NAME

guestfs−release−notes − libguestfs Release Notes

RELEASE NOTES FOR LIBGUESTFS 1.28

These release notes only cover the differences from the previous stable/dev branch split (1.26.0). For detailed changelogs, please see the git repository, or the ChangeLog file distributed in the tarball.

New features

Tools

virt−v2v (1) and **virt−p2v** (1) are tools for converting from foreign hypervisors (such as VMware or Xen) or physical machines, to KVM. These tools were previously a separate project. The code for both tools has been integrated into the libguestfs tree. As part of the refactoring, virt−p2v has been rewritten (from Ruby, now C), and virt−v2v now uses several modern features of qemu which make it run many times faster than before. **virt−v2v** (1) can import from: VMware vCenter, VMware OVA files, local disk files, libvirt, RHEL 5 Xen. It can output to: oVirt or Red Hat Enterprise Virtualization (RHEV-M), OpenStack Glance, libvirt, qemu, local disk files.

virt−log (1) is a new tool for listing log files from guests. It supports a variety of guests including Linux traditional, Linux using journal, and Windows event log.

virt−builder (1) has a new `--machine-readable` option to make it simpler to consume virt-builder from other programs.

New **virt−builder** (1) and **virt−customize** (1) *−−chmod* option.

virt−sysprep (1) will now remove: systemd journals, anaconda logs, lightdm logs, debian-installer files, apt logs, exim logs, ConsoleKit logs, firewalld logs, grubby logs, proftpd logs, libvirt/libxml logs, and several other log files. The virt-sysprep `user-account` operation is now able to remove or keep particular user accounts. (Pino Toscano).

New **guestmount** (1) *−−fd* option, allowing you to run guestmount captive under another process.

virt−sparsify (1) has a new *−−tmp* option allowing you to precisely control where temporary files are stored.

virt−sparsify (1) can now write to a block device.

virt−customize (1) and **virt−sysprep** (1) now support adding firstboot scripts to Windows guests.

virt−cat (1), **virt−edit** (1), **virt−ls** (1) now support the *−m* option, allowing you to override automatic inspection of guests and instead specify where to mount partitions (Pino Toscano).

The virt tools now have coloured output: green for OK, red for errors, blue for warnings.

Language bindings

You can build a Python distribution using `make -C python sdist`

Ruby bindings have switched from `Test::Unit` to `MiniTest`.

The Java bindings are now compatible with OpenJDK 8 (Pino Toscano).

Inspection

Oracle Linux is returned as `oraclelinux` (Nikos Skalkotos).

Linux guests which do not have */etc/fstab* can now be handled (Pino Toscano).

Minix is returned as `minix` (Pino Toscano).

Architectures

Aarch64 (64 bit ARM) support has been added.

Inspection and the `guestfs_file_architecture` call can now recognize arm (32 bit) and aarch64 guests.

Security

CVE–2014–0191 Network usage and entity resolution in XML parsing

Libguestfs previously used unsafe libxml2 APIs for parsing libvirt XML. These APIs defaulted to allowing network connections to be made when certain XML documents were presented. Using a malformed XML document it was also possible to exhaust all CPU, memory or file descriptors on the machine.

Since the libvirt XML comes from a trusted source (the libvirt daemon) it is not thought that this could have been exploitable.

This was fixed in libguestfs ≥ 1.27.9 and the fix was backported to stable versions ≥ 1.26.2, ≥ 1.24.9, ≥ 1.22.10 and ≥ 1.20.13. (Thanks: Dan Berrange, Pino Toscano).

Shellshock (bash CVE–2014–6271)

This bash bug indirectly affects libguestfs. For more information see: https://www.redhat.com/archives/libguestfs/2014–September/msg00252.html

API

New APIs

```
guestfs_clear_backend_setting
guestfs_get_backend_setting
guestfs_set_backend_setting
```
Use these APIs to set individual backend settings.

```
guestfs_cpio_out
```
Convert a directory within the disk image to cpio format.

```
guestfs_journal_get_realtime_usec
```
Fetch precise journal times, see **sd_journal_get_realtime_usec** (3).

```
guestfs_lstatns
guestfs_lstatnslist
guestfs_statns
```
Enhanced versions of `guestfs_lstat`, `guestfs_lstatlist`, `guestfs_stat` which return nanosecond timestamps.

Build changes

Libguestfs can now be built with qemu 2.x.

Add support for packaging the appliance on Mageia (Joseph Wang, Thierry Vignaud).

Augeas is now a required dependency.

Flex and bison are now required dependencies.

Internals

User-Mode Linux (UML) is no longer a supported backend (although still available). It will be supported again once someone steps in and fixes various regressions and brokenness in the UML (Linux) kernel.

You can now connect gdb to qemu by specifying `LIBGUESTFS_BACKEND_SETTINGS=gdb`

Serial BIOS (sgabios) is now used by the libvirt backend (on x86 only) so that we see early BIOS messages.

For the OCaml virt tools, exceptions are now handled and printed by a common function.

A GCC warning about large stack frames is now enabled by default. Several places that used large arrays and structures on the stack have been fixed.

There is now a test for booting the appliance repeatedly. Useful for finding kernel leaks. See: *tests/qemu/qemu−boot.c*

There is a test for testing the speed of various qemu features such as virtio-serial uploads and block device writes. See: *tests/qemu/qemu−speed−test.c*

GCC warnings are now enabled for OCaml-C bindings in the OCaml virt tools.

The code for editing files used by **virt−edit** (1), **guestfish** (1) edit command, **virt−customize** (1) −−*edit* option and more is now shared between all these utilities (thanks Pino Toscano).

The FUSE tests were rewritten in C to ensure finer control over how system calls are tested.

The *update−bugs.sh* script has been fixed so it should no longer create an empty BUGS file if the Bugzilla server is unavailable.

The **virt−resize** (1) tests now use a stochastic method to ensure much deeper and broader testing.

When the network is enabled, the appliance now uses DHCP to acquire an IP address.

If libvirt is being used then the appliance will connect to virbr0 (can be overridden by setting LIBGUESTFS_BACKEND_SETTINGS=network_bridge=<some_bridge>). This enables full-featured network connections, with working ICMP, ping and so on.

Bugs fixed

https://bugzilla.redhat.com/1153515
> empty (but set) LIBGUESTFS_BACKEND prints libguestfs: error: invalid backend:

https://bugzilla.redhat.com/1151766
> libguestfs-bash-completion package contains file /usr/share/bash−completion/completions/virt−log, but no **_virt_log()** function in that file

https://bugzilla.redhat.com/1151738
> typo error in man page of virt-edit

https://bugzilla.redhat.com/1151033
> virt−v2v conversions from VMware vCenter server run slowly

https://bugzilla.redhat.com/1150880
> virt−v2v: warning: display <graphics type='sdl'> was ignored when converting rhel5 guest with sdl graphics

https://bugzilla.redhat.com/1150867
> 'copy−file−to−file /src /dest' create file /dest even if command 'copy−file−to−file /src /dest' failed

https://bugzilla.redhat.com/1150815
> Can not find "RECURSIVE LONG LISTING" in 'man virt−diff'

https://bugzilla.redhat.com/1150701
> virt−v2v does not fstrim data disks and non-mounted filesystems

https://bugzilla.redhat.com/1150475
> Exporting 2+ disk guest to RHEV, only one disk shows after import

https://bugzilla.redhat.com/1148355
> virt-filesystems: incorrect LVM vg name when listing Fedora 21 Alpha Atomic image filesystems

https://bugzilla.redhat.com/1148072
> Option missing −−no−selinux−relabel

https://bugzilla.redhat.com/1148012
> RFE: Allow qemu-bridge-helper to be used to implement guestfs_set_network

https://bugzilla.redhat.com/1146815
> virt−v2v prints warning: /files/etc/fstab/8/spec references unknown device "cdrom"

https://bugzilla.redhat.com/1146275
> regression setting root password with virt−builder/virt−customize

https://bugzilla.redhat.com/1146017
> virt−v2v −v −x during windows guest conversion will hang at hivex: hivex_open: used block id ……

https://bugzilla.redhat.com/1145995
> Improve the error info when converting windows guest with unclean file system

https://bugzilla.redhat.com/1145916
> virt−v2v fails to convert win7 guest

https://bugzilla.redhat.com/1144891
> RFE: stat calls do not return nanosecond timestamps

https://bugzilla.redhat.com/1144766
> **futimens()** is a no-op via guestmount

https://bugzilla.redhat.com/1144201
> guestfish can not restore terminal's output colour when exit guestfish, if the terminal's background colour is black then it will make a inconvenient

https://bugzilla.redhat.com/1143949
> virt-customize option '−−password−crypto' do not work

https://bugzilla.redhat.com/1143887
> Warning shows when converting guests to rhev:chown: changing ownership of '/tmp/v2v.u48xag/*.ovf': Invalid argument

https://bugzilla.redhat.com/1143883
> warning shows when converting rhel7 guest:virt−v2v:could not update grub2 console: aug_get: no matching node (ignored)

https://bugzilla.redhat.com/1143866
> virt−v2v fails with error: cannot open Packages index using db5

https://bugzilla.redhat.com/1142416
> part-get-name give 'libguestfs: error: part_get_name: parted does not support the machine output (−m)' error message when run 'part−get−name /dev/sda 1'

https://bugzilla.redhat.com/1142186
> virt-sysprep option '−−mount−options' don't work well

https://bugzilla.redhat.com/1142158
> Illegal command 'part−get−name /dev/sda1 1' cause libguestfs appliance crashed

https://bugzilla.redhat.com/1142004
> virt−v2v prints warning:WARNING:/files/boot/grub/device.map references unknown device "xvda"

https://bugzilla.redhat.com/1141723
> virt−v2v: error: disk sda has no defined format shows when converting xen hvm guest

https://bugzilla.redhat.com/1141680
> [RFE] virt−v2 should support convert a domain with using domain's UUID instead of domain name

https://bugzilla.redhat.com/1141631
> [RFE] virt−v2 should support convert a guest to a dir-pool with using pool's uuid

https://bugzilla.redhat.com/1141157
> virt-sysprep option '−−user−accounts' don't work well

https://bugzilla.redhat.com/1141145
> virt−v2v fails to convert xen pv guests.

https://bugzilla.redhat.com/1141113
> virt−v2v fails to convert esx guests

https://bugzilla.redhat.com/1140946
> qemu-img shows error message for backing file twice

https://bugzilla.redhat.com/1140894
> No error messages output if append '−−format qcow2' after '−a guest.img', guest.img is a raw format image file

https://bugzilla.redhat.com/1140547
    virt-builder option '−−format' don't work well

https://bugzilla.redhat.com/1140156
    RFE: Export to RHEV data domain

https://bugzilla.redhat.com/1140050
    No error shows when multiple conflicting options used with virt−v2v

https://bugzilla.redhat.com/1139973
    Improve the error info when converting xen guest with no passwordless SSH access configured

https://bugzilla.redhat.com/1139543
    Improve the error info when converting guest with no space left

https://bugzilla.redhat.com/1138586
    No error shows when converting running guest with virt−v2v

https://bugzilla.redhat.com/1138184
    virt−v2v will fail when converting guests with initramfs−*kdump.img under /boot

https://bugzilla.redhat.com/1138182
    xen guest will be kernel panic after converted by virt−v2v

https://bugzilla.redhat.com/1130189
    Annoying message about permissions of /dev/kvm

https://bugzilla.redhat.com/1123007
    libguestfs 'direct' backend should close file descriptors before exec-ing qemu to avoid leaking
    !O_CLOEXEC fds

https://bugzilla.redhat.com/1122557
    virt-sparsify overwrites block devices if used as output files

https://bugzilla.redhat.com/1113156
    Empty fstab breaks libguestfs inspection

https://bugzilla.redhat.com/1111662
    Guestfs.Error("vgchange_uuid_all: Volume group has active logical volumes")

https://bugzilla.redhat.com/1109174
    virt-win-reg manual page is corrupted

https://bugzilla.redhat.com/1106548
    root gets an error accessing to a non-root dir on a snapshot guestmount VMDK img

https://bugzilla.redhat.com/1103877
    These APIs also need to add to 'guestfish −h' command list

https://bugzilla.redhat.com/1102448
    mageia package list is incorrect

https://bugzilla.redhat.com/1102447
    libguestfs 1.27.13 does not build due to libxml library order

https://bugzilla.redhat.com/1100498
    RFE: non-polling mechanism to detect guestmount −−no−fork readiness

https://bugzilla.redhat.com/1099490
    scrub-file can't handle link file

https://bugzilla.redhat.com/1099284
    typo errors in man pages

https://bugzilla.redhat.com/1098718
    RFE: virt-builder aliases

https://bugzilla.redhat.com/1096465
>   virt-builder "proxy=off" setting doesn't turn off the proxy for downloads

https://bugzilla.redhat.com/1094746
>   virt-sparsify man failes to mention what happens to snapshots within a qcow2 image (they are discarded)

https://bugzilla.redhat.com/1092753
>   virt-builder: If several repos contain the same os-version images, then they are duplicated in −l output

https://bugzilla.redhat.com/1091803
>   tar-in-opts execute failed that cause libguestfs appliance crashed

https://bugzilla.redhat.com/1088424
>   virt-resize: libguestfs error: part_set_name: parted: /dev/sdb: Error during translation: Invalid or incomplete multibyte or wide character

https://bugzilla.redhat.com/1088262
>   virt-builder cannot write to a block device

https://bugzilla.redhat.com/1085029
>   Ruby tests fail with latest Ruby

https://bugzilla.redhat.com/1079210
>   virt-sparsify −−in−place cannot sparsify as much as it should

https://bugzilla.redhat.com/1079182
>   virt-df cannot report used disk space of windows guest when updated to 6.5

https://bugzilla.redhat.com/1077817
>   virt-builder error: "syntax error at line 3: syntax error"

https://bugzilla.redhat.com/1056290
>   virt-sparsify overwrites block devices if used as output files

https://bugzilla.redhat.com/812970
>   virt-rescue cannot set ≥<rescue> prompt, on Ubuntu 12.04

SEE ALSO

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

AUTHOR

> Richard W.M. Jones

COPYRIGHT

LICENSE

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.