

## NAME

dialog – display dialog boxes from shell scripts

## SYNOPSIS

**dialog** **--clear**  
**dialog** **--create-rc** *file*  
**dialog** **--print-maxsize**  
**dialog** *common-options* *box-options*

## DESCRIPTION

**Dialog** is a program that will let you to present a variety of questions or display messages using dialog boxes from a shell script. These types of dialog boxes are implemented (though not all are necessarily compiled into **dialog**):

**calendar**, **checklist**, **form**, **fselect**, **gauge**, **infobox**, **inputbox**, **inputmenu**, **menu**, **msgbox** (message), **password**, **pause**, **radiolist**, **tailbox**, **tailboxbg**, **textbox**, **timebox**, and **yesno** (yes/no).

You can put more than one dialog box into a script:

- Use the **"--and-widget"** token to force Dialog to proceed to the next dialog unless you have pressed ESC to cancel, or
- Simply add the tokens for the next dialog box, making a chain. Dialog stops chaining when the return code from a dialog is nonzero, e.g., Cancel or No (see **DIAGNOSTICS**).

Some widgets, e.g., checklist, will write text to **dialog**'s output. Normally that is the standard error, but there are options for changing this: **"--output-fd"**, **"--stderr"** and **"--stdout"**. No text is written if the Cancel button (or ESC) is pressed; **dialog** exits immediately in that case.

## OPTIONS

All options begin with **"--"** (two ASCII hyphens, for the benefit of those using systems with deranged locale support).

A **"--"** by itself is used as an escape, i.e., the next token on the command-line is not treated as an option.

**dialog --title -- --Not an option**

The **"--args"** option tells **dialog** to list the command-line parameters to the standard error. This is useful when debugging complex scripts using the **"--"** and **"--file"**, since the command-line may be rewritten as these are expanded.

The **"--file"** option tells **dialog** to read parameters from the file named as its value.

**dialog --file parameterfile**

Blanks not within double-quotes are discarded (use backslashes to quote single characters). The result is inserted into the command-line, replacing **"--file"** and its option value. Interpretation of the command-line resumes from that point.

### Common Options

**--aspect** *ratio*

This gives you some control over the box dimensions when using auto sizing (specifying 0 for height and width). It represents width / height. The default is 9, which means 9 characters wide to every 1 line high.

**--backtitle** *backtitle*

Specifies a *backtitle* string to be displayed on the backdrop, at the top of the screen.

**--begin** *y x*

Specify the position of the upper left corner of a dialog box on the screen.

**--cancel-label** *string*

Override the label used for "Cancel" buttons.

**--clear** Clears the widget screen, keeping only the `screen_color` background. Use this when you combine widgets with **"--and-widget"** to erase the contents of a previous widget on the screen, so it won't be seen under the contents of a following widget. Understand this as the complement of **"--keep-**

**window**". To compare the effects, use these:

All three widgets visible, staircase effect, ordered 1,2,3:

```
dialog          --begin 2 2 --yesno "" 0 0 \  
--and-widget    --begin 4 4 --yesno "" 0 0 \  
--and-widget    --begin 6 6 --yesno "" 0 0
```

Only the last widget is left visible:

```
dialog    --clear    --begin 2 2 --yesno "" 0 0 \  
--and-widget --clear    --begin 4 4 --yesno "" 0 0 \  
--and-widget    --begin 6 6 --yesno "" 0 0
```

All three widgets visible, staircase effect, ordered 3,2,1:

```
dialog    --keep-window --begin 2 2 --yesno "" 0 0 \  
--and-widget --keep-window --begin 4 4 --yesno "" 0 0 \  
--and-widget    --begin 6 6 --yesno "" 0 0
```

First and third widget visible, staircase effect, ordered 3,1:

```
dialog    --keep-window --begin 2 2 --yesno "" 0 0 \  
--and-widget --clear    --begin 4 4 --yesno "" 0 0 \  
--and-widget    --begin 6 6 --yesno "" 0 0
```

Note, if you want to restore original console colors and send your cursor home after the dialog program has exited, use the **clear** (1) command.

#### **--colors**

Interpret embedded "\Z" sequences in the dialog text by the following character, which tells **dialog** to set colors or video attributes: 0 through 7 are the ANSI used in curses: black, red, green, yellow, blue, magenta, cyan and white respectively. Bold is set by 'b', reset by 'B'. Reverse is set by 'r', reset by 'R'. Underline is set by 'u', reset by 'U'. The settings are cumulative, e.g., "\Zb\Z1" makes the following text bold (perhaps bright) red. Restore normal settings with "\Zn".

#### **--cr-wrap**

Interpret embedded newlines in the dialog text as a newline on the screen. Otherwise, **dialog** will only wrap lines where needed to fit inside the text box. Even though you can control line breaks with this, **dialog** will still wrap any lines that are too long for the width of the box. Without cr-wrap, the layout of your text may be formatted to look nice in the source code of your script without affecting the way it will look in the dialog.

See also the "**--no-collapse**" and "**--trim**" options.

#### **--create-rc file**

When **dialog** supports run-time configuration, this can be used to dump a sample configuration file to the file specified by *file*.

#### **--defaultno**

Make the default value of the **yes/no** box a **No**. Likewise, make the default button of widgets that provide "OK" and "Cancel" a **Cancel**. If "**--nocancel**" or "**--visit-items**" are given those options overrides this, making the default button always "Yes" (internally the same as "OK").

#### **--default-item string**

Set the default item in a checklist, form or menu box. Normally the first item in the box is the default.

#### **--exit-label string**

Override the label used for "EXIT" buttons.

#### **--extra-button**

Show an extra button, between "OK" and "Cancel" buttons.

#### **--extra-label string**

Override the label used for "Extra" buttons. Note: for inputmenu widgets, this defaults to "Rename".

**--help** Prints the help message to **dialog**'s output. The help message is printed if no options are given.

**--help-button**

Show a help-button after "OK" and "Cancel" buttons, i.e., in checklist, radiolist and menu boxes. If "**--item-help**" is also given, on exit the return status will be the same as for the "OK" button, and the item-help text will be written to **dialog**'s output after the token "HELP". Otherwise, the return status will indicate that the Help button was pressed, and no message printed.

**--help-label** *string*

Override the label used for "Help" buttons.

**--help-status**

If the help-button is selected, writes the checklist, radiolist or form information after the item-help "HELP" information. This can be used to reconstruct the state of a checklist after processing the help request.

**--ignore**

Ignore options that **dialog** does not recognize. Some well-known ones such as "**--icon**" are ignored anyway, but this is a better choice for compatibility with other implementations.

**--input-fd** *fd*

Read keyboard input from the given file descriptor. Most **dialog** scripts read from the standard input, but the gauge widget reads a pipe (which is always standard input). Some configurations do not work properly when **dialog** tries to reopen the terminal. Use this option (with appropriate juggling of file-descriptors) if your script must work in that type of environment.

**--insecure**

Makes the password widget friendlier but less secure, by echoing asterisks for each character.

**--item-help**

Interpret the tags data for checklist, radiolist and menu boxes adding a column which is displayed in the bottom line of the screen, for the currently selected item.

**--keep-window**

Normally when **dialog** performs several **tailboxbg** widgets connected by "**--and-widget**", it clears the old widget from the screen by painting over it. Use this option to suppress that repainting.

At exit, **dialog** repaints all of the widgets which have been marked with "**--keep-window**", even if they are not **tailboxbg** widgets. That causes them to be repainted in reverse order. See the discussion of the "**--clear**" option for examples.

**--max-input** *size*

Limit input strings to the given size. If not specified, the limit is 2048.

**--no-cancel**

**--nocancel**

Suppress the "Cancel" button in checklist, inputbox and menu box modes. A script can still test if the user pressed the ESC key to cancel to quit.

**--no-collapse**

Normally **dialog** converts tabs to spaces and reduces multiple spaces to a single space for text which is displayed in a message boxes, etc. Use this option to disable that feature. Note that **dialog** will still wrap text, subject to the "**--cr-wrap**" and "**--trim**" options.

**--no-kill**

Tells **dialog** to put the **tailboxbg** box in the background, printing its process id to **dialog**'s output. SIGHUP is disabled for the background process.

**--no-label** *string*

Override the label used for "No" buttons.

**--no-shadow**

Suppress shadows that would be drawn to the right and bottom of each dialog box.

**--ok-label** *string*

Override the label used for "OK" buttons.

**--output-fd** *fd*

Direct output to the given file descriptor. Most **dialog** scripts write to the standard error, but error messages may also be written there, depending on your script.

**--print-maxsize**

Print the maximum size of dialog boxes, i.e., the screen size, to **dialog**'s output. This may be used alone, without other options.

**--print-size**

Prints the size of each dialog box to **dialog**'s output.

**--print-version**

Prints **dialog**'s version to **dialog**'s output. This may be used alone, without other options.

**--separate-output**

For checklist widgets, output result one line at a time, with no quoting. This facilitates parsing by another program.

**--separator** *string*

**--separate-widget** *string*

Specify a string that will separate the output on **dialog**'s output from each widget. This is used to simplify parsing the result of a dialog with several widgets. If this option is not given, the default separator string is a tab character.

**--shadow**

Draw a shadow to the right and bottom of each dialog box.

**--single-quoted**

Use single-quoting as needed (and no quotes if unneeded) for the output of checklist's as well as the item-help text. If this option is not set, **dialog** uses double quotes around each item. That requires occasional use of backslashes to make the output useful in shell scripts.

**--size-err**

Check the resulting size of a dialog box before trying to use it, printing the resulting size if it is larger than the screen. (This option is obsolete, since all new-window calls are checked).

**--sleep** *secs*

Sleep (delay) for the given number of seconds after processing a dialog box.

**--stderr**

Direct output to the standard error. This is the default, since curses normally writes screen updates to the standard output.

**--stdout**

Direct output to the standard output. This option is provided for compatibility with Xdialog, however using it in portable scripts is not recommended, since curses normally writes its screen updates to the standard output. If you use this option, **dialog** attempts to reopen the terminal so it can write to the display. Depending on the platform and your environment, that may fail.

**--tab-correct**

Convert each tab character to one or more spaces. Otherwise, tabs are rendered according to the curses library's interpretation.

**--tab-len** *n*

Specify the number of spaces that a tab character occupies if the "**--tab-correct**" option is given. The default is 8.

**--timeout** *secs*

Timeout (exit with error code) if no user response within the given number of seconds. This is overridden if the background "**--tailboxbg**" is used. A timeout of zero seconds is ignored.

**--title** *title*

Specifies a *title* string to be displayed at the top of the dialog box.

**--trim** eliminate leading blanks, trim literal newlines and repeated blanks from message text.

See also the "**--cr-wrap**" and "**--no-collapse**" options.

**--version**

Same as "**--print-version**".

**--visit-items**

Modify the tab-traversal of checklist, radiobox, menubox and inputmenu to include the list of items as one of the states. This is useful as a visual aid, i.e., the cursor position helps some users.

When this option is given, the cursor is initially placed on the list. Abbreviations (the first letter of the tag) apply to the list items. If you tab to the button row, abbreviations apply to the buttons.

**--yes-label** *string*

Override the label used for "Yes" buttons.

## Box Options

All dialog boxes have at least three parameters:

*text* the caption or contents of the box.

*height*

the height of the dialog box.

*width*

the width of the dialog box.

Other parameters depend on the box type.

**--calendar** *text height width day month year*

A **calendar** box displays month, day and year in separately adjustable windows. If the values for day, month or year are missing or negative, the current date's corresponding values are used. You can increment or decrement any of those using the left-, up-, right- and down-arrows. Use vi-style h, j, k and l for moving around the array of days in a month. Use tab or backtab to move between windows. If the year is given as zero, the current date is used as an initial value.

On exit, the date is printed in the form day/month/year.

**--checklist** *text height width list-height [ tag item status ] ...*

A **checklist** box is similar to a **menu** box; there are multiple entries presented in the form of a menu. Instead of choosing one entry among the entries, each entry can be turned on or off by the user. The initial on/off state of each entry is specified by *status*.

On exit, a list of the *tag* strings of those entries that are turned on will be printed on **dialog**'s output. If the "**--separate-output**" option is not given, the strings will be quoted to make it simple for scripts to separate them. See the "**--single-quoted**" option, which modifies the quoting behavior.

**--form** *text height width formheight [ label y x item y x flen ilen ] ...*

The form **dialog** displays a form consisting of labels and fields, which are positioned on a scrollable window by coordinates given in the script. The field length *flen* and input-length *ilen* tell how long the field can be. The former defines the length shown for a selected field, while the latter defines the permissible length of the data entered in the field.

- If *flen* is zero, the corresponding field cannot be altered. and the contents of the field determine the displayed-length.
- If *flen* is negative, the corresponding field cannot be altered, and the negated value of *flen* is used as the displayed-length.

- If *ilen* is zero, it is set to *flen*.

Use up/down arrows (or control/N, control/P) to move between fields. Use tab to move between windows.

On exit, the contents of the form-fields are written to **dialog**'s output, each field separated by a newline. The text used to fill non-editable fields (*flen* is zero or negative) is not written out.

#### **--fselect** *filepath height width*

The file-selection dialog displays a text-entry window in which you can type a filename (or directory), and above that two windows with directory names and filenames.

Here **filepath** can be a file path in which case the file and directory windows will display the contents of the path and the text-entry window will contain the preselected filename.

Use tab or arrow keys to move between the windows. Within the directory or filename windows, use the up/down arrow keys to scroll the current selection. Use the space-bar to copy the current selection into the text-entry window.

Typing any printable characters switches focus to the text-entry window, entering that character as well as scrolling the directory and filename windows to the closest match.

Use a carriage return or the "OK" button to accept the current value in the text-entry window and exit.

On exit, the contents of the text-entry window are written to **dialog**'s output.

#### **--gauge** *text height width [percent]*

A **gauge** box displays a meter along the bottom of the box. The meter indicates the percentage. New percentages are read from standard input, one integer per line. The meter is updated to reflect each new percentage. If the standard input reads the string "XXX", then subsequent lines up to another "XXX" are used for a new prompt. The gauge exits when EOF is reached on the standard input.

The *percent* value denotes the initial percentage shown in the meter. If not specified, it is zero.

On exit, no text is written to **dialog**'s output. The widget accepts no input, so the exit status is always OK.

#### **--infobox** *text height width*

An **info** box is basically a **message** box. However, in this case, **dialog** will exit immediately after displaying the message to the user. The screen is not cleared when **dialog** exits, so that the message will remain on the screen until the calling shell script clears it later. This is useful when you want to inform the user that some operations are carrying on that may require some time to finish.

On exit, no text is written to **dialog**'s output. Only an "OK" button is provided for input, but an ESC exit status may be returned.

#### **--inputbox** *text height width [init]*

An **input** box is useful when you want to ask questions that require the user to input a string as the answer. If *init* is supplied it is used to initialize the input string. When entering the string, the *backspace*, *delete* and cursor keys can be used to correct typing errors. If the input string is longer than can fit in the dialog box, the input field will be scrolled.

On exit, the input string will be printed on **dialog**'s output.

#### **--inputmenu** *text height width menu-height [ tag item ] ...*

An **inputmenu** box is very similar to an ordinary **menu** box. There are only a few differences between them:

1. The entries are not automatically centered but left adjusted.
2. An extra button (called *Rename*) is implied to rename the current item when it is pressed.
3. It is possible to rename the current entry by pressing the *Rename* button. Then **dialog** will write the following on **dialog**'s output.

RENAMED <tag> <item>

**--menu** *text height width menu-height [ tag item ] ...*

As its name suggests, a **menu** box is a dialog box that can be used to present a list of choices in the form of a menu for the user to choose. Choices are displayed in the order given. Each menu entry consists of a *tag* string and an *item* string. The *tag* gives the entry a name to distinguish it from the other entries in the menu. The *item* is a short description of the option that the entry represents. The user can move between the menu entries by pressing the cursor keys, the first letter of the *tag* as a hot-key, or the number keys 1-9. There are *menu-height* entries displayed in the menu at one time, but the menu will be scrolled if there are more entries than that.

On exit the *tag* of the chosen menu entry will be printed on **dialog**'s output. If the "**--help-button**" option is given, the corresponding help text will be printed if the user selects the help button.

**--msgbox** *text height width*

A **message** box is very similar to a **yes/no** box. The only difference between a **message** box and a **yes/no** box is that a **message** box has only a single **OK** button. You can use this dialog box to display any message you like. After reading the message, the user can press the *ENTER* key so that **dialog** will exit and the calling shell script can continue its operation.

On exit, no text is written to **dialog**'s output. Only an "OK" button is provided for input, but an ESC exit status may be returned.

**--pause** *text height width seconds*

A **pause** box displays a meter along the bottom of the box. The meter indicates how many seconds remain until the end of the pause. The pause exits when timeout is reached (status OK) or the user presses the Exit button (status CANCEL).

**--passwordbox** *text height width [init]*

A **password** box is similar to an input box, except that the text the user enters is not displayed. This is useful when prompting for passwords or other sensitive information. Be aware that if anything is passed in "init", it will be visible in the system's process table to casual snoopers. Also, it is very confusing to the user to provide them with a default password they cannot see. For these reasons, using "init" is highly discouraged. See "**--insecure**" if you do not care about your password.

On exit, the input string will be printed on **dialog**'s output.

**--radiolist** *text height width list-height [ tag item status ] ...*

A **radiolist** box is similar to a **menu** box. The only difference is that you can indicate which entry is currently selected, by setting its *status* to *on*.

On exit, the name of the selected item is written to **dialog**'s output.

**--tailbox** *file height width*

Display text from a file in a dialog box, as in a "tail -f" command. Scroll left/right using vi-style 'h' and 'l', or arrow-keys. A 'O' resets the scrolling.

On exit, no text is written to **dialog**'s output. Only an "OK" button is provided for input, but an ESC exit status may be returned.

**--tailboxbg** *file height width*

Display text from a file in a dialog box as a background task, as in a "tail -f &" command. Scroll left/right using vi-style 'h' and 'l', or arrow-keys. A 'O' resets the scrolling.

Dialog treats the background task specially if there are other widgets (**--and-widget**) on the screen concurrently. Until those widgets are closed (e.g., an "OK"), **dialog** will perform all of the tailboxbg widgets in the same process, polling for updates. You may use a tab to traverse between the widgets on the screen, and close them individually, e.g., by pressing *ENTER*. Once the non-tailboxbg widgets are closed, **dialog** forks a copy of itself into the background, and prints its process id if the "**--no-kill**" option is given.

On exit, no text is written to **dialog**'s output. Only an "EXIT" button is provided for input, but an ESC exit status may be returned.

NOTE: Older versions of **dialog** forked immediately and attempted to update the screen individually. Besides being bad for performance, it was unworkable. Some older scripts may not work properly with the polled scheme.

#### **--textbox** *file height width*

A **text** box lets you display the contents of a text file in a dialog box. It is like a simple text file viewer. The user can move through the file by using the cursor, page-up, page-down and *HOME/END* keys available on most keyboards. If the lines are too long to be displayed in the box, the *LEFT/RIGHT* keys can be used to scroll the text region horizontally. You may also use vi-style keys h, j, k, l in place of the cursor keys, and B or N in place of the page-up and page-down keys. Scroll up/down using vi-style 'k' and 'j', or arrow-keys. Scroll left/right using vi-style 'h' and 'l', or arrow-keys. A '0' resets the left/right scrolling. For more convenience, vi-style forward and backward searching functions are also provided.

On exit, no text is written to **dialog**'s output. Only an "EXIT" button is provided for input, but an ESC exit status may be returned.

#### **--timebox** *text height [width hour minute second]*

A dialog is displayed which allows you to select hour, minute and second. If the values for hour, minute or second are missing or negative, the current date's corresponding values are used. You can increment or decrement any of those using the left-, up-, right- and down-arrows. Use tab or backtab to move between windows.

On exit, the result is printed in the form hour:minute:second.

#### **--yesno** *text height width*

A **yes/no** dialog box of size *height* rows by *width* columns will be displayed. The string specified by *text* is displayed inside the dialog box. If this string is too long to fit in one line, it will be automatically divided into multiple lines at appropriate places. The *text* string can also contain the sub-string "*n*" or newline characters '\n' to control line breaking explicitly. This dialog box is useful for asking questions that require the user to answer either yes or no. The dialog box has a **Yes** button and a **No** button, in which the user can switch between by pressing the *TAB* key.

On exit, no text is written to **dialog**'s output. In addition to the "Yes" and "No" exit codes (see *DIAGNOSTICS*) an ESC exit status may be returned.

The codes used for "Yes" and "No" match those used for "OK" and "Cancel", internally no distinction is made.

### **Obsolete Options**

**--beep** This was used to tell the original cdialog that it should make a beep when the separate processes of the tailboxbg widget would repaint the screen.

#### **--beep-after**

Beep after a user has completed a widget by pressing one of the buttons.

## **RUN-TIME CONFIGURATION**

1. Create a sample configuration file by typing:

```
"dialog --create-rc <file>"
```

2. At start, **dialog** determines the settings to use as follows:

- a) if environment variable **DIALOGRC** is set, its value determines the name of the configuration file.
- b) if the file in (a) is not found, use the file *\$HOME/.dialogrc* as the configuration file.
- c) if the file in (b) is not found, try using the *GLOBALRC* file determined at compile-time, i.e., */etc/dialogrc*.



- d) if the file in (c) is not found, use compiled in defaults.
3. Edit the sample configuration file and copy it to some place that **dialog** can find, as stated in step 2 above.

## ENVIRONMENT

**DIALOGOPTS** Define this variable to apply any of the common options to each widget. Most of the common options are reset before processing each widget. If you set the options in this environment variable, they are applied to **dialog**'s state after the reset. As in the "**--file**" option, double-quotes and backslashes are interpreted.

The "**--file**" option is not considered a common option (so you cannot embed it within this environment variable).

**DIALOGRC** Define this variable if you want to specify the name of the configuration file to use.

**DIALOG\_CANCEL**

**DIALOG\_ERROR**

**DIALOG\_ESC**

**DIALOG\_EXTRA**

**DIALOG\_HELP**

**DIALOG\_ITEM\_HELP**

**DIALOG\_OK** Define any of these variables to change the exit code on Cancel (1), error (-1), ESC (255), Extra (3), Help (2), Help with --item-help (2), or OK (0). Normally shell scripts cannot distinguish between -1 and 255.

**DIALOG\_TTY** Set this variable to "1" to provide compatibility with older versions of **dialog** which assumed that if the script redirects the standard output, that the "**--stdout**" option was given.

## FILES

*\$HOME/.dialogrc* default configuration file

## EXAMPLES

The **dialog** sources contain several samples of how to use the different box options and how they look. Just take a look into the directory **samples/** of the source.

## DIAGNOSTICS

Exit status is subject to being overridden by environment variables. Normally they are:

- 0 if **dialog** is exited by pressing the **Yes** or **OK** button.
- 1 if the **No** or **Cancel** button is pressed.
- 2 if the **Help** button is pressed.
- 3 if the **Extra** button is pressed.
- 1 if errors occur inside **dialog** or **dialog** is exited by pressing the *ESC* key.

## BUGS

Perhaps.

## AUTHOR

Thomas E. Dickey (updates for 0.9b and beyond)

## CONTRIBUTORS

Tobias C. Rittweiler

Valery Reznic - the form widget.

Yura Kalinichenko adapted the gauge widget as "pause".

This is a rewrite (except as needed to provide compatibility) of the earlier version of **dialog 0.9a**, which

lists as authors:

Savio Lam - version 0.3, "dialog"

Stuart Herbert - patch for version 0.4

Marc Ewing - the gauge widget.

Pasquale De Marco "Pako" - version 0.9a, "cdialog"