

aptly - система управления Debian- репозиториями пакетов

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DevOps Meetup Moscow Jan'14



Повторяемость!



Australopithecus robustus

Homo habilis

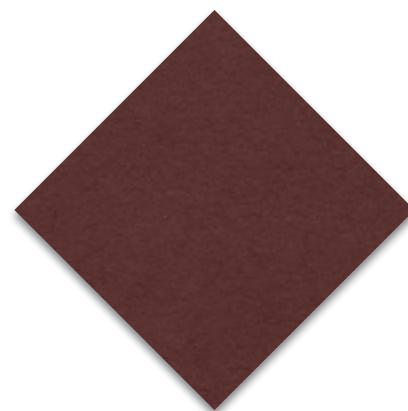
Homo erectus

Homo sapiens neanderthalensis

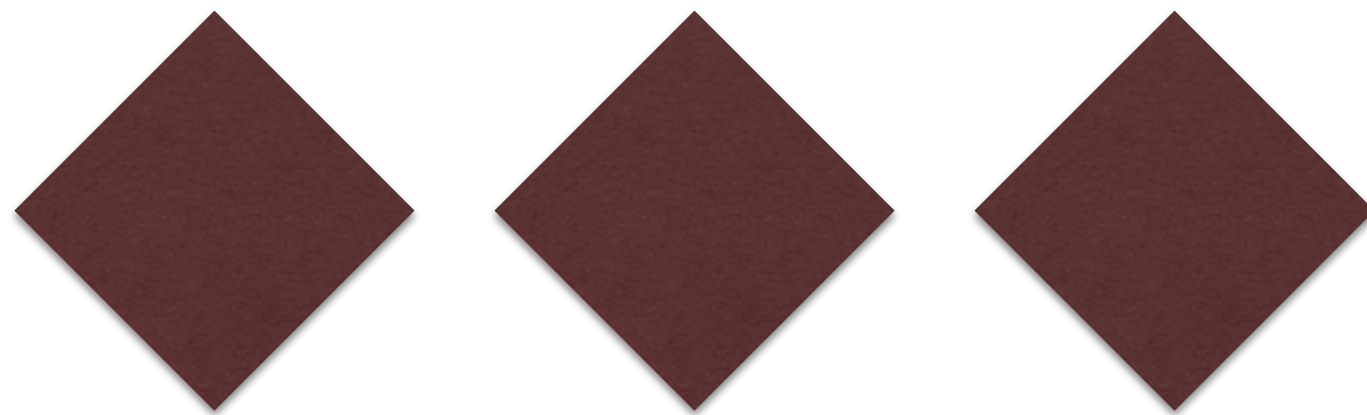
Homo sapiens sapiens

Изменения

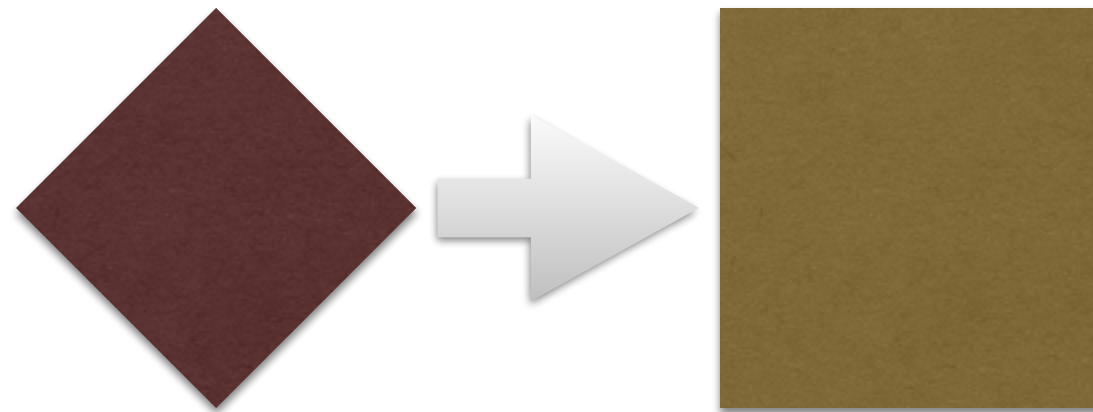
Окружение



Повторяемость окружения



Изменение окружения



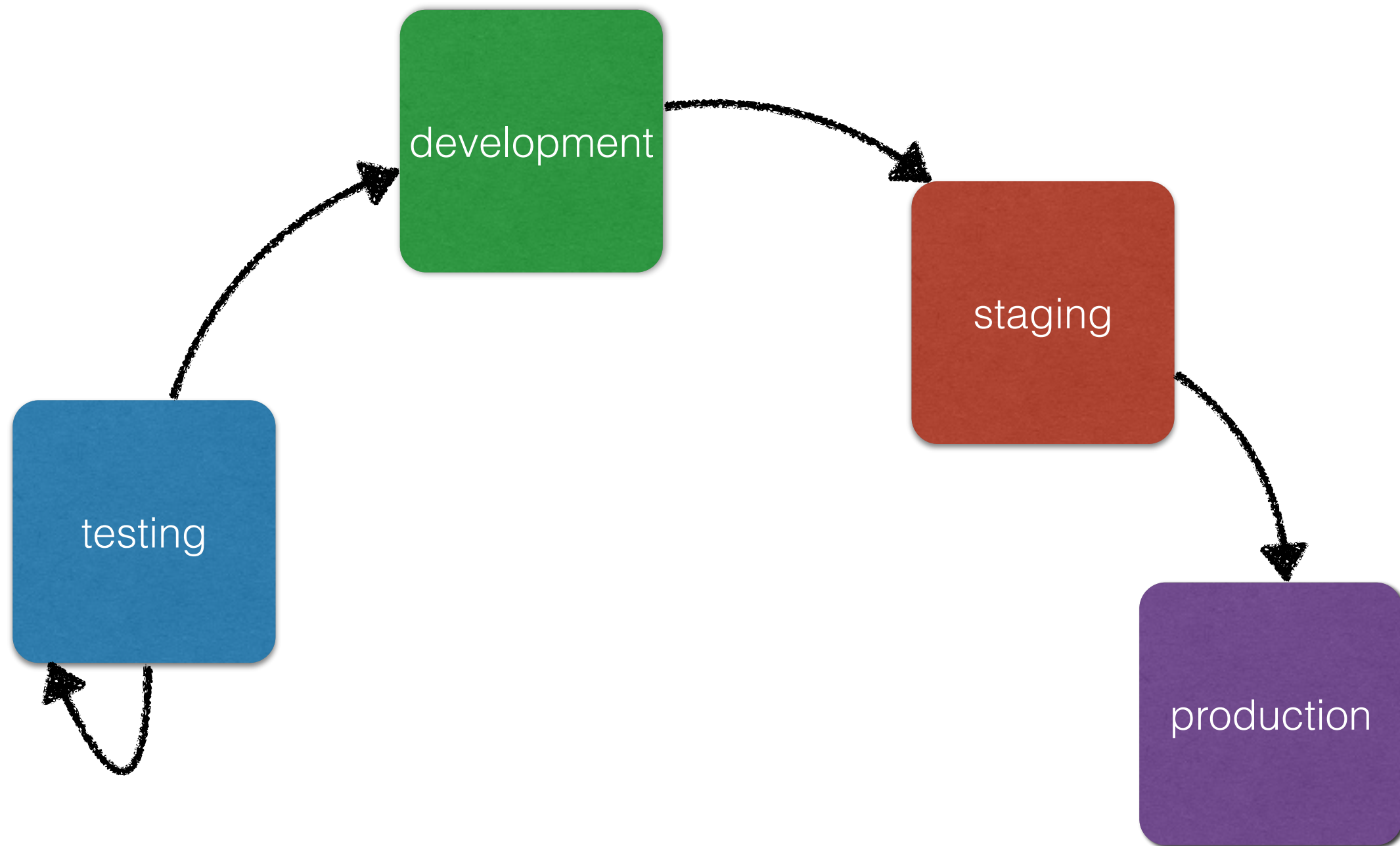


Повторяемость
изменений окружения

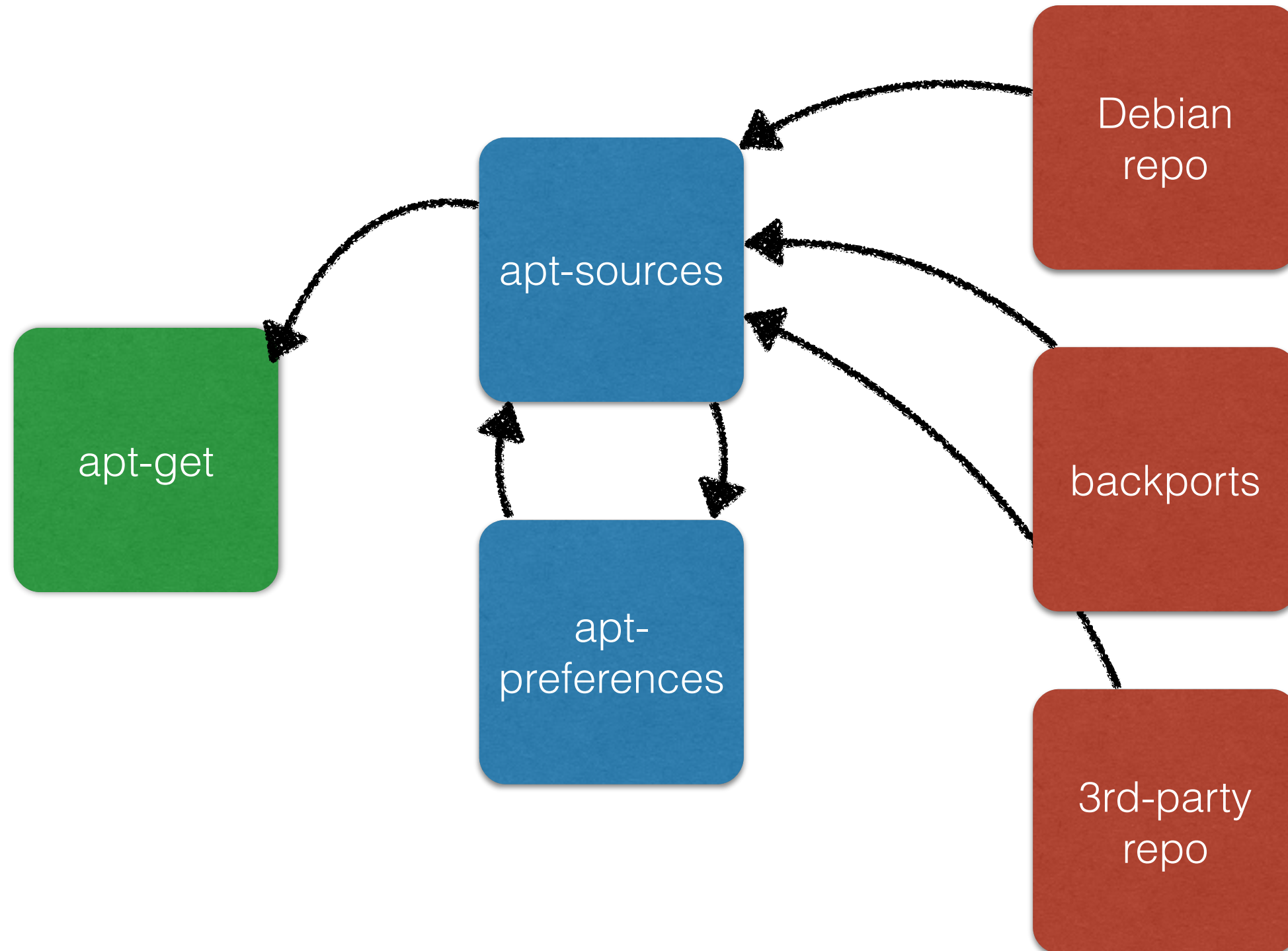


Окружение -
набор пакетов

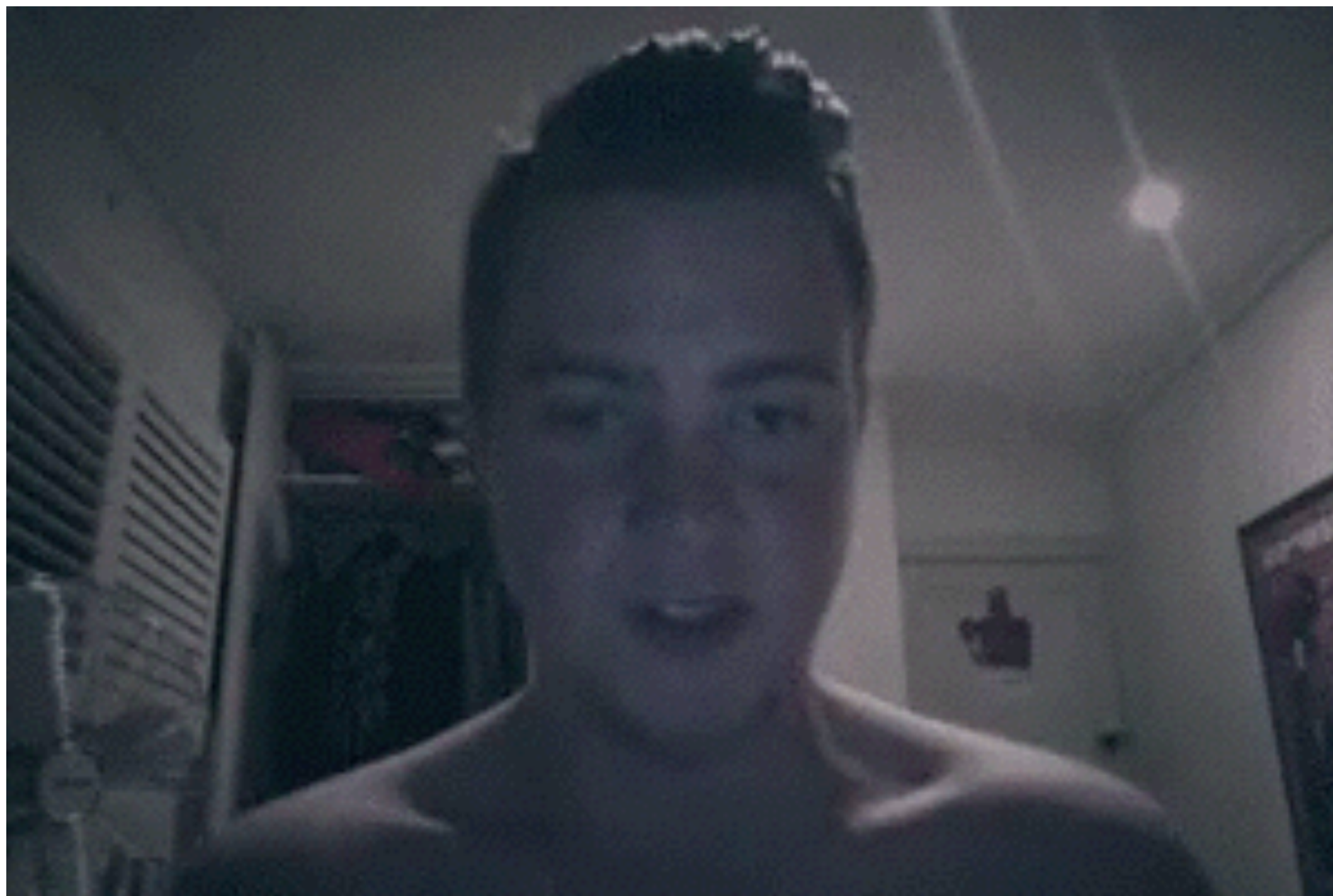
Версии окружения



Управление окружением



Не та версія...



apt pinning поможет!



No...



Цель

- Зафиксированный репозиторий пакетов
(*повторяемость*)
- Контролируемые изменения версий
(*изменений*)



aptly

* не является заменой apt, dpkg!

Сущности

mirror

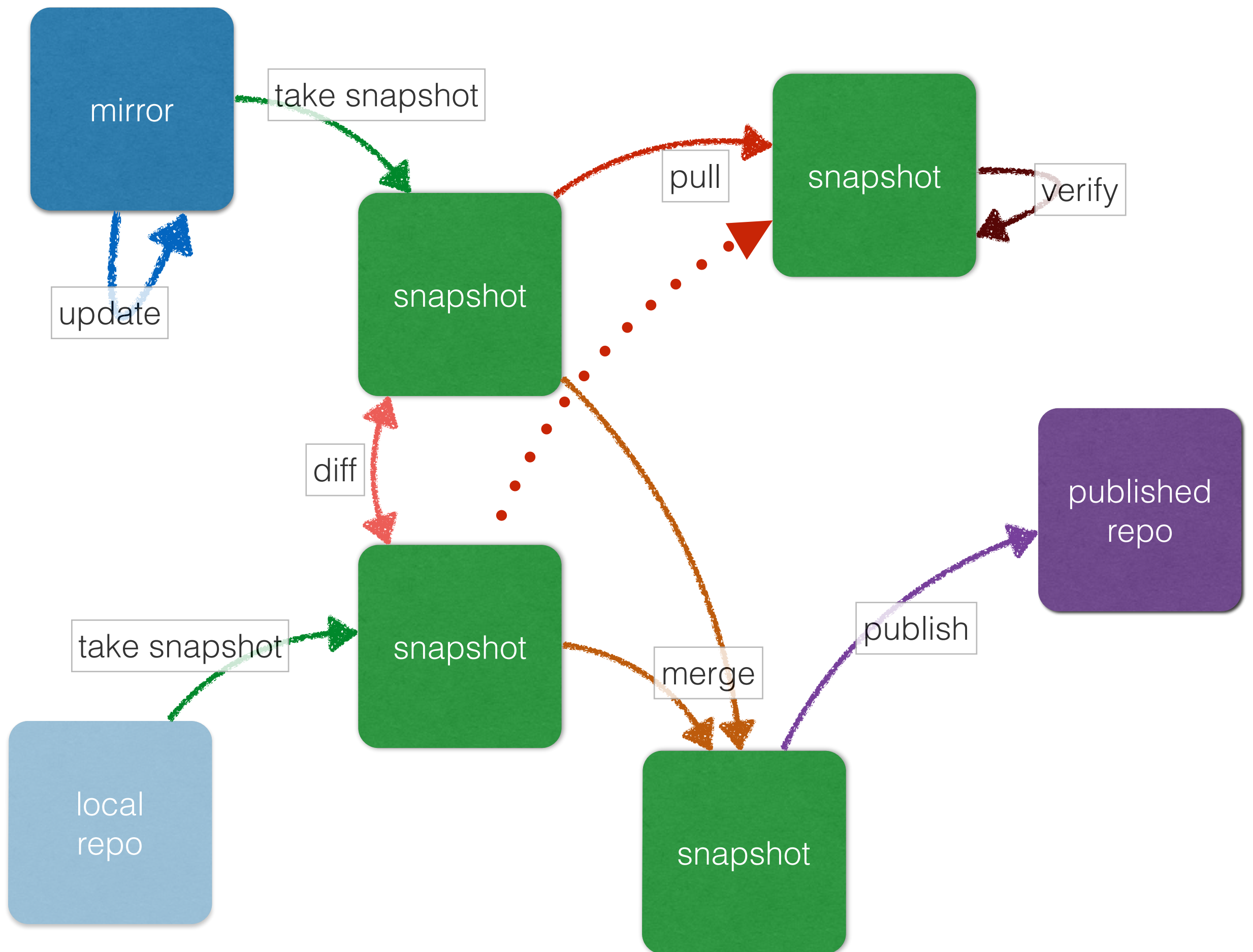
– зеркало удаленного репозитория

snapshot

– неизменяемый срез набора пакетов

published
repo

– опубликованный репозиторий пакетов



aptly mirror

```
$ aptly mirror create wheezy-main http://mirror.yandex.ru/debian/ wheezy main
```

```
Downloading http://mirror.yandex.ru/debian/dists/wheezy/Release...
```

```
Mirror [mirror1]: http://mirror.yandex.ru/debian/ wheezy  
successfully added.
```

```
You can run 'aptly mirror update mirror1' to download  
repository contents.
```

aptly mirror

```
$ aptly mirror update wheezy-main
Downloading http://mirror.yandex.ru/debian/dists/wheezy/
Release...
Downloading & parsing package files...
Downloading http://mirror.yandex.ru/debian/dists/wheezy/
main/binary-i386/Packages.bz2...
Downloading http://mirror.yandex.ru/debian/dists/wheezy/
main/binary-amd64/Packages.bz2...
Saving packages to database...
Building download queue...
Download queue: 0 items, 0.00 GiB size

Mirror `wheezy-main` has been successfully updated.
```



update

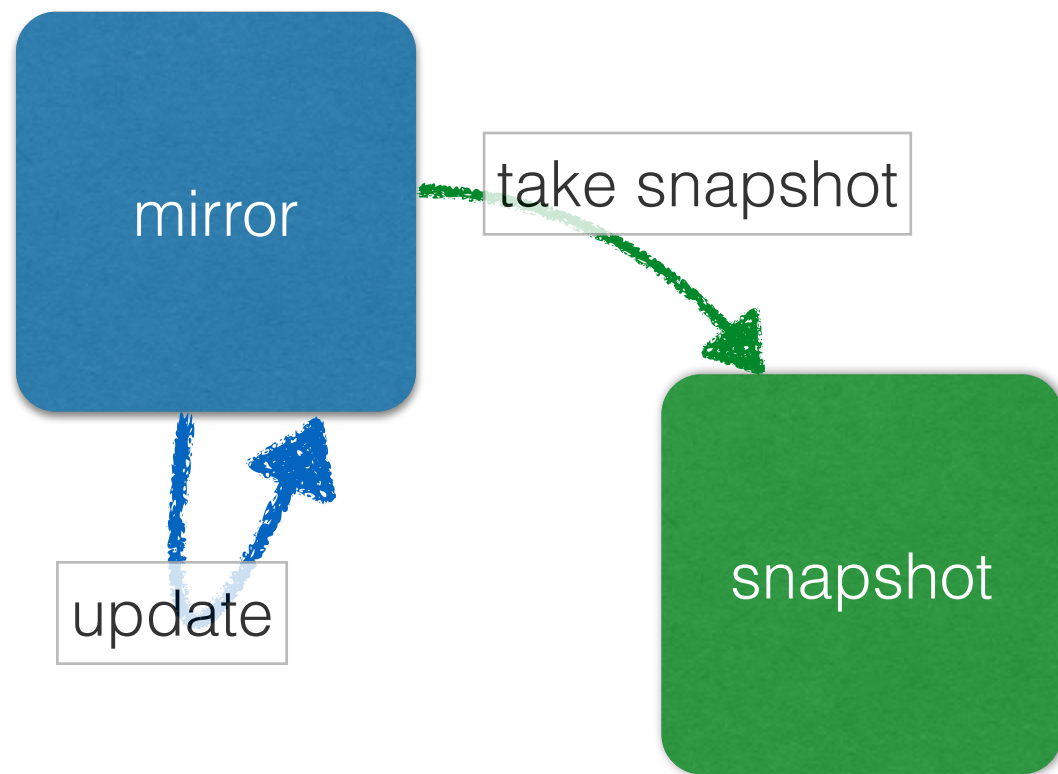


aptly snapshot

```
$ aptly snapshot create deb-main-250114 from mirror wheezy-main
```

Snapshot deb-main-250114 successfully created.

You can run 'aptly publish snapshot deb-main-250114' to publish snapshot as Debian repository.



aptly snapshot pull

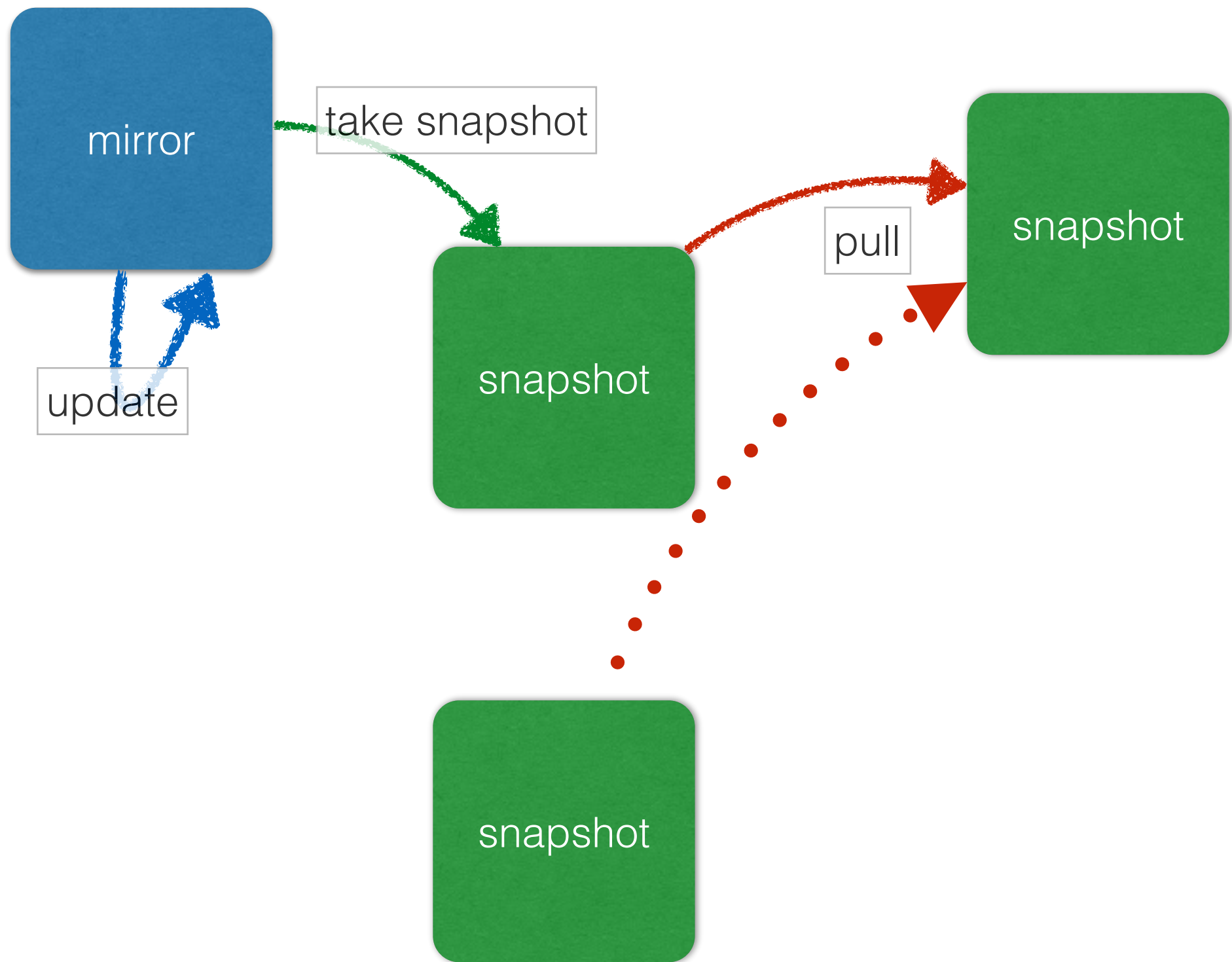
```
$ aptly snapshot pull deb-main-250114 percona-250114 deb-w-  
percona 'percona-server-server (>=5.5)'  
  
...  
[+] percona-server-server-5.5.35-rel33.0-611.wheezy_amd64 added  
[+] percona-server-server-5.5-5.5.35-rel33.0-611.wheezy_amd64 added  
[+] percona-server-client-5.5-5.5.35-rel33.0-611.wheezy_amd64 added  
[+] percona-server-common-5.5-5.5.35-rel33.0-611.wheezy_amd64 added  
[-] libmysqlclient18-5.5.31+dfsg-0+wheezy1_amd64 removed  
[+] libmysqlclient18-5.5.35-rel33.0-611.wheezy_amd64 added  
[+] percona-server-server-5.5.35-rel33.0-611.wheezy_i386 added  
[+] percona-server-server-5.5-5.5.35-rel33.0-611.wheezy_i386 added  
[+] percona-server-client-5.5-5.5.35-rel33.0-611.wheezy_i386 added  
[+] percona-server-common-5.5-5.5.35-rel33.0-611.wheezy_i386 added  
[-] libmysqlclient18-5.5.31+dfsg-0+wheezy1_i386 removed  
[+] libmysqlclient18-5.5.35-rel33.0-611.wheezy_i386 added
```

aptly snapshot pull

```
$ aptly snapshot pull aptly snapshot pull deb-main-250114  
back-250114 deb-w-xorg rsyslog
```

...

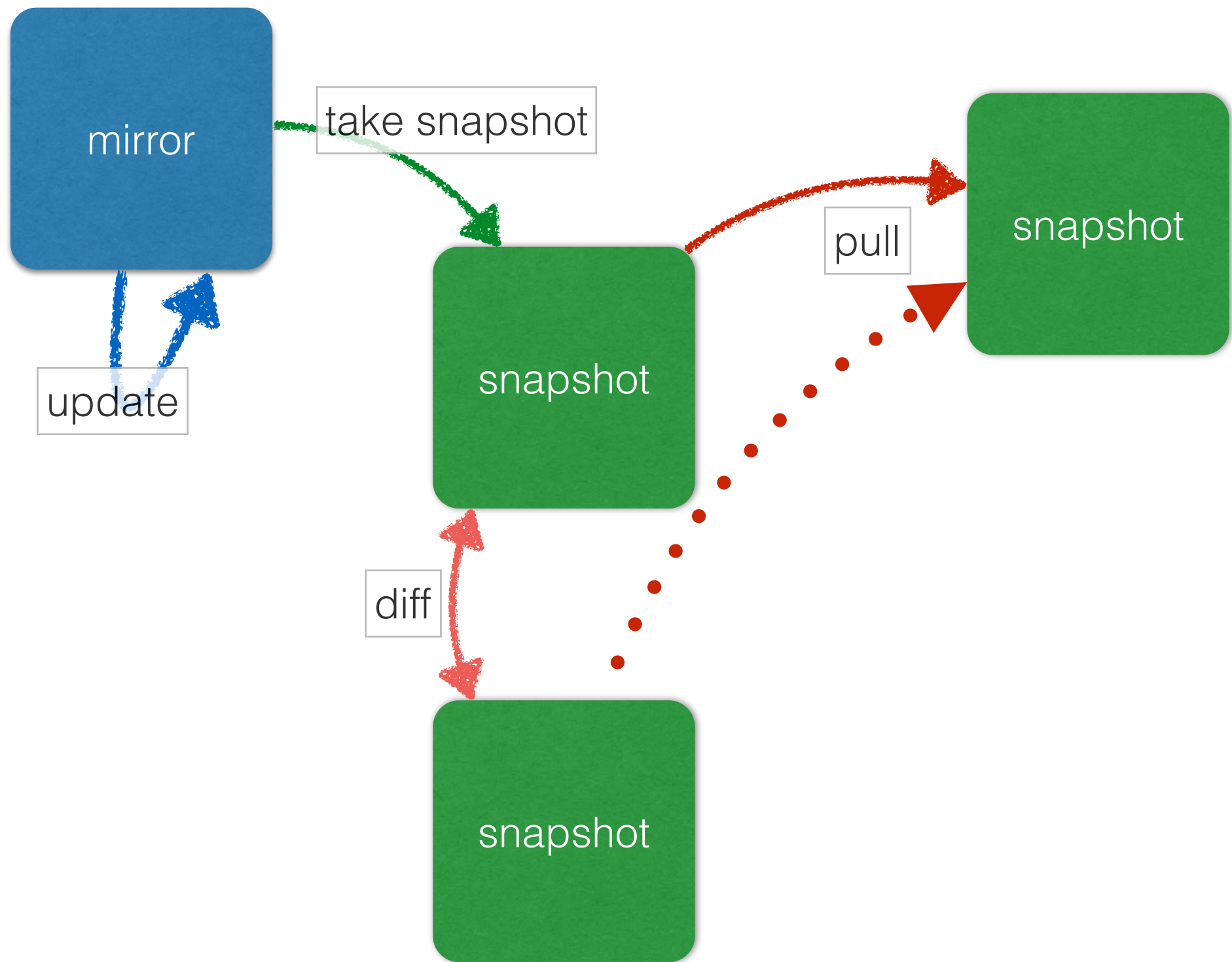
```
[-] rsyslog-5.8.11-3_amd64 removed  
[+] rsyslog-7.4.4-1~bpo70+1_amd64 added  
[-] libestr0-0.1.1-2_amd64 removed  
[+] libestr0-0.1.9-1~bpo70+1_amd64 added  
[+] init-system-helpers-1.11~bpo70.1_all added  
[-] rsyslog-5.8.11-3_i386 removed  
[+] rsyslog-7.4.4-1~bpo70+1_i386 added  
[-] libestr0-0.1.1-2_i386 removed  
[+] libestr0-0.1.9-1~bpo70+1_i386 added
```



aptly snapshot diff

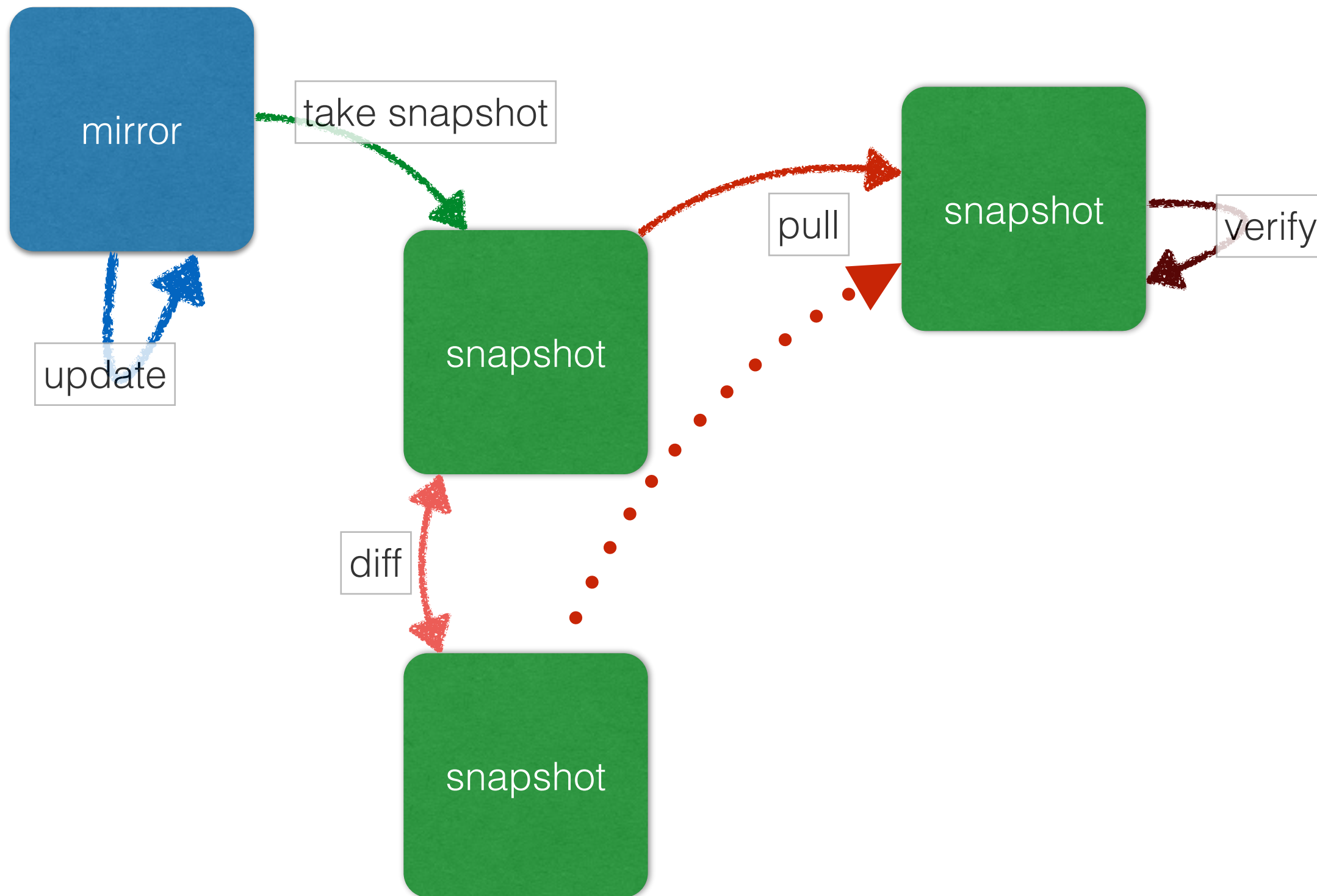
```
$ aptly snapshot diff deb-main-250114 deb-w-percona
```

Arch	Package	Version in A	Version in B
! amd64	libmysqlclient18	5.5.31+dfsg-0+wheezy1	5.5.35-rel33.0-611.wheezy
+ amd64	percona-server-client-5.5	-	5.5.35-rel33.0-611.wheezy
+ amd64	percona-server-common-5.5	-	5.5.35-rel33.0-611.wheezy
+ amd64	percona-server-server	-	5.5.35-rel33.0-611.wheezy
+ amd64	percona-server-server-5.5	-	5.5.35-rel33.0-611.wheezy
! i386	libmysqlclient18	5.5.31+dfsg-0+wheezy1	5.5.35-rel33.0-611.wheezy
+ i386	percona-server-client-5.5	-	5.5.35-rel33.0-611.wheezy
+ i386	percona-server-common-5.5	-	5.5.35-rel33.0-611.wheezy
+ i386	percona-server-server	-	5.5.35-rel33.0-611.wheezy
+ i386	percona-server-server-5.5	-	5.5.35-rel33.0-611.wheezy



aptly snapshot verify

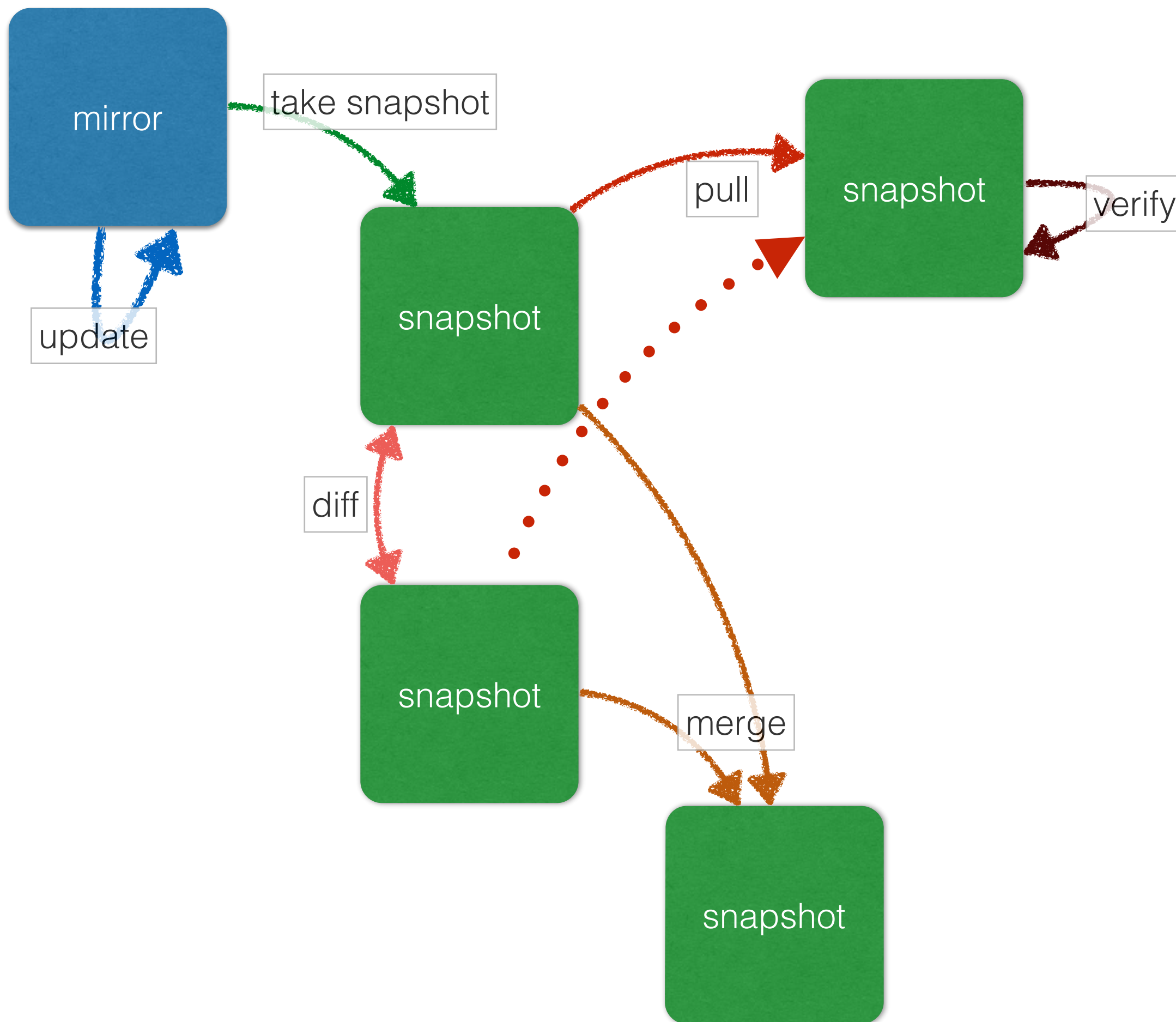
```
$ aptly snapshot verify deb-w-percona
Missing dependencies (13):
fenix [amd64]
fenix-plugins-system [amd64]
ia32-libs-i386 [amd64]
ia32-libs-gtk-i386 [amd64]
vidcontrol [amd64]
kbdcontrol [amd64]
libmysqlclient18 (= 5.5.31+dfsg-0+wheezy1) [amd64]
scsh-0.6 (>= 0.6.6) [amd64]
scsh-0.6 [amd64]
mozart (>= 1.4.0) [amd64]
libmysqlclient18 (= 5.5.31+dfsg-0+wheezy1) [i386]
vidcontrol [i386]
kbdcontrol [i386]
```



aptly snapshot merge

```
$ aptly snapshot merge deb-w-percona-250114 deb-main-250114  
percona-250114
```

Snapshot deb-w-percona-250114 successfully created.
You can run 'aptly publish snapshot deb-w-percona-250114'
to publish snapshot as Debian repository.



aptly publish snapshot

```
$ aptly publish snapshot -distribution=wheezy
```

```
percona-250114
```

```
Signing file '/Users/smira/.aptly/public/dists/wheezy/  
Release' with gpg, please enter your passphrase when  
prompted:
```

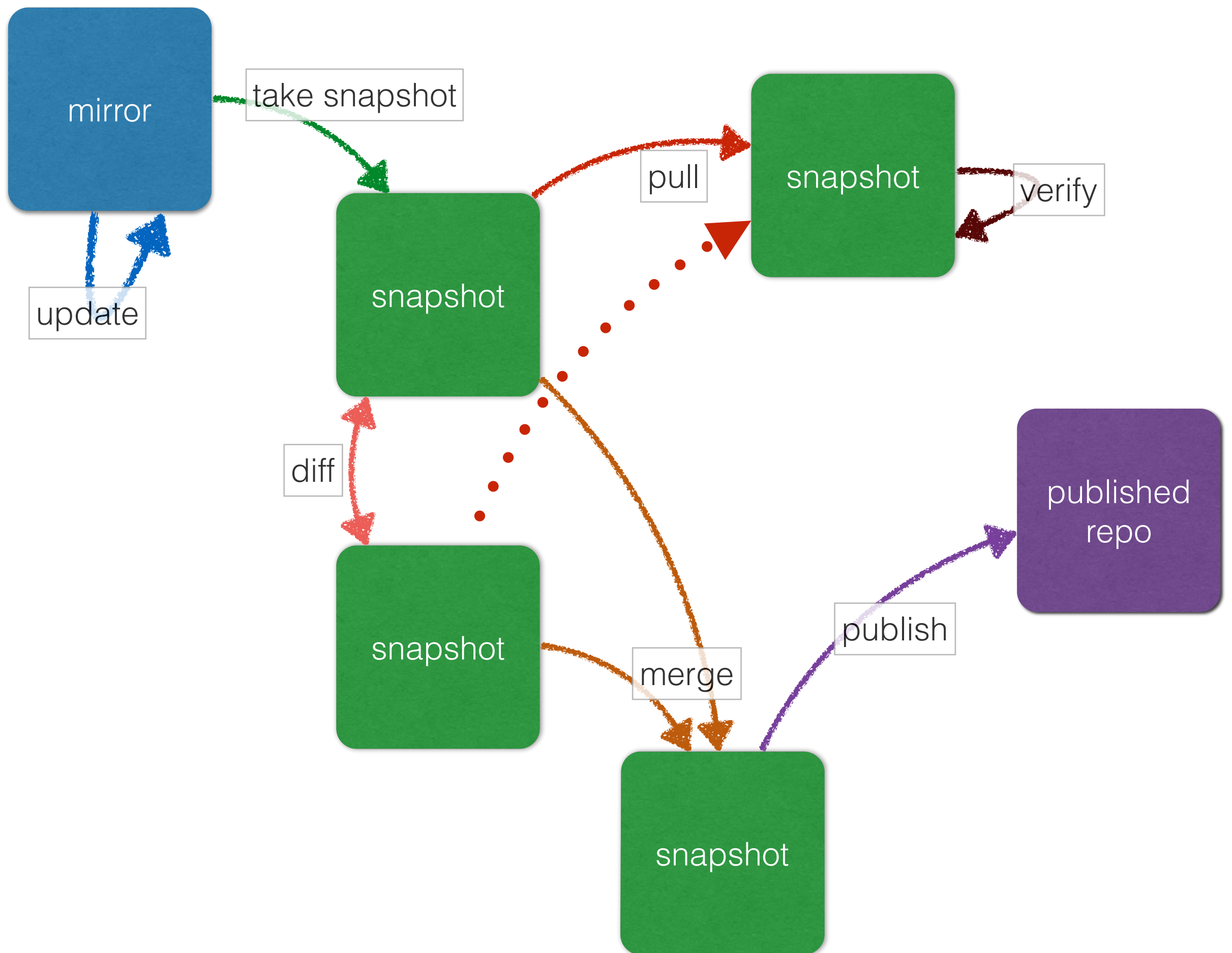
```
...
```

```
Snapshot percona-250114 has been successfully published.  
Please setup your webserver to serve directory '/Users/  
smira/.aptly/public' with autoindexing.
```

```
Now you can add following line to apt sources:
```

```
deb http://your-server/ wheezy main
```

```
Don't forget to add your GPG key to apt with apt-key.
```



Что планируется

- Поиск
- Фильтры при выполнении операций
- Управление локальными репозиториями (добавление “своих” пакетов)
- Поддержка source-пакетов и translations
- Верифицирование удаленных репозиторов

Что не работает пока

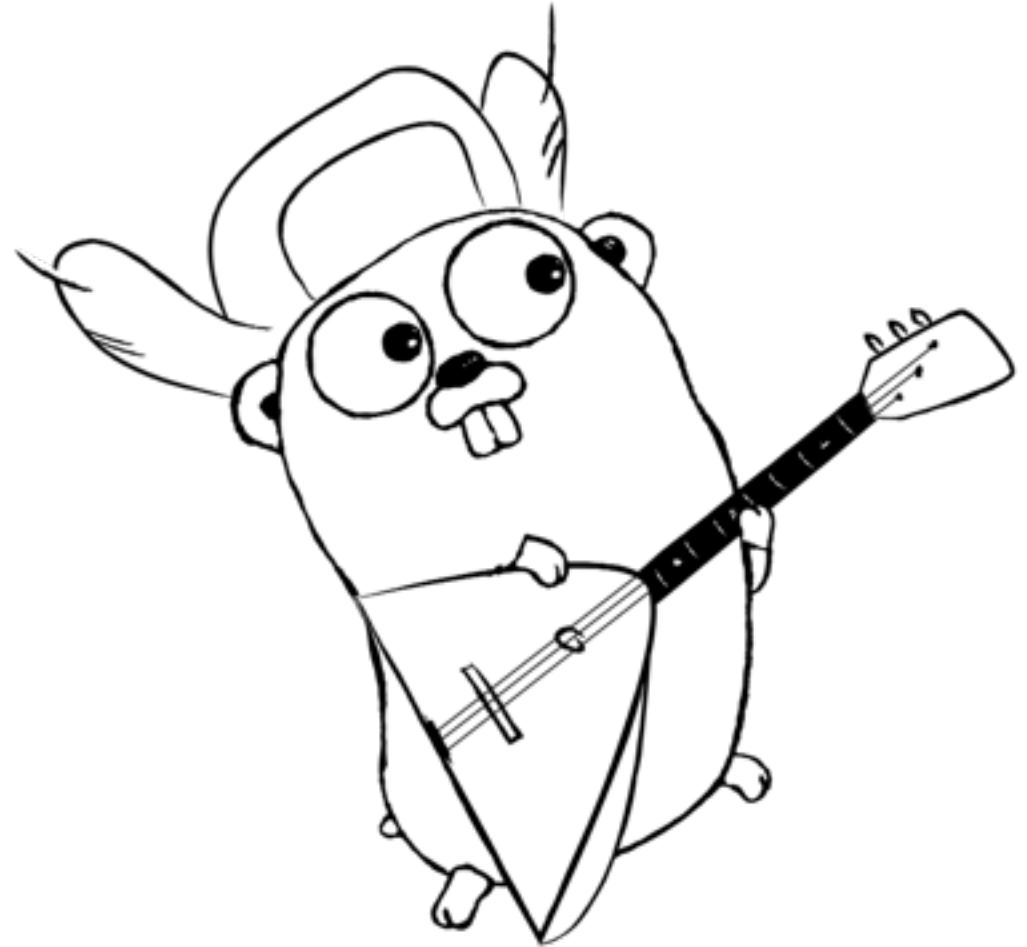
- удаление
- bash-completion
- flat-репозитории
- прогресс скачивания

Конкуренты

- mirror: ftpsync, reprepro, debmirror, apt-mirror, apt-cache...
- archive generation: dak, mini-dak, reprepro, ...

Внутренности

- Написано на Go
- База данных - LevelDB
- Файлы пакетов хранятся один раз



Внутренности

- `~/.aptly.conf` - конфигурация
- `~/.aptly/` - рабочий каталог по умолчанию
 - `db/` - база данных (мета-информация)
 - `pool/` - хранилище файлов
 - `public/` - опубликованные репозитории

Ссылки

- <http://www.apfly.info/>
- <https://github.com/smira/apfly/>
- @smira
- me@smira.ru
- Skype: smirnov.andrey