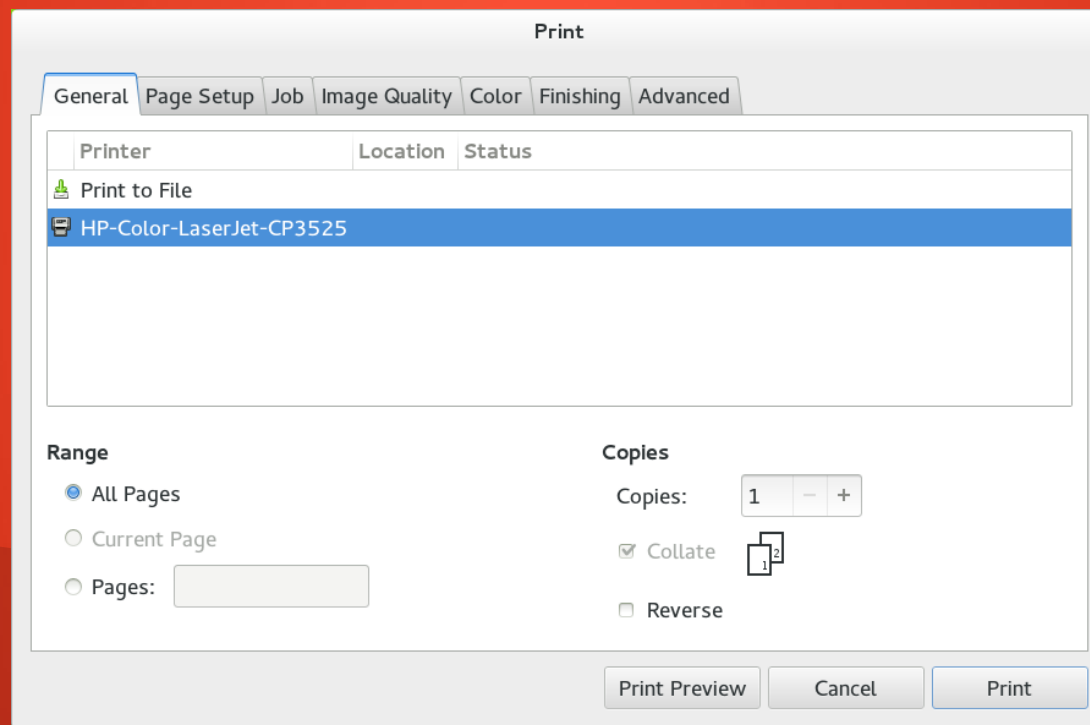# Printing support in GNOME and Gtk+

Gtk+ Print Dialog

Print dialog used in Gtk+ applications.

Gtk+ Print Dialog Basics

- Gtk+ print dialog allows users to set printing options at one place before actual print

  - Paper size and format

  - Page layout (multiple pages per sheet, odd / even pages, duplex printing, ...)

  - Job informations (priority, time, cover pages, ...)

  - Print quality

  - Color profile

  - Options specific to selected printer (stapling)

Gtk+ Print Dialog Backends

- CUPS backend
  - Uses IPP operations
  - It still uses PPD files for getting printer options
- File backend
  - Prints to PDF, Postscript and SVG files
  - Pages are arranged by Gtk+ on the output sheets (e.g. multiple pages per sheet)

Gtk+ Print Dialog Backends

- LPR backend
  - Not enabled by default
- PAPI backend
  - Not enabled by default

Gtk+ Print Dialog's DNS-SD Support

- Gtk+ supports direct printing to DNS-SD printers from 3.8
  - Lists printers advertised by DNS-SD protocol
    - Uses Avahi library
  - Shows basic options of DNS-SD printers
    - Uses IPP protocol implemented in CUPS
  - Prints to DNS-SD printers
    - Uses IPP protocol implemented in CUPS

Common Printing Dialog and Gtk+ Print Dialog

- DBUS
  - Gtk+ print dialog uses direct calls not DBus

- Option Icons
  - Gtk+ print dialog doesn't show icons for options

- Preview format
  - Gtk+ uses "cairo_t" together with some other info for getting pages for preview and passes them to an external application as PDF

Common Printing Dialog and Gtk+ Print Dialog

- DBus Service Name

  - Gtk+ print dialog doesn't expose its functionality over DBus

- Multiple Print Dialogs

  - Gtk+ print dialog doesn't support multiple instances for one running application

- Option Change Notification

  - Gtk+ doesn't notify application about changes of options

- Document Size

  - Document size is sent to print dialog together with content

Common Printing Dialog and Gtk+ Print Dialog

- Option Hints

    - Gtk+ print dialog doesn't support option hints

- Application specific Presets and Tags

    - Applications can add tab with its own options

- Option Saving

    - Gtk+ print dialog provides framework for storing print settings but this is not transparent to applications

- Handling of "InstallableOptions" group in PPD

    - Gtk+ print dialog doesn't expose options from "InstallableOptions" group

Common Printing Dialog and Gtk+ Print Dialog

- General

  - Gtk+ print dialog doesn't get documents in advance. It gets required info from user and send it together with the document to print server.

Printers Panel

Printers panel is part gnome-control-center project.
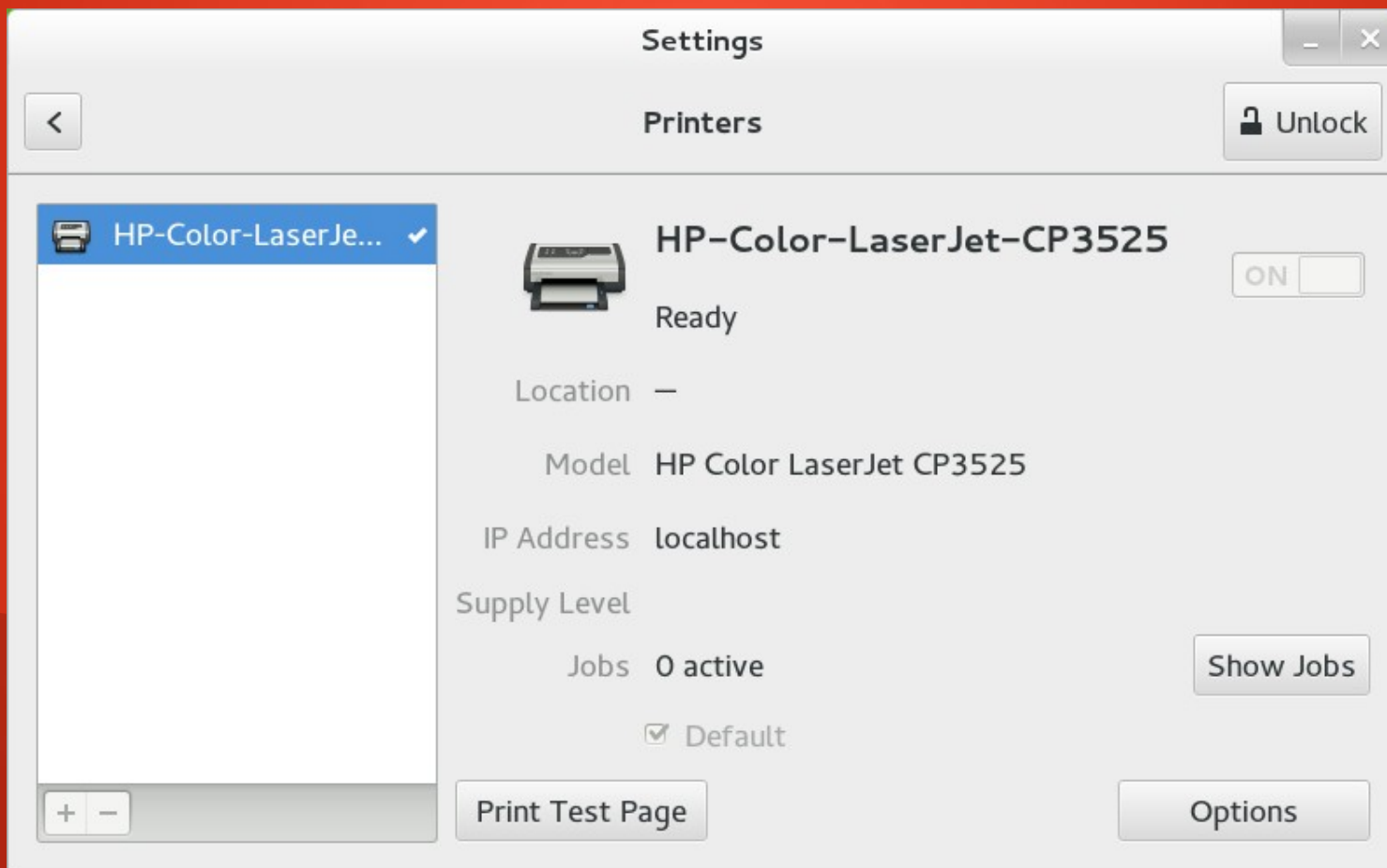
Printers Panel Basics

- Shows basic info about printers
    - name, location, model, IP address, amount of supplies, status, number of active jobs
- Supports addition / configuration / removal of printers to / in / from CUPS server
- Controls print jobs
- Doesn't contain advanced features for administration of print server
- Uses system-config-printer's and cups-pk-helper's methods

Printers Panel
Addition

- Automatically lists devices detected by local CUPS server and Samba printers on local network

- Lists printers configured on remote CUPS server given by user

- Lists devices on given address by using CUPS' SNMP backend

Printers Panel
Addition

- Groups found devices so that they don't appear more than once

- Installs missing packages if needed

- Selects best driver for added device or let user select the driver from database (Samba printers)

- Performs autoconfiguration

Printers Panel Addition
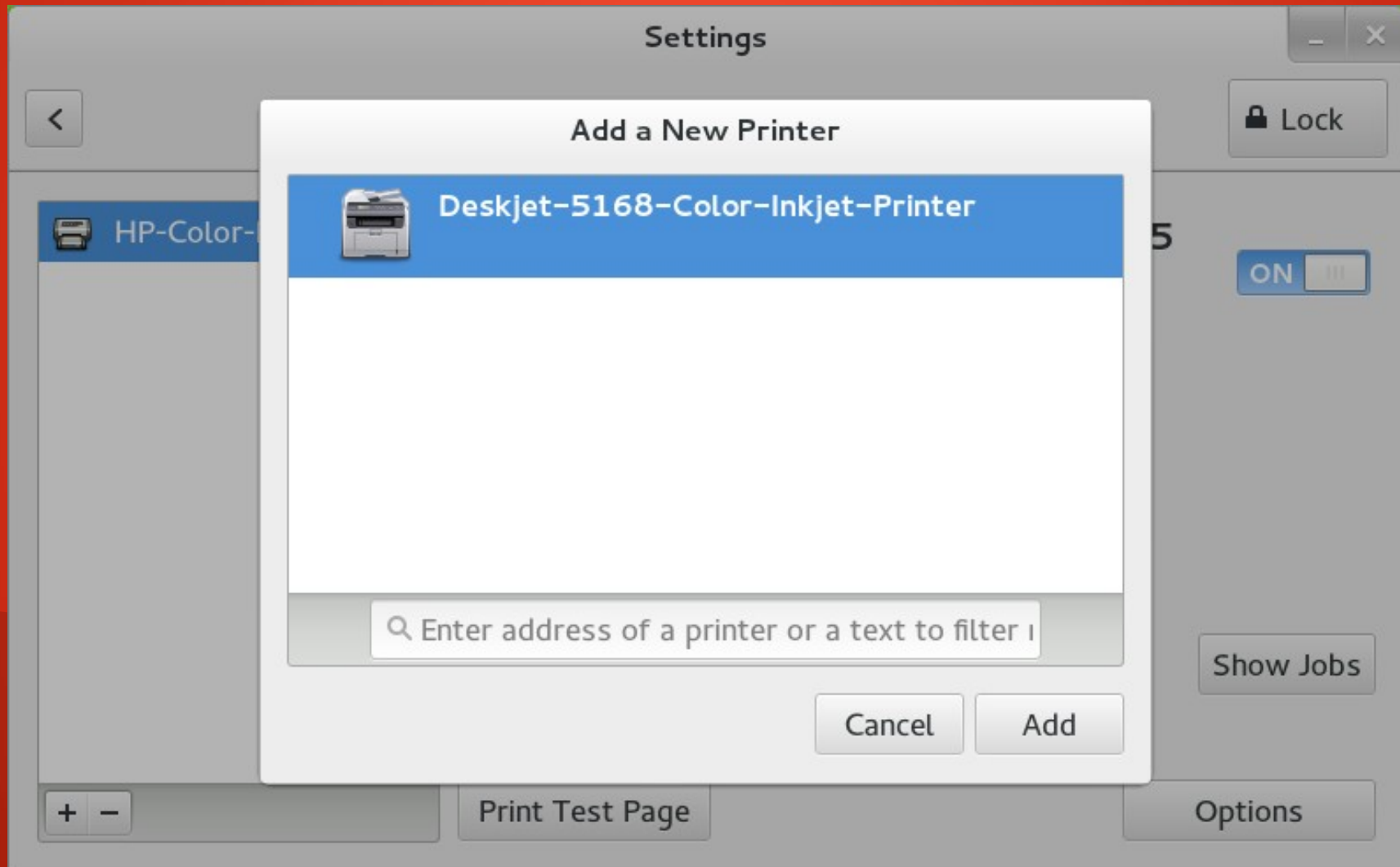
Printers Panel Configuration

- Renaming of printers

- Setting default printer

- Setting of printer's location

- Setting of printer's driver

  - Select from 3 best detected drivers

  - Select driver from installed ones

  - Select PPD file from disk

- Turning printer ON / OFF

Printers Panel Configuration
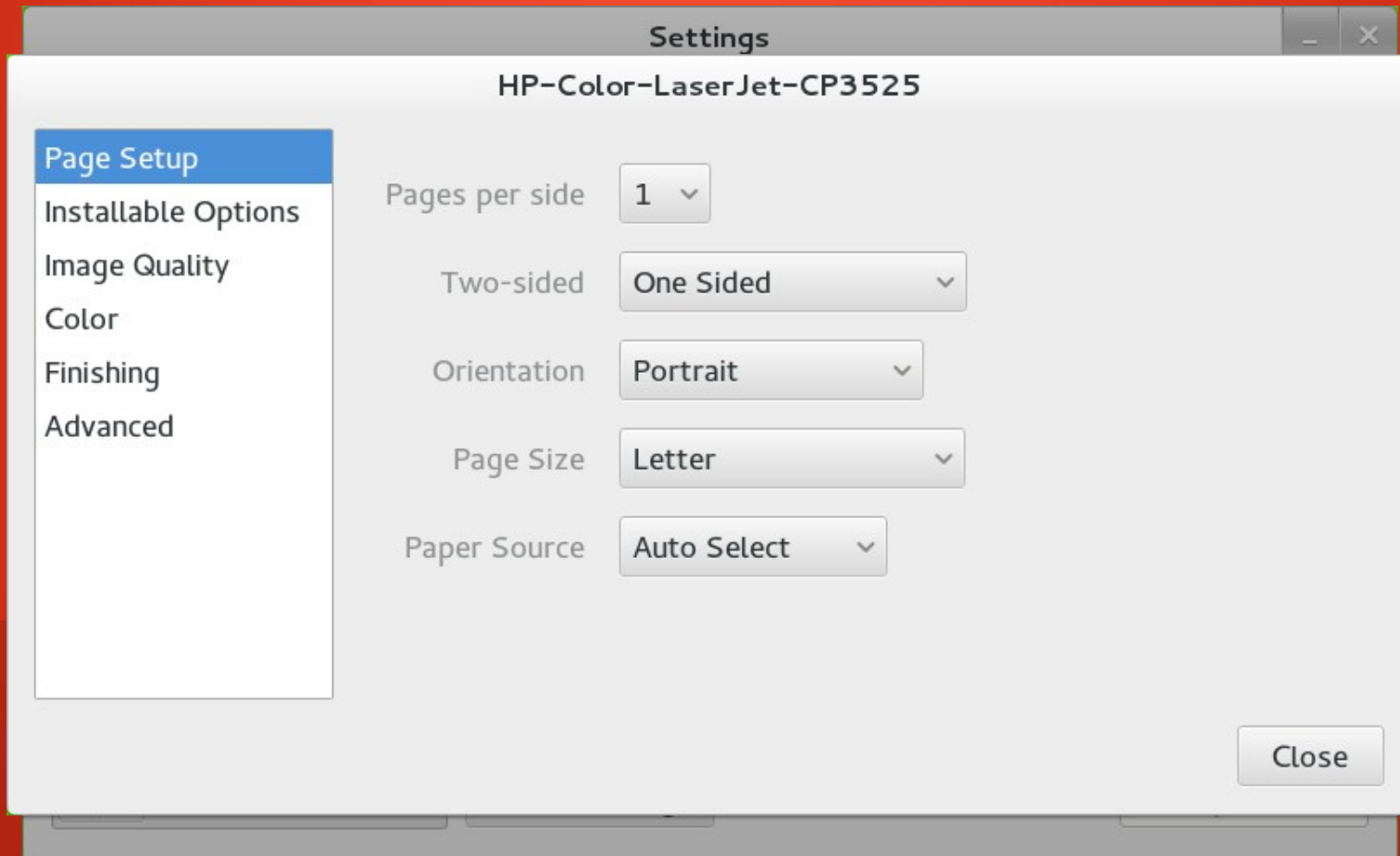
Settings

HP-Color-LaserJet-CP3525

Page Setup
Installable Options
Image Quality
Color
Finishing
Advanced

Pages per side   1 ▾

Two-sided   One Sided ▾

Orientation   Portrait ▾

Page Size   Letter ▾

Paper Source   Auto Select ▾

Close

Printers Panel Configuration
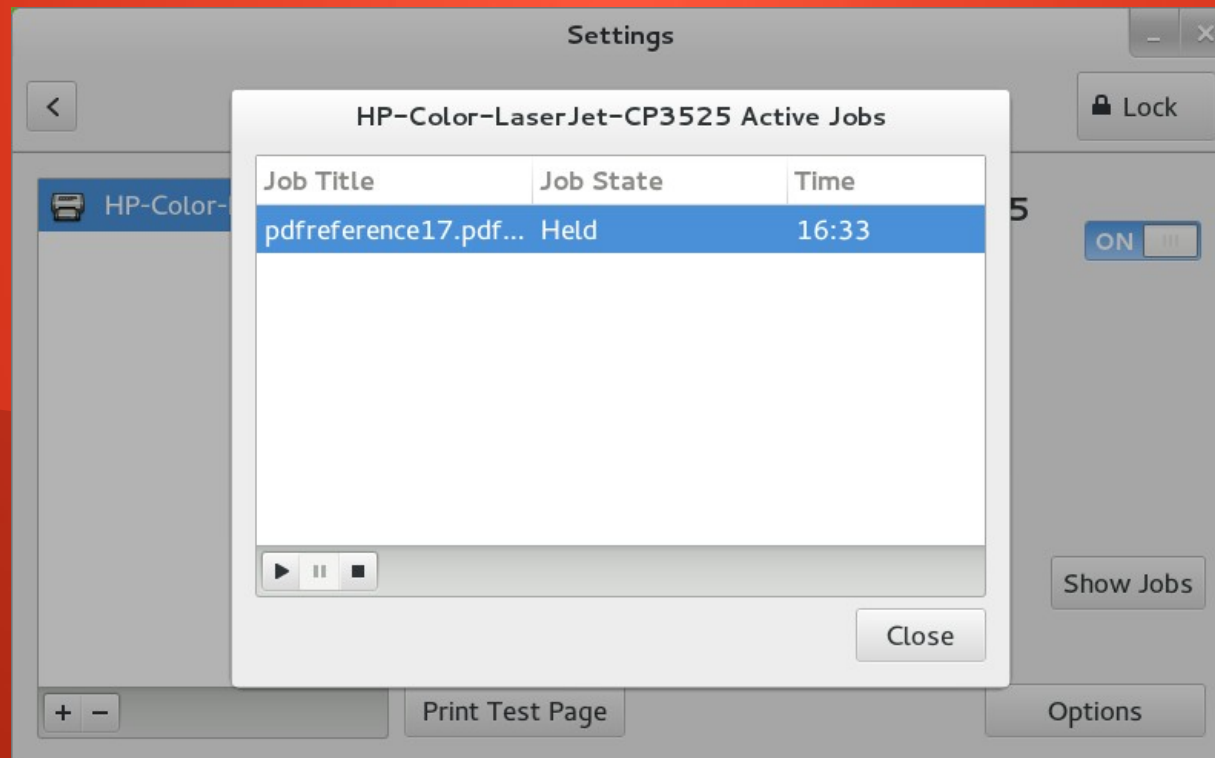
Printers Panel Configuration
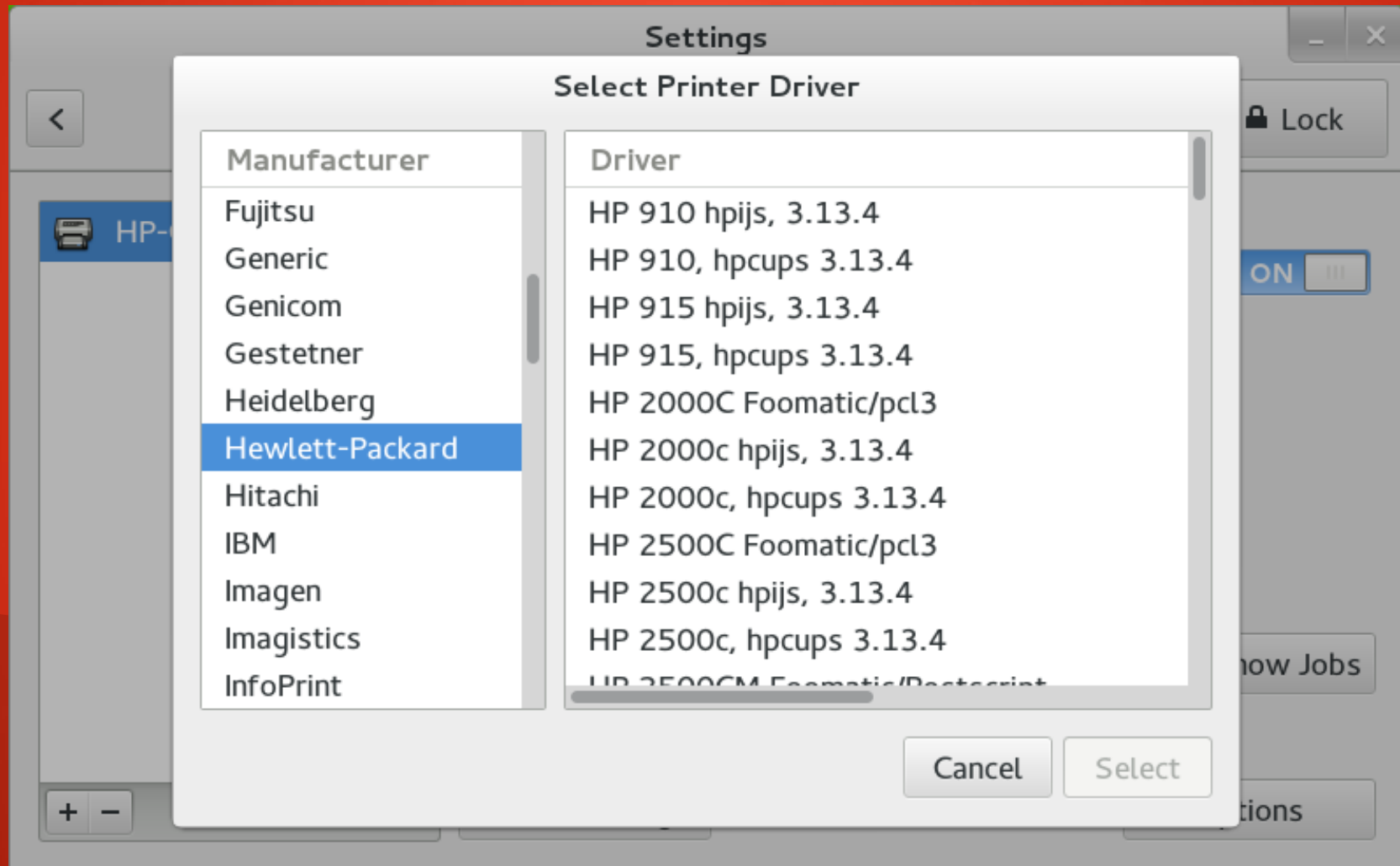
Printers Panel
Printer Removal

- Removes printer from CUPS server
  - Removes only printers which are installed locally, not those which are installed on a remote CUPS server

Printers Panel
Jobs Handling

- Lists active print jobs of actual user

- Allow user to resume / pause / cancel his print jobs

End