



OpenPrinting

# Print Management GUI

**Till Kamppeter - OpenPrinting**

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# How it works currently



- **Printer setup tools**

- CUPS web admin interface <http://localhost:631/>
- CUPS command line tools: `lpadmin`, `lpinfo`, `lpstat`
- `system-config-printer` - GUI
- GNOME Control Center - Print module - GUI
- `cups-browsed` - daemon

- Tools **control CUPS**, the running `cupsd`

- List available printers and drivers and create print queues
- List queues and jobs
- Modify queues
- Server settings: Owner/everyone can cancel jobs, debug mode, ...

# Printer management in the New Architecture



- We assume any form of the New Architecture
  - The **CUPS Snap** - OR -
  - **CUPS 3.x** or newer
- **All Printers are driverless IPP printers**, native or Printer Applications
- CUPS auto-creates virtual queue for each IPP printer → No manual queue creation required
- CUPS fully automatic → **Admin action moves to the IPP printers**
- **Tasks**
  - **List IPP services**
    - Buttons to web admin interfaces, IPP System Service, ...
  - **Discover non-driverless printers**
    - Find Printer Applications, local and in Snap Store



- **Similarities** between old and new
  - **Main Window**
    - Old: List CUPS queues, buttons/pop-up to modify
    - New: List IPP devices, buttons to web IF/IPP System Service
  - **Add-Printer Window**
    - Old: List printer devices and drivers, create CUPS queue
    - New: List non-driverless printers, install Printer Application, open Printer Application's web interface
- **Multi-function devices, scanners, fax out**
  - Functions are all IPP services, list functions of same device together
  - Scanners and faxes are managed like printers

# What we already have



- **IPP service list manager GUI**

- GSoC 2021: GUI for listing and managing available IPP Print/Scan services (or DNS-SD-advertised network services in general), by Divyasheel
- GTK+-based, GNOME Control Center module (to replace “Printing”)
- Discovers services using Avahi
- Duplicate entries removed, entries sorted by physical (MF) devices
- Button to open device’s web admin interface

- **IPP System Service GUI**

- GSoC 2020: Linux GUI application to admin MF devices using IPP System Service, by Lakshay Bandlish
- Manage IPP devices talking IPP to them
- Also GTK+-based, for possible integration in GNOME Control Center

# What we still need



- **Tool to guide users setting up non-driverless printers (and scanners)**
  - “Add Printer” window
  - Detects/discovers all available non-driverless printers (USB, network, ...)
  - **Finds Printer Applications**
    - Already locally installed
    - In the Snap Store
  - **Allows easy setup** of the printer within the Printer Application
    - Fully automatic: IPP System Service, IPP in general, command line?
    - Own GUI (communication as with “Fully Automatic”)
    - Button pointing to Printer Application’s web interface
    - **Note: Printer Applications do not auto-setup on start-up!**

# What we still need



- **Putting all the three together** to get the complete thing
  - Lister/Manager + IPP System Service + Add non-driverless printer
- **Complete IPP System Service GUI**
  - Scanners, other services, ...
  - More IPP requests
- **Get into GNOME Control Center upstream**, to replace current “Printing” module by new “Printing & Scanning” module.
  - Ideally, upstream should carry both and on build, install, or run time choose the correct one for the system’s print architecture

# Open Discussion

