

RED HAT :: SAN DIEGO :: 2007

SUMMIT



RHEL5/Fedora 7 Live CD experience

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Welcome to San Diego!



Live CD

- OS Development



Live CD

- OS Development
- Software Commons



Live CD

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- Software Commons
- Appliances



Live CD

- OS Development
- Software Commons
- Appliances
- Community around Live CD tools



About me

- OLPC
 - Wrote the build system



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- Involved in GNOME / freedesktop.org
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- Red Hat Desktop Team



History

- Did some work on the OLPC build system



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- Fedora 6 Live CD



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- Rewrite in Python



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- Did some work on the OLPC build system
- Fedora 6 Live CD
- Rewrite in Python
- Fedora 7 and beyond



Design Goals

- Feature parity
 - SELinux, Read/Write root file system



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- Feature parity
 - SELinux, Read/Write root file system
- Installable
- Easy to use
 - # livecd-creator --help



Design Goals

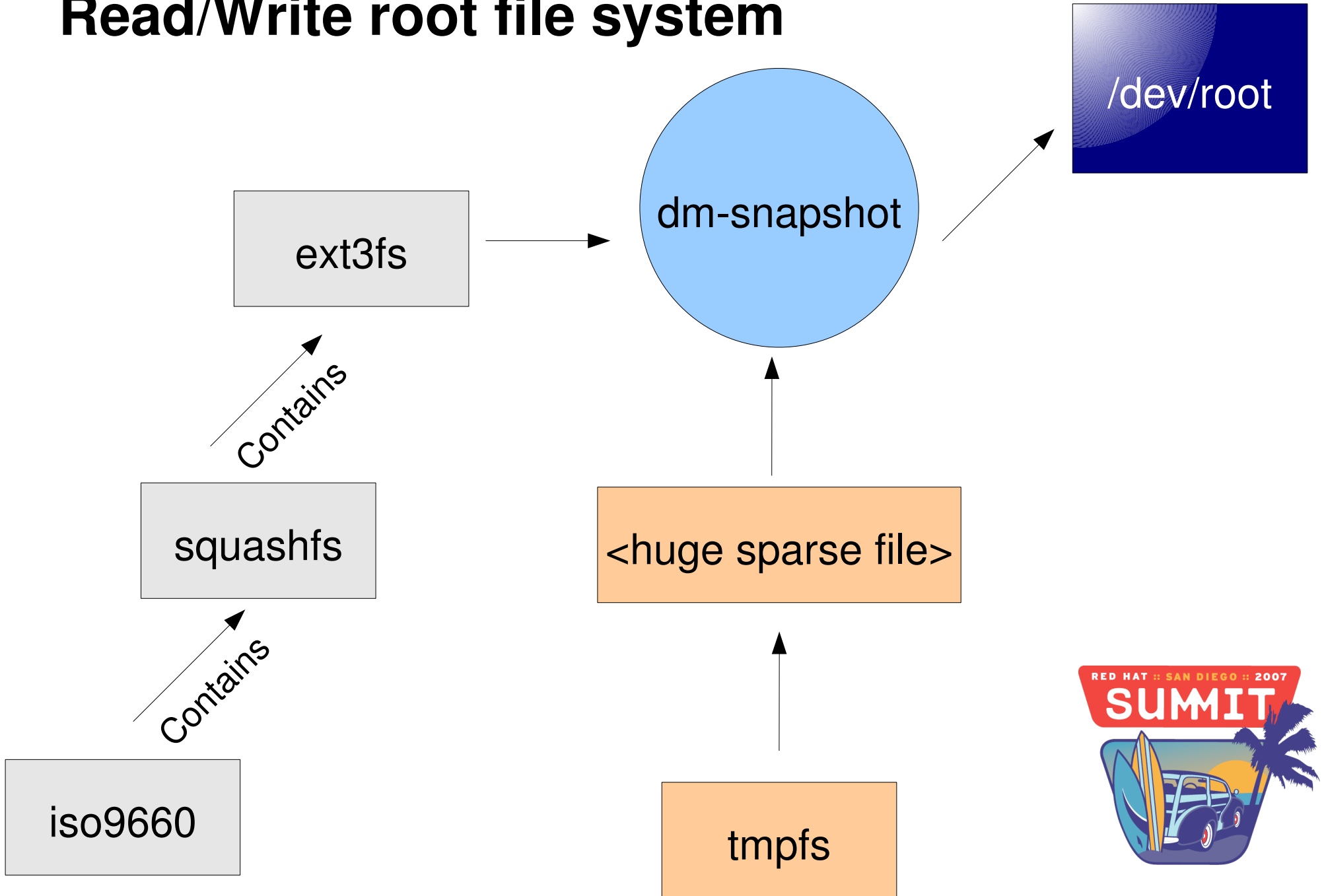
- Feature parity
 - SELinux, Read/Write root file system
- Installable
- Easy to use
 - # livecd-creator --help
- Hackable
 - Mature code base, Extensible
 - Free Software / Community



Demo!



Read/Write root file system



Easy to use

- `# livecd-creator --config=/usr/share/livecd-tools/livecd-fedora-minimal.ks --shell`
- Demo!



Build Process

Setup ext3
loopback



Build Process

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loopback

Install
Packages



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Install
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Post-Install
Tasks



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Create
Squashfs



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Create
Squashfs

Create
ISO9660fs



Installable

- ext3fs is pristine
 - All Live CD specific changes at boot time
 - Hardware auto-configuration
 - Add Live CD user
 - Automatic login



Installable

- ext3fs is pristine
 - All Live CD specific changes at boot time
 - Hardware auto-configuration
 - Add Live CD user
 - Automatic login
- Installation:
 - # dd if=/dev/live_ext3fs of=/dev/sda1
 - Extremely fast (no seeking)





Applications

- Derived distributions
 - Fedora SIG's: Eclipse, Games, Music, ...
 - Enthusiasts, LUG's, OLPC



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- Testing / QA
 - Much easier than installing the OS...



Applications

- Derived distributions
 - Fedora SIG's: Eclipse, Games, Music, ...
 - Enthusiasts, LUG's, OLPC
- Appliances
- Testing / QA
 - Much easier than installing the OS...
- Streamline OS development
 - Hardware auto-configuration
 - Limited LiveCD space: fight bloat, deps





Future features

- Persistence
 - Keep your changes on a USB thumbdrive



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- Optimized boot / read ahead
 - Applies to live installs too!



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- Persistence
 - Keep your changes on a USB thumbdrive
- Optimized boot / read ahead
 - Applies to live installs too!
- Single well-defined KS file defines content
 - Live CD
 - Xen Image
 - Installation media
 - ...



Future features (cont'd)

- Boot Live CD image from network
 - PXE or maybe even mDNS
 - Share Live CD image over network...



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- Better UI integration
 - Installer
 - Persistence management
 - Higher-level tools...



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- Boot Live CD image from network
 - PXE or maybe even mDNS
 - Share Live CD image over network...
- Better UI integration
 - Installer
 - Persistence management
 - Higher-level tools...
- More architectures
 - ppc





Community

- Mailing list

<http://www.redhat.com/mailman/listinfo/fedora-livecd-list>

- Source code repository

<http://git.fedoraproject.org/?p=hosted/livecd;a=summary>

- Maintainers

- David Zeuthen <davidz@redhat.com>
- Jeremy Katz <katzj@redhat.com>

- Get involved!

