

# Drop-down Terminal

## Introduction

A drop-down terminal pops up from the top of the screen in video game console fashion and can be toggled with a single hotkey. Applications such as Yakuake, Guake or Tilda provide drop-down terminal functionality for the regular desktop environments. With awesome and the power of lua, however, we can mimic this functionality and still use our precious light-weight terminal applications.

Adding the following function to your rc.lua and calling it in a keybinding will create a new window for the drop-down terminal when it does not exist, and will toggle between hidden and visible if one does exist. The first argument is the program to run (eg. "urxvtc"), the second argument is the height (absolute pixels when > 1 or a height percentage when < 1, 0.2 (20% of the screen height) by default), and the third argument is the screen to toggle on. The second and third arguments are optional.

## Function

```
-- This function is for awesome versions prior to 3.4

dropdown = {}

function dropdown_toggle(prog, height, s)
    if s == nil then s = mouse.screen end
    if height == nil then height = 0.2 end
    if not dropdown[prog] then
        -- Create table
        dropdown[prog] = {}
        -- Add unmanage hook for dropdown programs
        awful.hooks.unmanage.register(function (c)
            do
                for scr, cl in pairs(dropdown[prog])
                do
                    if cl == c then
                        dropdown[prog][scr] = nil
                    end
                end
            end)
    end
    if not dropdown[prog][s] then
        spawnw = function (c)
            -- Store client
            dropdown[prog][s] = c
            -- Float client
            awful.client.floating.set(c, true)
            -- Get screen geometry
            screengeom = screen[s].workarea
            -- Calculate height
```

```
    if height < 1 then
        height = screengeom.height*height
    end

    -- I like a different border with for the popup window
    -- So I don't confuse it with terminals in the layout
    bw = 2

    -- Resize client
    c:geometry({
        x = screengeom.x,
        y = screengeom.y - 1000,
        width = screengeom.width - bw,
        height = height - bw
    })

    -- Mark terminal as ontop
    --           c.ontop = true
    --           c.above = true
    c.border_width = bw

    -- Focus and raise client
    c:raise()
    client.focus = c

    -- Remove hook
    awful.hooks.manage.unregister(spawnw)
end

-- Add hook
awful.hooks.manage.register(spawnw)

-- Spawn program
awful.util.spawn(prog)

dropdown.currtag = awful.tag.selected(s)
else
    -- Get client
    c = dropdown[prog][s]
    -- Switch the client to the current workspace

    -- Focus and raise if not hidden
    if c.hidden then
        awful.client.movetotag(awful.tag.selected(s), c)
        c.hidden = false
        c:raise()
        client.focus = c
    else
        if awful.tag.selected(s) == dropdown.currtag then
            c.hidden = true
            local ctags = c:tags()
```

```
        for i, t in pairs(ctags) do
            ctags[i] = nil
        end
        c:tags(ctags)
    else
        awful.client.movetotag(awful.tag.selected(s), c)
        c:raise()
        client.focus = c
    end
end
dropdown.currtag = awful.tag.selected(s)
end
end
```

## Another solution

The previous solution have two little quirks: the console window is detected as the first window being managed just after requesting one. There could be a race condition but it is unlikely. The second associated quirk is that when you restart awesome, you lose the fact that this window is a drop-down terminal. You now have one terminal which is sticky. This is a bit disturbing. Here is another solution that works around this by relying on a name given to the dropdown terminal:

```
-- Quake like console on top
-- Similar to:
--   http://git.sysphere.org/awesome-configs/tree/scratch/drop.lua
-- But uses a different implementation. The main difference is that we
-- are able to detect the Quake console from its name
-- (QuakeConsoleNeedsUniqueName by default).
-- Use:
-- local quake = require("quake")
-- local quakeconsole = {}
-- for s = 1, screen.count() do
--     quakeconsole[s] = quake({ terminal = config.terminal,
--                             height = 0.3,
--                             screen = s })
-- end
-- config.keys.global = awful.util.table.join(
--     config.keys.global,
--     awful.key({ modkey }, "`",
--         function () quakeconsole[mouse.screen]:toggle() end)
-- )
-- If you have a rule like "awful.client.setslave" for your terminals,
-- ensure you use an exception for
-- QuakeConsoleNeedsUniqueName. Otherwise, you may run into problems
-- with focus.
```

```
local setmetatable = setmetatable
local string = string
local awful = require("awful")
local capi = { mouse = mouse,
               screen = screen,
               client = client,
               timer = timer }

-- I use a namespace for my modules...
module("quake")

local QuakeConsole = {}

-- Display
function QuakeConsole:display()
    -- First, we locate the terminal
    local client = nil
    local i = 0
    for c in awful.client.cycle(function (c)
        -- c.name may be changed!
        return c.instance == self.name
        end,
        nil, self.screen) do
        i = i + 1
        if i == 1 then
            client = c
        else
            -- Additional matching clients, let's remove the sticky bit
            -- which may persist between awesome restarts. We don't close
            -- them as they may be valuable. They will just turn into a
            -- classic terminal.
            c.sticky = false
            c.ontop = false
            c.above = false
        end
    end

    if not client and not self.visible then
        -- The terminal is not here yet but we don't want it yet. Just do
        nothing.
        return
    end

    if not client then
        -- The client does not exist, we spawn it
        awful.util.spawn(self.terminal .. " " .. string.format(self.argname,
self.name),
            false, self.screen)
        return
    end
end
```

```
-- Compute size
local geom = capi.screen[self.screen].workarea
local width, height = self.width, self.height
if width <= 1 then width = geom.width * width end
if height <= 1 then height = geom.height * height end
local x, y
if self.horiz == "left" then x = geom.x
elseif self.horiz == "right" then x = geom.width + geom.x - width
else x = geom.x + (geom.width - width)/2 end
if self.vert == "top" then y = geom.y
elseif self.vert == "bottom" then y = geom.height + geom.y - height
else y = geom.y + (geom.height - height)/2 end

-- Resize
awful.client.floating.set(client, true)
client.border_width = 0
client.size_hints_honor = false
client:geometry({ x = x, y = y, width = width, height = height })

-- Sticky and on top
client.ontop = true
client.above = true
client.skip_taskbar = true
client.sticky = true

-- This is not a normal window, don't apply any specific keyboard stuff
client:buttons({})
client:keys({})

-- Toggle display
if self.visible then
    client.hidden = false
    client:raise()
    capi.client.focus = client
else
    client.hidden = true
end
end

-- Create a console
function QuakeConsole:new(config)
    -- The "console" object is just its configuration.

    -- The application to be invoked is:
    -- config.terminal .. " " .. string.format(config.argname, config.name)
    config.terminal = config.terminal or "xterm" -- application to spawn
    config.name      = config.name      or "QuakeConsoleNeedsUniqueName" --
window name
    config.argname  = config.argname  or "-name %s" -- how to specify
window name
```

```

-- If width or height <= 1 this is a proportion of the workspace
config.height = config.height or 0.25 -- height
config.width = config.width or 1 -- width
config.vert = config.vert or "top" -- top, bottom or
center
config.horiz = config.horiz or "center" -- left, right or
center

config.screen = config.screen or capi.mouse.screen
config.visible = config.visible or false -- Initially, not visible

local console = setmetatable(config, { __index = QuakeConsole })
capi.client.add_signal("manage",
    function(c)
        if c.instance == console.name and c.screen ==
console.screen then
            console:display()
            end
        end)
capi.client.add_signal("unmanage",
    function(c)
        if c.instance == console.name and c.screen ==
console.screen then
            console.visible = false
            end
        end)

-- "Reattach" currently running QuakeConsole. This is in case awesome is
restarted.
local reattach = capi.timer { timeout = 0 }
reattach:add_signal("timeout",
    function()
        reattach:stop()
        console:display()
        end)
reattach:start()
return console
end

-- Toggle the console
function QuakeConsole:toggle()
    self.visible = not self.visible
    self:display()
end

setmetatable(_M, { __call = function(_, ...) return QuakeConsole:new(...)
end })

```

This only works for applications that accept to be given a name through the command line (xterm, rxvt). Example of use :

```
local quake = require("quake")

local quakeconsole = {}
for s = 1, screen.count() do
    quakeconsole[s] = quake({ terminal = config.terminal,
                             height = 0.3,
                             screen = s })
end

config.keys.global = awful.util.table.join(
    config.keys.global,
    awful.key({ modkey }, "`",
              function () quakeconsole[mouse.screen]:toggle() end)
```

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