

NAME

guestfs-release-notes – libguestfs Release Notes

RELEASE NOTES FOR LIBGUESTFS 1.26

These release notes only cover the differences from the previous stable/dev branch split (1.24.0). For detailed changelogs, please see the git repository, or the ChangeLog file distributed in the tarball.

New features*Tools*

virt-customize (1) is a new tool for customizing virtual machine disk images. It lets you install packages, edit configuration files, run scripts, set passwords and so on. **virt-builder** (1) and **virt-sysprep** (1) use virt-customize, and command line options across all these tools are now identical.

virt-diff (1) is a new tool for showing the differences between the filesystems of two virtual machines. It is mainly useful when showing what files have been changed between snapshots.

virt-builder (1) has been greatly enhanced. There are many more ways to customize the virtual machine. It can pull templates from multiple repositories. A parallelized internal xzcat implementation speeds up template decompression. Virt-builder uses an optimizing planner to choose the fastest way to build the VM. It is now easier to use virt-builder from other programs. Internationalization support has been added to metadata. More efficient SELinux relabelling of files. Can build guests for multiple architectures. Error messages have been improved. (Pino Toscano)

virt-sparsify (1) has a new `--in-place` option. This sparsifies an image in place (without copying it) and is also much faster. (Lots of help provided by Paolo Bonzini)

virt-sysprep (1) can delete and scrub files under user control. You can lock user accounts or set random passwords on accounts. Can remove more log files. Can unsubscribe a guest from Red Hat Subscription Manager. New flexible way to enable and disable operations. (Wanlong Gao, Pino Toscano)

virt-win-reg (1) allows you to use URIs to specify remote disk images.

virt-format (1) can now pass the extra space that it recovers back to the host.

guestfish (1) has additional environment variables to give fine control over the `><fs>` prompt. Guestfish reads its (rarely used) configuration file in a different order now so that local settings override global settings. (Pino Toscano)

virt-make-fs (1) was rewritten in C, but is unchanged in terms of functionality and command line usage.

Language bindings

The OCaml bindings have a new `Guestfs.Errno` module, used to check the error number returned by `Guestfs.last_errno`.

PHP tests now work. (Pino Toscano)

Inspection

Inspection can recognize Debian live images.

Architectures

ARMv7 (32 bit) now supports KVM acceleration.

Aarch64 (ARM 64 bit) is supported, but the appliance part does not work yet.

PPC64 support has been fixed and enhanced.

Security

Denial of service when inspecting disk images with corrupt btrfs volumes

It was possible to crash libguestfs (and programs that use libguestfs as a library) by presenting a disk image containing a corrupt btrfs volume.

This was caused by a NULL pointer dereference causing a denial of service, and is not thought to be exploitable any further.

See commit [d70ceb4cbea165c960710576efac5a5716055486](#) for the fix. This fix is included in libguestfs stable branches $\geq 1.26.0$, $\geq 1.24.6$ and $\geq 1.22.8$, and also in RHEL ≥ 7.0 . Earlier versions of libguestfs are not vulnerable.

Better generation of random root passwords and random seeds

When generating random root passwords and random seeds, two bugs were fixed which are possibly security related. Firstly we no longer read excessive bytes from `/dev/urandom` (most of which were just thrown away). Secondly we changed the code to avoid modulo bias. These issues were not thought to be exploitable. (Both changes suggested by Edwin Török)

API

GUID parameters are now validated when they are passed to API calls, whereas previously you could have passed any string. (Pino Toscano)

New APIs

`guestfs_add_drive_opts`: new `discard` parameter

The new `discard` parameter allows fine-grained control over discard/trim support for a particular disk. This allows the host file to become more sparse (or thin-provisioned) when you delete files or issue the `guestfs_fstrim` API call.

`guestfs_add_domain`: new parameters: `cachemode`, `discard`

These parameters are passed through when adding the domain's disks.

`guestfs_blkdiscard`

Discard all blocks on a guestfs device. Combined with the `discard` parameter above, this makes the host file sparse.

`guestfs_blkdiscardzeroes`

Test if discarded blocks read back as zeroes.

`guestfs_compare_*`

`guestfs_copy_*`

For each struct returned through the API, libguestfs now generates `guestfs_compare_*` and `guestfs_copy_*` functions to allow you to compare and copy structs.

`guestfs_copy_attributes`

Copy attributes (like permissions, xattrs, ownership) from one file to another. (Pino Toscano)

`guestfs_disk_create`

A flexible API for creating empty disk images from scratch. This avoids the need to call out to external programs like `qemu-img` (1).

`guestfs_get_backend_settings`

`guestfs_set_backend_settings`

Per-backend settings (can also be set via the environment variable `LIBGUESTFS_BACKEND_SETTINGS`). The main use for this is forcing TCG mode in the qemu-based backends, for example:

```
export LIBGUESTFS_BACKEND=direct
export LIBGUESTFS_BACKEND_SETTINGS=force_tcg
```

`guestfs_part_get_name`

Get the label or name of a partition (for GPT disk images).

Build changes

The following extra packages are required to build libguestfs 1.26:

`supermin` ≥ 5

Supermin version 5 is required to build this version of libguestfs.

`flex`, `bison`

Virt-builder now uses a real parser to parse its metadata file, so these tools are required.

xz This is now a required build dependency, where previously it was (in theory) optional.

Internals

PO message extraction rewritten to be more robust. (Pino Toscano)

podwrapper gives an error if the `--insert` or `--verbatim` argument pattern is not found.

Libguestfs now passes the `qemu -enable-fips` option to enable FIPS, if qemu supports it.

`./configure --without-qemu` can be used if you don't want to specify a default hypervisor.

Copy-on-write [COW] overlays, used for example for read-only drives, are now created through an internal backend API (`.create_cow_overlay`).

Libvirt backend uses some funky C macros to generate XML. These are simpler and safer.

The ChangeLog file format has changed. It is now just the same as `git log`, instead of using a custom format.

Appliance start-up has changed:

- The libguestfs appliance now initializes LVM the same way as it is done on physical machines.
- The libguestfs appliance does not write an empty string to `/proc/sys/kernel/hotplug` when starting up.

Note that you **must** configure your kernel to have `CONFIG_UEVENT_HELPER_PATH=""` otherwise you will get strange LVM errors (this applies as much to any Linux machine, not just libguestfs). (Peter Rajnoha)

Libguestfs can now be built on arches that have **ocamlc**(1) but not **ocamlopt**(1). (Hilko Bengen, Olaf Hering)

You cannot use `./configure --disable-daemon --enable-appliance`. It made no sense anyway. Now it is expressly forbidden by the configure script.

The packagelist file uses m4 for macro expansion instead of cpp.

Bugs fixed

<https://bugzilla.redhat.com/1073906>

java bindings `inspect_list_applications2` throws `java.lang.ArrayIndexOutOfBoundsException`:

<https://bugzilla.redhat.com/1063374>

[RFE] enable subscription manager clean or unregister operation to sysprep

<https://bugzilla.redhat.com/1060404>

virt-resize does not preserve GPT partition names

<https://bugzilla.redhat.com/1057504>

mount-local should give a clearer error if root is not mounted

<https://bugzilla.redhat.com/1056290>

virt-sparsify overwrites block devices if used as output files

<https://bugzilla.redhat.com/1055452>

libguestfs: error: invalid backend: appliance

<https://bugzilla.redhat.com/1054761>

guestfs_pvs prints "unknown device" if a physical volume is missing

<https://bugzilla.redhat.com/1053847>

Recommended default clock/timer settings

<https://bugzilla.redhat.com/1046509>

ruby-libguestfs throws "expecting 0 or 1 arguments" on `Guestfs::Guestfs.new`

<https://bugzilla.redhat.com/1045450>

Cannot inspect cirros 0.3.1 disk image fully

<https://bugzilla.redhat.com/1045033>
LIBVIRT_DEFAULT_URI=qemu:///system breaks libguestfs

<https://bugzilla.redhat.com/1044585>
virt-builder network (eg. --install) doesn't work if resolv.conf sets nameserver 127.0.0.1

<https://bugzilla.redhat.com/1044014>
When SSSD is installed, libvirt configuration requires authentication, but not clear to user

<https://bugzilla.redhat.com/1039995>
virt-make-fs fails making fat/vfat whole disk: Device partition expected, not making filesystem on entire device '/dev/sda' (use -I to override)

<https://bugzilla.redhat.com/1039540>
virt-sysprep to delete more logfiles

<https://bugzilla.redhat.com/1033207>
RFE: libguestfs inspection does not recognize Free4NAS live CD

<https://bugzilla.redhat.com/1028660>
RFE: virt-sysprep/virt-builder should have an option to lock a user account

<https://bugzilla.redhat.com/1026688>
libguestfs fails examining libvirt guest with ceph drives: rbd: image name must begin with a '/'

<https://bugzilla.redhat.com/1022431>
virt-builder fails if \$HOME/.cache doesn't exist

<https://bugzilla.redhat.com/1022184>
libguestfs: do not use versioned jar file

<https://bugzilla.redhat.com/1020806>
All libguestfs LVM operations fail on Debian/Ubuntu

<https://bugzilla.redhat.com/1008417>
Need update helpout of part-set-gpt-type

<https://bugzilla.redhat.com/953907>
virt-sysprep does not correctly set the hostname on Debian/Ubuntu

<https://bugzilla.redhat.com/923355>
guestfish prints literal "\n" in error messages

<https://bugzilla.redhat.com/660687>
guestmount: "touch" command fails: touch: setting times of 'timestamp': Invalid argument

<https://bugzilla.redhat.com/593511>
[RFE] function to get partition name

<https://bugzilla.redhat.com/563450>
list-devices returns devices of different types out of order

SEE ALSO

guestfs-examples (1), **guestfs-faq** (1), **guestfs-performance** (1), **guestfs-recipes** (1), **guestfs-testing** (1), **guestfs** (3), **guestfish** (1), <http://libguestfs.org/>

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BUGS

To get a list of bugs against libguestfs, use this link:
<https://bugzilla.redhat.com/buglist.cgi?component=libguestfs&product=Virtualization+Tools>

To report a new bug against libguestfs, use this link:
https://bugzilla.redhat.com/enter_bug.cgi?component=libguestfs&product=Virtualization+Tools

When reporting a bug, please supply:

- The version of libguestfs.
- Where you got libguestfs (eg. which Linux distro, compiled from source, etc)
- Describe the bug accurately and give a way to reproduce it.
- Run **libguestfs-test-tool** (1) and paste the **complete, unedited** output into the bug report.