

Continuous Integration at a Distribution Level

Shepherding 30K Ubuntu packages to never break

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Topics

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Motivation

- old distro model: break/freeze/fix
- new distro model: rolling release
- force developers to finish transitions
- make use of existing tests
- cover packaging and integration

Idea

<http://dep.debian.net/deps/dep8/>

Title: autopkgtest - automatic as-installed package testing

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Abstract:

Establish a standard interface to define and run "as-installed" tests of packages, i.e. the testing of packages in a context as close as possible to a Debian system where the packages subject to testing are properly installed.

Simple CLI test: gzip

debian/tests/control:

Tests: simple-gzip

Depends: gzip

debian/tests/simple-gzip:

```
#!/bin/sh -e  
echo "Bla" > bla.file  
cp bla.file bla.file.orig  
gzip bla.file  
gunzip bla.file.gz  
cmp bla.file bla.file.orig
```

Running the test

```
autopkgtest gzip -- qemu ubuntu-xenial-amd64.img
```

```
autopkgtest ~/debian/gzip-1.6/ -- schroot sid
```

```
autopkgtest http://git.debian.org/gzip.git -- \  
lxd images:debian/jessie/i386
```

Simple lib test

debian/tests/control:

Tests: build-login

Depends: build-essential, libsystemd-dev

debian/tests/build-login:

```
#!/bin/sh -e
```

```
cat <<EOF > loginmonitor.c  
#include <systemd/sd-login.h>
```

```
int main(int argc, char **argv) {  
    sd_login_monitor* mon = NULL;  
    int res = sd_login_monitor_new(NULL, &mon);  
    if (res < 0) {  
        fprintf(stderr, "sd_login_monitor_new failed: %i\n", res);  
        return 1;  
    }  
    assert(sd_login_monitor_get_fd(mon) > 0);  
    return 0;  
}  
EOF
```

```
gcc -Wall -Werror -o loginmonitor loginmonitor.c \  
    $(pkg-config --cflags --libs libsystemd)  
echo "build: OK"  
./loginmonitor  
echo "run: OK"
```


More complicated tests

Tests: networkd-test.py

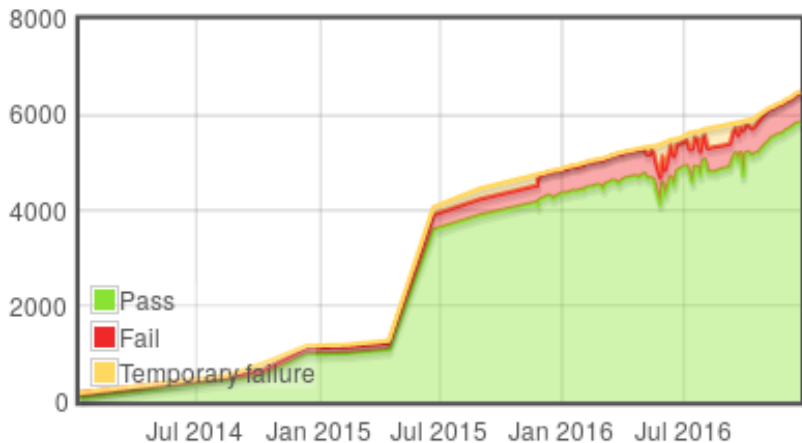
Tests-Directory: test

Depends: systemd, policykit-1, dnsmasq-base

Restrictions: needs-root, isolation-container

Autopkgtest coverage

<http://ci.debian.net/status/>



Gating

```
dput gtk+3.0_3.22.0-1_source.changes
```



```
devel-proposed
```



```
proposed-migration
```



```
devel
```

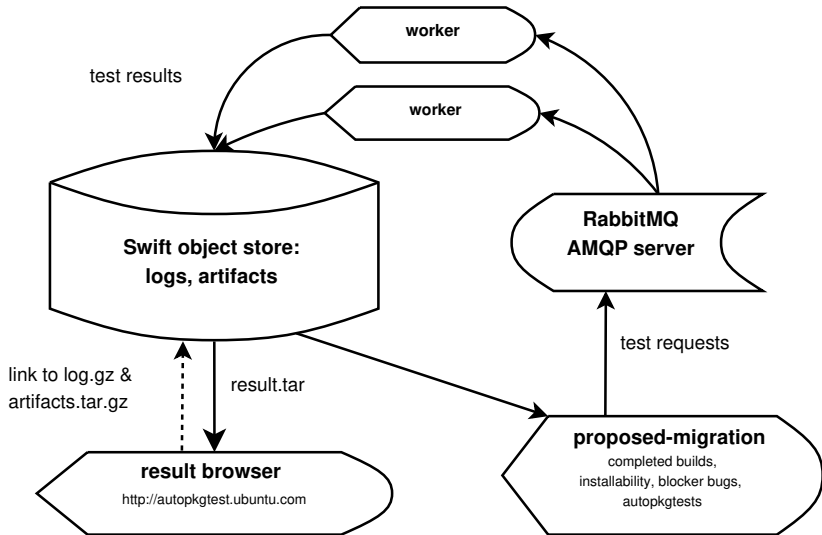
Gating

http://people.canonical.com/~ubuntu-archive/proposed-migration/update_excuses.html

gtk+3.0 (3.20.4-6 to 3.22.0-1)

- missing build on ppc64el
- gir1.2-gtk-3.0/i386: unsatisfiable Depends: libgirepository-1.0-1 (>= 1.41.4-1)
- autopkgtest for unity 7.5.0-0ubuntu1: Regression
- autopkgtest for gtk+3.0 3.22.0-1: Pass
- Not considered

Infrastructure



Impact for Ubuntu

- *Don't you break my software!*
 - cross-package changes land completely or not at all
 - usable devel series
 - release team: ☹️→ 😊
-
- *Argh, something broke the tests!*
 - maintain infrastructure and cloud
 - broken tests/updates imported from Debian

Impact for Debian

<https://ci.debian.net/packages/k/kwin/unstable/amd64/>



Debian Continuous Integration

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[k](#) / [kwin](#) / [unstable/amd64](#)

kwin [[unstable/amd64](#)]  

  This package is failing and has 4:5.4.3-1.1 passed.

Version	Date	Duration	Status	Results
4:5.8.4-1	2017-01-08 02:42:21 UTC	0h 41m 27s	 fail	debci log test log artifacts
4:5.6.4-2	2016-06-02 02:24:56 UTC	0h 16m 59s	 fail	debci log test log artifacts
4:5.4.3-1.1	2016-06-01 02:25:39 UTC	0h 21m 37s	 pass	debci log test log artifacts
4:5.4.3-1.1	2016-05-31 01:28:22 UTC	0h 23m 19s	 pass	debci log test log artifacts

Upstream integration

<https://github.com/systemd/systemd/pull/4512>
Ndisc exponential backoff #4512

Edit

Open pfl wants to merge 3 commits into `systemd:master` from `pfl:ndisc_exponential_backoff`

Conversation 9

Commits 3

Files changed 3

+130 -21



pfl commented on 28 Oct 2016

Member



This patch set implements Router Solicitation sending using the backoff mechanism described in RFC 7559 instead of sending only three Router Solicitations before giving up. The backoff computation is identical to DHCPv6. With this change, `SD_NDISC_EVENT_TIMEOUT` is a bit obsolete, but left in the code for now.

Please test,

Patrik

Reviewers



keszybz



Assignees



No one—assign yourself

Labels



ci-fails/needs-rework

network

nfl added some commits on 26 Oct 2016



Some checks were not successful

[Hide all checks](#)

3 failing and 2 successful checks



xenial-amd64 — autopkgtest finished (failure)

[Details](#)



xenial-i386 — autopkgtest finished (failure)

[Details](#)



xenial-s390x — autopkgtest finished (failure)

[Details](#)



default — Build finished.

[Details](#)



semaphoreci — The build passed on Semaphore.

[Details](#)

Q & A

Thanks for your attention!

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