

# Debian QA概述

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# 内容

- ❑ buildd

- ❑ debci

- ❑ piuparts

- ❑ others

# Debian QA

- <https://qa.debian.org/>

既是一个虚拟的组织，也是一个保证Debian包构建质量的集合。

# buildd

- test cases

源码里的测试用例作为第一道QA闸门

- [riscv64 buildd](#)

# debci

- 目的

autopkgtest的目的是测试处于安装状态的软件包

- 不同

为什么buildd时已经有了test cases, [为什么还需要它?](#)

1. check ABI breakages
2. check missing dependencies
3. check essential for the software to function correctly
4. more frequently

- 本地测试

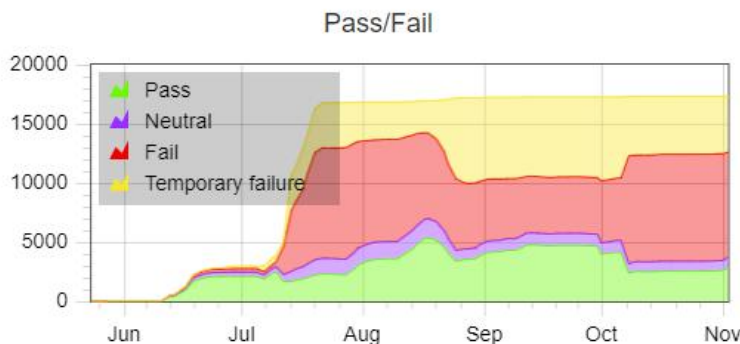
sudo apt install autopkgtest

sudo autopkgtest --apt-upgrade tkcalendar\_1.6.1-1.dsc

-- schroot sid-amd64-sbuild

- 官方测试

unstable/riscv64



```
ok 4 - all modules in libgd-barcode-perl pass the syntax check
ok
All tests successful.
Files=1, Tests=4, 3 wallclock secs ( 0.15 usr 0.03 sys + 2.25 cusr 0.63 csys = 3.06 CPU)
Result: PASS
autopkgtest [05:19:33]: test autodep8-perl-recommends: -----]
autodep8-perl-recommends PASS (superficial)
autopkgtest [05:19:34]: test autodep8-perl-recommends: - - - - - results - - - - -
autopkgtest [05:19:34]: @@@@@@@@@@@@@@@@@@@@@@ summary
autodep8-perl-build-deps PASS
autodep8-perl PASS (superficial)
autodep8-perl-recommends PASS (superficial)
```

- 实例

- 1. [limereg](#)

```
1  #!/bin/sh
2
3  set -e
4
5  WORKDIR=$(mktemp -d)
6  trap "rm -rf $WORKDIR" 0 INT QUIT ABRT PIPE TERM
7  cd $WORKDIR
8  cat <<EOF > limeregtestapi.c
9  #include <string.h>
10 #include <limereg.h>
11 int main(void)
12 {
13     return strcmp(Limereg_GetVersion(), "1.4.1");
14 }
15 EOF
16
17 gcc -o limeregtestapi limeregtestapi.c `pkg-config --cflags --libs liblimereg`
18 echo "build: OK"
19 [ -x limeregtestapi ]
20 ./limeregtestapi
21 echo "run: OK"
```

- 实例

## 2. lazy-loader

```
1  #!/bin/sh
2  set -efu
3
4  pys="$(py3versions -s 2> /dev/null)"
5
6  cp -a lazy_loader/tests "$AUTOPKGTEST_TMP"
7  cd "$AUTOPKGTEST_TMP"
8
9  for py in $pys; do
10     echo "=== $py ==="
11     $py -m pytest --verbose tests 2>&1
12 done
13
```

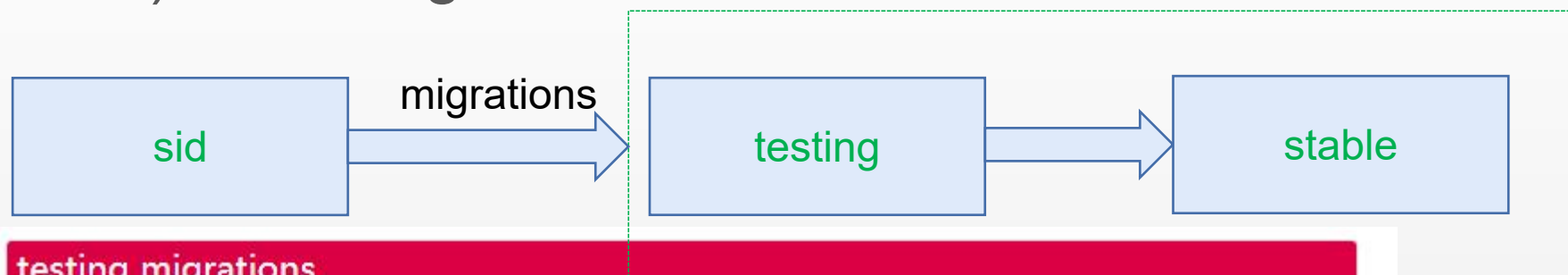


# ● 意义

NOTE: This document should be a living document, but experience learns that the main part of the qualification process only happens near the end.

	amd64	arm64	armel	armhf	i386	mips64el	mipsel	ppc64el	riscv64	s390x
available	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
portbox	yes	yes	yes	yes	yes	yes	yes	yes	~	yes
porters	- (w)	2	2	2	1	1	1	1	4	2
installer	d-i	d-i	d-i	d-i	d-i	d-i	d-i	d-i	d-i	d-i
archive-coverage	99	99	97	98	98	97	97	98	96	97
archive-update	99	99	99	99	99	99	99	99	99	99
upstream-support	yes	yes	glibc has trouble finding qualified persons to implement security fixes, might be special because the use of the libatomics library is mandatory	glibc has trouble finding qualified persons to implement security fixes	no: missing CPU security mitigations in Linux kernel	no: no upstream support in GCC, unaddressed test failures in binutils	no: no upstream support in GCC, unaddressed test failures in binutils	yes	yes	yes
buildds	5	8	8	10	5	10	10	2	6	2
buildd-dsa	yes	yes	yes	yes	yes	yes	yes	yes	no	yes
autopkgtest	yes	yes	yes	yes	yes	no	no	yes	available	yes
						builders are extremely slow (also	builders are extremely slow (also per kernel team), only one porter has		riscv64	

## •sid(unstable)、testing、stable



### testing migrations

#### excuses:

- Migration status for systemd (251.6-1 to 252-2): BLOCKED: Rejected/violates migration policy/introduces a regression
- Issues preventing migration:
- .. autopkgtest for bilibon/0.6.3: amd64: Test in progress, arm64: No test results, armel: Test in progress, armhf: Test in progress, i386: Test in progress, ppc64el: Test in progress, s390x: Test in progress
- .. autopkgtest for comitun/1.38-1.1: amd64: Test in progress, arm64: Pass, armel: Test in progress, armhf: Test in progress, i386: Test in progress, ppc64el: Test in progress, s390x: Test in progress
- .. autopkgtest for crvntsetun/2:2.5.0-5: amd64: Regression (reference ) , arm64: No test results, armel: No test results, armhf: No test results, i386: Regression (reference ) , ppc64el: No test results, s390x: No test results
- .. autopkgtest for debel/2.5.2: amd64: Test in progress, arm64: Pass, armel: Test in

# piuparts

- piuparts是一个用来检测deb包安装、卸载及升级的工具。

用法:

```
vim@dev:~/build/rfs/nmu$ sudo piuparts ladvd_1.1.2-2_amd64.deb -d sid
0m0.0s INFO: -----
0m0.0s INFO: To quickly glance what went wrong, scroll down to the bottom of this logfile.
0m0.0s INFO: FAQ available at https://wiki.debian.org/piuparts/FAQ
0m0.0s INFO: The FAQ also explains how to contact us in case you think piuparts is wrong.
0m0.0s INFO: -----
0m0.0s INFO: piuparts version 1.1.5 starting up.
0m0.0s INFO: Command line arguments: /usr/sbin/piuparts ladvd_1.1.2-2_amd64.deb -d sid
0m0.0s INFO: Running on: Linux dev 6.0.0-2-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.0.3-1 (2022-10-21) x86_64
0m0.0s DEBUG: Starting command: ['dpkg', '--info', 'ladvd_1.1.2-2_amd64.deb']
```

```
1m27.3s DEBUG: Command OK: ['rm', '-rf', '--one-file-system', '/tmp/tmpi5ig1xuy']
1m27.3s DEBUG: Removed directory tree at /tmp/tmpi5ig1xuy
1m27.3s INFO: PASS: All tests.
1m27.3s INFO: piuparts run ends.
vim@dev:~/build/rfs/nmu$
```

```
o .. limereg/5550x has unsatisfiable dependency
o .. Updating limereg would introduce bugs in testing: #922584
o Additional info:
o .. Cannot be tested by piuparts (not a blocker) -
  https://piuparts.debian.org/sid/source/l/limereg.html
o .. uninstallable on arch amd64, not running autopkgtest there
o .. uninstallable on arch arm64, not running autopkgtest there
o .. uninstallable on arch armel, not running autopkgtest there
```

# Others

- Debcheck <https://qa.debian.org/debcheck.php>

Type of Issue	ARCH										
	ANY	EVERY	amd64	arm64	armel	armhf	i386	mips64el	mipsel	ppc64el	s390x
Broken Relationships (main only)											
Pre-Depends	<a href="#">4</a>	none	none	none	<a href="#">1</a>	<a href="#">1</a>	none	<a href="#">3</a>	<a href="#">2</a>	<a href="#">1</a>	<a href="#">1</a>
Depends	<a href="#">552</a>	<a href="#">169</a>	<a href="#">196</a>	<a href="#">226</a>	<a href="#">356</a>	<a href="#">314</a>	<a href="#">284</a>	<a href="#">309</a>	<a href="#">346</a>	<a href="#">249</a>	<a href="#">327</a>
Recommends	<a href="#">474</a>	<a href="#">237</a>	<a href="#">255</a>	<a href="#">295</a>	<a href="#">382</a>	<a href="#">327</a>	<a href="#">292</a>	<a href="#">346</a>	<a href="#">391</a>	<a href="#">322</a>	<a href="#">365</a>
Suggests	<a href="#">848</a>	<a href="#">611</a>	<a href="#">660</a>	<a href="#">703</a>	<a href="#">732</a>	<a href="#">706</a>	<a href="#">681</a>	<a href="#">732</a>	<a href="#">746</a>	<a href="#">734</a>	<a href="#">731</a>

- <https://github.com/mika/jenkins-debian-glue>

# Testing for Debian

- system boot (verify kernel)?  
<https://validation.linaro.org/>  
target: qemu, unmatched [lava]
- daily upgrade system on sid and to see what breaks something?  
<https://piuparts.debian.org/>
- normal login from DM?  
<https://openqa.debian.net/> (only amd64)

Thanks