# Overview of openQA

The heart of openSUSE's automated Testing

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openSUSE

# Testing openSUSE releases ...

- NET images
- DVD images
- Live images
- Biarch DVD
- Rescue CD

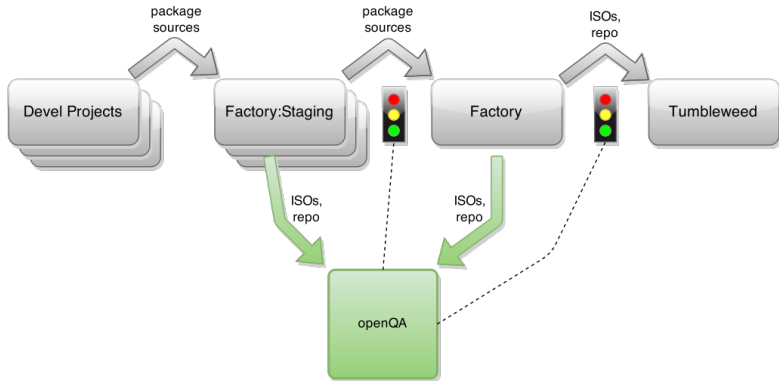# Testing openSUSE releases ...

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- Desktop
- Laptop
- UEFI
- Legacy
- x86_64
- aarch64
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- RAID
- LVM
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- btrfs
- LUKS
- ...

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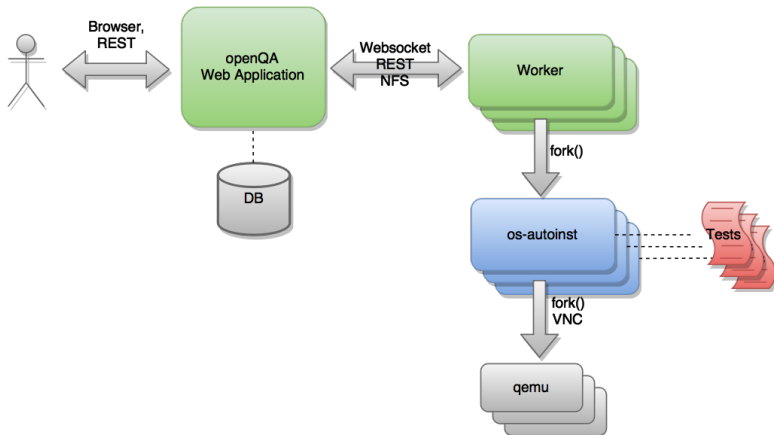**... needs automation!**

# openQA in openSUSE

# Basic Ideas

- ▶ test full stack: bootloader, installer, desktop, apps
- ▶ image recognition to "see like a human"
- ▶ act on the image seen (keyboard, mouse)
- ▶ use virtualization
- ▶ parallelize
- ▶ report!

# Architecture

# openQA welcome screen

# openQA build overview

Test result overview

Overall Summary of **openSUSE Tumbleweed** build 20150425

Passed: 74  Soft Failure: 26  Failed: 5

Flavor: DVD

| Test | i586 | x86_64 |
| --- | --- | --- |
| RAID0 | - | ↻ ● |
| RAID1 | - | ↻ ● |
| RAID10 | - | ↻ ● |
| RAID5 | - | ↻ ● |
| cryptlvm | ↻ ● yast2_bootloader | ↻ ● |
| dual_windows8 | - | ↻ ● |
| ext4 | ↻ ● | ↻ ● |
| gnome | ↻ ● gnucash | ↻ ● gnucash |
| gnome@Laptop_32 | ↻ ● gnucash | - |
| gnome@Laptop_64 | - | ↻ ● gnucash |

# openQA job overview



Results for opensuse-Tumbleweed-DVD-i586-Build20150425-cryptlvm

Result: **passed** finished 2 days ago ( 36:50 minutes )

| Test | Result | References |
|---|---|---|
| isosize ! | passed |  |
| bootloader 🔌 | passed |  |
| welcome 🔌 | passed |  |
| good_buttons 🔌 | passed |  |
| installation_mode 🔌 | passed |  |

# A Job in openQA

A job ...

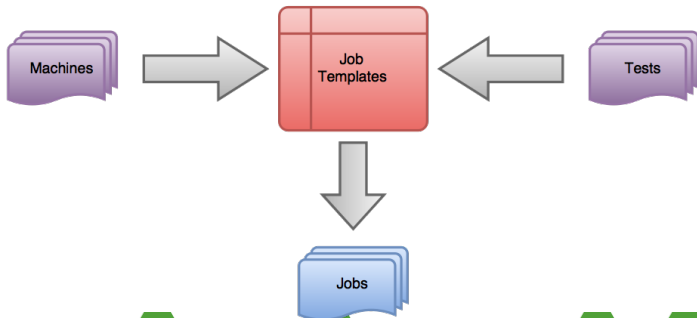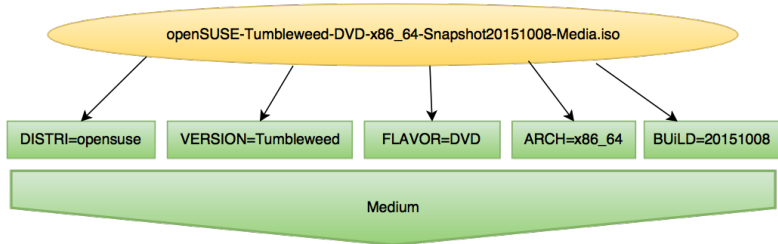- ▶ is a set of tests to run (installation, log in, launch Firefox..)
- ▶ has a state (running, scheduled, cancelled, ...)
- ▶ has a result (passed, failed)
- ▶ has settings
  - ▶ machine settings (disk size, CPU, ...)
  - ▶ media/product settings (ISO name, repo to use, ...)
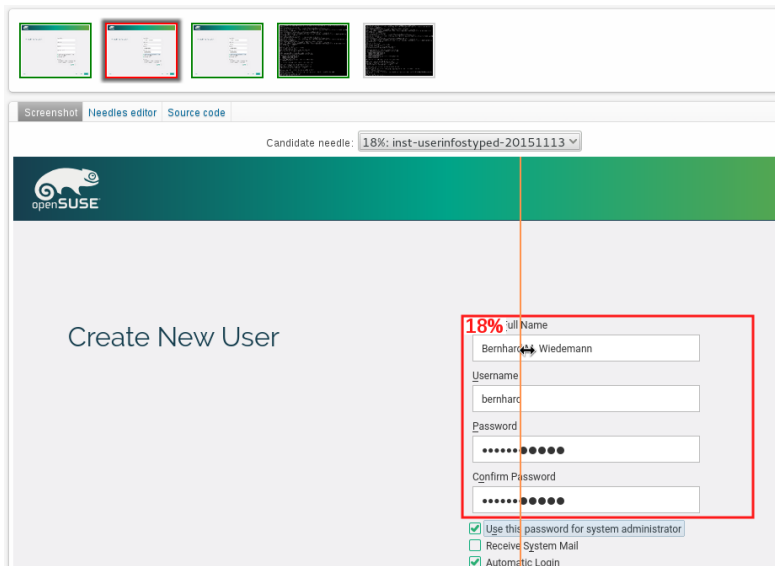  - ▶ test suite settings (Desktop, partitioning, ...)

# Job Templates

# openQA test result details

| | | |
|---|---|---|
| good_buttons | passed |  |
| installation_mode | passed |  |
| partitioning | passed |  |
| partitioning_finish | passed |  |
| installer_timezone | passed |  |
| logpackages | passed |  |
| installer_desktopselection | passed |  |
| user_settings | failed |  |
| installation_overview | none | |

# openQA test result details

# Needle Editor

# Test API

```perl
use base "basetest";
use strict;
use testapi;

sub run {
    # wait for bootloader to appear
    assert_screen "bootloader", 30;

    # "Install" is second option
    if (!get_var('LIVETEST')) {
      send_key "down";
    }

    # press enter to boot current entry
    send_key "ret";

    # wait for the desktop to appear
    assert_screen "desktop", 300;
}
```

# Advanced Features

- interactive needling mode
- real hardware testing
- multi machine support
- disk images, autoyast profiles etc as result

# Future Plans

- enhance multi machine networking
- even more support for hardware testing
- get rid of NFS
- more application testing
- do actual releases

# Summary

- state of the art web app
- test framework for fully automated OS and application testing
- visual documentation of test result, including video
- log files for failures
- simple API for tests
- remote controllable via REST API

# Get it

Web site http://os-autoinst.github.io/openQA/

Code https://github.com/os-autoinst

**openQA** documentation, server, worker

**os-autoinst** isotovideo tool and the API for tests.

**os-autoinst-distri-opensuse** openSUSE tests

**os-autoinst-needles-opensuse** openSUSE needles

RPMs https://build.opensuse.org/project/show/devel:openQA

# Contact

- openSUSE project management tool
  https://progress.opensuse.org/projects/openqav3
- #openSUSE-factory IRC channel at Freenode
- opensuse-factory@opensuse.org

Questions?

Join the conversation,
contribute & have a lot of fun!
www.opensuse.org

Thank
you.

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## Credits

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