To optimize a disk volume:

1   Click here 🔳 to open Speed Disk if it is not already running.

2   Select the disk volumes you want to optimize from the list.

You can see a pre-optimization Fragmentation Analysis by clicking the information icon ⓘ next to any disk volume in the list.

3   Click Start to begin the optimization.

💡   To change the optimization options, click Properties, and choose Options from the drop-down list.

{button ,AL("SD32_I0010;SD32_I0120;SD32_I0150;SD32_T0020;SD32_T0200")} Related Topics

To run Speed Disk in the background:

There are three ways to run Speed Disk in the background:

1 Use the scheduling feature of Speed Disk to schedule optimization tasks to run at preset times. These optimizations run in the background.

2 After starting the optimization, click Close to close Speed Disk. Click No on the Confirm Exit dialog box.

3 Simply minimize Speed Disk after starting the optimization.

To minimize the effect of background optimization on applications running in the foreground, set the optimization priority to Only When Idle. Use the Resources tab of the Speed Disk Options to set the optimization priority.

{button ,AL("SD32_I0010;SD32_I0150;SD32_T0200")} Related Topics

To generate a fragmentation analysis:

▶   Click the information icon

next to the disk volume you want analyzed.

     The fragmentation analysis can take some time, depending on the size of the volume, how many files are on the volume, and on the degree of file fragmentation. You can stop the analysis at any time by clicking Cancel.

{button ,AL("SD32_I0010;SD32_I0060;SD32_I0100;SD32_I0080")} Related Topics

To customize optimizations:
1   Click Properties from the main Speed Disk window.
2   Click Options from the drop-down list.
3   Click the Optimization tab.
4   Click a disk volume from the list.
5   Choose the optimization options you want.

💡   Speed Disk remembers these options and uses them whenever optimizing the selected disk volume.

{button ,AL("SD32_I0010;SD32_I0120;SD32_T0190;SD32_T0200")} Related Topics

To customize drive map colors:
1   Click Properties from the main Speed Disk window.
2   Click Legend from the drop-down list.
      The Legend option is available only when the drive map is displayed.
3   Click the colored square beside any block description in the drive map Legend.
4   Click the color you want to represent this type of block in the drive map.

{button ,AL("SD32_I0010;SD32_I0060;SD32_T0060")} Related Topics

To set resource options:
1   Click Properties from the main Speed Disk window.
2   Click Options from the drop-down list.
3   Click the Resources tab.
4   Choose the options you want.

> Set usage to Time Critical only if you are running Speed Disk without an interface (as by using the schedule feature of Speed Disk or closing Speed Disk after starting the optimization).

{button ,AL("SD32_I0010;SD32_I0150;SD32_T0020;SD32_T0200")} Related Topics

To open Speed Disk:

Click here to open Speed Disk.

{button ,AL("SD32_I0010;SD32_I0150;SD32_T0020;SD32_T0060;SD32_T0200")} Related Topics

To record optimization events or send alerts:

1 Click Properties from the main Speed Disk window.
2 Click Options from the drop-down list.
3 Click the Logging tab.
4 Make sure Enable Event Logging is checked.
5 Choose the Speed Disk event you want logged or for which you want an alert sent.
6 If the event is to be logged, choose how the event should be labeled in the log (Information, Warning, or Error). If you want an administrative alert sent when this event occurs, check Send Administrative Alert. (The event need not be logged to send administrative alerts.)

Recorded optimization events are viewable in the Windows NT Event Viewer. In order to use the alert feature, the Alerter and Messenger Windows NT services must be running.

{button ,AL("SD32_I0010;SD32_I0160;SD32_T0200")} Related Topics

To schedule optimizations to run at pre-set times:

1 Click Properties.
2 Choose Schedule from the drop-down list.
3 Click New.
4 Select the drives you want to schedule for optimization.
5 Enter a name for the optimization task.
6 Click Options to choose optimization options for this task.
7 Choose the frequency, and start times for this task. You can also specify a stop time for the optimization. The optimization will stop at the specified time, regardless of whether the optimization is complete.

{button ,AL("SD32_I0010;SD32_I0150;SD32_T0110;SD32_T0020")} Related Topics

About Speed Disk

Speed Disk improves a computer's performance by optimizing disk access. It <u>defragments</u> files and maximizes the usable free space on a <u>disk volume</u>. You can use Speed Disk's options to customize the optimization. For example, you can have Speed Disk:

- Optimize files, free space, or both
- Customize the optimization for each disk volume and for each scheduled task
- Run in the background to optimize volumes at preset times
- Maximize the amount of usable free space by selecting a Thorough optimization
- Record optimization events to the Windows NT Event Log
- To open Speed Disk, click here

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{button ,AL("SD32_I0020;SD32_I0030;SD32_I0050;SD32_I0150;SD32_I0160;SD32_T0010;SD32_T0200")} Related Topics

Why use Speed Disk

The space on a disk is divided up into discrete units called <u>clusters</u>. When files are stored to the disk, they are broken up into cluster-sized pieces. When all of the pieces of a file are located in adjacent or <u>contiguous</u> clusters, the file can be accessed quickly, since all of the information is in one place.

As files are created, modified, and deleted, the pieces of individual files can become scattered to different areas of the disk volume. The files are said to be <u>fragmented</u>. Over time the files become increasingly fragmented. As they do, computer performance degrades because it takes longer to locate all the pieces of fragmented files. Speed Disk defragments the files by rearranging them so their component pieces occupy contiguous clusters. When files are unfragmented, systems perform better.

Just as files can become fragmented, so can the free space on a disk. Many of the free space fragments can be too small to be usable under Windows NT. These fragments represent disk space that is essentially wasted. Speed Disk recovers disk space by consolidating free space fragments into usable size blocks.

{button ,AL("SD32_I0010;SD32_I0030;SD32_I0050;SD32_I0150;SD32_I0160;SD32_T0010;SD32_T0200")} Related Topics

When to use Speed Disk

Use Speed Disk regularly to help maintain optimal computer performance. Speed Disk lets you schedule optimization tasks to run automatically at preset times. You can also set Speed Disk to optimize continually in the background, while you work on other things.

 Norton System Doctor can automatically monitor a disk volume while you work and notify you when the files become too fragmented. You can configure Norton System Doctor to run Speed Disk automatically when fragmentation exceeds a specified value.

In addition to running Speed Disk on a regular basis, you should defragment a disk volume any time you modify large numbers of files on it. You can also use Speed Disk to consolidate unused disk space before installing new programs or copying large files to the disk. This maximizes the number of contiguous empty clusters for the new files.

{button ,AL("SD32_I0020;SD32_I0010;SD32_I0050;SD32_I0150;SD32_I0160;SD32_T0010;SD32_T0200")} Related Topics

About Speed Disk features

Speed Disk includes a variety of features to let you view disk-related information and customize how Speed Disk works:

	Quickly see how fragmented any disk volume is by viewing the color-coded Disk Map.
	Generate a fragmentation analysis to get details on file and free space fragmentation, and on overall disk volume utilization.
	Choose the style and degree of disk optimization you want.
	Schedule Speed Disk optimizations and run Speed Disk in the background.
	Record optimization events to the Windows NT Event Log.

{button ,AL("SD32_I0010;SD32_I0020;SD32_I0150;SD32_I0160;SD32_I0120;SD32_T0010;SD32_T0090;SD32_T0200")} Related Topics

About the drive map

The drive map is a graphical representation of the files arranged on a disk <u>volume</u>. The color-coding helps you identify how efficiently disk space is being used. You can customize the colors used for the drive map by clicking the color blocks on the drive map legend. Click Show Map in the main Speed Disk window to display the drive map.

Each block on the map represents a number of <u>clusters</u> on the disk volume. The number of clusters per block varies depending on the size of the volume and on screen resolution, and is listed in the upper-right corner of the map.

Gathering data on file fragmentation and unmovable files can take some time, depending on the size of the volume, how many files are on the volume, and on the degree of file fragmentation. To save time, the disk map does not initially distinguish fragmented or unmovable files. To see fragmented files in the disk map, click the information icon ![icon] for the volume. After Speed Disk performs the fragmentation analysis the disk map shows the fragmented files. Unmovable files will be distinguished in the map after the disk volume is optimized.

![icon]   You can cancel out of the fragmentation analysis at any time.

{button ,AL("SD32_I0010;SD32_I0050;SD32_T0090")} Related Topics

About unmovable files

Windows NT produces many unmovable files and file fragments during system operation. These files and file fragments must remain at a particular location on the disk for proper system operation. Fragments on the disk identified by Speed Disk as unmovable are not moved during optimization.

When you choose the Thorough optimization, Speed Disk consolidates as many small, unusable areas of free space as possible into the largest areas that exist between unmovable fragments. This consolidation recovers free space that would otherwise be wasted, and allows larger files to be defragmented.

{button ,AL("SD32_I0010;SD32_I0060;SD32_I0120")} Related Topics

About the **fragmentation analysis**

The fragmentation analysis shows the level of <u>fragmentation</u> on a disk volume. It presents a dialog box that lets you view information on file fragmentation, free space fragmentation, and on general disk utilization. The bottom of the fragmentation analysis dialog box displays a list of the 10 most fragmented files.

To see a fragmentation analysis, click the information icon next to the drive you want analyzed in the drive list.

{button ,AL("SD32_I0010;SD32_I0080;SD32_T0050;")} Related Topics

About optimization methods

Speed Disk lets you specify what to optimize and how the optimization should be performed.

During normal file operations, file and free space fragments are created on the disk. File fragmentation degrades computer performance because it takes longer to locate all the pieces of the fragmented files. Fragmentation of the disk's free space also has a negative impact on system performance. Free space fragments that are smaller than 16 clusters cannot be utilized by the NT File System (NTFS), so these fragments waste disk space. If there is substantial fragmentation on the disk, unavailable free space can consume a lot of potential disk space. Speed Disk lets you choose whether to optimize files, free space, or both.

Optimize Files Only

Optimizes as many files as possible without consolidating the free disk space. This method is faster than optimizing both files and free space at the same time, but may not optimize as many files as efficiently. Some large files may not be optimized at all.

Optimize Free Space Only

Quickly consolidates the free space to one area of the disk volume, but does not optimize any files. If you don't have time for a full optimization, you should use this method before installing new software.

Optimize Both Files And Free Space

Defragments the files and consolidates as much of the free space as possible. This method gives the best results, but also takes the longest.

You can also specify whether Speed Disk performs a Normal or Thorough optimization:

Normal

Suitable for most disks. You should try this method first. If the disk volume has ample free space, the Normal optimization provides results comparable to the Thorough optimization, and can be much faster.

Thorough

Attempts to relocate free space fragments to those areas where the space between unmovable files is at a maximum. This lets Speed Disk consolidate and recover the greatest number of small free space areas. Thorough optimization can improve both file and free space optimization, but takes substantially longer than Normal optimization if the disk volume is highly fragmented and if free space is limited.

If the disk volume has limited (less than 25%) free space, the Thorough optimization does the best job of recovering free space and improving system performance. Thorough optimization makes the maximum amount of free space available to the system.

Speed Disk remembers the optimization options you choose for each disk volume, so you need not reset options each time you optimize unless you want to change them.

{button ,AL("SD32_I0010;SD32_I0160;SD32_I0080;SD32_T0010;SD32_T0060")} Related Topics

About background operation and scheduling optimizations

Speed Disk can optimize in the <u>background</u> without having a major impact on foreground operations. There are three ways to run Speed Disk in the background:

Use the scheduling feature of Speed Disk to specify when and how you want the disk volumes optimized. Scheduling lets you specify as many optimization "tasks" as you need. You assign each task a unique name, specify when the optimization should run, which volumes to optimize, and what optimization options will be used for each. Thereafter, your optimization tasks run automatically in the background. keeping performance at its best.

Start the Speed Disk optimization from the Speed Disk interface, then close Speed Disk. Click "No" when the Confirm Exit dialog box asks whether to stop the optimization.

<u>Minimize</u> Speed Disk after starting the optimization.

To minimize the effect of background optimization on applications running in the foreground, set the optimization priority to Only When Idle. Use the Resources tab of the Speed Disk Options to set the optimization priority.

{button ,AL("SD32_I0010;SD32_T0110;SD32_I0160;SD32_T0200")} Related Topics

Recording optimization events and sending alerts

You can record optimization events to the event log maintained by Windows NT, and view the records using the Windows NT Event Viewer. Use the Logging tab of the Options dialog box to specify which Speed Disk events you want recorded. You can also specify an event type, which determines how the events are classified in the event log (Error, Warning, or Information) and the type of icon that precedes the log entry.

You can also have Speed Disk send administrative alerts to the system administrator or to another user automatically whenever a Speed Disk event occurs. The event need not be logged in order to send alerts. Configure alerts from the Server control in the Windows Control Panel. In order to use the alert feature, the Alerter and Messenger Windows NT services must be running.

{button ,AL("SD32_I0010;SD32_I0020;SD32_I0150;SD32_T0010;SD32_T0190;SD32_T0020")} Related Topics

Command-line options for Speed Disk

You can run Speed Disk from the command line, either from a console window, or by clicking Run from the Start menu. Use the following syntax:

```
SD32 [drive:]...[/FILES | /FREE | /BOTH] [/SUPER] [/AUTO]
```

drive:	Specifies the drives to be optimized. Each drive letter specified must be followed by a colon.
/FILES	Sets Speed Disk to optimize files only for the specified drives.
/FREE	Sets Speed Disk to optimize free space only for the specified drives.
/BOTH	Sets Speed Disk to optimize both files and free space for the specified drives. This is the default setting when Speed Disk is run from the command line.
/SUPER	Sets Speed Disk to use the Thorough optimization method for the specified drives. By default, Speed Disk is set to use the Normal optimization method when run from the command line.
/AUTO	Starts the optimization automatically after Speed Disk opens, and closes Speed Disk automatically after optimization is complete.

These options override any you have previously selected in Speed Disk. The options can be entered in any order.

For example, to have Speed Disk automatically optimize files only on drives C and D, enter:

```
SD32 c: d: /files /auto
```

{button ,AL("SD32_I0010;SD32_I0120;SD32_I0150;SD32_T0010;SD32_T0020;SD32_T0060")} Related Topics

Displays the contents of the selected disk volume in the form of a map.

The disk map will distinguish fragmented files only after you perform a fragmentation analysis, and will distinguish unmovable files only after you perform an optimization.

Hides the drive map.

Displays a drive map that represents the contents of the disk volume being optimized as color-coded bars.

Lists the disk volumes available for optimization. Click the volume you want to optimize.

You can choose more than one volume by holding down the Ctrl or Shift key while you click the others you want to optimize. Use the Optimization tab of the Speed Disk Options dialog box to set custom options for each volume.

 Click the information icon to see a fragmentation analysis for the associated disk volume.

Begins optimization of the selected disk volumes.

This is not available until you have selected a disk volume from the list.

Lets you to set Speed Disk options and change the color-coding used by the disk map.

Closes Speed Disk.

Shows the color codes used by the disk map. You can click a color block in this box to change the colors used in the disk map.

Lists the disk volumes for which you can specify optimization options. Speed Disk will remember the options you choose for each volume.

Defragments as many files as possible but does not consolidate unused space. This method is less effective than optimizing files and free space, but it is faster. Some large files may not be defragmented at all.

During normal operation, Windows NT creates many small, unusable areas of free disk space. This option consolidates and recovers as much free space as possible without defragmenting files.

Defragments files and consolidates free space.

Stops the optimization process.

Maximizes free space at the end of the disk volume.

Normal optimizations are faster than Thorough optimizations, but will not typically recover as much free space, The free space that results from Normal optimizations on volumes that are over 75% full is likely to be in smaller fragments than those resulting from a Thorough optimization. This can prevent larger files on these volumes from being completely defragmented.

For disk volumes that are over 75% full, we recommend performing a Thorough optimization, to recover the greatest amount of free space and defragment the greatest number of files.

Results in maximum optimization by minimizing small (unusable) areas of free space. For disk volumes with limited free space, this takes more time than a Normal optimization, especially for volumes formatted for NTFS.

Thorough mode is recommended for disk volumes that are over 75% full, or for those with a fragmented file that is larger than 50% of the total available free space.

Click the box to select from a list of Speed Disk events that can be recorded to the NT event log.

Check to have this event recorded in the Windows NT event log.

Click the type of event you want recorded to the Windows NT event log.

Sends an administraive alert to the network administrator or to another user whenever the listed Speed Disk event occurs. Configure alerts from the Server applet in the Control Panel. In order to use the alert feature, the Alerter and Messenger Windows NT services must be running.

Enables Speed Disk event logging.

Configures Speed Disk to run continuously.

Enter the number of times Speed Disk should run, or use the up and down arrows to change the number in the box. Successive runs of Speed Disk may improve optimization.

Sets the priority given to the Speed Disk optimization.

To minimize the effect of the optimization process on other applications running in the foreground, set the optimization priority to Only When Idle. For example, use this setting if you are running Speed Disk in the background or using the Speed Disk scheduling feature.

Lists the scheduled optimization tasks.

Creates a new scheduled optimization task.

Click to change the parameters of the currently-selected optimization task.

Disables the currently selected optimization task, without removing it from the list.

Re-enables the currently selected optimization task.

Removes the currently selected optimization task from the list.

Enter a name for the scheduled optimization task.

Click to choose optimization options for this scheduled Speed Disk task.

Click to choose the days for this task to run. This is available only when the task is scheduled to run Daily.

Lists the disk volumes for which you can schedule optimization tasks.

Click the box and choose how often you want the optimization to be performed.