

Managing breakage in Debian Installer

Frans Pop

Debian QA meeting,
Darmstadt



- 1 Introduction
- 2 Why does d-i break?
- 3 Managing breakage



Outline

- 1 Introduction
- 2 Why does d-i break?
- 3 Managing breakage



Types of breakage

- **General or architecture specific**
- Build failures: D-I images, CD images
- Basic installation problems in D-I itself
- Base installation problems: (c)debootstrap
- Base configuration problems
- Problems installing tasks
- Internationalization problems 1st/2nd stage



Types of breakage

- General or architecture specific
- Build failures: D-I images, CD images
- Basic installation problems in D-I itself
- Base installation problems: (c)debootstrap
- Base configuration problems
- Problems installing tasks
- Internationalization problems 1st/2nd stage



Types of breakage

- General or architecture specific
- Build failures: D-I images, CD images
- Basic installation problems in D-I itself
- Base installation problems: (c)debootstrap
- Base configuration problems
- Problems installing tasks
- Internationalization problems 1st/2nd stage



Types of breakage

- General or architecture specific
- Build failures: D-I images, CD images
- Basic installation problems in D-I itself
- Base installation problems: (c)debootstrap
- Base configuration problems
- Problems installing tasks
- Internationalization problems 1st/2nd stage



Types of breakage

- General or architecture specific
- Build failures: D-I images, CD images
- Basic installation problems in D-I itself
- Base installation problems: (c)debootstrap
- Base configuration problems
- Problems installing tasks
- Internationalization problems 1st/2nd stage



Types of breakage

- General or architecture specific
- Build failures: D-I images, CD images
- Basic installation problems in D-I itself
- Base installation problems: (c)debootstrap
- Base configuration problems
- Problems installing tasks
- Internationalization problems 1st/2nd stage



Types of breakage

- General or architecture specific
- Build failures: D-I images, CD images
- Basic installation problems in D-I itself
- Base installation problems: (c)debootstrap
- Base configuration problems
- Problems installing tasks
- Internationalization problems 1st/2nd stage



Complex environment

- D-I is a mini Linux distribution for 12 architectures
- Great variety: disklabels, filesystems, bootloaders, ...
- Some components we control ourselves, others... not
- Complex build environment (including CD building)
- Complex operational environment



Complex environment

- D-I is a mini Linux distribution for 12 architectures
- Great variety: disklabels, filesystems, bootloaders, ...
- Some components we control ourselves, others... not
- Complex build environment (including CD building)
- Complex operational environment



Complex environment

- D-I is a mini Linux distribution for 12 architectures
- Great variety: disklabels, filesystems, bootloaders, ...
- Some components we control ourselves, others... not
- Complex build environment (including CD building)
- Complex operational environment



Complex environment

- D-I is a mini Linux distribution for 12 architectures
- Great variety: disklabels, filesystems, bootloaders, ...
- Some components we control ourselves, others... not
- Complex build environment (including CD building)
- Complex operational environment



Complex environment

- D-I is a mini Linux distribution for 12 architectures
- Great variety: disklabels, filesystems, bootloaders, ...
- Some components we control ourselves, others... not
- Complex build environment (including CD building)
- Complex operational environment



Outline

- 1 Introduction
- 2 Why does d-i break?
- 3 Managing breakage



Causes of breakage

- Changes in D-I itself causing unexpected breakage
- New upstream releases of stuff used in D-I
(random example: dpkg)
- Library changes
- Transitions can hit D-I very hard -> delays
- Kernel configuration changes
- Migrations of udebs need to be triggered manually
- Build dependencies



Causes of breakage

- Changes in D-I itself causing unexpected breakage
- New upstream releases of stuff used in D-I
(random example: dpkg)
- Library changes
- Transitions can hit D-I very hard -> delays
- Kernel configuration changes
- Migrations of udebs need to be triggered manually
- Build dependencies



Causes of breakage

- Changes in D-I itself causing unexpected breakage
- New upstream releases of stuff used in D-I
(random example: dpkg)
- Library changes
- Transitions can hit D-I very hard -> delays
- Kernel configuration changes
- Migrations of udebs need to be triggered manually
- Build dependencies



Causes of breakage

- Changes in D-I itself causing unexpected breakage
- New upstream releases of stuff used in D-I
(random example: dpkg)
- Library changes
- Transitions can hit D-I very hard -> delays
- Kernel configuration changes
- Migrations of udebs need to be triggered manually
- Build dependencies



Causes of breakage

- Changes in D-I itself causing unexpected breakage
- New upstream releases of stuff used in D-I
(random example: dpkg)
- Library changes
- Transitions can hit D-I very hard -> delays
- Kernel configuration changes
- Migrations of udebs need to be triggered manually
- Build dependencies



Causes of breakage

- Changes in D-I itself causing unexpected breakage
- New upstream releases of stuff used in D-I
(random example: dpkg)
- Library changes
- Transitions can hit D-I very hard -> delays
- Kernel configuration changes
- Migrations of udebs need to be triggered manually
- Build dependencies



Causes of breakage

- Changes in D-I itself causing unexpected breakage
- New upstream releases of stuff used in D-I
(random example: dpkg)
- Library changes
- Transitions can hit D-I very hard -> delays
- Kernel configuration changes
- Migrations of udebs need to be triggered manually
- Build dependencies



Build-Depends (1)

debhelper, apt, gnupg, dpkg, grep-dctrl, bc, libc6-pic | libc6.1-pic | libc0.3-pic | glibc-pic, libdebian-installer4, libdebconfclient0, libparted1.6-13, libslang2-pic, libnewt-pic, libdiscover1-pic [!s390 !s390x], libdiscover1 [!s390 !s390x], libbogl-dev, libtextwrap1, cramfsprogs [powerpc ia64 mips], genext2fs, e2fsprogs, mklibs, mkisofs, genromfs [sparc], hfsutils [powerpc], dosfstools [i386 ia64 m68k amd64], syslinux [i386 amd64], palo [hppa], elilo [ia64], yaboot [powerpc], aboot [alpha], silo [sparc], sparc-utils [sparc], genisovh [mips], delo [mipsel], tip22 [mips], colo [mipsel], sibyl [mips mipsel], atari-bootstrap [m68k], vmelilo [m68k], m68k-vme-tftplilo [m68k], sysutils [i386 amd64], mtools [i386 ia64 m68k amd64], modutils, module-init-tools [i386 powerpc amd64 hppa ia64 sparc], bf-utf-source [!s390 !s390x], upx-ucl-beta [i386], bzip2 [powerpc], mkvmlinuz [powerpc]



Build-Depends (2) - Installation Guide

docbook, docbook-xml, docbook-xsl, xsltproc, gawk, w3m,
poxml, jadetex, openjade | openjade1.3, docbook-dsssl,
gs-common, debiandoc-sgml



Outline

- 1 Introduction
- 2 Why does d-i break?
- 3 Managing breakage**



Options

- Prevent breakage
- Detect breakage as soon as possible
 - Daily builds for all architectures
<http://people.debian.org/~joeyh/d-i/build-logs.html>
 - The D-I testlab (Joey Hess):
alpha, hppa, i386, ia64, mipsel, sparc
<http://people.debian.org/~joeyh/d-i/test-logs.html>
 - Installation reports
 - IRC: #debian-boot
- Problems often are noticed in D-I before they are seen elsewhere



Options

- Prevent breakage
- Detect breakage as soon as possible
 - Daily builds for all architectures
<http://people.debian.org/~joeyh/d-i/build-logs.html>
 - The D-I testlab (Joey Hess):
alpha, hppa, i386, ia64, mipsel, sparc
<http://people.debian.org/~joeyh/d-i/test-logs.html>
 - Installation reports
 - IRC: #debian-boot
- Problems often are noticed in D-I before they are seen elsewhere



Options

- Prevent breakage
- Detect breakage as soon as possible
 - Daily builds for all architectures
<http://people.debian.org/~joeyh/d-i/build-logs.html>
 - The D-I testlab (Joey Hess):
alpha, hppa, i386, ia64, mipsel, sparc
<http://people.debian.org/~joeyh/d-i/test-logs.html>
 - Installation reports
 - IRC: #debian-boot
- Problems often are noticed in D-I before they are seen elsewhere



Options

- Prevent breakage
- Detect breakage as soon as possible
 - Daily builds for all architectures
<http://people.debian.org/~joeyh/d-i/build-logs.html>
 - The D-I testlab (Joey Hess):
alpha, hppa, i386, ia64, mipsel, sparc
<http://people.debian.org/~joeyh/d-i/test-logs.html>
 - Installation reports
 - IRC: #debian-boot
- Problems often are noticed in D-I before they are seen elsewhere



Options

- Prevent breakage
- Detect breakage as soon as possible
 - Daily builds for all architectures
<http://people.debian.org/~joeyh/d-i/build-logs.html>
 - The D-I testlab (Joey Hess):
alpha, hppa, i386, ia64, mipsel, sparc
<http://people.debian.org/~joeyh/d-i/test-logs.html>
 - Installation reports
 - IRC: #debian-boot
- Problems often are noticed in D-I before they are seen elsewhere



Options

- Prevent breakage
- Detect breakage as soon as possible
 - Daily builds for all architectures
<http://people.debian.org/~joeyh/d-i/build-logs.html>
 - The D-I testlab (Joey Hess):
alpha, hppa, i386, ia64, mipsel, sparc
<http://people.debian.org/~joeyh/d-i/test-logs.html>
 - Installation reports
 - IRC: #debian-boot
- Problems often are noticed in D-I before they are seen elsewhere



Options

- Prevent breakage
- Detect breakage as soon as possible
 - Daily builds for all architectures
<http://people.debian.org/~joeyh/d-i/build-logs.html>
 - The D-I testlab (Joey Hess):
alpha, hppa, i386, ia64, mipsel, sparc
<http://people.debian.org/~joeyh/d-i/test-logs.html>
 - Installation reports
 - IRC: #debian-boot
- Problems often are noticed in D-I before they are seen elsewhere



Fixing breakage

- Debug and trace
- Report
- If under our control: fix and upload
- If not under our control: file bug and hound maintainer
- ... or NMU
- Test locally
- Wait for fix to make it to daily builds

For some types of problems we need help from porters or specialists



Fixing breakage

- Debug and trace
- Report
- If under our control: fix and upload
- If not under our control: file bug and hound maintainer
- ... or NMU
- Test locally
- Wait for fix to make it to daily builds

For some types of problems we need help from porters or specialists



Fixing breakage

- Debug and trace
- Report
- If under our control: fix and upload
- If not under our control: file bug and hound maintainer
- ... or NMU
- Test locally
- Wait for fix to make it to daily builds

For some types of problems we need help from porters or specialists



Fixing breakage

- Debug and trace
- Report
- If under our control: fix and upload
- If not under our control: file bug and hound maintainer
- ... or NMU
- Test locally
- Wait for fix to make it to daily builds

For some types of problems we need help from porters or specialists



Fixing breakage

- Debug and trace
- Report
- If under our control: fix and upload
- If not under our control: file bug and hound maintainer
- ... or NMU
- Test locally
- Wait for fix to make it to daily builds

For some types of problems we need help from porters or specialists



Fixing breakage

- Debug and trace
- Report
- If under our control: fix and upload
- If not under our control: file bug and hound maintainer
- ... or NMU
- Test locally
- Wait for fix to make it to daily builds

For some types of problems we need help from porters or specialists



Fixing breakage

- Debug and trace
- Report
- If under our control: fix and upload
- If not under our control: file bug and hound maintainer
- ... or NMU
- Test locally
- Wait for fix to make it to daily builds

For some types of problems we need help from porters or specialists



Communicating breakage

Keeping the team, porters and users informed:
<http://wiki.debian.net/DebianInstallerToday>

