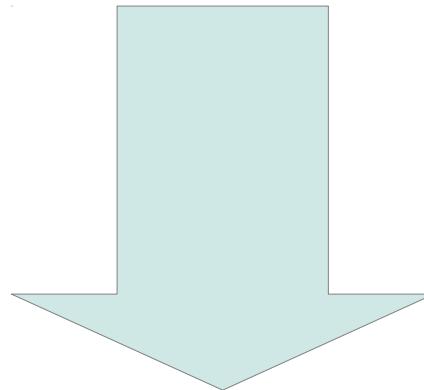


Syzix: heading off the beaten \$PATH

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kevin.pulo@anu.edu.au
[@_devkev_](https://twitter.com/_devkev_)



Traditional package install



/bin

/usr/bin

/lib

/usr/lib

/sbin

/usr/sbin

...

/usr/share

Traditional package install

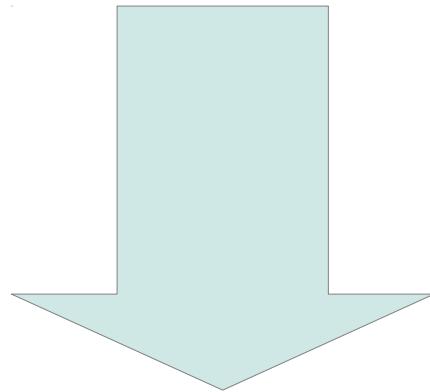


Single
package
version



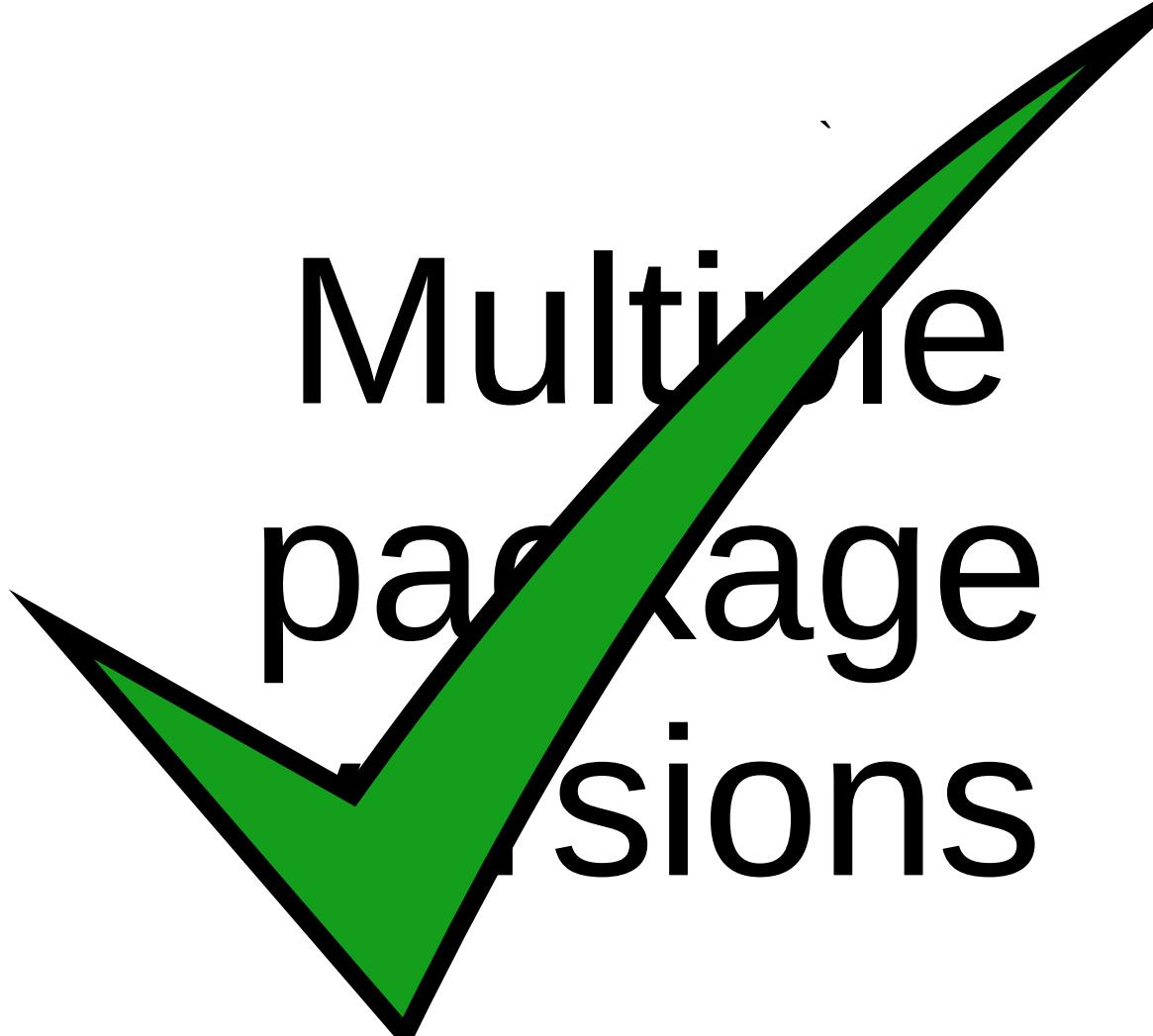
**single
package
version**

Syzix package install



/sw/\$repo/\$arch/\$pkgname/\$version

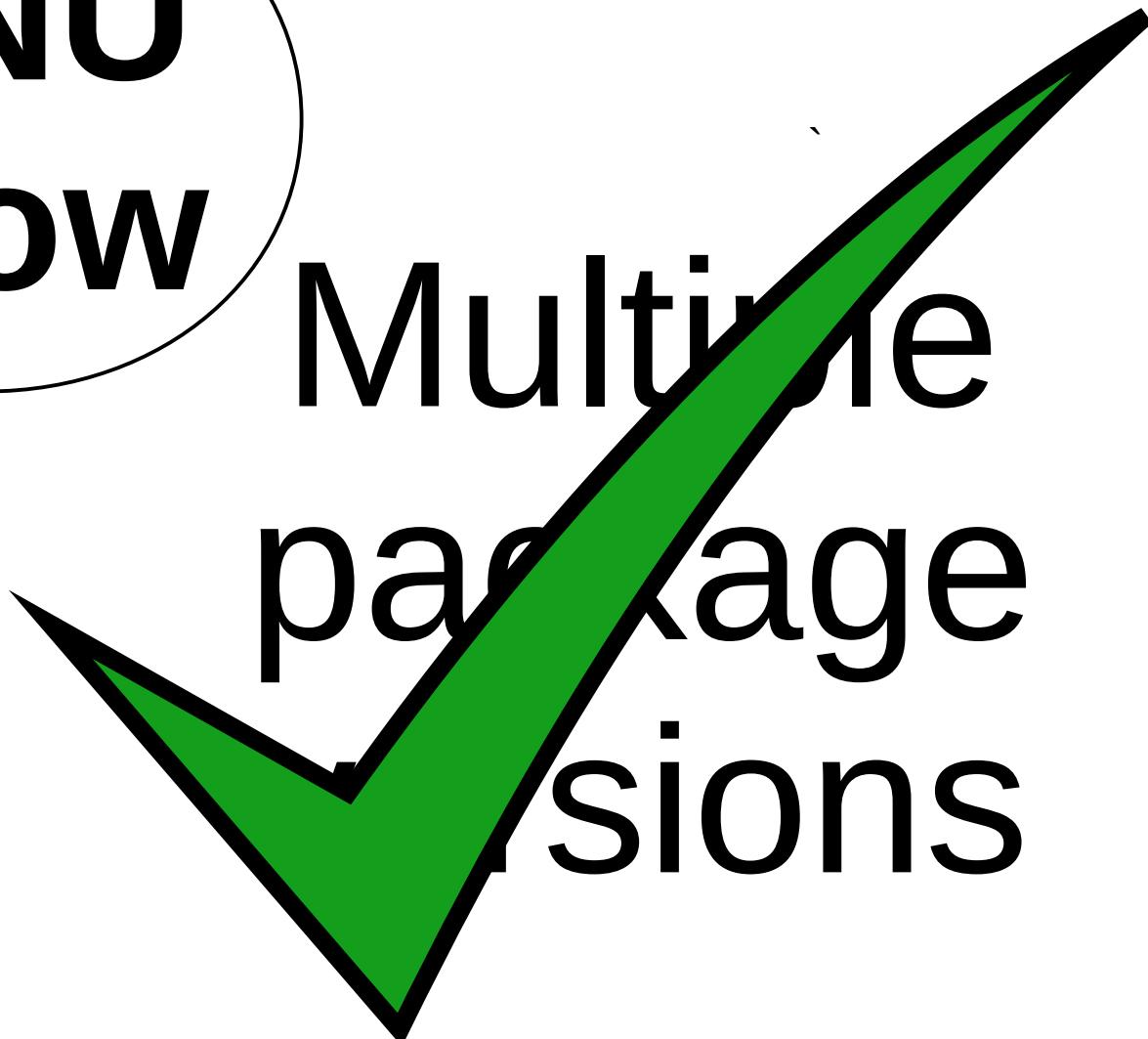
Multiple
package
versions



Multiple
package
sions

**GNU
Stow**

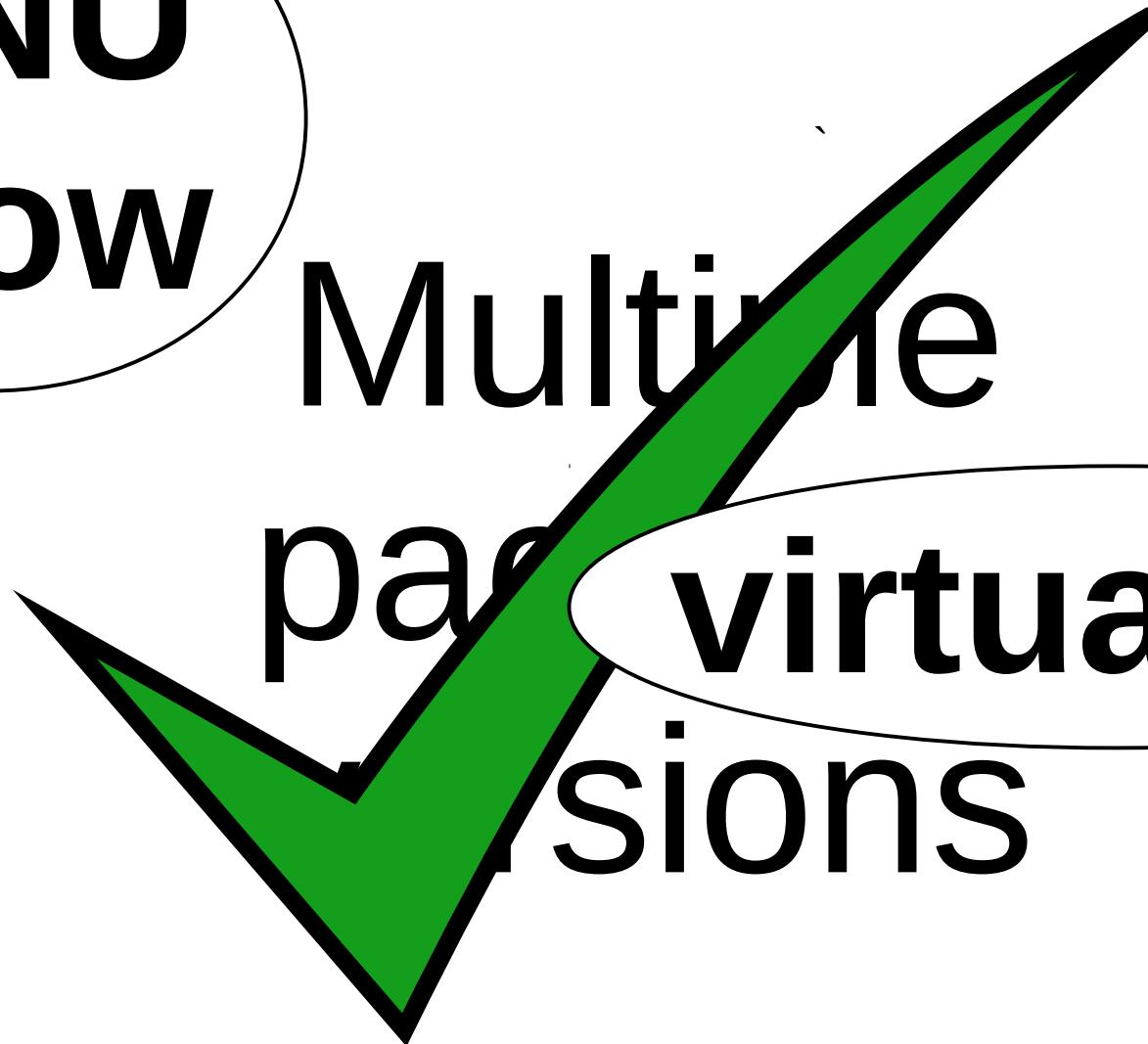
**Multiple
package
versions**



**GNU
Stow**

**Multiple
paths**

**virtualenv
sions**



**GNU
Stow**



e

pass
virtualenv
sions

**GNU
Stow**



**OSTree
e**

**pack
virtualenv
sions**

**GNU
Stow**



**OSTree
e**

~~pacman~~ **virtualenv**

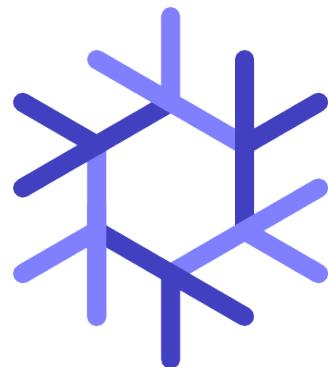
Gobolin Linux

The logo for Gobolin Linux features the word "Gobolin" in a large, pixelated font where each letter has a different color gradient (purple, blue, green). Below "Gobolin", the word "Linux" is written in a smaller, standard black font.

**GNU
Stow**



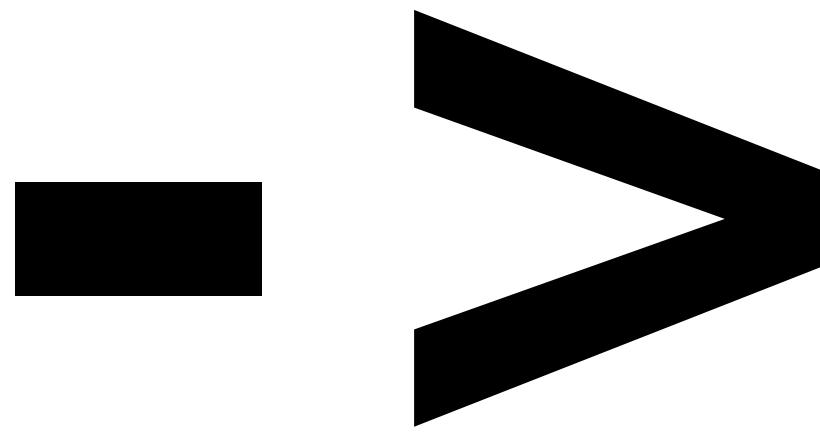
OSTree



NixOS **Virtualenv**

e
Virtualenv

Gobolinux





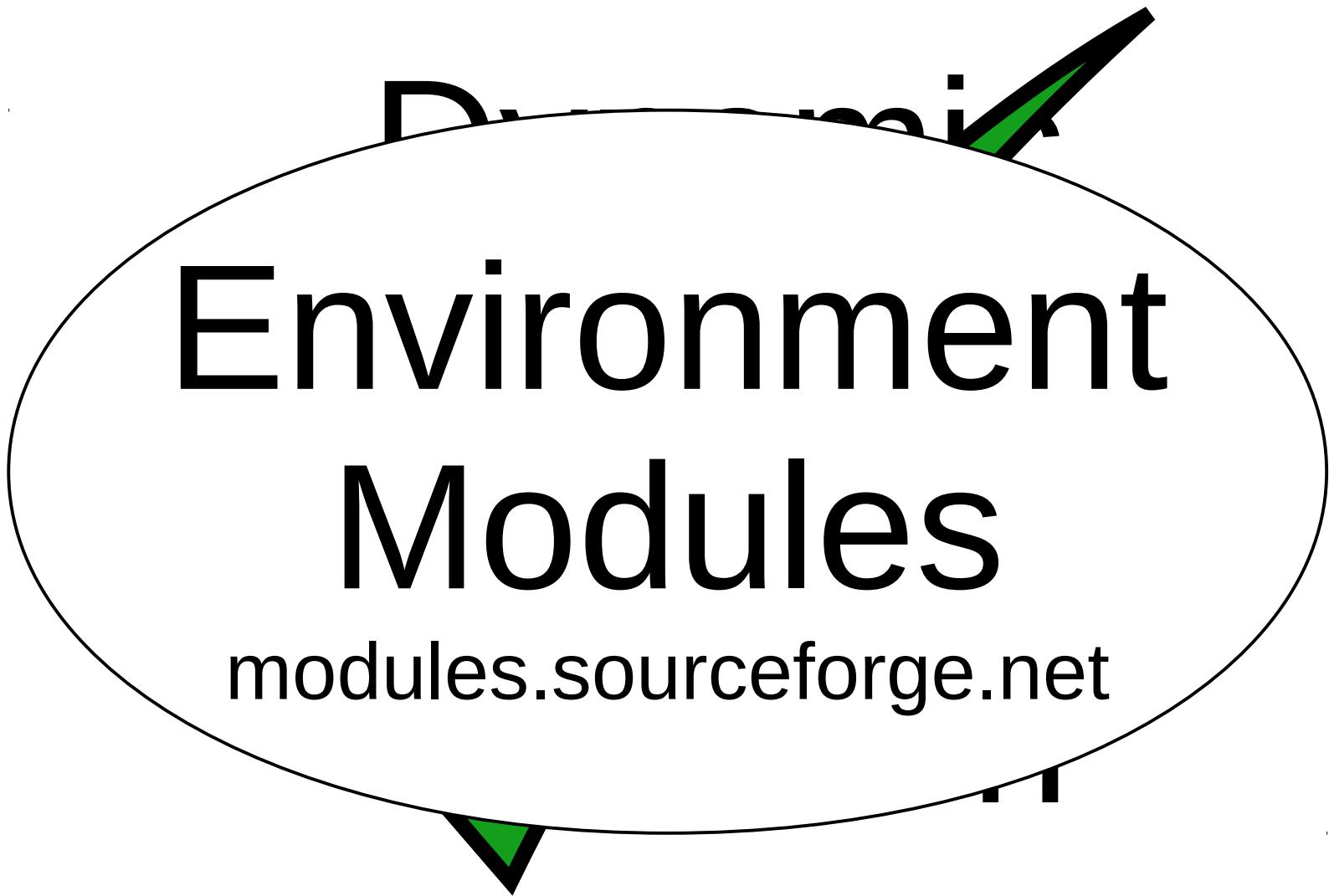
A photograph of a narrow, dirt path winding through a dense forest. The path is surrounded by tall trees with thick trunks and lush green undergrowth. Large, bold, black text is overlaid on the image, reading '\$PATH'.

\$PATH

Dynamic
runtime
version
selection



Dynamic
runtime
version
selection



Environment Modules

modules.sourceforge.net

```
$ syz list
```

```
Currently Loaded Syzfiles:
```

- 1) modules/3.2.6 3) modext-devel
- 2) shrapnel-devel 4) syz-devel

```
$ python
```

```
-bash: python: command not found
```

```
$ syz avail python
```

```
----- /sw/nix/x86_64-linux/.sf -----  
python/2.6.7                    python/2.7.3-wrapper  
python/2.7.3(default)        python3/3.2.3
```

```
$ syz load python/2.6.7
```

```
$ python
```

```
Python 2.6.7 (r267:88850, Jul 20 2012, 19:59:23)
```

```
[GCC 4.6.3] on linux2
```

```
Type "help", "copyright", "credits" or "license" for  
more information.
```

```
>>>
```

```
$
```

```
$ syz list
```

Currently Loaded Syzfiles:

- | | |
|------------------------------|--------------------|
| 1) modules/3.2.6 | 8) zlib/1.2.7 |
| 2) shrapnel-devel | 9) gcc/4.6.3 |
| 3) modext-devel | 10) bzip2/1.0.6 |
| 4) syz-devel | 11) attr/2.4.46 |
| 5) linux-headers/2.6.35.14-2 | 12) acl/2.2.51 |
| 6) glibc/2.13 | 13) coreutils/8.15 |
| 7) bash/4.2-p24 | 14) python/2.6.7 |

```
$ syz swap python/2.7.3
```

```
$ python
```

Python 2.7.3 (default, Jul 20 2012, 19:54:40)

[GCC 4.6.3] on linux2

Type "help", "copyright", "credits" or "license" for
more information.

```
>>>
```

```
$ syz unload python
```

```
$ python
```

-bash: python: command not found

```
$
```

A photograph of the Leaning Tower of Pisa against a cloudy sky. A person's hand is visible on the left side of the frame, pointing its index finger towards the tower. Superimposed over the hand and the tower are large, semi-transparent white letters spelling "Stable" above a plus sign, and "Unstable" below it.

Stable
+
Unstable



A yellow excavator is shown on a trailer being transported by a truck. The excavator has 'CAT' and '307D' markings. The background shows a road and trees.

Rollback package updates



Safely test
new versions -

Rolling release

+

Standard release



Telstar Logistics, CC-BY-NC



US Air Force, CC-BY-NC

Binary packages

+

Source builds

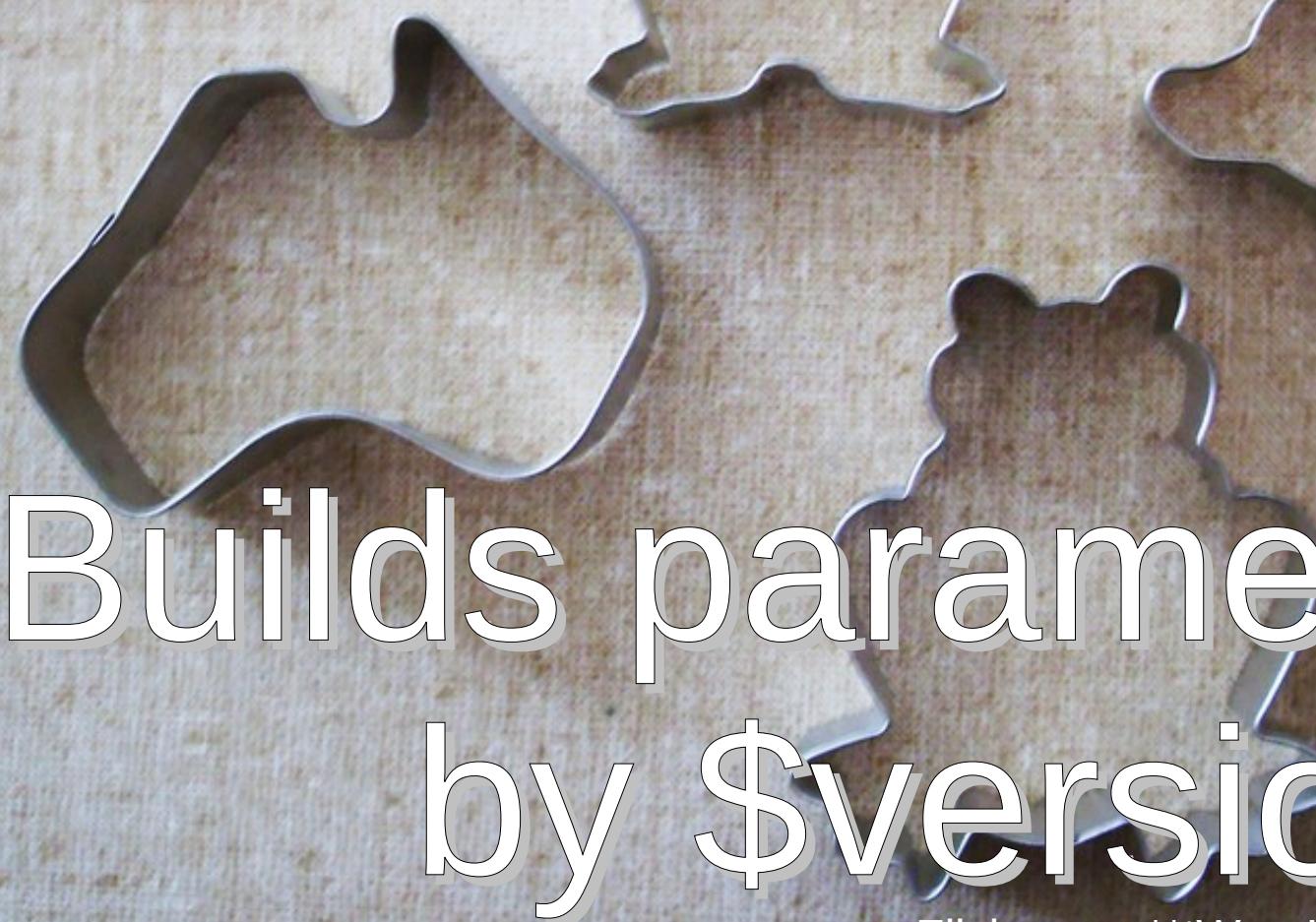


Marcel van Schooten, CC-BY

<http://www.flickr.com/photos/mvs/3405603248/>

Victor Gregorio, PD

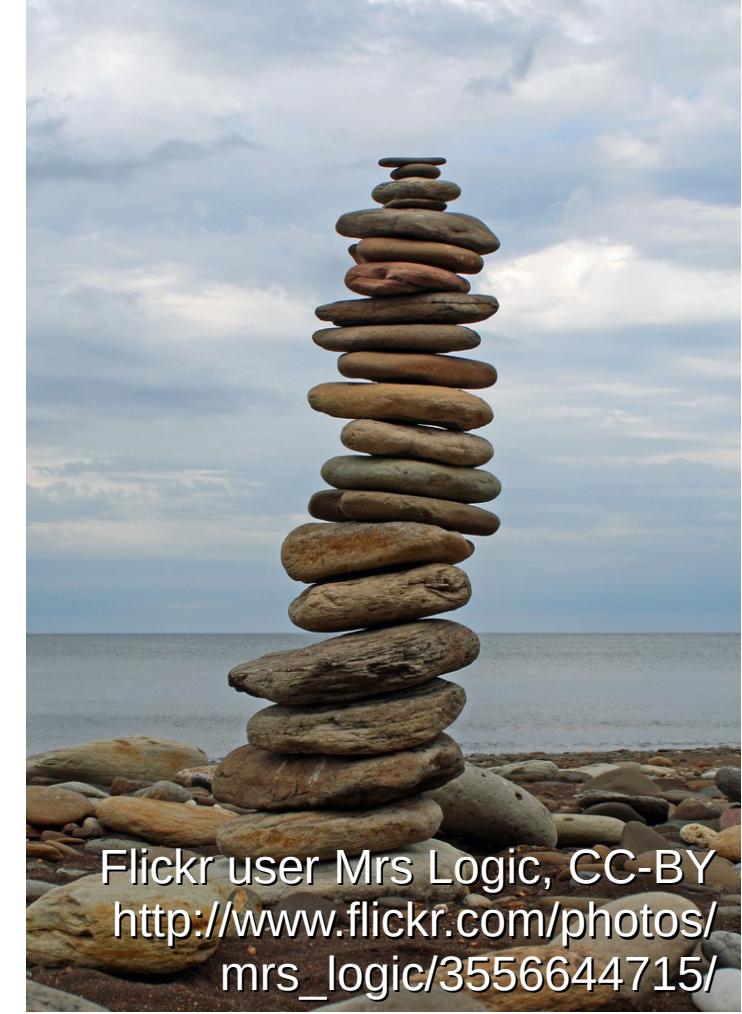
<http://hacktux.com/linux/wallpaper/apache/compile>



Builds parametrised
by \$version

Flickr user **tWo plNk pOSsuMs**, CC-BY-NC-ND
<http://www.flickr.com/photos/twopinkpossums/3225246704/>

Standalone install*



+

Flickr user Mrs Logic, CC-BY
http://www.flickr.com/photos/mrs_logic/3556644715/

* Not yet

Hosted install

Flickr user ausemade, CC-BY-NC-SA
<http://www.flickr.com/photos/ausemade/63735279/>

Multi-user systems

Power
users

Developers



Tomorrow

10:40am

MCC5

<http://syzix.org/>