

UFS Explorer Professional Recovery



UFS Explorer Professional Recovery is an expert-level software instrument created to address highly complicated data recovery challenges.

Along with linear electronic media, like hard disks, thumb drives and memory cards, the program handles RAID-based storages with various layouts, including standard, nested, custom and specific

configurations – Drobo BeyondRAID, Synology Hybrid RAID, Btrfs-RAID and ZFS RAID-Z. The integrated decryption algorithms make it possible to open volumes encrypted with BitLocker, LUKS, FileVault 2 and APFS without having to unlock them in the operating system. The software also supports numerous file systems used in Windows, Linux, macOS and BSD, offering direct access to their content, well as a variety of storage technologies, among which are Windows Dynamic Disks, Storage Spaces and deduplication, Apple Software RAID, Core Storage and Time Machine, Linux mdadm and LVM with Thin Provisioning. Furthermore, the application allows working with various virtualization systems, like VMware, Hyper-V, VirtualBox, QEMU, XEN and many formats of disk images.

Moreover, UFS Explorer Professional Recovery features extended possibilities for efficient processing of storage devices, especially ones that demonstrate certain hardware problems. The software offers an advanced procedure for opening storages with parameters as to their usage and an opportunity to save a sparse image file with the processed data. Operations with drives connected to DeepSpar Disk Imager can be performed via LAN and controlled by the software without the need for any third-party solutions. A full or partial image of a disk can also be created with the help of an embedded imaging function with various settings for disk reading and omission of damaged blocks. A map with defective areas can be generated during imaging or through the conversion of used/free file system space to mask and employed during the recovery procedure. The raw content of files and storages can be analyzed and edited directly in the software with a broad set of supplementary tools.

UFS Explorer Professional Recovery - version 8.0 [64 bit]


Professional Recovery Open Refresh New RAID Tools About ENG

Storage properties SGI XFS volume (sector 0 on RAID5 (4 drives))

Find files and folders Quick find...

Name	Date	Type	Size
IMG_UU41/.jpg	11.12.2017 11:20:34	File	187.41 Kt
IMG_00545.jpg	11.12.2017 11:45:36	File	240.49 Kt
IMG_00551.jpg	11.12.2017 11:37:12	File	237.35 Kt
IMG_00563.jpg	11.12.2017 11:21:10	File	238.65 Kt
IMG_00587.jpg	11.12.2017 11:41:26	File	151.92 Kt
IMG_00589.jpg	11.12.2017 11:41:30	File	153.32 Kt
IMG_00591.jpg	11.12.2017 11:22:14	File	189.35 Kt
IMG_00601.jpg	11.12.2017 11:18:53	File	164.23 Kt
IMG_00603.jpg	11.12.2017 11:35:37	File	115.80 Kt
IMG_00617.JPG	11.12.2017 11:30:35	File	221.26 Kt
IMG_00621.jpg	11.12.2017 11:55:55	File	242.88 Kt
IMG_00633.jpg	11.12.2017 11:19:14	File	223.00 Kt

Selected File "IMG_00603.jpg" with own size 118587 bytes.



IMG_00603.jpg
Picture
Modified: 11.12.2017 11:35:37
Size: 115 KB

View Save as...

UFS Explorer Professional Recovery - version 8.0 [64 bit]

Professional Recovery Open Refresh New RAID Tools About ENG

Storage properties Recovery [Virtual RAID]

Processing Virtual RAID (sectors 0-2882879616)

- Analyzing allocation of current files
- Searching for lost data

1.5%. Elapsed: 00:03:15. Estimated time left: 03:25:16

Stay at this page after scan is completed

Stop scan

Logical disks	file system	total size
Local Disk (C:)	NTFS	111.45 GB
Storage (D:)	NTFS	1.82 TB

Connected st...	label/ID	start ...	total s...
Drive0: Fixed W...	WD-WCA...		465.77 GB
Software Mirro...		63	980.44 ...
Software Mirro...		2008125	4.78 GB
Software Mirro...		12016683	980.44 ...
Software RAID...		14024808	458.23 GB
Drive1: Fixed Hi...	GFK544RP...		465.77 GB
Software Mirro...		63	980.44 ...
Software Mirro...		2008125	4.78 GB
Software Mirro...		12016683	980.44 ...
Software RAID...		14024808	458.23 GB
Drive3: Fixed Hi...	GEA534RF...		465.77 GB
Software Mirro...		63	980.44 ...
Software Mirro...		2008125	4.78 GB
Software Mirro...		12016683	980.44 ...
Software RAID...		14024808	458.23 GB
RAID1 (4 drives)			980.44 ...
Ext2/3/4 partit...		0	980.44 ...
Virtual RAID			1.35 TB
SGI XFS partition		0	1.35 TB

Work with various storage technologies

This professional application provides effective means for processing a variety of storage technologies implemented in modern devices. Among them are Windows Dynamic Disks and Storage Spaces, Apple Software RAID, Core Storage and Time Machine, Linux mdadm, LVM with Thin Provisioning, Btrfs-RAID, ZFS RAID-Z, Drobo's BeyondRAID, Synology's Hybrid RAID and other specific configurations. The software also supports the technology of Microsoft data deduplication (Windows Server), enabling users to recover data lost from deduplicated NTFS and ReFS volumes.

Support of a wide range of file systems

UFS Explorer Professional Recovery offers immediate access to the available content and allows restoring lost information from a comprehensive set of file systems applied in Windows (FAT/FAT32/exFAT, NTFS and ReFS/ReFS3), macOS (HFS+, APFS), Linux (Ext2, Ext3, Ext4, SGI XFS, JFS, ReiserFS, Sun ZFS, Btrfs), BSD/Solaris (ZFS) and VMware (VMFS, VMFS6), along with the possibility to read volumes with the legacy Apple HFS file system, Novell NetWare (NWFS) and Novell Storage Services (NWFS, NSS, NSS 64) file systems.

Data recovery from RAID

The utility offers automatic assembly for various RAID setups, including non-redundant RAID level 0 and JBOD, 1 and 1E mirrors, levels 3 and 4 with dedicated and 5 and 6 with distributed parity as well as nested RAID layouts. A special syntax makes it possible to define custom RAID configurations with different data distribution algorithms. The program is also capable of performing adaptive reconstruction of a defective RAID using parity (for RAID 5 and RAID 6) or a copy of data (for RAID 1). A RAID set can be also reconstructed using disk images with the imitation of bad sectors with the help of bad sector maps.

Decryption of encrypted storages

The software supports most common disk encryption technologies, including LUKS, BitLocker, FileVault 2, APFS encryption and eCryptFS, providing the possibility of access to the intact data

and recovery of lost files from encrypted volumes in cases when the encryption key is known to the user. There is no need to run the operating system and unlock the drive – the password/key can be inserted directly in the software and it will use it to decipher the storage for further operations.

Support of modern virtualization technologies

UFS Explorer Professional Recovery allows working with virtual disks used by leading virtualization systems, including VMware, Hyper-V, VirtualBox, QEMU and XEN, as if they were ordinary physical devices, and makes it possible to open them or recover lost data even when they are stored on RAID or on another virtual machine. For example, the user can build RAID storing a VMware ESX virtual machine (VMFS file system), open a virtual disk directly from VMFS and recover data straight from the virtual machine without the need to extract the virtual disk first.

Advanced disk reading procedure

UFS Explorer Professional Recovery allows choosing the method of data access and specifying an I/O timeout for cases when reading fails due to a device error. A "read-once" option makes it possible to avoid extra read requests to the same location on the disk and save the processed information to a sparse image file, reducing the load on unstable storages and preventing their further degradation.

Extensive disk imaging possibilities

The software allows creating a full bit-to-bit copy of a storage or customizing the imaged area either by specifying ranges on the disk or by selecting a group of files to be cloned. The embedded disk imager also provides adjustable parameters such as read timeout, block size, direction, protocol and settings for the omission of defective blocks after unsuccessful reading attempts. The bad blocks encountered during the process get indicated in a map file while a log of reading errors can be saved as a report.

Defining damaged sectors

UFS Explorer Professional Recovery produces defects maps during disk imaging and supports ones created by other compatible solutions. The program can utilize such a map for the virtual definition of damaged sectors on the storage or identify bad blocks dynamically by recognizing a specified content pattern. What is more, the software provides the possibility to create a mask with emulation of defects from the used or free file system space and employ this mask for disk imaging, scanning and other operations. The masked areas can also be filled with a given template.

Customizable scanning

The software offers several scanning options, including a quick scan for defined file system types, longer profound search for lost data by known content with the possibility to provide custom IntelliRAW rules, scanning of the space used by the file system or just the “free space” areas. The scanning procedure can be paused for checking the intermediate result while its results can be saved for further references.

Sector size mutation

While a typical sector size of a hard drive is 512 bytes, some vendors, like NetApp, EMC, HP, etc. use proprietary block formats in their storage systems which makes it impossible to access data on such disks without specialized hardware. UFS Explorer Professional supports SCSI and SAS drives with a non-standard sector size (520 bytes, 524 bytes, 528 bytes and others) and performs automatic sector conversion in the conventional size of 512 bytes through metadata truncation for subsequent data recovery or access to files.

Support of DeepSpar Disk Imager

UFS Explorer Professional Recovery enables direct access via network and allows restoring files from damaged disks connected to a DeepSpar Disk Imager device with the possibility to adjust the read timeout, block size and other parameters for maximum safety and efficiency of the procedure. Moreover, the software supports disk images generated by DDI, including the “split” image format. The imaging can also be performed by DDI by a bitmap loaded into the program.

Interaction with MRT data recovery tools

The utility is compatible with MRT Data Explorer, supports task files created by this software along with defects maps associated with them and provides control over disk imaging carried out by MRT solutions, including the possibility to image by a bitmap, choose specific ranges, files/folders, etc. Also, the program allows loading file image chunks from an MRT task, sorts them automatically and fills them with the necessary spacers for further operations.

Comprehensive toolkit for data analysis

UFS Explorer Professional Recovery offers all the necessary means for efficient work with the raw content of storages, partitions, files or their fragments in a hexadecimal mode. A convenient hexadecimal viewer with a raw data inspector, position bookmarks, structure templates, reverse data address translation, parallel search, data comparison and other features significantly facilitates data parsing while a hexadecimal editor with a set of auxiliary tools enables it easy manual modification.



UFS EXPLORER

DATA RECOVERY AND ACCESS SOFTWARE