Conky Status Window

Setup and Configuration Guide

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About Conky

Conky is an application that can display any kind of information on your screen, as a widget. Conky has many built-in variables and tools that let you display information about your system or details from external sources like email clients and music players. You can even extend Conky's functionality using scripts written in the Lua programming language.

How To Install Conky

See the separate topic here.

How To Configure Conky

There is no graphical interface for configuring Conky to set up a window. Instead, you edit a config file called `.conkyrc`. On Linux systems, you typically save this file in your home directory at $HOME/.config/conky/. You also will save any Lua scripts you create to this same directory and then "including" them in your `.conkyrc` file. You can then add a command to the autostart process of your desktop environment or window manager that launches Conky every time you boot your system.

The topics where I've documented my personal Conky window contain further details and hints about how to configure a conky of your own.

Additional Resources

- Find complete documentation at the Conky project's web site.
  - Configuration settings used in the `.conkyrc` file's `conky.config` section are here.
  - Variables used in the `.conkyrc` file's `conky.text` section are here.
- Find source code and additional information on GitHub.
- Although you can install Conky as an .AppImage from the conky project's SourceForge page, first check if you can install it from your OS's software repositories; this ensures Conky will be updated when new features are released. See the Installing Conky topic for how to install Conky on Debian-based Linux distributions.

Installing Conky

Conky is very popular and therefore it's highly likely that it already appears in your Linux distribution's software repositories. Use your distro's package manager to search for and install conky; a process that will also install any additional software and/or libraries that Conky depends on.

For example, in Debian-based systems (including Ubuntu and its derivatives), open a terminal and use the APT package manager to search for conky: `apt search conky`. You'll likely see multiple results like conky, conky-all, and more.

Optionally, you can see conky's dependencies and other details before you install it by typing `apt info conky`. You'll see that (as of May 2025) the Conky package depends on the other conky-related packages (conky-std, conky-cli, conky-all) you saw when you ran the previous search. This means installing Conky also will install those dependencies.

To install conky, type `sudo apt install Conky -y`. (The `-y` option tells APT to automatically answer "yes" to any confirmation messages.) You can verify Conky was installed correctly by typing `Conky --version`, which shows the version number other info.

If Conky does not appear in your software repositories, you can download it through other means. Understand that the following methods are outside of your operating system's package manager which means you may need to perform

additional steps to get Conky working on your system and you will need to install future updates manually. (Both of these steps are beyond the scope of this documentation.)

- Download the standalone .AppImage file for Conky from the project's SourceForge page.
- Download an .AppImage file or a .zip file of the source code (to compile yourself) from the project's GitHub page.

About My Conky

The Elements

My Conky window is very simple. It shows the current time and date, and then below that three meters that show usage information for memory, disk space, and CPU.

Another, more subtle element is a radial gradient color that appears behind the text and meters. It's controlled by a separate Lua script, and it helps separate my Conky window's content from wallpaper backgrounds that may have conflicting colors.

The Files

There are two files that control my Conky window: .conkyrc and draw_bg.lua. In Linux systems, you should save both files together at $HOME/.config/conky/. Both files are discussed in the following topics.

The `.conkyrc` File

The `.conkyrc` file defines the characteristics and appearance of the overall Conky window and also its contents. The following summarizes the file's different sections and highlights a few important options you might want to change. For details about how to use all options in this `.conkyrc` file, see the Conky project's additional resources.

There are two sections within the `conkyrc` file: `conky.config` and `conky.text`.

The `conky.config` Section

Here you configure the appearance of the CSWonky window itself. This includes parameters like size, position, and borders, but also the colors and fonts used later when defining the content in the `.conkyrc` file's `conky.text` section.

The following is not a detailed description of each parameter available. I only highlight the important ones you might want to edit.

Window Behavior and Appearance

Window Behavior

This part defines general characteristics of the Conky window. Specifically, the various `own_window_...` options, which you can research separately if you want to edit them.

The first two lines deserve attention because they are what ties the Lua script into this conky. As described here, this script draws a color gradient behind my conky.

- `lua_load` identifies the location of the Lua script to include.
- `lua_draw_hook_pre` identifies the function within the script that Conky should run.

For details about this script, see this topic that describes the `draw_bg.lua` file.

Window Size and Placement

The parameters in this section control the size of the Conky window and its location onscreen.

- The `minimum_width` and `minimum_height` parameters are self explanatory. They dictate that the Conky window cannot be any smaller than the two values here.
- Similarly, the `maximum_width` parameter dictates the window cannot be any wider than the value shown. For this conky, there is no `minimum_height` parameter, although you can add it if you want.
-

With these values, the physical size of the Conky window is much larger than the content I'm displaying. This was necessary, so be careful if you change these values. When either of the minimums were smaller, the color gradient (controlled by the Lua script) didn't have enough space to bloom fully and the edges of the window cut off the gradient, leaving an obvious line.

Window location:

- The `alignment` parameter specifies where the Conky window should be anchored. I chose bottom-left.
- The `gap_x` and `gap_y` parameters then give a horizontal and vertical offset (respectively). So, from the bottom-left anchor point, I've offset the Conky window horizontally (moved to the right) by +1350px. I offset the window vertically (moved down a little) by -120px.

Fonts

The first parameter is the most important; it's where you type the name of the default font you want to use in the conky window. You can always override this default font by specifying an inline font in the `conky.text` section of the `.conkyrc` file. In fact, my conky windows does this. But I specify a default font here just in case I make a mistake in the `conky.text` section.

Not sure what to type as the name of the font you want to use? Open a terminal and type `fc-list :family | sort | uniq`. This command lists all fonts installed on your system and sorts them by family and removes any duplicates. Each entry includes the path to the font's .tff file and also its name.

In the `.conkyrc` file there is a commented-out line for icons, if you want to use them.

Colors

I'll focus on the custom colors section. You can add and use as many colors as you like; just follow the format. I use only two colors: color4 and color8. (There used to be more but I removed the rest and didn't take the time to rename these two.)

- `color8` is the primary font color. Currently there are two variants; one for use when the conky window appears against a darker wallpaper background and another when the window appears against a lighter background.
- `color4` is an accent color used for the date and some percentage values in the two meters. Like color8 there are two variants depending on the overall color of your background.

Borders

Nothing special here. In the first line, `draw_borders` is set to false, so the following border parameters don't have any effect and the conky window is drawn without any borders. If you like borders, go for it.

Miscellaneous

Most of these are self-explanatory, and if you want to change them you can. There's nothing critical to highlight here.

The `conky.text` Section

This section of the `.conkyrc` file is where you combine the variables and text that define what appears in your Conky window. Here are some basic conventions about this section:

- You declare this section with the `conky.text` parameter followed by a special set of delimiters that mark the beginning and end of the section. These delimiters are custom; I chose `[=[` and `]=]`. You can change them, but just make sure the beginning and end characters match.
- The `conky.text` section uses variables in the format ${...}. If you type or copy/paste variables, make sure you include everything. Leaving out the `$` character, for example, will break the variable. Also, for variables that take numbers in their agruments, those numbers can be positive or negative (e.g., `${voffset -30}` or `${goto 50}`). For more information about variables, follow the link in theadditional resources topic.
- In this section you can specify fonts and sizes inline, which will override the default font you set in the `conky.config` section.
- For the purposes of this documentation, I divided the `conky.text` into subsections (SS-1, SS-2, etc.) so I can talk about them separately.
- The `conky.text` section uses the # character for comments because this section uses uses Conky's own variable language, which is closer to the classic Conky syntax. This differs from the `--` and `--[[...]]` characters used in the `conky.config` section, because that section follows the syntax for the Lua programming language.

SS-1

SS-1 contains the variables and text used to define the Conky window's data and time. The first line defines the format for the clock:

- The vertical offset variable pushes the starting point down from the top of the Conky window. Even though the window is aligned bottom-left in the `conky.config` section, I established the size of the window a little large to accommodate the full spread of the color gradient that appears in the background. And since the starting point for anything in the `conky.text` section is the top of the window, we need to push the text down a little.
- The next variable aligns the clock text in the horizontal center of the window.
- The color variable tells Conky that any following content should be in the main color `${color8}`
- The font variable tells Conky that any following content should have that font and size, and it stops when Conky encounters the closing `{font}` string.
- The time variable establishes the format for the clock. This variable accepts standard arguments for "string format time." Just ask AI to generate a list of the common `strftime` placeholders and their definitions.

The second line defines the day/date/year:

- There's no `${voffset}` variable; I just accepted Conky's default distance for the next line. If you wanted more or less space, however, you could add some offset.
- As with the first line, there is a center alignment variable, a color variable, and a font variable that all perform the same functions described previously.
- The day of the week (`${time %A}`) uses the main color (`${color8}`), but then switches to the accent color (`${color4}`) for the date (`${time %d}`) and month (`${time %B}`) before returning to the main color for the year (`${time %Y}`) .

SS-2

This section defines information to display regarding system memory usage. There's a label, an overall percentage of memory used, a parenthetical depicting the amount of memory used (in GB) out of how much is available (in GB), and a bar to give a visual. The code is spread across two lines, but I'll explain it together.

- There's a vertical offset that pushes the meter down a little to give it separation from the date/time information above.
- A color and font variable control the appearance of the "ram" label.
- A horizontal offset variable (`${goto 65}`) tells Conky to jump to the right before drawing the next part. A vertical offset variable then pulls it up slightly.
- I change to the accent color (`${color4}`) and add a font variable to control the appearance of the memory percentage.
- The memory percentage uses the `${memperc}` variable (which displays just a number) followed by a % symbol that I typed manually.
- Another set of horizontal and vertical offset variables tell Conky where to go to draw the next element.
- I switch back to the main color (`${color8}`) and adjust the font size before displaying a parenthetical containing the amount of memory used out of the total available. Following is a breakdown of `(${mem cached} / ${memmax})`:
  - I manually typed the opening and closing parentheses.
  - The first variable is a calculation. It shows now much memory is currently in use by subtracting the amount of cached memory from the currently used memory to get a more realistic picture of the memory that is available.
  - I manually type a slash, and then add the `${memmax}` variable that displays the total amount of installed RAM.
- On the final line, horizontal and vertical offset variables and a color variable affect how Conky draws a percentage-based memory bar. The `${membar 15,140}` variable takes two numeric arguments which draw a bar 15px tall and 140px long.

SS-3

This section defines information to display about disk usage. There's a label, an overall percentage of disk space used, a parenthetical depicting the amount of space used (in GB) out of how much is available (in GB), and a bar to give a visual. The code for this information is spread across two lines, but I'll explain it together.

- There's a vertical offset that raises this information up a little, and a horizontal offset that pushes to the right.
- A color and font variable control the appearance of the "disk" label.
- A horizontal offset variable (`${goto 332}`) tells Conky to jump to the right before drawing the next part. A vertical offset variable then pulls it up slightly.
- I change to the accent color (`${color4}`) and add a font variable to control the appearance of the disk usage percentage.
- The disk usage percentage uses the `${fs_used_perc}` variable (which displays just a number) followed by a % symbol that I typed manually.
- Another set of horizontal and vertical offset variables tell Conky where to go to draw the next element.
- I switch back to the main color (`${color8}`) and adjust the font size before displaying a parenthetical containing the amount of disk space used out of the total available. Following is a breakdown of `(${fs_used} / ${fs_size})`:
  - I manually typed the opening and closing parentheses.
  - The first variable is the total amount of disk space used. Then I manually typed a slash before adding a second variable that displays the total size of the disk.
- On the final line, horizontal and vertical offset variables and a color variable affect how Conky draws a percentage-based disk usage bar. The `${fs_bar 15,140}` variable takes two numeric arguments which draw a bar 15px tall and 140px long.

SS-4

This section defines what information to display regarding CPU usage. There's a label, a percentage of CPU usage, and a bar to give a visual. Currently, I have one line that shows usage as an average across all CPU cores (using the `${cpu}` variable).

- There's a vertical offset that raises this information up a little, and a horizontal offset that pushes to the right.
- A color and font variable control the appearance of the "cpu" label.
- A horizontal offset variable then tells Conky to jump to the right before drawing the next part.
- I change to the accent color (`${color4}`) and add a font variable to control the appearance of the CPU usage percentage.
- The disk usage percentage uses the `${fs_used_perc}` variable (which displays just a number) followed by a % symbol that I typed manually.
- A horizontal and slight vertical offset tell Conky where to go to draw the next element, a bar.
- I switch back to the main color (`${color8}`) and use the `${cpubar 15,190}` variable, which takes two arguments that draw a bar 15px tall and 190px long.

There are two nearly identical lines after this that are currently commented out. If you uncomment them they show CPU usage for individual cores. If you want to see that level of detail, just copy/paste these lines until you have matched the number of cores your computer has. Then for each line update two variables to reflect a different core:

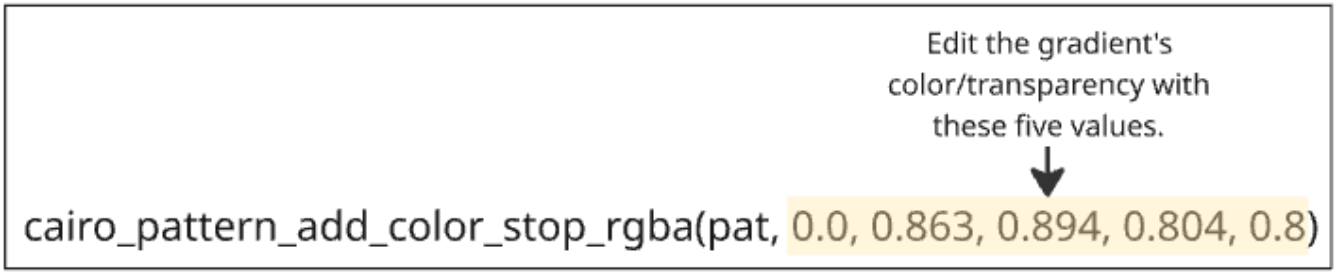
- `${cpu cpu`*`N`*`}` shows the percent usage. Replace *N* with the core's number.
- `${cpubar cpu`*`N`*` 15,190}` draws a bar. Replace *N* with the core's number.

The `draw_bg.lua` File

The `draw_bg.lua` file is a script that draws a radial color gradient behind the Conky window to help separate the window's contents from conflicting colors in the background wallpaper. The gradient currently only has two colors, light blue that's 80% opaque and white that's 0% opaque (fully transparent).

Full disclosure: I don't write code in the Lua programming language. I asked ChatGPT to write this script for me, and it worked great so I didn't ask questions. Therefore, I'm going to only cover the COLOR SECTION of the script which is where you can change the color of the gradient.

The gradient's starting color is at line 37: `cairo_pattern_add_color_stop_rgba(pat, 0.0, 0.863, 0.894, 0.804, 0.8)`. Changing the color means editing the decimal values that appear inside the parenthesis.



- The first value after "pat" is what's known as the offset. A number of 0.0 means that this color is at the start of the gradient (center), and a value of 1.0 means the color is at the end.
- The middle three decimal values together form the red-green-blue (RGB) values of the color itself. Converting a hex color (e.g., #DBE4CD) to decimal format means:
  - Separating the hex into its three individual components (red=DB, green=E4, blue=CD).
  - Replacing each component with its numerical value on the 0-255 scale (go ask AI).
  - Dividing each value by 255 to get a decimal.

HEX color		RGB Parts	Convert to Numeric	Convert to Decimal (÷255)
#DBE4CD	red	DB	219	0.863
	green	E4	228	0.894
	blue	CD	205	0.804

- The final number in the parentheses is the opacity value, where 0.0 is fully transparent and 1.0 is fully opaque.
- To add more colors along the gradient, you can duplicate one of these color stop lines and change the values. The script includes two commented-out lines already set up for this; just change the offset, color values, and opacity of each.