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# Where are file associations stored?

Asked 11 years ago    Active 2 years, 4 months ago    Viewed 76k times

How does Ubuntu or any other Linux systems store file associations?

76

Is there some `/etc/asscociations` file or something?

I know that I can right click on file and change it via "open with", but I'm just curious to know how it's stored internally.

28

files

mime-type

file-association

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edited Dec 11 '13 at 13:45

**Flyk**  
1,480   3   18   24

asked Dec 7 '10 at 20:29

**Stann**  
14k   17   44   42

10 Answers

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```
sktop Entry]
sion=1.0
e=Application
e=GNU Image Manipulation Program
ericName=Image Editor
ment=Create images and edit photographs
c=gimp-2.7 %U
Exec=gimp-2.7
n=gimp
minal=false
egories=Graphics;2DGraphics;RasterGraphics;GTK;
NOME-Bugzilla-Bugzilla=GNOME
NOME-Bugzilla-Product=GIMP
NOME-Bugzilla-Component=General
NOME-Bugzilla-Version=2.7.2
NOME-Bugzilla-OtherBinaries=gimp-2.7
rtupNotify=true
eType=application/postscript;application/pdf;image/bmp;image/g3fax;image/gif;image/x-
s;image/pcx;image/x-portable-anymap;image/x-portable-bitmap;image/x-portable-
ymap;image/x-portable-pixmap;image/x-psd;image/x-sgi;image/x-tga;image/x-
tmap;image/x-xwindowdump;image/x-xcf;image/x-compressed-
;image/tiff;image/jpeg;image/x-ppm;image/png;image/x-icon;image/x-
xmap;image/svg+xml;application/pdf;image/x-
;image/jp2;image/jpeg2000;image/jpx;image/x-xcursor;
```

See the `MimeType` field - this lists the supported **MIME** types. The `Exec` field tells the system to use the command `gimp-2.7 %U`, replacing '%U' with the files to open. (Note GIMP 2.7 is a version I have installed from a PPA, so is higher than the current version in the Ubuntu repositories).

When the application package is installed, the system extracts this **MIME** type data into a more easily accessible database because looking in each `.desktop` file would take too long if it was done every time a file was opened.

This tells the system what applications *can* be used for that **MIME** type and provides the applications in the 'Open With' list. The default is defined elsewhere. The file `/usr/share/applications/defaults.list` provides the information for the system defaults. Unless you choose otherwise, these are the applications used when you 'Open' a file.

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edited Jun 12 '20 at 14:37



Community Bot  
1

answered Dec 7 '10 at 20:51



dv3500ea

35.5k 13 97 150

8 After changing **MIME** types in `/usr/share/applications` `.desktop` files, is there a command to re-create that **MIME** database to see new associations in action? – [Redsandro](#) Oct 10 '12 at 16:40

12 Yes. `sudo update-desktop-database` See [jarrpa.net/2011/10/28/...](http://jarrpa.net/2011/10/28/...) – [NoBugs](#) Dec 22 '12 at 4:13

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1 I tried to use `sudo update-desktop-database /usr/share/applications/` because

the .desktop files were local. – [Michael](#) Jan 15 '20 at 3:30



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To supplement dv3500ea's excellent answer, I would like to add some information about what happens when you change your associations.

While the `defaults.list` (which you can find by typing 'locate defaults.list') provides the list of applications that are associated with each **MIME** type, any customizations that you make are stored in your home directory, in `~/.local/share/applications/mimeapps.list`. So if you add or remove associations, or change the default association, this file is updated.

The GNOME Desktop System Administration Guide at <http://library.gnome.org/admin/system-admin-guide/stable/> does not appear to discuss `mimeapps.list`, but I found the following description on <http://live.gnome.org/SysAdminGuideUpdate>:

`mimeapps.list` is located in `$XDG_DATA_DIRS/applications`. Its purpose is to add or remove **mime** associations from applications. `nautilus` writes `~/.local/share/applications/mimeapps.list` when the user makes changes in the "Open With" dialog.

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answered Jan 29 '11 at 11:42  
user8979

- 1 But using Ubuntu 12.04, I realize that the `mimeapps.list` is overridden by entries in the `defaults.list`. – [feela](#) Jun 25 '12 at 12:55
- 1 on 14.04, I was able to `s/vlc/mplayer/` in my `~/.local/share/applications/mimeapps.list`, and running processes like `pcmanfm` picked up the changes without restarting. (`mplayer.desktop` is just runs `mplayer`. I had one lying around from an old `mplayer` install in `/usr/local`, I guess. IDK if having a `MimeType=list;` was needed or not. – [Peter Cordes](#) Feb 3 '15 at 22:35
- 1 More precisely, `mimeapps.list` can be anywhere in the following search path:  
[specifications.freedesktop.org/mime-apps-spec/...](http://specifications.freedesktop.org/mime-apps-spec/) – [Ciro Santilli 新疆再教育营六四事件法轮功郝海东](#) Jan 19 '17 at 9:10



24



I found that on my system (Debian Jessie) there's also a `~/.config/mimeapps.list` that had an association I accidentally created to open a specific file type with `gedit`. None of the standard ways of correcting this (default application settings, Thunar's *open with* property) reflected this, but `gedit` was the default application.

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- 2 Thanks, you accidentally helped me to fix Firefox opening everything in Gedit. On openSUSE 13.2 I removed the line with "application/octet-stream=org.gnome.gedit.desktop;". :) – [user31389](#) Mar 4 '15 at 21:01
- 
- 3 since ubuntu 15.04 the user-specific modifications are also stored in `~/.config/mimeapps.list` . – [DJCrashdummy](#) Oct 11 '16 at 7:46
- 
- 3 More precisely, `mimeapps.list` can be anywhere in the following search path:  
[specifications.freedesktop.org/mime-apps-spec/...](https://specifications.freedesktop.org/mime-apps-spec/) – [Ciro Santilli 新疆再教育营六四事件法轮功郝海东](#) Jan 19 '17 at 9:11
- 

I was able to set an association like this:

11

`xdg-mime default xview.desktop image/jpeg`

You can also remove associations and do other things: `man xdg-mime`

I did not need to run `sudo update-desktop-database` .

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answered Jun 21 '15 at 10:00



[warvariuc](#)

2,255 4 26 41

I found this link concerning default association, it might be helpful.

[https://wiki.archlinux.org/index.php/Default\\_Applications](https://wiki.archlinux.org/index.php/Default_Applications)

for global association:

`/usr/share/applications/mimeapps.list`

per user association:

`~/.local/share/applications/mimeapps.list`

syntax is as follow:

```
[Added Associations]
mimetype=desktopfile1;desktopfile2;...;desktopfileN
...
[Removed Associations]
mimetype=desktopfile1;desktopfile2;...;desktopfileN
```

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edited Aug 23 '13 at 14:39

answered Aug 23 '13 at 8:16

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IdontCareAboutReputationPoints

300 2 5

- 1 This comes from an **archlinux** site, doesn't necessarily apply on Ubuntu, `/usr/share/applications/mimeapps.list` doesn't exist. – **guntbert** Aug 23 '13 at 16:44

Thank you for pointing this out, however the user said in Ubuntu or other Linux systems, this mean this is an answer to his question too :P. – **IdontCareAboutReputationPoints** Aug 23 '13 at 17:00

- 5 This answer is perfectly ok if you replace `mimeapps.desktop` with `defaults.desktop` – **szx** Apr 26 '14 at 9:26



Create a file `truecrypt.desktop` in `~/.local/share/applications` with the following lines:

7



```
[Desktop Entry]
Encoding=UTF-8
Type=Application
Icon=
Exec=/usr/bin/truecrypt %U
Name=truecrypt
Comment=manage truecrypt volumes
```

then edit the file `~/.local/share/applications/mimeapps.list` and add the following line:

```
application/octet-stream=truecrypt.desktop
```

I found out the **mime** type of Truecrypt by following running this command:

```
file --mime-type -b <any truecrypt filename>
```

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edited Mar 17 '12 at 5:20

answered Mar 13 '12 at 16:32

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Yi Jiang

1,186 1 13 28



Blindfreddy

71 1 1

Nice answer, because it works for those of use who use kde, but have a couple of gtk-native programs, like firefox. – **naught101** Apr 24 '12 at 5:57



**mimeapps.list** search path

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```

$XDG_CONFIG_HOME/$desktop-mimeapps.list user overrides, desktop-specific (for
advanced users)
$XDG_CONFIG_HOME/mimeapps.list user overrides (recommended location for
user configuration GUIs)
$XDG_CONFIG_DIRS/$desktop-mimeapps.list sysadmin and ISV overrides, desktop-
specific
$XDG_CONFIG_DIRS/mimeapps.list sysadmin and ISV overrides
$XDG_DATA_HOME/applications/$desktop-mimeapps.list for completeness, deprecated,
desktop-specific
$XDG_DATA_HOME/applications/mimeapps.list for compatibility, deprecated
$XDG_DATA_DIRS/applications/$desktop-mimeapps.list distribution-provided
defaults, desktop-specific
$XDG_DATA_DIRS/applications/mimeapps.list distribution-provided
defaults

```

and then the default values for those environment variables is given at

<https://specifications.freedesktop.org/basedir-spec/basedir-spec-0.6.html> :

- \$XDG\_DATA\_HOME : \$HOME/.local/share
- \$XDG\_CONFIG\_HOME : \$HOME/.config
- \$XDG\_DATA\_DIRS : none, appended to XDG\_DATA\_HOME
- \$XDG\_CONFIG\_DIRS : none, appended to XDG\_CONFIG\_HOME

Older versions of Ubuntu may not check ~/.config , so make sure you try ~/.local/share as well.

Commands like:

```

xdg-settings set default-web-browser chromium-browser.desktop
xdg-settings get default-web-browser

```

will automatically edit those files.

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edited Feb 17 '17 at 10:26

answered Jan 19 '17 at 9:22

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Ciro Santilli 新疆再教育  
营六四事件法轮功郝海东

21.3k 9 91 87

On Ubuntu 18.04, I've found the order of precedence to be as follows, from strongest to weakest:

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1. ~/.local/share/applications/defaults.list

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/usr/local/share/applications , and can be regenerated using [update-desktop-database](#) .

6. (Never used) /etc/gnome/defaults.list

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edited Aug 6 '19 at 7:29

answered Aug 6 '19 at 6:00

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Jimmy He

230 4 8



2



[Freedesktop.org](#) (previously called the X Desktop Group, thus the "XDG" abbreviation) is the group currently driving X standards like this ([learn more at Wikipedia](#)).

[warvariuc's answer](#) already mentions [xdg-mime](#) usage like:



```
xdg-mime default xnview.desktop image/jpeg
```

After lots of playing with image editors and viewers, I ended up with different viewers for different image types with almost no consistency, especially among the rarer image types.

I took the above command and assigned it to each of the **MIME** types controlled by the image viewers and then created a new `image-viewer.desktop` by cloning one of them (this is optional, you can merely reuse your favorite). Next, I manually verified that none of the **MIME** types would be incompatible with my new preferred application. Finally, I set that application to be the default for all of the other applications' **MIME** types:

```
sed '/^MimeType=/{!d; s///; s/;/\n/g' \
  /usr/share/applications/{ristretto,geeqie,gthumb}.desktop |sort -u \
  |xargs xdg-mime default image-viewer.desktop
```

This examines the `.desktop` files for each of the viewers ([Ristretto](#), [Geeqie](#), and [GThumb](#) in my case), extracts the **MIME** definition (which is prefaced by `MimeType=` and then contains a semicolon-delimited list), removes the (previously matched) preface label, and splits the list into one entry per line. `sort -u` then removes the redundant lines, then they're handed to `xdg-mime` to set the new defaults.

(If you want to test this before running it live, change `xargs` to `xargs echo` and it will print the resulting command instead of running it.)

This technique should work for anything you want to reclaim for a target app. You don't even

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For all users:

2

`/usr/share/applications/defaults.list`



Each user has a config file for overriding these defaults:

`~/.config/mimeapps.list`

see also <https://specifications.freedesktop.org/mime-apps-spec/mime-apps-spec-1.0.1.html> for places that might be used for overriding defaults.

You must know the **mime**-type of the file you want to change it's association.

Also all associations can be handled-changed in command line using:

`xdg-mime`

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answered Aug 2 '17 at 7:19



Xoristatziki

21 2

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