

# DiskSorter

## FILE CLASSIFICATION

---



## User Manual

**Version 15.9**

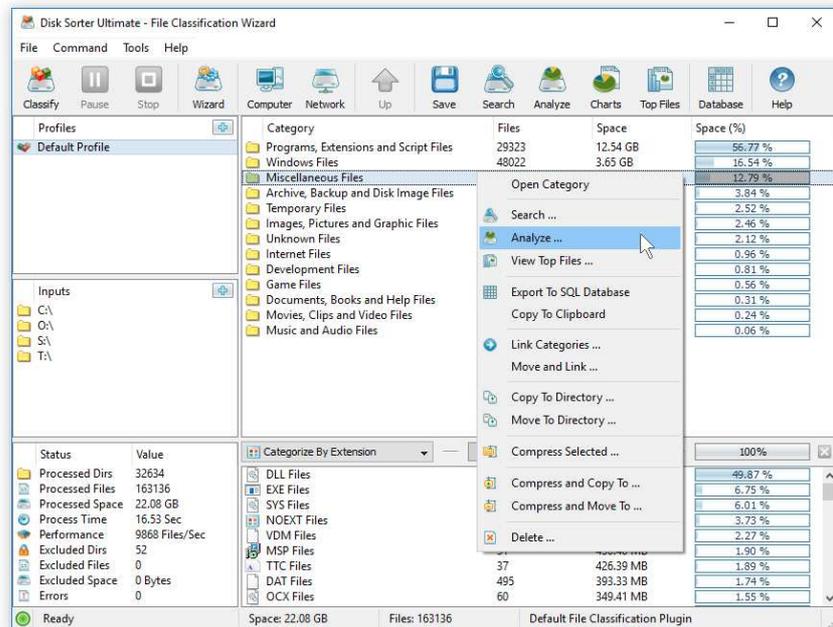
**Feb 2024**

[www.disksorter.com](http://www.disksorter.com)  
info@flexense.com  
Flexense Ltd.

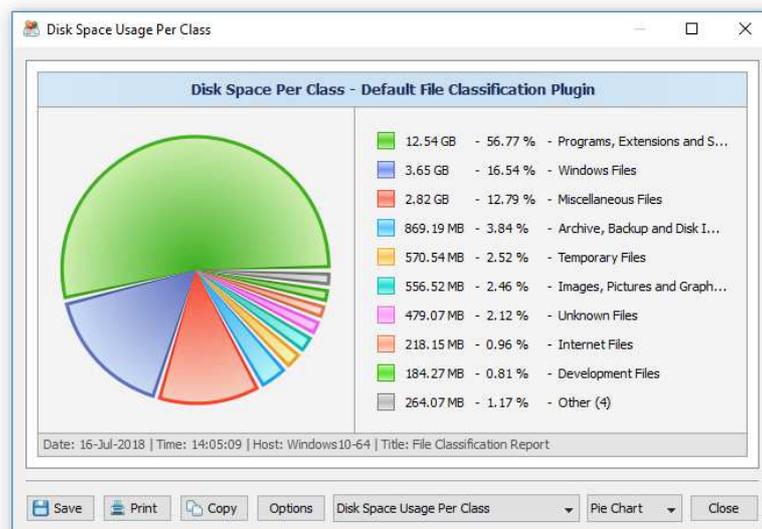
<b>1</b>	<b>Product Overview.....</b>	<b>3</b>
<b>2</b>	<b>DiskSorter Product Versions .....</b>	<b>7</b>
<b>3</b>	<b>Using Desktop Versions .....</b>	<b>8</b>
3.1	Product Installation Procedure.....	8
3.2	Classifying Files in a Disk or Directory .....	9
3.3	File Classification Plug-ins.....	10
3.4	File Categories and File Filters.....	12
3.5	File Classification Pie Charts.....	14
3.6	Disk Space Usage Timeline Charts .....	16
3.7	Using Built-in File Management Operations .....	18
3.8	Analyzing File Classification Results .....	20
3.9	Searching Files in File Classification Results .....	21
3.10	Saving File Classification Reports.....	22
3.11	Saving Graphical PDF Reports .....	24
3.12	Batch File Classification Reports .....	25
3.13	Exporting Results to an SQL Database.....	27
3.14	Automatic Report Management .....	29
3.15	Classifying Multiple Disks or Directories.....	30
3.16	Classifying Network Shares Using UNC Path Names .....	30
3.17	Classifying Files in One or More Servers .....	31
3.18	Classifying Files in All Servers on the Network.....	32
3.19	Classifying Specific File Types or File Groups.....	33
3.20	Advanced File Classification Options.....	35
3.21	File Classification Performance Options.....	36
3.22	Automatically Organizing Files on the Disk.....	40
3.23	Excluding Subdirectories from File Classification Process.....	41
3.24	Managing File Classification Plugins.....	42
3.25	Windows Shell Integration .....	43
3.26	Sound Notifications.....	44
3.27	DiskSorter Options Dialog.....	45
3.28	Customizing DiskSorter GUI Application .....	46
3.29	Using DiskSorter GUI Layouts .....	47
3.30	Using Command Line Utility .....	48
3.31	Product Update Procedure .....	50
3.32	Product Registration Procedure .....	51
<b>4</b>	<b>Using DiskSorter Server .....</b>	<b>52</b>
4.1	DiskSorter Server Overview .....	52
4.2	Product Installation Procedure.....	53
4.3	Using DiskSorter Server Client GUI Application.....	54
4.4	Batch File Classification Operations .....	57
4.5	Comparing File Classification Reports .....	58
4.6	Analyzing Disk Space Usage Per Host.....	59
4.7	Analyzing Disk Space Usage Per User.....	60
4.8	Using Built-In Disk Space Monitor.....	61
4.9	Using Web-Based Management Interface.....	63
4.10	Managing File Classification Commands.....	65
4.11	File Classification Results.....	66
4.12	File Classification Charts.....	67
4.13	File Classification Reports .....	68
4.14	Periodic File Classification Jobs.....	70
4.15	Analyzing File Classification History Trends .....	71
4.16	File Classification Rules .....	72
4.17	Excluding Directories from the File Classification Process .....	73
4.18	Using DiskSorter Server to Analyze Network Shares .....	74
4.19	Configuring DiskSorter Server.....	75
4.20	Configuring Custom User Name and Password.....	75
4.21	Configuring Custom Server Ports.....	76
4.22	Configuring E-Mail Notifications .....	76
4.23	Configuring SQL Database Integration.....	77
4.24	DiskSorter Server Command Line Utility .....	78
4.25	Updating DiskSorter Server .....	80
4.26	Registering DiskSorter Server .....	81
4.27	DiskSorter Enterprise OEM Version .....	82
<b>5</b>	<b>Appendix.....</b>	<b>83</b>
5.1	Installing MySQL Database .....	83
5.2	Configuring MySQL Database .....	88
5.3	Configuring MySQL ODBC Data Source.....	89
5.4	Supported Operating Systems and System Requirements.....	91

## 1 Product Overview

DiskSorter is a powerful file classification solution allowing one to classify files in disks, directories, network shares and NAS storage devices, save file classification reports, export file classification results to an SQL database, perform advanced history trend analysis operations and multiple types of file management operations on categories of files.

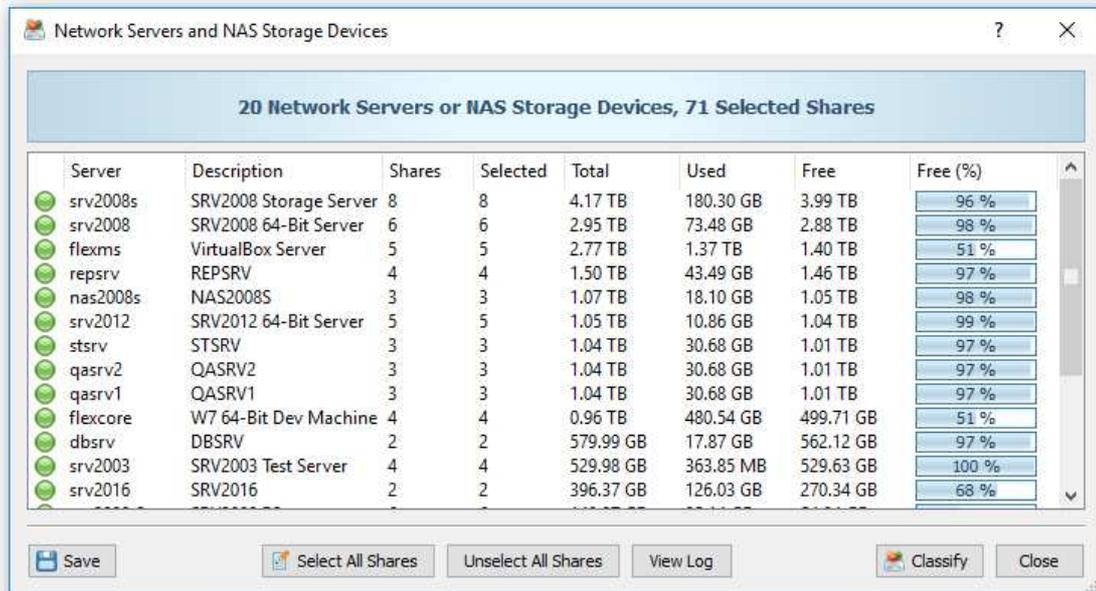


DiskSorter provides a number of built-in file classification plugins capable of recognizing more than 3,000 types of files and allowing one to classify files by the file type, extension, user name, creation, last modification and last access dates, etc. Users are provided with the ability to generate various types of pie charts, categorize and filter file classification results and save file classification reports into a number of standard formats including HTML, PDF, Excel, CSV, XML, text and the DiskSorter native report format.

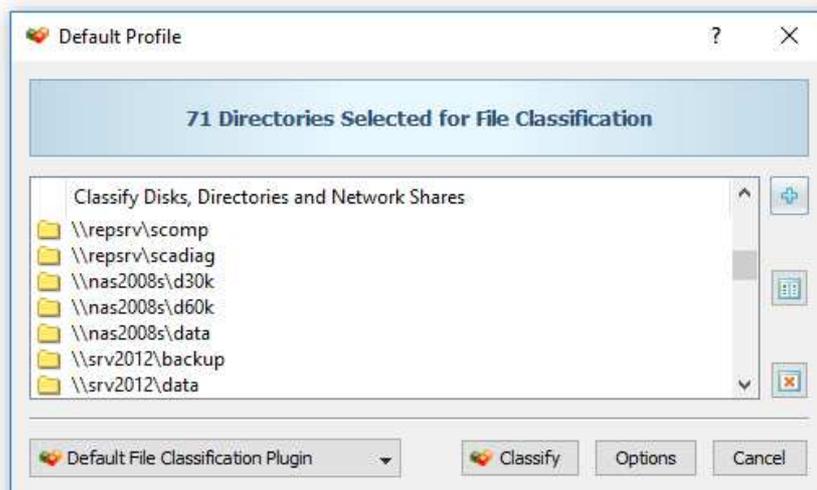


IT and storage administrators are provided with the ability to submit file classification reports from multiple servers and NAS storage devices to a centralized SQL database and analyze disk space usage history trends for one or more file categories per server and/or per user across the entire enterprise.

DiskSorter allows one to scan the network, discover network servers and NAS storage devices, automatically detect all accessible network shares and classify files in hundreds of network servers and NAS storage devices. In addition, the user is provided with the ability to export the list of detected servers and NAS storage devices (including lists of network shares for each server) into HTML, PDF, text and Excel CSV reports.



In order to classify files in one or more servers or NAS storage devices, press the 'Network' button located on the main toolbar and wait while DiskSorter will scan the network and show a list of detected network servers and NAS storage devices. On the network servers and NAS storage devices dialog, select the required servers and press the 'Classify' button.



DiskSorter will show all network shares hosted on the selected servers and NAS storage devices allowing one to classify files and save various types of file classification charts and reports. In addition, DiskSorter provides a large number of advanced file classification options allowing one to tune and customize file classification operations for user specific needs and hardware configurations.

In addition to the desktop GUI application, DiskSorter Pro and DiskSorter Server provide a command line utility allowing one to perform file classification operations, save various types of file classification reports, export file classification results to an SQL database and control one or more DiskSorter Servers locally or via the network.

```

c:\Program Files\Disk Sorter Ultimate\bin>diskorter -classify -dir C:\ -save_pdf_report C:\Reports
DiskSorter Version 11.0.24 (Jul 16 2018)
Operation Successfully Completed

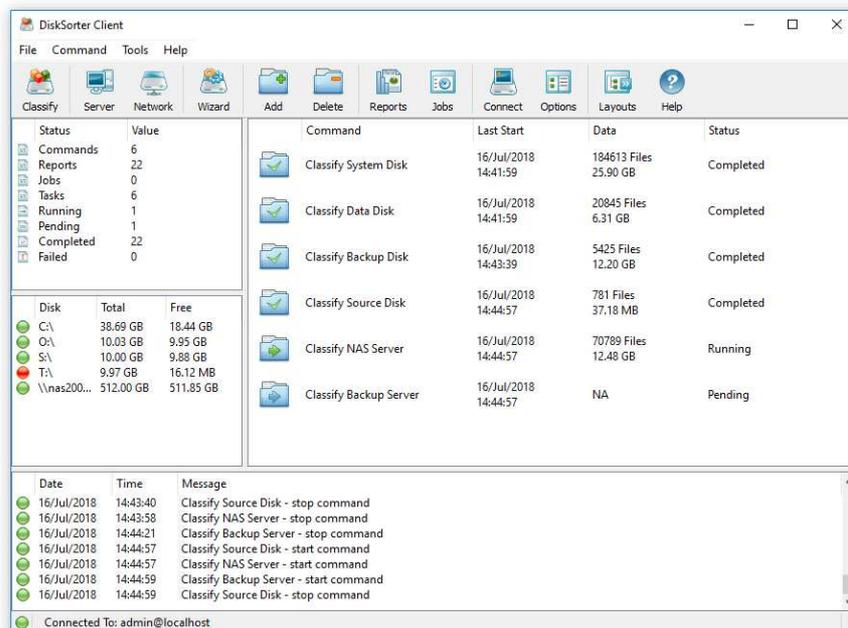
Date - 2018/07/16
Time - 14:22:11
Processed Files - 162357
Processed Space - 22.04 GB
Performance - 12474 Files/Sec
Process Time - 13.02 Sec
Command Name - File Classification
Host Name - Windows10-64
User Name - alex-s
Input Dir - c:\

File Classification Results:
Programs, Extensions and Script Files - 29259 Files 12.53 GB 56.85 %
Windows Files - 48001 Files 3.65 GB 16.57 %
Miscellaneous Files - 44316 Files 2.82 GB 12.81 %
Archive, Backup and Disk Image Files - 2174 Files 869.19 MB 3.85 %
Temporary Files - 13524 Files 570.52 MB 2.53 %
Images, Pictures and Graphic Files - 7253 Files 528.08 MB 2.34 %
Unknown Files - 9112 Files 476.92 MB 2.11 %
Internet Files - 5401 Files 217.57 MB 0.96 %
Development Files - 1734 Files 181.95 MB 0.81 %
Game Files - 27 Files 125.73 MB 0.56 %
Documents, Books and Help Files - 1318 Files 70.24 MB 0.31 %
Movies, Clips and Video Files - 228 Files 54.42 MB 0.24 %
Music and Audio Files - 10 Files 13.29 MB 0.06 %

Saving File Classification Report ...
File Classification Report Saved To:
C:\Reports\diskorter_report_20180716_142211.pdf

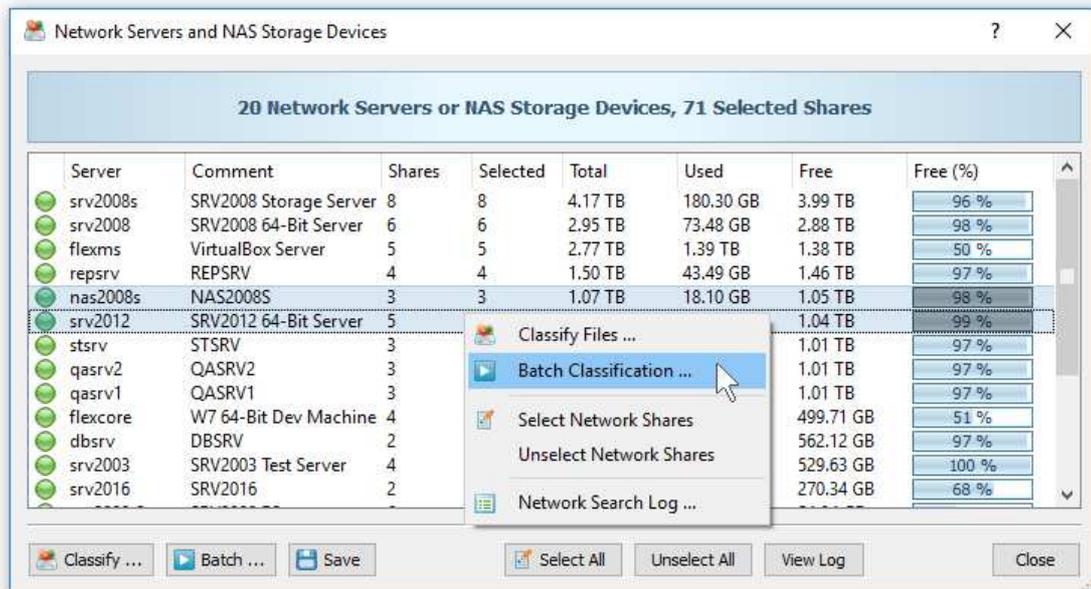
```

IT and storage administrators are provided with DiskSorter Server, which runs in the background as a service and allows one to perform multiple, parallel file classification operations, schedule periodic file classification operations and provides advanced file classification capabilities optimized for servers and NAS storage devices.

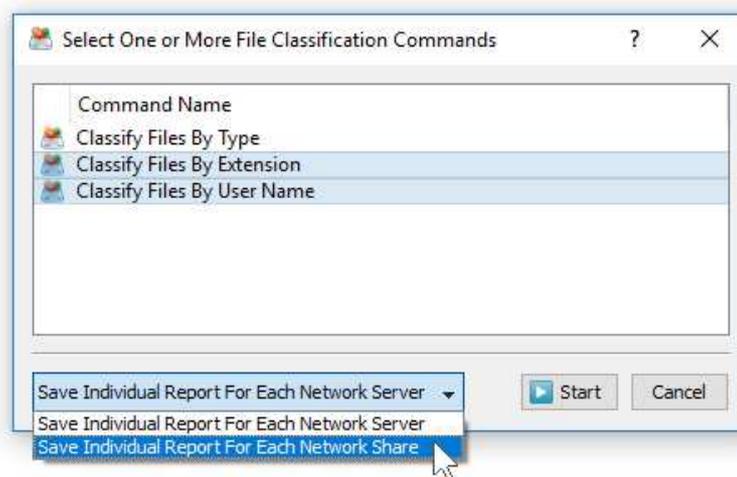


DiskSorter Server may be controlled using a full-scale client GUI application, which provides all features available in the desktop product version and additional capabilities allowing one to schedule periodic file classification operations and perform multiple-parallel file classification operations on a number of servers and/or NAS storage devices. In addition to the client GUI application, DiskSorter Enterprise provides a web-based management interface allowing one to control one or more DiskSorter Servers using a regular web browser locally or via the network.

DiskSorter Server and DiskSorter Enterprise provide the ability to scan the network, detect all network servers and NAS storage devices, execute one or more pre-configured file classification commands on hundreds of network servers and NAS storage devices and generate an individual file classification report for each network server, NAS storage device or network share.



In the simplest case, just press the 'Network' button located on the main toolbar, search all network servers and NAS storage devices on the network, select one or more servers, press the right mouse button and select the 'Batch File Classification' menu item. DiskSorter will show a list of pre-configured file classification commands allowing one to select one or more commands to be executed on all selected network servers and NAS storage devices.



Depending on the selected configuration, DiskSorter will save in the built-in reports database an individual file classification report for each network server, NAS storage device or network share. Once the batch file classification operation is completed, the user will be provided with the ability to open saved file classification reports, review file classification results, generate various types of pie charts and export reports to a number of standard formats including HTML, PDF, Excel, text, CSV and XML.

## 2 DiskSorter Product Versions

Features	Free	Pro	Server	Enterprise
Maximum Amount of Disk Space	2 TB	25 TB	100 TB	Unlimited
Maximum Number of Files	1 M	25 M	100 M	Unlimited
Maximum Number of Input Directories	10	25	100	Unlimited
Maximum Number of Analysis Profiles	3	25	100	Unlimited
Support for Unicode File Names	Yes	Yes	Yes	Yes
Support for Long File Names	Yes	Yes	Yes	Yes
Support for UNC Network Path Names	Yes	Yes	Yes	Yes
Built-In File Management Operations	Yes	Yes	Yes	Yes
Pie Charts and Bars Charts	Yes	Yes	Yes	Yes
HTML, PDF, XML, Text and CSV Reports	Yes	Yes	Yes	Yes
Multi-Threaded File Classification	Yes	Yes	Yes	Yes
Custom File Classification Plug-ins	No	Yes	Yes	Yes
Built-In Data Wiping Capabilities	No	Yes	Yes	Yes
Automatic File Organizing Capabilities	No	Yes	Yes	Yes
Custom File Classification Plugins	No	Yes	Yes	Yes
SQL Database Integration	No	Yes	Yes	Yes
Command Line Utility	No	Yes	Yes	Yes
Runs in the Background as a Service	No	No	Yes	Yes
Periodic File Classification Operations	No	No	Yes	Yes
Compare File Classification Reports	No	No	Yes	Yes
Disk Space Usage History Charts	No	No	Yes	Yes
Disk Space Usage Per Host	No	No	Yes	Yes
Disk Space Usage Per User	No	No	Yes	Yes
Summary File Classification Reports	No	No	Yes	Yes
Batch File Classification Operations	No	No	No	Yes
Web-Based Management Interface	No	No	No	Yes
OS Native User Authentication	No	No	No	Yes
Support For Multi-User Configurations	No	No	No	Yes
OEM Product Version	No	No	No	Yes
<b>Price</b>	<b>Free</b>	<b>\$125</b>	<b>\$450</b>	<b>\$850</b>

\* Product features, prices and license terms are subject to change without notice.

## 3 Using Desktop Versions

### 3.1 Product Installation Procedure

DiskSorter is available as a free download on our web site and on a large number of software directories from around the world. To be sure you are getting the latest product version check here: <http://www.disksorter.com/downloads.html>

DiskSorter is especially designed to be as simple as possible. The installation procedure is very simple, requires no special knowledge and may be completed in less than 30 seconds. There is no need for any additional software. Just download the DiskSorter installation package, run the setup program and you are done.



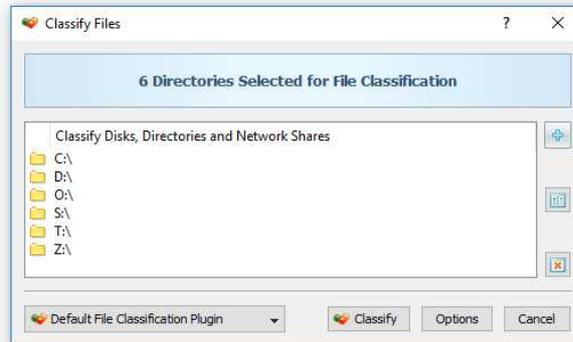
On the 'Welcome' screen press the 'Next' button. Read the end-user license agreement and press the 'I Agree' button if you agree with the license terms or the 'Cancel' button to stop the installation process.



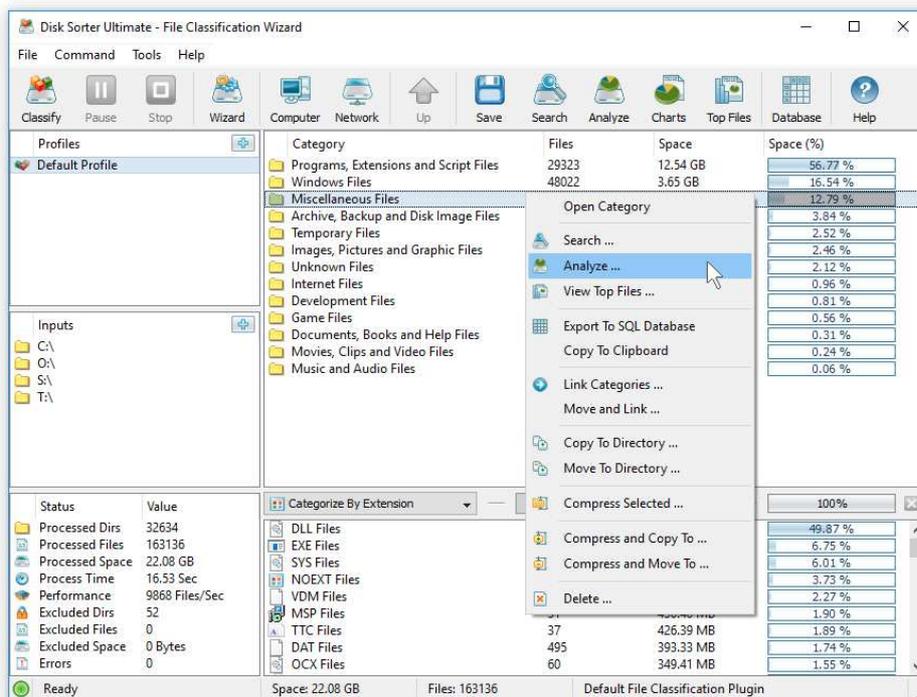
Select the destination directory, press the 'Install' button and wait for the installation process to complete. That's all you need to do to install the DiskSorter file classification utility on your computer.

### 3.2 Classifying Files in a Disk or Directory

In order to classify files located in one or more disks, directories or network shares, press the 'Classify' button located on the main toolbar, add directories or network shares that should be processed, select an appropriate file classification plug-in and press the 'Classify' button.



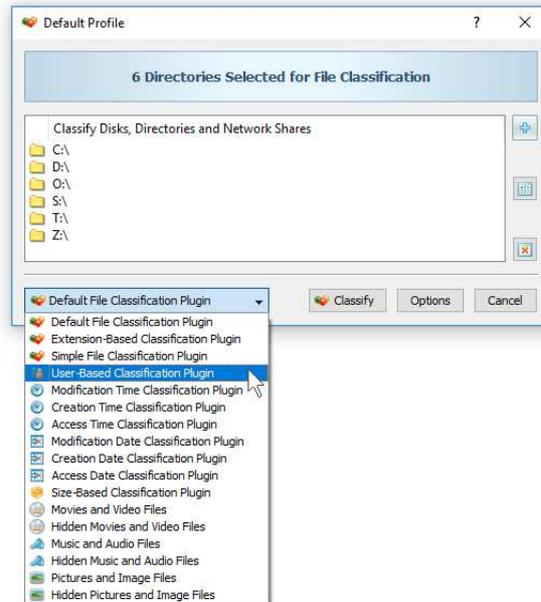
Depending on the number of files that should be processed, the file classification process may take from a couple of seconds for thousands of files to a few minutes for large file systems containing millions of files. During the file classification process, DiskSorter will display the file classification results preview, the total number of processed files and the total amount of processed disk space. Once the file classification process is completed, DiskSorter will display a hierarchy of file classes and categories sorted by the amount of the used disk space. For each file class or file category, DiskSorter will show the name of the category, the total number of files in the file category and all subcategories and the total amount of the disk space used by all files in the file category and all subcategories.



In order to display a pie chart showing the amount of the used disk space per file category, press the 'Charts' button located on the main toolbar. In order to open a file category, click on the category item in the main file classification results view. Select one or more categories, classes and/or files and press the right mouse button to perform a file management operation on the selected items. For example, select a file category, press the right mouse button and select the 'Copy To' menu item to copy all files related to the selected category to a directory.

### 3.3 File Classification Plug-ins

DiskSorter classifies files using a number of built-in file classification plug-ins capable of recognizing more than 3,500 types of files. The default file classification plug-in categorizes files into a logical hierarchy of file types sorted by the amount of disk space per file category. In order to change the file classification plug-in used for a file classification operation, open the file classification profile dialog, click on the file classification plug-ins combo box and select an appropriate file classification plug-in.



DiskSorter classifies files, shows file classification results, saves reports and allows one to perform file management operations on categories of files according to the currently selected file classification plug-in. For example, the extension-based file classification plug-in builds a hierarchy of file extensions and shows the used disk space and the number of file for each file extension. All file classification reports will show a list of file extensions and file management operations will be performed on one or more selected file extensions.

The screenshot shows the 'Disk Sorter Ultimate - Classify Files' window. The window has a menu bar (File, Command, Tools, Help) and a toolbar with various icons. On the left, there are sections for 'Profiles' (Default Profile, Classify Files) and 'Inputs' (C:\, D:\, O:\, S:\, T:\, Z:\). The main area is a table with columns: Category, Files, Space, and Space (%). Below the table, there's a 'Status' section and a 'File Categories' section showing a hierarchy of file categories based on creation time.

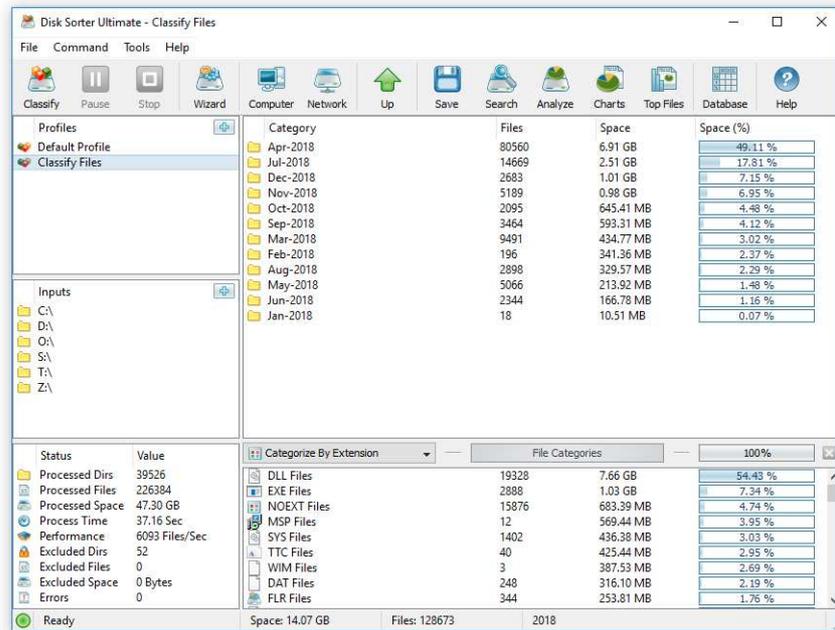
Category	Files	Space	Space (%)
DLL Files	23763	11.77 GB	25.40 %
JPG Files	4467	6.88 GB	14.85 %
MP3 Files	858	4.76 GB	10.26 %
EXE Files	3944	3.23 GB	6.97 %
ZIP Files	137	1.53 GB	3.30 %
SYS Files	1743	1.38 GB	2.99 %
PST Files	16	1.19 GB	2.57 %
NEF Files	225	1.13 GB	2.44 %
PDF Files	2571	1.13 GB	2.44 %
GZ Files	500	1.12 GB	2.41 %
CAB Files	781	917.63 MB	1.93 %
NOEXT Files	18888	810.78 MB	1.71 %
MSP Files	57	683.66 MB	1.44 %
RAR Files	357	598.95 MB	1.26 %
ISO Files	1	597.44 MB	1.26 %
WIM Files	10	475.15 MB	1.00 %
BMP Files	1155	438.38 MB	0.92 %
TTC Files	41	426.48 MB	0.90 %
DAT Files	539	425.47 MB	0.90 %
CAT Files	1811	330.44 MB	0.68 %
Created 6 - 12 Months Ago	130232	30.32 GB	65.40 %
Created 1 - 3 Months Ago	23147	4.78 GB	10.32 %
Created 3 - 6 Months Ago	5172	2.88 GB	6.21 %
Created 15 - 30 Days Ago	24085	2.75 GB	5.94 %
Created More Than 5 Years Ago	5750	2.00 GB	4.32 %
Created 1 - 2 Years Ago	10903	1.25 GB	2.70 %
Created 8 - 14 Days Ago	775	786.15 MB	1.66 %
Created Yesterday	797	621.83 MB	1.31 %
Created 3 - 5 Years Ago	3528	582.41 MB	1.23 %

At the bottom of the window, there's a 'Status' section with the following information:

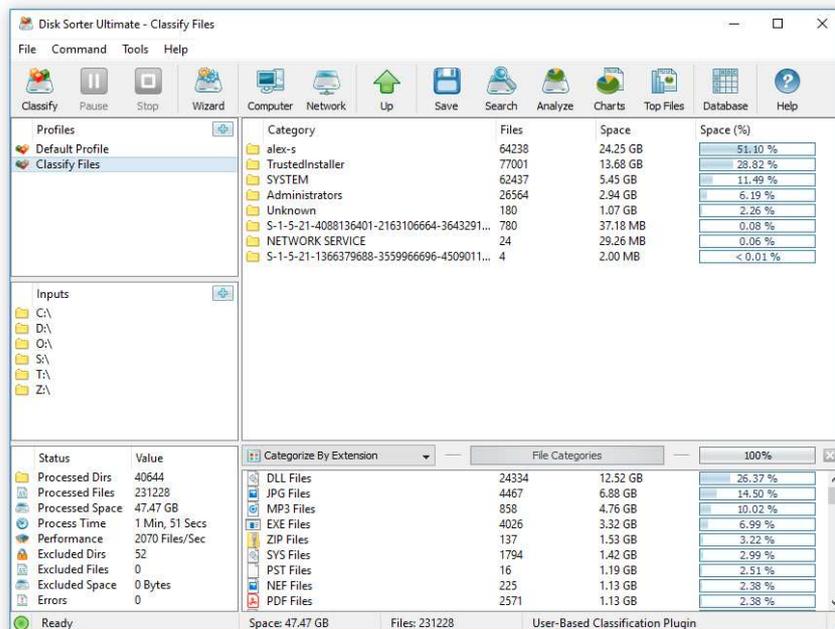
Processed Dirs	39114
Processed Files	222879
Processed Space	46.36 GB
Process Time	15.38 Sec
Performance	14496 Files/Sec
Excluded Dirs	52
Excluded Files	0
Excluded Space	0 Bytes
Errors	0

The bottom status bar shows: Space: 46.36 GB, Files: 222879, and Extension-Based Classification Plugin.

Another useful file classification plug-in is the modification date file classification plug-in, which builds a hierarchy of modification dates and shows the amount of disk space and the number of files that were last modified during each specific period of time. For date-based file classification plug-ins, file classification reports will show periods of time and file management operations will be performed on files that were last modified during a specific period of time.



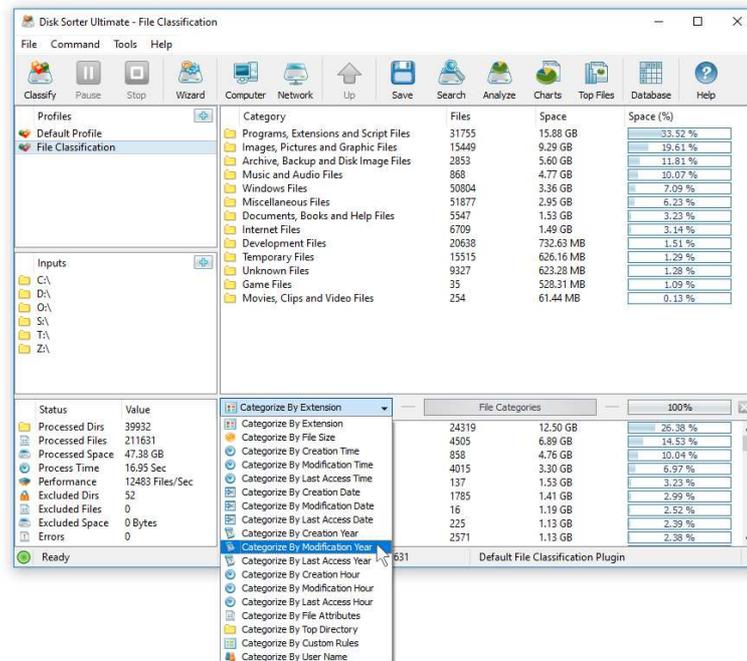
IT and storage administrators may be interested to display the amount of used disk space and the number of files per user name, which may be done using the user-based file classification plug-in. The user-based file classification plug-in builds a hierarchy of user names and shows the amount of disk space and the number of files per user.



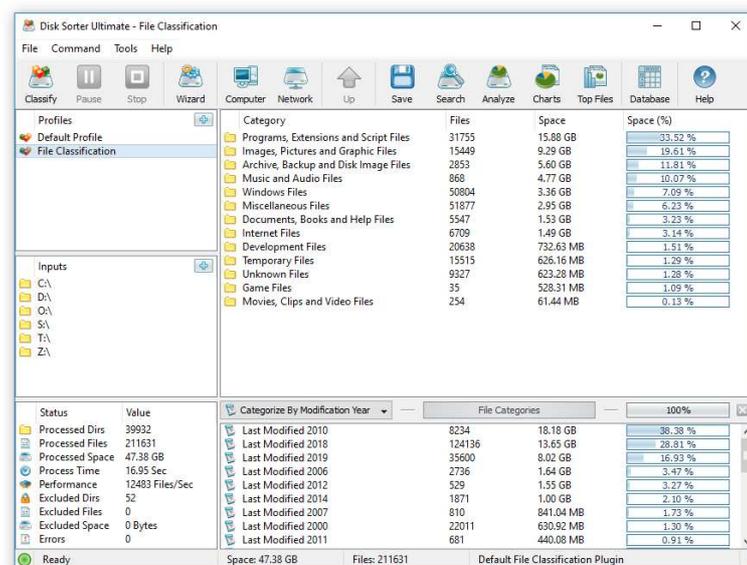
Moreover, the second-level file filters provide the ability to show the disk space usage and the number of files per user for a specific type of files or a file extension. For example, classify files using the user-based file classification plug-in, select the 'Classify By Extension' second-level file filter and click on a file extension to display the amount of disk space and the number of files per user for the selected file extension.

### 3.4 File Categories and File Filters

In addition to the primary file classification results, which are displayed in the top-level view, DiskSorter allows one categorize file classification results by the file extension, size, user name, creation, last modification and last access dates, etc. After finishing the file classification process, DiskSorter performs automatic file categorization and fills the bottom view with the list of detected file categories according to the selected file categorization mode.

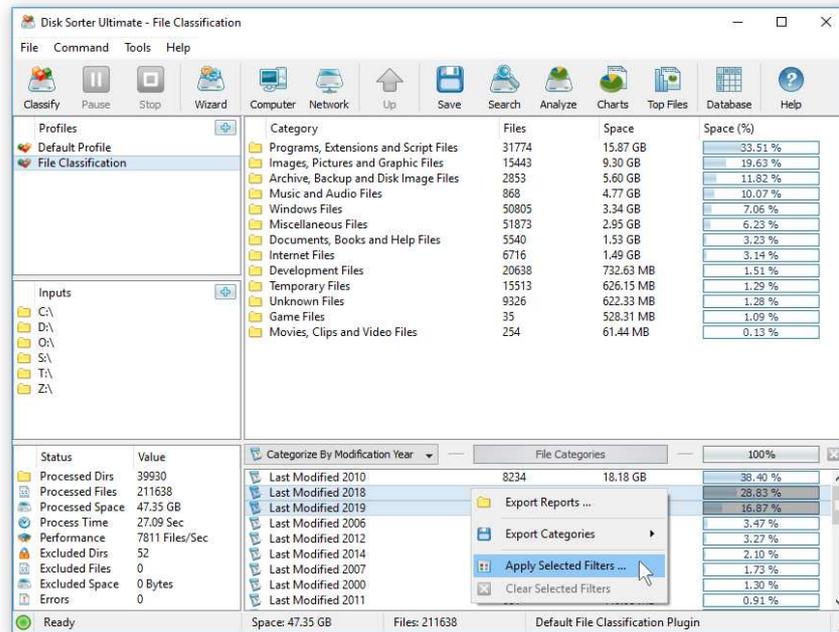


By default, DiskSorter categorizes file classification results by the file extension and shows a list of file extensions sorted by the amount of the used disk space. For each category, DiskSorter shows the number of files, the amount of the used disk space and the percentage of the used disk space relative to other file categories. Use the 'Categories' combo box to categorize files by the file size, user name, creation, last modification or last access dates.

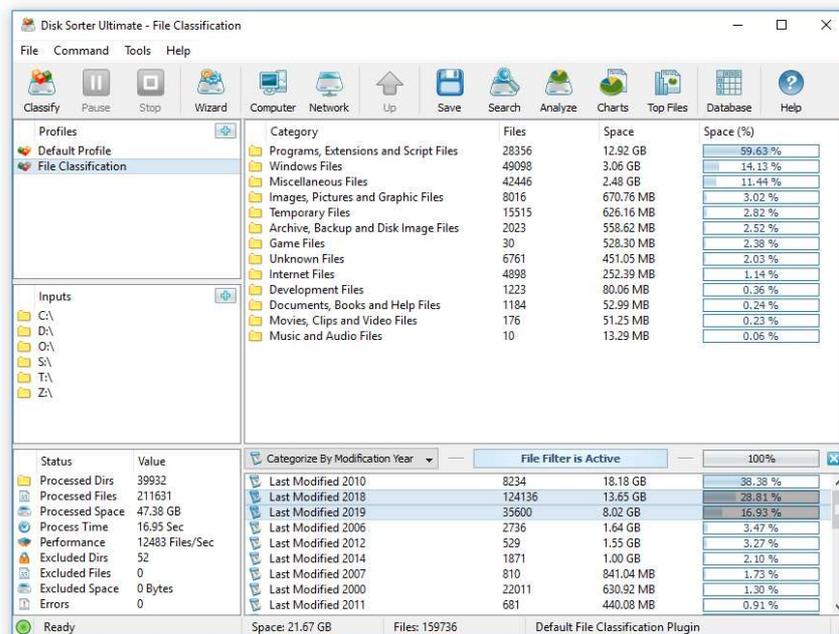


For example, if the file categorization mode is set to 'Categorize Files by Modification Year' the bottom view will display the amount of the used disk space and the number of files per modification year.

One of the most powerful features of DiskSorter is the ability to apply second-level file filters to file classification results. For example, in order to see all files that were modified during the last two days, select the 'Categorize By Modification Time' file categorization mode, select files that were modified yesterday and today, press the right mouse button and select the 'Apply Selected Filters' menu item.



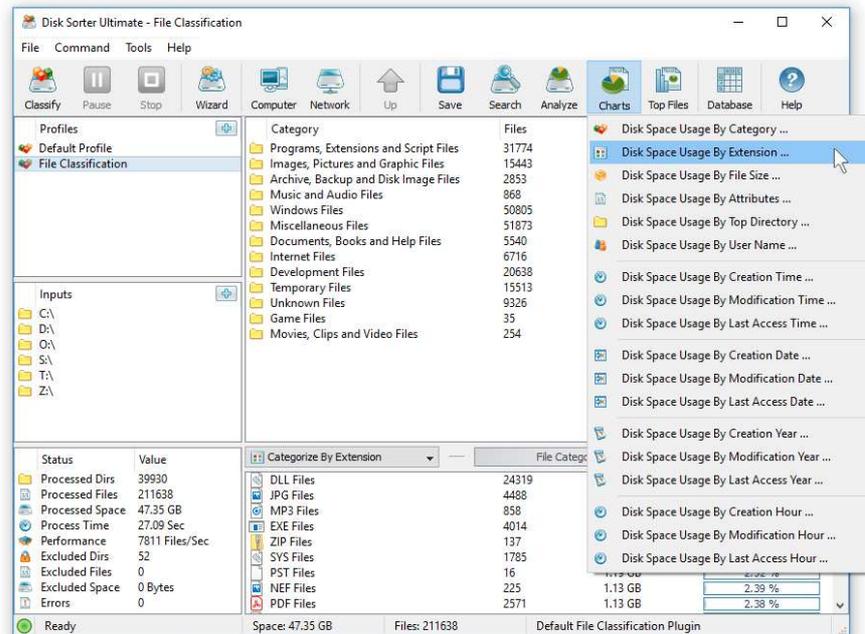
DiskSorter will filter file classification results and show a hierarchy of files that were modified during the last two days. When a file filter is active, the pie charts dialog will display charts according to the currently selected file filter.



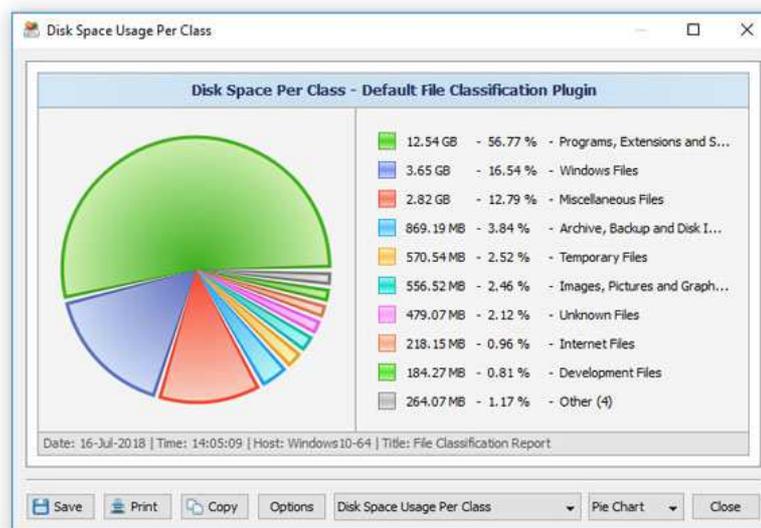
Moreover, when a file filter is active, HTML, PDF, Excel CSV and text reports will include file categories and files matching the currently selected file filters allowing one to generate different types of files classification reports showing disk space usage patterns from different points of view.

### 3.5 File Classification Pie Charts

The DiskSorter file classification utility provides multiple types of statistical pie charts and timeline charts capable of showing the amount of disk space usage and the number of files per file category, file extension, file size, file owner, creation, modification and last access time. In order to open the charts dialog, press the 'Charts' button located on the main toolbar and select an appropriate chart type.

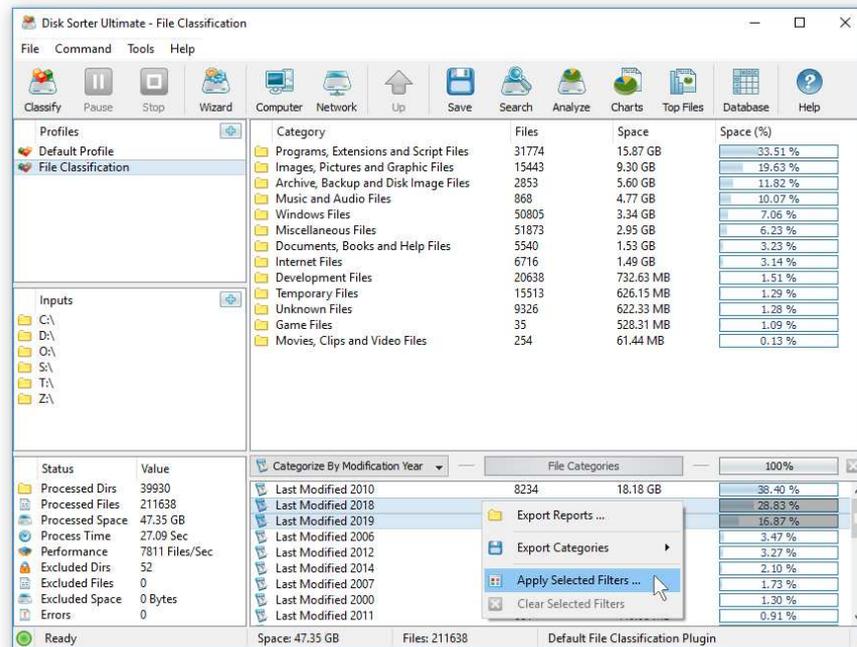


For example, in order to open a chart showing the disk space usage and the number of files per file category, press the 'Charts' button located on the main toolbar and select the 'Disk Space Usage Per Category' chart type.

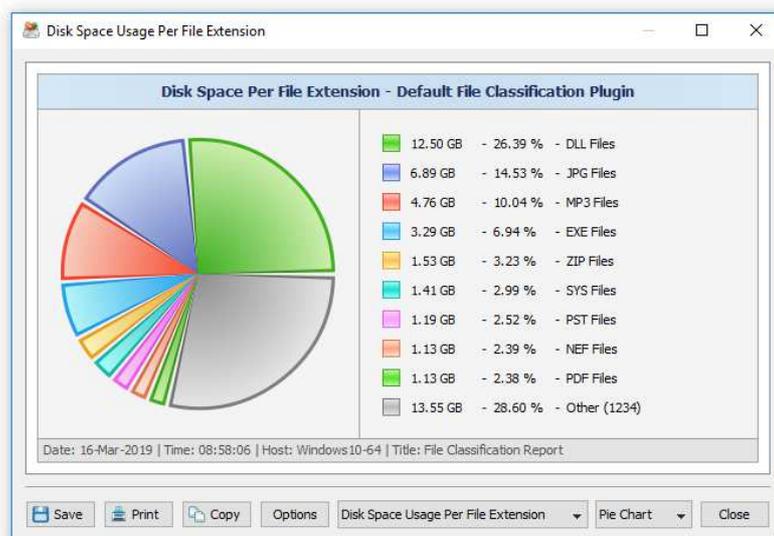


In addition, the charts dialog provides the user with the ability to export the chart data to a number of different formats, export the chart image to the BMP, JPEG and PNG image files, and copy the displayed chart image to the clipboard allowing one to easily integrate DiskSorter charts into user's documents and presentations. In order to customize the chart's description, press the 'Options' button and specify a custom chart title, host name, date or time.

One of the most powerful features of the DiskSorter file classification utility is the ability to filter disk space analysis results using one or more user-specified filters and then categorize filtered results and display statistical pie charts. For example, in order to display a pie chart showing the amount of disk space per file extension for files that were modified during the last two years, set the file categorization mode to 'Categorize By Modification Year', select one or more years to show the information for, press the right mouse button over the file filters view and select the 'Apply Selected Filters' menu item.



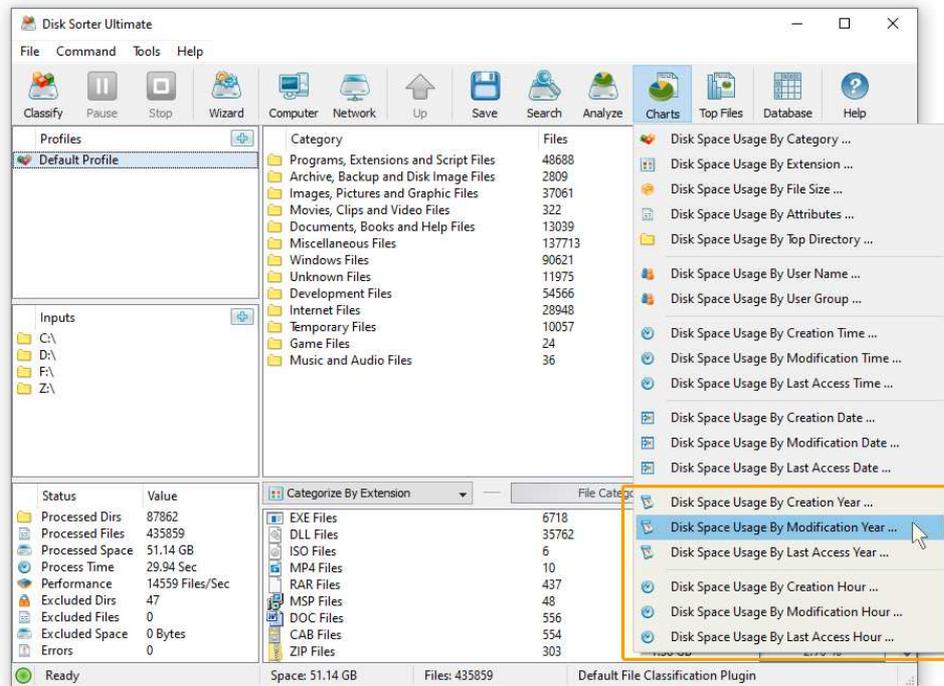
DiskSorter will filter the disk space analysis results and display files that were modified during the selected years. Now, press the 'Charts' button located on the main toolbar and select the 'Disk Space Usage Per Extension' menu item. DiskSorter will categorize the filtered disk space analysis results and display a pie chart showing the amount of disk space usage per file extension for files that were modified during the selected years.



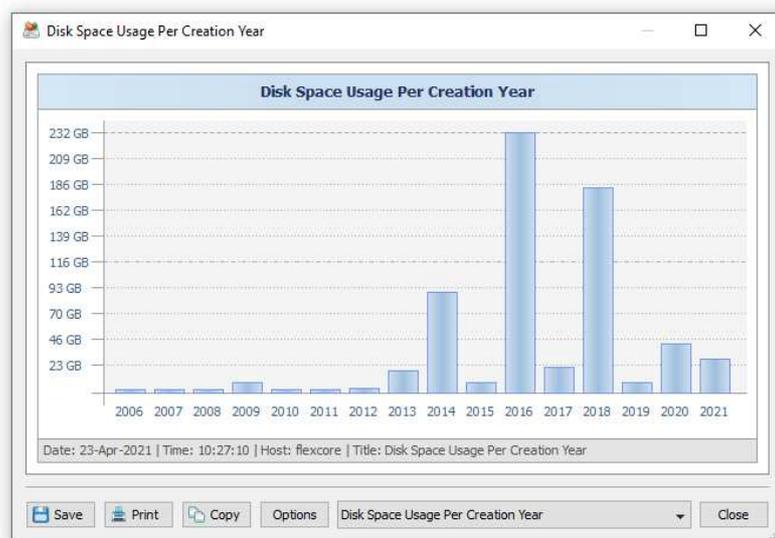
In a similar way, the user can filter disk space analysis results by the file type, size, user name, file attributes, creation, modification and last access dates and then display various types of charts showing the disk space usage or the number of files according to user-specific needs.

### 3.6 Disk Space Usage Timeline Charts

Another powerful capability is the ability to display the disk space usage timeline charts for all analyzed files or filtered file classification results. In the simplest case, press the 'Charts' button located on the main toolbar and select the 'Disk Space Usage Per Modification Year' menu item.

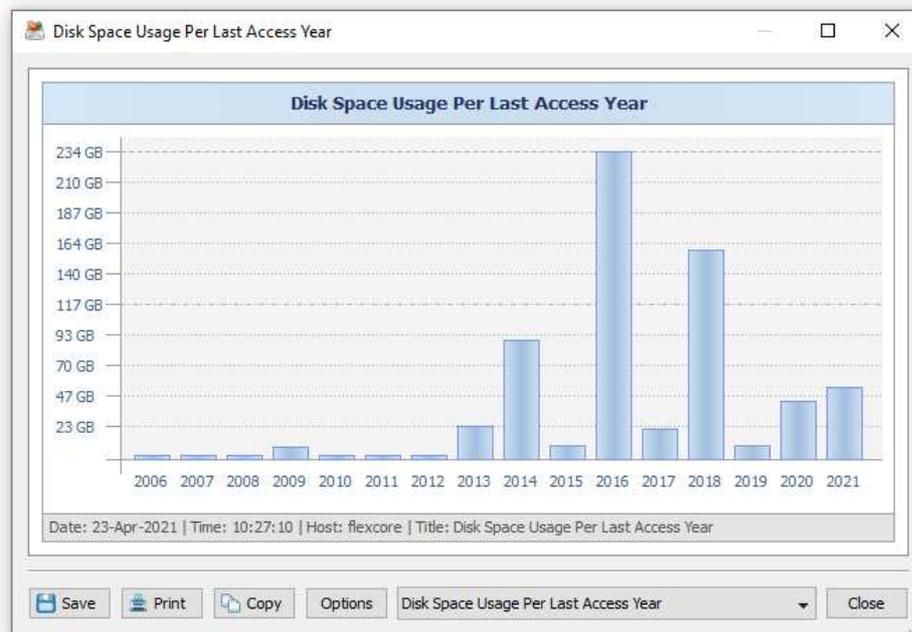


DiskSorter will display a time line chart showing how much data was modified per year. In order to display how many files were modified per year, set the chart mode to 'Number Of Files Per Modification Year'.

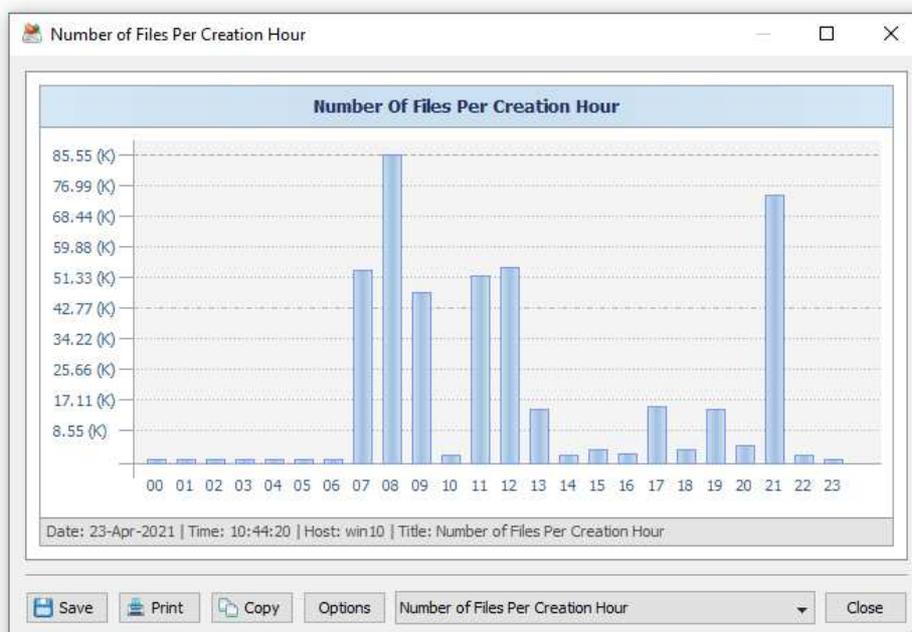


In addition, the user is provided with the ability to display timeline charts for filtered disk space analysis results. For example, in order to display how many documents were created per year, set the file categorization mode to 'Categorize By File Type', select the 'Documents, Books and Help Files' file category, press the right mouse button and select the 'Apply Selected Filters' menu item. Now, with the file filter active, press the 'Charts' button located on the main toolbar, and select the 'Disk Space Usage Per Creation Year' menu item.

One of the easiest ways to assess how much of the used disk space can be freed by archiving old, unused files is to display the last access year timeline chart. The timeline chart shows how much disk space is used by files which were last accessed during the last 15 years allowing one to easily identify the proportion of recently accessed files and old, unused files.



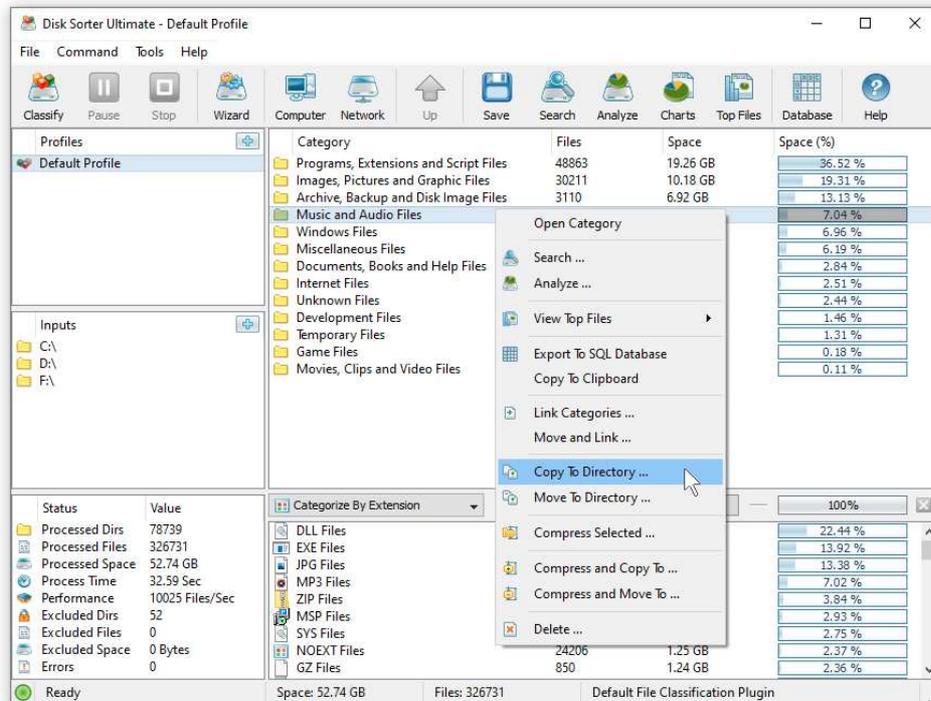
In order to identify which time of the day is the best time to perform backup operations, the user can display the 'Number of Files Per Creation Hour' or 'Number of Files Per Modification Hour' timeline charts.



The 24-hours timeline chart shows how much disk space and how many files were created or modified during each hour of the day allowing one to easily select the time for backup operations. In order to save, a time line chart, press the 'Save' button, select an appropriate chart format, enter a file name and press the 'Save' button.

### 3.7 Using Built-in File Management Operations

DiskSorter provides the user with a number of file management operations such as file copy, move, compress and delete, which may be performed on one or more selected file categories. For example, in order to copy all types of image files to a directory, select the 'Images and Picture Files' category in the file classification results view, press the right mouse button and select the 'Copy To Directory' menu item.



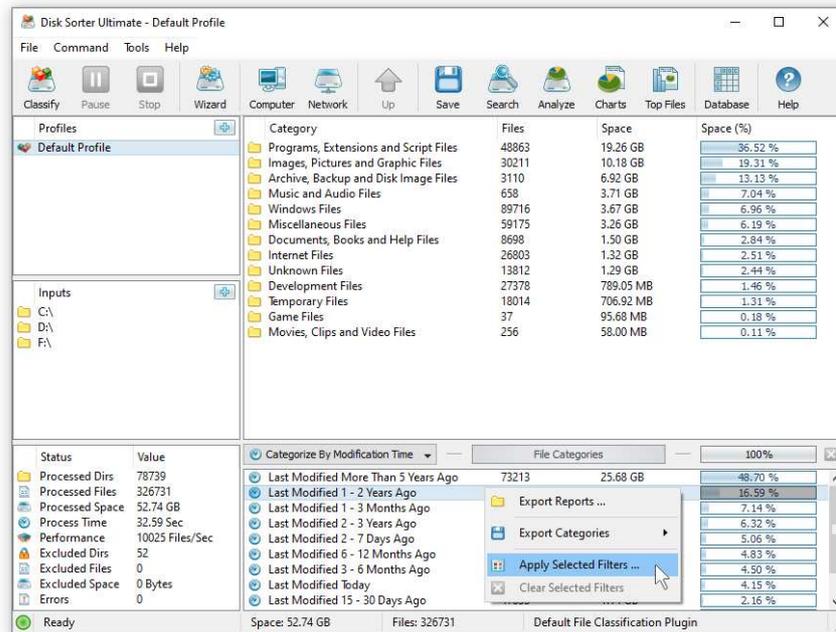
On the file copy dialog, enter a destination directory to copy files related to the selected file categories and press the 'Start' button. DiskSorter will recreate the selected hierarchy of file categories in the destination directory and copy all files related to the selected file categories to appropriate subdirectories in the destination directory.



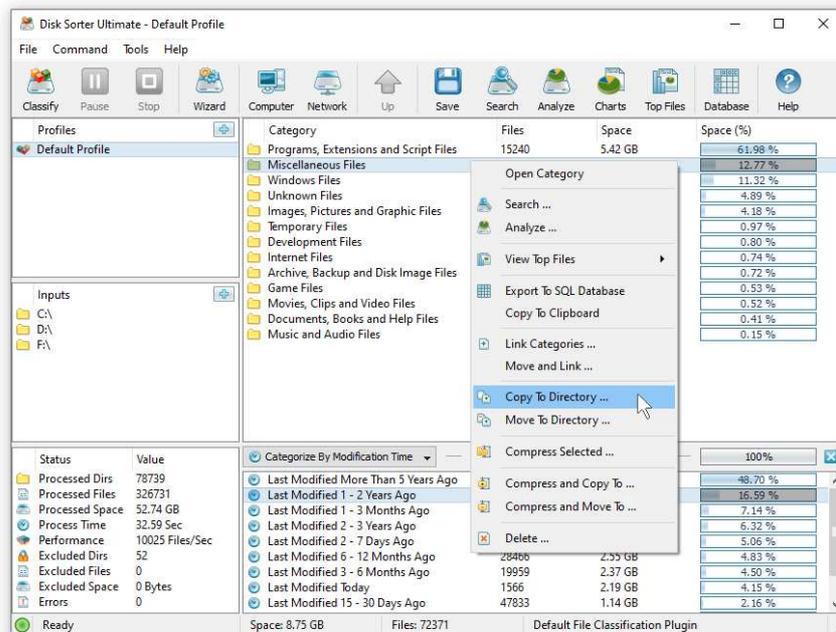
In order to move files related to a file category to another location, select the file category in the file classification results view, press the right mouse button and select the 'Move To Directory' menu item. In addition, the user is provided with the ability to delete all files related to one or more selected file categories.

Another useful file management operation provided by DiskSorter is the ability to compress files related to one or more selected file categories. DiskSorter uses the GZ file compression method, which is applied to individual files making it possible to selectively compress specific types of files, which are using a significant amount of disk space. In addition to the in-place file compression operation, DiskSorter provides the ability to copy and compress files in the destination directory and move and compress files in the destination directory.

Sometimes, it may be required to perform file management operations on groups of files matching multiple user-specific criteria. For example, let's assume that the user needs to copy all types of documents that were modified yesterday to another directory. In order to perform such an operation, classify one or more disks or directories using the default file classification plug-in and select the 'Categorize By Modification Time' file categorization mode.



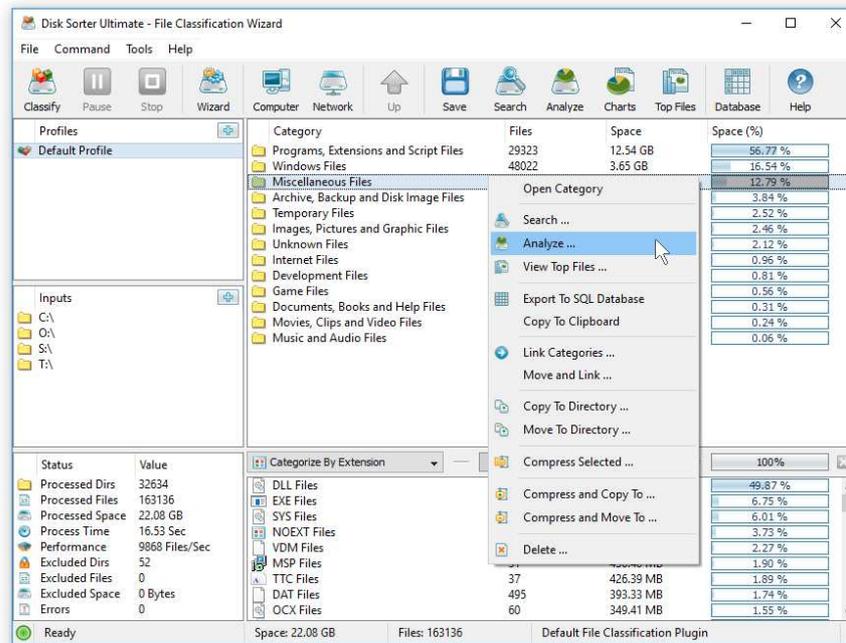
On the file categories view, select the 'Last Modified Yesterday' item, press the right mouse button and select the 'Apply Selected Filters' menu item. DiskSorter will filter file classification results and show in the top-level view categories of files that were modified yesterday. Now, select the 'Documents' file category in the file classification results view, press the right mouse button and select the 'Copy To Directory' menu item.



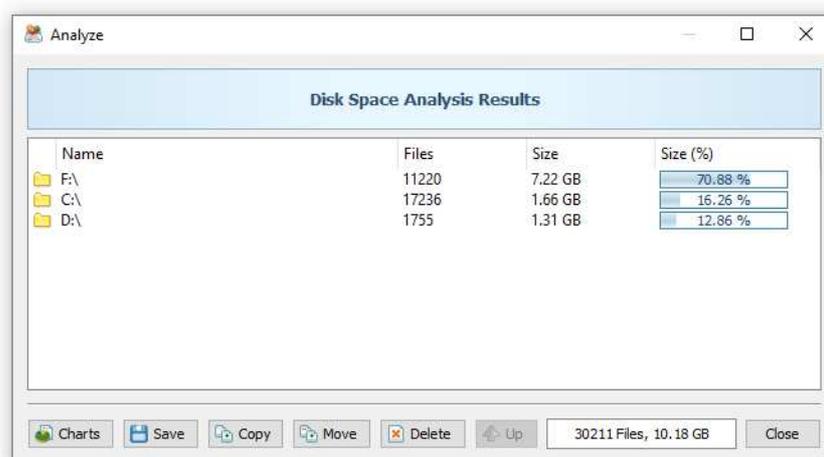
When a file filter is active, all file management operations such as file copy, move, compress and/or delete will be performed on files matching the selected file filter. Moreover, the user is provided with the ability to control advanced file copy, file delete and data wiping options for each specific file management operation.

### 3.8 Analyzing File Classification Results

The main category view in the DiskSorter GUI application shows file classification results according to the logical hierarchy of file categories and classes as defined in the selected file classification plug-in. In addition, the DiskSorter file classification utility provides the ability to analyze file classification results and show where files related to one or more file categories are physically located in the disk and then display a hierarchy of directories and files sorted by the amount of the used disk space.



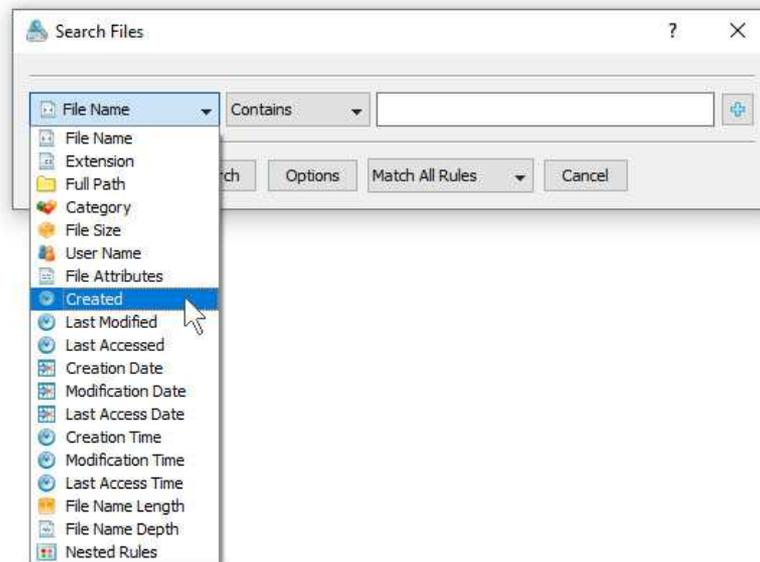
Moreover, such an analysis may be performed on filtered file classification results showing files matching multiple user-defined criteria. For example, in order to see where are located all documents that were last modified more than X months ago, apply an appropriate modification time file filter, select the 'Documents' file category, press the right mouse button and select the 'Analyze' menu item.



The analysis results dialog shows a hierarchy of directories and files sorted by the amount of the used storage space. The user is provided with the ability to perform numerous file management operations including file copy, move and delete. In addition, DiskSorter allows one to export the analysis results to the HTML, PDF, Excel CSV, text and XML formats.

### 3.9 Searching Files in File Classification Results

DiskSorter provides the ability to search files in file classification results by the file name, extension, full path, file category, file size, file attributes, creation, last modification and last access dates. In order to start a file search operation, classify one or more disks or directories and press the 'Search' button located on the main toolbar.



By default, the search operation will be performed on all file classification results. In order to search files in a specific file category, select the category in the file classification results view, press the right mouse button and select the 'Search Files' menu item. DiskSorter will search in the selected categories of files and display the file search results dialog showing a list of files matching the user specified criteria.

Name	Directory	Size	Created	Modified
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	17.98 KB	16-Oct-2002 12:03:24	16-Oct-2002 12:03:24
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	19.03 KB	16-Oct-2002 12:03:24	16-Oct-2002 12:03:24
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	18.38 KB	16-Oct-2002 12:03:22	16-Oct-2002 12:03:22
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	59.30 KB	16-Oct-2002 12:03:16	16-Oct-2002 12:03:16
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	31.67 KB	16-Oct-2002 12:03:14	16-Oct-2002 12:03:14
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	25.78 KB	16-Oct-2002 12:03:12	16-Oct-2002 12:03:12
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	32.50 KB	16-Oct-2002 12:03:08	16-Oct-2002 12:03:08
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	27.92 KB	16-Oct-2002 12:03:06	16-Oct-2002 12:03:06
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	20.09 KB	16-Oct-2002 12:03:04	16-Oct-2002 12:03:04
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	19.89 KB	16-Oct-2002 12:03:02	16-Oct-2002 12:03:02
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	29.22 KB	16-Oct-2002 12:01:14	16-Oct-2002 12:01:14
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	31.84 KB	16-Oct-2002 12:01:12	16-Oct-2002 12:01:12
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	42.26 KB	16-Oct-2002 12:01:10	16-Oct-2002 12:01:10
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	32.24 KB	16-Oct-2002 12:01:06	16-Oct-2002 12:01:06
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	20.14 KB	16-Oct-2002 12:01:04	16-Oct-2002 12:01:04
THMBNAIL.PNG	C:\Program Files (x86)\Common Files\Micro...	34.10 KB	16-Oct-2002 12:01:00	16-Oct-2002 12:01:00

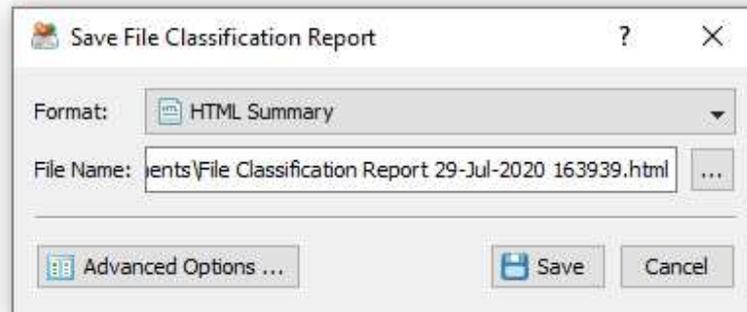
File Categories	Percentage
PNG Files	35.67 %
JPG Files	21.95 %
GIF Files	20.57 %
ICO Files	10.24 %
BMP Files	8.70 %
MSP Files	1.33 %
All Files	0.87 %

Date: 2020/07/29 Time: 16:38:03 Results: 1954 Files, 143.96 MB Displayed: 1954 Files, 143.96 MB

The search results dialog allows one to filter and categorize file search results, display various types of pie charts, copy, move and/or delete files, export file search results to a number of standard report formats including PDF, HTML, text, Excel CSV and XML. In addition, advanced users are provided with the ability to export file search results to an SQL database.

### 3.10 Saving File Classification Reports

DiskSorter allows one to save file classification reports into a number of standard formats including HTML, PDF, Excel, XML, text and CSV. In the simplest case, perform a file classification operation and press the 'Save' button located on the main toolbar. On the save report dialog, select an appropriate report format, enter a report file name and press the 'Save' button.



For the HTML, PDF, Excel, text, CSV and XML report formats, the user is provided with the ability to save a short summary report or a longer detailed report, which may be very long for large file systems containing millions of files. By default, DiskSorter will save a short, summary file classification report in the HTML report format, which will include a list of top-level file categories according to the selected file classification plug-in and a list of tables showing the disk space usage and the number of files per file extension, file attribute, top-level directory name, user name, etc.

Generated By: **Disk Sorter Ultimate v13.0.24** 29-Jul-2020 16:39:56

**File Classification Report**

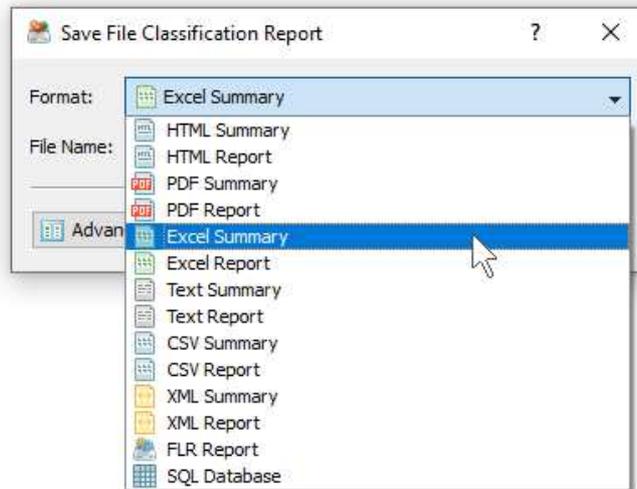
Date	2020/07/29
Time	16:30:55
Processed Files	326731
Processed Space	52.74 GB
Performance	10025 Files/Sec
Process Time	32.59 Sec
Command Name	Default Profile
Host Name	Windows10-64
User Name	alex-s
Input Dirs	c:\d:\vf\

**Disk Space Usage Per File Category**

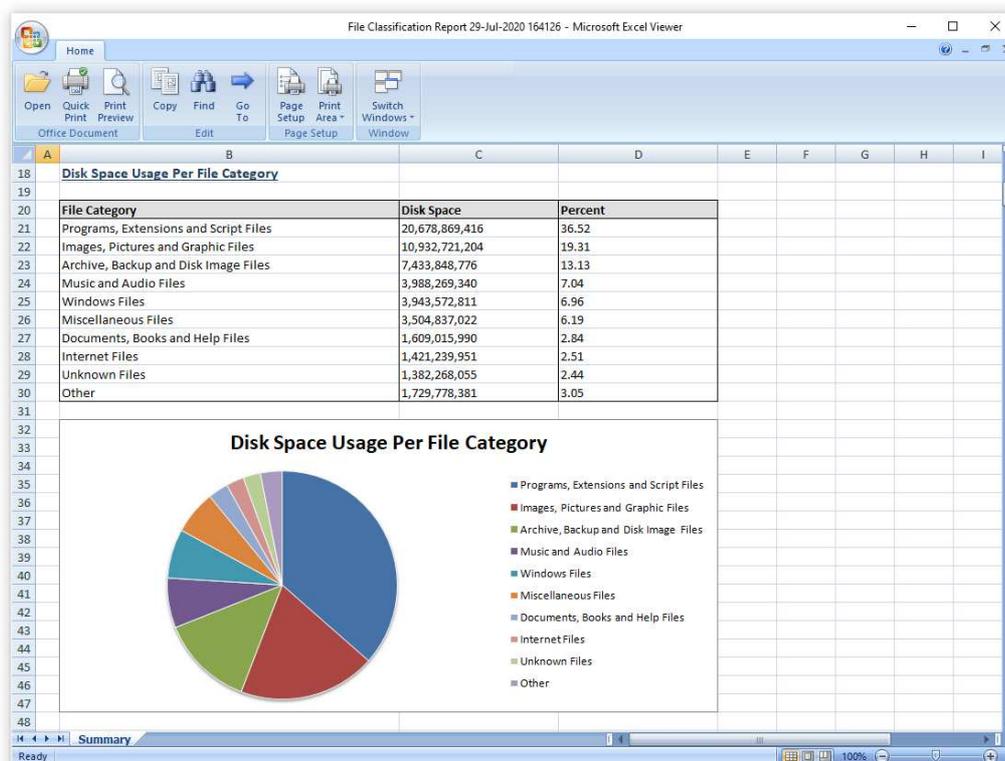
File Category	Disk Space	Percent
Programs, Extensions and Script Files	19.26 GB	36.52 %
Images, Pictures and Graphic Files	10.18 GB	19.31 %
Archive, Backup and Disk Image Files	6.92 GB	13.13 %
Music and Audio Files	3.71 GB	7.04 %
Windows Files	3.67 GB	6.96 %
Miscellaneous Files	3.26 GB	6.19 %
Documents, Books and Help Files	1.50 GB	2.84 %
Internet Files	1.32 GB	2.51 %
Unknown Files	1.29 GB	2.44 %
Development Files	789.05 MB	1.46 %
Temporary Files	706.92 MB	1.31 %
Game Files	95.68 MB	0.18 %
Movies, Clips and Video Files	58.00 MB	0.11 %

In addition, the user is provided with the ability to save file classification results to the DiskSorter native report format, which preserves all information related to each specific file classification operation and may be loaded at any time by using the DiskSorter GUI application.

Sometimes, it may be required to perform additional analysis of file classification results using external tools such as Microsoft Excel. In order to export file classification results to the Excel report format, perform a file classification operation, press the 'Save' button located on the main toolbar, select the 'Excel Summary' report format for a short summary report or the 'Excel Report' format for a detailed file classification report.



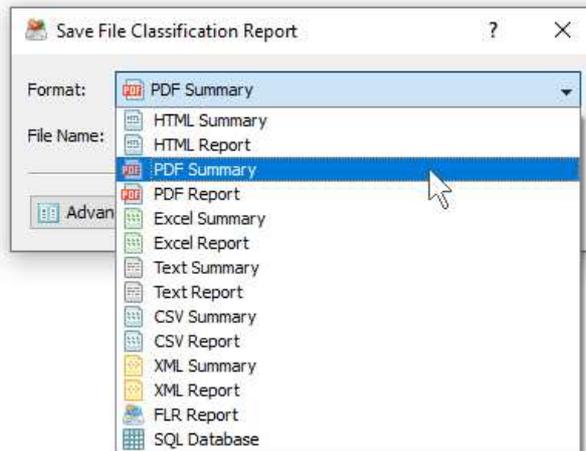
A summary Excel report will include a list of top-level file categories and a number of tables with pie charts showing the used disk space and the number of files per file extension, file attribute, file creation time, last modification time, top-level directory name, user name, etc.



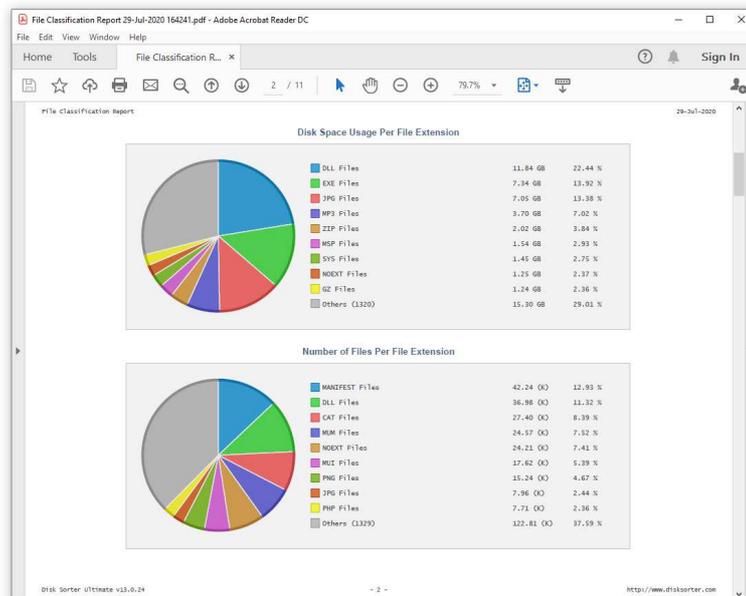
A detailed Excel report will include a list of file categories according to the currently selected file categorization mode and an hierarchy of file groups and file classes sorted by the amount of the used disk space, which may be very long for large file systems containing millions of files. In order to control how many hierarchy levels and how many files per level are exported in the detailed report, press the 'Advanced Options' button located on the 'Save Report' dialog and customize the file classification report according to your specific needs.

### 3.1.1 Saving Graphical PDF Reports

One of the most useful ways to export file classification results is to use the PDF summary or the PDF report formats. Both of these report formats include various types of graphical pie charts showing disk space usage and the number of files per file extension, file category, creation time, last modification time, user name, etc. In order to save file classification results to a PDF report file, press the 'Save' button located on the main toolbar and select the 'PDF Summary' report format for a short, summary report or the 'PDF Report' format for a detailed file classification report.



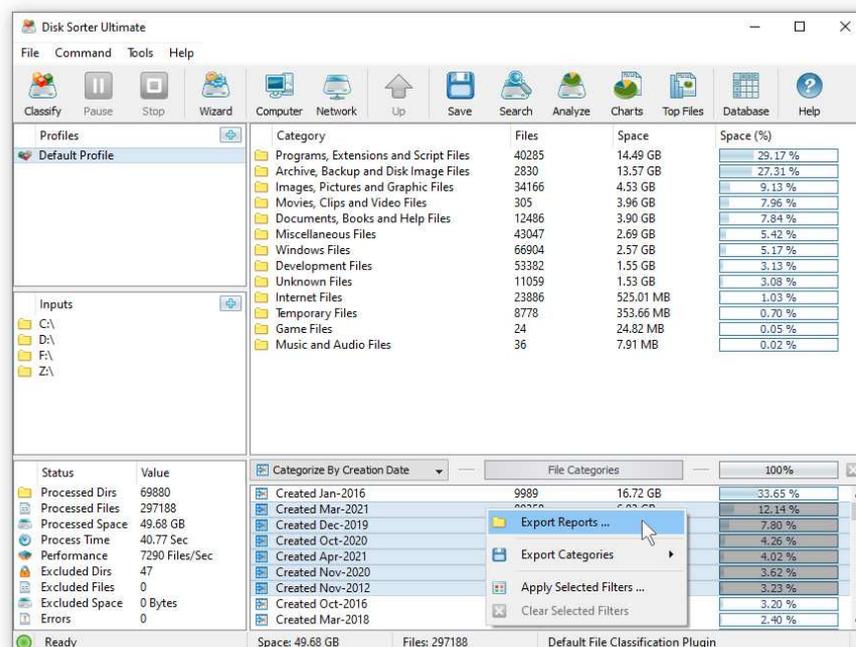
A summary PDF report will include a list of top-level categories of files according to the selected file classification plug-in sorted by the amount of the used disk space followed by a number of pie charts showing the disk space usage and the number of files per file extension, file attribute, file creation time, last modification time, top-level directory name, user name, etc. A detailed PDF report will include an hierarchy of file types sorted according to the used disk space, which may be very long for large file systems containing millions of files.



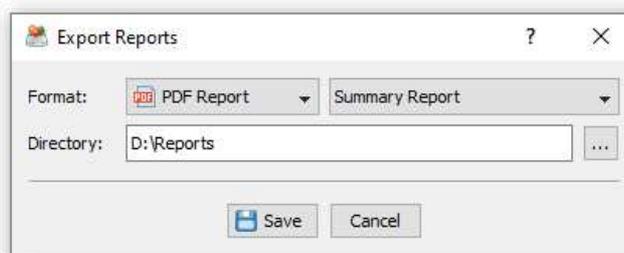
In addition to the hierarchy of file types sorted by the used disk space, detailed PDF reports include pie charts showing the disk space usage per file category and the number of files per file category according to the currently selected file categorization mode. For example, if the second-level file categories mode is set to categorize file classification results by the file extension, the PDF report will display pie charts showing the used disk space and the number of files per file extension.

### 3.12 Batch File Classification Reports

DiskSorter allows one to save batches of file classification reports according to the currently selected categories of files with each report showing the disk space usage and the number of files for a corresponding category of files. For example, let's assume that we need to save file classification reports for the last 10 years with each report showing categories of files and the disk space usage for all files that were created during each year.



In order to generate such reports, set the file categorization mode to 'Categorize By Creation Year', select all years for which you need to generate analysis reports in the file categories view, press the right mouse button and select the 'Export Reports' menu item. On the 'Export Reports' dialog, select an appropriate report format and report mode, specify a destination directory to export reports to and press the 'Save' button.

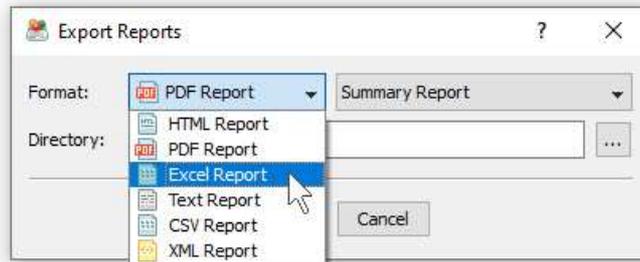


For each selected year, DiskSorter will filter file classification results by the file creation year and save an individual file classification report in the specified destination directory with each report file name and report title containing the file creation year.

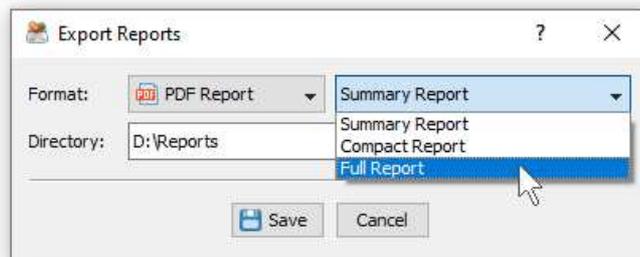
In the same way, the user can generate batches of analysis reports showing categories of files and the disk space usage per user, last modification date, last access date, file attributes, file size, top directory or user-custom categories pre-configured using flexible file matching rules.

For example, in order to export individual file classification reports for all users, set the file categorization mode to 'Categorize By User Name', select all the required users, press the right mouse button and select the 'Export Reports' menu item. Now, the destination directory will contain a series of file classification reports with each report showing categories of files and the disk space usage per user.

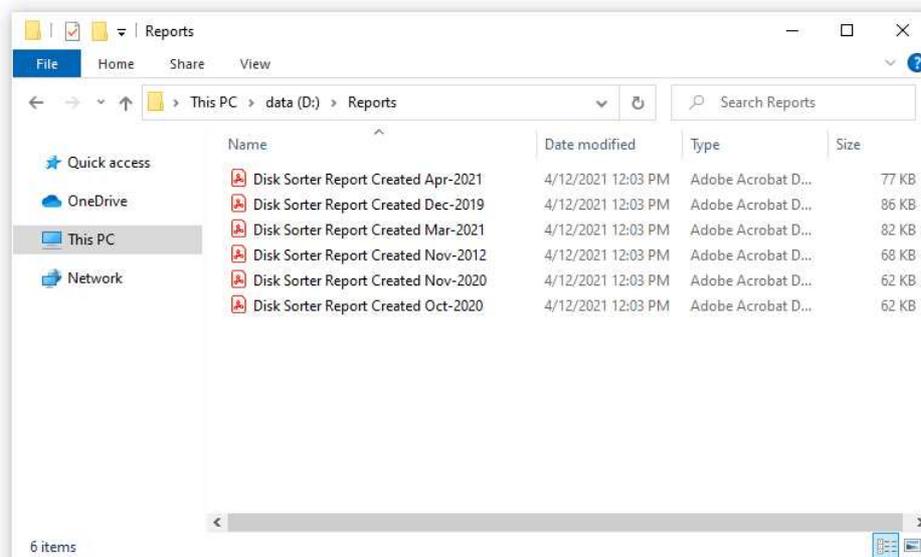
The batch reports dialog provides the ability to export reports to a number of standard report formats including: HTML, PDF, Excel, text, CSV and XML. Depending on the selected report format and report mode, each report will include a summary table showing statistics about the report, a table showing categories of files sorted by the amount of used disk space and lists of files for each category sorted by the file size.



In addition, the batch reports dialog allows one to select one of the following report modes: summary report, compact report or full report. When the summary report mode is selected, each report will include a summary table and lists of file categories sorted by the amount of used disk space. When the compact report mode is selected, each report will include a summary table, lists of file categories and lists of top 100 files per file category. When the full report mode is selected, each report will include a summary table, lists of file categories and full lists of files per category sorted by the file size.

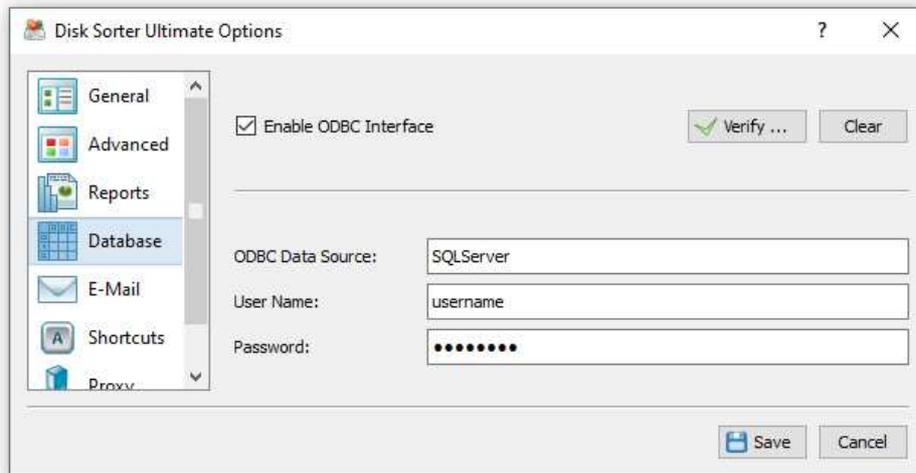


Once the export operation will be completed, the specified destination directory will contain a number of file classification reports according to the selected file categorization mode, selected categories of files and the selected report format.

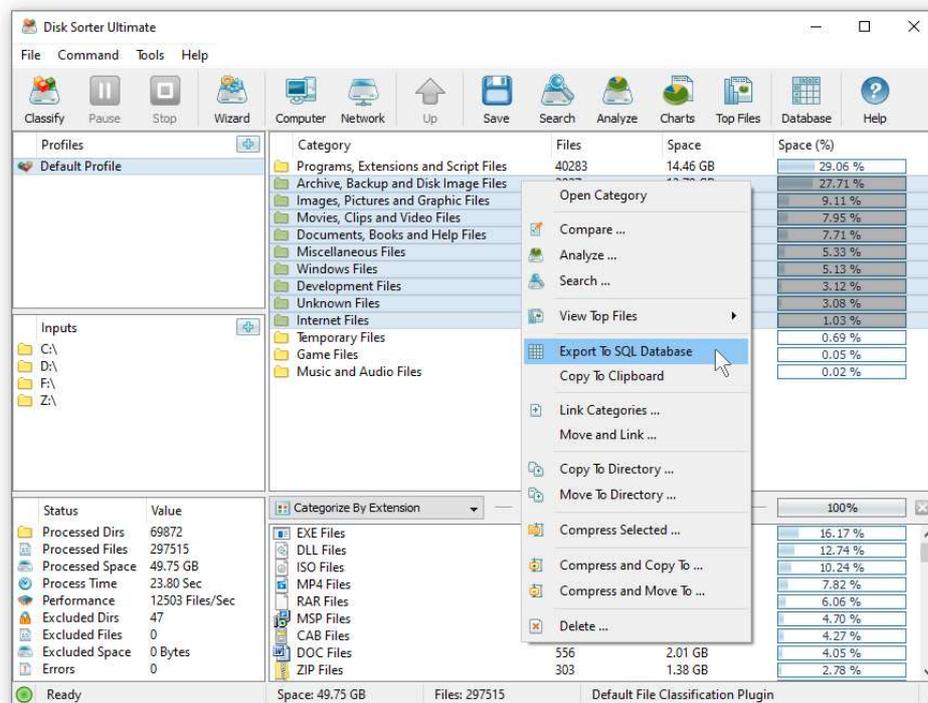


### 3.13 Exporting Results to an SQL Database

DiskSorter Pro and DiskSorter Server provide the ability to export file classification results to an SQL database via the ODBC database interface. In order to be able to export file classification results to an SQL database, the user needs to configure the ODBC database interface on the main options dialog.

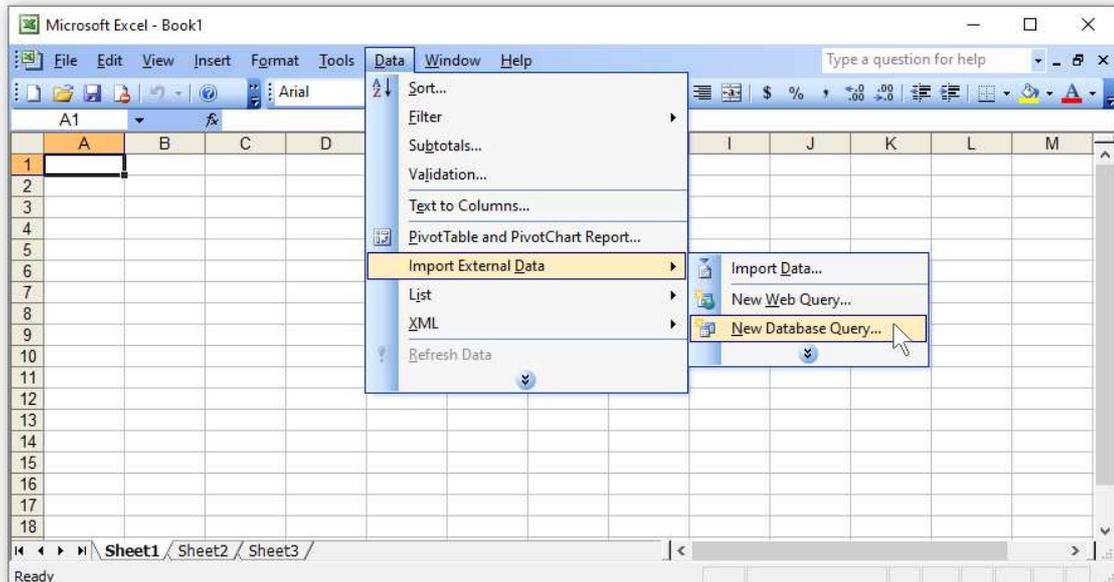


In order to configure the ODBC interface, open the main options dialog, select the 'Database' tab, enable the ODBC database interface, enter the ODBC data source name, the ODBC user name and password to use to connect to the SQL database and then press the 'Verify' button to check the specified ODBC interface.



Once finished configuring the ODBC database interface, select one or more file categories, press the right mouse button, select the 'Export To SQL Database' menu item and enter the name of the SQL database table to export file classification results to. DiskSorter will connect to the specified SQL database and export the selected file classification results to the specified SQL database table.

In order to import file classification results from an SQL database to Microsoft Excel, select the menu 'Data - Import External Data - New Database Query' menu item, select the ODBC data source to import the data from, select the SQL database table name that was specified during the export operation, select SQL database table columns to be imported, optionally select the data sorting mode and press the 'Finish' button.



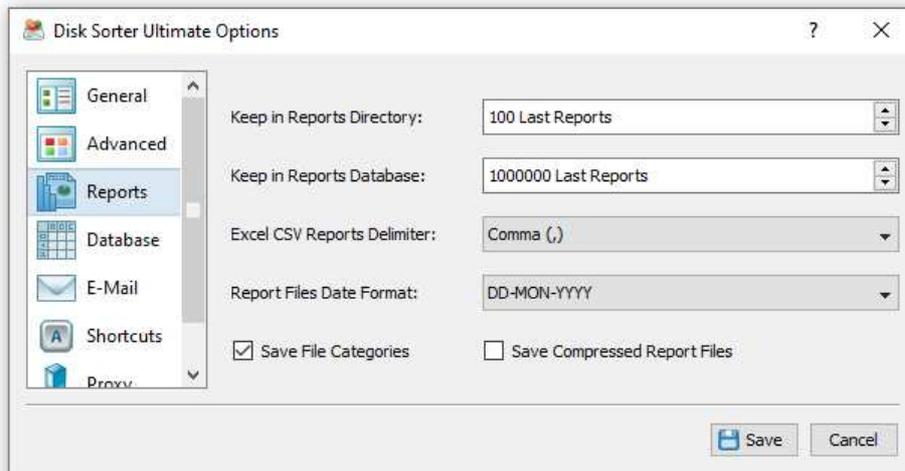
For each file category, DiskSorter exports to the SQL database the following columns of data: a unique category ID, the name of the file category, the total number of files related to the file category, the total size of all files related to the file category and the percentage of the disk space used by all files related to the file category.

The screenshot shows the Microsoft Excel interface with a table containing 13 rows of data. The columns are labeled 'id', 'category', 'files', 'space', and 'spercent'. The data represents file classification results.

id	category	files	space	spercent
1	1 Programs, Extensions and Script Files	40283	15524054029	29.06
2	2 Archive, Backup and Disk Image Files	3027	14802683700	27.71
3	3 Images, Pictures and Graphic Files	34181	4868714448	9.11
4	4 Movies, Clips and Video Files	305	4248519036	7.95
5	5 Documents, Books and Help Files	12476	4118071680	7.71
6	6 Miscellaneous Files	43036	2849085302	5.33
7	7 Windows Files	66833	2743010954	5.13
8	8 Development Files	53382	1667178483	3.12
9	9 Unknown Files	11056	1643909109	3.08
10	10 Internet Files	24098	550828243	1.03
11	11 Temporary Files	8779	370879748	0.69
12	12 Game Files	23	26015064	0.05
13	13 Music and Audio Files	36	8298120	0.02

### 3.14 Automatic Report Management

DiskSorter allows one to keep a user-specified number of reports in the reports directory or the reports SQL database while automatically deleting old reports and freeing up the disk space. These features are especially useful for fully automated file classification operations when the user needs to keep a history of report files in a reports directory or a history of reports in an SQL database.



By default, DiskSorter keeps last 100 reports in the reports directory or the SQL database. In order to enable automatic report management, open the 'Options' dialog, select the 'Reports' tab and change the 'Report Files' or 'Report Database' options to appropriate values.

The '**Keep in Reports Directory**' option is applicable to HTML, PDF, text, Excel CSV, XML and DiskSorter native reports saved to a reports directory or to the user's home directory using the DiskSorter command line utility. After saving each new report file, DiskSorter will check if there are too many report files of the same type (HTML, PDF, XML, CSV, etc.) in the reports directory and delete old reports according to the user-specified configuration.

The '**Keep in SQL Database**' option is applicable to reports submitted to an SQL database using the DiskSorter GUI application or the DiskSorter command line utility. After saving each new report to the SQL database, DiskSorter will check if there are too many reports from the same host computer, for the same set of disks or directories and delete old reports according to the user-specified configuration. For example, if reports from two different servers are submitted to the same SQL database, DiskSorter will keep in the database the last X reports for each server.

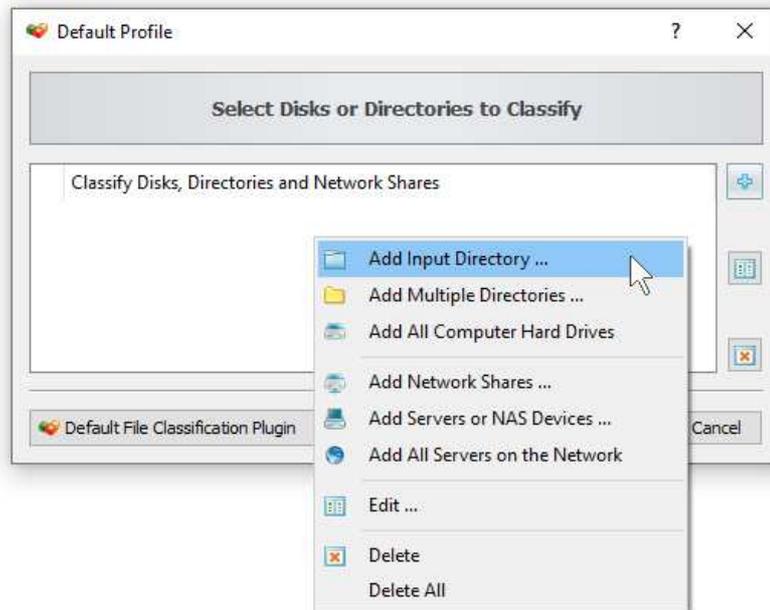
The '**Excel CSV Reports Delimiter**' option allows one to customize the field delimiter character used in Excel CSV reports. The comma character normally used as the CSV reports field delimiter is a valid file name character and therefore file names containing the comma character will span multiple fields in Excel datasheets. In order to properly export file names containing the comma character to an Excel datasheet, the CSV reports delimiter character should be changed to the Tab character, which cannot be used in file names.

The '**Save File Categories**' option allows one to enable/disable exporting of file categories to HTML, PDF, text, Excel CSV and XML reports. Second-level file categories are available when reports are saved using the DiskSorter GUI application manually. Automatically generated reports or reports saved using the DiskSorter command line utility are always saved without file categories. When the 'Save File Categories' option is enabled, DiskSorter GUI application will save second-level file categories to HTML, PDF, text, Excel CSV and XML reports.

The '**Save Compressed Report Files**' option allows one to save automatically generated HTML, text, Excel CSV and XML reports as GZ compressed archive files.

### 3.15 Classifying Multiple Disks or Directories

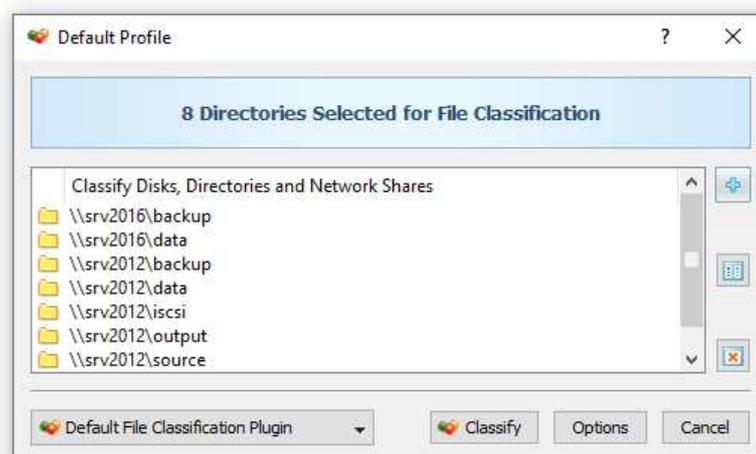
DiskSorter is capable of classifying files in a number of disks, directories or network shares simultaneously. In order to classify files in multiple locations, open the file classification profile dialog, press the 'Add' button located on the right side of the list of file classification locations and add all the disks, directories and/or network shares that should be processed.



During runtime, DiskSorter will process the specified disks, directories and network shares in parallel using a number of CPUs and/or CPU-cores according to the configuration specified on the advanced file classification options dialog.

### 3.16 Classifying Network Shares Using UNC Path Names

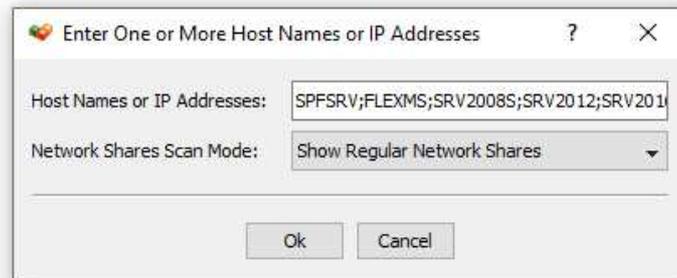
In order to simplify the file classification process for networked computers and/or NAS storage devices, DiskSorter allows one to specify directories that should be processed using UNC path names without mounting each network share as a local disk.



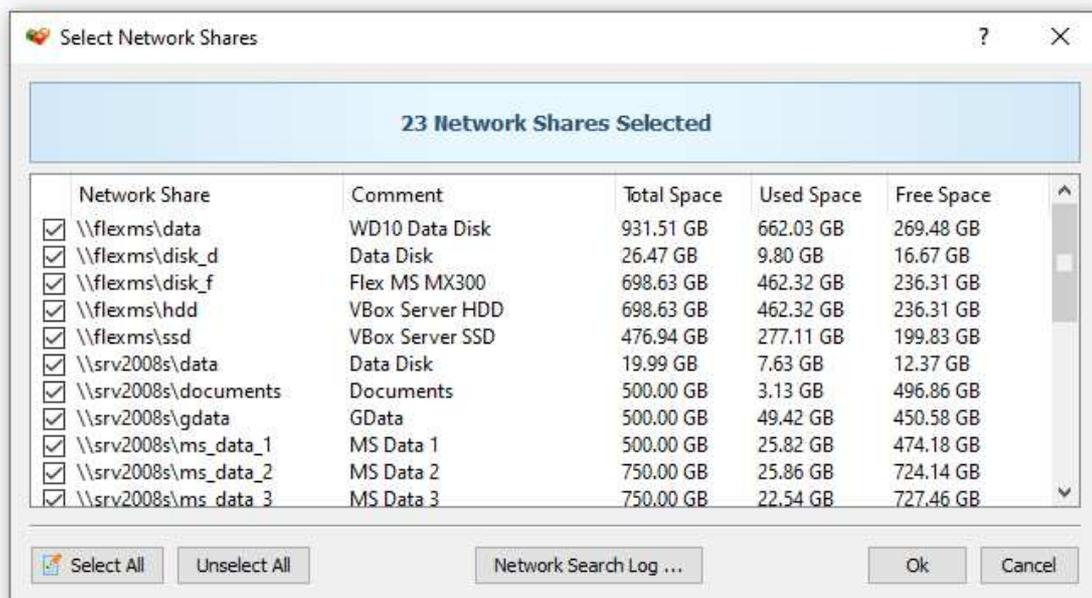
When working with UNC path names, it is important to keep in mind that all file management operations such as copy, move and delete will be performed using UNC path names and the user should have appropriate permissions on each specific network share and/or NAS storage device.

### 3.17 Classifying Files in One or More Servers

DiskSorter allows one to classify files in all network shares of one or more servers or NAS storage devices on the network. In order to classify files in one or more servers, open the file classification dialog, press the 'Add' button located on the right side of the list of file classification locations, select the 'Servers or NAS Devices' mode and enter one or more host names or IP addresses separated by the semicolon (;) character.



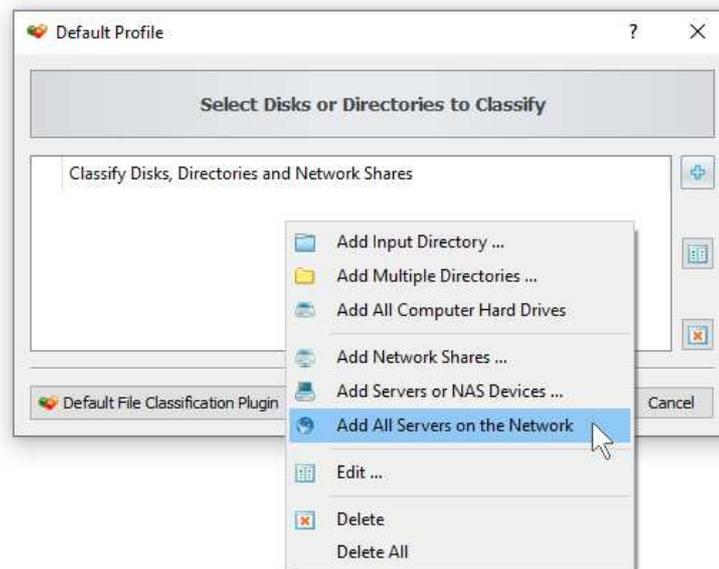
DiskSorter will scan the network and show a list of network shares detected in the specified servers and NAS storage devices allowing one to select one or more network shares that should be processed. In order to be able to use this feature, the user needs to have permissions to access network shares.



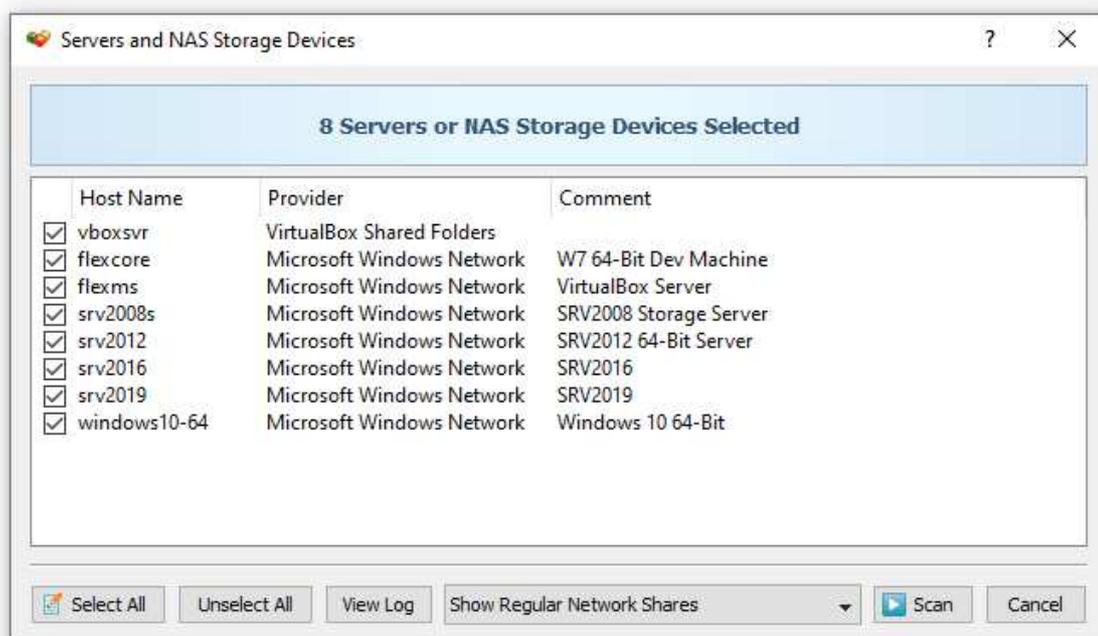
The network shares scanning operation may be performed multiple times for different servers and NAS storage devices and an unlimited number of network shares from different servers may be added to the file classification operation. During runtime, DiskSorter will classify files in all the specified network shares in parallel using all CPUs and/or CPU-cores available in the host computer DiskSorter is running on.

### 3.18 Classifying Files in All Servers on the Network

Another option is to classify and categorize files in all servers and/or NAS storage devices available on the network. In order to classify files in all servers on the network, open the file classification dialog, press the 'Add' button located on the right side of the list of file classification locations, select the 'All Servers on the Network' mode and press the 'Ok' button.



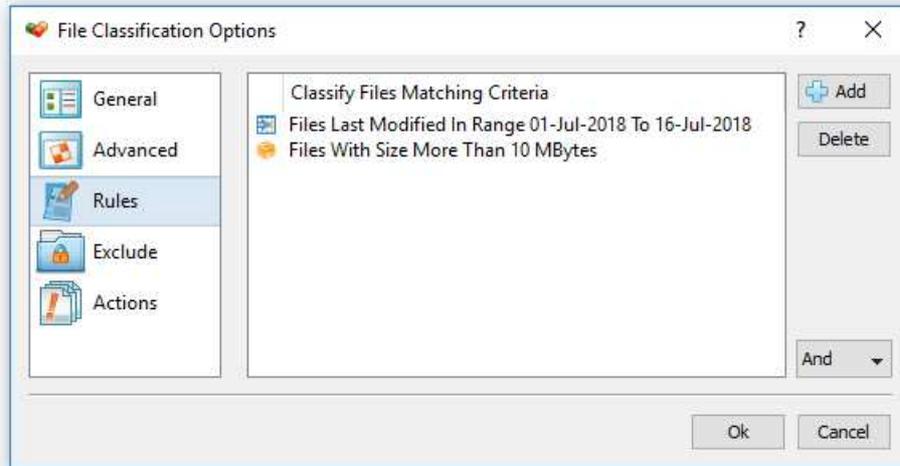
DiskSorter will scan the network and show a list of servers and NAS storage devices detected on the network. Select one or more servers or NAS storage devices to classify in and press the 'Ok' button.



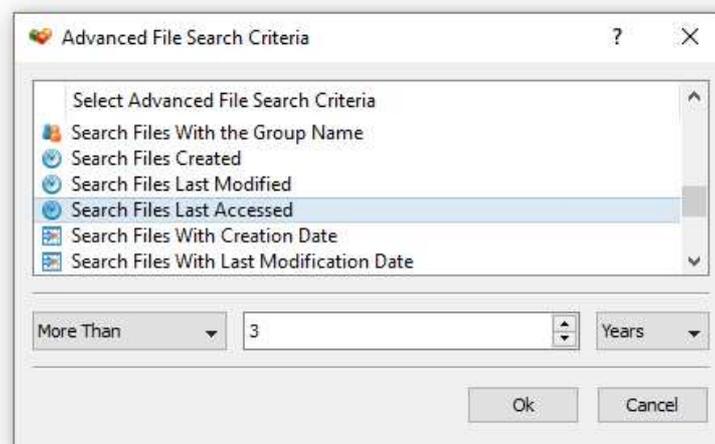
DiskSorter will scan the selected servers and show a list of network shares detected in the servers and NAS storage devices allowing one to select one or more network shares that should be processed. During runtime, DiskSorter will process the selected network shares in parallel using all CPUs available in the host computer DiskSorter is running on. In order to be able to use this feature, the user needs to have permissions to access network shares.

### 3.19 Classifying Specific File Types or File Groups

DiskSorter provides the user with the ability to classify specific types of files or file groups according to the specified file matching rules. For example, the user may classify files with the file size more than 10 MB that were last modified during a specified period of time.

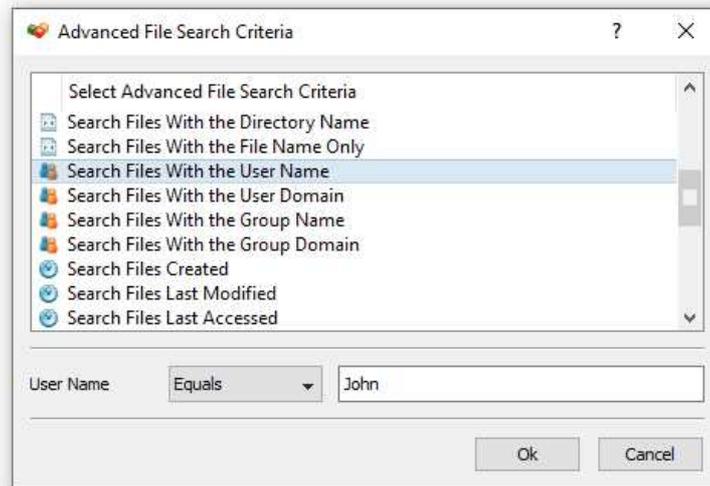


In order to add one or more file matching rules, open the file classification options dialog, select the 'Rules' tab and press the 'Add' button. On the 'Rules' dialog select an appropriate rule type and specify all the required parameters.

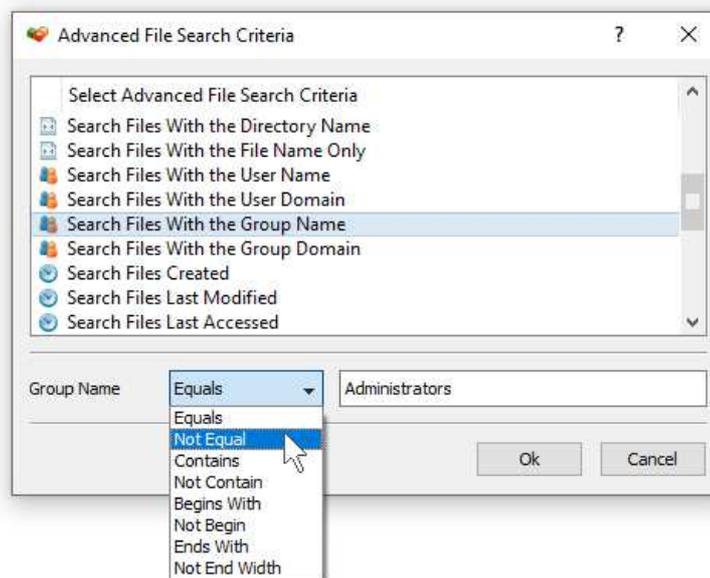


During the file classification process, DiskSorter will process input directories and apply the specified file matching rules to all the existing files. Files not matching the specified rules will be skipped from the file classification process and the file classification report will contain the user-selected files only.

In multi-user environments, DiskSorter provides the ability to classify files by the user name, group name and domain name. For example, in order to classify files owned by a specific user, open the file classification command options dialog, select the 'Rules' tab, select the 'Search Files With User Name' and enter the user name to search for.



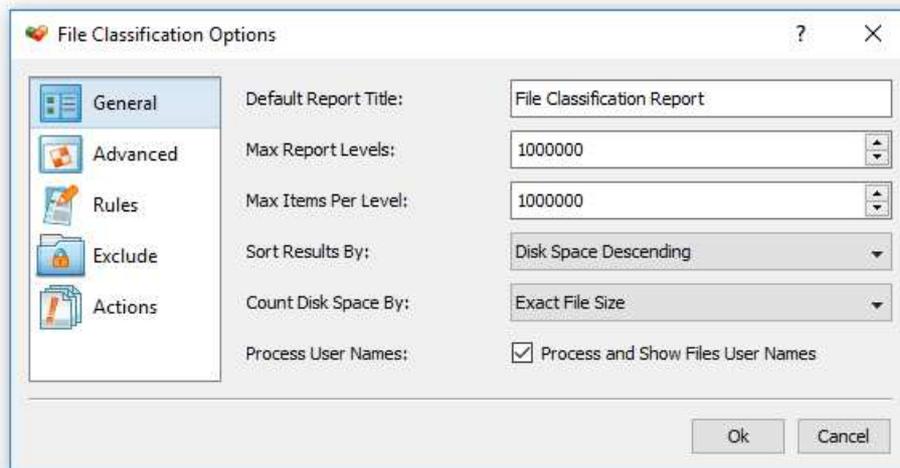
In addition to the positive file matching rules, DiskSorter provides negative file matching rules allowing one to exclude files matching the specified criteria. For example, in order to exclude all files owned by any member of the 'Administrators' user group, open the file classification command options dialog, select the 'Rules' tab, select the 'Search Files With Group Name', set the rule operator to 'Not Equal' and enter the 'Administrators' group name.



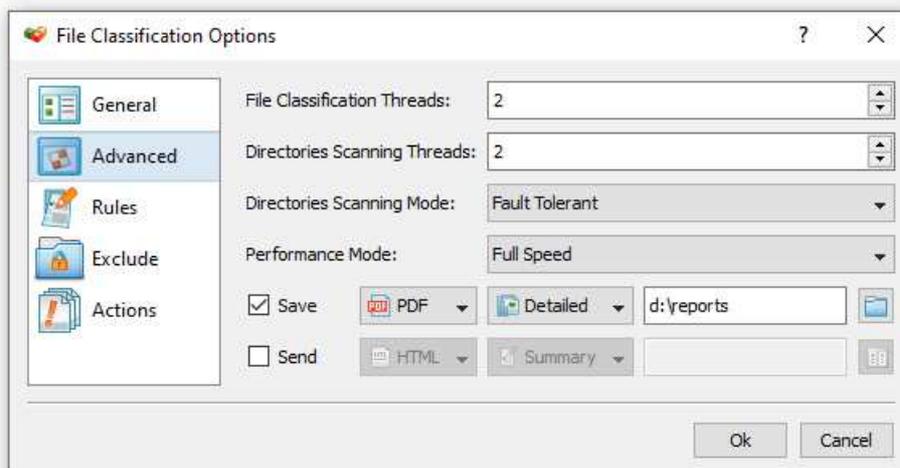
One of the most powerful features of the DiskSorter file matching rules is the ability to combine multiple types of rules allowing one to precisely select which files should be classified and which files should be excluded from the file classification process. For example, the user can configure a file classification command to classify all files which were created or modified during the last week, owned by regular users, but excluding all files owned by Administrators.

### 3.20 Advanced File Classification Options

By default, DiskSorter performs file classification using generic settings, which should be appropriate for most users. In addition, IT and storage administrators are provided with a number of advanced configuration options allowing one to customize the file classification process for user specific needs and hardware configurations.



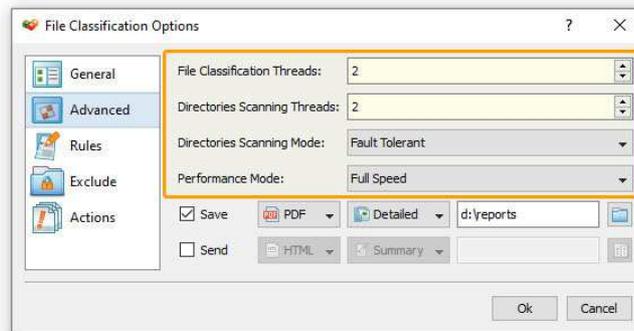
In order to customize the file classification process, open the file classification profile dialog and press the 'Options' button. The 'General' file classification options tab allows one to control the default report title, the maximum number of report levels, the maximum number of files per class, the results sorting mode, the disk space counting mode and provides an option to show files user names.



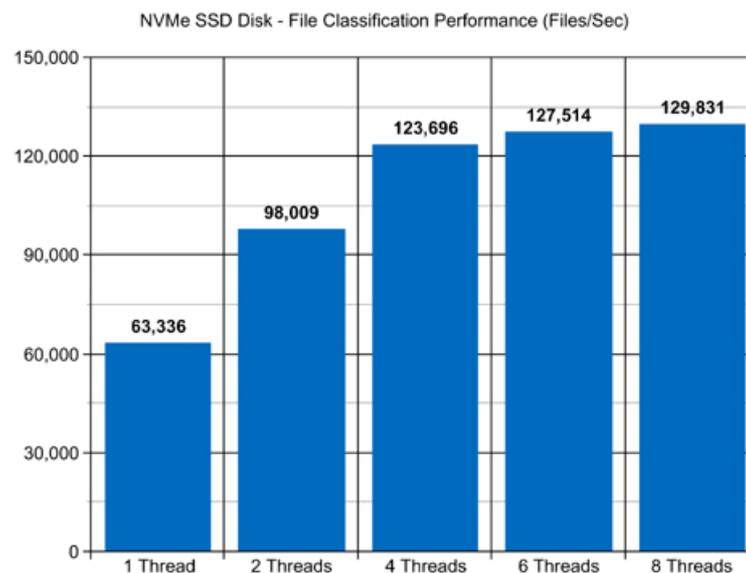
The 'Advanced' file classification options tab provides the ability to control the number of parallel file classification threads, the number of parallel directory scanning threads, the directories scanning mode and the speed of the file classification process. In addition, the 'Advanced' file classification options tab allows one to automatically generate file classification reports in a user-specified directory and/or send file classification reports to a user-specified E-Mail address.

### 3.21 File Classification Performance Options

DiskSorter is optimized for modern multi-core and multi-CPU systems and is capable of classifying files stored on multiple disks, directories or network shares in parallel using all CPUs installed in the computer. DiskSorter provides a number of different performance optimization options allowing one to tune the file classification operations for user-specific hardware and storage configurations.

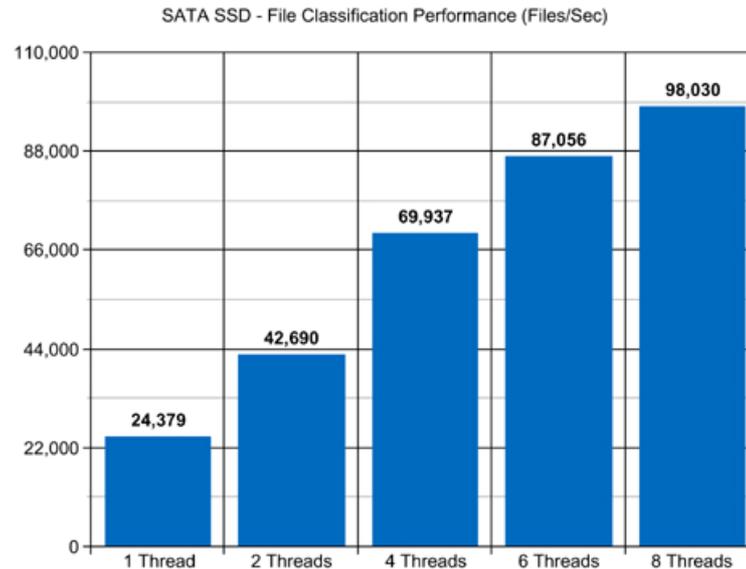


In order to customize the file classification performance optimization options, open the file classification operation dialog, press the 'Options' button and select the 'Advanced' tab. The 'File Classification Threads' option controls how many parallel threads are used to classify files. The 'Directories Scanning Threads' option controls how many parallel threads are used to scan input disks, directories and network shares. In the 'Fault-Tolerant' directory scanning mode, DiskSorter uses an individual processing thread for each input disk, directory or network share, but limits the maximum number of parallel scanning threads to the specified value. In the high-performance directory scanning mode, DiskSorter always uses the specified number of parallel directory scanning threads even when processing a single input disk, directory or network share.

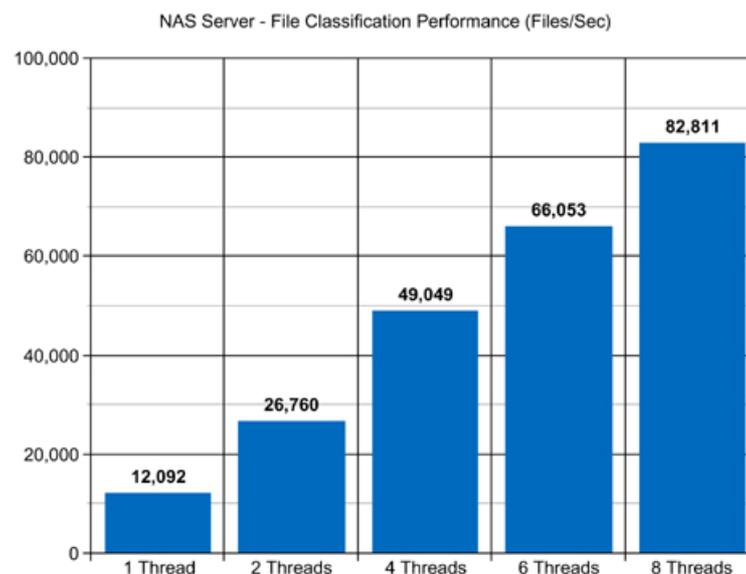


For example, when classifying files stored on a high-speed NVMe SSD disk, DiskSorter reaches up to 63,000 files/sec using a single file classification thread. With two parallel file classification threads, the performance scales up to 98,000 files/sec and with four parallel file classification threads, the performance increases up to 123,000 files/sec showing a very good multi-threaded performance scalability. With six processing threads the file classification performance reaches up to 127,000 files/sec and with eight processing threads the performance increases up to 129,000 files/sec, which makes it possible to classify and categorize 10 millions files within two minutes.

When classifying files stored on regular SATA SSD drives, which are significantly slower than NVMe SSD drives, the performance of the file classification process reaches up to 24,000 files/sec using a single file classification thread and scales up to 69,000 files/sec with four parallel file classification threads. With eight parallel file classification threads, the performance reaches up to 98,000 files/sec, which allows to classify and categorize huge numbers of files relatively fast.

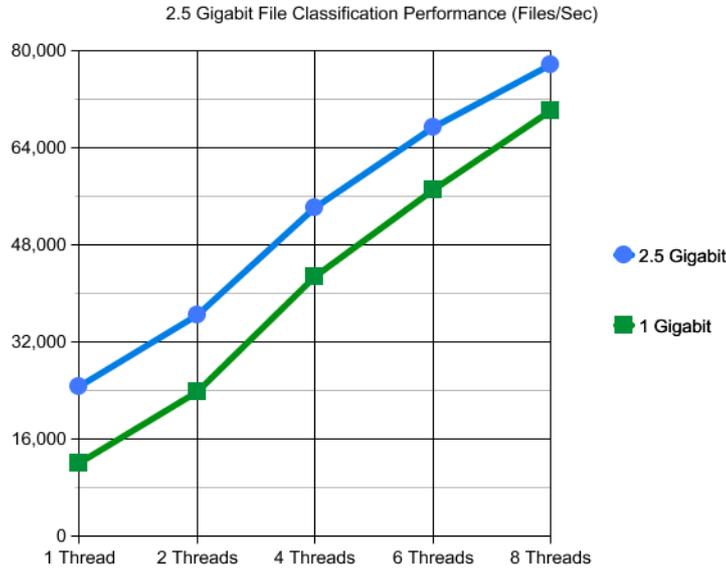


Classifying files stored on a NAS storage device via a network is more complicated because the user needs to take into account the speed and the latency of the network. If the computer, on which DiskSorter is installed, is connected to the NAS storage device via a high-speed, low-latency network, the performance of the file classification operations may reach up to 12,000 files/sec with one file classification thread, scale up to 49,000 files/sec with four parallel file classification threads and increase up to 82,000 files/sec with eight parallel file classification threads.

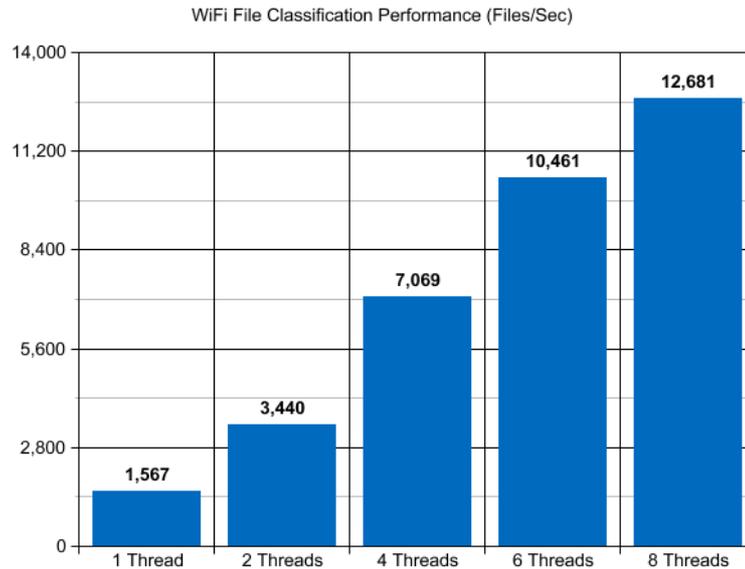


On the other hand, if DiskSorter will need to access network shares via the Internet or via a long-distance, high-latency network, the performance of the file classification operations will be relatively slow. One of the options to increase the performance of the file classification operations in such configurations is to set the 'High-Performance' directory scanning mode and increase the number of parallel directory scanning threads to 16 or even 32 disregarding how many CPUs are actually installed on the computer.

Classifying millions of files stored in one or more large NAS servers may be a very time consuming operation and one of the ways to speed-up the file classification process is to perform the file classification operation via the 2.5 Gigabit Ethernet network. With 2.5 Gigabit Ethernet the performance of the DiskSorter file classification operations continues to scale up to 80,000 Files/Sec with 8 parallel file classification threads.

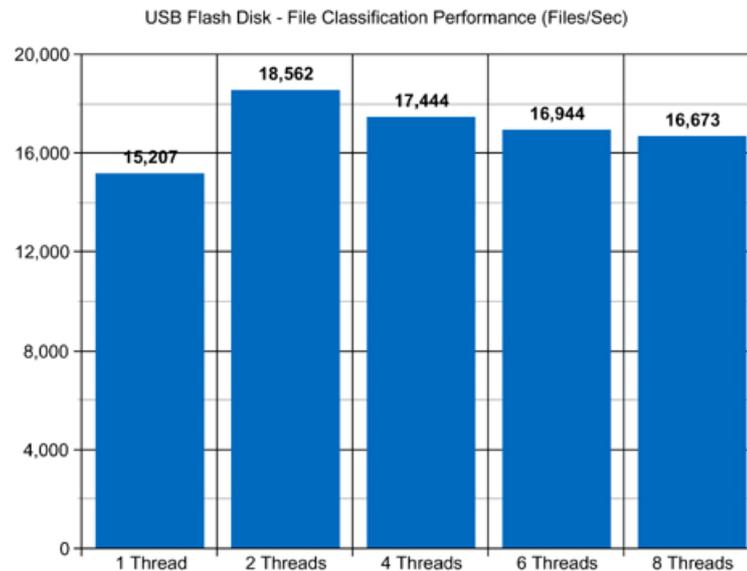


Due to a very wide adoption of laptops and NAS servers with built-in WiFi network interfaces, many users may consider classifying files stored in NAS servers via the wireless network. But, the latency of the wireless network is much higher and therefore it will take much more time to complete the file classification operation via the wireless network. The question is how much longer the user will need to wait and if it will save any significant amount of time to perform the file classification operation via a wired network.

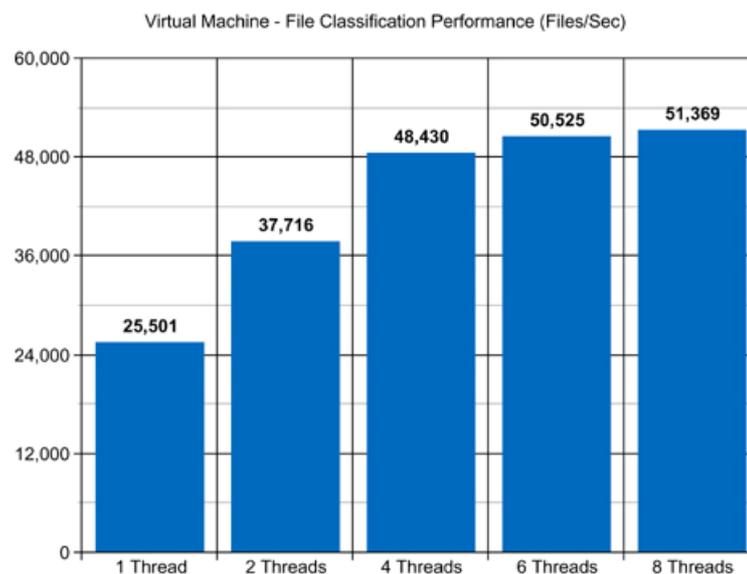


Based on our benchmarks, via a 5 GHz wireless network, DiskSorter reaches up to 1,500 Files/Sec with a single file classification thread and scales up to 12,000 Files/Sec with 8 parallel file classification threads, which is approximately 5 times slower compared to the standard Gigabit Ethernet and 7 times slower when compared to the 2.5 Gigabit Ethernet. So, if the user needs to classify up to 1 million files, it is possible to use a wireless network. On the other hand, if the user needs to classify a large NAS server with many millions of files, a low-latency Gigabit Ethernet or 2.5 Gigabit Ethernet is required.

Modern USB flash drives provide plenty of the storage space and are reasonably fast allowing one to store vast amounts of data for backup purposes. Sometimes, it may be required to classify and categorize files on a USB flash drive in order to free the used disk space. When classifying files stored on a USB flash drive, DiskSorter can reach up to 15,000 files/sec with a single file classification thread. With two parallel file classification threads, the performance increases up to 18,000 files/sec, which is good, but more than two file classification threads will slightly degrade the performance of the file classification operations.



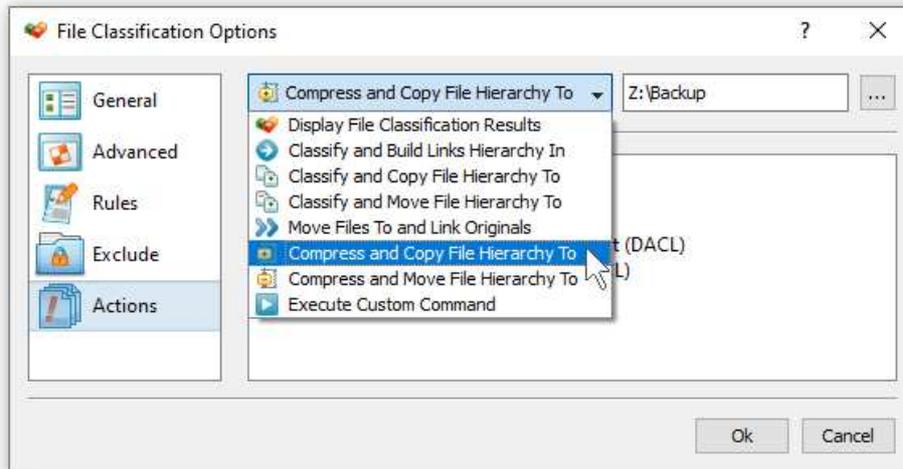
Today, modern IT environments widely deploy virtual servers and/or virtual workstations. Most of the popular virtualization platforms provide a high level of performance, but anyway some performance degradations are inevitable when a file classification operation is executed on a guest virtual machine compared to the same file classification operation executed directly on the host computer.



For example, when a virtual machine with 4 virtual CPUs is stored on an NVMe SSD disk and classifying files stored on a virtual local disk drive, which is physically stored on the same NVMe SSD disk, the performance of the file classification operations reaches up to 25,000 files/sec using a single file classification thread. With two parallel file classification threads, the performance of the file classification operations scales up to 37,000 files/sec and with four parallel file classification threads, the performance of the file classification operations increases up to 48,000 files allowing one to classify and categorize huge numbers of files relatively fast.

### 3.22 Automatically Organizing Files on the Disk

In addition to the ability to classify files, DiskSorter Pro and DiskSorter Server allow one to physically reorganize files on the disk and build a logical file hierarchy according to the selected file classification plug-in. The simplest way to build a file hierarchy on the disk is to construct a logical hierarchy of directories representing file categories, subcategories and file classes populated with links pointing to files in the processed file system.



In order to build a logical hierarchy of files on the disk, classify one or more directories, select the required file categories in the category view, press the right mouse button, select the 'Link Categories' menu item and enter the destination directory where the file hierarchy should be constructed in. DiskSorter will reconstruct the file hierarchy in the specified destination directory and populate it with links pointing to files in the processed file system. Now, it will be possible to navigate the logical file hierarchy using a regular file manager application.

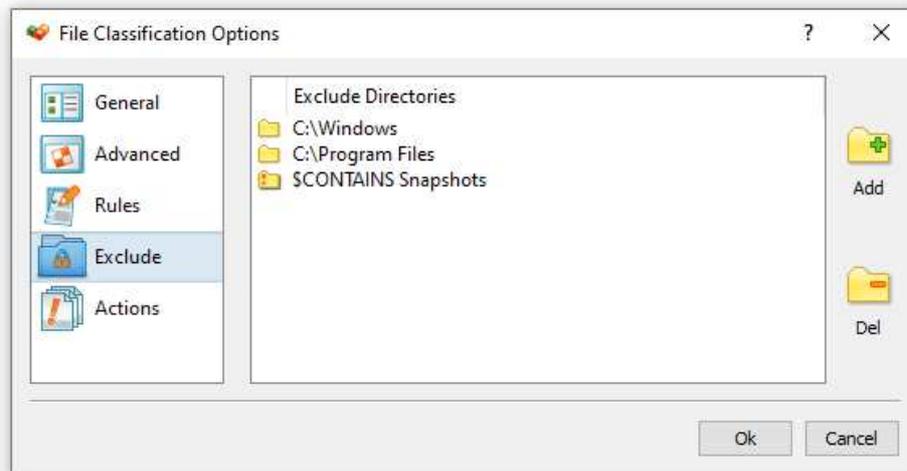
By default, DiskSorter just displays file classification results in the category view allowing the user to manually perform file management operations on specific files or file categories. Sometimes, users may need to automate the file classification process and to perform automatic file classification operations, on-the-fly, without showing the file classification results.

DiskSorter Pro provides the following automatic file classification modes:

- **Classify and Build Links Hierarchy In** - select this option and specify a destination directory to construct an organized hierarchy of directories and populate it with links to original files according to file classification results.
- **Classify and Copy File Hierarchy To** - selects this option and specify a destination directory to construct an organized hierarchy of directories and populate it with copies of original files according to file classification results.
- **Classify and Move File Hierarchy To** - select this option and specify a destination directory to construct an organized hierarchy of directories and move all classified files into that hierarchy according to file classification results.
- **Move Files To and Link Originals** - select this option and specify a destination directory to construct an organized hierarchy of directories and move all classified files into that hierarchy according to the selected file classification plug-in while replacing original files with links pointing to classified files in the specified destination directory.
- **Execute Custom Command** - select this option and specify a custom command or a script file to be executed for each classified file. For each classified file, DiskSorter will execute the specified custom command and pass the full name of the file and the full class name as the first and the second command line arguments respectively.

### 3.23 Excluding Subdirectories from File Classification Process

Sometimes, it may be required to exclude one or more subdirectories from the file classification process. For example, if you need to classify files stored on a disk excluding one or two special directories, you may specify the whole disk as an input directory and add the directories that should be skipped to the exclude list.



In order to add one or more directories to the exclude list, open the file classification profile dialog, press the 'Options' button, select the 'Exclude' tab and press the 'Add' button. All files and subdirectories located in the specified exclude directory will be excluded from the file classification process. In addition, advanced users are provided with a number of exclude directories macro commands allowing one to exclude multiple directories using a single macro command.

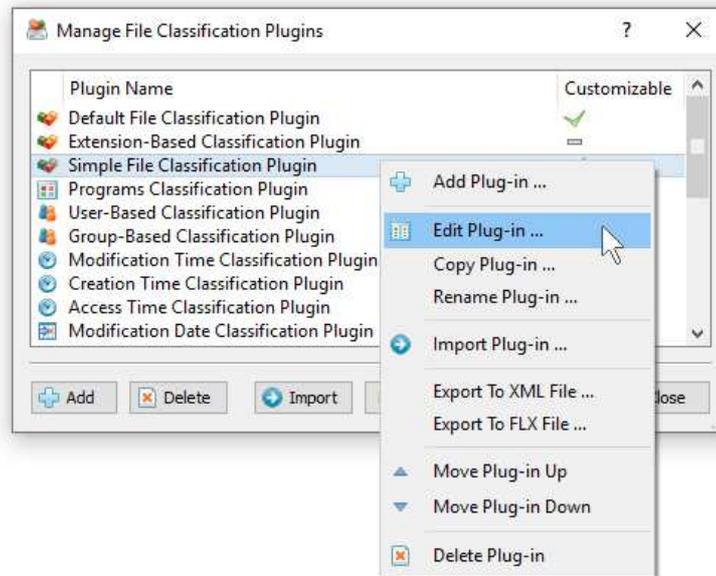
DiskSorter provides the following exclude directories macro commands:

- **\$BEGINS <Text String>** - this macro command excludes all directories beginning with the specified text string.
- **\$CONTAINS <Text String>** - this macro command excludes all directories containing the specified text string.
- **\$ENDS <Text String>** - this macro command excludes all directories ending with the specified text string.
- **\$REGEX <Regular Expression>** - this macro command excludes directories matching the specified regular expression.
- **\$DIRLIST <File Name>** - this macro command excludes all directories listed in the user-specified text file.

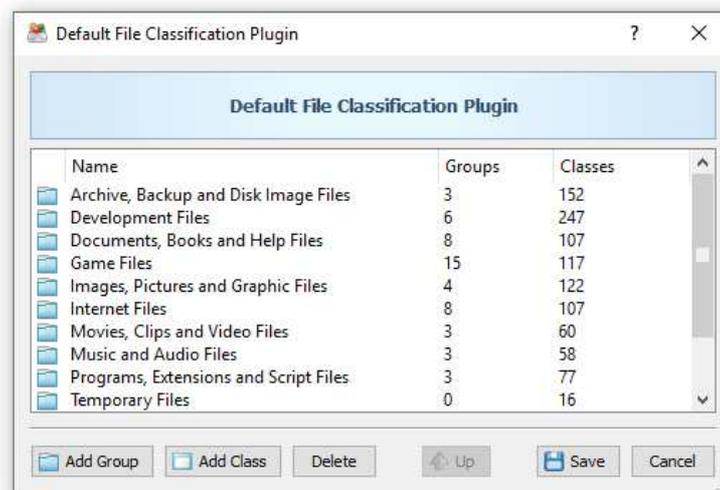
For example, the exclude macro command '\$CONTAINS Temporary Files' will exclude all directories with 'Temporary Files' at any place in the full directory path and the exclude macro command '\$REGEX \.(TMP|TEMP)\$' will exclude directories ending with '.TMP' or '.TEMP'.

### 3.24 Managing File Classification Plugins

By default, DiskSorter classifies and categorizes files using the 'Default File Classification Plug-in', which is capable of recognizing more than 3,000 of the standard file types and formats and allows one to organize them into a logical file hierarchy. In addition, a number of advanced file classification plug-ins are available for registered users of DiskSorter Pro and DiskSorter Server.



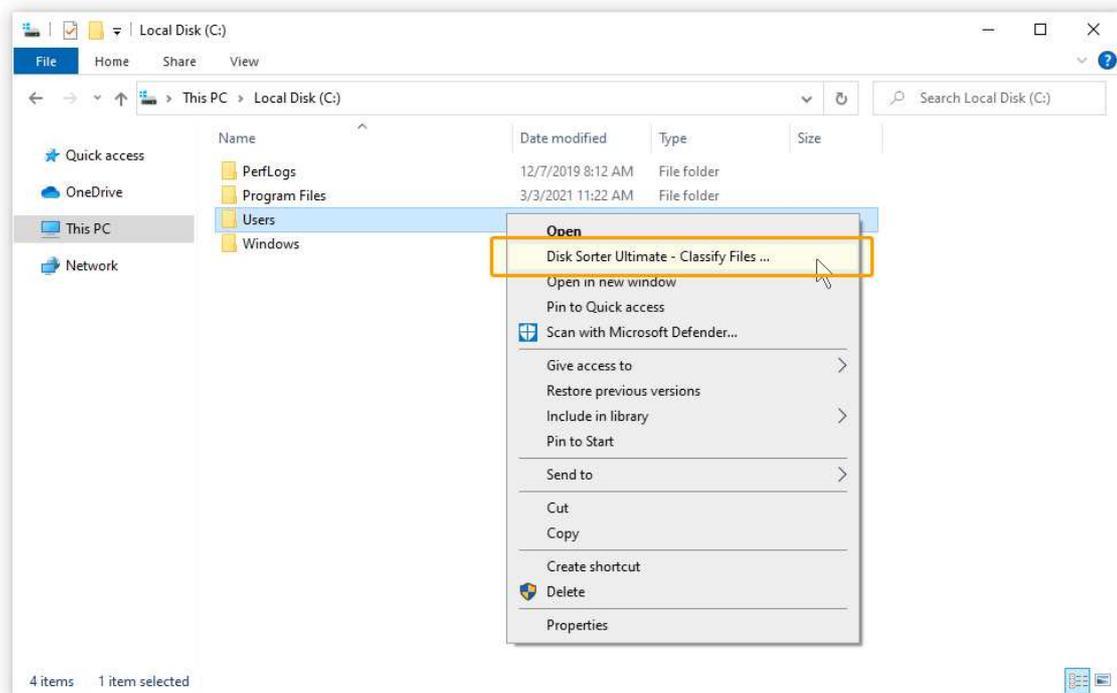
Finally, DiskSorter Pro provides the ability to add user-custom file classification plugins and customize the built-in file classification plug-ins allowing one to classify and categorize files according to the user-specific needs and requirements. In order to add a custom file classification plug-in, select the menu 'Tools - Manage Plugins', press the 'Add' button, specify a unique file classification plug-in name and then use the file classification plug-in designer dialog to create your custom file categories and file classes.



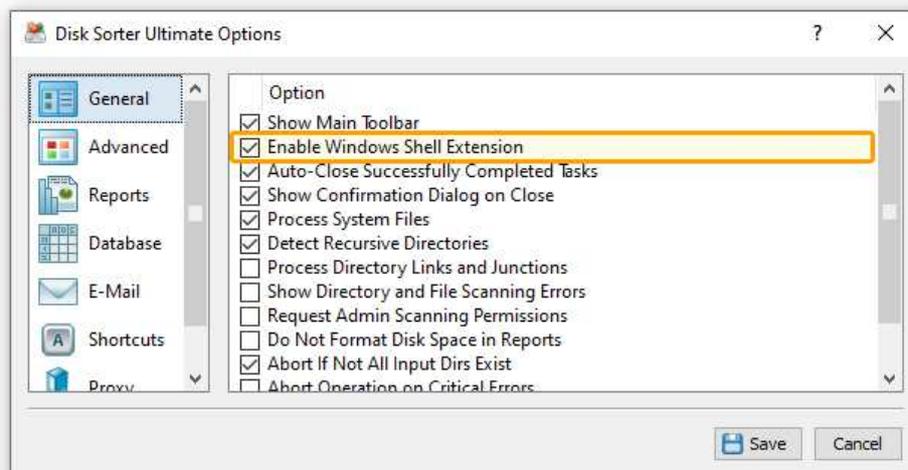
Another option is to customize a built-in file classification plug-in by adding support for one or more additional file type or file categories. In order to customize a built-in file classification plug-in, select the menu 'Tools - Manage Plugins', select the required file classification plug-in item, click the right mouse button and select the 'Copy Plug-in' menu, specify a new plug-in name and then double click on the newly copied plug-in item to open the plug-in copy in the file classification plug-ins designer dialog.

### 3.25 Windows Shell Integration

DiskSorter provides Windows shell integration capabilities allowing one to classify files directly from the Windows Explorer application. In order to classify files in one or more disks or directories, select the required disks or directories in the Windows Explorer application, press the right mouse button and select the 'DiskSorter - Classify Files' menu item.

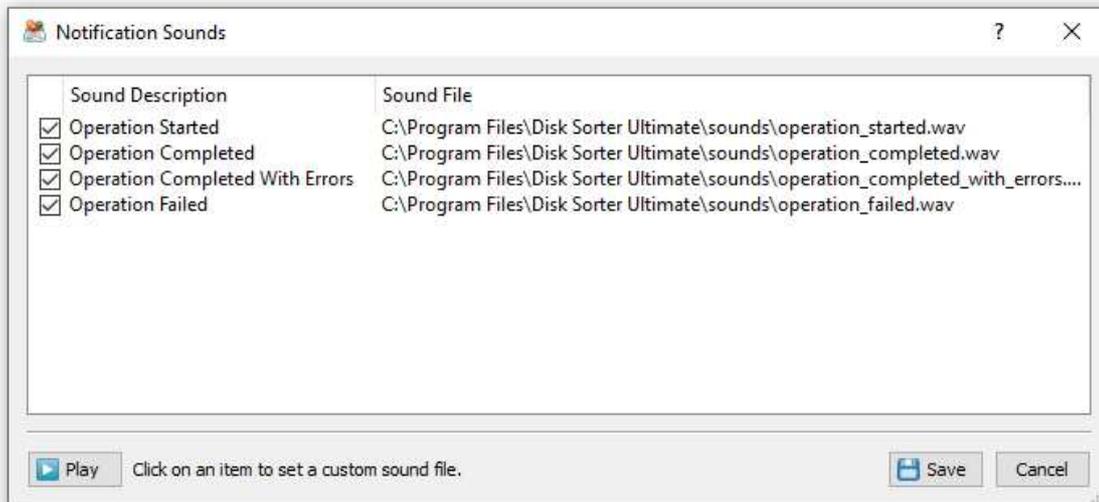


In most cases, the Windows shell extension is a very useful feature, but sometimes, when the user has too many installed shell extensions, the Windows context menu may become too cluttered. In order to remove the DiskSorter entry from the Windows shell extension, open the options dialog, select the 'General' tab and disable the Windows shell extension.

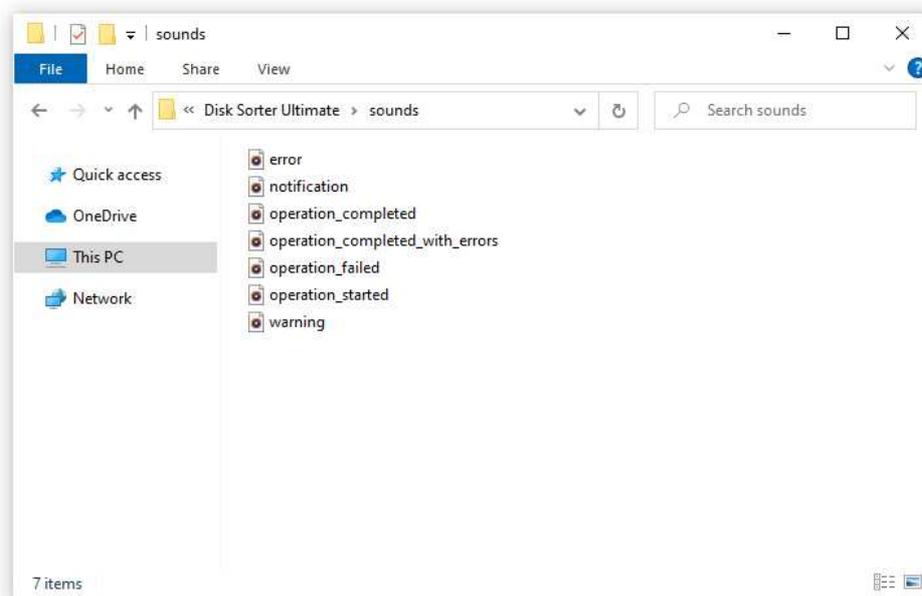


### 3.26 Sound Notifications

DiskSorter provides the ability to play notification sounds when a file classification operation is started, completed or failed. In addition, the user is provided with the ability to enable, disable or customize all types of sound notifications.



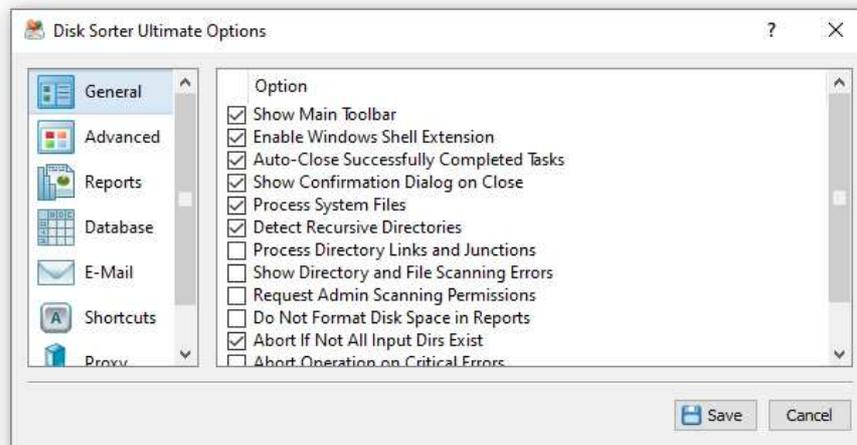
In order to open the 'Notification Sounds' dialog, select the 'Tools - Notification Sounds' menu item. The 'Notifications Sounds' dialog shows all the available sound notifications and allows one to enable or disable specific sound notifications.



In order to select a custom notification sound file, click on a notification sound item in the sounds list and select a custom WAV file. In order to play a notification sound, select the required notification sound in the sounds list and press the 'Play' button.

### 3.27 DiskSorter Options Dialog

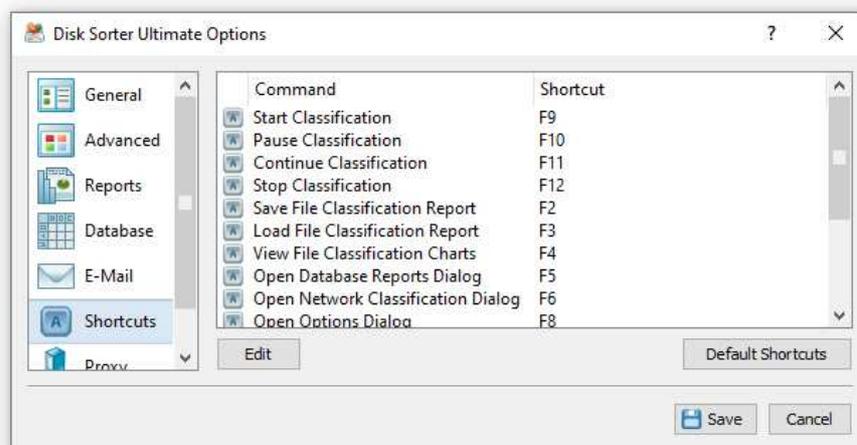
Select the 'Tools - Advanced Options' menu item to open the options dialog.



The '**General**' tab allows one to control the following options:

- Show Main Toolbar - Enables/Disables the main toolbar
- Always Show Profile Dialog Before Start - Instructs DiskSorter to always show the profile dialog before starting the file classification process.
- Auto-Close Successfully Completed Tasks - select this option to automatically close the process dialog after finishing the file classification process.
- Automatically Check For Product Updates - select this option to instruct DiskSorter to automatically check for available product updates.
- Show Scanning Access Denied Errors - select this option to see error messages when DiskSorter is prevented to scan files in a directory.
- Process System Files - select this option to classify system files and directories.
- Abort Operation On Critical Errors - by default DiskSorter is trying to process as many files as possible logging non-fatal errors in a process log. Select this option to instruct DiskSorter to abort operation when encountering a critical error.

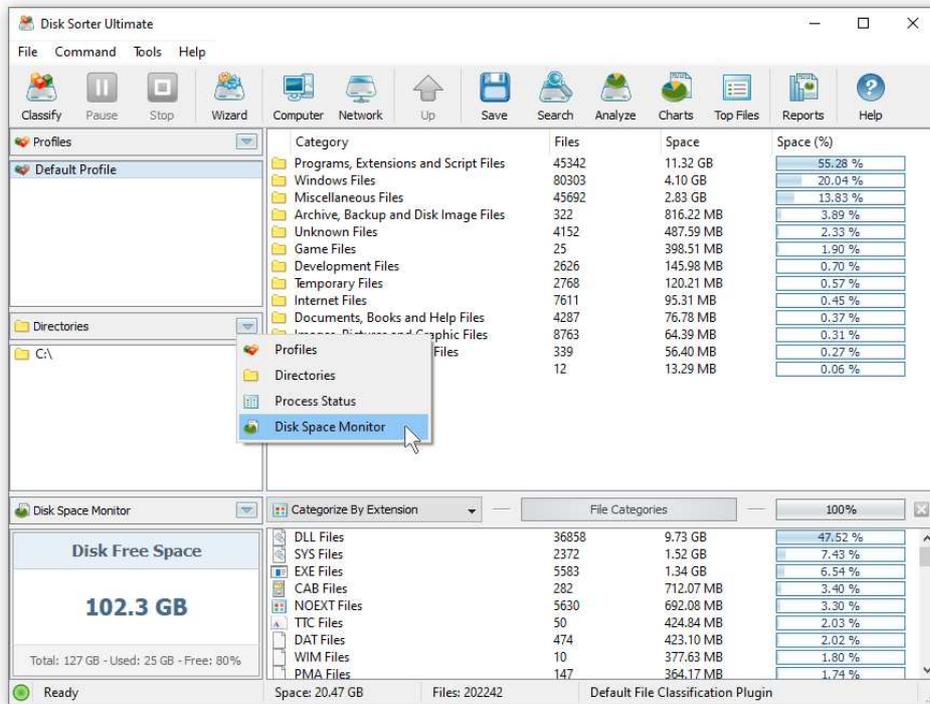
The '**Shortcuts**' tab provides the user with the ability to customize keyboard shortcuts. Click on a shortcut item to edit the currently assigned key sequence. Press the 'Default Shortcuts' button to reset all keyboard shortcuts to default values.



The '**Proxy**' tab provides the user with the ability to configure the HTTP proxy settings. DiskSorter uses the HTTP protocol in order to inquire whether there is a new product version available on the web site.

### 3.2.8 Customizing DiskSorter GUI Application

The main DiskSorter GUI application includes a side-bar allowing one to select different types of status views and customize the GUI application. The user is provided with the file classification profiles view, the current profile view, the file classification process status view and the disk space monitor status view. In order to select a different status view, click the status menu button located in the top-right corner and select a required status view type.



The file classification profiles status view displays the list of configured file classification profiles and provides the ability to add, edit and delete file classification profiles. In addition, the user is provided with the ability to perform file classification operations, export and/or import file classification profiles. For example, in order to add a new file classification profile, click the right mouse button over the profiles view and select the 'Add Profile' menu item.

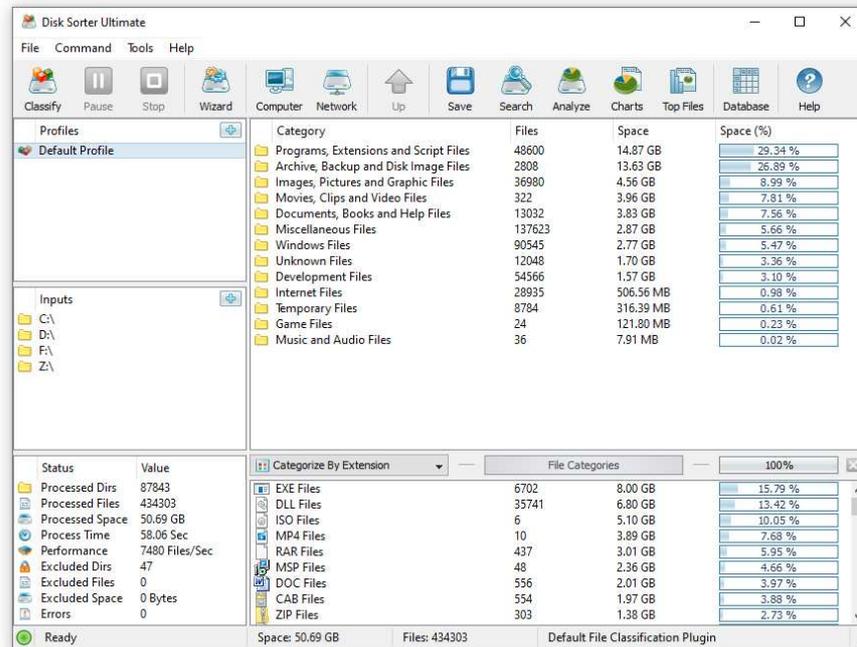
The current file classification profile view, shows the list of disks, directories and network shares configured to be processed during the file classification operation. The current profile view allows one to add, edit and delete input directories, disks and network shares. For example, to add a directory to the current file classification profile, click the right mouse button over the current profile view and select the 'Add Input Directory' menu item.

The disk space monitor status view displays the amount of the free disk space in all disks installed in the computer or a specific disk selected by the user. In addition, the status bar of the disk space monitor shows the total disk space, the used disk space and the percentage of the free disk space. When the amount of the free disk space changes, the disk space monitor displays a disk space change notification showing the amount of the changed disk space. In order to set a specific disk drive to be displayed, click the right mouse button over the disk space monitor and select the required disk.

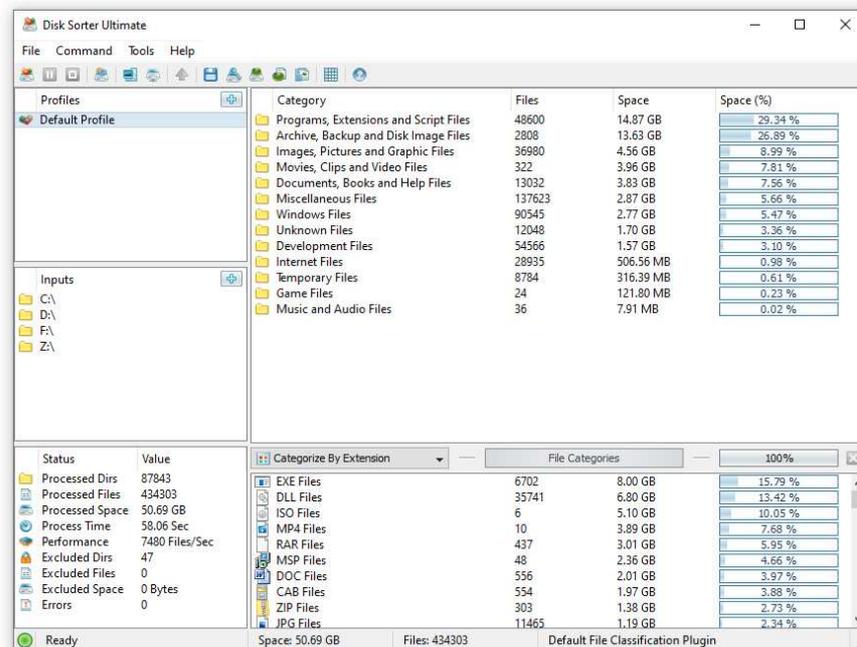
The process status view displays statistics about the current or the last performed file classification operation including the total number of processed directories, the total number of processed files, the total amount of processed disk space, the file classification process time, the performance of the file classification process, the number of excluded directories, the number of excluded files, the amount of excluded disk space and the number of directory scanning and file classification errors.

### 3.29 Using DiskSorter GUI Layouts

In order to improve GUI usability, the DiskSorter main GUI application provides three user-selectable GUI layouts. Press the 'Layouts' button to switch the GUI application to the next GUI layout.



The first (default) GUI layout displays large toolbar buttons with descriptive text labels under each button and shows the directories entry and the profiles combo box under the main toolbar.



The second GUI layout displays small toolbar buttons with descriptive text labels beside each button and shows the directories entry and the profiles combo box under the main toolbar. The third GUI layout displays small toolbar buttons without descriptive text labels and shows the directories entry and the profiles combo box as a single toolbar.

### 3.30 Using Command Line Utility

In addition to the DiskSorter GUI application, DiskSorter Pro and DiskSorter Server include a command line utility allowing one to execute file classification operations from an OS shell window. The DiskSorter command line utility provides IT and storage administrators with the ability to integrate file classification capabilities into batch files and shell scripts. The DiskSorter command line tool is located in the '**<ProductDir>/bin**' directory.

#### Command Line Syntax:

##### **disksorter -execute <Profile Name>**

This command executes the specified file classification profile.

##### **disksorter -classify -dir <Directory 1> [ ... Directory X ]**

This command classifies files in the specified directories, disks or network shares.

##### **disksorter -classify -server <HostName1;HostName2;HostNameX>**

This command classifies files in all network shares in the specified servers and/or NAS devices.

##### **disksorter -classify -network**

This command classifies files in all servers and/or NAS storage devices on the network.

##### **disksorter -link <Output Directory> -dir <Directory 1> [ ... Directory X ]**

This command classifies the specified input directories and builds an hierarchy of links in the output directory.

##### **disksorter -copy <Output Directory> -dir <Directory 1> [ ... Directory X ]**

This command classifies the specified directories and copies files organized according to the selected file classification plugin to the output directory.

##### **disksorter -move <Output Directory> -dir <Directory 1> [ ... Directory X ]**

This command classifies the specified directories and moves files organized according to the selected file classification plugin to the output directory.

##### **disksorter -move\_and\_link <Output Directory> -dir <Directory 1> [ ... Directory X ]**

This command classifies the specified directories and moves files organized according to the selected file classification plugin to the output directory replacing original files with links pointing to files located in the output directory.

##### **disksorter -command <Command Name> -dir <Directory 1> [ ... Directory X ]**

This command classifies the specified directories and executes a custom command with the group/class name as an argument for each classified file.

**Parameters:****-dir <Directory>**

This parameter specifies an input directory, disk or a network share for the file classification command. In order to ensure proper parsing of command line arguments, directories containing space characters should be double quoted.

**Options:****-save\_html\_report [ File Name ]**

This option saves an HTML file classification report to the specified file.

**-save\_pdf\_report [ File Name ]**

This option saves a PDF file classification report to the specified file.

**-save\_excel\_report [ File Name ]**

This option saves an Excel file classification report to the specified file.

**-save\_text\_report [ File Name ]**

This option saves a text file classification report to the specified file.

**-save\_csv\_report [ File Name ]**

This option saves an Excel CSV file classification report to the specified file.

**-save\_xml\_report [ File Name ]**

This option saves an XML file classification report to the specified file.

**-save\_report [ File Name ]**

This option saves a file classification report to the DiskSorter native report format.

**-save\_to\_database**

This option saves a file classification report to an SQL Database through the ODBC interface configured on the DiskSorter GUI options dialog.

**-title <Report Title>**

This optional parameter specifies a custom report title.

**-label <Report Label>**

This optional parameter specifies a custom report label.

**-levels <Report Levels>**

This optional parameter specifies the number of class hierarchy levels to export to the report.

**-files\_per\_class <Files Per Class>**

This optional parameter specifies the number of files per class to export to the report.

**-show\_users** - This option enables processing and display of files user names.

**-perf <FULL | MEDIUM | LOW>**

FULL - Full-speed file classification

MEDIUM - Medium-speed file classification

LOW - Low-speed file classification

**-scanners <1 ... 16>** - This option sets the maximum number of directory scanning threads.

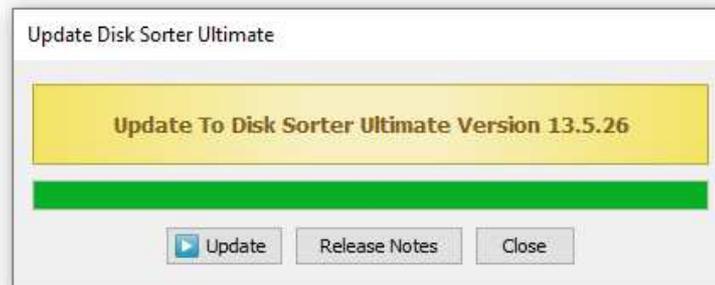
**-streams <1 ... 16>** - This option specifies the number of parallel file classification threads.

**-v** - This command shows the product's major version, minor version, revision and build date.

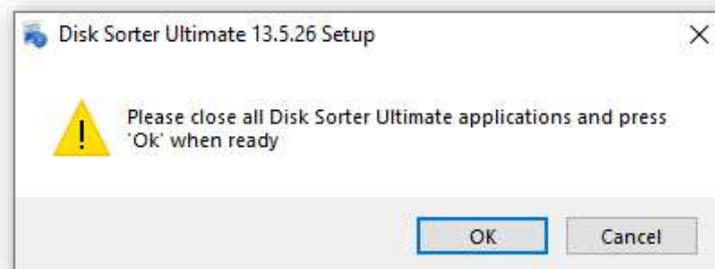
**-help** - This command shows the command line usage information.

### 3.31 Product Update Procedure

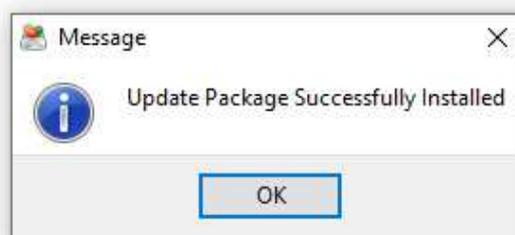
Almost every month, Flexense releases bug-fixes and product updates for the DiskSorter file classification utility. These product updates are uploaded to our web site and may be applied to any installed product version. Each time DiskSorter is started, the update manager checks if there is a new product version available. If there is a new product update available, the user will see an 'Update' link in the right-most corner of the status bar.



In order to manually check if the currently installed product version is up-to-date, select menu 'Help - Check For Updates ...' on the main menu bar. The update manager will connect to the update server and check if there is a newer version of the product available for download. If there is a new product version available, the update dialog will show the version of the new product update and the following two buttons: the 'Release Notes' button and the 'Install' button.



Press the 'Release Notes' button to see more information about new features and bug-fixes provided by the new product version. Press the 'Install' button to download and install the new product version. After pressing the 'Install' button, please wait while the update manager will download the new product version to the local disk. The update package will be downloaded to a temporary directory on the system drive and automatically deleted after the update manager will finish updating the product.



After download is completed, close all open DiskSorter applications and press the 'Ok' button when ready. If one or more DiskSorter applications will be open during the update, the operation will fail and the whole update process will need to be restarted from the beginning. After finishing the update process, DiskSorter will show a message box informing about the successfully completed operation.

### 3.32 Product Registration Procedure

DiskSorter licenses and discounted license packs may be purchased on the following page:

<http://www.disksorter.com/purchase.html>

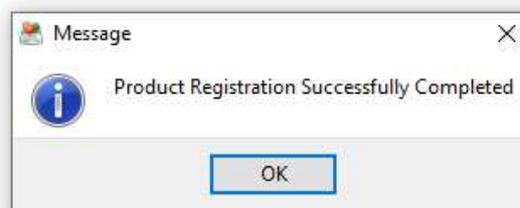
After finishing the purchase process, wait for the following two e-mail messages: the first one with a receipt for your payment and the second one with an unlock key. If you will not receive your unlock key within 24 hours, please check your spam box for e-mail messages originating from **support@flexense.com** and if it is not here contact our support team.



After you will receive your unlock key, start the DiskSorter GUI application and press the 'Register' button located in the top-right corner of the window.



On the register dialog, enter your name and the received unlock key and press the 'Register' button to finish the registration procedure.

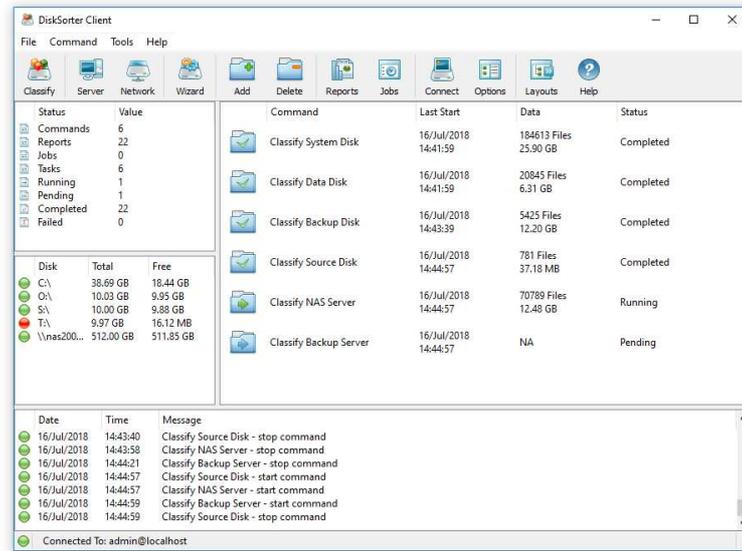


If the computer is not connected to the Internet, press the 'Manual Registration' button and follow the displayed manual product registration instructions.

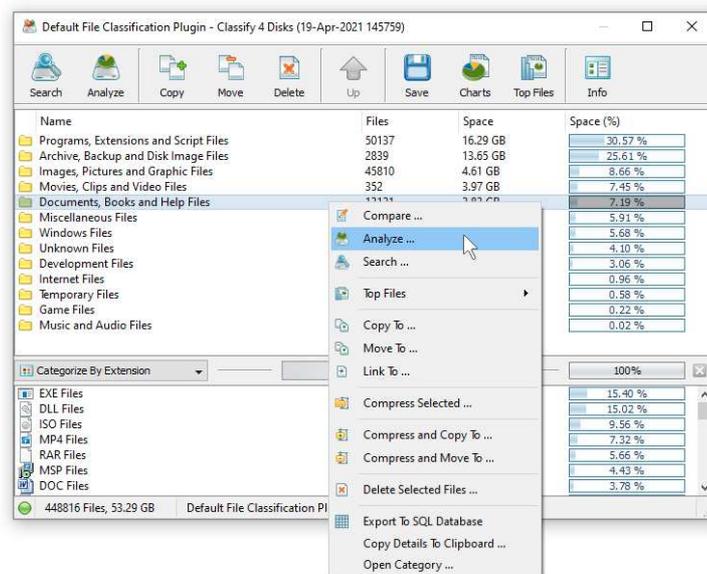
## 4 Using DiskSorter Server

### 4.1 DiskSorter Server Overview

DiskSorter Server is a server-based product version, which runs in the background as a service and is capable of performing multiple, parallel file classification operations, save file classification reports, submit reports to a centralized SQL database, perform advanced history trend analysis operations, etc.



DiskSorter Server includes a full-scale client GUI application providing all features available in the desktop product version and additional capabilities allowing one to classify files on multiple servers and NAS storage devices simultaneously, schedule periodic file classification operations and perform advanced history trend analysis operations locally or via the network. In addition, DiskSorter Server includes a command line utility, which may be used to control one or more servers locally or via the network, perform file classification operations and save file classification reports from batch files and shell scripts.



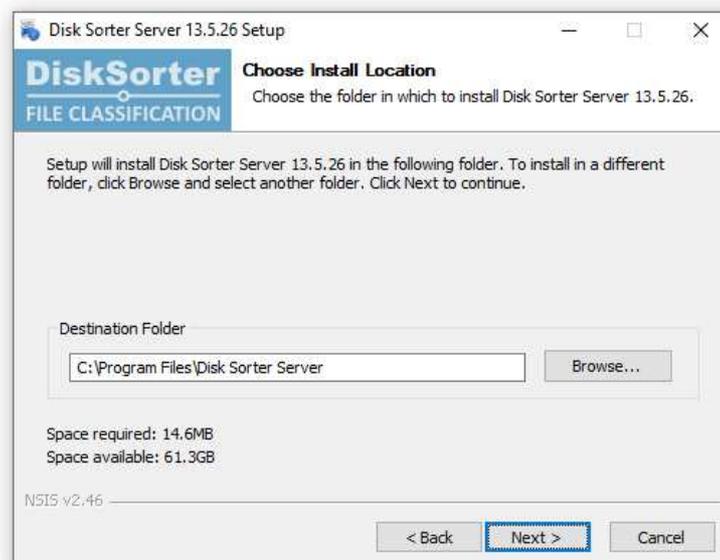
Finally, DiskSorter Enterprise provides a complete web-based management interface allowing one to configure, control and manage the product using a regular web browser locally or via the network.

## 4.2 Product Installation Procedure

DiskSorter Server is especially designed to be as simple as possible. The product does not require any third-party software applications and may be installed and configured within a couple of minutes. A fully functional 30-days trial version of DiskSorter Server may be downloaded from the following page: <http://www.disksorter.com/downloads.html>.



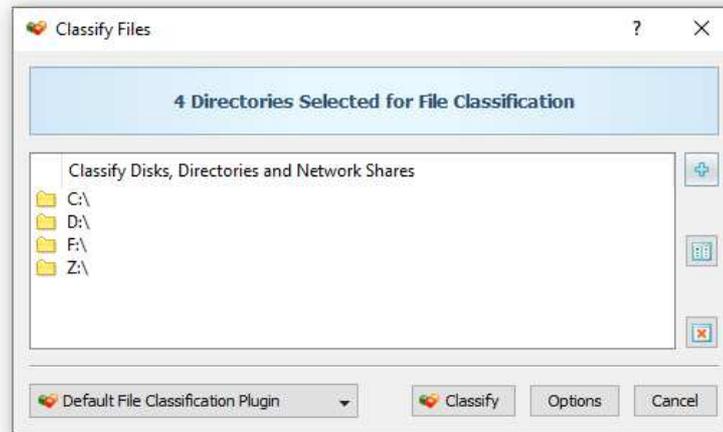
The installation package is very small, 5MB - 6MB depending on the target operating system, and the product requires just 20MB of the free disk space on the target server. In order to install DiskSorter Server, start the setup program, select a destination directory and press the 'Next' button.



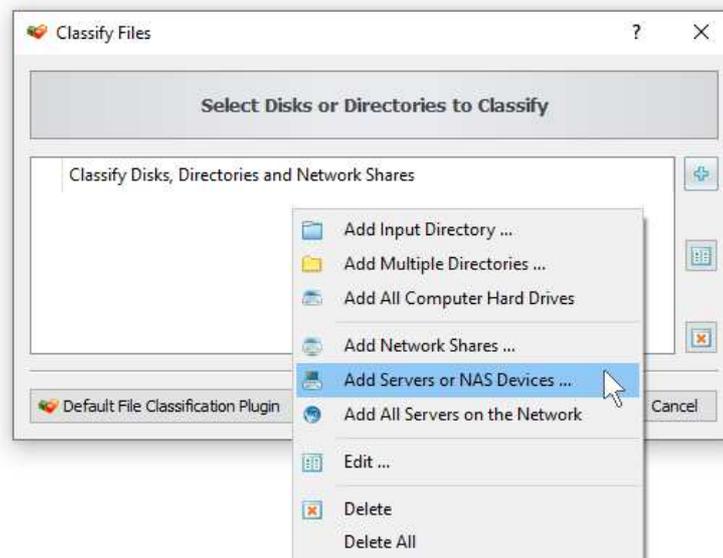
Optionally, enter custom server control and/or web access ports. The server control port is used by the DiskSorter client GUI application and the command line utility and the web access port is the port for the web-based management interface allowing one to control DiskSorter Enterprise using a standard web browser. If DiskSorter Server should be controlled remotely through the network, make sure one or both of these ports are open in the server's firewall.

### 4.3 Using DiskSorter Server Client GUI Application

In order to perform a simple file classification operation using the DiskSorter client GUI application, press the 'Classify' button located on the main toolbar, add one or more disks, directories or network shares to classify, select an appropriate file classification plug-in and press the 'Classify' button.

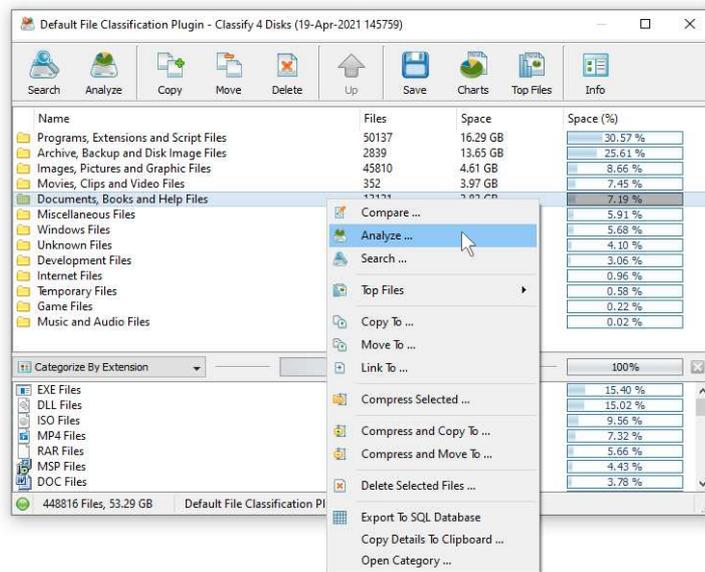


In addition, the file classification command dialog provides the ability to search servers and NAS storage devices on the network, identify accessible network shares and classify files in all servers and/or NAS storage devices on the network. In order to search network shares in specific servers or NAS storage devices on the network, press the 'Add' button located on the right side of the list of input directories, select the 'Servers or NAS Devices' inputs mode and specify a list of host names or IP addresses to search network shares in. In order to search network shares in all servers and NAS storage devices on the network, press the 'Add' button and select the 'All Servers on the Network' inputs mode.

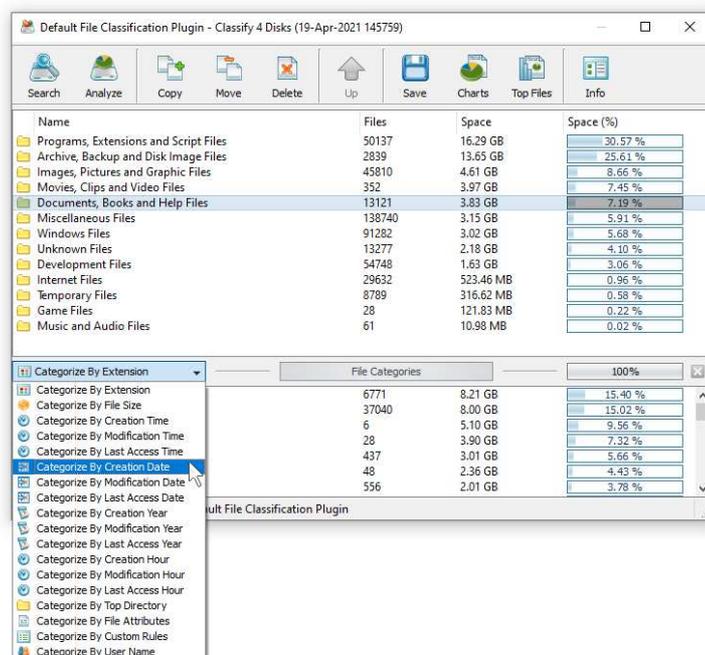


During the file classification process, DiskSorter will display the progress dialog showing the total number of processed directories and files, the total amount of processed disk space, the process time, the speed of the file classification operation and the number of file classification errors. In addition, the progress dialog allows one to pause/resume the file classification operation and dynamically change the speed of the file classification operation.

Once the file classification process is completed, DiskSorter will show the file classification results dialog, which will display top-level file categories and second-level sub-categories sorted by the amount of the used disk space. In order to open a top-level file category, just click on the top-level category item in the file classification results view.

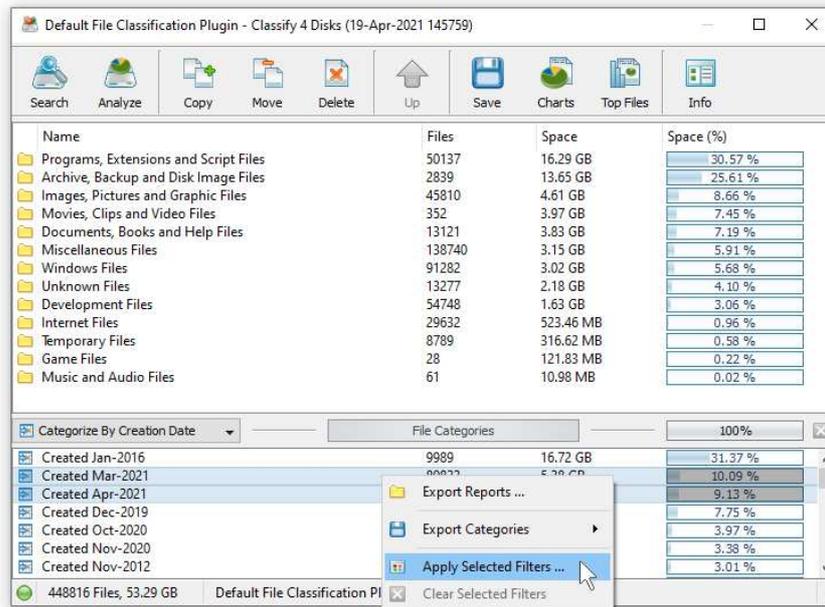


The file classification results dialog allows one to review file classification results, save file classification reports to a number of standard formats such as HTML, PDF, Excel, text, CSV, XML and the native DiskSorter report format. In addition, DiskSorter provides the ability to export file classification results to an SQL database and perform advanced history trend analysis operations on series of file classification reports stored in an SQL database. Finally, the user is provided with the ability to perform file management operations on files related to one or more selected categories of files.

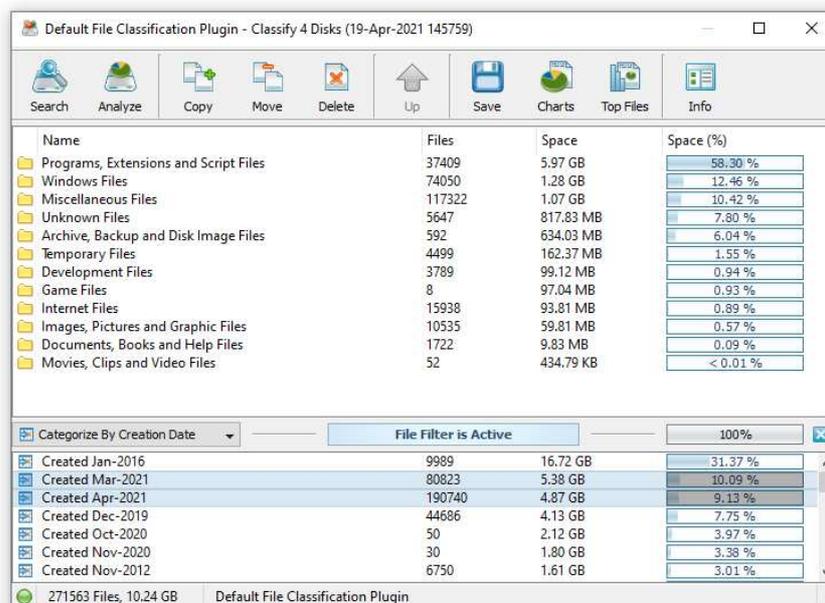


The bottom view of the file classification results dialog includes a list of second-level file categories, which provides the ability to categorize file classification results by the file extension, file size, user name, last access, modification and creation dates. In order to change the second-level file categories, click on the file categories combo box and select an appropriate results categorization mode.

One of the most powerful capabilities of DiskSorter is the ability to categorize and filter file classification results by one or more second-level file categories. For example, let's assume that the user needs to see a hierarchy of files that were last modified today. In this case, classify a number of disks or directories using the default file classification plug-in, open the file classification results dialog and select the 'Categorize By Modification Time' results categorization mode.



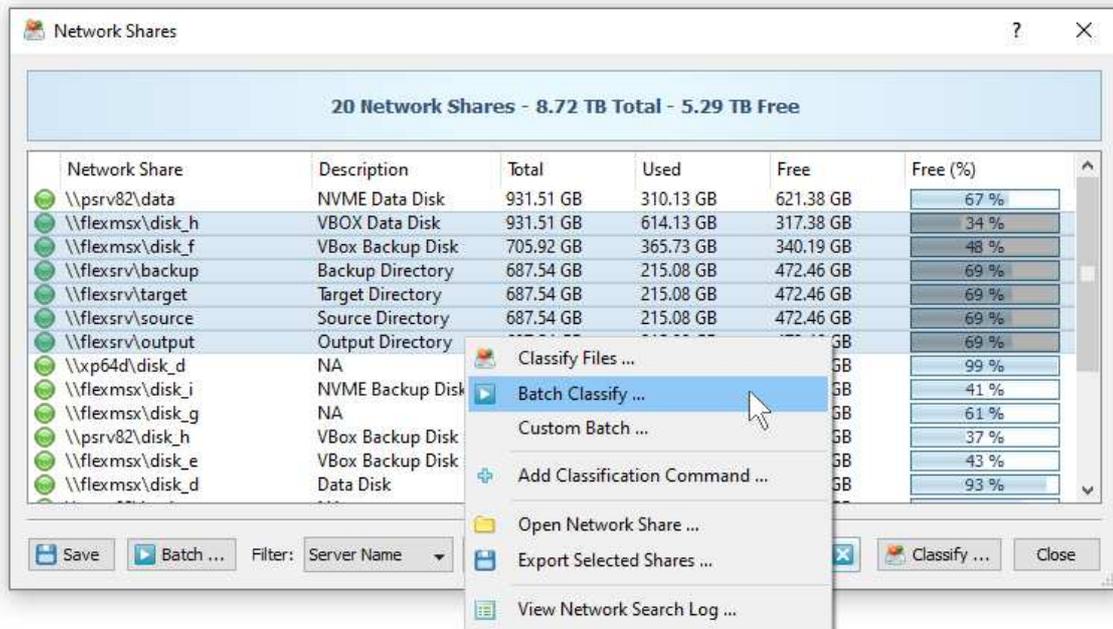
Now, select the 'Last Modified Today' file category in the second-level file categories, press the right mouse button and select the 'Apply Selected Filters' menu item. DiskSorter will filter file classification results and display in the top-level view a file hierarchy showing files that were last modified today.



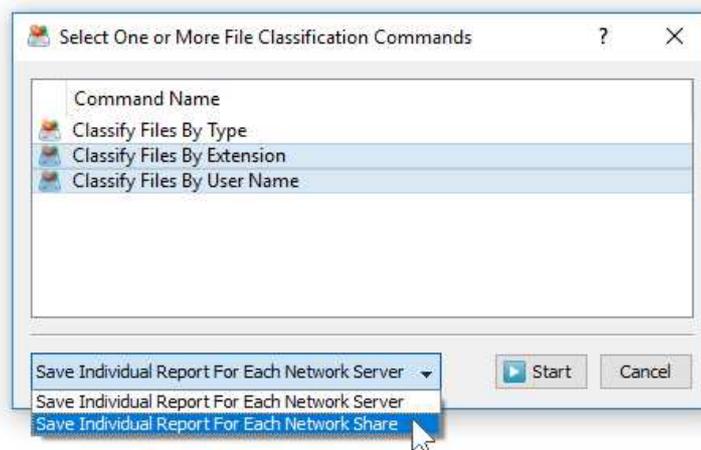
When a file filter is active, all types of file classification reports, pie charts and file management operations are performed on files matching the currently selected file filter. By using different types of second-level file categories and file filters, the user can generate multiple types of file classification reports and pie charts showing the file classification results from a number of different points of view.

## 4.4 Batch File Classification Operations

DiskSorter Server and DiskSorter Enterprise provide the ability to search the network, detect all network servers and NAS storage devices available on the network, execute one or more pre-configured file classification commands on hundreds of network servers and NAS storage devices and generate an individual file classification report for each network server, NAS storage device or network share.



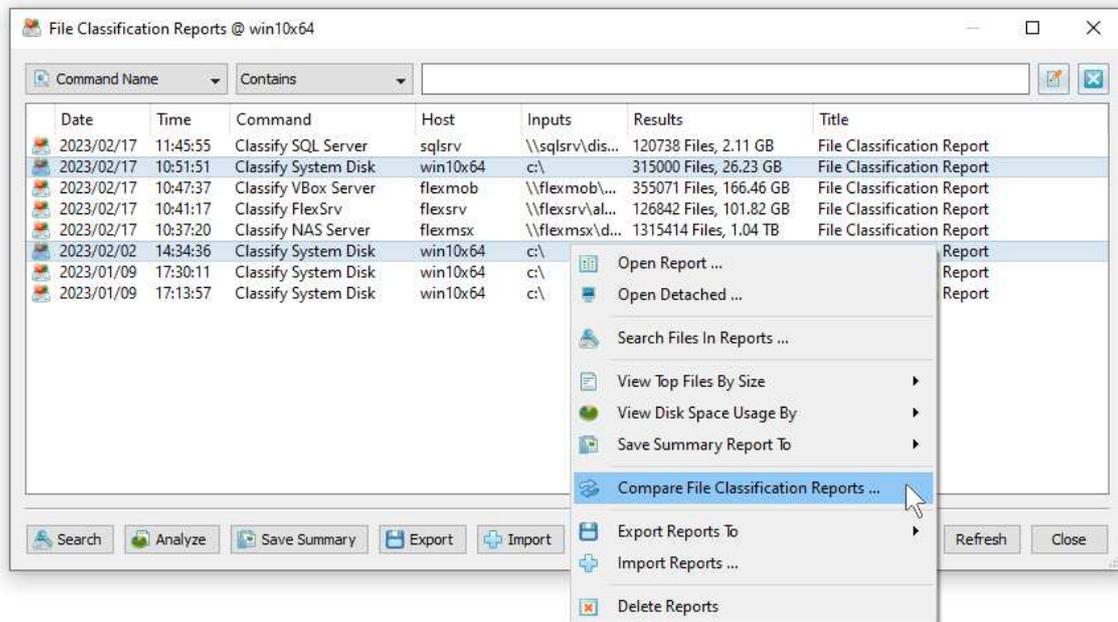
In the simplest case, open the DiskSorter client GUI application, press the 'Network' button located on the main toolbar, search all network servers and NAS storage devices on the network, select one or more servers, press the right mouse button and select the 'Batch File Classification' menu item. DiskSorter will show a list of pre-configured file classification commands allowing one to select one or more commands to be executed on all selected network servers and NAS storage devices.



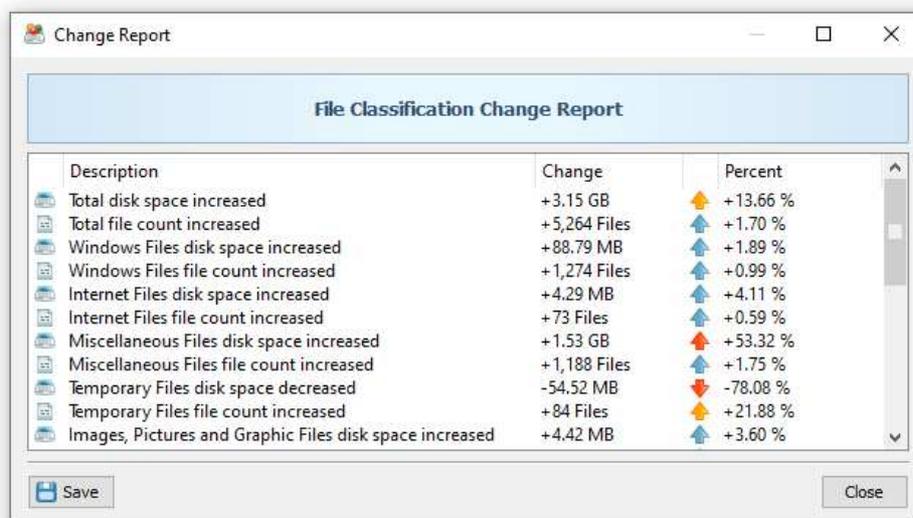
Depending on the selected batch file classification mode, DiskSorter Server will save in the built-in reports database an individual file classification report for each network server, NAS storage device or network share. Once the batch file classification operation is completed, the user will be provided with the ability to open saved file classification reports, review file classification results, generate various types of pie charts and export reports to a number of standard formats including HTML, PDF, text, Excel CSV and XML.

## 4.5 Comparing File Classification Reports

One of the most useful features of DiskSorter Server is the ability to compare file classification reports saved in the DiskSorter reports database allowing one to easily identify how the disk space usage is changing over time. For example, the user can schedule a periodic file classification operation to be performed once per week and then compare two weekly file classification reports and see what exactly changed over the time.



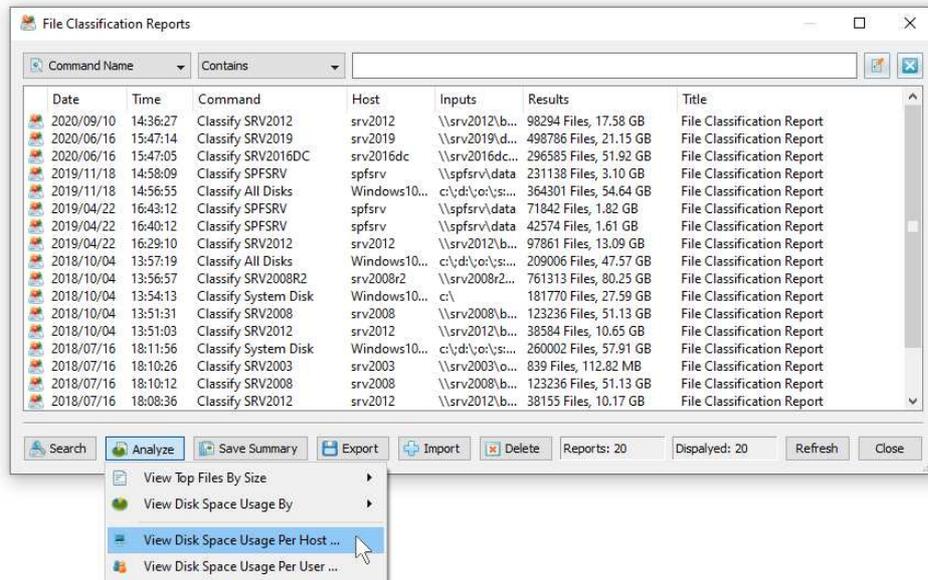
In order to compare file classification reports, press the 'Reports' button located on the main toolbar, select two file classification reports, click the right mouse button and select the 'Compare File Classification Reports' menu item. DiskSorter Server will compare the selected file classification reports and display the change report dialog showing a list of changes in the disk space usage and/or the number of files per file category according to the file classification plug-in used for this specific file classification operation.



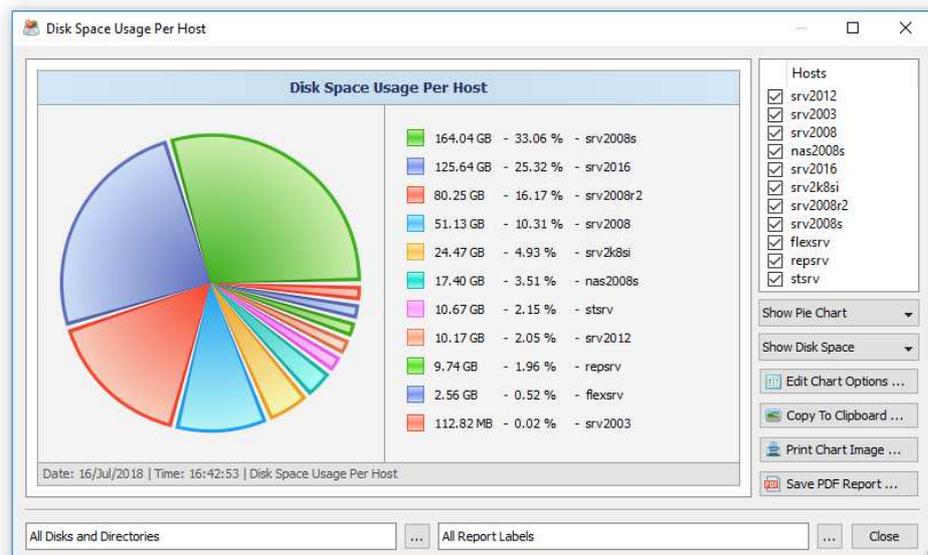
For example, if the file classification operation categorized files by the file type, the change report will show the changes in the disk space usage and/or the number of files per file type. On the other hand, if the file classification operation categorized files per user, the change report will display changes in the disk space usage and/or the number of files per user.

## 4.6 Analyzing Disk Space Usage Per Host

DiskSorter Server and DiskSorter Enterprise provide the ability to automatically detect all servers and NAS storage devices on the network, classify files in hundreds of servers and/or NAS storage devices via the network, submit reports to the reports database and display charts showing the disk space usage per server or NAS storage device across the entire enterprise.



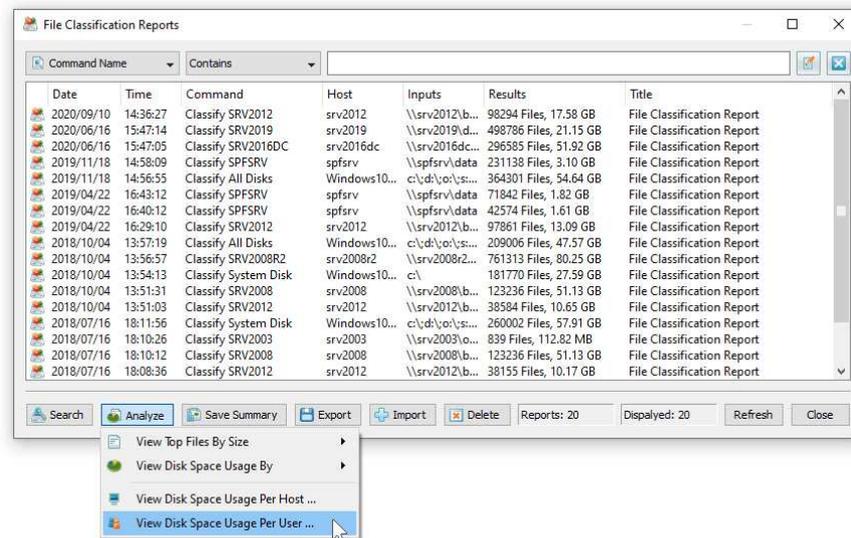
In order to analyze disk space usage per server, perform one or more file classification operations on multiple servers and/or NAS storage devices, open the 'Reports' dialog, press the 'Analyze' button and select the 'Analyze Disk Space Usage Per Host' menu item. DiskSorter will analyze all reports saved in the reports database and display the hosts analysis dialog showing the disk space usage per host.



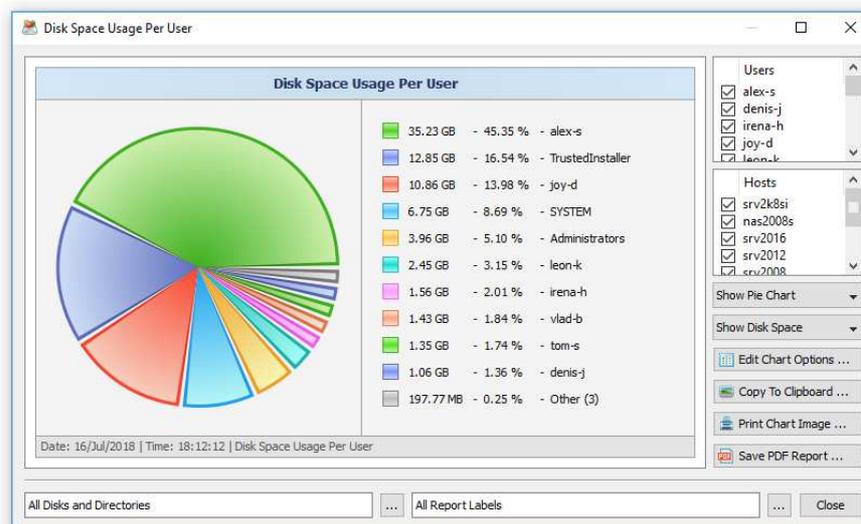
The hosts analysis dialog provides the ability to display pie charts and bars charts showing the disk space usage per server or NAS storage device according to file classification reports saved in the reports database. The user is provided with the ability to select the types of file classification operations and file system locations to analyze, edit the chart header and footer, copy the chart image to the clipboard and export graphical PDF reports including pie charts.

## 4.7 Analyzing Disk Space Usage Per User

DiskSorter Server and DiskSorter Enterprise provide the ability to automatically detect all servers and NAS storage devices on the network, classify files in hundreds of servers and/or NAS storage devices via the network, submit file classification reports to the reports database and display charts showing the used disk space per user across the entire enterprise.



In order to analyze disk space usage per user, perform one or more file classification operations on multiple servers and/or NAS storage devices, open the 'Reports' dialog, press the 'Analyze' button and select the 'Analyze Disk Space Usage Per User' menu item. DiskSorter will analyze all reports saved in the reports database and display the users analysis dialog showing the disk space usage per user.

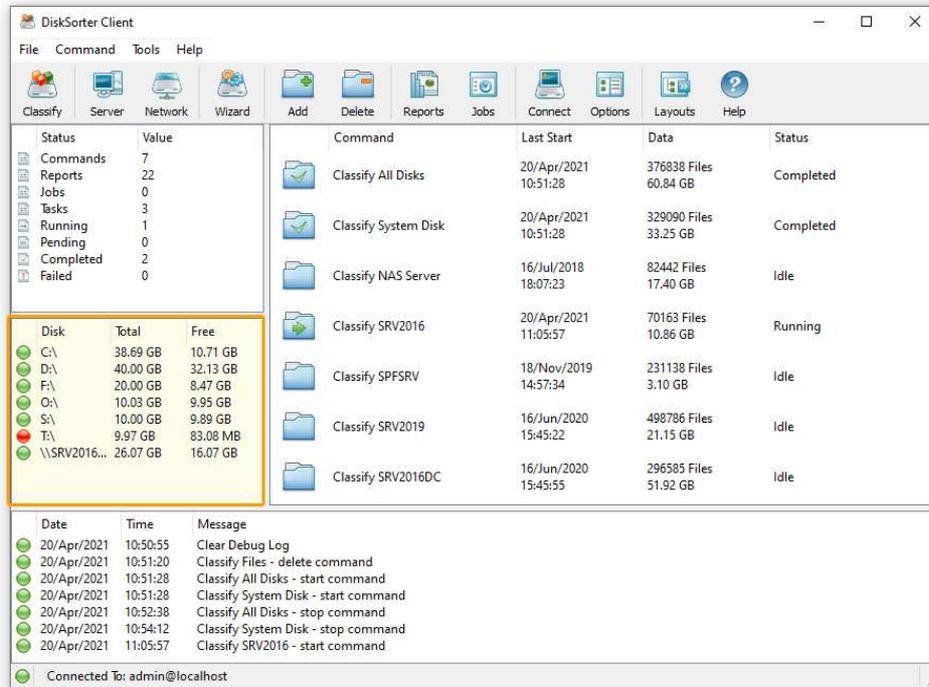


The users analysis dialog provides the ability to display pie charts and bars charts showing the disk space usage per user according to file classification reports saved in the reports database. The user is provided with the ability to select the types of file classification operations and file system locations to analyze, edit the chart header and footer, copy the chart image to the clipboard and export graphical PDF reports including pie charts.

**IMPORTANT:** In order to be able to display the disk space usage per user, the file classification operation should be configured to process and display files user names.

## 4.8 Using Built-In Disk Space Monitor

DiskSorter Server and DiskSorter Enterprise include a built-in disk space monitor allowing one to monitor the free disk space in a number of disks, directories or network shares and provides the ability to send E-Mail notifications including file classification reports showing recently created or modified files and/or execute custom actions when the amount of the free disk space drops below or rises above a user-specified limit.

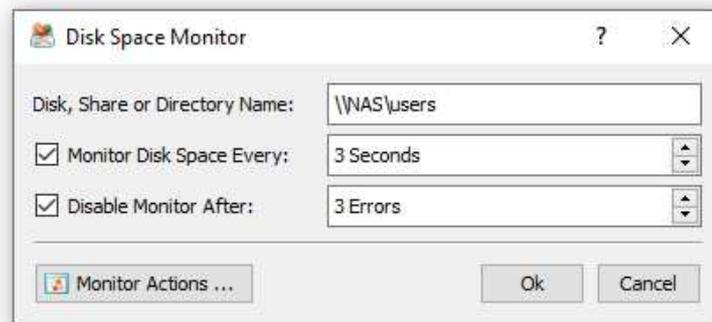


The disk space monitor is located in the bottom-right corner of the DiskSorter client GUI application. By default, the disk space monitor shows the status of all local disks in the server. For each disk, the disk space monitor shows the disk name, the total amount of the disk space, the amount of the free disk space and the disk status according to the configuration of the disk space monitor.

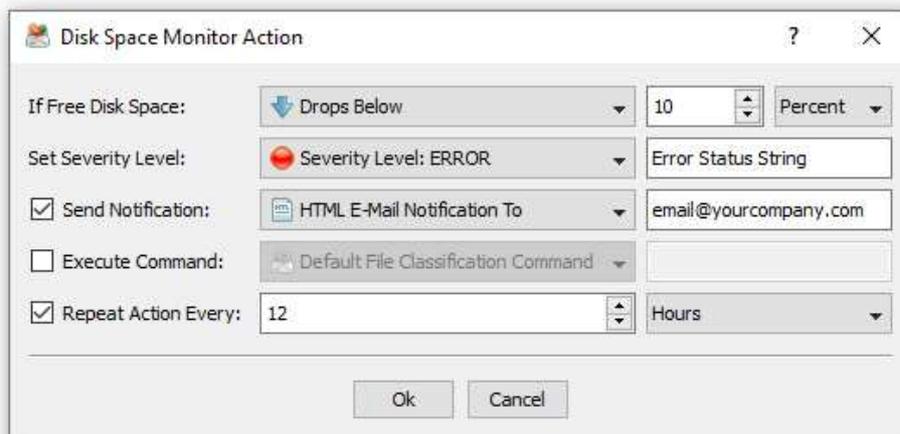


In order to add an additional disk or network share to the disk space monitor, press the right mouse button over the disk space monitor pane, specify the name of a disk, directory or network share to monitor and press the 'Ok' button. In order to change the configuration of a previously created disk space monitor, select the required disk item in the disk space monitor pane, press the right mouse button and select the 'Edit Monitor' menu item.

For each monitored disk, the disk space monitor allows one to control the disk space monitoring frequency, the maximum number of monitoring errors and disk space monitoring actions and/or E-Mail notifications. Sometimes, when monitoring the disk space usage in remote servers or NAS storage devices via the network, a network server or NAS storage device may be temporary offline due to unexpected connectivity or hardware problems. In this case, the disk space monitor will mark such a disconnected device as 'Offline' and continue to monitor the server according to the user-specified maximum number of errors. On the other hand, if a network server or NAS device was permanently disconnected from the network, the disk space monitor will disable monitoring of the disconnected server after the user-specified number of monitoring errors.



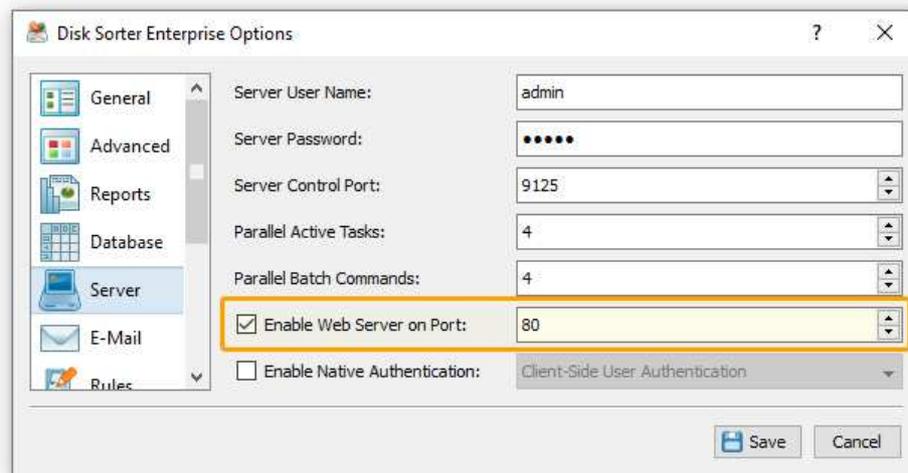
In order to automatically send an E-Mail notification and/or execute a custom action when the amount of the free disk space drops below a user-specified limit, the user needs to configure one or more disk space monitoring actions. Open the disk space monitor dialog, press the 'Monitor Actions' button, specify the minimum amount of the free disk space to trigger the action, select the 'Send Notification' option, select an appropriate notification format and specify an E-Mail address to send the notification to. In addition, in order to enable E-Mail notifications, the user needs to open the main options dialog, select the 'E-Mail' tab and configure an E-Mail server to use to send E-Mail notifications.



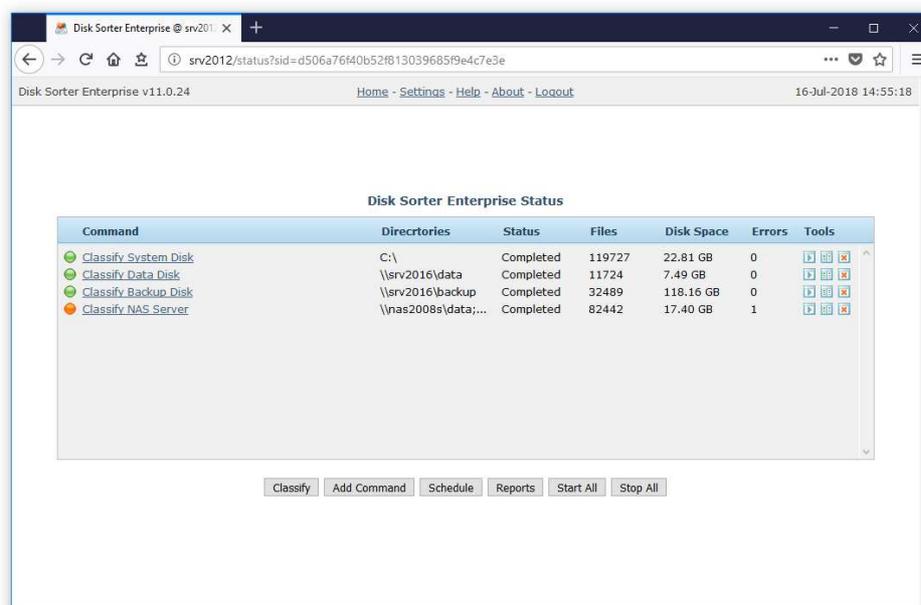
In addition to E-Mail notifications, the user is provided with the ability to automatically classify files that were created or modified during the last 24 hours and send a file classification report showing recent changes in the monitored disk to the specified E-Mail address. If the user selects the 'Default File Classification Command' option, the disk space monitor will automatically create a file classification command configured to classify all files that were created or modified during the last 24 hours and send the file classification results to the specified E-Mail address. If the user selects the 'Custom File Classification Command' option, the disk space monitor will execute the user-configured file classification command. Finally, if the user selects the 'User Command, Script or Batch File' option, the disk space monitor will execute the user-custom command, script or batch file.

## 4.9 Using Web-Based Management Interface

In addition to the DiskSorter client GUI application, DiskSorter Enterprise provides a web-based management interface allowing one to control one or more servers using a regular web browser locally or via the network. The web-based management interface provides the ability to perform file classification operations, review file classification results, save reports, schedule periodic file classification operations and perform advanced history trend analysis operations on series of file classification reports.

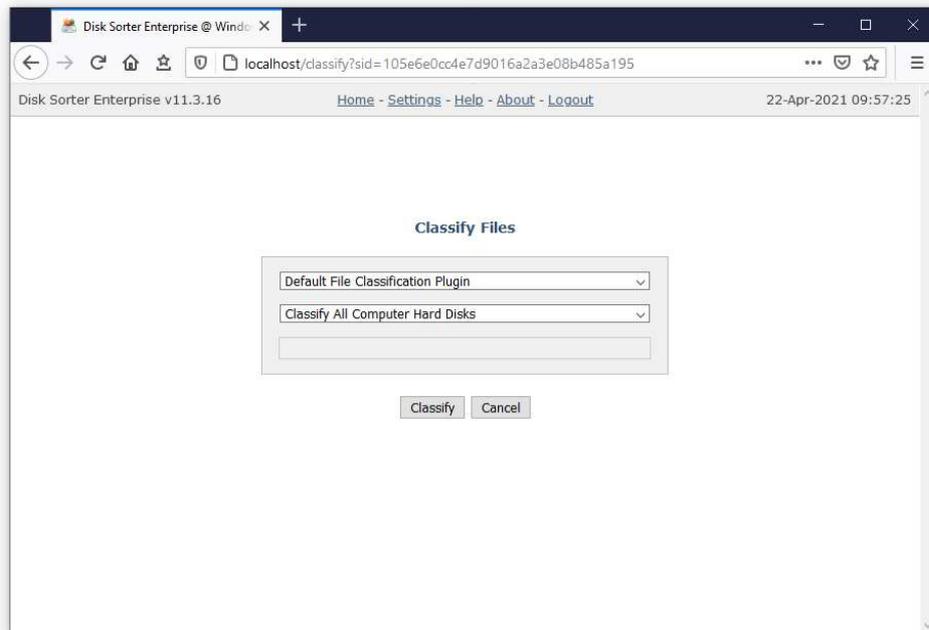


By default, the web-based management interface is disabled and in order to enable the web-based interface, connect to DiskSorter Enterprise using the client GUI application, open the 'Options' dialog, select the 'Server' tab, select the 'Enable Web Server' option and press the 'Save' button.

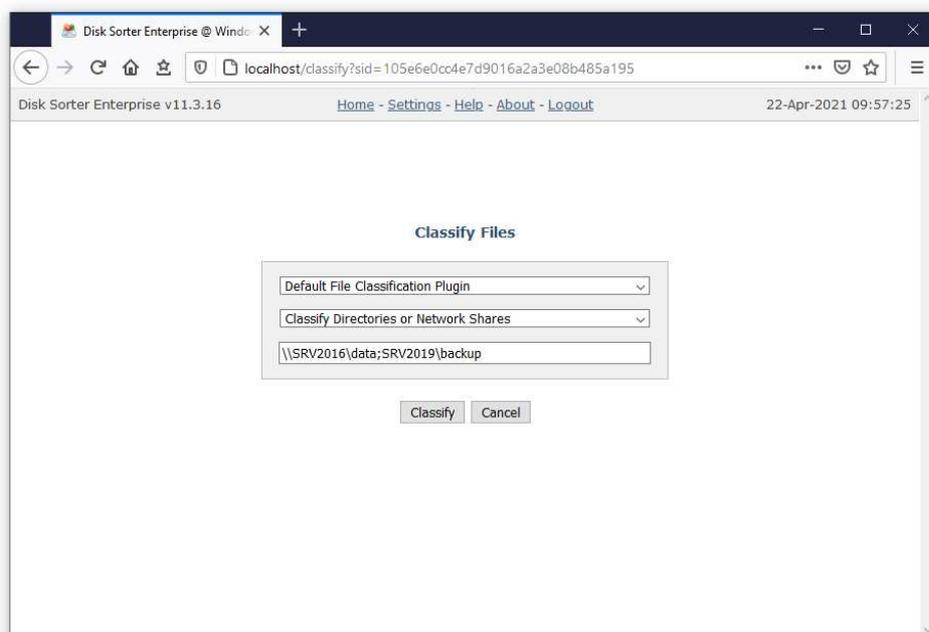


Now, open a regular web browser, type the host name or an IP address of the server in the address bar and login to the DiskSorter Enterprise web-based management interface using the default (**admin/admin**) user name and password. The DiskSorter Enterprise home page shows the status of the server and allows one to configure file classification commands, setup periodic file classification jobs and review file classification reports.

The web-based interface provides the following two file classification modes: the quick file classification mode, which is an easy to use mode for simple file classification operations, and the file classification commands mode, which provides the ability to pre-configure a number of customizable file classification commands and allows one to control an extensive set of advanced features and configuration options.



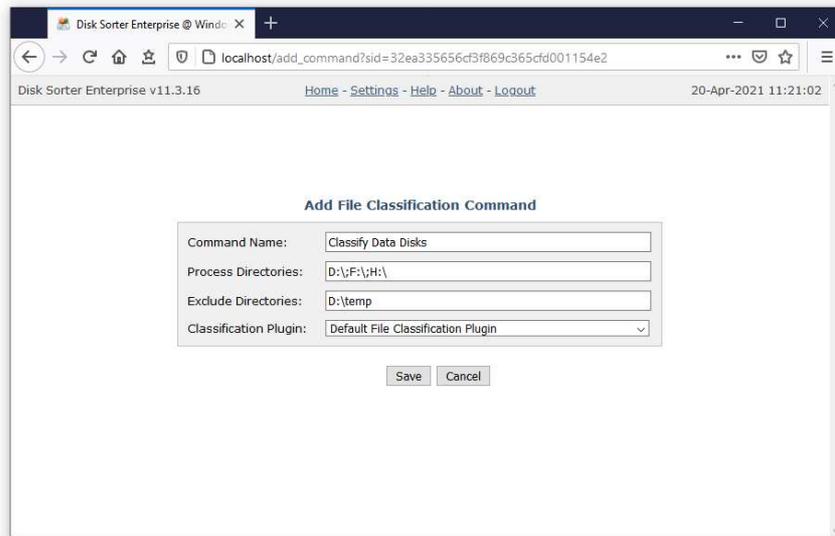
In order to simple classify files in one or more disk or directories using the quick classification mode, press the 'Classify' button located on the DiskSorter Server home page and specify disks, directories or network shares to classify.



In the quick file classification mode, DiskSorter Server will automatically create a simple file classification command, classify files in the specified disks and directories and display results. Each quick file classification command is saved in the product configuration file, displayed on the DiskSorter Server home page and may be later executed again or customized to perform a different type of file classification operation.

## 4.10 Managing File Classification Commands

DiskSorter Server allows one to configure multiple file classification commands with each one capable of processing a number of disks, directories or network shares. In order to add a new file classification command, press the 'Add Command' button located on the DiskSorter Server home page, specify a unique command name, enter one or more disks, directories or network shares to classify and press the 'Save' button.

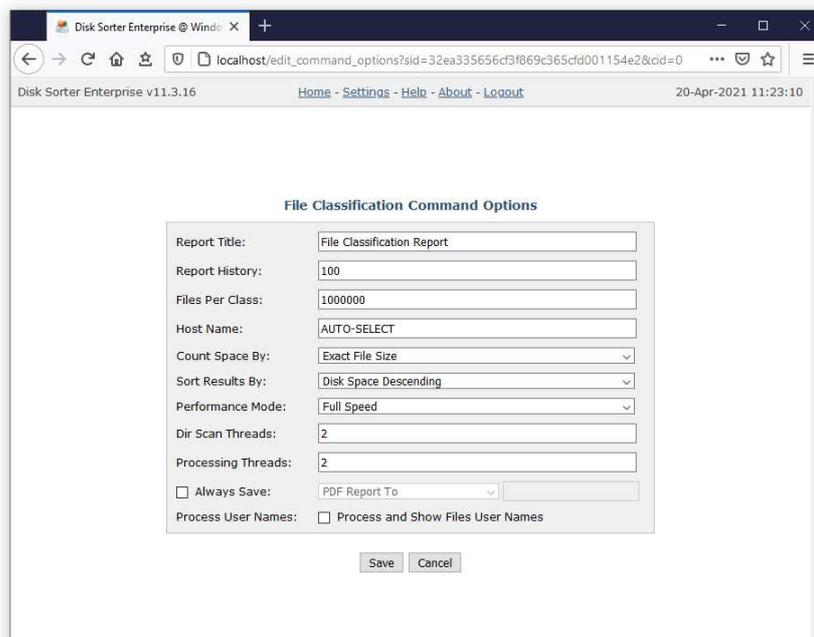


The screenshot shows the 'Add File Classification Command' form in the DiskSorter Enterprise v11.3.16 web interface. The form is titled 'Add File Classification Command' and contains the following fields:

- Command Name:
- Process Directories:
- Exclude Directories:
- Classification Plugin:

At the bottom of the form are 'Save' and 'Cancel' buttons.

In addition, the user is provided with the ability to exclude one or more directories from the file classification process, add one or more file matching rules specifying which types of files to classify and/or add one or more file classification actions capable of sending E-Mail notifications or automatically generating reports when one or more directories are matching user-specified rules and conditions.



The screenshot shows the 'File Classification Command Options' form in the DiskSorter Enterprise v11.3.16 web interface. The form is titled 'File Classification Command Options' and contains the following fields:

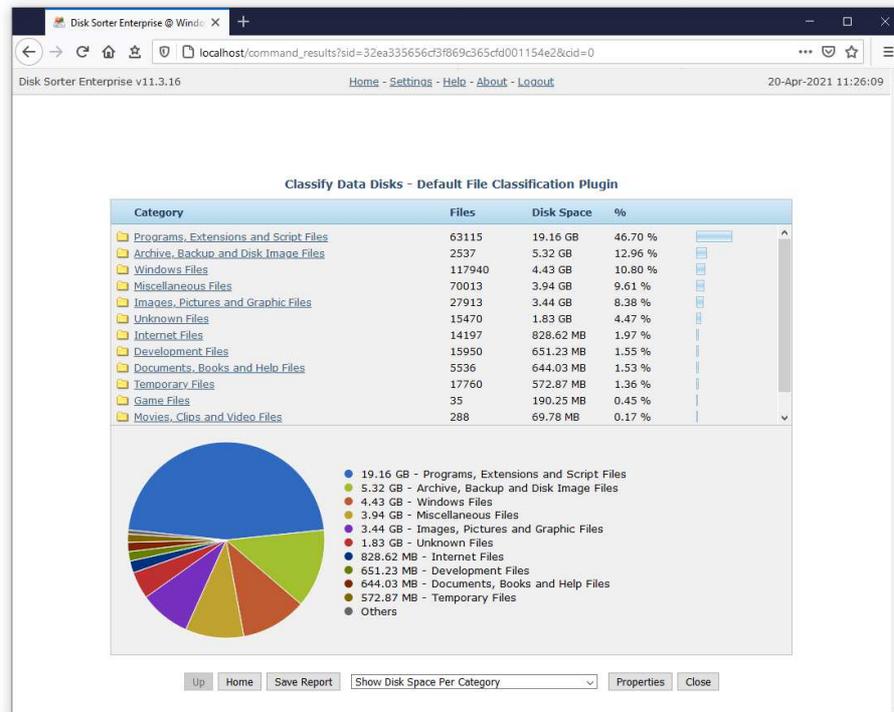
- Report Title:
- Report History:
- Files Per Class:
- Host Name:
- Count Space By:
- Sort Results By:
- Performance Mode:
- Dir Scan Threads:
- Processing Threads:
- Always Save:
- Process User Names:  Process and Show Files User Names

At the bottom of the form are 'Save' and 'Cancel' buttons.

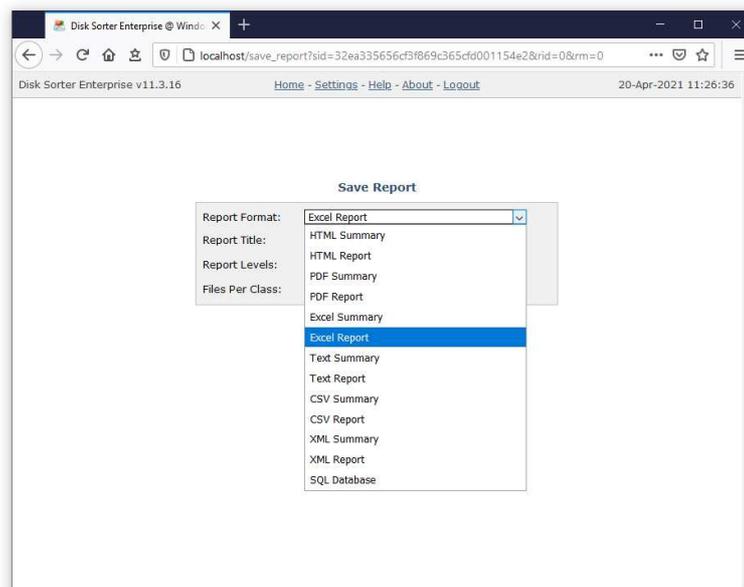
Finally, users are provided with numerous advanced file classification options allowing one to set a custom report title, configure how many history reports to keep for each file classification command, select file classification performance and file scanning modes and/or automatically generate HTML, PDF, Excel, XML, CSV or text file classification reports in a user-specified file or directory.

## 4.11 File Classification Results

For each file classification operation, DiskSorter Server saves an individual file classification report. In order to open the last report, just click on the required file classification command link displayed on the DiskSorter Server home page.



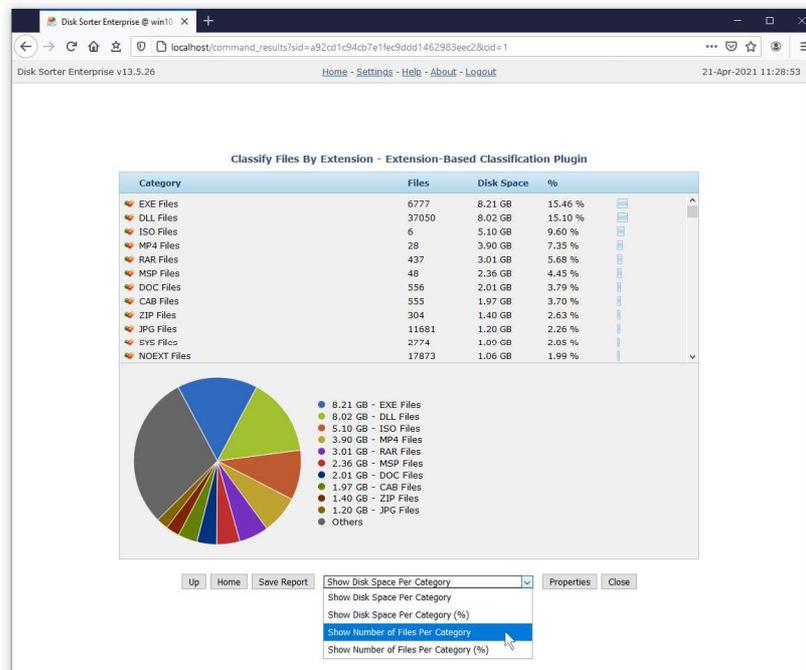
A file classification report shows file categories sorted by the amount of the used disk space according to the file classification plug-in used during the file classification operation. In order to open a file category, just click on the category name. In order to go to the parent category, press the 'Up' button located in the bottom-left corner of the report view.



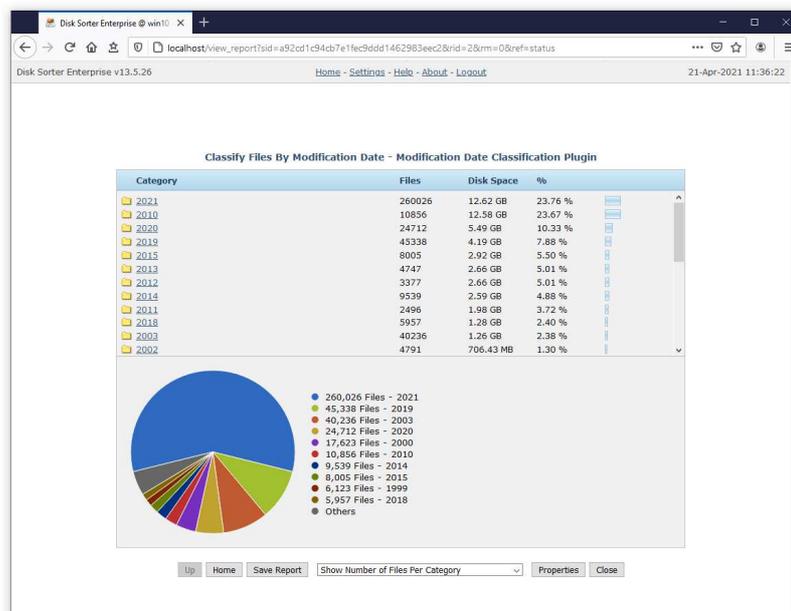
DiskSorter Server provides the ability to export file classification reports to a number of standard formats such as HTML, PDF, Excel, XML, CSV and text. In order to export a report to one of the standard formats, press the 'Save Report' button.

## 4.12 File Classification Charts

DiskSorter Server provides multiple types of file classification charts allowing one to display the amount of disk space per category, the percent of disk space per category, the number of files per category and the percent of files per category.



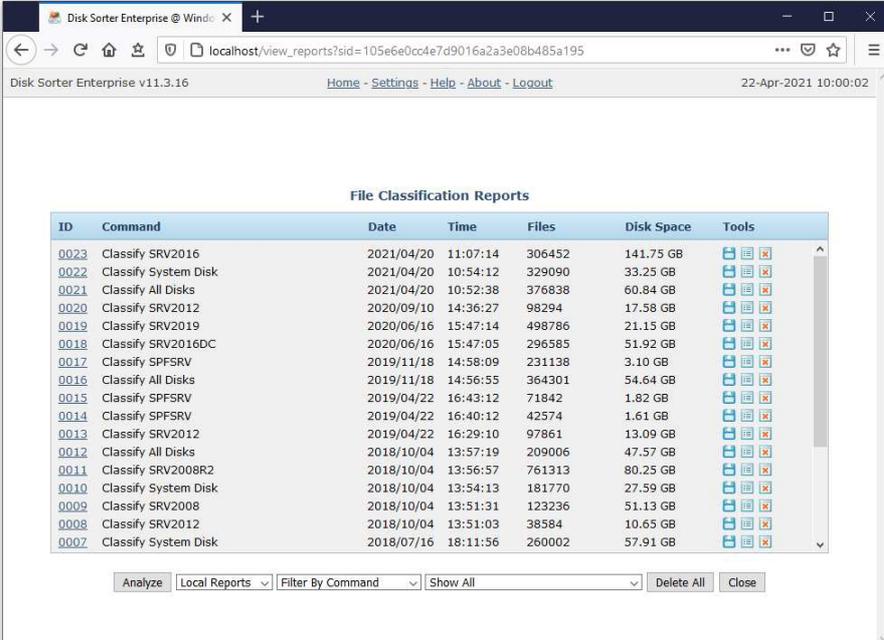
In order to change the currently displayed chart, click on the chart type selector located under the chart and select an appropriate type of chart. In each file classification report, the chart displays file categories according to the file classification plug-in that was used for the file classification operation.



File classification plugins included in a default DiskSorter Server installation are capable of categorizing files and displaying charts by the file type, extension, user name, creation, last modification or last access dates, etc. In addition, advanced users are provided with the ability to design custom file classification plugins using a simple XML-based format.

## 4.13 File Classification Reports

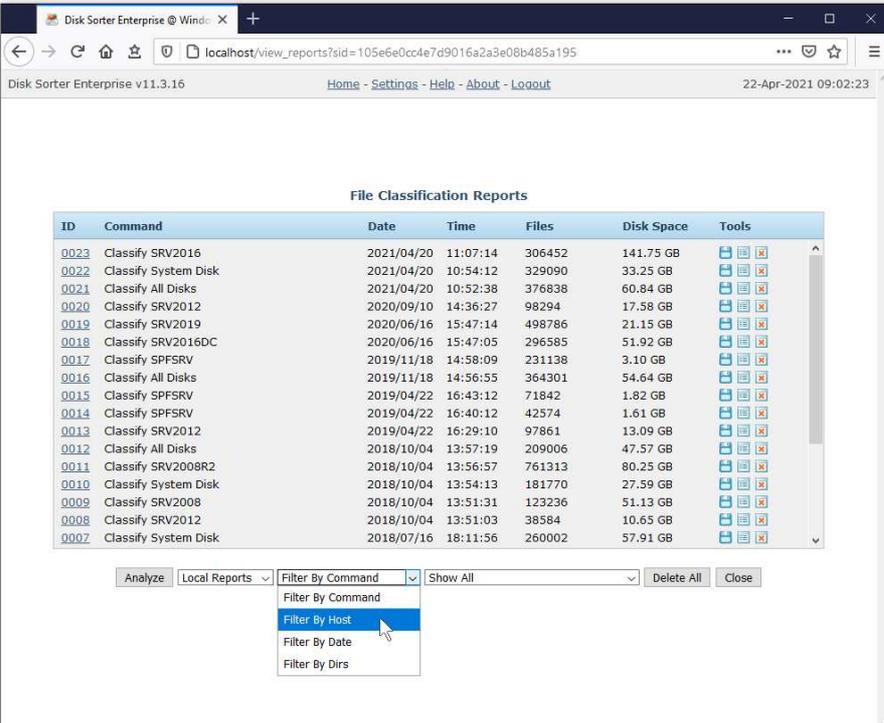
For each file classification operation, DiskSorter Server saves an individual file classification report. In order to open the last report, just click on the required file classification command link displayed on the DiskSorter Server home page. In order to browse all reports, press the 'Reports' button located on the DiskSorter Server home page.



ID	Command	Date	Time	Files	Disk Space	Tools
0023	Classify SRV2016	2021/04/20	11:07:14	306452	141.75 GB	
0022	Classify System Disk	2021/04/20	10:54:12	329090	33.25 GB	
0021	Classify All Disks	2021/04/20	10:52:38	376838	60.84 GB	
0020	Classify SRV2012	2020/09/10	14:36:27	98294	17.58 GB	
0019	Classify SRV2019	2020/06/16	15:47:14	498786	21.15 GB	
0018	Classify SRV2016DC	2020/06/16	15:47:05	296585	51.92 GB	
0017	Classify SPFSRV	2019/11/18	14:58:09	231138	3.10 GB	
0016	Classify All Disks	2019/11/18	14:56:55	364301	54.64 GB	
0015	Classify SPFSRV	2019/04/22	16:43:12	71842	1.82 GB	
0014	Classify SPFSRV	2019/04/22	16:40:12	42574	1.61 GB	
0013	Classify SRV2012	2019/04/22	16:29:10	97861	13.09 GB	
0012	Classify All Disks	2018/10/04	13:57:19	209006	47.57 GB	
0011	Classify SRV2008R2	2018/10/04	13:56:57	761313	80.25 GB	
0010	Classify System Disk	2018/10/04	13:54:13	181770	27.59 GB	
0009	Classify SRV2008	2018/10/04	13:51:31	123236	51.13 GB	
0008	Classify SRV2012	2018/10/04	13:51:03	38584	10.65 GB	
0007	Classify System Disk	2018/07/16	18:11:56	260002	57.91 GB	

Analyze Local Reports Filter By Command Show All Delete All Close

DiskSorter Server allows one to filter file classification reports by the command name, host name, date and input directories. In order to filter file classification reports, select an appropriate filter located on the bottom side of the reports page and then select a filter value.

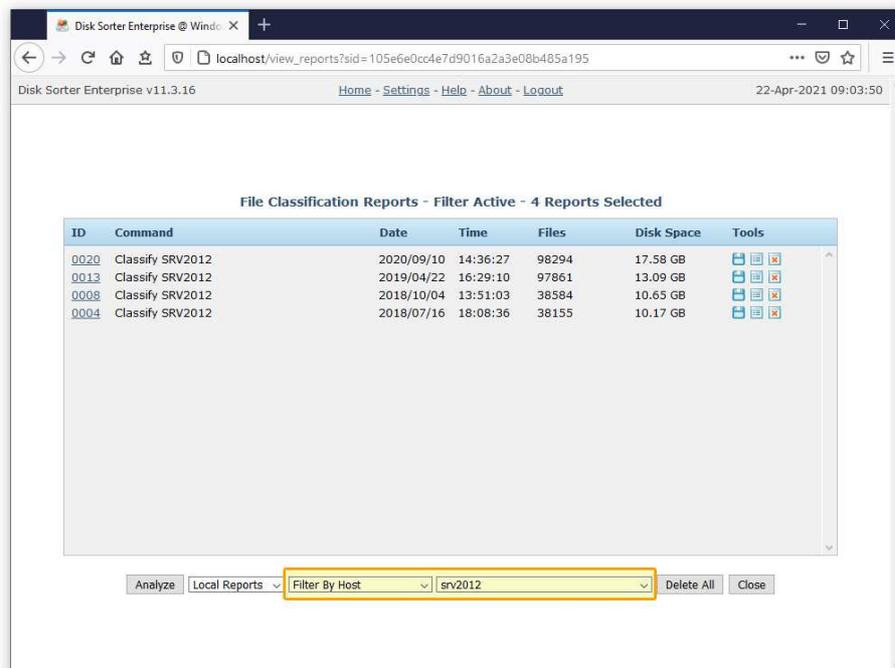


ID	Command	Date	Time	Files	Disk Space	Tools
0023	Classify SRV2016	2021/04/20	11:07:14	306452	141.75 GB	
0022	Classify System Disk	2021/04/20	10:54:12	329090	33.25 GB	
0021	Classify All Disks	2021/04/20	10:52:38	376838	60.84 GB	
0020	Classify SRV2012	2020/09/10	14:36:27	98294	17.58 GB	
0019	Classify SRV2019	2020/06/16	15:47:14	498786	21.15 GB	
0018	Classify SRV2016DC	2020/06/16	15:47:05	296585	51.92 GB	
0017	Classify SPFSRV	2019/11/18	14:58:09	231138	3.10 GB	
0016	Classify All Disks	2019/11/18	14:56:55	364301	54.64 GB	
0015	Classify SPFSRV	2019/04/22	16:43:12	71842	1.82 GB	
0014	Classify SPFSRV	2019/04/22	16:40:12	42574	1.61 GB	
0013	Classify SRV2012	2019/04/22	16:29:10	97861	13.09 GB	
0012	Classify All Disks	2018/10/04	13:57:19	209006	47.57 GB	
0011	Classify SRV2008R2	2018/10/04	13:56:57	761313	80.25 GB	
0010	Classify System Disk	2018/10/04	13:54:13	181770	27.59 GB	
0009	Classify SRV2008	2018/10/04	13:51:31	123236	51.13 GB	
0008	Classify SRV2012	2018/10/04	13:51:03	38584	10.65 GB	
0007	Classify System Disk	2018/07/16	18:11:56	260002	57.91 GB	

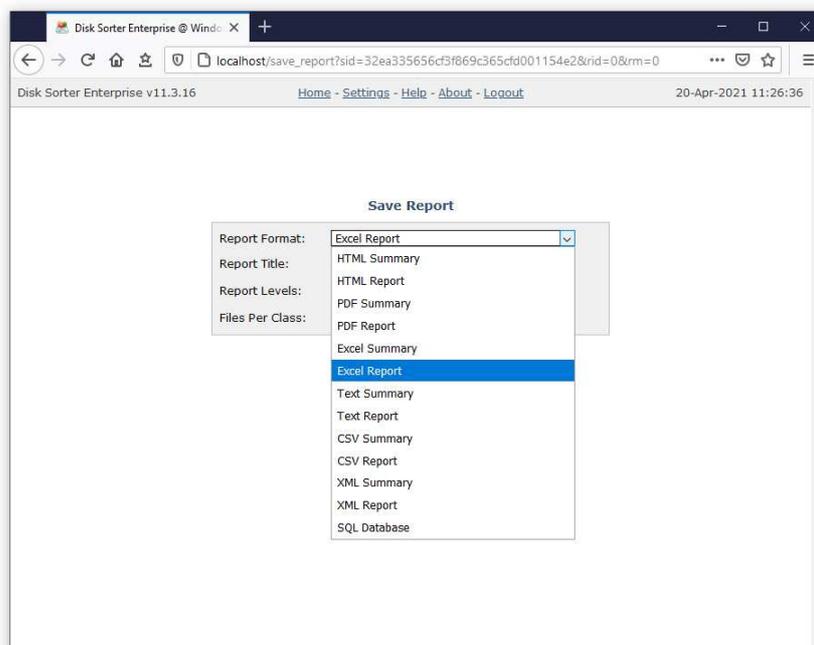
Analyze Local Reports Filter By Command Show All Delete All Close

- Filter By Command
- Filter By Host
- Filter By Date
- Filter By Dirs

When a report filter is active, DiskSorter Server displays the number of filtered reports in the reports page caption and shows reports matching the selected report filter in the reports view. In order to reset the currently selected report filter, select the 'Show All' filter value in the report filter located on the bottom side of the reports page.



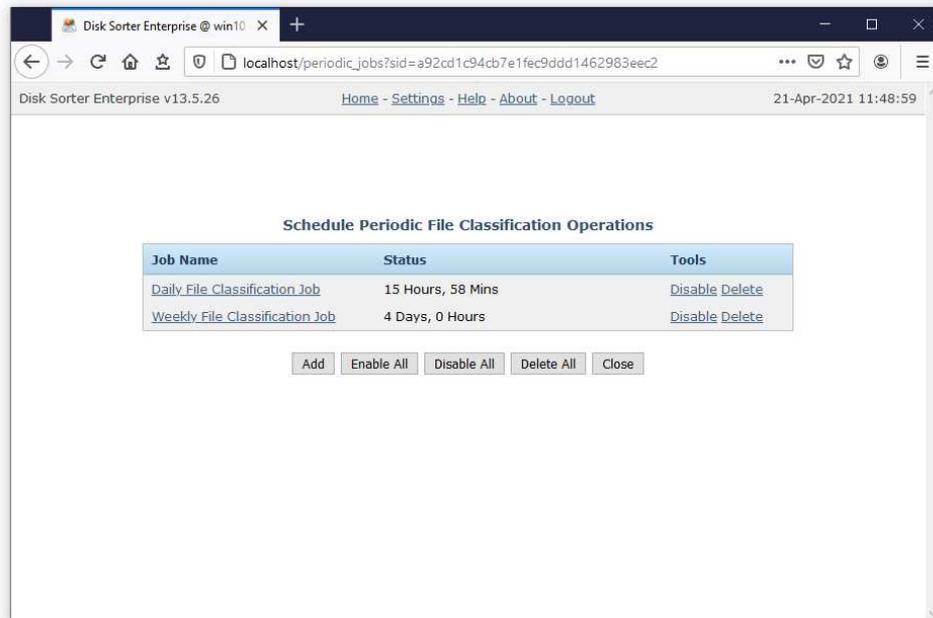
By default, DiskSorter Server keeps a history of 10 last reports for each file classification command. Reports are saved in the reports directory, which may be configured on the 'Reports' settings page. In order to open a file classification report listed in the reports view, click on the required report ID link.



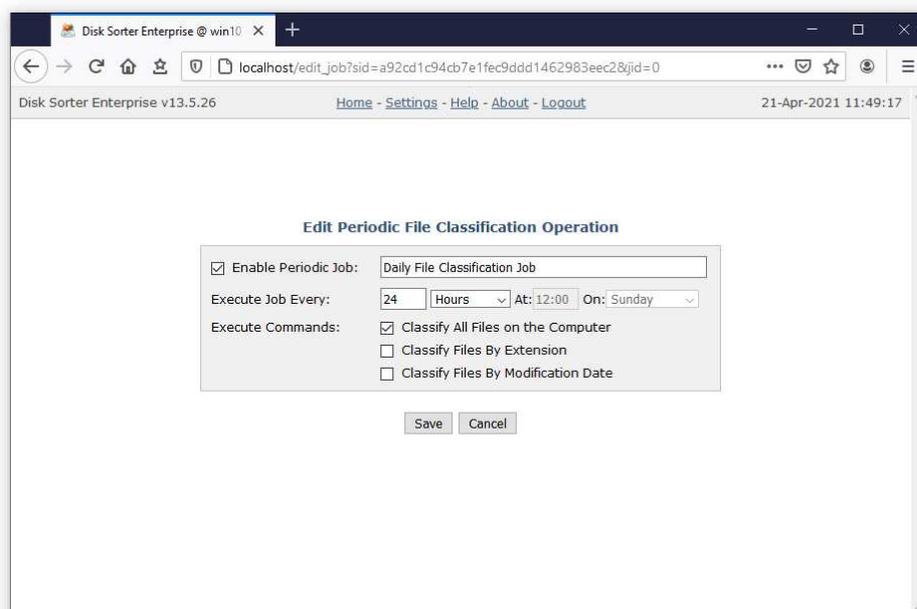
DiskSorter Server provides the ability to export file classification reports to a number of standard formats such as HTML, PDF, Excel, XML, CSV and text. In order to export a report to one of the standard formats, press an appropriate 'Save' button located in the 'Tools' column.

## 4.14 Periodic File Classification Jobs

DiskSorter Server allows one to setup a number of periodic file classification jobs with each one configured to perform one or more file classification commands at specific time intervals. In order to add a periodic file classification job, press the 'Periodic Jobs' button located on the DiskSorter Server home page and press the 'Add' button.



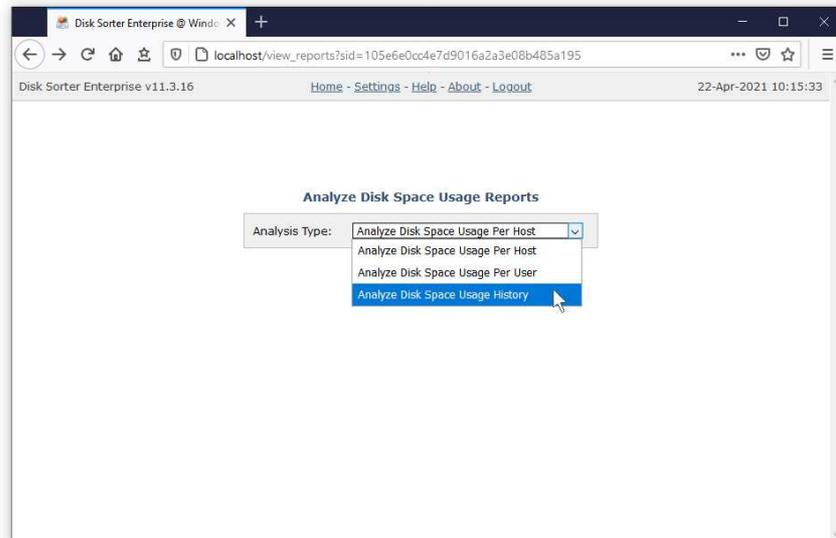
On the periodic job page, enter a unique periodic job name, specify the time interval and select one or more file classification commands to execute. In order to reduce the CPU load and memory usage on the host, DiskSorter Server performs selected file classification operations sequentially, one after one while saving reports and executing conditional file classification actions if required.



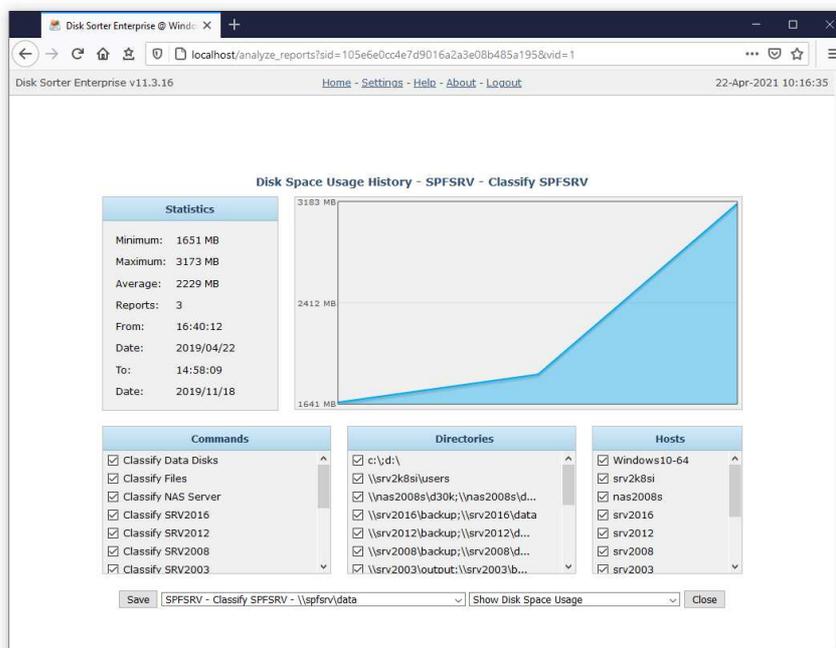
In addition, the user is provided with the ability to intentionally slow down file classification operations, in order to completely eliminate performance impact on production servers. To slow down a file classification command, open the command page, press the 'Options' button, select the 'Low Speed' performance mode and press the 'Save' button.

## 4.15 Analyzing File Classification History Trends

System and storage administrators are provided with the ability to analyze how file classification results are changing over time. In order to be able to perform the file classification history trend analysis, the user needs to setup one or more periodic file classification commands or manually perform multiple file classification operations over time.



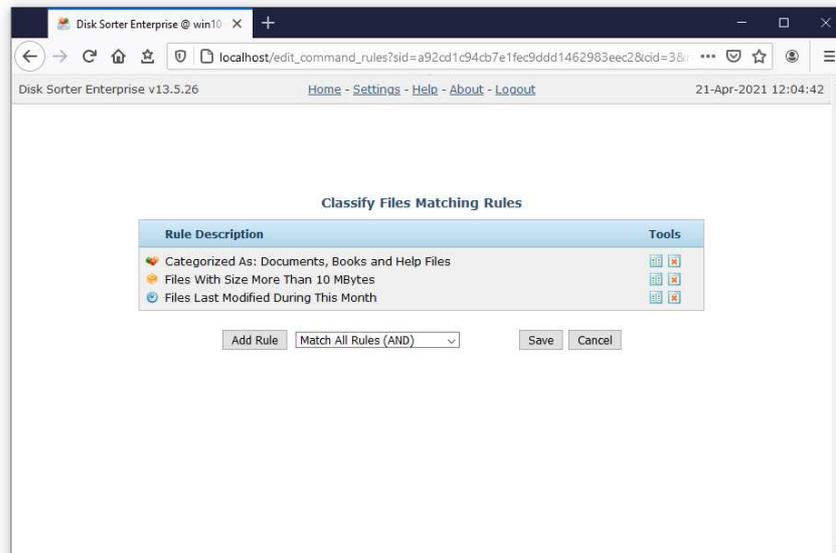
With multiple file classification reports saved in the report database, press the 'Reports' button located on the main status page, press the 'Analyze' button, select the 'Analyze Disk Space Usage History' option and press the 'Analyze' button. DiskSorter Server will generate a list of charts - one for each set of directories in each analyzed server and/or NAS storage device.



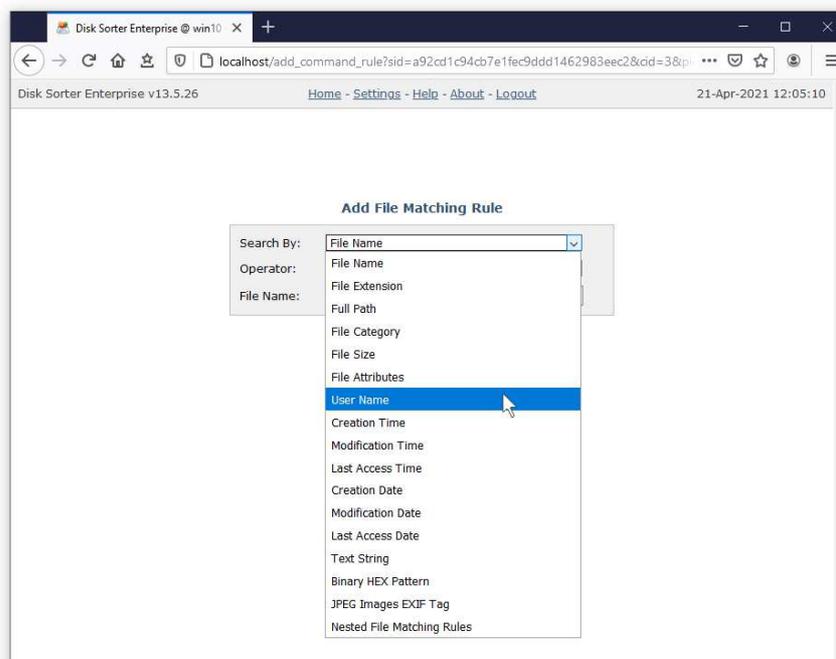
The top-left side of the history analysis page shows the statistics for the currently selected history chart. The top-right side shows the history line chart according to the currently selected chart and chart units. The three bottom-side panes provide the ability to filter charts by the command name, processed directories and/or the host name of the server or NAS storage device. In order to save the currently displayed history chart to a graphical PDF report, press the 'Save' button and then click on the report file link to download the report file.

## 4.16 File Classification Rules

DiskSorter Server provides the ability classify specific types of files or file categories using an extensive set of file matching rules capable of matching files by the file name, extension, directory, file type, file size, creation, last modification or last access dates, etc. In order to add one or more file matching rules to a file classification command, open the required command, press the 'Rules' button and press the 'Add Rule' button.



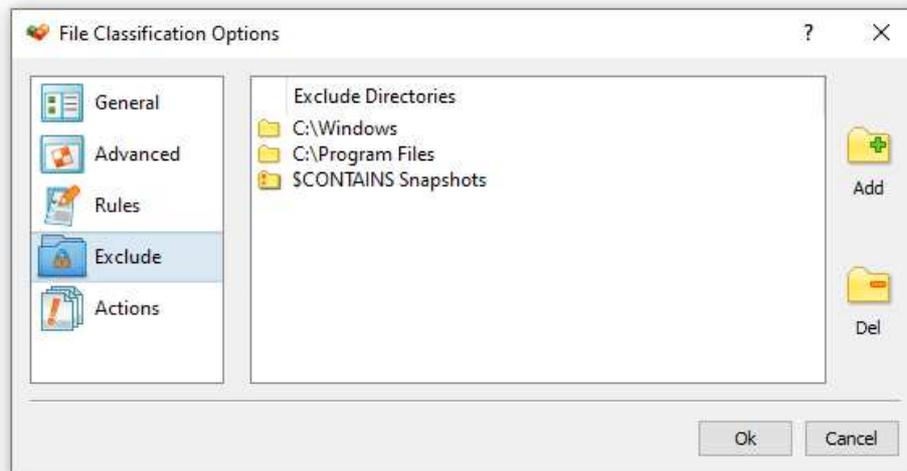
On the file matching rule page, select an appropriate rule type, select an operator, enter a rule value and press the 'Save' button. DiskSorter Server allows one to add an unlimited number of file matching rules to each file classification command and apply the (AND) or (OR) logical operators. For example, the user is provided with the ability to classify all types of documents with the file size more than X MB that were modified during the last month.



Finally, DiskSorter Server allows one to define multi-level, nested file matching rules with different sets of rules and logic operators on each level capable of precisely selecting the subset of files that should be processed.

## 4.17 Excluding Directories from the File Classification Process

Sometimes, it may be required to exclude one or more subdirectories from the file classification process. For example, if you need to classify files stored on a disk excluding one or two special directories, you may specify the whole disk as an input directory and add the directories that should be skipped to the exclude list.



In order to add one or more directories to the exclude list, open the file classification command configuration page and add one or more directories to the exclude list separated by the semicolon (;) character. All files and subdirectories located in the specified exclude directories will be excluded from the file classification process. In addition, advanced users are provided with a number of exclude directories macro commands allowing one to exclude multiple directories using a single macro command.

DiskSorter Server provides the following exclude directories macro commands:

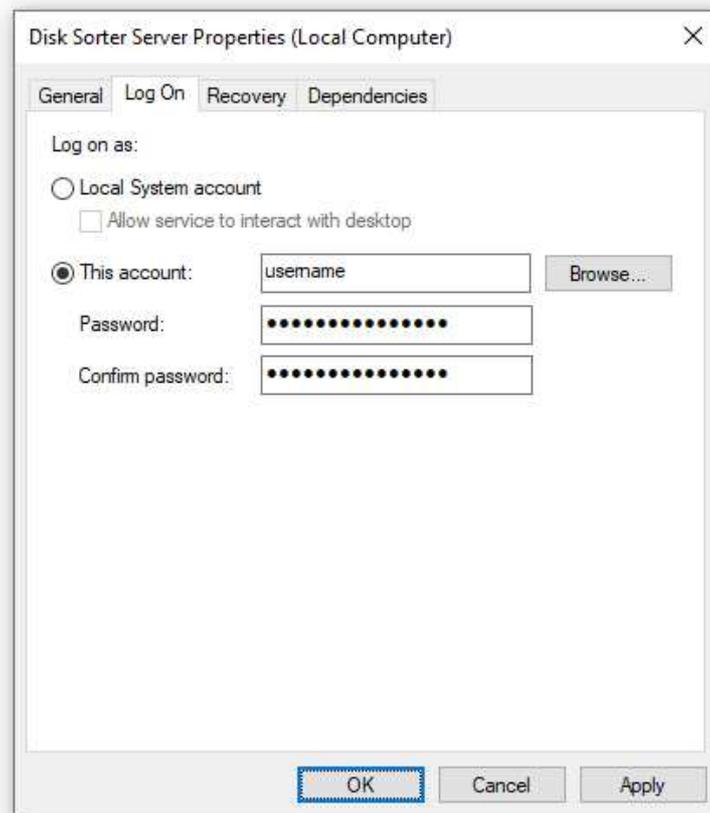
- **\$BEGINS <Text String>** - this macro command excludes all directories beginning with the specified text string.
- **\$CONTAINS <Text String>** - this macro command excludes all directories containing the specified text string.
- **\$ENDS <Text String>** - this macro command excludes all directories ending with the specified text string.
- **\$REGEX <Regular Expression>** - this macro command excludes directories matching the specified regular expression.

For example, the exclude macro command '\$CONTAINS Temporary Files' will exclude all directories with 'Temporary Files' at any place in the full directory path and the exclude macro command '\$REGEX \.(TMP|TEMP)\$' will exclude directories ending with '.TMP' or '.TEMP'.

## 4.18 Using DiskSorter Server to Analyze Network Shares

By default, the DiskSorter service is configured to run under the local system account, which is good to classify files in local disks and directories. On the other hand, the local system account does not have permissions to access files in network shares and NAS storage devices.

In order to enable DiskSorter Server to classify files in network shares and NAS storage devices, the DiskSorter service should be configured to run under a user account, which has permissions to access files and directories located on the required network shares.



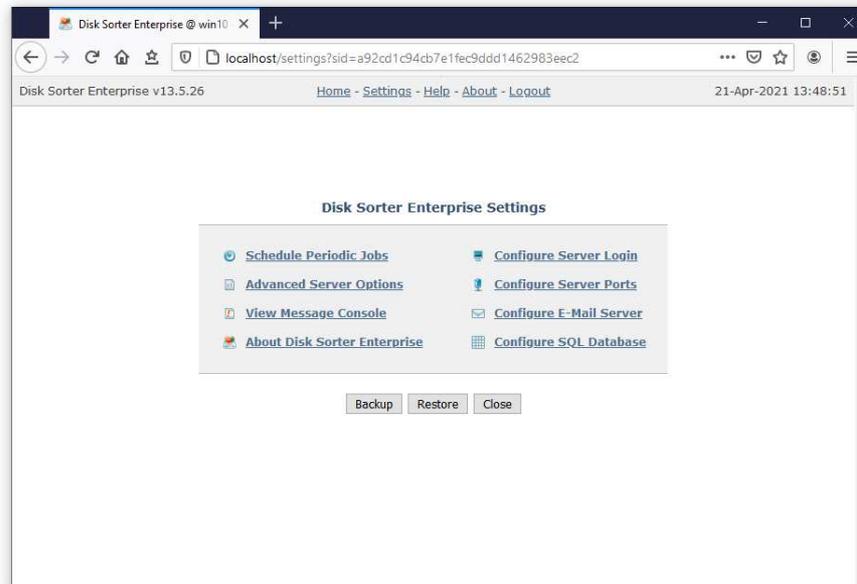
The configuration is very simple and may be performed within a couple of seconds using the following step-by-step guide:

1. Open the Windows control panel and click on the 'Administrative Tools' utility.
2. Open the Services control center and find here the 'Disk Sorter Server' service.
3. Open the ' Disk Sorter Server' service, select the 'General' tab and stop the service.
4. Select the 'Log On' tab and specify a user account to use for the service.
5. Select the 'General' tab and start the ' Disk Sorter Server' service.

Now, the DiskSorter service will run under the specified user account and will have exactly the same permissions as the specified account when accessing network shares and NAS storage devices.

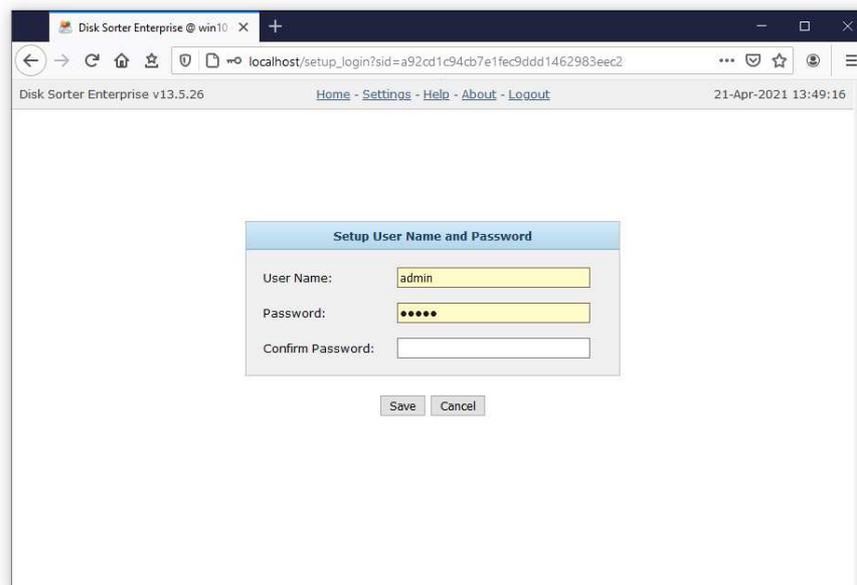
## 4.19 Configuring DiskSorter Server

DiskSorter Server provides a variety of configuration options allowing one to easily integrate the product into a user-specific network environment. In order to open the main settings page, click on the 'Settings' link located on the top menu bar.



## 4.20 Configuring Custom User Name and Password

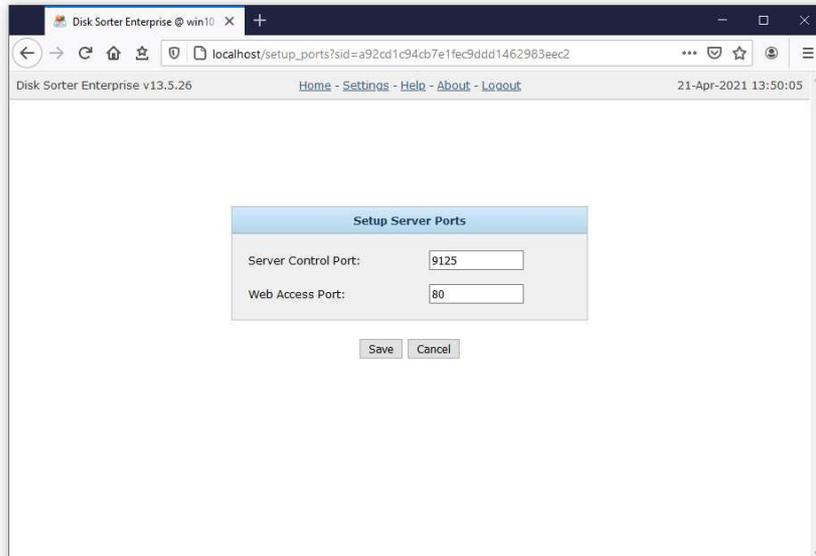
The DiskSorter Server web-based management console requires users to login with a DiskSorter user name and password. The default user name and password is set to **admin/admin**. In addition, DiskSorter Server provides the ability to set a custom user name and/or password for the DiskSorter web-based management interface and the command line utility, which may be used to automate configuration and management tasks.



In order to set a custom user name and password, click on the 'Configure Server Login' link located on the main settings page, enter a new user name and password and press the 'Save' button.

## 4.21 Configuring Custom Server Ports

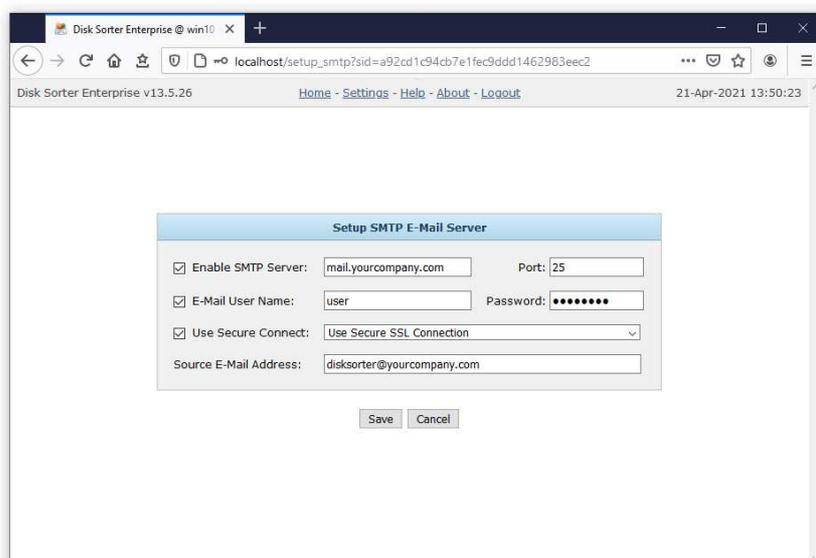
DiskSorter Server uses the TCP/IP port 9125 as the default server control port and the TCP/IP port 80 as the default web access port. Sometimes, these ports may be in use by some other software products or system services. If one or both of these ports are in use, DiskSorter Server will be unable to operate properly and the user needs to change the DiskSorter server control port and/or web access port.



In order to set a custom server control port and/or web access port, click on the 'Setup Server Ports' link located on the main settings page, select the 'Use Custom Port' option and enter a custom port number to use. If the DiskSorter server should be controlled through the network, make sure the custom ports are open in the server's firewall.

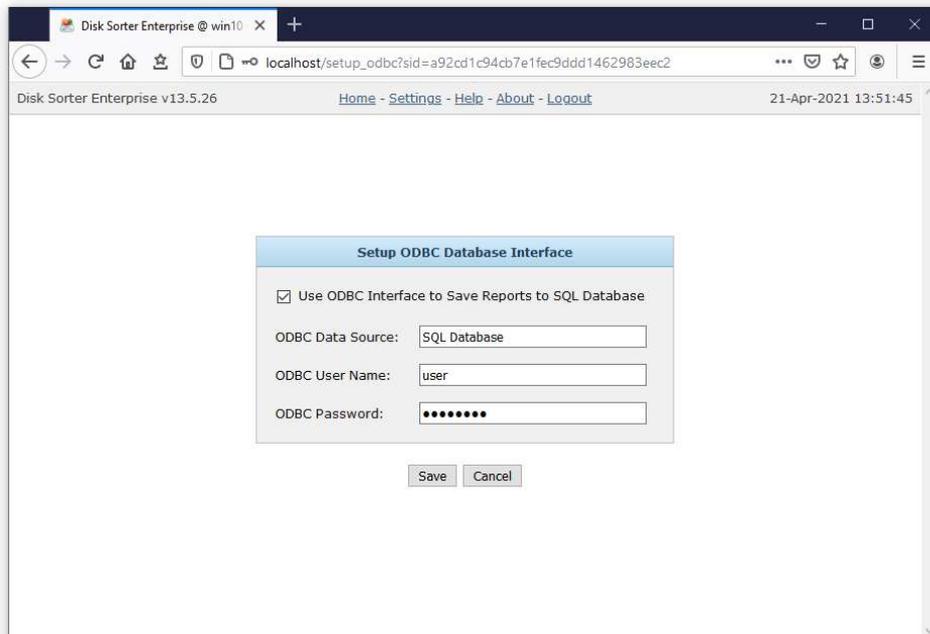
## 4.22 Configuring E-Mail Notifications

DiskSorter Server provides the ability to send E-Mail notifications when a user-specified disk space analysis rule is triggered for one or more disks or directories. In order to configure an SMTP E-Mail server to use to send E-Mail notifications, click on the 'Configure E-Mail Server' link located on the main settings page, enter the SMTP server host name, SMTP server port, SMTP user name, password and the source E-Mail address to use to send E-Mail notifications.

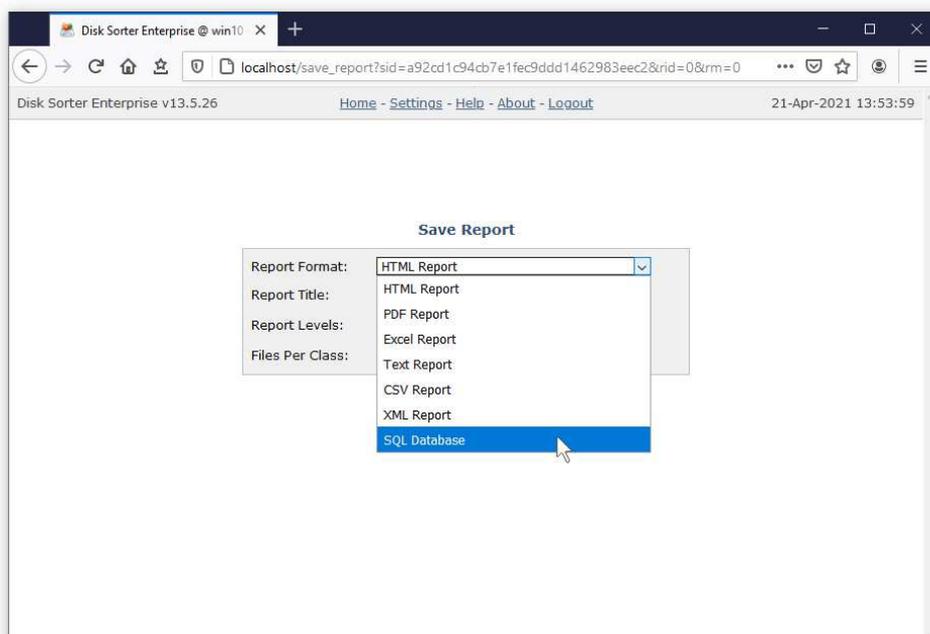


## 4.23 Configuring SQL Database Integration

DiskSorter Server provides the ability to save file classification reports to an SQL database allowing one to keep a history of reports for future review and analysis. In order to enable SQL database export, open the file classification command, press the 'Options' button, select the 'Always Save' checkbox, select the SQL database report format and press the 'Save' button.



DiskSorter Server exports SQL database reports through the ODBC database interface, which should be configured to operate properly. In order to configure the ODBC database interface, click on the 'Configure SQL Database' link located on the main settings page, enable the ODBC database interface, specify the ODBC data source, ODBC user name and password to use to save reports to the SQL database.



## 4.24 DiskSorter Server Command Line Utility

In addition to the web-based management interface, DiskSorter Server provides a command line utility allowing one to control one or more DiskSorter Servers locally or via the network. The DiskSorter command line utility is located in **<ProductDir>/bin** directory.

### DiskSorter Server Command Line Syntax:

#### **disksorter -server\_show\_commands**

Shows file classification commands configured in DiskSorter Server.

#### **disksorter -server\_start\_command <Command Name>**

Starts the specified file classification command.

#### **disksorter -server\_stop\_command <Command Name>**

Stops the specified file classification command.

#### **disksorter -server\_command\_status <Command Name>**

Shows the current status of a file classification command.

#### **disksorter -server\_command\_errors <Command Name>**

Shows process errors for a file classification command.

#### **disksorter -server\_delete\_command <Command Name>**

Deletes the specified file classification command.

#### **disksorter -server\_export\_reports -reports\_dir <Directory>**

Exports file classification reports to the specified directory.

#### **disksorter -server\_import\_reports -reports\_dir <Directory>**

Imports file classification reports from the specified directory.

#### **disksorter -server\_status**

Shows the current DiskSorter Server status.

#### **disksorter -server\_debug\_log**

Shows the DiskSorter Server debug log.

**Miscellaneous Commands:****diskorter -v**

Shows the product major version, minor version, revision and build date.

**diskorter -help**

This command shows the command line usage information.

**Command Line Options:****-host <Host Name>**

Specifies the host name or an IP address of DiskSorter Server to connect to. If not specified, the command line utility will connect to the local host.

**-port <Port Number>**

Specifies the TCP/IP port to connect to. If not specified, the command line utility will connect to the default DiskSorter Server TCP/IP port 9125.

**-user <User Name>**

Specifies a user name to login to DiskSorter Server. If not specified, the command line utility will login using the default "**admin**" user name.

**-password <Password>**

Specifies a password to login to DiskSorter Server. If not specified, the command line utility will login using the default "**admin**" password.

## 4.25 Updating DiskSorter Server

Flexense develops DiskSorter Server using a fast release cycle with minor product versions, updates and bug fixes released almost every month and major product versions released every year. New product versions and product updates are published on the product web site and may be downloaded from the following page: <http://www.disksorter.com/downloads.html>.



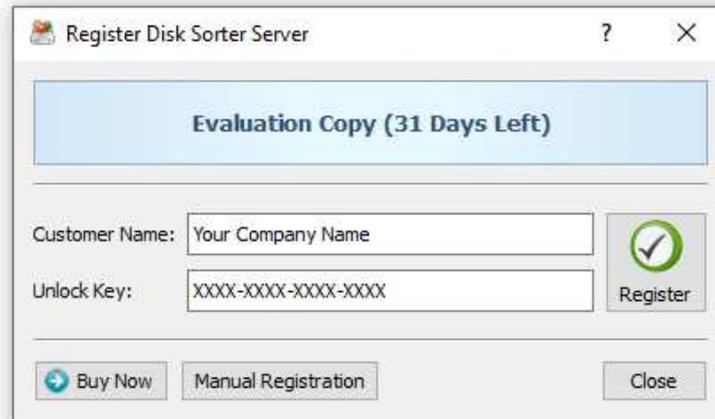
Due to the fact that the product is especially designed for servers running in production environments where stability is a major decision factor, DiskSorter Server updates should be manually installed by the user. In order to update an existing product installation, download the latest product version and just start the setup program.



The DiskSorter Server setup program will properly shutdown the running DiskSorter service, update the product and restart the DiskSorter service after finishing the update procedure. All product configuration files, saved file classification commands, file classification reports and product registration will remain valid and there is nothing to reconfigure or manage after the update.

## 4.26 Registering DiskSorter Server

Within a couple of hours after purchasing a product license, the customer will receive two e-mail messages: the first one confirming the payment and the second one containing an unlock key, which should be used to register the product. If you will not receive your unlock key within 24 hours, please check your spam box and if the unlock key is not in the spam box contact our support team: **support@flexense.com**.



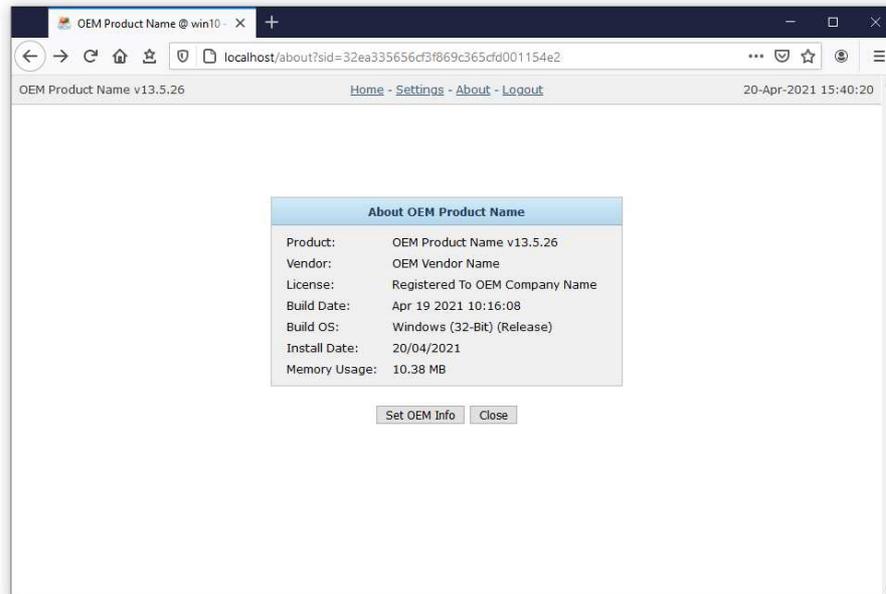
If the computer where DiskSorter Server is installed on is connected to the Internet, login to the DiskSorter server (default user name and password: **admin/admin**) using a standard web browser, click on the 'About' link located on the top menu bar, press the 'Register' button, enter your name or your company name, enter the received unlock key and press the 'Register' button.



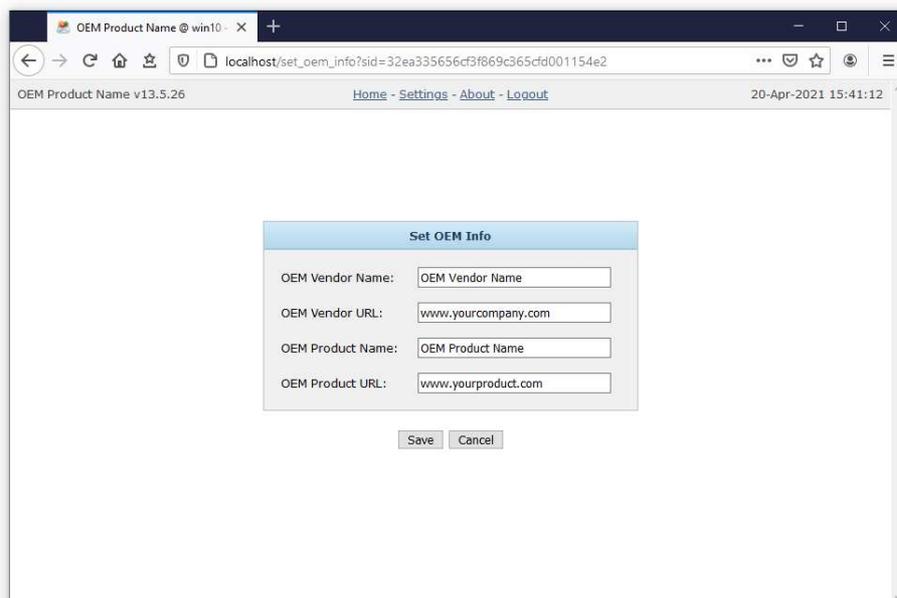
If the computer is not connected to the Internet, press the 'Manual Registration' button, export the product ID file and send the product ID file to **register@disksorter.com** as an attachment. Within a couple of hours, you will receive an unlock file, which should be imported in order to finish the registration procedure.

## 4.27 DiskSorter Enterprise OEM Version

Flexense provides system integrators, value-added distributors and IT service providers with the ability to resell DiskSorter Enterprise and/or provide services based on the product under third-party brand names. Resellers and integrators are provided with the ability to change the product name, the product web site address, the product vendor name and the product vendor web site address.



In order to be able to set custom OEM product and vendor information, the user needs to register the product using a special OEM-Enabled unlock key, which may be purchased on the product purchase page. Once the product is registered using an OEM unlock key, open the 'About' page, press the 'Set OEM Info' button, specify your custom OEM product and vendor information and press the 'Save' button.



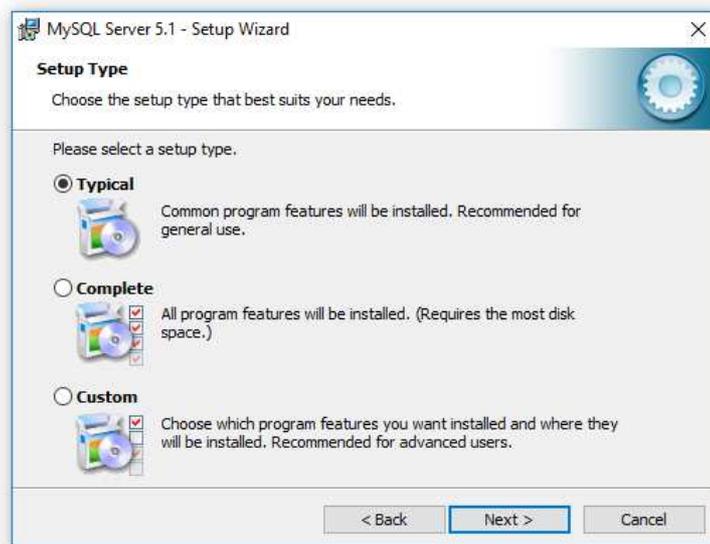
Custom OEM product and vendor information will be displayed on all pages of the DiskSorter Enterprise web-based management interface, in all types of reports generated by the product and all notification E-Mail messages sent by DiskSorter Enterprise.

## 5 Appendix

### 5.1 Installing MySQL Database

DiskSorter Pro is capable of saving file classification reports in an SQL database. Reports may be saved manually or automatically using the DiskSorter command line utility periodically executed by the Windows built-in task scheduler.

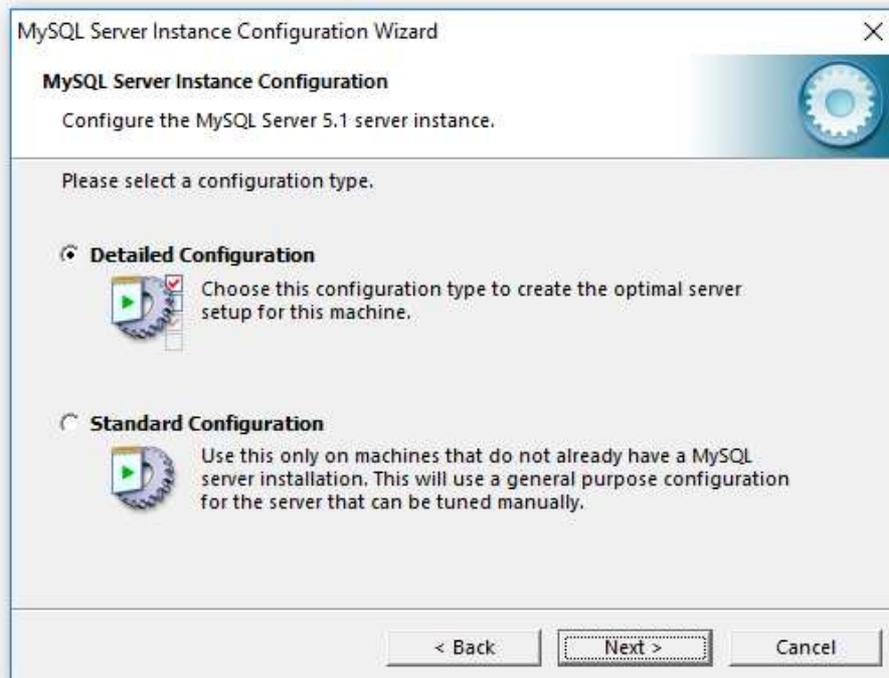
In order to configure DiskSorter to use the MySQL database, the user needs to install the following two components: the MySQL Server and the MySQL ODBC connector. First of all, let's install the MySQL Server. Download the latest version of the MySQL server from the MySQL web site and execute the setup program to start the installation procedure. On the setup type page, select the 'Typical' setup type and press the 'Next' button. By default, the setup will install the MySQL server and a command line utility, which will be used to configure the MySQL server.



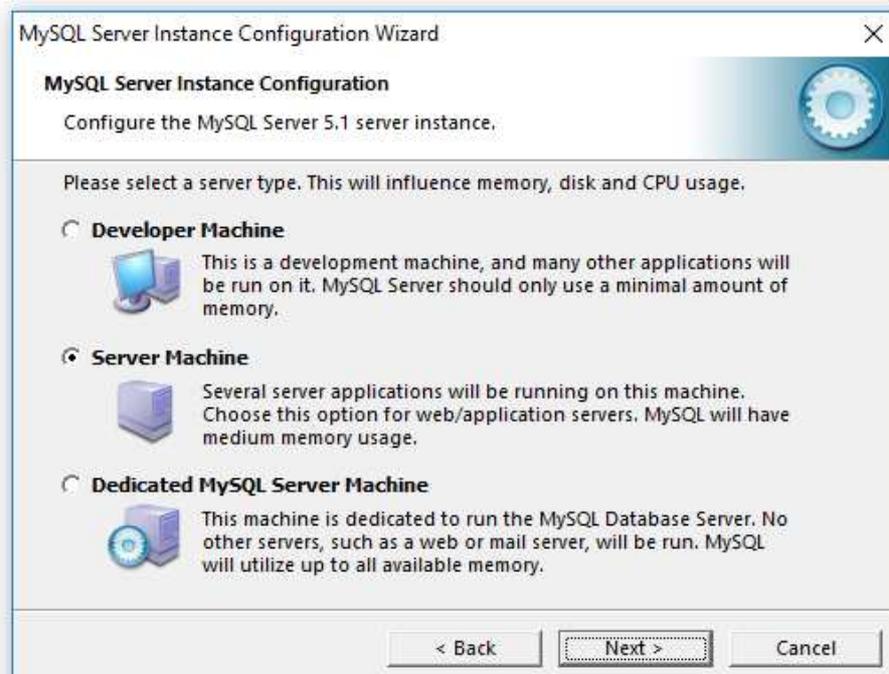
On the next setup page, select the 'Configure the MySQL Server now' option and press the 'Finish' button. The setup program will open a MySQL configuration wizard allowing one to configure basic server settings.



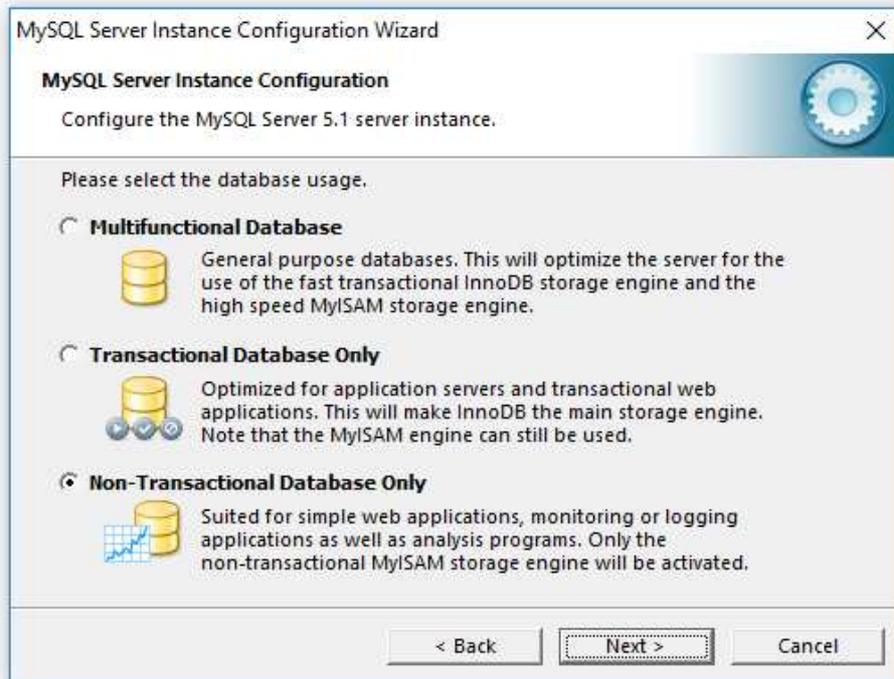
On the next setup page, select the 'Detailed Configuration' option and press the 'Next' button. The detailed configuration mode is required to configure the MySQL server for maximum database performance.



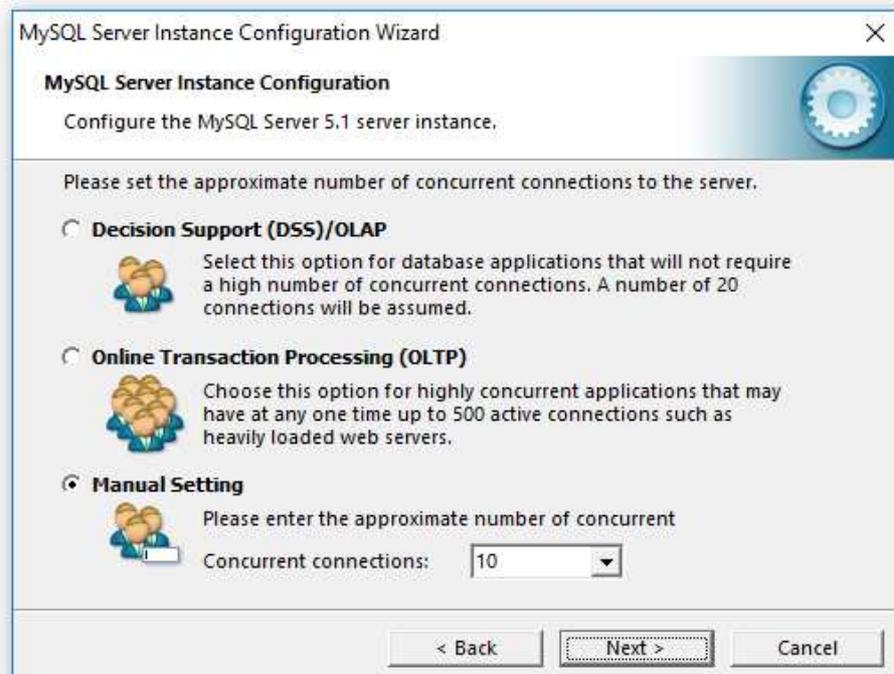
On the next page, select the 'Server Machine' option, which is the most balanced configuration for typical DiskSorter workloads. If the server is intended to process large volumes of reports and is dedicated for DiskSorter, select the 'Dedicated Server' configuration option.



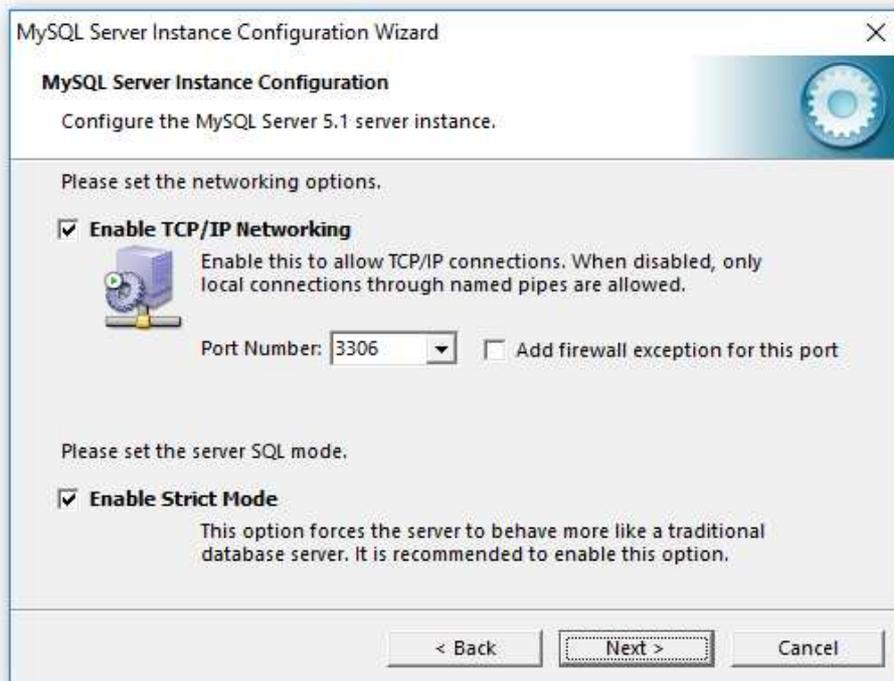
On the next page, select the 'Non-Transactional Database' option. DiskSorter does not perform concurrent insert or modify operations on the database and a transactional database is not required. Moreover, configuring the MySQL server as a non-transactional database will significantly improve the performance of database import operations.



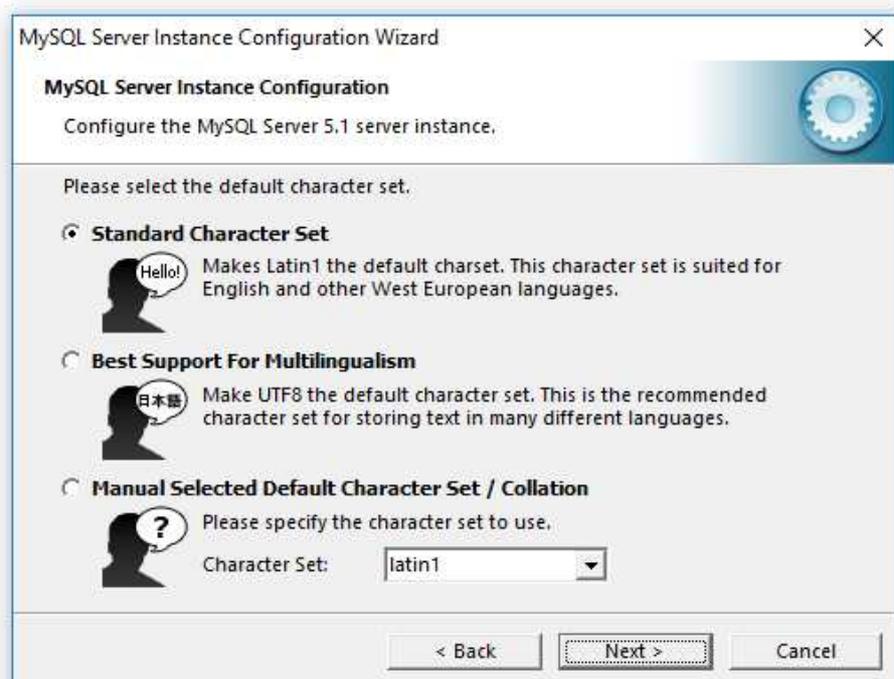
On the next page, select the 'Manual Setting' option and set the number of concurrent database connections to 5, which is the optimal number for typical DiskSorter installations.



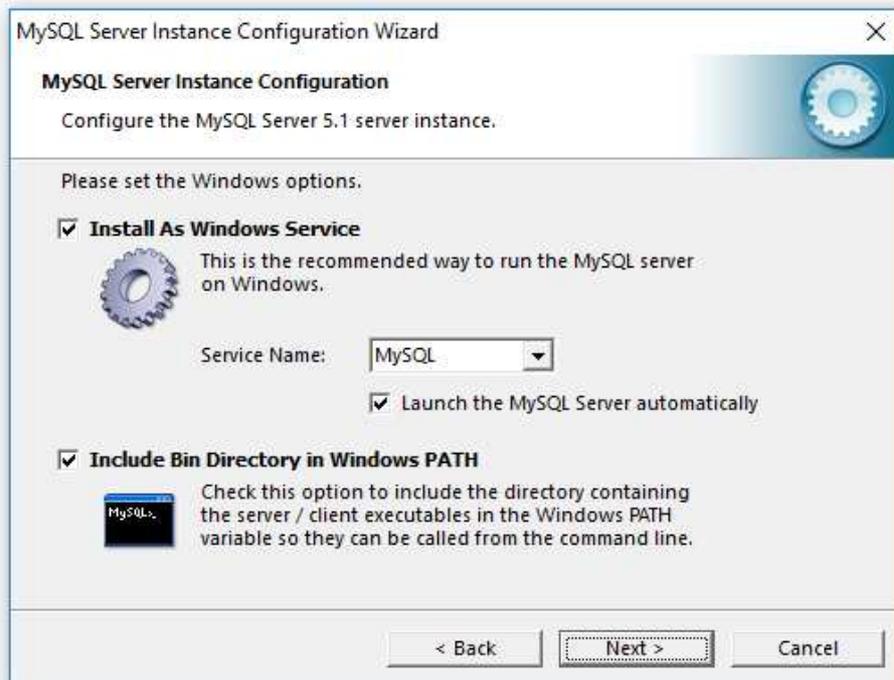
On the next page, enable TCP/IP networking and if the server will be accessed from other computers on the network, add a firewall exception for the MySQL server port. In general, a single MySQL server may be used to collect reports from multiple DiskSorter installations using remote ODBC connections.



On the next page select an appropriate character set. By default, DiskSorter uses the UTF-8 character set to store names of files and directories, but if there is no need to process Unicode file names, this option may be set to the standard Latin1 character set.



On the next page, select the 'Install as Windows Service' option and select the 'Include Bin Directory in Windows PATH' option. The PATH option will enable execution of the MySQL command line utility from any location.



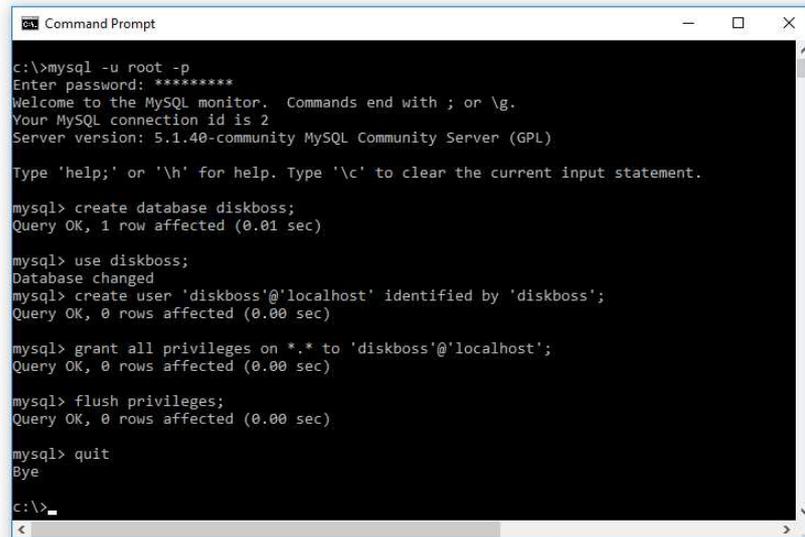
On the next page, select the 'Modify Security Settings' option and specify a root password for the MySQL server, which later will be used to configure regular MySQL users.



That's all. Press the 'Next' button to finish the installation procedure.

## 5.2 Configuring MySQL Database

The MySQL database provides the 'mysql' command line utility, which may be used to configure the database and the user account to be used by DiskSorter.



```
Command Prompt
c:\>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.1.40-community MySQL Community Server (GPL)

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database diskboss;
Query OK, 1 row affected (0.01 sec)

mysql> use diskboss;
Database changed
mysql> create user 'diskboss'@'localhost' identified by 'diskboss';
Query OK, 0 rows affected (0.00 sec)

mysql> grant all privileges on *.* to 'diskboss'@'localhost';
Query OK, 0 rows affected (0.00 sec)

mysql> flush privileges;
Query OK, 0 rows affected (0.00 sec)

mysql> quit
Bye
c:\>
```

In order to configure the MySQL database, open the command prompt window and type the following command:

```
mysql -u root -p
```

This command will start the 'mysql' command line utility and login to the MySQL server with root permissions. The user will be asked to provide the root password, which was specified during the MySQL server installation procedure.

Once logged in, the user needs to create a database that will be used by DiskSorter to store file classification reports. In order to do that, type the following command:

```
create database disksorter;
```

Now, add a user account that will be used by DiskSorter to submit reports to the database. Single quotes are required and should be specified exactly as displayed.

```
create user 'disksorter'@'localhost' identified by 'password';
```

Now, grant permissions to the user account using the following command:

```
grant all privileges on *.* to 'disksorter'@'localhost';
```

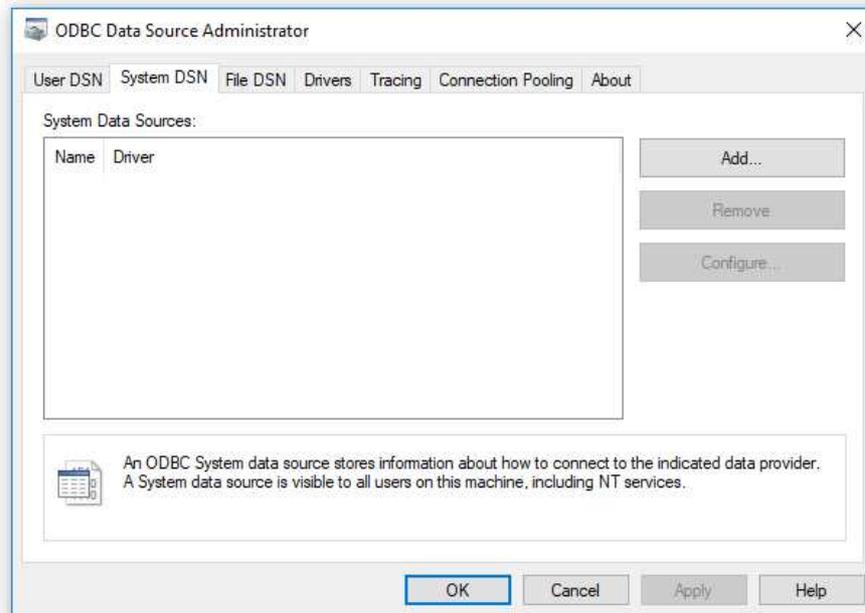
Finally, flush user privileges using the following command.

```
flush privileges;
```

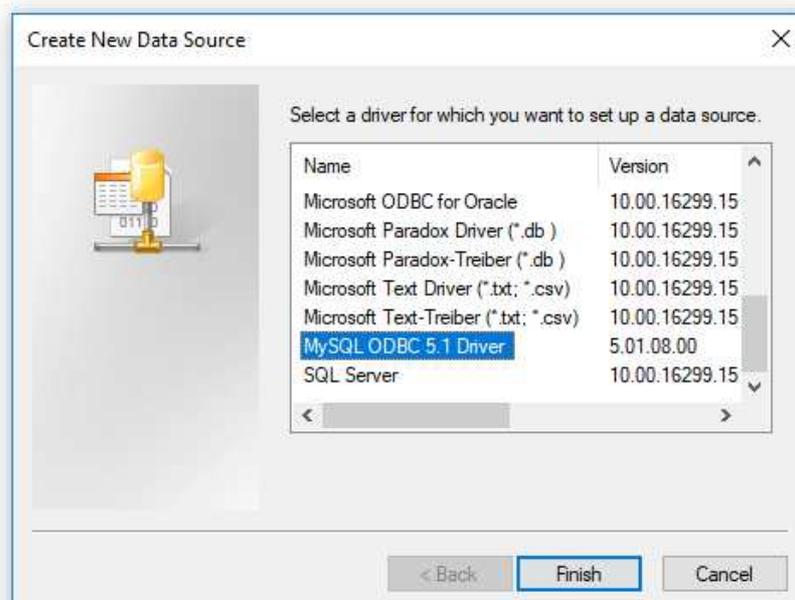
That's all. Now the MySQL server is fully configured. In order to disconnect from the MySQL database, just type **quit** in the command window.

### 5.3 Configuring MySQL ODBC Data Source

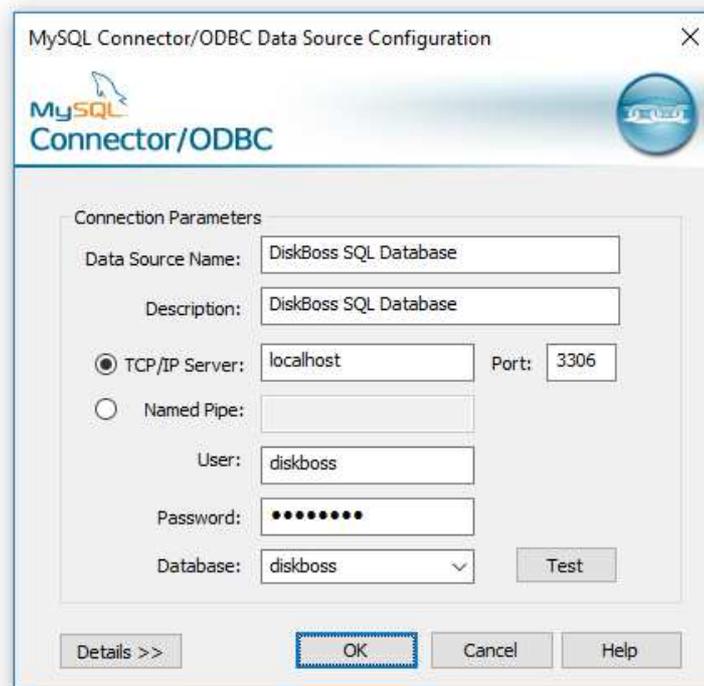
DiskSorter connects to the MySQL database through the ODBC interface. Download an appropriate version of the MySQL ODBC connector from the MySQL web site and execute the setup program. There are no critical configuration options in the MySQL ODBC connector installation procedure and the user can just press the 'Next' button until the last page keeping the default configuration options.



After finished installing MySQL ODBC Connector, open the Windows control panel and select 'Administrative Tools – Data Sources (ODBC)'. On the ODBC Administrator window, select the 'System DSN' tab and press the 'Add' button. On the next page, select the 'MySQL ODBC Driver' and press the 'Finish' button.

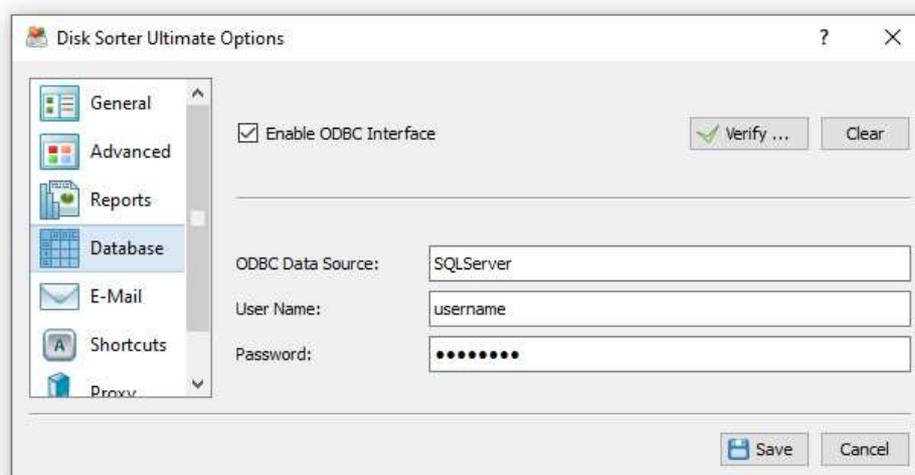


On the next page, enter a new data source name, which will be used by DiskSorter to connect to the database. Specify the name of the host where the MySQL server is running on and enter the MySQL user name and password that should be used by DiskSorter to connect to the database. Finally, select the name of the database that should be used to store file classification reports. After finished specifying all the required information, press the 'Test' button to check the database connection.



## Configuring DiskSorter Database Connection

In order to configure DiskSorter to use the installed MySQL database, open the options dialog and select the 'Database' tab. Enable the ODBC interface and enter the name of the ODBC data source, the database user name and password that were specified for the ODBC data source. Finally, press the 'Verify' button to check the DiskSorter database connection.



## 5.4 Supported Operating Systems and System Requirements

### Supported Operating Systems

- Windows XP
- Windows Vista
- Windows 7
- Windows 8
- Windows 8.1
- Windows 10
- Windows 11
- Server 2003
- Server 2008
- Server 2008 R2
- Server 2012
- Server 2012 R2
- Server 2016
- Server 2019
- Server 2022

### Minimal System Configuration

- Supported Operating System
- 1 GHz or better CPU
- 1 GB of system memory
- 100 MB of free disk space

### Recommended System Configuration

- Supported Operating System
- 2+ GHz dual-core CPU
- 4 GB of system memory
- 200 MB of free disk space

### DiskSorter Server System Configuration

- Supported Operating System
- 2+ GHz quad-core CPU
- 8 GB of system memory
- 1 GB of free disk space