UNIT 11: PRINTING JOBS

UNIT STRUCTURE

11.1 Learning Objectives

11.2 Introduction

11.3 Set up a Local Printer

- 11.3.1 Installation of Printer
- 11.3.2 Set the Default Printer
- 11.3.3 Installation of Network Printer

11.4 Printing

- 11.4.1 Print Only Certain Pages
- 11.4.2 Print Pages in a Different Order
- 11.4.3 Change the Paper Size When Printing
- 11.4.4 Print a Booklet
- 11.4.5 Print a File

11.5 Troubleshooting a Printer

11.6 Let Us Sum Up

11.7 Further Readings

11.8 Answer to Check Your Progress

11.9 Model Questions

11.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Install printers in Linux Operating System
- Print documents in different printers
- Know different property settings of the printer

11.2 INTRODUCTION

In the previous unit, we have learnt about processes and the various tasks associated with processes. In this unit, we will discuss how to work with printer. In the subsequent sections, we will discuss the installation of a printer and the various activities to be carried out while printing documents.

11.3 SET UP A LOCAL PRINTER

Linux operating system recognizes many types of printers automatically once they are connected to the computer. Most of the printers are connected via Universal Serial Bus (USB) directly to the computer, but some printers are connected via network (wired or wireless).

If the printer is connected to the network, then user should install it from the Printers panel in Settings.

11.3.1 Installation of Printer

Automatic installation of printer -

- Turn on the printer.
- Connect the printer to the computer via appropriate cable.
- Once the printer is connected to the computer, it will automatically search for drivers of the printer. If driver is found it will ask the user to authenticate it and it will automatically install the printer.
- Once installation is complete, a popup message will display that the system has finished the installing of printer.

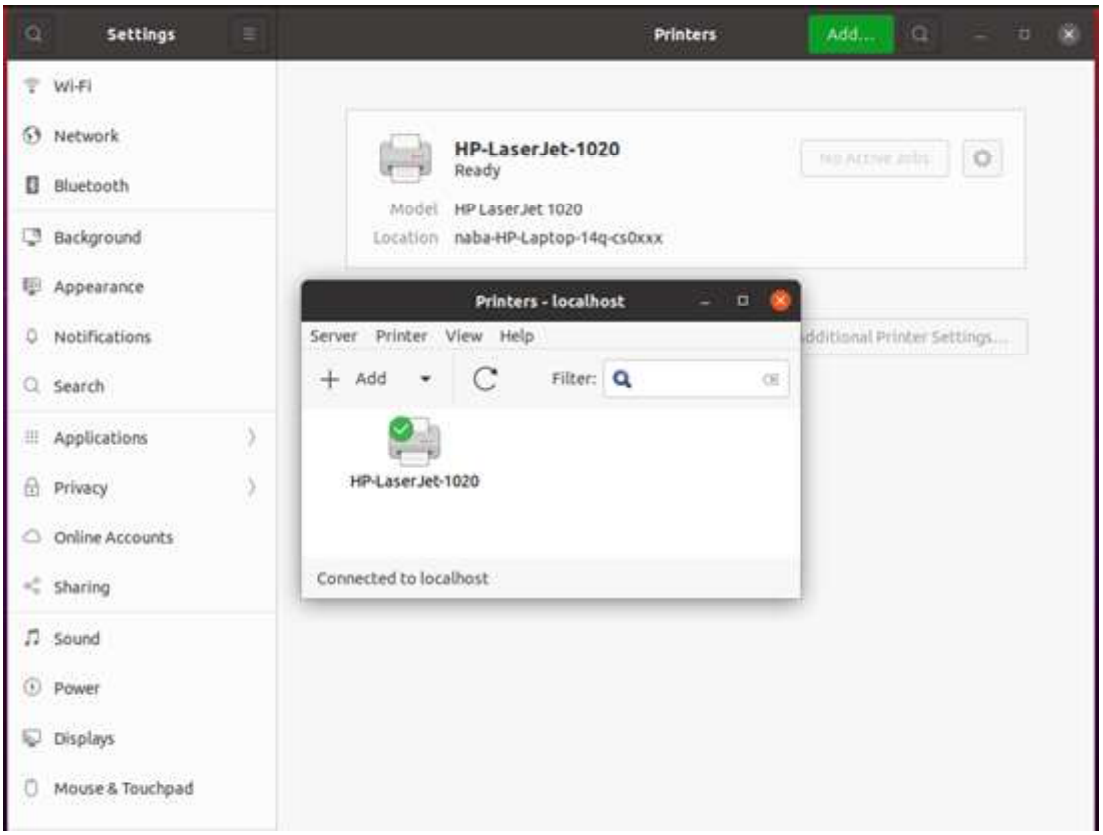
  Now, we can print the "Test Page" and can make additional changes in the printer setup.



Manual installation of printer -

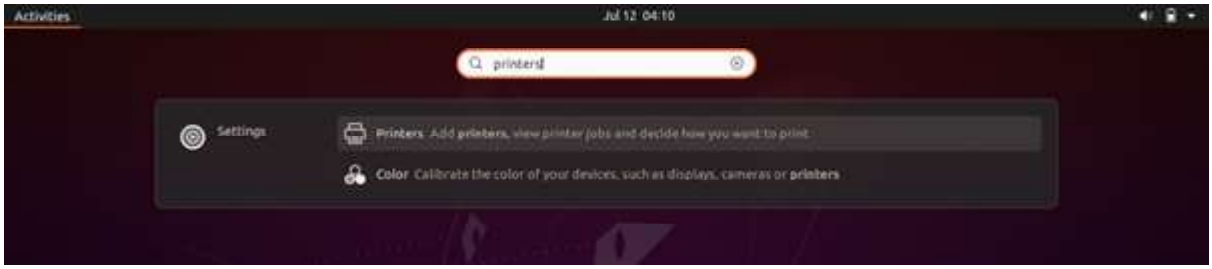
If the printer is not set up automatically, then we can add it from the printer settings. For manual installation of printer, we need to follow the steps given below:

- Open the Activities overview and type Printers.
- Select the "Printers" from menu.
- If the current user is not administrator (root user), it will ask for administrator permission.
- Select the Add from the menu. (Add / Add New / Add Printer differs in different OS).
- In the pop-up window, select the printer and press Add. (System will display preinstalled drivers in the list)
- If the printer is not discovered automatically, user needs to install the printer driver. Printer drivers can be downloaded from the printer's manufacturer (HP/ EPSON/ Cannon/ Brother) website and we need to install it to the computer before further proceed.



What is Activities overview-

When we start GNOME, we automatically enter the Activities overview. The overview allows us to access the windows and its applications. In the overview, we can search a software/system just by typing name of the applications, files, folders, etc.



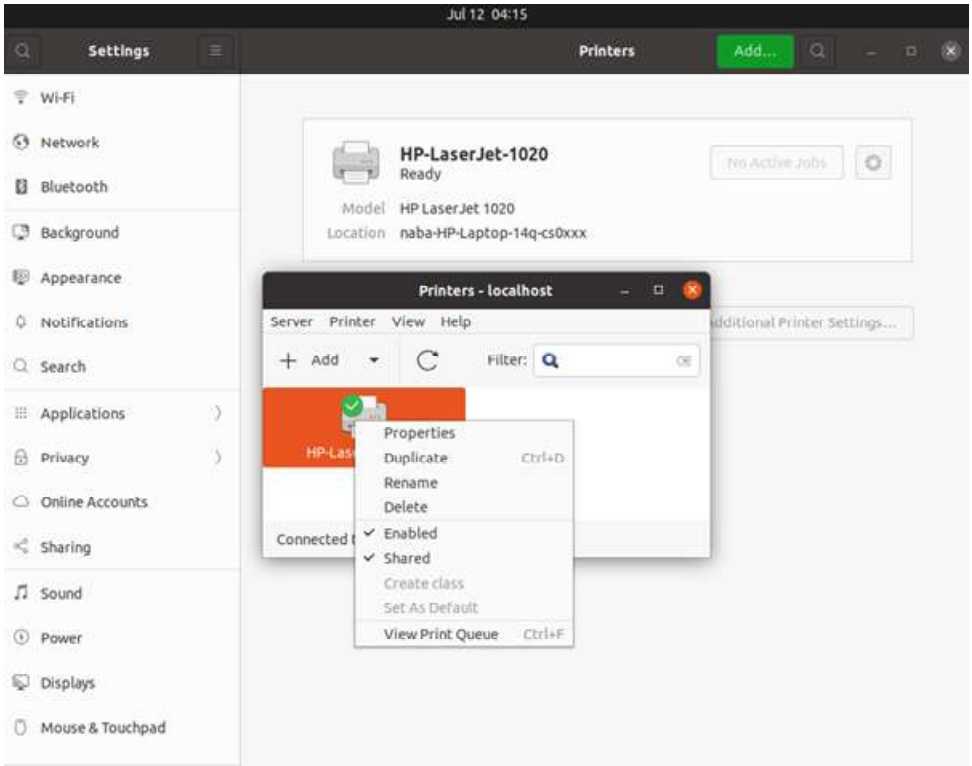
11.3.2 Set the Default Printer

If the system has more than one printer installed, then user needs to select the default printer to perform printing jobs. We select the printer used most often as the default printer.

To set the default printer, we need the administrative privileges (root user). To set the default printer we need to follow the following steps-

- To Open the Activities overview and start type of Printers.
- To Select Printers from the menu.
- To Click the settings button next to the printer.
- To Select the Use Printer by Default checkbox.

After setting of default printer, any job submitted for printing without selecting the printer will be printed by the different printer.



Change the name or location of a printer-

To change the name or location of a printer, we need the administrative privileges (root user). To set the name or location of the printer we need to follow the following steps-

- Select the printer from Printers by selecting the Printers from Activities overview.

Change printer name

- Click the settings button next to the printer.
- Select Printer Details.
- Enter the new name in the Name field.
- Close the dialog.

Change printer location

- Click the settings button next to the printer.
- Select Printer Details.
- Enter the new location for the printer in the Location field.
- Close the dialog.

11.3.3 Installation of Network Printer

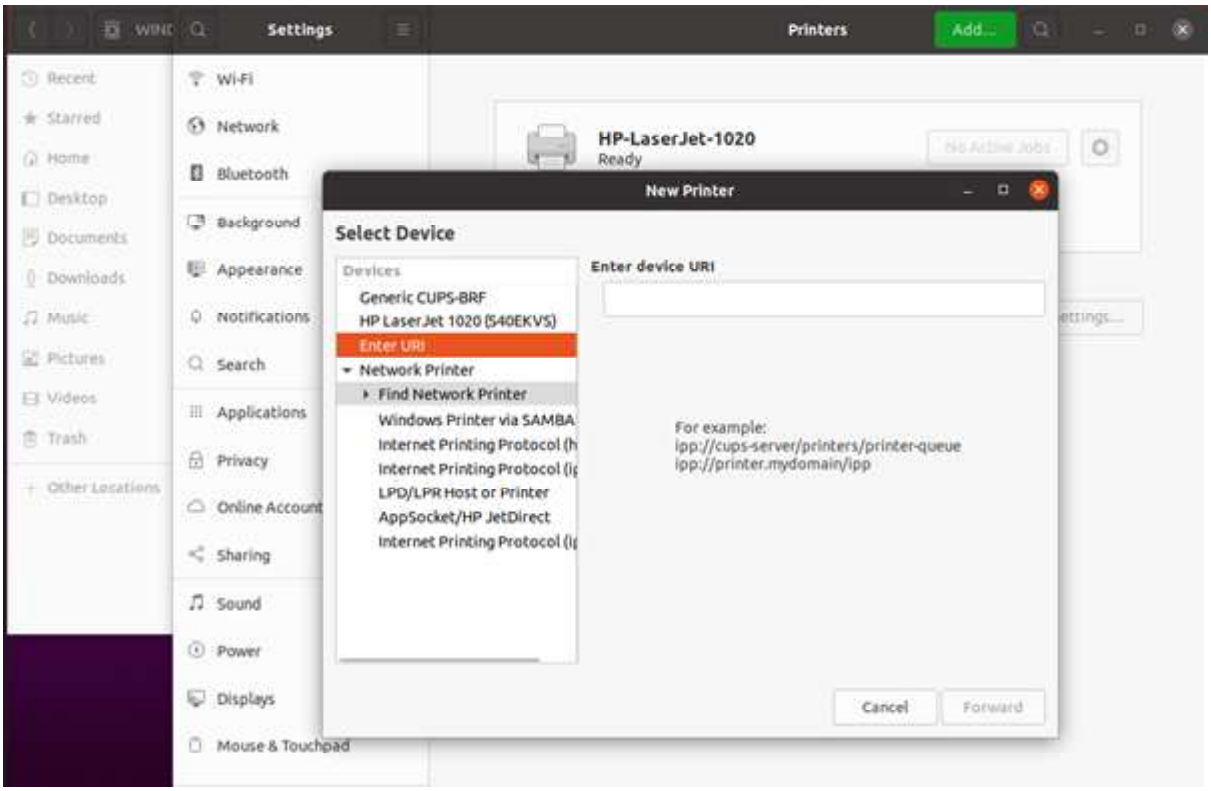
Ubuntu is a network-based operating system, it has built-in tools to help users to quickly locate and utilize the network resources like printers, databases, file servers etc. For installation of a network printer, we need to follow the basic steps-

- Open the Activities overview and type Printers.
- Select the "Printers" from menu.
- If the current user is not administrator (root user) it will ask for administrator permission.
- Select the Add from the menu. (Add / Add New / Add Printer differs in different OS)
- Select "Network Printer" under "Devices," then select "Find Network Printer."
- Type the network printer's IP address into the input box labelled "Host," then select the "Find" button.

- Select the printer that needs to install from the list under "Devices."
- Select the "Forward" button and select "Choose Driver" and select the appropriate driver.
- If system asks for authentication, then type the administrative password and select authenticate.
- Select the printer's manufacturer from the drop-down list, and select the printer's model from the drop-down list.
- Press "Apply"/ "OK" button to keep the setting.

Once Installation is complete, we can print the "Test Page" and can make additional changes in the printer setup.

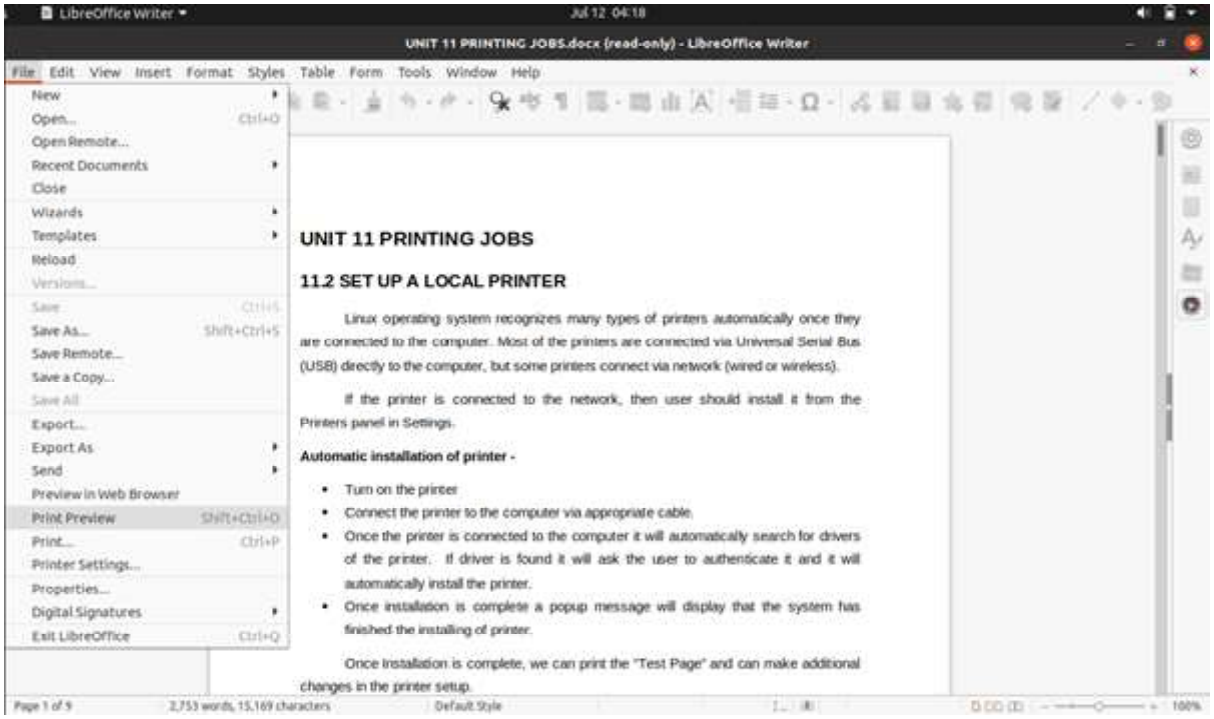
Note- If another Ubuntu or Windows PC on the network is already connected to the printer, the device may already be on the Devices list before we perform the search. In that case we may not have to install the printer we can just use it.

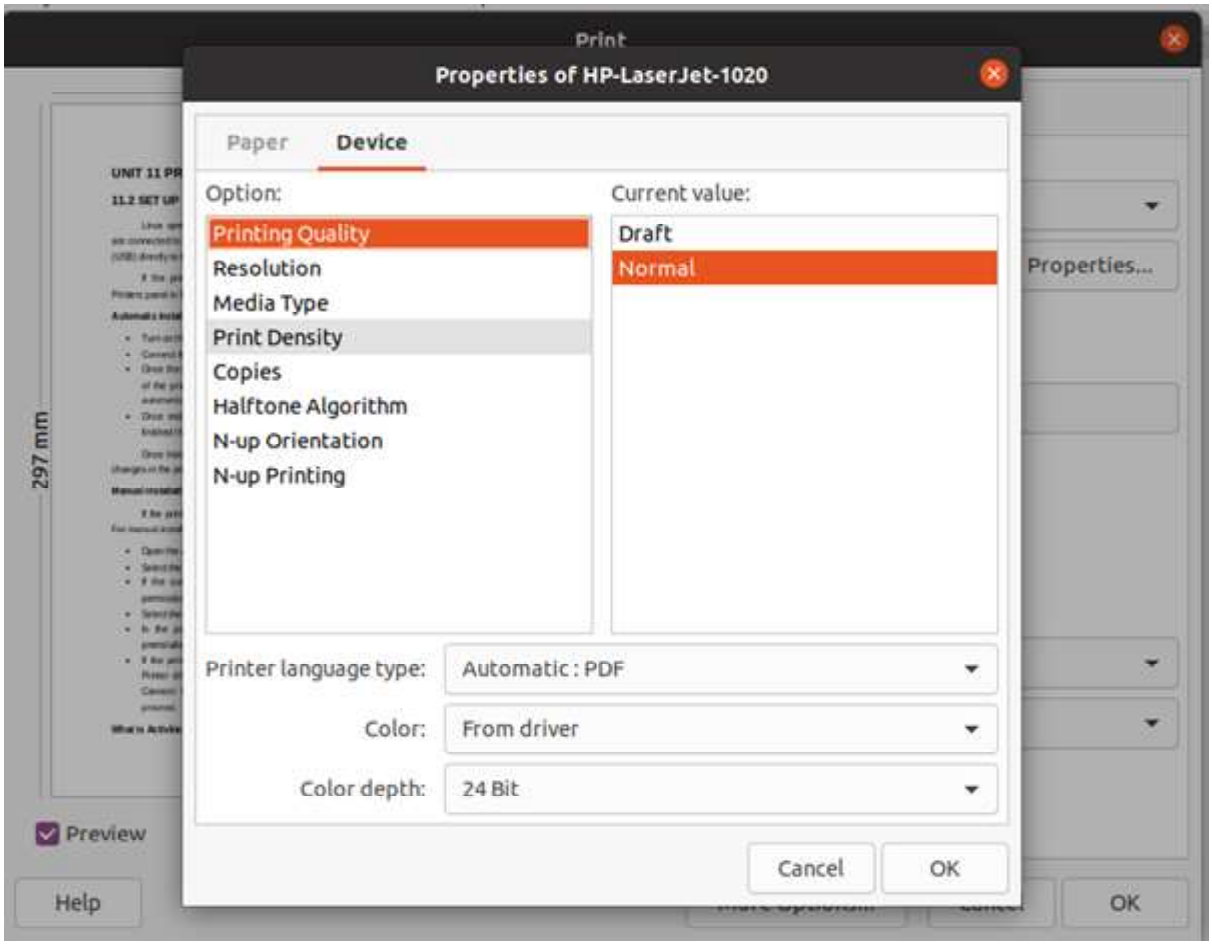


11.4 PRINTING

For print the document / file, we need to follow the steps cited below-

- Open the print dialog by pressing Ctrl+P or by selecting print dialog from file menu.
- Select the printer to print the document, if we don't select anyone, document will be printed by the default printer.
- We can change the Page type, page orientation, page order and few more setting in the print dialog menu as required to us.
- After finishing the setup, click the print button to get the printout copy.





11.4.1 Print Only Certain Pages

To only print certain pages from the document:

- Open the print dialog by pressing Ctrl+P.
- In the General tab, choose Pages from the Range section.
- Type the numbers of the pages to print in the text box, separated by commas. Use a dash to denote a range of pages.
  For example, if you enter "1,3,5-7" in the Pages text box to print pages 1,3,5,6,7

11.4.2 Print Pages in a Different Order

Reverse

- Printers usually print the first page first, and the last page last, so the pages end up in reverse order when we pick them up. If

required, we can reverse this printing order. To reverse printing order, follow the steps-

- Press Ctrl+P to open the Print dialog.
- In the General tab, under Copies, check Reverse. The last page will be printed first, and so on.

Collate

If we have to print more than one copy of the document, the print-outs will be grouped by page number by default (that is, all of the copies of page one come out, then the copies of page two, and so on). Collating will make each copy come out with its pages grouped together in the right order instead. To collate, -

- Press Ctrl+P to open the Print dialog.
- In the General tab, under Copies, check Collate.

Print envelopes

Most printers will allow us to print directly onto an envelope. This is especially useful if we have a lot of letters to send. There are two things we need to check when trying to print onto an envelope.

- The first one is that the printer knows the size of the envelope. To select the size in the Print dialog, go to the Page Setup tab and choose the Paper type as "Envelope" and then set the Paper size to the size of the envelope. Sometimes matching size is not available, in that case custom size needs to be set according to the requirement.
- Secondly, we need to make sure that the envelopes are loaded with the right side up in the printer's in-tray.

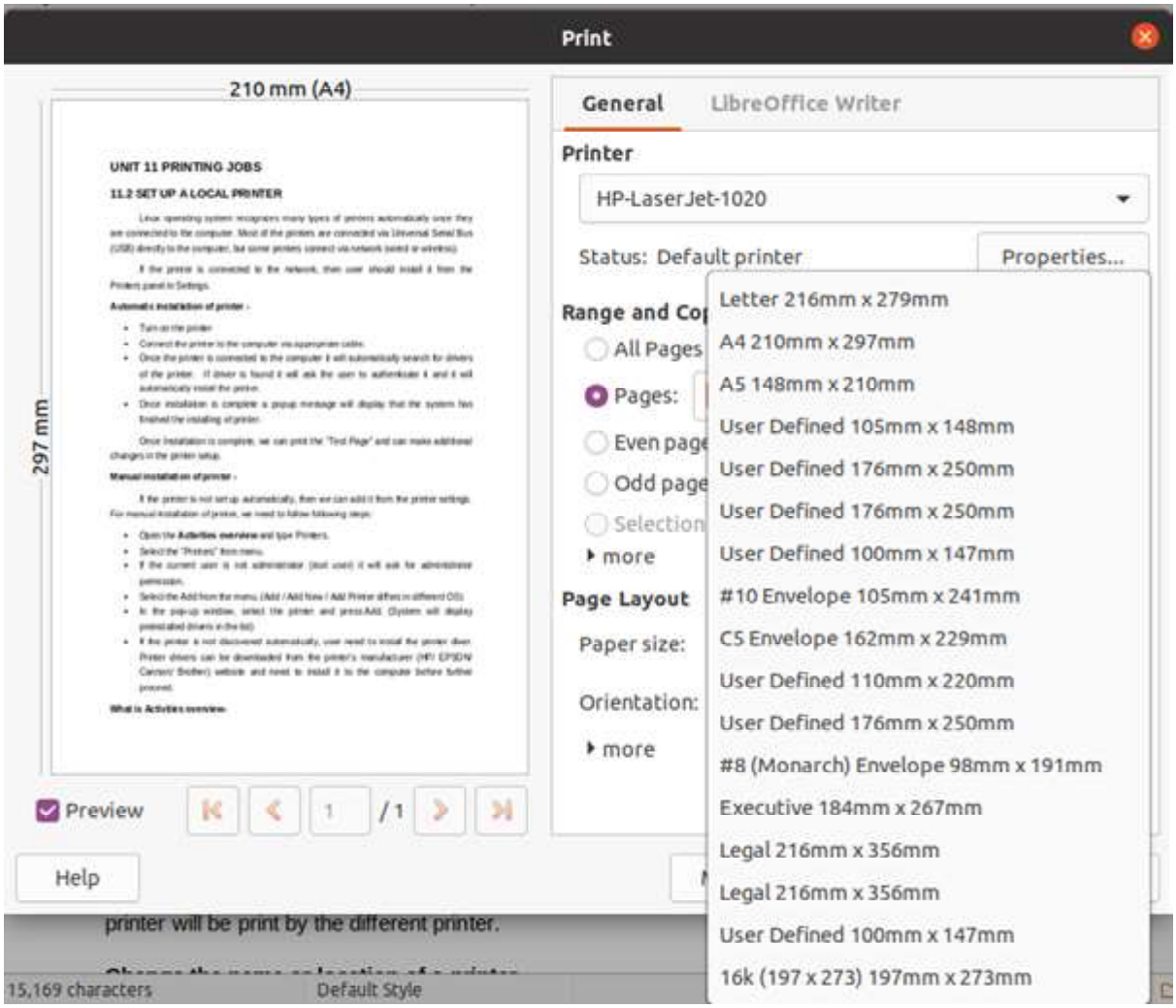
  Some printers are not designed to handle envelopes printing, especially some laser printers. If printer does not support envelop printing, it may damage the printer if we forcefully try to print it.

11.4.3 Change the Paper Size When Printing

If we want to change the paper size of the document (for example, print a US Letter-sized PDF on A4 paper), we can change the printing

format for the document as described below.

- Open the print dialog by pressing Ctrl+P.
- Select the Page Setup tab.
- Under the Paper column, choose the Paper size from the drop-down list.
- Click on Print to print your document.



we can also use the Orientation in the drop-down list to choose a different orientation:

- Portrait
- Landscape
- Reverse portrait
- Reverse landscape

Print two-sided and multi-page layouts

To print on both sides of each sheet of paper:

- Open the print dialog by pressing Ctrl+P.
- Go to the Page Setup tab of the Print window and choose an option from the Two-sided drop-down list. If the option is disabled, two-sided printing is not available for that printer.

Some printers do not have duplex printing facility. In that case we need to put back the one side printed page back to the printer as instructed by the printer.

Few printers do not support the both side printing facility; in those printers we can manually print first side of the page and then print the second side of the page, but we should be careful in selecting the pages to print on second side when we manually do that.

11.4.4 Print a Booklet

If we want to print a booklet from a LibreOffice document, first we need to export it to a PDF by choosing File -> Export as PDF. To print a booklet, the document needs to have multiple of 4 number of pages (4, 8, 12, 16,…). We may need to add blank pages to make it multiple of 4. After creating the PDF file, we can print the file as a booklet by selecting the printer

Print a booklet on a double-sided printer:

- Open the print dialog. Either by selecting Print from menu or by typing Ctrl+P.
- Click the Properties button of the print dialog
- In the Orientation drop-down list, make sure that Landscape is selected.
- In the Duplex drop-down list, select Short Edge.
- Click OK to go back to the print dialog.
- Under Range and Copies, choose Pages.
- Type the numbers of the pages in this order (n is the total number

of pages, and a multiple of 4):

n, 1, 2, n-1, n-2, 3, 4, n-3, n-4, 5, 6, n-5, n-6, 7, 8, n-7, n-8, 9, 10, n-9, n-10 …

Examples:

4 page booklet: Type 4,1,2,3

8 page booklet: Type 8,1,2,7,6,3,4,5

20pagebooklet: Type 20,1,2,19,18,3,4,17,16,5,6,15,14,7,8,13,12,9,10,11

- Choose the Page Layout tab.
- Under Layout, select Brochure.
- Under Page Sides, in the Include drop-down list, select All pages.
- Click Print.

Print a booklet on a single-sided printer:

- Open the print dialog. Either by selecting Print from menu or by typing Ctrl+P.
- Click the Properties button of the print dialog
- In the Orientation drop-down list, make sure that Landscape is selected.
- Click OK to go back to the print dialog.
- Under Range and Copies, choose Pages.
- Type the numbers of the pages in this order (n is the total number of pages, and a multiple of 4):

n, 1, 2, n-1, n-2, 3, 4, n-3, n-4, 5, 6, n-5, n-6, 7, 8, n-7, n-8, 9, 10, n-9, n-10…

Examples:

4 page booklet: Type 4,1,2,3

8 page booklet: Type 8,1,2,7,6,3,4,5

12 page booklet: Type 12,1,2,11,10,3,4,9,8,5,6,7

16 page booklet: Type 16,1,2,15,14,3,4,13,12,5,6,11,10,7,8,9

20 page booklet: Type 20,1,2,19,18,3,4,17,16,5,6,15,14,7,8,13,12,9,10,11

- Choose the Page Layout tab.
- Under Layout, select Brochure.
- Under Page Sides, in the Include drop-down list, select Front sides / right pages.

- Click Print.

When all the pages have been printed, flip the pages over and place them back in the printer.

- Open the print dialog. Either by selecting Print from menu or by typing Ctrl+P.
- Choose the Page Layout tab.
- Under Page Sides in the Include drop-down list, select Back sides / left pages.
- Click Print.

11.4.5 Print a File

Sometimes we need to print the document / data into a file instead of sending it to print from a printer. Printing to file will create a PDF, a PostScript or a SVG file that contains the document. This is useful if we want to send the document online or to another machine or to share it with someone. To print the document to a file we need to follow the steps as cited-

- Open the print dialog by pressing Ctrl+P or by selecting print dialog from file menu.
- Select Print to File in the Printer menu.
- To change the default filename and where the file to be saved, click the filename and set the new file name and select the location in the print dialog.
- After finishing the setup, click the print button to save the file.

PDF is the default file type for the document. If we want to use a different Output format, select either PostScript or SVG.

11.5 TROUBLESHOOTING A PRINTER

How to check printer's ink or toner level?

Checking of ink or toner level depends on the model and manufacturer of the printer, and the drivers and applications installed on the computer. Some printers have a built-in screen to display ink levels

and other information.

Some printers report toner or ink levels to the computer, which can be found in the Printers Settings panel. The ink level is shown with the printer details if it is available.

Alternatively, we can install applications to check or monitor ink levels. Inkblot shows ink status for many HP, Epson and Canon printers. Another ink levels application for Epson and some other printers is mtink.

Clearing a paper jam

Sometimes due to incorrect feeding of paper or low quality or damaged pages, printer get jammed. In the manual of the printer, detailed instructions are given about how to clear paper jams. In general, we need to open the printer's panels to find the jam inside and then firmly (but carefully!) pull the jammed paper out of the printer's feeding mechanism.

Once the jam has been cleared, we may need to press the printer's resume button to start printing again. In some printers, we may even need to turn the printer off and then on again, and then start the print job again.

Why are there streaks, lines or the wrong colors on my print-outs?

If the print-outs are streaky, faded, have lines on them that should not be there, or of poor quality, this may be due to a problem in the printer or low ink.

Fading text or images

This is mainly caused due to low ink. To solve this issue, check the ink levels and change the cartridge/ toner if necessary. If the ink levels are sufficient but still it showing the same problem then we need to clean the ink head. In the user manual, detail instructions for ink head cleaning is given.

Streaks and lines

This problem is mainly caused due to a dirty or partially blocked ink head. To solve this, we need to clean the ink head. In the user manual, detail instructions for ink head cleaning is given.

Wrong colors

This is mainly caused due to low ink or run out of one color from one of the cartridge / toners if we have multiple cartridges / toners. To

solve this issue, check the ink levels and change the cartridge/ toner if necessary.

Jagged lines, or lines are not straight

If lines are printed or writings are jagged not in straight line then we need to align print head. In the user manual detail instructions for aligning print head is given.

Cancel a print job

If we accidentally start printing a document that we don't require, we can cancel the print. To cancel a print job-

- Open the Activities overview and type Printers.
- Select Printers to open the list of printers.
- Click on the Show Jobs on the right-hand side of the Printers dialog.
- Cancel the print job by clicking the stop button.

If this does not cancel the print job then switch off and on the printer. But when we switch off the printer make sure that no pages are in the printing area otherwise it will cause a paper jam or damage the printer head.

Pause and release a print job

If we want to pause or release a print job, same procedure for cancel job need to be followed. Only instead of "Cancel the print job by clicking the stop button" we need to press pause printing or resume printing.



CHECK YOUR PROGRESS

Q 1: Shortcut key printing is _____

Q 2: We can set up a new printer from Printers in _____

Q 3: We cannot change the name of the printer. (TRUE/ FALSE)

Q 4: We can monitor ink level from Computer. (TRUE/ FALSE)



11.6 LET US SUM UP

- Linux operating system recognizes most of the printers automatically

once they are connected to the computer.

- If the OS recognizes the printer, it automatically installs the driver for the printer.
- If OS does not recognize the printer, we need to install from Printers by using Add New Printer window
- We can set a printer as default printer so that all the documents are get printed via that printer.
- In network-based operating system, it has built-in tools to locate and install network printers.
- We can print any document by using Ctrl + P. If we don't select the printer documents get printed in default printer.
- We can select certain pages to print instead of printing the whole document in the printing menu.
- We can set different printing properties such as page-size, page-orientation etc to get the printout as we wish.
- We can print to a file (as a soft copy) instead of printing to a printer (as hard copy)



11.7 FURTHER READINGS

1) Linux Administration Cookbook By Adam K. Dean
2) Linux Administration By Jason Cannon



11.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Cntrl + P

Ans to Q No 2: Activities overview

Ans to Q No 3: FALSE

Ans to Q No 4: TRUE



11.9 MODEL QUESTIONS

Q 1: Write the steps for Manual Installation of printers in Linux environment.

Q 2: Explain the installation process of network printers.

Q 3: Describe the process of Booklet printing.

Q 4: Describe the steps of setting a default printer.

Q 5: Describe the steps for manual duplex printing.

*** ***** ***