

## NAME

**devdump**, **isoinfo**, **isovfy**, **isodump** - Utility programs for dumping and verifying iso9660 images.

## SYNOPSIS

**devdump** *isoimage*

**isodump** *isoimage*

**isoinfo** [ *options* ] [ **find** [ *find expression* ] ]

**isovfy** *isoimage*

## DESCRIPTION

**devdump** is a crude utility to interactively display the contents of device or filesystem images. The initial screen is a display of the first 256 bytes of the first 2048 byte sector. The commands are the same as with **isodump**.

**isodump** is a crude utility to interactively display the contents of iso9660 images in order to verify directory integrity. The initial screen is a display of the first part of the root directory, and the prompt shows you the extent number and offset in the extent.

You can use the 'a' and 'b' commands to move backwards and forwards within the image. The 'g' command allows you to goto an arbitrary extent, and the 'f' command specifies a search string to be used. The '+' command searches forward for the next instance of the search string, and the 'q' command exits **devdump** or **isodump**.

**isoinfo** is a utility to perform directory like listings of iso9660 images.

**isovfy** is a utility to verify the integrity of an iso9660 image. Most of the tests in **isovfy** were added after bugs were discovered in early versions of **mkisofs**. It isn't all that clear how useful this is anymore, but it doesn't hurt to have this around.

## OPTIONS

The options common to all programs are **-help**, **-h**, **-version**, **i=name**, **dev=name**. The **isoinfo** program has additional command line options. The options are:

**-help**

**-h** print a summary of all options.

**-d** Print information from the primary volume descriptor (PVD) of the iso9660 image. This includes information about Rock Ridge, Joliet extensions and Eltorito boot information if present.

**-f** generate output as if a 'find . -print' command had been run on the iso9660 image. You should not use the **-l** image with the **-f** option. The same output is created by calling *isoinfo* with **-find -print**

**-find** *find expression*

This option acts as a separator. If it is used, all **isoinfo** options must be to the left of the **-find** option. To the right of the **-find** option, *mkisofs* accepts the find command line syntax only. If the find expression includes a **-print** or **-ls** primary, the **-l to isoinfo** is ignored. If the find expression evaluates as true, the selected action (e.g. list the ISO-9660 directory) is performed.

**-i iso\_image**

Specifies the path of the iso9660 image that we wish to examine. The options **-i** and **dev=target** are mutual exclusive.

**-ignore-error**

Ignore errors. The commands by default aborts on several errors, such as read errors. With this option in effect, the commands try to continue. Use with care.

**dev=target**

Sets the SCSI target for the drive, see notes above. A typical device specification is **dev=6,0**. If a filename must be provided together with the numerical target specification, the filename is implementation specific. The correct filename in this case can be found in the system specific manuals of the target operating system. On a *FreeBSD* system without *CAM* support, you need to use the control device (e.g. */dev/rcd0.ctl*). A correct device specification in this case may be **dev=/dev/rcd0.ctl:@**.

On Linux, drives connected to a parallel port adapter are mapped to a virtual SCSI bus. Different adapters are mapped to different targets on this virtual SCSI bus.

If no *dev* option is present, the program will try to get the device from the **CDR\_DEVICE** environment.

If the argument to the **dev=** option does not contain the characters ',', '/', '@' or ':', it is interpreted as an label name that may be found in the file */etc/default/cdrecord* (see FILES section).

The options **-i** and **dev=target** are mutual exclusive.

**-debug**

Print additional debug information. This enables e.g. printing of all directory entries if a file has more than one directory entry and printing of more information from the primary volume descriptor.

In debug mode, Rock Ridge information is parsed with **-R** even if it is not standard compliant.

- l** generate output as if a 'ls -lR' command had been run on the iso9660 image. You should not use the **-f** image with the **-l** option.

The numbers in square brackets are the starting sector number as decimal number (based on 2048 bytes per sector) and the iso9660 directory flags as hexadecimal number as follows:

**0x00**

A plain file (not really a flag).

**0x01**

Hide the file name from directory listings.

**0x02**

A directory.

**0x04**

An associated file (e.g. an Apple resource fork).

**0x08**

Record format in extended attributes is used.

**0x10**

No read/execute permission in extended attributes.

**0x20**

reserved

**0x40**

reserved

**0x80**

Not the final entry of a multi extent file.

**-N sector**

Quick hack to help examine single session disc files that are to be written to a multi-session disc. The sector number specified is the sector number at which the iso9660 image should be written when send to the cd-writer. Not used for the first session on the disc.

- p** Print path table information.
- R** Extract information from Rock Ridge extensions (if present) for permissions, file names and ownerships.
- s** Print file size info in multiples of sector size (2048 bytes).
- J** Extract information from Joliet extensions (if present) for file names.
- j charset**  
Convert Joliet file names (if present) to the supplied charset. See **mkisofs(8)** for details.

**-T sector**

Quick hack to help examine multi-session images that have already been burned to a multi-session disc. The sector number specified is the sector number for the start of the session we wish to display.

- X** Extract files from the image and put them into the filesystem. If the **-find** option is not used, all files are extracted.

The **isoinfo** program supports to extract all files, even multi extent files (files > 4 GB).

Before extracting files using the **-X** option, it is recommended to change the current directory to an empty directory in order to prevent to clobber existing files.

**-x pathname**

Extract specified file to stdout. The **pathname** needs to start with a slash ( '/') and in case of iso9660 names, must match the full pathname of the file including the version number (usually ' ;1 '). If the option **-R** has been specified and the filesystem carries Rock Ridge attributes, the **pathname** must match the full Rock Ridge pathname of the file.

## ENVIRONMENT

### CDR\_DEVICE

This may either hold a device identifier that is suitable to the open call of the SCSI transport library or a label in the file /etc/default/cdrecord.

**RSH**

If the **RSH** environment is present, the remote connection will not be created via **rcmd(3)** but by calling the program pointed to by **RSH**. Use e.g. **RSH=/usr/bin/ssh** to create a secure shell connection.

Note that this forces the program to create a pipe to the **rsh(1)** program and disallows the program to directly access the network socket to the remote server. This makes it impossible to set up performance parameters and slows down the connection compared to a **root** initiated **rcmd(3)** connection.

**RSCSI**

If the **RSCSI** environment is present, the remote SCSI server will not be the program **/opt/schily/sbin/rscsi** but the program pointed to by **RSCSI**. Note that the remote SCSI server program name will be ignored if you log in using an account that has been created with a remote SCSI server program as login shell.

**FILES**

**/etc/default/cdrecord**

Default values can be set for the following options in **/etc/default/cdrecord**.

**CDR\_DEVICE**

This may either hold a device identifier that is suitable to the open call of the SCSI transport library or a label in the file **/etc/default/cdrecord** that allows one to identify a specific drive on the system.

## Any other label

is an identifier for a specific drive on the system. Such an identifier may not contain the characters **'', '/', '@'** or **':'**.

Each line that follows a label contains a TAB separated list of items. Currently, four items are recognized: the SCSI ID of the drive, the default speed that should be used for this drive, the default FIFO size that should be used for this drive and drive specific options. The values for *speed* and *fifosize* may be set to -1 to tell the program to use the global defaults. The value for *driveropts* may be set to "" if no driveropts are used. A typical line may look this way:

```
teac1= 0,5,0    4      8m    ""
yamaha= 1,6,0  -1      -1    burnfree
```

This tells the program that a drive named *teac1* is at scsibus 0, target 5, lun 0 and should be used with speed 4 and a FIFO size of 8 MB. A second drive may be found at scsibus 1, target 6, lun 0 and uses the default speed and the default FIFO size.

## SEE ALSO

**mkisofs(8)**, **cdrecord(1)**, **readcd(1)**, **scg(4)**, **rcmd(3)**, **ssh(1)**.

## BUGS

The user interface really sucks.

## AUTHOR

The author of the original sources (1993 ... 1998) is Eric Youngdale <ericy@gnu.ai.mit.edu> or <eric@andante.jic.com> is to blame for these shoddy hacks.

Joerg Schilling wrote the SCSI transport library and its adaptation layer to the programs and newer parts (starting from 1999) of the utilities, this makes them Copyright (C) 1999-2018 Joerg Schilling. Patches to improve general usability would be gladly accepted.

## FUTURE IMPROVEMENTS

These utilities are really quick hacks, which are very useful for debugging problems in **mkisofs** or in an **iso9660** filesystem. In the long run, it would be nice to have a daemon that would NFS export a **iso9660** image.

The **isoinfo** program is probably the program that is of the most use to the general user.

## SOURCE DOWNLOAD

The source code for **devdump**, **isodump**, **isoinfo** and **isovfy** is included in the **schilytools** project and may be retrieved from the **schilytools** project at Codeberg at:

**<https://codeberg.org/schilytools/schilytools/>**

The download directory is:

**<https://codeberg.org/schilytools/schilytools/releases>**

**INTERFACE STABILITY**

The interfaces provided by **readcd** are designed for long term stability. As **readcd** depends on interfaces provided by the underlying operating system, the stability of the interfaces offered by **readcd** depends on the interface stability of the OS interfaces. Modified interfaces in the OS may enforce modified interfaces in **readcd**.