

Active@ Partition Manager

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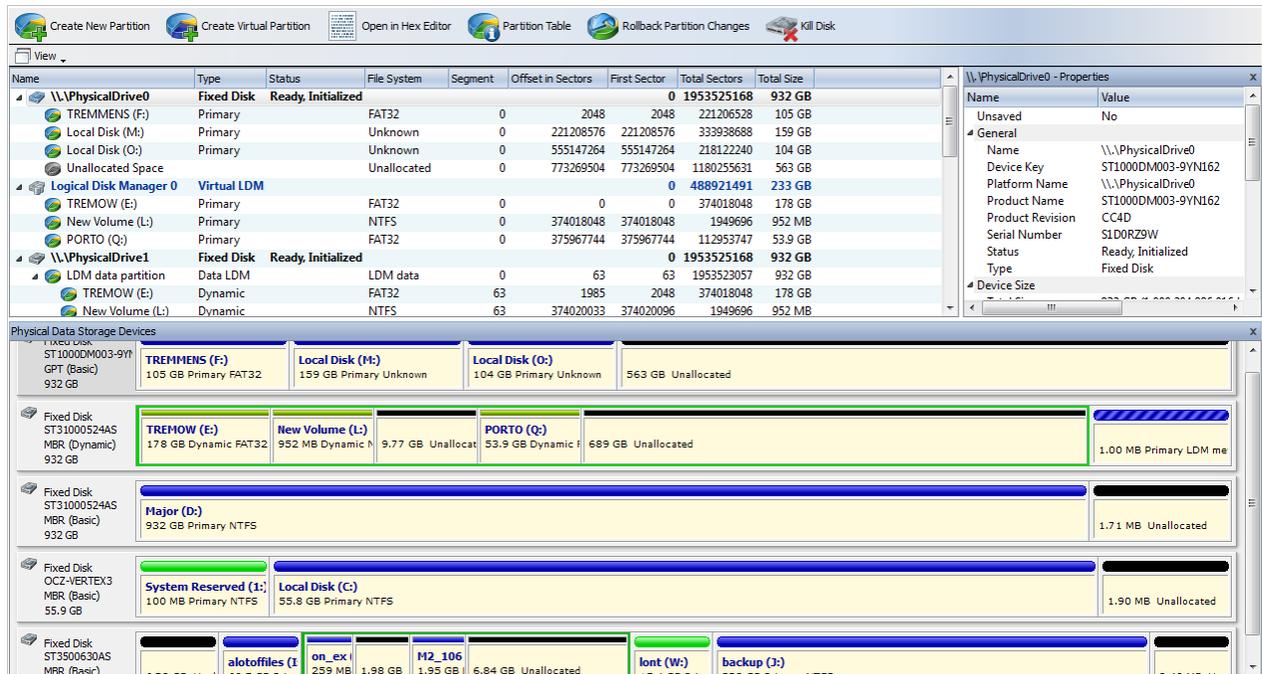
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Partition Manager Overview

Partition Manager is advanced disk utility that allows you to perform disk partitioning tasks, such as creating partitions and volumes, formatting them, and assigning drive letters. Initialize raw disk, edit partition tables and more.

Most of these changes to disk partitioning are recorded in dedicated backup files thus at any time these changes could be rollback at certain point. See [Rollback Partition Changes](#) on page 11 for more information.



The main features of Partition Manager are:

- [Initialize Disk \(Physical Device\)](#) on page 5
- [Create New Partition](#) on page 6
- [Change Partition Attributes](#) on page 8
- [Format Partition](#) on page 9
- [Edit Boot Sectors](#) on page 12
- [Edit Partition Table](#) on page 12

Active@ Partition Manager is a separate module of Active@ UNDELETE - advanced data recovery toolbox. For more features, like:

- Recovery deleted files or files from deleted or damaged partitions.
- Restore deleted or damaged partitions.
- Work with Disk Images.
- Recover data from damaged RAID's.
- Low level disk editing and more please visit [Active@ UNDELETE](#) web site.

Initialize Disk (Physical Device)

To make disk accessible for application it needs to be initialized first by one of the following partition style:

- Master Boot Record (MBR);
- GUID Partition Table

To initialize physical disk proceed as follows:

1. In **Partition Manager** select a *Disk (Physical Device)* node
2. To open the **Initialize Disk** dialog, do one of the following:
 - From the **Partition Manager** toolbar click **Initialize** button or use command **Actions > Initialize...** from main menu;
 - Right-click the selected item and click **Initialize...** command from the context menu.
3. Confirm disk selection and other options

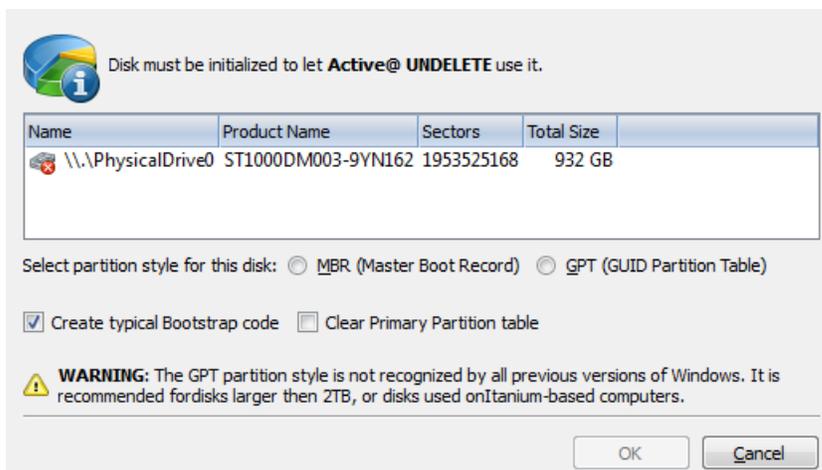


Figure 1: Initialize Disk dialog

Dialog options

Partition style

Select either *MBR* (Master Boot Record) or *GPT* (GUID Partition Table) partition style.



Note: GPT partition style is not supported by older versions of Windows. It is recommended for disks larger than 2TB. For all other purposes we recommend to use MBR partition style

Create typical bootstrap code

Default generic bootstrap code will be written if this option is on.

Clear Primary partition table

Primary partition table records will be cleared.



Warning: It is highly recommended to not clear primary partition table in case of restoring deleted or damaged disk partitioning.

4. Click **OK** to complete disk initialization.

Create New Partition

To create new partition (*Logical Drive*):

1. In **Partition Manager** select a Disk (*Physical Device*) or *Unallocated space* node.
2. To open the **Create New Partition** dialog:
 - From the toolbar click **Create New Partition** button or use command **Actions > Create New Partition...** from main menu.
 - Right-click the selected item and click **Create New Partition** command from the context menu.
3. Adjust dialog options and click **Create** button to create new partition.

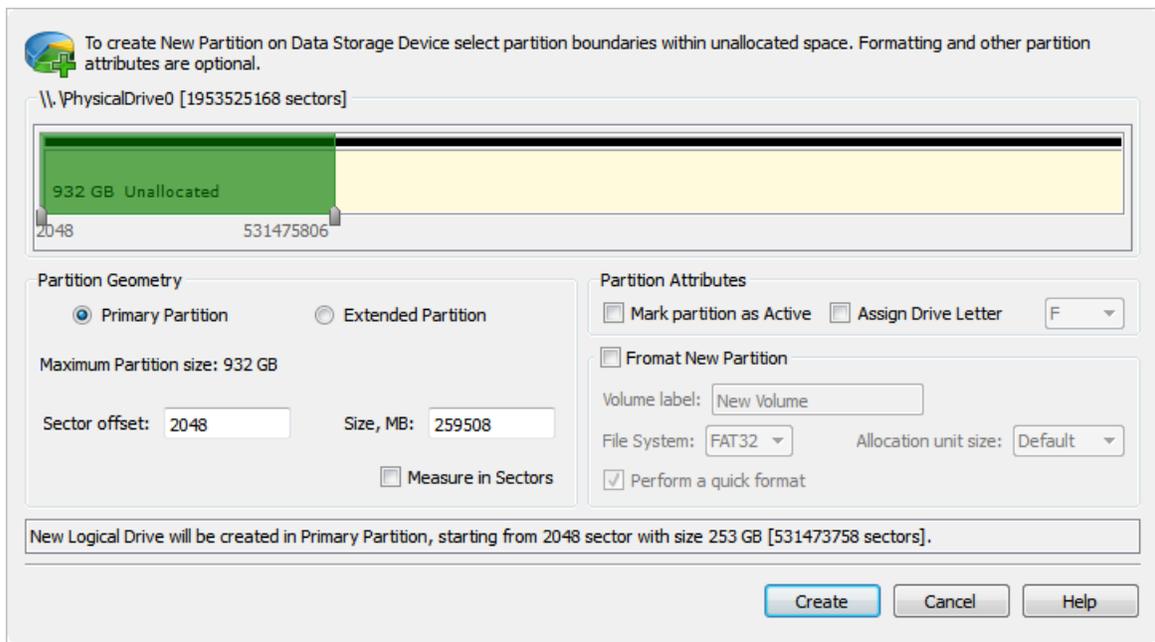


Figure 2: Create Partition dialog

Partition Geometry Primary or Extended

Partition can be created as Primary partition (of number of available Primary partitions are not exceeded) or as Extended partition.

Sector Offset

First sector of created partition. It can be set exact by numerical value entered in text box or by moving left slider in **Device View** control;

Partition Size

Partition size can be set in megabytes or in sectors, depending on state of **Measure in Sectors** check box;

Partition Geometry Mark Partition as Active

Newly created partition will be set as *Active Partition*;

Assign Drive letter

For Primary Partition or Logical Drive on extended partition drive letter can be assigned from the list of available in the system drive letters;

Format Partition [optional]

Volume label

Text label of partition (disk). This field can be blank

File System

Select file one of the supported file systems: FAT, FAT 32 or NTFS.

Unit Allocation Size

Depending on selected file system and total partition (disk) size available allocated unit size may be different. Default value of unit size is recommended.

Change Partition Attributes

To change Logical Drive (partition) attributes:

1. In **Partition Manager**, select a *Logical Drive (Partition)* node.
2. To open the **Partition Attributes** dialog, do one of the following:

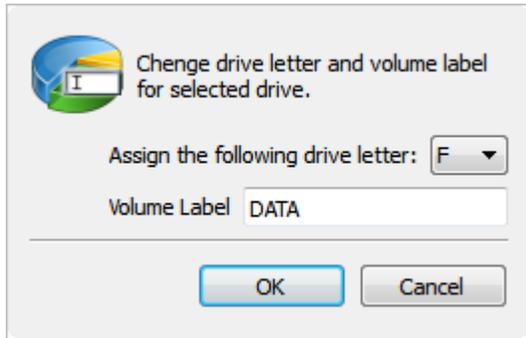


Figure 3: Create Partition dialog

- From the **Partition Manager** toolbar click **Change Attributes** button or use command **Actions > Change Attributes** from main menu;
- Right-click the selected item and click **Change Attributes** from the context menu.

Format Partition

To format *Logical Drive (Partition)*:

1. In **Partition Manager** select a *Logical Drive (Partition)* node.
2. To open the **Format Partition** dialog:
 - From the toolbar click **Format** button or use command **Actions > Format...** from main menu.
 - Right-click the selected item and click **Format...** command from the context menu.
3. Adjust dialog options and click **Format** button to format partition.

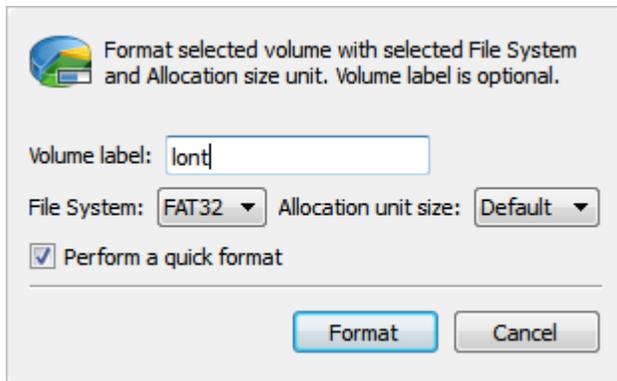


Figure 4: Format Partition dialog

Dialog Options

Volume label

Text label of partition (disk). This field can be blank

File System

Select file one of the supported file systems: FAT, FAT 32 or NTFS.

Unit Allocation Size

Depending on selected file system and total partition (disk) size available allocated unit size may be different. **Default** value of unit size is recommended.

Resize Partition

To resize *Logical Drive (Partition)*:

1. In **Partition Manager** select a *Logical Drive* (volume) node.
2. To open the **Resize Volume** dialog:
 - From the toolbar click **Resize** button or use command **Actions > Resize...** from main menu.
 - Right-click the selected item and click **Resize...** command from the context menu.
3. Adjust dialog options and click **Resize** button to format partition.

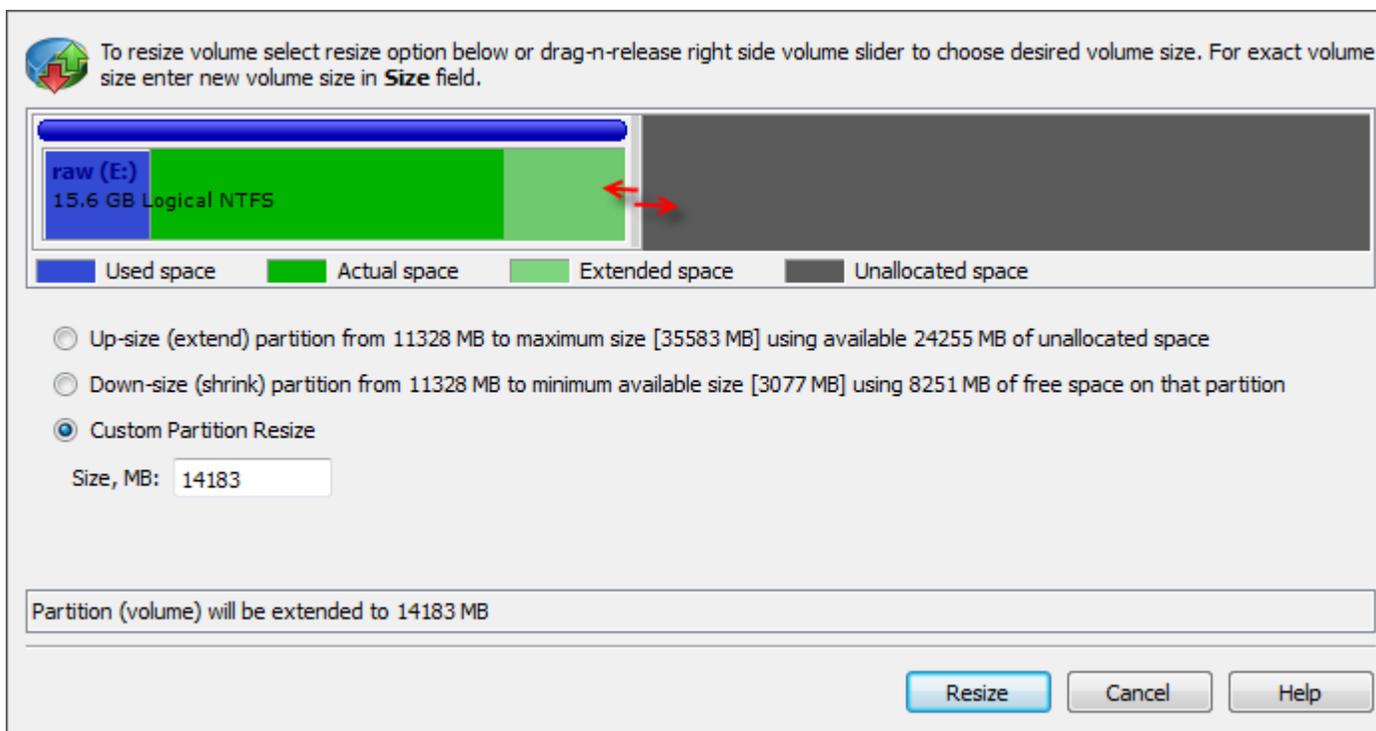


Figure 5: Resize Partition dialog

Dialog Options

Resize options

Use radio buttons to expand to use maximum space available or shrink to last used cluster.
Use **custom** option to define exact new size of partition.



Note: Use device control drag'n'release feature to set approximate partition size.

4. Click **Resize** to resize selected partition (volume).

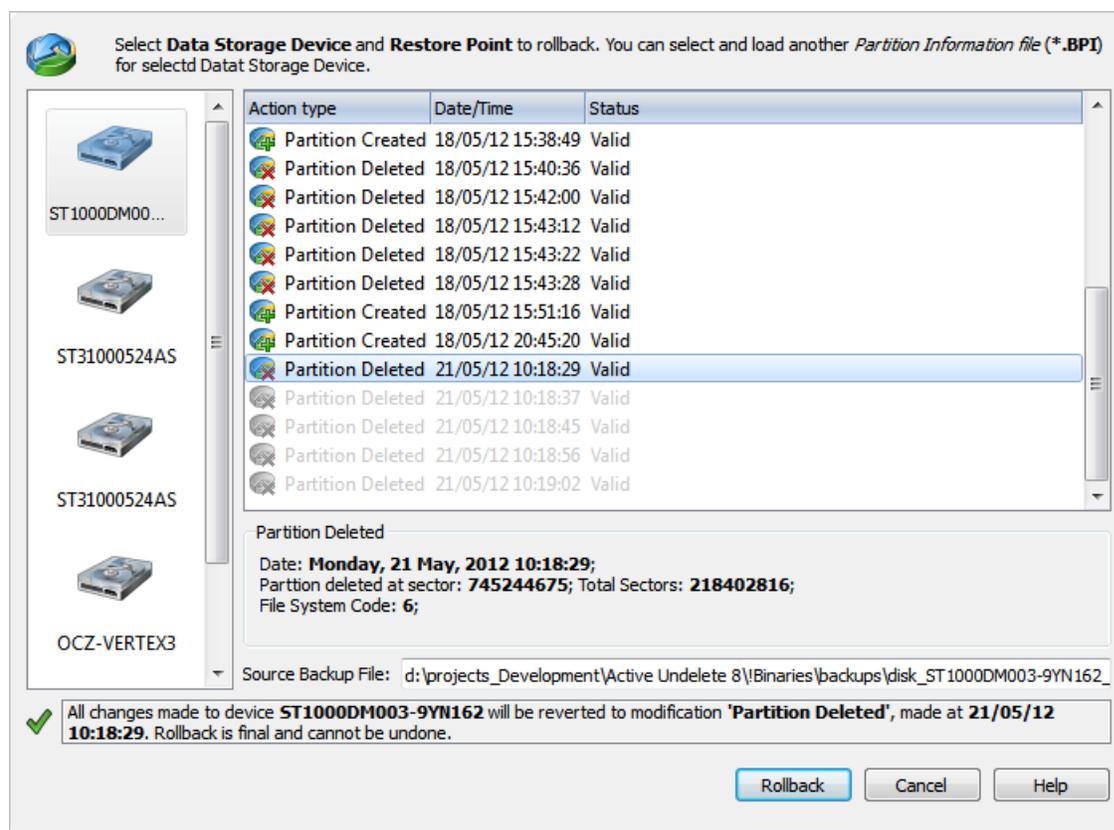
Rollback Partition Changes

Some critical partition layout changes made to a physical device are backed up by default. Users can roll back these changes at any point by using the **Roll back Partition Changes** tool. These changes are:

- Initialize Disk
- Create Partition
- Format Partition
- Delete Partition

To open the Rollback Partition Changes dialog, do one of the following:

- From the Tools menu, choose the **Roll Back Partition Changes** command.
- For a selected physical device (disk) node use the context menu **Roll Back Partition Changes** command.



To roll back changes made to a physical device, select a restore point in the chronologically ordered list and click the **Roll Back** button to complete the changes.

Advanced Editing

Edit Boot Sectors

Primary Boot Sector and *Copy Boot Sector* (if applicable) can be edited and synchronized by individual fields. Active@ UNDELETE provide "suggested" boot sector with most appropriate values for reference.

To Edit (Synchronize) boot sectors:

1. In **Partition Manager** or **Recovery Explorer** select a *Logical Drive (Partition)* node.
2. To open the **Edit Boot Sectors** dialog, do one of the following:
 - From the toolbar click **Edit Boot Records** button or use command **Actions > Edit Boot Records...** from main menu;
 - Right-click the selected item and click **Edit Boot Records...** command from the context menu.
3. Use radio buttons near the value fields to select and click **OK** button to confirm changes.

Partition Primary Boot Sector (PBS) **must** match Primary Boot Sector (CBS) and both boot sectors must be valid for the recovered drive to be accessible by operating system.
Select valid fields from either Primary Boot Sector, Primary Boot Sector or from Suggested Boot Sector.

	Primary Boot Sector [Offset, bytes: 0]	Copy Boot Sector [Offset, bytes: 536707072]	Suggested Boot Sector
00	JMP instruction <input type="radio"/> <input type="checkbox"/> EB5B90	<input type="radio"/> <input type="checkbox"/> 000000	<input checked="" type="radio"/> EB5290
03	File System ID <input checked="" type="radio"/> 4E54465320202020	<input type="radio"/> <input type="checkbox"/> 0000000000000000	4E54465320202020
0B	Bytes per sector <input checked="" type="radio"/> 0200	<input type="radio"/> <input type="checkbox"/> 0000	0200
0D	Sectors per cluster <input checked="" type="radio"/> 01	<input type="radio"/> <input type="checkbox"/> 00	01
0E	Always 00 <input checked="" type="radio"/> 0000	<input type="radio"/> <input type="checkbox"/> 0000	0000
10	Always 00 <input checked="" type="radio"/> 000000	<input type="radio"/> <input type="checkbox"/> 000000	000000
13	Always 00 <input checked="" type="radio"/> 0000	<input type="radio"/> <input type="checkbox"/> 0000	0000
15	Media descriptor <input checked="" type="radio"/> F8	<input type="radio"/> <input type="checkbox"/> 00	00
16	Always 00 <input checked="" type="radio"/>	<input type="radio"/> <input type="checkbox"/> 0000	0000
18	Sectors per track <input checked="" type="radio"/>	<input type="radio"/> <input type="checkbox"/> 0000	003F
1A	Heads <input type="radio"/> <input type="checkbox"/> 0020	<input type="radio"/> <input type="checkbox"/> 0000	<input checked="" type="radio"/> 00FF
1C	Hidden Sectors <input checked="" type="radio"/> 0000003F	<input type="radio"/> <input type="checkbox"/> 00000000	0000003F
20	Always 00 <input checked="" type="radio"/> 00000000	<input type="radio"/> <input type="checkbox"/> 00000000	00000000
24	Always 00 80 00 80 <input checked="" type="radio"/> 80008000	<input type="radio"/> <input type="checkbox"/> 00000000	80008000

Show offset in hexadecimal mode Show values in hexadecimal mode Save on Disk

Restore Defaults OK Cancel Help

Figure 6: Synchronize Boot sectors dialog box

Edit Partition Table

You can edit *Disk System Records* (MFT, Boot sector etc.) by using specially designed forms.

To edit *Partition Table*:

1. In **Partition Manager** select a *Physical Device*.
2. To open the **Edit Partition Table** dialog:
 - Use command **Actions > Partition Table...** from main menu;

- Right-click the selected item and click **Partition Table** command from the context menu.
3. Change desired fields to appropriate values

View and edit master boot record

00 Master bootstrap [first 32]: EB0600000000000033C0FA8ED0BC007CFB8ED88BF48EC0BF267E0657BF007EB9

1B8 Disk Index: BF0418E6

1BC Reserved: 0000

1FE Signature (55AA): 55AA

Partition Table Entry #1		Partition Table Entry #2	
1BE	Active Partition (80): 00	1CE	Active Partition (80): 00
1BF	Start Head: 180	1CF	Start Head: 254
1C0	Start Sector: 1	1D0	Start Sector: 63
1C0	Start Cylinder: 877	1D0	Start Cylinder: 1023
1C2	File System [hex]: 07	1D2	File System [hex]: 0F
1C3	End Head: 254	1D3	End Head: 254
1C4	End Sector: 63	1D4	End Sector: 63
1C4	End Cylinder: 1023	1D4	End Cylinder: 1023
1C6	First Sector: 14100345	1D6	First Sector: 141002505
1CA	Partition size in sectors: 126902160	1DA	Partition size in sectors: 23117535
Partition Table Entry #3		Partition Table Entry #4	
1DE	Active Partition (80): 80	1EE	Active Partition (80): 00

Show offset in hexadecimal mode

Reset OK Cancel

Figure 7: Edit Partition Table dialog

- To discard all changes and restore all values to fields in the dialog, click **Reset**.
- To save all changes made in the dialog, click **Save**.



Warning:

Saving incorrect values might render the partition useless. You may not undo changes that you make in this dialog.

Hardware Diagnostic File

If you want to contact our technical support staff for help with file recovery, a file that contains a summary of your local devices is helpful. *Active@ UNDELETE* allows you to create a summary listing file in XML format. This data format is "human-readable" and can help our technical support staff analyze your computer configuration or point out disk failures.

To create a hardware diagnostic file from the **File** menu, click **Save Hardware Info As...**



Note: To save time when contacting our technical support staff, we highly recommend that you provide us with a hardware diagnostic file

Application Log

This log view monitors each action taken by the application and displays messages, notifications and other service information. Use the messages in this screen to observe and further understand the flow of the recovery process.

We recommend that you attach a copy of the log file to all requests made to our technical support group. The entries in this file will help us resolve certain issues.

To prepare a log file, turn on **Display Trace Events** and **Write Log on Disk** options in the **Preferences** dialog box.

It is best to save the log file to a physical disk that is different from the disk that holds the deleted data. By doing this, you reduce the risk of writing over the data that you are trying to recover.