06-3 Installing Newer Packages
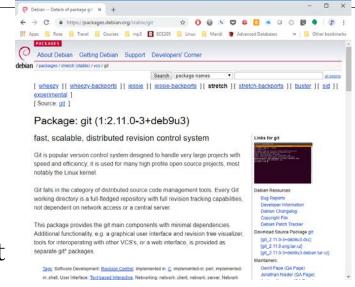
Living on the "Testing" Edge

apt install

- **apt install** installs a stable version of software
- May not be the most current version
- You can see what's available with

```
bone$ apt-cache pkgnames | sort > /tmp/list
bone$ wc /tmp/list
 46677   46677 818844  /tmp/list <- 2016
 55465   55465 1019470 /tmp/list <- 2017
 55514   55514 1016224 /tmp/list
bone$ less /tmp/list
0ad
0ad-data
0ad-data-common
0install
0install-core
0xffff
2048-qt
```

Example: git

bone$ **git --version**

git version 2.11.0

May not be the current version of git

- https://packages.debian.org/stable/ shows current versions

- https://packages.debian.org/stretch/git

- May not be current version, but is well tested

- Here is what the Bone is running

bone$ **cat /etc/apt/sources.list**

deb http://deb.debian.org/debian stretch main contrib non-free

…

Installing a more recent version

- Debian has different distributions of packages
- Different levels of testing
- Packages start in *Unstable* distribution
- Move to *Testing*
- Finally move to *Stable* if it is a significant upgrade
- Currently *Stretch* (version 9) is stable (on Bone)
- *Buster* (version 10) is in testing
- What if you need a newer version than what Stretch has?

Backports

- If you don't want to risk a *Testing* distribution…
- Use backports
- Packages taken from the next release and compiled for the current release

```
bone$ cd /etc/apt/sources.list.d
bone$ sudo bash
bone$ echo "deb http://ftp.us.debian.org/debian/ stretch-backports
main" > stretch-backports.list
bone$ echo "deb http://ftp.us.debian.org/debian/ buster main contrib
non-free" > buster.list
bone$ echo "deb http://ftp.us.debian.org/debian/ sid main contrib non-
free" > sid.list
```

bone$ **sudo apt update** (2 minutes)

- http://linuxconfig.org/debian-apt-get-wheezy-sources-list

*.list

`deb url distribution main contrib non-free`

- **`url`**: http://ftp.us.debian.org/debian/

- **`distribution`**: wheezy, jessie, stretch, sid OR oldstable, stable, testing, unstable

- **`main`**: DFSG-compliant packages, which do not rely on software outside this area to operate. These are the only packages considered part of the Debian distribution.

- **`contrib`**: DFSG-compliant software, but have dependencies not in **`main`** (possibly packaged for Debian in **`non-free`**).

- **`non-free`**: contains software that does not comply with the DFSG.

Debian Free Software Guidelines

https://wiki.debian.org/SourcesList

https://www.debian.org/social_contract#guidelines

Installing from other releases

```
bone$ nano --version
  GNU nano, version 2.7.4
```

- Install buster

```
bone$ sudo apt install nano/buster
bone$ nano --version
  GNU nano, version 3.1
```

- Install Sid

```
bone$ sudo apt install nano/sid
nano is already the newest version (3.1-1).
bone$ sudo apt install nano/stretch
```

Clean up

- Best not to have unneeded releases in `/etc/apt/sources.list.d`
- They make **apt update** take extra time.

```
bone$ cd /etc/apt/sources.list.d
bone$ sudo mkdir hide
bone$ sudo mv stretch-backports.list hide
bone$ sudo mv buster.list sid.list hide
bone$ sudo apt update
```