Gentoo testing, testing and automated testing

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Gentoo already has much testing being done:

- FEATURES="test"
- Maintainers (QA tools)
    Repoman / pcheck / paludis
    http://qa-reports.gentoo.org/
- Arch team testing (stable tree)
- Tinderbox / tree building
    (Diego / Patrick)
- Automated stage / CD building
    (Release Engineering)

So why more testing and what for?:

- Packages still break (check bugzilla)
- Packages / environment change with time
- Automatically test new bumps
- Stages fail to build
- Built stages impede / complicate installations
- ISOs fail to build
- ISOs fail to boot / start services
- ISOs don't support hardware / features

gentoo linux™
still compiling...

So we need more and better testing.
But mostly, automated testing

What to test?

• Packages
• Stages
• ISOs
• (Prefix "stages")

We need more testing, and mostly, automated testing.

What are we testing for?

- Do packages build?
- Do packages pass their own tests?
- Do reverse dependencies build?
- Does a package work?
  (It helps if there are testing plans - emacs)
- Does a package exhibit general QA issues?

We need more testing, and mostly, automated testing.

What else should we test?

- Automatically test new versions of packages
- Determine good candidates for version bumps

We need more testing, and mostly, automated testing.

What else should we test?

- Does a CD boot?
- Does a CD support diverse hardware?
    Hard – access to hardware
- Does a CD fail to start services / set parameters?
- Can we start an ssh session?
- Can we extract and chroot to a kown good stage?

We need more testing, and mostly, automated testing.

What else should we test?

- Can we chroot to a stage?
- Can we update a stage? (emerge -uDavN @world)
- Can we rebuild a stage? (emerge -eav @world)
- Can we "install" a system with a stage?
- Can we boot the above system?

- (Very similar to a Prefix bootstrap)

How to run the new tests?

Automate tinderbox testing
Create a solution to schedule specific testing
Use virtualized solutions for "installs"
    Qemu / chroots / lxc
Central reporting solution / dashboard

Discussion

- Reuse existing testing/continuous integration/whatever tools?
- Testing requires help, who/what could/would help
- Anything we forgot that we *should* test?
- Can we make a design?

Credits:

Fernando Orucu (likewhoa) for the backgrounds

Thanks

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