

**NAME**

**visudo** - edit the sudoers file

**SYNOPSIS**

**visudo** [-chIOPqsV] [[-f] *sudoers*]

**DESCRIPTION**

**visudo** edits the *sudoers* file in a safe fashion, analogous to *vipw*(8). **visudo** locks the *sudoers* file against multiple simultaneous edits, performs basic validity checks, and checks for syntax errors before installing the edited file. If the *sudoers* file is currently being edited you will receive a message to try again later.

If the *sudoers* file does not exist, it will be created unless the editor exits without writing to the file.

**visudo** parses the *sudoers* file after editing and will not save the changes if there is a syntax error. Upon finding an error, **visudo** will print a message stating the line number(s) where the error occurred and the user will receive the "What now?" prompt. At this point the user may enter 'e' to re-edit the *sudoers* file, 'x' to exit without saving the changes, or 'Q' to quit and save changes. The 'Q' option should be used with extreme caution because if **visudo** believes there to be a syntax error, so will **sudo**. If 'e' is typed to edit the *sudoers* file after a syntax error has been detected, the cursor will be placed on the line where the error occurred (if the editor supports this feature).

There are two *sudoers* settings that determine which editor **visudo** will run.

**editor** A colon (':') separated list of editors allowed to be used with **visudo**. **visudo** will choose the editor that matches the user's SUDO\_EDITOR, VISUAL, or EDITOR environment variable if possible, or the first editor in the list that exists and is executable. **sudo** does not preserve the SUDO\_EDITOR, VISUAL, or EDITOR environment variables unless they are present in the *env\_keep* list or the *env\_reset* option is disabled in the *sudoers* file. The default editor path is *vi* which can be set at compile time via the --with-editor configure option.

**env\_editor**

If set, **visudo** will use the value of the SUDO\_EDITOR, VISUAL, or EDITOR environment variables before falling back on the default editor list. **visudo** is typically run as root so this option may allow a user with **visudo** privileges to run arbitrary commands as root without logging. An alternative is to place a colon-separated list of "safe" editors in the *editor* variable. **visudo** will then only use SUDO\_EDITOR, VISUAL, or EDITOR if they match a value specified in *editor*. If the *env\_reset* flag is enabled, the SUDO\_EDITOR, VISUAL, and/or EDITOR environment variables must be present in the *env\_keep* list for the *env\_editor* flag to function when **visudo** is invoked via **sudo**. The default value is *on*, which

can be set at compile time via the `--with-env-editor` configure option.

The options are as follows:

**-c, --check**

Enable *check-only* mode. The existing *sudoers* file (and any other files it includes) will be checked for syntax errors. If the path to the *sudoers* file was not specified, **visudo** will also check the file ownership and permissions (see the **-O** and **-P** options). A message will be printed to the standard output describing the status of *sudoers* unless the **-q** option was specified. If the check completes successfully, **visudo** will exit with a value of 0. If an error is encountered, **visudo** will exit with a value of 1.

**-f** *sudoers*, **--file=***sudoers*

Specify an alternate *sudoers* file location, see below. As of version 1.8.27, the *sudoers* path can be specified without using the **-f** option.

**-h, --help**

Display a short help message to the standard output and exit.

**-I, --no-includes**

Disable the editing of include files unless there is a pre-existing syntax error. By default, **visudo** will edit the main *sudoers* file and any files included via `@include` or `#include` directives. Files included via `@includedir` or `#includedir` are never edited unless they contain a syntax error.

**-O, --owner**

Enforce the default ownership (user and group) of the *sudoers* file. In edit mode, the owner of the edited file will be set to the default. In check mode (**-c**), an error will be reported if the owner is incorrect. This option is enabled by default if the *sudoers* file was not specified.

**-P, --perms**

Enforce the default permissions (mode) of the *sudoers* file. In edit mode, the permissions of the edited file will be set to the default. In check mode (**-c**), an error will be reported if the file permissions are incorrect. This option is enabled by default if the *sudoers* file was not specified.

**-q, --quiet**

Enable *quiet* mode. In this mode details about syntax errors are not printed. This option is only useful when combined with the **-c** option.

**-s, --strict**

Enable *strict* checking of the *sudoers* file. If an alias is referenced but not actually defined or if there is a cycle in an alias, **visudo** will consider this a syntax error. It is not possible to differentiate between an alias and a host name or user name that consists solely of uppercase letters, digits, and the underscore ('\_') character.

**-V, --version**

Print the **visudo** and *sudoers* grammar versions and exit.

A *sudoers* file may be specified instead of the default, */etc/sudoers*. The temporary file used is the specified *sudoers* file with ".tmp" appended to it. In *check-only* mode only, '-' may be used to indicate that *sudoers* will be read from the standard input. Because the policy is evaluated in its entirety, it is not sufficient to check an individual *sudoers* include file for syntax errors.

**Debugging and sudoers plugin arguments**

**visudo** versions 1.8.4 and higher support a flexible debugging framework that is configured via *Debug* lines in the *sudo.conf(5)* file.

Starting with **sudo** 1.8.12, **visudo** will also parse the arguments to the *sudoers* plugin to override the default *sudoers* path name, user-ID, group-ID, and file mode. These arguments, if present, should be listed after the path to the plugin (i.e., after *sudoers.so*). Multiple arguments may be specified, separated by white space. For example:

```
Plugin sudoers_policy sudoers.so sudoers_mode=0400
```

The following arguments are supported:

`sudoers_file=pathname`

The *sudoers\_file* argument can be used to override the default path to the *sudoers* file.

`sudoers_uid=user-ID`

The *sudoers\_uid* argument can be used to override the default owner of the *sudoers* file. It should be specified as a numeric user-ID.

`sudoers_gid=group-ID`

The *sudoers\_gid* argument can be used to override the default group of the *sudoers* file. It must be specified as a numeric group-ID (not a group name).

`sudoers_mode=mode`

The *sudoers\_mode* argument can be used to override the default file mode for the *sudoers* file. It

should be specified as an octal value.

For more information on configuring `sudo.conf(5)`, refer to its manual.

## ENVIRONMENT

The following environment variables may be consulted depending on the value of the *editor* and *env\_editor sudoers* settings:

`SUDO_EDITOR` Invoked by **visudo** as the editor to use

`VISUAL` Used by **visudo** if `SUDO_EDITOR` is not set

`EDITOR` Used by **visudo** if neither `SUDO_EDITOR` nor `VISUAL` is set

## FILES

`/etc/sudo.conf` Sudo front-end configuration

`/etc/sudoers` List of who can run what

`/etc/sudoers.tmp` Default temporary file used by visudo

## DIAGNOSTICS

In addition to reporting *sudoers* syntax errors, **visudo** may produce the following messages:

sudoers file busy, try again later.

Someone else is currently editing the *sudoers* file.

`/etc/sudoers: Permission denied`

You didn't run **visudo** as root.

you do not exist in the passwd database

Your user-ID does not appear in the system passwd database.

Warning: {User,Runas,Host,Cmnd}\_Alias referenced but not defined

Either you are trying to use an undeclared {User,Runas,Host,Cmnd}\_Alias or you have a user or host name listed that consists solely of uppercase letters, digits, and the underscore ('\_') character. In the latter case, you can ignore the warnings (**sudo** will not complain). The message is prefixed with the path name of the *sudoers* file and the line number where the undefined alias was used. In **-s** (strict) mode these are errors, not warnings.

**Warning: unused {User,Runas,Host,Cmnd}\_Alias**

The specified {User,Runas,Host,Cmnd}\_Alias was defined but never used. The message is prefixed with the path name of the *sudoers* file and the line number where the unused alias was defined. You may wish to comment out or remove the unused alias.

**Warning: cycle in {User,Runas,Host,Cmnd}\_Alias**

The specified {User,Runas,Host,Cmnd}\_Alias includes a reference to itself, either directly or through an alias it includes. The message is prefixed with the path name of the *sudoers* file and the line number where the cycle was detected. This is only a warning unless **visudo** is run in **-s** (strict) mode as **sudo** will ignore cycles when parsing the *sudoers* file.

**ignoring editor backup file**

While processing a *@includedir* or *#includedir*, a file was found with a name that ends in '~' or *.bak*. Such files are skipped by **sudo** and **visudo**.

**ignoring file name containing '.'**

While processing a *@includedir* or *#includedir*, a file was found with a name that contains a '.' character. Such files are skipped by **sudo** and **visudo**.

**unknown defaults entry "name"**

The *sudoers* file contains a *Defaults* setting not recognized by **visudo**.

**SEE ALSO**

vi(1), sudo.conf(5), sudoers(5), sudo(8), vipw(8)

**AUTHORS**

Many people have worked on **sudo** over the years; this version consists of code written primarily by:

Todd C. Miller

See the CONTRIBUTORS.md file in the **sudo** distribution (<https://www.sudo.ws/about/contributors/>) for an exhaustive list of people who have contributed to **sudo**.

**CAVEATS**

There is no easy way to prevent a user from gaining a root shell if the editor used by **visudo** allows shell escapes.

**BUGS**

If you believe you have found a bug in **visudo**, you can either file a bug report in the sudo bug database, <https://bugzilla.sudo.ws/>, or open an issue at <https://github.com/sudo-project/sudo/issues>. If you would

prefer to use email, messages may be sent to the sudo-workers mailing list, <https://www.sudo.ws/mailman/listinfo/sudo-workers> (public) or [<sudo@sudo.ws>](mailto:sudo@sudo.ws) (private).

Please not report security vulnerabilities through public GitHub issues, Bugzilla or mailing lists. Instead, report them via email to [<Todd.Miller@sudo.ws>](mailto:Todd.Miller@sudo.ws). You may encrypt your message with PGP if you would like, using the key found at <https://www.sudo.ws/dist/PGPKEYS>.

## SUPPORT

Limited free support is available via the sudo-users mailing list, see <https://www.sudo.ws/mailman/listinfo/sudo-users> to subscribe or search the archives.

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