

# New Version

HDClone 9 is the **most feature-packed Update** in the history of HDClone. Since 2003, when HDClone 1.0 was first launched, 20 full versions have been developed and the Editions have increased from 2 to 7. As a result, over one hundred independent products and over 1,000 intermediate versions (Service Updates) of HDClone have been released to date. In addition, the number of available program languages has been expanded from 2 languages initially to 9 languages today. This reflects the worldwide popularity of HDClone, as confirmed by our customers in more than 160 countries.



## What's New?

HDClone 9 brings **additional new apps** to replace and enhance the previous program functions VM Image, SmartImage, SmartCopy, Restore/Recovery. These previous program functions will remain in the 'Classic' tab until the next version in order to provide an easier transition for users.

The **newly arranged system bar** offers an improved overview as well as new functions. Several menu items, such as the Screenshot function, have been reorganized. The License applet provides convenient access to online product and license information. The Notify applet, which informs of Service Updates, now also allows you to clear the download.

The **support of Windows Server systems** (Professional Edition and higher) represents another change. With version 9, instead of the runtime system, the data source (disk or image) is now the crucial factor. As a result, the Professional Edition is the minimum required Edition when copying, backing up or restoring Windows Servers.

The **single file image format MFI**, already introduced with HDClone 8 becomes the default format in HDClone 9.

## New Features

### DataSelect – Select Files and Folders | 9.0 PE and up

With DataSelect, you can select individual files and folders from the source, which saves copying time and storage space. It also allows you to migrate disks on which the total amount of data is actually too large. Backups and images can be narrowed down to specific files and folders.

### Updated PartitionResize & PartitionSelect | 9.0 PE and up

The features to select partitions (PartitionSelect) and to adjust partition sizes (PartitionResize) have been completely renewed. Both have been designed for enhanced simplicity and clarity. Also, any changes can be more comprehensively managed and conveniently monitored.

### Enhanced SmartImage & VM Image | 9.0 PE and up

Both apps have been enhanced by the features PartitionSelect, DataSelect, the new status display and by new and improved reports.

### HotCopy/LiveImage with Verification | 9.0 PE and up

Copies and images from the system drive that are created on Windows with HDClone/W during a running operation (HotCopy and LiveImage), can now subsequently be verified.

### Updated Restore/Recovery & SmartCopy | 9.0 PE and up

The completely newly developed apps replace the previously used program functions for copying and restoring images and backups. The new apps facilitate the use of the program by providing a more comprehensive layout. In addition, the also newly developed features PartitionSelect, PartitionResize and DataSelect as well as the new status indicator and the improved reports have been integrated.

### New and Improved Reports | 9.0 PE and up

The new apps also come with new and improved reports that contain useful advanced information.



## Spot is Now a File Manager | 9.0 PE and up

To date, the app Spot had been a mere file browser that was used to view folder structures and files. Now you can also use the app to [copy, move and delete files and folders](#), especially in the self-booting variants HDClone/S and HDClone/L.

## File Access in Images | 9.0 PE and up

The new Spot File Manager also allows the self-booting variants HDClone/S and HDClone/L to [access individual files and folders within an image](#) by first mounting them with the Virtual Disk applet. Up until now, this could only be done on Windows (HDClone/W), and only with Miray Virtual Disk (MVD).

## New Status Indicator | 9.0 PE and up

The [newly developed and comprehensively arranged status indicator](#) offers a [clear overview](#) of essential and detailed information both during an active process and once the process is completed.

## Write Access for Ext File Systems | 9.0 PE and up

[Write access to files and folders](#) is now possible for Ext2, Ext3 and Ext4 file systems. Images can therefore be saved directly on Ext disks. Also, with Spot's new file managing capabilities, you can [copy and delete files and folders directly to and from Ext disks](#).

## Use Virtual Disks with Overlay | 9.0 PE and up

The [Virtual Disk applet](#) can now also [open overlays](#) as well as [create new ones](#). This allows you to save changes to the Virtual Disk without changing the original image. Until now, this was only possible with Miray Virtual Disk (MVD) on Windows. It is now also available in the [self-booting variants HDClone/S and HDClone/L](#).

## All-new CLI | 9.0 EE and up

[HDClone's command line interface \(CLI\)](#) on Windows (HDClone/W) has been redeveloped from the ground up. It facilitates the integration into scripts, including redirection of the output. Moreover, the CLI has been divided into task-specific modules. The new development brings a lot of enhanced details, such as [direct help with syntax highlighting](#) and a [faster program start](#).

## 64-Bit Boot Setup | 9.0 PE and up

The Boot Setup, which creates boot media with HDClone/S, and optionally HDClone/L and HDClone/S64 on Windows, now supports 64-bit. This allows [boot media to be created on a pure 64-bit Windows](#) (without WoW64, e.g. Windows PE 64).

## Jumplist and Explorer Integration | 9.0 PE and up

On Windows (HDClone/W), the most important apps can now be [started directly from a jumplist](#). HDClone can also be [opened via the Windows Explorer by right-clicking on an HDClone image](#).

## HDClone/S Native for 64-Bit | 9.0 PE and up

The [self-booting variant HDClone/S64](#) for [64-bit systems](#) extends the usable RAM from 2 GB to as much as 256 terabytes. A number of program functions benefit from this, especially the new DataSelect.

## Direct Access to File Systems | 9.0 PE and up

The Spot File Manager can copy files and folders [between HDClone-supported file systems](#). This allows access to Ext, XFS, Btrfs, HFS+, and APFS even on Windows with HDClone/W, although these are not supported by Windows.

## Resizing Linux Retains Bootability | 9.0 PE and up

If common [Linux installations](#) are [enlarged or reduced in size](#) during copying or restoring, HDClone can now adjust them in a way that they [remain bootable](#) despite resizing.

## Raspberry Pi and Windows 10 IoT Images | 9.0 PE and up

By specifically supporting the official boot images of [Raspberry Pi and Windows 10 IoT](#), HDClone 9 is able to [transfer or copy](#) them directly to a boot media (SD card) and can also automatically [enlarge or reduce](#) their size, if necessary.

## DiskTest App – Storage Media Test | 9.0 PE and up

This disk surface test can be used to check [disks, SSDs, flash drives and USB sticks](#) for faulty memory. The scope ranges from basic tests to advanced quality assurance tests.

## Smaller Differential Backups | 9.0 AE and up

With Differential Backups and Differential Images that are created [directly in Windows](#) (LiveImage), specific temporary files are recognized and are [no longer included](#) in the backup.



## Feature Matrix

In the following table you will find the main features that have been added to HDClone 9 in the overview along with the availability in the respective editions. An unfilled dot (◻) indicates that the feature exists, but can only be partially used due to general limitations of the respective edition.

Ver. New Features in HDClone 9	FE	BE	SE	AE	PE	EE
9.0 <b>DataSelect</b> – choose files and folders				▪	▪	▪
9.0 <b>PartitionResize</b> – new and improved version (FE: enlarging only)	◻	▪	▪	▪	▪	▪
9.0 <b>PartitionSelect</b> – new and improved version			▪	▪	▪	▪
9.0 <b>SmartImage app</b> – new and improved version			▪	▪	▪	▪
9.0 <b>VM Image app</b> – new and improved version					▪	▪
9.0 <b>Verification for HotCopy/LiveImage</b> on Windows (HDClone/W)			▪	▪	▪	▪
9.0 <b>Restore app</b> and <b>Recovery app</b> – new and improved version	▪	▪	▪	▪	▪	▪
9.0 <b>FullCopy app</b> (FE and up) and <b>SmartCopy app</b> (SE and up) – new and improved version	◻	◻	▪	▪	▪	▪
9.0 <b>Reports</b> – comprehensively updated format and content					▪	▪
9.0 <b>Spot File Manager</b> – copy, move and delete files				▪	▪	▪
9.0 <b>File access in images</b> – without MVD and now also with HDClone/S + HDClone/L					▪	▪
9.0 <b>New and enhanced Status Indicator</b> to show progress and completion	▪	▪	▪	▪	▪	▪
9.0 <b>Ext file system</b> – save images and files to Ext				▪	▪	▪
9.0 <b>Virtual disks now with Overlay</b> to be mounted directly in HDClone					▪	▪
9.0 <b>Completely new CLI</b> – more options and better job integration						▪
9.0 <b>64-bit Boot Setup</b> – native 64-bit Windows application					▪	▪
9.0 <b>Jumplist</b> – to quickstart in Windows	▪	▪	▪	▪	▪	▪
9.0 <b>Windows Explorer integration</b> – start HDClone directly	▪	▪	▪	▪	▪	▪
9.0 <b>64-bit HDClone/S</b> – native 64-bit boot version (x64)					▪	▪
9.0 <b>Use external file systems</b> – also in Windows	◻	◻	◻	▪	▪	▪
9.0 <b>Retain bootability when resizing Linux</b> (for GRUB and Syslinux)				▪	▪	▪
9.0 <b>Raspberry Pi images</b> enlarge directly when importing					▪	▪
9.0 <b>Windows 10 IoT</b> – resize while retaining bootability	▪	▪	▪	▪	▪	▪
9.0 <b>DiskTest App</b> – disk surface test for HDD, SSD and flash					▪	▪
9.0 <b>Smaller Differential Backups</b> – omit temporary files				▪	▪	▪



## Information on Modifications

The following information pertains to modifications which do not represent features in the actual sense, yet which bring about a different or new program behavior in comparison to the previous version. Therefore, this information is specifically aimed at users of older HDClone versions.

### HDClone Images

The single file image (.MFI), which was already introduced with HDClone 8, is now the standard image type in HDClone 9. An MFI file is automatically generated when the image type "HDClone Image" is selected. While HDClone Images in the old format (file folders with the extension ".img" and various individual files) can still be used, they can no longer be created.

### RAW Images

RAW images created with HDClone 9 (direct 1:1 image without additional information ≠ BitImage) have the extension .IMG in place of .RAW. This is more consistent with common file extension conventions. When reading RAW images (e.g. Restore), HDClone supports the extensions .RAW and .BIN in addition to .IMG.

### Classic Tab

HDClone 9 features new app versions that replace previous apps (see also "New Features"). To facilitate the transition for our users, the previous apps remain available under the new "Classic" tab, which contains the entries of the former "QuickStart" tab. The "QuickStart" tab itself has been slightly redesigned and now holds the new app versions.

Note: The "Classic" tab is intended for use during the transition and will be removed after HDClone 9. Therefore, please use the apps in the other tabs whenever possible.

### Updates, Product and License Information

The License applet in the system bar has been redesigned and, on Windows (HDClone/W), now offers direct access to information in the web browser. Information includes the current license status, program changes and improvements (ChangeLog), or the applicable Update and Upgrade options (Upgrade Configurator). In HDClone/S and HDClone /L, a corresponding QR code is displayed which can be used to open the requested site on a smartphone or tablet without having to enter its link manually.

### User Manual and Inline Help

In order to facilitate the search for information within the user documentation, additional parts of the user manual have been incorporated into the Inline Help, which provides a clickable index and a search function. In addition, the information in the Inline Help can be accessed automatically and according to the context, i.e. the respective Help page is invoked for the currently used program function.

### The Newly Arranged System Bar

Some functions in the system bar have been rearranged. The "Save Log" and "Saved Log Files" functions have been moved from the "Toolbox" applet to the "Heartbeat" applet, as this applet contains functions that address the system status, which also applies to the logs. The "Screenshot" and "Saved Screenshots" functions have been moved from the Toolbox applet to the Screen applet. The "Spot" File Manager and the "Pad" Text Editor can now be accessed from the "Toolbox" applet.