

Xorg

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Usually the configuration of X via Xorg is generated on the fly. Compared to the old XFree86 setups years ago this works astonishing well. There is usually no need to create ones own configuration. However in some corner cases there is an advantage to understand the configuration or even create a part of the configuration explicitly.

1 Using A Laptop With external Display Only (Internal LCD Closed)

Some laptops have the BIOS option to only use the external monitor. As long as Linux is not detecting the internal LCD screen all is fine. Some other BIOS' might defined the primary screen to be the external one, but usually Linux do not care about it. And in some cases there is no option.

In this cases the onboard LCD screen gets configured via Xorg automatically. If this is a good or bad thing depends on the window manager. From my experience Gnome or MATE will handle such a screen well, means will blank it and one can log in, lock the screen and even after hibernation log into the system correctly.

Some other window managers, as XFCE4 under Debian 10 Buster do not behave well. Some or all of the following can be observed sometimes:

- After booting the system, the login dialog will be displayed on the closed laptop screen and not on the external monitor

- After logout and login again the login dialog will be displayed on a random screen, sometimes on the closed one.
- After unlocking or login from the external monitor, the system gets aware of a closed internal screen, and if there is no activity (mouse for example) the system get sent to hibernation and it seems that unlocking or login in do not work. This even happens if correct values of never sleeping when lid is closed was chosen in power management setup dialog.

The following might fix some of the problems, but maybe not all. The trick is to provide a part of the Xorg configuration that explicitly tells Xorg to not guess the configuration for the onboard LCD, but to just ignore it. As a result the screen gets blanked and is not available for X configuration tools. While this has pros in a static scenario where the laptop is always closed it has the disadvantage that, if one decide to use the laptop as a mobile computer, no X will show up. In a second step this unexpected behavior is addressed.

First the following file `/usr/share/X11/xorg.conf.d/50-disable-lvds.conf` with the content

```
1 Section "Monitor"
2     Identifier "lvds monitor"
3     Option "ignore" "true"
4 EndSection
5
6 Section "Device"
7     Identifier "LVDS-1"
8     Option "Monitor-LVDS-1" "lvds monitor"
9 EndSection
```

All except one value `LVDS-1` is fixed. To understand which value the device identifier has, use the command `xrandr -q`. Usually on laptops there is a line starting or containing the string `LVDS` like this:

```
1 LVDS-1 connected 1280x800+0+0 (normal left inverted right x axis y axis) 321
   mm x 213mm
```

Second, in case you forget how you configured X on your laptop. That can happen if you decide to use the laptop (after it was used 2 years on your desk as a desktop replacement) on the road again, a hint on the login screen might help to figure out why X was not started. Of course you would need to restart the laptop or at least X.

```
1 export MOTD=/etc/motd
2 echo "">>$MOTD
3 echo "=====>>
   $MOTD
4 echo "To start X on LCD screen, move or remove:>>$MOTD
5 echo "/usr/share/X11/xorg.conf.d/50-disable-lvds.conf">>$MOTD
```

```
6 echo "===== ">>  
    $MOTD
```

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