NAME

ipp−usb − Daemon for IPP over USB printer support

DESCRIPTION

ipp−usb daemon enables driver−less printing and scanning on USB−only AirPrint−compatible printers and MFPs.

It works by connecting to the device by USB using IPP−over−USB protocol, and exposing the device to the network, including DNS−SD (ZeroConf) advertising.

IPP printing, eSCL scanning and web console are fully supported.

SYNOPSIS

Usage:

ipp−usb mode [options]

Modes are:

standalone
: run forever, automatically discover IPP−over−USB devices and serve them all

udev
: like standalone, but exit when last IPP−over−USB device is disconnected

debug
: logs duplicated on console, −bg option is ignored

check
: check configuration and exit

Options are

−bg
: run in background (ignored in debug mode)

CONFIGURATION

ipp−usb searched for its configuration file in two places: 1. **/etc/ipp−usb/ipp−usb.conf** 2. **ipp−usb.conf** in the directory where executable file is located

Configuration file syntax is very similar to .INI files syntax. It consist of named sections, and each section contains a set of named variables. Comments are started from # or ; characters and continues until end of line:

```
# This is a comment
[section 1]
variable 1 = value 1  ; and another comment
variable 2 = value 2
```

Network parameters

Network parameters are all in the **[network]** section:

```
[network]
 # TCP ports for HTTP will be automatically allocated in the following range
 http−min−port = 60000
 http−max−port = 65535

 # Enable or disable DNS−SD advertisement
 dns−sd = enable      # enable | disable

 # Network interface to use. Set to ‘all‘ if you want to expose you
 # printer to the local network. This way you can share your printer
 # with other computers in the network, as well as with iOS and Android
 # devices.
 interface = loopback # all | loopback
```

```
# Enable or disable IPv6
ipv6 = enable       # enable | disable
```

Logging configuration

Logging parameters are all in the **[logging]** section:

```
[logging]
 # device−log  − what logs are generated per device
 # main−log    − what common logs are generated
 # console−log − what of generated logs goes to console
 #
 # parameter contains a comma−separated list of
 # the following keywords:
 #   error     − error messages
 #   info      − informative messages
 #   debug     − debug messages
 #   trace−ipp, trace−escl, trace−http − very detailed per−protocol traces
 #   all       − all logs
 #   trace−all − alias to all
 #
 # Note, trace−* implies debug, debug implies info, info implies error
 device−log    = all
 main−log      = debug
 console−log   = debug

 # Log rotation parameters:
 #   log−file−size    − max log file before rotation. Use suffix M
 #                      for megabytes or K for kilobytes
 #   log−backup−files − how many backup files to preserve during rotation
 #
 max−file−size    = 256K
 max−backup−files = 5

 # Enable or disable ANSI colors on console
 console−color = enable # enable | disable
```

Quirks

Some devices, due to their firmware bugs, require special handling, called device−specific **quirks**. **ipp−usb** loads quirks from the **/usr/share/ipp−usb/quirks/*.conf** files and from the **/etc/ipp−usb/quirks/*.conf** files. The **/etc/ipp−usb/quirks** directory is for system quirks overrides or admin changes. These files have .INI−file syntax with the content that looks like this:

```
[HP LaserJet MFP M28−M31]
 http−connection = keep−alive

[HP OfficeJet Pro 8730]
 http−connection = close

[HP Inc. HP Laser MFP 135a]
 blacklist = true

# Default configuration
```

```
[*]
 http−connection = ""
```

For each discovered device, its model name is matched against sections of the quirks files. The section name contains an exact model name, which contains **iManufacturer**+**iProduct** entries from **lsusb −v** command output, or it may contain glob−style wildcards: ***** that matches any sequence of characters and **?** , that matches any single character. To match one of these characters (***** and **?**) literally, use backslash as escape.

All matching sections from all quirks files are taken in consideration, and applied in priority order. Priority is computed using the following algorithm:

- When matching model name against section name, amount of non−wildcard matched characters is counted, and the longer match wins
- Otherwise, section loaded first wins. Files are loaded in alphabetical order, sections read sequentially

If some parameter exist in multiple sections, used its value from the most priority section

The following parameters are defined:

blacklist = true | false
: If **true**, the matching device is ignored by the **ipp−usb**

http−XXX = YYY
: Set XXX header of the HTTP requests forwarded to device to YYY. If YYY is empty string, XXX header is removed

usb−max−interfaces = N
: Don’t use more that N USB interfaces, even if more is available

In case of you found out about your device needs a quirk to work properly or it does not work with **ipp−usb** at all, although it provides IPP−over−USB interface, please report the isues at https://github.com/OpenPrinting/ipp−usb. The possible quirk for the device can be added to the project itself and fix the situation for all device’s owners.

FILES

- **/etc/ipp−usb/ipp−usb.conf**: the daemon configuration file
- **/var/log/ipp−usb/main.log**: the main log file
- **/var/log/ipp−usb/<DEVICE>.log**: per−device log files
- **/var/ipp−usb/dev/<DEVICE>.state**: device state (HTTP port allocation, DNS−SD name)
- **/var/ipp−usb/lock/ipp−usb.lock**: lock file, that helps to prevent multiple copies of daemon to run simultaneously
- **/usr/share/ipp−usb/quirks/*.conf**: device−specific quirks (see above)
- **/etc/ipp−usb/quirks/*.conf**: device−specific quirks defined by sysadmin (see above)

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SEE ALSO

cups(1)