

VX Search

FILE SEARCH SOLUTION



User Manual

Version 15.9

Feb 2024

www.vxsearch.com

info@flexense.com

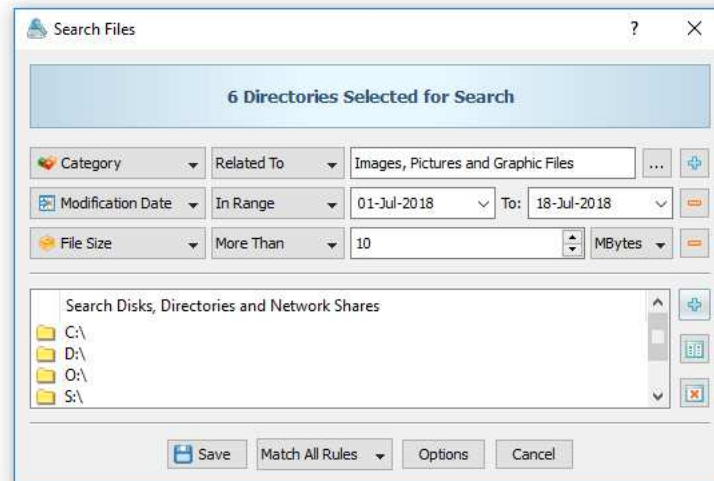
Flexense Ltd.

1	Product Overview.....	4
2	VX Search Product Versions	8
3	Using Desktop Product Versions	9
3.1	Product Installation Procedure	9
3.2	Searching Files in Disks or Directories.....	10
3.3	Searching Files by Category.....	11
3.4	Searching Files by Name	12
3.5	Searching Files by Size	12
3.6	Searching Files by Date.....	13
3.7	Searching Files by Time	14
3.8	Searching Files by Text Patterns.....	15
3.9	Searching Files by Binary Patterns.....	15
3.10	Searching Files by File Attributes.....	16
3.11	Searching Files by User Name	17
3.12	Searching Files By User Group	18
3.13	Searching Programs By Version Information	19
3.14	Searching JPEG images by EXIF tags	19
3.15	Searching Files Using Regular Expressions.....	20
3.16	Searching Files by the File Name Length	21
3.17	Searching Files by the File System Depth	21
3.18	Searching Directories.....	22
3.19	Using Multi-Level File Search Rules.....	23
3.20	Integrating VX Search With External Tools.....	24
3.21	Categorizing and Filtering File Search Results	25
3.22	File Search Statistics and Pie Charts	27
3.23	Showing File Search Results User Names.....	30
3.24	Categorizing and Filtering File Search Results by User Name.....	31
3.25	Performing File Management Operations	32
3.26	Saving File Search Reports	33
3.27	Saving Graphical PDF Reports	35
3.28	Exporting File Search Results to Excel Datasheets	36
3.29	Customizing File Search Reports	37
3.30	Exporting File Search Results to an SQL Database	38
3.31	Searching Network Shares Using UNC Path Names	39
3.32	Searching Files in One or More Servers	40
3.33	Searching Files in All Servers on the Network.....	41
3.34	Multi-Threaded File Search and Performance Options.....	42
3.35	Windows Shell Integration	46
3.36	Using the System Tray Icon.....	47
3.37	Advanced File Search Options	48
3.38	Excluding Subdirectories from File Search	49
3.39	Excluding Specific Files from File Search.....	50
3.40	Automatic Report Generation	51
3.41	Sending E-Mail Notifications.....	52
3.42	Sound Notifications.....	53
3.43	Customizing VX Search GUI Application.....	54
3.44	VX Search Configuration Options.....	55
3.45	Using VX Search Command Line Utility.....	58
3.46	Product Update Procedure	60
3.47	Product Registration Procedure	61
4	Using Server Product Version.....	62
4.1	VX Search Server Overview	62
4.2	Product Installation Procedure	63
4.3	Using VX Search Client GUI application	64
4.4	Batch File Search Operations	65
4.5	Using Built-In Disk Space Monitor.....	66
4.6	Using Web Based Management Interface.....	68
4.7	Quick File Search Operations	69
4.8	Managing File Search Commands	70
4.9	Searching Files by Category.....	71

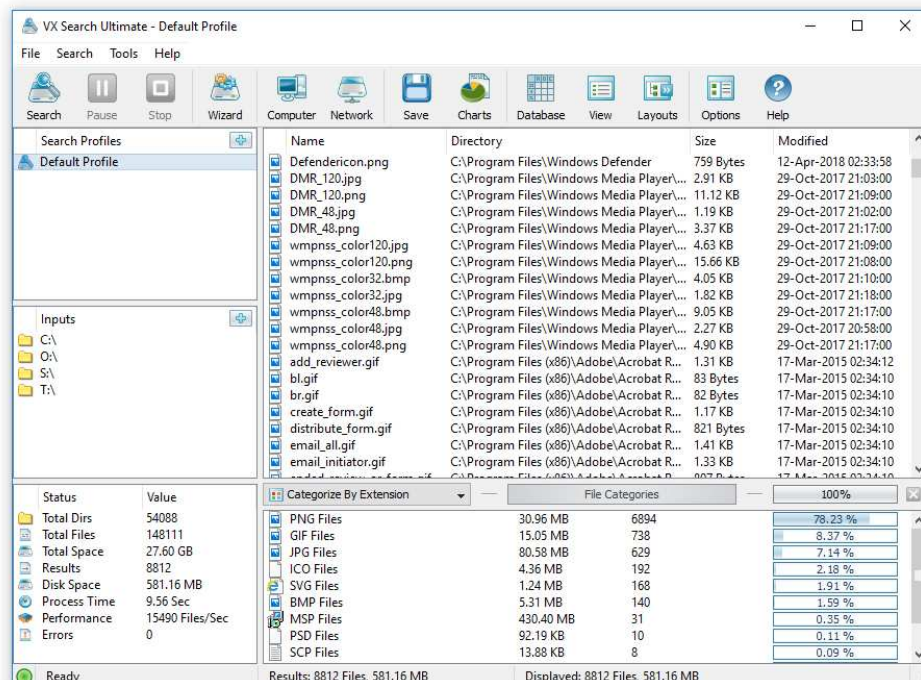
4.10	Searching Files by Name	72
4.11	Searching Files by Size	72
4.12	Searching Files by Date.....	73
4.13	Searching Files by Text Strings	74
4.14	Searching Files by Binary Patterns.....	74
4.15	Searching Files by File Attributes.....	75
4.16	Searching Files by User	76
4.17	Searching JPEG images by EXIF tags	76
4.18	Searching Files Using Regular Expressions.....	77
4.19	Using Multi-Level File Search Rules	78
4.20	Excluding Directories from the File Search Process	79
4.21	Reviewing File Search Results	80
4.22	File Search Reports.....	82
4.23	Automatic File Search Actions	84
4.24	Periodic File Search Operations	85
4.25	Searching Files in Network Shares	86
4.26	Configuring VX Search Server	87
4.27	Configuring Custom User Name and Password	87
4.28	Configuring Custom Server Ports.....	88
4.29	Configuring E-Mail Notifications.....	88
4.30	Configuring SQL Database Integration	89
4.31	VX Search Server Command Line Utility	90
4.32	Updating VX Search Server.....	92
4.33	Registering VX Search Server	93
4.34	VX Search Enterprise OEM Version	94
5	Appendix.....	95
5.1	Installing MySQL Database	95
5.2	Configuring MySQL Database.....	100
5.3	Configuring MySQL ODBC Data Source.....	101
5.4	Configuring VX Search Database Connection.....	102
5.5	Supported Operating Systems.....	103
5.6	System Requirements.....	103

1 Product Overview

VX Search is an automated, rule-based file search solution allowing one to search files by the file type, category, extension, file name, file size, location, creation, modification and last access dates, regular expressions, user name, file attributes, binary and text patterns, JPEG EXIF tags, etc.

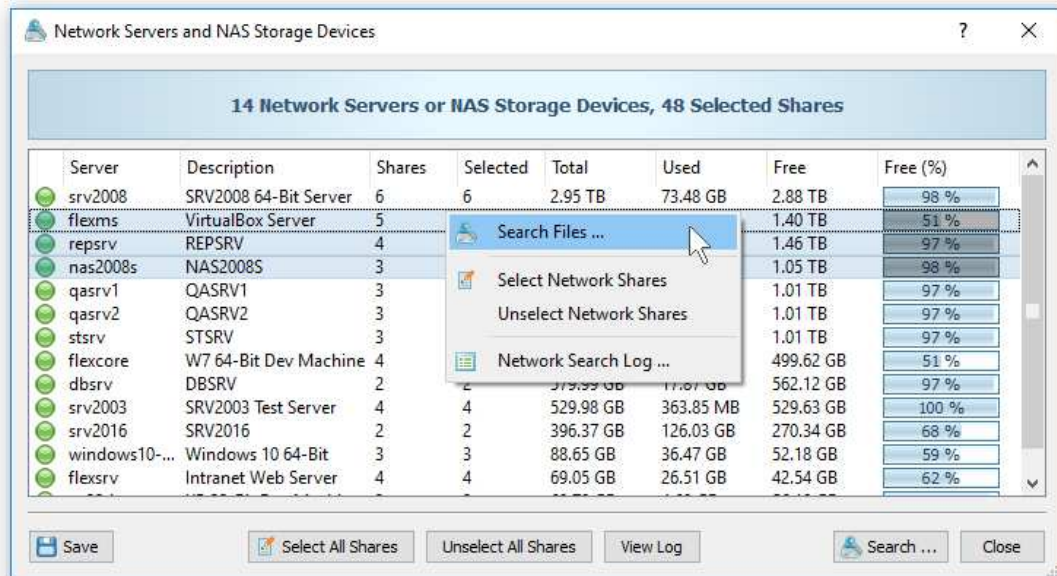


The user is provided with the ability to categorize and filter file search results, perform file management operations, generate various types of pie and bars charts, save reports to a number of standard formats such as HTML, PDF, Excel, text, CSV, XML and export search results to an SQL database.

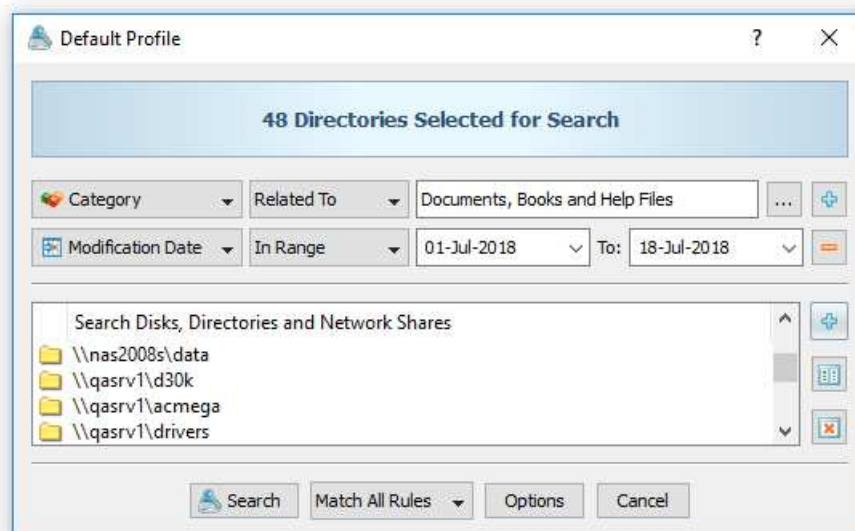


IT administrators are provided with advanced file search capabilities including the ability to search files in multiple servers and/or NAS storage devices simultaneously, periodic file search operations, automatic report generation, conditional file search actions allowing one to send E-Mail notifications and/or execute custom commands when a file search operation finds a user-specified number of files.

VX Search allows one to scan the network, discover network servers and NAS storage devices, automatically detect all accessible network shares and search 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 search files in one or more servers or NAS storage devices, press the 'Network' button located on the main toolbar and wait while VX Search 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 'Search' button.



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

In addition to the VX Search GUI application, the user is provided with a command line utility, which can be used to execute pre-configured file search operations and integrated into user-custom shell scripts and batch files. The VX Search command line utility may be used to execute file search operations locally or control file search operations in one or more VX Search Servers via the network.

```

c:\Program Files\VX Search Ultimate\bin>vxsearch -search *.jpg -dir "C:\Program Files"

VX Search Version 11.0.26 (Jul 17 2018)

Operation Successfully Completed

Date           - 2018/07/18
Time           - 12:14:16
Results        - 6
Disk Space     - 82.90 KB
Total Dirs     - 467
Total Files    - 2564
Total Space    - 1.03 GB
Performance    - 11708 Files/Sec
Process Time   - 219 ms.
Command Name   - File Search
Host Name      - Windows10-64
User Name      - alex-s
Input Dirs     - c:\program files

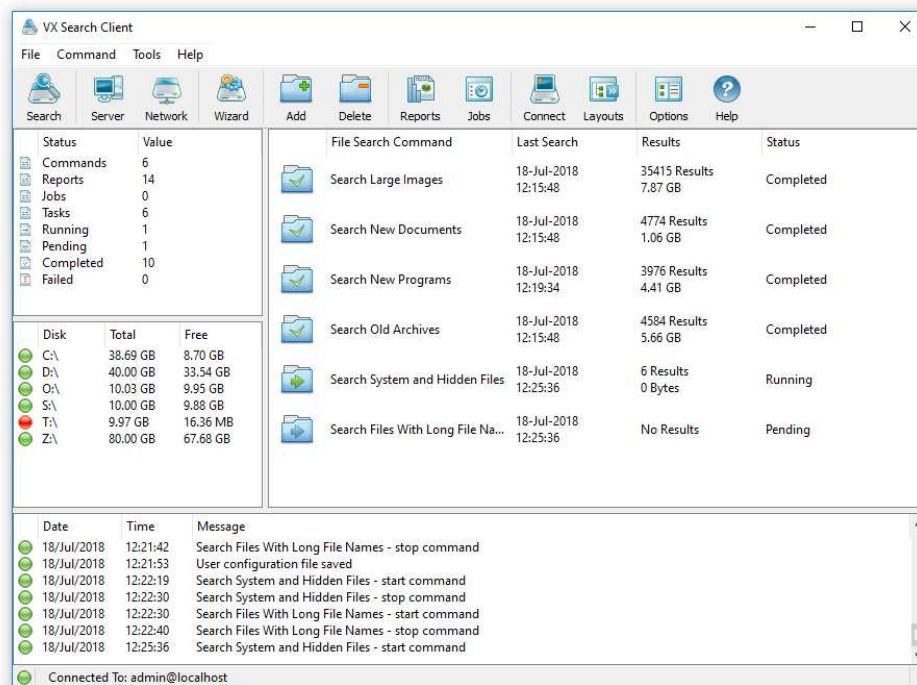
Search Results:

C:\program files\MySQL\MySQL Server 5.1\loginhdr.jpg
C:\program files\Windows Media Player\Media Renderer\DMR_120.jpg
C:\program files\Windows Media Player\Media Renderer\DMR_48.jpg
C:\program files\Windows Media Player\Network Sharing\wmpnss_color120.jpg
C:\program files\Windows Media Player\Network Sharing\wmpnss_color32.jpg
C:\program files\Windows Media Player\Network Sharing\wmpnss_color48.jpg

c:\Program Files\VX Search Ultimate\bin>

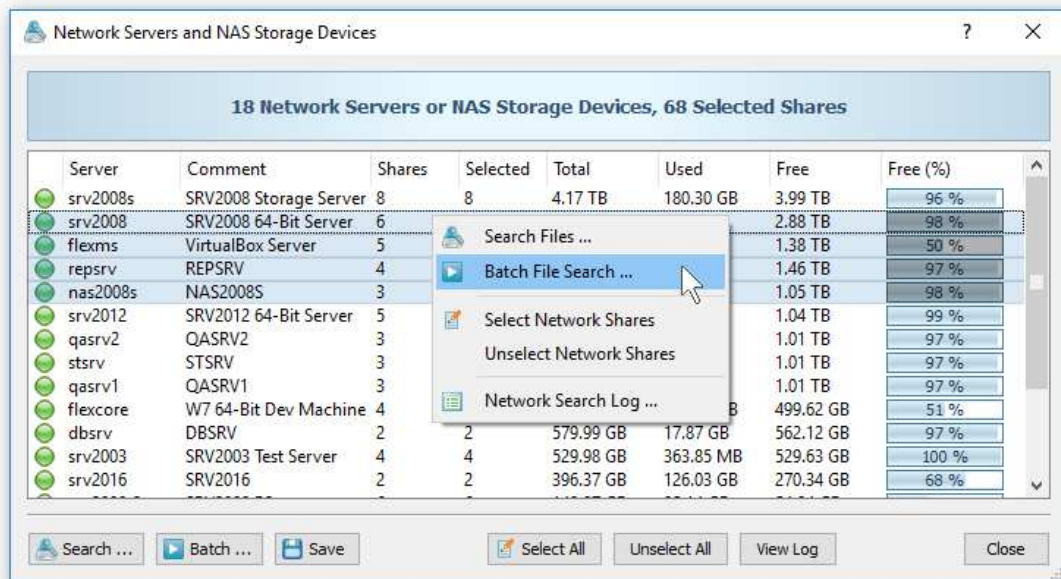
```

IT and storage administrators are provided with the server product version, which runs in the background as a service and provides the ability to perform fully-automated, periodic file search operations, generate various types of file search reports, analyze file search results and execute conditional actions based on user-defined rules and policies.

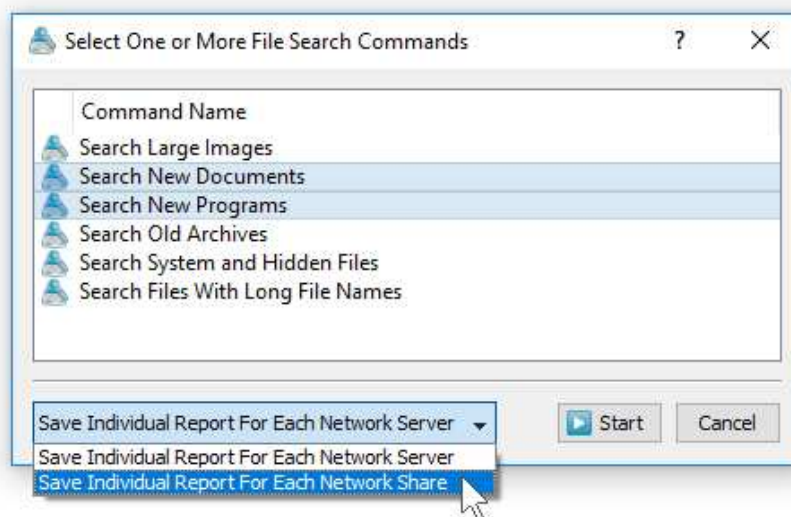


VX Search Server may be controlled using a full-scale client GUI application and the command line utility, which provides the ability to perform file search operations, review results and save reports locally and through the network. Finally, enterprise customers are provided with VX Search Enterprise - a server-based product version allowing one to perform search operations, review results and save reports using a regular web browser locally or through the network.

VX Search Server and VX Search Enterprise provide the ability to scan the network, detect all network servers and NAS storage devices, execute one or more pre-configured file search commands on hundreds of network servers and NAS storage devices and generate an individual file search 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 Search' menu item. VX Search will show a list of pre-configured file search 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, VX Search Server will save in the built-in reports database an individual file search report for each network server, NAS storage device or network share. Once the batch file search operation is completed, the user will be provided with the ability to open saved file search reports, review file search results, generate various types of pie charts and export reports to a number of standard formats including HTML, PDF, text, Excel CSV and XML.

2 VX Search Product Versions

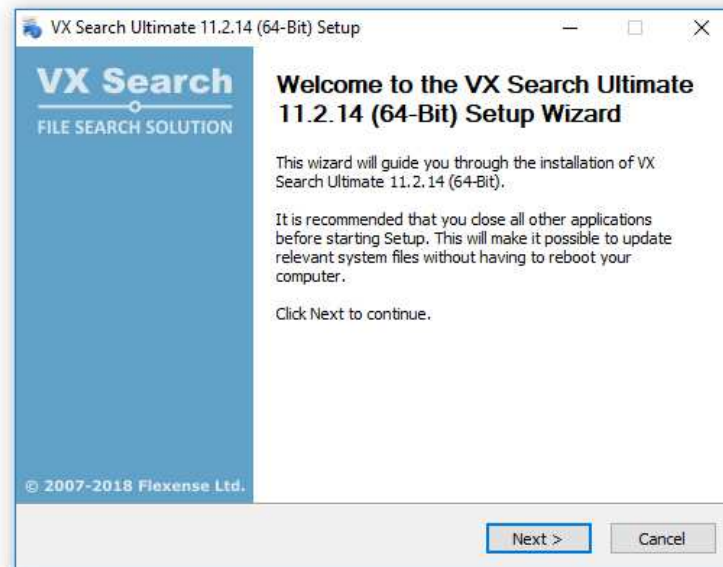
Features	Free	Pro	Server	Enterprise
Maximum Amount of Disk Space	2 TB	25 TB	100 TB	Unlimited
Maximum Number of Files	1 M	25 M	100 M	Unlimited
Maximum Number of Input Directories	10	25	100	Unlimited
Maximum Number of Search Profiles	3	25	100	Unlimited
Support for Unicode File Names	Yes	Yes	Yes	Yes
Support for Long File Names	Yes	Yes	Yes	Yes
Support for UNC Network Path Names	Yes	Yes	Yes	Yes
File Management Operations on Results	Yes	Yes	Yes	Yes
HTML, PDF, Text, CSV and XML Reports	Yes	Yes	Yes	Yes
Multi-Threaded File Search	Yes	Yes	Yes	Yes
Support for System Tray Icon	Yes	Yes	Yes	Yes
Multiple Types of File Search Rules	Yes	Yes	Yes	Yes
Support for ACLs and Security Attributes	No	Yes	Yes	Yes
Multi-Level File Search Rules	No	Yes	Yes	Yes
SQL Database Integration	No	Yes	Yes	Yes
Automatic Report Generation	No	Yes	Yes	Yes
Conditional File Search Actions	No	Yes	Yes	Yes
Command Line Utility	No	Yes	Yes	Yes
Runs in the Background as a Service	No	No	Yes	Yes
Periodic File Search Operations	No	No	Yes	Yes
VX Search Client GUI Application	No	No	Yes	Yes
Built-In Disk Space Monitor	No	No	Yes	Yes
Batch File Search Operations	No	No	No	Yes
Web-Based Management Interface	No	No	No	Yes
Support For Multi-User Configurations	No	No	No	Yes
OS Native User Authentication	No	No	No	Yes
OEM Product Version	No	No	No	Yes
License	Free	\$125	\$450	\$850

* Prices, product features and license terms are subject to change without notice.

3 Using Desktop Product Versions

3.1 Product Installation Procedure

All versions of VX Search may be freely downloaded from the <http://www.vxsearch.com> web site. The free product version does not contain any malware, spyware or any other harmful software components, but the free product version can be used for personal purposes only. Commercial product versions are available for a free 30-days trial.



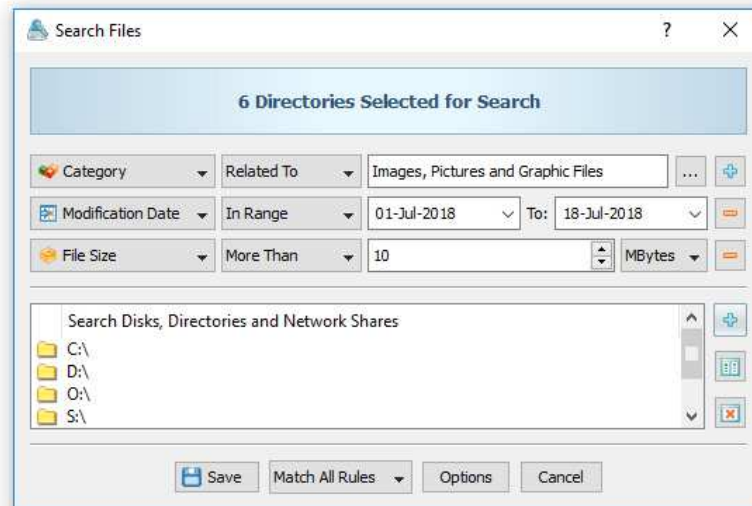
The product installation procedure is very simple and does not require any third party software components. Just run the setup program, accept the end-user license, select the destination directory and wait about 10 seconds for the installation procedure to complete.



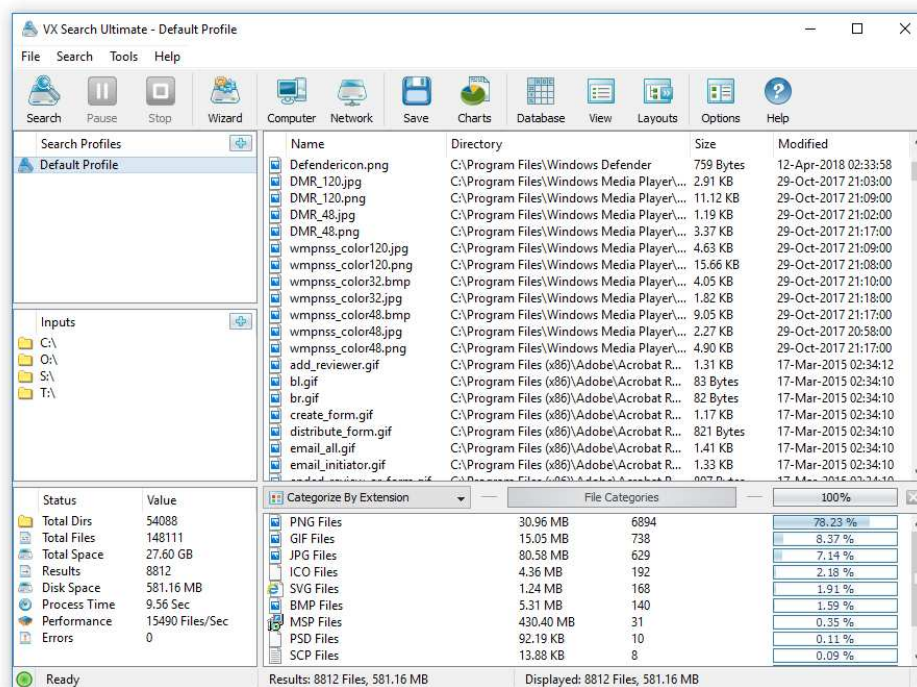
Product updates are released almost every month and if the computer where the product is installed on is connected to the Internet, select the 'Help - Check For Updates' menu item to update the installed product version. If the computer is not connected to the Internet, download the regular setup program for a new product version and just install it on the top of the currently installed product version and it will perform a proper update procedure.

3.2 Searching Files in Disks or Directories

VX Search provides multiple ways to search files ranging from simple file name wildcards to complex sets of multi-level file matching rules capable of searching files using multiple criteria combined with logical operators. In the simplest, case press the 'Search' button located on the main toolbar, enter a file name wildcard and one or more disks or directories to search in.



For more advanced search capabilities, press the 'Advanced Search' button, add one or more file matching rules and select an appropriate logical operator. VX Search provides a large number of file matching rules capable of searching files by the file type, category, file name, extension, location, size, creation, modification and last access dates, user name, file attributes, JPEG EXIF tags, etc.



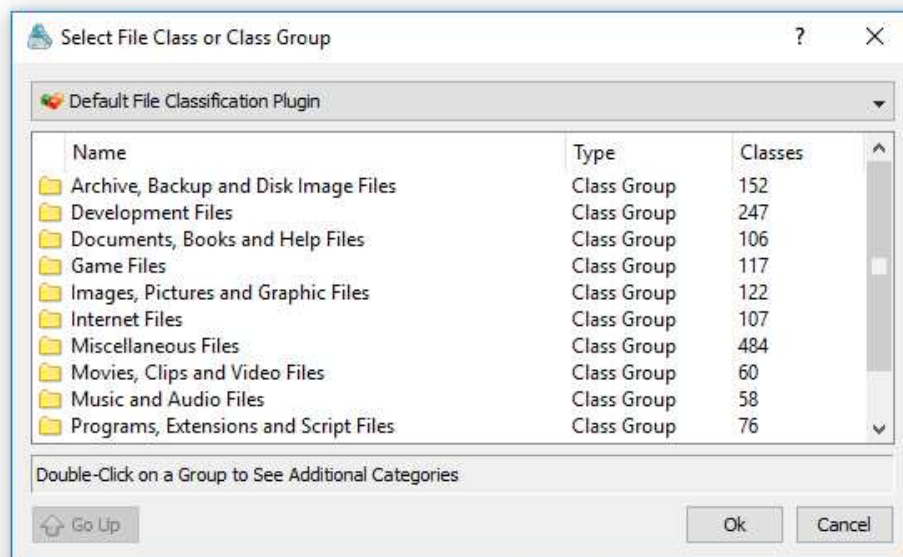
Once finished adding file matching rules, press the 'Search' button to start the search operation. The main VX Search GUI application shows file search results and allows one to categorize and filter results, export reports, generate pie and bars charts and much more.

3.3 Searching Files by Category

One of the most powerful capabilities of VX Search is the ability to search files by the file type or category using an extensive set of file classification plugins capable of recognizing more than 3,500 types of files. In order to search files related to a category, select the 'Search Files Categorized As' file matching rule and press the 'Select' button to select an appropriate file category.



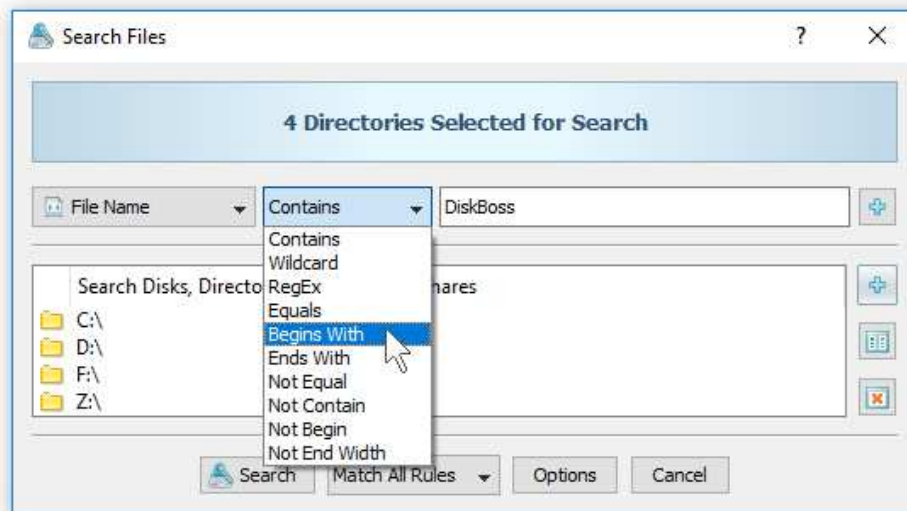
All file categories are organized into a logical hierarchy with multiple subcategories, groups and file classes. Select a file classification plug-in and browse the hierarchy of file categories to select an appropriate file type. For example, select the 'Images, Pictures and Graphic Files' category to find all types of images and picture files. This is especially useful when the user needs to find multiple types of files, but does not know all the required file extensions.



If the selected file category contains a number of subcategories, files related to any of the selected subcategories will be displayed in the search results. A number of file categories may be added using multiple file matching rules combined with a logical (AND, OR) operator. Finally, power computer users and IT administrators may design custom file classification plugins with user-specific file categories and hierarchies using a simple XML-based format and use these custom file categories in file search operations.

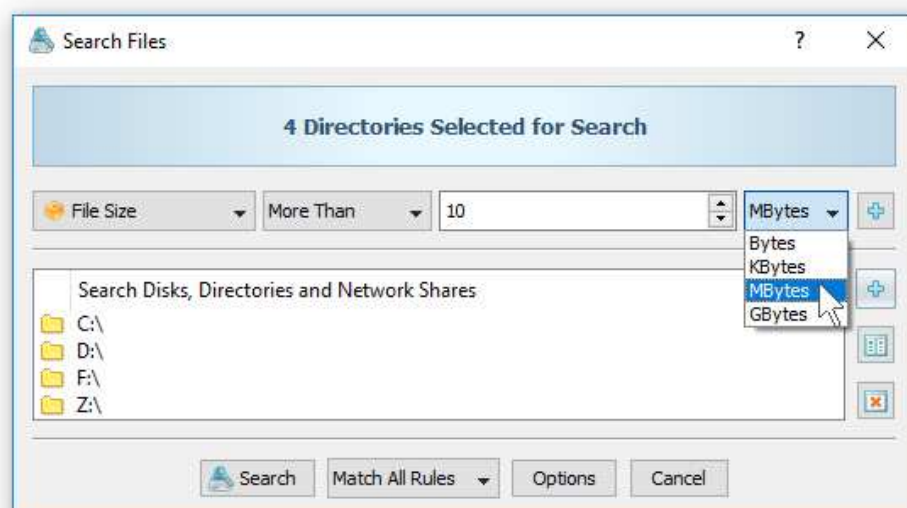
3.4 Searching Files by Name

VX Search allows one to search files by the file name, location, extension, full file name including the full path, the name of the directory without the path and file name and the file name without extension. There are a number of positive and negative pattern matching operators providing the user with the ability to match text patterns located at different places of the file name and allowing one to define precise file matching rules.



3.5 Searching Files by Size

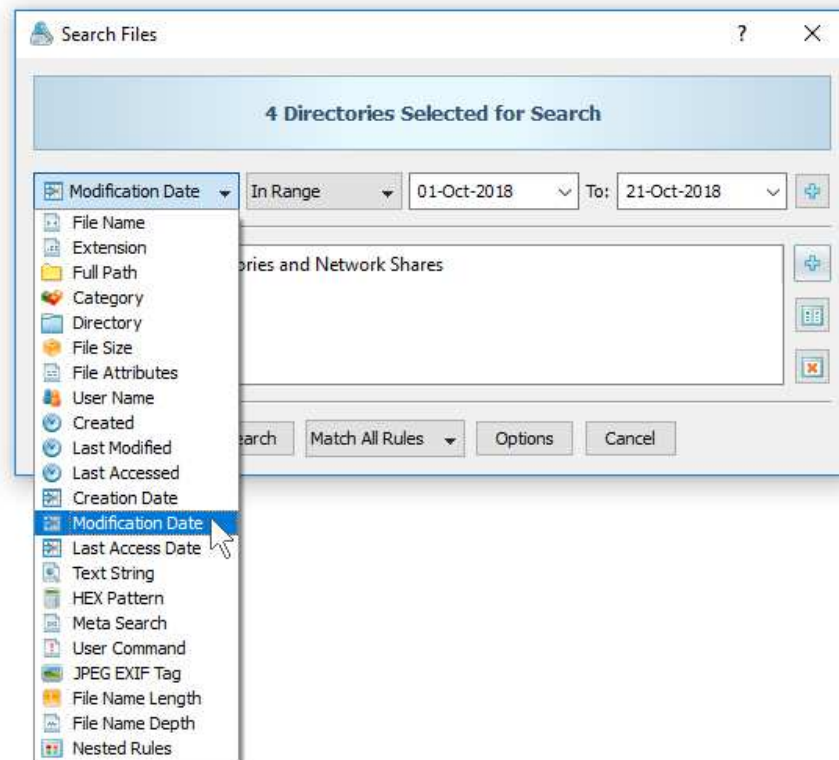
The user is provided with the ability to search files by the file size using multiple comparison operators and size units. This file matching rule is very useful when combined with file categories to search files matching multiple different criteria.



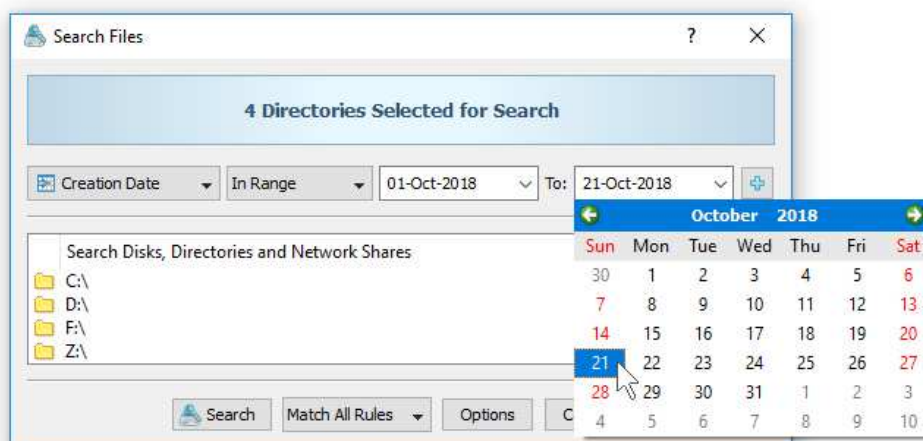
For example, VX Search allows one to find all pictures and images with the file size greater than X MB. The size-based file matching rule may be combined with other types of file matching rules allowing one to find files exactly matching user needs and requirements.

3.6 Searching Files by Date

VX Search provides a set of file matching rules allowing one to search files by the creation, modification and last access dates. The set of date-based file matching rules provides the ability to search files created, last modified or last accessed on a specific date, older or newer than a specific date. In addition, the user is provided with the ability to search files created, last modified or last accessed between user-specified dates.



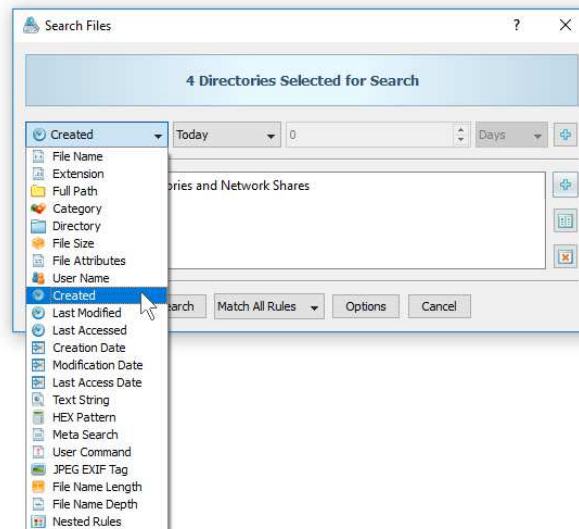
For example, in order to search files which were created before 1-Jan-2016, set the file search rule type to 'Creation Date', set the operator to 'Older Than' and set the date to 1-Jan-2016. In a similar way, the user can search files that were created before the specified date or exactly on the user-specified date.



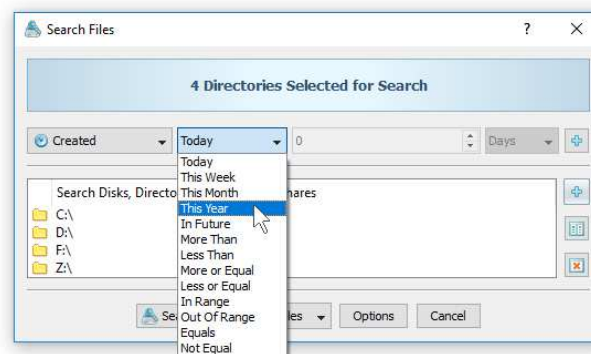
Finally, the user is provided with the ability to search files created, last modified or last accessed within a user-specified range of dates. For example, in order to search files that were created between two dates, set the rule operator to 'Creation Date', set the operator to 'In Range', enter the start date and enter the end date.

3.7 Searching Files by Time

In addition to the file matching rules capable of searching files by user-specified dates, VX Search provides an additional set of file matching rules allowing one to search files by relative periods of time. For example, the user can search files that were created, last modified or last accessed during the last X years, months, days, hours, minutes or seconds.



The relative time-based rules are useful when the user needs stable periods of time not changing and keeping valid as the time passes by. For example, a file matching rule searching files that were modified during the last 7 days is always valid disregarding of the current date.

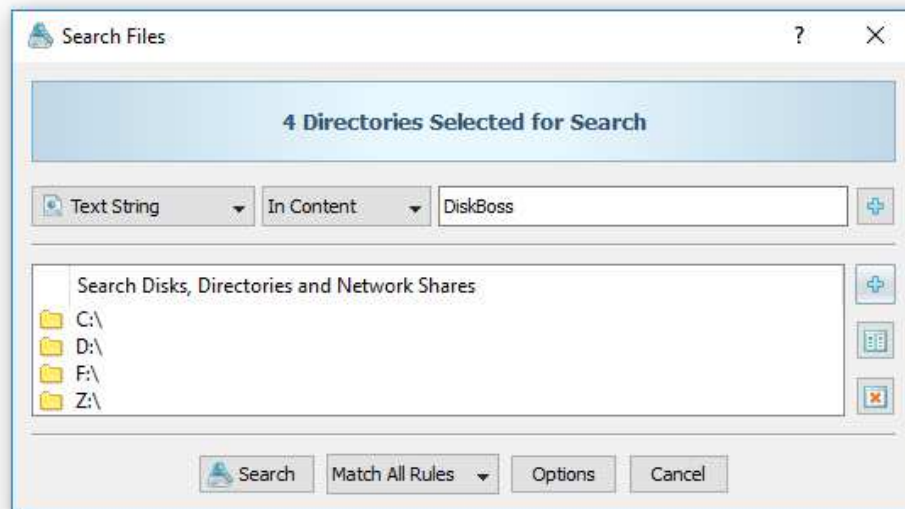


The time-based file matching rules provide a number of pre-configured operators allowing one to search files that were created, last modified or last accessed today, during this week, during this month or during this year. In addition, there are a number of standard comparison operators and time range operators. Finally, the user is provided with the ability to search files with the creation, last modification or last access timestamps set to a future time.



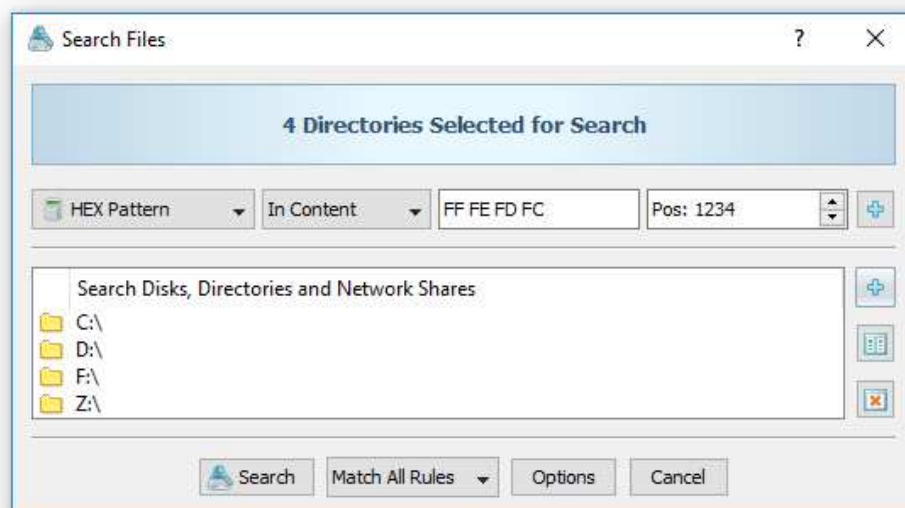
3.8 Searching Files by Text Patterns

VX Search provides a file matching rule capable of searching files containing or not containing a user-specified text pattern. In order to match files by a text pattern, select the 'Search Files Containing Text' file matching rule, select an appropriate text matching operator and enter a text pattern to search for.



3.9 Searching Files by Binary Patterns

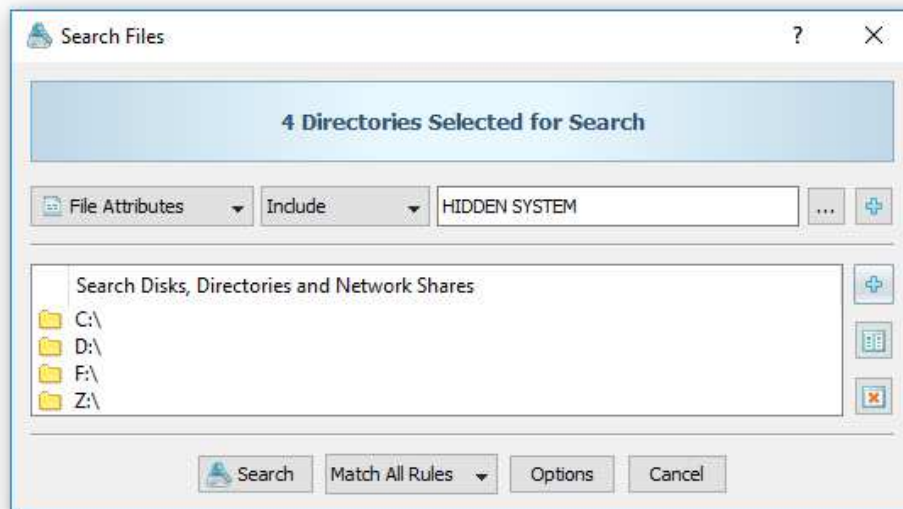
Power computer users and IT administrators are provided with a binary pattern file matching rule, which is capable of searching files by binary patterns located at specific places inside of files. In order to add a binary file matching rule, select the 'Search Files Containing HEX Pattern' rule, select an appropriate pattern matching operator, enter the HEX pattern to search for and enter the position inside of the file where the binary pattern should be found at.



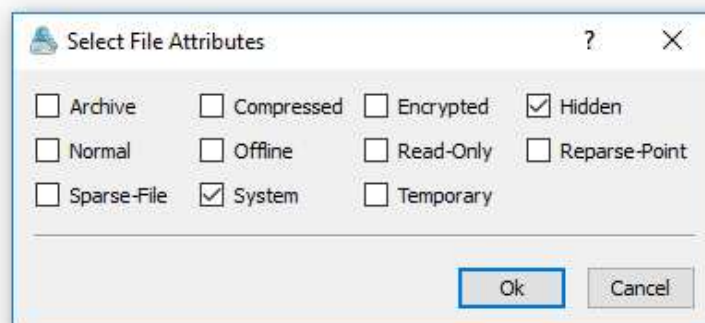
The binary pattern file matching rule is very useful when the user needs to detect specific file formats containing format-specific signature patterns at designated positions. Multiple binary pattern rules may be combined with logical operators to detect files containing multiple patterns at different positions. The pattern should be specified as a string of HEX characters with two characters per byte delimited with the space character. The position should be specified as an absolute offset from the beginning of the file.

3.10 Searching Files by File Attributes

Sometimes, it may be required to search files by file attributes. For these purposes, VX Search provides the file attributes file matching rule. Select the 'Search Files With the File Attributes' file matching rule, select an appropriate attribute matching operator and press the 'Select' button to select the attributes to be checked.



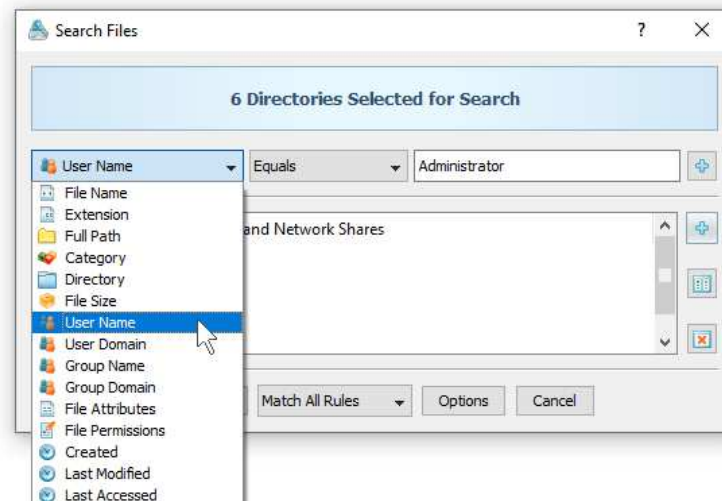
On the attributes select dialog, check all the attributes that should be tested and press the 'Ok' button. When the operator is set to 'Having Attributes', VX Search will search files having all the selected file attributes. Otherwise, VX Search will search files having none of the selected file attributes.



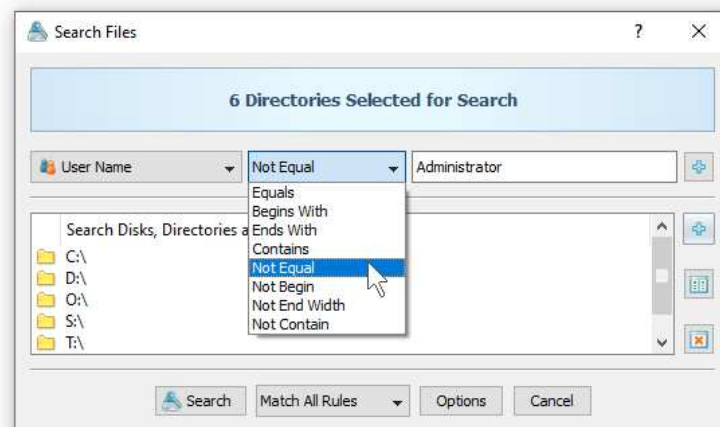
The negative operator is especially useful when the user needs to find all files related to a specific file category, but skip all protected system and hidden files. The attributes file matching rule may be combined with other types of file matching rules allowing one to precisely select the required files.

3.11 Searching Files by User Name

Advanced computer users and IT administrators are provided with the ability to search files by the user name, user domain, primary user group and group domain. Select the 'Search Files With the User Name' file matching rule, select an appropriate text matching operator and enter the user name to search for.



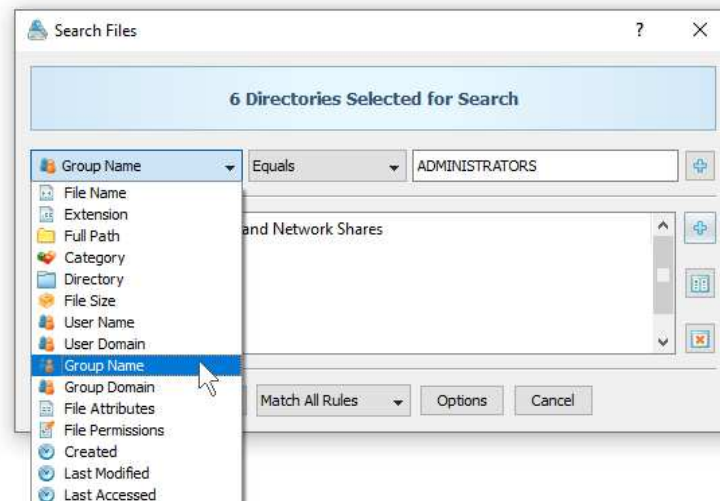
The entered text pattern is case insensitive and it may be matched exactly or at different places inside of the user name using different types of the text matching operator. For example, in order to search for all files owned by the computer Administrator, select the 'User Name' rule, set the rule operator to 'Equal' and enter 'Administrator' to the text entry.



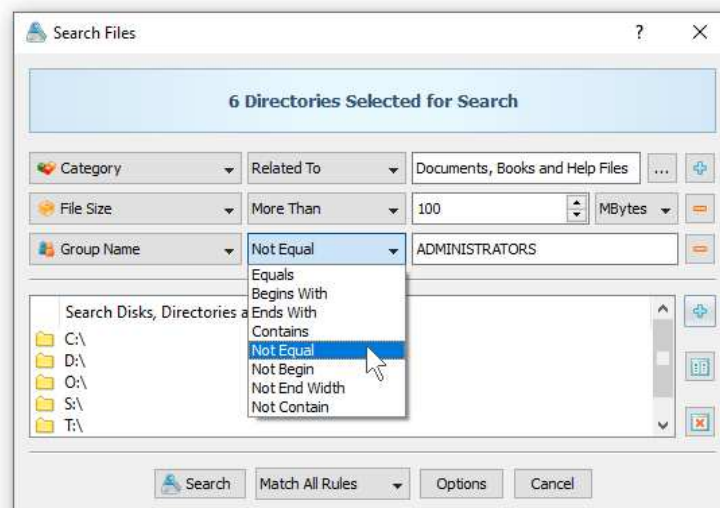
Another option is to use a negative search rule operator to search files not owned by the specified user. For example, in order to search files owned by any regular user, but not by the computer Administrator, set the rule operator to 'Not Equal' and enter 'Administrator' to the text entry.

3.12 Searching Files By User Group

In addition, IT administrators are provided with the ability to search files by the primary user group. For example, in order to search files owner by all administrators, set the search rule type to 'Group Name', set the search operator to 'Equals', set the rule value to 'ADMINISTRATORS' and press the 'Search' button.



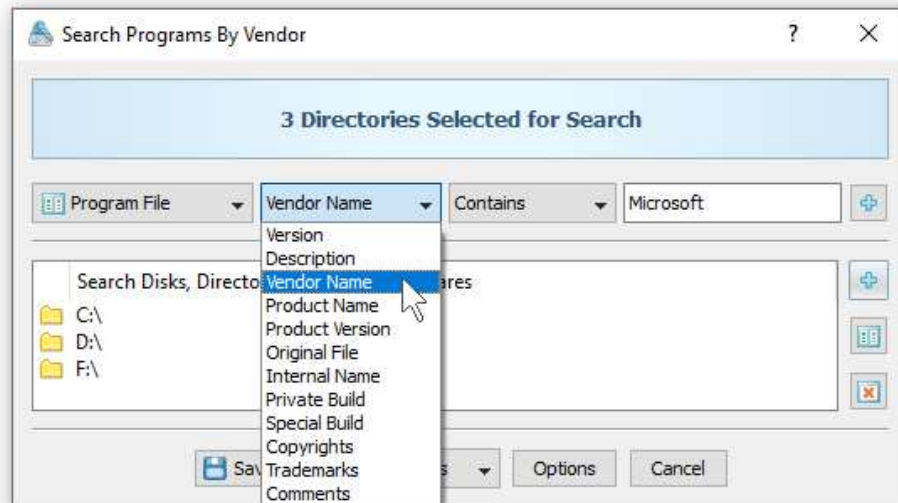
One of the most powerful capabilities of the VX Search file matching rules, is the ability to combine different types of rules to precisely search for the required files. For example, in order to search for all types of large documents owned by regular users, but not by Administrators, add a rule to match all types of documents, add a second rule to match files by the file size, add a third rule to match files with the primary user group not equal to 'ADMINISTRATORS' and then set the rules logic to 'Match All Rules'.



During the file search operation, VX Search will apply the file matching rules according to the specified rules order and rules logic. For example, if the rules logic is set to 'Match All Rules', VX Search will apply the rules until the first not matching rule and the rest of the rules will be skipped. On the other hand, if the rules logic is set to 'Match Any Rule', the rules will be applied until the first matching rule and the rest of the rules will be skipped.

3.13 Searching Programs By Version Information

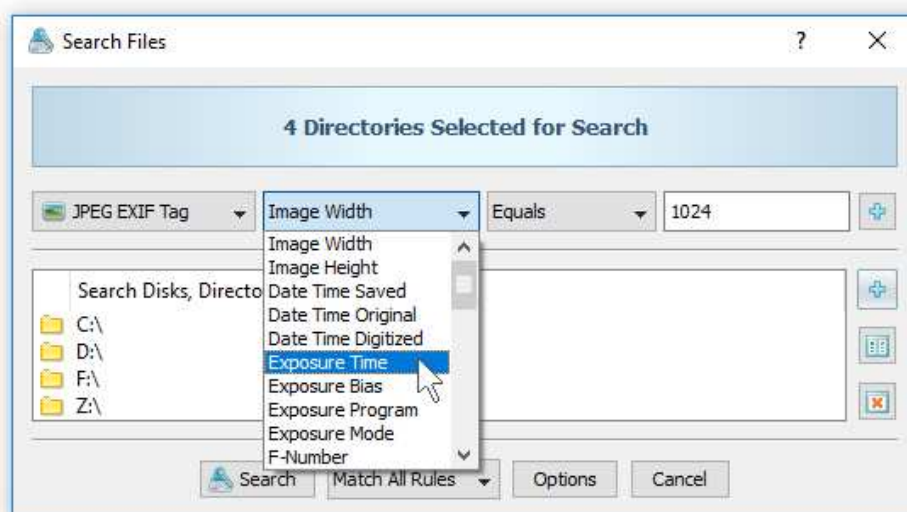
VX Search provides the ability to search program files and DLL library files by the file version, file description, vendor name, product name, product version, original file name, internal file name, build number, copyright information and comments added by the software vendor of program files and DLL libraries.



For example, in order to search for all programs and DLL libraries developed by Microsoft, set the rule type to 'Program File', set the rule mode to 'Vendor Name', set the rule operator to 'Contains', set the rule value to 'Microsoft' and press the 'Search' button.

3.14 Searching JPEG images by EXIF tags

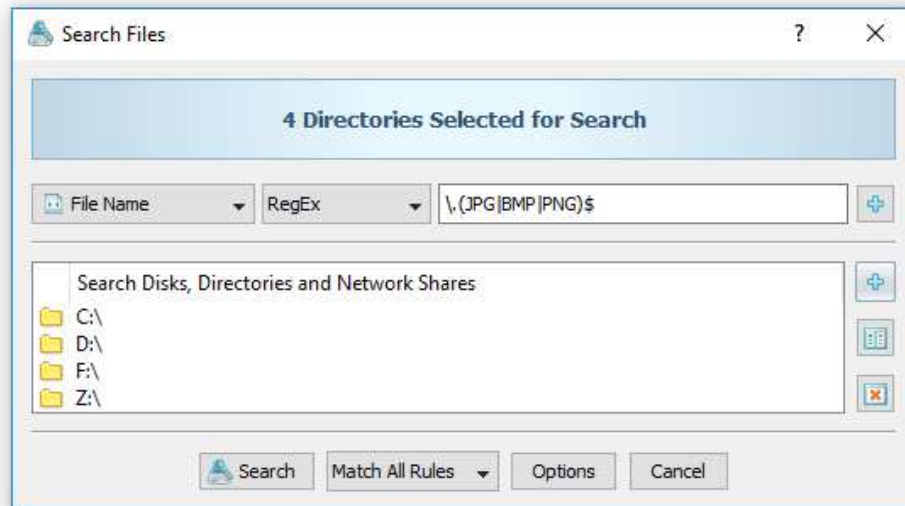
All JPEG images include a set of EXIF tags containing various information about the camera and the imaging mode used to take the picture. In addition, the EXIF tags may contain custom fields with proprietary information related to the subject displayed in the picture. VX Search allows one to search JPEG images using standard and custom JPEG EXIF tags.



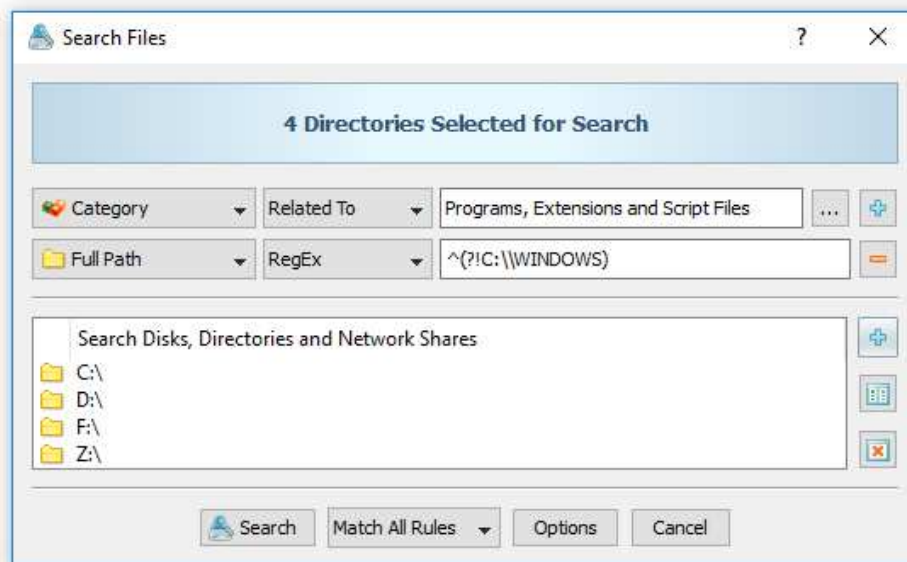
In order to search JPEG images by EXIF tags, select the 'Search JPEG Images With EXIF Tag' file matching rule, select the tag to be checked, select an appropriate text matching operator and enter a text or numeric value to search for.

3.15 Searching Files Using Regular Expressions

Regular expressions provide a flexible and powerful way to match text patterns in file names and directories. VX Search provides RegEx pattern matching operators for the file name search rule and the file path search rule.



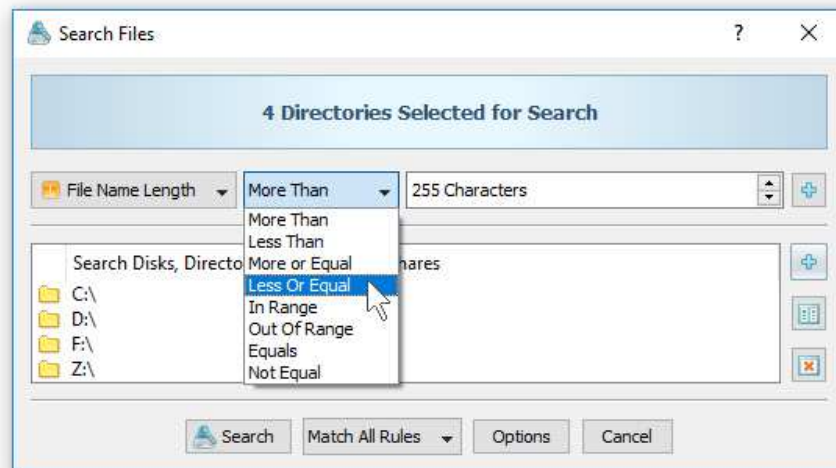
In order to search files using a regular expression, select the 'File Name' file matching rule, select the 'RegEx' pattern matching operator and enter a regular expression that should be matched. For example, the '\.(JPG|BMP|PNG)\$' regular expression will match all JPG, BMP and PNG image files.



Regular expressions may be combined with other types of file matching rules allowing one to match a very specific set of files. In addition to the ability to match files using regular expressions, VX Search allows one to exclude files using regular expressions. For example, in order to search all programs and executable files while excluding files located in the Windows directory, use the regular expression '^(!C:\\WINDOWS)' applied to the 'Full Path' file matching rule.

3.16 Searching Files by the File Name Length

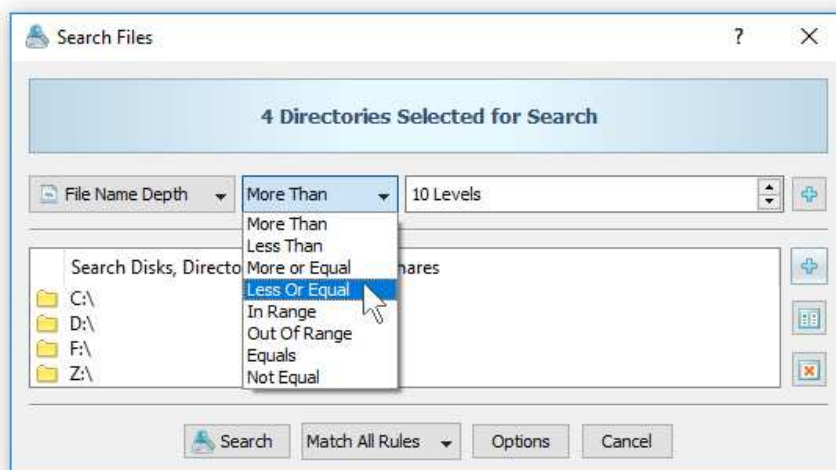
VX Search provides the ability to search files by the length of the file name allowing one to identify files with long file names, which may cause compatibility problems with some old software programs not supporting long file names. In order to search files by the length of the file name, open the file search dialog and add the 'File Name Length' search rule, select an appropriate operator and enter the number of file name characters to search for.



The 'File Name Length' rule provides a number of operators allowing one to match files with the file name length more, less, equal or not equal to a user-specified value. In addition, the user is provided with 'In Range' and 'Out Of Range' file name length operators.

3.17 Searching Files by the File System Depth

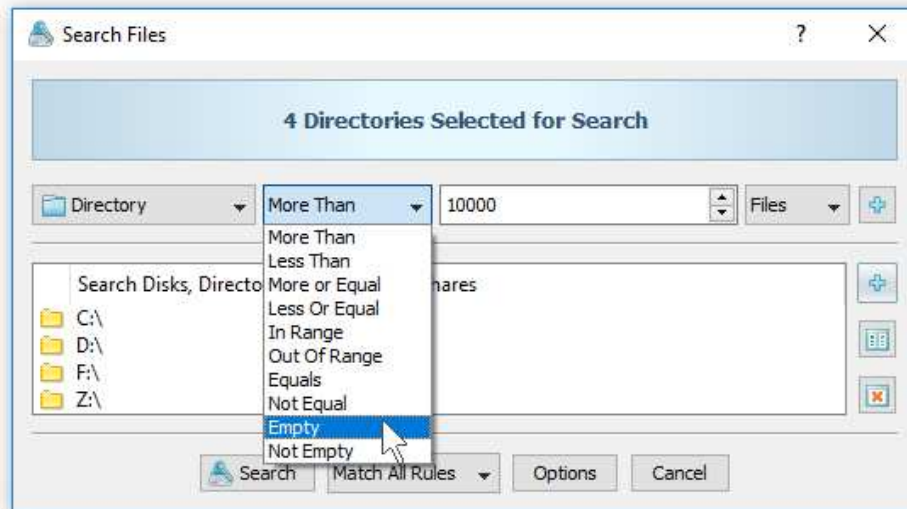
Advanced users are provided with the 'File Name Depth' search rule, which is capable of matching files by the depth of the file system. This rule may be useful when the user is required to exclude files located too deep in the file system or match files located on a very specific level in the file system.



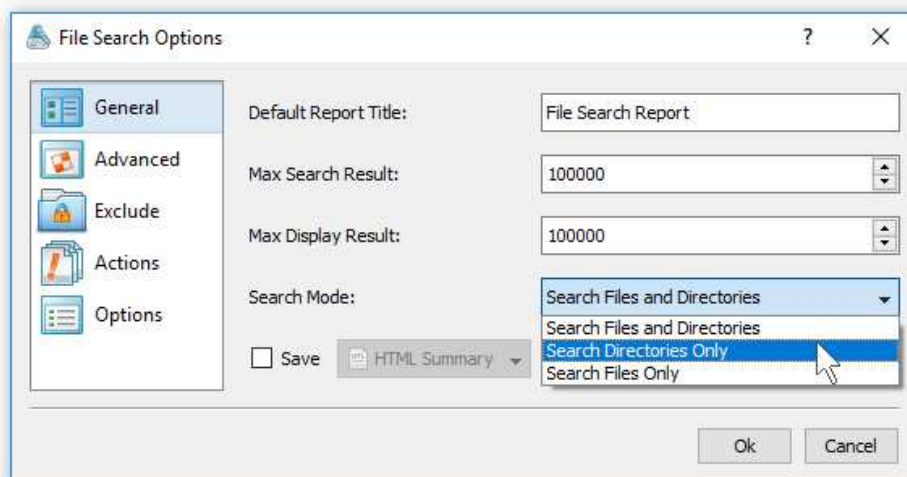
In order to search files by the depth of the file system, open the file search dialog and add the 'File Name Depth' search rule, select an appropriate operator and enter the number of file system levels to search for. The 'File Name Depth' rule provides a number of operators allowing one to match files with the file system depth more, less, equal or not equal to a user-specified value. In addition, the user is provided with 'In Range' and 'Out Of Range' file system depth operators.

3.18 Searching Directories

VX Search provides the ability to find directories by the number of files, number of subdirectories or the amount of disk space used by files located in a directory. For example, in order to find all directories containing more than 1,000 files, select the 'Directory' search rule, select the 'More Than' operator, set the rule value to 1,000 and set the rule units to 'Files'.



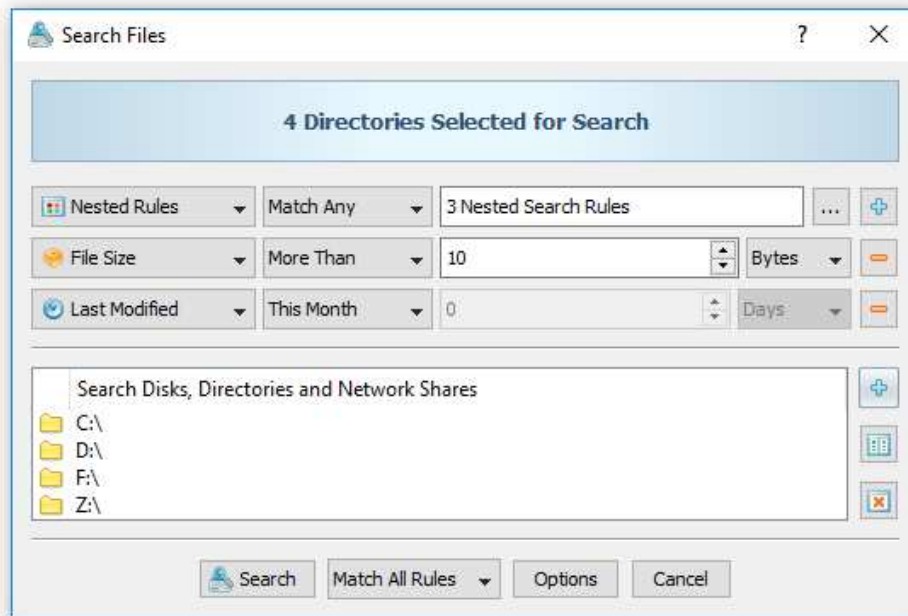
In addition to the standard operators, the 'Directory' rule provides two special operators, named 'Empty' and 'Not Empty', allowing one to easily find empty or not empty directories. During the search process, the 'Directory' rule will be applied only to directories and in order to operate properly, the command search mode should be set to 'Search Files and Directories' or 'Search Directories Only'.



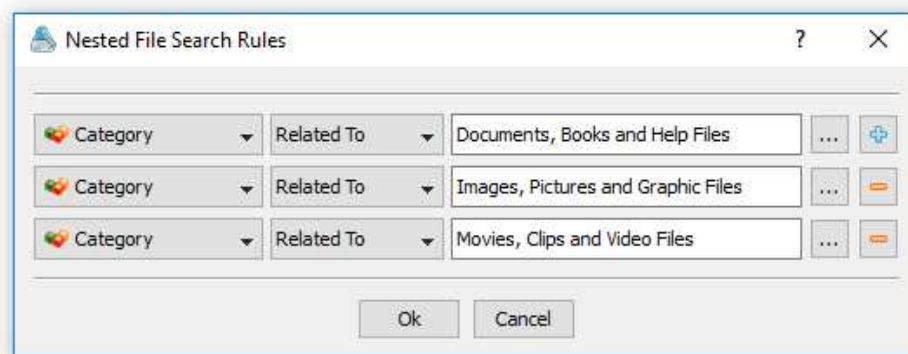
The search mode is especially useful when the user needs to find directories by the directory name and/or attributes and skip all files matching the rules from the search results. In order to search only for directories, open the search options dialog, select the 'General' tab and set the search mode to 'Search Directories Only'.

3.19 Using Multi-Level File Search Rules

Sometimes, it may be required to define multi-level, hierarchical file matching rules. For example, let's assume that we need to find files related to multiple file categories that were modified today. In order to define such a rule, open the advanced search options dialog, press the right mouse button over the list of file matching rules and select the 'Add Nested Rule List' menu item.



On the nested rules dialog, add all the required file categories, select the 'OR' logical operator and press the 'OK' button. On the advanced search dialog, press the 'Add' button, add the time-based file matching rule to find files that were modified today and select the 'AND' logical operator.

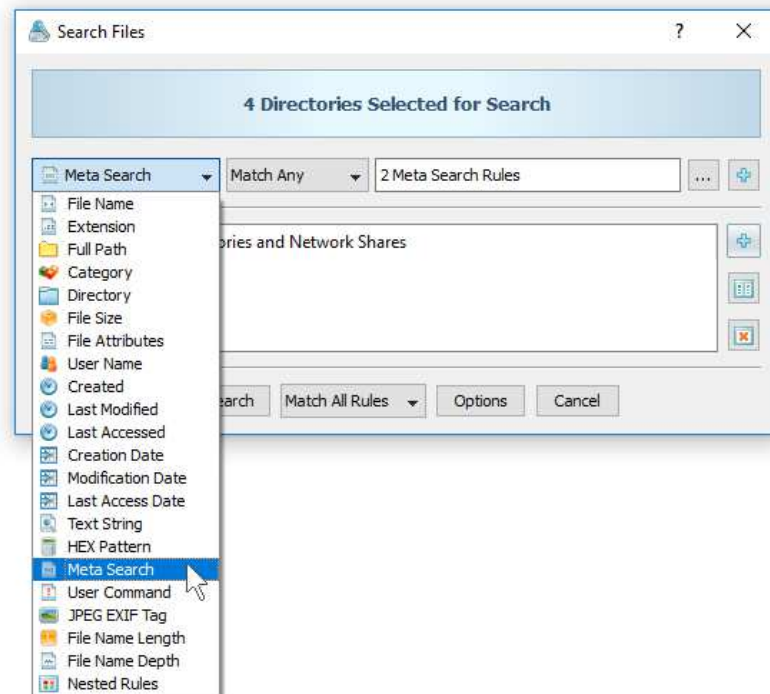


The nested rule list will match all the required file categories, while the time-based top level file matching rule will select files that were modified today. VX Search provides a fully scalable rule-based model with an unlimited number of nested levels allowing one to define sophisticated multi-level file matching rules capable of precisely searching the required files.

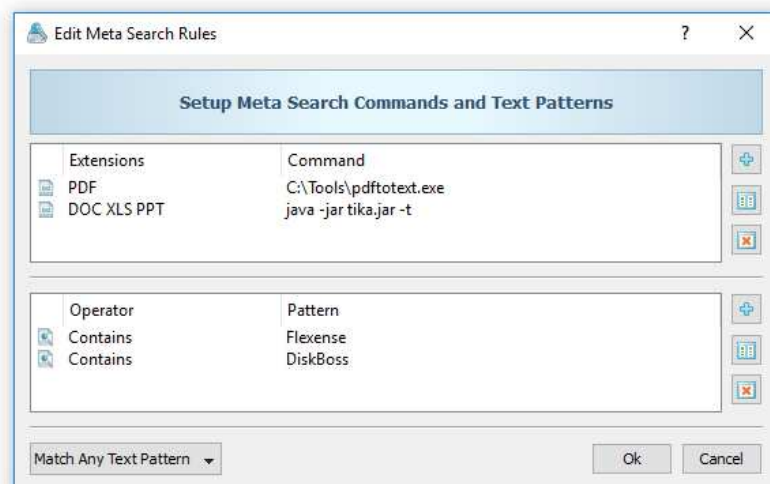
In addition, power computer users and IT administrators are provided with an XML-Based format allowing one to define custom file classifications plugins and complex search queries, which may be executed using the VX Search command line utility. Finally, the command line utility may be used to execute automated periodic file search operations, generate reports, submit search results to an SQL database or issue E-Mail notifications when a search operation finds a user-specified number of files.

3.20 Integrating VX Search With External Tools

VX Search allows one to integrate external content extraction or file format conversion tools in the file search operations. The user is provided with the ability to specify which external tools, commands or script files to execute for which file extensions and then configure one or more text patterns to search in the output generated by the configured external tools.



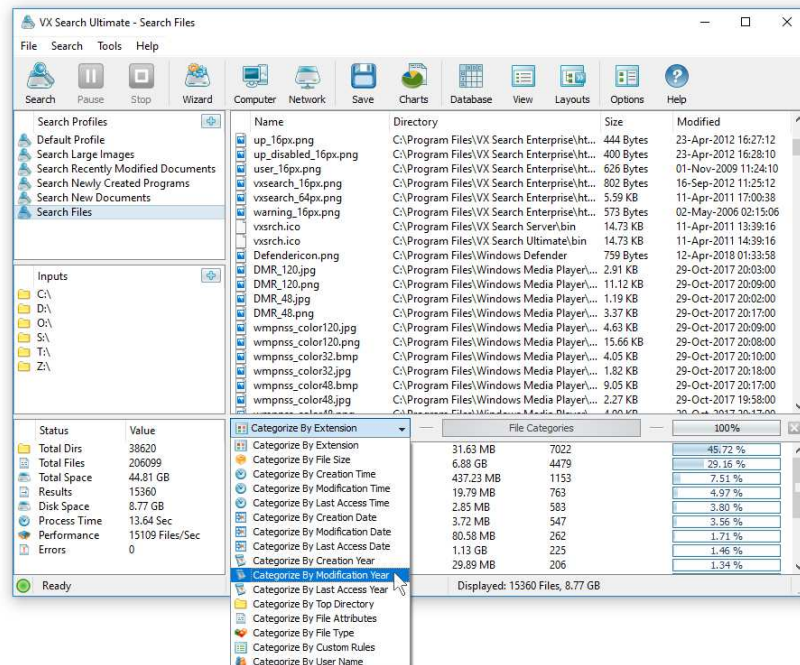
In order to configure a file search operation to use an external tool, open the search dialog, select the 'Meta Search' rule type and press the 'Edit Rule' button. On the 'Meta Search' rule dialog, press the 'Add' button in the top view and specify one or more file extensions to process and a custom command to execute for each file with the specified file extensions.



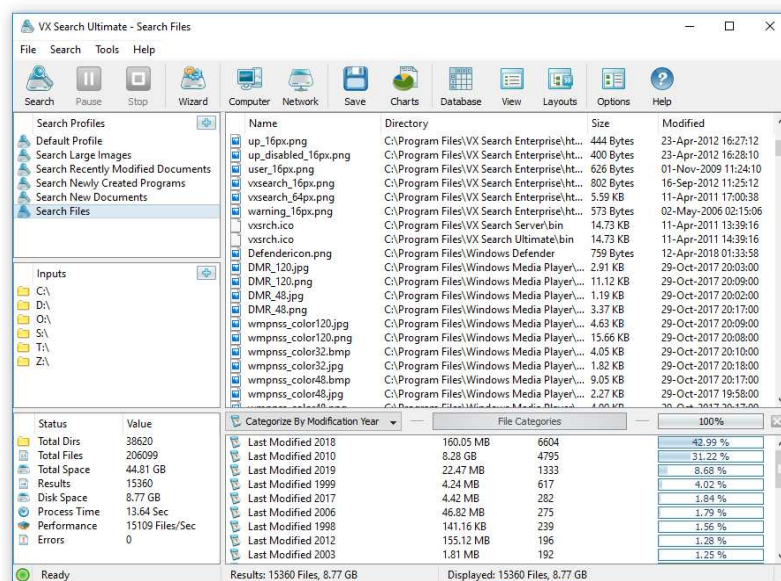
Once finished configuring file extensions and custom commands, press the 'Add' button in the bottom view and specify one or more text patterns to search in the output generated by the configured custom commands. During runtime, VX Search will scan the specified input directories, process all the existing files, execute the configured commands for each file with the specified file extensions and search for the user-specified text patterns in the output generated by the executed custom commands.

3.21 Categorizing and Filtering File Search Results

The bottom part of the main VX Search GUI application shows file categories and allows one to filter the file search results using one or more file filters. The user is provided with the ability to categorize search results by the file type, file extension, size, creation, modification and last access time and the user name. Use the categories combo box to select an appropriate file categorization mode.

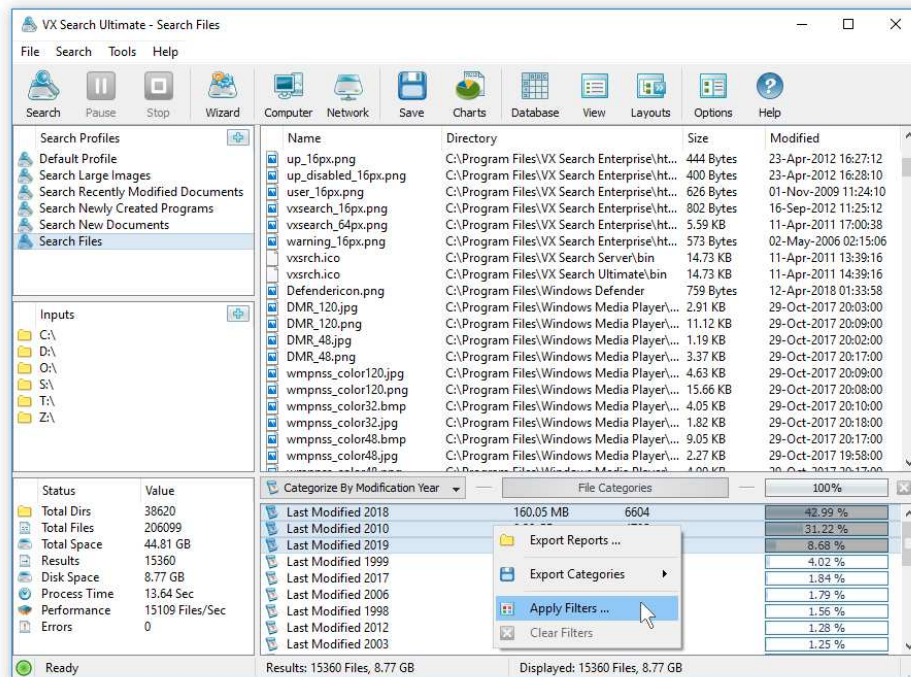


For example, in order to categorize the file search results by the modification year, click on the file categories combo box and select the 'Categorize By Modification Year' file categorization mode. VX Search will categorize the file search results and display the number of files and the amount of disk space for each modification year.

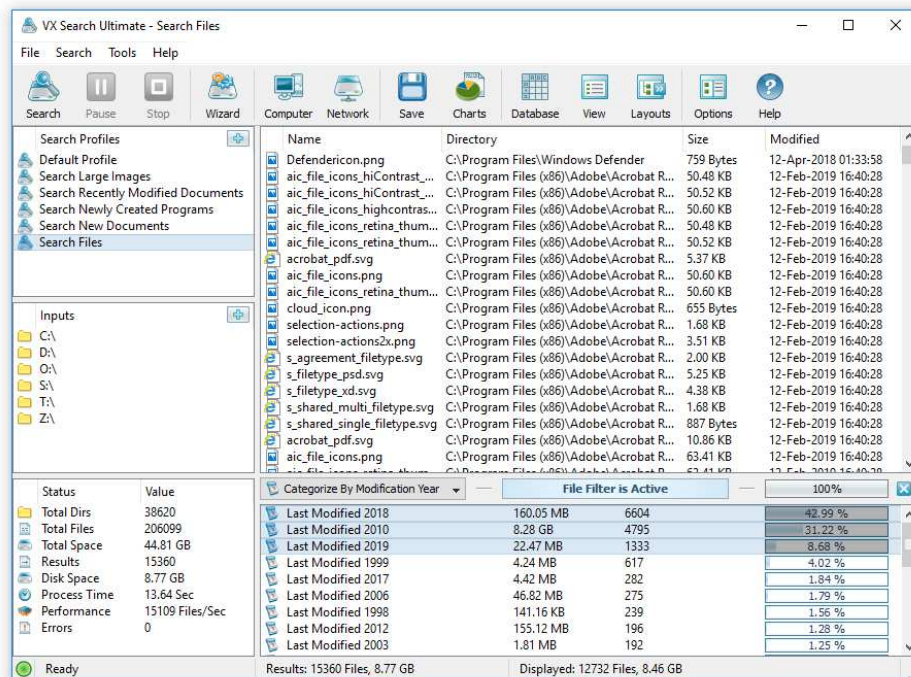


In addition, the user is provided with the ability to export the list of displayed file categories to the HTML, PDF, Excel, text and XML formats. In order to export the list file categories, select the required categories, press the right mouse button, select the 'Export Categories' menu item and then select an appropriate report format.

Another advanced feature provided by VX Search is the ability to filter the file search results by one or more of second-level file categories. For example, let's assume that we have searched for all pictures and image files in a computer. The top pane of the VX Search main GUI application shows the file search results and the bottom pane shows file categories.



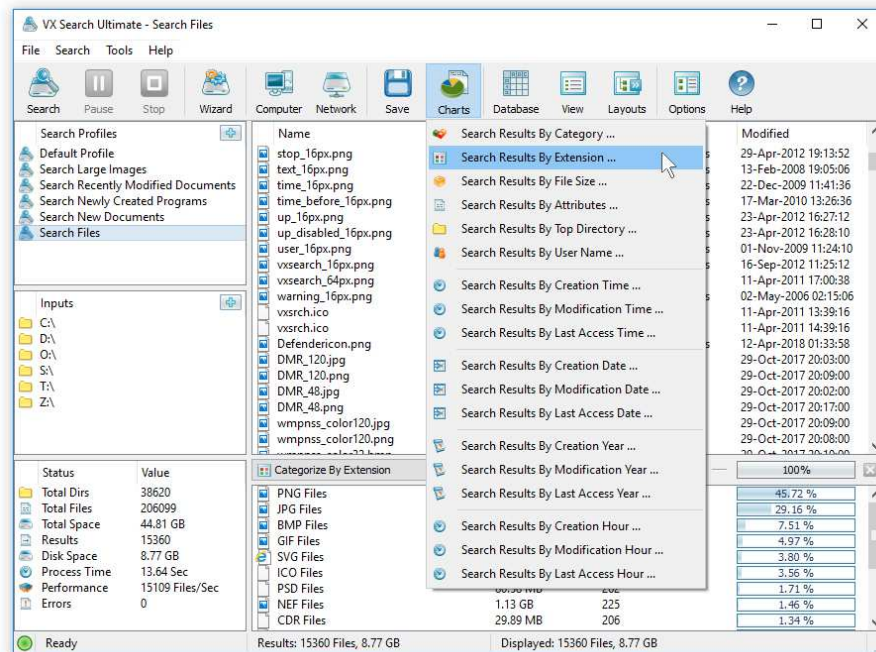
Select one or more file categories in the bottom pane, press the right mouse button and select the 'Apply Filters' menu item. VX Search will filter the search results and show files matching the selected file categories.



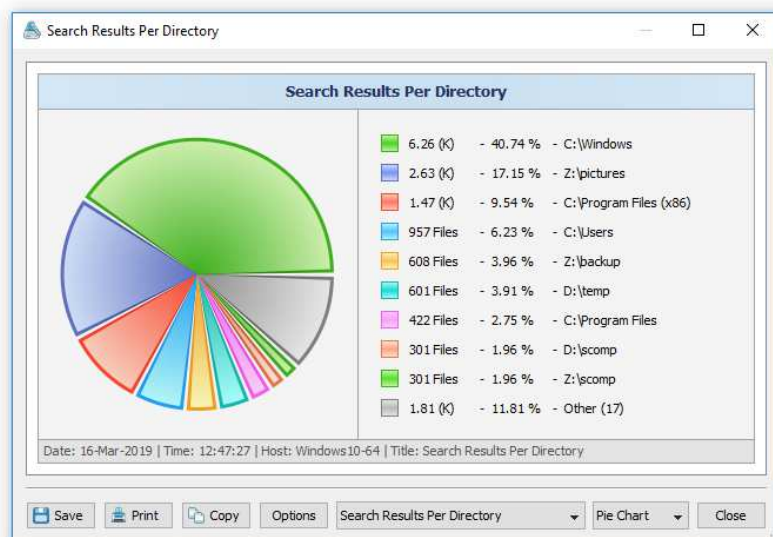
Now, the user can export reports and/or perform file management operations, such as file copy, move or delete, on files matching the selected file categories. In order to clear the selected file categories press the 'Clear' button located on the right side of the categories progress bar.

3.22 File Search Statistics and Pie Charts

The VX Search file search utility provides multiple types of statistical pie charts and timeline charts capable of showing the number of search results and the amount of disk space per directory, file extension, file type, 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.

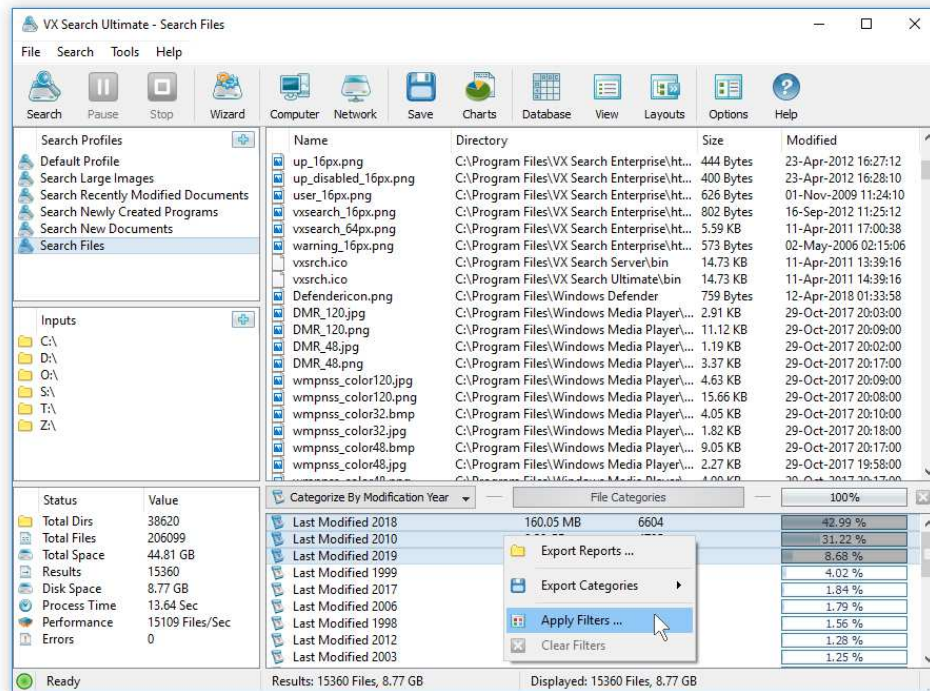


For example, in order to open a chart showing the number of search results and the amount of disk space per directory, press the 'Charts' button located on the main toolbar and select the 'Search Results Per Directory' chart type.

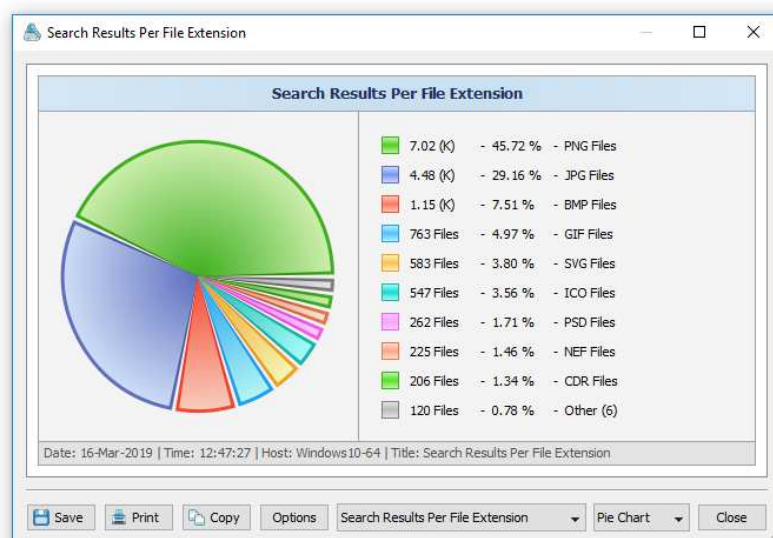


In addition, the charts dialog provides the user with the ability to export the chart data to a number of different formats and copy the displayed chart image to the clipboard allowing one to easily integrate VX Search charts into user's documents and presentations. In order to customize the chart's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

One of the most powerful features of the VX Search file search utility is the ability to filter file search 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 number of search results 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.

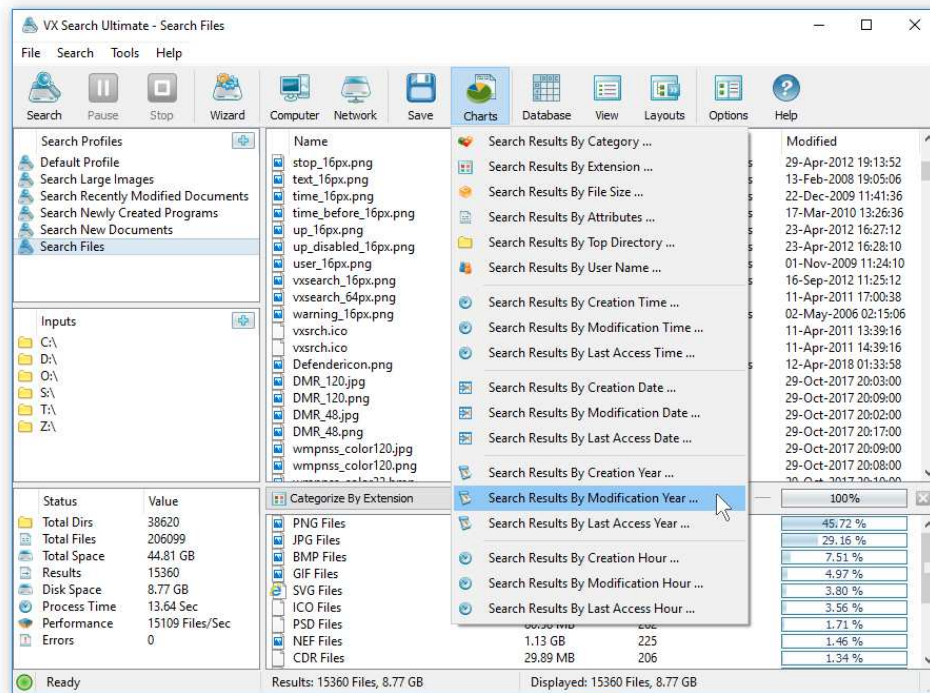


VX Search will filter the file search results and display search results that were modified during the selected years. Now, press the 'Charts' button located on the main toolbar and select the 'Search Results Per Extension' menu item. VX Search will categorize the filtered file search results and display a pie chart showing the number of search results per file extension for files that were modified during the selected years.



In a similar way, the user can filter the file search results by the file type, size, user name, file attributes, creation, modification and last access dates and then display various types of charts showing file search results statistics according to the user-specific needs.

Another powerful capability is the ability to display the file search results timeline charts for all or filtered file search results. In the simplest case, press the 'Charts' button located on the main toolbar and select the 'Search Results Per Modification Year' menu item.



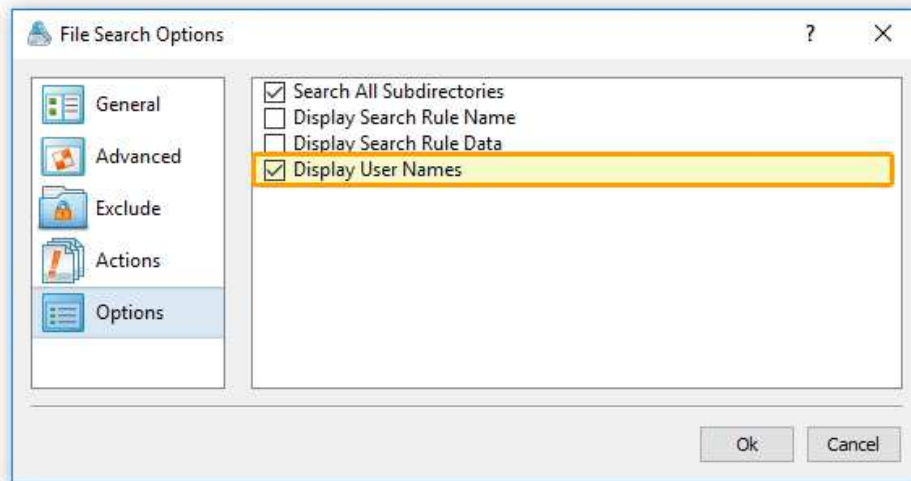
VX Search will display a time line chart showing how much search results were modified per year. In order to display how much data was modified per year, set the chart mode to 'Disk Space Usage Per Modification Year'.



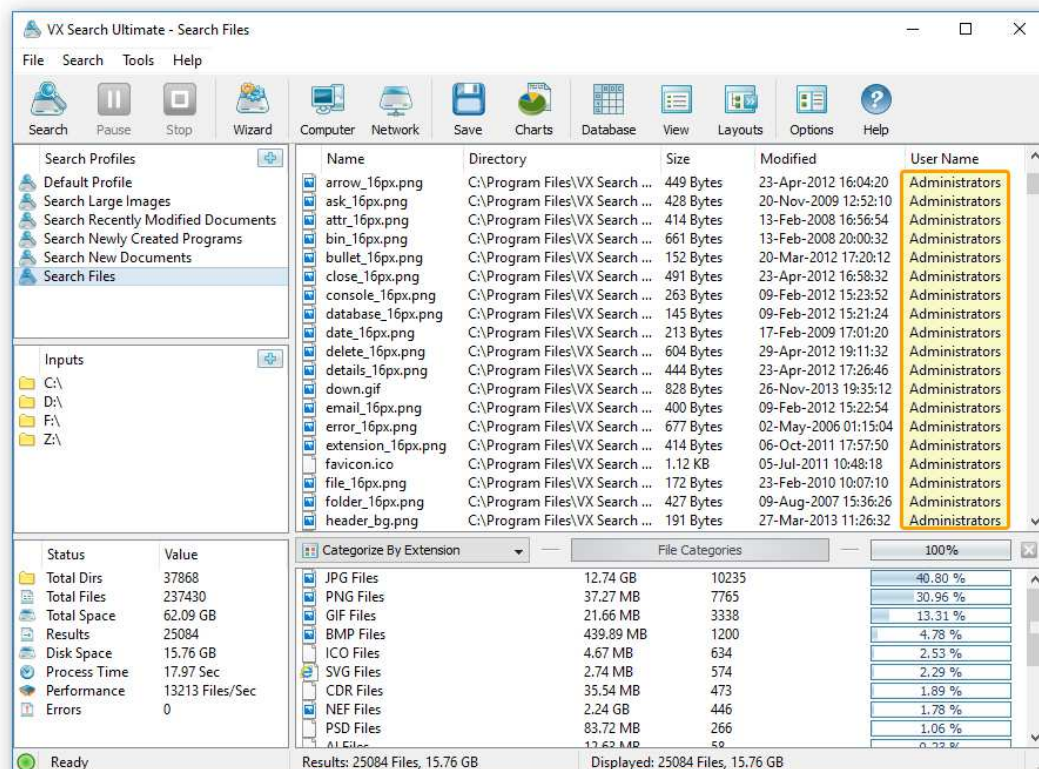
In addition, the user is provided with the ability to display timeline charts for filtered file search results. For example, in order to display how many documents were created per year, set the file categorization mode to 'Categorize By File Type', select the 'Documents, Books and Help Files' file category,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

3.23 Showing File Search Results User Names

VX Search provides the ability to show files user names in the file search results view. In order to enable processing and display of files user names, open the file search profile dialog, press the 'Options' button, select the 'Options' tab and select the 'Display User Names' option.



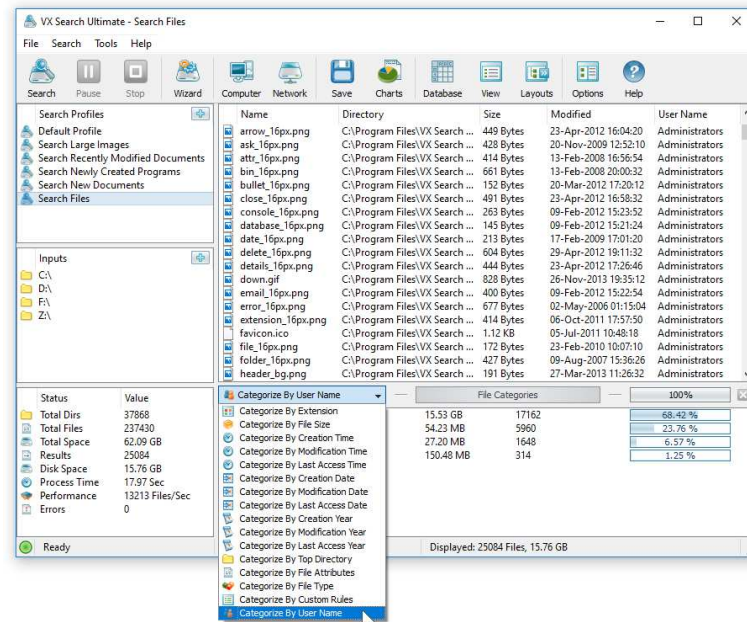
With this option enabled, the VX Search GUI application will show the user name for each file search result in the search results view. In addition, PDF and XML reports will include user names for all file search results.



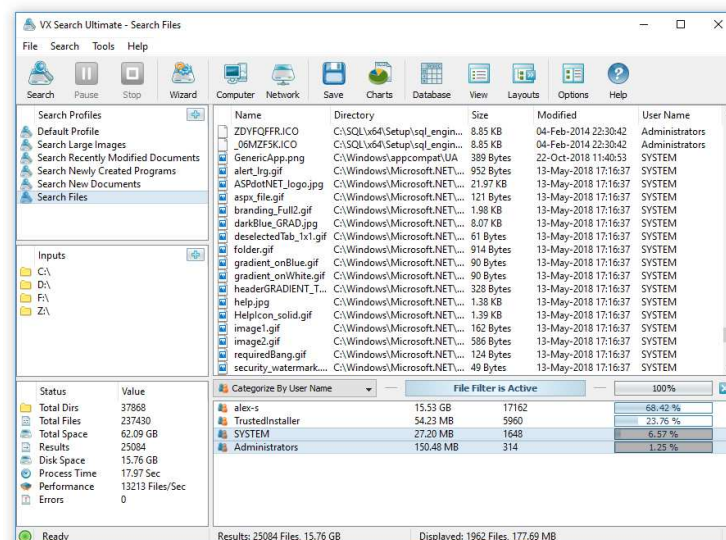
The option to process and display files user names significantly reduces the performance of file search operations and it should be enabled only when required. The potential performance impact may be especially significant when searching files in network shares or NAS storage devices over a high-latency network and in such situations it is recommended to configure the file search operation to use multiple parallel file search threads.

3.24 Categorizing and Filtering File Search Results by User Name

VX Search allows one to categorize and filter file search results by the user name. In order to categorize file search results by the user name, open the file search options dialog, select the 'General' tab, select the option to 'Process and Show Files User Names' and start the file search operation. When the file search operation will be completed, set the 'Categorize by User Name' file categorization mode.



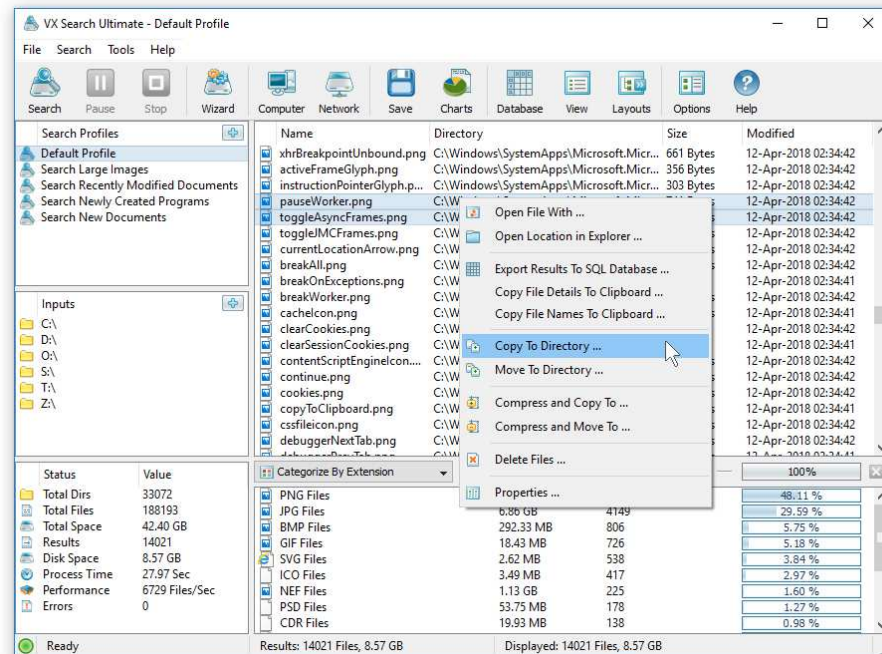
The file categories view will show all user names, the number of file search results per user and the amount of disk space per user. In order to export user names and displayed statistics to a pie chart or bars chart, press the 'Charts' button, select an appropriate chart type and press the 'Copy To Clipboard' button. In order to export user names and statistics to a report file, press the 'Save' button and select an appropriate report format.



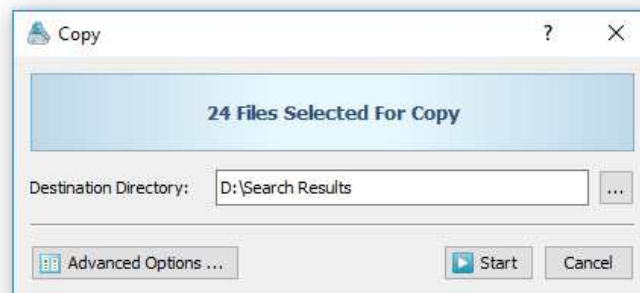
Sometimes, it may be required to generate multiple reports with each one listing files related to a specific user or perform a file management operation on files related to a specific user. In this case, select the required user name in the file categories view, press the right mouse button and select the 'Apply Filters' menu item. VX Search will filter files related to the selected user and all reports and file management operations will be performed on files related to the selected user.

3.2.5 Performing File Management Operations

VX Search allows one to perform file management operations, such as file copy, move or delete, on file search results. For example, in order to copy one or more files displayed in the search results view, select the files in the results view, press the right mouse button and select the 'Copy Files' menu item.



On the file copy dialog, enter a destination directory and press the 'Start' button. The destination directory should be specified as an absolute location with a full path. The UNC notation for network shares is also supported.

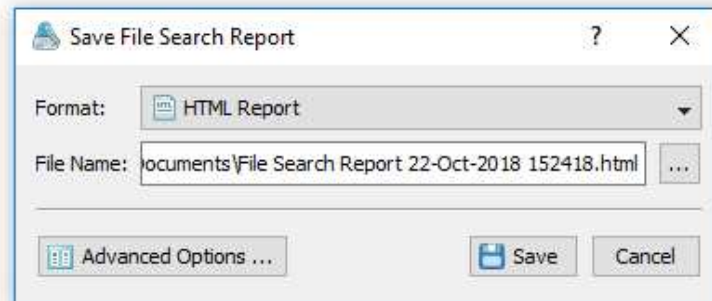


In order to delete one or more files, select the required files in the search results view, press the right mouse button and select the 'Delete Files' menu item. For advanced delete options, such as data wiping capabilities, press the 'Advanced Options' button.



3.26 Saving File Search Reports

VX Search allows one to save file search reports into a number of standard formats including HTML, PDF, Excel, XML, text and CSV. In the simplest case, perform a file search 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 short summary reports or longer detailed reports, which may be very long for large reports containing many thousands of files. By default, VX Search will save a short, summary file search report in the HTML report format, which will include a list of the first 20 file search results and a list of tables showing the disk space usage and the number of file search results per file extension, file type, top-level directory name, user name, etc.

Generated By: **VX Search Ultimate v13.0.28** 03-Aug-2020 12:02:56

File Search Report

Date	2020/08/03
Time	12:01:17
Results	1755
Disk Space	1.31 GB
Total Dirs	2252
Total Files	21537
Total Space	7.72 GB
Performance	14977 Files/Sec
Process Time	1.44 Sec
Command Name	Default Profile
Host Name	Windows10-64
User Name	alex-s
Input Dirs	d:\
File Filter Active	No

12 File Categories

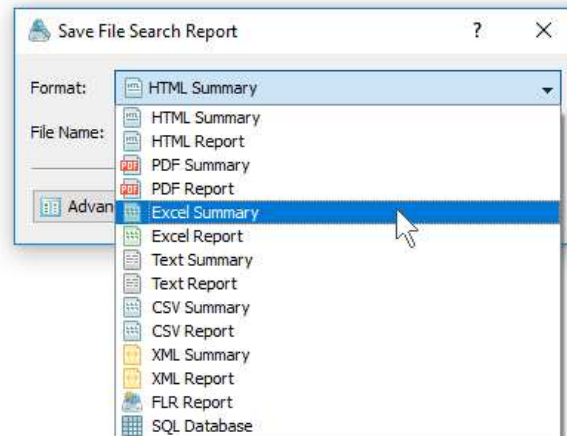
Category	Files	Space	Space (%)
Last Modified 2010	1111 Files	1.19 GB	90.51 %
Last Modified 2012	24 Files	102.75 MB	7.66 %
Last Modified 2006	100 Files	17.57 MB	1.31 %
Last Modified 2007	14 Files	2.55 MB	0.19 %
Last Modified 1999	366 Files	2.48 MB	0.19 %
Last Modified 2004	34 Files	477.99 KB	0.03 %
Last Modified 2001	8 Files	461.25 KB	0.03 %
Last Modified 2003	38 Files	369.23 KB	0.03 %
Last Modified 2015	21 Files	353.20 KB	0.03 %
Last Modified 2000	36 Files	258.01 KB	0.02 %
Last Modified 2005	2 Files	52.21 KB	< 0.01 %
Last Modified 2009	1 File	11.98 KB	< 0.01 %

File Search Results

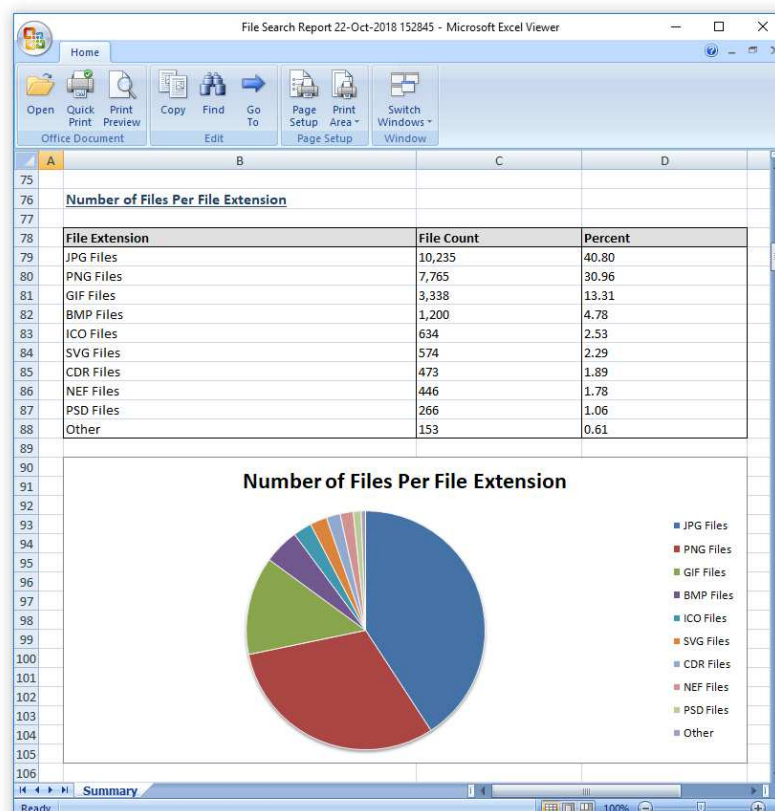
Type	Size	Created	Modified	Name
File	187.09 KB	30-Jan-2010 01:00:00	25-Jul-2006 01:12:15	D:\acmega\company\business_plan\industry\industry.jpg
File	89.60 KB	30-Jan-2010 01:00:00	25-Jul-2006 00:52:57	D:\acmega\company\business_plan\market\graph.jpg
File	68.43 KB	30-Jan-2010 01:00:00	25-Jul-2006 00:52:40	D:\acmega\company\business_plan\market\market.jpg
File	71.18 KB	30-Jan-2010 01:00:00	20-Nov-2006 20:48:38	D:\acmega\company\tam\tam_top5.jpg
File	19.05 KB	30-Jan-2010 01:00:00	04-Jan-2007 10:57:28	D:\acmega\competitors\gartner\Magic Quadrant for E-Recruitment Software, 2006_files\143521_f1.png
File	924 Bytes	30-Jan-2010 01:00:00	04-Jan-2007 10:57:27	D:\acmega\competitors\gartner\Magic Quadrant for E-Recruitment Software, 2006_files\gartnerlogo.gif

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

Sometimes, it may be required to perform additional analysis of file search results using external tools such as Microsoft Excel. In order to export file search results to the Excel report format, perform a file search 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 search report.



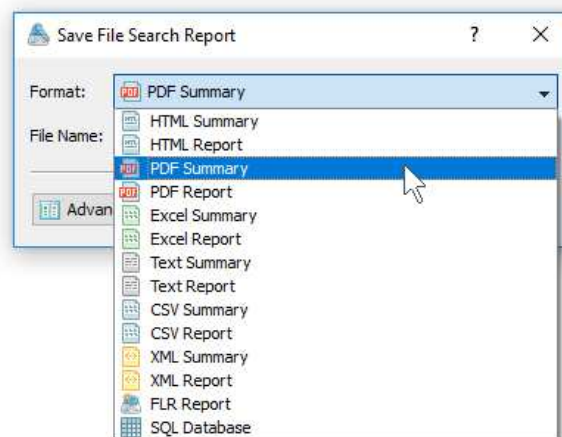
A summary Excel report will include a list of the first 20 file search results and a number of tables with pie charts showing the used disk space and the number of file search results per file extension, file category, top-level directory name, file creation time, last modification time, user name, etc.



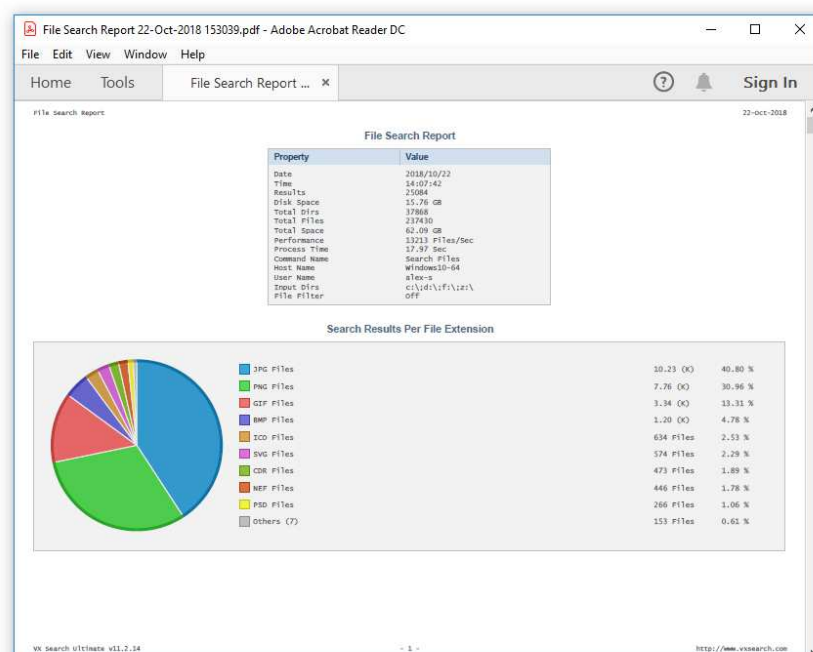
A detailed Excel report will include a list of file categories according to the currently selected file categorization mode and a full list of file search results, which may be very long for large reports containing many thousands of files. In order to control how many files are exported in the detailed report, press the 'Advanced Options' button located on the 'Save Report' dialog and customize the file search report for your specific needs.

3.27 Saving Graphical PDF Reports

One of the most useful ways to export file search 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 file search results per file extension, file category, creation time, last modification time, top-level directory name, user name, etc. In order to save file search 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 search report.



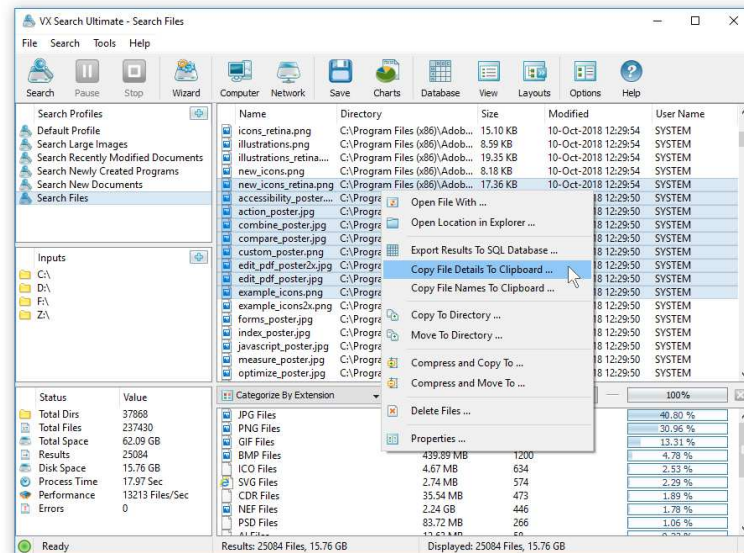
A summary PDF report will include a list of the first 20 file search results and followed by a number of pie charts showing the disk space usage and the number of file search results per file extension, file category, file creation time, last modification time, top-level directory name, user name, etc. A detailed PDF report will include a full list of file search results, which may be very long for large reports containing many thousands of files.



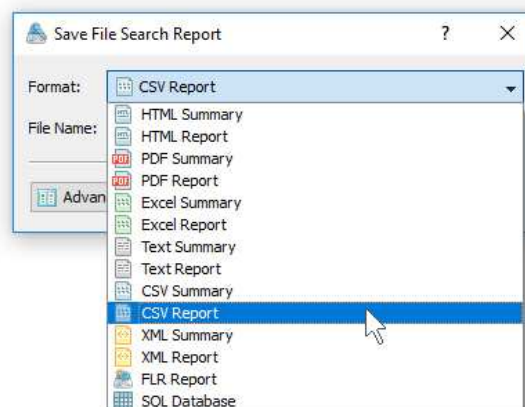
In addition to the list of file search results, detailed PDF reports include pie charts showing the disk space usage per file category and the number of file search results per file category according to the currently selected file categorization mode. For example, if the second-level file categories mode is set to categorize file search 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.

3.28 Exporting File Search Results to Excel Datasheets

The simplest way to export file search results to an Excel datasheet is to copy selected results to the clipboard and then paste copied file search results in Microsoft Excel. In order to copy file search results to the clipboard, select one or more results in the file search results view, press the right mouse button and select the 'Copy File Details to Clipboard' menu item.



Selected file search results will be copied to the clipboard according to the current sorting and filtering modes and will be available in the Excel datasheet exactly in the same way as displayed in the file search results view. In order to export files user names to an Excel datasheet, the option to show files user names should be enabled during the file search operation. In order to be able to sort file search results by the last modification date, the user needs to open the 'Options' dialog, select the 'Reports' tab and set an appropriate date format, which can be properly sorted in Excel datasheets.

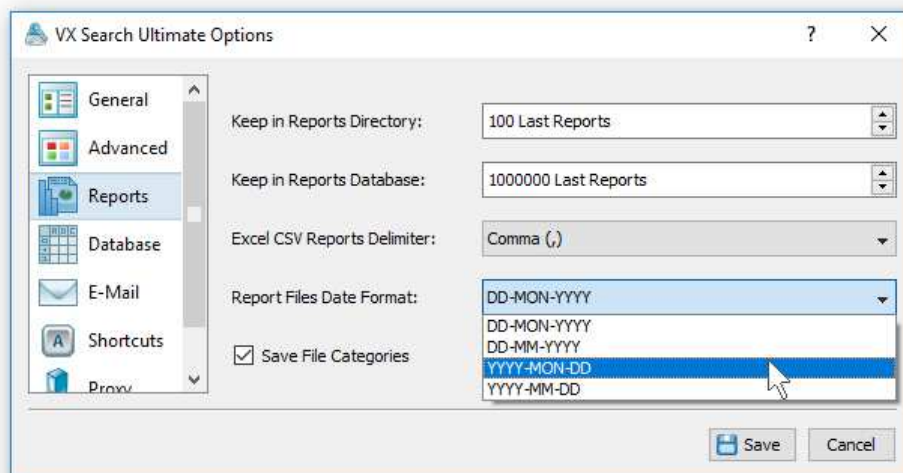


Another option to export file search results to Microsoft Excel, is to save an Excel CSV report file. Press the 'Save' button located on the main toolbar, select the 'CSV Report' format, enter a file name to save the report to and press the 'Save' button. Now, in order to open the saved CSV report file in Microsoft Excel, just click on the CSV report file in Windows file explorer.

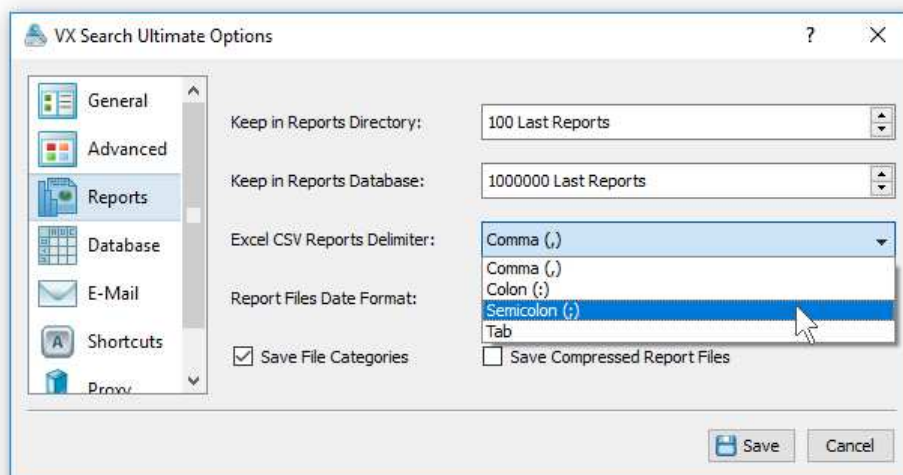
When exporting file search results to Excel datasheets, the user needs to take into account that the comma (,) character used as the data field delimiter in CSV reports is also a valid file name character and file names containing the comma (,) character will span across multiple data fields in Excel datasheets. In order to properly export such file names to an Excel datasheet, open the 'Options' dialog, select the 'Reports' tab and change the CSV reports delimiter to the 'Tab' character, which cannot be used in file names.

3.29 Customizing File Search Reports

By default, VX Search exports file search reports including the last modification date for each file search result. The date format used in file search reports is easily readable, but not good for sorting file search results by the last modification date in external programs such as Microsoft Excel, etc. In addition to the default date format, VX Search provides a number of alternative date formats allowing one to customize file search reports. In order to change the date format used in file search reports, open the 'Options' dialog, select the 'Reports' tab and set the 'Report Files Date Format' to an appropriate date format.



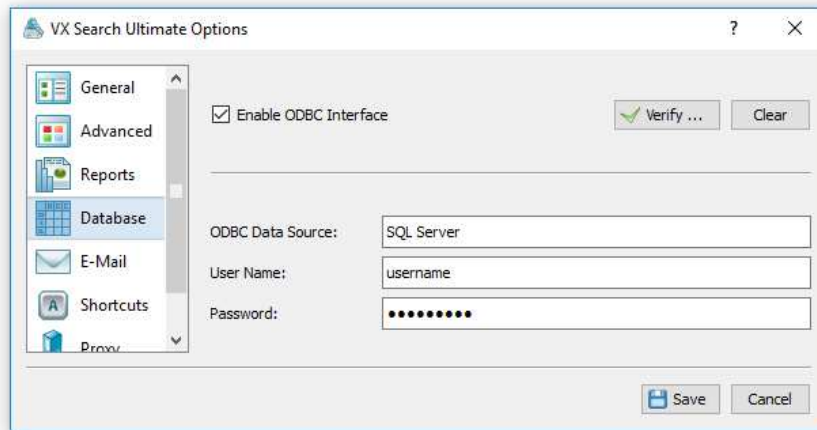
When exporting Excel CSV reports, the user may encounter problems with directories and files having the comma (,) character in the file or directory name. The comma (,) character is a valid character for file names, but this character is normally used in Excel CSV reports as the delimiter character causing file names containing the comma character to span multiple data fields in Microsoft Excel data sheets.



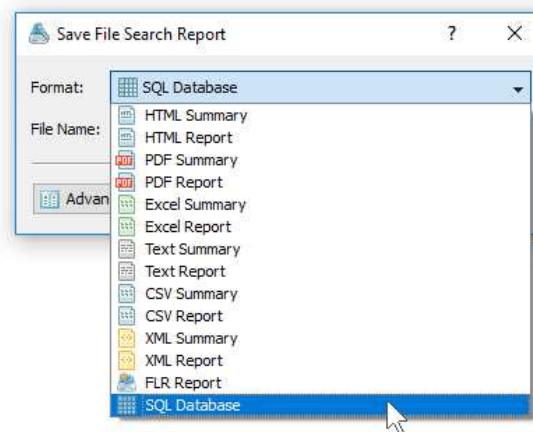
In order to change the CSV reports delimiter character used by VX Search in file search reports, open the 'Options' dialog, select the 'Reports' tab and set the CSV reports delimiter to the 'Tab' character, which cannot be used in file names and therefore will not conflict with file names exported in file search reports. In order to import a tab-delimited file search report to an Excel data sheet, open Microsoft Excel, select the menu 'Data - Import External Data - Import Data', select the file search report file and select the 'Tab' character as the data field delimiter.

3.30 Exporting File Search Results to an SQL Database

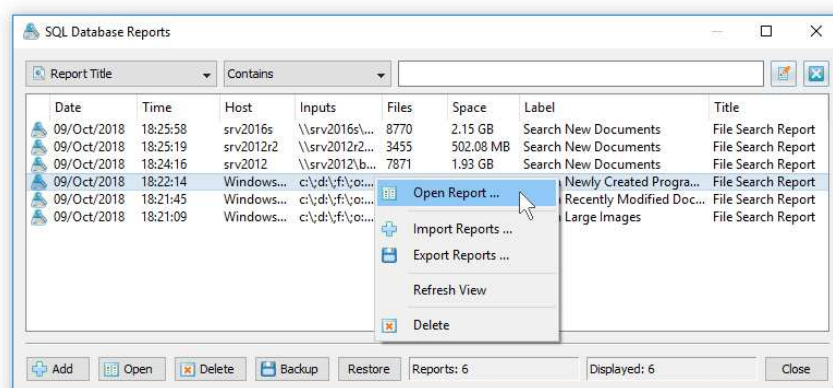
VX Search Pro and VX Search Server provide the ability to export search results into an SQL database allowing one to save reports from multiple servers and/or desktop computers in a centralized SQL database for future analysis and reference.



Before exporting search results to an SQL database, the user needs to open the options dialog and configure an ODBC data source to use to connect to the database.

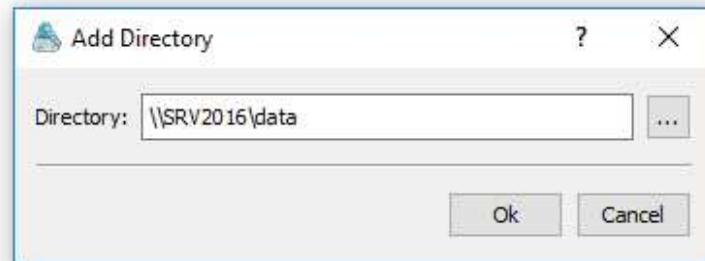


Once the database connection is configured and tested, press the 'Save' button located on the main toolbar, enter a report title, select the 'SQL Database' report format and press the 'Save' button. For each report in the database, VX Search shows the date and time of the search operation, the host name, the directories that were searched, the number of files and disk space and the report title. To load a previously saved report, just click on the report item.

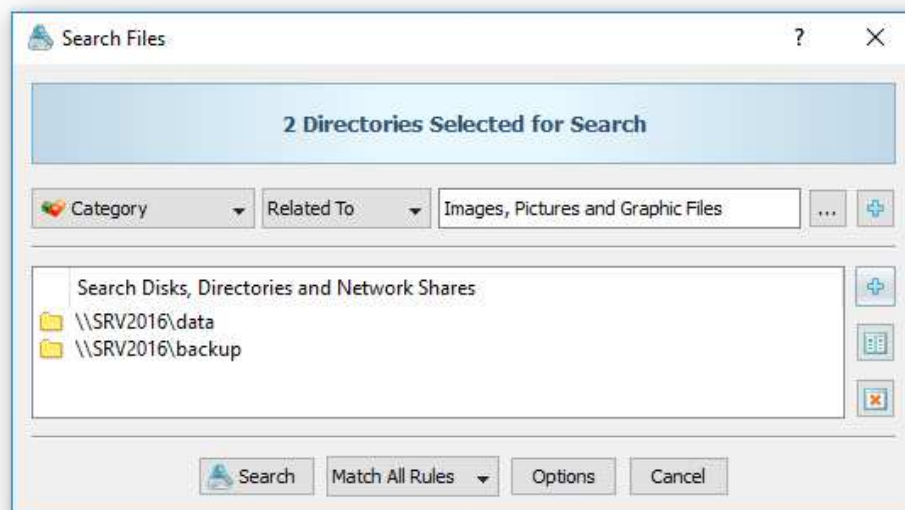


3.31 Searching Network Shares Using UNC Path Names

VX Search fully supports the UNC notation and allows one to search files in network shares by specifying one or more UNC network locations in the file search dialog. In order to search files in one or more network shares, press the 'Add' button located on the right side of the list of search locations, enter a UNC network location and press the 'Ok' button.



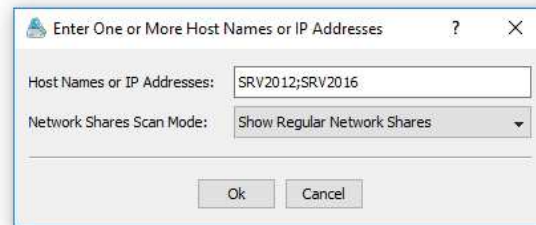
In order to be able to search files in network shares, the user needs to have directory access permissions. In addition, in order to perform file management operations on file search results, such as file copy, move or delete, the user needs to have file write permissions.



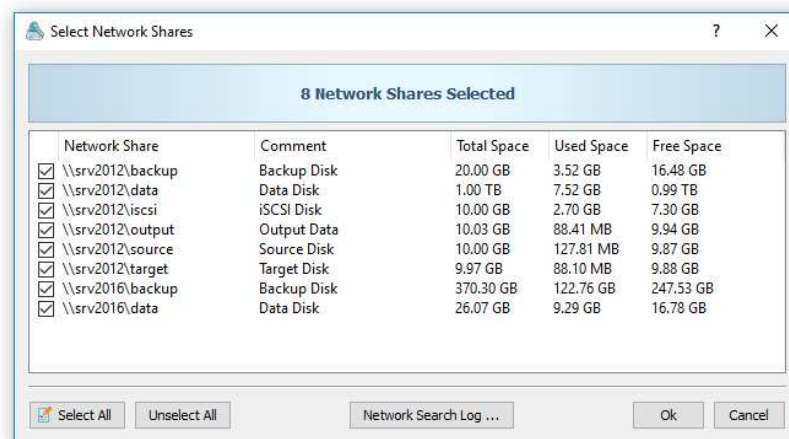
In addition to the ability to search files using UNC network locations, VX Search allows one to copy or move file search results to UNC network locations. For example, in order to copy one or more files to an UNC network location, select the required files in the file search results view, press the right mouse button, select the 'Copy Files To' menu item, enter the UNC network location to copy the selected files to and press the 'Start' button.

3.32 Searching Files in One or More Servers

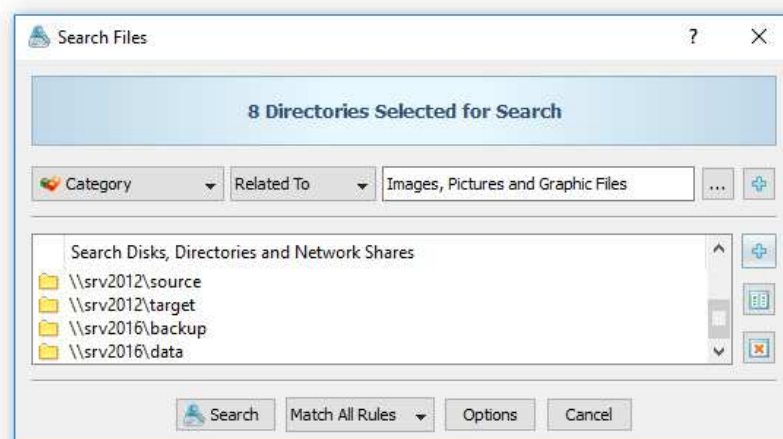
VX Search allows one to search files in all network shares of one or more servers or NAS storage devices on the network. In order to search files in one or more servers, open the search dialog, press the 'Add' button located on the right side of the list of search locations, select the 'Search Servers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



VX Search 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.

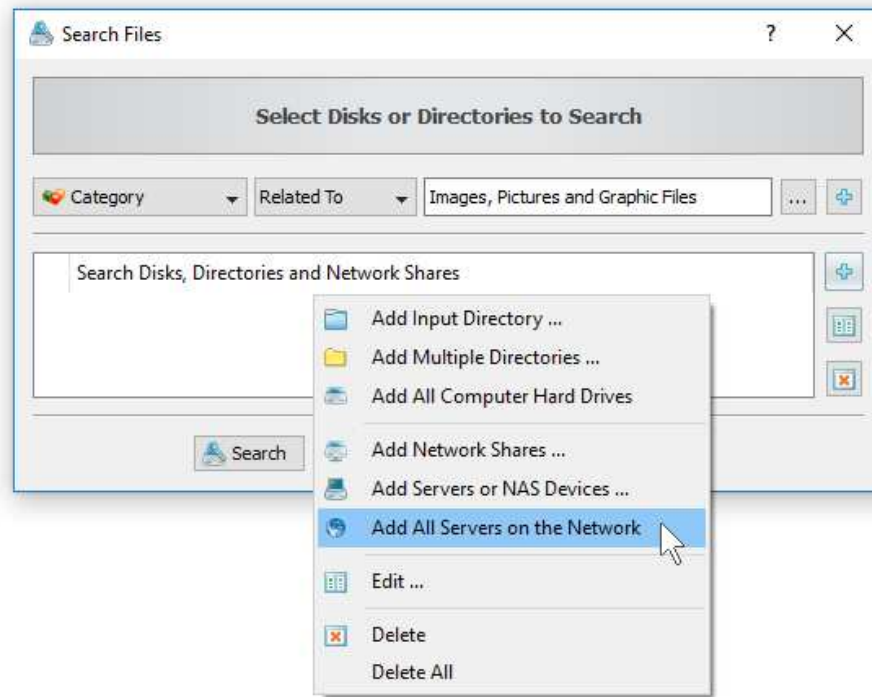


The network shares scanning operation may be performed multiple times for different servers and NAS storage devices and an unlimited number of network shares from different servers may be added to the file search operation. During runtime, VX Search will process all the specified network shares in parallel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

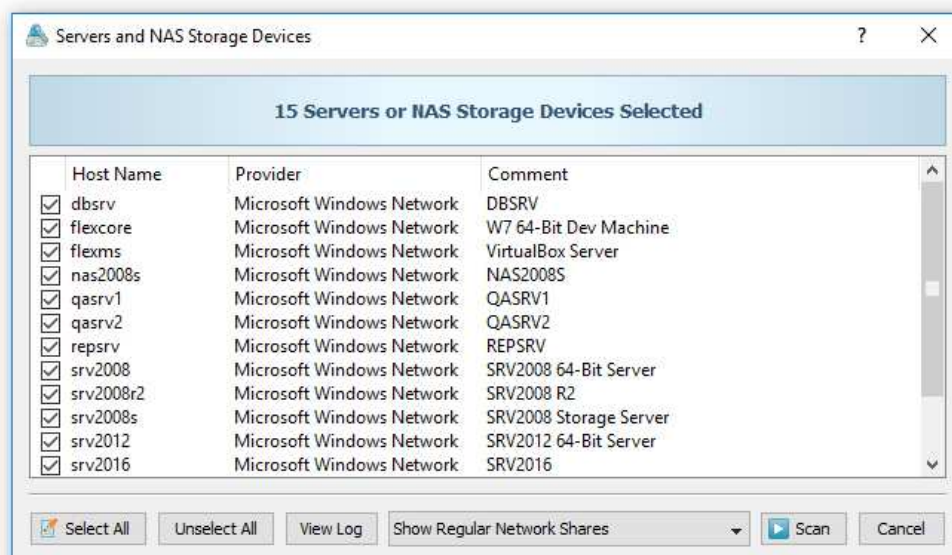


3.33 Searching Files in All Servers on the Network

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



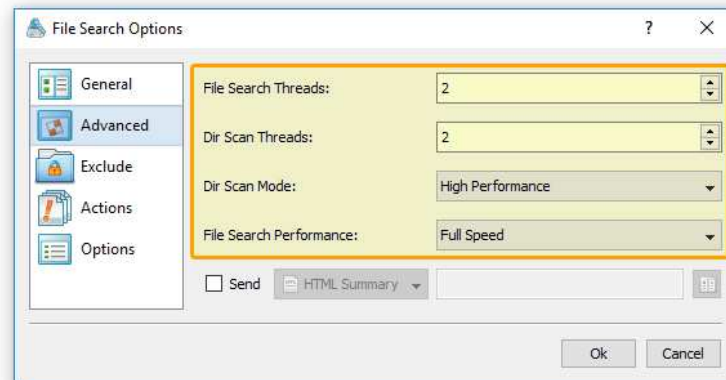
VX Search will scan the network and show a list of servers and NAS storage devices detected on the network. Select one or more servers to search in and press the 'Ok' button.



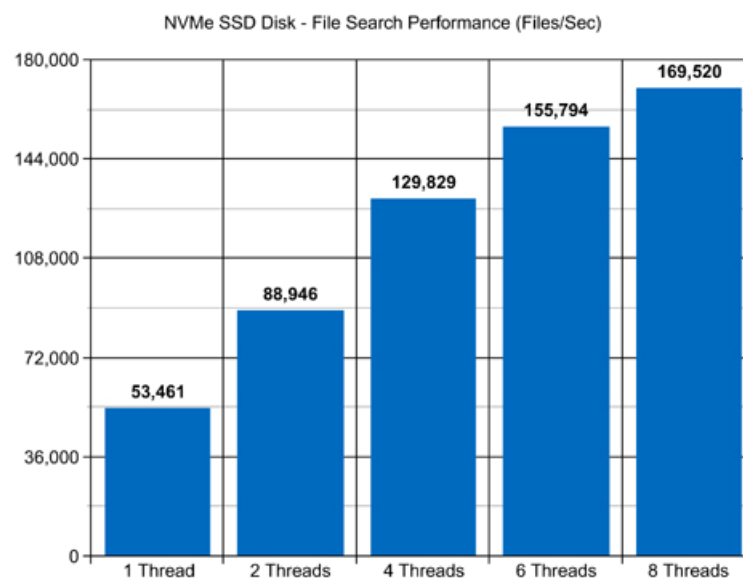
VX Search will scan the selected servers and show a list of network shares detected in the servers and NAS storage devices allowing one to select one or more network shares that should be processed. During runtime, VX Search will process the selected network shares in parallel using all CPUs available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

3.34 Multi-Threaded File Search and Performance Options

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

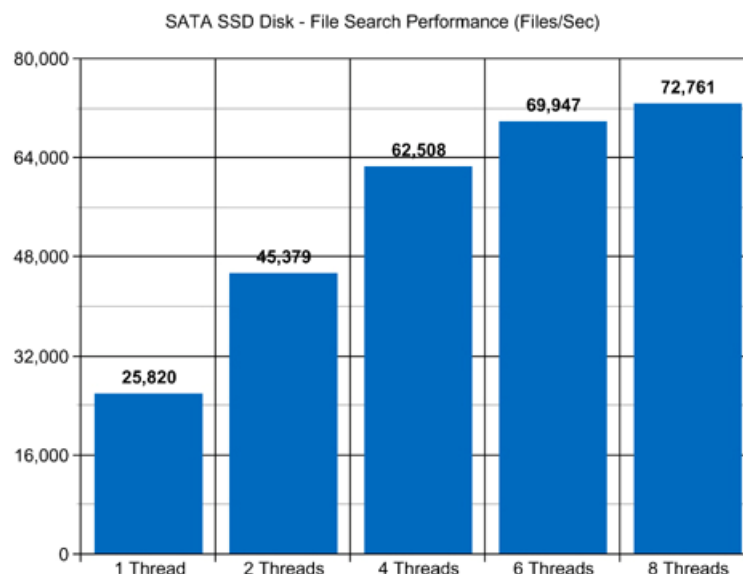


In order to customize the file search performance optimization options, open the file search operation dialog, press the 'Options' button and select the 'Advanced' tab. The 'File Search Threads' option controls how many parallel threads are used to search files. The 'Directories Scanning Threads' option controls how many parallel threads are used to scan input disks, directories and network shares. In the 'Fault-Tolerant' directory scanning mode, VX Search 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, VX Search always uses the specified number of parallel directory scanning threads even when processing a single input disk, directory or network share.

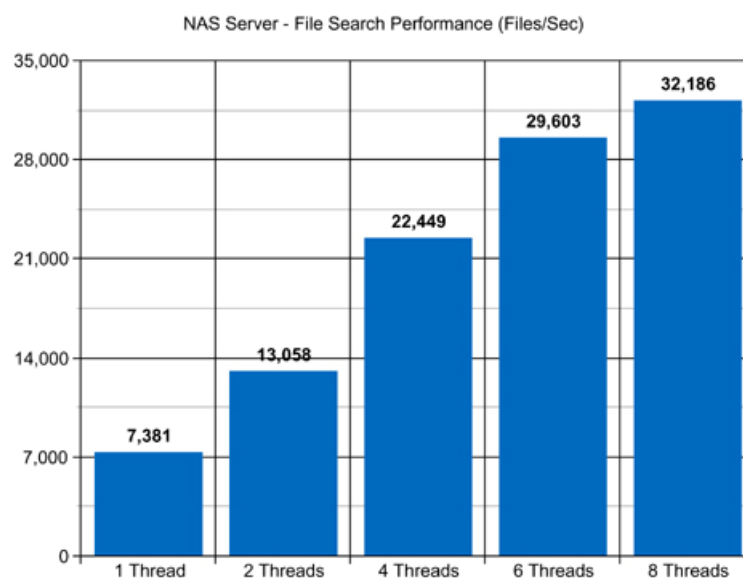


For example, when searching files stored on a high-speed NVMe SSD disk, VX Search reaches up to 53,000 files/sec using a single search thread. With two parallel search threads, the performance scales up to 88,000 files/sec and with four parallel search threads, the performance increases up to 129,000 files/sec showing a very good level of multi-threaded performance scalability. With six processing threads the file search performance reaches up to 155,000 files/sec and with eight processing threads the file search performance increases up to 169,000 files/sec allowing one to quickly search huge numbers of files.

When searching files stored on regular SATA SSD drives, which are significantly slower than NVMe SSD drives, the performance of the file search process reaches up to 25,000 files/sec using a single process thread and scales up to 62,000 files/sec with four parallel file search threads. With eight parallel file search threads, the performance reaches up to 72,000 files/sec, which allows to search large numbers of files very fast.

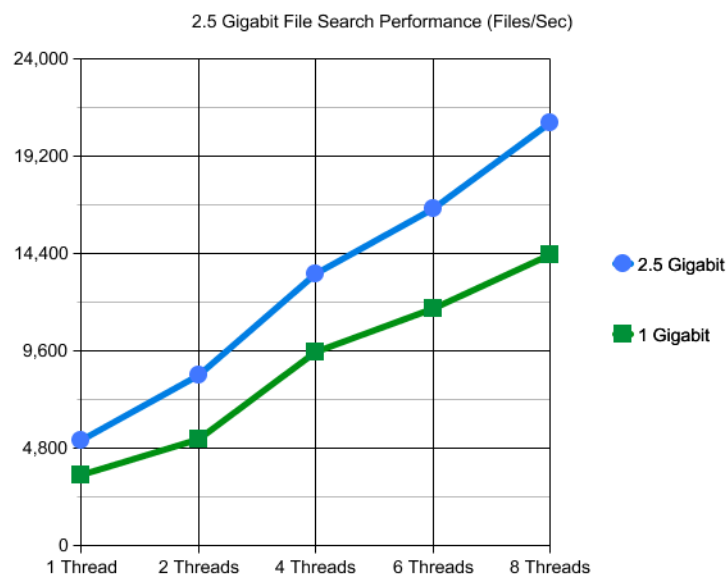


Searching file stored on a NAS storage device via a network is a more complicated task because the user needs to take into account the speed and the latency of the network. If the computer, on which VX Search is installed, is connected to the NAS storage device via a high-speed, low-latency network, the performance of the file search operations may reach up to 7,300 files/sec with one file search thread, scale up to 22,400 files/sec with four parallel file search threads and increase up to 32,100 files/sec with eight parallel search threads.

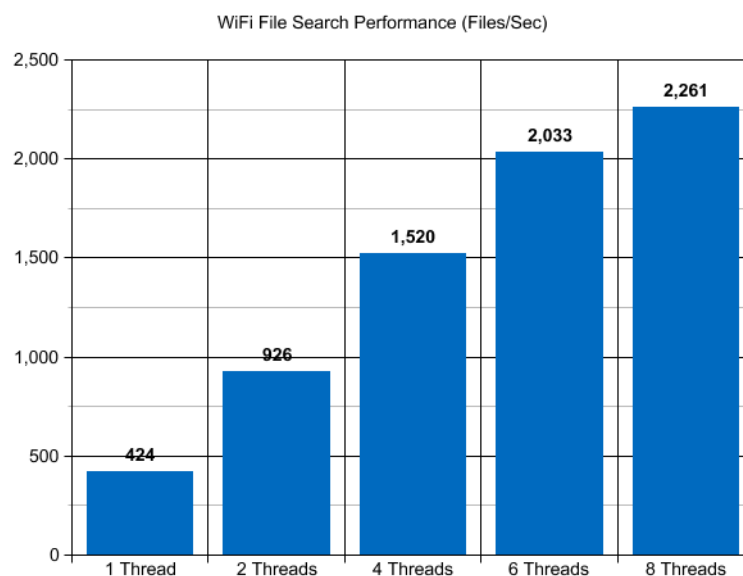


On the other hand, if VX Search will need to access network shares via the Internet or via a long-distance, high-latency network, the performance of the file search operations will be relatively slow. One of the options to increase the performance of the file search operations in such configurations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

Searching millions of files stored in one or more NAS servers may be a very time consuming operation and one of the ways to speed-up the file search process is to use a 2.5 Gigabit Ethernet network. With 2.5 Gigabit Ethernet the performance of the VX Search file search operations continues to scale up to 20,800 Files/Sec with 8 parallel file search threads, which represents a 44% improvement compared to the standard Gigabit Ethernet.

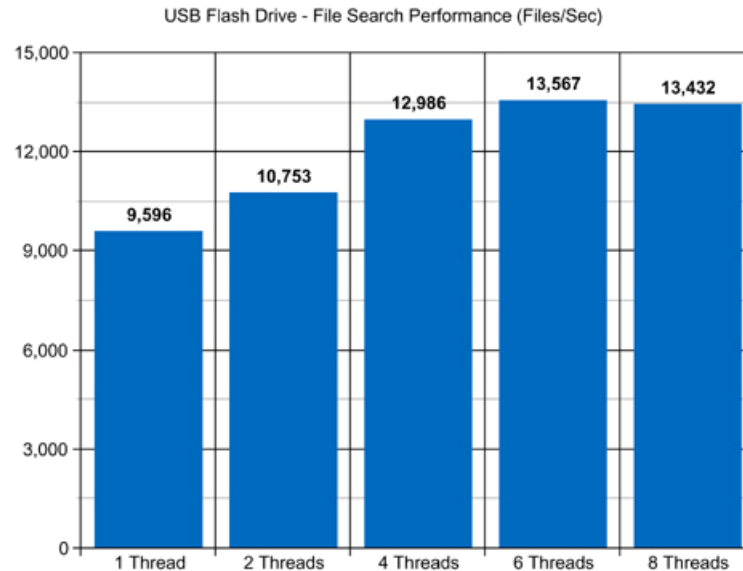


Due to a very wide adoption of laptops and NAS servers with built-in WiFi network interfaces, many users may consider searching files stored in NAS servers via the wireless network. But, the latency of the wireless network is much higher and therefore it will take much more time to complete the file search 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 search files via a wired network.

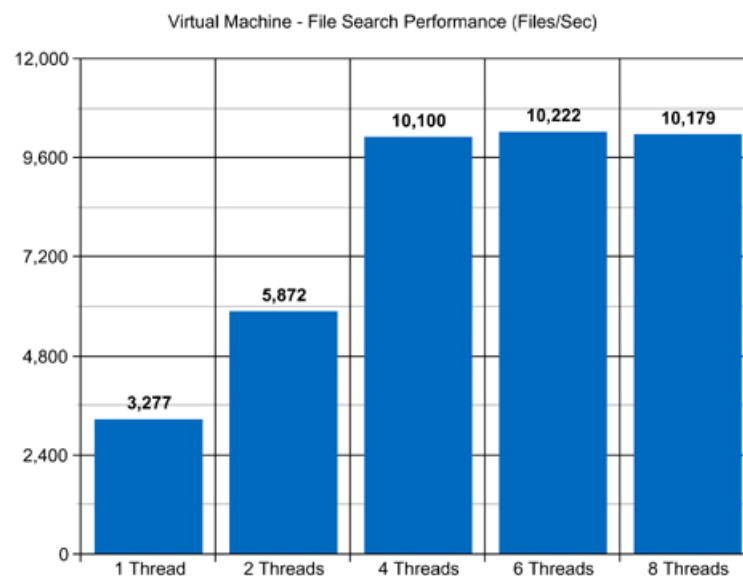


Based on our benchmarks, via a 5 GHz wireless network, VX Search reaches up to 424 Files/Sec with a single file search thread and scales up to 2,200 Files/Sec with 8 parallel file search threads, which is approximately 6 times slower compared to the standard Gigabit Ethernet and almost 10 times slower when compared to the 2.5 Gigabit Ethernet. So, if the user needs to search files in a NAS server with 1 million files or more, 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. When searching files stored on a USB flash drive, VX Search can reach up to 9,500 files/sec with a single search thread. With two parallel search threads, the performance increases up to 10,700 files/sec, with four parallel threads the performance increases up to 12,900 files/sec and with six parallel file search threads the performance scales up to 13,500 files/sec.



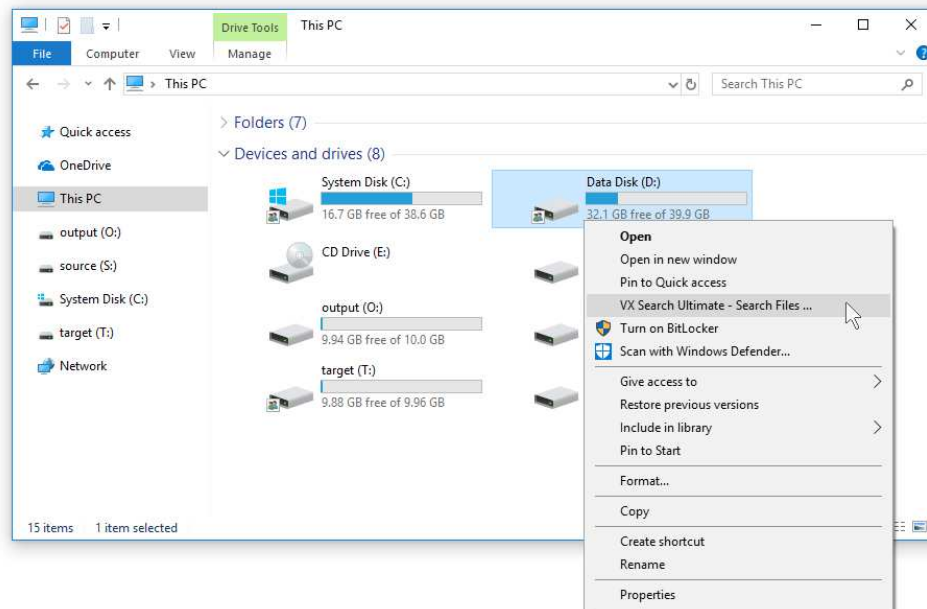
Today, modern IT environments widely deploy virtual servers and/or virtual workstations. Most of the popular virtualization platforms provide a high level of performance, but depending on the target hardware and software platforms, significant performance degradations are inevitable when a file search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



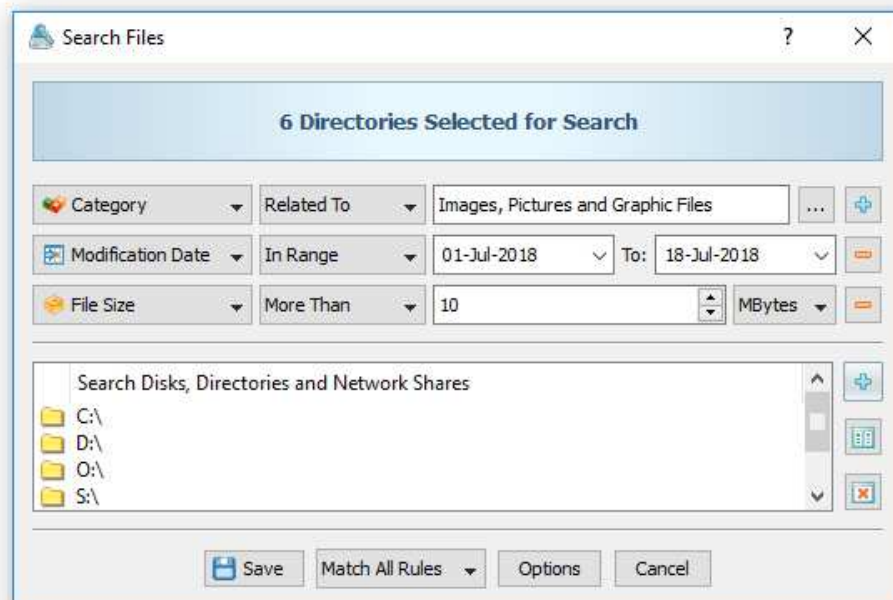
For example, when a virtual machine with 4 virtual CPUs is stored on an SSD disk and searching files stored on a virtual local disk drive, which is physically stored on the same SSD disk, the performance of the file search operations reaches up to 3,200 files/sec using a single search thread. With two parallel search threads, the performance of the file search operations scales up to 5,800 files/sec and with four parallel search threads, the performance of the file search operations increases up to 10,100 files/sec.

3.35 Windows Shell Integration

In order to simplify execution of search operations, VX Search provides Windows shell integration capabilities allowing one to search files directly from the Windows Explorer application. Select one or more disks or directories in the Windows Explorer application, press the right mouse button and select the 'VX Search - Search Files' menu item to search files in the selected disks and directories.



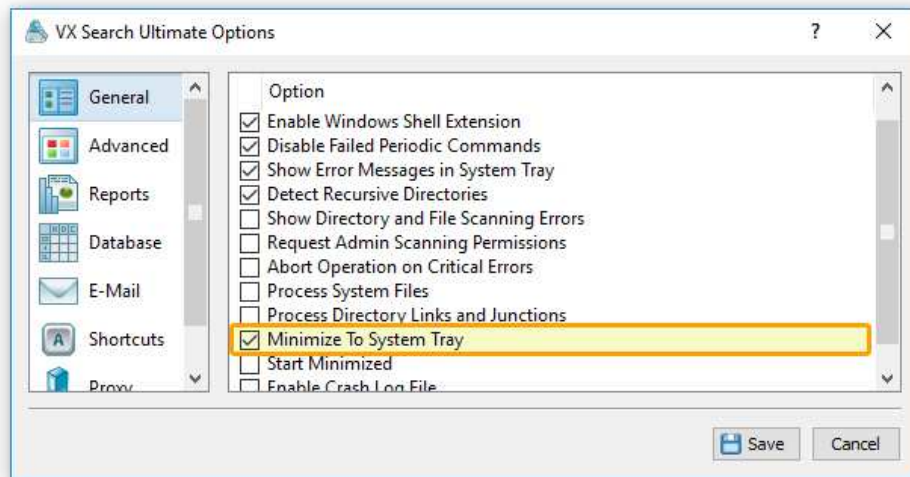
On the search dialog, enter a file search wildcard and press the 'Search' button to start the search operation. Alternatively, press the 'Advanced Search' button and specify one or more file matching rules on the advanced search options dialog.



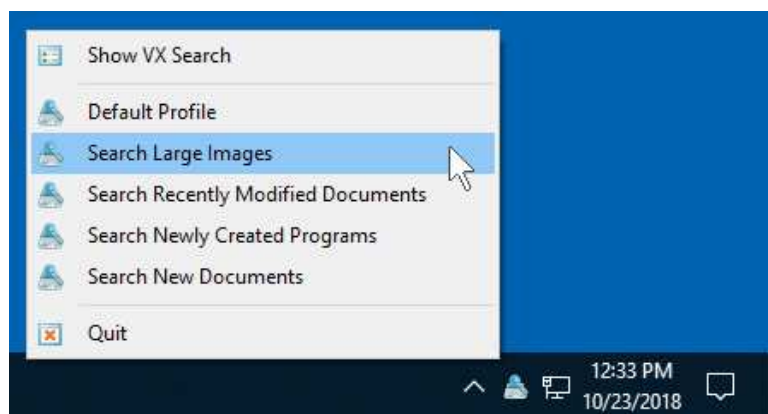
The last 10 file search operations performed through the Windows Explorer application are remembered in the locations and file wildcards history and the user is provided with the ability to select one of the previously entered locations or file wildcards using the history selection buttons located on the right side of the search dialog.

3.36 Using the System Tray Icon

Power computer users and IT administrators may use the VX Search system tray icon to start frequently performed file search operations directly from the system tray status area. The VX Search system tray icon menu shows all the user-defined search profiles and allows one to start any file search operation in a single mouse click.



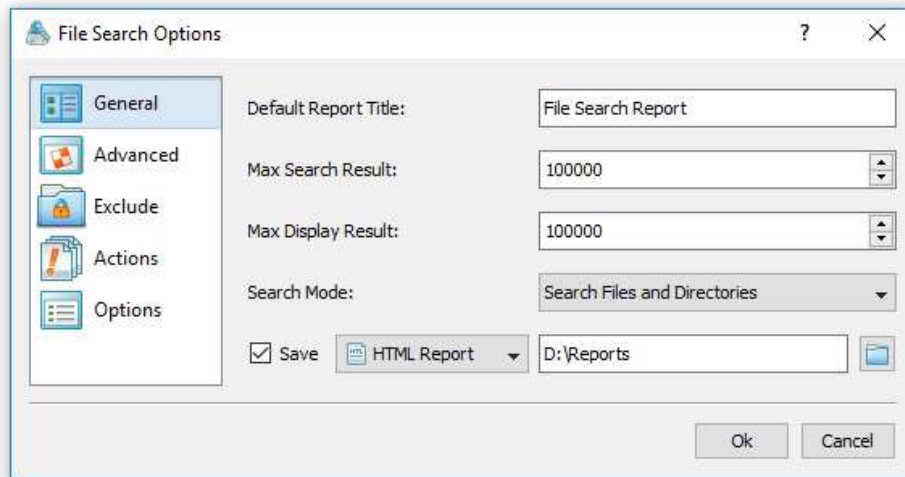
In order to enable the system tray icon, open the 'Options' dialog, select the 'General' tab and check the 'Minimize To System Tray' option. When this option is enabled, the VX Search main GUI application will be minimized to the system tray icon. To open the VX Search system tray menu, click the right mouse button over the system tray icon.



When a search operation is launched from the system tray menu, the VX Search GUI application will be restored from the system tray area and shown as the top level window displaying search results that were found.

3.37 Advanced File Search Options

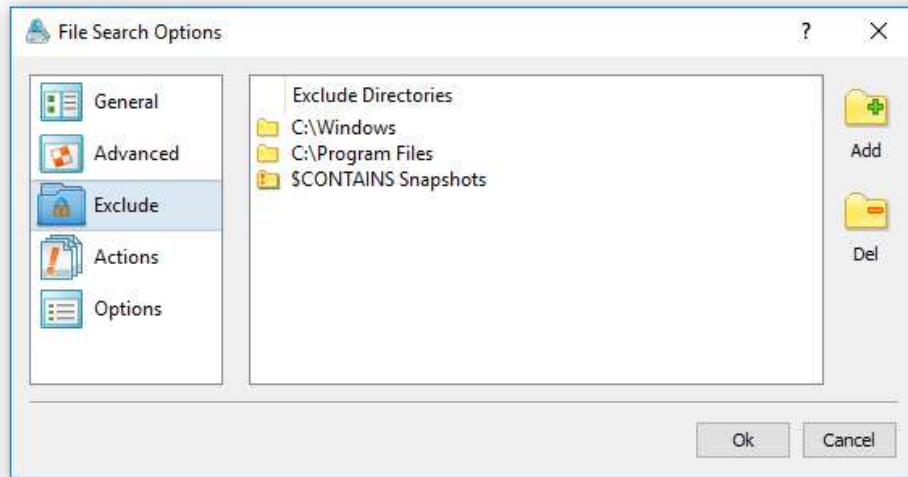
The advanced search options tab allows one to set the default report title, which is used for automated report generations, the maximum number of search results, the file scanning mode, the speed of the search operation and the number of processing threads to use.



In addition, VX Search Pro and VX Search Server provide the user with the ability to automatically generate reports, export results to an SQL database or send E-Mail notifications when the search operation finds a user-specified number of files.

3.38 Excluding Subdirectories from File Search

Sometimes, it may be required to exclude one or more subdirectories from the file search process. In order to add one or more directories to the exclude list, open the search profile dialog, select the 'Exclude' tab and press the 'Add' button located on the right side of the dialog.



Directories added to the exclude list will be excluded recursively including all files and subdirectories. In order to remove a directory from the exclude list, select the required directory and press the 'Delete' button. 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.

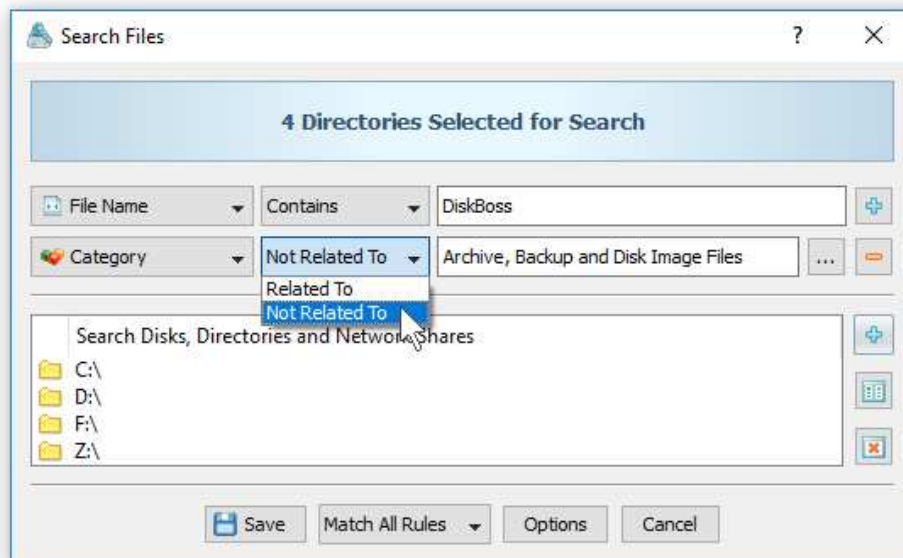
VX Search provides the following exclude directories macro commands:

- **\$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 directories listed in the user-specified text file.

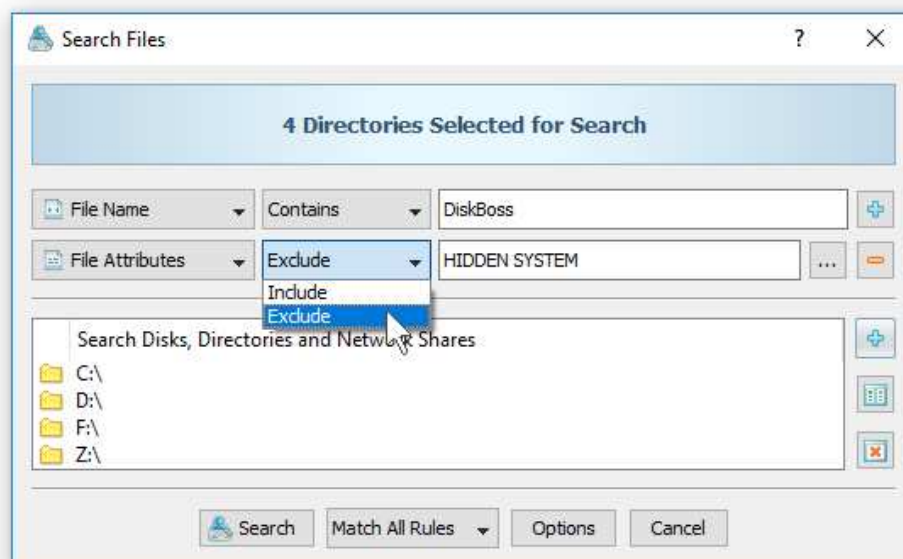
For example, the exclude macro command '\$CONTAINS Temporary Files' will exclude all directories with 'Temporary Files' at any place in the full directory path and the exclude macro command '\$REGEX \.(TMP|TEMP)\$' will exclude directories ending with '.TMP' or '.TEMP'.

3.39 Excluding Specific Files from File Search

Advanced users are provided with the ability to exclude specific files or file categories from the file search process. In general, all types of file matching rules provide positive operators, intended to positively match files, and negative operators, intended to exclude specific files or categories of files from file search results.



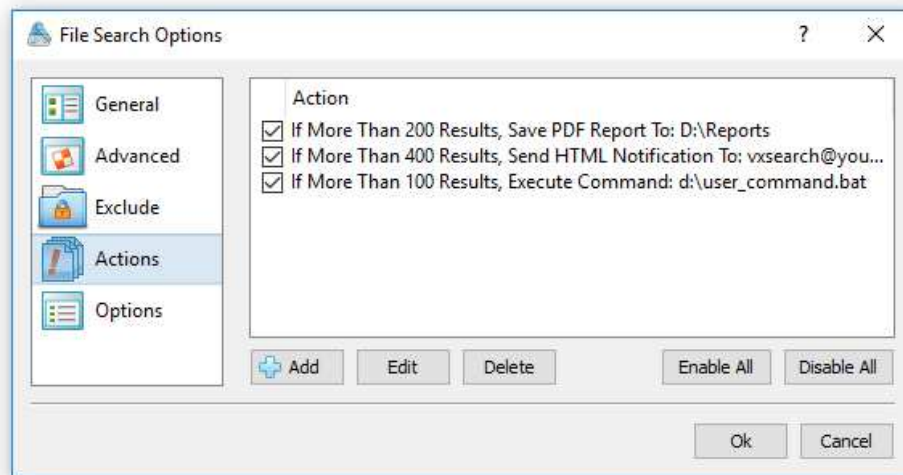
For example, let's assume that the user needs to search files by name, but exclude all pictures and image files from search results. In this case, the user needs to add a file name rule and a file category rule with the 'Not Related To' operator, which will exclude all types of images and pictures from search results.



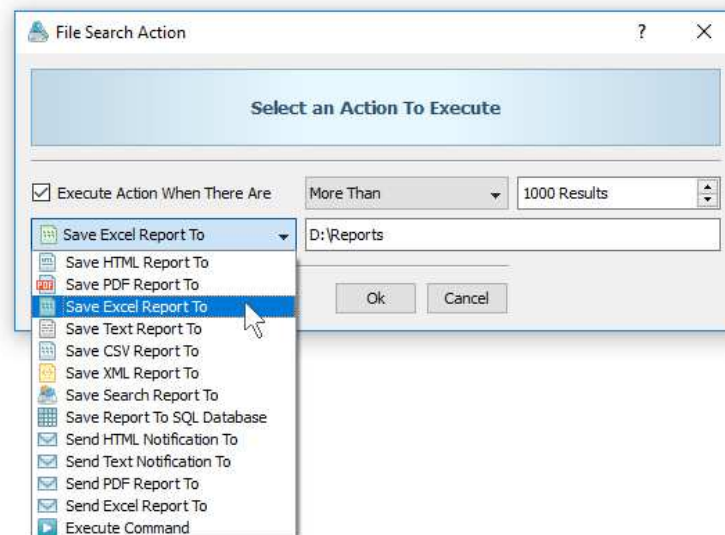
Similarly, in order to exclude all system and hidden files from search results, add a rule to match files by file attributes, select the 'Exclude' operator and select the file attributes that should be excluded.

3.40 Automatic Report Generation

In order to enable automatic report generation, open the search options dialog, select the 'Advanced' tab, enable execution of conditional actions, specify the number of search results to trigger the action, select an appropriate report format and optionally specify the name of the directory or file to save reports in.

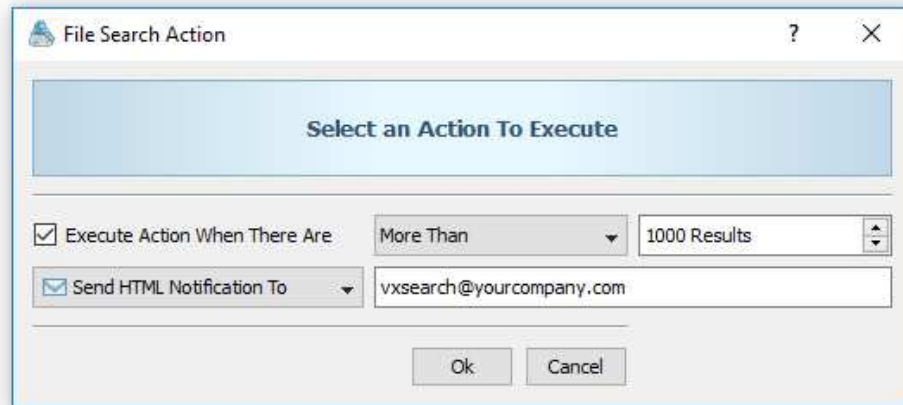


If the report file name is empty, VX Search will save report to the user's home directory with automatically generated file names containing the date and time of each report. If the specified action value is an existing directory, VX Search will save reports to the directory. Otherwise, the specified value will be used as the name of the report file and all reports will be saved to the same file overwriting the file with each new report.

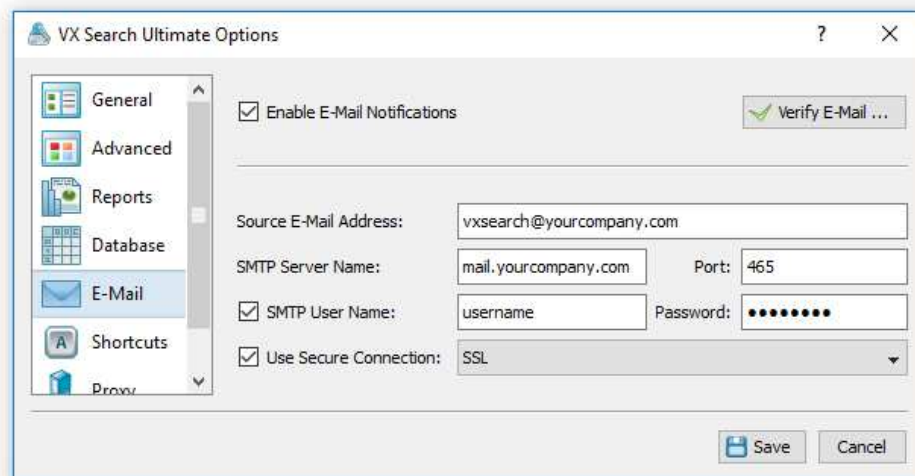


3.41 Sending E-Mail Notifications

VX Search Pro and VX Search Server provide the ability to send E-Mail notifications when a search operation finds a user-specified number of files. This feature is especially useful for periodic search operations performed automatically at specific time intervals and intended to detect specific types or categories of files in enterprise storage systems.



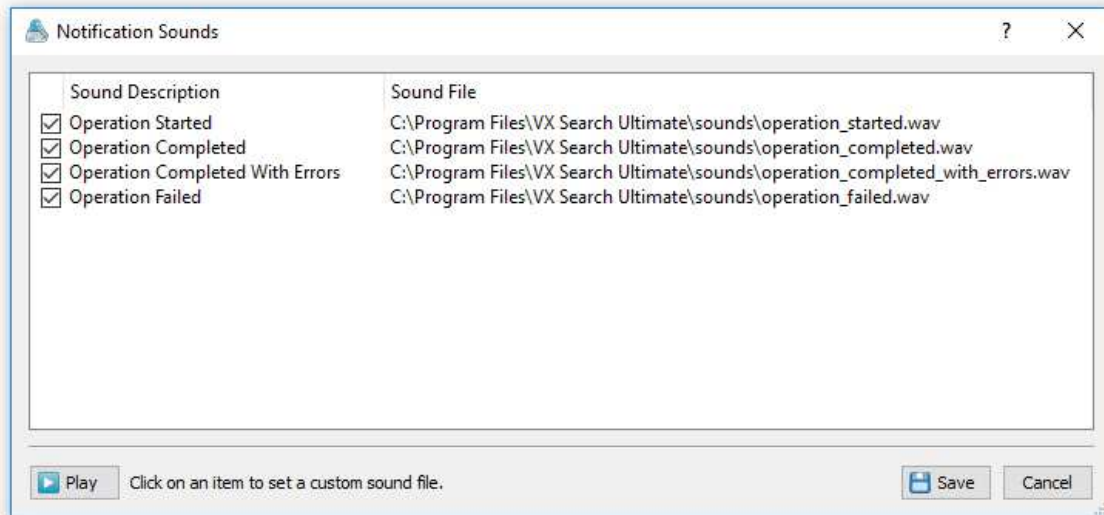
In order to enable E-Mail notifications for a search operation, open the search profile dialog, select the 'Advanced' tab, enable conditional actions, set the number of file search results to trigger the action, select the 'E-Mail Notification' action type and enter an e-mail address to send notifications to.



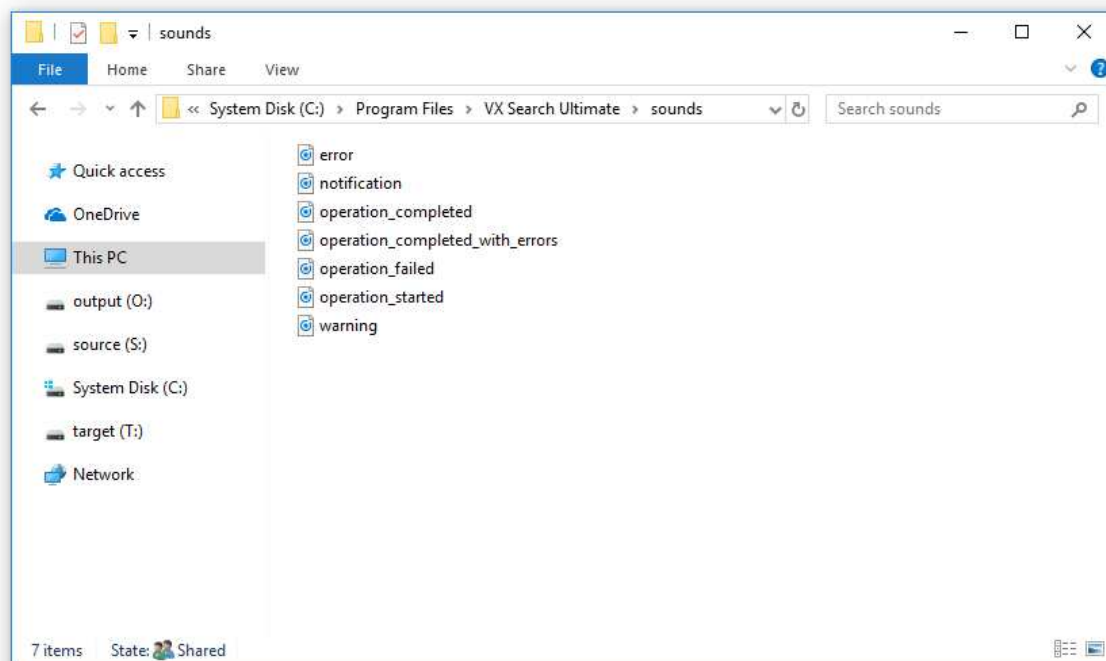
E-Mail notifications will be send using the SMTP e-mail account configured in the options dialog. In order to configure the SMTP account, open the options dialog, select the 'E-Mail' tab, enter the host name or the IP address of the SMTP server, enter the TCP/IP port number, enter the name of the user account, password and the source E-Mail address that should be used by VX Search in E-Mail notifications.

3.42 Sound Notifications

VX Search provides the ability to play notification sounds when a file search 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.



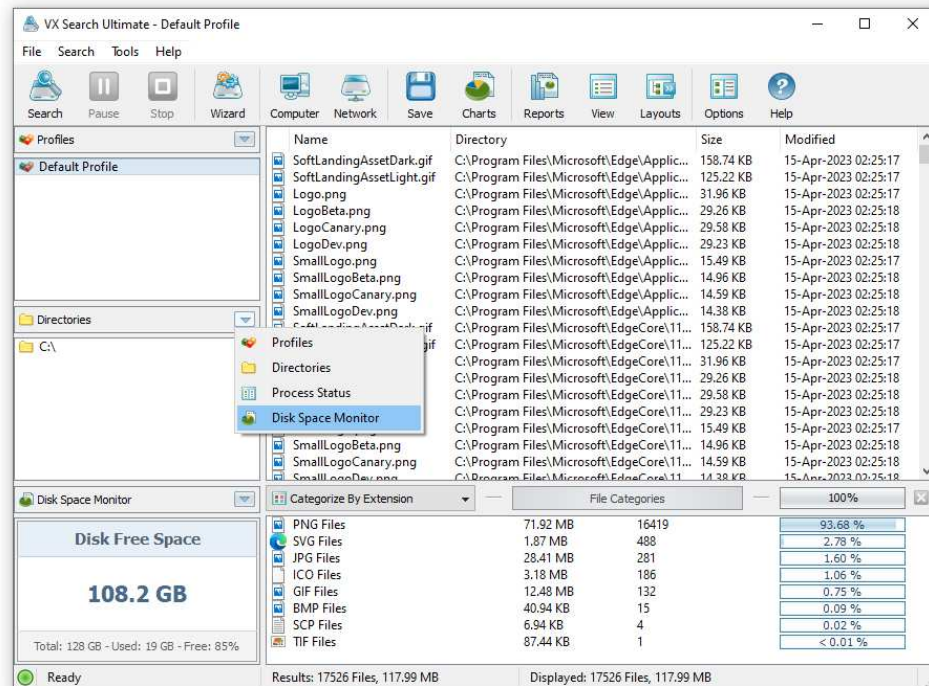
In order to open the 'Notification Sounds' dialog, select the 'Tools - Notification Sounds' menu item. The 'Notifications Sounds' dialog shows all the available sound notifications and allows one to enable or disable specific sound notifications.



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.

3.43 Customizing VX Search GUI Application

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

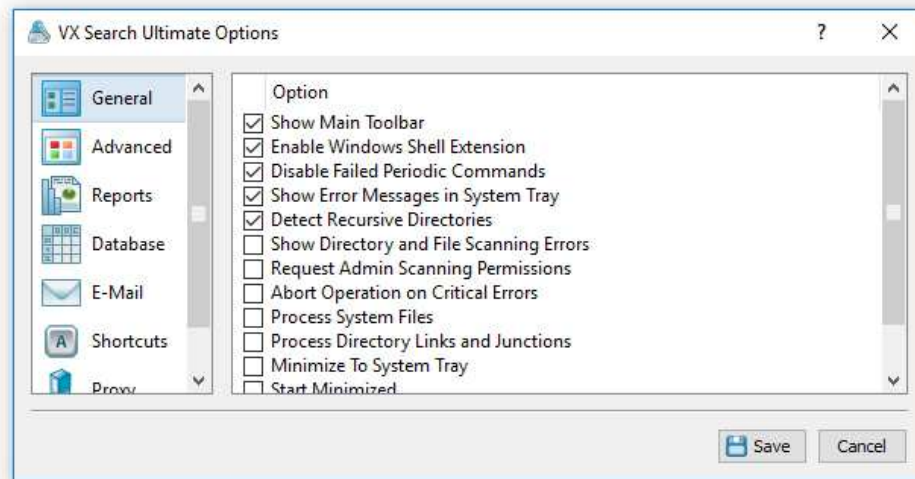
The current file search profile view, shows the list of disks, directories and network shares configured to be processed during the file search operation. The current profile view allows one to add, edit and delete input directories, disks and network shares. For example, to add a directory to the current file search 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 search operation including the total number of processed directories, the total number of processed files, the total amount of processed disk space, the number of file search results, the file search process time, the performance of the file search process, the number of excluded directories and the number of directory scanning and file search errors.

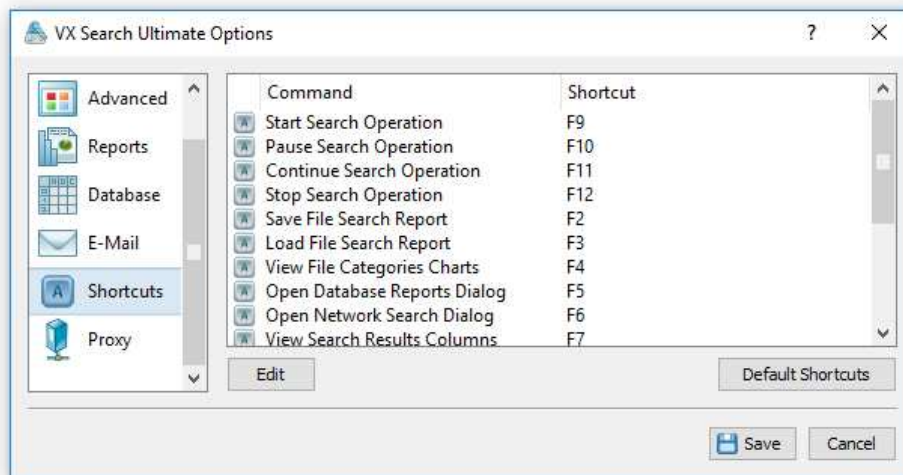
3.44 VX Search Configuration Options

VX Search provides a large number of configuration options allowing one to tune file search operations and the VX Search GUI application for user-specific needs and requirements. In order to open the 'Options' dialog, select the 'Tools - Advanced Options' menu item.

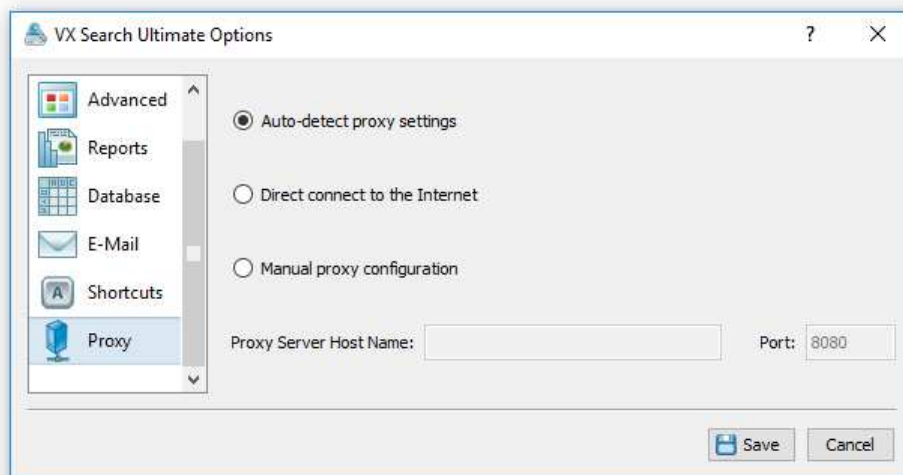


- **Show Main Toolbar** - Use this option to enable/disable the toolbar in the main VX Search GUI application.
- **Automatically Check For Product Updates** - Use this option to enable automatic check for product updates. If this option is enabled, VX Search will check for new product updates on each start and display the 'Update' link in the bottom-right corner of the status bar when a new product version will be available.
- **Disable Failed Periodic Commands** - This option applicable to VX Search Server only and it may be used to disable failed periodic search operations.
- **Show Error Messages in System Tray** - Use this option to enable/disable display of error messages in the system tray status area when the VX Search GUI application is minimized to the system tray icon.
- **Show Scanning Access Denied Errors** - Use this option to enable/disable display of access denied errors issued when VX Search is unable to search files in a disk or directory due to insufficient permissions.
- **Abort Operation On Critical Errors** - By default, VX Search tries to process as many disks and directories as possible while logging errors in the process log. Select this option to abort search and file management operations on the first critical error.
- **Enable Manual Product Registration** - Use this option to enable/disable manual product registration.
- **Process System Files** - Use this option to enable/disable processing of protected system files and directories.
- **Process Directory Links and Junctions** - Use this option to enable/disable processing of directory links and junctions.
- **Minimize To System Tray** - Enable this option to minimize the VX Search GUI application to the system tray icon.
- **Start Minimized** - Enable this option to start the VX Search GUI application minimized to the system tray icon.

The '**Shortcuts**' tab allows one to customize keyboard shortcuts. In order to change a keyboard shortcut, click on the shortcut item in the list to open the keyboard shortcut dialog and press a new key sequence.

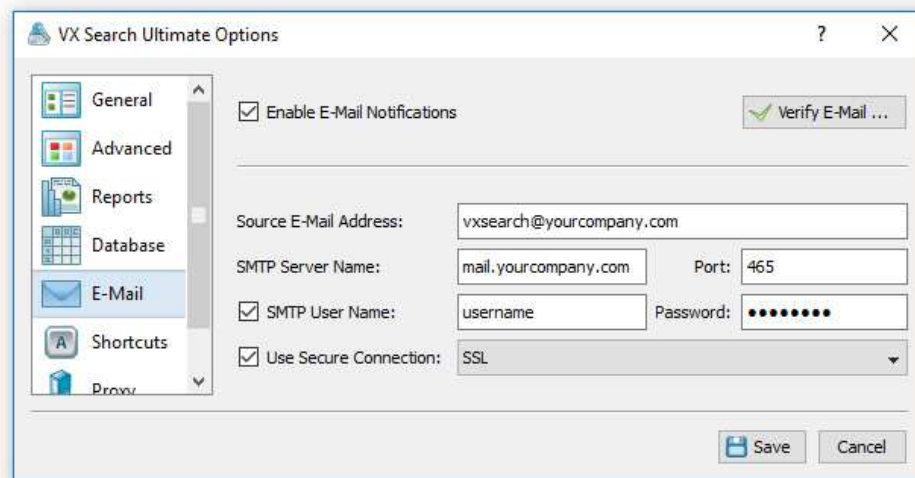


The '**Proxy**' tab provides the ability to configure Internet access through an HTTP proxy. VX Search checks for product updates through the Internet and if the computer where the product is installed on is connected to the Internet through an HTTP proxy, the user may configure a custom HTTP proxy configuration.

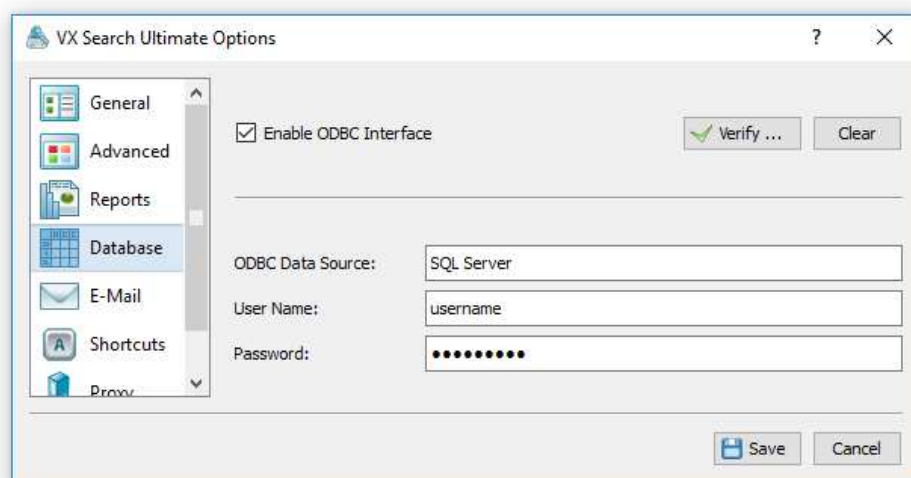


By default, VX Search uses the host's default proxy configuration and the user needs to change these settings only if VX Search is unable to receive product updates.

The '**E-Mail**' tab allows one to configure an SMTP account to use to send user-defined E-Mail notifications. These features are available in VX Search Pro and VX Search Server only. The SMTP account settings configured on this tab are applicable to both the VX Search GUI application and the VX Search command line utility.



The '**Database**' tab provides the user with the ability to configure the ODBC database interface, which may be used to save file search reports to an SQL database. In order to configure the ODBC database interface, enter the ODBC data source name, user name and password to use to connect to the database.



The ODBC database interface configured on this tab is applicable to both the VX Search GUI application and the VX Search command line utility. SQL database export capabilities are available in VX Search Pro and VX Search Server only.

3.45 Using VX Search Command Line Utility

In addition to the VX Search GUI application, the VX Search Pro and VX Search Server product versions provide a command line utility allowing one to execute file search operations from an OS shell window.

The VX Search command line utility is located in **<ProductDir>/bin** directory.

Command Line Syntax:

vxsearch -search <FileFilter> -dir <Directory 1> [... Directory X]

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

vxsearch -search -name <File Name Text> -dir <Directory 1> [... Directory X]

This command searches files containing the specified text in the file name.

vxsearch -search -regex <Regular Expression> -dir <Directory 1> [... Directory X]

This command searches files by the file name using a regular expression.

vxsearch -search <FileFilter> -server <hostname1;hostname2;hostnameX>

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

vxsearch -search <FileFilter> -network

This command searches files in all detected servers and/or NAS devices on the network.

vxsearch -search <XML Search Rules File> -dir <Directory 1> [... Directory X]

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

vxsearch -execute <Profile Name>

This command executes the specified file search profile.

vxsearch -execute <XML Command File Name>

This command executes the specified XML search command file.

Parameters:

-dir <Directory>

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

-server <hostname1;hostname2;hostnameX>

This parameters specifies one or more servers or NAS storage devices to search files in. The list of servers may be specified as a list of host name or IP addresses delimited by the semicolon (;) character.

Command Line Options:**-save_html_report [File Name]**

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

-save_excel_report [File Name]

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

-save_text_report [File Name]

This option saves a plain text file search report to the specified file.

-save_csv_report [File Name]

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

-save_xml_report [File Name]

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

-save_pdf_report [File Name]

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

-save_report [File Name]

This option saves a report in the VX Search native report format.

-save_to_database

This option saves file search results to an SQL database.

-save_to_database_table <Table Name>

This option saves file search results to the specified SQL database table.

-title <Report Title>

This option sets the report title.

-compress

This option instructs to export a compressed report file.

-show_users

This option enables processing and display of files user names.

-scanners <Max Dir Scan Threads>

This parameter sets the maximum number of parallel directory scanning threads.

-streams <File Search Threads>

This parameter sets the number of parallel file search threads.

-perf <FULL | MEDIUM | LOW>

This parameter controls the speed of the file search operation.

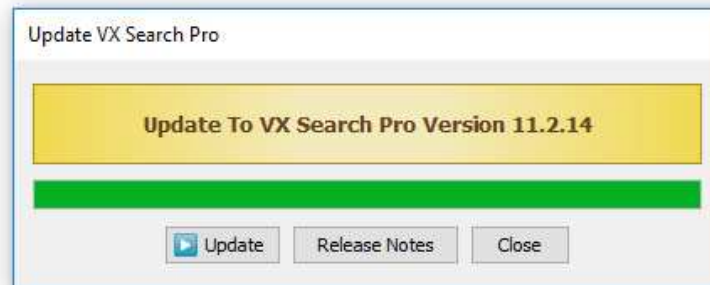
-v - Shows the product major version, minor version, revision and build date.

-help

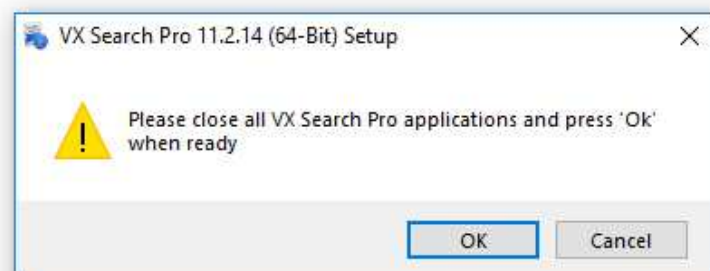
This command shows the command line usage information.

3.46 Product Update Procedure

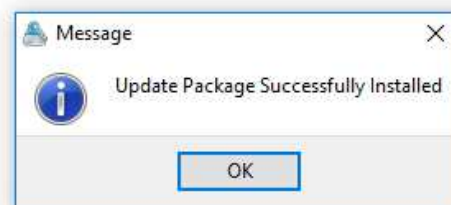
Almost every month, Flexense releases bug-fixes and product updates for VX Search. These product updates are uploaded to our web site and may be applied to any installed product version. Each time VX Search is started, the update manager checks if there is a new product version available. If there is 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 that 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 two buttons: the 'Release Notes' button and the 'Install' button. Press the 'Release Notes' button to see more information about what new features and bug-fixes contains this specific product version. Press the 'Install' button to download and install the new product version.



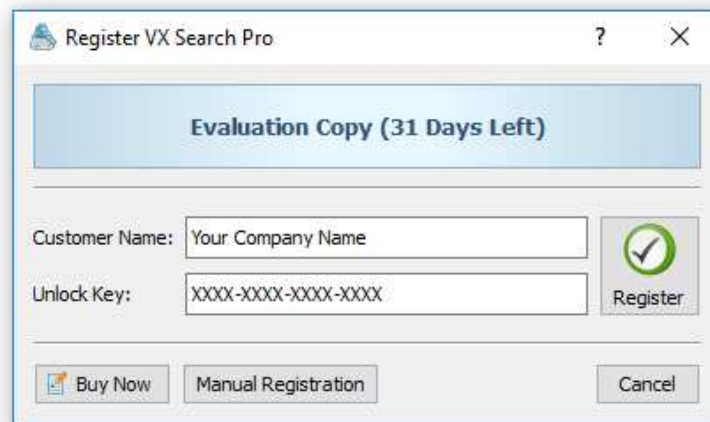
After pressing the 'Install' button, please wait while the update manager will download the new product version to the local disk. The update package will be downloaded to a temporary directory on the system drive and automatically deleted after the update manager will finish updating the product.



After download is completed, close all open VX Search applications and press the 'Ok' button when ready. If one or more VX Search 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, VX Search will show a message box informing about the successfully completed operation.

3.47 Product Registration Procedure

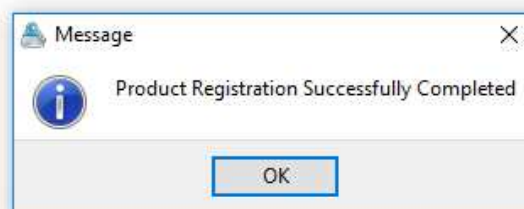
Licenses for commercial product versions and discounted license packs may be purchased on the following page: <http://www.vxsearch.com/purchase.html>



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.



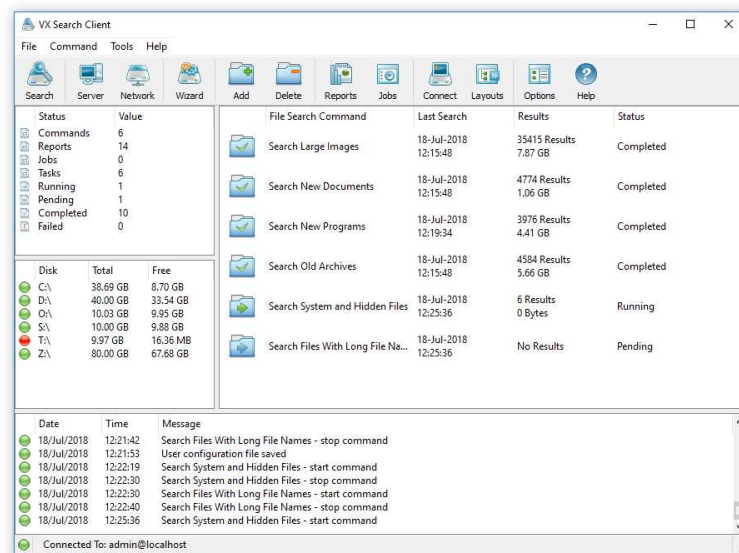
After you will receive your unlock key, start the VX Search GUI application and press the 'Register' button located in the top-right corner of the window. On the register dialog, enter your name and the received unlock key and press the 'Register' button to finish the registration procedure.



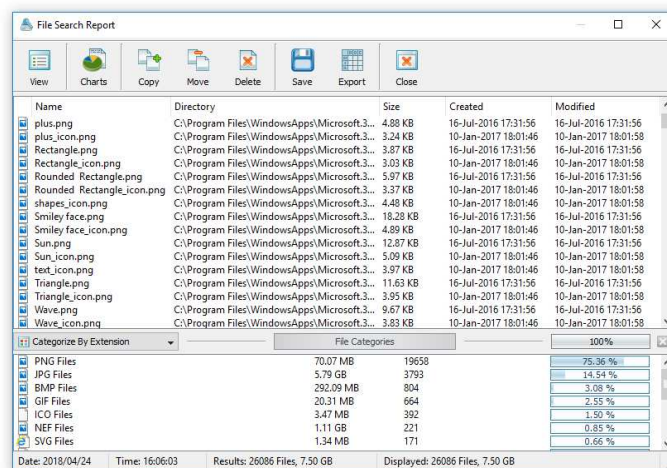
4 Using Server Product Version

4.1 VX Search Server Overview

VX Search Server is a rule-based file search server, which runs in the background as a service and provides the ability to search files in one or more directories, disks, network shares or NAS storage devices by the file name, directory, regular expressions, file size, file type, file attributes, user name, creation, last modification or last access dates, text and binary patterns, JPEG EXIF tags, etc.



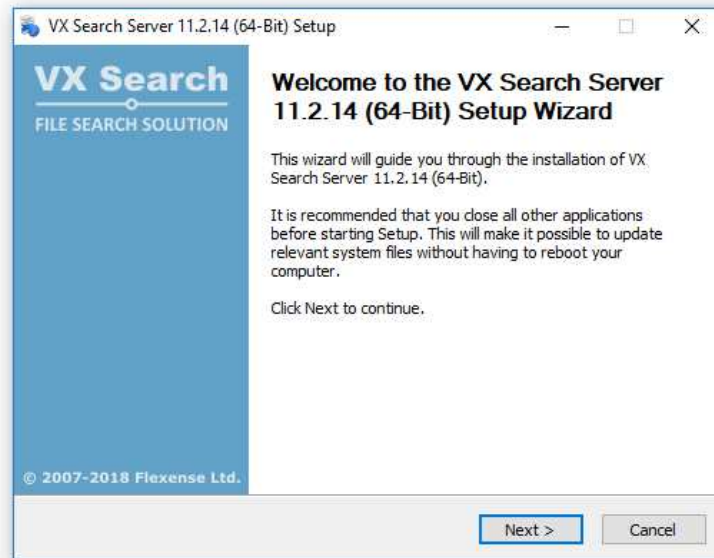
VX Search Server allows one to setup an unlimited number of files search operations, with each one capable of searching files using an extensive set of file matching rules combined with logical operators. Power users are provided with the ability to combine multiple types of rules into hierarchical file search queries capable of precisely searching required types or groups of files. For example, VX Search Server allows one to search for all types of documents with the file size more than X MB that were modified during the last Y months.



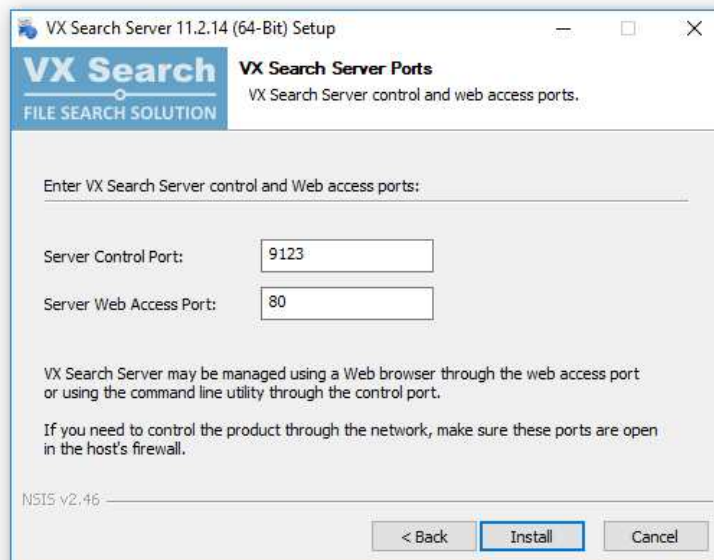
VX Search Server may be controlled using a full-scale client GUI application and a command line utility locally or via the network. The user is provided with the ability to review file search results, generate HTML, PDF, text, CSV, XML reports or export file search results from multiple servers to a centralized SQL database for future review and analysis. In addition, VX Search Server provides the ability to schedule periodic file search operations according to user-defined time intervals, automatically generate reports and/or send E-Mail notifications when a file search operation finds a user-specified number of file search results.

4.2 Product Installation Procedure

VX Search 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 VX Search Server may be downloaded from the following page: <http://www.vxsearch.com/downloads.html>.



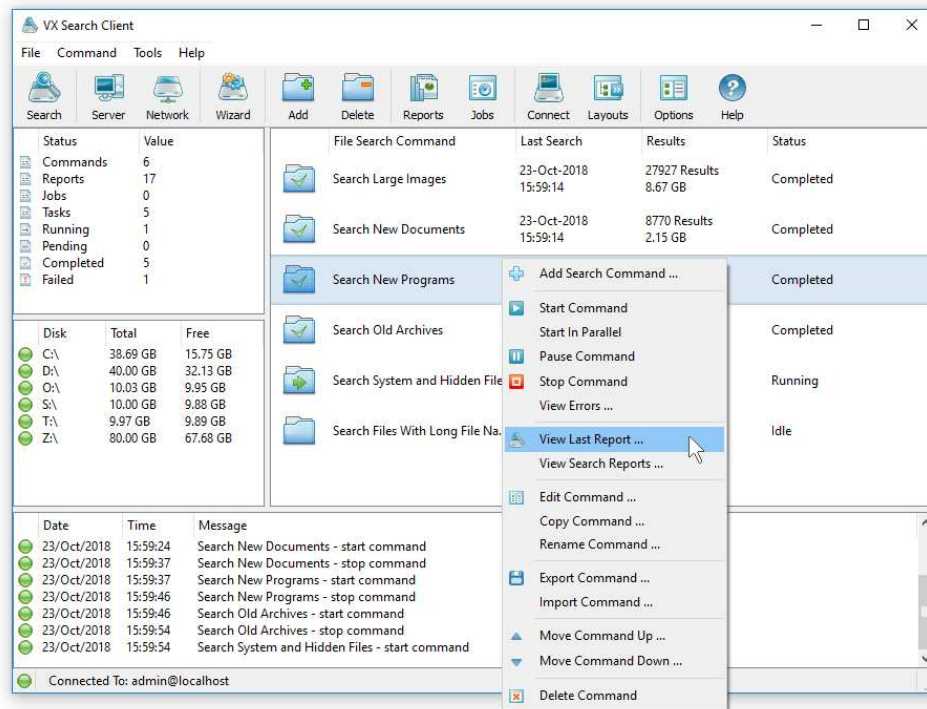
The installation package is very small, 5MB - 6MB depending on the target operating system, and the product requires just 20MB of the free disk space on the target server. In order to install VX Search Server, start the setup program, select a destination directory and press the 'Next' button.



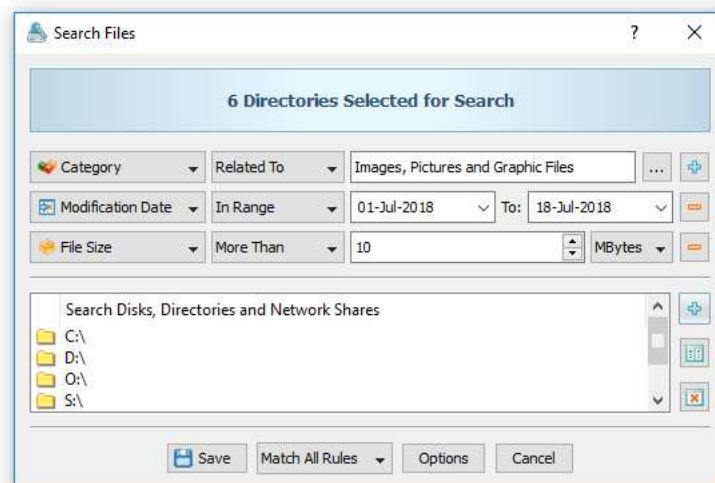
Optionally, enter custom server control and/or web access ports. The server control port is used by the VX Search command line utility and the web access port is the port for the web-based management interface allowing one to control VX Search Server using a standard web browser. If VX Search Server 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 VX Search Client GUI application

VX Search Server provides a full-scale client GUI application, which can be used to control one or more VX Search servers locally or via the network. The client GUI application allows one to perform file search operations, review file search results, schedule periodic file search operations, save file search reports and export file search results to an SQL database.



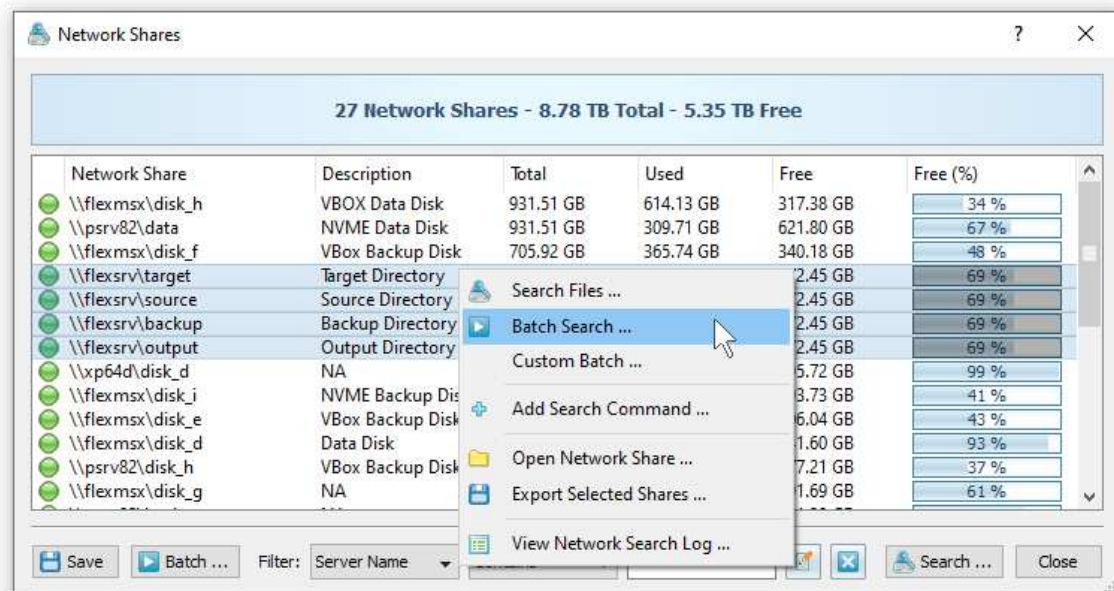
In order to perform a simple file search operation, press the 'Search' button located on the main toolbar, add one or more file matching rules and specify disks, directories and/or network shares to search in. For advanced file search options, press the 'Options' button located on the file search command dialog.



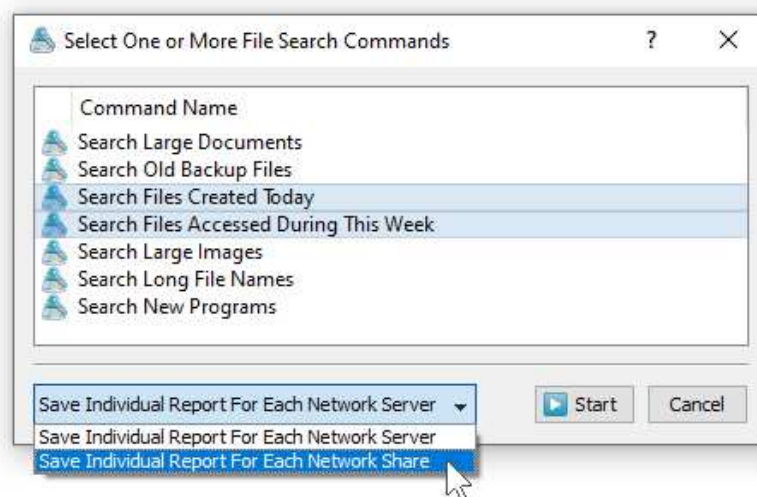
VX Search Server allows one to pre-configure sophisticated file search operations as user-defined file search commands and then execute these search commands in a single mouse click or schedule periodic file search operations, automatically generate various types of file search reports and/or setup conditional E-Mail notifications or custom file search actions executed when a user-defined search command finds a user-specified number of results.

4.4 Batch File Search Operations

VX Search Server and VX Search 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 search commands on hundreds of network servers and NAS storage devices and generate an individual file search report for each network server, NAS storage device or network share.



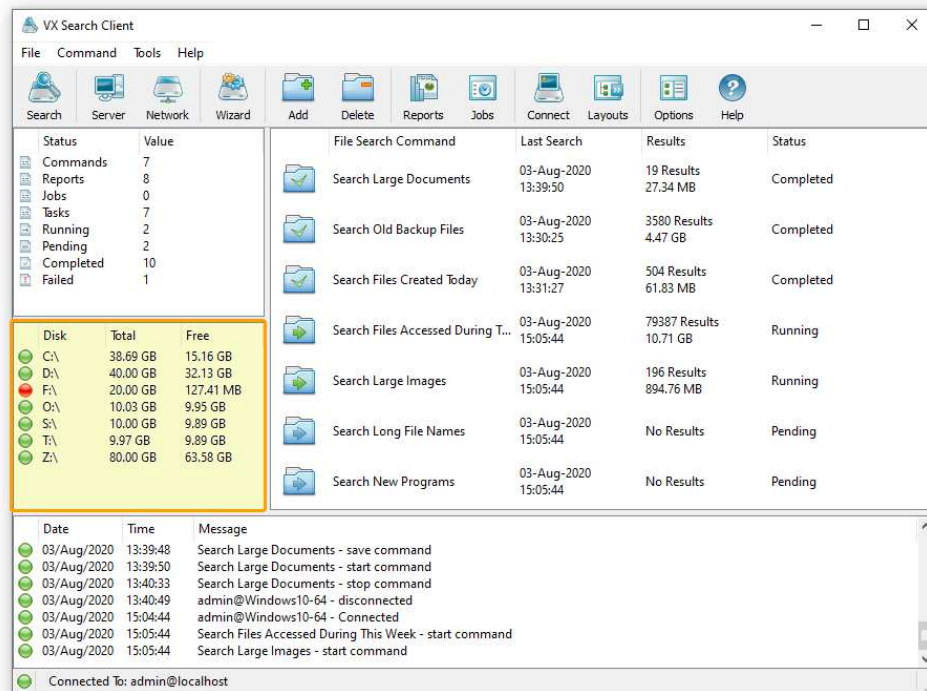
In the simplest case, open the VX Search client GUI application, press the 'Network' button located on the main toolbar, search all network servers and NAS storage devices on the network, select one or more servers, press the right mouse button and select the 'Batch File Search' menu item. VX Search will show a list of pre-configured file search 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 search mode, VX Search Server will save in the built-in reports database an individual file search report for each network server, NAS storage device or network share. Once the batch file search operation is completed, the user will be provided with the ability to open saved file search reports, review file search 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 Using Built-In Disk Space Monitor

VX Search Server and VX Search 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 search 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.

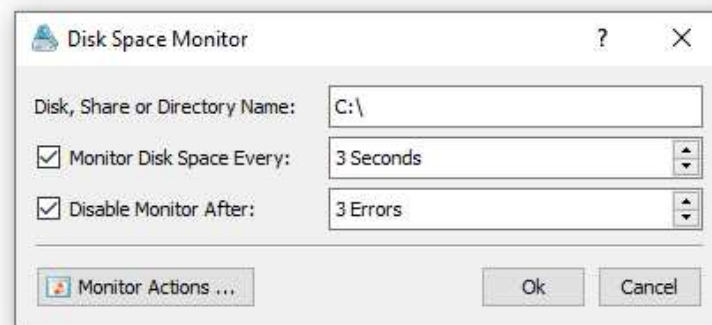


The disk space monitor is located in the bottom-right corner of the VX Search client GUI application. By default, the disk space monitor shows the status of all local disks in the server. For each disk, the disk space monitor shows the disk name, the total amount of the disk space, the amount of the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

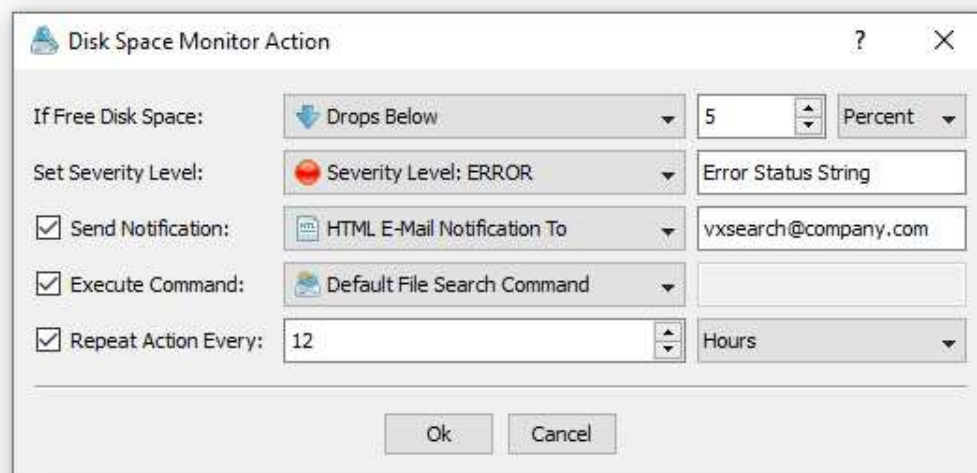


In order to add an additional disk or network share to the disk space monitor, press the right mouse button over the disk space monitor pane, specify the name of a disk, directory or network share to monitor and press the 'Ok' button. In order to change the configuration of a previously created disk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



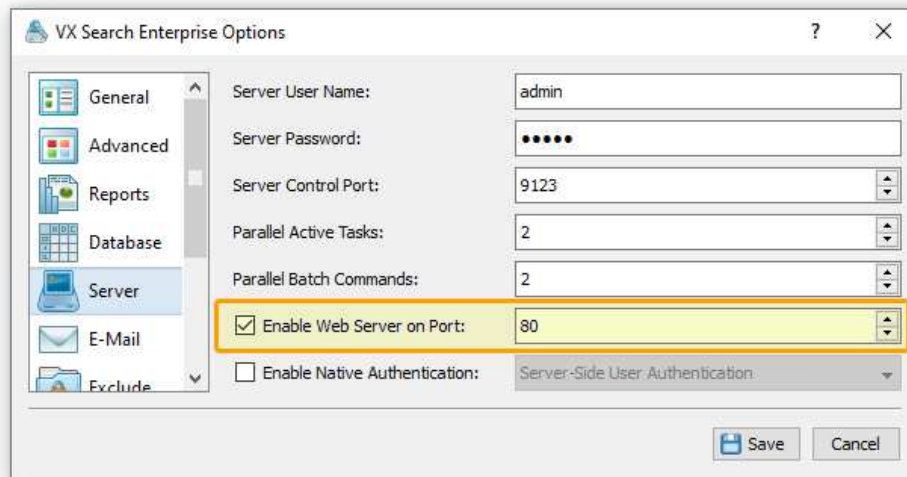
In order to automatically send an E-Mail notification and/or execute a custom action when the amount of the free disk space drops below a user-specified limit, the user needs to configure one or more disk space monitoring actions. Open the disk space monitor dialog, press the 'Monitor Actions' button, 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.



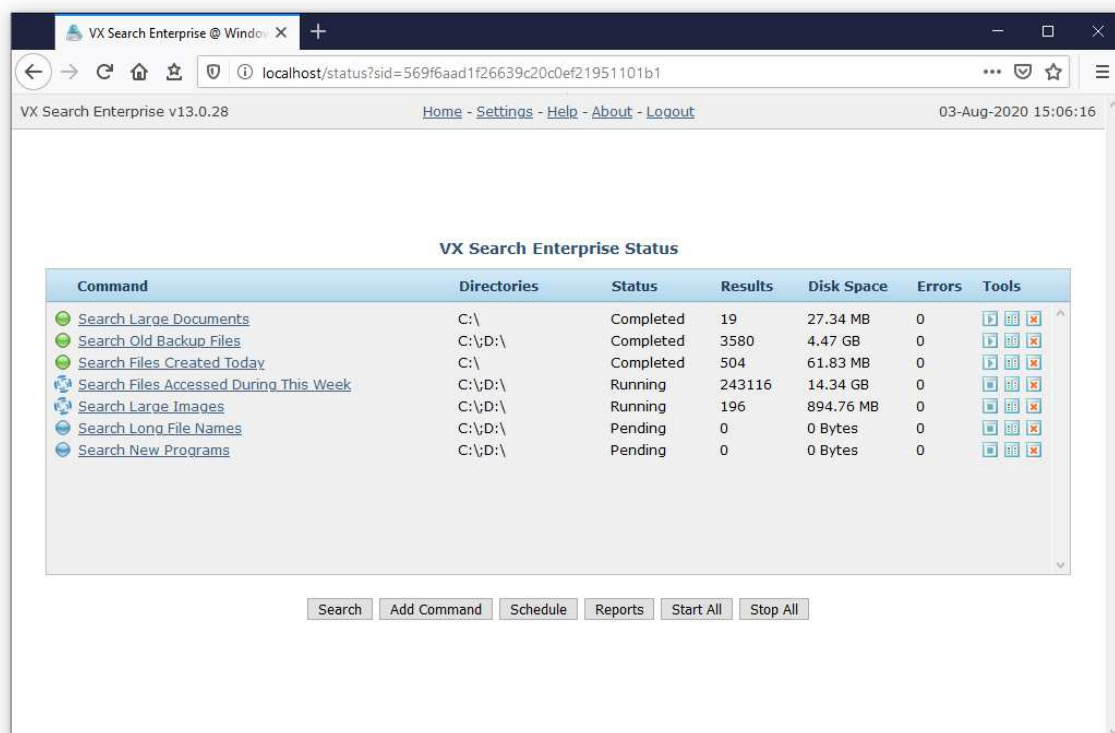
In addition to E-Mail notifications, the user is provided with the ability to automatically search files that were created or modified during the last 24 hours and send a file search report showing recently created or modified files to the specified E-Mail address. If the user selects the 'Default File Search Command' option, the disk space monitor will automatically create a file search command configured to search all files that were created or modified during the last 24 hours and send the file search results to the specified E-Mail address. If the user selects the 'Custom File Search Command' option, the disk space monitor will execute the user-configured file search 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.

4.6 Using Web Based Management Interface

In addition to the VX Search client GUI application, VX Search Enterprise provides a web-based management interface, which can be used to control one or more VX Search Servers using a regular web browser.



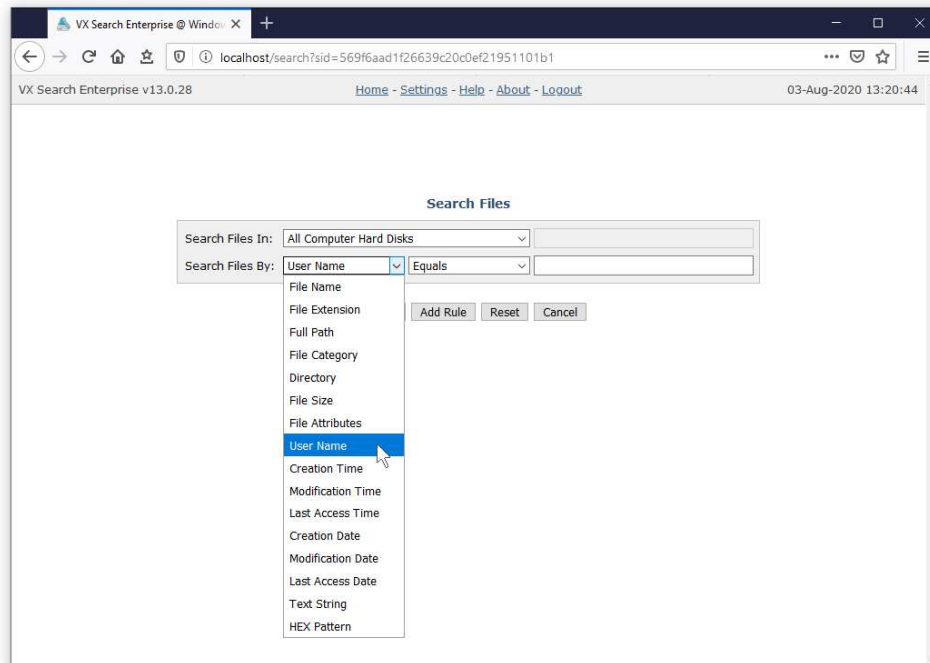
In order to enable the web-based management interface, connect to the server using the VX Search client GUI application, open the 'Options' dialog, select the 'Server' tab and select the 'Enable Web Server' option. Now, open a regular web browser and type in the address bar the host name or an IP address of the server to connect to and login to the VX Search Enterprise web-based management interface using the default (**admin/admin**) user name and password.



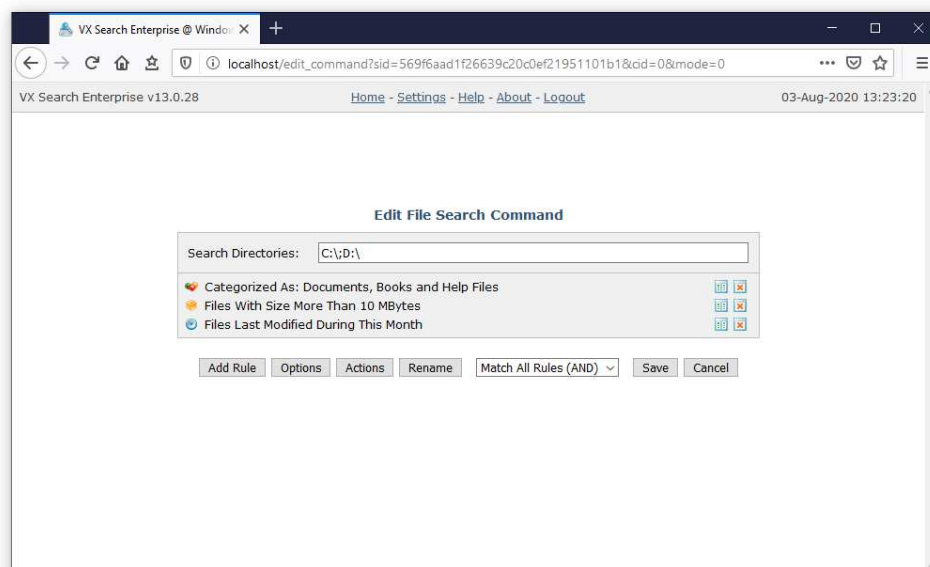
The VX Search Enterprise home page shows the user-defined file search commands and allows one to perform file search operations, review file search results, generate various types of reports and schedule periodic file search operations.

4.7 Quick File Search Operations

VX Search Server provides the following two file search modes: the quick file search mode, which is an easy to use mode for simple search operations, and the search commands mode, which provides the ability to pre-configure a number of file search commands based on one or more file matching rules and allowing one to control an extensive set of file search options.



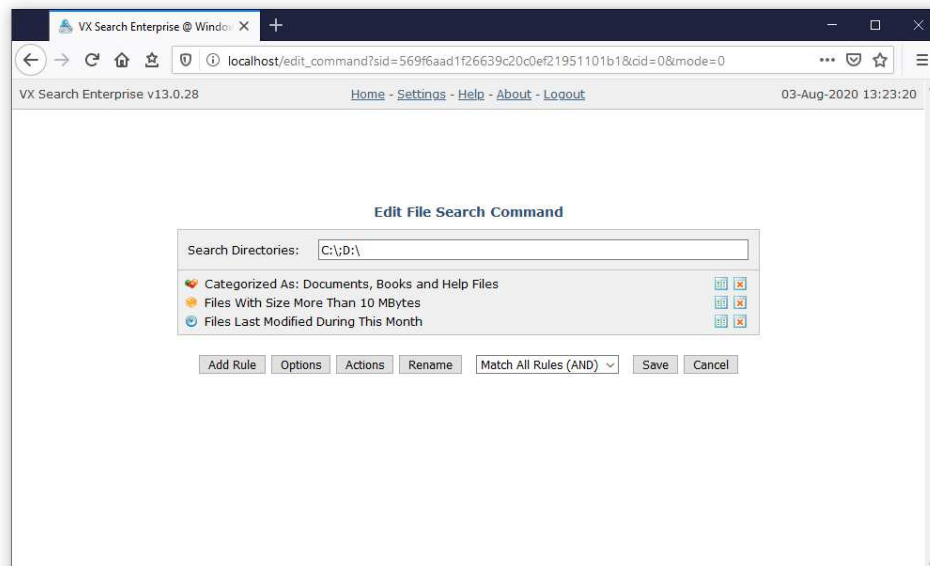
In order to simple search files using the quick file search mode, press the 'Search' button located on the VX Search Server home page, specify disks, directories or network shares to search in and add one or more file search rules.



In the quick file search mode, VX Search Server will automatically create a file search command according to the selected file search rules, search files in the specified disks and directories and display search results. Each quick file search command is saved in the product configuration file, displayed on the VX Search Server home page and may be later executed again or customized to search different sets of files.

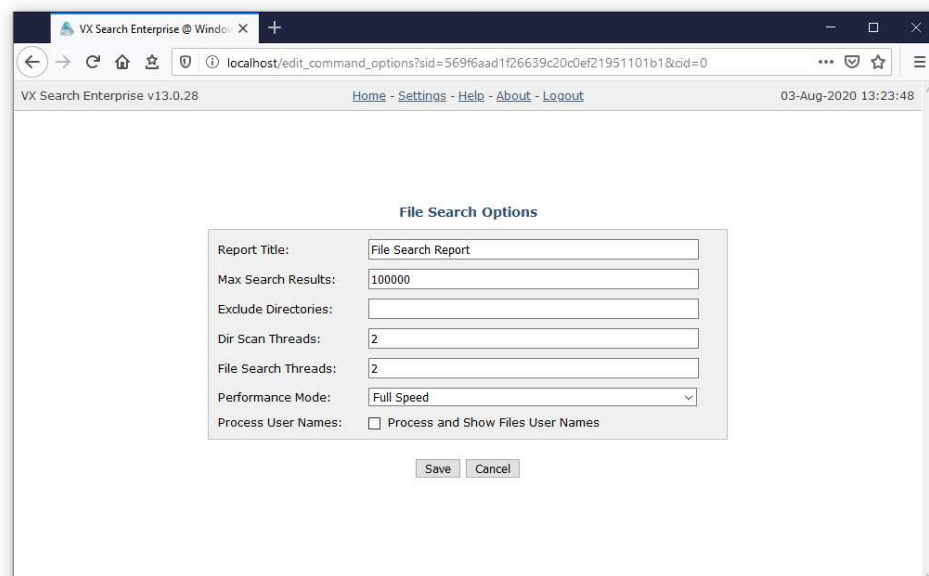
4.8 Managing File Search Commands

VX Search Server allows one to configure multiple file search operations with each one capable of searching files in a number of disks, directories, network shares or NAS storage devices. In order to add a new command, press the 'Add Command' button located on the VX Search Server home page, specify a unique command name, enter one or more disks, directories or network shares to search in, add one or more file search rules and press the 'Save' button.



The screenshot shows the 'Edit File Search Command' dialog box within the VX Search Enterprise v13.0.28 web interface. The dialog has a title bar 'Edit File Search Command'. It contains a 'Search Directories:' text input field with the value 'C:\D:\'. Below this, there are three search rules listed with icons: 'Categorized As: Documents, Books and Help Files', 'Files With Size More Than 10 MBytes', and 'Files Last Modified During This Month'. At the bottom of the dialog, there are buttons for 'Add Rule', 'Options', 'Actions', 'Rename', a dropdown menu set to 'Match All Rules (AND)', and 'Save' and 'Cancel' buttons.

Each file search operation may be configured to search files using an extensive set of file search rules combined with logical operators. Advanced users are provided with the ability to define multi-level, hierarchical file search queries capable of precisely selecting required files by the file name, regular expressions, file type, file size, user name, attributes, creation, last modification or last access dates, text or binary patterns, JPEG EXIF tags, etc.

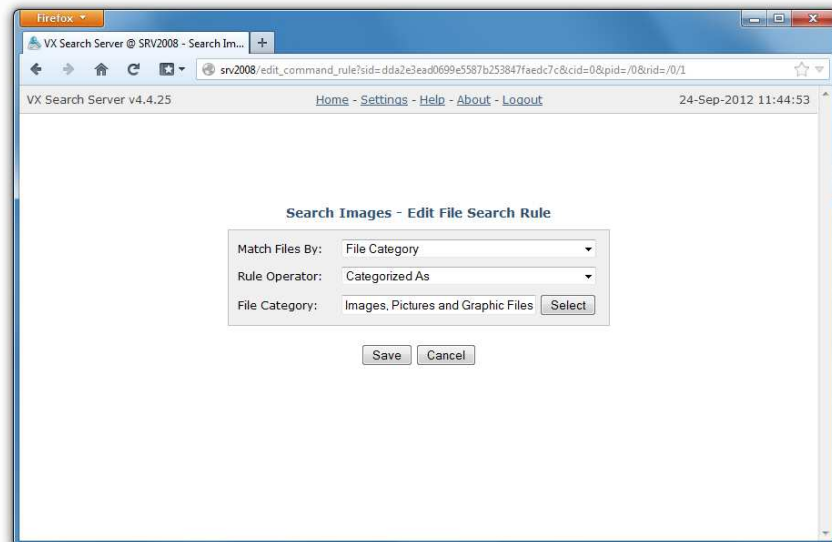


The screenshot shows the 'File Search Options' dialog box within the VX Search Enterprise v13.0.28 web interface. The dialog has a title bar 'File Search Options'. It contains several configuration fields: 'Report Title:' with the value 'File Search Report', 'Max Search Results:' with the value '100000', 'Exclude Directories:' (empty), 'Dir Scan Threads:' with the value '2', 'File Search Threads:' with the value '2', 'Performance Mode:' with a dropdown menu set to 'Full Speed', and 'Process User Names:' with an unchecked checkbox labeled 'Process and Show Files User Names'. At the bottom, there are 'Save' and 'Cancel' buttons.

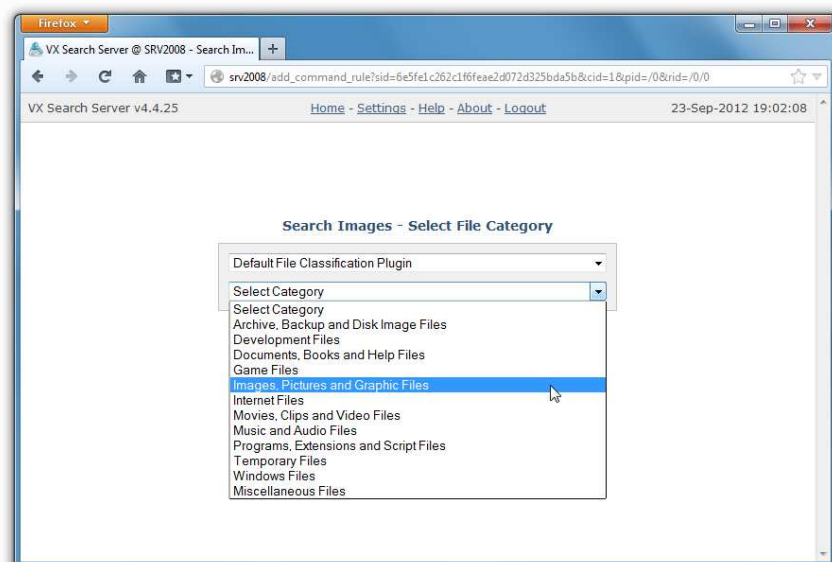
In addition, the user is provided with the ability to exclude one or more directories from the files search process, set a custom report title, control the maximum number of search results for each file search operation, set the number of history reports to save for each file search operation and configure file search operations to intentionally slow down the file search process in order to minimize the performance impact on running production servers.

4.9 Searching Files by Category

One of the most powerful capabilities of VX Search Server is the ability to search files by the file type or category using an extensive set of file classification plugins capable of recognizing more than 2500 types of files. In order to search files related to a category, select the 'Search Files Categorized As' file matching rule and press the 'Select' button to select an appropriate file category.



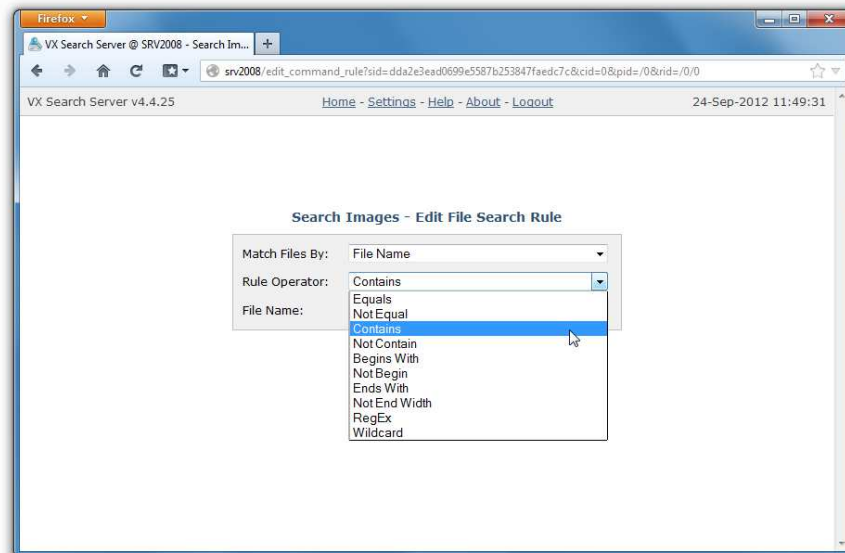
All file categories are organized into a logical hierarchy with multiple subcategories, groups and file classes. Select a file classification plugin and browse the hierarchy of file categories to select an appropriate file type. For example, select the 'Images, Pictures and Graphic Files' category to find all types of images and picture files. This is especially useful when the user needs to find multiple types of files, but does not know all the required file extensions.



If the selected file category contains a number of subcategories, files related to any of the selected subcategories will be displayed in the search results. A number of file categories may be added using multiple file matching rules combined with a logical (AND, OR) operator. Finally, power computer users and IT administrators may design custom file classification plugins with user-specific file categories and hierarchies using a simple XML-based format and use these custom file categories in file search operations.

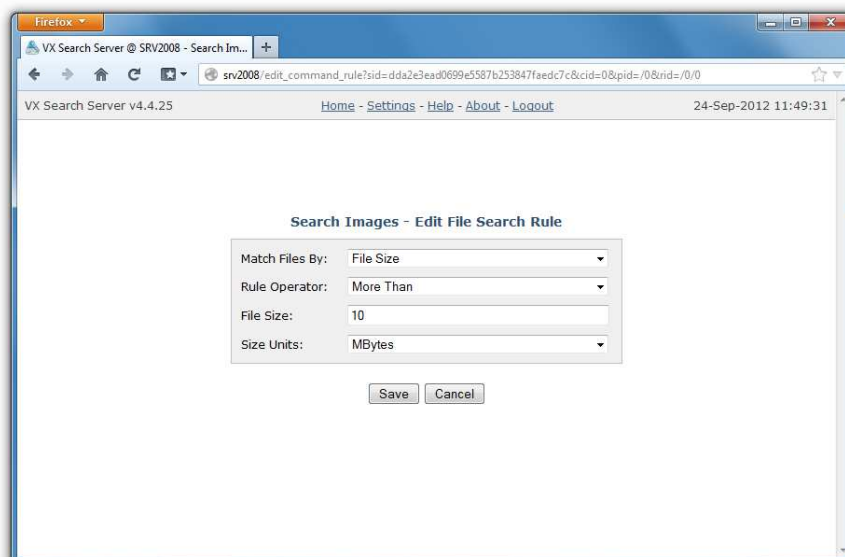
4.10 Searching Files by Name

VX Search allows one to search files by the file name, location, extension, full file name including the full path, the name of the directory without the path and file name and the file name without extension. There are a number of positive and negative pattern matching operators providing the user with the ability to match text patterns located at different places of the file name and allowing one to define precise file matching rules.



4.11 Searching Files by Size

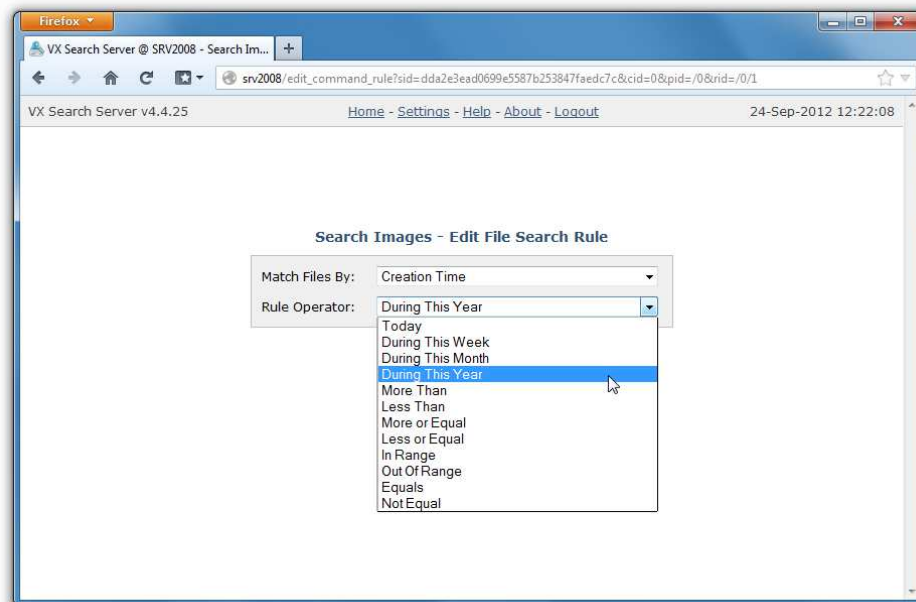
The user is provided with the ability to search files by the file size using multiple comparison operators and size units. This file matching rule is very useful when combined with file categories to search files matching multiple different criteria.



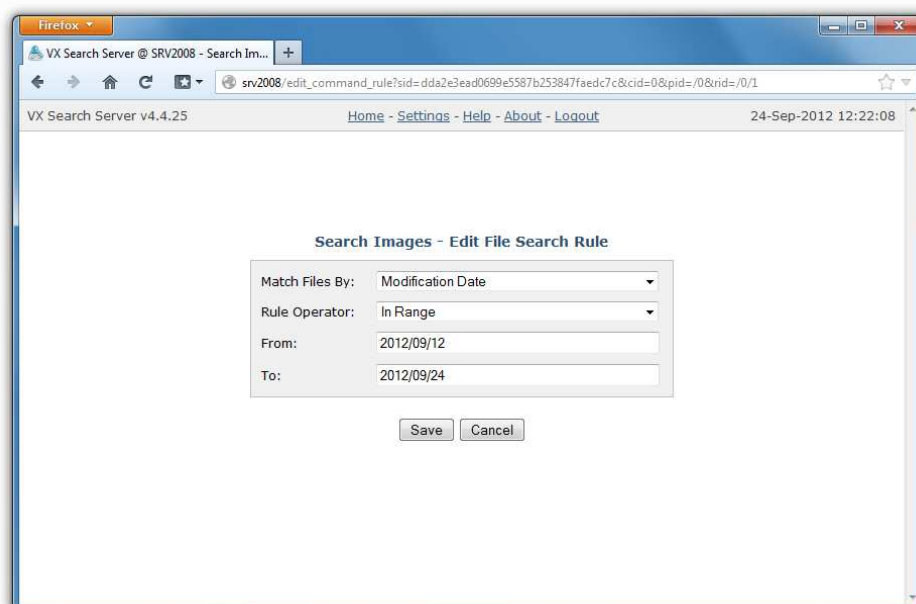
For example, VX Search allows one to find all pictures and images with the file size greater than X MB. The size-based file matching rule may be combined with other types of file matching rules allowing one to find files exactly matching user needs and requirements.

4.12 Searching Files by Date

VX Search provides two sets of file matching rules allowing one to search files by the creation, modification and last access dates. The first set of time-based file matching rules works with relative time periods and provides the ability to find files that were created, modified or last accessed during X days, weeks, months or years.



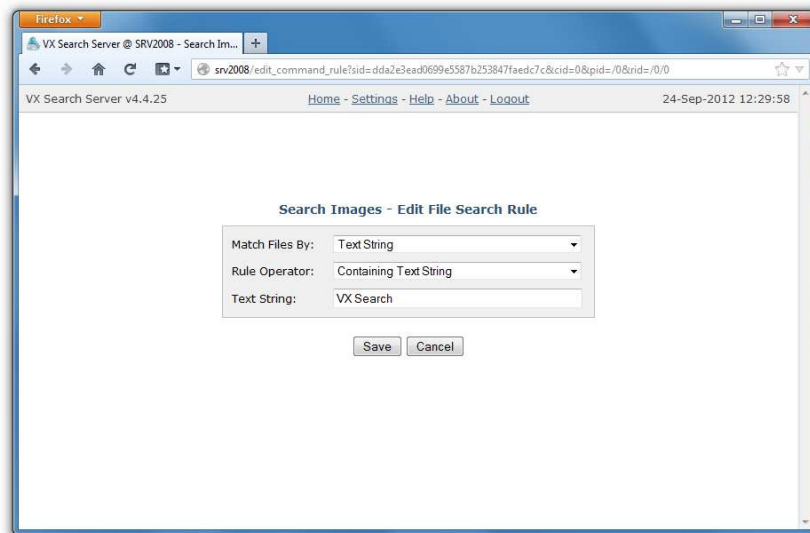
The relative time-based rules are useful when the user needs stable time periods not changing and keeping valid as the time passes on. For example, a file matching rule searching files that were modified during the last 7 days is always valid disregarding of the current date.



Sometimes, when the user needs to find files that were created, modified or last accessed during very specific dates, relative time periods are not good. For these cases, VX Search provides absolute date-based file matching rules, which are allowing one to define exact dates or date ranges to search for.

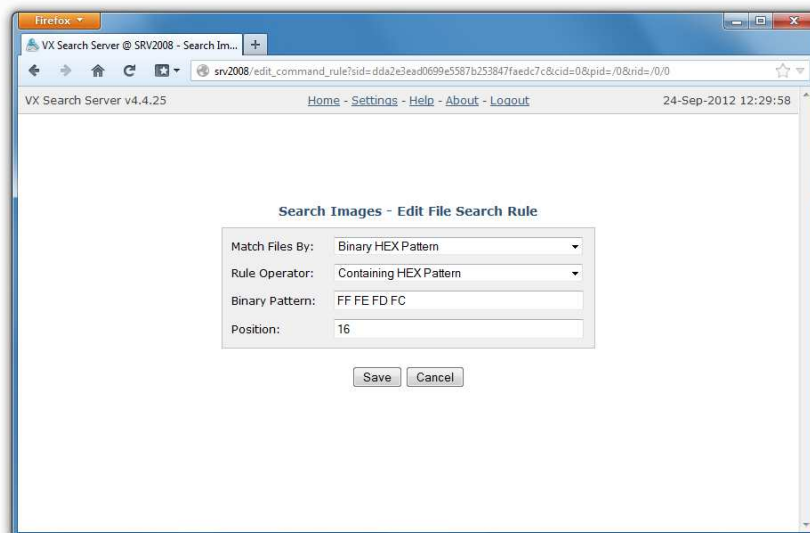
4.13 Searching Files by Text Strings

VX Search Server provides a file matching rule capable of searching files containing or not containing user-specified text strings. In order to match files by a text pattern, select the 'Search Files by Text String' file matching rule, select an appropriate text matching operator and enter a text string to search for.



4.14 Searching Files by Binary Patterns

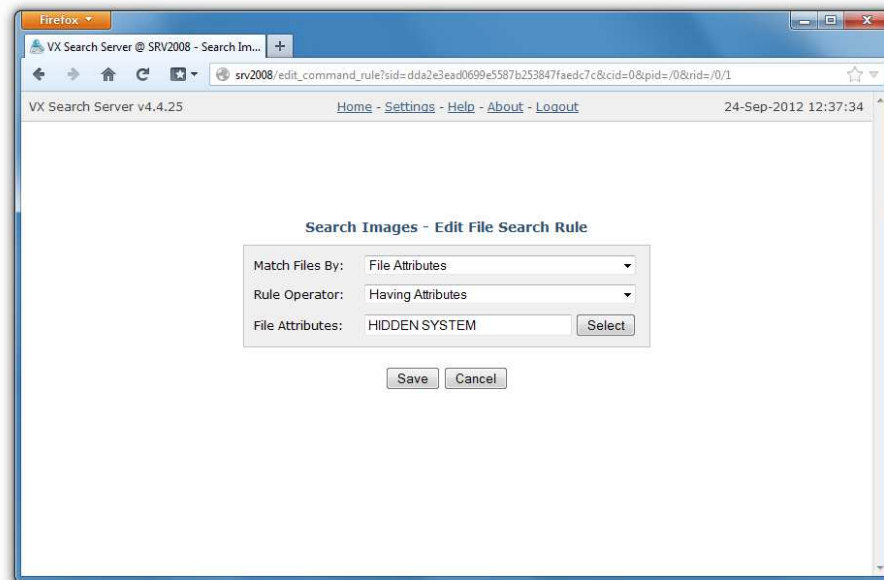
Power computer users and IT administrators are provided with a binary pattern file matching rule, which is capable of searching files by binary patterns located at specific locations inside of files. In order to add a binary file matching rule, select the 'Binary HEX pattern' rule, select an appropriate pattern matching operator, enter the HEX pattern to search for and enter the position inside of files where the binary pattern should be located.



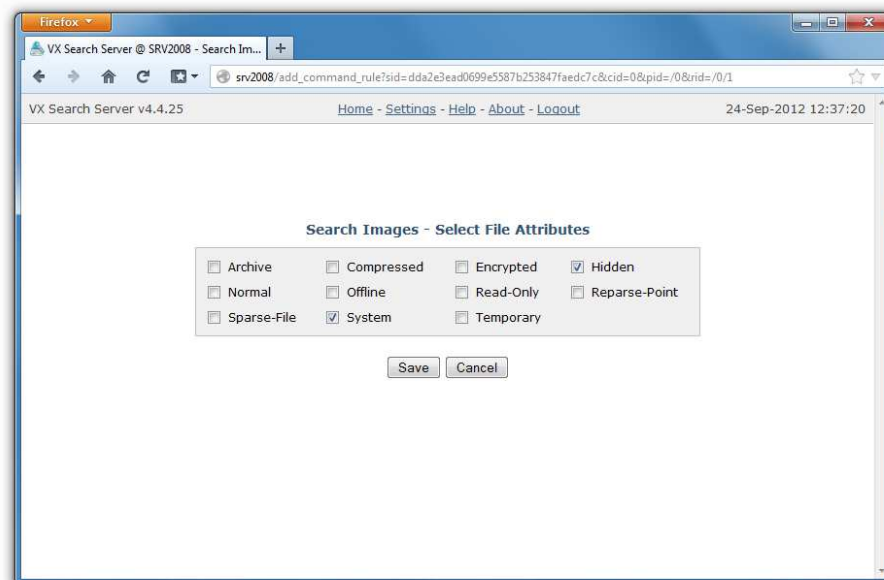
The binary pattern file matching rule is very useful when the user needs to detect specific file formats containing format-specific signature patterns at designated positions. Multiple binary pattern rules may be combined with logical operators to detect files containing multiple patterns at different positions. The pattern should be specified as a string of HEX characters with two characters per byte delimited by the space character. The position should be specified as an absolute offset from the beginning of the file.

4.15 Searching Files by File Attributes

Sometimes, it may be required to search files by file attributes. For these purposes, VX Search Server provides the file attributes file matching rule. Select the 'File Attributes' file matching rule, select an appropriate attribute matching operator and press the 'Select' button to select the attributes to be checked.



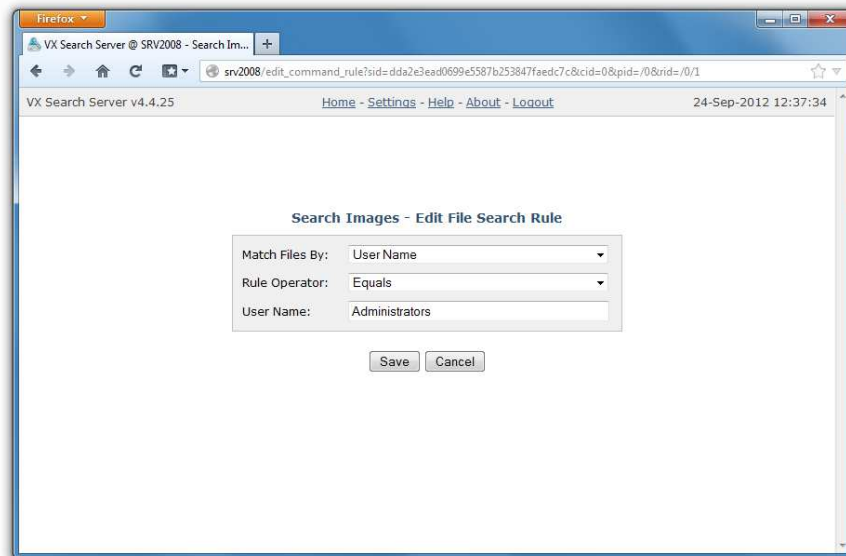
On the attributes select page, check all the attributes that should be tested and press the 'Save' button. When the operator is set to 'Having Attributes', VX Search Server will search files having all the selected file attributes. Otherwise, VX Search Server will search files having none of the selected file attributes.



The negative operator is especially useful when the user needs to find all files related to a specific file category, but skip all protected system and hidden files. The attributes file matching rule may be combined with other types of file matching rules allowing one to precisely select the required files.

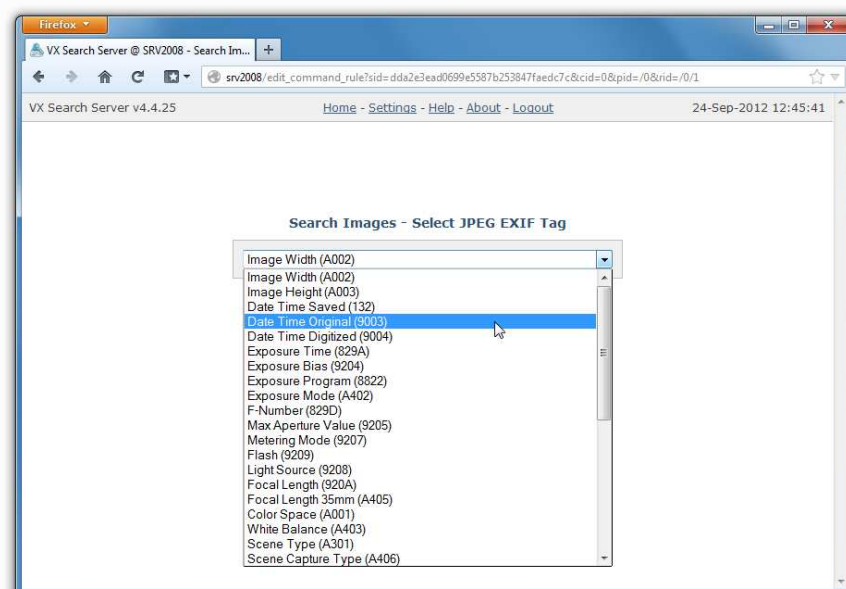
4.16 Searching Files by User

Power computer users and IT administrators are provided with the ability to search files by the user name. Select the 'User Name' file matching rule, select an appropriate text matching operator and enter the user name to search for. The entered text pattern is case insensitive and it may be matched exactly or at different places inside of the user name using different types of the text matching operator.



4.17 Searching JPEG images by EXIF tags

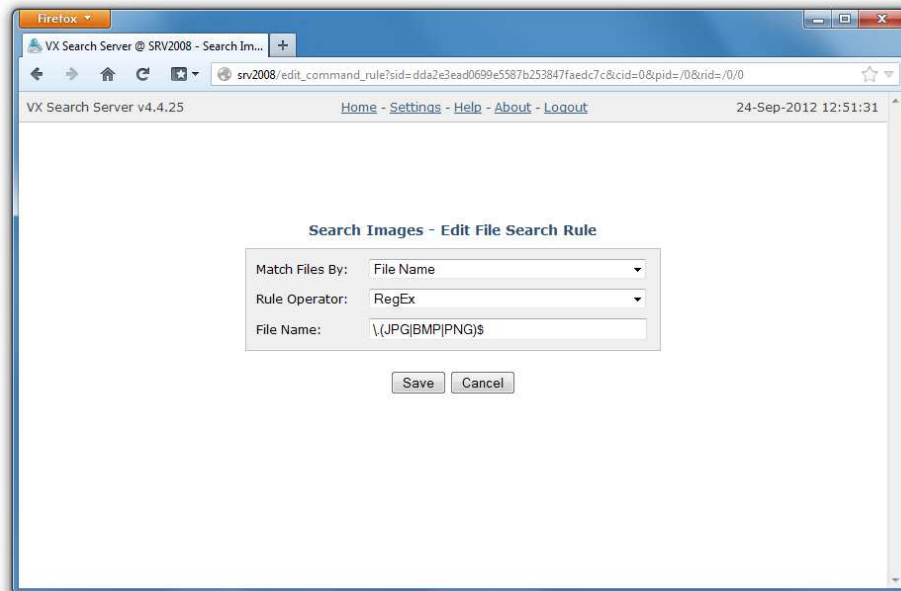
All JPEG images include a set of EXIF tags containing various information about the camera and the imaging mode used to take the picture. In addition, the EXIF tags may contain custom fields with proprietary information related to the subject displayed in the picture. VX Search Server allows one to search JPEG images using standard and custom JPEG EXIF tags.



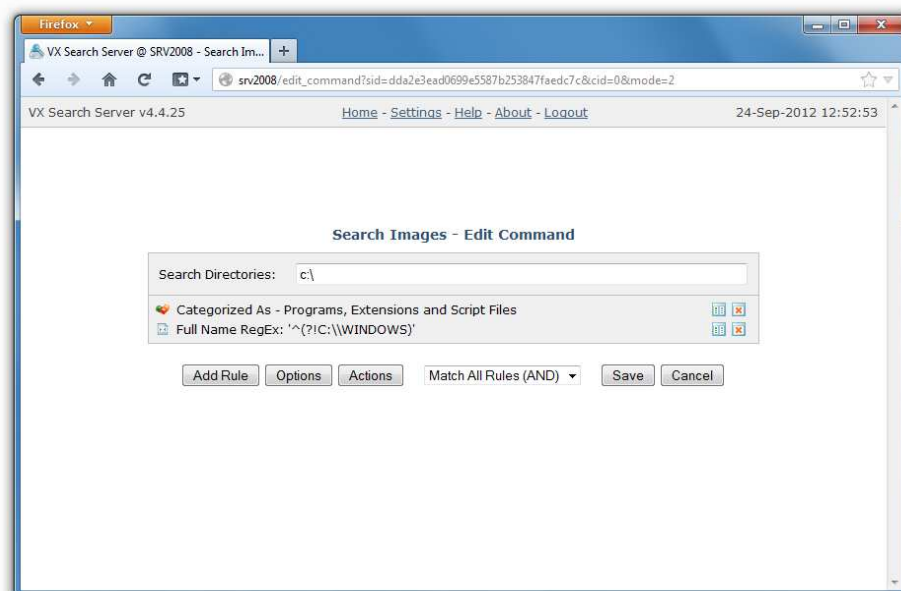
In order to search JPEG images by EXIF tags, select the 'Search JPEG Images With EXIF Tag' file matching rule, select the tag to be checked, select an appropriate text matching operator and enter a text or numeric value to search for.

4.18 Searching Files Using Regular Expressions

Regular expressions provide a flexible and powerful way to match text patterns in file names and directories. VX Search Server provides the RegEx pattern matching operator for the file name search rule and the file path search rule.



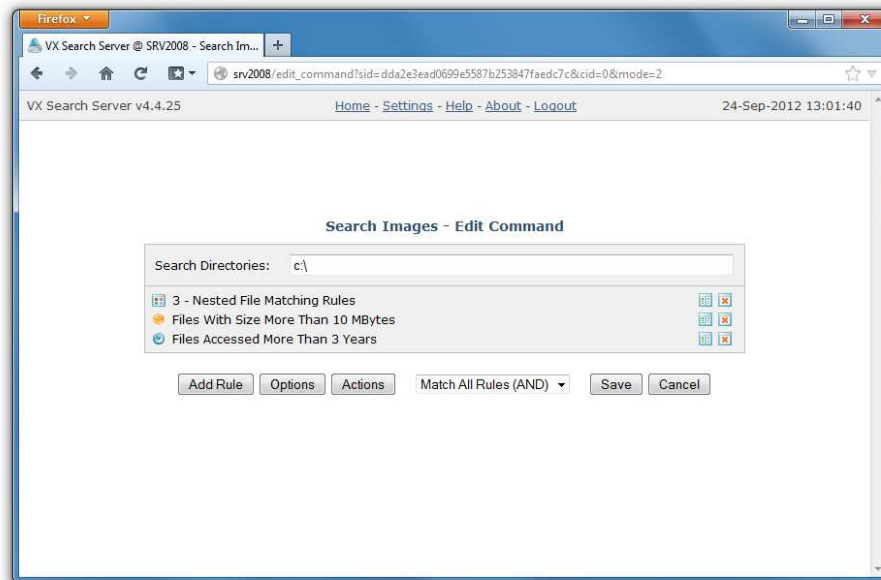
In order to search files using a regular expression, select the 'File Name' file matching rule, select the 'RegEx' pattern matching operator and enter a regular expression that should be matched. For example, the '\\.(JPG|BMP|PNG)\$' regular expression will match all JPG, BMP and PNG image files.



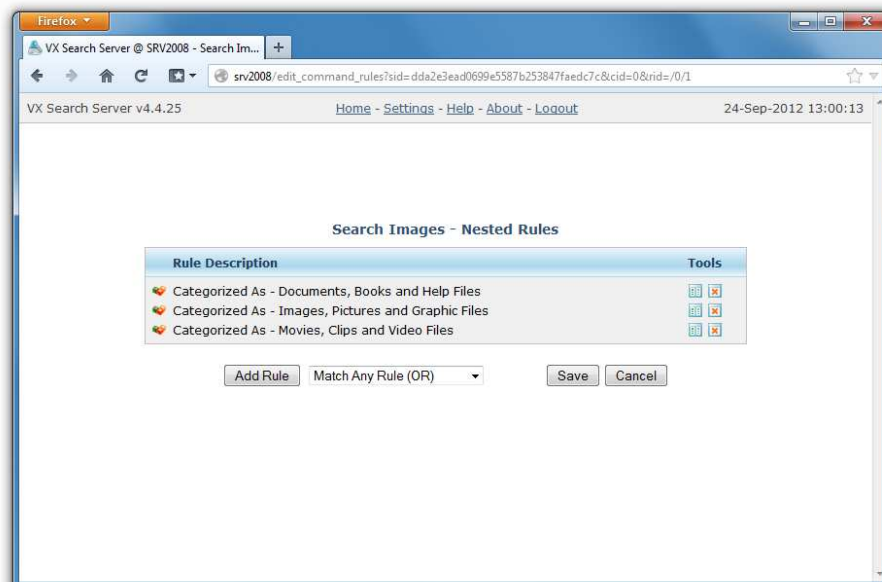
Regular expressions may be combined with other types of file matching rules allowing one to match a very specific set of files. In addition to the ability to match files using regular expressions, VX Search Server allows one to exclude files using regular expressions. For example, in order to search all programs and executable files while excluding files located in the Windows directory, use the regular expression '^(!C:\\\\WINDOWS)' applied to the 'Full Path' file matching rule.

4.19 Using Multi-Level File Search Rules

Sometimes, it may be required to define multi-level, hierarchical file matching rules. For example, let's assume that we need to find files related to multiple file categories with the file size more than 10 MB that were last accessed more than 3 years ago. In order to add a nested rule list, open the search command page, press the 'Add Rule' button and select the 'Nested Rule List' file matching rule.



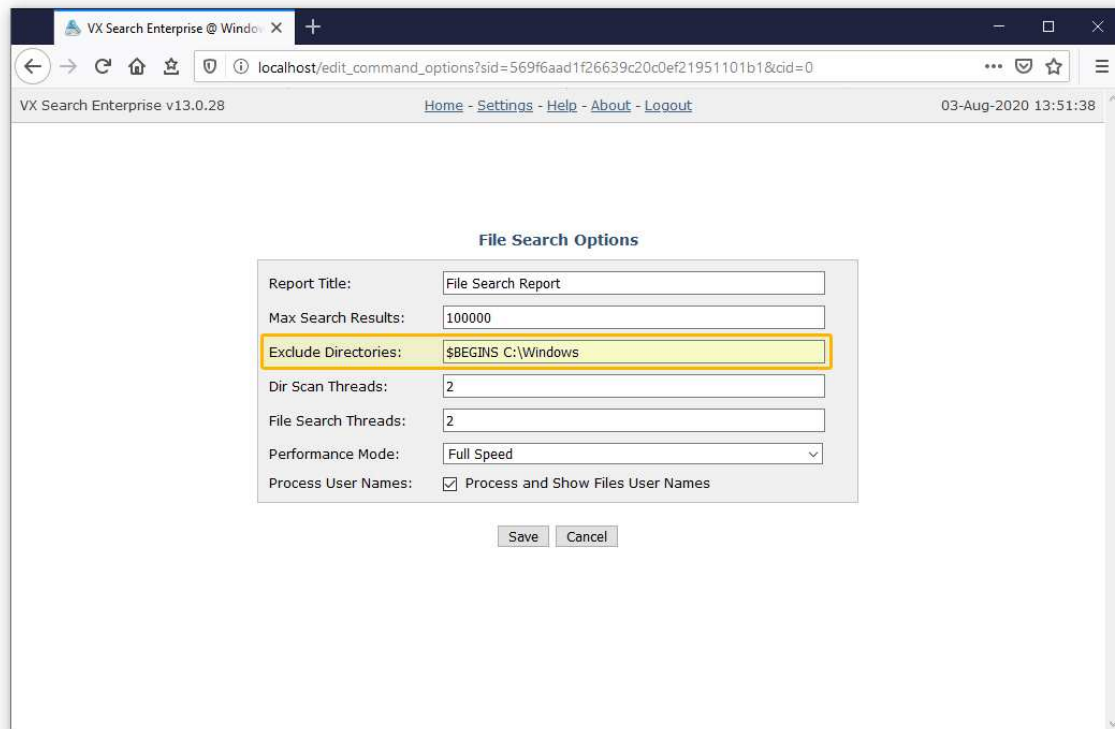
On the nested rules dialog, add all the required file categories, select the 'OR' logical operator and press the 'Ok' button. On the search command page, press the 'Add Rule' button, add the time-based file matching rule to find files that were last accessed more than 3 years ago, add a rule to match files with the file size more than 10 MB and select the 'AND' logical operator.



The nested rule list will match all the required file categories, while the time-based top level file matching rule will select files that were last accessed more than 3 years ago. VX Search Server provides a fully scalable rule-based model with an unlimited number of nested levels allowing one to define sophisticated, multi-level file matching rules capable of precisely searching the required files.

4.20 Excluding Directories from the File Search Process

Sometimes, it may be required to exclude one or more subdirectories from the file search process. In order to add one or more directories to the exclude list, open the search command configuration page, press the 'Options' button and add one or more directories to the exclude directories list.



Directories added to the exclude list will be excluded recursively including all files and subdirectories. 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.

VX Search 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'.

4.21 Reviewing File Search Results

In order to review results for a finished file search operation, just click on the command name on the VX Search Server home page. The results page shows the number file search results, the amount of disk space and the list of search results. For each result, VX Search Server shows the file name, the name of the directory, the user name, the file size and the last modification date.

The screenshot shows the VX Search Server web interface in a Firefox browser. The page title is 'VX Search Server - Search Images'. The address bar shows a URL with a command ID. The page displays 'Search Images - 858 Results, 9.42 MB'. Below this is a table with columns: File Name, Directory, User Name, File Size, and Last Modified. The table lists various files, including 'version.bmp', 'disk.ico', 'disk.ico', 'disk.ico', 'actions_16px.png', 'ask_16px.png', 'attr_16px.png', 'bin_16px.png', 'bullet_16px.png', 'close_16px.png', 'console_16px.png', 'current_dir_16px.png', 'database_16px.png', 'date_16px.png', 'delete_16px.png', 'details_16px.png', 'disksavvy_16px.png', and 'email_16px.png'. Below the table is a section titled 'Search Results Categorized By Extension' with a table showing file types (GIF Files, PNG Files, ICO Files, BMP Files, JPG Files, SCP Files), their total disk space, and the number of results. At the bottom, there are buttons for 'Save Report', 'Categorize Search Results By Extension', 'Set Filter', 'Clear Filter', 'Properties', and 'Close'.

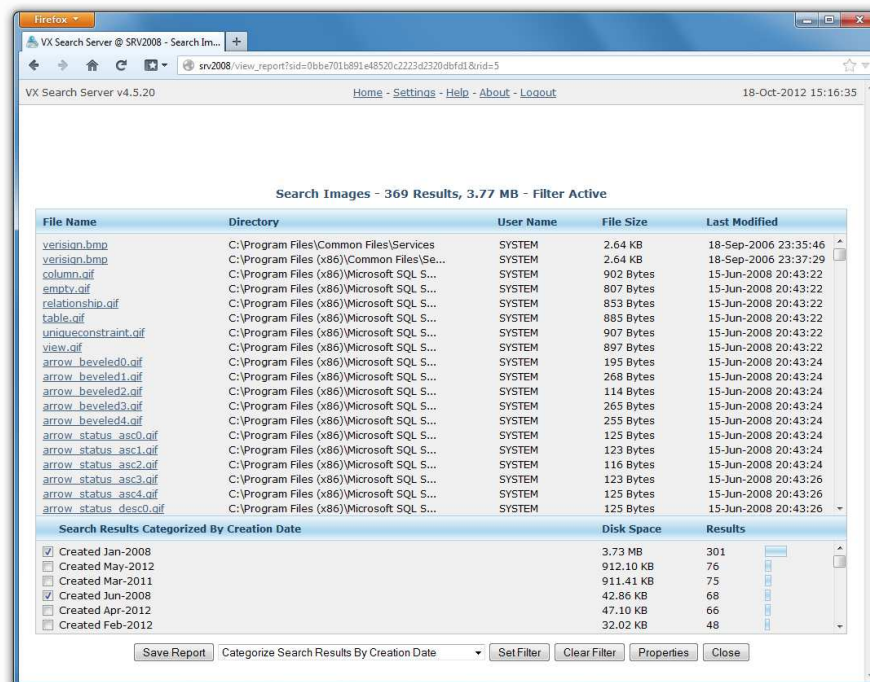
File Name	Directory	User Name	File Size	Last Modified
version.bmp	C:\Program Files\Common Files\Services	SYSTEM	2.64 KB	18-Sep-2006 23:35:46
disk.ico	C:\Program Files/Disk Pulse Server/bin	Administrators	14.73 KB	27-Jan-2010 10:26:36
disk.ico	C:\Program Files/Disk Pulse Ultimate/bin	Administrators	14.73 KB	27-Jan-2010 11:26:36
disk.ico	C:\Program Files/Disk Savvy/bin	Administrators	14.73 KB	03-Dec-2009 16:41:12
disk.ico	C:\Program Files/Disk Savvy Server/bin	Administrators	14.73 KB	03-Dec-2009 15:41:12
actions_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	396 Bytes	09-Feb-2012 15:14:40
ask_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	428 Bytes	20-Nov-2009 12:52:10
attr_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	414 Bytes	13-Feb-2008 16:56:54
bin_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	661 Bytes	13-Feb-2008 20:00:32
bullet_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	152 Bytes	20-Mar-2012 17:20:12
close_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	491 Bytes	23-Apr-2012 16:58:32
console_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	263 Bytes	09-Feb-2012 15:23:52
current_dir_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	449 Bytes	23-Apr-2012 16:04:20
database_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	145 Bytes	09-Feb-2012 15:21:24
date_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	213 Bytes	17-Feb-2009 17:01:20
delete_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	604 Bytes	29-Apr-2012 19:11:32
details_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	444 Bytes	23-Apr-2012 17:26:46
disksavvy_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	806 Bytes	22-Apr-2012 16:33:46
email_16px.png	C:\Program Files/Disk Savvy Server/httd	Administrators	400 Bytes	09-Feb-2012 15:22:54

Search Results Categorized By Extension	Disk Space	Results
<input type="checkbox"/> GIF Files	236.26 KB	301
<input type="checkbox"/> PNG Files	1.16 MB	281
<input type="checkbox"/> ICO Files	1.53 MB	106
<input type="checkbox"/> BMP Files	1.39 MB	92
<input type="checkbox"/> JPG Files	1.74 MB	61
<input type="checkbox"/> SCP Files	13.88 KB	8

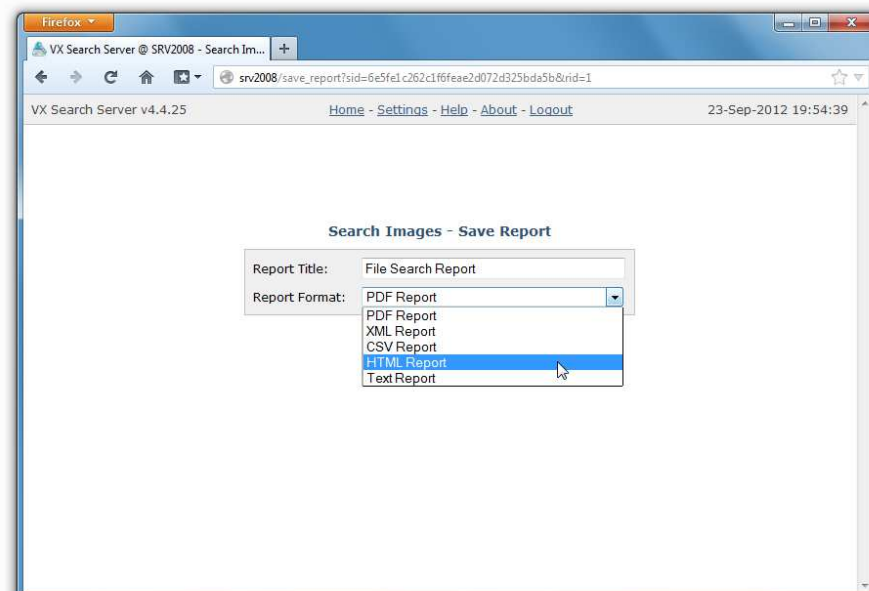
One of the most powerful capabilities of VX Search Server is the ability to categorize file search results by the file extension, file type, size, user name, creation, last modification or last access dates and filter displayed file search results by one or more file categories.

This screenshot is similar to the previous one, but with a dropdown menu open for the 'Categorize Search Results By Extension' button. The dropdown menu lists the following options: 'Categorize Search Results By Extension', 'Categorize Search Results By File Size', 'Categorize Search Results By File Type', 'Categorize Search Results By Modification Date', 'Categorize Search Results By Last Access Date', 'Categorize Search Results By Creation Time', 'Categorize Search Results By Modification Time', 'Categorize Search Results By Last Access Time', and 'Categorize Search Results By User Name'. The 'Categorize Search Results By Extension' option is currently selected.

In order to filter search results, select one or more file filters and press the 'Set Filter' button. When one or more file filters are selected, saved file search reports will include search results matching the selected file filters. In order to reset the selected file filters, press the 'Clear Filter' button.



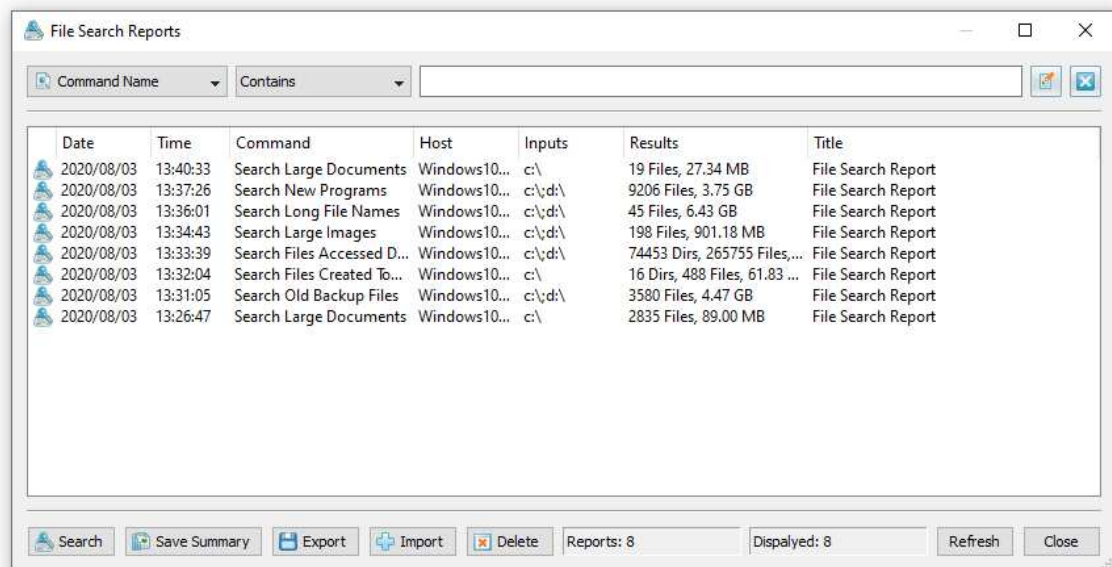
In order to see extended information for a search result, click on the result name located on the left side of the results page. VX Search Server allows one to save HTML, PDF, text, Excel CSV or XML reports. In order to export a report, press the 'Save' button located in the top-right corner of the results page and select an appropriate report format.



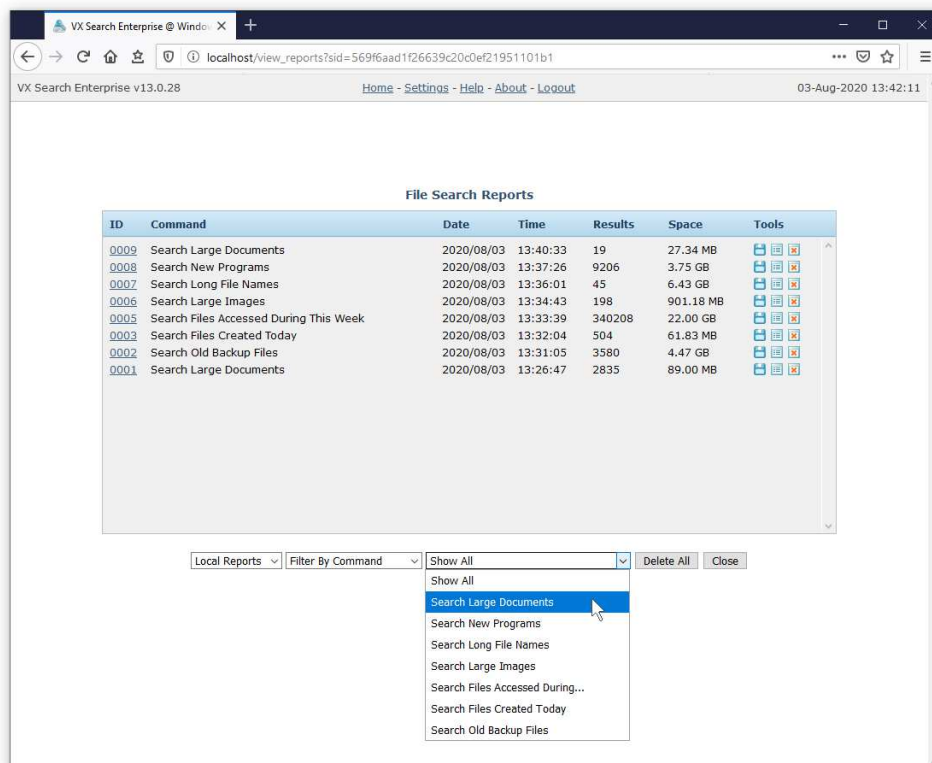
In addition, file search reports may be generated automatically using one or more file search actions allowing one to automatically save reports when a file search operation finds a user-specified number of search results. Finally, VX Search Server provides the ability to send HTML, text and PDF reports as E-Mail notifications when a file search operation finds a user-specified number of search results.

4.22 File Search Reports

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

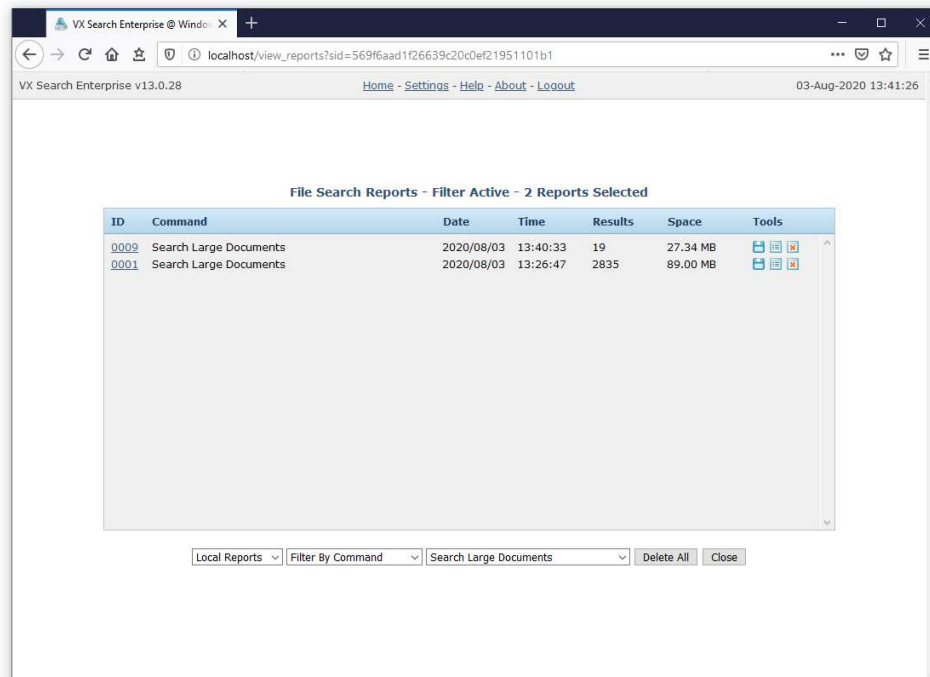


VX Search Server allows one to filter file search reports by the search command name, host name, date and input directories. In order to filter search reports, select an appropriate filter located on the bottom side of the reports page and then select a filter value.

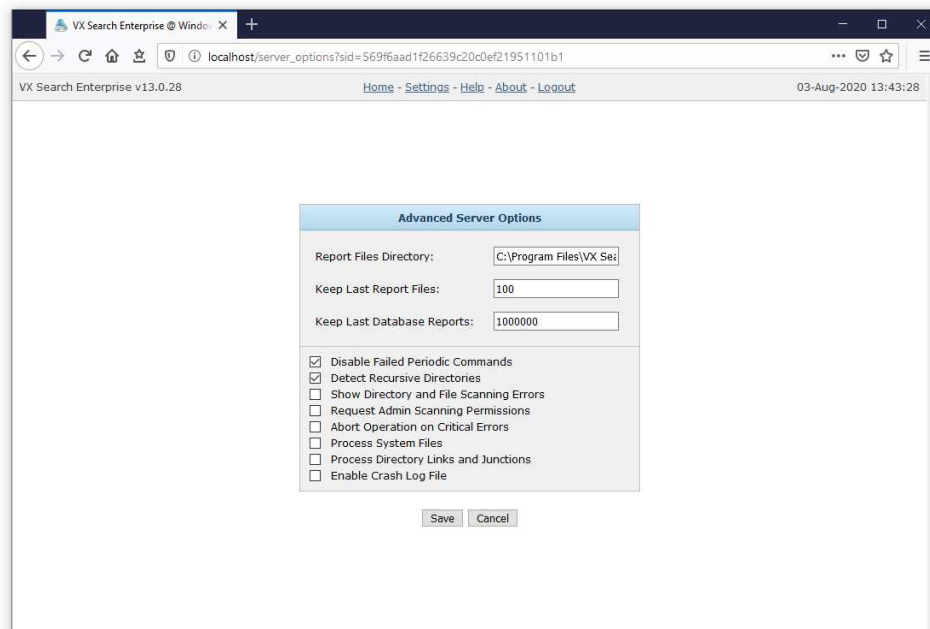


When a report filter is active, VX Search Server displays the number of filtered reports in the reports page caption and shows reports matching the selected report filter in the reports view.

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.



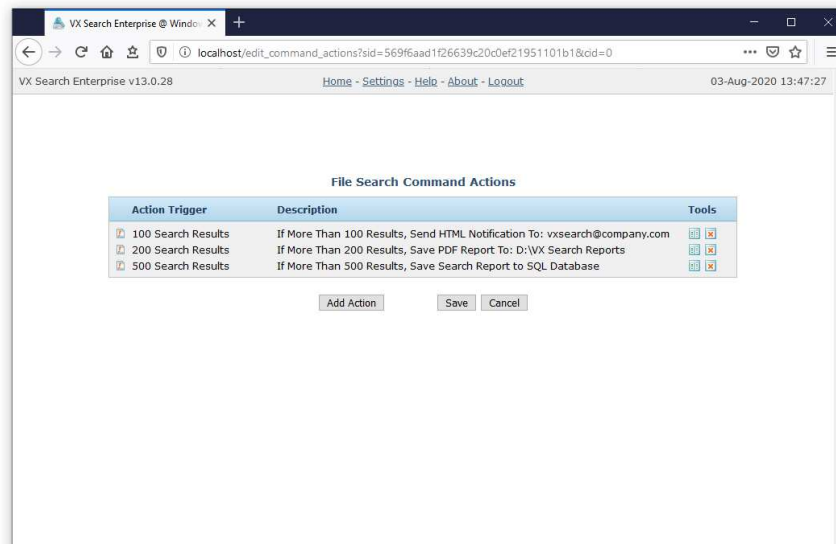
By default, VX Search Server keeps a history of 10 last reports for each file search command. In order to open a file search report listed in the reports view, click on the required report ID link. Reports are saved in the reports directory, which may be configured on the 'Advanced Server Options' page.



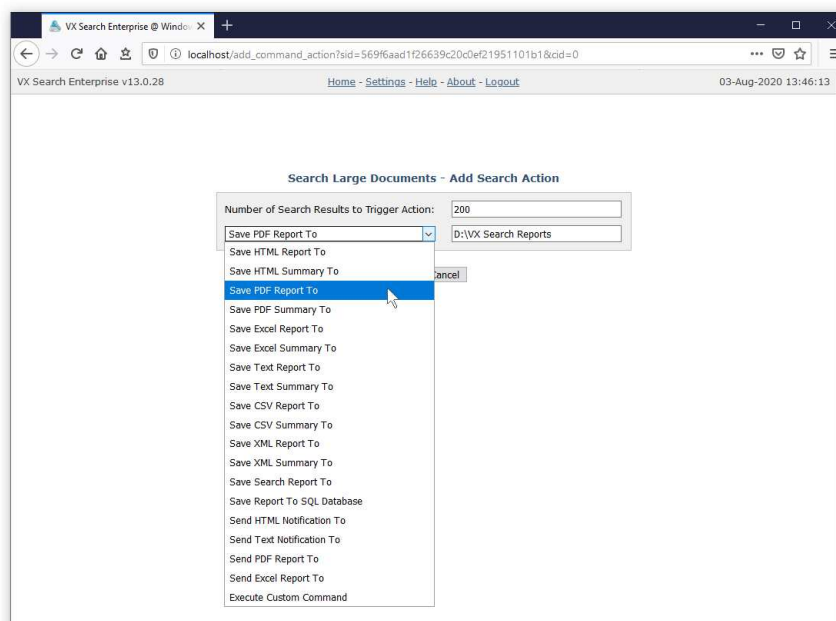
In addition, the user is provided with the ability to control the number of history reports saved in the reports directory. Finally, if VX Search Server is configured to save reports to an SQL database, the user can set the number of history reports to keep in the SQL database.

4.23 Automatic File Search Actions

VX Search Server provides the ability to automatically save reports or send E-Mail notifications when a file search command finds a user-specified number of search results. This feature is especially useful in conjunction with periodic file search operations allowing one to schedule file search operations at user-specific time intervals. In order to configure automatic file search actions, open a file search command and press the 'Actions' button.



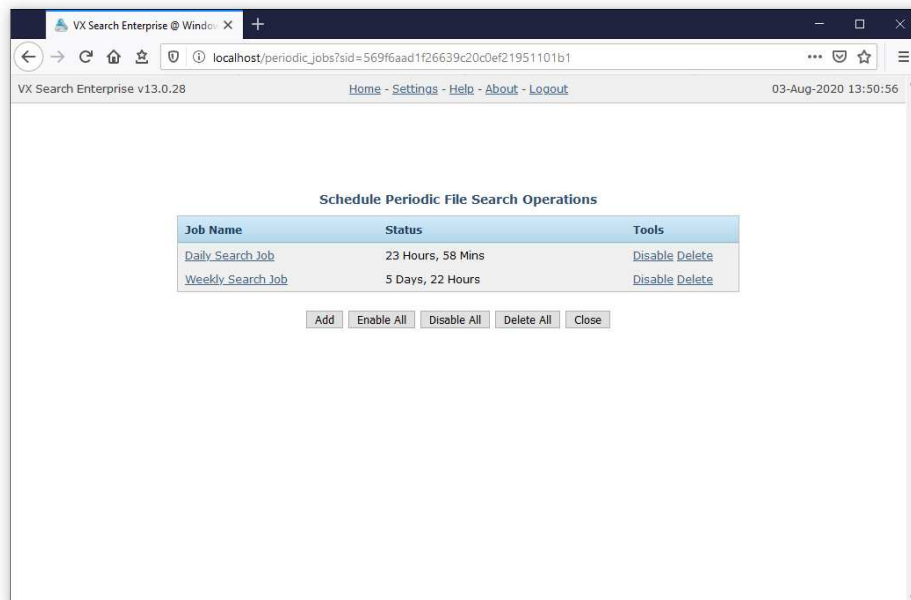
In order to add a new action, press the 'Add Action' button, enter the number of search results to trigger the action, select an appropriate action type and press the 'Save' button. For E-Mail notification actions, the action value should be set to an E-Mail address to send the notification to. In addition, the user needs open the 'Settings' page and configure an SMTP server to use to send E-Mail notifications.



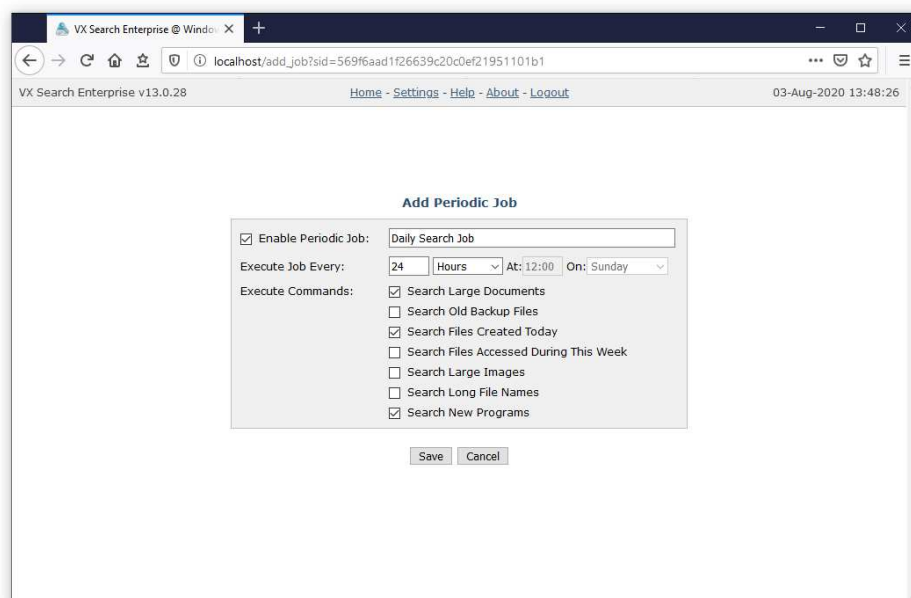
For report generation actions, the action value should be set to a file name or a directory name where to save file search reports. If the action value is set to an existing directory, VX Search Server will automatically generate file names with the report date and time added to each report file name. For the custom command action, the action value should be set to the command (including all command line arguments) to be executed.

4.24 Periodic File Search Operations

VX Search Server allows one to setup a number of periodic jobs with each one configured to perform one or more file search commands at specific time intervals. This feature is especially useful in conjunction with automatic file search actions allowing one to save reports and/or send E-Mail notifications when a file search operation finds a user-specified number of search results. In order to add a periodic file search job, press the 'Periodic Jobs' button located on the VX Search 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 search commands to execute. In order to reduce the CPU load and memory usage on the host, VX Server performs selected file search operations sequentially, one after one while saving reports and executing automatic file search actions if required.

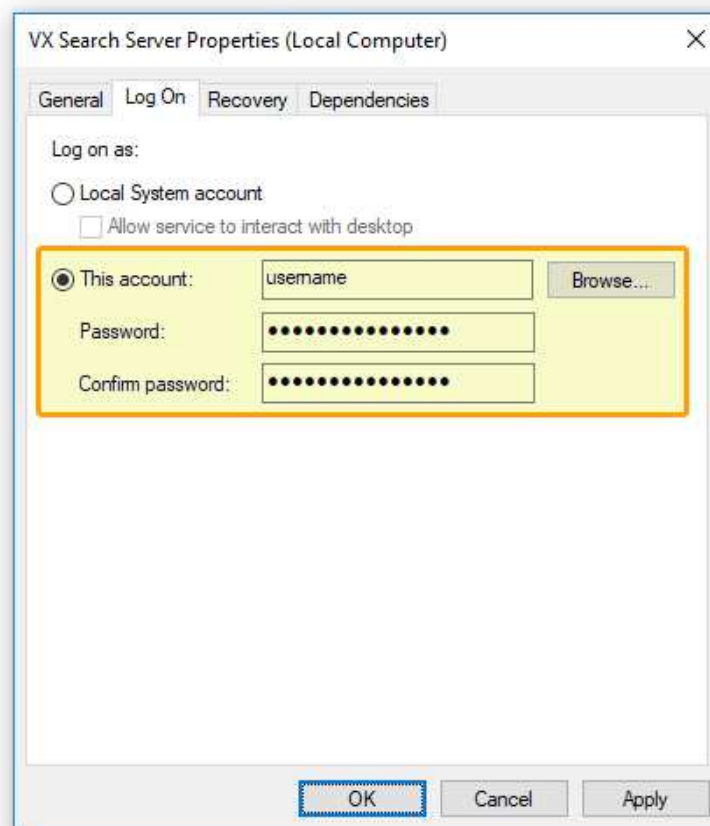


In addition, the user is provided with the ability to intentionally slow down file search operations, in order to completely eliminate performance impact on production servers. In order to slow down a file search command, open the command page, press the 'Options' button, select the 'Low Speed' performance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

4.25 Searching Files in Network Shares

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

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



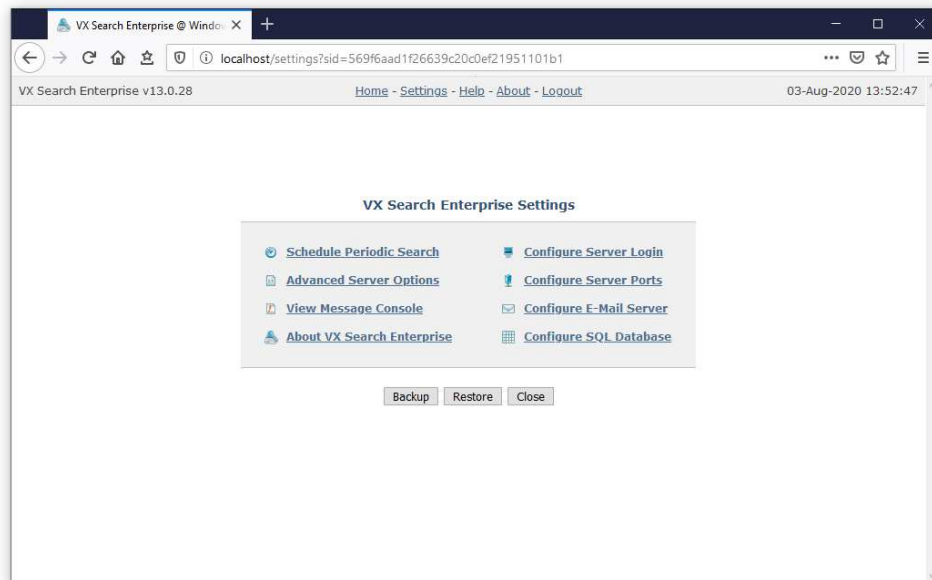
The configuration is very simple and may be performed within a couple of seconds using the following step-by-step guide:

1. Open the Windows control panel and click on the 'Administrative Tools' utility.
2. Open the Services control center and find here the ' VX Search Server' service.
3. Open the ' VX Search 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 ' VX Search Server' service.

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

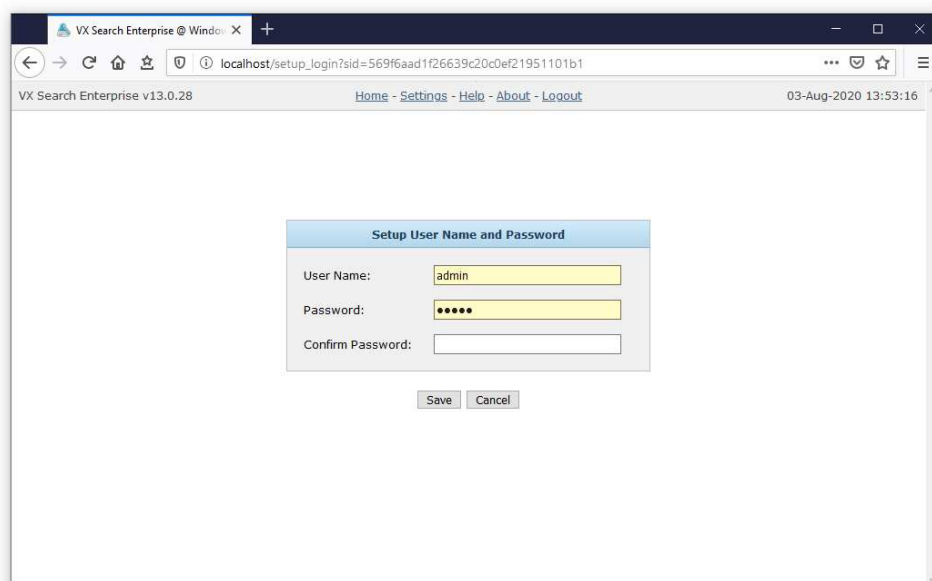
4.26 Configuring VX Search Server

VX Search 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.



4.27 Configuring Custom User Name and Password

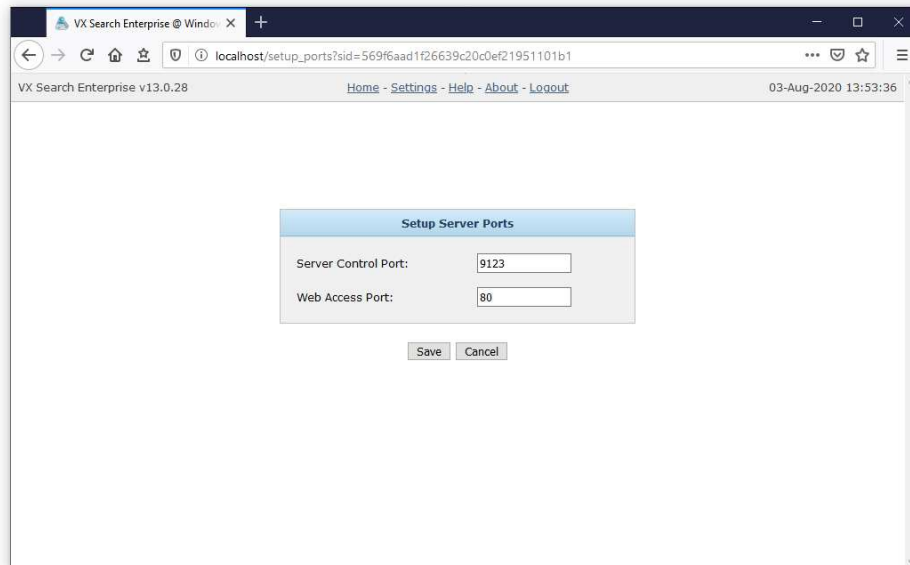
The VX Search Server web-based management console, requires users to login with a VX Search user name and password. The default user name and password is set to **admin/admin**. In addition, VX Search Server provides the ability to set a custom user name and/or password for the VX Search web-based management 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.

4.28 Configuring Custom Server Ports

VX Search Server uses the TCP/IP port 9123 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, VX Search Server will be unable to operate properly and the user will need to change the VX Search server control port and/or web access port.



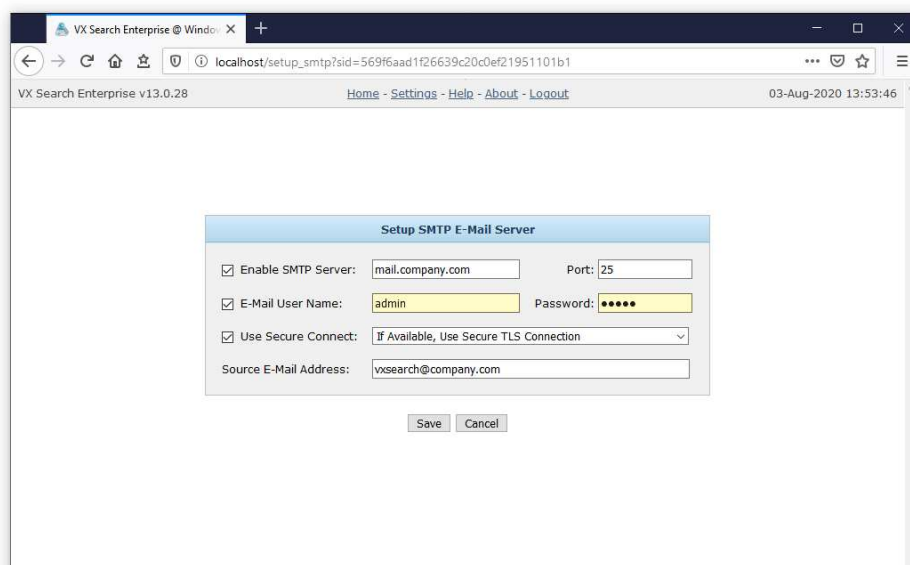
The screenshot shows a web browser window titled 'VX Search Enterprise @ Window'. The address bar shows 'localhost/setup_ports?sid=569f6aad1f26639c20c0ef21951101b1'. The page header includes 'VX Search Enterprise v13.0.28', navigation links 'Home - Settings - Help - About - Logout', and a timestamp '03-Aug-2020 13:53:36'. The main content area displays a 'Setup Server Ports' dialog box with the following fields:

Setup Server Ports	
Server Control Port:	9123
Web Access Port:	80
<div>Save Cancel</div>	

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 VX Search server should be controlled through the network, make sure the custom ports are open in the server's firewall.

4.29 Configuring E-Mail Notifications

VX Search Server provides the ability to send E-Mail notifications when a file search command finds a user-specified number of search results. 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.

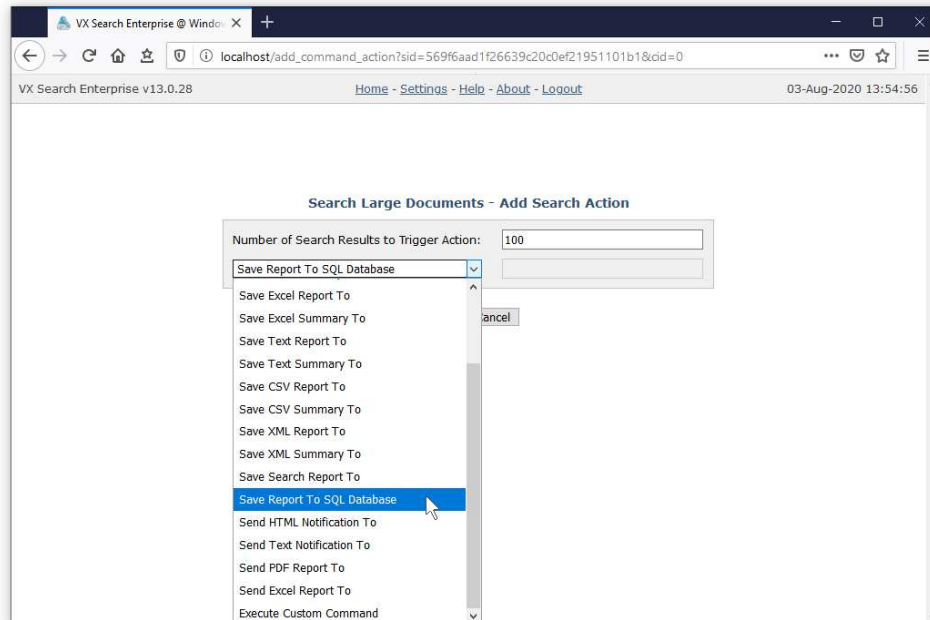


The screenshot shows a web browser window titled 'VX Search Enterprise @ Window'. The address bar shows 'localhost/setup_smtp?sid=569f6aad1f26639c20c0ef21951101b1'. The page header includes 'VX Search Enterprise v13.0.28', navigation links 'Home - Settings - Help - About - Logout', and a timestamp '03-Aug-2020 13:53:46'. The main content area displays a 'Setup SMTP E-Mail Server' dialog box with the following fields:

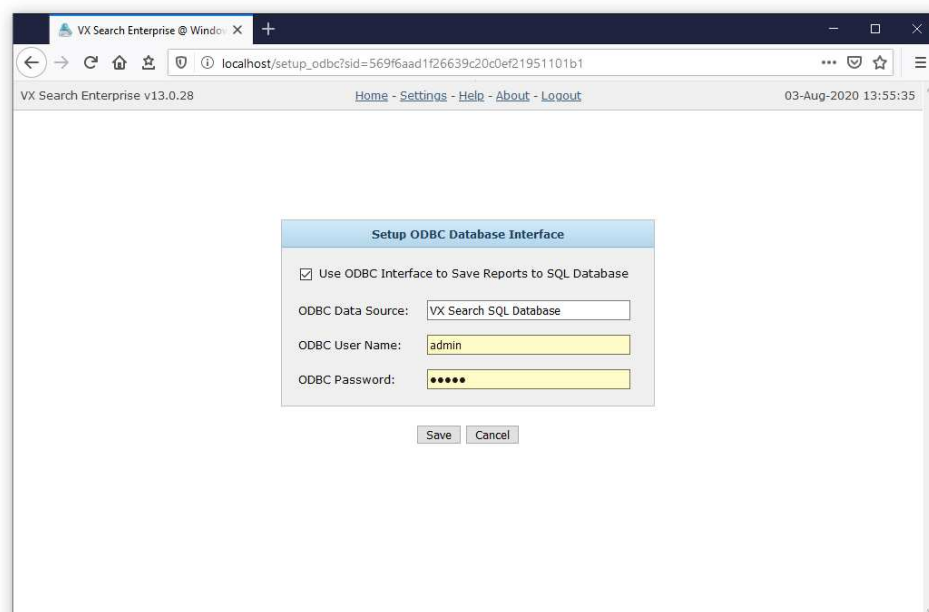
Setup SMTP E-Mail Server	
<input checked="" type="checkbox"/> Enable SMTP Server:	mail.company.com Port: 25
<input checked="" type="checkbox"/> E-Mail User Name:	admin Password: *****
<input checked="" type="checkbox"/> Use Secure Connect:	If Available, Use Secure TLS Connection
Source E-Mail Address: vxsearch@company.com	
<div>Save Cancel</div>	

4.30 Configuring SQL Database Integration

VX Search Server provides the ability to save file search 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 a file search command, press the 'Actions' button and add a file search action to save file search reports to an SQL database.



VX Search 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.



4.31 VX Search Server Command Line Utility

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

VX Search Server Command Line Syntax:

vxsearch -server_show_commands

Shows file search commands configured in VX Search Server.

vxsearch -server_start_command <Command Name>

Starts the specified file search command.

vxsearch -server_start_all_commands

Starts all inactive file search commands.

vxsearch -server_stop_command <Command Name>

Stops the specified file search command.

vxsearch -server_stop_all_commands

Stops all active file search commands.

vxsearch -server_command_status <Command Name>

Shows the current status of a file search command.

vxsearch -server_command_errors <Command Name>

Shows process errors for a file search command.

vxsearch -server_delete_command <Command Name>

Deletes the specified file search command.

vxsearch -server_delete_all_commands

Deletes all configured file search command.

vxsearch -server_show_reports

Shows file search reports saved in the VX Search Server reports database.

vxsearch -server_export_reports -reports_dir <Directory>

Exports file search reports to the specified directory.

vxsearch -server_import_reports -reports_dir <Directory>

Imports file search reports from the specified directory.

vxsearch -server_archive_old_reports -reports_dir <Directory>

Archives old file search reports to the specified directory.

vxsearch -server_archive_all_reports -reports_dir <Directory>

Archives all file search reports to the specified directory.

vxsearch -server_delete_old_reports

Deletes old file search reports from the VX Search Server reports database.

vxsearch -server_delete_all_reports

Deletes all file search reports from the VX Search Server reports database.

vxsearch -server_status

Shows the current VX Search Server status.

vxsearch -server_debug_log

Shows the VX Search Server debug log.

Miscellaneous Commands:**vxsearch -v**

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

vxsearch -help

This command shows the command line usage information.

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

Specifies the host name or an IP address of VX Search 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 VX Search Server TCP/IP port 9123.

-user <User Name>

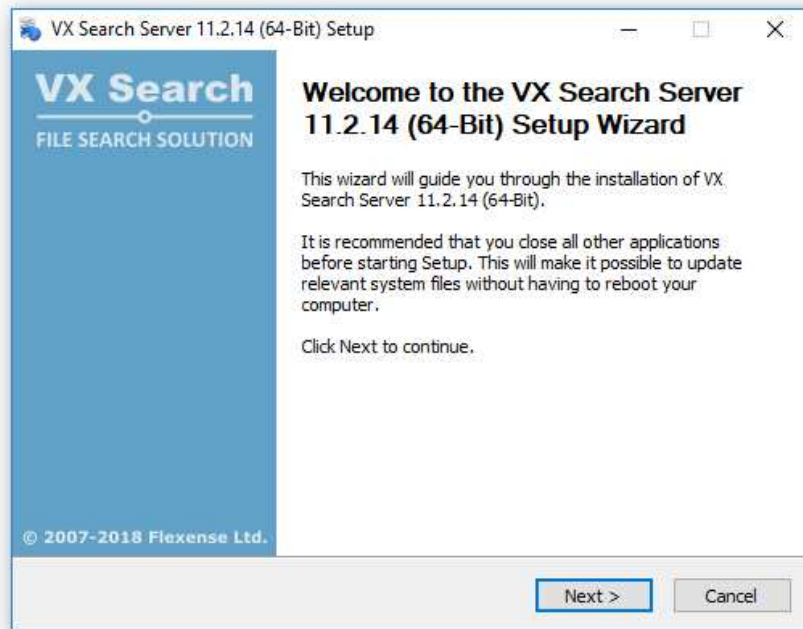
Specifies a user name to login to VX Search Server. If not specified, the command line utility will login using the default "**admin**" user name.

-password <Password>

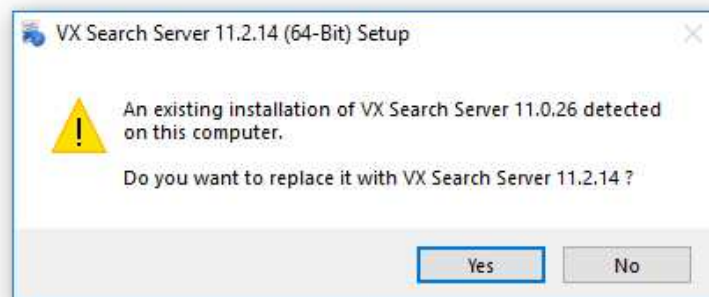
Specifies a password to login to VX Search Server. If not specified, the command line utility will login using the default "**admin**" password.

4.32 Updating VX Search Server

Flexense develops VX Search 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.vxsearch.com/downloads.html>.



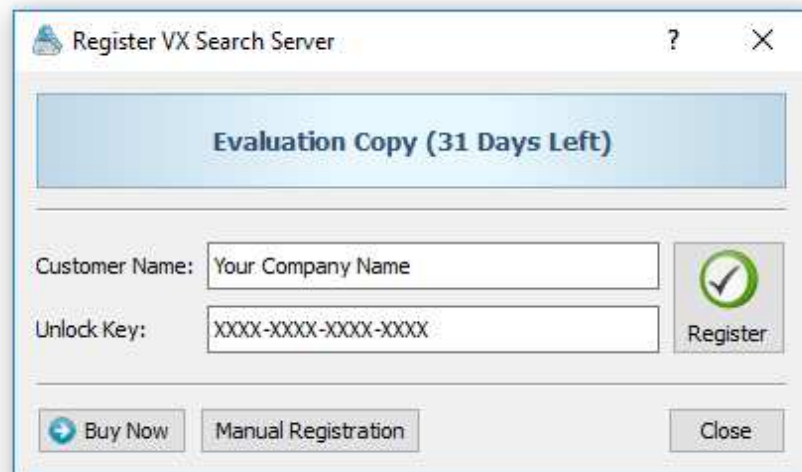
Due to the fact that the product is especially designed for servers running in production environments where stability is a major decision factor, VX Search Server updates should be manually installed by the user. In order to update an existing product installation, download the latest product version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



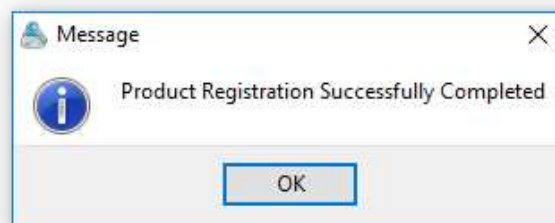
The VX Search Server setup program will properly shutdown the running VX Search service, update the product and restart the VX Search service after finishing the update procedure. All product configuration files, configured file search commands, file search reports and product registration will remain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

4.33 Registering VX Search 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 VX Search Server is installed on is connected to the Internet, login to the VX Search 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@vxsearch.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.

4.34 VX Search Enterprise OEM Version

Flexense provides system integrators, value-added distributors and IT service providers with the ability to resell VX Search 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.

The screenshot shows a web browser window titled 'OEM Product Name @ Window X'. The address bar shows 'localhost/set_oem_info?sid=1349a8d030b5656ce84a944a4c39bc31'. The page header includes 'OEM Product Name v11.2.14', navigation links 'Home - Settings - About - Logout', and a timestamp '23-Oct-2018 18:35:33'. The main content area displays a 'Set OEM Info' dialog box with the following fields:

OEM Vendor Name:	<input type="text" value="OEM Vendor Name"/>
OEM Vendor URL:	<input type="text" value="http://www.mycompany.com"/>
OEM Product Name:	<input type="text" value="OEM Product Name"/>
OEM Product URL:	<input type="text" value="http://www.myproduct.com"/>

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

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.

The screenshot shows the same web browser window, but the address bar now shows 'localhost/about?sid=1349a8d030b5656ce84a944a4c39bc31'. The main content area displays an 'About OEM Product Name' dialog box with the following information:

Product:	OEM Product Name v11.2.14
Vendor:	OEM Vendor Name
License:	Registered To OEM
Build Date:	Oct 9 2018 11:48:49
Build OS:	Windows (64-Bit) (Release)
Install Date:	09/10/2018
Memory Usage:	10.38 MB

At the bottom of the dialog are 'Set OEM Info' and 'Close' buttons.

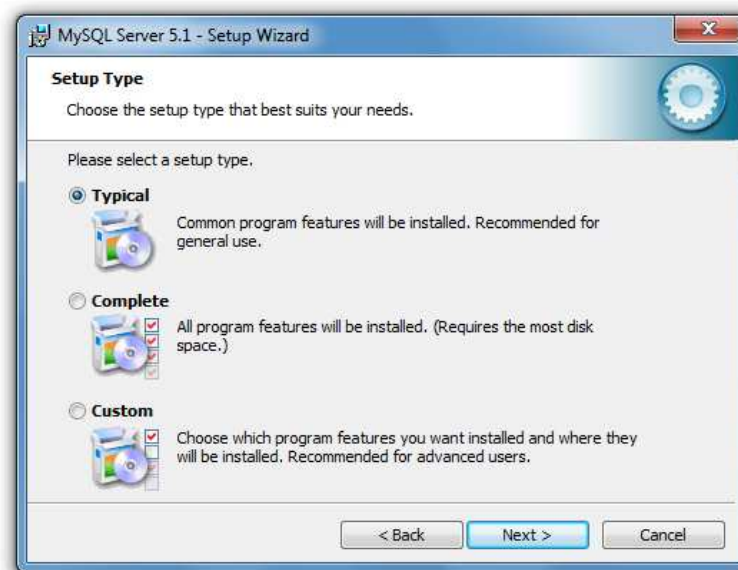
Custom OEM product and vendor information will be displayed on all pages of the VX Search web-based management interface, in all types of reports generated by the product and all notification E-Mail messages sent by VX Search Enterprise.

5 Appendix

5.1 Installing MySQL Database

VX Search Server is capable of saving reports in an SQL database. Reports may be saved manually or automatically using one or more file search actions and periodic file search jobs.

In order to configure VX Search 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.



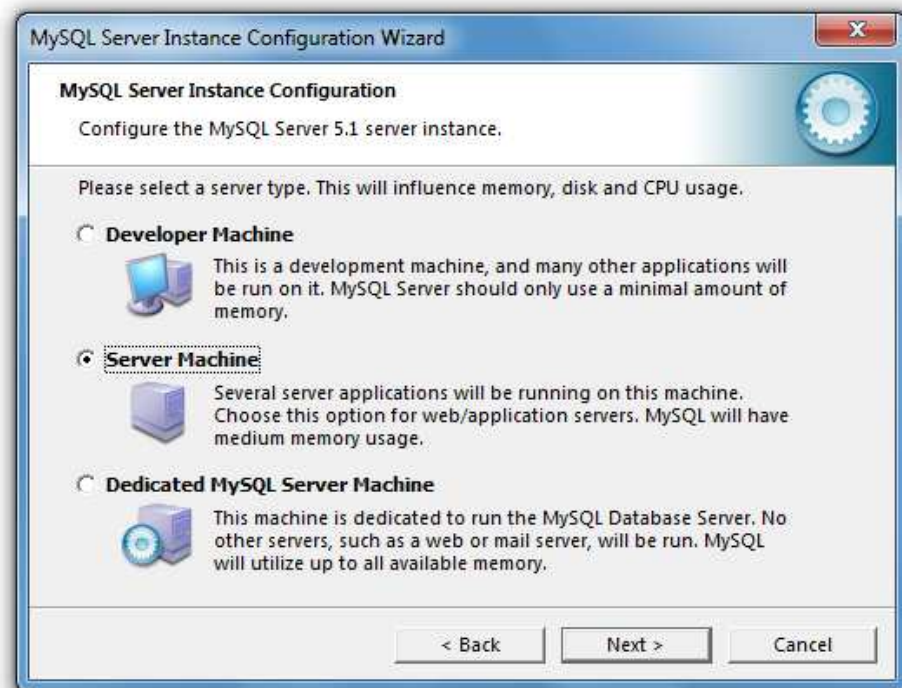
On the next setup page, select the 'Configure the MySQL Server now' option and press the 'Finish' button. The setup program will open a MySQL configuration wizard allowing one to configure basic server settings.



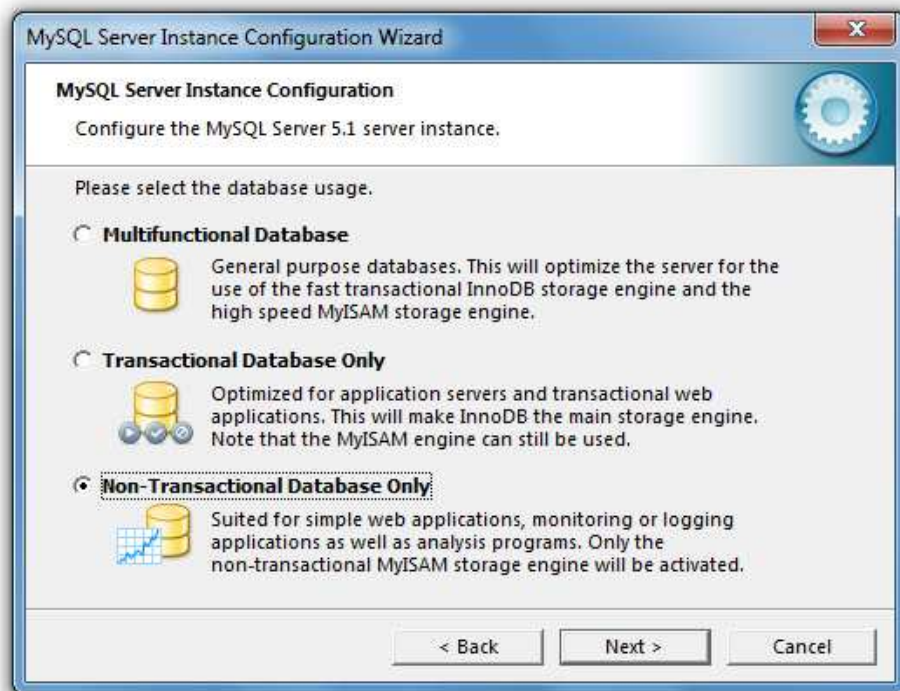
On the next setup page, select the 'Detailed Configuration' option and press the 'Next' button. The detailed configuration mode is required to configure the MySQL server for maximum database performance.



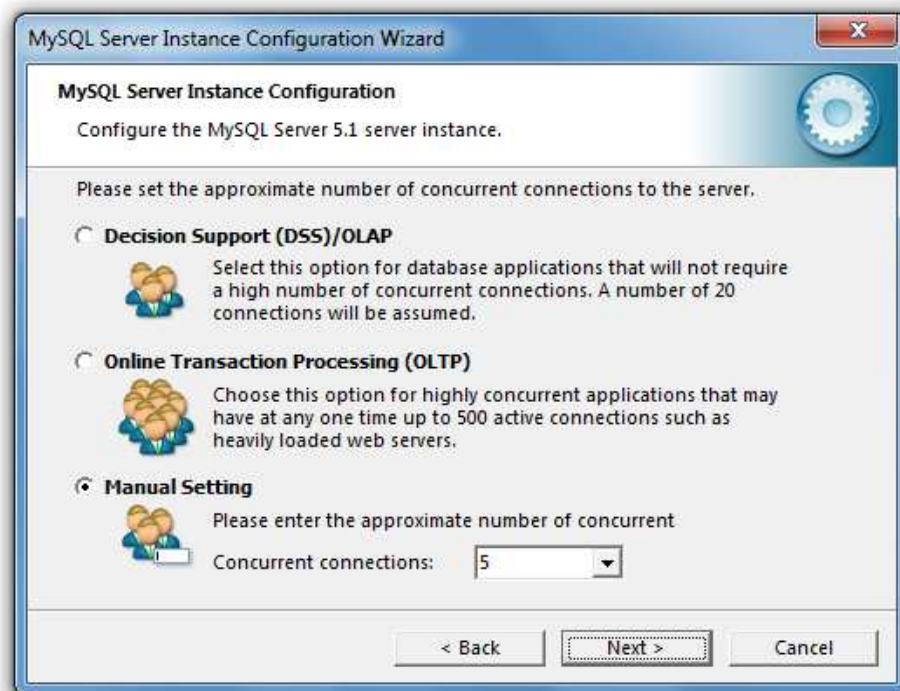
On the next page, select the 'Server Machine' option, which is the most balanced configuration for typical VX Search Server workloads. If the server is intended to process large volumes of reports and is dedicated for VX Search, select the 'Dedicated Server' configuration option.



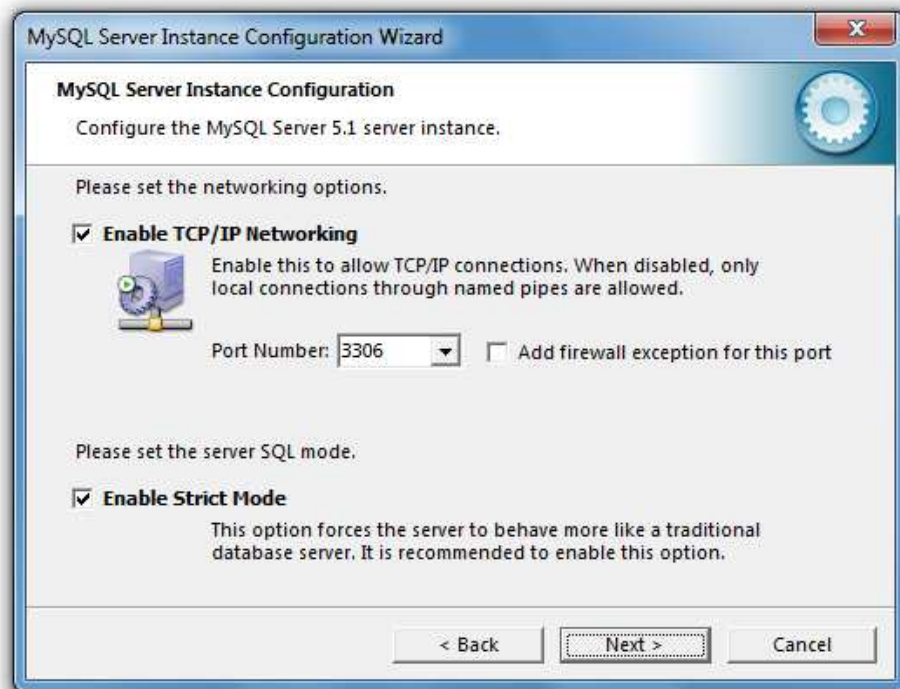
On the next page, select the 'Non-Transactional Database' option. VX Search does not perform concurrent insert or modify operations on the database and a transactional database is not required. Moreover, configuring the MySQL server as a non-transactional database will significantly improve the performance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



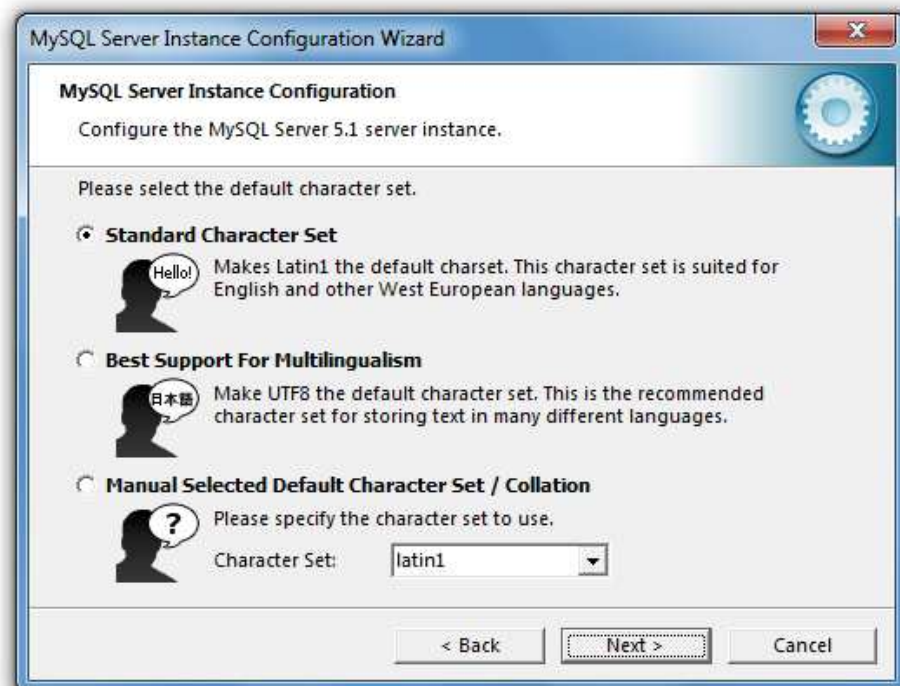
On the next page, select the 'Manual Setting' option and set the number of concurrent database connections to 5, which is the optimal number for typical VX Search installations.



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 VX Search installations using remote ODBC connections.



On the next page select an appropriate character set. By default, VX Search 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.



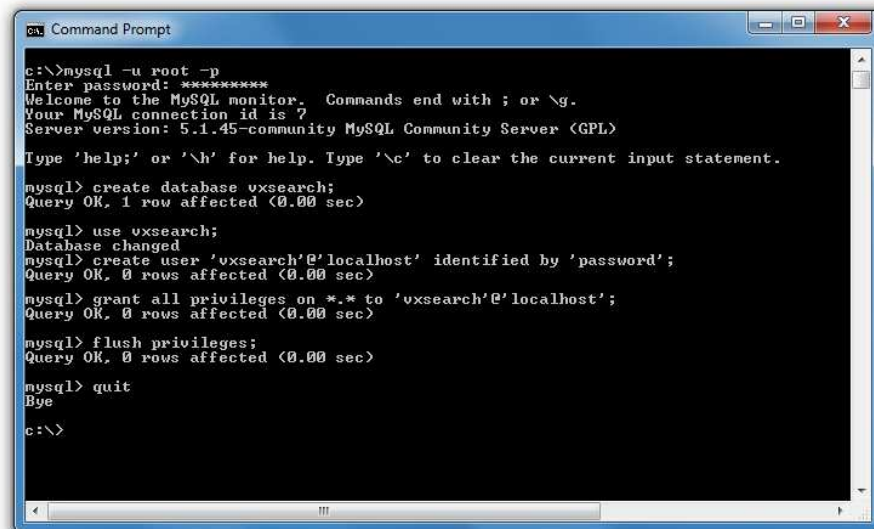
On the next page, select the 'Modify Security Settings' option and specify a root password for the MySQL server, which later will be used to configure regular MySQL users.



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 VX Search.



```
c:\>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 7
Server version: 5.1.45-community MySQL Community Server (GPL)

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

mysql> create database vxsearch;
Query OK, 1 row affected (0.00 sec)

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

mysql> grant all privileges on *.* to 'vxsearch'@'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 VX Search to store reports. In order to do that, type the following command:

```
create database vxsearch;
```

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

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

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

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

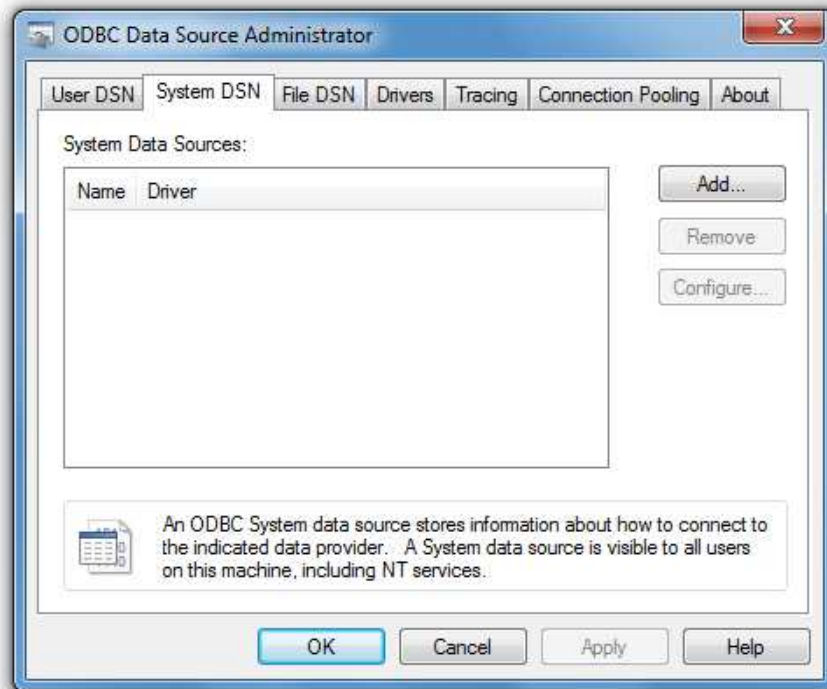
Finally, flush user privileges using the following command.

```
flush privileges;
```

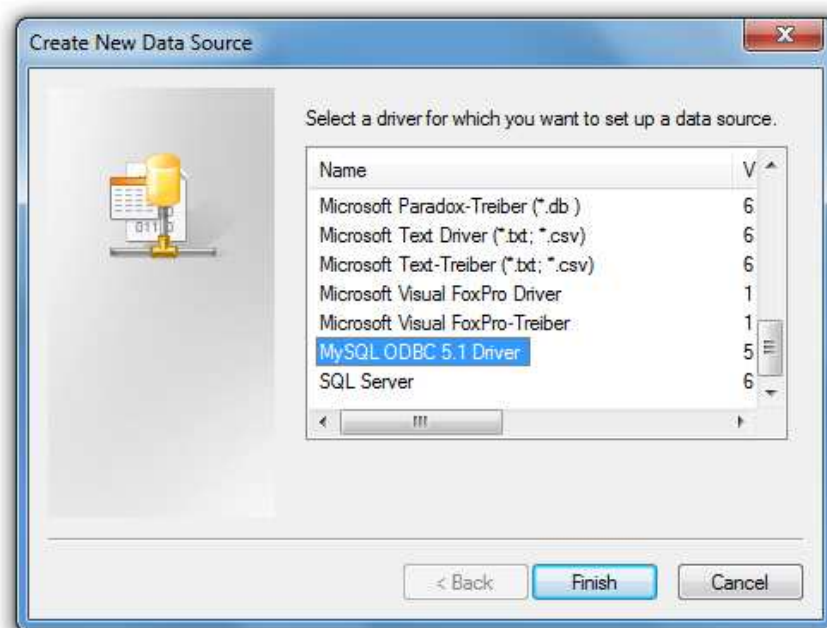
That's all. Now the MySQL server is fully configured. In order to disconnect from the MySQL database, just type **quit** in the command window.

5.3 Configuring MySQL ODBC Data Source

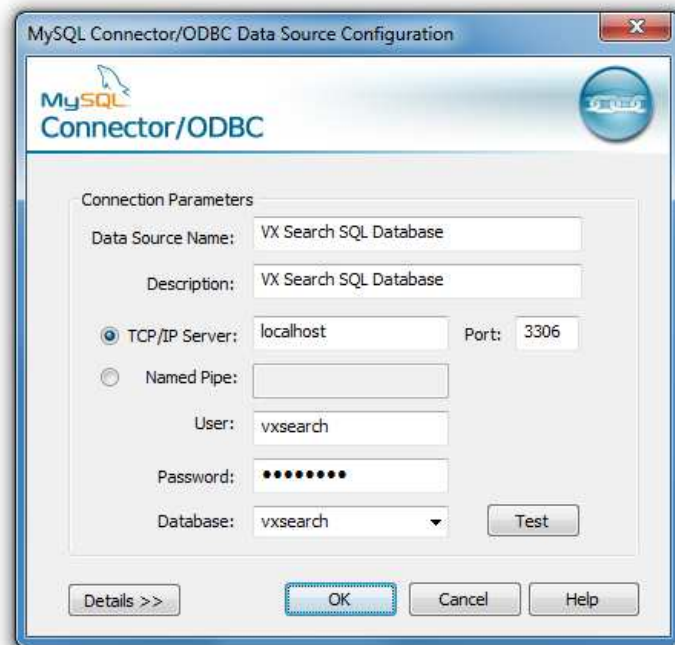
VX Search connects to the MySQL database through the ODBC interface. Download an appropriate version of the MySQL ODBC connector from the MySQL web site and execute the setup program. There are no critical configuration options in the MySQL ODBC connector installation procedure and the user can just 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.

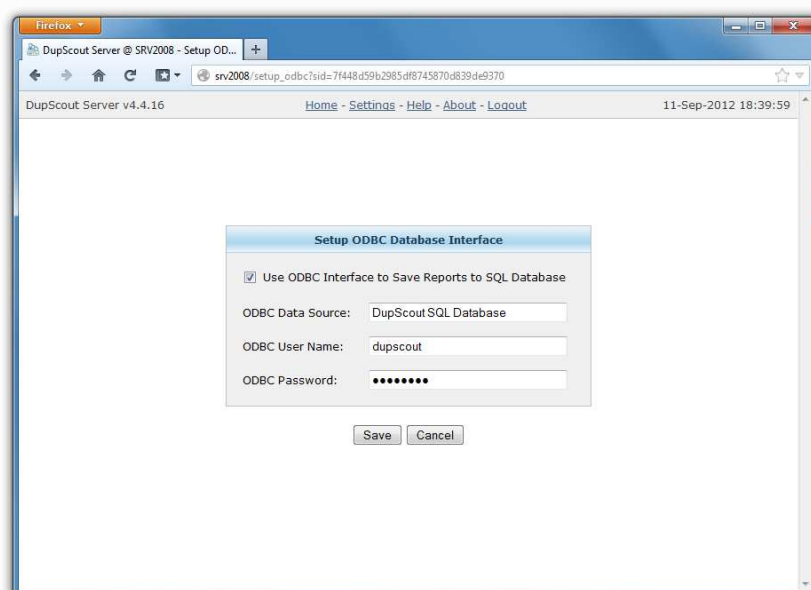


On the next page, enter a new data source name, which will be used by VX Search to connect to the database. Specify the name of the host where the MySQL server is running on and enter the MySQL user name and password that should be used by VX Search to connect to the database. Finally, select the name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



5.4 Configuring VX Search Database Connection

In order to configure VX Search to use the installed MySQL database, open the main settings page and click the 'Database' link. 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 'Save' button to check the VX Search database connection.



5.5 Supported Operating Systems

Supported Operating Systems

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

5.6 System Requirements

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 or quad-core CPU
- 2 GB of system memory
- 200 MB of free disk space

VX Search Server System Configuration

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