

deb Linux: How to add support for Bulgarian, Russian, Belarusian, Ukrainian, Serbian, Macedonian, Bosnian language cyrillic localization to Xfce, GNOME, KDE Desktop

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If just installed Ubuntu or Xubuntu and choose as a default language English by mistake and you happen to live in Bulgaria, Russia, Ukraine, Belarus or any other cyrillic speaking / writing country and you want to make the desktop graphical environment to display menus in mother language Cyrillic. Here is how;

To add cyrillic localization, native support in GUI environment for major Desktop Graphic Environments (XFCE, GNOME, KDE ...) run in terminal:

For Bulgarian Cyrillic language Desktop support:

```
linux:~# apt-get install language-pack-bg
```

```
Д§ДµÑ,ДµД½Дµ Д½Д° Ñ•Д¿Д,Ñ•ÑŠÑ†Д,Ñ,Дµ Ñ• Д¿Д°Д°ДµÑ,Д,... Д“Д¾Ñ,Д¾Д²Д¾
Д°Д·Д³Ñ€Д°Д¶Д°Д½Дµ Д½Д° Д ÑŠÑ€Д²Д¾Ñ,Д¾ Ñ•ÑŠÑ•
Д·Д°Д²Д,Ñ•Д,Д¼Д¾Ñ•Ñ,Д
Д§ДµÑ,ДµД½Дµ Д½Д° Д,Д½Ñ,Д¾Ñ€Д¼Д°Ñ†Д,Ñ•Ñ,Д° Д·Д°
Ñ•ÑŠÑ•Ñ,Д¾Ñ•Д½Д,ДµÑ,Д¾... Д“Д¾Ñ,Д¾Д²Д¾
Д¿Д»ДµД´Д½Д,Ñ,Дµ Д´Д¾Д¿ÑŠД»Д½Д,Ñ,ДµД»Д½Д, Д¿Д°Д°ДµÑ,Д, Ñ%Дµ
Д±ÑŠД´Д°Ñ, Д,Д½Ñ•Ñ,Д°Д»Д,Ñ€Д°Д½Д,:
  firefox-locale-bg language-pack-bg-base
Д¿Д»ДµД´Д½Д,Ñ,Дµ Д·ДžД´Д` Д¿Д°Д°ДµÑ,Д, Ñ%Дµ Д±ÑŠД´Д°Ñ,
Д,Д½Ñ•Ñ,Д°Д»Д,Ñ€Д°Д½Д,:
  firefox-locale-bg language-pack-bg language-pack-bg-base
0 Д°Д°Ñ,ÑфД°Д»Д,Д·Д,Ñ€Д°Д½Д, 3 Д½Д¾Д²Д, Д,Д½Ñ•Ñ,Д°Д»Д,Ñ€Д°Д½Д, 0 Д·Д°
Д¿Ñ€ДµД¼Д°Ñ...Д²Д°Д½Дµ Д, 2 Д±ДµД· Д¿Ñ€Д¾Д¼Ñ•Д½Д°.
Д•ДµД¾Д±Ñ...Д¾Д´Д,Д¼Д¾ Дµ Д´Д° Ñ•Дµ Д,Д·Ñ,ДµД³Д»Ñ•Ñ, 0 B/1048 kB
Д°Ñ€Ñ...Д,Д²Д,
Д¿Д»ДµД´ Ñ,Д°Д·Д, Д¾Д¿ДµÑ€Д°Ñ†Д,Ñ Ñ%Дµ Д±ÑŠД´Дµ Д,Д·Д¿Д¾Д»Д·Д²Д°Д½Д¾
3533 kB Д´Д¾Д¿ÑŠД»Д½Д,Ñ,ДµД»Д½Д¾ Д´Д,Ñ•Д°Д¾Д²Д¾
Д¿Ñ€Д¾Ñ•Ñ,Ñ€Д°Д½Ñ•Ñ,Д²Д¾.
Д°Ñ•Д°Д°Ñ,Дµ Д»Д, Д´Д° Д¿Ñ€Д¾Д`ÑŠД»Д¶Д,Ñ,Дµ [Y/n]? Y
Selecting previously unselected package language-pack-bg-base.
(Reading database ... 287291 files and directories currently installed.)
Unpacking language-pack-bg-base (from .../language-pack-bg-
base_1%3a12.04+20130128_all.deb) ...
Selecting previously unselected package language-pack-bg.
Unpacking language-pack-bg (from .../language-pack-bg_1%3a12.04+20130128_all.deb) ...
Selecting previously unselected package firefox-locale-bg.
```

```
Unpacking firefox-locale-bg (from ../firefox-locale-
bg_19.0.2+build1-0ubuntu0.12.04.1_i386.deb) ...
Processing triggers for software-center ...
Updating software catalog...this may take a moment.
INFO:softwarecenter.db.pkghinfo_impl.aptcache:aptcache.open()
Software catalog update was successful.
Ð½Ñ,Ð»Ð½µ Ð½Ð° firefox-locale-bg (19.0.2+build1-0ubuntu0.12.04.1) ...
Ð½Ñ,Ð»Ð½µ Ð½Ð° language-pack-bg (1:12.04+20130128) ...
Ð½Ñ,Ð»Ð½µ Ð½Ð° language-pack-bg-base (1:12.04+20130128) ...
Generating locales...
  bg_BG.UTF-8... up-to-date
Generation complete.
```

Two packages *language-pack-bg* and *language-pack-bg-base* packages add to system localization files which in Linux are in the format of .mo files. Here is list of 2 packs file content:

```
linux:~# dpkg -L language-pack-bg
```

```
/.
/usr
/usr/share
/usr/share/doc
/usr/share/doc/language-pack-bg
/usr/share/doc/language-pack-bg/copyright
/usr/share/doc/language-pack-bg/changelog.gz
/usr/share/locale-langpack
```

```
linux:~# dpkg -L language-pack-bg-base
```

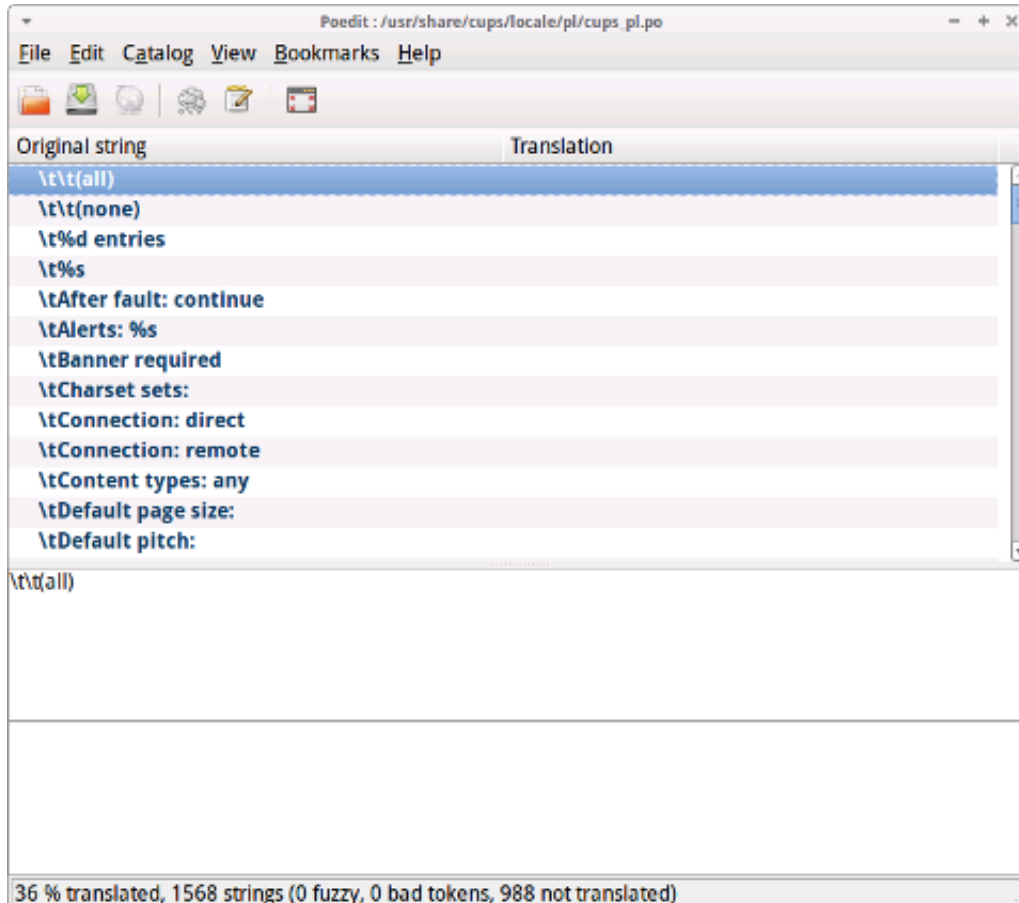
```
/.
/usr
/usr/share
/usr/share/doc
/usr/share/doc/language-pack-bg-base
/usr/share/doc/language-pack-bg-base/copyright
/usr/share/doc/language-pack-bg-base/changelog.gz
/usr/share/locale-langpack
/usr/share/locale-langpack/bg
```

/usr/share/locale-langpack/bg/LC_MESSAGES
/usr/share/locale-langpack/bg/LC_MESSAGES/Linux-PAM.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/pidgin.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/findutils.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/mutt.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/help2man.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/pppconfig.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/jade.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/recode.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/wdiff-gnulib.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/software-properties.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/grub.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/cracklib.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ggzcore.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/libapt-inst1.4.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/system-service.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/gwibber-service-sohu.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/mlocate.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/lynx.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/dnsmasq.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/apparmorapplet.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/gettext-tools.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/binutils.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/hello.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/quota.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ld.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/libvisual-0.4.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/friendly-recovery.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/gnupg2.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/git-gui.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/bash.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/apturl.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/sharutils.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ubuntuone-control-panel.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/pulseaudio.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/hello-debhelper.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/hunspell.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/dctrl-tools.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/gwibber-service-sina.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/popt.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/powertop.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/xdiagnose.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ubuntuone-client.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/gettext-runtime.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/debian-tasks.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/nano.mo

/usr/share/locale-langpack/bg/LC_MESSAGES/lvm2.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ecryptfs-utils.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/duplicity.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ubuntu-wallpapers.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/dselect.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/debconf.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/mountall.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/JabberBot.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/net-tools.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/apport.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/libidn.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/newt.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/tar.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/gnupg.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/coreutils.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/make.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/libapt-pkg4.12.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/kerneloops.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/lvm.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ufw.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/pidgin-libnotify.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/pppoeconf.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/acl.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/python-apt.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/gutenprint.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/MoinMoin.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/usbcreator.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/launchpad-integration.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/example-content.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/avahi.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/transmission-gtk.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/xkeyboard-config.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/dpkg-dev.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/libgpg-error.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/human-theme.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/grep.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/sane-backends.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/NetworkManager.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/libvirt.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ubuntu-sso-client.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/app-install-data.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/dpkg.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/whois.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/system-config-kickstart.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/gprof.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/zeitgeist.mo

```
/usr/share/locale-langpack/bg/LC_MESSAGES/shared-mime-info.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/virt-manager.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/bison-runtime.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/wget.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/quilt.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/command-not-found.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/jockey.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/attr.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ltsp-login.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/kcm_gtk.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/alsa-utils.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/aspell.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/fetchmail.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/man-db-gnulib.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/devscripts.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/xscreensaver.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/unity-2d.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/compiz.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/apt.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/gODBCConfig.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/libc.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/plasma_applet_menubarapplet.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/update-manager.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/psmisc.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/screen-resolution-extra.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/unattended-upgrades.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/adduser.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/sysstat.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/checkbox.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/apt-listchanges.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/ubuntuone-installer.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/upstart.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/upower.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/tasksel.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/byobu.mo
/usr/share/locale-langpack/bg/LC_MESSAGES/language-selector.mo
/var
/var/lib
/var/lib/locales
/var/lib/locales/supported.d
/var/lib/locales/supported.d/bg
```

Above **.mo** files are binary files, generated from plain text **.po** / **.pod** files. In free software OS **.po** files are the most common language translation files, where for each different language a set of **.po** files exist. Translators usually translate from English to respective language using a *GUI text editor* called **poedit**. Once translation is made from those **.po** files **.mo** binaries are generated and shipped as localizations for program or group of programs. Below is edit of one of Polish translation of lang file belonging to *CUPS Printing* service.



Once **.po** files are created, generation of **.mo** files can be done in various way, however usually Linux system uses **msgfmt** - (compile message catalog to binary format). In order to generate **.mo** file out of lets say **cups_pl.po**;

```
hipo@linux:~$ msgfmt cups_pl.po
hipo@linux:~$ ls -al *.mo
-rw-rw-r-- 1 hipo hipo 31988 Mar 18 12:38 messages.mo
```

Anyways, here is **how to add Cyrillic support for rest of Major cyrillic speaking countries**, issue;

For Russian Cyrillic language Linux Desktop env support;

```
linux:~# apt-get install --yes language-pack-ru
```

...

For Belarusian Cyrillic Linux Desktop;

```
linux:~# apt-get install --yes language-pack-be
```

For Linux Desktop in Ukrainian;

```
linux:~# apt-get install --yes language-pack-uk
```

...

For Linux Desktop in Serbian language;

```
linux:~# apt-get install --yes language-pack-sr
```

...

For Graphic Environment in Macedonian;

```
linux:~# apt-get install --yes language-pack-mk
```

...

For Linux GUI in Bosnian;

```
linux:~# apt-get install --yes language-pack-bs
```

...

For Kyrgyz language Linux localization;

```
linux:~# apt-get install --yes language-pack-ky
```

Whether, you are using Linux Desktop internationalization on some other Cyrillic related language, which I'm missing here please feel free to drop me a comment how you install it? I