

# Lineox LIFF – Documentation Server

*Lineox LIFF is completely new kind of "documentation CD", but it is much more than that. Ideally, it should be installed as an add-on to a web server. After that, you can do very fast searches that span the entire 900 MB of documentation Lineox LIFF contains. This chapter introduces Lineox LIFF and we take a look at its installation and use.*

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## Lineox LIFF introduction

Lineox LIFF is a totally new kind of product, there has been nothing similar available before. However, Lineox LIFF uses many familiar techniques, and it is the combination of these techniques which is new.

Lineox LIFF is a kind of documentation CD. Most of the documentation files can be viewed with a web browser and there is a HTML based menu system on the CD. The menu system categorizes the available documents to allow easy manual browsing.

When Lineox LIFF is installed as a web server add-on, it offers even more features. A web server installation enables fast searches using pre-made index files. This is similar to using search engines on the Internet, such as Google, AltaVista, and the like. With Lineox LIFF you can, however, limit your searches to categories of your interest and you do not need a connection to the Internet.

The documentation on Lineox LIFF consists of documentation of Lineox Linux programs, man and info pages converted to HTML format, Linux Documentation Project guides, HOWTO and mini-HOWTO documents. Altogether there are about 72,500 documentation files which take about 900 MB space on hard disk.

The total size of files on the Lineox LIFF CD is about 1.8 GB. This would, of course, be impossible without transparent compression. All the files can be viewed and otherwise used as normal files if you have a recent enough Linux kernel. There have been some older patched kernels, but in the official Linux kernel transparent CD-ROM file system support appeared first in version 2.4.14.

## Using Lineox LIFF without installation

On Lineox Enterprise Linux rhlver installation DVD-ROM LIFF is as a CD-ROM image file. The easiest way to access it is to run `LIFFmount` script from the root directory of installation DVD-ROM. It mounts the image file to directory `/mnt/LIFF`, which then can be used like a mounted CD-ROM.

To get yourself acquainted with Lineox LIFF, start with opening `index.html` from the CD-ROM root directory. You can find a link called "browse documents" there.

Lineox  
the Complete Linux Documentation Collection

Introduction  
Search  
All  
Amusements  
Applications  
Archiving  
Communications  
Databases  
Editors  
Emulators  
Engineering  
File  
Internet  
Multimedia  
Productivity  
Publishing  
System  
Text  
Development  
HTML Documents  
System\_Environment  
User\_Interface

Search [ ] [Go] SEARCH HELP

Method: [All words] Format: [Long] Sort by: [Score]

Restrict search only to selected documentation packages  
Checking any box below restricts search to only selected packages. Leave unchecked, if you want global search.

Include all in this list in the search

Include in search		Include in search	
<input type="checkbox"/> balsa-1.2.3	Browse	<input type="checkbox"/> cadaver-0.17.0	Browse
<input type="checkbox"/> curl-7.10.6	Browse	<input type="checkbox"/> elinks-0.4.2	Browse
<input type="checkbox"/> etherreal-0.9.13	Browse	<input type="checkbox"/> fetchmail-6.2.0	Browse
<input type="checkbox"/> ftpcopy-0.3.9	Browse	<input type="checkbox"/> gaim-0.66	Browse
<input type="checkbox"/> galeon-0.11.3	Browse	<input type="checkbox"/> gftp-2.0.14	Browse
<input type="checkbox"/> gq-0.4.0	Browse	<input type="checkbox"/> htdig-3.1.6	Browse
<input type="checkbox"/> jwhois-3.2.2	Browse	<input type="checkbox"/> lftp-2.6.3	Browse
<input type="checkbox"/> lynx-2.8.4	Browse	<input type="checkbox"/> mailman-2.0.13	Browse
<input type="checkbox"/> micn-0.4.6.n1	Browse	<input type="checkbox"/> mrtm-> 9.9.9	Browse

Name : balsa Relocations: (not relocateable)  
Version : 1.2.3 Vendor: (none)  
Release : 1 Build Date: ti 25. maaliskuuta 2003 21:56:46  
Install Date: pe 28. maaliskuuta 2003 17:06:13 Build Host: rk6.rk  
Group : Applications/Internet Source RPM: balsa-1.2.3-1.src.rpm  
Size : 2868002 License: GPL  
Signature : (none)  
URI : http://www.balsa.net/

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Lineox LIFF main menu frame is on the left, the selected documentation category frame is on the right, and an info frame is below it.

## Some important document categories in Lineox LIFF

While most of the Lineox LIFF document categories relate to Lineox Linux program categories, there are some other major categories as well:

- **HTML/HOWTO** – HOWTO documents from Linux Documentation Project (LDP)
- **HTML/info2html** – info pages converted to HTML format
- **HTML/LDP** – LDP guides. These are more complete than HOWTO documents.
- **HTML/man2html** – man pages converted to HTML format
- **HTML/Mandrake\_Manuals** – Mandrake guides in HTML format
- **HTML/Red\_Hat\_Manuals** – Red Hat guides in HTML format

## Lineox LIFF installation and uninstallation

There are three ways Lineox LIFF can be installed.

The three installation modes are:

- **CD-ROM installation** – this mode just makes links to the CD-ROM. This is a very fast way to install, but using Lineox LIFF will be slow because all file accesses get directed to the CD-ROM, which is a slower media than hard disk. Use this mode if you just want to try out the fully featured Lineox LIFF. Later, you can run the installer again and choose a hard disk installation; CD-ROM installation does not limit your future choices.

Because LIFF is included as an image file on Lineox Enterprise Linux installation disk, this installation type requires that the DVD-ROM and LIFF image file are mounted manually before LIFF installation with commands:

```
umount /mnt/cdrom
mkdir /mnt/LEL
mount /dev/cdrom /mnt/LEL
mount /mnt/LEL/LIFF.iso /mnt/cdrom -o loop
```

If you want to use this installation type for a longer time, you should add the appropriate lines to `/etc/fstab` file.

- **Hard disk installation** – this mode results in much faster operation, but the installation itself can take some time, as there is about 1.8 GB of files on the Lineox LIFF CD-ROM. Most files are fairly small in size, and there are over 75,000 files altogether.
- **CD-ROM image** – this mode combines the speed advantage of hard disk installation and space saving of compressed CD-ROM filesystem. This mode copies the whole CD-ROM to hard disk as an image file, which is then mounted using loop device.

How fast is this type of installation? It depends on the relative speeds of your CPU and hard disk. If the disk is slow compared to the processor, the time saved reading a smaller compressed file is longer than it takes for the CPU to uncompress the file. As a rule of thumb, it can be said that a typical 200 MHz or faster computer has a relatively faster CPU than hard disk, and hard disks are getting relatively slower all the time.

Is speed very important then? It is if you chose an ordinary CD-ROM installation. With an approximately 50x speed CD-ROM drive a search can take about half a minute. However, search speed is only about 5 seconds on a 200 MHz computer when Lineox LIFF is installed on hard disk.



Lineox LIFF installation options.

## Lineox LIFF installation

Lineox LIFF installation starts by running `LIFFinstall` from the root directory of Lineox Enterprise Linux DVD-ROM. It mounts LIFF CD-ROM image and starts `LIFFinstall` from

CD-ROM root directory. The purpose of this is that the user always starts `LIFFinstall` from the root directory of DVD-ROM or CD-ROM and the type of media has no real effect.

Lineox LIFF installation is very simple. The user interface is handled by `dialog` in text mode (use the `-text` parameter to force text mode) and by `Xdialog` in graphical mode. If `Xdialog` is not installed, you get the text mode, but you need not worry: it is just as easy to use and there is no difference in operation between the text and graphical modes.

More important and possible momentary showstoppers are packages that `LIFFinstall` requires. They are:

- `dialog` or `Xdialog`
- `apache` or `httpd`
- `htdig`
- `htdig-web`

If any of the required packages are missing, `LIFFinstall` provides a report on the missing packages, but continues.

In the best case, `LIFFinstall` asks only about the installation type. Choose CD-ROM, hard disk, or CD-ROM image installation. If you have a fresh Lineox Linux installation, `LIFFinstall` asks also if it can modify the Apache configuration file. Choose **OK** and the Lineox LIFF installation is complete.

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### Note

Lineox LIFF installation program makes a directory alias `docs` for real directory `/usr/share/doc` in the Apache configuration file. This is more secure way that using `FollowSymLinks` option, which could compromise the safety of your data. This setting would be very convenient, but it can expose unwanted directories and files outside your web server directory tree to the outside world.



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### Lineox LIFF uninstallation

There is no need to uninstall Lineox LIFF if you want to replace CD-ROM installation with hard disk installation, you just start Lineox LIFF installation program and choose hard disk installation.

If you want to remove your Lineox LIFF installation, the installation program offers uncompleted and not fully tested option to uninstall LIFF. It does work, but it doesn't always remove all the files LIFF installs.

The LIFF installation writes a log file with name `/root/LIFFinstall.log`. LIFF uninstall reads it and tries to undo all what the installation did. Because the installation log should contain all the necessary information about what the installation did do, a new and better version of installation program could do a better work uninstalling all the LIFF files. Please check the Lineox web site for a more recent version of installation program, if you want to uninstall LIFF.

## Using Lineox LIFF

After installation you can use the Lineox LIFF search feature. You can limit the search scope to any category available or only to the selected document packages in the selected category. Selecting “Search” from the main menu is the easiest choice if you do not want to limit the search scope.

If you have opened any of the documentation categories (except “All”) the checkbox “Include all in this list in the search” is checked and the search scope is the currently selected documentation category. If you want to further limit the search scope, uncheck it and check instead the documentation packages you want to limit your search to. If you want an unlimited search, uncheck all the checkboxes.

In general, using Lineox LIFF is very easy and there is also online help available.