



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'alternatives.8' command

\$ man alternatives.8

UPDATE-ALTERNATIVES(8) System Manager's Manual UPDATE-ALTERNATIVES(8)

NAME

alternatives - maintain symbolic links determining default commands

SYNOPSIS

alternatives [options] --install link name path priority [--slave link

name path]... [--initscript service] [--family name]

alternatives [options] --remove name path

alternatives [options] --set name path

alternatives [options] --auto name

alternatives [options] --display name

alternatives [options] --config name

alternatives [options] --list

alternatives [options] --remove-all name

alternatives [options] --add-slave name path slink sname spath

alternatives [options] --remove-slave name path sname

DESCRIPTION

alternatives creates, removes, maintains and displays information about the symbolic links comprising the alternatives system. The alternatives system is a reimplementaion of the Debian alternatives system. It was rewritten primarily to remove the dependence on perl; it is intended to be a drop in replacement for Debian's update-dependencies script. This man page is a slightly modified version of the man page from the Debian project.

It is possible for several programs fulfilling the same or similar functions to be installed on a single system at the same time. For example, many systems have several text editors installed at once. This gives choice to the users of a system, allowing each to use a different editor, if desired, but makes it difficult for a program to make a good choice of editor to invoke if the user has not specified a particular preference.

The alternatives system aims to solve this problem. A generic name in the filesystem is shared by all files providing interchangeable functionality. The alternatives system and the system administrator together determine which actual file is referenced by this generic name. For example, if the text editors `ed(1)` and `nvi(1)` are both installed on the system, the alternatives system will cause the generic name `/usr/bin/editor` to refer to `/usr/bin/nvi` by default. The system administrator can override this and cause it to refer to `/usr/bin/ed` instead, and the alternatives system will not alter this setting until explicitly requested to do so.

The generic name is not a direct symbolic link to the selected alternative. Instead, it is a symbolic link to a name in the alternatives directory, which in turn is a symbolic link to the actual file referenced. This is done so that the system administrator's changes can be confined within the `/etc` directory: the FHS (q.v.) gives reasons why this is a Good Thing.

When each package providing a file with a particular functionality is installed, changed or removed, alternatives is called to update information about that file in the alternatives system. alternatives is usually called from the `%post` or `%pre` scripts in RPM packages.

It is often useful for a number of alternatives to be synchronised, so that they are changed as a group; for example, when several versions of the `vi(1)` editor are installed, the man page referenced by `/usr/share/man/man1/vi.1` should correspond to the executable referenced by `/usr/bin/vi`. alternatives handles this by means of master and slave links; when the master is changed, any associated slaves are changed

too. A master link and its associated slaves make up a link group. Each link group is, at any given time, in one of two modes: automatic or manual. When a group is in automatic mode, the alternatives system will automatically decide, as packages are installed and removed, whether and how to update the links. In manual mode, the alternatives system will not change the links; it will leave all the decisions to the system administrator.

Link groups are in automatic mode when they are first introduced to the system. If the system administrator makes changes to the system's automatic settings, this will be noticed the next time alternatives is run on the changed link's group, and the group will automatically be switched to manual mode.

Each alternative has a priority associated with it. When a link group is in automatic mode, the alternatives pointed to by members of the group will be those which have the highest priority.

When using the `--config` option, alternatives will list all of the choices for the link group of which given name is the master link. You will then be prompted for which of the choices to use for the link group. Once you make a change, the link group will no longer be in automatic mode. You will need to use the `--auto` option in order to return to the automatic state.

TERMINOLOGY

Since the activities of alternatives are quite involved, some specific terms will help to explain its operation.

generic name

A name, like `/usr/bin/editor`, which refers, via the alternatives system, to one of a number of files of similar function.

symlink

Without any further qualification, this means a symbolic link in the alternatives directory: one which the system administrator is expected to adjust.

alternative

The name of a specific file in the filesystem, which may be made

accessible via a generic name using the alternatives system.

alternatives directory

A directory, by default /etc/alternatives, containing the symbolic links.

administrative directory

A directory, by default /var/lib/alternatives, containing alternatives' state information.

link group

A set of related symlinks, intended to be updated as a group.

master link

The link in a link group which determines how the other links in the group are configured.

slave link

A link in a link group which is controlled by the setting of the master link.

automatic mode

When a link group is in automatic mode, the alternatives system ensures that the links in the group point to the highest priority alternatives appropriate for the group.

manual mode

When a link group is in manual mode, the alternatives system will not make any changes to the system administrator's settings.

OPTIONS

Exactly one action must be specified if alternatives is to perform any meaningful task. Any number of the common options may be specified together with any action.

COMMON OPTIONS

--verbose

Generate more comments about what alternatives is doing.

--quiet

Don't generate any comments unless errors occur. This option is not yet implemented.

--test Don't actually do anything, just say what would be done. This option is not yet implemented.

--help Give some usage information (and say which version of alternatives this is).

--version Tell which version of alternatives this is (and give some usage information).

--keep-missing When switching between alternatives, if the new variant does not provide some files, keep the links pointed to the previous implementation. It prevents issues with missing files due to switching between versions.

--keep-foreign When removing, adding or switching between alternatives, check if the link does not point to some other location than altdir (/etc/alternatives/ by default). In such case the link is not modified.

--altdir directory Specifies the alternatives directory, when this is to be different from the default.

--admindir directory Specifies the administrative directory, when this is to be different from the default.

ACTIONS

--install link name path priority [--slave slink sname spath] [--initscript service]...

Add a group of alternatives to the system. name is the generic name for the master link, link is the name of its symlink, path is the alternative being introduced for the master link, and priority is the priority of the alternatives group. Higher priorities take precedence if no alternative is manually selected. sname, slink and spath are the generic name, symlink name and alternative for a slave link, and service is the name of any as?

sociated initscript for the alternative. NOTE: --initscript and --family are a Red Hat Linux specific options. Zero or more --slave options, each followed by three arguments, may be specified.

If the master symlink specified exists already in the alternatives system's records, the information supplied will be added as a new set of alternatives for the group. Otherwise, a new group, set to automatic mode, will be added with this information. If the group is in automatic mode, and the newly added alternatives' priority is higher than any other installed alternatives for this group, the symlinks will be updated to point to the newly added alternatives.

If --initscript is used, the alternatives system will manage the initscript associated with the alternative via chkconfig, registering and unregistering the init script depending on which alternative is active.

NOTE: --initscript is a Red Hat Linux specific option.

--family can be used to group similar alternatives. If the group is in manual mode and the alternative currently used is removed, alternatives will try to change links to different one with same family and highest priority.

NOTE: --family is a Red Hat Linux specific option.

--remove name path

Remove an alternative and all of its associated slave links. name is a name in the alternatives directory, and path is an absolute filename to which name could be linked. If name is indeed linked to path, name will be updated to point to another appropriate alternative, or removed if there is no such alternative left. Associated slave links will be updated or removed, correspondingly. If the link is not a symlink, no links are changed; only the information about the alternative is removed.

--set name path

The symbolic link and slaves for link group name set to those

configured for path, and the link group is set to manual mode.

This option is not in the original Debian implementation.

`--config name`

Present the user with a configuration menu for choosing the mas?

ter link and slaves for link group name. Once chosen, the link

group is set to manual mode.

`--auto name`

Switch the master symlink name to automatic mode. In the

process, this symlink and its slaves are updated to point to the

highest priority installed alternatives.

`--display name`

Display information about the link group of which name is the

master link. Information displayed includes the group's mode

(auto or manual), which alternative the symlink currently points

to, what other alternatives are available (and their correspond?

ing slave alternatives), and the highest priority alternative

currently installed.

`--list` Display information about all link groups.

`--remove-all name`

Remove the whole link group name. Use with caution.

`--add-slave name path slink sname spath`

Add a slave link to an alternative identified by name and path.

sname, slink and spath are the generic name, symlink name and

alternative for the slave.

`--remove-slave name path sname`

Remove slave with generic name sname from alternative identified

by name and path.

FILES

`/etc/alternatives/`

The default alternatives directory. Can be overridden by the

`--altdir` option.

`/var/lib/alternatives/`

The default administration directory. Can be overridden by the

--admindir option.

EXIT STATUS

- 0 The requested action was successfully performed.
- 2 Problems were encountered whilst parsing the command line or performing the action.

DIAGNOSTICS

alternatives chatters incessantly about its activities on its standard output channel. If problems occur, alternatives outputs error messages on its standard error channel and returns an exit status of 2. These diagnostics should be self-explanatory; if you do not find them so, please report this as a bug.

BUGS

If you find a bug, please report it using the Red Hat bug tracking system at <http://bugzilla.redhat.com>.

If you find any discrepancy between the operation of alternatives and this manual page, it is a bug, either in the implementation or the documentation; please report it. Any significant differences between this implementation and Debian's is also a bug and should be reported, unless otherwise noted in this man page.

AUTHOR

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SEE ALSO

ln(1), FHS, the Filesystem Hierarchy Standard.

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