

# User's Manual

## Diskeeper<sup>®</sup> Administrator Edition for Windows<sup>®</sup>

December 2004

This document describes the installation and operation of Executive Software International's Diskeeper Administrator Edition for Microsoft<sup>®</sup> Windows. It is intended primarily for Windows system administrators and managers.

Revision/Update Information: This is a new manual

Software Versions: Diskeeper 9.0 Administrator Edition

Operating Systems: Windows Server<sup>™</sup> 2003  
Windows XP (all edition except Home)  
Windows NT<sup>®</sup> 4.0 (SP 6 or higher)

Executive Software International, Inc., Burbank, California, USA



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November 2004

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# Preface

## What This Book is About

Welcome to the Diskeeper Administrator Edition User's Manual. This book will first give you a quick look at the major features in Diskeeper Administrator Edition, then help you get it installed and running. Next, it describes the various features in Diskeeper Administrator Edition and how to use them. It also describes the key features available in the Diskeeper Professional and Server editions. Finally, it defines disk fragmentation and its effect on your Windows systems.

## Structure of This Book

- Chapter 1 gives a brief overview of Diskeeper Administrator Edition.
- Chapter 2 describes how to install Diskeeper Administrator Edition.
- Chapter 3 explains how to use the various features of Diskeeper Administrator Edition.
- Chapter 4 gives an overview of the features available in the Diskeeper Professional and .Server editions.
- Chapter 5 presents the theory of Diskeeper operation.
- Appendix A has tables showing the different Diskeeper editions, and the operating systems, features and capacities they support.
- Appendix B tells you where to get answers to Frequently Asked Questions
- Appendix C lists all the available menu options
- Appendix D lists possible error messages and their causes
- Appendix E explains how to contact your Executive Software Customer Service Representative for Support Services.
- The Glossary provides definitions of technical terms used in this manual.

## Introduction

Throughout its history, Diskeeper has improved with each new version. Diskeeper version 9.0 continues this tradition with even more innovative new features and approaches to solving fragmentation problems for everyone, from home users to the world's largest enterprise IT departments.

The Diskeeper family of products includes *Diskeeper Administrator Edition*. Diskeeper Administrator Edition is not a defragmenter, but an application that provides a single point of control by which you can control all the Diskeeper 9.0 installations on your network, including editions that can efficiently handle multi-terabyte disk volumes. This solves the following problems:

Diskeeper Administrator Edition makes the Diskeeper Server editions more powerful and efficient. Continuing earlier advances, all the 'network administration' features have removed from the Diskeeper Server editions to increase their performance and reliability. The Diskeeper Administrator Edition takes over the network administration duties, allowing the Server Editions to better emphasize the core functionality of defragmentation, especially on very large disk volumes.

Diskeeper Administrator Edition provides very flexible control of Diskeeper in a network environment. Key to this control are these network administration features:

- Active Directory<sup>®</sup> and Custom Grouping support—This feature allows you to define groups of computers you want to defragment, then control these groups as a single unit. Use groups you have established with

the Active Directory in Windows 2000 Server and Windows Server 2003, or you can create your own custom groups.

- Enhanced monitoring of Diskkeeper-related statuses on remote systems—Diskkeeper now provides reports and alerts about several performance and reliability factors, and gives you concise reports on the condition of the disks and computers in your network.
- Network-Wide Scheduling capability—As in previous versions of Diskkeeper Server, you can create a defragmentation schedule and send it to a few (or a few thousand) computers with just a few mouse clicks.
- PushInstall—The Diskkeeper PushInstall feature allows you to install Diskkeeper Professional Edition or Diskkeeper Server Standard Edition on any number of remote computers network-wide from a single, central location (such as your desk).

## About Fragmentation

As used in this manual, the term *disk fragmentation* means two things:

- a condition in which pieces of individual files on a disk volume are not contiguous, but rather are broken up and scattered around the disk; and
- a condition in which the free space on a disk volume consists of little pieces of space here and there rather than a few large free spaces.

The effects of excessive fragmentation are twofold as well:

- file access takes longer because a file must be collected in pieces here and there, requiring several disk accesses instead of just one; and
- file creations take longer because space for the file must be allocated in little pieces here and there instead of just one contiguous allocation.

The bottom line—fragmentation slows Windows system performance. The longer you wait to defragment your disk volumes, the slower your computer runs.

With Diskkeeper, all the disks in a Windows system can be kept defragmented indefinitely. Diskkeeper cleans them up and keeps them that way.

Running either invisibly as a background job or as a manual defragmenter, Diskkeeper carefully rearranges files and free space on a disk volume so they consist of as few pieces as possible. Because Diskkeeper runs online, there is no need to lock users off a disk while it is being defragmented.

Diskkeeper is the complete “Set It and Forget It”<sup>®</sup> solution to the loss in system performance caused by disk fragmentation!

## Other Important Products

Executive Software is known throughout the computer industry for its focused development of system management tools. If you are running Windows NT, Windows 2000, Windows XP or Windows Server 2003, you should also use:

### Undelete<sup>®</sup> for Windows

Instantly recover files that have been accidentally deleted anywhere on your network. Undelete sets up a Recovery Bin that caches all deletions—even versions created between backups—and saves you the time and money of wading through backups. Undelete also includes a recovery tool for files that have been deleted before Undelete was installed. Data is your business. Complete your data protection solution with Undelete, available from your local reseller or directly from Executive Software.

## **Sitekeeper® System Management Software**

Get at-a-glance updates on every software version, build, update and patch. Also see detailed hardware information including processor speed, RAM, hard drive size, logical free space and asset management tags from the BIOS and motherboard. Install/uninstall programs with a few clicks of the mouse.



## Chapter 1

# Overview of Diskeeper Administrator Edition

Diskeeper introduced the concept of enterprise-wide defragmentation, and *Diskeeper Administrator Edition* represents the next generation of this technology.

If you are a new Diskeeper Administrator user, welcome to the leading edge of defragmentation technology! If you have used Diskeeper Administrator in the past, you will notice many changes in this version. These changes are the result of Executive Software's continual research to find what system administrators need and want in their defragmentation solutions.

Recent marketing research has shown that computer system performance and reliability are major concerns among system administrators. Diskeeper Administrator Edition addresses these concerns by separating the administration of the defragmentation process from the defragmentation operation itself.

As disk sizes have increased and server duties have multiplied, it has become clear that a standalone administration console dedicated to controlling defragmentation operations network-wide provided a more efficient use of computer resources, especially on large server disk volumes. Starting with Diskeeper 8.0, this remote control functionality has been removed from the server versions of Diskeeper, and is now incorporated into Diskeeper Administrator Edition. The Administrator Edition only controls Diskeeper operation—it does not perform defragmentation itself.

With Diskeeper Administrator Edition, you can install, schedule, monitor, and control Diskeeper on computers throughout your network.

Here are the major features provided by Diskeeper Administrator Edition:

- The PushInstall feature makes it easy to deploy Diskeeper Professional or Diskeeper Server Standard or Server Enterprise editions to any supported computer on your network. Need to install Diskeeper on a few hundred machines? Diskeeper Administrator Edition can do it in a few mouse clicks.
- Scheduling defragmentation operations is simple, whether you're managing a handful of computers or thousands network-wide. You can specify times when you want Diskeeper to run, or let the Diskeeper Smart Scheduling® feature automatically determine the optimum defragmentation schedule for each disk. Diskeeper supports two separate schedules for each of your disk volumes. This allows you to set one schedule for weekdays, and another for weekends. Or you can run low-priority defragmentation jobs during the day when the computer is active, and other, higher-priority jobs in the off-hours.
- For ease of management, you can arrange the computers on your network into logical groups. Diskeeper Administrator Edition supports Microsoft Active Directory® groups, or you can create your own customized groups. For example, you can easily set up different defragmentation schedules, reports or preferences for the computers in the Finance department compared to those in Engineering—or PushInstall Diskeeper to all the computers on the fourth floor.
- Diskeeper Administrator Edition provides a wealth of report and alert options detailing the fragmentation on the computers across your network, and also collects performance and reliability data that you can use to proactively maintain your systems.
- You can use Diskeeper Administrator Edition to remotely-control Diskeeper on computers all over your network. Without ever leaving your desk, you can perform any Diskeeper task as if you were sitting in front of the remote machine.

## 2 Overview

- Diskeeper Administrator Edition gives you the status of Diskeeper operations throughout your network at a glance. You can quickly see which machines have which versions of Diskeeper installed, and also see which systems have Diskeeper scheduled to run.
- The License Management module of Diskeeper Administrator Edition gives you complete control over the Diskeeper licenses in use on your network.

In a typical scenario, you would use Diskeeper Administrator Edition to PushInstall Diskeeper to remote computers throughout your network. Then, you would use Diskeeper Administrator to create schedules for the defragmentation of those remote machines. These remote computers can optionally be divided into groups—you can use your existing Active Directory grouping structure or create your own custom groups. After setting defragmentation schedules, you can specify which alert messages you'd like to see, and how often you'd like to see them. At this point, you're done! Diskeeper will automatically handle the fragmentation throughout your network. At any time thereafter, you can easily check up on Diskeeper operations network-wide—without ever leaving your desk!

Diskeeper Administrator Edition consists of two main components—the *Administrator Console* and the *Administrator Database*.

- The **Administrator Console** is the “control panel” by which you send commands to Diskeeper installations throughout your network. Since it is the “hands-on” piece of the Diskeeper Administrator package, it can be installed on one or more computers that are easily accessible by the people who need to use Diskeeper Administrator.
- The **Administrator Database** component works in the background to collect and store the scheduling, logging, reports, alerts and other informational data for all the computers on your network with valid Diskeeper licenses.

This data is stored in either a new or existing SQL database, or you can use the Microsoft Desktop Engine (MSDE), which is a subset of the full SQL product.

Remember, Diskeeper Administrator Edition is not a defragmenter. In order to defragment the computer(s) it is installed on, it is necessary to also install either Diskeeper Professional Edition or one of the Diskeeper Server editions on the computer(s).

## Other Useful Information

In order to start using Diskeeper Administrator, it is necessary to first configure the Administrator Database. This includes specifying whether to use an existing SQL Server 2000 or Microsoft Desktop Engine (MSDE) database or installing MSDE locally on the computer running Diskeeper Administrator. If neither of these are installed on your computer, you will be prompted to download and install a free version of MSDE from the Executive Software web site. The database configuration also includes naming the database, and specifying where it resides. See *Configuring the Database* page 15 for information about configuring the Administrator Database.

After the Administrator Database has been configured, it's time to specify the computers in your network you want to manage with Diskeeper Administrator. Nearly all of the tasks you perform with Diskeeper Administrator are based on the list of managed computers maintained in the Administrator Database. Use the Manage Diskeeper Computers option in the Configuration taskbar to specify the computers you want to manage. Of course, Diskeeper must be installed on the computers you want to manage, but if it is not, you can easily use the PushInstall feature to install Diskeeper on the remote computers. See *Selecting Managed Diskeeper Computers* on page 16 for information about setting up your managed computers.

In order to gather the Diskeeper data from remote machines, Diskeeper Administrator must use login credentials for an account that is a member of the Administrators group on the domain or workgroup being polled. (This account information is also used by the PushInstall feature described here.) Diskeeper Administrator allows you to use different login information for each domain on which you want to control remote Diskeeper installations. See *Setting Up Account Information* on page 17 for more information about entering account information.

Once you have established which computers are to be managed by Diskeeper Administrator, you can start using it to simplify your life (or at least simplify how you manage defragmentation on your network)!

After Diskeeper Administrator has found the other Diskeeper installations on your network, it can then gather any existing scheduling information for the remote machines. It gathers post-defragmentation performance and reliability information about each individual computer and stores that data in the Administrator database. From then on, any time Diskeeper-related activity occurs on one of the remote machines, the Diskeeper Administrator database is updated, so information about the condition of the remote computers is always instantly available. You can view reports showing either the information currently in the database, or poll the managed Diskeeper computers for reports showing up-to-the-minute information (including data from computers that have been temporarily off the network—such as laptop systems).



## Chapter 2

# Installing Diskeeper Administrator Edition

This chapter provides information you need before, during, and after installing Diskeeper Administrator Edition.

## Before the Installation

### Platforms and Windows Versions Supported

Diskeeper Administrator Edition runs on the Intel® x86 platform (including Pentium™ and compatible CPUs from other manufacturers) running Windows Server 2003, Windows XP (all editions except Home), Windows 2000, and Windows NT 4.0 (SP 6 or higher).

Note that Service Pack 6 or higher is required on Windows NT 4.0 systems.

**Important Note:** If you are installing Diskeeper Administrator on a computer running Windows XP Service Pack 2, be sure to visit [www.executive.com/sp2](http://www.executive.com/sp2) for the latest information about running Diskeeper with Service Pack 2.

### Additional Software Requirements

Diskeeper Administrator requires either Microsoft SQL Server 2000 or the Microsoft Desktop Engine (MSDE) to store Diskeeper-related information. The MSDE provides local data storage and is based on the data engine used in Microsoft SQL Server 2000. It is provided on the Diskeeper Administrator CD-ROM, and is also available free of charge from the Executive Software web site.

Diskeeper Administrator also relies on the Microsoft .NET Framework and the Microsoft Management Console (MMC).

The .NET Framework provides the communication facilities necessary for the various Diskeeper Administrator components.

The MMC provides a single point of control for system utilities such as Diskeeper Professional and Server editions. The MMC is used as a central location for a variety of Microsoft and other third party administrative tools.

**Note:** The Diskeeper Administrator setup process will automatically install the .NET Framework or MMC on your computer if needed.

On Windows NT 4.0 computers, Service Pack 6 is required for Diskeeper Administrator to function properly. Diskeeper Administrator will not install on Windows NT systems running Service Pack 5 or lower.

### Resource Requirements

The disk space requirements for Diskeeper Administrator depend on several factors. On most systems, Diskeeper Administrator will need 80 megabytes or less. Allow up to 450 MB of extra free space for temporary files during the installation. If the Microsoft .NET Framework is not installed on your computer, this requires approximately 70 MB of additional disk space. Further, your system may require a new or updated version of

## 6 Installation

the Microsoft Management Console (less than 6 MB). Finally, if Internet Explorer is not present on your computer, some other needed files (hhupd.exe, 50comupd.exe, and wintdist.exe) may be added.

If you install the MSDE when you first configure the Diskeeper Administrator database, it initially requires less than 70 MB of disk space, although as the database grows, the additional disk space requirements will increase. Also, the MSDE uses the Microsoft Data Access Components (MDAC), which will require approximately 26 additional MB of disk space if not already present on your system.

### A Note About Firewalls

As a normal part of its operation, Diskeeper Administrator acts as a server on your network. If you are running a hardware or software firewall, you may see messages indicating Diskeeper Administrator is trying to act as a server. These messages are expected; you can safely allow these events.

You may also be notified that Diskeeper Administrator is trying to access the Internet. It is important to note that Diskeeper Administrator does not access the Internet (except when you specifically use the Check for Updates feature), but it does use Windows mechanisms that may trigger these alerts from your firewall. Again, these messages are expected and you can safely allow the events.

### Installation Procedure—The Short Version

The Diskeeper Administrator installation is typically fast and simple. Here are the basic steps:

**Note:** Make sure you are logged onto an account that is a member of the Administrators group.

1. Insert the Diskeeper Administrator CD-ROM into the appropriate drive on your computer. (If you are installing from a downloaded file, double-click the file you downloaded.)
2. Follow the screens displayed, answering the questions asked as prompted.

That's it! It would still be a good idea to read "After the Installation" on page 7, but you're done with the installation.

### Installation Procedure—The Details

#### Installation Overview

Diskeeper Administrator is installed by the **SETUP.EXE** program supplied on the Diskeeper CD-ROM (or within the installation package, in the case of a downloaded version). The **SETUP.EXE** program:

- Confirms that you have Administrator privileges.
- Determines which Windows version you are running.
- Checks for sufficient space on the disk for the installation.
- Detects and removes any previously installed Diskeeper Administrator software.
- Copies the necessary files to the destination directories, updates the Windows registry, starts the Diskeeper Administrator service, and creates a link in the Windows Start menu for **Diskeeper Administrator**.

#### Installation Procedure

Diskeeper Administrator Edition can be installed from a CD-ROM, or it may be downloaded from the Web. This procedure applies to both methods. Before you start the installation, please note the following:

- Windows NT 4.0 machines must have Service Pack 6 or higher installed
- You must be logged into an account that is a member of the Administrators group to install Diskeeper Administrator.

This installation procedure assumes you are installing from CD-ROM. If the Diskeeper software was downloaded from the Web, double-click the executable file in the directory into which it was downloaded and go directly to step 3.

1. Insert the Diskeeper CD-ROM into the appropriate drive on your computer.
2. The Windows AutoPlay feature automatically displays a screen that allows you to install Diskeeper Administrator or choose from an assortment of Trialware versions of Executive Software products.  
  
If you have disabled the AutoPlay feature, simply double-click the **Setup.exe** file in the root-level folder on the CD-ROM and follow the instructions displayed.
3. Click **Next** when the welcome message appears.
4. After you have read and accepted the license agreement, click **Next** to continue.
5. You can choose a different disk volume or directory for the installation. Click **Change** and navigate to the location where you want the files for Diskeeper Administrator installed.
6. After making any desired changes to the file destinations, click **Next** to accept your changes. If any directory you specified does not exist, a new directory will be created.
7. If Internet Explorer 4.01 or higher is not installed on your computer, another installation program is started and a package of necessary components is installed on your computer. Microsoft Management Console (MMC), which is the interface for Diskeeper Administrator, requires these components. These components are a small subset of Internet Explorer—not the complete Internet Explorer product. Installing these components (hhupd.exe, 50comupd.exe, and wintdist.exe) will not affect your current web browser. Note that you must restart your computer after installing Diskeeper Administrator if these components are installed.
8. If the MMC is not installed on your computer, the MMC Setup program is started automatically. After the MMC files are installed, the Diskeeper Administrator Setup program resumes.
9. After the Diskeeper Administrator files have been copied to your system, you may be presented with the opportunity to register Diskeeper Administrator online.
10. On a Windows 2000, Windows XP or Windows Server 2003, after Setup is complete, you can immediately start Diskeeper Administrator by clicking **Finish**. On Windows NT systems, you may be required to restart your computer before running Diskeeper Administrator.

To run Diskeeper Administrator, click the Windows **Start** button, select **Programs**, and then **Diskeeper Administrator**.

## After the Installation

### Registering Diskeeper Administrator Edition

After the installation is complete, you may be given the option to register your Diskeeper Administrator Edition purchase online. Alternatively, you can register Diskeeper by mailing or faxing the registration card that comes with the CD.

Be sure to register your purchase to receive the free 90 days of telephone support included with Diskeeper Administrator Edition.

### About Windows Service Packs

There is typically no need to upgrade Diskeeper Administrator each time you install a new Windows Service Pack upgrade.

**Important Note:** Windows XP Service Pack 2 (SP2) establishes default security settings that can prevent Diskeeper Administrator from communicating with Diskeeper computers throughout your network. Be sure to visit [www.executive.com/sp2](http://www.executive.com/sp2) for the latest information about configuring your Windows XP SP2 computers to run Diskeeper Administrator and Diskeeper.

## Repairing Windows Systems

Performing an emergency repair or reinstallation of a Windows system can possibly change or disable certain system information or services, which may make it necessary to reinstall Diskeeper Administrator after repairing your Windows system.

## About the Diskeeper Administrator Service

Diskeeper Administrator creates a Windows service. The service allows the Administrator Data Controller to run in the background while other applications are running. As long as your operating system is up and running, Diskeeper Administrator can do its job, whether you are logged on or not.

After installation, the Diskeeper Administrator service starts automatically each time your computer is restarted. This service runs all the time, whether or not any Diskeeper Administrator actions are occurring. This service consumes negligible system resources, and in most cases will never need to be disabled.

## The Windows Application Event Log

Diskeeper Administrator messages are placed in the Windows Application Event Log. By default, this log is 512 kilobytes in size (except on Windows Server 2003), and is set to overwrite events older than 7 days. Diskeeper Administrator may quickly fill the log file if these default settings are used. To prevent this, perform the following steps to change the size and overwriting characteristics of the Application Event Log:

### On Windows 2000 and Windows XP

1. Right-click **My Computer** on your desktop and select **Manage**.
2. When the Computer Management Console is displayed, select **System Tools**, and then **Event Viewer**.
3. Expand the Event Viewer by double-clicking it and select **Application**.
4. Next, click the **Action** menu and select **Properties**.
  - a) Set the **Maximum log size** to **2048 KB**.
  - b) Enable the **Overwrite events as needed** option.
  - c) Click **OK**.

### On Windows NT 4.0

1. From the Windows NT **Start** button, choose **Programs**, then the **Administrative Tools** Program Group.
2. In the Administrative Tools Program Group, choose the **Event Viewer**.
3. In the Event Viewer, open the **Log** menu and choose the **Log Settings** option.
4. In the **Event Log Settings** dialog box, perform these steps:
  - a) Set the **Change Setting** to **Application Log**.
  - b) Set the **Maximum Log Size** to **2048 KB**.
  - c) Enable the **Overwrite Events as Needed** option.
  - d) Click **OK**.

## Uninstalling Diskeeper Administrator Edition

To uninstall Diskeeper Administrator, you must be logged into an account that is a member of the Administrators group.

Note that the controls may have slightly different names, depending on the version of Windows.

Follow these steps to completely remove and uninstall Diskeeper Administrator from your computer:

1. From the **Control Panel**, double-click **Add/Remove Programs**.
2. Highlight the **Diskeeper Administrator** entry.
3. Click **Remove**. This removes the Diskeeper Administrator program files from your computer. In most cases, the Diskeeper Administrator installation directories will not be removed.
4. Manually delete the Diskeeper Administrator installation directories if they exist.

**Note:** If the MMC has been installed on your computer, it will not be removed when Diskeeper Administrator is uninstalled.

**Also Note:** Any data or installation files stored by the Administrator Data Controller are not removed when you uninstall Diskeeper Administrator (in the event you are planning to re-install Diskeeper Administrator). Manually delete these files if they are no longer needed.

## Remote Installation

Diskeeper Professional Edition or Diskeeper Server Standard Edition can be installed simultaneously on multiple computers in a network, using the PushInstall feature in Diskeeper Administrator.

Remote installation can be a tremendous time saver for system administrators, especially on large networks, where you may have to install Diskeeper on hundreds, or even thousands of computers.

For more information on remotely installing Diskeeper, see *Deploying Diskeeper* on page 17.



## Chapter 3

# Diskeeper Administrator Edition Operation

This chapter describes the features available with Diskeeper Administrator Edition, and what you can do with them.

## Overview

These are the main Diskeeper Administrator Edition features:

- **Alerts**—Get e-mail notification of critical issues regarding the condition of the disk volumes all through your network.
- **Reports**—Establish and view several Diskeeper reports showing information about selected computers on your network.
- **Network Scheduler**—Set and view Diskeeper defragmentation schedules on selected computers on your network.
- **PushInstall**—Install or uninstall Diskeeper Professional Edition or Diskeeper Server Standard or Server Enterprise editions on selected computers throughout your network.
- **Single Remote Computer Control**—Connect directly to a remote system and have full control of Diskeeper on that system.
- **Logical Grouping Control**—Supports Active Directory groups, or you can create custom logical groups of systems on which to manage Diskeeper operations.
- **Cross-Platform Support**—Diskeeper Administrator Edition runs on a variety of Windows operating system platforms, from Windows NT through Windows Server 2003.

## Navigating in Diskeeper Administrator

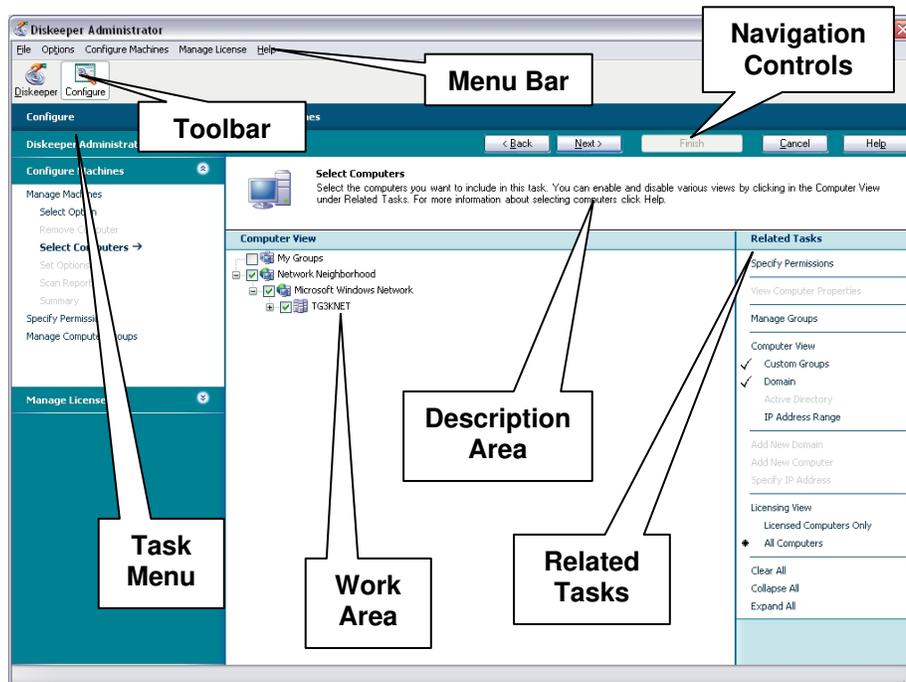
Navigation in Diskeeper Administrator is done through the “Unified User Interface” shell. This shell provides a convenient central location to perform all Diskeeper Administrator tasks and view reports.

The Unified User Interface was designed to guide you through all of the available tasks quickly and easily. If any information or variables are required for a task, Diskeeper Administrator takes you to the appropriate page and prompts you for the necessary input.

Common operations, such as scheduling a task, are presented in a consistent manner—scheduling a report scan is done the same way as scheduling a PushInstall operation. Because of this, you will see similar screens as you use the different the Diskeeper Administrator modules. See page 13 for additional tips on this.

## 12 Diskeeper Administrator Edition Operation

Although the information displayed differs depending on the task you are performing, this example shows a typical view:



Here are descriptions of the different sections of the Unified User Interface display:

**Toolbar**— The Toolbar at the top of the display allows you to switch between the two main views: the **Diskeeper Tasks** view and the **Configuration Tasks** view. Use the Diskeeper Tasks view to perform Diskeeper-related tasks like creating reports, scheduling defragmentation jobs, or PushInstalling Diskeeper to remote computers. Use the Configuration Tasks view to configure the Diskeeper Administrator database, specify which computers you want to manage, specify alert settings, and manage Diskeeper licenses.

As you switch between views, you will notice the Menu bar and Task pane change accordingly to present the options available in that view.

**Menu Bar**—The menu bar of the display offers a menu-based (and keyboard-accessible) path to all of the different Diskeeper Administrator tasks and features. The available menu options change when you switch between the Diskeeper Tasks view and the Configuration Tasks view. See *Menu Options* on page 51 for a listing of all the menu options available.

**Navigation Controls**—Most Diskeeper Administrator tasks are done through the help of wizards that guide you through the operation. Use the navigation controls to move through the wizards. The different buttons operate as their names imply, allowing you to move forward or back, finish or cancel a task, or get help about the current task.

**Task Menu**—The Task menu provides a convenient way to start any Diskeeper Administrator task. As you progress through the task wizard, the Task menu shows you where you are and what the next step will be.

**Description Area**—This section of the display gives a brief description of the page displayed, telling you what it does and what you need to do.

**Work Area**—This is where the various Diskeeper Administrator wizards prompt for and accept your input, and display requested information. Here you can select the computers you want to manage, select available task options, make configuration changes, and display reports. Many of the screens shown in the work area also include the Related Tasks pane, which gives you options that are related to the current task.

**Related Tasks**—When applicable, the Related Tasks pane offers you quick access to tasks that are related to the current task. For example, when you are viewing a report, the Related Tasks pane offers choices to print or save the report. Or, if you are PushInstalling Diskeeper to remote computers, you are offered a variety of

options, ranging from updating the installation package to seeing a report about your Diskeeper licenses. Like most of the Diskeeper Administrator display, the Related Tasks pane changes dynamically, depending on the task you are performing.

Note that Related Tasks are only displayed for options where they are applicable, so at times the Related Tasks pane will not be displayed.

## Other Navigational Tips

You will notice Diskeeper Administrator uses several methods for getting your input or displaying information that are consistent from one task to another. For example, selecting computers for a PushInstall task is done in the same manner as selecting computers on which to generate reports. Or, filtering the data within the different Diskeeper Administrator reports is done in the same way for each report type. This section briefly describes some tips for using this consistency to your advantage.

## Selecting Computers

The wizards for several Diskeeper Administrator tasks—such as creating reports or deploying Diskeeper—include a page for you to select computers on which you want to perform the task. Navigating the tree view displayed on the Select Computers page is done in a manner very similar to other Windows-based applications, like Windows Explorer.



Click the plus sign  in the tree to expand a branch, or click the minus sign  to collapse the branch.

You select a computer by clicking on it. To select more than one computer, hold the <Ctrl> key while clicking on the computers you want to select.

Right-click on any of the computer icons in the tree view and select **Properties** to see the Diskeeper Computer Properties page for that computer. This page shows the computer name, and allows you to enable or disable e-mail alert notification of Diskeeper events that occur on the selected computer.

In the **Computer View** section of the **Related Tasks** pane, you can select any combination of the following:

- **Custom Groups**
- **Domains**
- **Active Directory**
- **IP address Range**

If you choose to display computers by IP address range, a page is displayed allowing you to provide the starting and ending IP addresses for the range you want to display. See the following section for more information about specifying an IP address range.

## Specifying an IP Address Range

When you select **IP address Range** in the **Computer View** section of the **Related Tasks** pane in the process of selecting computers, you can view a specific group of computers by entering an Internet Protocol (IP) address range. If you enter an address in only the **IP Address Start** field, only the computer with that IP address is included. If you specify an end address, all computers between the start and end addresses are included.

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If the IP range covers multiple domains, you must enter the trusted domain name in the **Domain** field. When one domain “trusts” another, the user name and password defined in the “trusted” domain can be used for authentication and authorization in the “trusting” domain(s).

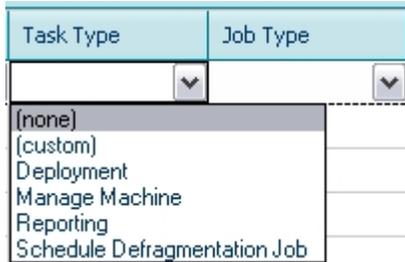
Additionally, if you want to indicate a mask used to determine the subnet an IP address belongs to, you can do so on this page.

Follow these steps to enter an IP address range:

1. In the **Domain** field, enter the name of the domain containing the machine(s) with the IP address or IP address range you want to enter.
2. You can include a single computer by entering an address in the **IP Address Start** field only.
3. If you select the option to **Specify End IP Address** and enter an address, all computers with IP addresses falling within the range are included.
4. If you want to indicate the mask used to determine what subnet an IP address belongs to, select the **Specify IP Mask** option and enter the mask in the accompanying field.

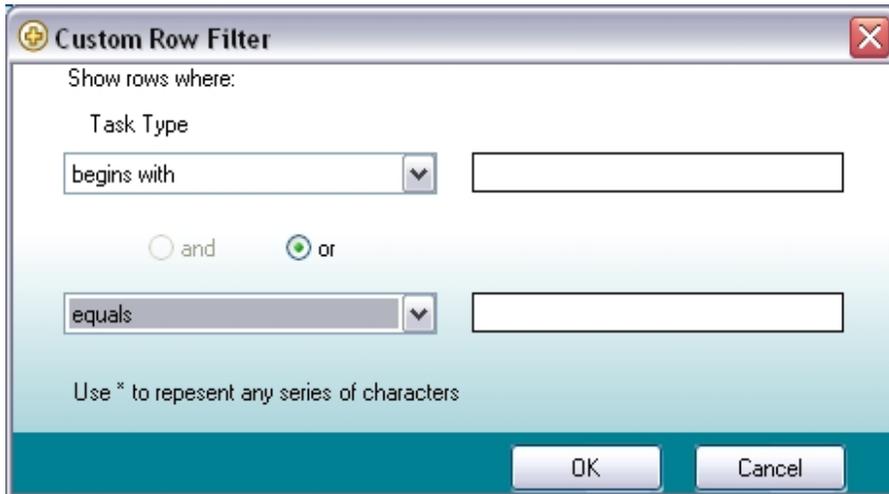
## Filtering Reports

Grids in the various Diskeeper Administrator reports feature “Quick Filtering.” Quick Filtering allows you to quickly and easily display only the information you want to see in the grid. You can click the down arrow at the top of any column and determine what displays in the entire grid.



When you select an item, only that item appears in the grid. When you select “(none)” no filtering is applied and all items appear in the grid.

When you select “(custom)” the Custom Row Filter screen appears so you can build a custom filter statement to determine the information that appears in the grid.



## First Things First

Before using Diskeeper Administrator for the first time, there are several steps you should take.

## Configuring the Database

Diskeeper Administrator relies on a database of Diskeeper-related information gathered from remote computers across your network. Before using Diskeeper Administrator for the first time, you must configure the database. You can also change the database configuration later with the **Configure Database** option on the Diskeeper Administrator Configuration task menu.

There are several steps involved in configuring the Diskeeper Administrator database. The entire process is explained on-screen as you go through the configuration process.

Here is a summary of the steps:

### Specifying whether to use Microsoft SQL Server or MSDE

As the first step of configuring the Diskeeper Administrator database, you must specify whether to use Microsoft SQL Server 2000 or the Microsoft Desktop Engine (MSDE) for the Diskeeper Administrator database.

The MSDE provides local data storage and is based on the data engine used in Microsoft SQL Server 2000. It is provided on the Diskeeper Administrator CD-ROM, and is also available free of charge from the Executive Software web site.

### Specifying the database server location

If you opt to use an existing database, the next step in the database configuration task is to specify which computer you want to use as the database server for Diskeeper Administrator. The Database Servers: drop-down list shows you the database servers detected on your network by Diskeeper Administrator.

Also as part of this step, you must provide your SQL Server authentication login name and password. Note this is not your Windows login information—it is the authentication information you use to log into either the SQL Server or MSDE database. A SQL password is a must, since the Diskeeper Administrator database cannot be configured to use pass-through authentication.

### Specifying whether to use a new or existing database

This step allows you to specify whether to use a new or an existing database. You can also configure more than one database as long as you give each database a unique name.

### Specifying the database location

During this step you specify the directory folder where you want the Diskeeper Administrator database to reside.

Note that you cannot create a directory on a remote server from this task. We recommend you create a C:\Diskeeper Administrator directory folder on the remote server for the Diskeeper Administrator database.

## Summary

The final screen displayed in the Configure Database task confirms the successful configuration of your Diskeeper Administrator database.

## Selecting Managed Diskeeper Computers

Before doing most Diskeeper Administrator tasks, you must first specify the computers on which you want to manage Diskeeper, and provide login credentials to allow Diskeeper Administrator to perform tasks on these remote computers. Note that Diskeeper must be installed on a computer in order for Diskeeper Administrator to manage it. (You can use the PushInstall feature to install Diskeeper on your remote computers.)

**Note:** You must have valid a Diskeeper license for each Diskeeper computer you manage. Diskeeper Administrator can manage computers running trial versions of Diskeeper, but you must purchase a full license (or re-assign an existing license) in order to continue using Diskeeper on that computer after the trial period ends. Diskeeper Administrator includes license management options that make it easy to administer your Diskeeper licenses from a single location. See page 20 for more information about managing Diskeeper licenses on your network.

After you select the computers you want to manage, Diskeeper Administrator scans the selected computers to see if Diskeeper is installed on them, and if so, it gathers current Diskeeper-related information from them.

It is easy to tell which computers are managed by this instance of Diskeeper Administrator. Managed computers are indicated in the Select Computers page by this icon:  and non-managed computers are shown in the Select Computers page with this icon: .

If you have not specified Diskeeper computers to be managed by Diskeeper Administrator, you will be prompted to do so any time you initiate a task requiring managed computers. Follow these steps to select the computers you want to manage with Diskeeper Administrator. You can change the computers you are managing at any time:

1. Click **Manage Diskeeper Computers and Groups** in the Getting Started screen. (Or you can select **Manage Machines** in the Configuration Task pane.)
2. Select **I want to add Managed Computers**, then click **Next**.
3. In the tree view displayed, select the computer(s) you want to manage with Diskeeper Administrator. You can select one or more single computers, workgroups, domains, or custom groups of computers. (See page 32 for information about creating custom groups.) After selecting the computers you want to manage, click **Next**.
4. Next, you will be prompted to enter the login credentials to allow Diskeeper Administrator access to the computers you selected. You must specify an account that is a member of the Administrators group for the domains, workgroups or computers you selected. This allows Diskeeper Administrator to determine if Diskeeper is installed on the remote computers and if so, what schedules have been set. Diskeeper Administrator allows you to use different login information for each domain or workgroup on which you want to control remote Diskeeper operations. Enter user names and passwords for the appropriate computers, workgroups or domains in the text boxes displayed, then click **Next**.
5. The next screen asks if you want this installation of Diskeeper Administrator to take control over the selected remote computers. Enabling this option allows Diskeeper Administrator to take control of defragmentation on all the selected computers running Diskeeper in your network, even if they are currently being controlled by another installation of Diskeeper Administrator elsewhere on the network. Make your choice then click **Next**.
6. Since polling a large number of computers across the network can take some time and use network bandwidth, you are next given the option to schedule the polling task for a later time, or perform it now. If you select to schedule the task for a later time, you are prompted to specify when the task is to begin. You can also specify a time for the task to be stopped, even if it has not yet completed. This gives you the flexibility to perform the polling task at a time when network bandwidth will not be impacted. Choose when to perform the scan and click **Next**.
7. After specifying when to perform the scanning task, a Scan Report is displayed, showing you the ongoing status of the scan of remote computers. You can print the report by clicking Print Report in the Related Tasks pane. When the scanning task is complete, the Scan Report is automatically saved in the Diskeeper

Administrator Job Queue, along with other similar reports. See page 35 for more information about the Job Queue. When you are done reviewing the report, or when you are ready to perform another task, click **Finish**.

Now you are ready to start using Diskeeper Administrator to manage Diskeeper on the computers you've selected.

## Setting Up Account Information

In order to gather the Diskeeper data from remote machines, Diskeeper Administrator must use login credentials for an account that is a member of the Administrators group on the domain or workgroup being polled. (This account information is also used by the PushInstall feature described on page 17.) Diskeeper Administrator allows you to use different login information for each domain or workgroup on which you want to perform remote Diskeeper installations.

If you have already selected Diskeeper computers to manage (as described in the previous section), there is no need to do the steps shown below.

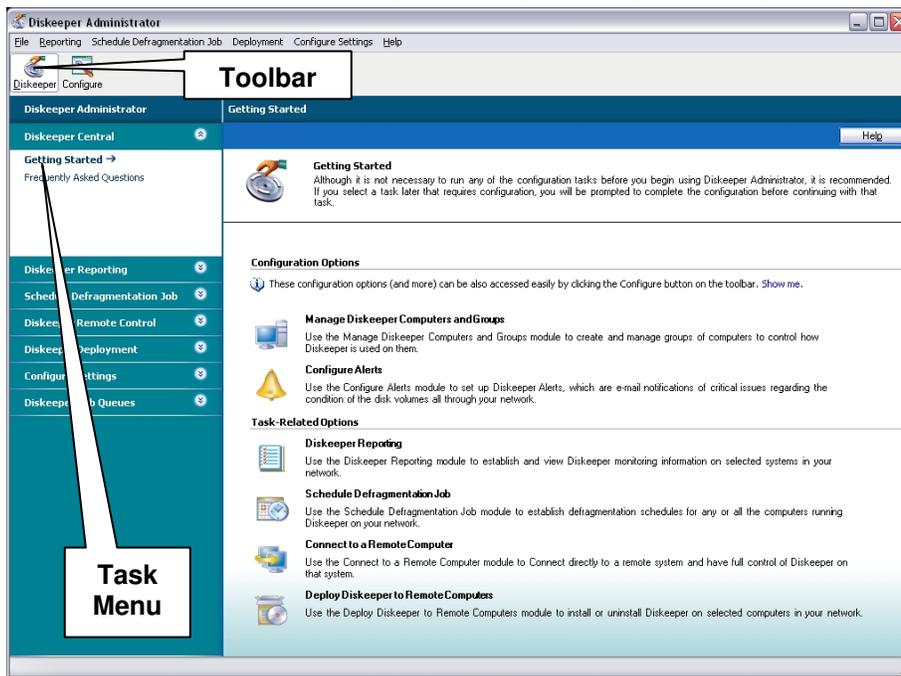
If you have not already specified account information, you will be prompted to do so any time you initiate a task requiring it. Follow these steps to specify the account information you want to be used by Diskeeper Administrator. You can change this information at any time:

1. Click **Configure** in the toolbar to display the Configuration task menu, select **Configure Machines**, then select **Specify Permissions** to display the Specify Permissions page.
2. Highlight the domain(s) or workgroup(s) for which you want to specify login credentials.
3. In the **Type** column, click the drop-down menu and select either **Domain**, **Workgroup**, or **Local Admin**, depending on the type of account you are using to access the selected domain(s) or workgroup(s).
4. Click the **User Name** field and enter the user name for an account that is a member of the Administrators group on the selected domain or workgroup.
5. Click the **Password** field and enter the password for the account entered in the previous step.
6. Click **OK**. When you click **OK**, the login credentials are verified on each domain or workgroup. A message is displayed if any of the verification processes fail.

To clear the credentials for an account, select it and click **Clear** in the Related Tasks pane. The **Clear All** option clears the account information for all the accounts listed.

## Getting Started Display

After you have configured the Diskeeper Administrator database, the Getting Started page is displayed. You can also display this page at any time by clicking **Diskeeper** in the toolbar then clicking **Diskeeper Central** in the Task menu. This is the starting point for the primary Diskeeper Administrator operations.



From this page, you can:

- Use the **Manage Diskeeper Computers and Groups** task to specify which computers you want to manage with Diskeeper Administrator.
- Use the **Configure Alerts** task to establish parameters for Diskeeper Alerts to be sent from selected computers in your network.
- Use the **Diskeeper Reporting** task to establish and view Diskeeper monitoring information on selected computers in your network.
- Use the **Schedule Defragmentation Job** task to establish and send defragmentation schedules to selected remote computers in your network.
- Use the **Connect to a Remote Computer** task to connect directly to a remote computer and have full control of Diskeeper on that computer.
- Use the **Deploy Diskeeper to Remote Computers** task to PushInstall Diskeeper on selected remote computers in your network.

## Deploying Diskeeper

Use the Diskeeper PushInstall feature to install or uninstall Diskeeper Professional Edition or Diskeeper Server Standard Edition on selected computers across your network. Be aware that you must have valid Diskeeper licenses for the computers on which you intend to install Diskeeper.

Note that you cannot PushInstall Diskeeper to remote computers running Windows 95, Windows 98, or Windows Me. You must have Administrator access on all the selected computers to PushInstall Diskeeper to Windows NT, Windows 2000, Windows XP and Windows Server 2003 systems. If necessary, you will be prompted for the appropriate credentials.

Also note that the PushInstall operation requires the presence of a shared folder named ADMIN\$ on each of the target computers. The ADMIN\$ share exists by default on Windows systems, unless it has been specifically disabled or removed. See page 20 for information about determining if the ADMIN\$ share exists on your computer(s)

The PushInstall feature establishes a network connection with the selected machines, then installs the selected Diskeeper edition to those computers. It relies on having the installable Diskeeper package(s) available to be installed. The first time you use the PushInstall feature, you are prompted to browse for the installation package you intend to use. You can use either a CD-ROM or downloaded installation package. Once you choose the Setup.exe file, the installation package is copied to the Administrator database. If you have previously selected an installation package, the Diskeeper Deployment wizard will display the edition and version of the package, and allow you to browse for a different package if desired.

If you try to PushInstall a Diskeeper version that is not compatible with the target machine, a message explaining the situation is displayed. Messages are also displayed to let you know the status of the installations.

## Installing Diskeeper Across the Network

Follow these steps to deploy Diskeeper to one or a few hundred remote computers:

1. Click **Deploy Diskeeper to Remote Computers** in the Getting Started screen. (Or you can select the option to install Diskeeper on network computers in the **Manage Computers** task, then click **Next**.)
2. In the next screen displayed, select **I want to install Diskeeper**. You must also specify which Diskeeper edition you want to install. Remember that you must have valid Diskeeper licenses for the computers on which you intend to install Diskeeper. Optionally, select the option to set a Smart Schedule on all the disk volumes on all the selected machines. The new Smart Schedule will overwrite any schedules that have previously been set on the target machines. The Smart Scheduling feature is described in detail later on page 38. When you have made your selections, click **Next**.
3. If this is the first time you are installing the selected edition of Diskeeper, the next screen you will prompt you to specify the location where you have the installable Diskeeper package. This can be a Diskeeper Professional or Server Edition CD-ROM, or a downloaded file. For any edition, a single **Setup.exe** file contains the entire Diskeeper installation package for that edition. After you navigate to the installation file, Diskeeper Administrator notes the Diskeeper edition, version and build number of the file and copies it into the Administrator Database where it is accessible to the PushInstaller. Once the installable file has been copied, any subsequent PushInstall operations will automatically use that file, but offer you a chance to change it. Click **Browse for Installation Package** to navigate to the appropriate installation package, then click **Next**.
4. In the tree view that is displayed next, select any combination of one or more computers, groups or domains on which you want to install Diskeeper. After selecting the computers on which to install Diskeeper, click **Next**. (Note that you cannot PushInstall Diskeeper to remote computers running Windows 95, Windows 98, or Windows Me.)
5. Since PushInstalling to a large number of computers across the network can take some time and use network bandwidth, you are next given the option to schedule the PushInstall task for a later time, or perform it now. If you select to schedule the task for a later time, you are prompted to specify when the task is to begin. You can also specify a time for the task to be stopped, even if it has not yet completed. This gives you the flexibility to perform the PushInstall task at a time when network bandwidth will not be impacted. Choose when to perform the PushInstall and click **Next**.
6. After specifying when to perform the PushInstall task, a Summary is displayed, showing you the ongoing status of the PushInstall task. You can print the report by clicking **Print Report** in the Related Tasks pane. When the PushInstall task is complete, the Summary is automatically saved in the Diskeeper Administrator Job Queue, along with other similar reports. See page 35 for more information about the Job Queue. When you are done reviewing the report, or when you are ready to perform another task, click **Finish**.

## Uninstalling Diskeeper Across the Network

Using the PushInstall feature to uninstall Diskeeper from remote machines is easy. The uninstaller will remove *any* version of Diskeeper (Professional or Server) from the computers you select in the Machines pane.

Follow these steps to uninstall Diskeeper from one or more computers:

## 20 Diskeeper Administrator Edition Operation

1. Click **Deploy Diskeeper to Remote Computers** in the Getting Started screen. (Or you can select the option to install Diskeeper on network computers in the **Manage Computers** task, then click **Next**.)
2. In the next screen displayed, select **I want to uninstall Diskeeper**.
3. In the tree view that is displayed next, select any combination of one or more computers, groups or domains from which you want to uninstall Diskeeper. After selecting the computers, click **Next**.
4. Since uninstalling Diskeeper from a large number of computers across the network can take some time and use network bandwidth, you are next given the option to schedule the task for a later time, or perform it now. If you select to schedule the task for a later time, you are prompted to specify when the task is to begin. You can also specify a time for the task to be stopped, even if it has not yet completed. This allows you to perform the uninstall task at a time when network bandwidth will not be impacted. Choose when to perform the uninstall task and click **Next**.
5. After specifying when to perform the uninstall task, a Summary is displayed, showing you the ongoing status of the task. You can print the report by clicking **Print Report** in the Related Tasks pane. When the task is complete, the Summary is automatically saved in the Diskeeper Administrator Job Queue, along with other similar reports. See page 35 for more information about the Job Queue. When you are done reviewing the report, or when you are ready to perform another task, click **Finish**.

## Stopping a PushInstall Operation

Follow these steps to stop an ongoing PushInstall operation, or a remote uninstall operation:

In the Diskeeper Task menu, click **Job Queue**. This will display a listing of Diskeeper Administrator tasks that are completed, currently running, or pending.

Select the currently-running or pending PushInstall task and click **Stop** in the Related Tasks pane.

**Note:** This option only stops any PushInstall operations that are in progress or pending. It does not “roll back” installations that have already been done.

## About the ADMIN\$ Share

The Diskeeper Administrator PushInstall feature relies on a shared folder named ADMIN\$ on each of the target computers. The ADMIN\$ share exists by default on Windows systems, unless it has been specifically disabled.

Here are two ways to check for the presence of the ADMIN\$ share on your computers:

- Open Windows Explorer and enter `\\computer_name\ADMIN$` in the Address field (where *computer\_name* is the name of the computer you are checking). If the share does not exist, an error message will be displayed. If it does exist, the contents of the WINNT folder will be shown.
- Right-click **My Computer** and select **Manage** to open the Windows Computer Management applet. Next, select **System Tools | Shared Folders | Shares**. The right-hand pane will display a list of all shares for that computer, including ADMIN\$ if it exists.

If the ADMIN\$ share has been removed or disabled on your computer, contact Executive Software Technical Support for assistance.

## Managing Diskeeper Licenses

The License Management module gives you complete control over the distribution and use of your Diskeeper licenses. You can easily see the number and types of licenses in use, how many are available, and which managed computers are using Diskeeper licenses. You can also convert trialware licenses into full licenses (or full licenses into trialware) or purchase additional licenses online, all from a single location.

Follow these steps to manage your Diskeeper licenses on remote computers:

1. Click **Configure** to display the Configuration Task menu, then select **Manage Licenses** to access the License Management module.
2. Select **Add or remove Diskeeper licenses** and click **Next**.
3. The next screen shows you a summary of the licenses you have assigned to this instance of Diskeeper Administrator. You can see a wide variety of information, including the license type and count and other applicable information.
4. Use the different options in the **Related Tasks** pane to purchase, add or remove Diskeeper licenses. You can also view details about any of the listed licenses or create and print reports showing license details and usage.

## Converting Diskeeper Licenses

Follow these steps to convert trialware licenses into full licenses (or full licenses into trialware):

1. Click **Configure** to display the configuration task pane, then select **Manage Licenses** to access the License Management module.
2. Select **I want to upgrade Diskeeper trialware to the full version** or **I want to convert a full version Diskeeper license to trialware** and click **Next**.
3. The next screen shows you a summary of the applicable licenses being managed by this instance of Diskeeper Administrator. You can see a wide variety of information, including the license type and count as well as other applicable information.
4. Select the computer(s) on which you want to upgrade or convert the Diskeeper license.
5. Click **Next**.
6. After a few moments of processing, a summary report is displayed telling you the status of the license conversion. Use the options in the Related Tasks pane to print the summary report or to create groups of computers for your future management needs.
7. Click **Finish** to return to the start of the Manage Licenses wizard.

## Scheduling Diskeeper Across the Network

The Network Scheduler is a unique feature of Diskeeper Administrator Edition. You don't have to connect individually to each computer you want to schedule and then specify the schedule(s) for each volume on that computer. Not an easy task if you have a few hundred (or thousand) computers on your network!

You can create defragmentation schedules for other computers on your network (if they are also licensed to run Diskeeper). Diskeeper Administrator allows you to easily set the same "Set It and Forget It" schedule on one or more computers at a time. You can set the same schedule on all the disk volumes on the remote machines, or you can set different schedules for separate disks.

A defragmentation schedule specifies the times or days of the week that Diskeeper will (or will not) be allowed to run. Diskeeper provides two types of schedules—primary and secondary—allowing you to assign up to two schedules per disk volume.

The Network Scheduler feature allows you to easily set the same "Set It and Forget It" schedule for some or all of the volumes on one or more computers at a time.

To use this feature fully, it is helpful to understand the method by which Diskeeper creates and controls defragmentation schedules on remote computers. When you create a schedule for a computer, Diskeeper stores all the necessary scheduling information in a control file (Diskeep.ctl) on the computer for which the schedule

was created. Then, the Diskeeper Service on the scheduled machine periodically checks the control file to determine whether to start the Diskeeper defragmentation engine on that computer.

The Diskeeper Smart Scheduling option, which lets Diskeeper automatically determine the best schedule for each disk volume, is available in the Network Scheduler feature. Smart Scheduling is available from the **Select type of schedule** drop-down option list in the scheduling pane. See page 38 for more information about Smart Scheduling.

You can either set a schedule or clear an existing schedule on anywhere from one to several thousand computers at once. Since clearing a schedule is, in fact, setting a schedule to not run Diskeeper, the steps for creating or deleting a schedule are virtually identical.

1. Click **Schedule Defragmentation Job** in the Getting Started screen or click **Diskeeper** in the toolbar to display the Diskeeper Administrator task menu and select **Schedule Defragmentation Job**
2. In the tree view displayed, select the computer(s) on which you want to set a schedule. You can schedule one or more single computers, domains, or custom groups of computers. (See page 32 for information about creating custom groups.) After selecting the computers you want to schedule, click **Create Primary Schedule**.
3. In the Create and Deleted Scheduled Jobs page displayed, select the disk volume(s) you want to be affected by the schedule you are setting. Keep in mind the disk volumes you choose will be applied to the schedules you send to all the selected computers. You can select individual disk volumes by drive letter by holding the <Ctrl> key and clicking on the drive letters you want to schedule. You can also choose to select or exclude all mounted volumes (also known as letterless drives) if they are supported by the operating systems on the selected computers. Select the disk volumes you want to include in the schedule, and click one of these options in the **Related Tasks** pane:
  - **Create Primary Schedule**
  - **Create Secondary Schedule**
4. Next, you are given several options for customizing the schedule. You can choose the type of schedule, the days it will (or will not) run, as well as starting and ending times for the schedule to use. See page 22 for more information about the different custom scheduling options. After specifying the options you want, click **Next**.
5. Next, the Create and Deleted Scheduled Jobs page is displayed again. You can set additional schedules—either primary or secondary—on other disk volumes. Repeat steps 3 and 4 above as you need, then click **Next**.
6. Since sending a schedule to a large number of computers across the network can take some time and use marginal network bandwidth, you are next given the option to perform the scheduling task at a later time, or do it now. If you select to schedule the task for a later time, you are prompted to specify when the task is to begin. You can also specify a time for the task to be stopped, even if it has not yet completed. This gives you the flexibility to perform the scheduling task at a later time. Choose when to send the schedule and click **Next**.
7. After specifying when to perform the scheduling task, a Summary is displayed, showing you the ongoing status of the scheduling task. You can print the summary by clicking **Print** in the Related Tasks pane. When the task is complete, the summary is automatically saved in the Diskeeper Administrator Job Queue, along with other similar reports. See page 35 for more information about the Job Queue. When you are done reviewing the summary, or when you are ready to perform another task, click **Finish**.

## Scheduling Options

The Set It and Forget It Options page offers four main scheduling controls.

| Schedule Type | When to Run | Starting Times | Ending Times |
|---------------|-------------|----------------|--------------|
| One Time      | every day   | all day        | all day      |

|                  |                  |                |                |
|------------------|------------------|----------------|----------------|
| Continuously     | weekends         | 12:00 midnight | 12:00 midnight |
| every 2 hours    | weekdays         | through        | through        |
| every 4 hours    | Monday           | 11:00 pm       | 11:00 pm       |
| every 8 hours    | Tuesday          |                |                |
| every 12 hours   | Wednesday        |                |                |
| every 24 hours   | Thursday         |                |                |
| every 48 hours   | Friday           |                |                |
| every 72 hours   | Saturday         |                |                |
| Smart Scheduling | Sunday           |                |                |
| Screen Saver     |                  |                |                |
|                  | except every day |                |                |
|                  | except Monday    |                |                |
|                  | except Tuesday   |                |                |
|                  | except Wednesday |                |                |
|                  | except Thursday  |                |                |
|                  | except Friday    |                |                |
|                  | except Saturday  |                |                |
|                  | except Sunday    |                |                |

## About the Schedule Type

Use this section of the Set It and Forget It Options page to specify how often Diskeeper should run on the selected volumes.

- **One Time**—As the name implies, a schedule created with this option will only run once. When this option is selected, you can select the time and day the single defragmentation run will be done. For example, you could create a schedule that will run one time only, on Saturday at 2:00 am.
- **Continuously**—A schedule created with this option will run continuously. In other words, after the defragmentation run is completed, another run is started shortly thereafter. For example, you could create a schedule that runs continuously every day between 2:00 am and 3:00 am. As another example, you could create a schedule that runs continuously except every day between 6:00 am and 10:00 pm. This would effectively prevent Diskeeper from running during the specified hours, but allow it to run continuously outside of those hours.
- **Every X hours**—These options allow you to further define when Diskeeper will run on the scheduled machines. To continue with the example above, you could create a schedule that runs every four hours except every day between 6:00 am and 10:00 pm. In this case, Diskeeper would only run every four hours between 10:00 pm and 6:00 am daily.
- **Smart Scheduling**—Use the Smart Scheduling option to allow Diskeeper to automatically determine the optimum defragmentation schedule for each of your disk volumes and adjust it accordingly. Smart Scheduling is described in detail on page 38.
- **Screen Saver**—When enabled, Screen Saver mode automatically starts defragmenting the selected disk volume(s) any time the screen saver starts on your computer. More information about Screen Saver mode on page 39.

## About When to Run

Use this section of the Set It and Forget It Options page to specify days the Diskeeper job will (or will not) be allowed to run on the selected volumes.

- **Every day**—A schedule created with this option will run every day between the starting and ending times you specify. For example, you could create a schedule that runs every day between 2:00 am and 3:00 am.
- **Weekends**—A schedule created with this option will run only on weekends (Saturday and Sunday) between the starting and ending times you specify. For example, you could create a schedule that only runs Saturday and Sunday between 2:00 am and 3:00 am.
- **Weekdays**—A schedule created with this option will run only on weekdays (Monday through Friday) between the starting and ending times you specify. For example, you could create a schedule that only runs during the week between 5:00 am and 6:00 am.
- **Monday ... Sunday**—Like the weekend and weekday options, a schedule created with this option will run only on the specified day between the starting and ending times you specify. For example, you could create a schedule that only runs on Friday between 9:00 pm and 1:00 am.
- **Except every day**—This is the opposite of the Everyday option. Like all the other “except” options, use this option to specify time when Diskeeper will not be allowed to run. A schedule created with this option will run every day except between the starting and ending times you specify. For example, you could create a schedule that runs every eight hours daily except between 7:00 am and 6:00 pm.
- **Except weekends**—Similar to the “Except every day” option, a schedule created with this option will run except on weekends (Saturday and Sunday) between the starting and ending times you specify. For example, you could create a schedule that runs every 24 hours except all day on Saturday and Sunday, when it would not run at all.
- **Except weekdays**—Like the “Except weekends” option, a schedule created with this option will run except on weekdays (Monday through Friday) between the starting and ending times you specify. For example, you could create a schedule that runs every 12 hours except on weekday between 6:00 am and 10:00 pm, when it wouldn’t run at all.
- **Except Monday ... Except Sunday**—Like the other “Except” options, a schedule created with any of these options will run except on the specified day between the starting and ending times you specify. For example, you could create a schedule that runs every 48 hours except on Friday between 9:00 pm and 1:00 am, when it wouldn’t run.

## About Starting and Ending Times

Use these sections of the Set It and Forget It Options page to specify the start and end of a time period the Diskeeper job will (or will not) be allowed to run on the selected volumes.

**All day**—A schedule created with this option will run (or not run, depending on other options you choose) all day on the days you specify. For example, you could create a schedule that runs every two hours all day on Sunday (from 12:00 am to 11:59pm). As an opposite example, you could create a schedule that runs every two hours except all day on weekdays, when it wouldn’t run at all..

**12:00 midnight through 11:00 pm**—Similar to the “All day” option, a schedule created with these options will run (or not run) between the starting and ending times you specify. For example, you would use these options to create a schedule that only runs during the week between 5:00 am and 6:00 am—or one that does not run on weekdays between 7:00 am and 7:00 pm.

## Stopping a Network Scheduling Operation

To cancel an ongoing network scheduling operation, follow these steps:

1. Click **Diskeeper** in the toolbar to display the Diskeeper Administrator task pane, then select **Diskeeper Job Queues** to see the various job queues.

2. Click **Schedule Defragmentation Jobs** to see any network scheduling jobs that are pending or currently running.
3. Select the network scheduling jobs you want to stop and click **Stop** in the Related Tasks pane.

Note this option only stops any network scheduling operations that are in progress or pending. It does not “roll back” schedules that have already been set.

## Diskeeper Reports

Diskeeper Administrator Edition provides a variety of useful reports regarding the computers on your network. These reports can be for any number of machines, based on the computers you have selected.

All reports are shown in the main task pane of the Diskeeper Administrator Edition display by default, but you can use the **Unpin** option in the Related Tasks pane to open the report in a separate window.

## Details about the Reports

Diskeeper Administrator Edition gathers information each time Diskeeper-related changes occur on any remote Diskeeper computers being managed by that instance of Diskeeper Administrator. This information is stored in the Diskeeper Administrator database.

You can generate reports based on real-time data or data stored in the Diskeeper Administrator database. Real-time data offers the most current view of your managed Diskeeper computers, since Diskeeper Administrator polls each selected computer when this option is selected. However, this polling process can take a considerable length of time on a large network, and a certain amount of network traffic occurs. Database data gathering is typically much faster, but it may not be completely current, especially if the Diskeeper Administrator database has been off-line for any length of time.

The **Performance Report** shows factors that directly affect the performance and reliability of your disk volumes, such as MFT fragmentation, paging file fragmentation and the level of free space. This report is a useful way to show Diskeeper is maintaining the good health of the system.

The **Computer Report** shows detailed information about the Diskeeper status on the computers managed by this instance of Diskeeper Administrator.

The **Settings Report** shows information about priority and defragmentation settings established on the computers managed by this instance of Diskeeper Administrator.

The **Alert Report** shows information about any Diskeeper alerts that have been generated on the computers managed by this instance of Diskeeper Administrator.

The **Status Report** shows general information about all the Diskeeper installations on your network. This is an easy way to see which computers on your network have Diskeeper installed.

Also note that you can save and print reports you create. See the Related Tasks pane when you are viewing a report for the available report options.

## Status Report

The Status Report shows general information about all the Diskeeper installations on your network. This is an easy way to see which computers on your network have Diskeeper installed.

This information is gathered for each selected computer:

- Domain
- Machine name
- Operating System Name
- Diskeeper Edition

- Diskeeper Version
- Scheduled Status
- Administrator Name

Any messages that have been displayed in the Diskeeper Administrator Status pane can be retrieved using the Status and Error Report.

## Performance Report

The Performance Report shows factors that directly affect the performance and reliability of your disk volumes, such as MFT fragmentation, paging file fragmentation and the level of free space. This report is a useful way to show Diskeeper is maintaining the good health of the system.

The figure shown in the "Performance Index" column represents the length of time to read the fragmented files on the volume versus the length of time to read all the files, and shows a guideline of the relative performance level of the volume. As this number increases, the performance of the volume decreases.

Note that the "MFT Fragments" column in the Performance Report includes both the MFT and the MFT Mirror. As a result, NTFS disk volumes will always show at least two "MFT fragments".

This information is gathered for each selected computer:

- Machine name
- Diskeeper edition
- Diskeeper version

For each volume:

- Volume name
- Volume space
- Free Space %
- MFT Fragments
- Paging File Fragments
- Performance Index

## Computer Report

The Computer Report shows detailed information about the Diskeeper status on the computers managed by this instance of Diskeeper Administrator.

This information is gathered for each selected computer:

- Domain
- Machine name
- Operating System Name
- Diskeeper Edition
- Diskeeper Version

For each volume:

- Volume Name
- Primary and Secondary Schedules
- Schedule Type
- Schedule Day
- Start Time
- End Time

## Settings Report

The Settings Report shows information about priority and defragmentation settings established on the computers managed by this instance of Diskeeper Administrator.

- Domain
- Machine name
- Primary Defragmentation Method
- Secondary Defragmentation Method
- Manual Defragmentation Method
- Primary TVE<sup>1</sup> Defragmentation Method
- Secondary TVE Defragmentation Method
- Manual TVE Defragmentation Method
- Scheduled Defragmentation Priority
- Manual Defragmentation Priority
- Scheduled I/O Smart™
- Manual I/O Smart

## Alerts Report

The Alerts Report duplicates the information shown in the Alerts Reports sent daily via e-mail to specified recipients. (The Diskeeper Administrator Alerts features are described in detail on page 29.) The Alerts Report includes this information:

- Domain
- Machine name
- Diskeeper Edition
- Diskeeper Version
- Volume Name
- Alert Time
- Alert Type

The Alerts Report is in the same format as the Daily Alerts Report, but since you can specify a starting and ending time period to examine, it is useful for seeing a compilation of Diskeeper Alerts covering a specific time period.

**Note:** Even if you have disabled automatic e-mail notification of Alerts, the alerts data is still stored in the Diskeeper Administrator data controller area. This allows you to produce an Alerts Report on-demand at any time.

## Creating a Report

The Diskeeper Reporting wizard guides you through the steps necessary to create a report. Here is an overview of those steps:

Click **Diskeeper Reports** in the **Getting Started** page to access the Diskeeper reporting module. Or, click **Diskeeper** in the toolbar to display the Diskeeper Administrator task menu, then select **Diskeeper Reporting**.

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<sup>1</sup> The Terabyte Volume Engine (TVE) is available on selected Diskeeper editions. See page 47 for a table showing the Diskeeper editions that support the TVE.

## Selecting the Report Type

Use this page of the Reporting module to specify the type of report to create. You can create these report types. (See page 25 for descriptions of these report types):

- Performance Report
- Computer Report
- Settings Report
- Alert Report
- Status Report

## Selecting Computers

Use this page of the Reporting module to select the managed Diskeeper computers to be included in the report. You can select any or all of the computers managed by this instance of Diskeeper Administrator.

You can also access the **Manage Groups** page from the **Related Tasks** pane when the Select Computers page is displayed. This allows you to create or edit groups specific to your reporting needs. See page 32 for more information about custom groups.

## Specifying Which Type of Data to Use

Use this page of the Reporting module to specify the source for the data used in the report. You can use data that is already in the Diskeeper Administrator database, or create the report based on real-time data gathered immediately or at a later time you specify.

Note that managed Diskeeper computers automatically send report and alert data to Diskeeper Administrator after completion of a scheduled defragmentation job.

Real-time data offers the most current view of the managed Diskeeper computers on your network, but gathering the data can take some time and incur network overhead.

Using data from the Administrator database is faster and less costly in network bandwidth, but it may not reflect the most current Diskeeper information on your network. This is especially true if the Diskeeper Administrator database has been off-line for any period of time.

## Viewing Report Status

After a report has been created, you can optionally check the status of the report. Select **View Status** from the **Related Tasks** pane to see the status of the selected report. This shows information about the success of failure of the data-gathering operation on each selected computer,

## Filtering a Report

Regardless of the type of report, Diskeeper Administrator provides powerful filtering capabilities, allowing you to view the data you need most.

As mentioned earlier in this manual, grids in the various Diskeeper Administrator reports feature “Quick Filtering.” Quick Filtering allows you to quickly and easily display only the information you want to see in the grid. You can click the down arrow at the top of any column and determine what displays in the entire grid.

| Task Type                    | Job Type |
|------------------------------|----------|
|                              |          |
| (none)                       |          |
| (custom)                     |          |
| Deployment                   |          |
| Manage Machine               |          |
| Reporting                    |          |
| Schedule Defragmentation Job |          |

When you select an item, only that item appears in the grid. When you select “(none)” no filtering is applied and all items appear in the grid.

When you select “(custom)” the Custom Row Filter screen appears so you can build a custom filter statement to determine the information that appears in the grid.

## Saving a Report

After you have viewed a report, you can save it for future reference. Select **Save** from the **Related Tasks** pane to save the report. You are given the option of specifying the location where the report file will be saved. You can navigate to the disk volume and folder of your choice.

## Printing a Report

Saved reports can be printed. Select **Print** from the **Related Tasks** to print the report. A standard Windows print dialog box is displayed where you can select which printer to send the report to, and other printing options.

## Unpinning a Report

Initially, Diskeeper reports are displayed in the work area of the Diskeeper Administrator display. You can “unpin” them from the display and open them in their own window. Select **Unpin Report** from the **Related Tasks** to open the report in a new window. When you unpin a report, you will notice the **Related Tasks** pane now includes a **Pin Report** task, which closes the separate window and places the report back into the main Diskeeper Administrator display.

## Diskeeper Alerts

Diskeeper Administrator can be set up to send you e-mail alerts informing you of situations that affect the performance and reliability of the computers being controlled by Diskeeper Administrator.

## 30 Diskeeper Administrator Edition Operation

Alerts are based on data received from managed Diskeeper installations throughout your network. Diskeeper Administrator examines this data to determine whether an alert should be generated. This data is gathered as Diskeeper-related events occur on managed Diskeeper computers throughout your network.

Alerts are logged and stored in the Administrator database as they are detected. Alerts are sent to you (or the people you designate) as individual e-mail messages for each Alert. You control whether (and to whom) these e-mail messages are sent.

Alerts are generated under these conditions:

- If free space has reached a critical level on an individual machine. (The free space affects the Reliability Index, which is described in detail shortly.) You can set the free space threshold at which these Alerts are generated.
- A Diskeeper defragmentation job does not complete on a volume for any reason

Executive Software has done extensive research into the causes of disk performance and reliability problems. This research has shown these factors play a significant role in regards to disk performance and reliability:

- Overall fragmentation (described below)
- MFT fragmentation
- Paging file fragmentation
- Available free space

Diskeeper uses these factors to determine a disk reliability index each time it analyzes or defragments a disk volume.

Disk reliability is rated into three categories—Healthy, Warning and Critical.

This table shows the Warning and Critical levels used in determining the reliability index.

| Reliability Factor        | Warning Level       | Critical Level      |
|---------------------------|---------------------|---------------------|
| Overall Fragmentation     | > 10% fragmentation | > 50% fragmentation |
| MFT Fragmentation         | > 250 fragments     | >2000 fragments     |
| Paging File Fragmentation | > 250 fragments     | >1500 fragments     |
| Free Space                | < 15% free space    | < 5% free space     |

The *Overall fragmentation* figure is calculated by dividing the time required to read the fragmented files on the volume by the time required to read all the files on the volume, and multiplying the result by 100.

## How to Get Alerts

Diskeeper Administrator Edition delivers alerts in two ways:

- An Alert Report displayed directly in the Diskeeper Administrator display
- An Alert Report e-mailed to you or the people you designate

Each Diskeeper report includes a recommendation for handling the problem noted in the alert.

You have control over which alerts are reported to you. For each type of e-mailed alert, your options are:

- All alerts
- Alerts occurring between the starting and ending dates you specify

In order to receive alerts by e-mail, you must specify at least one e-mail address. You will be prompted for this information the first time you set up any type of Diskeeper report.

## Enabling and Disabling Alerts on Individual Computers

Several Diskeeper Administrator tasks include navigation of a tree view of the computers on your network.

Right-click on any of the computer icons in the tree view and select **Properties** to see the Diskeeper Computer Properties page for that computer. This page shows the computer name, and allows you to enable or disable e-mail alert notification of Diskeeper events that occur on the selected computer.

## Configuring Alerts

Diskeeper Administrator Edition can be set up to send you e-mail Alerts informing you of situations that affect the performance and reliability of the computers being managed by Diskeeper Administrator.

Alerts are based on post-defragmentation data received from remote Diskeeper 9.0 (or higher) installations throughout your network. Diskeeper Administrator examines this data to determine whether an alert should be generated. This data is sent to Diskeeper Administrator any time Diskeeper-related activity or changes occur on your managed Diskeeper computers.

Alerts are logged and stored in the Administrator database as they are detected. Alerts are sent to you (or the people you designate) as individual e-mail messages for each alert, and/or by a daily report, which is also sent via e-mail. You control whether (and to whom) these e-mail messages are sent.

Follow these steps to configure alerts:

1. Click **Configure Alerts** in the **Getting Started** page to access the Alert Settings module. Or, click **Configure** in the toolbar to display the Configuration task menu, then select **Alert Settings** to display the Alerts Settings page. You can choose from these self-explanatory options:
  - Time of day when the alert report will be generated
  - Whether to send the daily alert report if there are no events to report
  - The criteria for generating an alert
  - Who the alert should be e-mailed to
  - Outgoing e-mail server (SMTP) information
2. After selecting the settings you want, click **Enable/Disable Alerts** in the Related Tasks pane. This causes the Select Computers page to be displayed, showing all your managed Diskeeper computers. Select the computers from which you want alert messages generated and click **OK**.
3. Next, the Alert Settings page is displayed again. Confirm your settings, then click **Apply** to configure the alerts.

## Setting Up Alert and Task Purge Options

Diskeeper Administrator stores Diskeeper alert data and details about Diskeeper Administrator tasks in the Diskeeper Administrator database. Over time, this information should be purged to avoid consuming unacceptable amounts of disk space. By default, Diskeeper Administrator keeps this data for 30 days, but you have control over how often this data is cleared out.

You can specify how long to save Diskeeper alerts and one-time tasks in the Diskeeper Administrator database. Diskeeper Administrator will keep alerts and one-time tasks in the database for a maximum of 180 days. Note that repeating tasks (such as scheduled report scans) are not purged.

Follow these steps to change the purge options:

1. Click **Configure** to display the configuration task bar
2. Click **Diskeeper Administrator** to open the Administrator configuration menu

3. Select **Set Purge Options** to display the Configure Purge Options page.

This page provides these options:

- **Clear Alerts**
- **Clear Tasks**

For each option, you can set the number of days (from 0 to 180) for Diskeeper Administrator to keep the alerts or tasks in the database. You can also click the respective button to clear alerts or tasks immediately.

## Using Groups

Diskeeper Administrator allows you to create and use logical groups of computers on your network. These groups can then be controlled and managed as a single unit. For example, you might create a group that consists of all the computers in the Accounting Department, or all the workstations on the third floor. Then, when you need to perform a Diskeeper Administrator task such as scheduling defragmentation or PushInstalling Diskeeper to multiple machines, you simply select the group of computers (as a single unit) instead of each computer in the group.

In addition to custom groups you create, Diskeeper Administrator also supports any groups you have created within Microsoft Active Directory. Here again, you can apply Diskeeper Administrator tasks to Active Directory groups in the same manner as applying them to a single machine.

## Creating Custom Groups

Custom groups are made up of one or more of the computers you have specified to be managed by this instance of Diskeeper Administrator. A group can include entire domains or workgroups, and can also include other groups.

Click **Configure** in the toolbar then select **Configure Machines** to open the Machine Configuration menu. Next, click **Manage Computer Groups** to open the Manage Groups page.

The Manage Groups page shows a tree view of any groups you have created, and if the **Show Network View** option is enabled in the Related Tasks pane, a second tree view is displayed showing your network. Depending on the **Related Tasks** options selected, the network view can show domains, Active Directory organizational units (OUs) or IP Address ranges.

After opening the Manage Groups page, follow these steps to create a new custom group:

1. Click **Create New Group** in the Related Tasks pane. A new group is created and set up for you to edit the name.
2. Edit the name of the new group displayed in the **Computer View** section of the page.
3. Next, navigate the **Network View** tree to display the domains, workgroups or computers you want to include in the new group. Drag and drop your choices into the new group displayed in the Computer View section of the page. When you are done, click **OK**. The new group will now be available from the various Select Computer pages throughout Diskeeper Administrator.

You can also access the Manage Groups page from the Related Tasks pane in any of the Select Computer pages.

## Managing Custom Groups

To add or remove computers from an existing group, follow these steps:

1. Click **Configure** in the toolbar then select **Configure Machines** to open the Machine Configuration menu. Next, click **Manage Computer Groups** to open the Manage Groups page.
2. Navigate the tree in the Computer View section of the page and expand the groups you want to change.

3. To add new machines or groups to the existing group, simply drag and drop the machines and/or other groups you want to add from the Network View section of the page to the group you are changing.
4. To remove a machine or group from the existing group, select the machines and/or groups you want to remove and click **Delete** in the Related Tasks pane. This is also how you delete an entire group.
5. After making the changes you want, click **OK** to save the edited group.

## Remote Control

You can use Diskeeper Administrator to remotely control Diskeeper 9.0 operations on computers all over your network. (Of course, Diskeeper Professional or Diskeeper Server must be licensed and installed on the remote computers.) Without ever leaving your desk, you can perform any Diskeeper task as if you were sitting in front of the remote machine.

To connect to and control a remote computer, follow these steps:

1. Click **Connect to a Remote Computer** in the **Getting Started** page to access the Remote Control module. Or, click **Diskeeper** in the toolbar to display the Diskeeper Administrator task menu, then select **Diskeeper Remote Control** to display the Remote Control page.
2. In the tree view displayed, select the computer on which you want to run Diskeeper, and then click **OK**.
3. Once the computer is connected, the Diskeeper interface opens in a new window and the name of the computer being controlled is shown at the top of the Diskeeper display.

Error messages will be displayed if Diskeeper fails to connect to the remote computer.

After connecting to Diskeeper on the remote computer, perform any Diskeeper operations on that computer in the same manner as running Diskeeper on a local computer.

## Run Schedules Across a Network

To create or alter “Set It and Forget It” run schedules on remote computers on your network, you must have sufficient permissions to edit a file in the Diskeeper directory on the remote computer. If you do not have sufficient permissions, an error message is displayed stating that access is denied to the run schedule. If you cannot create or alter a run schedule that you think you have permission to use, there are two likely possibilities:

- You logged on with a username that the target computer recognizes and a password that it does not recognize. A common example is to log on to your computer as Administrator and then try to edit an exclusion list on a computer that has its own Administrator account established with a different password.
- Your computer is not running a network protocol that is running on the target computer.

## Editing Exclusion Lists on a Network

Diskeeper allows you to list files and directory folders that you do not want moved. This “exclusion list” is checked by Diskeeper each time defragmentation is run. To edit exclusion lists on remote computers on your network, you must have sufficient permissions to edit a file in the Diskeeper directory on the remote computer. If you do not have sufficient permissions, an error message is displayed stating that access is denied to the exclusion list. If you cannot edit an exclusion list that you think you have permission to use, there are two likely possibilities:

- You logged on with a username that the target computer recognizes and a password that it does not recognize. A common example is to log on to your computer as Administrator and then try to edit an exclusion list on a computer that has its own Administrator account established with a different password.
- Your computer and the remote computer do not share the same network protocol.

For more information about Diskeeper Exclusion Lists, see page 40.

## Configuring Diskeeper Settings

Diskeeper Administrator gives you a convenient way to change important Diskeeper settings on one or many computers across your network.

You can choose from several different defragmentation methods, and specify the priority at which Diskeeper defragmentation jobs will be run on the selected remote computers.

## Configuring the Defragmentation Method

Follow these steps to configure the defragmentation method on one or more of your managed Diskeeper computers:

1. Click **Diskeeper** in the toolbar to display the Diskeeper Administrator task menu, then select **Configure Settings** to access the Diskeeper settings module.
2. Select **Set Defragmentation Method** and click **Next**.
3. In the tree view displayed, select the computer(s) on which you want to set the defragmentation method. You can select one or more single computers, domains, or custom groups of computers. (See page 32 for information about creating custom groups.) After selecting the computers you want to configure, click **Next**.
4. In the next screen displayed, select the defragmentation method for each of these types of Diskeeper defragmentation jobs:

**Primary** scheduled defragmentation jobs

**Secondary** scheduled defragmentation jobs

**Manual** defragmentation jobs

See page 40 for information about the different defragmentation methods available.

You can also choose different defragmentation methods for cases where the selected computers are running an edition of Diskeeper that supports the Terabyte Volume Engine (TVE). The TVE is a specialized defragmentation engine designed to defragment very large disk volumes. See page 40 for more information about the TVE.

5. Since configuring a large number of computers across the network can take some time and use marginal network bandwidth, you are next given the option to schedule the configuration task for a later time, or perform it now. If you select to schedule the task for a later time, you are prompted to specify when the task is to begin. You can also specify a time for the task to be stopped, even if it has not yet completed. This gives you the flexibility to perform the task at a later time. Choose when to perform the configuration and click **Next**.
6. After specifying when to perform the configuration task, a summary is displayed, showing you the ongoing status of the task. You can print the summary report by clicking **Print Report** in the Related Tasks pane. When the configuration task is complete, the summary is automatically saved in the Diskeeper Job Queue, along with other similar reports. See page 35 for more information about the Job Queue. When you are done reviewing the summary, or when you are ready to perform another task, click **Finish**.

## Configuring the Defragmentation Priority

1. Click **Diskeeper** in the toolbar to display the Diskeeper Administrator task menu, then select **Configure Settings** to access the Diskeeper settings module.
2. Select **Set Defragmentation Priority** and click **Next**.

3. In the tree view displayed, select the computer(s) on which you want to set the defragmentation priority. You can select one or more single computers, domains, or custom groups of computers. (See page 32 for information about creating custom groups.) After selecting the computers you want to configure, click **Next**.
4. In the next screen displayed, select the priority for each of these types of Diskeeper defragmentation jobs:
  - Scheduled** defragmentation jobs
  - Manual** defragmentation jobs

See page 40 for information about the different defragmentation priorities available.

You can also enable the **I/O Smart** option, which “throttles” disk I/O during the defragmentation operation, further ensuring the operation will not negatively impact performance on the selected computers. See page 40 for a description of the I/O Smart option.
5. Since configuring a large number of computers across the network can take some time and use marginal network bandwidth, you are next given the option to schedule the configuration task for a later time, or perform it now. If you select to schedule the task for a later time, you are prompted to specify when the task is to begin. You can also specify a time for the task to be stopped, even if it has not yet completed. This gives you the flexibility to perform the task at a later time. Choose when to perform the configuration and click **Next**.
6. After specifying when to perform the configuration task, a summary is displayed, showing you the ongoing status of the task. You can print the summary report by clicking **Print Report** in the Related Tasks pane. When the configuration task is complete, the summary is automatically saved in the Diskeeper Job Queue, along with other similar reports. See page 35 for more information about the Job Queue. When you are done reviewing the summary, or when you are ready to perform another task, click **Finish**.

## Diskeeper Job Queues

The Diskeeper Job Queues option provides a centralized location for information about any pending, running or completed Diskeeper Administrator tasks (or jobs) you have performed. You can stop a current or pending job, and view the status of a job to see detailed information about whether it completed successfully for all selected computers.

Select Diskeeper Job Queues in the Diskeeper Task pane to open a view of the job queues.

The Task Menu on the left offers these views:

- All Jobs
- Reporting Jobs
- Schedule Defragmentation Jobs
- Deployment Jobs
- Manage Machine Jobs
- Configure Settings Jobs

Click any of these options to see a listing of past, present and scheduled jobs of that category. The typical listing shows the job name, the task type (such as Deployment tasks or Schedule Defragmentation jobs), the job type (one-time or scheduled, for example) and the last run time and date.

Double-click any of the jobs listed to see a detailed report about the status of the job. This is a useful way to see the computers on which a specific job was or was not successful. You can see details about the domain, the machine name, the status of the job, a description or explanation of the reported status, and the date and time the status was recorded.

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The Related Tasks pane offers options allowing you to print listings from the job queues or to delete selected jobs from the queue.

## Chapter 4

# Overview of Diskeeper Features

This chapter describes key features available in Diskeeper Professional and the various Diskeeper Server editions. Not all these features are directly available within Diskeeper Administrator Edition, but they are available via the Remote Control feature described starting on page 33. This information is provided in this manual simply for reference.

## Diskeeper Defragmentation Modes

Diskeeper Professional and the Diskeeper Server editions are designed to operate in three different ways. The “Set It and Forget It” and “Manual Defragmentation” modes run while your disk volumes are online and available to other users. The Boot-Time defragmentation mode runs only when you restart your computer.

**Note:** The Boot-Time defragmentation feature is only available on Diskeeper running Windows NT, Windows 2000, Windows XP, or Windows Server 2003.

**Set It and Forget It**—“Set It and Forget It” allows Diskeeper to run automatically in the background, either after hours or while users and other processes are active on the system, according to a predetermined schedule you set. As with manual defragmentation jobs, you can select several different defragmentation methods to suit your needs.

Set It and Forget It defragmentation jobs are scheduled using one of several scheduling options:

- **Smart Scheduling**—This feature is available within the Disk Volume Scheduler feature. Smart Scheduling allows Diskeeper to automatically determine the optimum defragmentation schedule for your disk volumes. Smart Scheduling is described further on page 38.
- **Disk Volume Scheduler**—The Disk Volume Scheduler allows you to specify the times or days of the week that Diskeeper will (or will not) be allowed to run.
- **Screen Saver Mode**—Screen Saver mode scheduling option automatically starts defragmenting the selected disk volume(s) any time the screen saver starts on your computer. The defragmentation operation is paused whenever keyboard or mouse activity is detected on the computer. Screen Saver mode is described further on page 39.

A defragmentation schedule specifies the times or days of the week that Diskeeper will (or will not) be allowed to run. Diskeeper provides two types of schedules—primary and secondary—allowing you to assign up to two schedules per disk volume.

**Manual Defragmentation**—Manual defragmentation gives you direct control over Diskeeper operation. You have control over which disk volumes are defragmented, when defragmentation is started and stopped, and the priority at which Manual defragmentation jobs run. You can also choose between different defragmentation methods, to emphasize system performance or defragmentation speed. Manual defragmentation is not the preferred method of defragmentation, since it typically runs at a higher process priority and consumes more system resources than Set It and Forget It background defragmentation.

**Boot-Time Defragmentation**—The Boot-Time defragmentation feature is only available on the Windows NT, Windows 2000, Windows XP, and Windows Server 2003 versions of Diskeeper. Boot-Time defragmentation has three main parts:

- **Directory Consolidation**—In Windows NT (and FAT volumes in Windows 2000, Windows XP and Windows Server 2003), a directory is actually a file, which cannot be moved safely while the operating system is active. These directory files are usually scattered over the disk volume, presenting a barrier to

effective defragmentation. Directory Consolidation, done at boot-time, before the system starts up, moves directories to a single location on the disk, which frees up larger portions of the disk for defragmenting.

- **Paging File Defragmentation**—The paging file is a file that the Windows NT, Windows 2000, Windows XP, and Windows Server 2003 operating systems use and cannot be defragmented safely while the operating system is active, but it *can* be defragmented at boot-time, using the Boot-Time Paging File Defragmentation feature.
- **MFT Defragmentation**—The Master File Table (MFT) is another file that cannot be defragmented safely while Windows NT or Windows 2000 are active, but it *can* be defragmented at boot-time, using the Boot-Time MFT Defragmentation feature. (Note that on Windows XP and Windows Server 2003 systems, all but the first 16 file records in MFT is defragmented online, without the need for boot-time defragmentation.)

## Smart Scheduling

With Smart Scheduling, you no longer have to decide how often to defragment your disks—Diskeeper will automatically determine the optimum defragmentation schedule for each of your disk volumes and adjust it accordingly.

The method used to determine how often Diskeeper should run is elegant in its simplicity. When Smart Scheduling is enabled, Diskeeper keeps track of the number of files moved every time it runs on each disk volume. When the number of fragmented files moved during a defragmentation run increases, Diskeeper is automatically scheduled to run more often. When the number of files moved decreases, the time between defragmentation runs is increased.

The Smart Scheduling option is available within the **Select type of schedule** drop-down list in the Set It and Forget It pane.

You can also set exclusion times when the Smart Scheduling option will be prevented from scheduling a defragmentation run. When Smart Scheduling is selected, the **Select which days to run** drop-down option list will be limited to these times:

- Except Everyday
- Except Weekends
- Except Weekdays
- Except Monday
- Except Tuesday
- Except Wednesday
- Except Thursday
- Except Friday
- Except Saturday
- Except Sunday

You can use the “starting” and “ending” time drop down lists to further define times when the scheduling of automatic defragmentation runs will not be allowed. For example, a schedule set like this:

| Type of Schedule | Which Days      |
|------------------|-----------------|
| Smart Scheduling | Except Weekdays |
| Starting Time    | Ending Time     |
| 1:00 am          | 3:00 am         |

will allow Diskeeper to automatically determine how often to run, but will also prevent it from running between 1:00 am and 3:00 am on weekdays (i.e., when your nightly backup is running).

Here's another example, showing a Smart Schedule that will run everyday, but only between the hours of 7:00 pm and 7:00 am:

| Type of Schedule | Which Days  |
|------------------|-------------|
| Smart Scheduling | Everyday    |
| Starting Time    | Ending Time |
| 7:00 pm          | 7:00 am     |



**Tip:** The **Set It and Forget It** option on the Diskeeper Command pane on the remote computer includes several commonly-used defragmentation schedules, pre-configured and ready to use.

## Screen Saver Mode

When enabled, Screen Saver mode automatically starts defragmenting the selected disk volume(s) any time the screen saver starts on your computer. The defragmentation operation is paused whenever keyboard or mouse activity is detected on the computer. This option is available under the **Select type of schedule** drop-down list in the Diskeeper Set It and Forget It pane. Note that you must have a screen saver enabled for this option to function.

If you only have a single disk volume selected for Screen Saver mode, the defragmentation operation is re-started at the logical "beginning" of the volume each time the screen saver re-starts after being interrupted (by keyboard activity, for example).

When more than one disk volume is selected for Screen Saver mode, the volumes are handled in a round-robin manner. If a defragmentation pass is stopped, the operation resumes on the next volume when the screen saver starts again. For example, if you select volumes C and D for Screen Saver mode, when your screen saver starts, Diskeeper begins a defragmentation pass on volume C. If that pass is interrupted, and then the screen saver starts again, Diskeeper will begin a pass on volume D.

If the screen saver has not been interrupted after Diskeeper completes the defragmentation pass on each of the selected disk volumes, Diskeeper is automatically scheduled to re-start the defragmentation operation in one hour.

Because of the "start and stop" nature of the Screen Saver mode, it is not recommended on disk volumes that are heavily fragmented, unless you expect the computer's screen saver to be on for several hours. In cases where your screen saver activity is only for short periods of time, a thorough manual defragmentation or scheduled Set It and Forget It defragmentation is recommended before running Diskeeper in Screen Saver mode.

**Note:** Screen Saver mode is not recommended for servers. Many servers spend a good deal of time with the screen saver active, which could cause Diskeeper to run more often than necessary. This can cause unnecessary system resource use on the server at times when it is under heavy demand.

## Exclusion List

In some cases, you may have files or directories of files you do not want to defragment. For example, you may not want to defragment temporary files that will soon be deleted. Any files or directories can be excluded from Diskeeper processing by adding them to the exclusion list.

Choose the **Exclude selected files and folders** option from the **Change your settings** menu in the Diskeeper Command pane on the remote computer to open the **Exclude** dialog box. (This option is also available from the **Action** menu.)

Additional information about exclusion lists is available in the Diskeeper Help or User's Manual.

## Priority

Select the **Set defragmentation priority** option from the **Change your settings** menu in the Diskeeper Command pane to select the Windows priority at which Diskeeper defragmentation jobs run. (This option is also available from the Action menu.) You can set the priority independently for both "Set It and Forget It" and "Manual" defragmentation jobs.

By default, scheduled, Set It and Forget It defragmentation jobs run at the lowest possible Windows priority. Also by default, manual defragmentation jobs run at the normal Windows priority. The priority for either type of defragmentation job can be changed with the Priority option.

Running at the lowest priority minimizes the system performance impact when Diskeeper is defragmenting a disk volume. However, defragmentation jobs running at the lowest priority can take substantially longer to complete than those running at higher priorities, since Diskeeper "backs off" for any process running at a higher priority (even screen savers).

For this reason, you may have occasions where you want to run Diskeeper at a higher priority. Keep in mind, though, that your system performance may be impaired when Diskeeper is run at higher priorities.

In addition to the different levels of Windows priorities to choose from, Diskeeper also offers **I/O Smart**. This option takes the concept of run priorities one step farther by "throttling" (suspending) the defragmentation process whenever disk I/O activity is detected on a disk while it is being defragmented. This ensures the defragmentation process will be transparent to users, no matter how active the disk.

For more information about setting Diskeeper priority, see the Diskeeper Help or User's Manual.

## Defragmentation Options

Most editions of Diskeeper allow you to choose the type of defragmentation that best suits your needs, for both manual and scheduled "Set It and Forget It" defragmentation jobs. Diskeeper provides defragmentation methods that emphasize:

- **Maximum disk performance**—This is the default, proven and balanced mix of file defragmentation and free space consolidation. It is designed to gain the best disk performance without using excessive system resources. This is the defragmentation method used by Diskeeper Professional Edition and Diskeeper Home Edition.
- **Quick defragmentation**—This method provides the fastest defragmentation. It reduces the defragmentation time by placing the emphasis on defragmenting the fragmented files, rather than free space consolidation, since this returns the greatest system performance gain. This defragmentation method will complete faster and use fewer resources, but note that the free space consolidation will not be as thorough as the other methods.

**Free space consolidation**—This defragmentation method performs additional free space consolidation. This method performs a normal Diskeeper defragmentation, but then additionally performs extra processing to further improve free space consolidation. It is important to note this method requires additional processing and

time, and free space consolidation improvement will be gradual as the option is used over time. Because of this, the Improved Free Space option is only available for Set It and Forget It defragmentation jobs.

- On Windows NT 4.0 systems, you should run a boot-time directory consolidation before using this option, to make more contiguous free space available.
- On Windows XP and Windows Server 2003 systems, free space consolidation may be improved by running a boot optimization from the Windows Command Prompt before using this option. See the Diskeeper User's Manual or help system for more information about boot optimization and the command prompt.

**File performance defragmentation**—This defragmentation method concentrates the defragmentation effort on the pieces of fragmented files that affect your disk performance the most. This method moves and defragments smaller file fragments, but does not attempt to move large file fragments, thus saving time and system resources. Large file fragments in two or three pieces have very little if any performance impact, but attempting to consolidate these large pieces into a single, contiguous piece can consume more resources than accessing the slightly-fragmented (or partially defragmented) file.

Click **Change your settings** in the Diskeeper Command pane on the remote computer then select **Change the defragmentation method** to select the method Diskeeper uses for both manual and Set It and Forget It defragmentation jobs. The **Defragmentation Options** option is also available in the **Action** menu.

The Diskeeper Help and User's Manual have additional information about the different defragmentation options.

## Event Logging

Diskeeper allows you to record information about its activity in a log file. The logging method varies, depending on the version of Windows you are using.

Click **Change your settings** in the Command pane on the remote computer then select **Set event logging options** to alternately enable or disable the logging of various events to the Diskeeper Event Log. The **Event Logging** option is also available from the **Action** menu.

Additional information about logging Diskeeper activity is available in the Diskeeper Help or User's Manual.



## Chapter 5

# Theory of Diskeeper Operation

This chapter describes the Diskeeper design goals and how those goals were met.

## About Disk Fragmentation

As mentioned in the introduction of this manual, the term *disk fragmentation* means two things:

- a condition in which pieces of individual files on a disk are not contiguous, but rather are broken up and scattered around the disk volume; and
- a condition in which the free space on a disk volume consists of little pieces of space here and there rather than a few large free spaces.

The effects of excessive fragmentation are twofold as well:

- file access takes longer because a file must be collected in pieces here and there, requiring several disk accesses instead of just one; and
- file creation takes longer because space for the file must be allocated in little pieces here and there instead of just one contiguous allocation.

Before the introduction of Diskeeper, there was no method for completely correcting the problems of file and free space fragmentation on Windows NT computers or in a mixed Windows network.

## Design Goals

In designing Diskeeper for Windows, the following goals were established:

- The product must be completely safe to use.
- It must improve Windows system performance. It is not designed to make the disk look “pretty”—it is designed to improve disk performance and, as a result, overall system performance.
- It should process live disks without interfering with user access to files.
- It should run without operator intervention.
- It must defragment all possible files and consolidate free space into the smallest possible number of large spaces.

Diskeeper defragments files and free space on a disk, allowing access to the files on the disk at any time while Diskeeper is running.

## Safety

Diskeeper is designed with *safety* as the highest priority.

To ensure the safe movement of files on Windows NT, Windows 2000, Windows XP, and Windows Server 2003 systems, Diskeeper uses mechanisms built into Windows that were developed and implemented by Executive Software, and fully incorporated into the operating system by Microsoft. On Windows 95, Windows 98, and Windows Me systems, Diskeeper uses similar mechanisms used by Microsoft and others.

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By using these built-in mechanisms, Diskeeper maintains cache coherency, file security and permissions information, and file content integrity no matter how fragmented the files on the disk are.

The foremost design goal for Diskeeper is to make sure that no data is ever lost. To accomplish this goal Diskeeper uses the following criteria for accessing files:

- the contents of data files are never modified under any circumstances
- only one file is processed at a time, not the whole disk
- each processing pass is independent of the other passes
- no information is stored on any other device or in a “scratch space”
- Diskeeper accesses a file in such a way that no user access can conflict with Diskeeper during the critical portion of the relocation process
- file relocation is aborted if any error is encountered, leaving the file in its original state

Diskeeper was designed to err on the side of caution. In other words, it only moves a file on the volume when it is absolutely certain that no data will be lost, including file attributes. The only change to file attribute-type information is the physical location of the file on the volume. None of the file dates are changed and no other fields in the file record header are used to store Diskeeper information.

Diskeeper never defragments or moves files that are specifically stored at a specific physical location on the volume.

If anything causes your computer to crash while Diskeeper is running, or if you abort the Diskeeper defragmentation run in the middle of the file relocation process, no data is ever at risk.

**Windows 95/98/Me Note:** Stopping or pausing a Diskeeper job through its menus or toolbars is completely safe. Note, however, that in the event of a system crash or other non-standard termination of the Diskeeper process while it is running, it is possible for free space and file information to be stored incorrectly. Executive Software strongly recommends running the Windows Scandisk error checking utility immediately when Diskeeper is stopped abnormally. Scandisk will correct any potential file errors.

## Performance

When running in the “Set It and Forget It” mode, Diskeeper is designed to run in the background, without adversely affecting performance of your Windows computer. Steps have been taken to assure that, by default, Diskeeper overhead has the lowest possible impact on system performance. Diskeeper can be run at the lowest possible Windows priority, using only otherwise unused CPU cycles. Diskeeper was designed in such a way to ensure it will not interfere with other processes on your Windows computer.

However, for cases where you want to defragment disks more quickly, Diskeeper allows you to increase the defragmentation priority. For more information, see the Diskeeper Help or User’s Manual.

## Process Live Disks

It is not acceptable to force users off the disk while performing routine defragmentation. To do so would be a case of the cure being worse than the disease. Access to fragmented files is better than no access at all.

The best solution is to defragment online with users active on the same disk volume. Diskeeper was designed with this in mind. During most of the time Diskeeper is processing a file, it shares the file with any other users that may access the same file. The last step of processing the file, however, involves locking the file for a very brief period, a matter of milliseconds. If another user requests a file that Diskeeper has locked, that request is suspended for the brief period until Diskeeper releases the file. Then the request is serviced. There is never an interruption of either process as a result of this delay.

This solution allows Diskeeper to defragment open files safely, regardless of whether they are open for read operations or for write operations.

**Note:** Due to the Windows NT 4.0 design, directories, MFT and paging files cannot be moved safely on live disks (NTFS directories *can* be moved on Windows 2000/XP). Therefore, Diskeeper performs these operations at the only safe time, while the computer is starting up.

## No Operator Intervention

In keeping with the design goals, after Diskeeper has been started in the “Set It and Forget It” mode, it runs automatically in the background, without the need for operator intervention. It runs indefinitely, unless told otherwise by you.



## Appendix A

## Table of Diskeeper Editions

The table below shows the different editions of Diskeeper available, as well as the features and capabilities of each:

|  | Diskeeper 9.0 Editions |              |                 |                   |               |
|--|------------------------|--------------|-----------------|-------------------|---------------|
|  | Home                   | Professional | Server Standard | Server Enterprise | Administrator |
| Defragmentation                              | ✓                      | ✓            | ✓               | ✓                 | N/A           |
| Performance Analysis                         | ✓                      | ✓            | ✓               | ✓                 | N/A           |
| Reliability Analysis                         | ✓                      | ✓            | ✓               | ✓                 | N/A           |
| Fragmentation Analysis                       | ✓                      | ✓            | ✓               | ✓                 | N/A           |
| Set It and Forget It Scheduling              | ✓                      | ✓            | ✓               | ✓                 | N/A           |
| Boot-Time defragmentation                    |                        | ✓            | ✓               | ✓                 | N/A           |
| Defragmentation methods                      | 1                      | 4            | 4               | 4                 | N/A           |
| Exclusion list                               | ✓                      | ✓            | ✓               | ✓                 | N/A           |
| Event logging                                | ✓                      | ✓            | ✓               | ✓                 | N/A           |
| Adjustable Priority                          |                        | ✓            | ✓               | ✓                 | N/A           |
| I/O Smart                                    | ✓                      | ✓            | ✓               | ✓                 | N/A           |
| Frag Shield                                  |                        | ✓            | ✓               | ✓                 | N/A           |
| Command line interface                       |                        | ✓            | ✓               | ✓                 | N/A           |
| Maximum single volume size supported         | 512 GB                 | 512 GB       | 768 GB          | 4 TB              | N/A           |
| Total disk space supported (all volumes)     | No limit               | No limit     | No limit        | No limit          | N/A           |
| Simultaneous operations                      | 1                      | 4            | 8               | 16                | N/A           |
| Terabyte Volume Engine                       |                        |              |                 | ✓                 | N/A           |
| 64-bit processor Compatible                  |                        |              | ✓               | ✓                 |               |
| Remote control of local Diskeeper editions   |                        |              |                 |                   | ✓             |
| Can be controlled by Diskeeper Administrator |                        | ✓            | ✓               | ✓                 | N/A           |

This table shows the different Diskeeper editions available and the Windows operating systems they support:

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|  | Diskeeper 9.0 Editions |              |                 |                   |               |
|--|------------------------|--------------|-----------------|-------------------|---------------|
|  | Home                   | Professional | Server Standard | Server Enterprise | Administrator |
| Windows 95                                 | ✓                      | ✓            |                 |                   |               |
| Windows 98                                 | ✓                      | ✓            |                 |                   |               |
| Windows Me                                 | ✓                      | ✓            |                 |                   |               |
| Windows XP Home                            | ✓                      | ✓            | ✓               |                   |               |
| Windows XP Tablet PC                       | ✓                      | ✓            | ✓               |                   | ✓             |
| Windows XP Media Center                    | ✓                      | ✓            | ✓               | ✓                 | ✓             |
| Windows NT 4.0 Workstation                 |                        | ✓            | ✓               |                   | ✓             |
| Windows 2000 Professional                  | ✓                      | ✓            | ✓               | ✓                 | ✓             |
| Windows XP Professional                    | ✓                      | ✓            | ✓               | ✓                 | ✓             |
| Windows NT 4.0 Server                      |                        |              | ✓               |                   | ✓             |
| Windows 2000 Server                        |                        |              | ✓               | ✓                 | ✓             |
| Windows Server 2003 Web                    |                        |              | ✓               | ✓                 | ✓             |
| Windows Server 2003 Standard               |                        |              | ✓               | ✓                 | ✓             |
| Windows 2000 Advanced Server               |                        |              | ✓               | ✓                 | ✓             |
| Windows NT 4.0 Enterprise Server           |                        |              | ✓               |                   | ✓             |
| Windows Server 2003 Enterprise             |                        |              |                 | ✓                 | ✓             |
| Windows 2000 w/Server Appliance Kit        |                        |              | ✓               | ✓                 |               |
| Windows Server 2003 w/Server Appliance Kit |                        |              | ✓               | ✓                 |               |

## Appendix B

## Answers to Frequently Asked Questions

The list of Frequently Asked Questions (FAQs) about Diskeeper Administrator Edition is currently being developed. For the most current list, visit the Executive Software website at [www.executive.com/support/support.asp](http://www.executive.com/support/support.asp).



## Appendix C

# Menu Options

## Configuration Menus

These are the options available from menu bar after clicking **Configure** in the toolbar:

File Options Configure Machines Manage License Help

### File Menu

- **Exit**—Closes the Diskeeper Administrator interface and exit the program

### Options Menu

- **Database**—Opens the Configure Database wizard
- **Alert Setting**—Configures Diskeeper alert settings
- **Purge Options**—Sets how long to keep alert and task data in the database
- **Check Updates**—Checks for updated versions of Diskeeper Administrator

### Configure Machines Menu

- **Machine Management**—Opens the Manage Machines wizard to add or remove managed Diskeeper computers and to PushInstall Diskeeper to remote computers

### Manage License Menu

- **Manage License**—Opens the Manage Licenses wizard to add or remove Diskeeper licenses and to convert trial licenses into full version licenses

### Help Menu

- **About**—Shows information about the version of Diskeeper Administrator you have installed
- **Diskeeper Administrator Help**—Opens the main Diskeeper Administrator help system
- **Getting Started**—Opens the Configuration Getting Started page

## Diskeeper Administrator Menus

These are the options available from menu bar after clicking **Diskeeper** in the toolbar:

File   Reporting   Schedule Defragmentation Job   Deployment   Configure Settings   Help

### File Menu

- **Open Report**—Opens a previously-saved Diskeeper report
- **Exit**—Closes the Diskeeper Administrator interface and exit the program

### Reporting Menu

- **Create Report**—Starts the Diskeeper Reporting wizard to create a report
- **Reports**—Displays reports you have created

### Schedule Defragmentation Job Menu

- **Schedule**—Starts the Diskeeper Scheduling wizard to create a defragmentation schedule

### Deployment Menu

- **Install**—Starts the PushInstall wizard to install Diskeeper on remote computers

### Configure Settings Menu

- **Settings**—Starts the Settings Configuration wizard to change the defragmentation method and priority on your managed Diskeeper computers

### Help Menu

- **About**— Shows information about the version of Diskeeper Administrator you have installed
- **Diskeeper Administrator Help**—Opens the main Diskeeper Administrator help system
- **Getting Started**—Opens the Diskeeper Administrator Getting Started page

## Appendix D

# Troubleshooting

There are several situations that can cause Diskeeper Administrator to display error messages. This table shows Diskeeper Administrator error messages displayed, what can cause them, and how to resolve them.

In the event of an error message or other failure, select the affected computer and click **Show Error Details** in the Related Tasks pane for assistance with the error.

| Error Message  | Description  | Solution  |
|--|--|---|
| Computer is offline<br><i>or</i><br>Could not connect to the machine | The target computer is offline.  | Ensure the computer is booted and connected to the network.   |
|  | Diskeeper is not installed on the target computer.   | Install Diskeeper 9.0 build 505 or higher on the target computer.   |
|  | The target computer is running with a firewall enabled. This is especially common when the target computer is running Windows XP Service Pack 2. | A firewall (including 3rd party firewalls) may prevent Diskeeper Administrator from connecting to Diskeeper. If you are running Windows XP SP2, see <a href="http://www.executive.com/sp2">www.executive.com/sp2</a> for information about configuring the Windows XP SP2 firewall to be compatible with Diskeeper Administrator. |
|  | You are PushInstalling Diskeeper to computers running Windows 95, Windows 98, or Windows Me.   | Be aware that you cannot PushInstall Diskeeper to remote computers running Windows 95, Windows 98, or Windows Me. You can, however, use Diskeeper Administrator to perform other Diskeeper management functions (such as scheduling and reporting) on these operating systems.  |
| Incompatible Diskeeper version                                       | The Diskeeper version on the remote computer is not compatible with Diskeeper Administrator 9.0.   | The target computer must be running Diskeeper 9.0.505 or higher.  |
| Operating System version not supported                               | The operating system on the target machine is not supported.   | Refer to Appendix A to see the operating systems supported by Diskeeper.  |
| Access Denied  | Access to the remote computer is denied with the specified user permissions.   | Check to confirm the user account you specified in the Specify Permissions page is a member of the Administrators group.  |
| Machine offline or Diskeeper is not running                          | Diskeeper is not installed or is disabled.   | Confirm Diskeeper is installed on the target computer and that the Diskeeper service is running.  |
|  | The computer is offline.   | Ensure the computer is booted and connected to the network.   |

|   |  |   |
|---|--|---|
| Machine offline or Diskeeper is not running (continued) | A firewall is preventing Diskeeper Administrator from communicating with Diskeeper.  | A firewall (including 3rd party firewalls) may prevent Diskeeper Administrator from connecting to Diskeeper. If you are running Windows XP SP2, see <a href="http://www.executive.com/sp2">www.executive.com/sp2</a> for information about configuring the Windows XP SP2 firewall to be compatible with Diskeeper Administrator.   |
|   | Unsupported Diskeeper version.   | You must be running Diskeeper 9.0.505 or higher. If the correct version of Diskeeper is installed on the remote computer, make sure the Diskeeper service is running on the remote computer.  |
|   | Failure of the Remote Procedure Call (RPC) communication between Diskeeper Administrator and Diskeeper on a remote computer.   | The required ports are not open on the target machine. See <a href="http://www.executive.com/sp2">www.executive.com/sp2</a> for complete information about the ports needed by Diskeeper Administrator and how to open them, and to download tools to automate the task.  |
| Diskeeper is not installed                              | Diskeeper is not installed on the remote computer.   | Use the Diskeeper Administrator PushInstall deployment option to install Diskeeper on the remote computer.  |
| Request sent to remote computer                         | A request (such as setting a schedule or setting the defragmentation method) has been sent to the remote Diskeeper computer and Diskeeper Administrator is waiting for the response. | <p>This can be the result of ports being disabled on the computer running Diskeeper Administrator. The Diskeeper Administrator installation opens the required ports, but they may have been closed by another program or process. See <a href="http://www.executive.com/sp2">www.executive.com/sp2</a> for complete information about the ports needed by Diskeeper Administrator and how to open them, and to download tools to automate the task.</p> <p>This can also be due to network errors preventing two-way communication between the Diskeeper Administrator computer and the target machine.</p> <p>At the Windows command prompt, enter:</p> <pre>c:\&gt;ping &lt;target machine name&gt;</pre> <p>or</p> <pre>c:\&gt;ping &lt;target machine IP address&gt;</pre> <p>to determine if the machine is visible to the network.</p> |
| Remote computer did not respond                         | The remote computer did not respond to a request from Diskeeper Administrator.   | <p>This can be caused by communication problems between the target machine and the machine from which you are running Diskeeper Administrator. Check to confirm other network functions are working on that computer.</p> <p>This can also be the result of ports being disabled on the computer running Diskeeper Administrator. The Diskeeper Administrator installation opens the required ports, but they may have been closed by another program or process. See <a href="http://www.executive.com/sp2">www.executive.com/sp2</a> for complete information about the ports needed by Diskeeper Administrator and how to open them, and to download tools to automate the task.</p> <p>This can also be due to network errors preventing</p>  |

|  |   |  |
|--|---|--|
| <p>Remote computer did not respond (continued)</p>                             |   | <p>two-way communication between the Diskeeper Administrator computer and the target machine.</p> <p>At the Windows command prompt, enter:</p> <pre>c:\&gt;ping &lt;target machine name&gt;</pre> <p>or</p> <pre>c:\&gt;ping &lt;target machine IP address&gt;</pre> <p>to determine if the machine is visible to the network.</p>   |
| <p>This computer is being managed by another Diskeeper Administrator</p>       | <p>This message is displayed if you attempt to manage a computer which is currently being managed by another instance of Diskeeper Administrator.</p>   | <p>Remember you can take over management of the remote computer in the Manage Diskeeper Computers and Groups module of Diskeeper Administrator.</p>  |
| <p>This computer was previously managed by another Diskeeper Administrator</p> | <p>This message is displayed when you take over management of a remote Diskeeper computer from another instance of Diskeeper Administrator.</p>   | <p>No action needed.</p>   |
| <p>Failed to start Setup.exe</p>   | <p>This message is displayed during a PushInstall deployment when the Setup.exe file fails to start on the remote computer.</p>   | <p>This is usually due to an error condition preventing the Diskeeper installation procedure from running on the remote computer. Check the Windows application event log on the remote computer for errors.</p>   |
| <p>Installation operation timeout</p>  | <p>When performing a PushInstall deployment, a 15-minute timeout is set for remote installation. If the installation is not completed within 15 minutes after the installation on the final machine has started, this error message is displayed.</p> | <p>This is usually due to an error condition preventing the Diskeeper installation procedure from running on the remote computer. Check the Windows application event log on the remote computer for errors.</p> <p>This can also be the result of ports being disabled on the computer running Diskeeper Administrator. The Diskeeper Administrator installation opens the required ports, but they may have been closed by another program or process. See <a href="http://www.executive.com/sp2">www.executive.com/sp2</a> for complete information about the ports needed by Diskeeper Administrator and how to open them, and to download tools to automate the task.</p> |
| <p>Partial Success</p>   | <p>When scheduling defragmentation on remote computers, this message indicates that not all the drives selected were able to be scheduled.</p>  | <p>This can occur if one or more drives have been set using Group Policy. Consider enabling "Allow Local Override" using the Group Policy template so that these options can be set from Diskeeper Administrator.</p>  |

## 56 Troubleshooting

|   |   |   |
|---|---|---|
| Upgrade failed due to insufficient number of Diskeeper licenses | This message is shown if you do not have enough Diskeeper licenses available when trying to upgrade a trial version of Diskeeper to a full version. | Purchase additional Diskeeper licenses online via the <b>Purchase Licenses</b> option in the Related Tasks pane of the <b>Manage Licenses</b> configuration task. Alternatively, you can convert existing full licenses to trial licenses to make additional full licenses available. |
|---|---|---|

If you need assistance with any Diskeeper Administrator error messages, contact Executive Software Technical Support as described in Appendix E of this manual.

## Appendix E

## Support Services

### U.S. Support Services

Registered users are entitled to 90 days of free telephone support, as well as special upgrade pricing, from Executive Software. Our free U.S. technical support is available Monday through Friday during the first 90 days from 7:00 A.M. to 5:30 P.M. Pacific time. If you have not yet registered your Diskeeper for Windows purchase, use the registration card in your Diskeeper box and do so now. Or, register your purchase online via our Web site at:

[www.executive.com](http://www.executive.com)

Most technical support questions can be answered from the Technical Support section of our Web site at the address shown above.

You may also contact our technical support team via the Internet at:

[tech\\_support@executive.com](mailto:tech_support@executive.com)

Or via FAX at:

**818-252-5514**

If you are within your 90-day free support period, or have purchased telephone support, you can call:

**818-771-1600**

When your 90-day free support period has expired, you may purchase the support plan which best suits your needs. Executive Software offers 24-hour, 7-day support plans. Contact Executive Software to find out which support options suit you best.

Executive Software's address is:

**Executive Software**

**7590 North Glenoaks Boulevard**

**Burbank, California 91504, USA**

## European Support Services

Registered users are entitled to 90 days of free telephone support, as well as special upgrade pricing, from Executive Software. Our free European technical support is available Monday through Friday during the first 90 days from 8:30 to 17:30 GMT. If you have not yet registered your Diskeeper for Windows purchase, use the registration card in your Diskeeper box and do so now. Or, register your purchase online via our Web site at:

[www.executive-europe.com](http://www.executive-europe.com)

Most technical support questions can be answered from the Technical Support section of our Web site at the address shown above.

You may also contact our technical support team via the Internet at:

[tech.support@execsoft.co.uk](mailto:tech.support@execsoft.co.uk)

Or via FAX at:

**+44 (0) 1342-327390**

If you are within your 90-day free support period, or have purchased telephone support, you can call:

**+44 (0) 1342-327477**

When your 90-day free support period has expired, you may purchase the support plan which best suits your needs. Executive Software offers 24-hour, 7-day support plans. Contact Executive Software to find out which support options suit you best.

Executive Software's address is:

**Executive Software UK Inc.**

**Kings House, Cantelupe Road**

**East Grinstead, West Sussex RH19 3BE**

**England**

# Glossary

**access:** To store *data* on, or retrieve data from, a *disk drive* or other *peripheral device*. See also *file*.

**administrator:** See *system administrator*.

**applet:** A small *application* program that is usually built into an *operating system* or a larger application program. For example, the built-in writing and drawing programs that come with *Windows* are sometimes called “applets.”

**application:** A computer *program*, which causes a computer *system* to perform some useful work for the user.

**AutoPlay:** A feature of some *Windows* applications on *CD-ROM* that causes the program to start automatically when the CD-ROM is placed in the drive.

**background processing:** The execution of certain operations during momentary lulls in the primary (foreground) process. An example of a background process is printing while a word processor is waiting for keystrokes.

**binary:** From Latin “bini,” meaning two by two and “ary,” meaning of, or pertaining to. Computers use the binary number system, which is a way of counting in which only two *digits* (0 and 1) are used. Contrast with the familiar decimal number system, in which we count with 10 digits (0 through 9).

**bit:** Short for *binary digit*. The smallest unit of information handled by a computer. Like a light switch, a bit is either on or off, which corresponds to a numerical value of one or zero. Larger numbers are expressed by groups of bits. See also *byte*.

**boot:** Refers to the initial start-up of a computer, such as when you turn on the computer’s power. From the word “bootstrap,” indicating the computer “lifts itself by the bootstraps;” that is, it gets itself going.

**boot-time:** The time during which a computer *boots*; that is, the computer is starting up and the *operating system* has not yet taken over control of the computer.

**browser:** A software program, such as Microsoft’s *Internet Explorer*, designed to locate and view Web pages on the *Internet*. In addition to displaying text, modern browsers also can display pictures and play sounds.

**byte:** A group of eight *bits*, which can represent a number from zero through 255, a letter of the alphabet, or a variety of other things.

**cache:** From the French word *cacher*, meaning “to hide.” A temporary storage facility designed to speed things up by providing information to software that would otherwise have to be obtained from a slower *medium*. Caches exist for Web browsers, *disk drives* and *CPUs*. See also *cache memory*.

**cache coherency:** A condition where the *data* contained in the *cache memories* in a computer with multiple processors is kept consistent at all times.

**cache memory:** In computers, a cache is a small amount of very fast *memory* that is placed close to (or inside) the *CPU chip*, in order to improve performance. The cache memory holds copies of recently accessed *data*. Because computer programs often run the same instructions repeatedly, many times the CPU will find the data it needs in the cache and therefore will run faster because it does not need to access the computer’s main memory.

**CD-ROM:** Compact Disk Read-Only Memory. A stiff plastic disk commonly used by *software* manufacturers to distribute software to customers. As the name implies, the original contents of a CD-ROM cannot be changed.

**central processing unit (CPU):** The part of the computer hardware that controls the computer’s overall operation and performs computations. Most modern CPUs are built into a single *integrated circuit* or *chip*. See also *Pentium*, *x86*.

**chip:** See *integrated circuit*.

**CHKDSK:** A program (supplied with Windows NT, Windows 2000, Windows XP, and Windows Server 2003) that checks the integrity of a disk and corrects disk errors such as lost *clusters*. See also *scandisk*.

**client:** In a computer *network*, a computer that uses the services of another computer, called a *server*. For example, a client can “ask” a server to provide it with needed data, or to print a file for the client. See also *server*, *workstation*.

**cluster:** Smallest addressable unit of space on a disk. A one-byte file will actually use a cluster of disk space. The minimum size of a cluster depends on the size of the disk *volume*. The *FAT file system* allows a maximum of 65,536 clusters per volume, which means that the cluster size on a 64-megabyte disk volume is one kilobyte, while a 128-megabyte volume uses two-kilobyte clusters. Thus, the FAT file system can be very wasteful of disk space on large volumes. The *NTFS* file system does not suffer from this limitation.

**COM:** Acronym for Component Object Model, a specification developed by Microsoft for building software *components* that can be made into programs or add functionality to existing programs running on Microsoft Windows platforms.

**component:** A small modular *program* that performs a specific function and is designed to work interactively with other components and *applications*. See also *applet*, *COM*, *DCOM*.

**contiguous:** Adjacent; placed one after the other. A contiguous file is not fragmented; that is, it takes up a single “chunk” of disk space. See also *fragmentation*, *defragmentation*.

**control file:** A file (**Diskeep.ctl**) used by *Diskeeper* to keep track of and control scheduled defragmentation of disk volumes. See also *Set It and Forget It*.

**controller:** A specialized electronic circuit, which serves as an *interface* between a *device*, such as a *disk drive*, and a computer. See also *IDE*, *SCSI*.

**CPU:** see *central processing unit*.

**data:** Information, as processed by a computer. Plural of the Latin word *datum*, meaning an item of information.

**database:** A collection of related information about a subject, organized in a useful manner that provides a base or foundation for procedures such as retrieving information, drawing conclusions, and making decisions.

**datum:** Singular of *data*.

**DCOM:** Acronym for Distributed Component Object Model, a version of the Component Object Model (*COM*) software developed by Microsoft to support *objects* distributed across a network. For example, the *Set It and Forget It* feature of *Diskeeper* uses DCOM to start a scheduled *defragmentation*.

**defragmentation:** The reduction or elimination of *fragmentation*, by making files and/or free disk space more *contiguous*.

**device:** A machine, such as a printer or a *disk drive*.

**digit:** From Latin “digitus,” meaning finger. Any of the numbers 0 through 9 in the decimal number system, called a digit because people originally used their fingers for counting. Computers use a *binary* number system with only two digits (0 and 1).

**directory:** A file that contains a catalog of files and other directories stored on a disk, which allows you to organize your files into groups, making them easier to find.

**directory consolidation:** A *Diskeeper* feature which, at *boot-time*, gathers (almost) all *directory* entries on a disk *volume* into a single area on the disk, instead of scattered in many places. The only exceptions are the \Recycler and \Recycled directories, which *Windows* expects to find at a fixed location on the volume. Directory consolidation makes *defragmentation* more effective than it would otherwise be. Directory consolidation requires sufficient contiguous free disk space into which the directories can be moved.

**disk drive:** A *device* containing one or more disks, treated as a unit by a computer.

**Diskeeper:** A *software* product that increases *system* performance through disk *defragmentation*. It eliminates *resource-wasting file fragmentation* safely, by consolidating fragmented files and free space.

**diskette:** See *floppy disk*.

**domain:** In *Windows NT*, *Windows 2000*, *Windows XP* and *Windows Server 2003*, a group of *workstations* and *servers*, defined by an *administrator*, that share a common directory database and allow a user to log onto any *resource* in the domain with a single user ID and password. Each domain in a network has a unique name.

**drive:** See *disk drive*.

**drive letter:** In *Windows* and *MS-DOS operating systems*, the naming convention for *disk drives*, consisting of a letter, followed by a colon. Drives A: and B: are normally reserved for *floppy disk* drives and C: typically indicates the first *hard drive*. See also *volume*.

**encrypted file:** A file that has been scrambled and made unrecognizable by anyone who does not have the proper “key” to decode it. The *Windows 2000*, *Windows XP* and *Windows Server 2003* Encrypting File System (EFS) allows users to encrypt files and folders on an NTFS volume to prevent access by unauthorized individuals.

**event logging:** The process of recording audit information when certain events occur, such as *services* starting and stopping, users logging on and off and accessing *resources*. When running Diskeeper on *Windows NT*, *Windows 2000*, *Windows XP*, and *Windows Server 2003* systems, logged events can be viewed with the *Event Viewer* utility (in Administrative Tools.) When run on *Windows 95/98/Me* systems, Diskeeper logs events to a text file that can be viewed with a variety of text editor programs such as Notepad.

**Event Viewer:** A utility available on *Windows NT*, *Windows 2000*, *Windows XP*, and *Windows Server 2003*, which permits the viewing of logged events. See also *event logging*.

**extended partition:** A type of *partition* that permits the limitation of four partitions per disk drive to be overcome. A disk drive may be partitioned into a maximum of four *primary partitions*, or three primary partitions plus an extended partition. One or more *logical drives* may be created within an extended partition.

**FAT:** See *file allocation table*.

**FAT file system:** The *file system* used by *MS-DOS* and adapted for *Windows* to store information on disks, which makes use of a *file allocation table*. There are three types of FAT file system. The FAT12 (12-bit) is used on FAT volumes smaller than 16 megabytes in size, such as *floppy disks*—it is not supported by Diskeeper. FAT16 can be found on all versions of *Windows* from *Windows 95* through *Windows Server 2003*. *Windows Server 2003*, *Windows 2000*, *Windows Me*, *Windows 98*, and the later OSR 2 version of *Windows 95* also support FAT32; *Windows NT* does not.

**field:** A subdivision of a *record* in a *file*. For example, a record in a customer file may contain a name field, an address field and a phone number field.

**file:** A complete, named collection of *data*, such as a *program*, a set of data used by a program, or a user-created document. See also *record*, *field*.

**file allocation table (FAT):** A table or list maintained by some *operating systems*, to keep track of how *files* are stored on a disk.

**file system:** The method used by an *operating system*, of naming, *accessing* and organizing *files* and *directories* on a disk. See also *NTFS*, *FAT file system*.

**floppy disk:** A removable storage *medium*, consisting of a small magnetic disk made of flexible plastic, housed in a square protective envelope or cartridge. Originally, floppy disks really were “floppy,” because they were enclosed in a paper envelope. Also called a *diskette*, which is a better name for the more recent design that uses a stiff plastic cartridge. Contrast with *hard disk*.

**formatting:** A method of preparing a disk surface for use by placing certain magnetic patterns on it, which are used by the *file system* in storing and retrieving *data*.

**fragmentation:** The word *fragmentation* means “the state of being fragmented.” The word *fragment* means “a detached, isolated or incomplete part.” It is derived from the Latin “fragmentum,” which in turn is derived from “frangere,” meaning “break.” So, *fragmentation* means that something is broken into parts that are detached, isolated or incomplete.

**graphical user interface (GUI):** Pronounced “gooey.” A user *interface*, as used in the *Windows operating systems*, which uses a mouse and graphic displays to interact with the user, with the purpose to make the computer system easier to use than other operating systems, such as *MS-DOS*.

**GUI:** See *graphical user interface*.

**hard disk:** One or more rigid metal platters, coated with magnetic material. Contrast with *floppy disk*, or *diskette*, which is made of plastic. Also used to refer to the physical unit that makes up a *disk drive*.

**hardware:** The physical parts of a computer *system*, including *devices* such as printers and *disk drives*. Contrast with *software*.

**IDE:** Integrated Device Electronics. One of two common types of *interfaces* between a *disk drive* and a computer, where the *controller* is built into the disk drive, which eliminates the need for a separate controller card in the computer. See also *SCSI*.

**integrated circuit:** Also called a *chip*. A collection of electronic parts with a specific purpose, built into a single physical package. See also *central processing unit*.

**Intel:** Manufacturer of *processor chips*, known especially for the *Pentium* and *x86* processors.

**interface:** The connection and interaction between *hardware*, *software* and/or the user. For example, a *disk controller* provides a physical interface between a computer and a *disk drive*. The keyboard, mouse and display are an interface between a computer and the user.

**Internet:** A global *network* that links millions of computers. One popular section of the Internet is the World Wide Web, which allows computer users to view text and pictures with the aid of a browser, such as *Internet Explorer*. E-mail (electronic mail) is another popular part of the Internet, which allows computer users to send and receive written messages.

**Internet Explorer:** A software package developed by Microsoft for browsing the *Internet*, but increasingly used with other applications.

**job:** A request to have the computer or its *peripherals* perform some activity. In relation to *Diskeeper*, it is a request to have a disk *defragmented*.

**log file:** A *file* that keeps track of certain events as they occur. The *Windows NT/2000/XP operating system* maintains several log files that can be viewed with the *Event Viewer*. On *Windows 95/98/Me* systems, *Diskeeper* uses a specially created text file for the same purpose. See also *Event Logging*.

**logical drive:** That portion of the space on a *disk drive* that is considered by the *software* to be a single unit. In this context, *logical* means “conceptual.” because there is no direct relationship between the name and a physical object. See also *partition*, *volume*.

**login credentials:** The username and password that allows access to a computer user account.

**long filenames:** In the DOS operating system, filenames were limited to a maximum of eight characters, followed by a period and up to three characters to indicate the type of file. This is also referred to as the 8.3 file naming convention. The *Windows 95/98/Me*, *Windows NT*, *Windows 2000*, *Windows XP*, and *Windows Server 2003* operating systems allow filenames that are over 200 characters long. In addition, these filenames may contain a mixture of upper- and lowercase characters and embedded spaces.

**master file table (MFT):** On an *NTFS volume*, the master file table is a *file*, which contains information about all other files in that volume. This includes the name of each file, its physical location on the disk, and other information.

**media:** A collective word for the physical material on which computer-based information is stored, such as a *CD-ROM* or *floppy disk*. Media is the plural of *medium*, but like *data* is often used in the singular form.

**medium:** See *media*.

**memory:** The computer's temporary working storage, where *program* instructions and *data* are kept, permitting the *CPU* to process the instructions.

**MFT:** See *master file table*.

**Microsoft:** A computer *software* company, with its head office in the state of Washington; creators of the *MS-DOS* and *Windows operating systems*.

**MMC:** Microsoft Management Console. MMC can be used to create, save and open administrative tools (called *snap-ins*), such as Diskkeeper. MMC provides a common user interface for system tools, as well as a system for managing hardware, software and network components.

**MS-DOS:** Microsoft Disk Operating System. An *operating system* designed for a small computer with a single user running one *application program* at a time.

**multitasking:** A feature of an *operating system*, where the computer can work on more than one *task* at a time. See also *background processing*.

**network:** A group of computers that are connected together and capable of exchanging data with each other. See also *server*, *client*.

**NTFS:** New Technology File System. A file system designed specifically for use with Windows NT, Windows 2000, Windows XP, and Windows Server 2003.

**OEM:** Acronym for original equipment manufacturer. The term is misleading, because an OEM typically buys computers from another manufacturer, customizes them for a particular application, and then sells them under the OEM's own brand name.

**operating system:** A collection of *programs*, which perform *system* functions and control the running of *application* programs and the allocation of *resources*.

**OSR 2:** Acronym for *OEM Service Release 2*, a version of *Windows 95* released in late 1996, which features an improved file system, called *FAT32*, while the original version of *Windows 95* used *FAT16*.

**page file or paging file:** An area of a disk that is set aside to hold *data* intended to reside in the computer's *memory*. Portions of the paging file are copied to memory as needed. This mechanism requires a much smaller amount of physical memory than would be required if the entire *program* were to be loaded into memory all at once. See also *swap file*.

**partition:** A subdivision of the space on a *disk drive* that is treated as though it were a separate physical unit. A computer with only one hard disk drive can have a single partition, often called drive C:, or it can have several partitions, such as drive C:, drive D:, and drive E:. See also *volume*, *drive letter*, *primary partition*, *extended partition*, *logical drive*.

**Pentium:** The name of a type of *processor*, introduced by *Intel* in 1993. It is the successor to the 80486 and equivalent to the 80586 chip in the *x86* series.

**peripheral device:** (Related to *periphery*, roughly meaning "on the outside.") A *device*, such as a *disk drive*, printer, keyboard or mouse, connected to and used by a computer.

**permission:** The ability of a user on a computer *system* to *access* or modify *files*, especially those that he or she did not create. Permissions exist for security reasons, to prevent unauthorized access to sensitive information. The *system administrator* assigns permissions, or "who has access to what."

**platform:** The environment, in which a computer system operates, either based on the computer's *CPU* or its operating system. For example: the *x86* platform, or the *Windows Server 2003* platform.

**platter:** A *disk drive* consists of one or more platters, each of which can receive magnetic recordings on both sides. The platter spins like a phonograph record on a turntable.

**primary partition:** In *Windows* and *MS-DOS operating systems*, the disk space on a *disk drive* may be divided into a maximum of four primary partitions; or three primary partitions plus an *extended partition*, which in turn can contain one or more *logical drives*.

**priority:** On a *Windows system*, several *programs* can appear to be running at once, even though the *CPU* can only process one instruction at a time. With the help of the *operating system*, the CPU processes a few instructions from one program, then a few instructions of the next program, and so on, over and over. Without priority assignments, each program would be given about the same amount of time in each “time slot.” but by assigning priorities, the more important programs can be given longer time intervals than the less important ones, allowing them to complete faster.

**process:** A *program*, along with the system *resources* the program requires to run. A process represents a unit of resource ownership and work to be done. The *operating system* creates processes to keep track of resources and to ensure the proper scheduling of *tasks*.

**processor:** See *central processing unit*.

**program:** A set of instructions that tell a computer what to do. Synonym: *software*.

**RAID:** Redundant Array of Independent Disks. A method of combining several *disk drives* to make one large volume. Typically used on a *network file server* to achieve faster *access*, greater protection against disk failure, or both.

**record:** A collection of related *data* items, treated as a unit. For example, in a *file* containing information about a company’s customers, one record would consist of the particulars (name, address, phone number, etc.) of one customer. See also *field*.

**registry:** A *database* that contains information about current *hardware* settings, installed *software*, user preferences and associations between *file* types, and *applications* that *access* those files.

**resource:** Any part of a computer system, such as a *disk drive*, printer, or *memory*, which can be used by a *program*.

**scandisk:** A program (supplied with Windows 95, Windows 98 and Windows Me) that checks the integrity of a disk and corrects disk errors such as lost *clusters*. See also *CHKDSK*.

**SCSI:** Small Computer System Interface. One of two common methods of *interfacing disk drives* and other *devices* to computers. See also *IDE*.

**server:** On a computer network, a computer that makes *resources* available to other computers (*clients* or *workstations*.) For example, all the computers on a network can be set up to share a single high-speed printer, which is connected to the server. Usually, the server is faster and more powerful than the client computers connected to it.

**service:** A process that performs a specific system function and often provides an application programming interface (API) for other processes to call. *Diskeeper* uses a *Windows* service, which allows *Diskeeper* to run in the *background* while other applications are running.

**Service Pack:** A collection of *software* used to issue corrections and updates to software between major releases. Usually refers to compilations of corrections and updates to a *Windows* operating system.

**Set It and Forget It:** A term that was created by Executive Software, which is a registered trademark and hallmark of the company. A “Set It and Forget It” product can operate transparently (unseen by the user) and in the *background* (concurrent with other *applications*). After a schedule is set up for its operation, it thereafter performs its functions at predetermined times, without further intervention or attention from the user or *administrator*.

**Smart Scheduling:** A feature, introduced with *Diskeeper* 6.0, which has a built-in mechanism to determine how frequently a disk *volume* needs to be *defragmented*. With Smart Scheduling, *Diskeeper* automatically

schedules defragmentation runs to occur more often when a disk volume becomes more fragmented, or less often when it becomes less fragmented.

**SMS:** System Management Server. A *software* product from *Microsoft*, which permits the *system administrator* on a Windows NT, Windows 2000 or Windows Server 2003 *network* to do such things as install and run new software on different computers on the network, all from a single location.

**snap-in:** A program, such as Diskkeeper, that can be used with the Microsoft Management Console (*MMC*). For more information, see the MMC Help facility.

**software:** A generic term for computer *programs*, taken collectively. Contrast with *hardware*. Software can be categorized into *application* software and *system* software.

**sparse files:** A method of storing large files—that contain mostly empty space and not much data—in a way that uses much less disk space than would otherwise be used. Sparse file support allows an application to create very large files without committing disk space for every byte.

**swap file:** A *file* on a *disk drive* that *Windows 95/98/Me* uses to hold temporary *data* that will not fit into *memory*. When needed, the *operating system* moves data from the swap file to memory. See also *paging file*.

**system:** The collection of one or more computers and *peripheral devices*. Sometimes used as a synonym for *operating system*, or the combination of *hardware* and *software*, as a logical unit.

**system administrator:** The person in charge of maintaining a multi-user computer *system*.

**system file:** In general, a *file* that is part of, or *accessed* by, the *operating system*. The Diskkeeper Drive Map display shows certain system files in green, particularly the *master file table* (MFT) and several other files that cannot be moved safely by Diskkeeper (or any other defragmenter). These are not the files that make up the *Windows operating system*, but the files that make up the *NTFS file system*.

**task:** A *program* or portion thereof that is run as an independent entity.

**trialware:** A free software package from Executive Software, such as Diskkeeper, that has the same functionality as the official version of the software, but which works for a limited time period, after which it expires. Trialware allows you to try the software before making a buying decision.

**utility:** A *program* that provides basic services or functions.

**volume:** A subdivision of the space on a *disk drive* that is treated as though it were a separate physical unit, or a combination of physical disks treated as a single unit. A computer with only one hard disk drive can have a single volume, often called drive C:, or it can have several volumes, such as drive C:, drive D:, and drive E:. See also *drive letter*, *logical drive*, *partition*.

**volume set:** In *Windows*, a single *logical drive*, which is composed of up to 32 areas of free space on one or more *disk drives*. Volume sets can be used to combine small areas of free space on one or more disk drives into a larger logical drive, or to create a single large logical drive out of two or more small disks.

**Windows:** A family of *operating systems*, first introduced by *Microsoft* in 1983, with a *graphical user interface* and which ran on *MS-DOS* based computers. See also *Windows 95*, *Windows 98*, *Windows NT*, *Windows 2000*, *Windows XP* and *Windows Server 2003*.

**Windows 2000:** Originally named *Windows NT 5.0*, Windows 2000 is a family of operating systems for desktop computers and network servers, announced by *Microsoft* in 1998. Windows 2000 resembles *Windows NT 4.0* and *Windows 98*, but has many enhancements and new features. Windows 2000 is available in several editions, ranging from Windows 2000 Professional to Windows 2000 Advanced Server.

**Windows 95:** A version of *Windows* released in 1995. New features in Windows 95 with regard to its predecessor, Windows 3.1, include a new user interface and support for 32-bit applications. See also *OSR 2*.

**Windows 98:** Successor to the *Windows 95* operating system, Windows 98 features support for the *FAT32 file system*, greater Internet integration, and supports recent hardware developments.

**Windows Me:** Short for Windows Millennium Edition, an operating *system* released by *Microsoft* in September 2000. Successor to *Windows 98* and designed for home use, Windows Me offers enhancements in the areas of *digital media*, *user interface*, *home networking*, and the *Internet*.

**Windows NT:** An *operating system* released by *Microsoft* in 1993 (NT stands for New Technology.) It has a similar *graphical user interface* to *Windows*, but it does not run over *MS-DOS* and has been designed specifically for computer *network* environments.

**Windows Server 2003:** An operating system released by Microsoft in 2003 as the follow-up version to Windows 2000 Server. Like its predecessor, it has a similar graphical user interface to Windows, but it does not run over MS-DOS and has been designed specifically for computer network environments. Windows Server 2003 is available in Standard, Web, Enterprise, and Datacenter editions.

**Windows XP:** An operating system released by *Microsoft* in 2001 as the follow-up version to *Windows 2000*. Like its predecessor, it has a similar *graphical user interface* to other Windows versions, but it does not run over MS-DOS and has been designed specifically for computer network environments. Windows XP is available in several editions for different uses, such as Windows XP Professional for corporate use, or Windows XP Home Edition for home users.

**workgroup:** In *Windows NT*, *Windows 2000*, *Windows XP*, or *Windows Server 2003*, a workgroup consists of one or more computers that do not participate in a *domain* and are therefore responsible for their own security and administration.

**workstation:** A computer that has been set up for use by an individual typically connected to a *network*. The term is also used to indicate a *client* computer, in contrast with a *server*.

**x86:** Symbol to represent a series of *CPUs*, manufactured by *Intel* and others, including model numbers 8086, 80286, 80386, 80486 and 80586 (*Pentium*). All of the CPUs in this series have certain characteristics in common, which permits *software* to be written that will run on any of them.

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