

OCLUG 2012-08-09: Packaging With Debian

- 1) Package everything into .deb
- 2) ?
- 3) Profit

What is the problem?

- Code and scripts and configuration files
- Need to deploy them to production
- Need to install dependancies
- Need to do this in a reproducible fashion

DEMO

- Virtual package
- Code package
- Base package

Pieces of the equation

1. make the package
2. Upload/index the package
3. Install the package

Make the package

- Normal system from DEBIAN has “debian” directory with (Makefile) *rules*
- **Overkill** for many things.
- Simple Makefile

Stock Install * Makefile

```
TOP = ../..
```

```
include $(TOP)/deb.mk
```

```
include $(TOP)/common.mk
```

```
DIRS ?= $(shell find . -maxdepth 1 -type d | grep -v tests | egrep -v '\.$$' | sed  
's/\./\\/')
```

```
SOURCEFILES ?= $(shell find $(DIRS) -type f)
```

```
all : deb
```

```
deb:: $(DEB)
```

```
$(DEB):: ${GENFILES}
```

```
    @rm -rf tmp
```

```
    @mkdir -p tmp
```

```
    @tar -c --exclude='*~' -f - $(DIRS) | (cd tmp && tar xf -)
```

```
    @perl -pi \
```

```
        -e 's/\$\$(VER\)/'$(VER)'/g;' \
```

```
        -e 's/\$\$(WEEK\)/'$(WEEK)'/g;' \
```

```
        -e 's/\$\$(REVISION\)/'$(REVISION)'/g;' \
```

```
        tmp/DEBIAN/control
```

```
    @echo Packaging $(DEB)
```

```
    @fakeroot -u sh -c 'chown -f -R root tmp; dpkg-deb -b tmp $(DEB)'
```

```
    @rm -rf tmp
```


Stock “make install” Makefile

```
TOP = ../..
```

```
LIB=opt/linguistech/lib/gatewayfuncs.pm
```

```
XFERSOCK=xfersock/xfersock
```

```
include $(TOP)/instdeb.mk
```

```
install: ${XFERSOCK}
```

```
install -d ${DESTDIR}/etc/linguistech
```

```
install -d ${DESTDIR}/opt/linguistech/bin
```

```
install -d ${DESTDIR}/opt/linguistech/lib
```

```
install -d ${DESTDIR}/etc/init.d
```

```
install watch-agent      ${DESTDIR}/opt/linguistech/bin
```

```
install gateway-agent    ${DESTDIR}/opt/linguistech/bin
```

```
install ${XFERSOCK}      ${DESTDIR}/opt/linguistech/bin
```

```
install gateway-agent-monitor $
```

```
{DESTDIR}/opt/linguistech/bin
```

```
install etc/init.d/gateway-agent ${DESTDIR}/etc/init.d
```

```
install ${LIB}           ${DESTDIR}/opt/linguistech/lib
```

Uploading One

```
% cat ../upd.sh  
ssh sg1@galaxy.gatineau.credil.org bin/update-archive.sh
```

```
% ../upd.sh  
dists/novavision/main: New 56.3kB 66 files 82.5kB 0s  
dists/novavision/main/binary-i386: New 31.5kB 33 files  
41.2kB 0s  
dists/novavision/main/binary-amd64: New 31.5kB 33 files  
41.2kB 0s  
Done Packages, Starting contents.  
dists/novavision/Contents: 66 files 82.5kB 0s  
dists/novavision/Contents-i386: 33 files 41.2kB 0s  
dists/novavision/Contents-amd64: 33 files 41.2kB 0s  
Done. 165kB in 132 archives. Took 0s  
Release Release-1 differ: char 47, line 3
```


Uploading

```
% make push
```

```
Packaging novavision-beaumont-server_3.0.20120621.t0941.deb
```

```
dpkg-deb: building package `novavision-beaumont-server'
```

```
in `novavision-beaumont-server_3.0.20120621.t0941.deb'.
```

```
novavision-beaumont-server_3.0.20120621.t0941.deb
```

```
100% 1224      1.2KB/s   00:00
```

```
novavision-beaumont-server_3.0.20120621.t0941.deb ->
```

```
sg1@galaxy.gatineau.credil.org:/home/sg1/incoming
```

Indexing

```
#!/bin/sh

# this script sorts uploads from /gap/repo/incoming into appropriate
# directories
# and then updates the repo metafiles.

# DEBIAN ETCH
gapdir=/home/sg1/data/dists/novavision/main
mkdir -p ${gapdir}
cd /home/sg1/data

for deb in /home/sg1/incoming/*.deb
do
    for arch in i386 amd64
    do
        if [ -f $deb ]; then cp $deb $gapdir/binary-$arch; fi
    done
    rm -f $deb
done

apt-ftparchive generate ~/etc/novavision-archive.conf
apt-ftparchive -c ~/etc/apt-novavision-release.conf release
dists/novavision/ >dists/novavision/Release
```

Installing

```
--- a/support/beaumont-server/DEBIAN/control
+++ b/support/beaumont-server/DEBIAN/control
@@ -6,7 +6,7 @@ Architecture: all
Provides: novavision-beaumont-server
Depends: libxslt-dev, libxml2-dev,
         libapache2-mod-passenger, libgpgme-ruby, libgpgme11-
dev,
-      libactionpack-ruby1.8, rails-ruby1.8
+      libactionpack-ruby1.8, rails-ruby1.8, xfig
```

```
curley-[~] mcr 10002 %sudo apt-get upgrade
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages have been kept
back:
  novavision-beaumont-server
The following packages will be upgraded:
```


Installing Too

```
% sudo apt-get install novavision-beaumont-server
```

The following extra packages will be installed:

```
dbus gawk ghostscript gsfonts libavahi-client3 libavahi-common-data libavahi-common3  
libcups2 libcupsimage2 libdbus-1-3 libgs8 libjasper1 libjbig2dec0 libnetpbm10 libpaper-utils  
libpaper1 libpng12-0 libtiff4 netpbm rails-ruby1.8 transfig xaw3dg xfig xfig-libs
```

Suggested packages:

```
dbus-x11 cups-common libjasper-runtime thin1.8 libapache2-mod-ruby libapache2-mod-fcgid  
libfcgi-ruby1.8 gimp xfig-doc gsfonts-x11 spell cups-client lpr
```

The following NEW packages will be installed:

```
dbus gawk ghostscript gsfonts libavahi-client3 libavahi-common-data libavahi-common3  
libcups2 libcupsimage2 libdbus-1-3 libgs8 libjasper1 libjbig2dec0 libnetpbm10 libpaper-utils  
libpaper1 libpng12-0 libtiff4 netpbm rails-ruby1.8 transfig xaw3dg xfig xfig-libs
```

The following packages will be upgraded:

```
novavision-beaumont-server
```

Conclusion

1. Scp of your config files is non-reproducible
2. Debian packaging is easy.
3. Profit.