zeroset

Dual-head Monitor Setup on Ubuntu Linux with Xorg and radeon

Let me briefly summarize two methods to configure a dual-head setup with an external monitor connected to a laptop's HDMI port on Ubuntu Linux 12.10 Natty. My setup includes a Lenovo Z565 laptop with an AMD/ATI Mobility Radeon HD 5470 graphics card and a Samsung S24A650D monitor. We assume that we rely Xorg's open-source *radeon* driver throughout the tutorial.

Dynamic Configuration

We will use *xrandr* to configure a temporary dual-head setup during runtime. After connecting the monitor to the laptop, obtain the labels the system assigned to the monitors by a

```
xrandr -q
```

In my case, the output read

```
Screen 0: minimum 320 x 200, current 1920 x 1848, maximum 8192 x 8192
LVDS connected 1366x768+0+1080 (normal left inverted right x axis y axis) 0mm x 0mm
   1366x768      60.0*+
   1280x720      59.9
   1152x768      59.8
 (...)
HDMI-0 connected 1920x1080+0+0 (normal left inverted right x axis y axis) 531mm x 299mm
   1920x1080     60.0*+  50.0
   1600x1200     60.0
   1680x1050     59.9
 (...)
VGA-0 disconnected (normal left inverted right x axis y axis)
```

The laptop's internal monitor is called *LVDS* and the external monitor *HDMI-0*. By another call to xrandr, we

activate the dual-head setup:

```
xrandr --output HDMI-0 --primary --left-of LVDS
```

The command line is to be understood literally: The HDMI monitor shall be the primary screen (e.g. displaying gnome's titlebar) and shall be positioned left of the laptop's internal monitor. For other placements, see xrandr's *–left-of*, *–right-of*, *–above* and *–below* options or the very general *–po*s argument.

Permanent Configuration

For a permanent static configuration of a dual-head setup, we create a configuration file for the X server with an editor of your choice,

```
/etc/X11/xorg.conf
```

You will need root privileges for this*.* The contents of *xorg.conf* is as follows:

```
Section "Device"
    Identifier     "Mobility Radeon HD 5400 Series"
    Driver       "radeon"
    Option        "monitor-LVDS" "monitor_internal"
    Option        "monitor-HDMI-0" "monitor_external"
EndSection

Section "Monitor"
    Identifier     "monitor_internal"
    Option        "RightOf" "monitor_external"
EndSection

Section "Monitor"
    Identifier     "monitor_external"
    Option        "Primary" "true"
EndSection
```

In the device section, we specify to use Xorgs's open source *radeon* driver and setup two aliases for the monitors. Please note that the monitor ID is composed of the static prefix *monitor-* and the monitor label as returned by *xrandr -q* (see above). The remaining configuration places the laptop's internal monitor right of

the external monitor. The latter is configured to be the primary screen.

Further Information

For more information, have a look at

- Xorg's documentation of the radeon driver
- An article at Intel about configuring dual-head setups
- and the man pages for the radeon driver (*man radeon*) and xrandr (*man xrandr*)

simon / January 7, 2013 / gnome, radeon, ubuntu / dual-head, external, HDMI, linux, monitor, radeon, ubuntu, xorg

3 thoughts on "Dual-head Monitor Setup on Ubuntu Linux with Xorg and radeon"

Samson

February 19, 2014 at 03:10

I have a similar hardware as yours but I am running Ubuntu server with xbmc, at the moment xbmc is automatically start by upstart script and it will display on both the laptop's LVDS and TV via HDMI. What I want it xmbc only output to TV while I get Ubuntu console back in LVDS, that can be a simple tty console. Any hints on how to do that?

Pingback: Configurar dual head con xrandr | Gastón Ramos

Pingback: Ubuntu 14.04 to 16.04 Radeon HD 5770 but basic display functionality does not work - ubuntutextbook

This site uses Akismet to reduce spam. Learn how your comment data is processed.

Privacy Overview

This website uses cookies to improve your experience while you navigate through the website. Out of these, the cookies that are categorized as necessary are stored on your browser as they are essential for the working of basic functionalities of the website. We also use third-party cookies that help us analyze and understand how you use this website. These cookies will be stored in your browser only with your consent. You also have the option to opt-out of these cookies. But opting out of some of these cookies may affect your browsing experience.

Necessary

Necessary

Always Enabled

Necessary cookies are absolutely essential for the website to function properly. This category only includes cookies that ensures basic functionalities and security features of the website. These cookies do not store any personal information.

Non-necessary

Non-necessary

Any cookies that may not be particularly necessary for the website to function and is used specifically to collect user personal data via analytics, ads, other embedded contents are termed as non-necessary cookies. It is mandatory to procure user consent prior to running these cookies on your website.

SAVE & ACCEPT