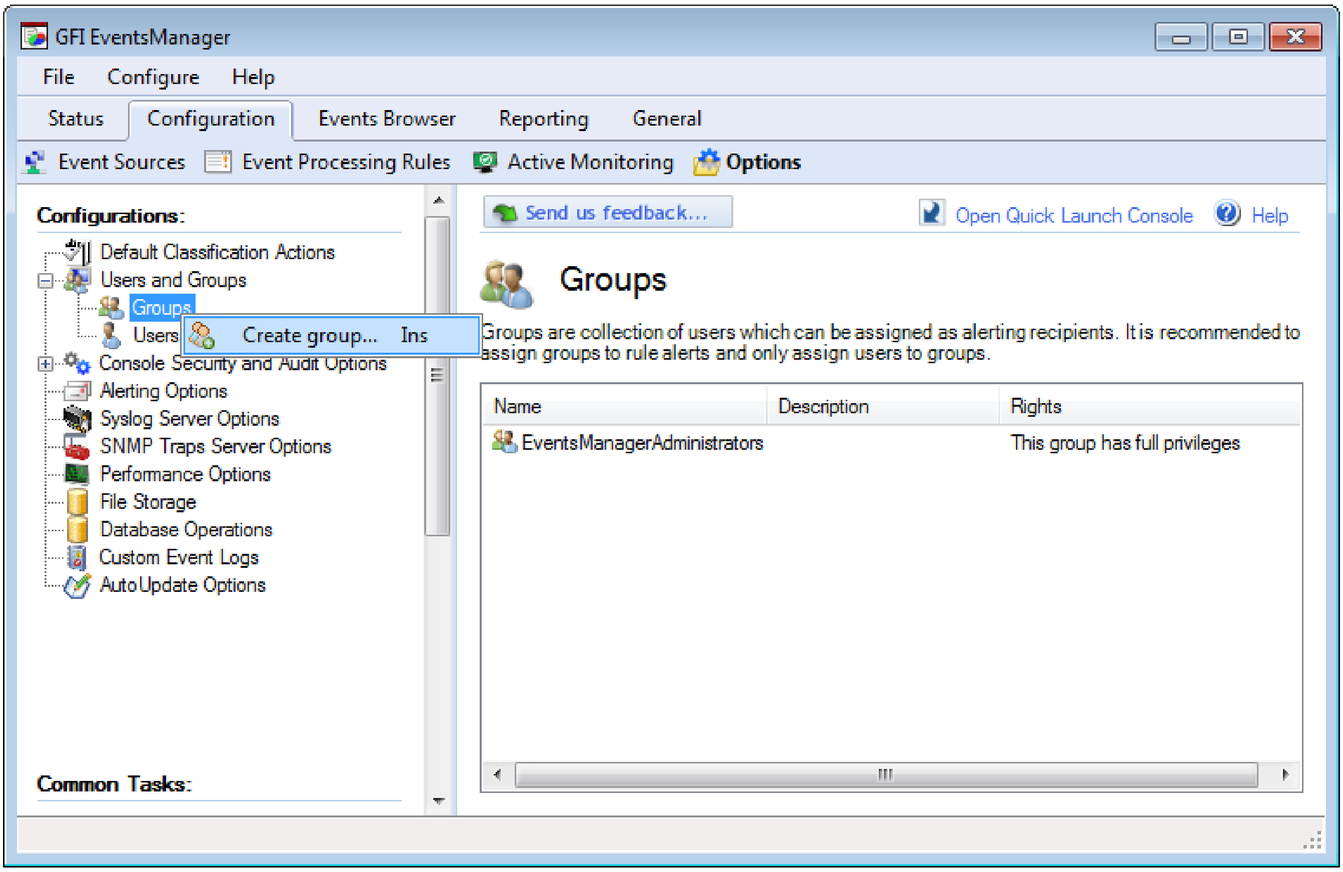
» Changing group properties

» Deleting a group

21.3.1 Creating a new group

To create a new user group:

1. From **Configuration** tab > **Options**, expand **Users and Groups** node.

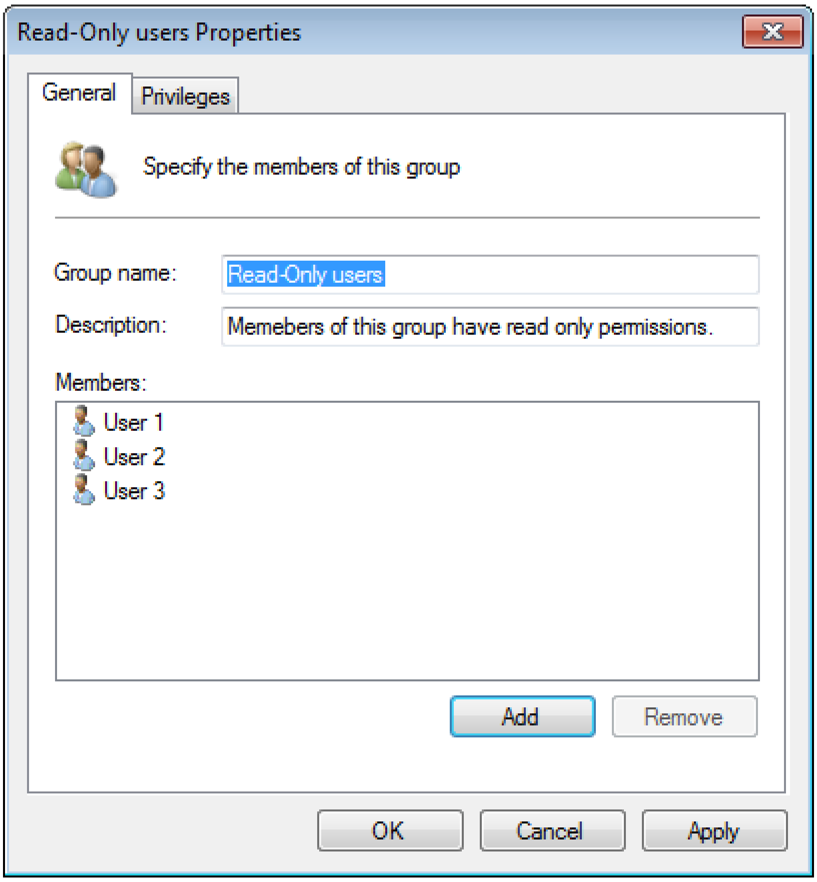


Groups are collection of users which can be assigned as alerting recipients. It is recommended to assign groups to rule alerts and only assign users to groups.

Name	Description	Rights
EventsManagerAdministrators		This group has full privileges

Screenshot 272: Creating a new user group

2. Right-click **Groups** sub-node and select **Create group…**



Read-Only users Properties

Specify the members of this group

Group name: Read-Only users

Description: Memebers of this group have read only permissions.

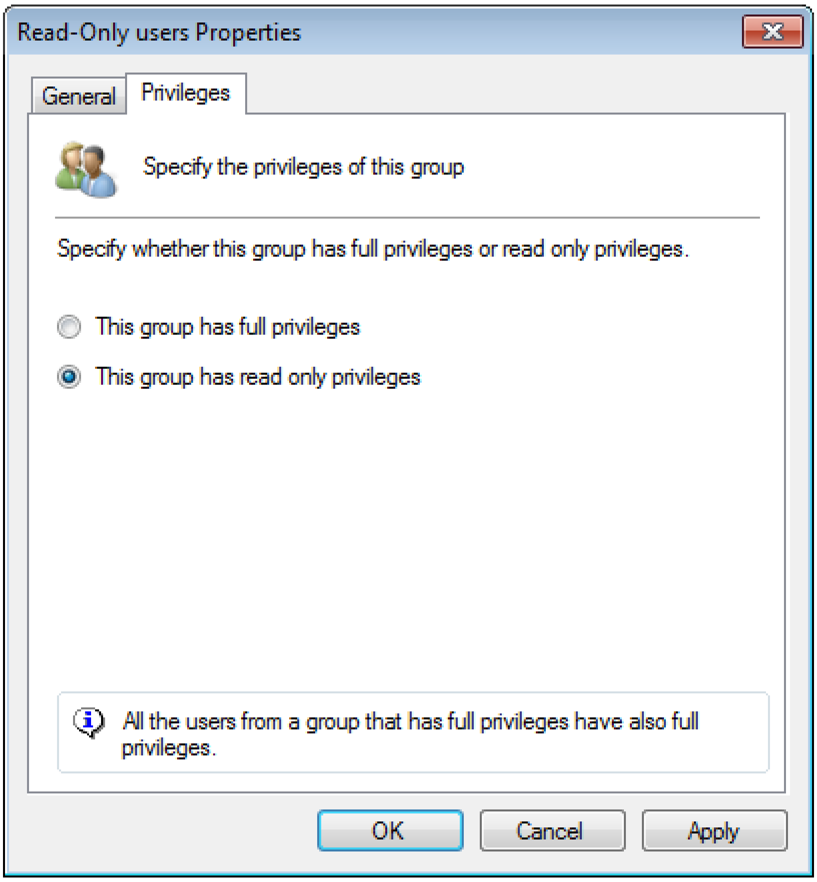
Members:

- User 1
- User 2
- User 3

Screenshot 273: Creating a new user group - General properties

3. Specify the name and an optional description for the new group.

4. Click **Add** to add users to the group.



Specify the privileges of this group

Specify whether this group has full privileges or read only privileges.

○ This group has full privileges

● This group has read only privileges

All the users from a group that has full privileges have also full privileges.

Screenshot 274: Creating a new user group - General properties

5. From the **Privileges** tab, select if the group has **Full** or **Read Only** permissions.

6. Click **Apply** and **OK**

21.3.2 Changing group properties

To edit the settings of a user group:

1. From **Configuration** tab > **Options**, expand **Users and Groups** node.

2. From the right pane, right-click on the group to be configured and select **Properties**.

3. Perform the required changes in the tabs available and click **OK**

21.3.3 Deleting a group

To delete a user group:

1. From **Configuration** tab > **Options**, expand **Users and Groups** node.

2. Right-click on the group to be deleted and select **Delete**.

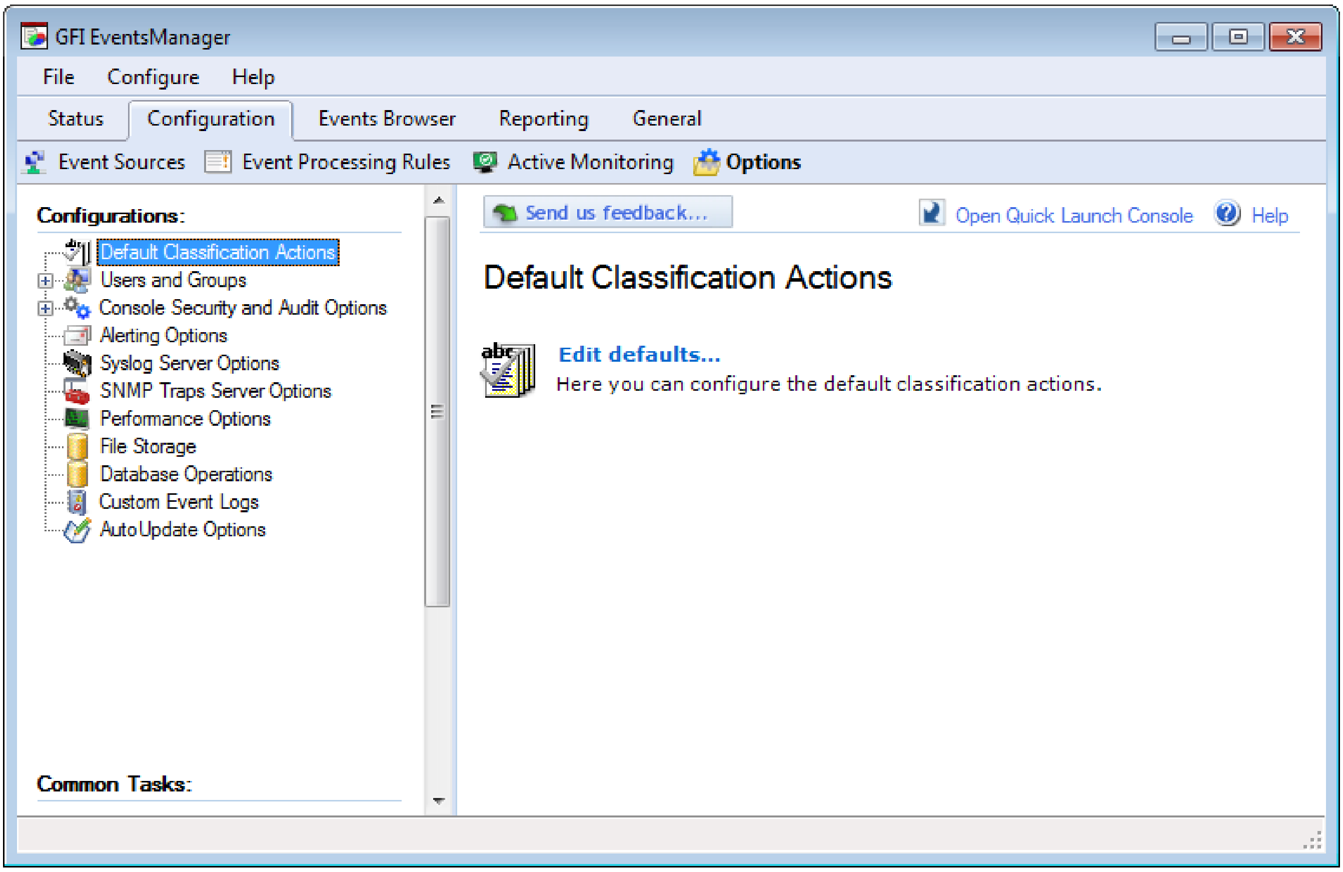
22 How to configure alerts

This section provides you with information about the available alerting methods and how to configure each according to your requirements. During event processing, GFI EventsManager automatically executes actions and triggers alerts whenever particular events are encountered.

Topics in this section:

22.1 Configuring Default Classification Actions

Through the configuration parameters provided in the default classification actions, you can trigger alerts and actions based only on event classification. Example: default classification parameters can be configured to trigger email alerts for all classified events (critical, high, medium and low) but archive only critical events.

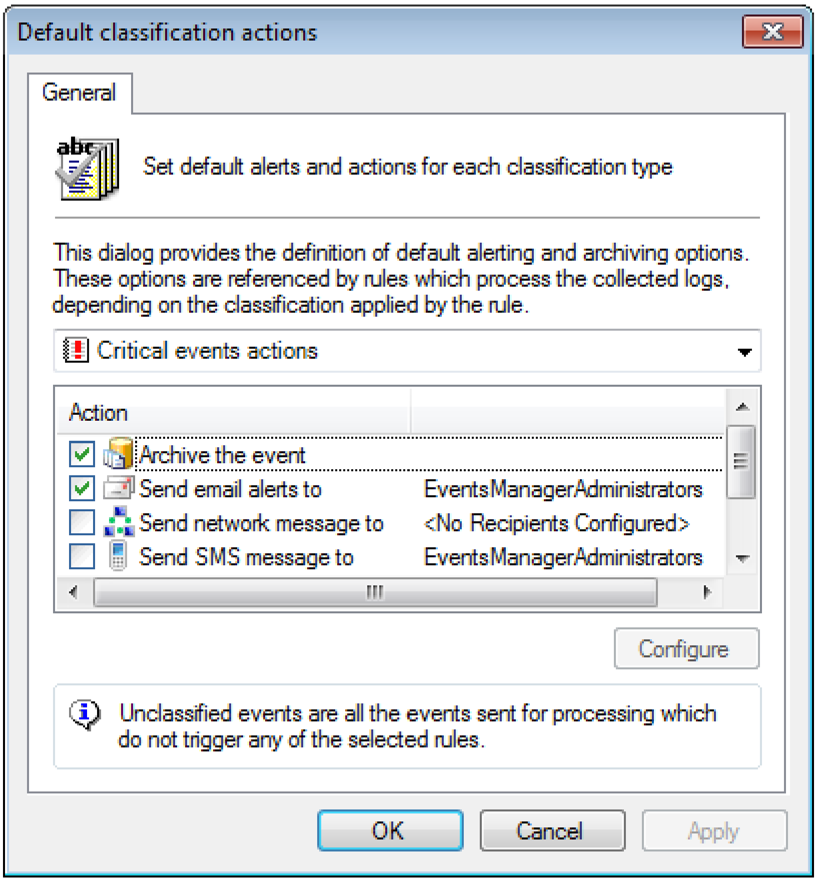


Here you can configure the default classification actions.

Screenshot 275: Configuring default classification actions

To configure Default Classification Actions:

1. From **Configuration** tab **>** **Options**, right-click **Default Classification Actions** node and **Edit defaults...**



Default classification actions

General

Set default alerts and actions for each classification type

This dialog provides the definition of default alerting and archiving options. These options are referenced by rules which process the collected logs, depending on the classification applied by the rule.

Critical events actions

Action	
☑ Archive the event	
☑ Send email alerts to	EventsManagerAdministrators
□ Send network message to	<No Recipients Configured>
□ Send SMS message to	EventsManagerAdministrators

Unclassified events are all the events sent for processing which do not trigger any of the selected rules.

Screenshot 276: Default Classification Actions dialog

2. From the drop-down menu, select the event classification to be configured.

3. From **Action** list, select actions to be triggered and click **Configure**. The available actions are:

Action	Description
Archive the event	Archives events without further processing.
Send email alerts to	Click **Configure** and select the recipients. **NOTE** Ensure that users have a valid email address configured. For more information refer to Managing user accounts.
Send network messages to	Click **Configure** and select the recipients. **NOTE** Ensure that users have a valid computer name/IP configured. For more information refer to Managing user accounts.
Send SMS message to	Click **Configure** and select the recipients. **NOTE** Ensure that users have a valid mobile number configured. For more information refer to Managing user accounts.

Action	Description
Run file	Click **Configure** and select the file to execute and specify any command-line parameters you want to pass to the file. Supported files include: » VB Scripts - *.VBS » Batch Files - *.BAT » Executables - *.EXE
Send SNMP Message	Click **Configure** and select the recipients.
Scan computer	GFI EventsManager re-audits the computer.
Run checks on computer	Click **Configure**, select the monitoring checks you want to run when the action is triggered. **Note** Active Monitoring is applied to the corresponding event sources, selected from the Target computers tab. For more information refer to Creating and configuring Active Monitoring checks. **Note** Ensure that Monitoring Checks processing is enabled or the checks will be discarded. For more information refer to Configuring event source monitoring.

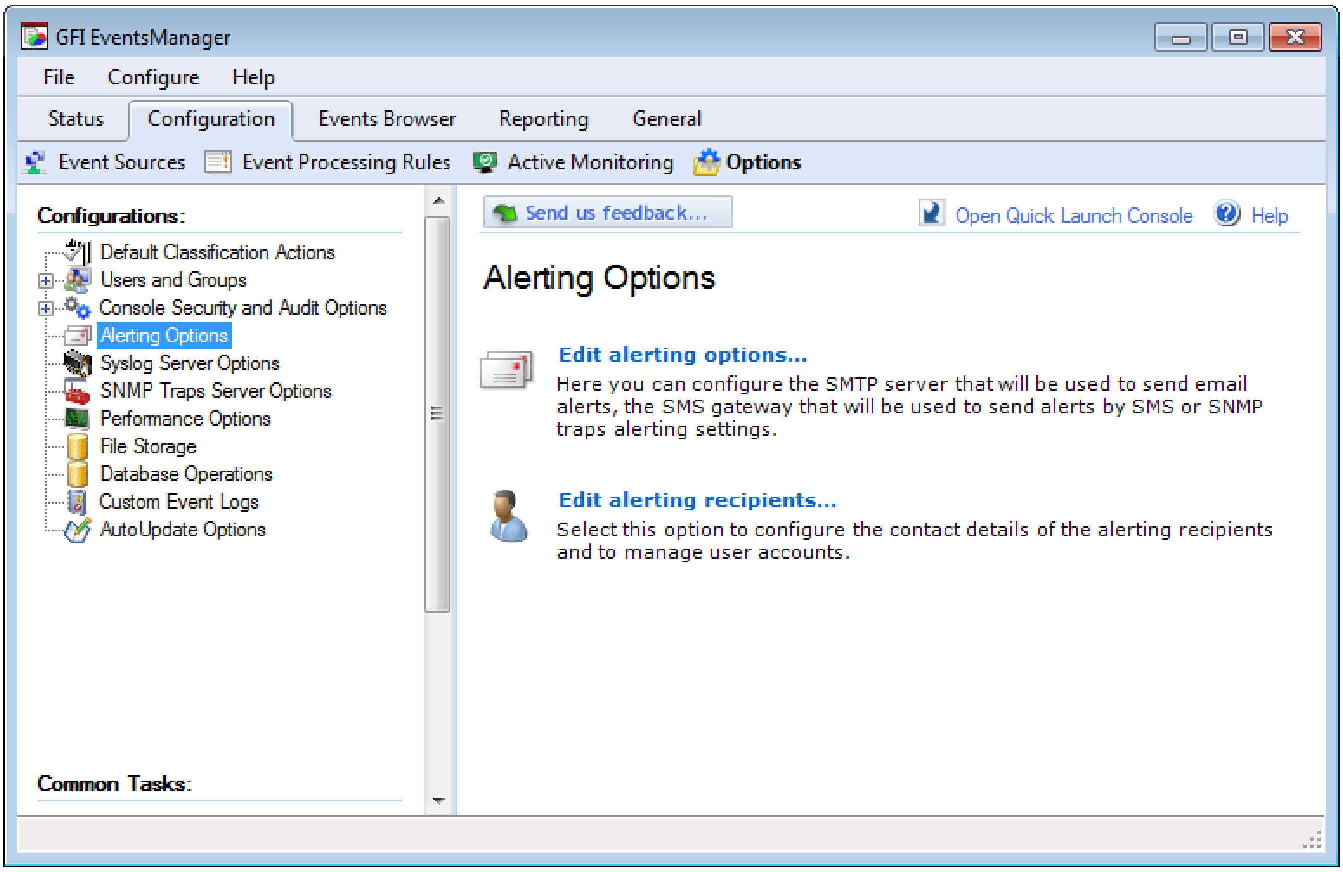
4. Click **Apply** and **OK**

> **Note**
>
> Running default actions on events classified as **Low**, may cause a lot of network traffic when email, SMS, network or SNMP alerts are enabled. This may also be problematic when archiving is enabled on Low importance events.

22.2 Configuring Alerting Options

Alerting options enable you to configure what alerts are triggered when particular events are encountered. For example, you can configure GFI EventsManager to send an email and SMS alert to one or more recipients when a critical event is processed.

To configure Alerting Options:



Alerting Options

Edit alerting options...

Here you can configure the SMTP server that will be used to send email alerts, the SMS gateway that will be used to send alerts by SMS or SNMP traps alerting settings.

Edit alerting recipients...

Select this option to configure the contact details of the alerting recipients and to manage user accounts.

Screenshot 277: Configuring Alerting Options

1. Go to **Configuration > Options**, right-click **Alerting Options** and select **Edit alerting options...**

2. Configure the alerting method of your choice.

- Configuring email alerts
- Configuring network alerts
- Configuring SMS alerts
- Configuring SNMP Traps alerts

22.2.1 Database errors alerts

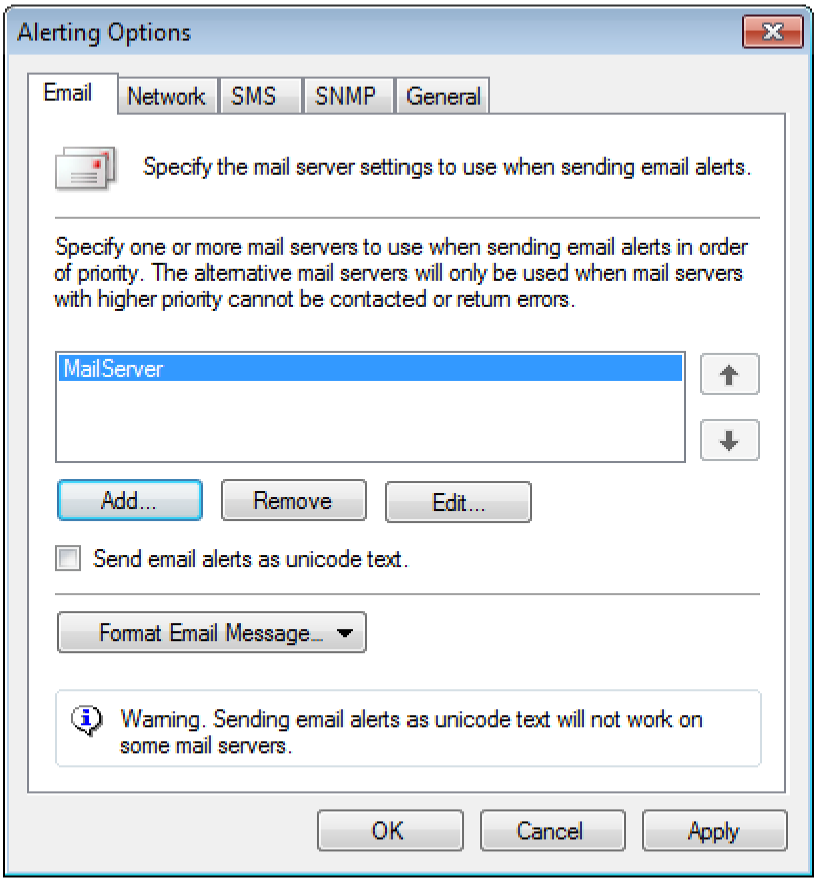
This section describes how to configure email alerts when database errors occur. Database errors include backup failures, data corruption, size exceeding maximum size specified and other database operation errors

To configure database error alert settings:

1. From the **Alerting Options** dialog, click **General** tab.

2. Check the option **Send email alerts on database errors** and click **OK**.

22.2.2 Email alerts



Specify the mail server settings to use when sending email alerts.

Specify one or more mail servers to use when sending email alerts in order of priority. The alternative mail servers will only be used when mail servers with higher priority cannot be contacted or return errors.

MailServer

□ Send email alerts as unicode text.

Warning. Sending email alerts as unicode text will not work on some mail servers.

Screenshot 278: Configuring Email options

To configure email alerts:

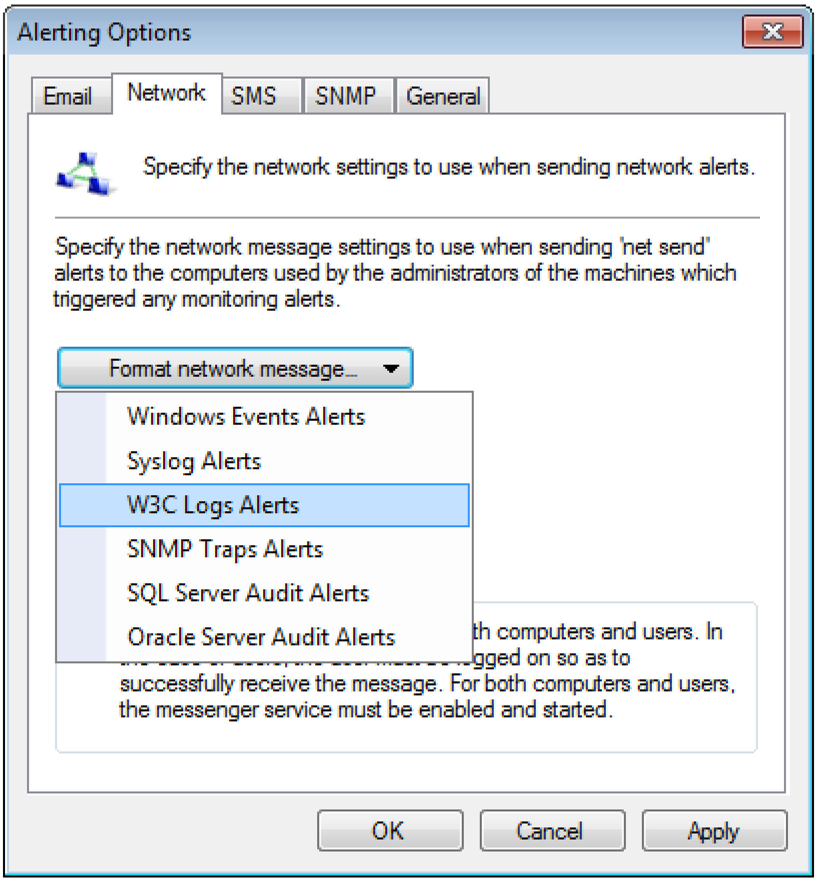
1. From the Alerting Options dialog, click **Email** tab.

2. Configure the options described below:

Option	Description
Add/Remove/Edit	Click **Add…** to specify the mail server details including the server name /IP, logon credentials and recipient email address. Use the **Remove** or **Edit** button to remove a selected server or edit details.
Up/Down arrow buttons	Use the arrow buttons to change the position of the selected mail server. GFI EventsManager attempts to deliver email alerts via the first mail server. If unsuccessful, it recursively checks the following mail servers.
Send email alerts as Unicode text	Select this option to send emails as Unicode text as opposed to HTML or RTF format.
Format Email Message	Optionally, from the Format Email Message drop-down menu, select the log type (Windows®, Text Logs, Syslog) and customize the email content.

3. Click **Apply** and **OK**

22.2.3 Network alerts



Specify the network settings to use when sending network alerts.

Specify the network message settings to use when sending 'net send' alerts to the computers used by the administrators of the machines which triggered any monitoring alerts.

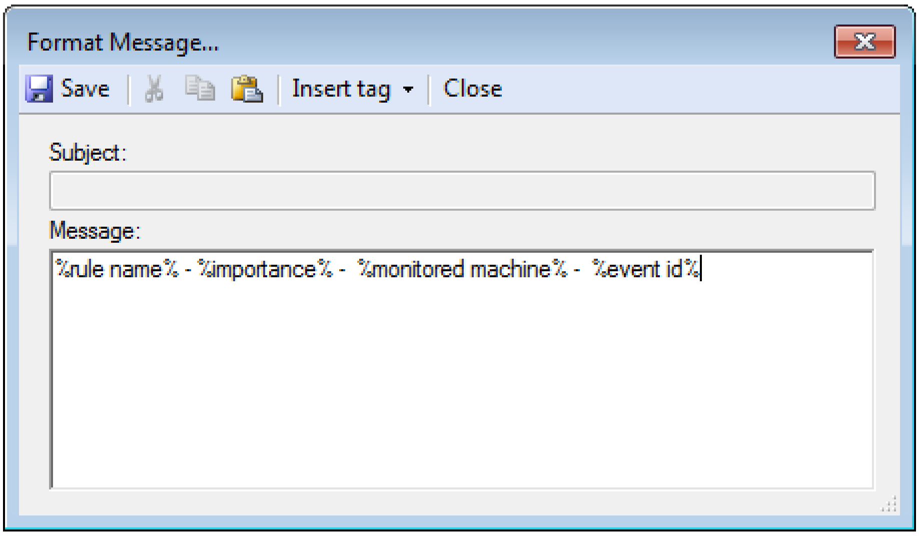
...th computers and users. In ...gged on so as to successfully receive the message. For both computers and users, the messenger service must be enabled and started.

Screenshot 279: Configuring Network options

To configure network alerts:

1. From the Alerting Options dialog, click **Network** tab.

2. From **Format network message…** drop-down menu, select the log type and customize the format of the message.



Subject:

Message:

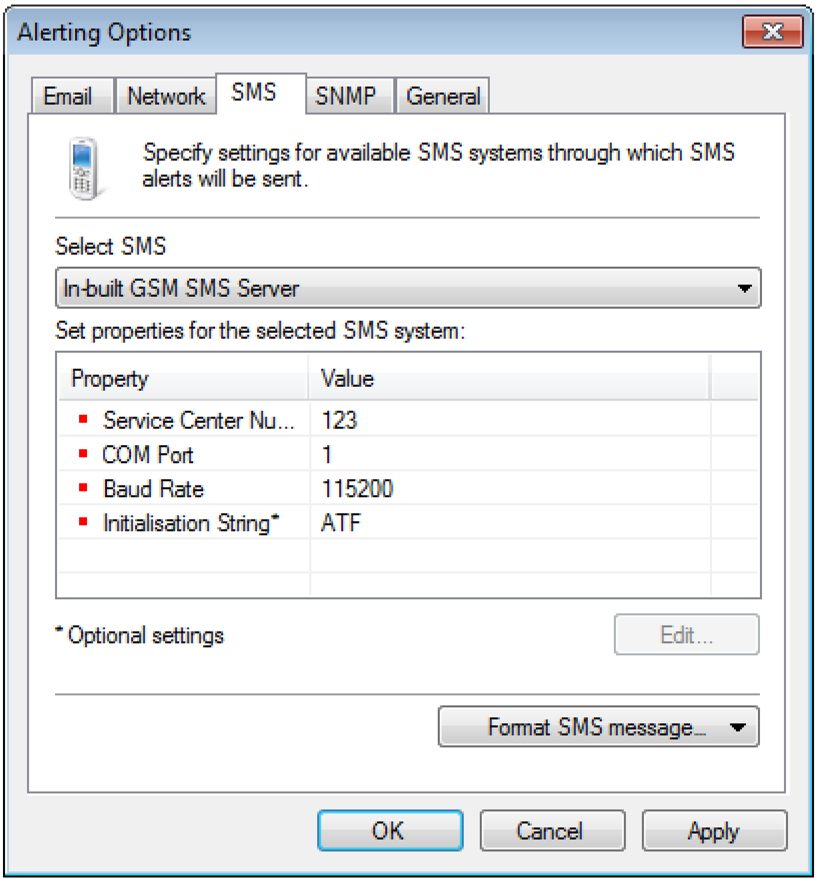
%rule name% - %importance% - %monitored machine% - %event id%

Screenshot 280: Configuring Network alerts: Format message

3. Click **Insert tag** to select from a list of tags to include in the message.

4. Click **Save** and **OK**

22.2.4 SMS alerts



Specify settings for available SMS systems through which SMS alerts will be sent.

Select SMS

In-built GSM SMS Server

Set properties for the selected SMS system:

Property	Value
▪ Service Center Nu...	123
▪ COM Port	1
▪ Baud Rate	115200
▪ Initialisation String*	ATF

* Optional settings

Screenshot 281: Configuring SMS options

To configure SMS alerts:

1. From the Alerting Options dialog, click **SMS** tab.

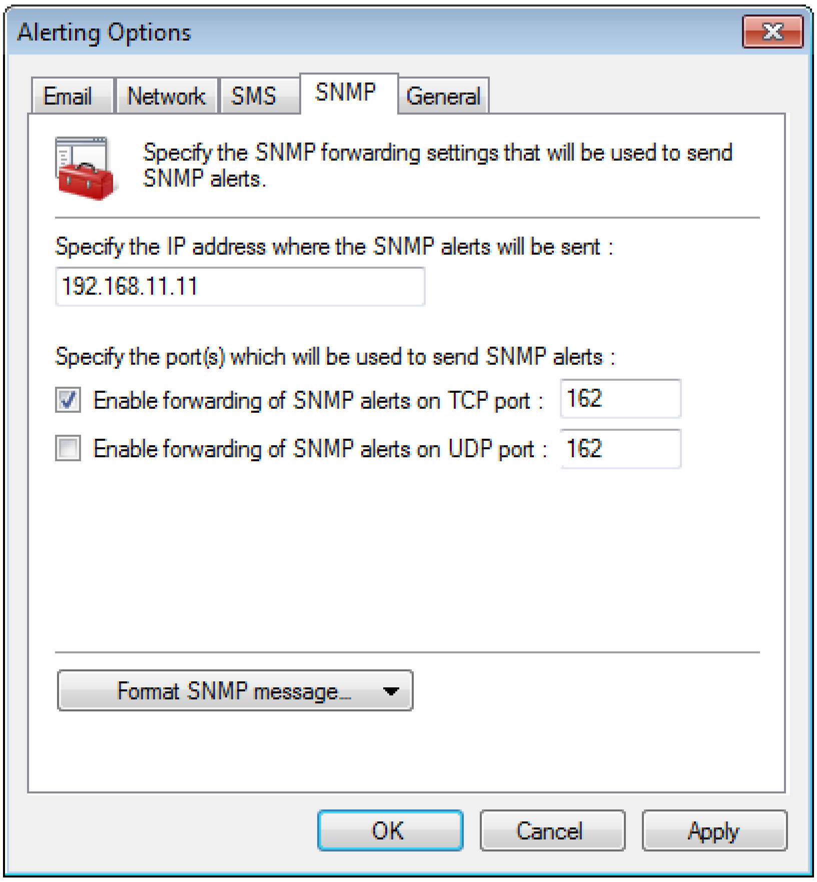
2. Configure the options described below:

Option	Description
Select SMS	Select the SMS service used to send SMS alerts. Available services include: » In-built GSM SMS Server » FaxMaker SMS service provider template » Clickatell Email2SMS Service » Generic SMS service provider template.
Set properties for the selected SMS system	Configure the properties for the selected SMS service type. Amongst others, property settings include: » Service center number » COM Port » Baud Rate » SMTP Server » SMTP Port. Click **Edit...** to configure the selected property.
Format SMS message	Optionally, from the **Format Email Message** drop-down menu, select the log type (Windows®, Text Logs, Syslog) and customize the email content.

3. Click **Apply** and **OK**

22.2.5 SNMP alerts

To configure SNMP alerts:



Specify the SNMP forwarding settings that will be used to send SNMP alerts.

Specify the IP address where the SNMP alerts will be sent : 192.168.11.11

Specify the port(s) which will be used to send SNMP alerts :

☑ Enable forwarding of SNMP alerts on TCP port : 162

□ Enable forwarding of SNMP alerts on UDP port : 162

Screenshot 282: Configuring SNMP alerts

1. From the **Alerting Options** dialog, click **SNMP** tab.

2. Configure the options described below:

Option	Description
Specify the IP address where the SNMP alerts will be sent	Enter the IP address of the recipient.
Specify the port(s) which will be used to send SNMP alerts	Specify TCP/UDP communication port. By default, the assigned port is 162.
Format SNMP message	Optionally, from the Format Email Message drop-down menu, select the log type (Windows®, Text Logs, Syslog) and customize the email content.

3. Click **Apply** and **OK**

23 Customising advanced options

Refer to the following guidelines to learn more about advanced customization options.

23.1 Configure events sources and log types

Use this option to extend the amount of event data processed by GFI EventsManager. This enables you to:

- Audit an even wider range of event sources as required by your specific network configuration through the addition of other computers / nodes
- Audit diverse event data other than Windows Event Logs. These include Text Logs (such as W3C, CSV, XML and DHCP logs), Syslogs, SNMP Traps Messages, Active Monitoring Event Logs, Microsoft SQL server and Oracle server audit logs. For more information, refer to Managing Event Sources (page 66).

23.2 Configure events processing rules

Use this option to customize the default set of events processing rules which ship with GFI EventsManager. This enables you to:

- Thoroughly investigate incidents through the isolation of specific events
- Take proactive action through the automated response to events on event generation.

For more information, refer to About events processing rules (page 173).

23.3 Configure database operations

Use this option to manage the database backend. This enables you to:

- Save space by deleting old or unnecessary data
- Safeguard and consolidate data by importing and exporting data to files
- Reduce database load by moving data between different instances of GFI EventsManager.

For more information, refer to Database Maintenance (page 223).

23.4 Configure alert recipients

Use this option to configure the user details of whoever needs to receive notification messages. This enables you to:

- Facilitate user setup through the creation and assignment of users to groups
- Send different notification messages to users depending on the notification type and whether the message is sent during user working hours or after working hours.

For more information, refer to Managing user accounts (page 311).

23.5 Configure alert options

Use this option to customize alert generation of notification messages. This enables you to:

- Customize the alert notification message text which will be relayed to the users
- Configure notification message settings for email, network message and SMS message connections. This includes setting up the SMS gateway and the email server details.

For more information, refer to Configuring Alerting Options (page 324).

23.6 Configure active monitoring

Use this option to scan your network for failures or irregularities. This enables you to:

- Identify and proactively fix unexpected problems before they occur
- Inspect network activity in granular detail by using a combination of active monitoring checks, events processing rules and alerts.

For more information, refer to Active Monitoring (page 188).

24 Troubleshooting

Use the information in the following sections to resolve issues encountered in GFI EventsManager:

- Documentation
- GFI Knowledge Base
- Request technical support
- Web forum
- Troubleshooter wizard

24.1 Documentation

If this manual does not satisfy your expectations, or if you think that this documentation can be improved in any way, let us know via email on: documentation@gfi.com.

24.2 GFI Knowledge Base

GFI maintains a comprehensive knowledge base repository, which includes answers to the most common problems. GFI Knowledge Base always has the most up-to-date listing of technical support questions and patches. In case the information in this guide does not solve your problems, next refer to GFI Knowledge Base by visiting: http://kb.gfi.com/.

24.3 Request technical support

If none of the resources listed above enable you to solve your issues, contact the GFI Technical Support team by filling in an online support request form or by phone.

- **Online**: Fill out the support request form and follow the instructions on this page closely to submit your support request on: http://support.gfi.com/supportrequestform.asp
- **Phone**: To obtain the correct technical support phone number for your region visit: https://www.gfi.com/company/contact.htm

> **Note**
> Before contacting Technical Support, have your Customer ID available. Your Customer ID is the online account number that is assigned to you when first registering your license keys in the GFI Customer Area at: http://customers.gfi.com.

We will answer your query within 24 hours or less, depending on your time zone.

24.4 Web forum

User to user technical support is available via the GFI web forum. Access the web forum by visiting: http://forums.gfi.com

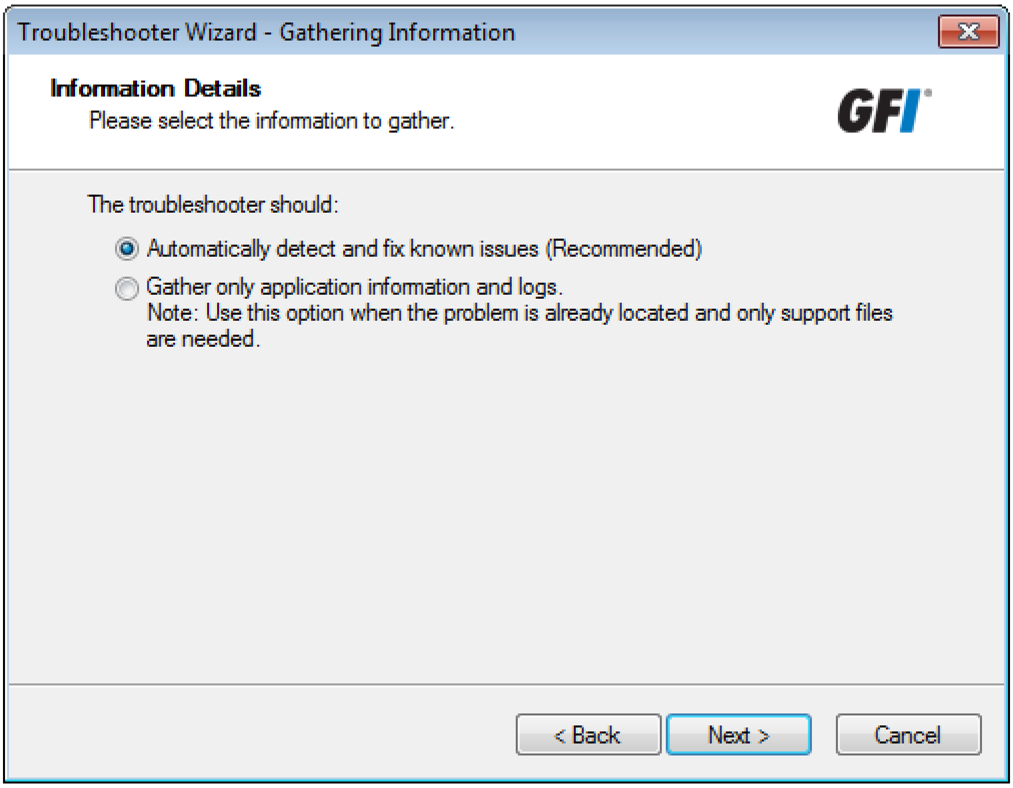
24.5 Using the troubleshooter wizard

To use the troubleshooting tool:

1. Go to the install folder of GFI EventsManager.

2. Locate and double-click **Trouble.exe**.

3. Click **Next** at the wizard welcome screen.



Information Details

Please select the information to gather.

The troubleshooter should:

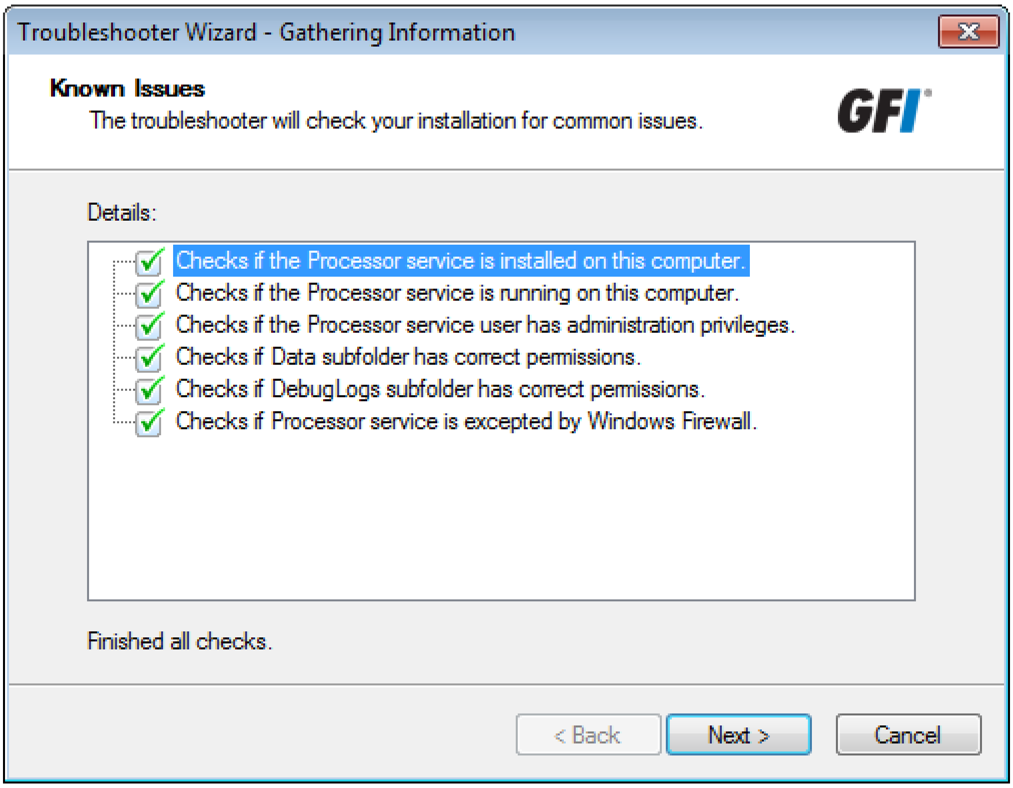
● Automatically detect and fix known issues (Recommended)

○ Gather only application information and logs.
Note: Use this option when the problem is already located and only support files are needed.

Screenshot 283: Select information gathering mode

4. Select how the troubleshooter will collect information. Select from:

- **Automatically detect and fix known issues** - Select this option to allow GFI EventsManager to run a set of checks to determine what is wrong
- **Gather only application information and logs** - Specify your contact details, issue description and your system information to upload them to our support team. If you choose this option, skip to step **9**.


Troubleshooter Wizard - Gathering Information

Known Issues

The troubleshooter will check your installation for common issues.

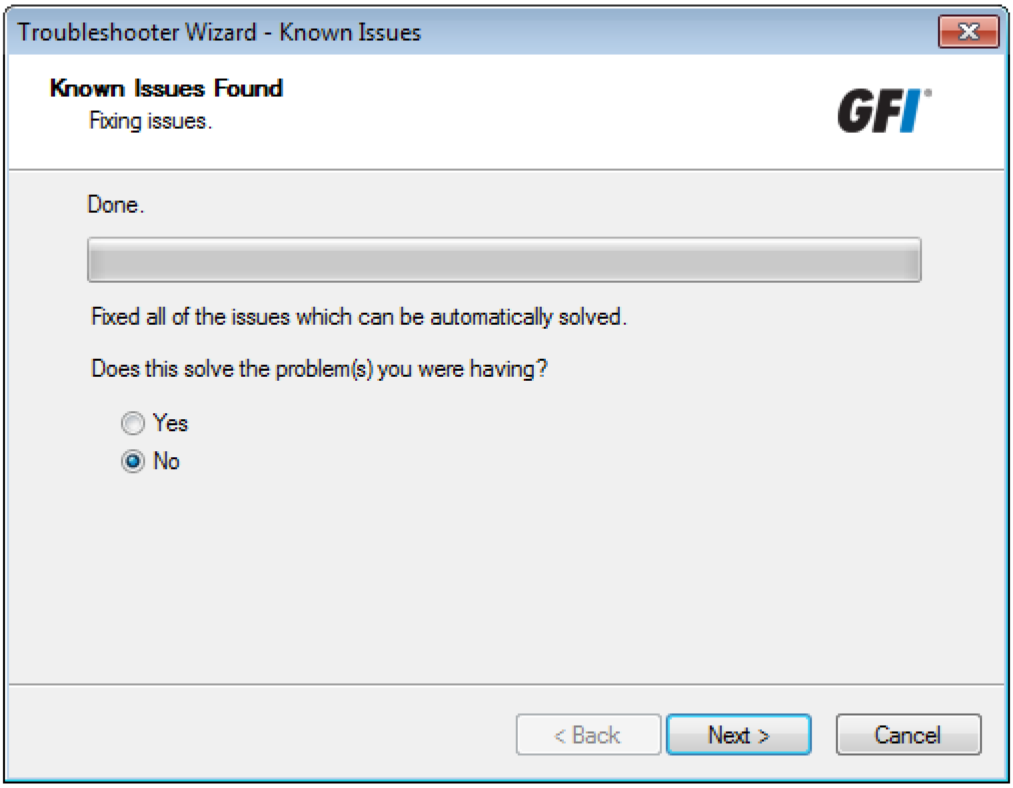
Details:

- ✓ Checks if the Processor service is installed on this computer.
- ✓ Checks if the Processor service is running on this computer.
- ✓ Checks if the Processor service user has administration privileges.
- ✓ Checks if Data subfolder has correct permissions.
- ✓ Checks if DebugLogs subfolder has correct permissions.
- ✓ Checks if Processor service is excepted by Windows Firewall.

Finished all checks.

Screenshot 284: Troubleshooter automatic checks

5. Wait for the troubleshooter to run the required checks and click **Next**.


Troubleshooter Wizard - Known Issues

Known Issues Found

Fixing issues.

Done.

Fixed all of the issues which can be automatically solved.

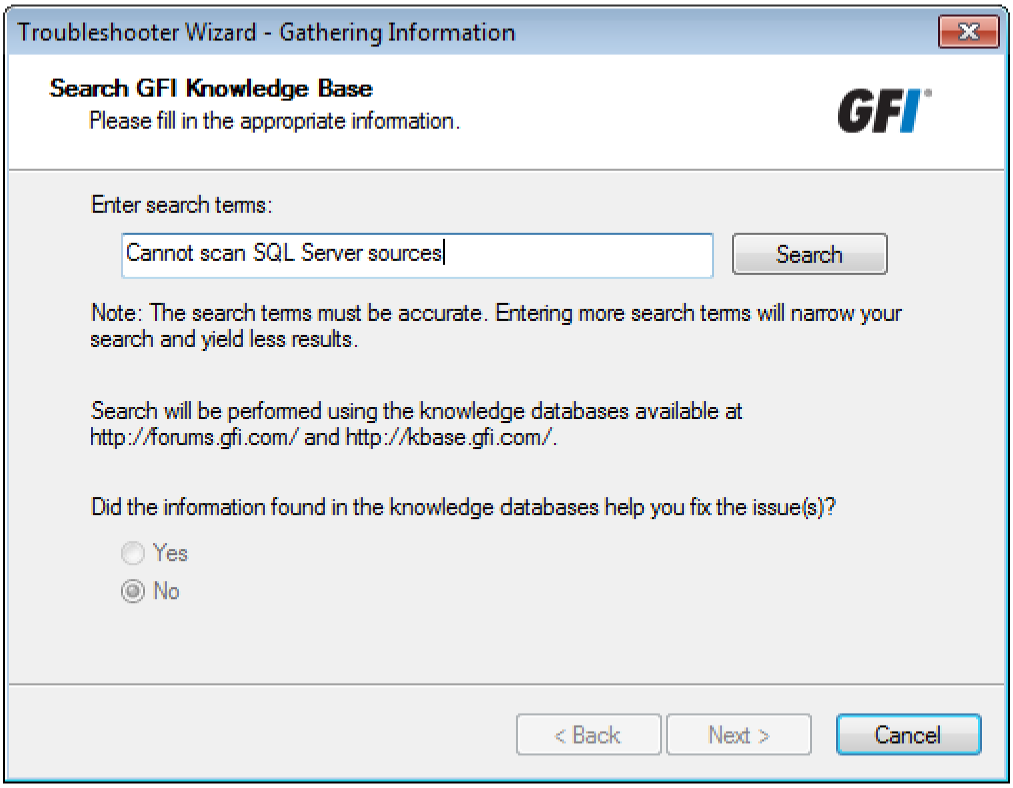
Does this solve the problem(s) you were having?

○ Yes

● No

Screenshot 285: Troubleshooter automatically fixing detected issues

6. Wait for the troubleshooter to apply fixes for issues detected during the check. If this solves your problem, click **Yes** and **Finish**. If the problem remains, select **No** and click **Next**.



Search GFI Knowledge Base

Please fill in the appropriate information.

Enter search terms:

Cannot scan SQL Server sources

Note: The search terms must be accurate. Entering more search terms will narrow your search and yield less results.

Search will be performed using the knowledge databases available at http://forums.gfi.com/ and http://kbase.gfi.com/.

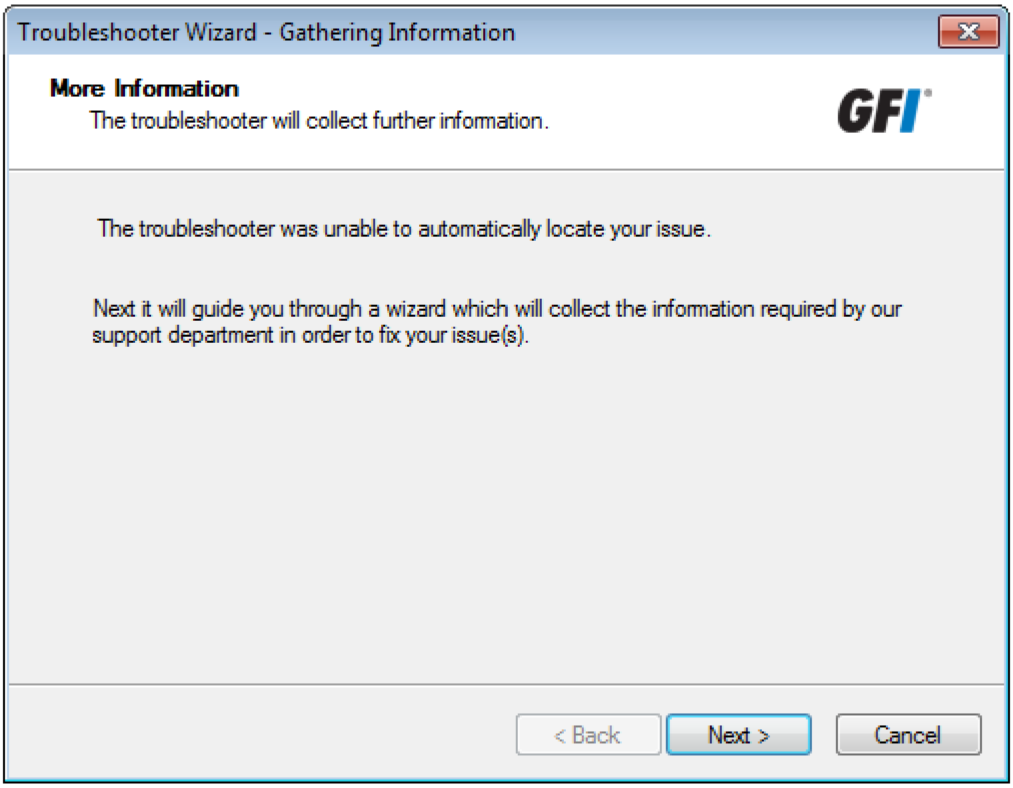
Did the information found in the knowledge databases help you fix the issue(s)?

○ Yes

● No

Screenshot 286: If the problem persists, search for articles on our knowledge base

7. Search our knowledge base archive for articles related to your problem. Key in the error your are encountering in the **Enter search items** text box and click **Search**. If this solves your problem, click **Yes** and **Finish**. If the problem remains, select **No** and click **Next**.



More Information

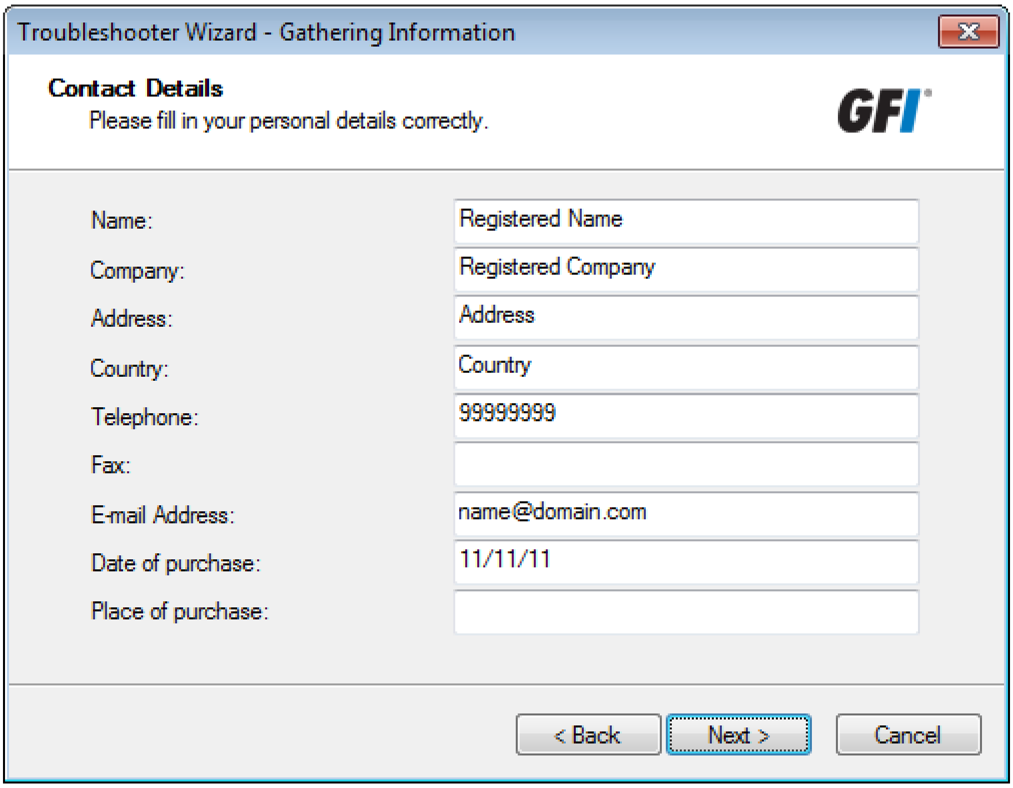
The troubleshooter will collect further information.

The troubleshooter was unable to automatically locate your issue.

Next it will guide you through a wizard which will collect the information required by our support department in order to fix your issue(s).

Screenshot 287: Manually checking for issues

8. Click **Next**.


Troubleshooter Wizard - Gathering Information

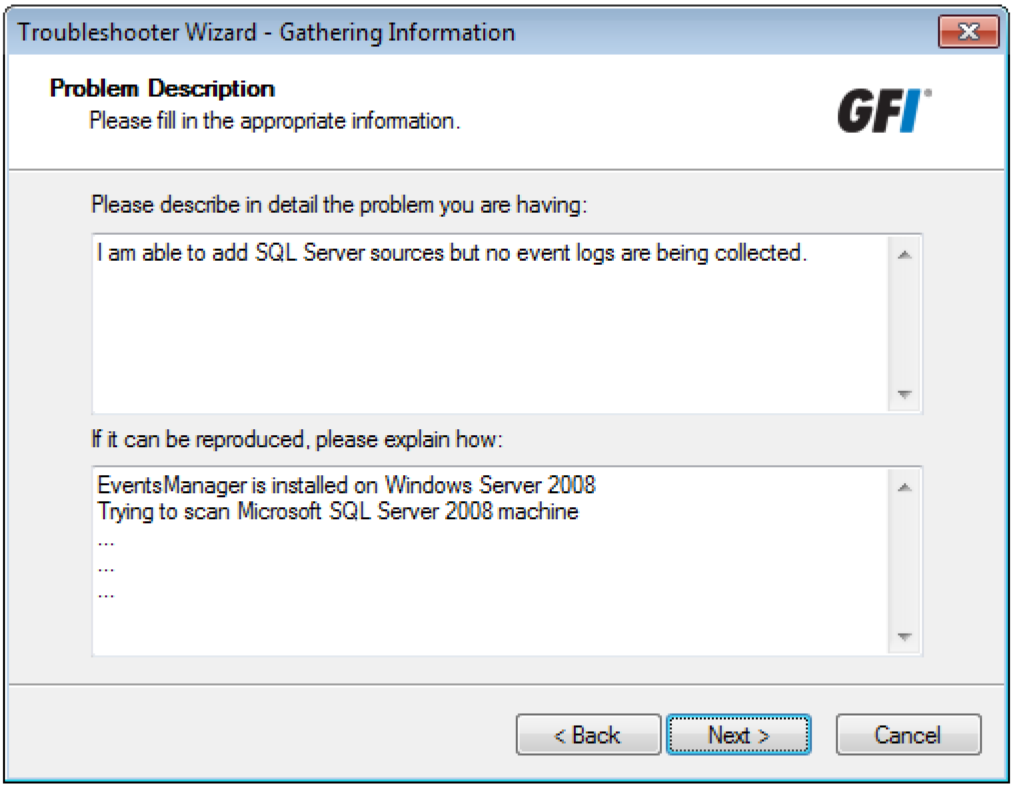
Contact Details

Please fill in your personal details correctly.

Name:	Registered Name
Company:	Registered Company
Address:	Address
Country:	Country
Telephone:	99999999
Fax:	
E-mail Address:	name@domain.com
Date of purchase:	11/11/11
Place of purchase:	

Screenshot 288: Specify contact details

9. Key in your contact details so that our support team would be able to contact you for further analysis information. Click **Next**.


Troubleshooter Wizard - Gathering Information

Problem Description

Please fill in the appropriate information.

Please describe in detail the problem you are having:

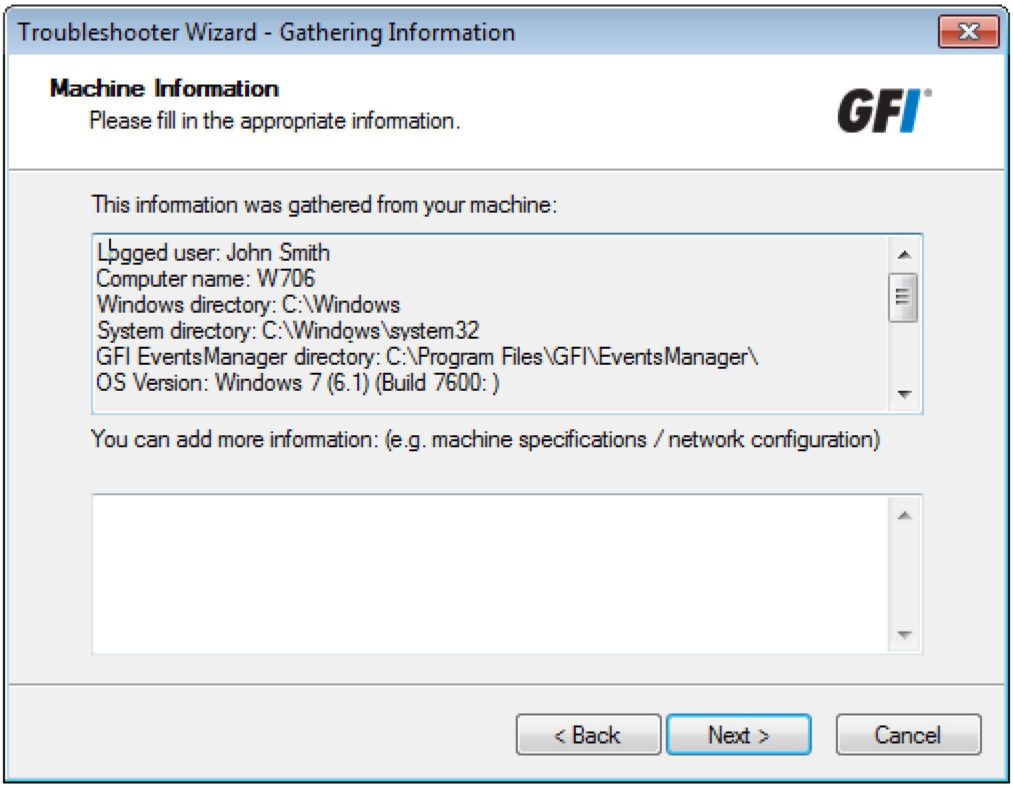
I am able to add SQL Server sources but no event logs are being collected.

If it can be reproduced, please explain how:

EventsManager is installed on Windows Server 2008
Trying to scan Microsoft SQL Server 2008 machine
...
...
...

Screenshot 289: Key in the problem description and other information

10. Specify the error you are getting and other information that would help our support team to recreate this issue. Click **Next**.


Troubleshooter Wizard - Gathering Information
Machine Information
Please fill in the appropriate information.
GFI
< Back
Next >
Cancel

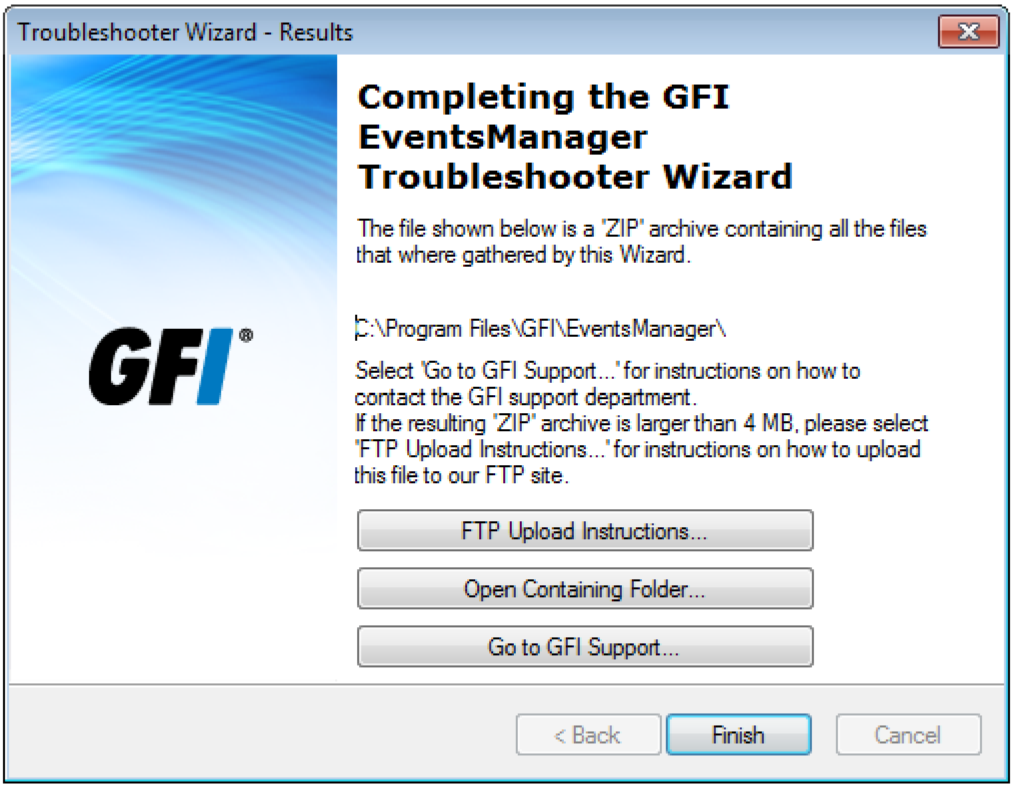
This information was gathered from your machine:

```
Logged user: John Smith
Computer name: W706
Windows directory: C:\Windows
System directory: C:\Windows\system32
GFI EventsManager directory: C:\Program Files\GFI\EventsManager\
OS Version: Windows 7 (6.1) (Build 7600: )
```

You can add more information: (e.g. machine specifications / network configuration)

Screenshot 290: Gathering machine information

11. The troubleshooter scans your system to get hardware information. You can manually add more information in the space provided or click **Next**.


Troubleshooter Wizard - Results
GFI
FTP Upload Instructions...
Open Containing Folder...
Go to GFI Support...
< Back
Finish
Cancel

Completing the GFI EventsManager Troubleshooter Wizard

The file shown below is a 'ZIP' archive containing all the files that where gathered by this Wizard.

C:\Program Files\GFI\EventsManager\

Select 'Go to GFI Support...' for instructions on how to contact the GFI support department.
If the resulting 'ZIP' archive is larger than 4 MB, please select 'FTP Upload Instructions...' for instructions on how to upload this file to our FTP site.

Screenshot 291: Finalizing the troubleshooting process

12. At this stage, the troubleshooter creates a package with the information gathered from the previous steps. Next, send this package to our support team so they can analyze and troubleshoot your problem. Select from:

- **FTP Upload Instructions** - Opens an article to give you instructions on how you can upload the troubleshooter package to our FTP server
- **Open Containing Folder** - Opens the folder containing the troubleshooter package so that you can send it via email
- **Go to GFI Support** - Opens the support page of GFI website.

13. Click **Finish**.

25 Glossary

A

Actions

The activity that will be carried out as a result of events matching specific conditions. For example you can trigger actions whenever an event is classified as critical. Actions supported by GFI EventsManager include Email alerts, event archiving and execution of scripts.

Alerts

Notifications which inform recipients that a particular event has occurred. GFI EventsManager can generate Email alerts, SMS alerts and Network alerts.

Archive

A collection of events stored in the SQL Server based database backed of GFI EventsManager.

Audit account management

Generates events when account management operations are done such as create/delete a user account or group, enable/disable a user account and set/change a user password. For more information, refer to http://technet.microsoft.com/en-us/library/cc737542(WS.10).aspx

Audit process tracking

Generates events which track actions such as programs which are launched, closed, as well as other indirect object access information which contain important security information. For more information, refer to http://technet.microsoft.com/en-us/library/cc775520(WS.10).aspx

Audit system events

Generates events when important system events happen such as user restarts or shuts down the target computer or when an event occurs that affects the security log. For more information, refer to http://-technet.microsoft.com/en-us/library/cc782518(WS.10).aspx

C

COM+ Network Access

Enable this firewall permission to allow client machines to access applications or services that resides on the server. This allows GFI EventsManager to access resource from all servers. For more information about this permission, refer to http://technet.microsoft.com/en-us/library/cc731967.aspx

E

Email alerts

Email notifications which inform recipients that a particular event has occurred. To enable email alerts, you must have access to an active mail server.

Event classification

The categorization of events as Critical, High Medium, Low or Noise.

Event logs

A collection of entries which describe events that occurred on the network or on a computer system. GFI EventsManager supports different types of event logs including: Windows Event Log, W3C Logs, Syslog, SNMP Traps and SQL Server audit events.

Event processing rules

A set of instructions which are applied against an event log.

F

File and Printer sharing

Enable this firewall permission to allow GFI EventsManager to access events definitions on target machines. For more information, refer to http://technet.microsoft.com/en-us/library/cc779133 (WS.10).aspx

I

Internet Protocol Security

A framework of open standards used to encrypt and authenticate network packets during a communication session between computers. Using cryptography services, IPsec ensures data integrity, authentication and confidentiality.

IPsec

Internet Protocol Security is a framework for a set of protocols for security at the network or packet processing layer of network communication. Earlier security approaches have inserted security at the Application layer of the communications model. IPsec is said to be especially useful for implementing virtual private networks and for remote user access through dial-up connection to private networks. A big advantage of IPsec is that security arrangements can be handled without requiring changes to individual user computers.

M

Management Information Base

A MIB is the equivalent of a data dictionary or codebook. It associates object identifiers (OIDs) with a readable label and various other parameters related to an active network object such as a router. Its main function is to assemble and interpret SNMP messages transmitted from SNMP-enabled network devices. The information stored in MIBs is organized hierarchically and is normally accessible using a protocol such as SNMP.

N

Network alerts

Network messages (known as Netsend messages) which inform recipients that a particular event has occurred. These messages are sent through an instant messenger system/protocol and are shown as a popup in the system tray of the recipient’s desktop. To setup network alerts, you must specify the name or IP of the computers where the Netsend messages will be sent.

Network discovery

Enable this firewall permission to allow GFI EventsManager to gather information about connected machines on the network that can be scanned. For more information, refer to http://-technet.microsoft.com/en-us/library/cc181373.aspx

Noise

Repeated log entries which report the same event.

O

Object auditing

Enable this auditing feature to audit events of users accessing objects (example, files, folder and printer). For more information, refer to http://technet.microsoft.com/en-us/library/cc976403.aspx

R

Remote Event Log Management

Required to allow GFI EventsManager to access and collect events from remote machines. For more information, refer to http://technet.microsoft.com/en-us/library/cc766438.aspx

Rule-set folder

The folder which contains one or more rule-sets.

Rule-sets

A collection of event processing rules.

S

SMS alerts

SMS notifications which inform recipients that a particular event has occurred. In GFI EventsManager, SMS alerts can be sent through various sources including mobile phones with modem capabilities and email-to-SMS web-based gateways.

SNMP Object Identifier (OID)

An SNMP object identifier is an address made up of a sequence of 'dotted' numbers (Example: 1.3.6.1.4.1.2682.1). These numbers uniquely identify and locate a specific device (Example: hub) within the entire network. SNMP OIDs are a key component in the assembly of SNMP messages. In fact, an SNMP server cannot interpret or assemble messages which don't have an OID. Individual vendors often create their own MIBs that only include the OIDs associated specifically with their device.

SNMP Traps

Notifications/alerts generated and transmitted by active network components (Example: hubs, routers and bridges) to SNMP server(s) whenever important events such as faults or security violations occur. Data contained in SNMP Traps may contain configuration, status as well as statistical information such as number of device failures to date.

Syslog messages

Notifications/alerts most commonly generated and transmitted to a Syslog server by UNIX and Linux-based systems whenever important events occur. Syslog messages can be generated by workstations, servers as well as active network devices and appliances such as Cisco routers and Cisco PIX firewalls to record failures and security violations amongst other activities.

U

Unclassified events

Events that did not satisfy any of the event processing conditions configured in the event processing rules.

W

W3C logs

W3C is a common log format developed by the World Wide Web Consortium. W3C logs are text-based flat files used mainly by web servers including Microsoft Internet Information Server (IIS) to record web related events such as web logs.

Windows Event Logs

A collection of entries which describe events that occurred on a computer system running Windows OS.

26 Index