

### Making KVM autotest useful for KVM developers

Lucas Meneghel Rodrigues lmr@redhat.com

#### KVM Forum 2011

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#### 1 Software Usability

**2** Usability problems

3 Initiatives to improve usability

4 How to contribute

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## Usability

- In layman terms, it is the perceived ease of use of a human made  ${\rm design}^1$ 



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<sup>1</sup>http://en.wikipedia.org/wiki/Usability ← □ ▷ ← ∂ ▷ ← ≥ ▷ ← ≥ ▷ ≥ ∽ Q ⊂ Lucas Meneghel Rodrigues lmr@redhat.com Making KVM autotest useful for KVM developers



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  - Errors: How many errors do users make? How severe are these errors? How easily can they recover from the errors?
  - Satisfaction: How pleasant is it to use the design?

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## What KVM autotest offers

• Knowledge of guest OS install (lots of them)

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• Catch of guest kernel crashes (linux platform)



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- Test grid might even automate host install
- Good right? But it's worth nothing if people can't use it

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## Clash of use cases - Personas

#### KVM QA

• Needs to provide automated and regular testing of codebase

#### KVM R&D

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- On a perfect world, a single command line would be the goal

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• Test config format to define a matrix of tests to be executed

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- Test config format to define a matrix of tests to be executed
- It has its merits, makes sense for the QA case

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- However, it's showing up to be cumbersome for R&D case

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- Test config format to define a matrix of tests to be executed
- It has its merits, makes sense for the QA case
- However, it's showing up to be cumbersome for R&D case
- We will re-think the R&D use case, proposing 'a back to autotest basics' approach, that we want to discuss on some BoF session

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## Initiatives to improve KVM autotest usability

• Sane defaults

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- Sane defaults
- Minimizing points of failure

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- Sane defaults
- Minimizing points of failure
- Improve reporting

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- Sane defaults
- Minimizing points of failure
- Improve reporting
- Rigorous review and automated checks to keep code good quality

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- Sane defaults
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- Rigorous review and automated checks to keep code good quality
- Documentation. Tips of the week

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- Sane defaults
- Minimizing points of failure
- Improve reporting
- Rigorous review and automated checks to keep code good quality
- Documentation. Tips of the week
- Conversation. Lots of it

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### Sane defaults

• Use pre-installed qemu-kvm

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## Sane defaults

- Use pre-installed qemu-kvm
- Install a single, widely available guest OS

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## Sane defaults

- Use pre-installed qemu-kvm
- Install a single, widely available guest OS
- Boot it and shut it down

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## Sane defaults

- Use pre-installed qemu-kvm
- Install a single, widely available guest OS
- Boot it and shut it down
- We can improve the sample config comments

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## Minimizing points of failure

• Graceful degradation of optional functionality

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## Minimizing points of failure

- Graceful degradation of optional functionality
  - kvm\_stat profiler

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## Minimizing points of failure

#### • Graceful degradation of optional functionality

- kvm\_stat profiler
- VM screenshot conversion

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## Minimizing points of failure

- Graceful degradation of optional functionality
  - kvm\_stat profiler
  - VM screenshot conversion
- Minimizing obligatory dependencies

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### Improve reporting

• Do not depend on web interface for reports

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### Improve reporting

- Do not depend on web interface for reports
  - Autotest upstream now has html reports per job

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### Improve reporting

- Do not depend on web interface for reports
  - Autotest upstream now has html reports per job
  - Uses some fancy javascript to spice up things

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#### Documentation

• Tips of the week series - How tos

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### Documentation

- Tips of the week series How tos
  - Week 1 Installing virtio drivers

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  - Week 3 Running tests with existing guest
  - Week 4 Writing your own tests
  - Week 5 You name it!

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### Further work

• In the end, our goal would be to have

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### Further work

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- Would probably call a text menu helping user to configure some few questions, or assume some defaults. But that needs more thinking.

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- make autotest target
- Would probably call a text menu helping user to configure some few questions, or assume some defaults. But that needs more thinking.
- Sane way to entirely bypass the cartesian config system, for the single developer use case.

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### How to contribute

#### http://autotest.kernel.org/wiki/KVMAutotest

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- The autotest team is waiting to implement your suggestions

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### Contact

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- Imr@redhat.com
- Autotest mailing list (autotest@test.kernel.org)
- KVM mailing list (kvm@vger.kernel.org)

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