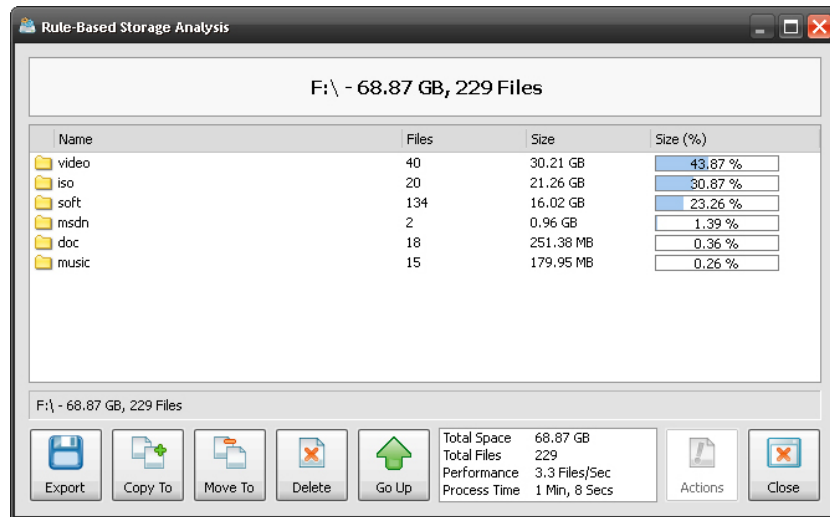
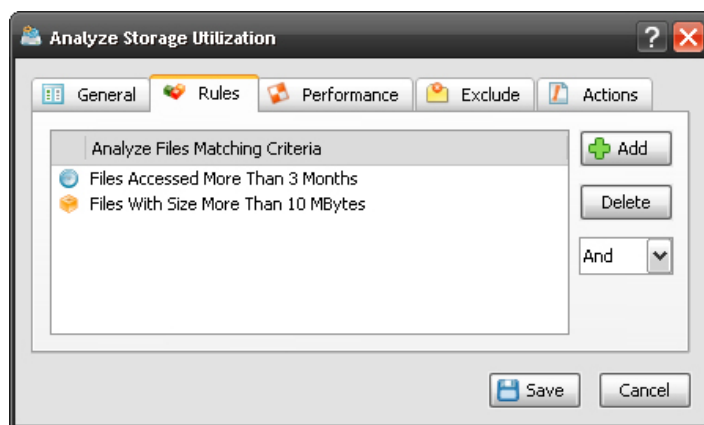


Rule-Based Storage Utilization Analysis Using FlexTk

The major goal of the document is to provide FlexTk users with a step-by-step storage utilization analysis tutorial gradually guiding from a simple, manual storage analysis to an unattended, rule-based storage utilization analysis with automatic actions and e-mail notifications. Storage analysis features and capabilities explained in this tutorial are available in FlexTk Ultimate, FlexTk Agent and FlexTk Server. Let's begin with the simplest storage analysis operation available in any FlexTk version. Select one or more files or directories in the file navigator, press the right mouse button and select the 'Storage Utilization' menu item.

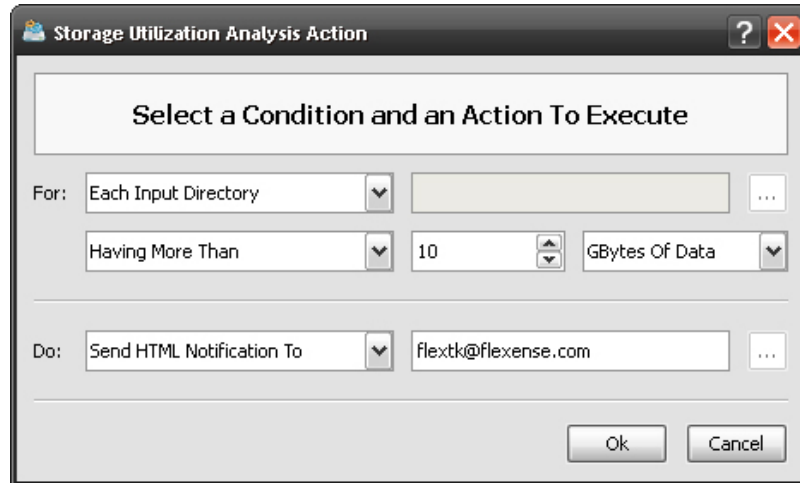


FlexTk will scan the selected files and directories, perform storage utilization analysis and open a results dialog showing a hierarchy of files and directories sorted by the amount of the used storage space. The hierarchy of files and directories allows one to easily identify storage utilization hot spots, find unused files and free-up wasted storage space. That is relatively simple, but still requires the user to browse through the hierarchy of files and directories and manually look for files that are not used and may be deleted.

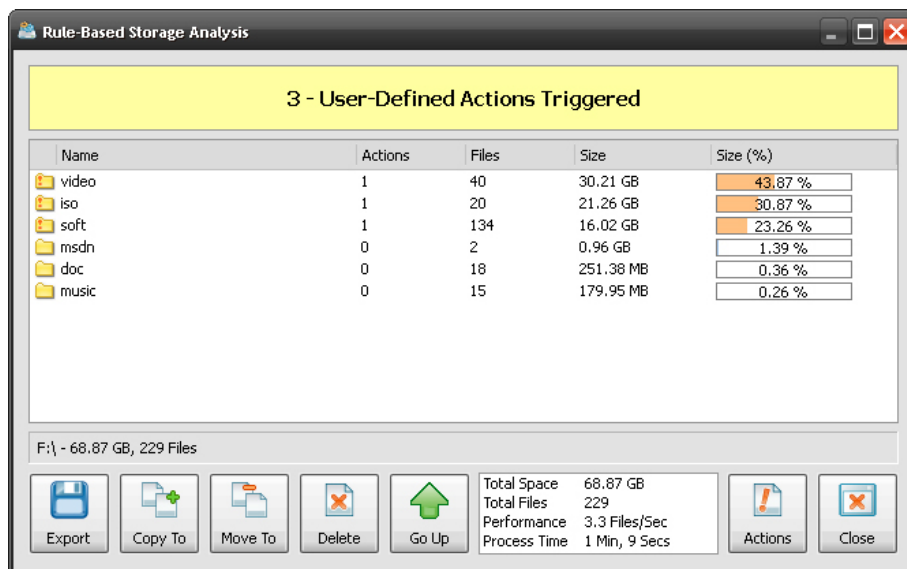


In order to simplify the storage analysis process, FlexTk Ultimate allows one to analyze files matching one or more user-specified criteria. For example, it may be very useful to analyze relatively large files that have not been accessed for a long period of time. This way files that are still in use will be not displayed in the file hierarchy and the user will have to deal with a significantly smaller amount of files, which are good candidates to be archived or deleted. In order to add one or more file matching rules to a storage analysis operation, open the advanced storage analysis options dialog, select the 'Rules' tab and add one or more file matching rules representing files you wish to analyze.

Now, the storage analysis results dialog looks quite different. The top level category has gone and we can see that large unused files are actually located in three directories only. This time it will be much easier to locate and take an action on files that should be archived or deleted. Yes, we have made some progress in simplifying storage analysis, but we still need to browse the file hierarchy and to look for storage utilization hot spots manually. In order to make it ever more easier, let's define one or more storage analysis conditions, which will analyze the storage analysis hierarchy and show us storage utilization hot spots automatically.

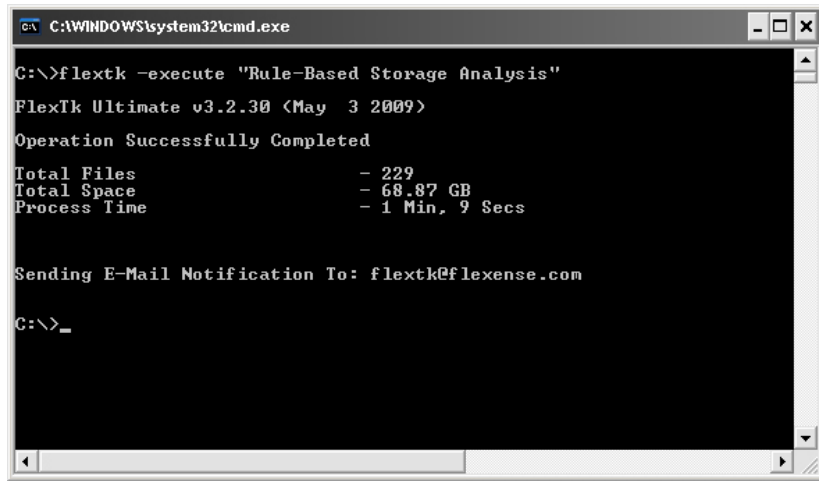


In order to add one or more storage utilization conditions, open the advanced storage analysis options dialog, select the 'Actions' tab and press the 'Add' button. Each storage utilization analysis condition may be applied to all input directories, to a sub-directory in a user-specified location or an arbitrary directory. The user is provided with the ability to trigger actions when any of the selected input directories has a specific amount of data, number files, amount of free space, etc. Select an appropriate input mode, operator, storage units and action, which will be executed for each directory that meets the specified condition.



This time, the storage analysis results dialog shows all the detected storage utilization hot spots and the user is provided with clear information where to look in. By default, all storage analysis operations are executed in the 'Preview' mode, which is allowing one to manually confirm or reject triggered storage analysis actions. In order to execute triggered storage analysis actions, press the 'Actions' button, select/unselect required actions and press the 'Execute' button.

Ok, we have a storage analysis operation that is capable of automatically detecting storage utilization hot spots, but in order to be effective we need this operation to be performed periodically in fully automatic and unattended way. In order to enable the automatic execution mode, open the advanced storage utilization options dialog, select the 'Actions' tab and change the execution mode from 'Preview' to 'Execute'.



```

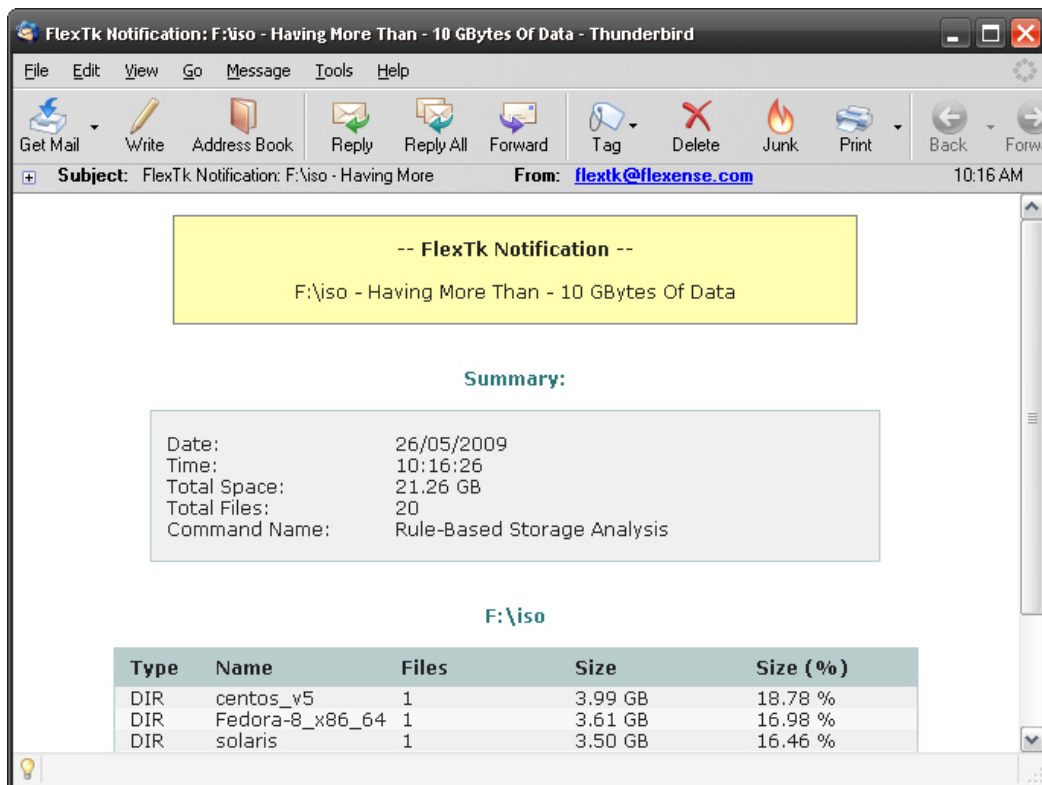
C:\>flextk -execute "Rule-Based Storage Analysis"
FlexTk Ultimate v3.2.30 <May 3 2009>
Operation Successfully Completed
Total Files           - 229
Total Space           - 68.87 GB
Process Time          - 1 Min, 9 Secs

Sending E-Mail Notification To: flextk@flexense.com

C:\>_

```

Automatic storage analysis operations may be executed using the FlexTk's GUI application, direct desktop shortcuts or the FlexTk's command line tool. The simplest way to execute an automatic storage analysis command periodically is to use the FlexTk's command line tool. Just, setup a new periodic job in the Window's built-in task scheduler using the following command: `flextk -execute 'Your Storage Analysis Command Name'`.



The storage analysis command will be executed at the specified time intervals. FlexTk will process all the input files and directories, evaluate all the specified storage analysis conditions and automatically execute triggered actions.