

1. Install CUPS Print Server
 - 1.1 `sudo apt-get install cups -y`
2. Start CUPS Print Service
 - 2.1 `sudo systemctl start cups`
3. Enable CUPS Print Service
 - 3.1 `sudo systemctl enable cups`
4. Configure CUPS Print Server
 - 4.1 `sudo nano /etc/cups/cupsd.conf`
 - 4.2 Make these changes in the cupsd.conf file and save the file
 - 4.2.1 # Show shared printers on the local network.
 - Browsing On
 - BrowseLocalProtocols dnssd
 - 4.2.2 # Only listen for connections from the local machine.
 - Port 631
 - Listen /run/cups/cups.sock
 - 4.2.3 # Restrict access to the server...
 - <Location />
 - Order allow,deny
 - Allow @Local
 - </Location>
 - 4.2.4 # Restrict access to the admin pages...
 - <Location /admin>
 - AuthType Default
 - Require valid-user
 - Order allow,deny
 - Allow @Local
 - </Location>
5. Restart CUPS Print Service
 - 5.1 `sudo systemctl restart cups`
6. Add the CUPS localhost printer to the system
 - 6.1 Type “printer” in the Activities search bar, and then select the “Printer Settings”
 - 6.2 Click on the “Add” button in the “Printer Settings”

7. Configure a CUPS server (often the local machine) using the CUPS API (Application Programming Interface)

7.1 system-config-printer

```
/usr/share/system-config-printer/system-config-printer.py:315: DeprecationWarning:
Gtk.ActionGroup.list_actions is deprecated
  for action in printer_manager_action_group.list_actions ():
/usr/share/system-config-printer/system-config-printer.py:316: DeprecationWarning:
Gtk.Action.set_sensitive is deprecated
  action.set_sensitive (False)
/usr/share/system-config-printer/system-config-printer.py:324: DeprecationWarning:
Gtk.ActionGroup.get_action is deprecated
  act = printer_manager_action_group.get_action (action)
/usr/share/system-config-printer/system-config-printer.py:354: DeprecationWarning:
Gtk.UIManager.ensure_update is deprecated
  self.ui_manager.ensure_update ()
/usr/share/system-config-printer/system-config-printer.py:355: DeprecationWarning:
Gtk.UIManager.get_accel_group is deprecated
  self.PrintersWindow.add_accel_group (self.ui_manager.get_accel_group ())
/usr/share/system-config-printer/system-config-printer.py:364: DeprecationWarning:
Gtk.UIManager.get_action is deprecated
  action = self.ui_manager.get_action ("/new-printer")
/usr/share/system-config-printer/system-config-printer.py:365: DeprecationWarning:
Gtk.Action.create_menu_item is deprecated
  newprinteritem = action.create_menu_item ()
/usr/share/system-config-printer/system-config-printer.py:663: DeprecationWarning:
Gtk.Action.get_proxies is deprecated
  for widget in action.get_proxies ():
/usr/share/system-config-printer/system-config-printer.py:976: DeprecationWarning:
urllib.parse.splittyp() is deprecated as of 3.8, use urllib.parse.urlparse() instead
  (scheme, rest) = urllib.parse.splittyp (object.device_uri)
/usr/share/system-config-printer/system-config-printer.py:2236: DeprecationWarning:
Gdk.threads_enter is deprecated
  Gdk.threads_enter ()
/usr/share/system-config-printer/system-config-printer.py:2187: DeprecationWarning:
Gdk.threads_leave is deprecated
  Gdk.threads_leave ()
```

8. Lists the available devices and drivers known to the CUPS server(The -v option is used to list the available devices.)

8.1 sudo lpinfo -v

```
file cups-brf:/
network beh
network lpd
network ipp
network socket
network ipps
network http
network https
direct hp
direct hpfax
```

9. Configure printer and class queues provided by CUPS

(-p : Specifies the name of the printer to add.

- printer name : Here the printer name is EPSON-M100-Series.

- -E : Enables the destination and accepts jobs.

- -v : Sets the device-uri attribute of the print queue.

- -m : Sets the PPD file for the printer from the model directory or by using one of the driver interfaces.)

9.1 sudo lpadmin -p HP-LaserJet-M1522n-MFP -E -v HP-LaserJet-M1522n-MFP.ppd

```
lpadmin: File device URIs have been disabled. To enable, see the FileDevice directive in
"/etc/cups/cups-files.conf".
```

10. The cupsaccept command instructs the printing system to accept print jobs to the specified destinations

10.1 sudo cupsaccept HP-LaserJet-M1522n-MFP

10.2 sudo cupsenable HP-LaserJet-M1522n-MFP

11. lpstat displays status information about the current classes, jobs, and printers.

- (-p: Shows the printers and whether or not they are enabled for printing. If no printers are specified then all printers are listed.
- -d: Shows the current default destination.
- -r: Shows whether the CUPS server is running.
- -l: Shows a long listing of printers, classes, or jobs.
- -o: Shows the jobs queue on the specified destinations. If no destinations are specified all jobs are shown.)

11.1 lpstat -p -d

```
printer CUPS-BRF-Printer is idle. enabled since Saturday 01 April 2023 11:07:47 AM
printer HP-LaserJet-M1522n-MFP disabled since Tuesday 11 April 2023 04:10:45 PM -
Unplugged or turned off
printer HP_LaserJet_CM1415fn_BBC43F_ is idle. enabled since Tuesday 11 April 2023 03:56:03
PM
printer Kyocera_TASKalfa_5003i is idle. enabled since Tuesday 11 April 2023 03:56:03 PM
system default destination: HP-LaserJet-M1522n-MFP
```

12. lpoptions displays or sets printer options and defaults

12.1 sudo lpoptions -d HP-LaserJet-M1522n-MFP

```
copies=1 device-uri=hp:/usb/HP_LaserJet_M1522n_MFP?serial=00CNG9B6RG9F finishings=3
job-cancel-after=10800 job-hold-until=no-hold job-priority=50 job-sheets=none,none marker-
change-time=0 number-up=1 printer-commands=AutoConfigure,Clean,PrintSelfTestPage printer-
info='Hewlett-Packard HP LaserJet M1522n MFP' printer-is-accepting-jobs=true printer-is-
shared=true printer-is-temporary=false printer-location=U-aryant printer-make-and-model='HP
LaserJet M1522n MFP Foomatic/pxlmono (recommended)' printer-state=3 printer-state-change-
time=1681210167 printer-state-reasons=none printer-type=8564756
printer-uri-supported=ipp://localhost/printers/HP-LaserJet-M1522n-MFP
```

13. lp command submits files for printing or alters a pending job/lpr submits files for printing

13.1 lp usb2.c

13.2 lpr usb2.c