



NETWRIX FILE SERVER CHANGE REPORTER

ADMINISTRATOR'S GUIDE

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1. INTRODUCTION

1.1. Overview

This guide is intended for system administrators and integrators who are going to install and configure NetWrix File Server Change Reporter.

From this guide you will learn:

- What functionality NetWrix File Server Change Reporter provides;
- What settings are required for your environment to use NetWrix File Server Change Reporter successfully;
- How to configure options and settings available in NetWrix File Server Change Reporter;
- How to start using NetWrix File Server Change Reporter and view reports.

1.2. How This Guide is Organized

This section explains how this guide is organized and provides a brief overview of each chapter.

- Chapter [1 Introduction](#): the current chapter. It explains the purpose of this document and explains its structure.
- Chapter [2 Product Overview](#): gives description of the product key features, benefits, workflow, and provides license information.
- Chapter [3 Getting Started](#): lists all product requirements and the requirements to the monitored environment, explains how to install NetWrix File Server Change Reporter and configure audit policies on the monitored servers.
- Chapter [4 Working with the Standard Configuration Mode](#): provides a description of the Standard Configuration mode options, instructions on how to configure the mode settings and start using the reporting functionality.
- Chapter [5 Working with the Enterprise Configuration Mode](#): provides a description of the Enterprise Configuration mode options, instructions on how to configure the mode settings and start using the reporting functionality.
- Chapter [6 Additional Configuration](#): provides a description of the additional configuration options available in NetWrix File Server Change Reporter.
- [A Appendix: Monitored Object Types and Attributes](#): contains a full list of all object types and attributes that can be monitored by NetWrix File Server Change Reporter.
- [B Appendix: Related Documentation](#): contains a list of all documentation published to support NetWrix File Server Change Reporter.

2. PRODUCT OVERVIEW

File server auditing is a critical requirement for organizations that rely on file servers to store their documents and network applications. Unauthorized and accidental changes to the files and folders structure, permissions, file shares, and other objects can significantly impact users and company infrastructure by facilitating data theft and security threats.

NetWrix File Server Change Reporter audits important file server changes and sends reports on:

- Successful and/or failed read access attempts;
- Successful and/or failed object modification attempts, including modifications of files, folders, shares, and permissions.

2.1. Key Features

NetWrix File Server Change Reporter helps you carry out the following auditing and reporting tasks:

- Detect and report on successful/failed object read access and successful/failed change attempts. Reports include information about events telling the user *what* was done, *who* accessed an object or made changes, *where* this happened and *when*.
- Report on the previous and current values for every change.
- Generate on-demand Web-based reports.
- Create custom reports (can also be ordered at NetWrix).
- Store collected audit data and enable historical reporting for any period of time.

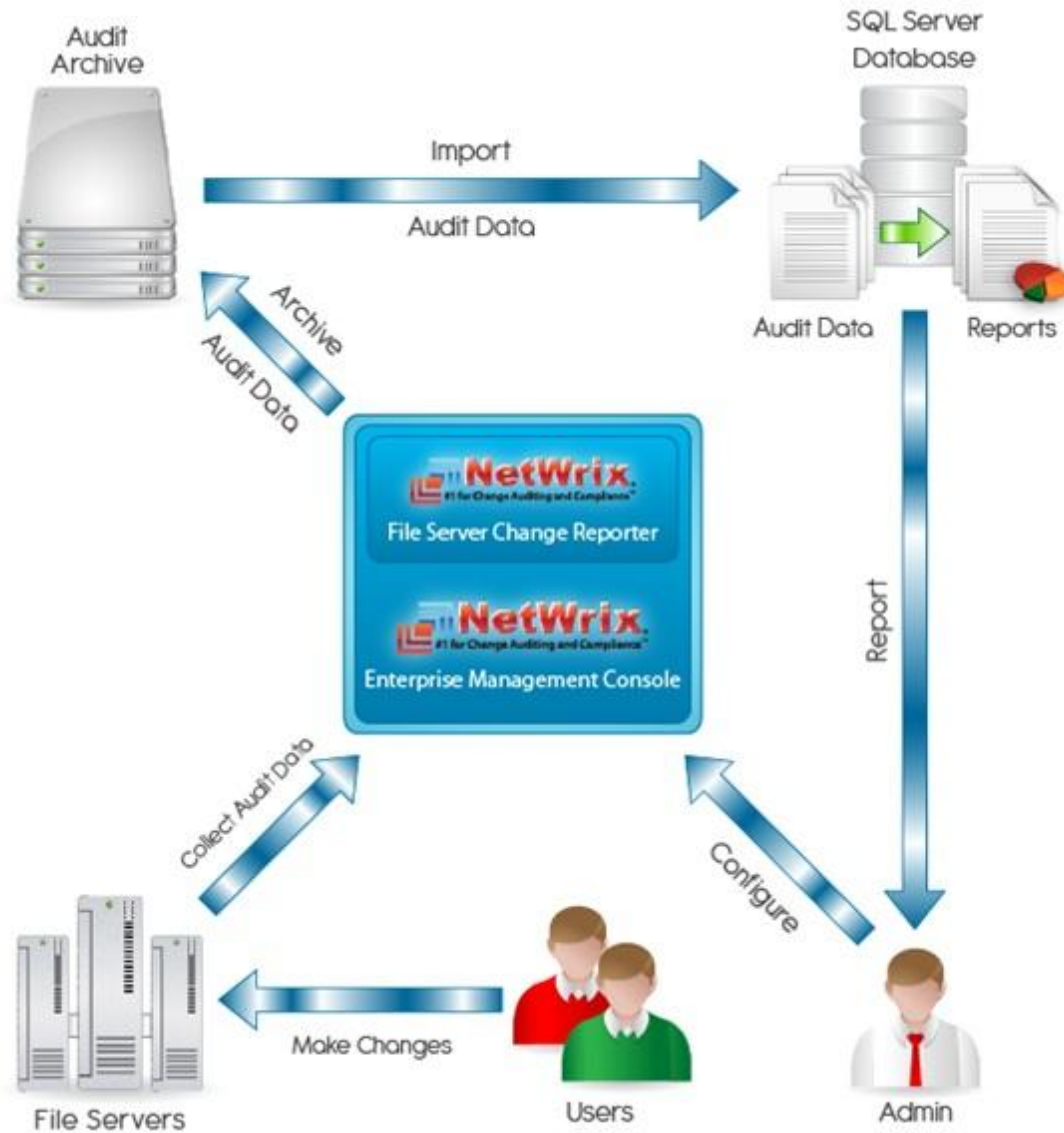
The product supports the following file server types: Windows® Server, NetApp® filer, and EMC VNX/VNXe/Celerra (please note: NetApp® filer and EMC VNX/VNXe/Celerra are only configurable and available in the NetWrix File Server Change Reporter Standard configuration mode of the Enterprise Edition).

2.2. How It Works

NetWrix File Server Change Reporter data collection and reporting workflow is as follows:

1. The user launches the configuration utility and sets the parameters for automated data collection and reporting, choosing whether to report on:
 - Successful modifications
 - Failed modification attempts
 - Successful read access
 - Failed read access attempts
2. A dedicated scheduled task which is launched periodically (every day, at 3 AM by default; it can also be launched manually when needed) collects file server snapshots and/or audit data, and sends an email with a report to the specified recipients. The task name is *NetWrix Management Console - File Server Change Reporter - <your Managed Object name>*.
3. In the Enterprise Edition, if Advanced Reports are enabled and configured, the task will also enable saving information about the file server changes into a specified Microsoft SQL Server database (you can use the Database Importer tool to import data on demand, for details refer to Section [6.6 Importing Changes That Occurred Between Two Snapshots](#)). You can run and view reports in the Report Manager through a web browser or via NetWrix Management Console.
4. Additionally, you can generate and view on-demand reports through NetWrix Management Console or via the Report Viewer utility.

Figure 1: The NetWrix File Server Change Reporter Workflow Chart



2.3. Licensing

NetWrix File Server Change Reporter is available in two editions: Freeware and Enterprise. The table below outlines the difference between them.

Table 1: The NetWrix File Server Change Reporter Editions

Feature	The Freeware Edition	The Enterprise Edition
Long-term archiving of audit data	No	Any period of time
Reporting on <i>who</i> made the changes and <i>when</i>	No	Yes
Single installation handles multiple computer collections, each with its individual settings	No	Yes
Integrated interface for all NetWrix products, which provides centralized configuration and settings management	No	Yes
Advanced reports based on MS SQL Server Reporting Services, with filtering, grouping and sorting	No	Yes
Custom reports	No	Yes. Create manually or order from NetWrix
Permissions change reports	Not detailed	Detailed
Technical Support	Support Forum , Knowledge Base	Full range of options (phone, email, submission of support tickets, Support Forum , Knowledge Base)
Advanced Reports can be viewed directly from NetWrix Management Console	No	Yes
Licensing	Free of charge	Per server; please request a quote

The Freeware Edition can be used by companies and individuals for an unlimited period of time, at no charge. The Enterprise Edition can be evaluated free of charge for 20 days.

Note: You are eligible for free technical support during the evaluation period of all NetWrix products. If you encounter any problem or would like to get assistance with installation, configuration or implementation of NetWrix File Server Change Reporter, please [contact our support specialists](#).

3. GETTING STARTED

This chapter describes the necessary prerequisites for the NetWrix File Server Change Reporter installation.

3.1 Installation Prerequisites

3.1.1 Hardware Requirements

Before installing NetWrix File Server Change Reporter, make sure that your system meets the following hardware requirements:

Table 2: The NetWrix File Server Change Reporter Hardware Requirements

Component	Minimum	Recommended
Processor	Intel or AMD 32 bit, 2GHz	Intel or AMD 64 bit, 3GHz
Memory	512MB RAM	2GB RAM
Disk	50MB physical disk space for the installation	See recommendations below

To estimate the approximate size of the disk space required for the Audit Archive, follow the procedure below:

Procedure 1. To estimate approximate disk space required for the Audit Archive

1. Calculate the audit data volume generated per hour. To do this, define the total time of the retention period for events in your security log, starting from the time of the first event up to the time of the last event. Divide the current size of the security log by the time range in hours, for example:

$$700 \text{ (MB, the current security log size)} / 7 \text{ (the period of time (in hours) during which events were written to the security log)} = 100.$$
 The audit data volume generated per hour equals 100 MB.
2. Calculate the audit data volume generated per day. To do this, multiply the audit data volume generated per hour by 24, for example:

$$100 \text{ (MB, the audit data volume generated per hour)} \times 24 = 2400.$$
 The audit data volume generated per day equals to 2400 MB.
3. Calculate the approximate disk space size required per day. To do this, define the compressed size of the audit data volume generated per day. Divide the audit data volume by 30, for example:

$$2400 \text{ (MB, the audit data volume generated per day)} / 30 = 80.$$
 The compressed size of the audit data volume generated per day equals 80 MB.

Note: Please make sure that the TEMP folder has enough space to keep the amount of data equivalent to the security logs volume generated between data collections. All calculations above are approximate. The actual repository disk space consumption depends on user access activity and selected audit types (file modifications only or file reads as well).

3.1.2 Software Requirements

Before installing NetWrix File Server Change Reporter, make sure that your system meets the following software requirements:

Table 3: The NetWrix File Server Change Reporter Software Requirements

Component	Requirement
Operating System	Windows XP SP3 or later
Framework	.NET Framework 2.0 , 3.0 or 3.5

3.1.3 Target File Server Requirements

The following requirements apply to the monitored file servers:

Table 4: File Server Requirements

File Server Type	Requirements
Microsoft Windows File Server	Operating System: Windows 2000 SP4 or later .NET Framework* 2.0 , 3.0 or 3.5 .
NetApp filer (CIFS configuration only)	CIFS Network Protocol support
EMC VNX/VNXe/Celerra families (CIFS configuration only)	CIFS Network Protocol support

* .NET Framework is only required if you are going to use the network traffic compression option, for details about this option refer to the [Section 6.1 Network Traffic Compression](#).

Note: NetApp filer and EMC VNX/VNXe/Celerra are only configurable in the NetWrix File Server Change Reporter Standard configuration mode.

3.1.4 Requirements to the Security Event Log Maximum Size

The following requirements apply to the maximum size of the security event log on your target file server:

Table 5: Security Event Log Requirements for Windows Operating Systems

Operating System on the computer		Network Traffic Compression option is enabled	Security log auto archiving is enabled	Security Event Log Maximum Size
where NetWrix File Server Change Reporter is installed	which is monitored by NetWrix File Server Change Reporter			
Windows 2000/XP/2003/Vista/7/2008/2008 R2	Windows 2000/XP/2003	Yes /No	Yes /No	300 MB
Windows 2000/XP/2003	Windows Vista/7/2008/2008 R2	No	No	300 MB
Windows 2000/XP/2003	Windows Vista/7/2008/2008 R2	No	Yes	Configuration is not supported
Windows 2000/XP/2003	Windows Vista/7/2008/2008 R2	Yes	Yes/No	4 GB
Windows Vista/7/2008/2008 R2	Windows Vista/7/2008/2008 R2	Yes/ No	Yes/No	4 GB

If you monitor computers with NetApp or EMC VNX/VNXe/Celerra data storage system installed, the following size is recommended:

Table 6: Security Event Log Requirements for Data Storage Systems

Operating System where NetWrix File Server Change Reporter is installed	Data Storage System	Security Event Log Maximum Size
Windows 2000/XP/2003	Net App filer EMC VNX/VNXe/Celerra	300 MB
Windows Vista/7/2008/2008 R2	Net App filer	4 GB (300 MB is recommended, depending on productivity)
Windows Vista/7/2008/2008 R2	EMC VNX/VNXe/Celerra	4 GB

Note: If you move security log files from the default system folder to a non-default one, you must reboot your target server for the reporting functionality to work properly.

3.1.5 Supported Microsoft SQL Server Versions

For the Advanced Reporting feature, which is only supported in the Enterprise Edition, you need to have Microsoft SQL Server 2005, 2008 or 2008 R2 with Reporting Services configured. SQL Server 2005 Express Edition with Advanced Services can be installed and configured automatically. For your convenience, we have provided instructions on the manual installation of SQL Server with Reporting Services required for NetWrix File Server Change Reporter. For a step-by-step procedure, please refer to the following technical article: [Installing Microsoft SQL Server and Configuring the Reporting Services](#). For full installation and configuration details, refer to documentation provided by Microsoft.

3.1.6 Required Rights and Permissions

For data collection and reports generation, NetWrix File Server Change Reporter uses the account under which the scheduled task is run. This account must be granted the following permissions:

- Read access to the monitored shared folders
- “Manage auditing and security log” policy enabled

The account under which NetWrix File Server Change Reporter is run, must comply with the following requirements:

- If the computer with NetWrix File Server Change Reporter installed and the monitored file server belong to the same domain, this account must be assigned the domain administrator permissions;
- If the computer with NetWrix File Server Change Reporter installed and the monitored file server belong to a workgroup or different domains, the file server must have accounts with the same name and password as the account under which NetWrix File Server Change Reporter is run. All these accounts must be assigned the local administrator permissions.

In the Enterprise Edition, for proper performance of the Advanced Reporting functionality, the account used by users to view reports, as well as the account for running the scheduled task, must be assigned the Content Manager role for the SSRS Home folder. To assign the Content Manager role to an account, follow the procedure below:

Procedure 2. To assign the Content Manager role to an account

1. Run the Report Manager, open the **Properties** tab of the **Home** folder, and click **New Role Assignment** (the path can vary slightly depending on your SQL Server version).
2. Specify the necessary group or user account in the following format: *domain\user*. The account should be in the same domain or in a trusted domain.

3. Select **Content Manager**.
4. Click **OK** to save the role assignments.

3.2 Installing NetWrix File Server Change Reporter

To install NetWrix File Server Change Reporter, run the setup program on any computer in the domain where the monitored file servers are located. If the selected computer is running Windows Server 2008, 2008 R2, Windows Vista or Windows 7, make sure User Account Control (UAC) is turned off.

To install NetWrix File Server Change Reporter, follow the procedure below:

Procedure 3. To install NetWrix File Server Change Reporter

1. Download NetWrix File Server Change Reporter.
2. Run the setup package called fscrfree_setup.msi (for the Freeware Edition) or fscrfull_setup.msi (for the Enterprise Edition).
3. Follow the instructions of the wizard. When prompted, accept the license agreement and specify the installation folder.
4. On the last step, click **Finish** to complete the installation procedure. For the Enterprise Edition, select the configuration mode before clicking **Finish** (the Enterprise configuration mode is recommended).

Figure 2: The NetWrix File Server Change Reporter Installation Wizard



To learn how to configure and use NetWrix File Server Change Reporter, please refer to the corresponding sections of this guide:

- The Standard configuration mode is used in the Freeware and Enterprise Editions. For details, refer to the Section [4 Working with the Standard Configuration Mode](#).
- The full featured Enterprise configuration mode is used in the Enterprise Edition only. For details, refer to the Section [5 Working with the Enterprise Configuration Mode](#).

3.3 Configuring Audit on File Servers

To collect audit data, you need to configure Audit Policy Settings on your target file servers. This chapter describes how to configure Audit settings for Microsoft Windows file servers. For details on how to monitor NetApp file server, refer to the following technical article: [How to Configure NetWrix File Server Change Reporter to Monitor NetApp Filer CIFS Shares](#). For

details on how to monitor EMC VNX/VNXe/Celerra file server, refer to the following technical article: [How to Configure NetWrix File Server Change Reporter to Monitor EMC VNX/VNXe/Celerra CIFS Shares.](#)

Note: NetApp filer and EMC VNX/VNXe/Celerra are only configurable in the NetWrix File Server Change Reporter Standard configuration mode.

3.3.1 Configuring Default Audit Settings on File Shares

Before configuring the audit settings, consider that if you have multiple file shares frequently accessed by a significant number of users, it is reasonable to audit objects modification only. Tracking all access events may result in too much data written to the audit logs, whereas only some part of it may be of any interest. Please note that audit flags must be set on every file share you want to audit.

If you are going to monitor an entire computer, consider the following:

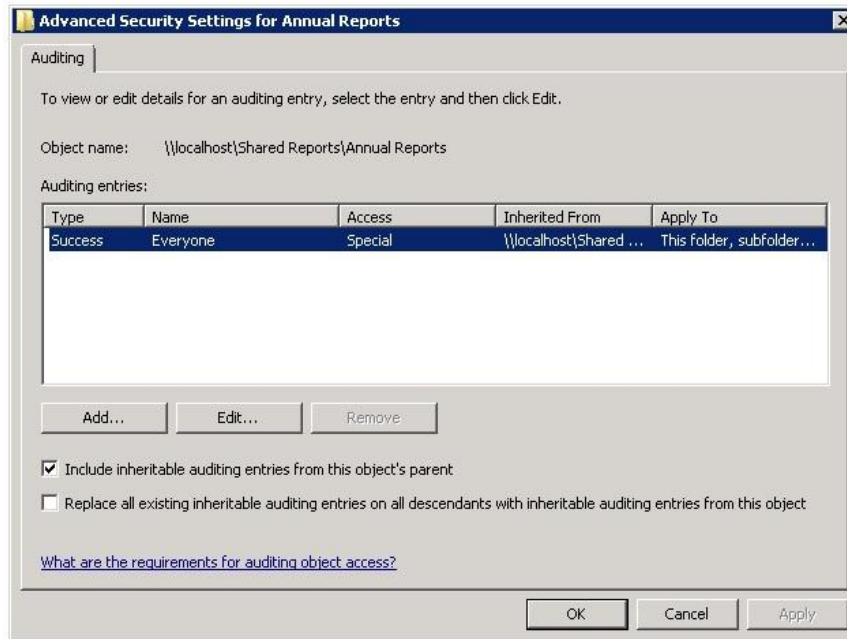
- If you specify a single computer name, NetWrix File Server Change Reporter will monitor all shared folders on this computer except the folders whose name ends with the \$ symbol (which are either hidden or administrative/system folders). In order for the report functionality to work properly, you need to configure audit settings for each share folder on the computer separately. Otherwise, reports will contain limited data and warning messages.
- For your convenience, if your file shares are stored within one folder (or disk drive), you can configure audit settings for this folder only. As a result, you will receive reports on all required access types applied to all file shares within this folder. Please note that it is not recommended to configure audit settings for system disks.

To configure the default Audit settings, follow the procedure below:

Procedure 4. To configure the default audit settings on file shares

1. Navigate to the required file share, right-click it and select **Properties** from the pop-up menu. The **<Share_Name> Properties** form will open.
2. Select the **Security** tab and click the **Advanced** button. The **Advanced Security Settings for <Share_Name>** form will open.
3. Go to the **Auditing** tab, select the **Everyone** group (or another user-defined group of the selected users granted special permissions) and click **Edit**. The **Advanced Security Settings for <Share_Name>** form will open as a separate dialog:

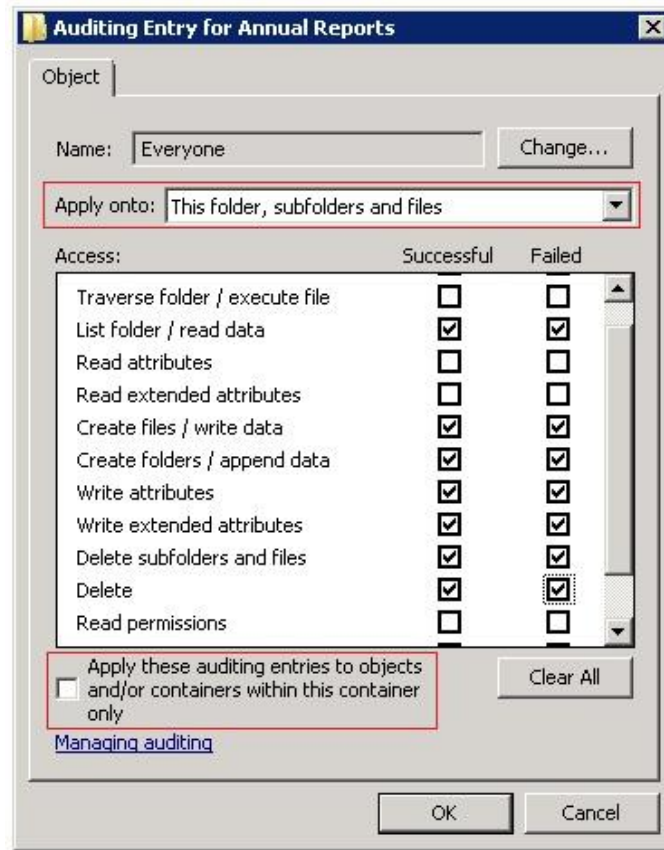
Figure 3: Advanced Security Settings



Note: You can specify any other required user group, but in this case the current version of NetWrix File Server Change Reporter will send you email reports with warnings about the audit configuration. This will not affect the reporting functionality and the product will only monitor user accounts that belong to the selected group.

4. Select the **Everyone** group and click the **Edit** button. The **Auditing Entry for <Share_Name>** dialog will appear.
5. Select the **Success** and **Failed** check-boxes for the following Access options:
 - To monitor successful read access and failed read access attempts:
 - o List Folder / Read Data
 - To monitor successful modifications and failed modification attempts:
 - o Create Files / Write Data
 - o Create Folders / Append Data
 - o Write Attributes
 - o Write Extended Attributes
 - o Delete Subfolders and Files
 - o Delete
 - o Change Permissions
 - o Take Ownership

Figure 4: Audit Entry for <Share_Name> Dialog



6. Make sure that the **Apply onto** parameter is set to **This folder, subfolders and files**, and the **Apply these auditing entries to objects and/or containers within this container only** check box is cleared.
7. Click **OK** to save the changes and close the dialog.

Note: If no data is present in reports, or the **Who changed** field contains the 'system' value, refer to [NetWrix File Server Change Reporter Troubleshooting Guide](#).

3.3.2 Configuring Audit Object Access Policy

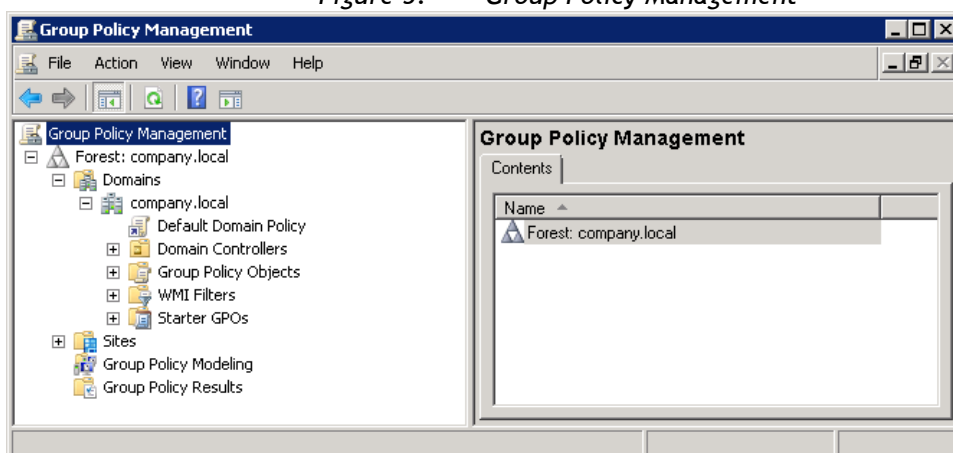
To collect data from the monitored file servers, you must configure the Audit object access policy on the file servers. You must be logged on as a member of the **Administrators** group or you must be granted the **Manage auditing and security log** permission in Group Policy to perform this procedure.

To configure the Audit object access policy, follow the procedure below. This procedure provides you with one of several possible ways to configure the Audit object access policy:

Procedure 5. To configure Audit object access policy

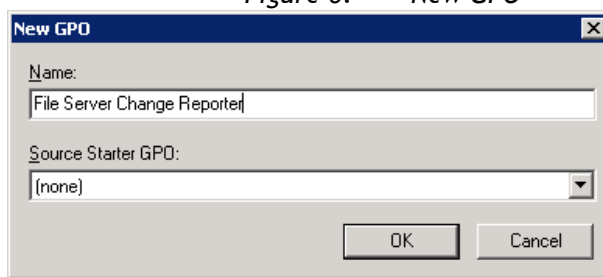
1. Navigate to **Start → Programs → Administrative Tools → Group Policy Management**. The **Group Policy Management** dialog will open:

Figure 5: Group Policy Management



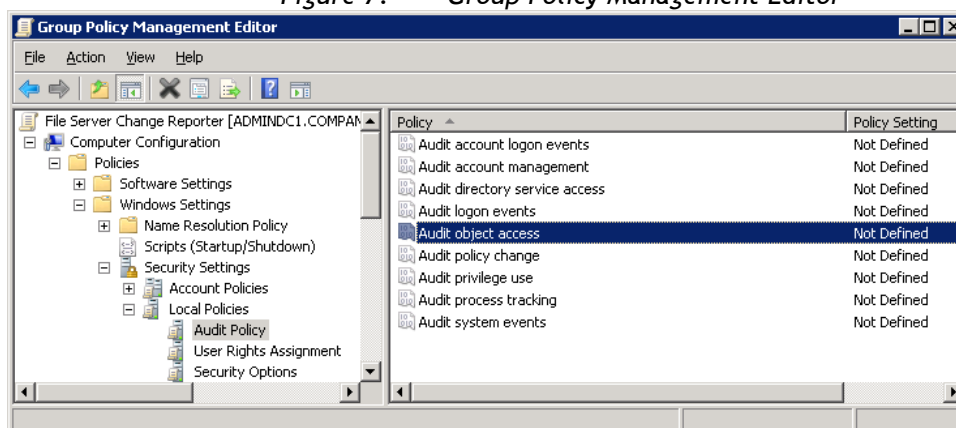
- Expand the **Domains** node, right-click the <Company_Domain_Name> node and select the **Create a GPO in this domain and Link it here** option. The **New GPO** dialog will appear.
- Type in the name of your new GPO into the **Name** field and click **OK**.

Figure 6: New GPO



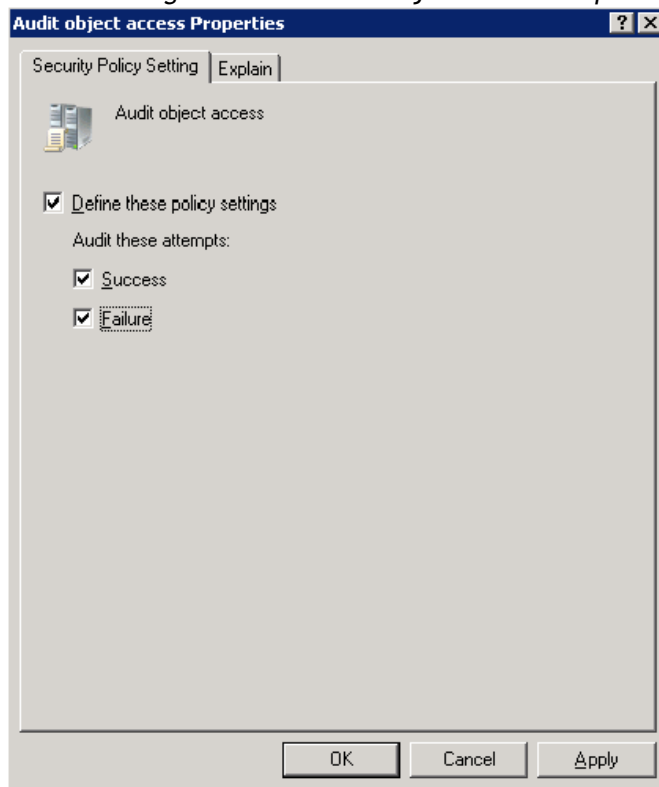
- Right-click the newly created GPO in the left pane of the **Group Policy Management** form and select the **Edit** option. **Group Policy Management Editor** will open.
- Expand the **Computer Configuration** node on the left and then go to **Policies** → **Windows Settings** → **Security Settings** → **Local Policies** → **Audit Policy**.

Figure 7: Group Policy Management Editor



- Double-click **Audit object access** on the right and select all check boxes in the **Audit object access Properties** dialog:

Figure 8: Audit Object Access Properties



7. Click **OK** to save the changes and close the form.

You can also refer to the Windows Server TechCenter article for additional information: [Create a new Group Policy object: Group Policy](#). If you wish to use the local policy, you can find instructions in the following Windows Server TechCenter article: [Define or modify auditing policy settings for an event category: Auditing](#).

For Microsoft Windows file servers running Windows Vista or later, you can configure the granular audit policy. Via the granular audit policy you can manage auditing at a detailed level, which helps you avoid saving unnecessary data to your audit logs.

For instructions on how to configure the granular audit policy for the servers running Windows Vista or later, refer to the following technical article: [How to Configure Granular Audit Policy on a File Server Monitored by NetWrix File Server Change Reporter](#).

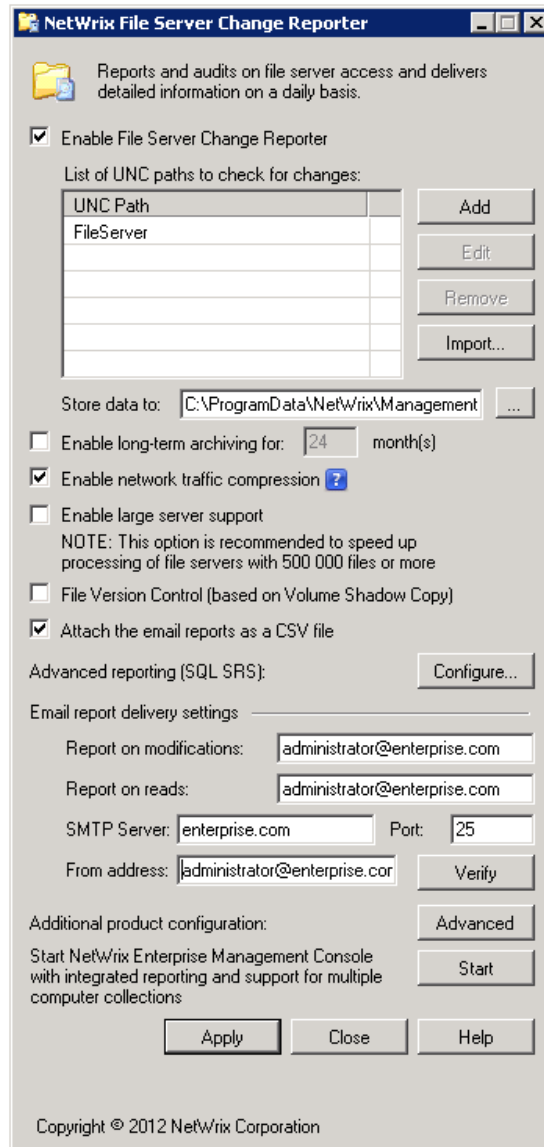
4. WORKING WITH THE STANDARD CONFIGURATION MODE

The standard configuration mode is set by default for the Freeware Edition. For the Enterprise Edition, you can select to use either the Standard or the Enterprise configuration mode. Some features of the Standard Configuration mode are unavailable in the Freeware Edition - they are marked with asterisk (*) in the configuration options' description below.

4.1 Configuring Basic Settings

To launch the configuration utility open the **Start** menu and select **File Server Change Reporter**. The following configuration main dialog will be displayed:

Figure 9: NetWrix File Server Change Reporter Configuration Dialog

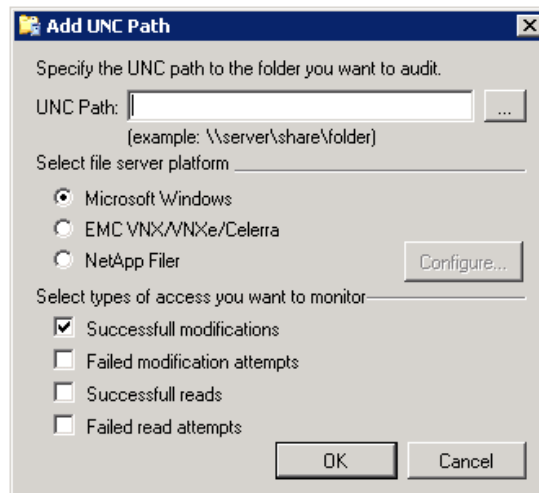


The following configuration settings are available in this dialog:

1. **Enable File Server Change Reporter.** The check box enables data collection and reporting; it is selected by default.
2. **List of UNC paths to check for changes.** To specify a UNC path to the object you want to monitor, click **Add** and do the following:

- a) In the **Add UNC Path** dialog, type in or browse for the folder you want to audit. You can specify a file server name to audit all shares located on that server or UNC path to a folder or share you want to audit.

Figure 10: Add UNC Path

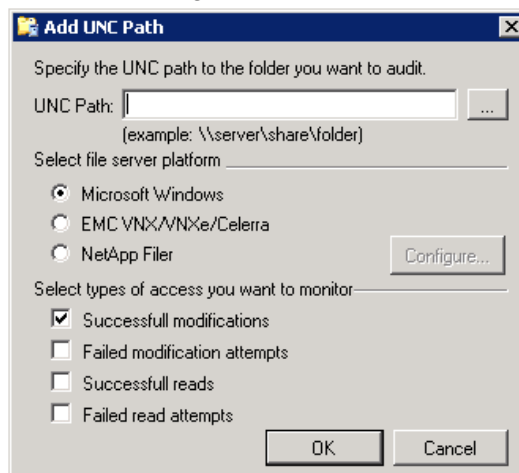


- b) Select a file server platform. For details on how to monitor NetApp file server, please refer to the following technical article: [How to Configure NetWrix File Server Change Reporter to Monitor NetApp Filer CIFS Shares](#). To monitor EMC VNX/VNXe/Celerra file server, please refer to the following technical article: [How to Configure NetWrix File Server Change Reporter to Monitor EMC VNX/VNXe/Celerra CIFS Shares](#).
- c) **Select types of access you want to monitor.** On the **Add UNC Path** dialog, select the options that correspond to the file access event types you need to monitor.

The following options are available:

- Successful modifications
- Failed modification attempts (available for Windows Servers and EMC VNX/VNXe/Celerra only)
- Successful reads
- Failed read attempts

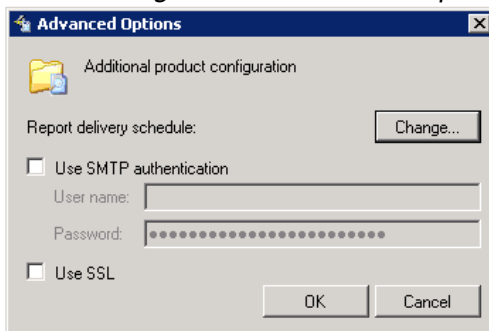
Figure 11: Add UNC Path



- d) When finished, click **OK** to save the settings and return to the configuration utility main dialog.

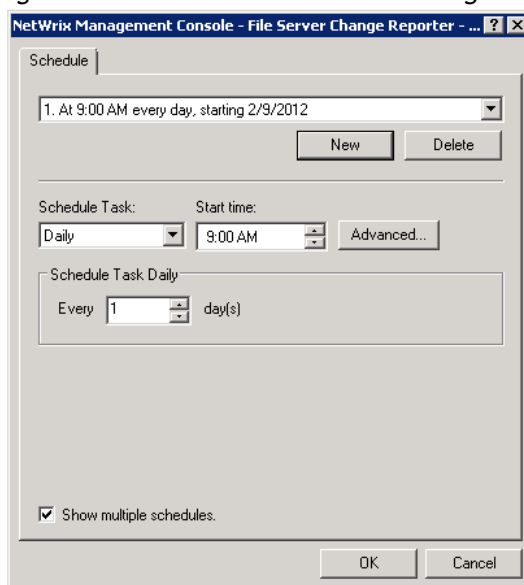
3. **Import UNC paths list***. Use the **Import** button to import a .txt file containing a list of UNC paths to the file servers, one entry per line.
4. **Specify the data storage path**. Populate the **Store data to** text box. All snapshots made by NetWrix products you are using will be stored in the corresponding subfolders of this folder. For example, snapshots made by NetWrix File Server Change Reporter will be stored in the FS Changes subfolder.
5. **Enable long-term archiving***. By default, NetWrix File Server Change Reporter stores data collected for the last two days. Select the **Enable long-term archiving for <n> months** option if you need tracking for longer periods, and specify its value. It affects only the local repository and not the SQL database.
6. **Enable network traffic compression**. To increase data collection speed and effectiveness, check the **Enable network traffic compression** box. This option can only be applied to the monitored servers with a Windows operating system installed. For details on how the option works, please refer to Section [6.1 Network Traffic Compression](#) of this document.
7. **Enable large server support***. If you want to speed up processing of file servers with a large number of files (500 000 and more), it is highly recommended to select the **Enable large server support** option.
8. **Enable File Version Control***. This option allows creating rollback points using the Volume Shadow Copy technology. This will enable you to roll back incorrect or unwanted modifications on your monitored file shares. You can access the native MS Windows Volume Shadow Copying feature by right-clicking your volume icon and opening the **Properties** dialog. On the **Shadow Copies** tab, a list of a maximum of 64 shadow copies is stored with the selection of back-up points. There is also a link to the corresponding help file with description of the feature's benefits and usage scenarios. Please note, that this option results in creation of a great number of extra records in the security log. For details on how to restore files or folders, please refer to the following technical article: [How to Perform File System Backup and Restore with NetWrix File Server Change Reporter](#).
9. **Enable attachment of email reports as a CSV file**. If this option is selected, reports will be attached to your emails. Otherwise, you will receive reports as a part of the emails body.
10. **Enable advanced reporting based on SQL Server Reporting Services (SSRS) ***. Click the **Configure** button next to this option. For details, refer to Section [4.3 Advanced Reporting](#) of this guide.
11. **Email report delivery settings**. Populate the following fields:
 - a) **Report on modifications**. Enter the email address to which reports on file modifications will be delivered (multiple recipients should be separated by commas). These reports are based on 'Successful modifications' and/or 'Failed modification attempts' events.
 - b) **Report on reads**. Enter the email address to which reports on the read file access or failed read attempts will be delivered (multiple addresses should be separated by comma). These reports are based on 'Successful reads' and/or 'Failed read attempts' events.
 - c) **SMTP Server / Port**. Define the SMTP server name and port number
 - d) **From address**. Enter an email address from which the reports will be sent To check the correctness of the email address, click **Verify**. The system will send a test message to the specified address and will inform you if any problems are detected.
12. **Additional product configuration**. To set additional parameters for working with your mail server, click **Advanced**. The **Advanced Options** dialog will open.

Figure 12: Advanced Options



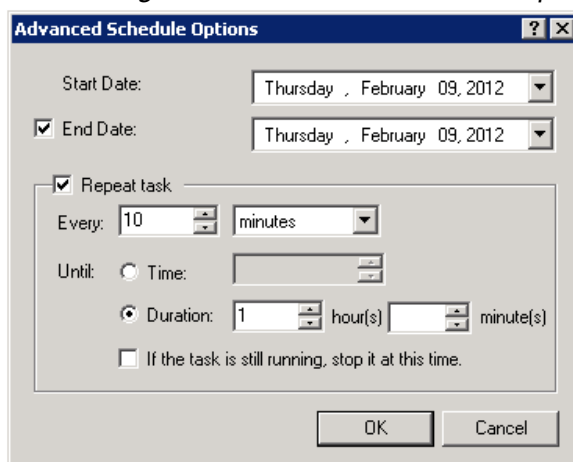
- a) **Report delivery schedule.** By default, reports are generated and delivered at 3.00 AM every day. Click **Change** to modify the schedule. On the displayed dialog, click **New**.

Figure 13: NetWrix File Server Change Reporter dialog



To set additional schedule options, click **Advanced**. On the **Advanced Schedule Options** dialog, set parameters for the new task.

Figure 14: Advanced Schedule Options



- b) **Use SMTP authentication or SSL.** Enable the options depending on your mail server configuration.

13. Start NetWrix Enterprise Management Console with integrated reports and support for multiple computer collections*. Click Start to launch the Console.
14. Click Apply to save your configuration.

On clicking Apply, you will be prompted to enter the credentials for data collection and report generation:

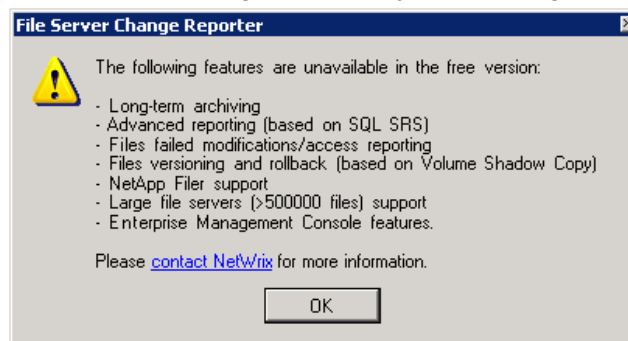
Figure 15: Scheduled Task Credentials



Specify the account under which the scheduled task (named NetWrix Management Console - File Server Change Reporter - <Your Managed Object name>) will collect your file server's data and send emails with reports to the specified recipients. Make sure that the account you specify has the sufficient privileges. For details refer to [Section 3.1.6 Required Rights and Permissions](#) of this guide.

Note: The Freeware Edition only reports on the fact of a file system permission change (the information about *who* made the change, *what* was changed and *when* it was changed is not available in this Edition). If you have selected an option which is unavailable in the Freeware Edition, you will be presented with the following system message.

Figure 16: System message



4.2 Data Collection and Reporting

This chapter explains how to manually launch a data collection task and generate reports using NetWrix File Server Change Reporter Standard Configuration mode.

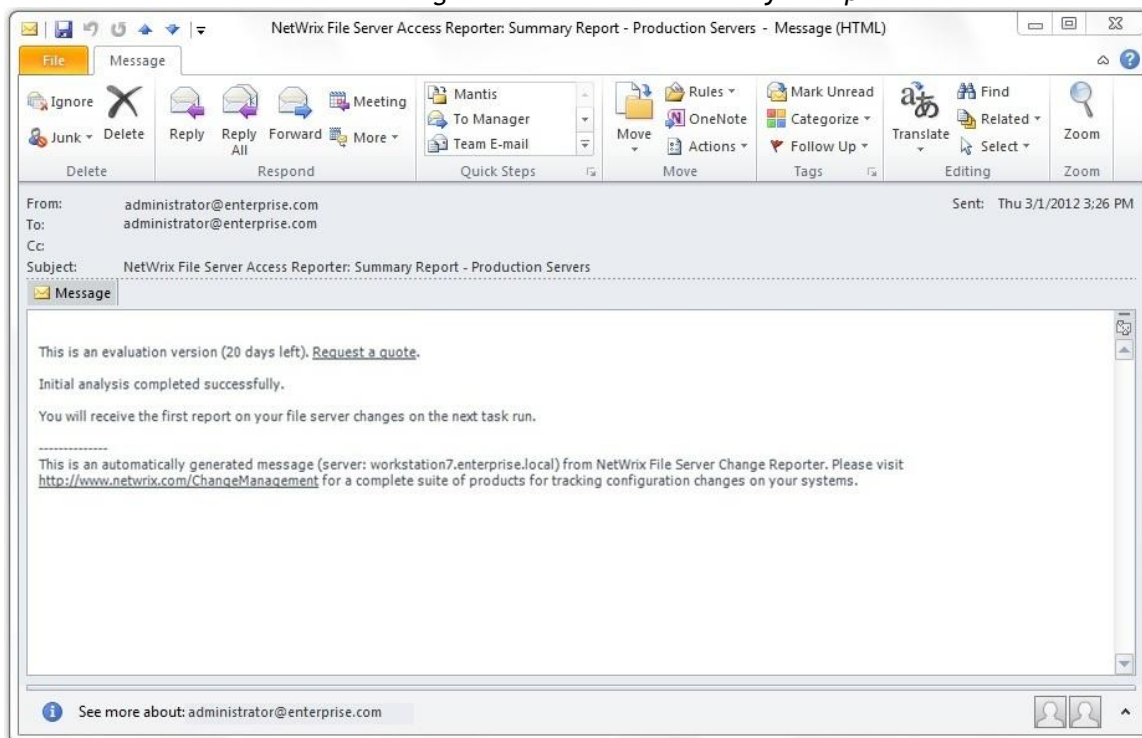
4.2.1 Running Data Collection Task

By default, NetWrix File Server Change Reporter performs data collection at 3:00 AM daily, and generates reports on all selected access types that were detected. However, you can manually launch the task named *NetWrix Management Console - File Server Change Reporter - <Your Managed Object name>* using the Task Scheduler. Also, you can use the Task Scheduler to modify the task's properties (for example, schedule, account, etc.) Each time the task is run, it collects file server snapshots together with audit data, and sends reports by email with data on the specified events (successful/failed read access, successful/failed modification attempts) to the corresponding recipients. The audit data is also saved to the

SQL Server database (if Advanced Reporting is configured) for further advanced reports generation.

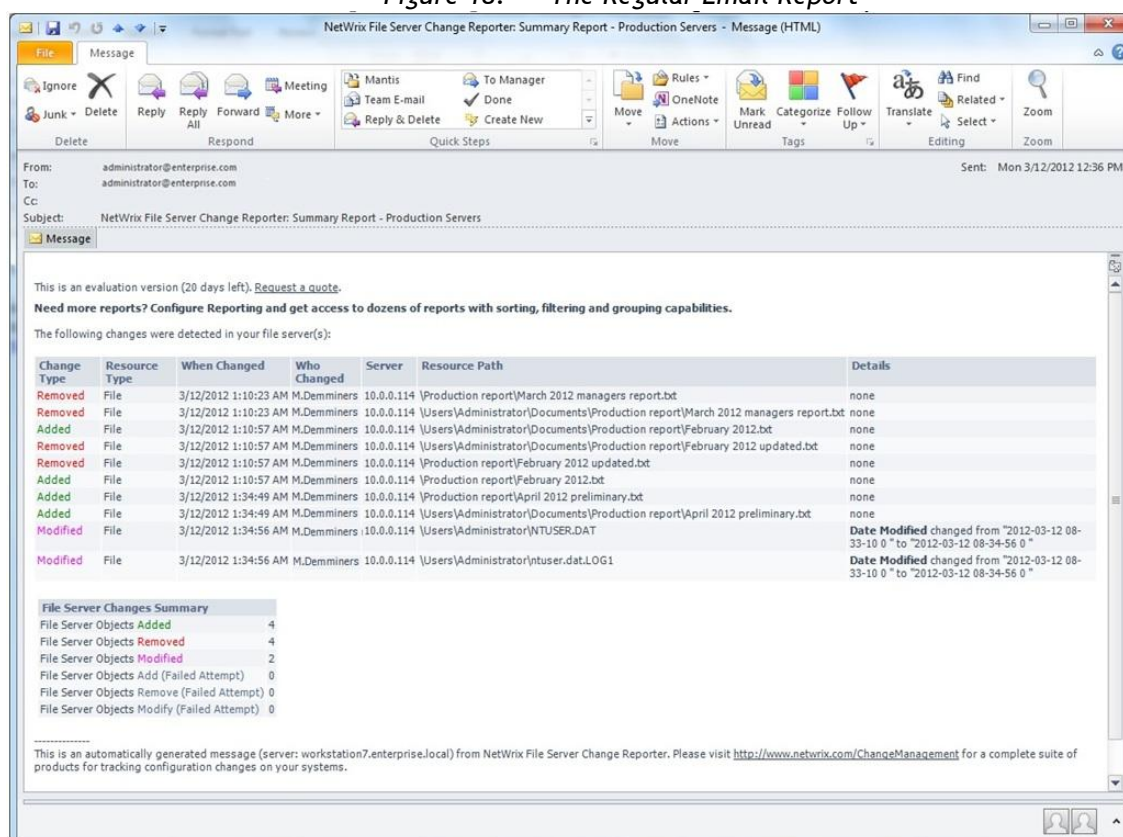
After the first data collection run, an email notification confirming that the initial analysis has been completed is sent to the specified recipient(s):

Figure 17: The Initial Analysis Report



Then, every time a scheduled data collection task is run, a report on changes that occurred since the last data collection is sent to the specified recipient(s):

Figure 18: The Regular Email Report



If Advanced Reporting is configured (for details, refer to the Section [4.3.1 Configuring Advanced Reporting Settings](#) in this document), you can click the **More reports** link in the email report to view the HTML versions of the reports in your web browser.

4.2.2 Running On-Demand Reports

To generate on-demand reports, you can use the Report Viewer tool available from the **Start** menu. Reports will return data on changes made between two selected snapshots.

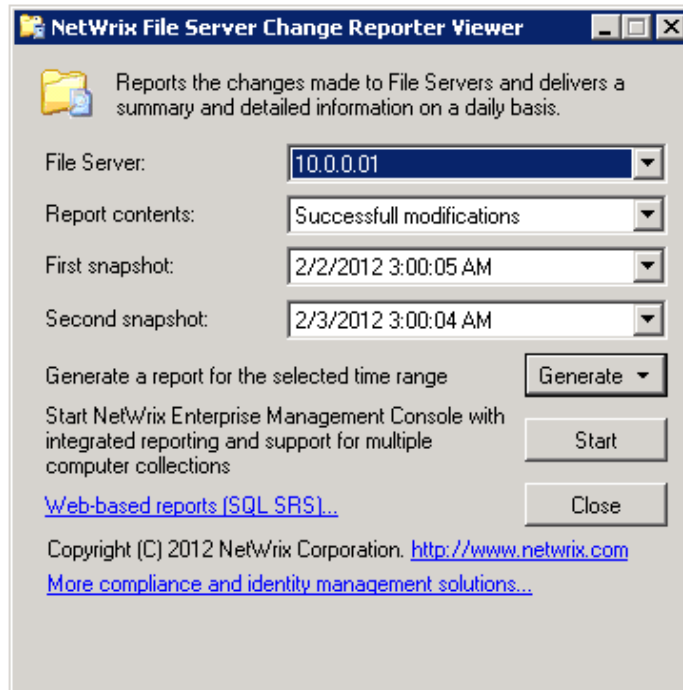
Note: The scheduled task must run at least 2 times before on-demand reports become available.

To run an on-demand report, follow the procedure below:

Procedure 6. To run an on-demand report

1. Launch the Report Viewer from the Start menu.

Figure 19: NetWrix File Server Change Reporter Viewer



2. In the **NetWrix File Server Change Reporter Viewer** dialog, select the file server, report contents and snapshots by date.
3. Click the **Generate** button and select the format in which you to want to get the report: select either “Generate HTML” or “Generate CRV”.
4. In the **Save as** dialog, specify the location where the report will be saved. By default, the report file is saved in the user’s **Documents** folder.

4.3 Advanced Reporting

With SQL Server Reporting Services deployed, you can also configure the Advanced Reporting functionality (SSRS-based).

With Advanced Reporting you will be able to:

- Use a wide variety of reports to analyze access attempts and modifications on your file servers; dozens of reports will help you stay compliant with standards and regulations your organization is subject to (SOX, HIPAA, PCI, GLBA, SAS70, and others).
- Change the report filters to fine-tune data views.
- Use a variety of report output formats: PDF, XLS, and others to save the report.
- Apply grouping and sorting to report data.

4.3.1 Configuring Advanced Reporting Settings

To configure the Advanced Reporting setting, follow the procedure below:

Procedure 7. To configure Advanced Reporting settings

1. Launch the **Advanced Reporting Configuration** wizard. To launch the wizard, click **Configure** on the NetWrix File Server Change Reporter configuration dialog. If the Advanced Reporting settings are being configured for the first time, the wizard will start. If the Advanced Reporting settings have already been configured, the **Reports Settings** screen with the existing settings will be displayed. Click **Start** to launch the **Advanced Reporting Configuration** wizard.

2. On the first step of the wizard, select whether you want to proceed with the automatic installation and configuration of SQL Server 2005 Express Edition with Advanced Services, or use an existing SQL Server instance.

Note: If you use an existing SQL Server instance, make sure that the Reporting Services feature is installed and configured for this server. For instructions on the manual installation of SQL Server with Reporting Services required for NetWrix File Server Change Reporter, please refer to the following technical article: [Installing Microsoft SQL Server and Configuring the Reporting Services](#). For full installation and configuration details, please refer to documentation provided by Microsoft.

3. On the next step, do the following:
 - If you have selected to install and configure SQL Server 2005 Express Edition with Advanced Services, wait for the automatic installation and configuration process to complete.
 - If you have selected to configure an existing SQL Server deployment for reporting, configure the SQL Server database connection settings.

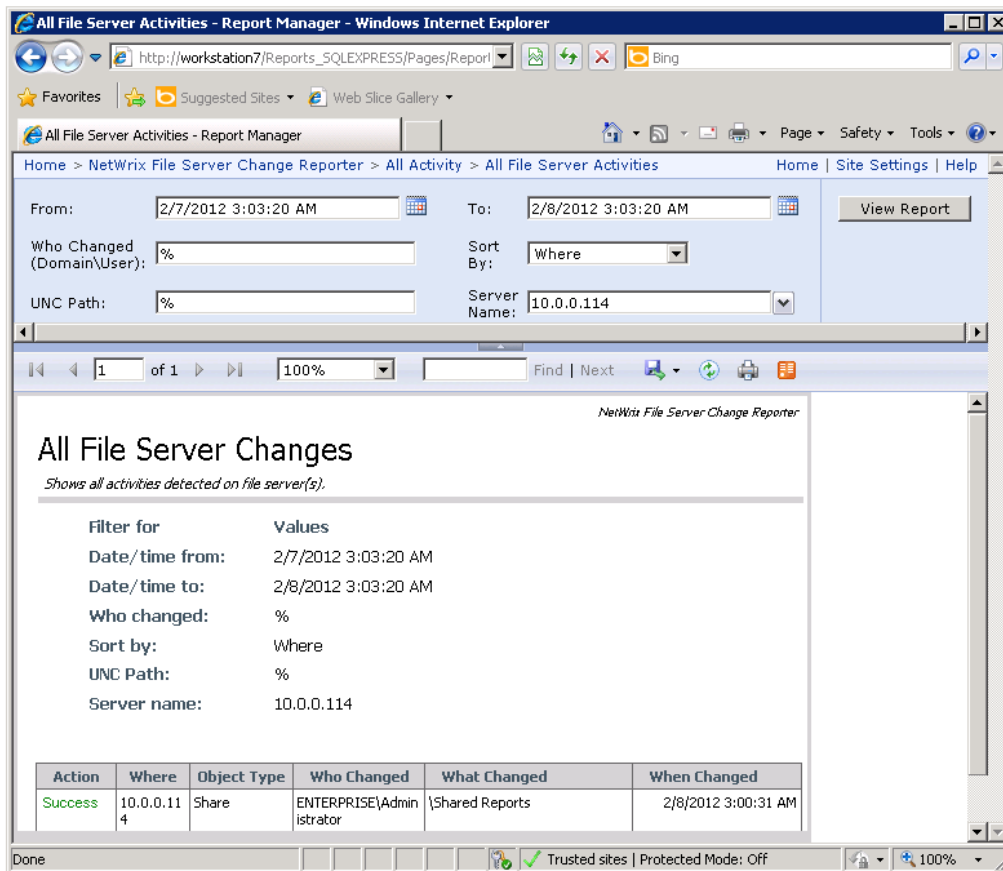
Figure 20: The Reports Configuration Wizard

Note: A database will be created automatically on the specified server with the following default name: NetWrix_File_Server_Change_Reporter. By default, it will be accessed using Windows authentication with the scheduled task account. To use SQL Server authentication, clear the **Windows Authentication** check box, and enter the credentials for the database access.

Enter and verify the URLs of the Reporting Services: Report Server URL and Report Manager URL. The URLs must be in the following format: `http://<server_name>/<virtual_directory_name>`. You can find the correct path names in the **SQL Reporting Services Configuration Manager**. To do this, first launch the **SQL Reporting Services Configuration Manager** (for MS SQL Express 2005 it will be **Start** → **All Programs** → **Microsoft SQL Server 2005** → **Configuration Tools** → **Reporting Services Configuration**) where you can find the virtual directory names under **Report Server Virtual Directory** and **Report Manager Virtual Directory** menu categories. The default values for these names are “ReportServer\$SQLEXPRESS” and “Reports\$SQLEXPRESS” respectively.

4. Click **Next** to save your configuration.
5. On the final screen, review your settings and click **Finish**. Make sure the account under which you plan to view reports has sufficient rights for the **Home** folder.

Figure 21: The Advanced Report Example



To change the Advanced Reporting settings, launch the **Advanced Reporting Configuration Wizard** via the **Configure** button in the configuration utility main window.

5 WORKING WITH THE ENTERPRISE CONFIGURATION MODE

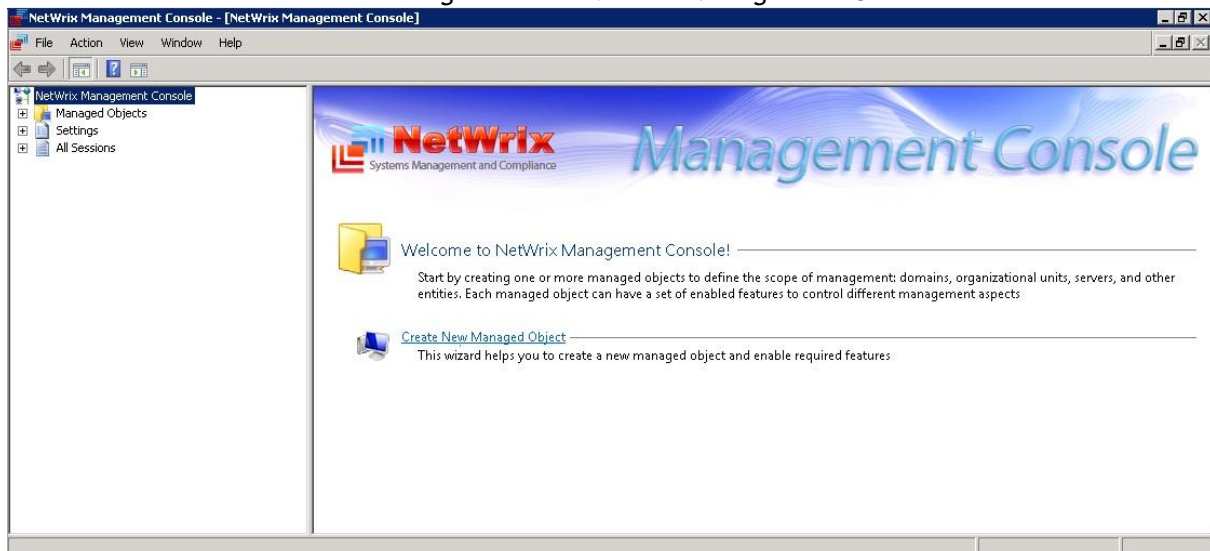
The full-featured Enterprise configuration mode is available in the product Enterprise Edition. Operations with NetWrix File Server Change Reporter are performed via NetWrix Management Console (implemented as an MMC snap-in) which enables flexible configuration and management capabilities. With NetWrix Management Console, you can:

- Handle numerous Managed Objects (domains, OUs, multiple server collections) with a single installation;
- Manage all NetWrix products configuration and settings via an integrated interface;
- Enable management features for the selected objects in bulk, for example, specify report generation frequency;
- Use Advanced Reporting with lots of predefined out-of-the-box reports.

To open NetWrix Management Console, navigate to the **Start** menu, select **File Server Change Reporter**, and click **Start** on the **File Server Change Reporter** configuration dialog.

Alternatively, select the NetWrix Management Console shortcut  in the **Start** menu. The Management Console main page will be displayed:

Figure 22: NetWrix Management Console



5.1 Creating New Managed Object

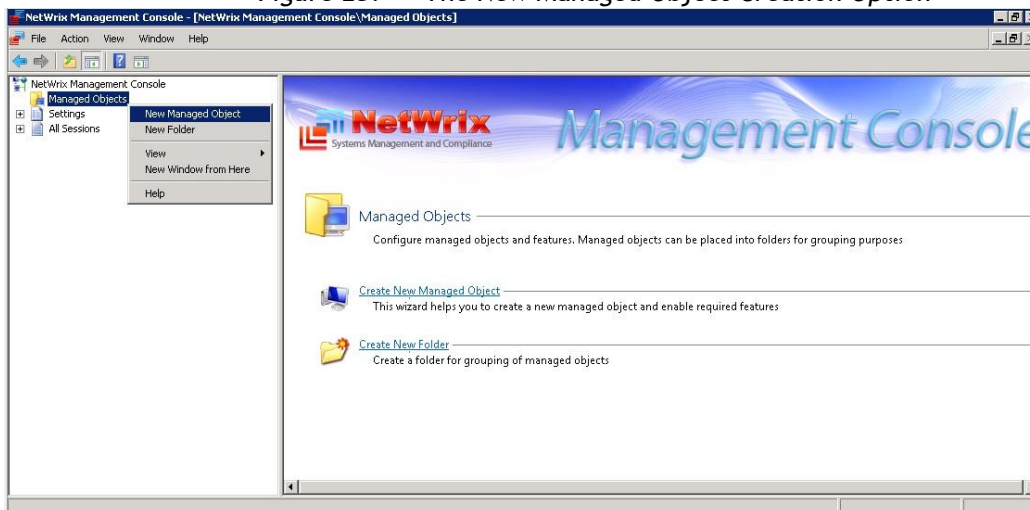
In NetWrix Management Console, Managed Object is a computer collection that you monitor for changes. After you have installed NetWrix File Server Change Reporter, you must create a new Managed Object and perform its initial configuration.

To create and configure a new Managed Object, follow the procedure below:

Procedure 8. To create and configure new Managed Object

1. In NetWrix Management Console, select the **Managed Objects** node in the left pane. The Managed Objects page will be displayed on the right.
2. In the right pane, click **Create New Managed Object**. Alternatively, right-click on the **Managed Objects** node on the left and select **New Managed Object**.

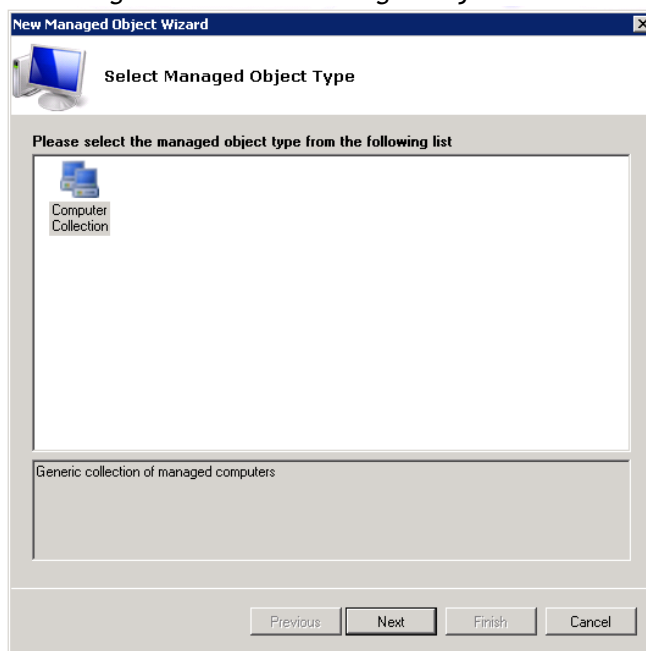
Figure 23: The New Managed Object Creation Option



Note: For your convenience, you can group Managed Objects into folders. To do this, right-click on the **Managed Objects** node, select **New Folder**, specify folder name, and then create new Managed Object inside this folder. You cannot move existing Managed Objects into the folders once they have been created.

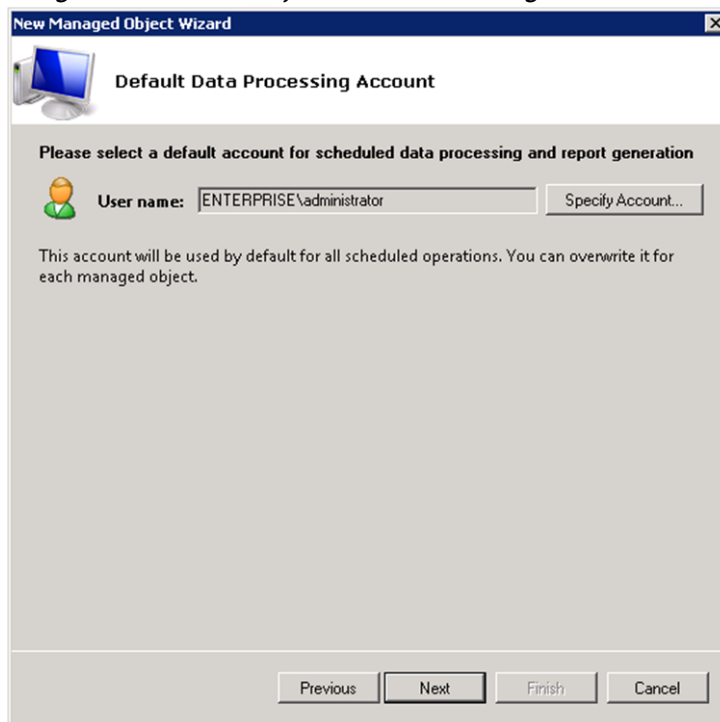
3. The **New Managed Object** wizard will open. On the **Select Managed Object Type** screen, select **Computer Collection** as a new Managed Object type and click **Next**.

Figure 24: New Managed Object Wizard



4. On the **Default Data Processing Account** screen, click the **Specify Account** button to set a default account (<domain name>\<account name>). This account will be used by NetWrix File Server Change Reporter for data collection and reports generation.

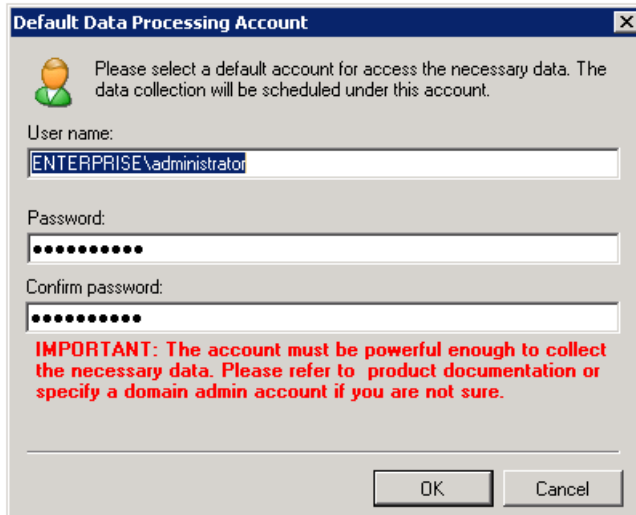
Figure 25: The Default Data Processing Account screen



When selecting the account, remember that it must be granted the necessary access rights (see the Section [3.1.6 Required Rights and Permissions](#) in this document).

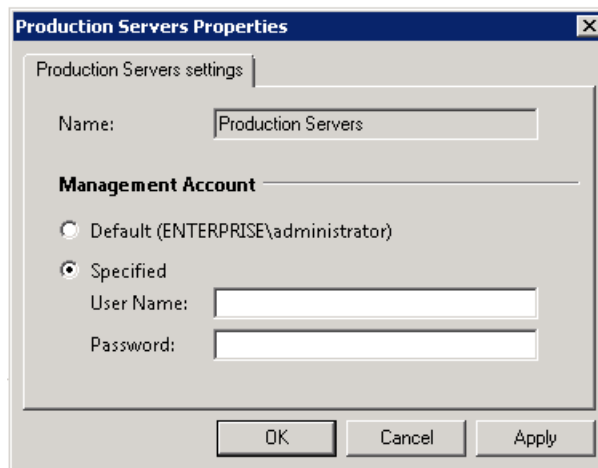
You can change the default data processing account later if needed. To change the account for all Managed Objects in bulk, select **Schedule** under the **Settings** node in the Management Console tree. On the **Report Delivery Schedule** page, click **Change** to open the **Default Data Processing Account** dialog and edit the account's credentials:

Figure 26: The Default Data Processing Account dialog



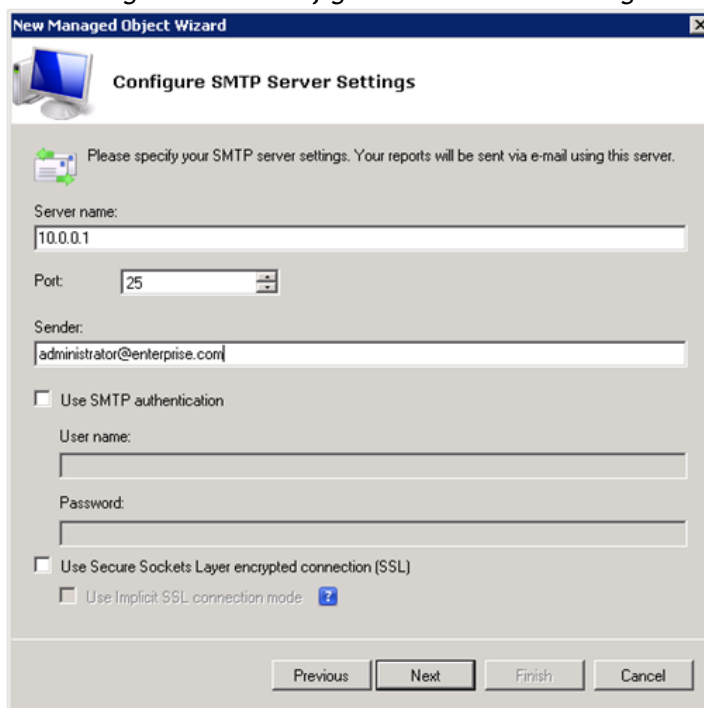
To change the default data processing account for each Managed Object individually, select the required Managed Object in the Management Console tree, right-click it and select **Properties**. On the Managed Object **Properties** dialog, enter new credentials:

Figure 27: The Managed Object Properties dialog



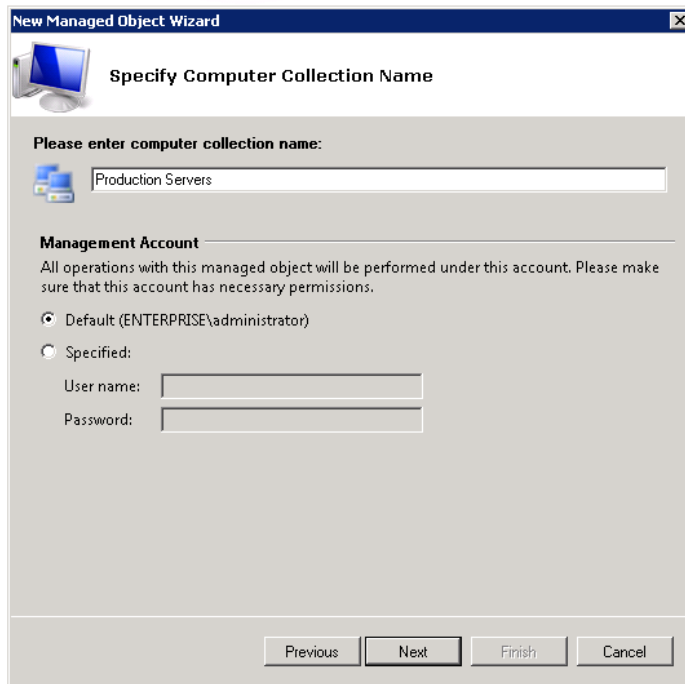
5. On the **Configure SMTP Server Settings** screen, specify the email settings that will be used by the system to send reports:

Figure 28: Configure SMTP Server Settings



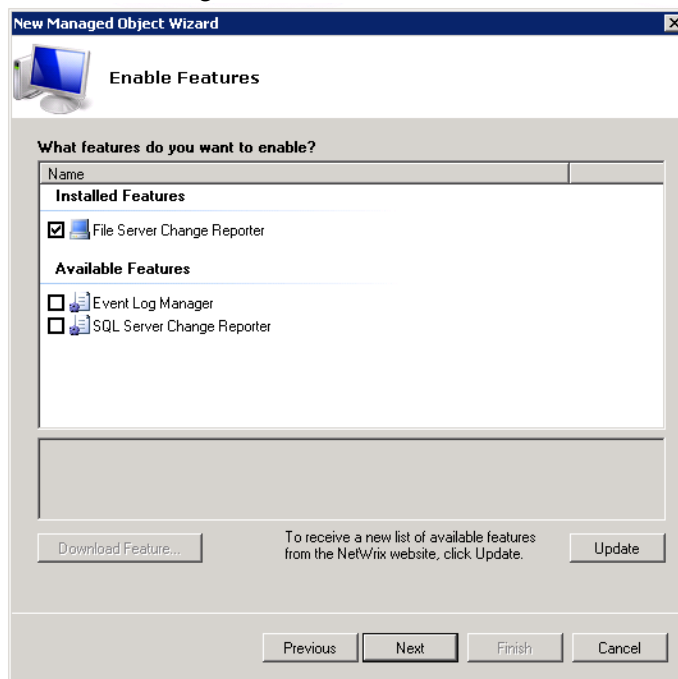
6. On the **Specify Computer Collection Name** screen, enter the computer collection name and select the **Management Account** for the Managed Object. You can leave the default account as the Management Account (the one you set as a default data processing account), or specify a different account.

Figure 29: Specify Computer Collection Name



7. On the **Enable Features** screen, select the **File Server Change Reporter** feature to monitor your computer collection.

Figure 30: Enable Features



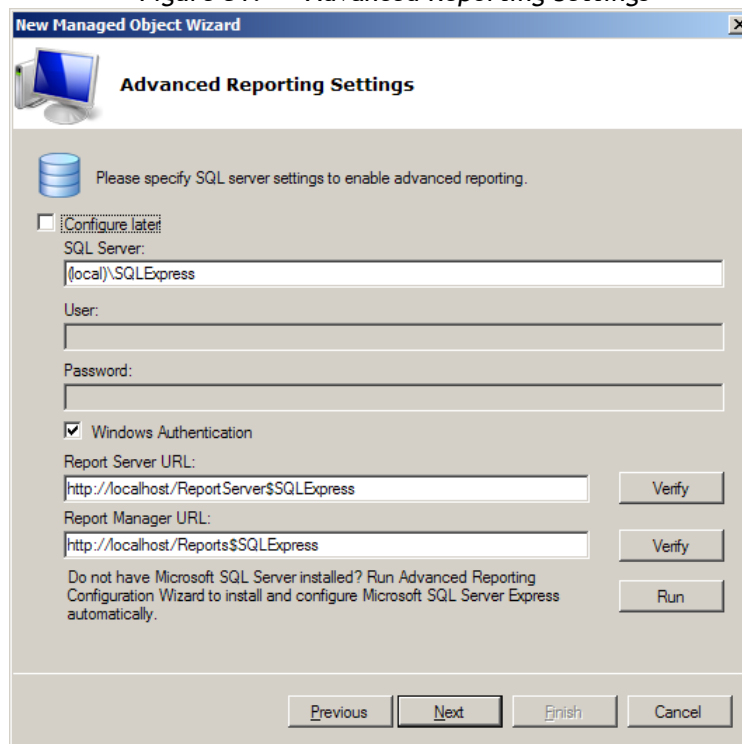
Note: The **Installed Features** list contains all features that can be used to monitor your Managed Object type. If you have other NetWrix change auditing products installed, the list may contain several items.

The **Available Features** list contains all features which have not yet been installed but can be downloaded and configured for the selected Managed Object type. Select a feature to get additional information about it on NetWrix website and download an available product version.

8. On the **Advanced Reporting Settings** screen, you must specify the settings that will be used for Advanced Reporting:
 - SQL Server where the product database (with data collected for the reporting purposes) will be stored;
 - The URLs of the SQL Server Reporting Services Report Server and the Report Manager.

Note: For these settings to be applied, make sure the **Advanced Reporting** option is enabled (for details refer to the Section [4.3 Advanced Reporting](#) in this document).

Figure 31: Advanced Reporting Settings



Specify the following:

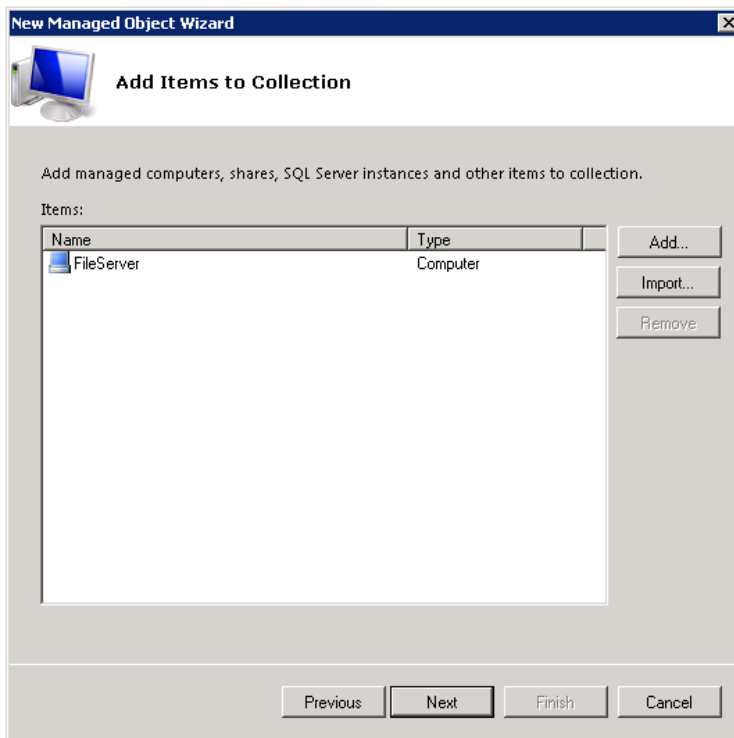
- **SQL Server:** The name of the server where the **NetWrix_File_Server_Change_Reporter** database will be created.
- **Windows authentication.** If you select this box, the default data processing account (specified on the **Default Data Processing Account** screen of the **New Managed Object** wizard) will be used to access the SQL Server database. To use SQL Server authentication, clear this box and supply user name and password for SQL Server access.
- **SQL Reporting Services.** Specify the SSRS Report Server and the Report Manager URL. The URLs must be in the following format: `http://<server_name>/<virtual_directory_name>`. You can find the correct path names in the **SQL Reporting Services Configuration Manager**. To do this, first launch the **SQL Reporting Services Configuration Manager** (for MS SQL Express 2005 it will be **Start** → **All Programs** → **Microsoft SQL Server 2005** → **Configuration Tools** → **Reporting Services Configuration**) where you can find the virtual directory names under **Report Server Virtual Directory** and **Report Manager Virtual Directory** menu categories. The default values for these names are “ReportServer\$SQLExpress” and

“Reports\$SQLExpress” respectively. To check correctness of your entered values, click **Verify**.

- **Advanced Reporting Configuration Wizard.** If you wish to install a SQL Server, click **Run** to launch the **Reports Configuration** wizard which allows you to install and automatically configure the SQL Server 2005 Express Edition with Advanced Services.

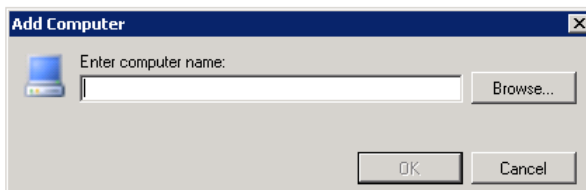
9. On the **Add Items to Collection** screen, select items that you want to monitor.

Figure 32: Advanced Reporting Settings



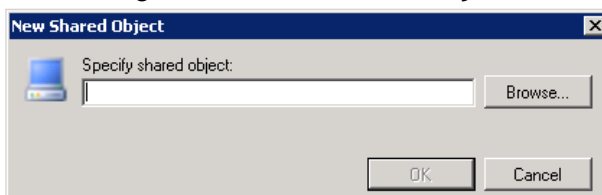
On clicking the **Add** button you will be presented with a menu list allowing you either to add/browse for a computer name or add/browse for a new shared object. Select the required item, the corresponding dialog will open.

Figure 33: Add Computer



Enter the UNC path to the new shared object.

Figure 34: New Shared Object



You can also import the computers' or shared objects' names list via the **Import** button on the **Add Items to Collection** screen.

NetWrix File Server Change Reporter supports audit of DFS and clustered file servers. For details on how to configure these options, refer to the following Knowledge Base articles: [Does NetWrix File Server Change Reporter support DFS?](#) and [How to configure the File Server Change Reporter to audit a clustered file server?](#)

Note: The Enterprise Configuration mode of the Enterprise Edition supports adding of Windows file shares only. NetApp filer and EMC VNX/VNXe/Celerra are only configurable and available in the NetWrix File Server Change Reporter Standard configuration mode of the Enterprise Edition.

10. On the **Configure File Server Change Reporter Settings** screen, specify the reports recipients and configure the advanced settings if required.

Figure 35: Configure File Server Change Reporter Settings

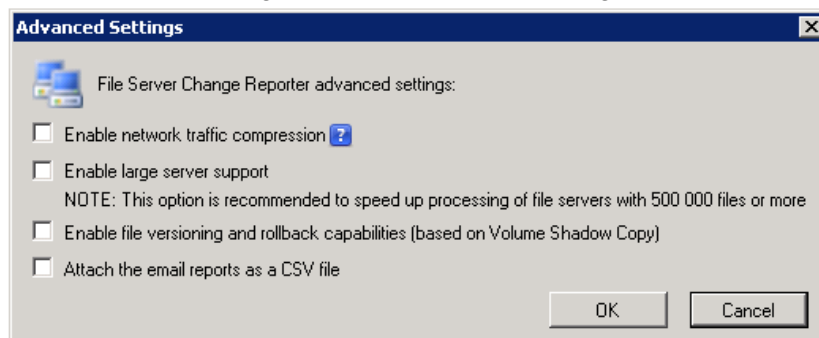
The screenshot shows the 'New Managed Object Wizard' dialog box. The title bar reads 'New Managed Object Wizard'. The main window title is 'Configure File Server Change Reporter Settings'. The 'Enable File Server Change Reporting' checkbox is checked. There are two recipient lists, each with a checked entry for 'administrator@enterprise.com'. The 'Advanced...' button is visible. Navigation buttons 'Previous', 'Next', 'Finish', and 'Cancel' are at the bottom.

The **Enable File Server Change Reporting** box is selected by default; this makes the product start monitoring your Managed Object as soon as the current configuration via the wizard is completed. You can also clear this box. In this case you will have to enable this feature manually later on the File Server Change Reporter general settings page.

Enter email addresses of reports recipients. There are two types of reports: file and folder changes (successful and failed attempts) and file and folder read access (successful and failed attempts). You can have both sent to the same email. The report recipients grids are enabled depending on the types of events you have selected for monitoring: successful modifications, successful reads, failed modification attempts, failed read attempts.

Clicking the **Advanced** button will open the **Advanced Settings** form with additional options which you can apply to the monitored Managed Object.

Figure 36: Advanced Settings

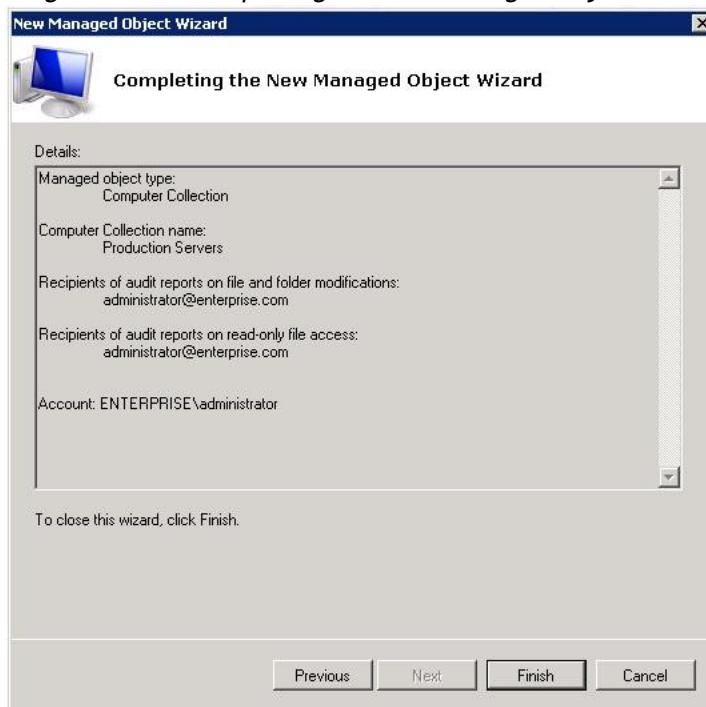


The following settings are available:

- [Network Traffic Compression](#)
- [Large Servers Support](#)
- [Using File Versioning and Rollback Capabilities](#)
- Attach the email reports as a CSV file

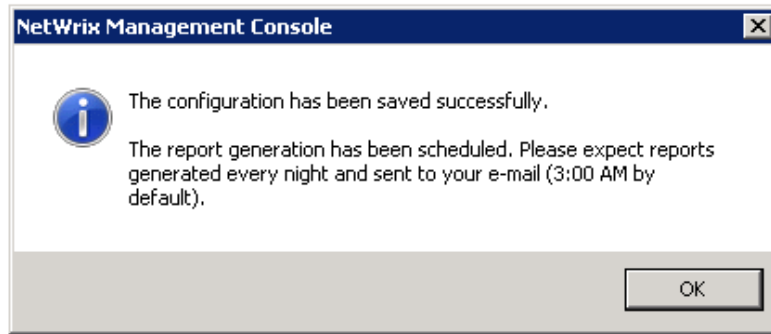
11. On the **Completing the New Managed Object Wizard** screen, check the details and click **Finish**.

Figure 37: Completing the New Managed Object Wizard



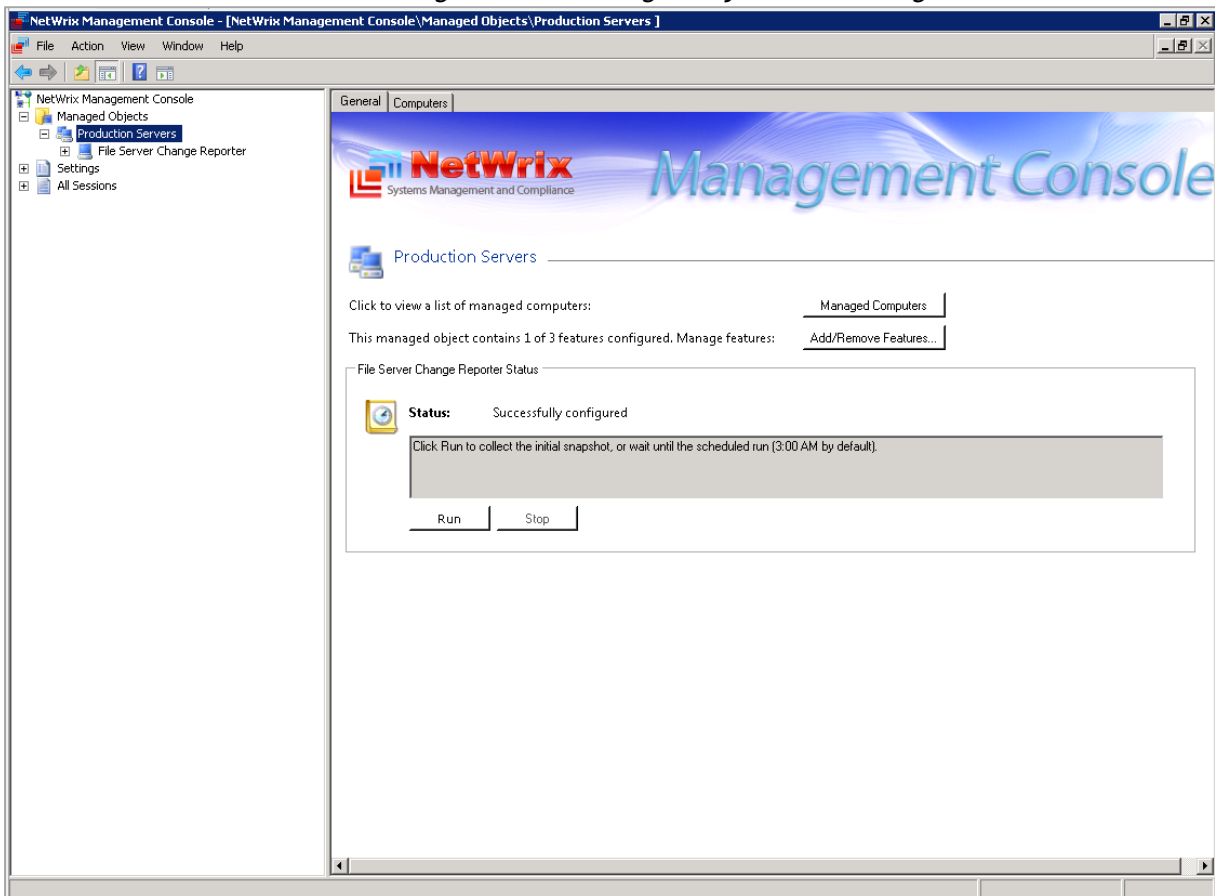
As a result, you will be presented with the message informing about successful configuration completion.

Figure 38: NetWrix Management Console Message



The Managed Object you have created will appear under the **Managed Objects** node in the left pane of NetWrix Management Console. The Managed Object details will be displayed in the right pane.

Figure 39: Managed Object General Page



The Managed Object General tab displays the following options:

- **Managed Computers:** Click this button to view and edit a list of managed computers belonging to this Managed Object.
- **Add/Remove Features:** Click this button if you wish to add or remove some particular feature for this Managed Object.
- **Run:** Click this button to manually launch a data collection task.
- **Stop:** Click this button to stop a data collection process.

5.2 Modifying Managed Object Settings

This section explains how to change the settings of an existing Managed Object (computer collection).

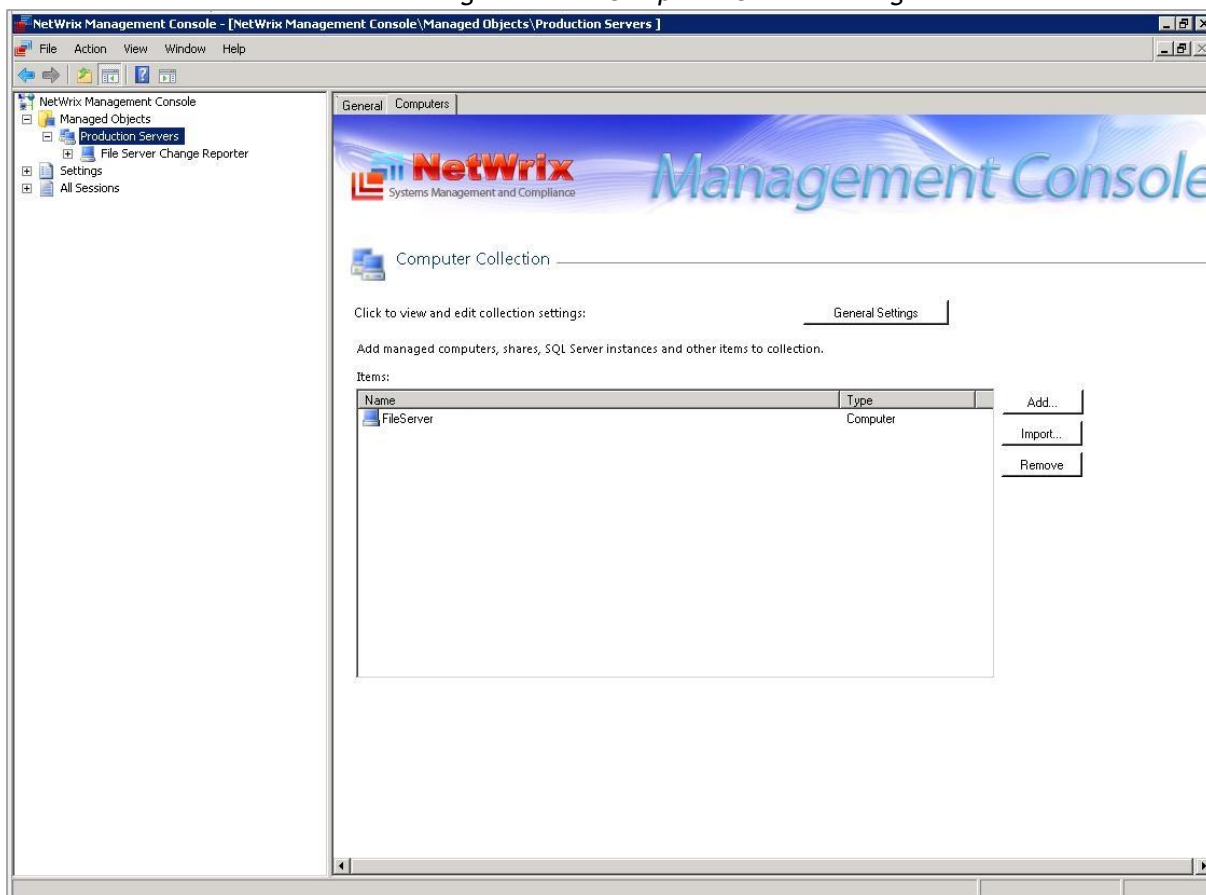
5.2.1 Editing Managed Computers List

To edit the list of computers added to a selected Managed Object:

Procedure 9. To edit managed computers list

1. In the left pane of NetWrix Management Console, expand the **Managed Objects** node and select the required Managed Object. Its details will be displayed in the right pane. Select the **Computers** tab or click the **Managed Computers** button. The list of computer collection items currently added to the Managed Object will be shown on the **Computers** page.

Figure 40: Computer Collection Page

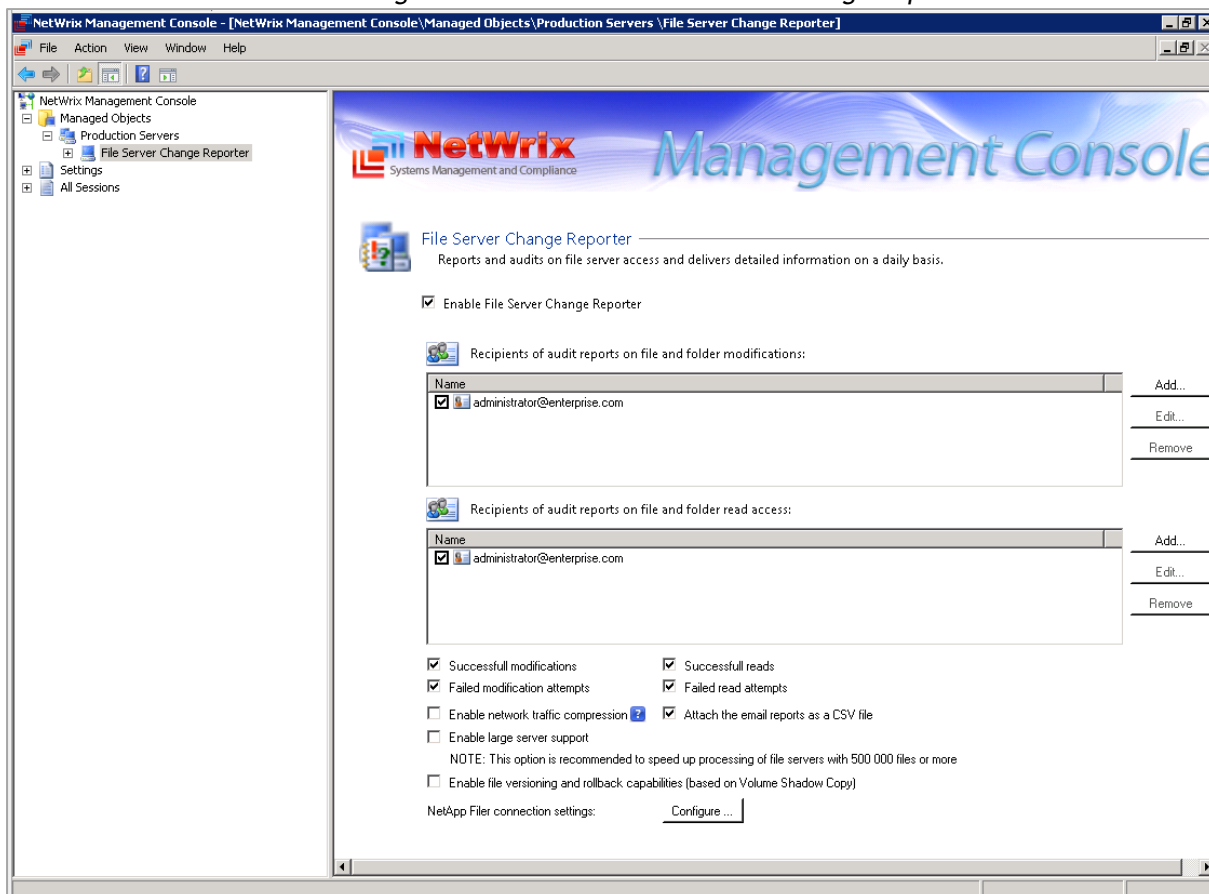


2. Use the following buttons to edit the list:
 - **Add:** Click this button to add a new computer to the collection.
 - **Import:** Click this button to import computer names from a file (a *.txt file with one entry per line).
 - **Remove:** Use this button to delete a computer from the list.

5.2.2 Modifying Feature Settings

In the left pane of NetWrix Management Console, expand the **Managed Objects** node, expand the required Managed Object's node and select **File Server Change Reporter**. The page with general feature settings will be displayed on the right:

Figure 41: NetWrix File Server Change Reporter



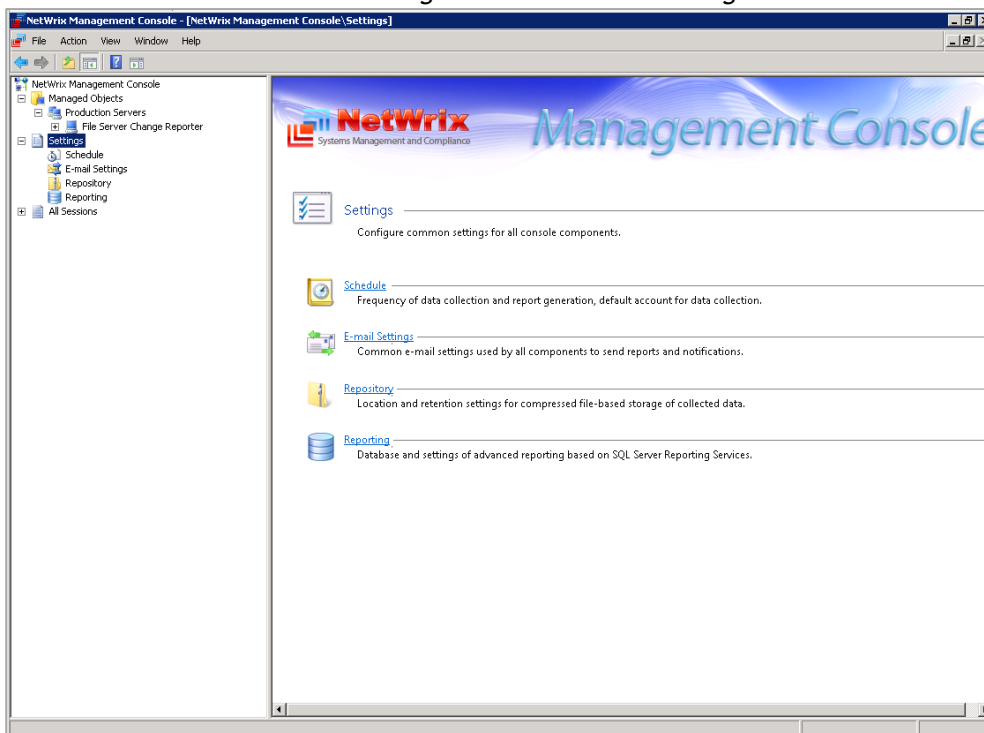
On the File Server Change Reporter page, you can add, edit or remove reports recipients' email addresses, enable or disable the required types of access you want to monitor, and select additional options. For detailed descriptions of the additional options available on this page, refer to Section [6 Additional Configuration](#).

5.3 Configuring Global Settings

NetWrix Management Console provides a convenient interface for configuring the settings that will be applied to all existing Managed Objects and all NetWrix features enabled for these Objects. This chapter provides detailed instructions on how to configure the global settings.

To access the **Global Settings** configuration options, expand the **Settings** node in the left pane. The **Settings** page with available options will be displayed on the right:

Figure 42: Global Settings



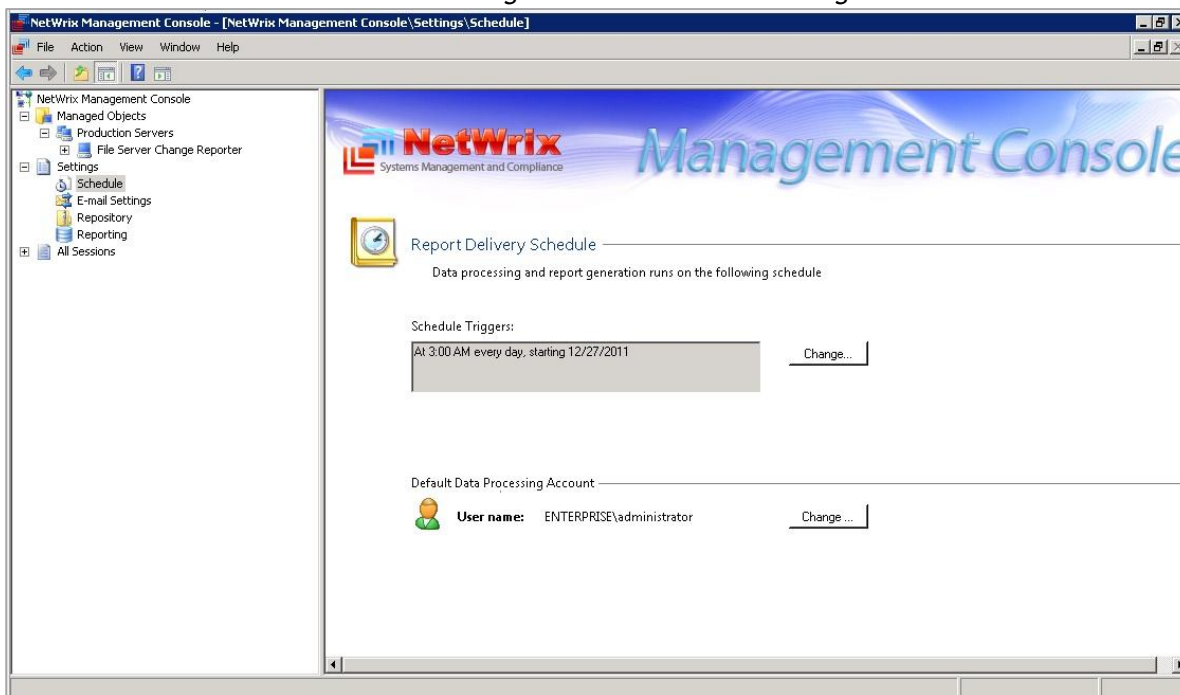
The following Global Settings are available:

- [Schedule](#)
- [E-mail Settings](#)
- [Repository](#)
- [Reporting](#)

5.3.1 Configuring Task Schedule

To access the Schedule settings, click **Schedule** on the **Settings** page or select the **Schedule** node under the **Settings** node in the left pane:

Figure 43: Schedule Settings



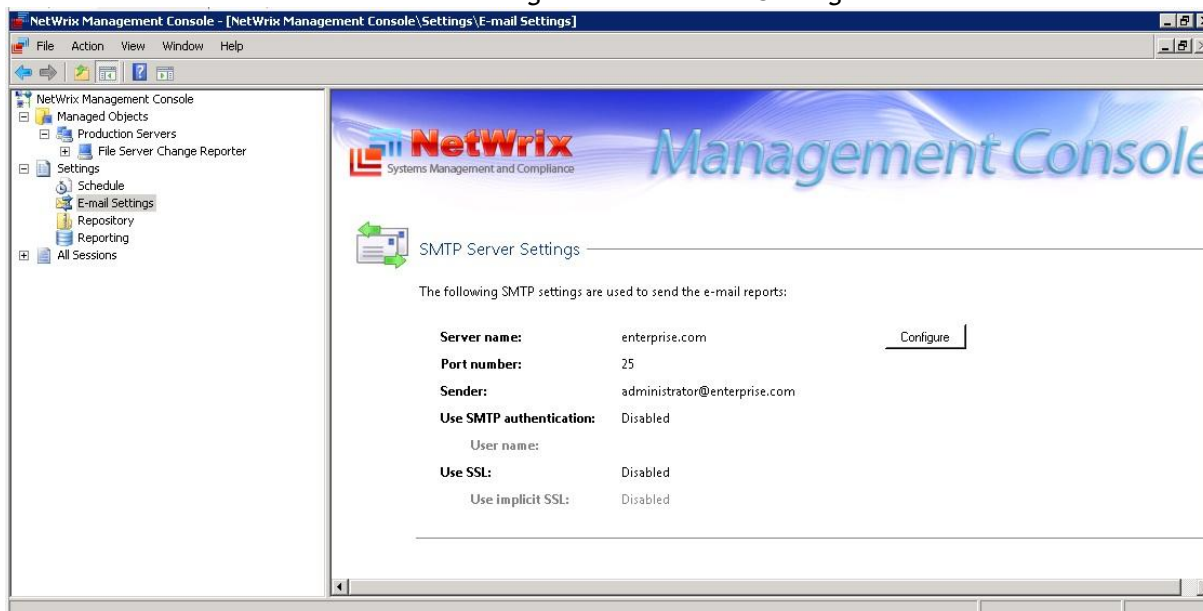
By default, data collection and report delivery is scheduled to run daily at 3:00 am.

To add a new schedule task click **Change**. If you want the task to run from a specific account, modify the **Default Processing Account** by clicking the corresponding **Change** button.

5.3.2 Configuring E-mail Settings

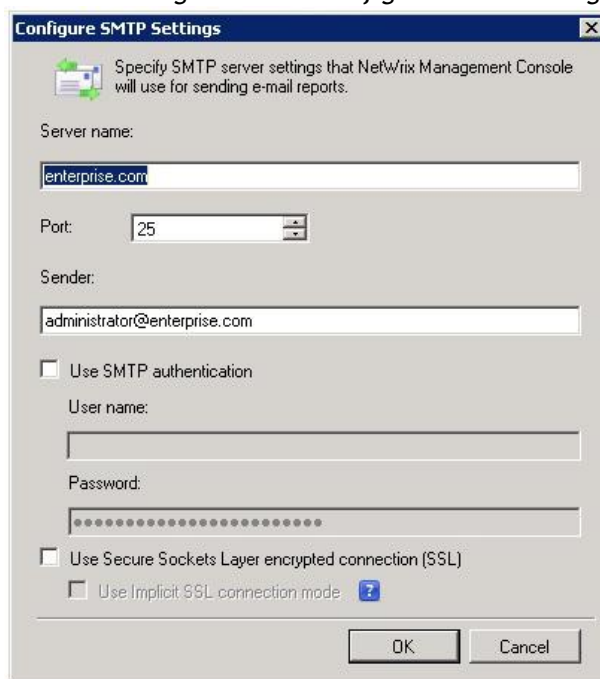
To access the SMTP settings, click **E-mail Settings** on the **Settings** page or select the **E-mail Settings** node under the **Settings** node in the left pane.

Figure 44: E-mail Settings



Click **Configure** to open the Configure SMTP Settings dialog:

Figure 45: Configure SMTP Settings

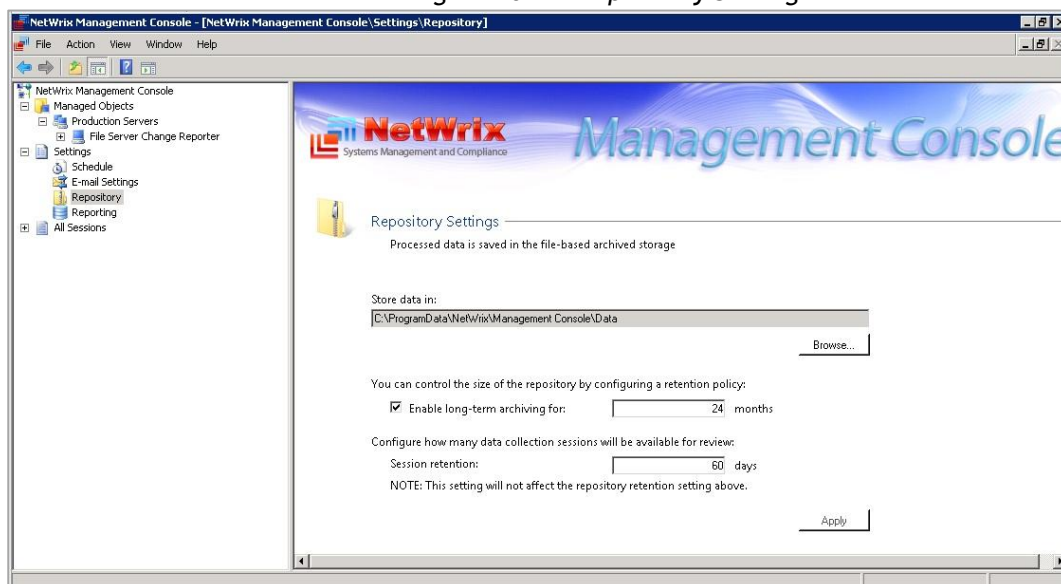


Populate the fields with the relevant data. If your SMTP server needs authentication, check **Use SMTP authentication** and enter the required user name and password. If your SMTP server needs an SSL-encrypted connection, select the corresponding option.

5.3.3 Configuring Repository Settings

Data collected by the product is saved locally in Audit Archive, a file-based storage, for the archiving purpose in accordance with the retention period you specify. To access the Repository settings, click **Repository** on the **Settings** page or select the **Repository** node under the **Settings** node in the left pane.

Figure 46: Repository Settings



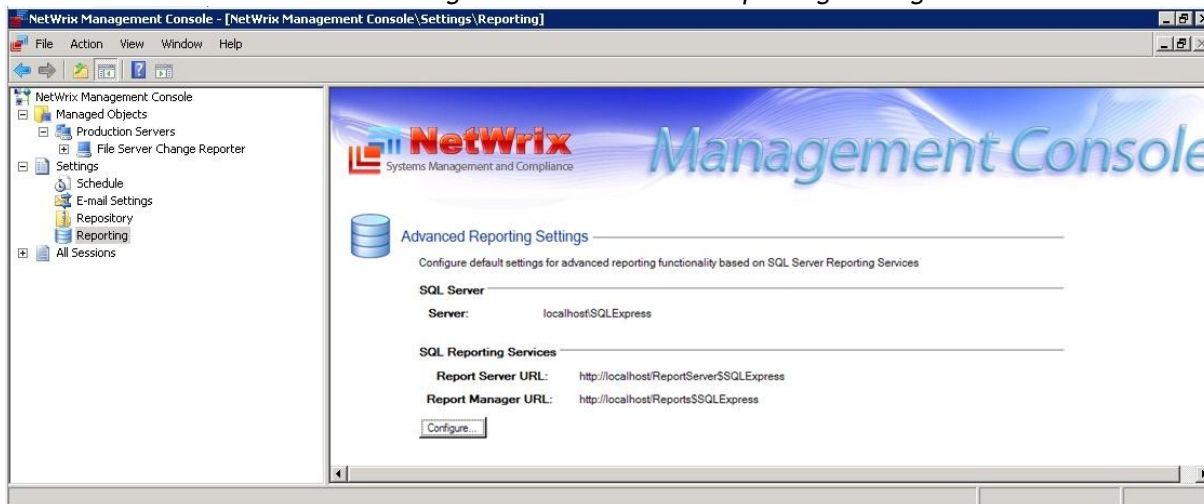
- Specify the path to the repository (default is <%All users\Application Data%\>NetWrix\Management Console\Data).
- To change data retention settings, select **Enable long-term archiving for <n> months**, and specify the required value (default is 24 months).

You can also use the **Session retention** field to specify the period when the data is available for review (default is 60 days).

5.3.4 Configuring Reporting Settings

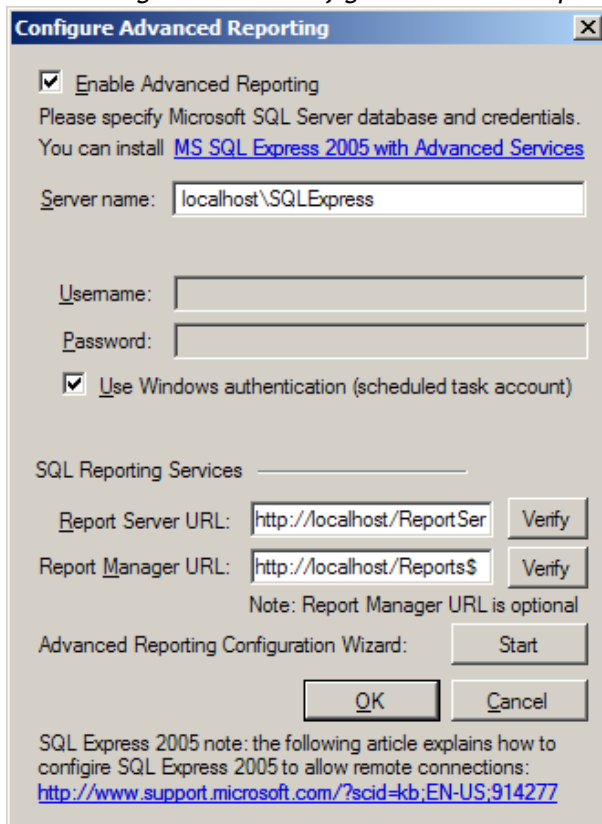
To access the Advanced Reporting settings, click **Reporting** on the **Settings** page or select the **Reporting** node under the **Settings** node in the left pane.

Figure 47: Advanced Reporting Settings



To change your SQL server settings, click **Configure**. The following dialog will appear:

Figure 48: Configure Advanced Reporting



On the **Configure Advanced Reporting** form, you can modify the following:

- **SQL Server name.** The name of the server where the NetWrix File Server Change Reporter database will be created.

- **Use Windows authentication.** If you select this box, the default data processing account (specified on the **Default Data Processing Account** screen of the **New Managed Object** wizard) will be used to access the SQL Server database. To use SQL Server authentication, clear this box and supply user name and password for the SQL Server access.
- **SQL Reporting Services.** Specify the SSRS Report Server and the Report Manager URL. The URLs must be in the following format: `http://<server_name>/<virtual_directory_name>`. You can find the correct path correct folder names in the SQL Reporting Services Configuration Manager. To do this, first launch the **SQL Reporting Services Configuration Manager** (for MS SQL Express 2005 it will be **Start** → **All Programs** → **Microsoft SQL Server 2005** → **Configuration Tools** → **Reporting Services Configuration**) where you can find the virtual directory names under **Report Server Virtual Directory** and **Report Manager Virtual Directory** menu categories. The default values for these names are “ReportServer\$SQLEXPRESS” and “Reports\$SQLEXPRESS” respectively. To check correctness of your entered values, click **Verify**.
- **Advanced Reporting Configuration** wizard. If you wish to install a SQL Server, click **Start** to launch the **Reports Configuration** wizard which allows you to install and automatically configure SQL Server 2005 Express Edition with Advanced Services.

5.4 Data Collection and Reporting

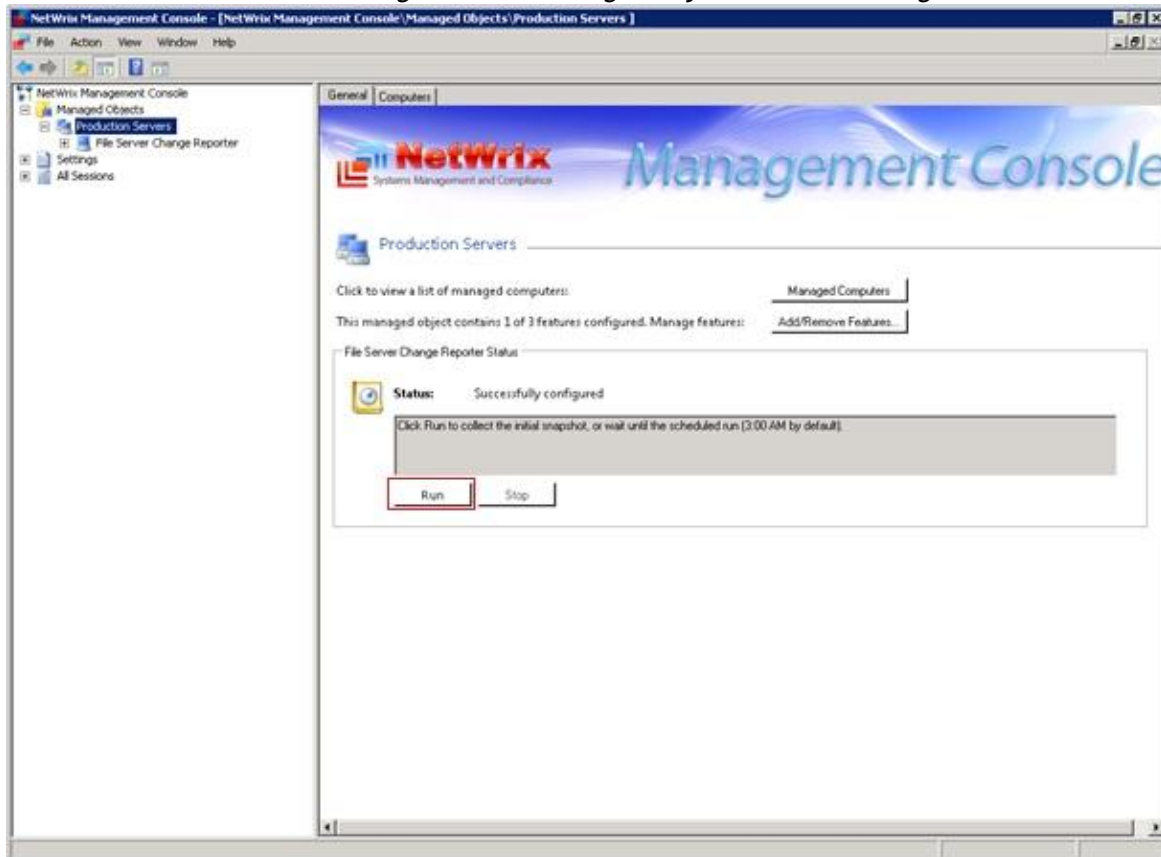
This chapter provides instructions on how to perform data collection and generate reports using NetWrix Management Console.

5.4.1 Running Data Collection Task

By default, NetWrix File Server Change Reporter runs data collection (scans the monitored servers for changes) at 3:00 AM every day, and generates reports on all changes that were detected.

To manually start a data collection task, expand the **Managed Objects** node in NetWrix Management Console, select your Managed Object and click **Run** on the Managed Object **General** tab in the right pane:

Figure 49: Managed Object General Settings



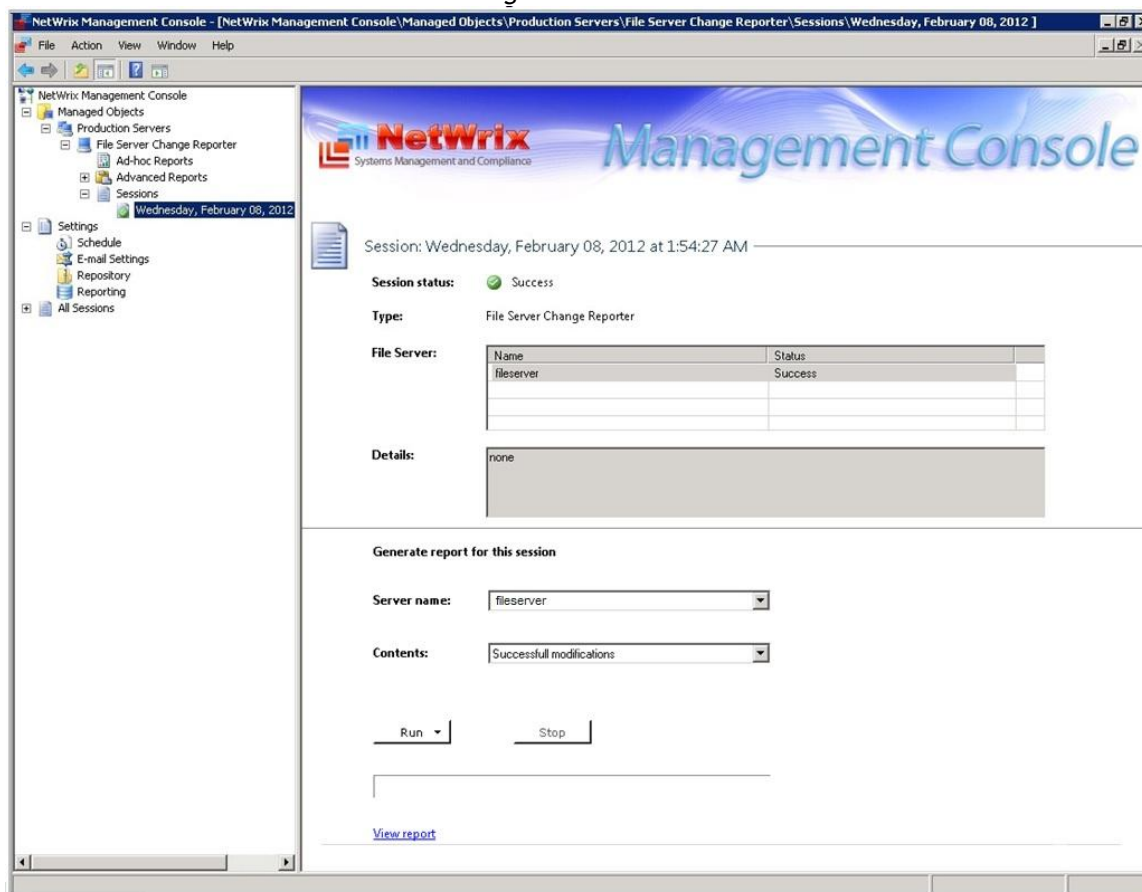
Then file server audit data will be collected and reports will be sent by email to the specified recipients. The task session information can be examined using NetWrix Management Console, as described in Section [5.4.2 Viewing Task Session Results](#).

5.4.2 Viewing Task Session Results

All task operation information is shown in NetWrix Management Console under the **Sessions** node.

To view a session's details, expand the **Managed Object** node in the Console left pane, then navigate to <your **Managed Object**> node → **File Server Change Reporter** → **Sessions** and pick a particular session. The **Session** page will be displayed with the details and options available.

Figure 50: Session Details



For each selected session, you can review the following information:

- **Session status:** Success, Warning, Error, or Fatal Error. Fatal Error occurs if data collection failed to start due to an incorrect account, remote computer powered off, or other reason specified in the **Details** grid on the **Session** page.
- **Type:** the name of the feature that processed data during the selected session (in this case, File Server Change Reporter).
- **File Server:** the list of servers included into the Managed Object collection processed during the session.
- **Details:** detailed information about the audit data collection results.

To generate a report based on data collected during the selected session, use the settings in the lower pane on the right:

- **Server name.** Select the file server whose data will be included in the report.
- **Contents list.** Select the type of events to report on: successful modifications, failed modification attempts, successful read access, or failed read attempts.

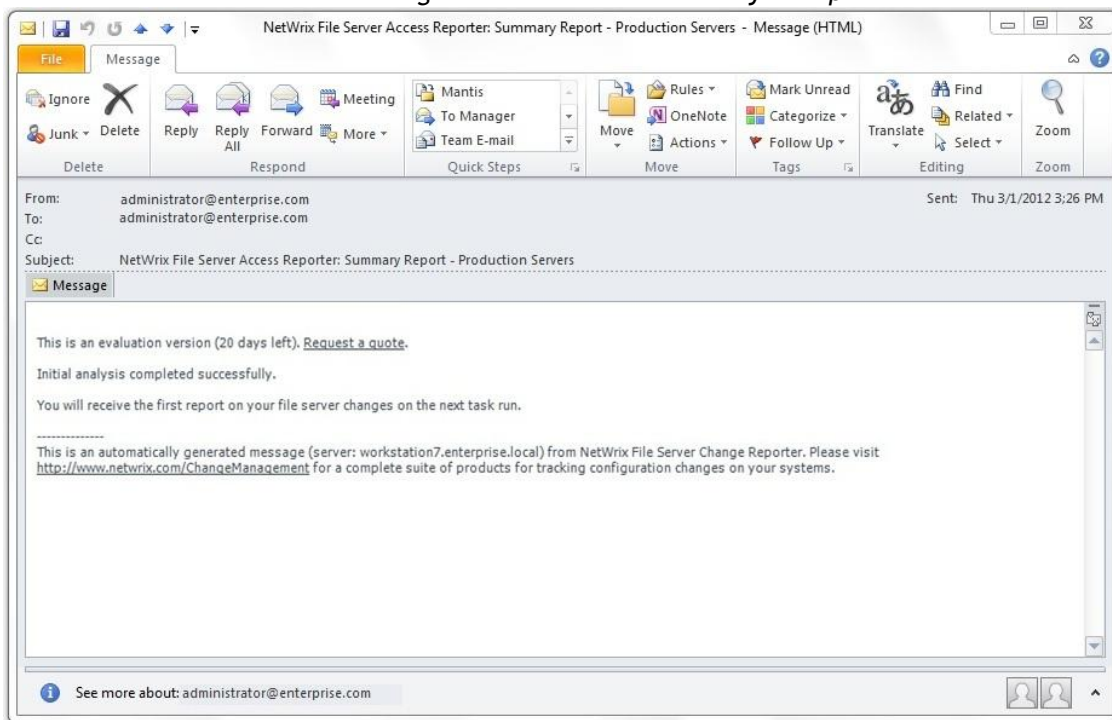
Click the **Run** button to launch the report generation process. From the button's drop-down menu select to run the report either in the HTML or CSV format. The report will be generated and displayed in the selected format.

To see a report generated earlier, click **View report** (if the report has no history, it will be generated first and then displayed).

5.4.3 Viewing Scheduled Reports

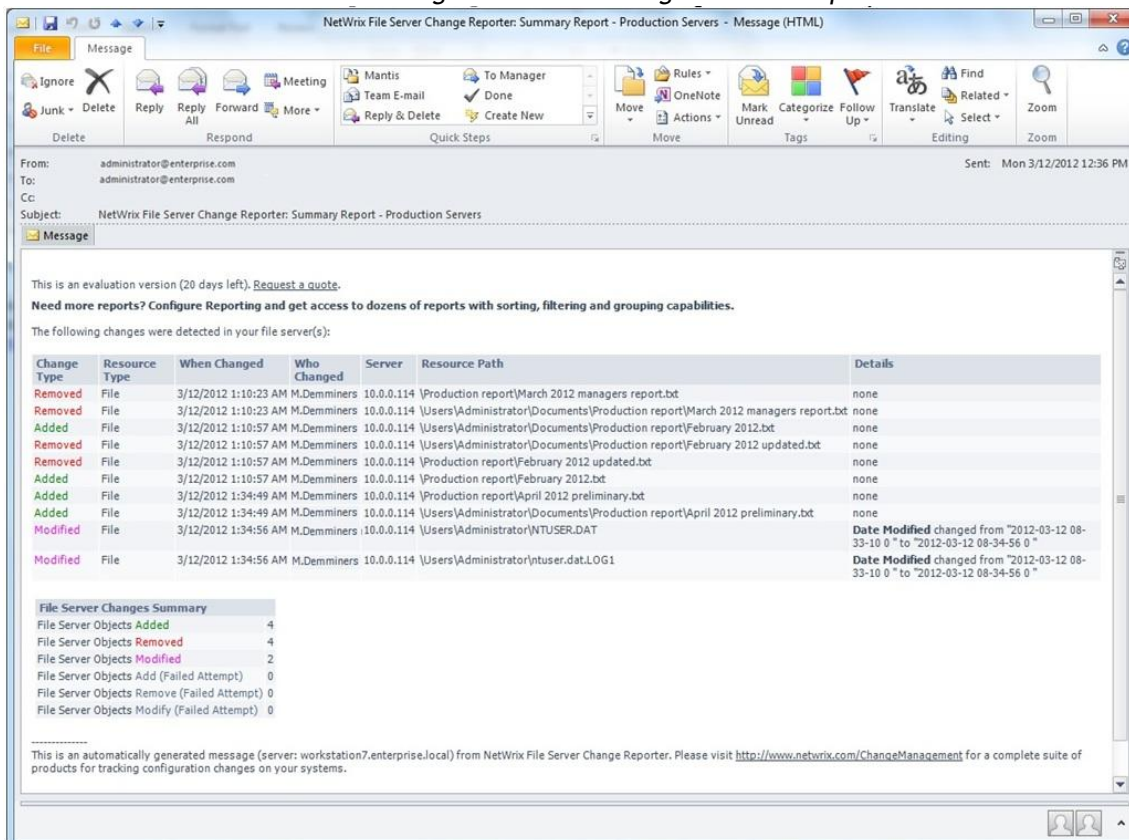
After the first data collection run, an email notification confirming that the initial analysis has been completed is sent to the specified recipient(s).

Figure 51: The Initial Analysis Report



Then, every time a scheduled data collection task is run, a report on changes that occurred since the last data collection is sent to the specified recipient(s):

Figure 52: The Regular Email report

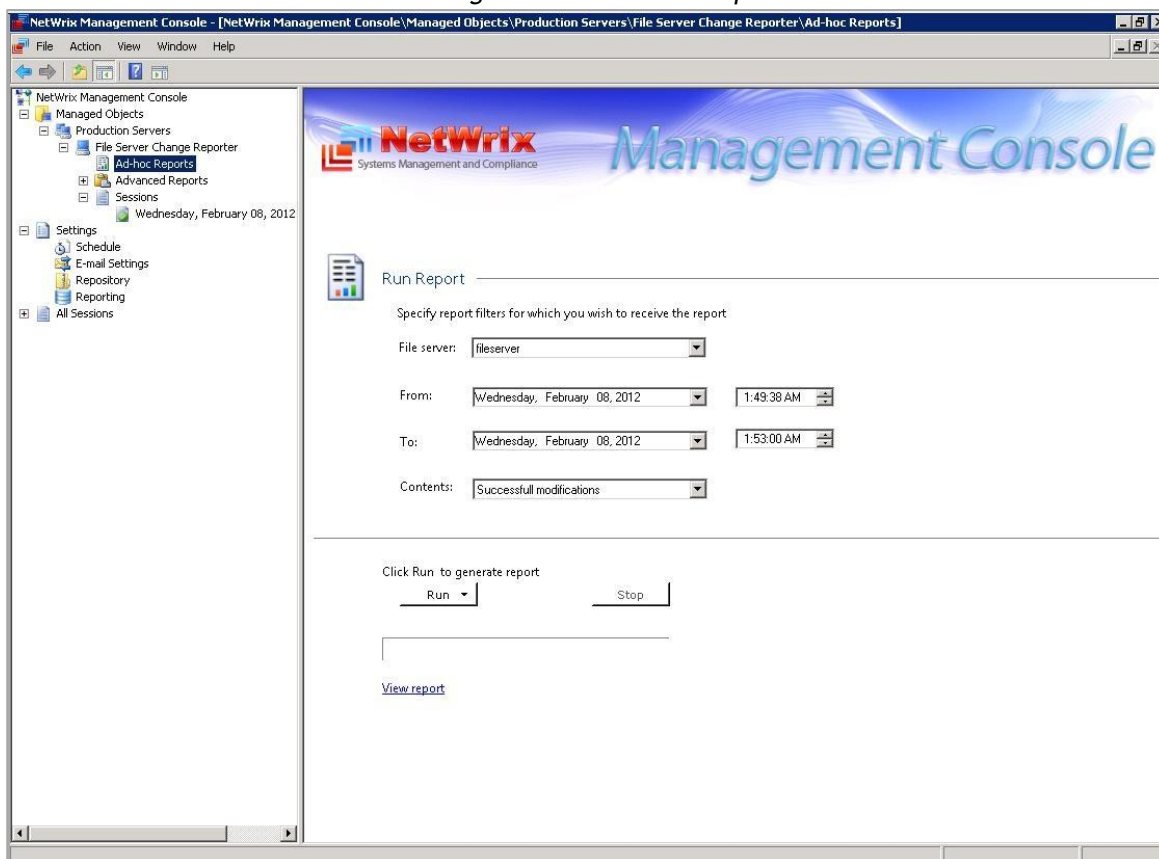


If Advanced Reporting has been configured (as described in the Section [5.5 Advanced Reporting](#) of this document), you can click the **More reports** link from this email report to view HTML reports in your web browser.

5.4.4 Running Ad-hoc Reports

To generate an Ad-hoc report, expand the **Managed Object** node in the Console left pane, expand the required Managed Object's node, then expand the **File Server Change Reporter** node, and select **Ad-hoc Reports**. The page with report filters will be displayed.

Figure 53: Ad-hoc Report Filters



You can specify the following report parameters:

- **File server.** Specify the name of a file server whose data will be included in the report.
- **Date range.** Specify the required period; by default the period between the last two data collection sessions is set.
- **Contents.** Select the type of events you wish to receive a report on.

Set the required filter values and click **Run**. From the button's drop-down menu select to run the report either in the HTML or CSV format. The report will be generated and displayed in the selected format. To cancel the report generation process, click **Stop**.

5.5 Advanced Reporting

With SQL Server Reporting Services deployed, you can also configure Advanced Reporting (SSRS-based). In this case, you can use the following advantages of Advanced Reporting:

- Use a wide variety of reports to analyze access attempts and modifications on your file servers; dozens of reports will help you to stay compliant with standards and

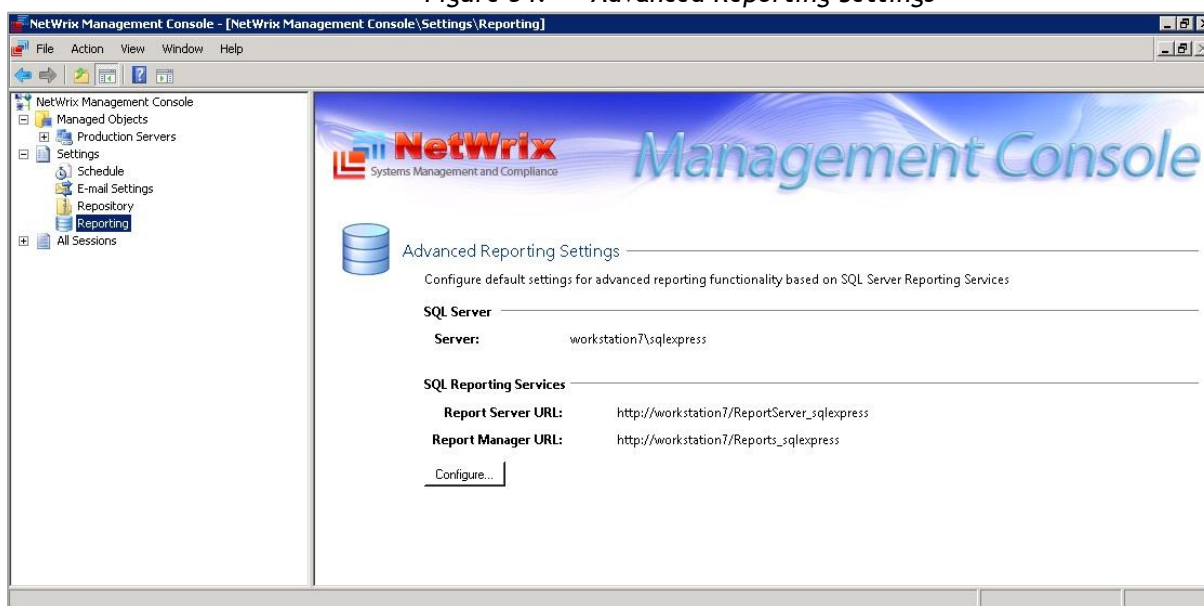
regulations your organization is subject to (SOX, HIPAA, PCI, GLBA, SAS70, and others).

- Change report filters to fine-tune the data view according to your needs.
- Apply one of the most commonly used formats: PDF, XLS and others to save a report.
- Apply grouping and sorting to report data, and so on.

5.5.1 Configuring Default Advanced Reporting Settings

To access the default Advanced Reporting settings, click **Reporting** on the **Settings** page or select the **Reporting** node under the **Settings** node in the NetWrix Management Console left pane. Then click **Configure** on the right pane. The Reports Configuration Wizard will be launched. The wizard helps you configure Advanced Reporting settings which will be used by default.

Figure 54: Advanced Reporting Settings



To configure Advanced Reporting setting, follow the procedure below:

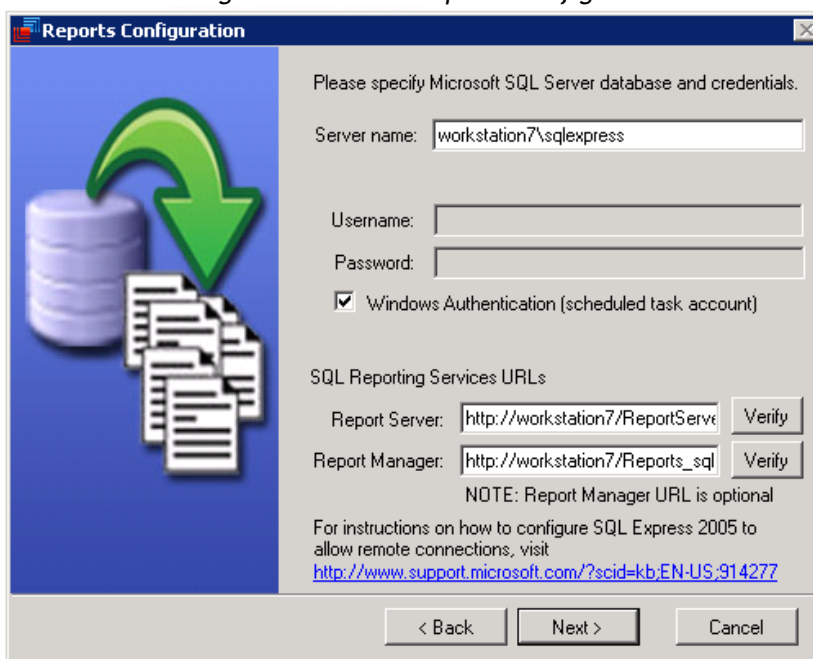
Procedure 10. To configure Advanced Reporting settings

1. Launch the **Advanced Reporting Configuration** wizard.
2. On the first step of the wizard, select whether you want to proceed with the automatic installation and configuration of SQL Server 2005 Express Edition with Advanced Services, or use an existing SQL Server instance.

Note: If you use an existing SQL Server instance, make sure that the Reporting Services feature is installed and configured for this server. For instructions on the manual installation of SQL Server with Reporting Services required for NetWrix file Server Change Reporter, please refer to the following technical article: [Installing Microsoft SQL Server and Configuring the Reporting Services](#). For full installation and configuration details, please refer to documentation provided by Microsoft.

3. On the next step, do the following:
 - If you have selected to install and configure SQL Server 2005 Express Edition with Advanced Services, wait for the automatic installation and configuration process to complete.
 - If you have selected to configure an existing SQL Server instance for reporting, configure the SQL Server database connection settings:

Figure 55: The Reports Configuration Wizard



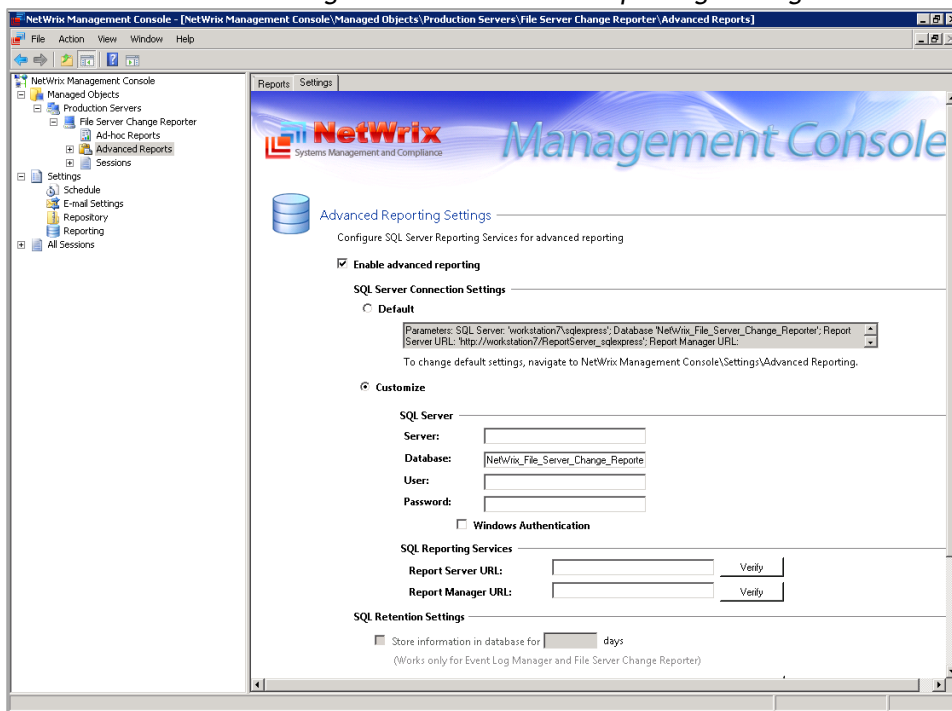
Note: A database will be created automatically on the specified server with the following default name: NetWrix_File_Server_Change_Reporter. By default, it will be accessed using Windows authentication with the scheduled task account. To use SQL Server authentication, clear the **Windows Authentication** check box, and enter the credentials for the database access.

Enter and verify the URLs of the Reporting Services: Report Server URL and Report Manager URL. The URLs must be in the following format: `http://<server_name>/<virtual_directory_name>`. You can find the correct path names in the **SQL Reporting Services Configuration Manager**. To do this, first launch the **SQL Reporting Services Configuration Manager** (for MS SQL Express 2005 it will be **Start → All Programs → Microsoft SQL Server 2005 → Configuration Tools → Reporting Services Configuration**) where you can find the virtual directory names under **Report Server Virtual Directory** and **Report Manager Virtual Directory** menu categories. The default values for these names are “ReportServer\$SQLEXPRESS” and “Reports\$SQLEXPRESS” respectively.

4. Click **Next** to save your configuration.
5. On the final step, review your settings and click **Finish**. Make sure the account under which you plan to view the reports has sufficient rights for the **Home** folder.

You can also configure Advanced Reporting Settings via the **Advanced Reporting Settings** page in the Management Console. To access the page, in the left Console pane expand the **Managed Object** node, then expand **<your Managed Object name>** node, select **File Server Change Reporter** and then **Advanced Reports**. Open the **Settings** tab on the right pane:

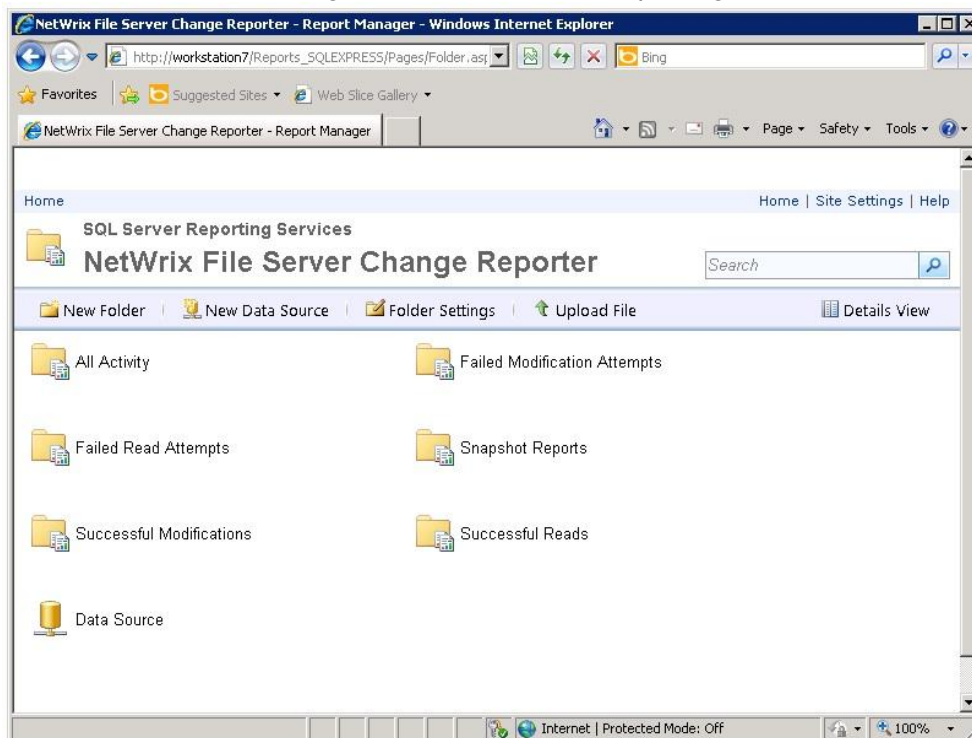
Figure 56: Advanced Reporting Settings



On the **Advanced Reporting Settings** screen, you can modify the required settings by selecting the relevant option as well as run the Reports Configuration wizard.

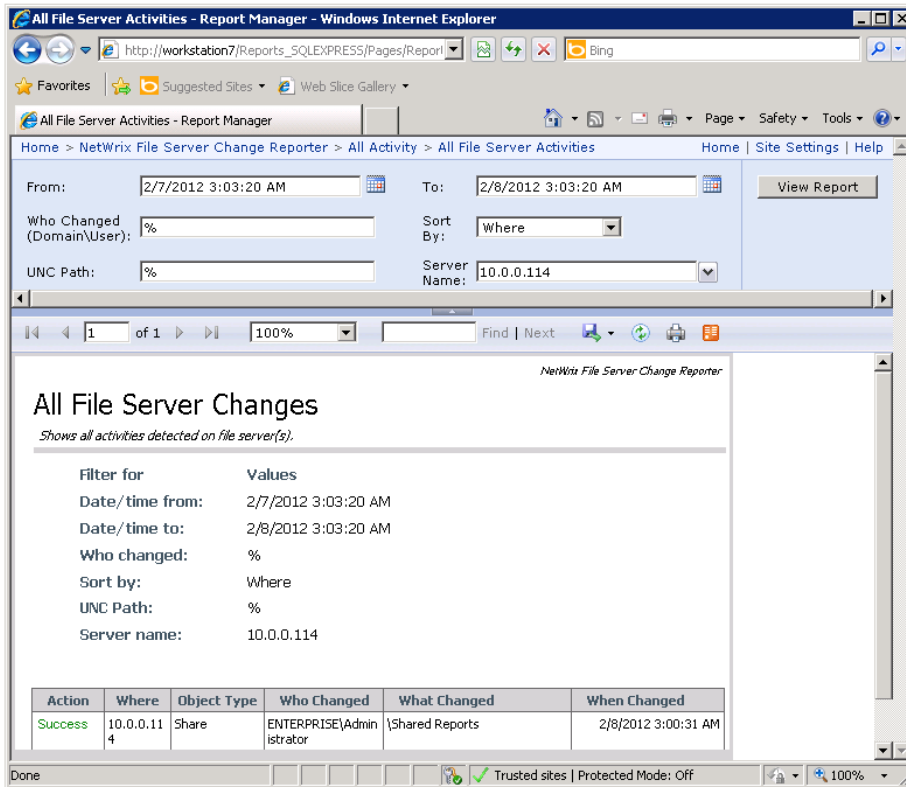
You can view the reports either on the Management Console page or by using your web browser. On the **Advanced Reporting Settings** page, click **Navigate** under **Web-based Reporting**. The SQL Database Access page will be displayed.

Figure 57: SQL Server Reporting Services



Select the folder of the report you want to generate and set the required parameters. Click **View Report** to get the report:

Figure 58: Example of the Advanced Report

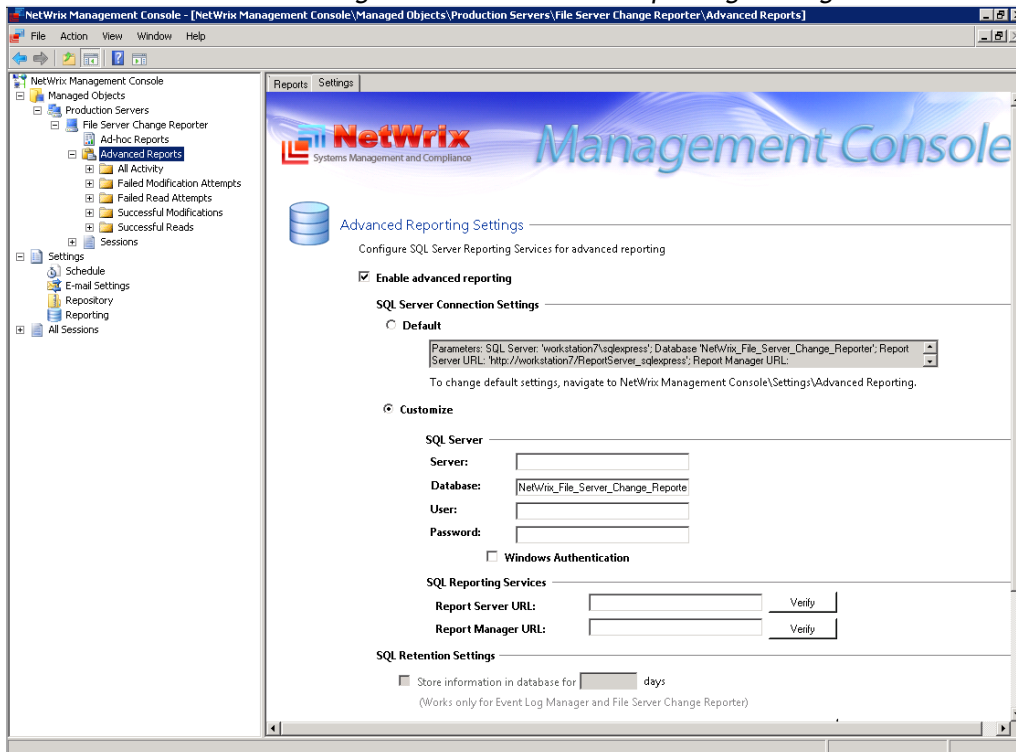


5.5.2 Modifying Advanced Reporting Settings

To change the default Advanced Reporting settings, in NetWrix Management Console left pane, select **Managed Objects** → <your Managed Object name> → **File Server Change Reporter** → **Advanced Reports**, and open the **Settings** tab.

Select the **Enable SQL Server reporting** option if required.

Figure 59: Advanced Reporting Settings



The following options are available:

- To customize the current values, select the **Customize** option, then specify the necessary values:
 - o Enter SQL Server and product database names

Note: If you have multiple NetWrix products deployed, consider that each of them must use a separate database. Databases can be located on the same SQL server.

- o If you want to connect to the database using SQL Server authentication, supply access credentials

Note: Alternatively, you can use **Windows Authentication** to connect to the database - if this option is selected, the account specified at **Run As** for the scheduled task will be used.

- o Enter the SSRS Report Server and Report Manager URLs and click **Verify**.
 - o You can also click **Run Wizard** and follow the wizard's steps (for example, to install SQL Server Express). For details, refer to the Section [5.5.1 Configuring Default Advanced Reporting Settings](#).
- To upload a set of predefined report templates to the Report Server, in the **Web-based Reporting** section, click **Upload**.
 - To launch a web browser and open the reports in Report Viewer, click **Navigate**.
To save the updated configuration, click **Apply**.

6 ADDITIONAL CONFIGURATION

The following additional configuration options are available:

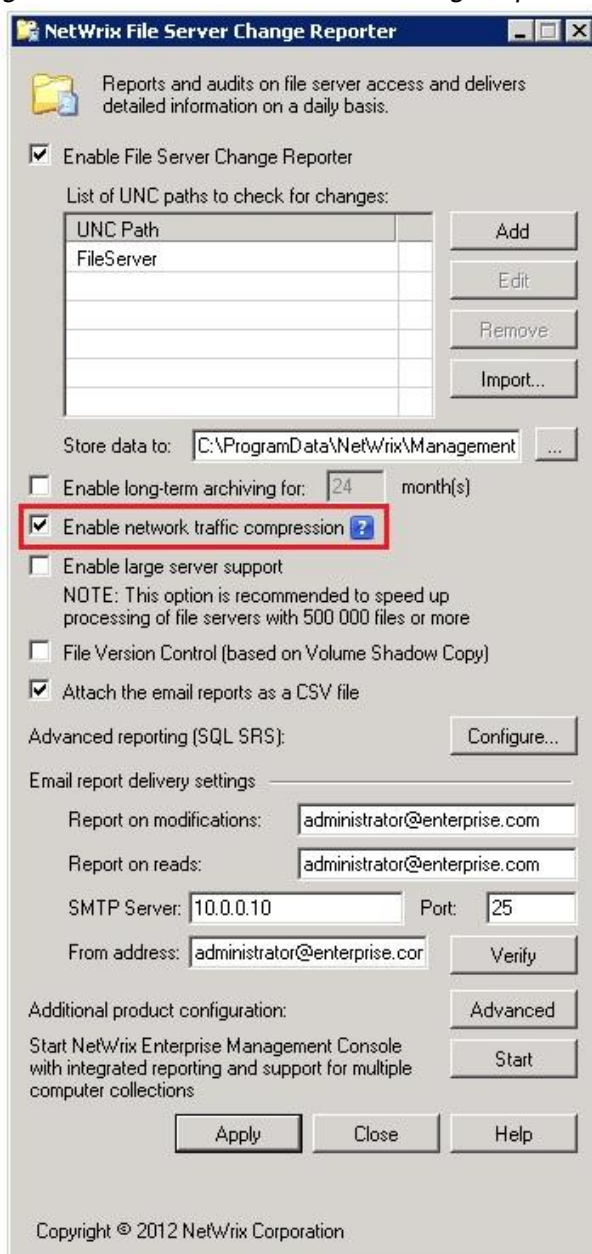
- [Network traffic compression](#)
- [Large server support](#)
- [File versioning and rollback capabilities \(based on Volume Shadow Copy\)](#)
- [Editing Report Delivery Schedule](#)
- [Including and Excluding Data From Reports](#)
- [Importing Changes That Occurred Between Two Snapshots](#)
- [Creating Custom Reports](#)

6.1 Network Traffic Compression

The network traffic compression option is recommended for slow connections and distributed multi-site networks. When enabled, a light-weight agent is executed remotely on each file server to collect and compress audit data before transfer. The program is executed only on schedule and completes quickly (usually, it takes several minutes). This results in almost 100 times less data transferred with minimal impact on target computers' performance.

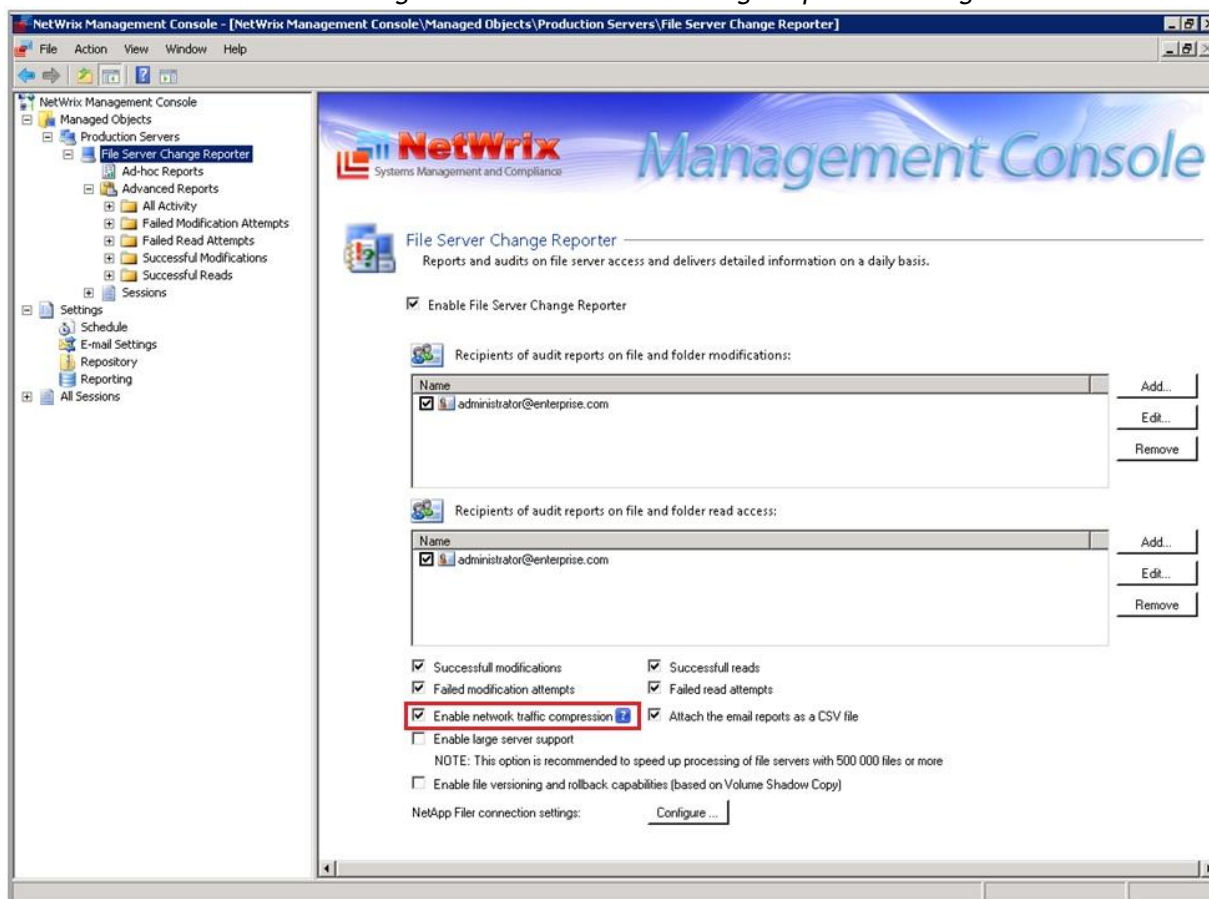
To enable this option in the Freeware Edition select the option in the configuration dialog:

Figure 60: NetWrix File Server Change Reporter Configuration



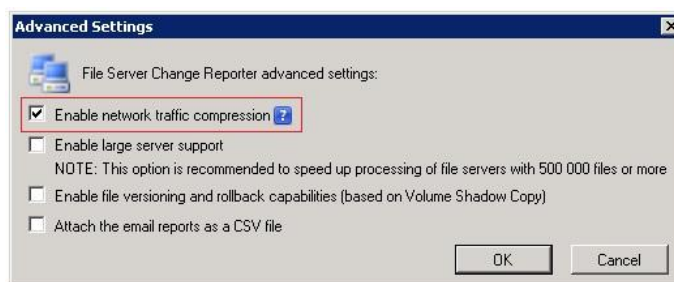
To enable the option in the Enterprise Edition you can either select this option on the configuration dialog, or on the NetWrix File Server Change Reporter settings page. To access the page, in the NetWrix Management Console left pane, select **Managed Objects** → **<your Managed Object name>** → **File Server Change Reporter**. The NetWrix File Server Change Reporter settings for the selected Managed Object will be displayed on the right:

Figure 61: File Server Change Reporter Settings



For the Enterprise Edition, this option is also available on the **Configure File Server Change Reporter Settings** screen of the **New Managed Object** wizard. On clicking the **Configure** button on this screen the **Advanced Settings** form will appear with the option's selection box. To enable the option, tick the box and click **OK**.

Figure 62: Advanced Settings



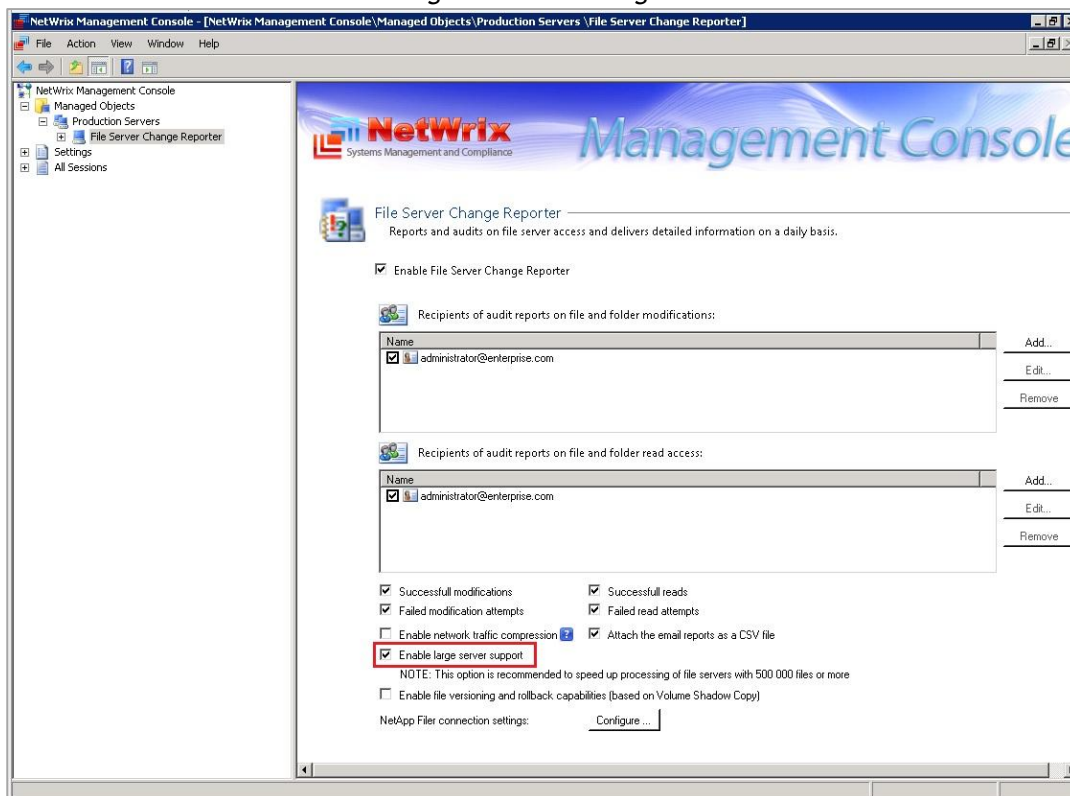
Note: This option can only be applied to the monitored servers with a Windows operating system.

6.2 Large Servers Support

If you manage large servers, you can use an additional option provided by NetWrix File Server Change Reporter. The **Enable large server support** option is recommended to speed up data collection from file servers storing a large amount of data (500 000 and more files).

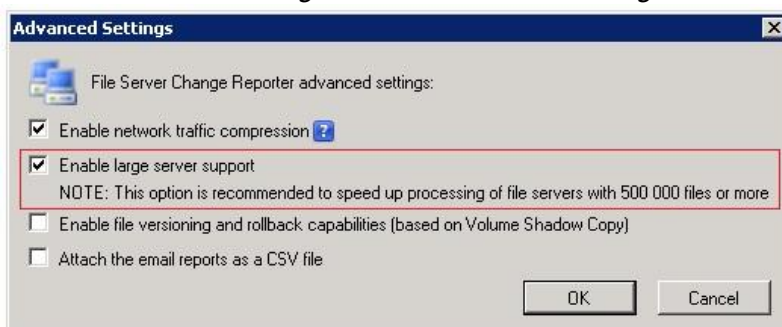
To access this option, expand the required Managed Object node in the left NetWrix Management Console pane and select the **File Server Change Reporter** node. The option's box "Enable large server support" will be displayed on the File Server Change Reporter settings page on the right.

Figure 63: Management Console



This option is also available on the **Configure File Server Change Reporter Settings** screen of the **New Managed Object** wizard. On clicking the **Configure** button on this screen the **Advanced Settings** form will appear with the option's selection box. To enable the option, tick the box and click **OK**.

Figure 64: Advanced Settings



Note: This option is available in the Enterprise Edition only.

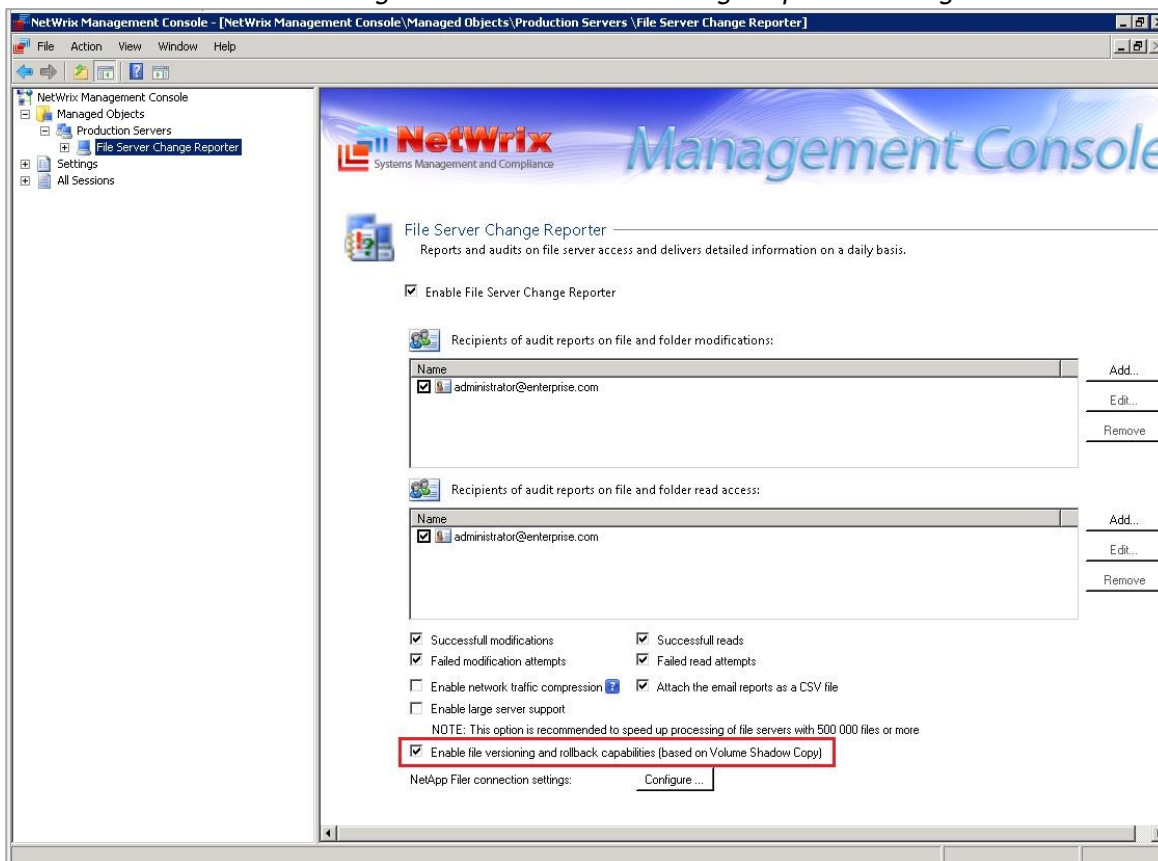
6.3 Using File Versioning and Rollback Capabilities

NetWrix File Server Change Reporter provides file versioning and rollback capabilities.

Enable this option to create rollback points basing on the Volume Shadow Copy technology. If any data, file or permission is changed or deleted, you will always be able to perform a rollback of these actions. For detailed instructions on how to perform rollback, refer to the technical article [How to Perform File System Backup and Restore with NetWrix File Server Change Reporter](#).

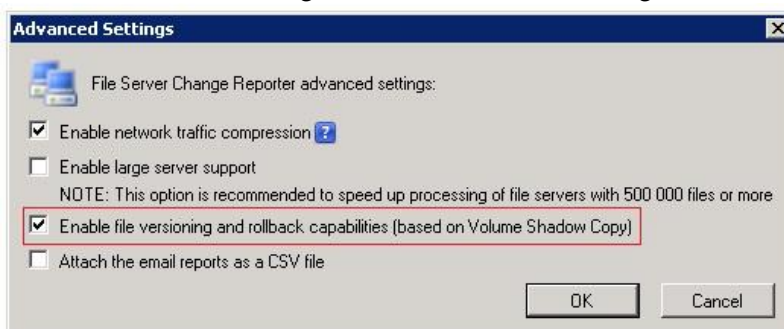
To enable the option, expand the required Managed Object node in the left NetWrix Management Console pane and select the **File Server Change Reporter** node. The option's box **"Enable file versioning and rollback capabilities (based on Volume Shadow Copy)"** will be displayed on the File Server Change Reporter settings page on the right:

Figure 65: File Server Change Reporter Settings



This option is also available on the **Configure File Server Change Reporter Settings** screen of the **New Managed Object** wizard. On clicking the **Configure** button on this screen the **Advanced Settings** form will appear with the option's selection box. To enable the option, tick the box and click **OK**.

Figure 66: Advanced Settings



Note: This option is available in the Enterprise Edition only.

6.4 Editing Report Delivery Schedule

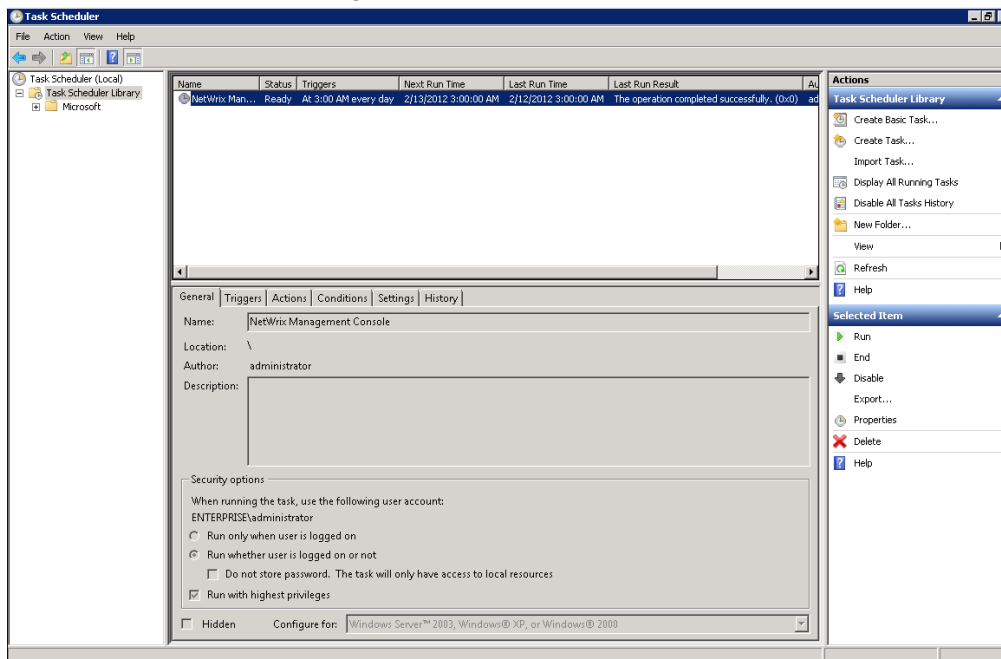
You can set a particular task schedule for all Managed Objects in bulk, or fine-tune scheduled tasks for each Managed Object individually. For details on how to set a task schedule for all Managed Objects, refer to Section [5.3.1 Configuring Task Schedule](#).

To edit a scheduled task for your Managed Object on Windows 2008, follow the procedure below. NetWrix File Server Change Reporter uses a standard Windows scheduled task called 'NetWrix Management Console - File Server Change Reporter - Your_x0020_Computer_x0020_Collection'.

Procedure 11. To edit scheduled task on Windows 2008

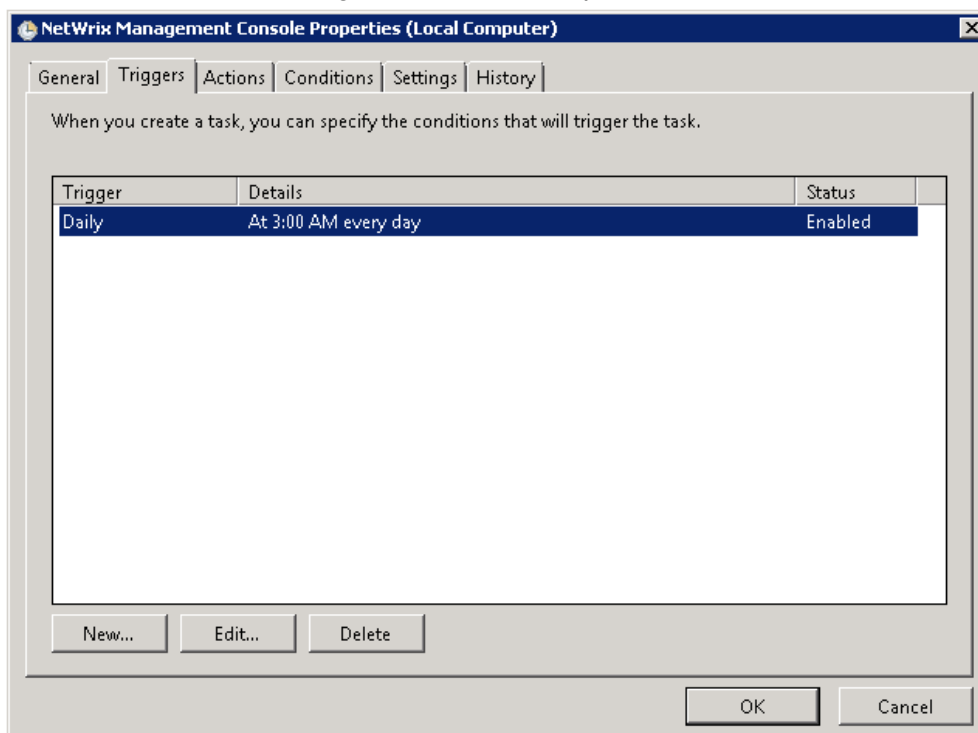
1. Navigate to the Start menu → Administrative Tools → Task Scheduler and select the required NetWrix Management Console task.

Figure 67: Task Scheduler



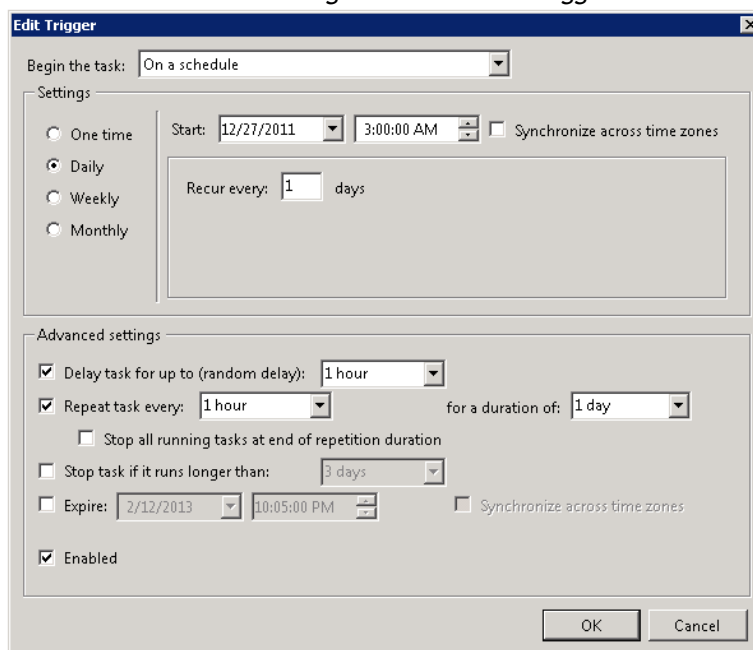
2. Double-click the task, and go to the Triggers tab on the displayed Properties form. Click the Edit button.

Figure 68: Task Properties



3. On the Edit Trigger form, define the required settings to fine-tune your task schedule.

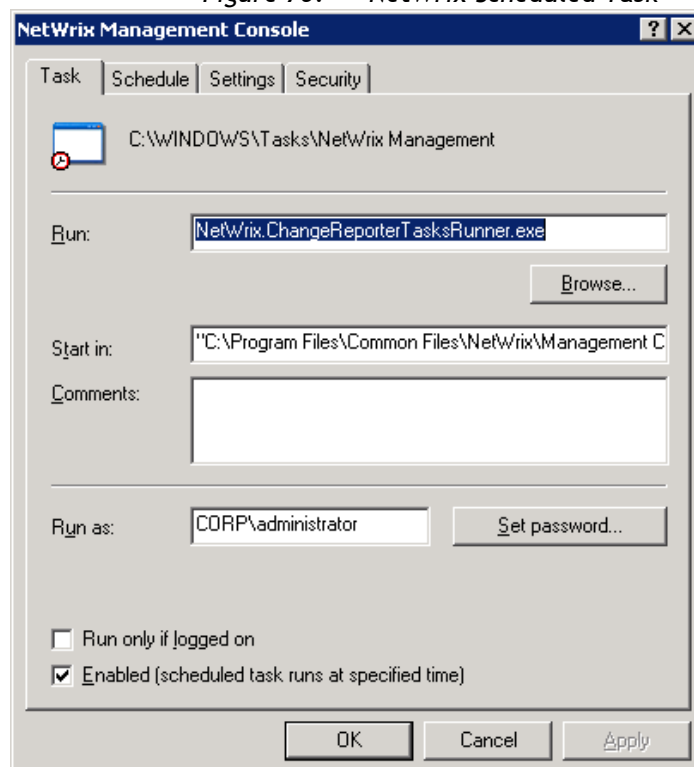
Figure 69: Edit Trigger



Procedure 12. To edit scheduled task on Windows 2003

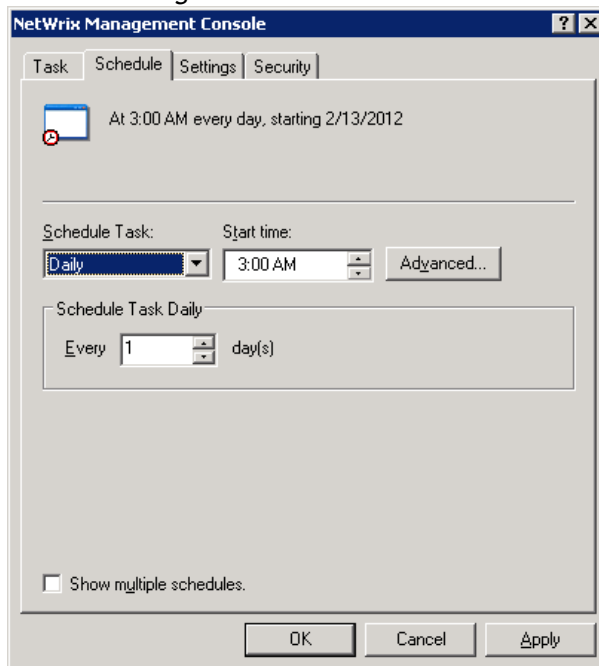
1. Navigate to the **Start menu → Settings → Control Panel → Scheduled Tasks** and select the **NetWrix Management Console** task. The scheduled task dialog will appear:

Figure 70: NetWrix Scheduled Task



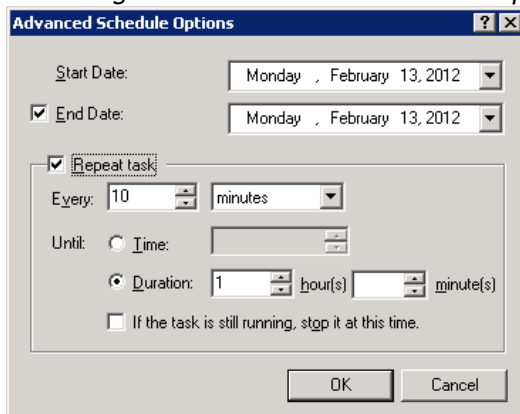
2. Go to the **Schedule** tab to define the required task period and time settings.

Figure 71: NetWrix Scheduled Task



3. Click **Advanced** to access advanced schedule options.

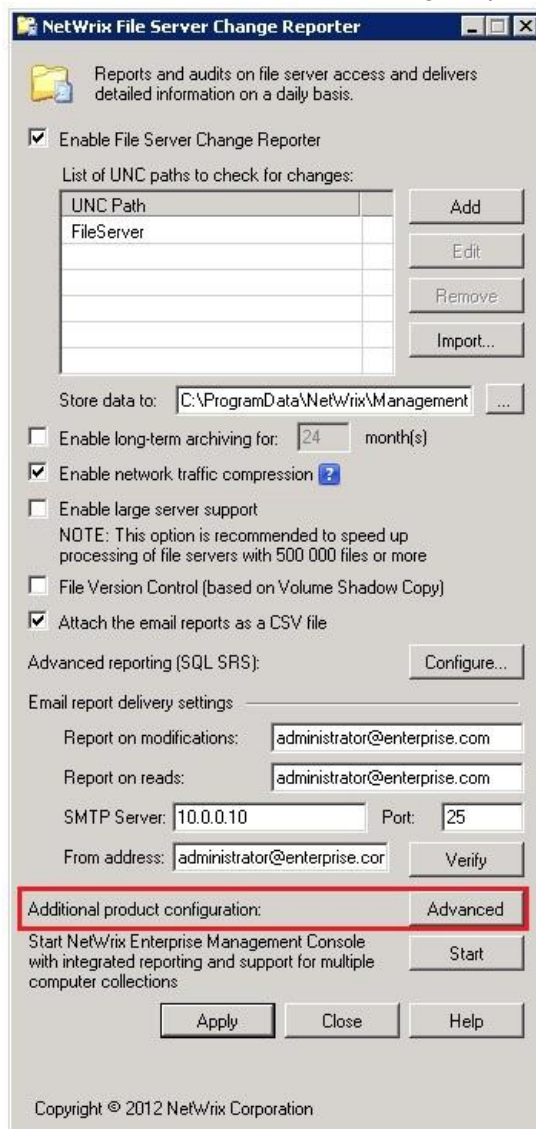
Figure 72: Advanced Schedule Options



4. Click **OK** to apply the changes and close the form.

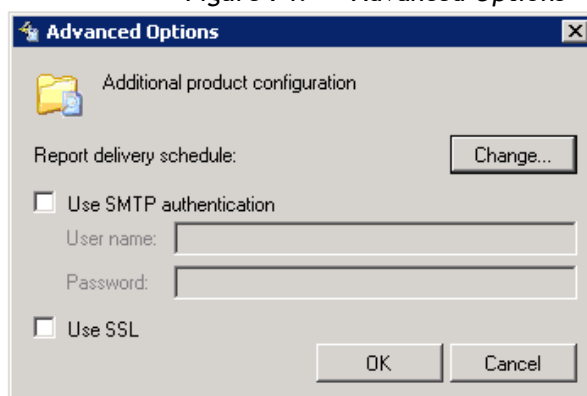
For the Freeware Edition, you can modify task schedule by selecting the **Advanced** button for the **Additional product configuration** on the Configuration utility dialog.

Figure 73: NetWrix File Server Change Reporter Configuration



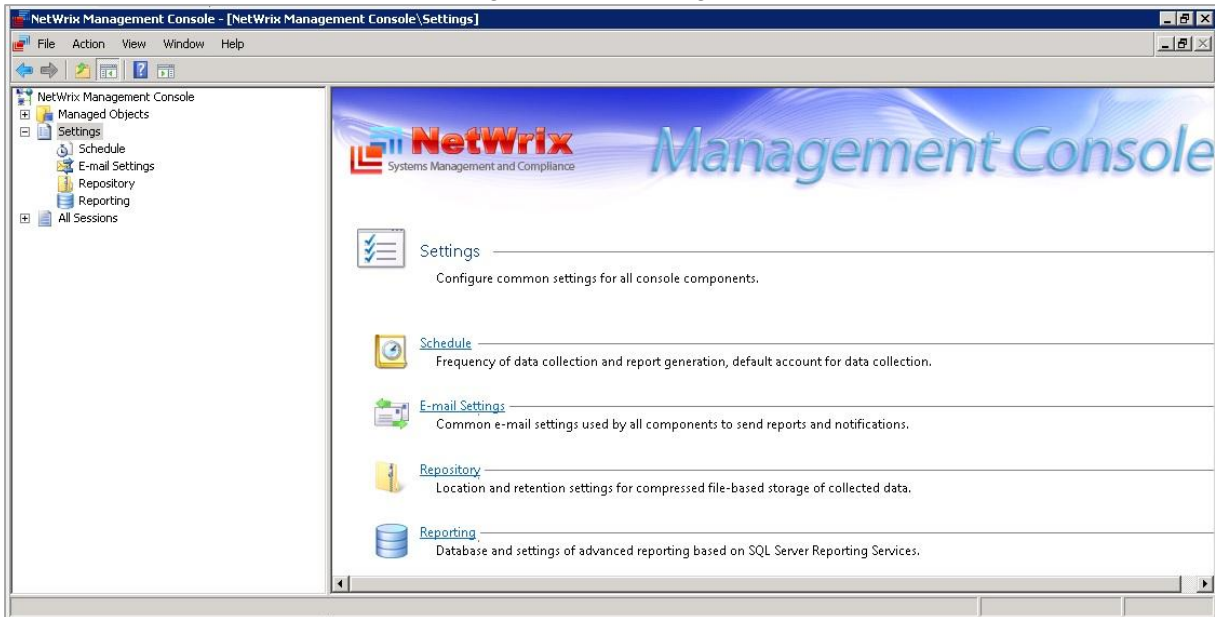
On the **Advanced Options** form displayed, click **Change** and define the required schedule settings.

Figure 74: Advanced Options



You can also edit the Schedule task by clicking **Schedule** on the **Settings** page or selecting the **Schedule** node under the **Settings** node in the NetWrix Management Console left pane.

Figure 75: Management Console



Configuration via Global Settings will affect all Managed Objects.

6.5 Including and Excluding Data from Reports

To fine-tune data collection and reporting, change the required configuration files located in the product installation folder. The files must be added with one entry per line. The following configuration files are available:

- To exclude object types from your reports, add the types' names to the omitobjlist.txt file.
- To exclude particular objects (files, folders or shares) from your reports, specify their UNC paths in the omitpathlist.txt file.
- To exclude particular attributes from reports, add attributes' names to the omitproplist.txt file.
- To prevent saving information about certain objects to the Audit Archive, specify the UNC paths to these objects in the omitstorelist.txt file.
- To prevent saving information about certain attributes to the Audit Archive, specify attributes' names in the omitstireproplist.txt file.
- To prevent saving information about certain users' to the Audit Archive, specify their names in the omitstoreuserlist_fs file.
- To exclude particular users from your reports, specify their names in the omituserlist_fs file.
- To change attributes' display names in your reports, edit these names in the propnames.txt file.

6.6 Importing Changes That Occurred Between Two Snapshots

Database Importer allows you to import data on file server changes that were made between two snapshots to a SQL server database for advanced analysis through Microsoft SQL Server Reporting Services.

To launch the Database Importer navigate to **Start → All Programs → NetWrix → File Server Change Reporter → DB Importer**.

This option can only be applied if at least 2 data collection tasks have run.

Figure 76: File Server Change Reporter DB Importer



On the **File Server Change Reporter** form, specify the file server whose changes need to be imported, select the snapshots' sessions and specify the server and database, where you want to import the data. To start the process, click **Import**. Data will be imported from a local repository to the specified SQL Server.

In most cases the use of Database Importer is not required, because data is imported according to the schedule and is automatically written to the specified database if the corresponding option is selected.

However, you may need to manually import data when, for example, the database fails, or some other error occurs.

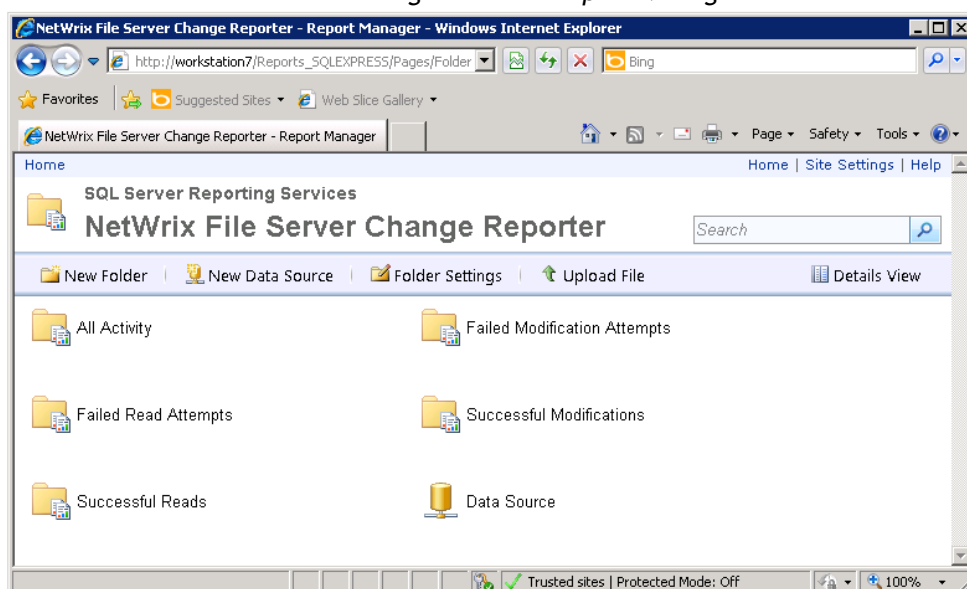
6.7 Creating Custom Reports

You can create custom reports via **Microsoft SQL Reporting Services Report Manager**. The tables below describe the database structure used by NetWrix File Server Change Reporter. You can use this information to build custom reports that extract and display the required data.

Make sure you have selected **Report Manager** during the installation of Microsoft SQL Server. Otherwise, custom reporting will not be available.

To access **Microsoft SQL Reporting Services Report Manager**, use the URL you specified in the Advanced Reporting Settings, then click **Report Builder** to start creating reports.

Figure 77: Report Manager



NetWrix File Server Change Reporter database structure includes the following tables:

- DBVersion
- Sessions
- Changes
- PropChanges

DBVersion

Identifies the database format version. Used for compatibility checking.

Column	Data Type	Description
<i>ProductId</i>	int	Primary key
<i>ProductName</i>	nvarchar(255)	Contains the product name that has collected the data to this database: <i>File Server Change Reporter</i> .
<i>DBVersion</i>	int	Database format version. The current version must be 1.

Sessions

Contains all data collection sessions (new session is created every day by default). All detected changes are linked to sessions.

Column	Data Type	Description
<i>SessionId</i>	int	Primary key
<i>ProductId</i>	int	Contains the product ID that has collected the data during this session. For NetWrix File Server Change Reporter this value is 1.
<i>Date</i>	DATETIME	Data collection session start time.

Changes

Contains details of all changes (object name, type, who changed, when changed, etc.) made to all file server objects.

Column	Data Type	Description
<i>ChangeId</i>	int	Primary key
<i>ProductId</i>	int	For NetWrix File Server Change Reporter this value is 1
<i>SessionId</i>	int	Foreign key to <i>Sessions.SessionId</i> .
<i>ObjectPath</i>	nvarchar(255)	Full file server object path.
<i>ObjectType</i>	nvarchar(255)	Active Directory object class (e.g. <i>user</i> , <i>organizationalUnit</i> , etc.).
<i>What</i>	int	Change type: <ol style="list-style-type: none"> 1. Added 2. Removed 3. Modified 4. Add (Failed Attempt) 5. Remove (Failed Attempt) 6. Modify (Failed Attempt) 7. Successful reads 8. Failed read attempts

<i>Who</i>	nvarchar(255)	User account under which the change was made.
<i>Where</i>	nvarchar(255)	Name of the file server to which the change was made.
<i>When</i>	DATETIME	Date and time when the change was made.

PropChanges

Contains changed attributes and values for modified file server objects.

Column	Data Type	Description
<i>PropChangeld</i>	int	Primary key
<i>Changeld</i>	int	Foreign key to <i>Changes.Changeld</i>
<i>PropName</i>	nvarchar(255)	Changed file server attribute name
<i>PropNameInt</i>	nvarchar(255) NOT NULL	Internal attribute name
<i>IsMultiValue</i>	int	Attribute type. This value defines meaning of <i>BeforeValue</i> and <i>AfterValue</i> fields
<i>BeforeValue</i>	ntext	For single-valued attributes contains previous attribute value, for multi-valued contains removed items (e.g. removed group members)
<i>AfterValue</i>	ntext	For single-valued attributes contains new attribute value, for multi-valued contains added items (e.g. added group members)

NetWrix offers you the **Custom Reporting Pay Service**, via which you can order any custom report directly from NetWrix. [Contact](#) NetWrix for details.

A APPENDIX: MONITORED OBJECT TYPES AND ATTRIBUTES

The following table provides a full list of all objects and attributes monitored by NetWrix File Server Change Reporter.

Table 7: *The NetWrix File Server Change Reporter Monitored Objects*

Object Type	Attributes
File	<ul style="list-style-type: none"> • Attributes • Security • Size • Date Created • Date Modified
Folder	<ul style="list-style-type: none"> • Security • Attributes • Date Created • Date Modified
Share	<ul style="list-style-type: none"> • Share Permissions* • User Limit* • Local Path* • Root Folder Security • Attributes* • Date Created • Date Modified

* These attributes cannot be monitored if the **Large server support** option is enabled.

B APPENDIX: RELATED DOCUMENTATION

The following table lists all documents available to support NetWrix File Server Change Reporter:

Table 8: Related Documentation

Document Name	Overview
NetWrix File Server Change Reporter Administrator's Guide	The current document provides detailed instructions on how to configure and use NetWrix File Server Change Reporter
NetWrix File Server Change Reporter Quick Start Guide for the Enterprise Edition	The guide provides instructions on how to start working with the program quickly and easily.
NetWrix File Server Change Reporter Quick Start Guide (Freeware Edition)	The document is intended for evaluation of the product Freeware Edition. It provides instructions on how to start working with the program quickly and easily.
NetWrix File Server Change Reporter Troubleshooting Guide	The guide provides step-by-step instructions on troubleshooting reporting issues.
How to Perform File System Backup and Restore with NetWrix File Server Change Reporter	The technical article provides instructions on how to roll back to a previously saved back-up point using NetWrix File Server Change Reporter.
Installing Microsoft SQL Server and Configuring the Reporting Services	The technical article provides instructions on how to install Microsoft SQL Server 2005/2008/2008 R2 Express and configure the Reporting Services.
How to Configure NetWrix File Server Change Reporter to Monitor NetApp Filer CIFS Shares	The technical article provides detailed instructions on how to configure NetWrix File Server Change Reporter and NetApp filer CIFS shares for auditing.
How to Configure NetWrix File Server Change Reporter to Monitor EMC VNX/VNXe/Celerra CIFS Shares	The technical article provides detailed instructions on how to configure NetWrix File Server Change Reporter and the EMC VNX/VNXe/Celerra CIFS shares for auditing.
How to Configure Granular Audit Policy on a File Server Monitored by NetWrix File Server Change Reporter	The technical article provides instructions on how to configure granular Audit policy on a file server monitored by NetWrix File Server Change Reporter.
Subscription to SQL Server Reports	The article provides step-by-step instructions on how to configure subscription to SSRS reports.
Installing SQL Express on Windows Vista Technical Article	The technical article provides detailed instructions on how to install SQL 2005 with Advanced Services on Windows Vista.
NetWrix File Server Change Reporter Release Notes	The document provides a list of known issues that customers may experience while using the release version 3.3.