
Directory File Show (DF-SHOW) Documentation

Release 0.9.0

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May 15, 2020

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Introduction to DF-SHOW

This is a set of applications which display files and directories. The following programs are included:

- sf** The Show File application displays a text file on screen and allows for easy navigation. The program can be invoked by the `sf` command for a specific file or from the `show` application.
- show** The Show Directory application displays all or some of the names of the files on a system with information about the files. From this program, files can be copied, deleted, displayed, edited (in your favorite editor), or renamed by simply positioning the cursor to the desired file name and using a single command character. The application is invoked by the `show` command similar to the standard `ls` command.

2.1 Pre Built Packages

2.1.1 Arch

Releases of DF-SHOW are available in the AUR

```
curl -L https://aur.archlinux.org/cgit/aur.git/snapshot/dfshow.tar.gz | tar xz
cd dfshow
makepkg -srci
```

The latest cutting edge versions from the master branch are also available in the AUR

```
curl -L https://aur.archlinux.org/cgit/aur.git/snapshot/dfshow-git.tar.gz | tar xz
cd dfshow-git
makepkg -srci
```

2.1.2 Ubuntu

Run the following to install DF-SHOW from the [Launchpad hosted PPA](#)

```
sudo add-apt-repository ppa:ian-hawdon/dfshow
sudo apt-get update
sudo apt-get install dfshow
```

2.1.3 RPM Based Distributions

Packages are available from the [Fedora Copr](#) build service:

If you're using a version of Linux with dnf:

```
sudo dnf copr enable roberthawdon/DF-SHOW
```

you need to have `dnf-plugins-core` installed

```
sudo dnf install dfshow
```

If you have older distribution:

```
sudo yum copr enable roberthawdon/DF-SHOW
```

you need to have `yum-plugin-copr` installed

```
sudo yum install dfshow
```

For more information, please see the [roberthawdon/DF-SHOW](#) repository.

2.1.4 macOS

Versions of DF-SHOW for macOS are provided via Homebrew. Homebrew is available for macOS versions 10.6 (Snow Leopard) and above. Any version of macOS supporting Homebrew can be used to install DF-SHOW.

Please visit the [Homebrew homepage](#) for instructions for installing Homebrew on your Mac.

To install DF-SHOW via Homebrew, run the following in your terminal:

```
brew tap roberthawdon/dfshow  
brew install dfshow
```

2.2 Building from Source

Ensure you have the following dependencies installed:

- Your system's build tools
- A C compiler (`gcc` or `clang`)
- `ncurses` development packages
- `libconfig` development packages

Download the project and prepare sources.

```
git clone https://github.com/roberthawdon/dfshow  
cd dfshow  
./bootstrap  
./configure
```

On systems with SELinux, you can enable support for this by passing the `--with-selinux` option to `configure`.

On some BSD systems, you may need to pass extra parameters to `configure` and build DF-SHOW:

```
./configure LDFLAGS="-L/usr/local/lib" CFLAGS="-I/usr/local/include"
```

Build DF-SHOW with

```
make
```

Install DF-SHOW

```
sudo make install
```


3.1 Overview

The `show` application lets users view the names of files and directories on a disk with information about the files. Files can be copied, moved, viewed, and edited (in your system's default editor). The application is run using the `show` command. The output is similar to the `ls` command.

The screen is divided into three parts. The first is the command bar which displays the functions available, their hotkeys, and additional prompts when requested. The commands are described in more detail in the *commands* and *global commands* sections.

The second part is the middle of the screen between the top and bottom rows. This displays information for the files and directories and is known as the display window. The top three rows of the display window are header lines which identify the information being displayed in each column, the number of objects in the current directory, the total space used by the files in the current directory, the remaining disk space on the mounted partition the directory resides, and the current path. Each line gives the object's permissions, hard links, the owner and group information, size of the object, date and time of the last modification, as well as the name of each file or directory.

The third part is known as the function bar, each function can be accessed by its numeric function key. The functions are described in more detail in the *functions* section.

3.2 Command line arguments

The following options are shared with `ls`:

- `-@` Displays extended attributes keys and sizes (macOS only).
- `-a`, `--all` Does not ignore files or directories starting with `..`. The `.` and `..` objects are never hidden due to their navigational functions in `show`.
- `--author` Prints the author of the file in the output.
- `-B`, `--ignore-backups` Hides files ending in `~`, often used as backup files.
- `--color[=COLOR]` Sets colorizing of files and directories. Can be set to `always` or `never`.

- f** Does not sort the output, this is equivalent to running `show` with `-aU`.
- full-time** Sets the Time/Date format to `full-iso`.
- g** Only displays the group of each object. Can be paired with `--author`.
- G, --no-group** Omits the group of each object in the output.
- h, --human-readable** Displays the file sizes in a human readable format. For example, 1024 Bytes will be represented as 1M.
- si** As above, but uses powers of 1000. (1000 = 1m)
- r, --reverse** Reverse the order of sorting. Can be paired with `-S` or `-t`.
- S** Sorts files and directories by size, largest first.
- time-style=[TIME_STYLE]** Time/Date format. Can be set to `full-iso`, `long-iso`, `iso`, or `locale`.
- t** Sorts by modification time, newest first.
- U** Displays output in the order they're found.
- Z, --context** Shows the security context of each file, if one is defined.
- 1** Only shows the file name on display.
- help** Displays help message, then exits.
- version** Displays program version, then exits.

The following options are specific to `show`:

- theme=[THEME]** Color themes. Passing this argument without an option will display available themes.
- no-danger** Disables the danger color scheme when running with elevated privileges.
- marked=[MARKED]** Displays information about marked files. Can be set to `always`, `never`, or `auto`.
- no-sf** Doesn't display files using `sf` (if installed) and defaults to the user's `PAGER` setting.
- show-on-enter** Sets the enter key to launch the `show` command instead of moving the selection down by one.
- running** Checks for parent instances of `show`, this is useful when using the Run Command option.
- settings-menu** Launch `show` directly into the settings menu.
- edit-themes** Launches `show` directly into the theme editor. (colors)
- skip-to-first** Sets the highlighted item to the first object that isn't `.` or `..`

3.3 Commands

Several commands are provided which can be used on a single file or multiple files. These commands provide a lot of the functions supported by standard Unix commands, but in a convenient user interface. The file to be operated on is selected by navigating the cursor on the line of the desired file. The highlighted (first character) of the command is used to invoke its function. Multiple files can be selected using the "Mark/Unmark" function. The following is a list of valid commands and a brief description of each.

Copy Copy file or marked files to a specified destination.

Delete Delete file or marked files.

Edit Invoke the system's text editor.

Hidden Toggle the visibility of hidden objects.

Link Create a link between files or directories.

Modify Change the owner/group or permissions of files.

Quit Quit current directory.

Rename Rename/move file or marked files.

Show Show file or directory.

Touch Change file timestamps.

eXec Runs files marked as executable.

hUnt Searches and marks files matching a string.

Each of the commands are described in the following paragraphs. If the command has any additional propts, they are also described here.

Copy Copy the selected file, or marked files to another file location. When using this command, only the destination must be specified. The destination file name is requested by one of the following prompts. An empty response to the prompt or the *ESC* key is used to abort the command. If there are no marked files, a single file copy is requested; otherwise, a multiple file copy is requested.

```
Copy file to:
```

```
Copy multiple files to:
```

If the destination file already exists, confirmation to replace the file is requested by the following prompt.

```
Replace file [<file name>]? (Yes/No)
```

Delete Delete the selected file, or marked files. As this is a destructive process, confirmation is requested by one of the following prompts. If there are no marked files, a single file delete is requested; otherwise, a multiple delete is requested.

```
Delete file? (Yes/No)
```

```
Delete file [<file name>]? (Yes/No/All/Stop)
```

For single files, a “Y” will delete files and anything else will abort the delete file operation. For multiple files, confirmation for all files is requested. A “Y” will delete the prompted file, an “N” will not delete the file, an “A” will delete all the marked files without further confirmation, and an “S” will stop the multiple delete command.

Edit This invokes the default text editor. Please consult the *man* pages of your preferred editor for more information. The edit command utilizes the *VISUAL* or *EDITOR* environment variable. If this has not been set, the following message is displayed.

```
Please export a VISUAL environment variable to define the utility program name.
```

To resolve this, set a variable to your preferred editor in your shell’s user preference file.

```
export VISUAL=/usr/bin/vi
```

Hidden This toggles the display of hidden files and directories. This allows adjustment of the *-a* option whilst in the application. If the currently selected object is hidden by this toggle, the cursor is returned to the top of the directory.

Link Creates a link to the selected file. The type of link is requested by the following prompt.

```
Link Type - Hard, Symbolic (enter = S)
```

Selecting “H” will bring up the following prompt.

```
Hard link to:
```

show will then create a hard link to the selected file at the target specified.

Selecting “S” will bring up the following prompt.

```
Symbolic link to:
```

After a location is specified, the following prompt is shown to ask how to link to the target file.

```
Link Location - Absolute, Relative (enter = R)
```

Selecting “A” will link to the file directly relevant to the root directory (/).

Selecting “R” will instruct show to link to the target file relative to the destination.

Modify Modify the owner/group properties or changes the permissions of an object, or multiple objects. When invoked, the following prompt is displayed.

```
Modify: Owner/Group, Permissions
```

Selecting “O” will bring up two prompts.

```
Set Owner:
```

```
Set Group (owner):
```

If the names of the owner or group is invalid, an error will be displayed to the user. If the group prompt is left blank, then it will use the value of the owner prompt.

Selecting “P” will bring up the following prompt.

```
Modify Permissions:
```

The syntax is a 3 or 4 digit octect. See the man pages for `chmod` for further information.

Quit Closes the current directory currently displayed. The application will return you to the previous directory you were viewing. If there are no previous directory, a blank screen showing the global commands is displayed.

Rename Rename the selected file, or marked files to a new file name. The new file name is requested by one of the following prompts. After a file is renamed, the new file information line is into the list (providing the file has been renamed to the same directory) and the old information line is removed. Files can only be moved to locations on the same mounted partition. An empty response to the prompt or the *ESC* key will abort the command. If there are no marked files, a single file rename is requested; otherwise a multiple file rename is requested.

```
Rename file to:
```

```
Rename multiple files to:
```

Show Will either display the contents of a directory, or open the contents of a file. The show file command utilizes the `PAGER` environment variable. If this has not been set, the following message is displayed.

```
Please export a PAGER environment variable to define the utility program name.
```

To resolve this, set a variable to your preferred pager in your shell’s user preference file.

```
export PAGER=/usr/bin/less
```

Touch Sets the timestamp of the selected file(s). When selected, the following prompt will be shown.

```
Set Time - Accessed, Both, Modified (enter = B)
```

By default, show will modify both the access and modified times. When one of the options is selected, one of the following prompts are shown.

```
Set Access Time: Set Modified Time: Set Time:
```

Set the desired time in one of the following formats: YYYY-MM-DD HH:MM:SS, HH:MM:SS

hUnt Hunts the selected file, or marked files containing a regex string. When used with a single file, the selected file will be marked if the string matches. When using multiple files, any files not matching the string will be unselected. Case sensitivity is requested by the following prompt, afterwards the user is asked to input the string to search. To abort at this prompt, the *ESC* key must be used.

```
Case Sensitive, Yes/No/ESC (enter = no)
```

Following this selection, one of the following prompts will be displayed.

```
Match Case - Enter string:
```

```
Ignore Case - Enter string:
```

eExec Will execute the selected file if it has the execute flag set and the current user running the `show` process has permission to. Arguments are requested by the following prompt. Unlike other commands, an empty response will execute the file without arguments. To abort at this prompt, the *ESC* key must be used.

```
Args to pass to <file>:
```

The following error is displayed if the file does not have an executable flag, or the user does not have sufficient privileges to run.

```
Error: Permission denied
```

3.3.1 Creating parent directories

A number of the commands above will display the following prompt to create parent directories if they are not present.

```
Directory [/path/to/directory] does not exist. Create it? Yes/No  
(enter = no)
```

Selecting “Y” will instruct `show` to create the missing parent directories required to complete the command.

Selecting “N” will abort the command due to the required parent directories not being available. An error message will be shown.

3.4 Functions

In order to select objects to be used by the commands described in the previous section, the cursor must be moved to the line of the desired object. The functions to move the cursor and the list of files in the display window are described here. A list of the valid functions and their associated function keys is given list.

F1, PgDn Page Down

F2, PgUp Page Up

F3 Top of List

F4 Bottom of List

F5 Refresh Directory

F6 Mark/Unmark File

F7 Mark All Files

F8 Unmark All Files

F9 Sort List

F10 Block Mark

HOME Top of Display

END Bottom of Display

Down, RETURN Down one line (RETURN can be repurposed to be the Show command using the `--show-on-enter` argument)

Up Up one line

Right Right one column

Left Left one column

ESC Global Commands

The display functions with their associated key assignments are described here.

Page Down F1, PgDn: Scroll the display window down or forward a page on the list of files. The cursor is left in the same relative row of the window unless the end of the list is reached. If the last file of the list is already displayed in the window, the list is not scrolled, but the cursor is placed on the last file in the list.

Page Up F2, PgUp: Scroll the display window up or backward a page on the list of files. The cursor is left in the same relative row of the window unless the beginning of the list is reached. If the first file of the list is already displayed in the window, the list is not scrolled, but the cursor is placed on the first file in the list.

Top of List F3: Display the beginning of the list of files in the window and place the cursor on the first file in the list.

Bottom of List F4: Display the end of the list of files in the display window and place the cursor on the last file of the list.

Refresh Directory F5: Rereads the directory. This function is useful to update the list of files after several new files have been created or updated outside of the application.

Mark/Unmark File F6: Toggle the file mark on the current file. The file mark is indicated with an "*" in front of the file name.

Mark All Files F7: Set the file mark on all the files but not directories in the list.

Unmark All Files F8: Remove the file marks from all files in the list.

Sort List F9: Normally, the file list is sorted by file name alphabetically. This function allows the files to be listed based on another sorting criteria which is requested by the following prompt.

```
Sort list by - Date & time, Name, Size
```

The option is selected by using the first letter of the option name.

Date & time: Sort the list on date and time so the newest files are at the top of the list.

Name: Sort the list on the file name.

Size: Sort the list on file size so the largest are at the top of the list.

Using *SHIFT* whilst selecting an option performs that action in reverse order.

Block Mark F10: Marks all files between two points. Files marked will be indicated with an * in front of them.

Top of Display HOME: Move the cursor to the first file on the current display.

Bottom of Display END: Move the cursor to the last file on the current display.

Down One Line Down Arrow, Return: Move the cursor down one line to the next file in the display. If the cursor is on the bottom row of the window, the window is scrolled down one line. If the present line is the last file in the list, the cursor is not repositioned.

Up One Line Up Arrow: Move the cursor up one line to the next file in the display. If the cursor is on the top row of the window, the window is scrolled up one line. If the present line is the first file in the list, the cursor is not repositioned.

Right one column Right Arrow: Moves the display area one column. This occurs when an entry rolls off the edge of the display. Scrolling will stop at the end of the longest entry.

Left one column Left Arrow: Moves the display area one column.

Global Commands ESC: Invoke the *global commands* described in the next section. This allows another directory to be displayed without terminating the current display.

3.5 Global Commands

When a file group display is terminated with the Quit command, one of the following commands can be used to display another group of files, invoke the editor for a file, or terminate the application completely. The first character of the command is used to invoke the desired function. The command line is shown below.

```
cOloRs, Config, Edit file, Help, Make dir, Quit, Run, Show dir, Touch file
```

These commands are described below.

cOloRs Launches an inbuilt color configuration utility which customizes the colors for the various display areas in all the utilities. Further information can be found in the *colors* section.

Config Launches *show*'s configuration menu. From here, all aspects of *show* can be configured, and settings saved so they will persist between sessions. Further information can be found in the *configuring show* section.

Edit file Invoke the default text editor to edit the specified file. The file name is requested by the following prompt. An empty response is used to abort this command.

```
Edit File - Enter pathname:
```

Help Launches the man pages for *show*.

Make dir Make a new directory. The directory name is requested by the following prompt. An empty response is used to abort this command.

```
Make Directory - Enter pathname:
```

Quit Terminate *show*.

Run Invoke your shell. The *show* application is still resident, so the "exit" command will return to the application.

Show dir Invoke the application to display another directory. The directory name is requested by the following prompt. An empty response is used to abort this command.

```
Show Directory - Enter pathname:
```

Touch file Updates the timestamp of a specified file requested by the following prompt. If the file doesn't exist, it will be created.

```
Touch File - Enter pathname:
```

The following prompt is shown to ask if the time should be set to a specific date.

```
Set Time? Yes/No (enter = N)
```

Selecting No will set the file's access and modification time to the current time.

3.6 Configuring show

show features an inbuilt configuration menu where the user can tweak the default settings. It is accessed from the global menu.

The following screen is displayed.

```
SHOW Settings Menu - Quit, Revert, Save

[ ] Display file colors
<-> Show marked file info: <never> <always> <auto>
<-> Sorting mode: <name> <date> <size> <unsorted>
[ ] Reverse sorting order
<-> Time style: <locale> <iso> <long-iso> <full-iso>
[ ] Show hidden files
[ ] Hide backup files
[ ] Use 3rd party pager over SF
[ ] Use SI units
[ ] Human readable sizes
[ ] Enter key acts like Show
< > Owner Column: <owner> <group> <author>
[ ] Skip to the first object
```

There are three types of configuration items, each denoted with a different symbol:

[] Indicates a toggle switch, when active, the switch will display [*]. To toggle a value, press *SPACE* when the cursor is highlighted over a specific item.

<-> Indicates a single value option, the active item will be highlighted. To change the value, use either the arrow keys, or *SPACE* to toggle through each available option.

< > Indicates a multi value option, the active items will be highlighted. To change their values, use the arrow keys to highlight the desired option and press *SPACE* to toggle its activation status.

The following commands can be used within this menu.

Quit Applies changes and either returns to the previous screen.

Revert Reverts settings to their original value from when the settings menu was invoked.

Save Saves settings for future sessions.

Colors

The inbuilt Colors utility is used to customize the colors used in the applications. It is accessed from the global menu of the show utility.

The following screen is displayed after launch.

```
Color number, Load, Quit, Save, Toggle, Use

Command lines          !-Default
Display lines         ?-Default Bold
Error messages        0-Black
Information lines     1-Red
Heading lines         2-Green
Danger lines          3-Brown
Selected block lines  4-Blue
Highlight             5-Magenta
Text input            6-Cyan
Directories           7-Light Gray
Symbolic links        8-Dark Gray
Orphened symbolic links 9-Light Red
Executable files      A-Light Green
Set user identification B-Yellow
Set group identification C-Light Blue
Sticky bit directory  D-Light Magenta
Sticky bit directory - other writable E-Light Cyan
F-White

Select 0 to F for desired foreground color
```

Initially, the cursor is positioned beside the “Command lines” string. The cursor can be moved to each of the display types using the up and down cursor keys, and each color can be set by using the number of the desired color. The background color can be set by using the Toggle command. Each of the types of lines are described below.

Command lines The color of the top and bottom lines of each utility. These lines display the valid command, function keys and other global information.

Display lines The color for the main text lines in each utilities' display.

Error messages The color in which any error messages are displayed.

Information lines The color used to display general information such as the directory header information.

Heading lines The color used to display the headings for each column in `show`.

Danger lines The color used to replace the informationa lines with a warning, such as when running as the root user.

Selected block lines The color of the selected block lines of the current file in the `show` utility.

Highlight The color of the command/function keys.

Text input The color of input text lines.

The following color settings are used when `--color` arguement is used. They are used to differentiate object status:

```
Directories Symbolic links Orphened symbolic links Executable files Set user
identification Set group identification Sticky bit directory Sticky bit
directory - other writable
```

After each of the colors have been changed to the desired color, the theme must be saved with the `Save` command. All the commands are described below.

Load Loads a theme file so it can be modified or used. The following prompt requests the data file name.

```
Load Colors - Enter file pathname:
```

Quit Quit the color modification utility and return to `show`.

Save Save the theme information in a data file for use by all the utilities. The following prompt requests the data file name.

```
Save Colors - Enter file pathname:
```

Toggle Switches between foreground and background selection.

Use Sets the theme as the default to persist between sessions. The current theme needs to be saved before this command can be used.

5.1 Overview

The `sf` (or Show File) application displays a text file through a logical window which can be moved forward and backward on the file. The utility is invoked by using the `sf` command or through the `show` application.

If the `sf` application is invoked without specifying a file name, the following prompt requesting a file is displayed.

```
Show File - Enter pathname:
```

The screen format is very simple with a command line at the top of the screen, a display window consisting of the middle rows of the screen, and a file identification line at the bottom of the window. The identification line gives the line and column number of the top left character in the window. An example of the command line and information line is given below.

```
F1-Down, F2-Up, F3-Top, F4-Bottom, Config, Find, Help, Position, Quit, Wrap-on  
File = /home/robert/sf.txt Top = 1:1
```

The end of the file is indicated by a “*eof” line displayed in the file window after the last line of the file.

5.2 Command line arguments

`-w, --wrap` Enables line wrapping.

`--theme=[THEME]`: **Color themes. Passing this argument** without an option will display available themes.

`--settings-menu` Launch `sf` directly into the settings menu.

`--help`: Displays help message, then exits.

`--version`: Displays program version, then exits.

5.3 Commands

The `sf` application provides functions to move the window up or down on the file being displayed. These functions are invoked by function keys specified before the function name. Commands are provided to position the window to a specific line of the file and to quit the utility. These commands are invoked by using the first letter of the command name. Each of the commands and functions are described below.

F1, PgDn Move the file window down or forward on the file by the size of the display to show the next section of the file.

F2, PgUp Move the file window up or backward on the file by the size of the display to show the previous section of the file.

F3 Top of File - Position the file window to the first line of the file.

F4 Bottom of File - Position the file window to the last line of the file.

Config Launches `sf`'s configuration menu. From here, all aspects of `sf` can be configured, and settings saved so they will persist between sessions. Further information can be found in the *configuring sf* section.

Find Searches for a string provided in the form of a Regex. Case sensitivity is requested by the following prompt, afterwards the user is asked to input the string to search. To abort at this prompt, the *ESC* key must be used.

```
Ignore-case Case-sensitive (enter = I)
```

Following this selection, one of the following prompts will be displayed:

```
Match Case - Enter string:
```

```
Ignore Case - Enter string:
```

After a search has been made, the keybinding `CTRL + F` will repeat the search to find further occurrences.

Help Launches the man pages for `sf`.

Position Position the file window to a specific line of the file or relative from the current file position. The new file position is requested by the following prompt.

```
Position relative (+num || -num) or absolute (num):
```

If a number without a plus “+” or minus “-” sign is specified, then the file window is moved to the specified line number if it exists. If a number with a plus “+” sign is specified, then the file window is moved down or forward by the specified number of lines. Otherwise if a number with a minus “-” sign is specified then the file window is moved up or backward by the specified number of lines.

Quit Terminate the `sf` application and return to the utility which invoked it, or the user's terminal.

Wrap-on, Wrap-off Toggles line wrapping on or off. When enabled, the information line only shows the line number.

Home Position the file window to the first column of the file.

End Position the file window to the last column of the file.

5.4 Configuring sf

`sf` features an inbuilt configuration menu where the user can tweak the default settings. It is accessed using the `Config` command.

The following screen is displayed.

```
SF Settings Menu - Quit, Revert, Save
```

```
[ ] Enable text wrapping
```

The menu is made up of toggle switches. When active, the switch will display [*], when inactive [] is displayed. To toggle a value, press *SPACE* when the cursor is highlighted over a specific item.

The following commands can be used within this menu.

Quit Applies changes and either returns to the previous screen.

Revert Reverts settings to their original value from when the settings menu was invoked.

Save Saves settings for future sessions.

CHAPTER 6

License and Credits

DF-SHOW is licensed under the [GNU General Public License v3.0](#).

6.1 Authors

- [Robert Ian Hawdon](#)

6.2 Contributors

- [List of contributors](#)

CHAPTER 7

Indices and tables

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