

UCSC Copier Program, Linux, and Pharos Secure Printing March 1, 2018

Using Linux to print using our Pharos Secure process isn't as straightforward as those for Mac or PC due to the lack of Linux popup print drivers, the variance in types of Linux, their CUPS version, and potential other issues (unknown at the current time, but you can be sure we'll find out about them from our users).

We've found a process that successfully prints Pharos Secure output for the user that is correctly charged in Pharos. It prints ONLY with our Pharos Secure print process. No Pharos Direct printing is available using Linux. The following varieties and versions of Linux and CUPS have been found to work when the instructions below are correctly implemented:

Redhat v6.x and v7.x
Fedora v6, v7, v25
CentOS v6 and v7
Ubuntu 16.04
Debian 8.7

CUPS versions: 1.5.3, 1.7.5, 2.1.3, 2.2.0

The Copier Program is NOT saying Pharos Secure printing won't work with later versions of Linux/CUPS; we just haven't got the resources to prove it will work using the instructions below. If you are trying to get the instructions to work with a variety or version of Linux, or a version of CUPS not listed above, please email Bill Kasper at dragon01@ucsc.edu; put the words "Linux/CUPS issue" in the email subject. Let me know (a) if you got it to work with the instructions below, or (b) you didn't get it to work with the instructions below. If (b), we'll work with you to get you printing.

There are two ways to print using Linux/CUPS: (1) RAW and (2) using the PPD for the Ricoh device you use most of the time. RAW will always give black and white output, single-sided. If you want color, double-sidedness, or any of the other features of the MFD for your printing, you'll need to go to <http://www.openprinting.org/driver/Postscript-Ricoh/>.

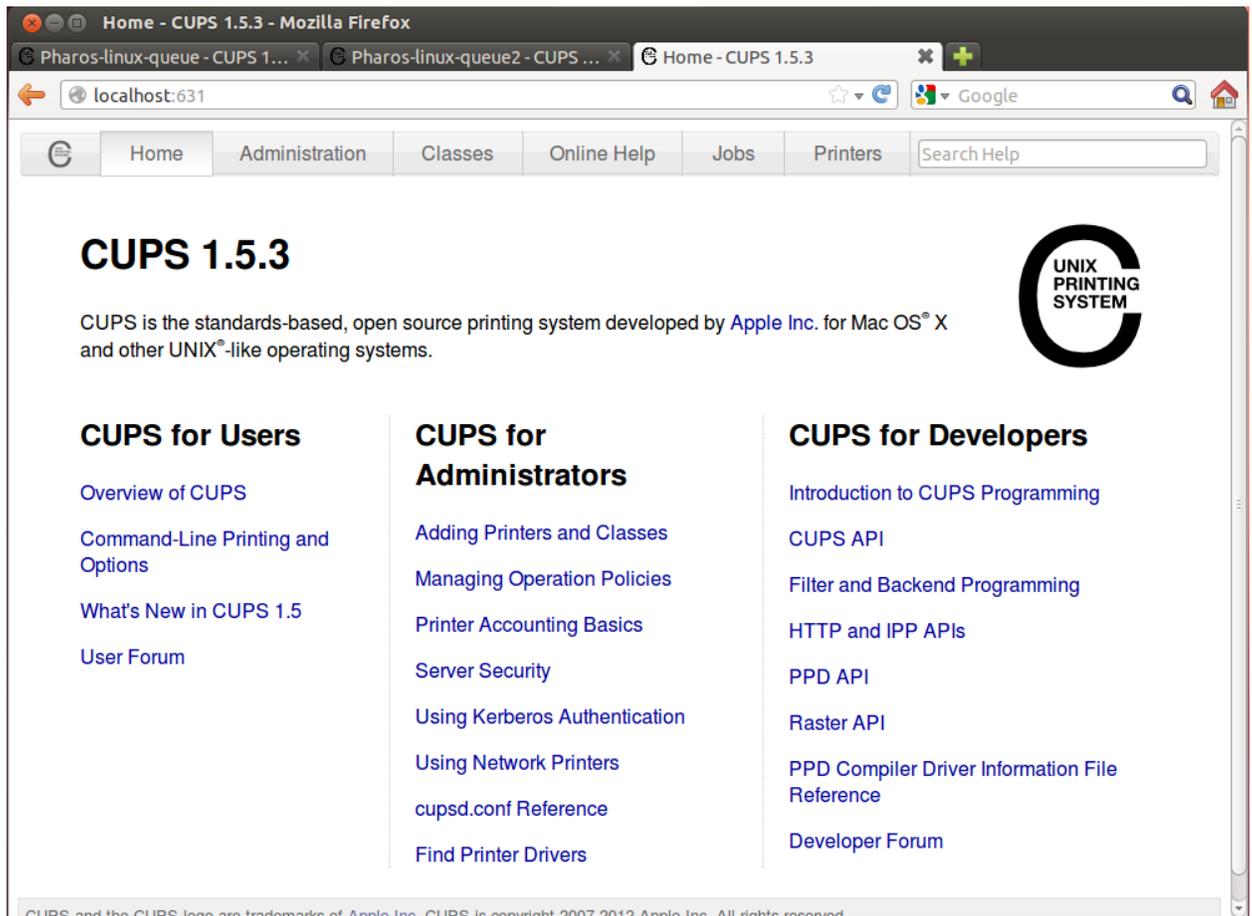
That webpage has the drivers for all our Ricoh MFDs (most of which are either “Ricoh Aficio MP Cxxx” or “Ricoh MP Cxxx” devices; check on the front of the device, or call us at x9-5799).

Also, please understand that the Copier Program is just two people, neither of whom are particularly versed in Linux printing and its myriad variety. We’re reliant on working with ITS to get this done. That said, it seems like we’ve finally got a process that works.

Here are the instructions.

Printing to Pharos under Linux (CUPS)

1. Verify CUPS is installed via shell command:
`$ which cupsctl`
Which should return with something similar to the following:
`/usr/sbin/cupsctl`
 - a. If CUPS is not installed, consult your distribution documentation for installation instructions or visit the project website: <http://cups.org>
2. Navigate to <http://localhost:631> in Firefox or another web browser.
3. Click “**Adding Printers and Classes**” link under CUPS for Administrators heading.



4. Press “Add Printer” under Printers heading.

Administration - CUPS 1.5.3 - Mozilla Firefox

Pharos-linux-queue - CUPS 1... x Pharos-linux-queue2 - CUPS ... x Administration - CUPS 1.5.3 x +

localhost:631/admin

Home Administration **Classes** Online Help Jobs Printers Search Help

Printers

Add Printer Find New Printers
Manage Printers

Classes

Add Class Manage Classes

Jobs

Manage Jobs

Server

Edit Configuration File View Access Log View Error Log
View Page Log

Server Settings:

Advanced ▶

- Show printers shared by other systems
- Share printers connected to this system
 - Allow printing from the Internet
- Allow remote administration
- Use Kerberos authentication (FAQ)
- Allow users to cancel any job (not just their own)
- Save debugging information for troubleshooting

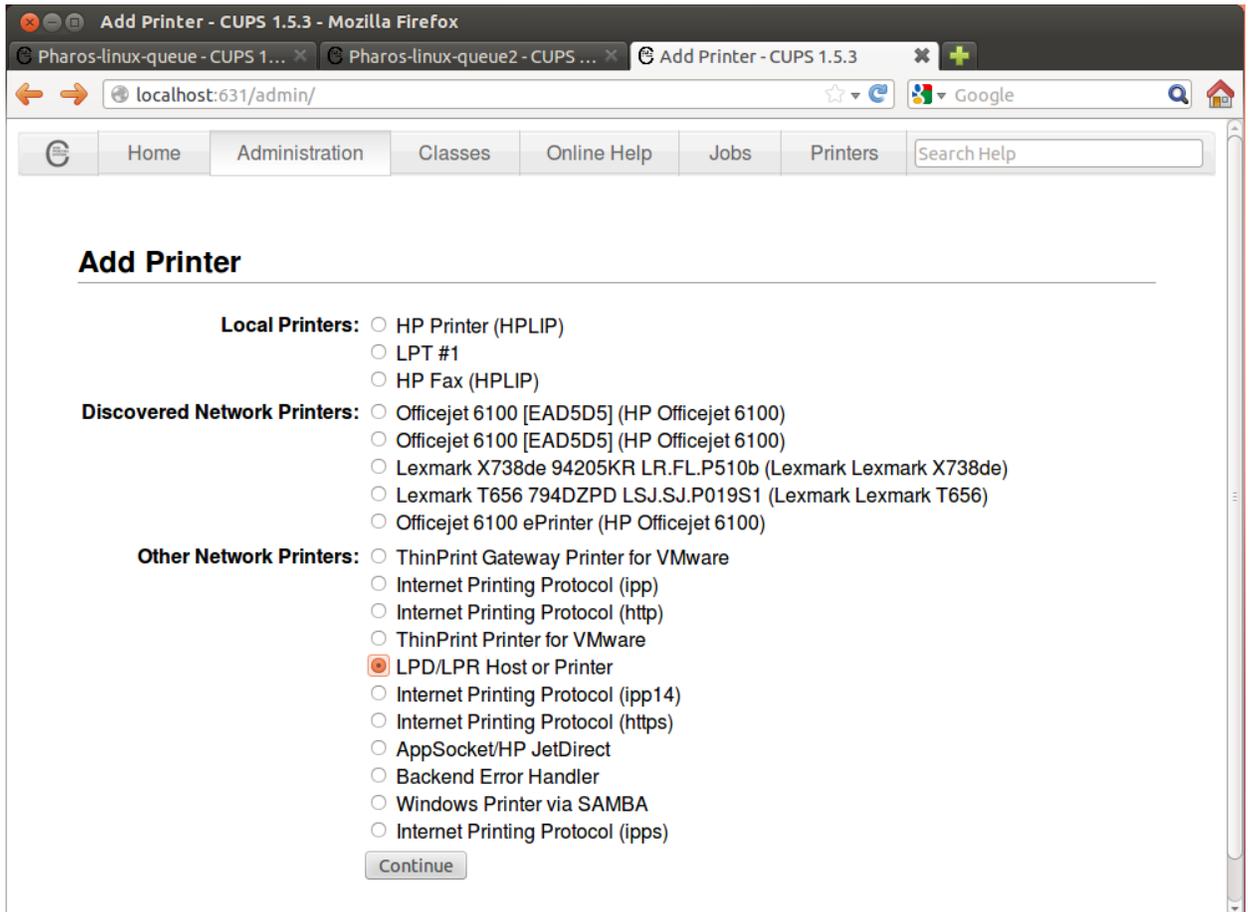
Change Settings

RSS Subscriptions

Add RSS Subscription

Name	Events	Queue Name
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5. Select “**LPD/LPR Host or Printer**” under Other Network Printers section.



6. Enter connection details using the following format:

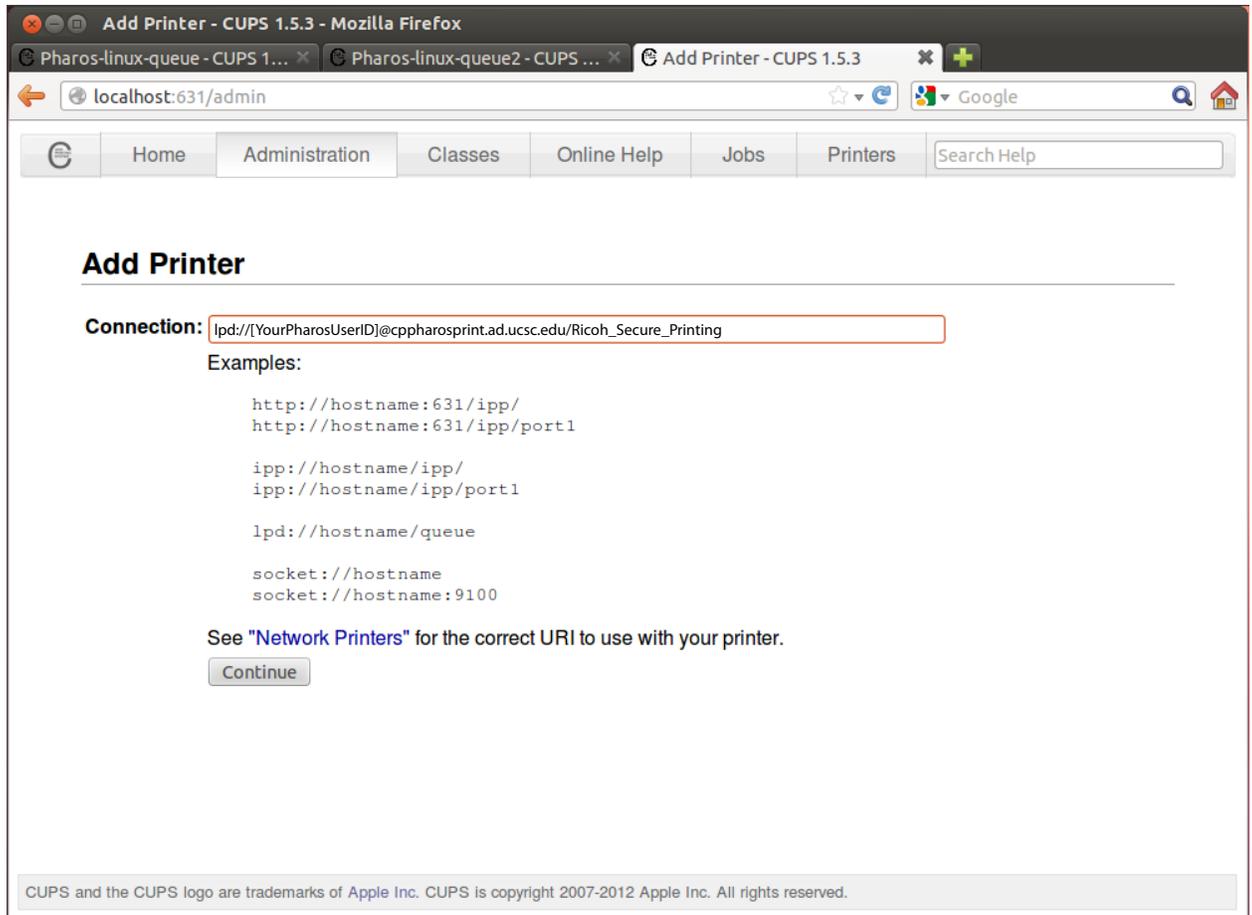
a. `lpd://[username]@[hostname or IP]/[queue name]`

For example:

`lpd://[YourPharosUserID]@cppharosprint.ad.ucsc.edu/Ricoh_Secure_Printing` OR

`lpd://dragon01@cppharosprint.ad.ucsc.edu/Ricoh_Secure_Printing` (for a CruzID of "dragon01")

REMEMBER: YOUR PHAROS USERID IS THE SAME AS YOUR CRUZID, which is the first part of your @ucsc.edu email address (i.e., dragon01@ucsc.edu with a CruzID of "dragon01").



- b. Add a name for the printer, such as “PharosSecure”. This is what appears in printers list.
 - i. It is common practice to include “bw” or “color” as part of the name in situations where there are specific printers or print queues for black and white and color print jobs.
 - ii. Optionally, add a description and location information.

Add Printer

Name:
(May contain any printable characters except "/", "#", and space)

Description:
(Human-readable description such as "HP LaserJet with Duplexer")

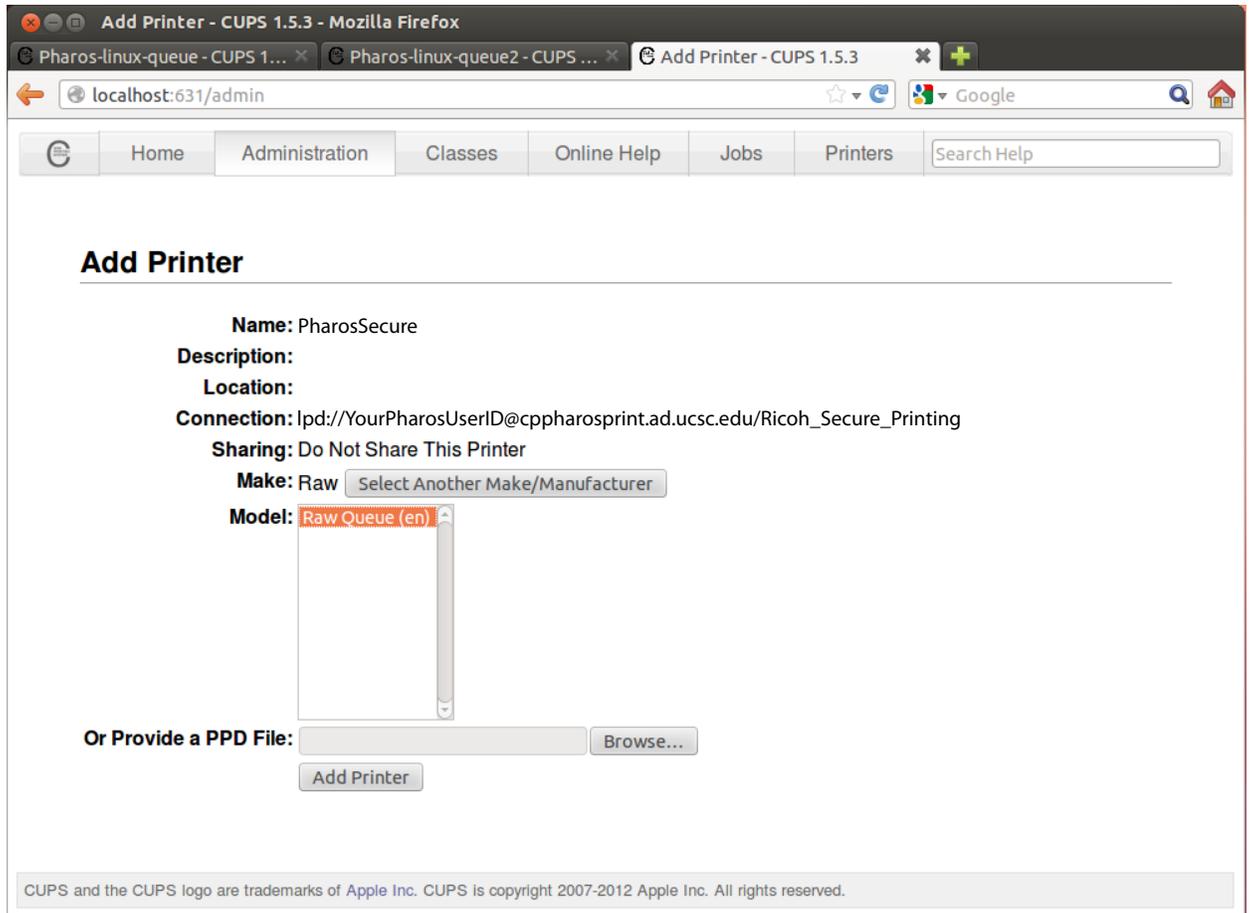
Location:
(Human-readable location such as "Lab 1")

Connection: lpd://YourPharosUserID@cppharosprint.ad.ucsc.edu/Ricoh_Secure_Printing

Sharing: Share This Printer

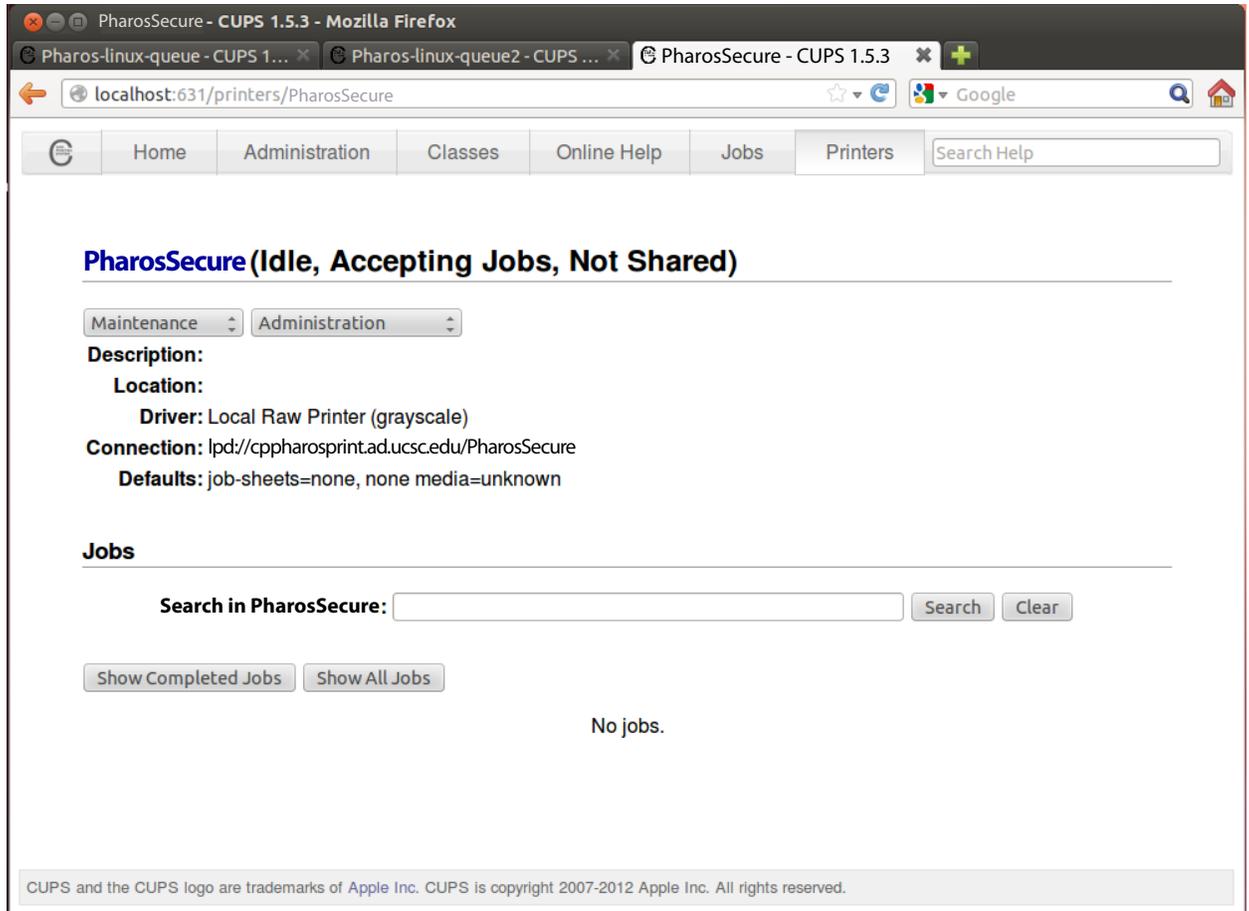
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7. Select "Raw" as the printer make.
 - a. Alternatively, it may be possible to specify the actual printer make, such as HP or Lexmark.
8. Select "Raw Queue" as the printer model.
 - a. Alternatively, if you selected a specific manufacturer in step 7 and you know the exact printer model, you may select the appropriate model here.
9. If you have the PPD file, you may browse for it at the bottom of the page. Ricoh PPDs for Linux can be found here: <http://www.openprinting.org/driver/Postscript-Ricoh/> We recommend choosing the driver for the MFD you use most for Secure Printing.



If everything has gone well, you will be presented with some final options for the printer.

10. Press “Set Default Options” button, and you should be taken to a confirmation page, which will refresh to this page automatically (your Driver will be different if you used a Ricoh PPD in step 9):



The screenshot shows a Mozilla Firefox browser window displaying the CUPS 1.5.3 web interface for the printer 'PharosSecure'. The browser's address bar shows 'localhost:631/printers/PharosSecure'. The page has a navigation menu with 'Home', 'Administration', 'Classes', 'Online Help', 'Jobs', and 'Printers'. The main content area is titled 'PharosSecure (Idle, Accepting Jobs, Not Shared)'. Below the title are two dropdown menus for 'Maintenance' and 'Administration'. The 'Description' section includes 'Location:', 'Driver: Local Raw Printer (grayscale)', 'Connection: lpd://cppharosprint.ad.ucsc.edu/PharosSecure', and 'Defaults: job-sheets=none, none media=unknown'. The 'Jobs' section features a search box labeled 'Search in PharosSecure:' with 'Search' and 'Clear' buttons, and two buttons for 'Show Completed Jobs' and 'Show All Jobs'. The text 'No jobs.' is displayed below the search area. At the bottom, a footer contains the text: 'CUPS and the CUPS logo are trademarks of Apple Inc. CUPS is copyright 2007-2012 Apple Inc. All rights reserved.'

11. When you print your document, select the printer you just created and print as you normally would.

