

Linux Jargon Buster: What is Display Manager in Linux?

In this chapter of the Linux Jargon Buster, you'll learn about display manager in Linux. Is it part of the desktop environment? What does it do?



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GDM, LightDM, SSDM. You'll come across these terms in various Linux forum discussions.

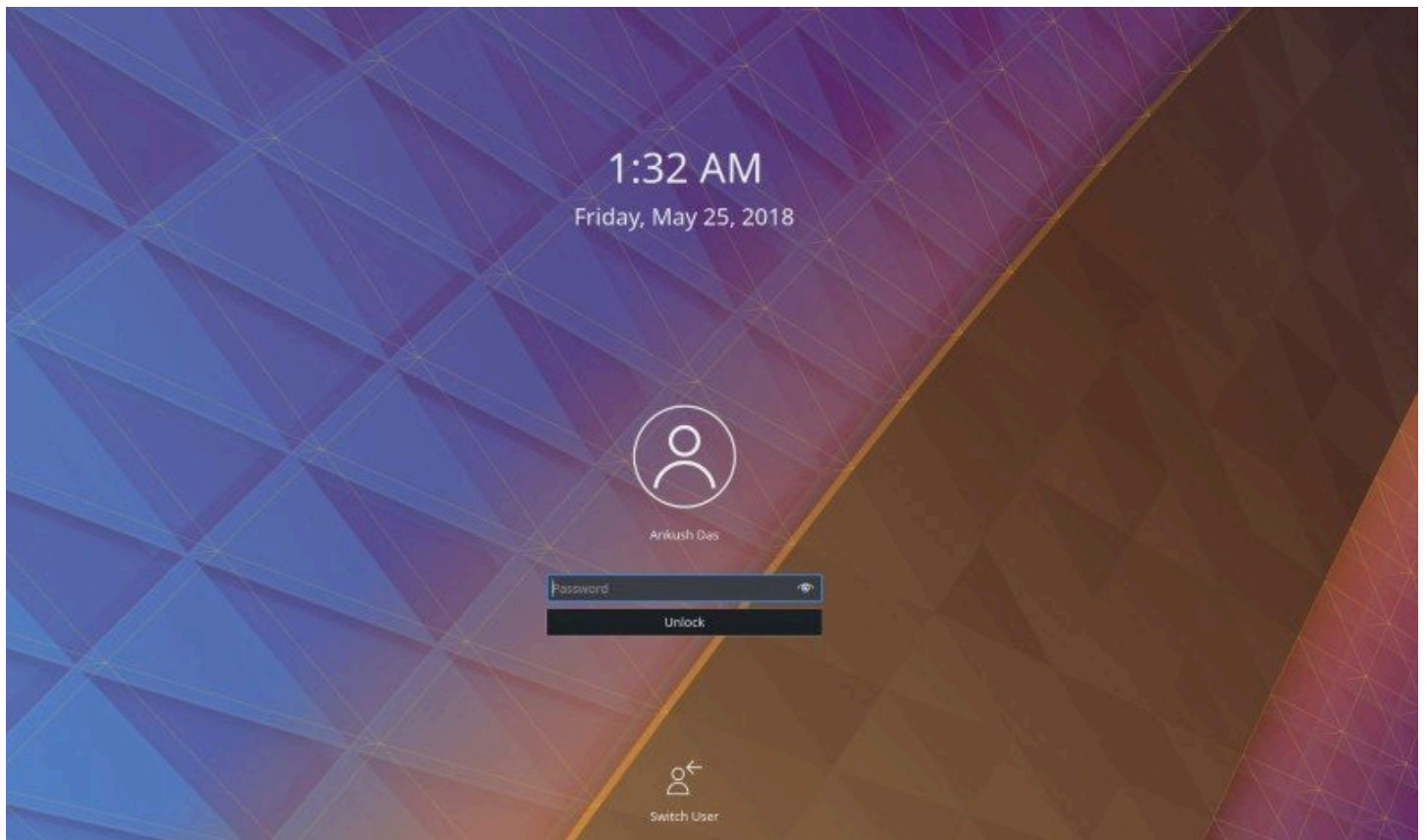
These are display managers usually associated with certain desktop environments. Learn more about them in this article.

What is display manager in Linux?

In simple terms, a display manager is a program that provides graphical login capabilities for your Linux distribution. It controls the user sessions and manages user authentication. Display manager starts the display server and loads the desktop environment right after you enter your username and password.

The display manager is often synonymous with the login screen. It is the visible part of it after all. However, the visible login screen, also called greeter, is only a part of the display manager.

Membership



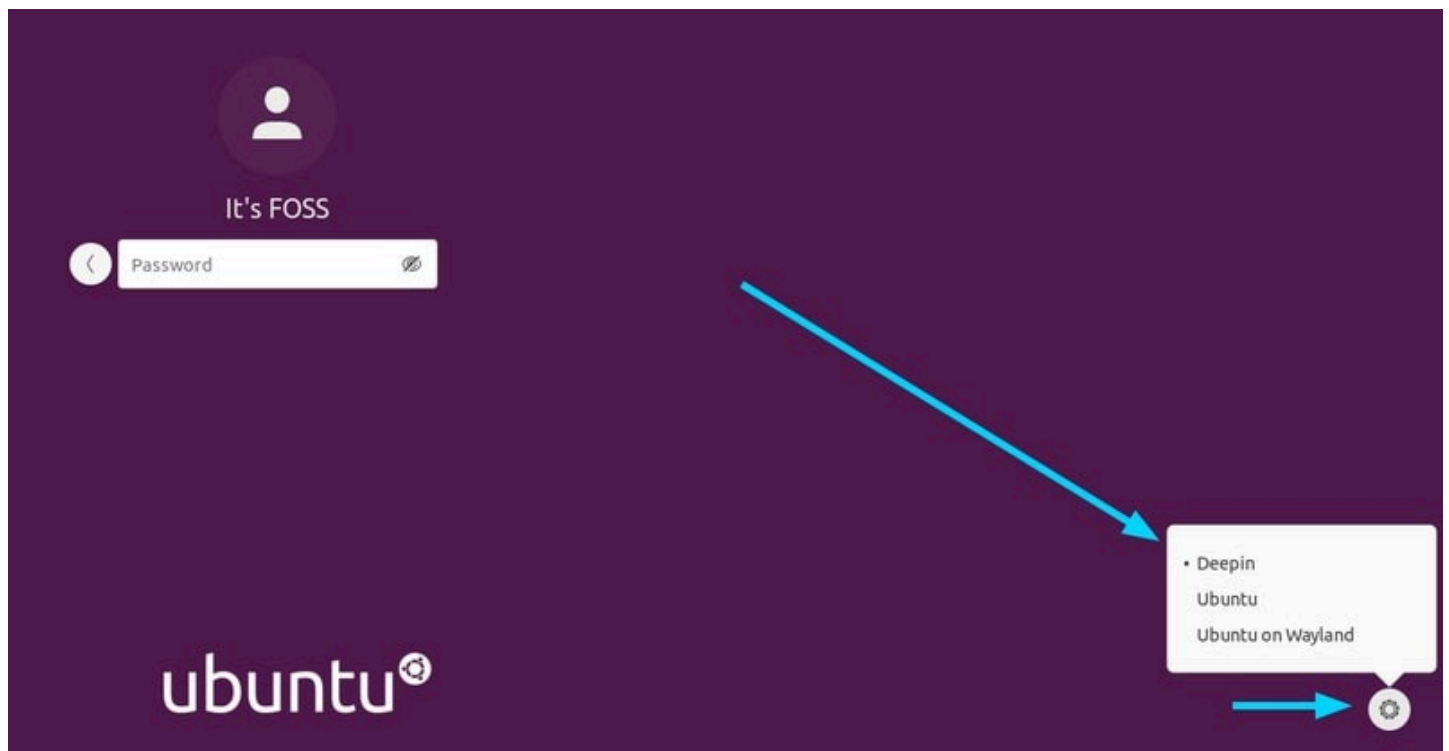
Login screen is the visible part of a display manager

As with various desktop environments and display servers, there are various display managers available as well. Let's have a look at them.

Different display managers

Some people think of the display manager as part of the desktop environment but that's not the case. It is a separate program.

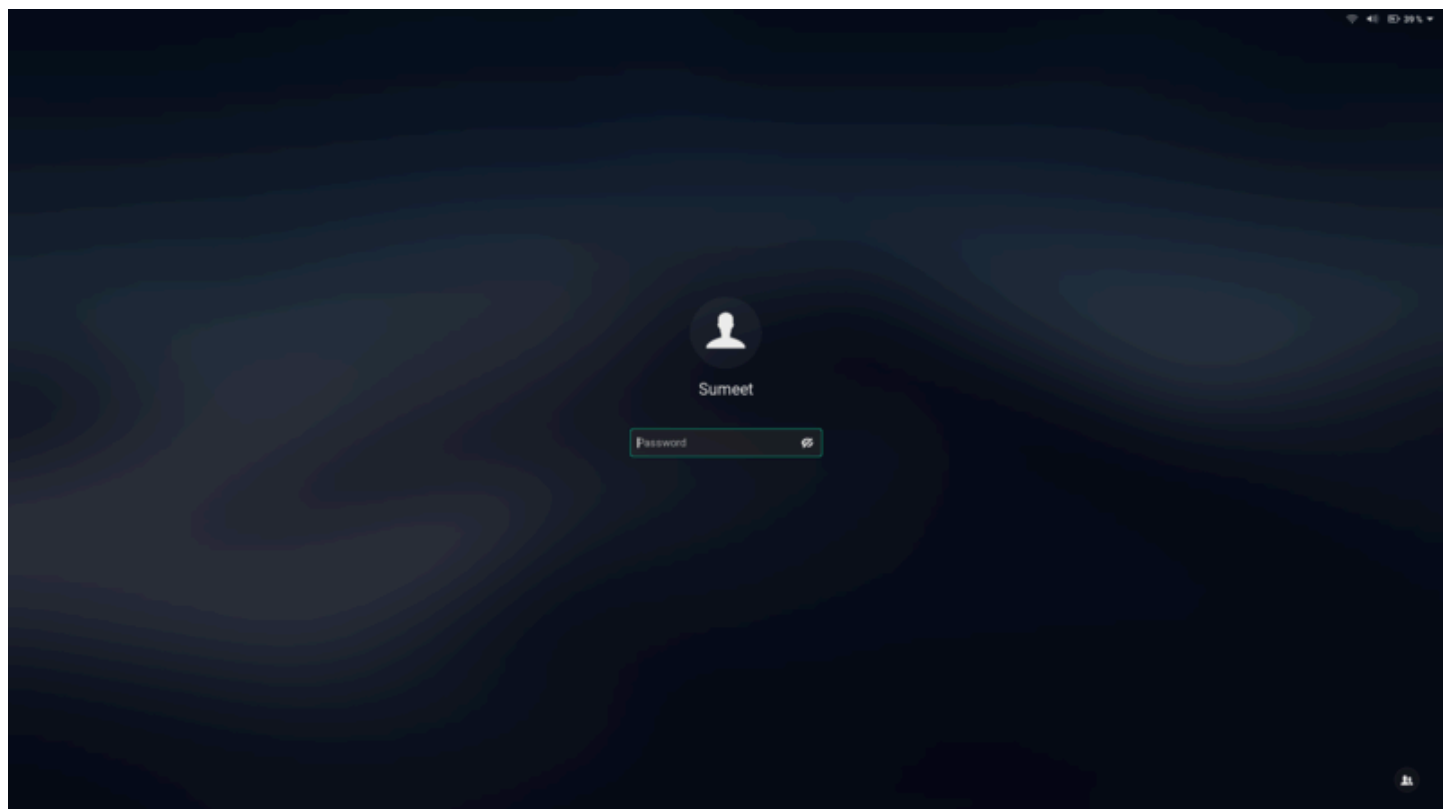
A desktop environment may recommend a certain display manager but it doesn't mean that it won't work with some other display manager. If you ever installed more than one desktop environment in the same system, you might remember that a login screen (i.e., the display manager) allows you to switch the desktop environments.



A display manager can be used with various desktop environments

Though the display manager is not part of the desktop environment, it is often developed by the same team as the desktop environment. It also becomes part of the identity of the desktop environment.

For example, the GNOME desktop environment develops GDM (GNOME Display Manager) and just by looking at the login screen, you would think of GNOME desktop environment.



GNOME login screen with GDM

Some popular display managers are:

- GDM (GNOME Display Manager): preferred by GNOME
- SDDM (Simple Desktop Display Manager): preferred by KDE
- LightDM: developed by Ubuntu for Unity desktop

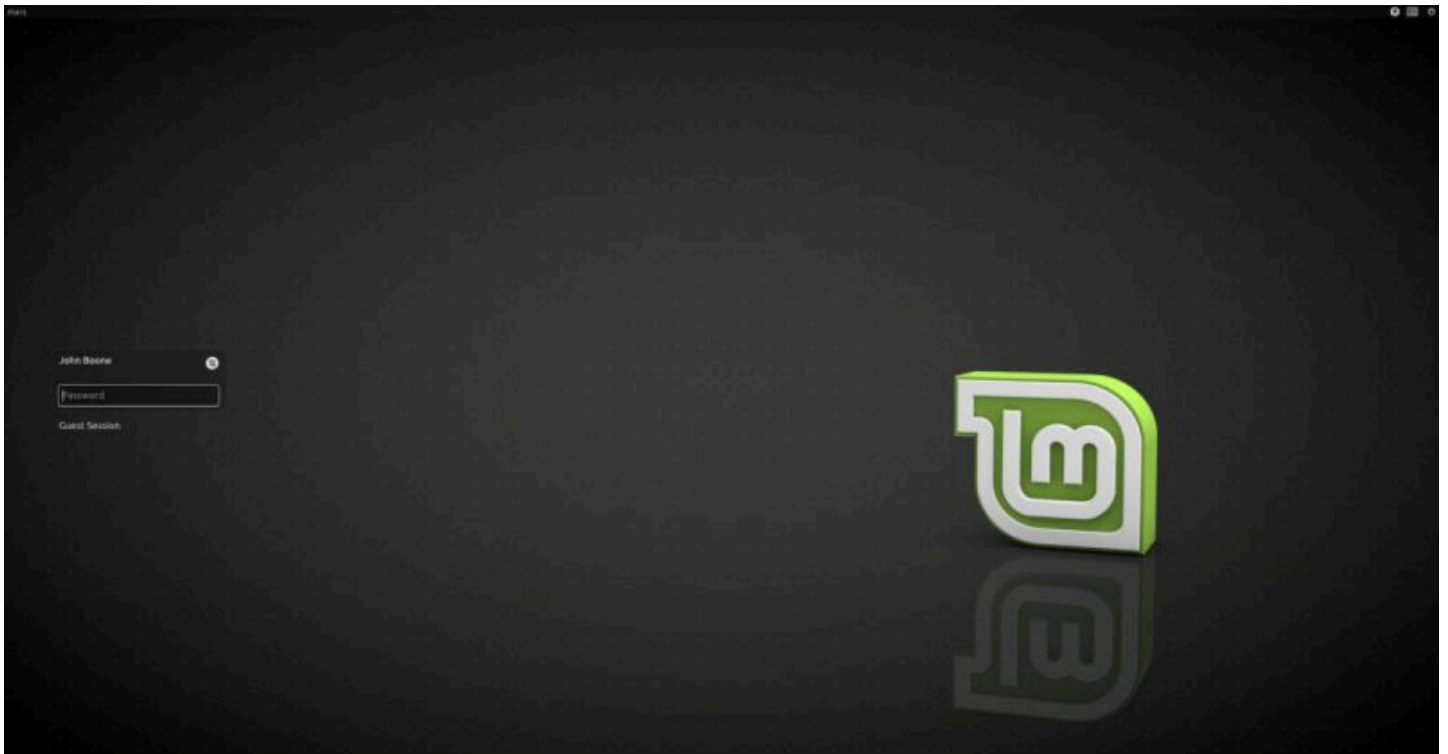
Display managers can be customized

There are so many desktop environments available. Do they all have their own display managers? No, that's not the case.

As I mentioned previously, the visible login screen is called a greeter. This greeter can be customized to change the looks of the login screen.

In fact, many distributions and/or desktop environments have written their own greeters to give users a login screen that resembles their brand.

For example, Mint's Cinnamon desktop uses LightDM but has its own greeter to give it more Mint-like (or should I say Cinnamon-like) looks.



Linux Mint login screen based on LightDM

Take a look at Kali Linux's login screen:

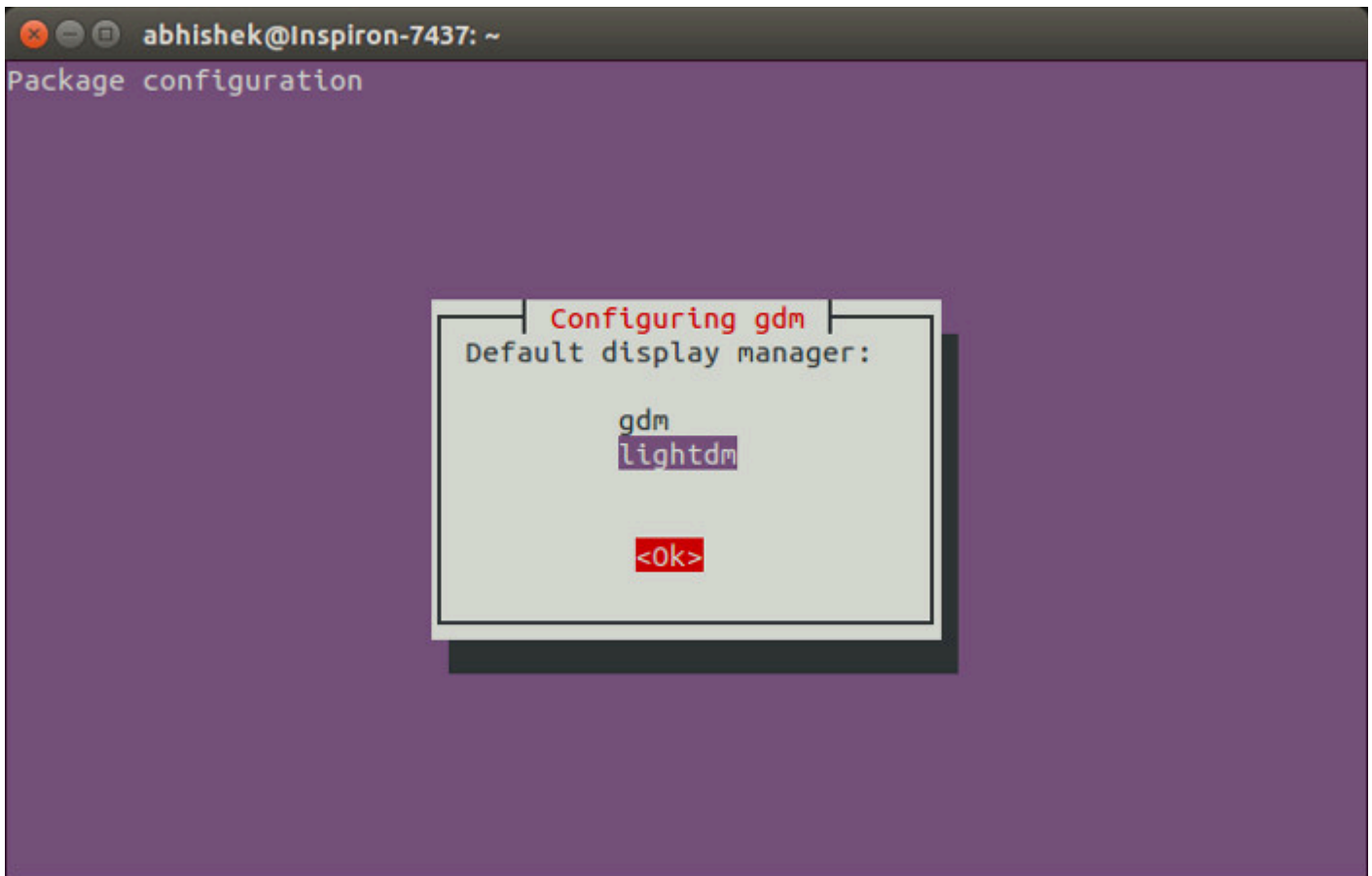


Kali Linux login screen

If you are into coding and tweaking, you can modify or code your own greeter as per your liking.

Changing display manager

You can change the display manager if you want. You need to install the display manager first. You'll see the option to switch the display manager while installing.



If you didn't do it initially, then you can change the display manager by manually configuring it later. The method to reconfigure the display manager is slightly different for different distributions and not in the scope of this article.

Conclusion

I hope you have a slightly better understanding of the term "display manager" in Linux. The aim of this jargon buster series is to explain common Linux colloquial and technical terms in non-technical language without going into too much detail.

I welcome your comments and suggestion.



ABOUT THE AUTHOR

Abhishek Prakash

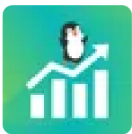
Created It's FOSS 11 years ago to share my Linux adventures. Have a Master's degree in Engineering and years of IT industry experience. Huge fan of Agatha Christie detective mysteries 🕵️



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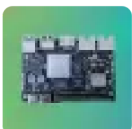


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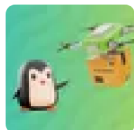
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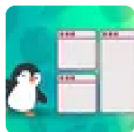
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Todd Winters 3 years ago

I sure did not know that the display manager was a separate program. Very informative! Thanks.

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p_metheny99 3 years ago

Very interesting article, simple and clear. /Pat

👍 0 🗨️ 0 Reply



gychang 3 years ago

can you write about how to place an app in certain virtual desktop (e.g. 2?), using wmctrl?

👍 0 🗨️ 0 Reply



Peter Goulden 3 years ago

Great explanation. Thanks. I've been using Linux for over 20 years and still didn't know the display manager was separate from the desktop environment. Really appreciate these articles.

👍 0 🗨️ 0 Reply



Abhishek Prakash 3 years ago

I am glad you liked the Jargon Buster series, Peter :)

👍 0 🗨️ 0 Reply



Peter F. 3 years ago

Does the display manager serve as a display back end (one layer above X / Wayland) when GNOME / KDE is already running?

👍 0 🗨️ 0 Reply



Abhishek Prakash 3 years ago

In a way... display manager interacts with both display server and desktop environment.

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