TrueType fonts
EASY ON THE EYES

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Maybe, just maybe, it's not your eyes after all. It could be the fonts you are using to view Web pages and other on screen stuff. If you have access to TrueType fonts then you are missing out by not using them.

By default, the fonts you get with a Linux distribution can often leave something to be desired, especially when called upon to display Web pages of any detail. It's a sad indictment of our times, but very many Web pages are written on the assumption that the Web browser that is going to view them will have access to a certain range of fonts, and these fonts are usually the Windows TrueType fonts. This is why some Web pages can look so bad or, at worst, be totally unreadable on a Linux system.

There are many different types of fonts available, but the crux of the matter for this article is that Adobe Type 1 font files are supplied with XFree86, while TrueType font are supplied with Windows. If you are running a dual boot machine, then these TrueType fonts might just be languishing in some dark corner of your hard drive – what a waste.

TrueType fonts in Netscape.

Standard Linux fonts in Netscape.

How far down the road are you.

To confirm for yourself what version of XFree you are running, in your favourite terminal type *XFree86 -version* to see. If it is less than version 4 you may want to consider upgrading – If you really do want to stick with an older version, because you have hardware that is not supported in the new version for instance, then you will need to insure you have the FreeType Library, XFSFT and TTMKFDIR installed.

There has been a change in the way fonts have been handled by the XFree package, partly to do with the increasing need for supporting things like TrueType. Previously XFree would cater for its own font needs, so, as part of configuring X on your system, a list of locations would say where all the font files were, usually specified in the FontPath section of */usr/X11/lib/X11/XF86Config*.

More recently, some systems shipped so that their fonts were better looked after as a resource, and handled separately by a font server, of which XFXFT is just one, which could now deal with extras like TrueType. With systems like this you now have to configure both X – to tell it to use the font server, and also configure the font server so it knows what fonts to serve.

Currently, most distributions will now ship with XFree version 4 or greater, which has facilities built in to deal with TrueType fonts. Configuration falls back into the domain of X and its configuration file.

Much depends on where your system is in this scheme of things and how you go about configuring it. You need to reconfigure something in your system to tell it where these new TrueType fonts are, but will it be for a font server or X itself? We will have to work through the options.

Getting things ready.

You will need a directory that will hold, or at least point to, your TrueType fonts. Different distributions have different file layouts, so, as a SuperUser you should make a directory:-

```
# su -
# mkdir -p /usr/local/share/fonts/ttfonts
```

Copy into this directory your TrueType fonts, so, if

FreeType libraries are available from *http://www.freetype.org/* and you will need to compile this yourself. While on this site you might also want to take ftjam which is a utility that should help when compiling FreeType.
XFSFT is available from *http://www.dcs.ed.ac.uk/home/jec/programs/xfsft/*
TTMKFDIR is available from *freshmeat.net/projects/ttmkfdir/*

you are using your Windows fonts then copy them to this directory:-

```
#  cp /mnt/win1/windows/fonts/*.ttf⤷
/usr/local/share/fonts/ttfonts/
```

or download fonts from the internet and extract them to this directory. You will need to change the file permissions of these files and of the directory itself, so:-

```
# chmod 775 /usr/local/share/fonts/ttfonts
```

and

```
# chmod 644⤷
/usr/local/share/fonts/ttfonts/*.ttf
```

These font names should all be in lower case which you can do with the accompanying shell script if it looks like to much to do by hand.

Some information needs to be collected about these fonts and you need to run a couple of utilities to do this. It's important to run them while in the directory holding the fonts, so:-

```
# cd /usr/local/share/fonts/ttfonts
# ttmkfdir -o fonts.scale
# mkfontdir
```

The above will create the plain text files *fonts.dir* and *fonts.scale*

As a precautionary measure, if you use any of the graphical log in tools like xdm, then turn them off – should something go wrong when configuring X then you end up with a much bigger challenge not being able to log in. Use the Mandrake Control Centre or the SuSE YaST tool to turn this feature off.

Configuring font servers or X

If you have had to install XFSFT font server yourself, then you will need to add, with an editor, to the XFSFT config file */usr/etc/xfsft.conf* the directory we just created holding our TrueType fonts. This is also true if you are using a system that has installed its own font server, Mandrake 8 for example, except that you will be looking for the configuration file in */etc/X11/fs/config*. The entry goes under the catalogue section and should look something like the example shown. The order may be different, but since it is worked through sequentially it is best to put the paths that are most important to you at the top.

X still needs to know what to do about any fonts it needs to display, so we now need to tell it to call on the services of the font server. This is best done by adding a line by hand to the X server configuration file, which, depending on your system will be in */etc/XF86Config* or

Shell script

Shell script to change upper case characters to lower case. Call the script while you are in the directory you want to work on.

```
#!/bin/sh
#
## ——Changing UPPER to lower case——-

ls * | while read f
 do
   if [ -f $f ]; then
     if [ "$f" ! =  "`echo \"$f\" | tr A-Z a-z`" ]; then
      #Note that 'This' will overwrite 'this'!
      mv -iv "$f" "`echo \"$f\" | tr A-Z a-z`"
     fi
   fi
 done
```

/etc/X11/XF86Config. Under the section "Files" you need to add the line **FontPath "unix/:-1"**.

If you found you had a recent version of XFree installed by your distribution when you looked earlier then you now fall in to one of two categories.

RedHat shipped with its own hacked version of XFree from version 6. If this describes your system then you will want to use their **chkfontpath** facility.

```
# chkfontpath -- add⤷
/usr/local/share/fonts/ttfonts
```

Again, X still needs to know about this so you need to make sure the font server is mentioned in XF86Config with the lines **FontPath "unix/:-"**. for version of RedHat 6.x or **FontPath "unix/:7100"** for RedHat 7.x.

For other users that are still using a font server, you will have to update your server configuration file to add the new font directory by hand Those using the more recent versions of XFree where we just need to change our XF86Config file, you should add your new font path with the **xset** utility:-

```
# xset +fp /usr/local/share/fonts/ttfonts
```

Time to go

With all this set up all we need to do is reset the server so that it can now take full advantage of the fonts we have added. Have a look at what's been added by viewing your efforts in one of the font selector utilities.

Further info

XFree86 Font De-uglification HOWTO or the FDU HOWTO can be found at
http://feenix.burgiss.net/ldp/fdu
Font HOWTO can be found at
http://pegasus.rutgers.edu/~elflord/font_howto
Jim's Linux Pages can be found
http://www.hazalthorn.freeserve.co.uk/TrueType.html

Font section of XFSFT.

```
catalogue =  /usr/local/share/fonts/ttfonts,
             /usr/X11R6/lib/X11/fonts/misc:unscaled,
             /usr/X11R6/lib/X11/fonts/100dpi:unscaled,
             /usr/X11R6/lib/X11/fonts/75dpi:unscaled,
             /usr/X11R6/lib/X11/fonts/Type1,
             /usr/X11R6/lib/X11/fonts/Speedo
```