NAME

guestfs–release–notes – libguestfs Release Notes

RELEASE NOTES FOR LIBGUESTFS 1.22

These release notes only cover the differences from the previous stable/dev branch split (1.20.0). For detailed changelogs, please see the git repository, or the ChangeLog file distributed in the tarball.

New features

API

Remote access to disks:

- Network Block Device (nbd)

- Secure Shell (ssh)

- HTTP and HTTPS

- FTP and FTPS

- iSCSI

- Gluster

- Ceph/rbd (Mike Kelly)

- Sheepdog

- TFTP

The SYSLINUX and EXTLINUX bootloaders can now be installed in disk images using the API.

Inspection can now handle filesystems such as btrfs where subvolumes are separately mountable (Matthew Booth).

"Attach methods" are now known as "backends". Compatibility with existing code is preserved.

Filenames can contain ':', as long as newer QEMU is being used.

Tools

Virt-alignment-scan and virt-df scan multiple guests in parallel.

Guestmount now passes errno accurately back to userspace in almost all cases.

Guestfish and other tools can now use a URI-like syntax to access remote disks, eg:

```
guestfish -a ssh://example.com/path/to/disk.img
```

Guestfish and guestmount now allow you to specify the filesystem type when mounting, which is more secure (Dave Vasilevsky).

Guestfish is now the "guest filesystem shell".

Guestfish allows only `1 true t yes y on 0 false f no n off` for boolean values (case insensitive), and gives an error for all other strings.

New tool `guestunmount` for unmounting FUSE filesystems safely.

`guestmount --no-fork` flag prevents guestmount from daemonizing.

Virt-resize now uses sparse copies by default, saving considerable space for guests which are mostly empty.

Bash tab completion has been rewritten and can now handle most tools, and correctly tab-complete `--long` options. In addition, bash completion scripts are loaded on demand.

Language bindings

The Java API now supports events.

The Python object now inherits from the `object` base class.

Python methods which previously returned lists of tuples can now be made to return a Python dict. For backwards compatibility, you have to enable this by using the constructor option

```
guestfs.GuestFS(python_return_dict=True).
```

The PHP bindings are now tested properly, and have had multiple fixes.

The long-deprecated Perl `Sys::Guestfs::Lib` library has been removed. https://www.redhat.com/archives/libguestfs/2013–April/msg00001.html

Examples

New example program showing how to enable debugging and capture log messages.

Other

Distributors can add arbitrary extra packages to the appliance by doing:

```
./configure --with-extra-packages="list of package names"
```

Distributors can use:

```
./configure --with-supermin-extra-options="..."
```

to add arbitrary extra options to supermin.

Security

No security issues were found in this release.

New APIs

```
cp-r
extlinux
feature-available
get-program
is-whole-device
part-get-gpt-type
part-set-gpt-type
rename
set-program
syslinux
```

C only:

```
guestfs_event_to_string
```

Internals

The febootstrap tool has now been renamed to ''supermin''. Libguestfs can use either, but now prefers ''supermin''. http://people.redhat.com/˜rjones/supermin/

libxml2 is required to build libguestfs.

The hivexregedit program (from hivex) is required to build from git.

Internal functions can no longer be used unless the caller defines -DGUESTFS_PRIVATE=1.

Enable C compiler warnings in Python, Ruby bindings.

Fail early and clearly if libvirt does not support qemu/KVM (eg. if default libvirt connection is to Xen).

`make print-subdirs` rule, useful for selectively running tests.

Multiple fixes to allow separated (sourcedir != builddir) builds.

Multiple fixes to Haskell bindings.

`ln` and `ln-f` APIs now capture `errno` correctly.

Language binding tests use (mostly) a standard numbering scheme and aim to test the same range of features in each language. Also the number of launches required has been reduced so these tests should run much more quickly.

Library code internally uses GCC `__attribute__((cleanup))` (if available) to simplify memory allocation.

Internal header files have been reorganized. See the comments in *src/guestfs−internal*.h*

Internal code shared between the library and certain tools is now located in a static `libutils` library.

Almost all subdirectories can now use parallel builds, although note that the top-level directories still build in series.

Use of `PATH_MAX` and `NAME_MAX` has been eliminated from the code.

The Java API now requires JVM ≥ 1.6.

Force use of `serial-tests` with automake ≥ 1.12.

Use of sockets in the library protocol layer is abstracted, allowing other non-POSIX layers to be added in future (see *src/conn−socket.c*).

`qemu−img info −−output json` is used if available, for more secure parsing of the output of this command.

Distros can now use `make INSTALLDIRS=vendor install` to place Ruby bindings in vendordir. This eliminates a non-upstream patch carried by both Fedora and Debian.

Valgrind log files are now written to *tmp/valgrind−DATE−PID.log*

`make clean` cleans the local `tmp/` directory.

The C API tests have been rewritten using a more flexible generator language that allows arbitrary C code to be executing during tests.

Bugs fixed

https://bugzilla.redhat.com/961812
> Segfault in inspect−fs.c in mountable code

https://bugzilla.redhat.com/957772
> tar-out and base64−out quoting error

https://bugzilla.redhat.com/957380
> libguestfs: error: btrfsvol:/dev/sda2/root: root device not found: only call this function with a root device previously returned by guestfs_inspect_os

https://bugzilla.redhat.com/948324
> inspection fails if libosinfo is not installed

https://bugzilla.redhat.com/928995
> file on zero-sized file now produces ''empty '' instead of ''empty''

https://bugzilla.redhat.com/921292
> qemu: could not open disk image /tmp/.../snapshot1: Permission denied

https://bugzilla.redhat.com/921040
> ''error: external command failed, see earlier error messages'' message needs to change

https://bugzilla.redhat.com/920225
> libguestfs should use −−output json (if supported) to safely parse the output of qemu-img command

https://bugzilla.redhat.com/916780
> feature request: guestmount −−with−cleanup−pipefd

https://bugzilla.redhat.com/914934
> oom-killer kills guestfsd when tar-in a lot of data

https://bugzilla.redhat.com/914931
> FileIn commands cause segfault if appliance dies during the file copy in

https://bugzilla.redhat.com/913145
> Misc leaks in virNetClientProgramCall in libvirt 1.0.2

https://bugzilla.redhat.com/912499
> Security context on image file gets reset

https://bugzilla.redhat.com/909836
> libguestfs-test-tool −−qemu segfaults

https://bugzilla.redhat.com/909624
> Unexpected non-tail recursion in recv_from_daemon results in stack overflow in very long-running API calls that send progress messages

https://bugzilla.redhat.com/908322
> virt-tar fails on non-existent directory names "error in chunked encoding at /home/rjones/d/libguestfs/tools/virt−tar line 272."

https://bugzilla.redhat.com/908321
> virt-cat fails on directory names "/dev/stdout: error in chunked encoding"

https://bugzilla.redhat.com/907554
> btrfs causes subsequent ntfs−3g filesystem to fail

https://bugzilla.redhat.com/905341
> "No such file or directory" when execute "hivex-commit"

https://bugzilla.redhat.com/903620
> btrfs_subvolume_list broken due to change in subvolume list output

https://bugzilla.redhat.com/895910
> guestmount: **rename()** incorrectly follows symbolic links

https://bugzilla.redhat.com/895905
> guestmount: **link()** incorrectly returns ENOENT, when it should be EXDEV

https://bugzilla.redhat.com/895904
> checksums-out fail to compute the checksums of all regular files in directory

https://bugzilla.redhat.com/894545
> libguestfs FTBFS on Fedora 19 because of new ruby

https://bugzilla.redhat.com/890027
> virt-sysprep: Setting hostname, domain name and pretty name on Fedora 18 correctly

https://bugzilla.redhat.com/887971
> pvcreate fails if partition contains a swap signature

https://bugzilla.redhat.com/887520
> zero_free_space: open: /sysroot//ujqqq135.rd3: Cannot allocate memory

https://bugzilla.redhat.com/886915
> libguestfs with libvirt attach-method fails with odd error if default hypervisor is Xen

https://bugzilla.redhat.com/847549
> Adding a zero-length virtio-scsi disk causes: qemu-kvm: hw/scsi−bus.c:1568: scsi_req_complete: Assertion 'req−>status == −1' failed.

https://bugzilla.redhat.com/811649
> libguestfs cannot open disk images which are symlinks to files that contain ':' (colon) character

https://bugzilla.redhat.com/664558
> RFE: Allow to set log callback in Ruby bindings

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.