



# Before we begin

This talk contains crude language, and also cats.



# Mono packaging in Debian and Ubuntu – why we're always right

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FOSDEM 2011  
Brussels, Belgium



# Your pilot for this flight

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- Ubuntu MOTU



# Stuff in this talk



- dpkg versus RPM (and other constraints)
- What we do that others don't
- How that stuff makes us super awesome
- Where we suck (and why it's totally not our fault)
- How to write flamebait talk titles

# Wibbly-wobbly, timey-wimey stuff

- Mono's been in Debian since April 2002: version 0.13
- That's longer than openSUSE (0.30 in SuSE Professional 9.1, nothing in 9.0)
- Mono's been in Ubuntu since Oct 2004: version 1.0.1

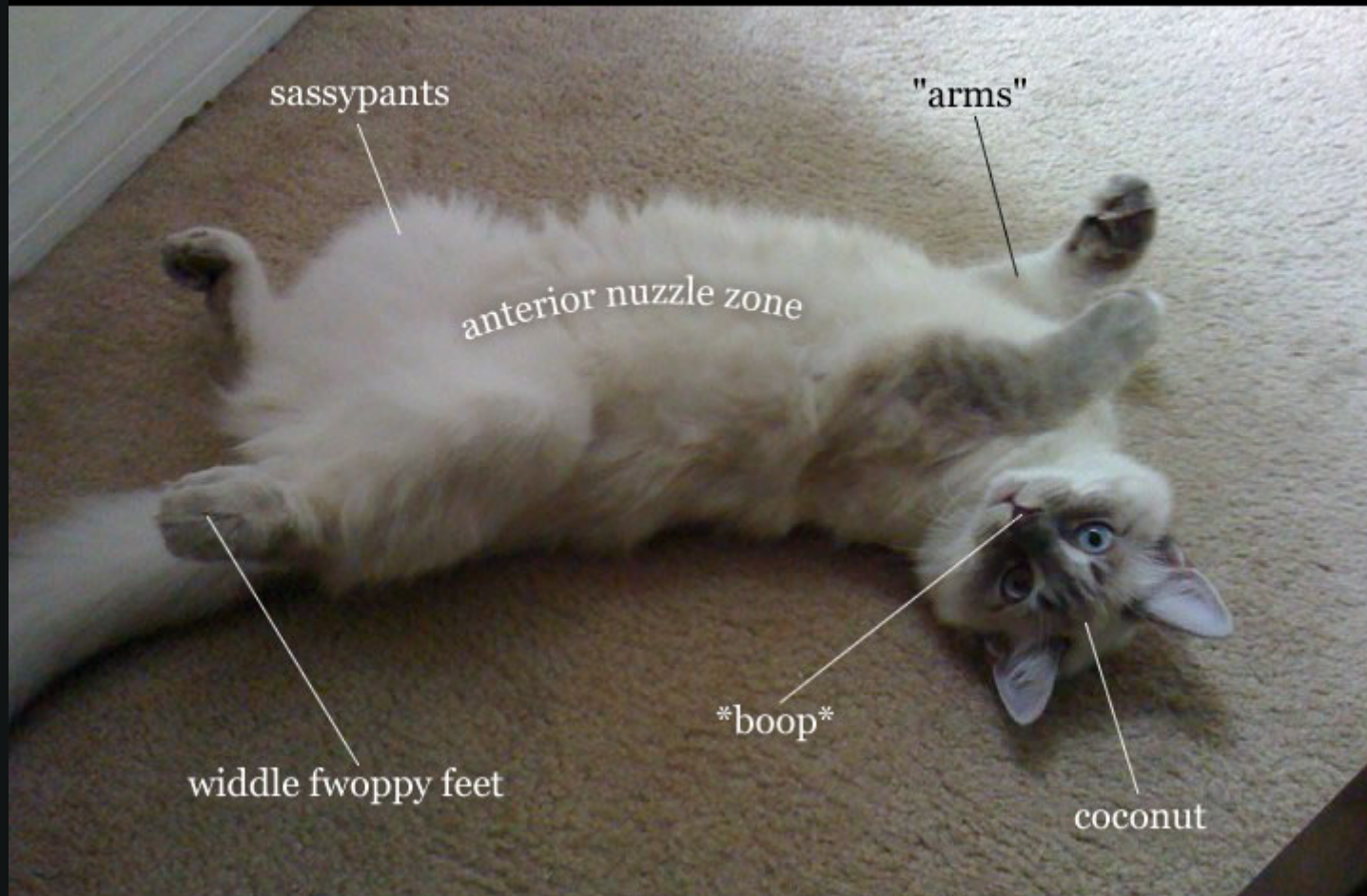
# A word on Debian packages

- RPM is much more sophisticated in some places
- And pretty dumb in others
- Some of the things we do wouldn't be possible with an RPM distribution



# Basic packaging structure

## feline anatomy





# Where RPM is better

- RPM allows sophisticated dependencies
- Not only on packages, but also:
  - Assemblies
  - Files
  - Versioned symbols
  - And more

# Where dpkg is better

- debconf configuration system allows packages settings to be altered during install
- preinst/prerm/postinst/postrm allow scripts on install/removal (e.g. regenerate monodoc search index)

# Working around the constraints

- dpkg only has names and versions on packages, so we need to handle ABI etc in package names, not via RPM's sophisticated assembly dependencies
- Works for us – but needs extra care taken to avoid problems

# Is dpkg or RPM inherently better?



# What has 9 years told us?

- Get it right, or it'll bite you down the line



- All the weird things we do come from experience

# What “weird stuff?”

- Chop everything into teeny pieces
- Build the world against only ONE classlib
- Override the compiler in the build system
- Use funny package names and install locations
- Strip all your useful things out of source tarballs



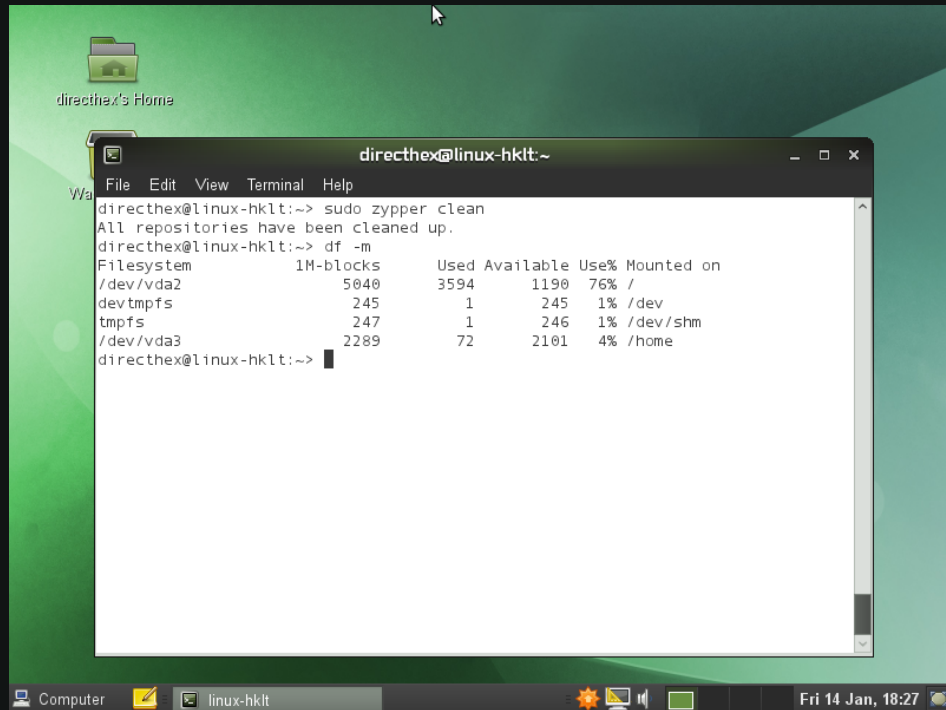
# mono.tar.bz2 and its 103 children

- Almost one package per assembly
- Only required assemblies ever installed



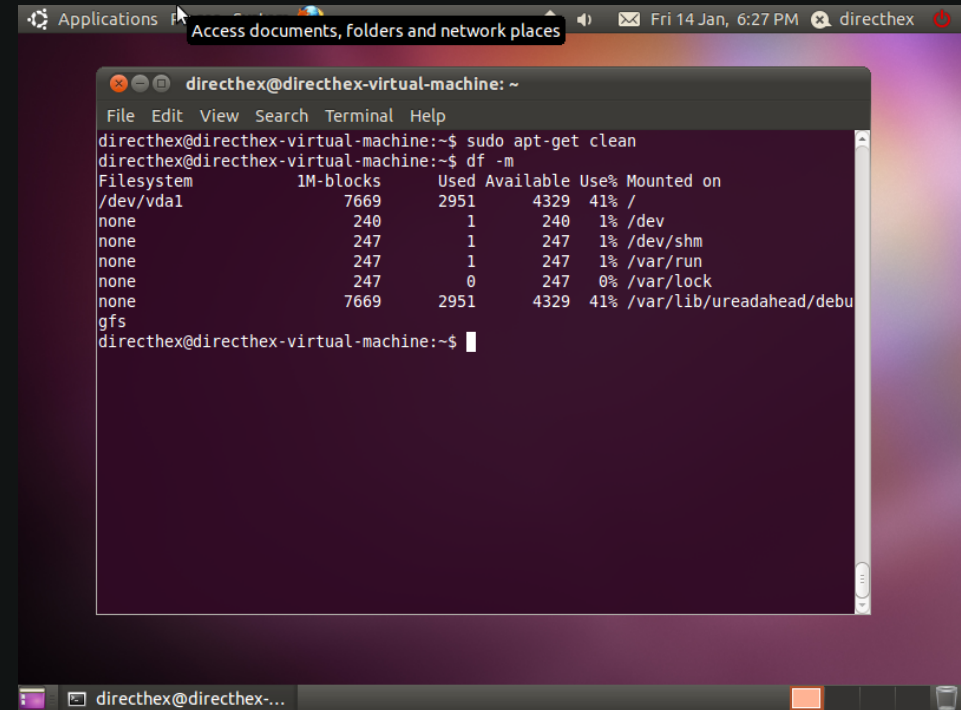
# Does that REALLY help?

- openSUSE 11.3
- GNOME desktop
- Mono removed
- 3.6 gig used



```
directex@linux-hklt:~  
File Edit View Terminal Help  
directex@linux-hklt:~> sudo zypper clean  
All repositories have been cleaned up.  
directex@linux-hklt:~> df -m  
Filesystem      1M-blocks    Used Available Use% Mounted on  
/dev/vda2        5040       3594      1190    76% /  
devtmpfs         245         1        245     1% /dev  
tmpfs           247         1        246     1% /dev/shm  
/dev/vda3       2289         72       2101     4% /home  
directex@linux-hklt:~>
```

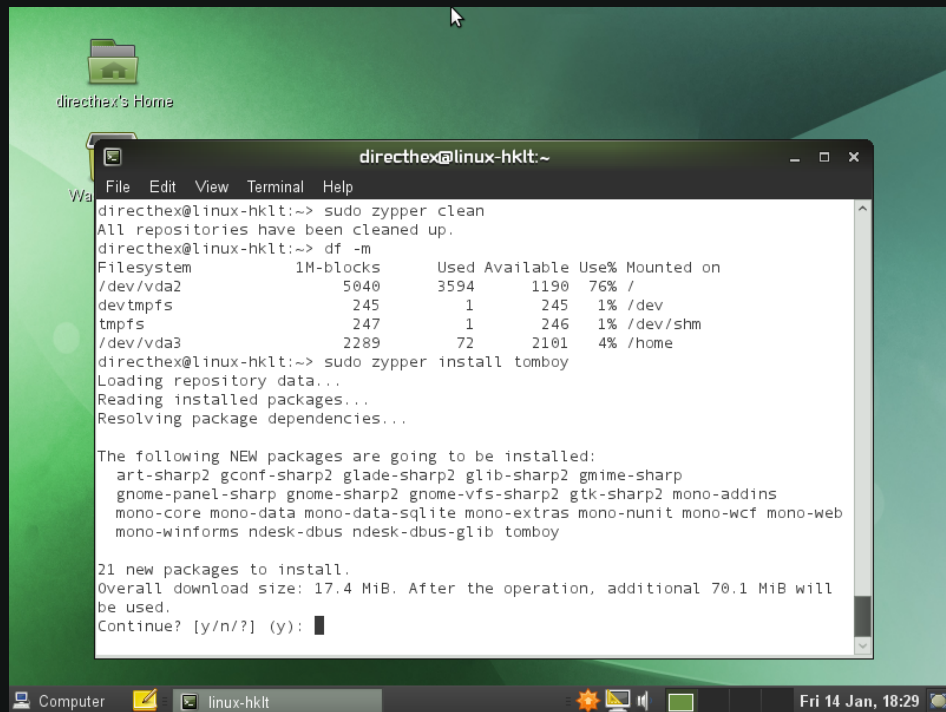
- Ubuntu 10.10
- GNOME desktop
- Mono removed
- 2.9 gig used



```
directex@directex-virtual-machine: ~  
File Edit View Search Terminal Help  
directex@directex-virtual-machine:~$ sudo apt-get clean  
directex@directex-virtual-machine:~$ df -m  
Filesystem      1M-blocks    Used Available Use% Mounted on  
/dev/vda1       7669       2951      4329    41% /  
none            240         1         240     1% /dev  
none            247         1         247     1% /dev/shm  
none            247         1         247     1% /var/run  
none            247         0         247     0% /var/lock  
none            7669       2951      4329    41% /var/lib/ureadahead/debu  
gfs  
directex@directex-virtual-machine:~$
```

# Does that REALLY help? pt2

- 3.6 gig used
- +70.1M for
- 2.9 gig used
- +22.7M for



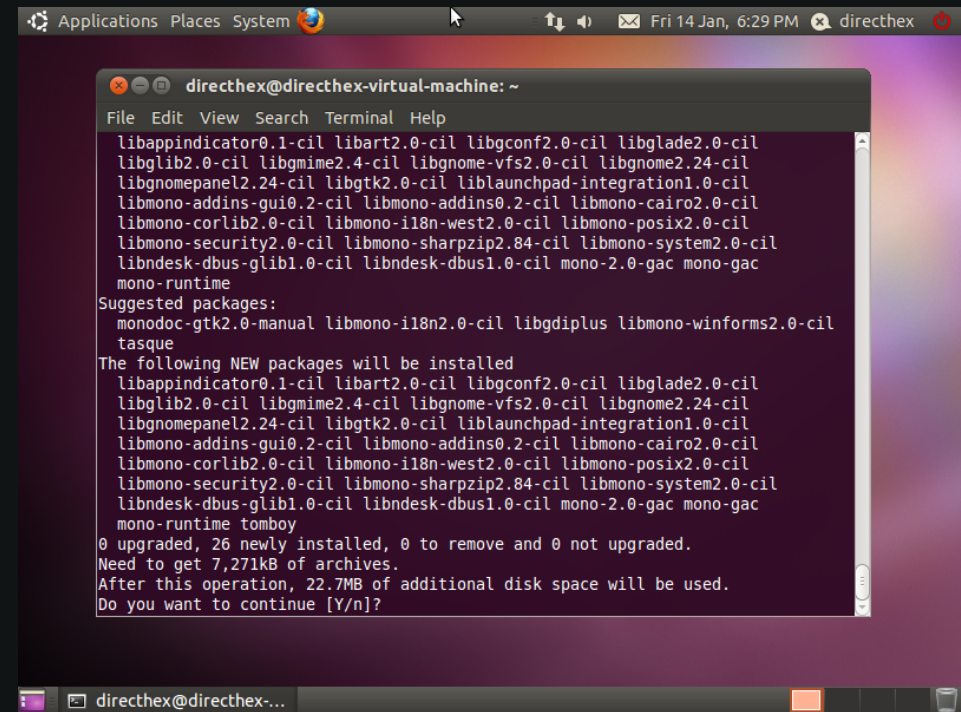
The screenshot shows a terminal window titled 'directhex@linux-hklt:~'. The user has run 'df -m' to check disk usage. The output shows that the root filesystem (/dev/vda2) is 76% full. Then, the user runs 'sudo zypper install tomboy'. The terminal shows the progress of installing 21 new packages, including art-sharp2, gconf-sharp2, glade-sharp2, glib-sharp2, gmime-sharp, gnome-panel-sharp, gnome-sharp2, gnome-vfs-sharp2, gtk-sharp2, mono-addins, mono-core, mono-data, mono-data-sqlite, mono-extras, mono-nunit, mono-wcf, mono-web, mono-winforms, ndesk-dbus, ndesk-dbus-glib, and tomboy. The overall download size is 17.4 MiB, and an additional 70.1 MiB will be used.

```
directhex@linux-hklt:~$ df -m
Filesystem      1M-blocks      Used Available Use% Mounted on
/dev/vda2        5040      3594      1190    76% /
devtmpfs         245         1         245     1% /dev
tmpfs            247         1         246     1% /dev/shm
/dev/vda3        2289         72       2101     4% /home

directhex@linux-hklt:~$ sudo zypper install tomboy
Loading repository data...
Reading installed packages...
Resolving package dependencies...

The following NEW packages are going to be installed:
art-sharp2 gconf-sharp2 glade-sharp2 glib-sharp2 gmime-sharp
gnome-panel-sharp gnome-sharp2 gnome-vfs-sharp2 gtk-sharp2 mono-addins
mono-core mono-data mono-data-sqlite mono-extras mono-nunit mono-wcf mono-web
mono-winforms ndesk-dbus ndesk-dbus-glib tomboy

21 new packages to install.
Overall download size: 17.4 MiB. After the operation, additional 70.1 MiB will
be used.
Continue? [y/n/?] (y):
```

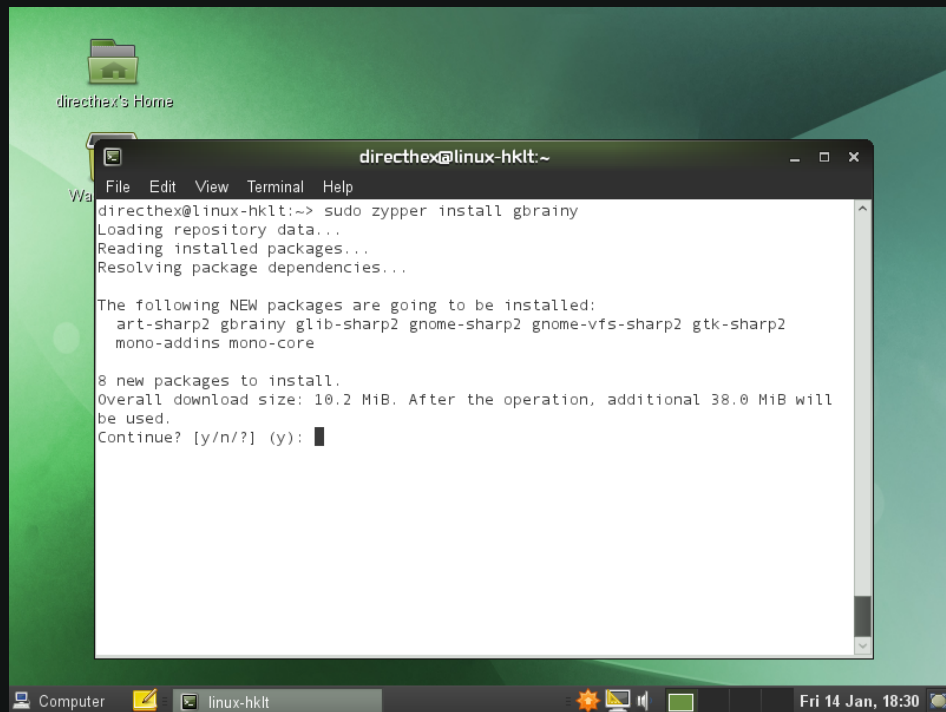


The screenshot shows a terminal window titled 'directhex@directhex-virtual-machine: ~'. The user has run 'zypper install tomboy'. The terminal shows the progress of installing 21 new packages, including libappindicator0.1-cil, libart2.0-cil, libgconf2.0-cil, libglade2.0-cil, libglib2.0-cil, libgmime2.4-cil, libgnome-vfs2.0-cil, libgnome2.24-cil, libgnomepanel2.24-cil, libgtk2.0-cil, liblaunchpad-integration1.0-cil, libmono-addins-gui0.2-cil, libmono-addins0.2-cil, libmono-cairo2.0-cil, libmono-corlib2.0-cil, libmono-il8n-west2.0-cil, libmono-posix2.0-cil, libmono-security2.0-cil, libmono-sharpzip2.84-cil, libmono-system2.0-cil, libndesk-dbus-glib1.0-cil, libndesk-dbus1.0-cil, mono-2.0-gac, mono-gac, mono-runtime, monodoc-gtk2.0-manual, libmono-il8n2.0-cil, libgdiplus, libmono-winforms2.0-cil, and tasque. The terminal also shows the overall download size and the additional disk space required.

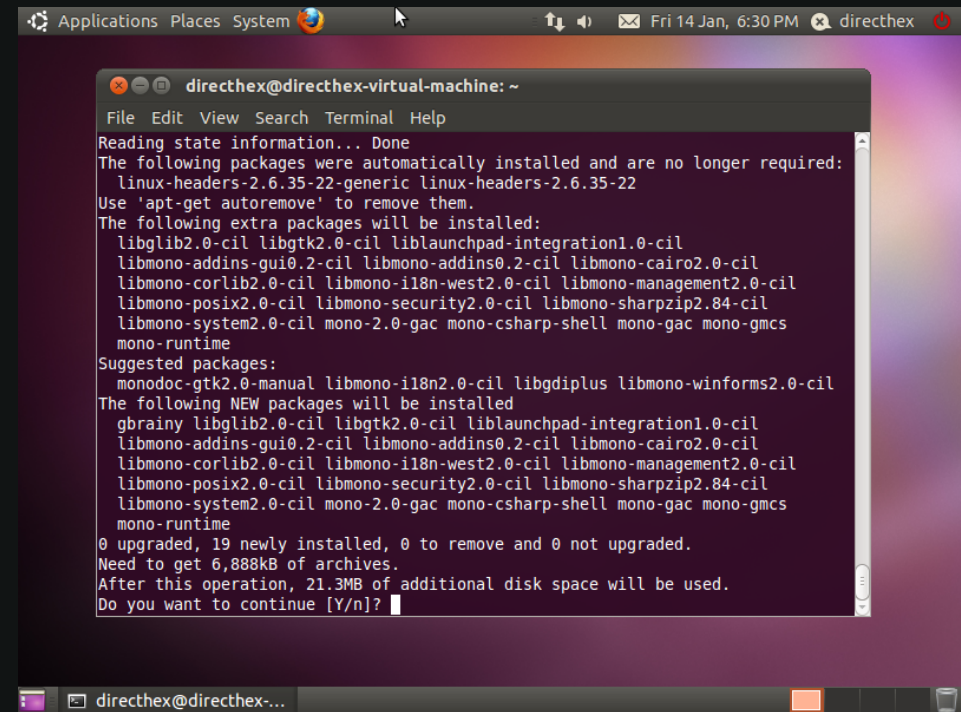
```
directhex@directhex-virtual-machine: ~$ zypper install tomboy
libappindicator0.1-cil libart2.0-cil libgconf2.0-cil libglade2.0-cil
libglib2.0-cil libgmime2.4-cil libgnome-vfs2.0-cil libgnome2.24-cil
libgnomepanel2.24-cil libgtk2.0-cil liblaunchpad-integration1.0-cil
libmono-addins-gui0.2-cil libmono-addins0.2-cil libmono-cairo2.0-cil
libmono-corlib2.0-cil libmono-il8n-west2.0-cil libmono-posix2.0-cil
libmono-security2.0-cil libmono-sharpzip2.84-cil libmono-system2.0-cil
libndesk-dbus-glib1.0-cil libndesk-dbus1.0-cil mono-2.0-gac mono-gac
mono-runtime
Suggested packages:
monodoc-gtk2.0-manual libmono-il8n2.0-cil libgdiplus libmono-winforms2.0-cil
tasque
The following NEW packages will be installed
libappindicator0.1-cil libart2.0-cil libgconf2.0-cil libglade2.0-cil
libglib2.0-cil libgmime2.4-cil libgnome-vfs2.0-cil libgnome2.24-cil
libgnomepanel2.24-cil libgtk2.0-cil liblaunchpad-integration1.0-cil
libmono-addins-gui0.2-cil libmono-addins0.2-cil libmono-cairo2.0-cil
libmono-corlib2.0-cil libmono-il8n-west2.0-cil libmono-posix2.0-cil
libmono-security2.0-cil libmono-sharpzip2.84-cil libmono-system2.0-cil
libndesk-dbus-glib1.0-cil libndesk-dbus1.0-cil mono-2.0-gac mono-gac
mono-runtime tomboy
0 upgraded, 26 newly installed, 0 to remove and 0 not upgraded.
Need to get 7,271kB of archives.
After this operation, 22.7MB of additional disk space will be used.
Do you want to continue [Y/n]?
```

# Does that REALLY help? pt3

- 3.6 gig used
- +38.0M for
- 2.9 gig used
- +21.3M for



```
directex@linux-hklt:~  
File Edit View Terminal Help  
directex@linux-hklt:~$ sudo zypper install gbrainy  
Loading repository data...  
Reading installed packages...  
Resolving package dependencies...  
  
The following NEW packages are going to be installed:  
  art-sharp2 gbrainy glib-sharp2 gnome-sharp2 gnome-vfs-sharp2 gtk-sharp2  
  mono-addins mono-core  
  
8 new packages to install.  
Overall download size: 10.2 MiB. After the operation, additional 38.0 MiB will  
be used.  
Continue? [y/n/?] (y):
```

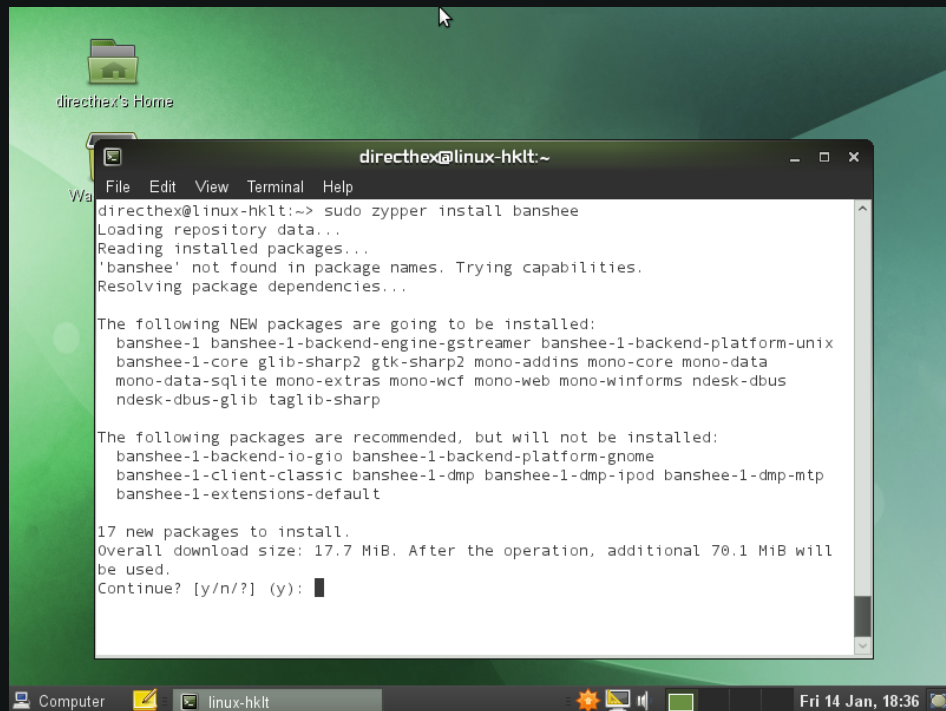


```
directex@directex-virtual-machine: ~  
File Edit View Search Terminal Help  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  linux-headers-2.6.35-22-generic linux-headers-2.6.35-22  
Use 'apt-get autoremove' to remove them.  
The following extra packages will be installed:  
  libglib2.0-cil libgtk2.0-cil liblaunchpad-integration1.0-cil  
  libmono-addins-gui0.2-cil libmono-addins0.2-cil libmono-cairo2.0-cil  
  libmono-corlib2.0-cil libmono-i18n-west2.0-cil libmono-management2.0-cil  
  libmono-posix2.0-cil libmono-security2.0-cil libmono-sharpzip2.84-cil  
  libmono-system2.0-cil mono-2.0-gac mono-csharp-shell mono-gac mono-gmcs  
  mono-runtime  
Suggested packages:  
  monodoc-gtk2.0-manual libmono-i18n2.0-cil libgdiplus libmono-winforms2.0-cil  
The following NEW packages will be installed  
  gbrainy libglib2.0-cil libgtk2.0-cil liblaunchpad-integration1.0-cil  
  libmono-addins-gui0.2-cil libmono-addins0.2-cil libmono-cairo2.0-cil  
  libmono-corlib2.0-cil libmono-i18n-west2.0-cil libmono-management2.0-cil  
  libmono-posix2.0-cil libmono-security2.0-cil libmono-sharpzip2.84-cil  
  libmono-system2.0-cil mono-2.0-gac mono-csharp-shell mono-gac mono-gmcs  
  mono-runtime  
0 upgraded, 19 newly installed, 0 to remove and 0 not upgraded.  
Need to get 6,888kB of archives.  
After this operation, 21.3MB of additional disk space will be used.  
Do you want to continue [Y/n]?
```

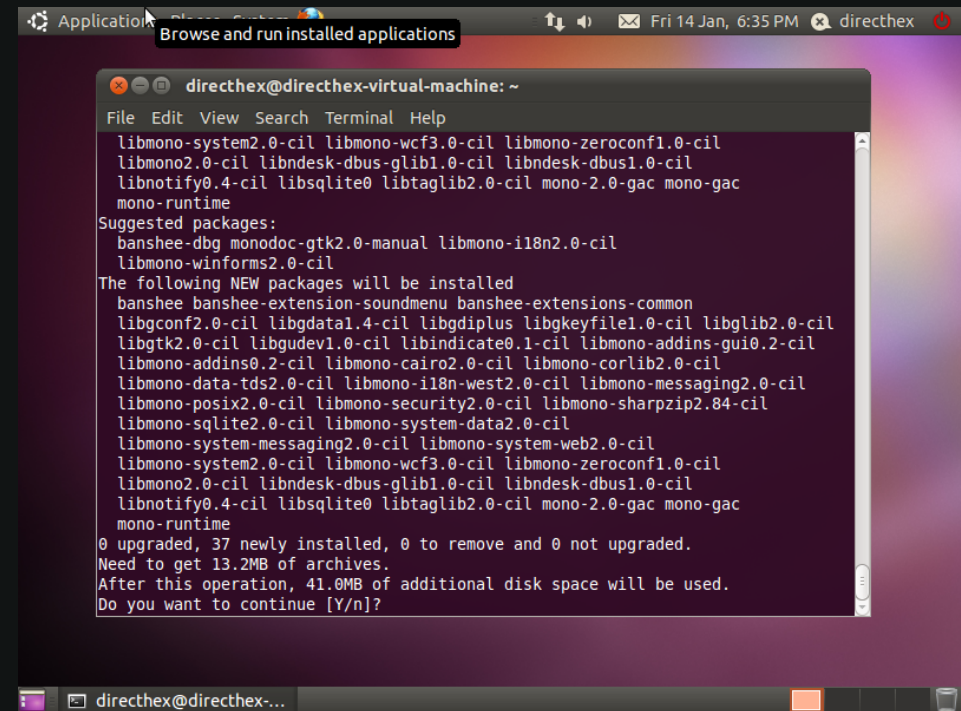


# Does that REALLY help? pt4

- 3.6 gig used
- +70.1M for
- 2.9 gig used
- +41.0M for



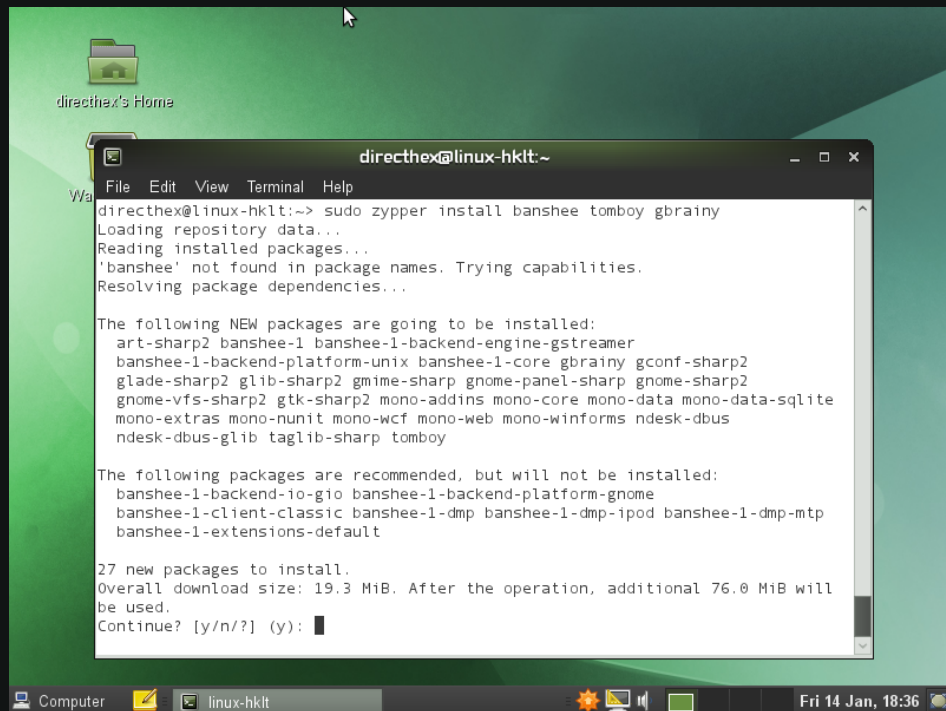
```
directhex@linux-hklt:~  
File Edit View Terminal Help  
directhex@linux-hklt:~$ sudo zypper install banshee  
Loading repository data...  
Reading installed packages...  
'banshee' not found in package names. Trying capabilities.  
Resolving package dependencies...  
  
The following NEW packages are going to be installed:  
banshee-1 banshee-1-backend-engine-gstreamer banshee-1-backend-platform-unix  
banshee-1-core glib-sharp2 gtk-sharp2 mono-addins mono-core mono-data  
mono-data-sqlite mono-extras mono-wcf mono-web mono-winforms ndesk-dbus  
ndesk-dbus-glib taglib-sharp  
  
The following packages are recommended, but will not be installed:  
banshee-1-backend-io-gio banshee-1-backend-platform-gnome  
banshee-1-client-classic banshee-1-dmp banshee-1-dmp-ipod banshee-1-dmp-mtp  
banshee-1-extensions-default  
  
17 new packages to install.  
Overall download size: 17.7 MiB. After the operation, additional 70.1 MiB will  
be used.  
Continue? [y/n/?] (y):
```



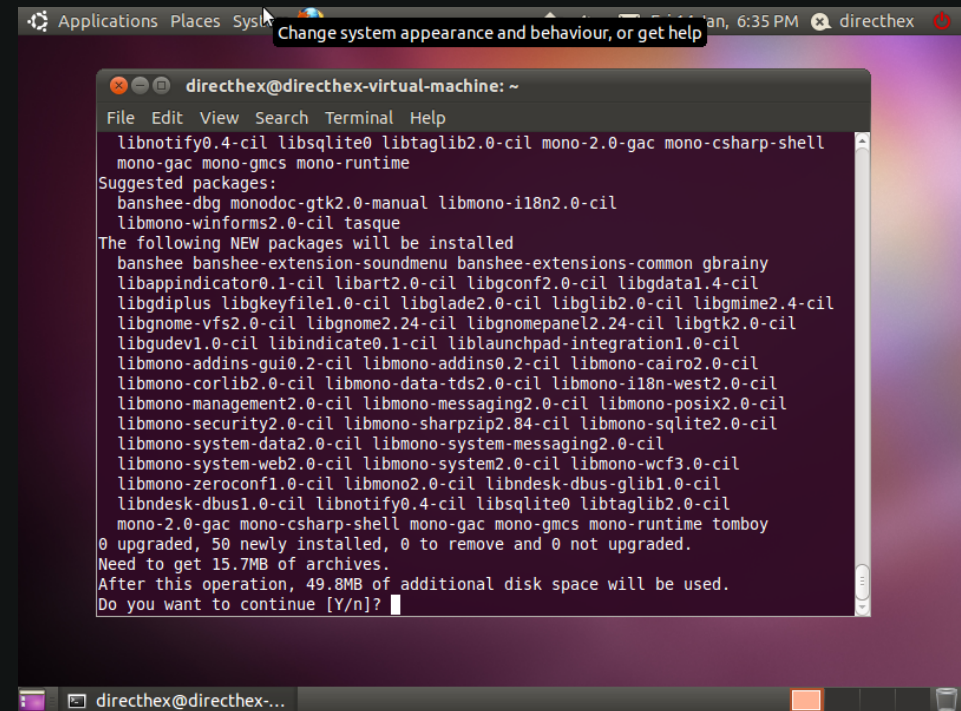
```
directhex@directhex-virtual-machine: ~  
File Edit View Search Terminal Help  
libmono-system2.0-cil libmono-wcf3.0-cil libmono-zeroconf1.0-cil  
libmono2.0-cil libndesk-dbus-glib1.0-cil libndesk-dbus1.0-cil  
libnotify0.4-cil libsqlite0 libtaglib2.0-cil mono-2.0-gac mono-gac  
mono-runtime  
Suggested packages:  
banshee-dbg monodoc-gtk2.0-manual libmono-i18n2.0-cil  
libmono-winforms2.0-cil  
The following NEW packages will be installed  
banshee banshee-extension-soundmenu banshee-extensions-common  
libgconf2.0-cil libgdata1.4-cil libgdiplus libgkeyfile1.0-cil libglib2.0-cil  
libgtk2.0-cil libgudev1.0-cil libindicate0.1-cil libmono-addins-gui0.2-cil  
libmono-addins0.2-cil libmono-cairo2.0-cil libmono-corlib2.0-cil  
libmono-data-tds2.0-cil libmono-i18n-west2.0-cil libmono-messaging2.0-cil  
libmono-posix2.0-cil libmono-security2.0-cil libmono-sharpzip2.84-cil  
libmono-sqlite2.0-cil libmono-system-data2.0-cil  
libmono-system-messaging2.0-cil libmono-system-web2.0-cil  
libmono-system2.0-cil libmono-wcf3.0-cil libmono-zeroconf1.0-cil  
libmono2.0-cil libndesk-dbus-glib1.0-cil libndesk-dbus1.0-cil  
libnotify0.4-cil libsqlite0 libtaglib2.0-cil mono-2.0-gac mono-gac  
mono-runtime  
0 upgraded, 37 newly installed, 0 to remove and 0 not upgraded.  
Need to get 13.2MB of archives.  
After this operation, 41.0MB of additional disk space will be used.  
Do you want to continue [Y/n]?
```

# Does that REALLY help? pt5

- 3.6 gig used
- +76.0M for all 3
- 2.9 gig used
- +49.8M for all 3



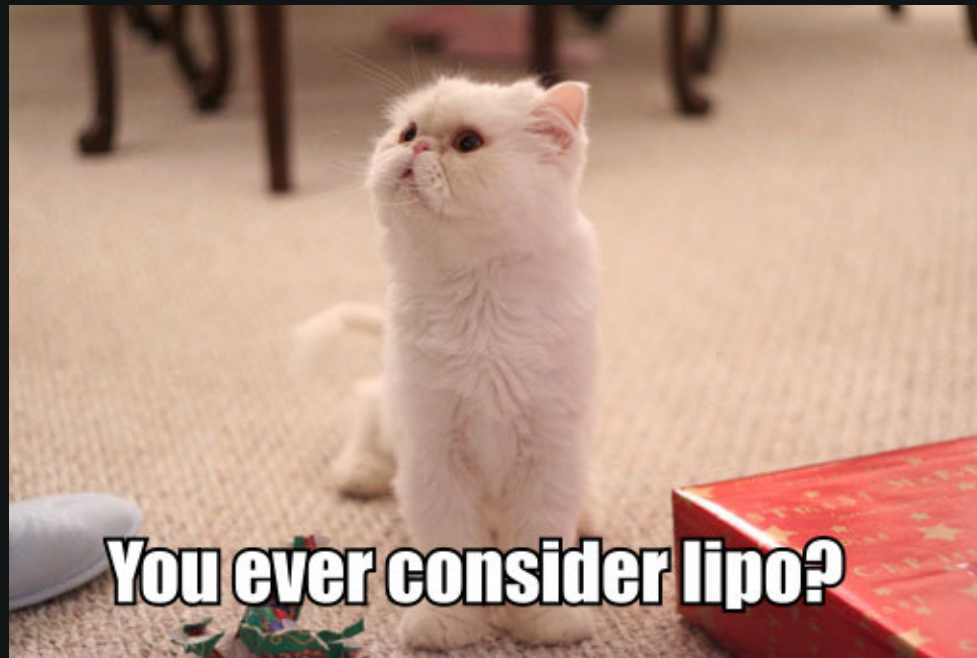
```
directex@linux-hklt:~  
File Edit View Terminal Help  
directex@linux-hklt:~> sudo zypper install banshee tomboy gbrainy  
Loading repository data...  
Reading installed packages...  
'banshee' not found in package names. Trying capabilities.  
Resolving package dependencies...  
  
The following NEW packages are going to be installed:  
art-sharp2 banshee-1 banshee-1-backend-engine-gstreamer  
banshee-1-backend-platform-unix banshee-1-core gbrainy gconf-sharp2  
glade-sharp2 glib-sharp2 gmime-sharp gnome-panel-sharp gnome-sharp2  
gnome-vfs-sharp2 gtk-sharp2 mono-addins mono-core mono-data mono-data-sqlite  
mono-extras mono-nunit mono-wcf mono-web mono-winforms ndesk-dbus  
ndesk-dbus-glib taglib-sharp tomboy  
  
The following packages are recommended, but will not be installed:  
banshee-1-backend-io-gio banshee-1-backend-platform-gnome  
banshee-1-client-classic banshee-1-dmp banshee-1-dmp-ipod banshee-1-dmp-mtp  
banshee-1-extensions-default  
  
27 new packages to install.  
Overall download size: 19.3 MiB. After the operation, additional 76.0 MiB will  
be used.  
Continue? [y/n/?] (y):
```



```
directex@directex-virtual-machine: ~  
File Edit View Search Terminal Help  
libnotify0.4-cil libsquid0 libtaglib2.0-cil mono-2.0-gac mono-csharp-shell  
mono-gac mono-gmcs mono-runtime  
Suggested packages:  
banshee-dbg monodoc-gtk2.0-manual libmono-i18n2.0-cil  
libmono-winforms2.0-cil tasque  
The following NEW packages will be installed  
banshee banshee-extension-soundmenu banshee-extensions-common gbrainy  
libappindicator0.1-cil libart2.0-cil libgconf2.0-cil libgd2.0-cil  
libgdiplus libgkeyfile1.0-cil libglade2.0-cil libglib2.0-cil libgmime2.4-cil  
libgnome-vfs2.0-cil libgnome2.24-cil libgnomepanel2.24-cil libgtk2.0-cil  
libgudev1.0-cil libindicate0.1-cil liblaunchpad-integration1.0-cil  
libmono-addins-gui0.2-cil libmono-addins0.2-cil libmono-cairo2.0-cil  
libmono-corlib2.0-cil libmono-data-tds2.0-cil libmono-i18n-west2.0-cil  
libmono-management2.0-cil libmono-messaging2.0-cil libmono-posix2.0-cil  
libmono-security2.0-cil libmono-sharpzip2.84-cil libmono-sqlite2.0-cil  
libmono-system-data2.0-cil libmono-system-messaging2.0-cil  
libmono-system-web2.0-cil libmono-system2.0-cil libmono-wcf3.0-cil  
libmono-zeroconf1.0-cil libmono2.0-cil libndesk-dbus-glib1.0-cil  
libndesk-dbus1.0-cil libnotify0.4-cil libsquid0 libtaglib2.0-cil  
mono-2.0-gac mono-csharp-shell mono-gac mono-gmcs mono-runtime tomboy  
0 upgraded, 50 newly installed, 0 to remove and 0 not upgraded.  
Need to get 15.7MB of archives.  
After this operation, 49.8MB of additional disk space will be used.  
Do you want to continue [Y/n]?
```



# Does that REALLY help? Clearly.



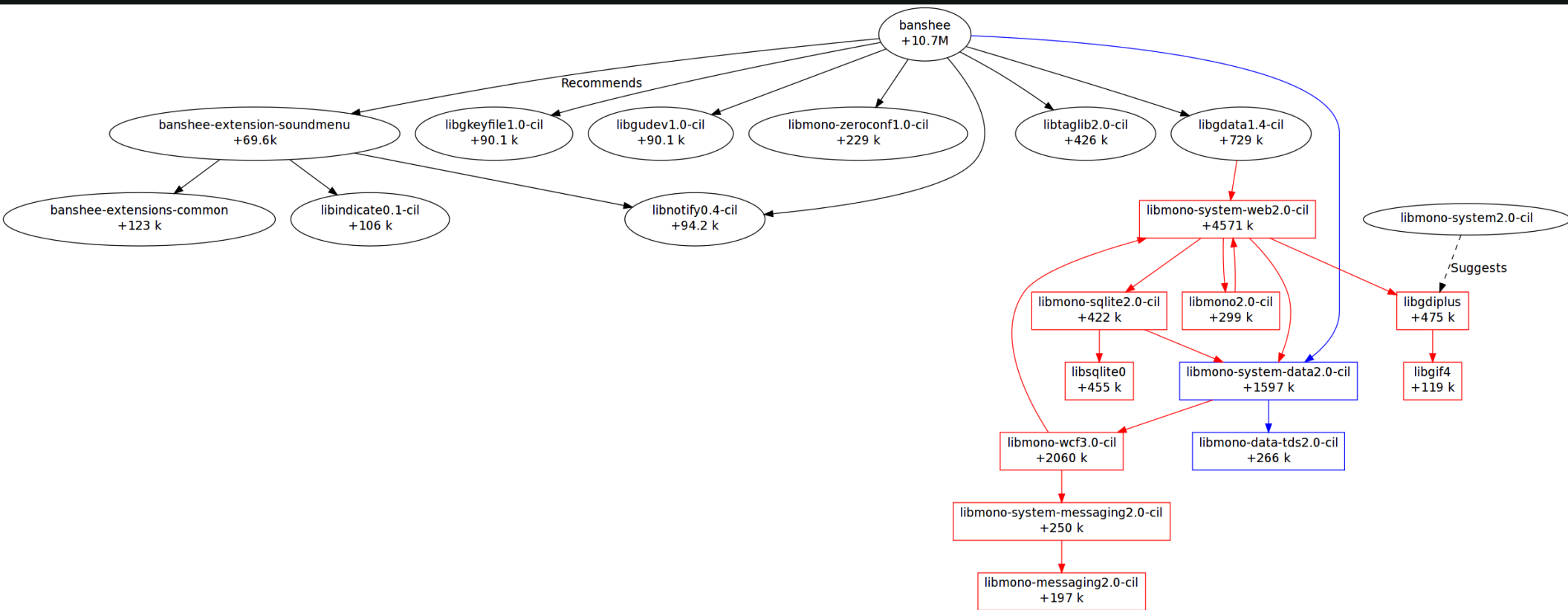
33% better? You guys are  
unbeatable!



Notice how Banshee was  
huge compared to the  
others?



# What does Banshee need that the others don't?

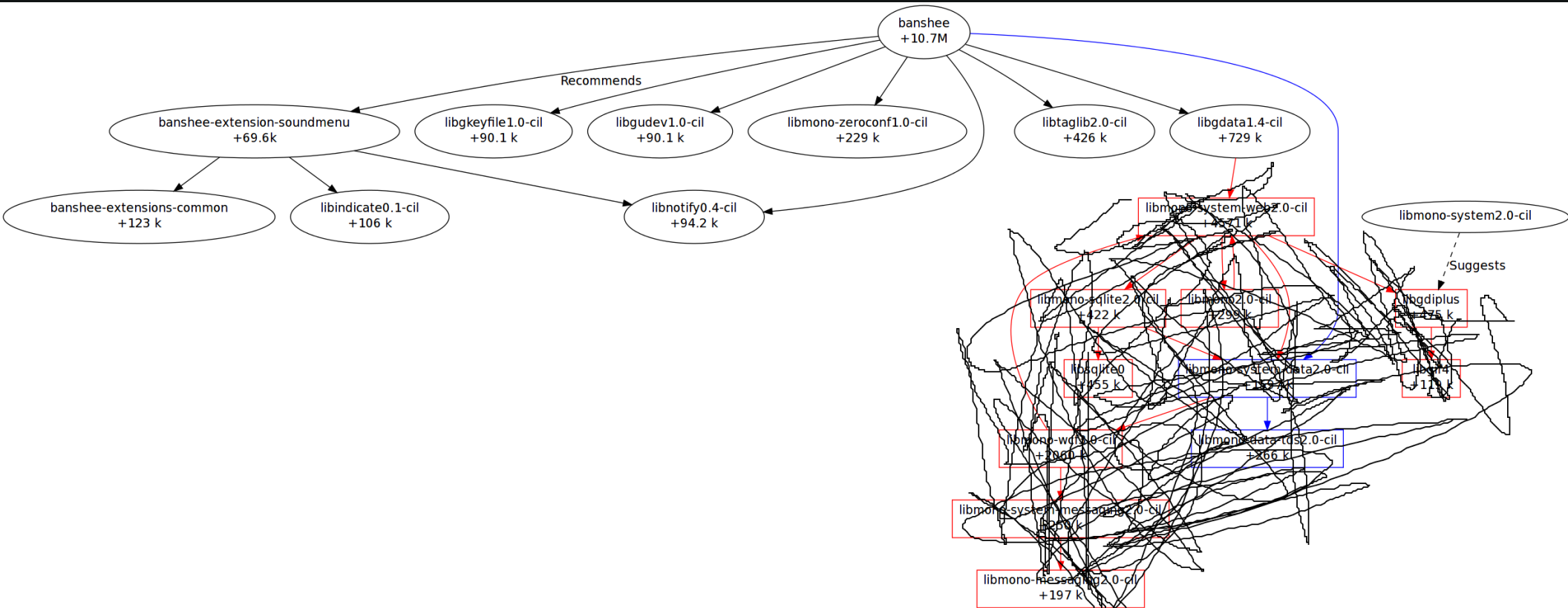


# WCF? System.Web? Bollocks.





# Stuff in blue & red? Throw Gabriel Burt at them!





# Result?

- Banshee:

41.0M → 31.5M

- All three:

49.8M → 49.6M

```
directhex@directhex-virtual-machine: ~  
File Edit View Search Terminal Help  
banshee-extension-soundmenu banshee-extension-ubuntuonemusicstore  
libgconf2.0-cil libgdata1.4-cil libgkeyfile1.0-cil libglib2.0-cil  
libgtk2.0-cil libgudev1.0-cil libindicate0.1-cil libmono-addins0.2-cil  
libmono-cairo2.0-cil libmono-corlib2.0-cil libmono-i18n-west2.0-cil  
libmono-posix2.0-cil libmono-security2.0-cil libmono-sharpzip2.84-cil  
libmono-system2.0-cil libmono-zeroconf1.0-cil libndesk-dbus-glib1.0-cil  
libndesk-dbus1.0-cil libnotify0.4-cil libtaglib2.0-cil libubuntuone1.0-cil  
mono-2.0-gac mono-gac mono-runtime  
Suggested packages:  
banshee-dbg monodoc-gtk2.0-manual libmono-i18n2.0-cil libgdiplus  
libmono-winforms2.0-cil  
The following NEW packages will be installed  
banshee banshee-extension-soundmenu banshee-extension-ubuntuonemusicstore  
libgconf2.0-cil libgdata1.4-cil libgkeyfile1.0-cil libglib2.0-cil  
libgtk2.0-cil libgudev1.0-cil libindicate0.1-cil libmono-addins0.2-cil  
libmono-cairo2.0-cil libmono-corlib2.0-cil libmono-i18n-west2.0-cil  
libmono-posix2.0-cil libmono-security2.0-cil libmono-sharpzip2.84-cil  
libmono-system2.0-cil libmono-zeroconf1.0-cil libndesk-dbus-glib1.0-cil  
libndesk-dbus1.0-cil libnotify0.4-cil libtaglib2.0-cil libubuntuone1.0-cil  
mono-2.0-gac mono-gac mono-runtime  
0 upgraded, 21 newly installed, 0 to remove and 1 not upgraded.  
Need to get 10.2MB of archives.  
After this operation, 31.5MB of additional disk space will be used.  
Do you want to continue [Y/n]?
```

```
directhex@directhex-virtual-machine: ~  
File Edit View Search Terminal Help  
libmono-corlib2.0-cil libmono-i18n-west2.0-cil libmono-management2.0-cil  
libmono-posix2.0-cil libmono-security2.0-cil libmono-sharpzip2.84-cil  
libmono-system2.0-cil libmono-zeroconf1.0-cil libndesk-dbus-glib1.0-cil  
libndesk-dbus1.0-cil libnotify0.4-cil libtaglib2.0-cil libubuntuone1.0-cil  
mono-2.0-gac mono-csharp-shell mono-gac mono-gmcs mono-runtime  
Suggested packages:  
banshee-dbg monodoc-gtk2.0-manual libmono-i18n2.0-cil libgdiplus  
libmono-winforms2.0-cil tasque  
The following NEW packages will be installed  
banshee banshee-extension-soundmenu banshee-extension-ubuntuonemusicstore  
gbrainy libappindicator0.1-cil libart2.0-cil libgconf2.0-cil libgdata1.4-cil  
libgkeyfile1.0-cil libglade2.0-cil libglib2.0-cil libgmime2.4-cil  
libgnome-vfs2.0-cil libgnome2.24-cil libgnomepanel2.24-cil libgtk2.0-cil  
libgudev1.0-cil libindicate0.1-cil liblaunchpad-integration1.0-cil  
libmono-addins-gui0.2-cil libmono-addins0.2-cil libmono-cairo2.0-cil  
libmono-corlib2.0-cil libmono-i18n-west2.0-cil libmono-management2.0-cil  
libmono-posix2.0-cil libmono-security2.0-cil libmono-sharpzip2.84-cil  
libmono-system2.0-cil libmono-zeroconf1.0-cil libndesk-dbus-glib1.0-cil  
libndesk-dbus1.0-cil libnotify0.4-cil libtaglib2.0-cil libubuntuone1.0-cil  
mono-2.0-gac mono-csharp-shell mono-gac mono-gmcs mono-runtime tombay  
0 upgraded, 41 newly installed, 0 to remove and 4 not upgraded.  
Need to get 12.8MB of archives.  
After this operation, 40.6MB of additional disk space will be used.  
Do you want to continue [Y/n]?
```

41.0M → 31.5M  
Holy crap!

49.8M → 49.6M  
openSUSE!

# Building the world against 2.0

- If an app uses 2.0, and a lib uses 1.0, you need two copies of many libs
- So rebuild all 1.0 libs with gmcs
- Works great

# Single classlib downsides

- 1.0-only non-distro apps need a hug to run
- Can no longer build 1.0 apps using distro libs (but we keep core Mono 1.0 libs available)

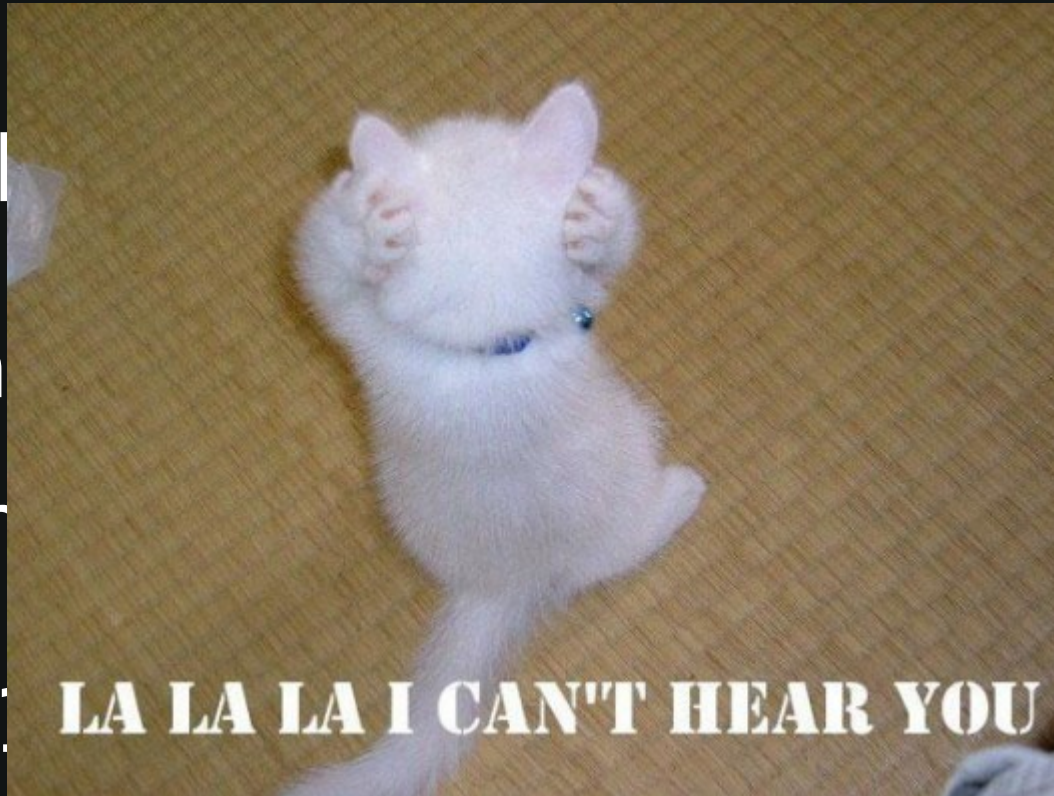


# mcs, gmcs, dmcs, and mono-CSC

- C apps use “gcc”, not “gcc-3.4” or “gcc-4.3”
- Makes it easy to rebuild the world
- Mono didn't have this
- mcs for 1.0, gmcs for 2.0, dmcs for 4.0

# Wait, mcs changed?

- It gets l
- “al” wa
- “resgen
- An old : **LA LA LA I CAN'T HEAR YOU** d
- “resgen” during build will break on 2.8+



- We predicted and avoided this in our

# The Debian solution

- al1, al2, where al is a symlink to default
- resgen1, resgen2, where resgen is a symlink to default
- etc
- mcs, gmcs, where mono-csc is a symlink to default
- Was meant to be just “csc”, but Chicken Scheme Compiler took it first



# So how does that help rebuilds?

- Update symlinks in “mono” package to be 4.0, not 2.0
- No-change rebuild of, e.g., F-Spot
- Finished. Nap time!

# Late breaking news (2011-01-20)

- Mono 2.10 now has a master compiler command, “mcs”, which can target anything. It's based on IKVM.Reflect

- Yay



# What else?

- Package names include the ABI
- But you compile against an API, not an ABI
- For easy rebuilds, we need unversioned “devel” packages



# An example

- If FooBarSharp produces FooBar.dll 2.3, it goes in libfoobar2.3-cil
- If it comes with a pkg-config file foobar-1.0.pc, it goes in libfoobar1.0-cil-dev
- Consumer app just build-depends on mono-devel and libfoobar1.0-cil-dev

# An example pt2

- FooBar.dll goes into /usr/lib/cli/FooBar-2.3/
- GAC links are done at install time by dpkg
- Install-time gacinstall allows installing into multiple runtimes' GAC
- Portable.NET (lulz), or parallel install Mono in /opt. Or a Linux port of .NET Micro! Whatevs. We don't judge.

# -cil? Huh?

- .NET™ is a trademark
- Non-Mono frameworks **might** happen
- So neutral term from ECMA-335 used





# Stripping tarballs

- Mono deployment guidelines recommend bundling binary copies of 3<sup>rd</sup> party libs in your source releases



# No no no no no no no no no.

- Binary bundles of OSS libs without source or version are no different from closed-source libs
- No guarantee the binary actually even builds, or works
- No way to deal with security issues
- See HtmlAgilityPack in Mono

# Bundle things, cause us strife

- Ever seen “+dfsg” in a package version? It means we had to strip non-Free content
- Even source bundles upset Debian FTP Masters, due to security burden
- Massive source bundle is the only reason Moonlight 2.x isn't in Debian

... so THAT weird stuff.

Still here?



# The suck

- We're usually pretty slow at packaging new Mono releases. Especially major ones
- Largely a manpower issue – and right now, the Debian 6.0 freeze doesn't help
- Also, LOTS of debugging for every

# The suck pt2

- New packages (including new binary packages from existing source) can get blocked by Debian FTP Master for over a month
- Just plan around it. There's not much alternative.





# The suck pt3

- Debian releases very rarely, so the included Mono versions need to last years
- Packaging changes can make backports difficult or impossible
- Price of progress!

# Contrary to popular belief, we don't...

- Split packages based on patents or other criteria



# Contrary to popular belief, we don't...

- Care about the lunatic fringe's  
ramb



# We care about just one thing

- Making Mono apps available to our users
- And doing the best damn job we can
- Millions of people have our packages installed, so we're probably doing something right

# And above all else

- Ruby packaging in Debian is in deep trouble due to upstream douchiness
- And next door's talk is “The Java Packaging Nightmare”
- **Good packages require a responsive and helpful upstream, which we have**

# Any questions?





