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Automated testing with OpenQA

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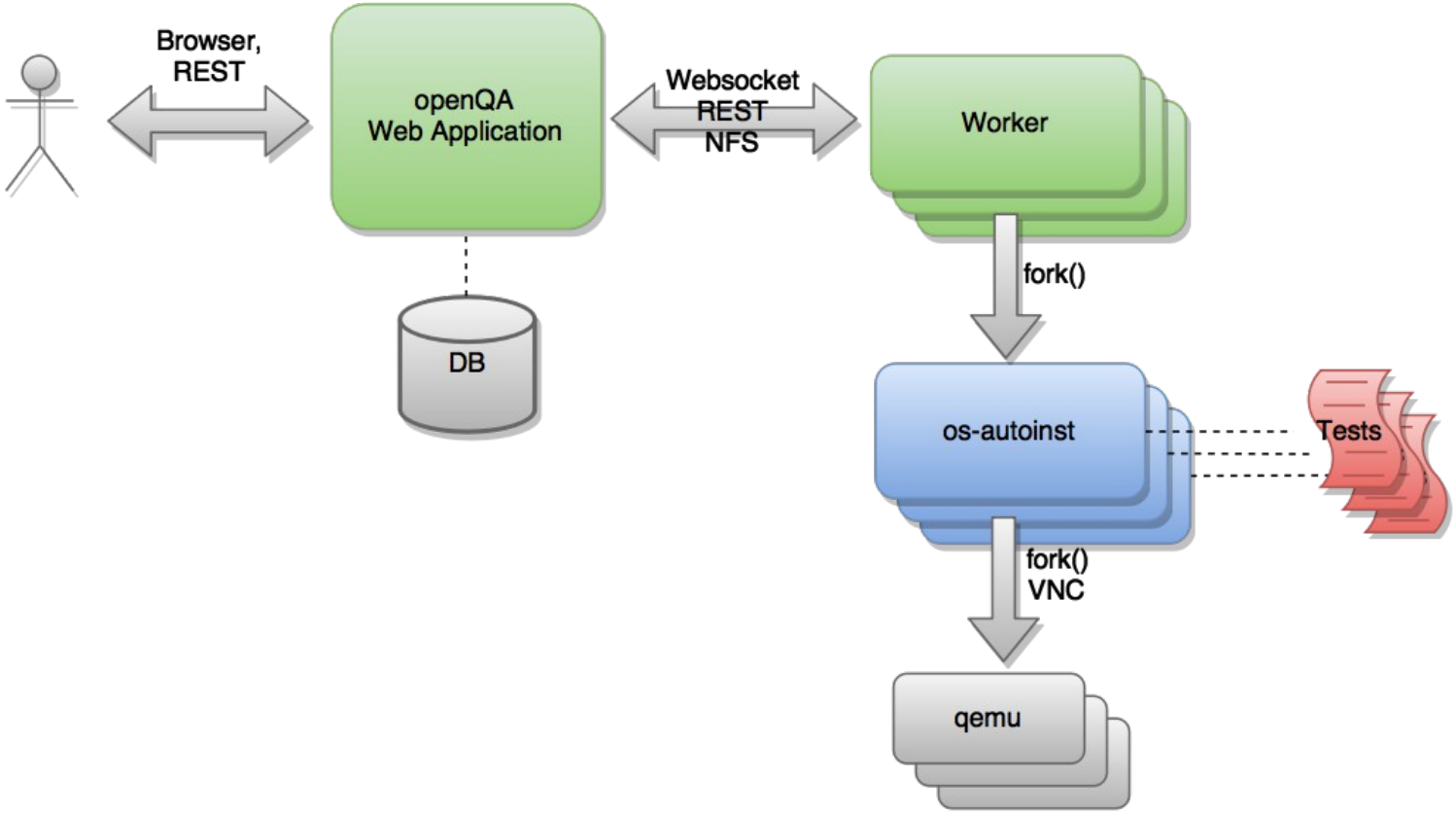
SUSE

OpenQA

- Started in 2009
- System level automated testing
- Used by openSUSE, Fedora, Debian, GNOME and others
- No changes to the software under test
- Controls SUT via keyboard/mouse
- Gets results by looking at the screen (using OpenCV) or text data via serial port

OpenQA architecture



OpenQA git repositories

openQA Development

http://open.qa/

Overview | Repositories 19 | Packages | People 19 | Projects 1

Popular repositories

openQA

openQA web-frontend, scheduler and tools.

Perl ☆ 208 155

os-autoinst

OS-level test automation

Perl ☆ 106 157

os-autoinst-distri-opensuse

os-autoinst test cases for openSUSE

Perl ☆ 55 219

os-autoinst-needles-opensuse

os-autoinst needles for openSUSE

☆ 10 110

People

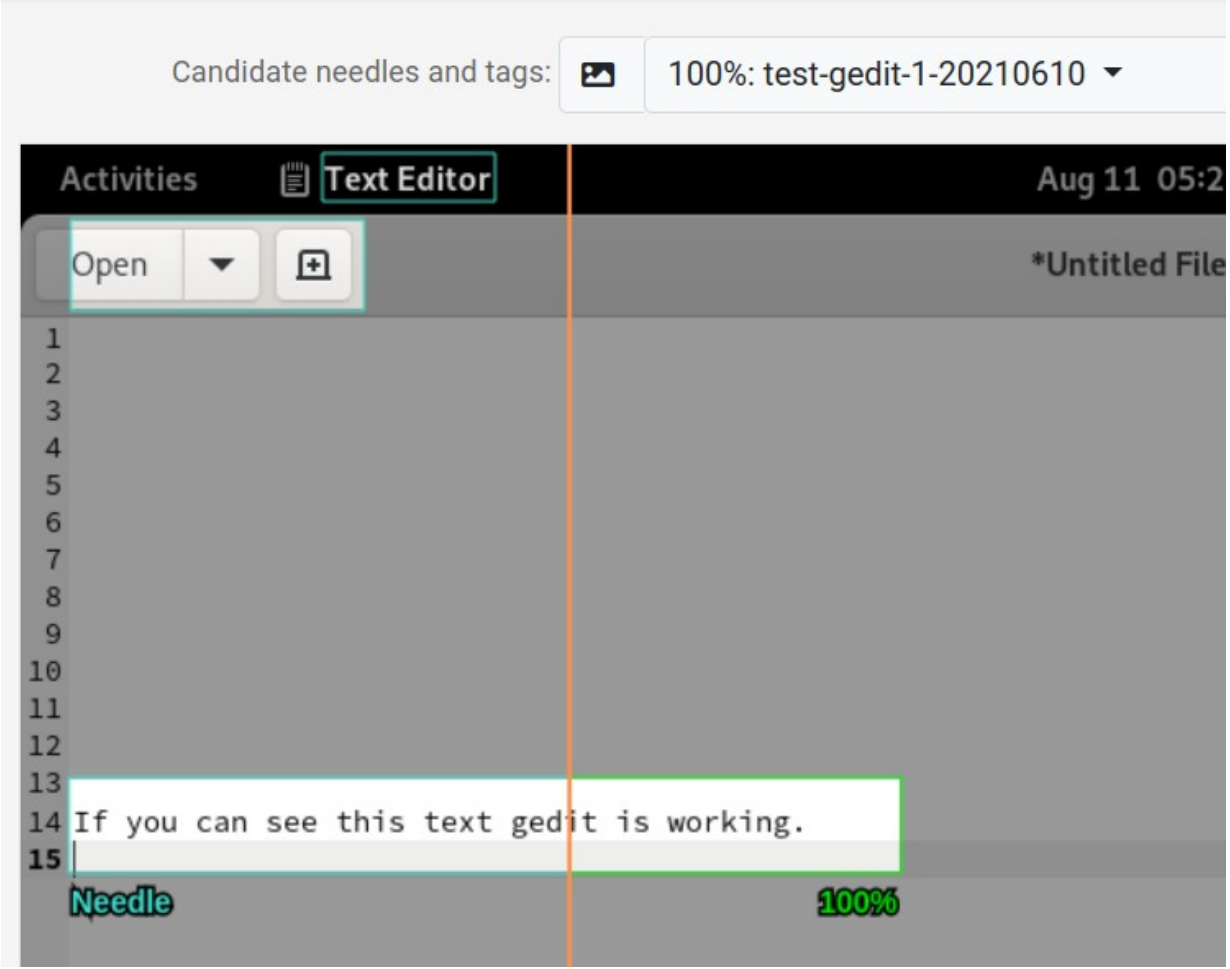
Top languages

Perl Python Shell HTML SaltStack

SUSE

Needles


```
{
  "area": [
    {
      "ypos": 192,
      "xpos": 246,
      "type": "match",
      "height": 35,
      "width": 147,
      "click_point": {
        "xpos": 112.5,
        "ypos": 17.5
      }
    }
  ],
  "properties": [],
  "tags": [
    "inst-oninstallation"
  ]
}
```

Testing gedit

```
18 use base "x11test";
19 use strict;
20 use warnings;
21 use testapi;
22
23 sub run {
24     my ($self) = @_;
25     x11_start_program('gedit');
26     $self->enter_test_text('gedit', slow => 1);
27     assert_screen 'test-gedit-1';
28     send_key 'alt-f4';
29     assert_screen 'gedit-save-changes';
30     send_key 'alt-w';
31 }
```

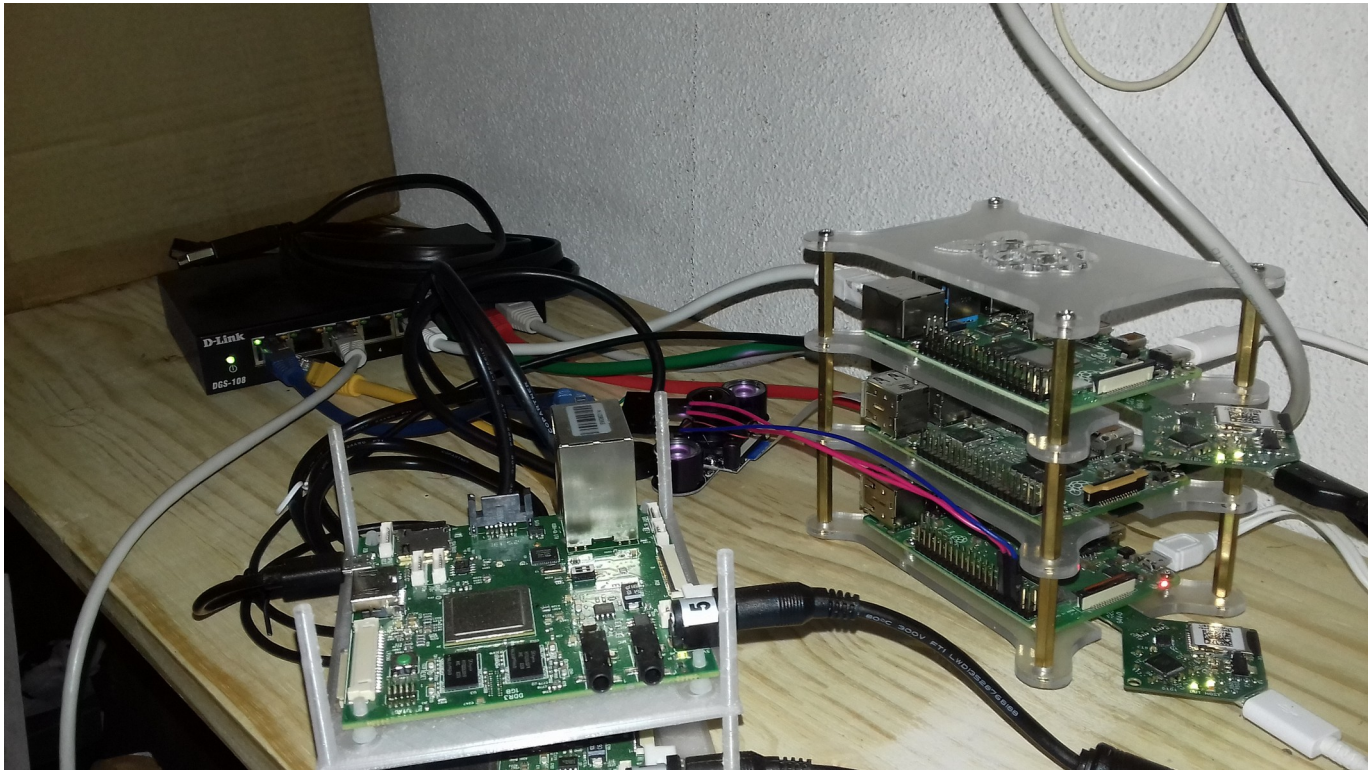
YES, test are written in Perl!

But there is support for Python now.

Not just for GUI testing

```
sub run() {
    # change to root
    become_root;

    # output zypper repos to the serial
    script_run "zypper lr -d > /dev/$serialdev";

    # install xdelta and check that the installation was successful
    assert_script_run 'zypper --gpg-auto-import-keys -n in xdelta';

    # additionally write a custom string to serial port for later checking
    script_run "echo 'xdelta_installed' > /dev/$serialdev";

    # detecting whether 'xdelta_installed' appears in the serial within 200 seconds
    die "we could not see expected output" unless wait_serial "xdelta_installed", 200;

    # capture a screenshot and compare with needle 'test-zypper_in'
    assert_screen 'test-zypper_in';
}
```

Also supports testing on real hardware



SUSE

And a lot more

- **Machines, Products, Testsuites and Job templates**
- **CLI tools and REST api**
- **Assets and job dependencies**
- **Multi machine tests**
- **Dashboards and result viewer, can parse and import ‘external’ test results from LTP, Junit XML and others**

Links

- **https://open.qa**
- **https://github.com/os-autoinst**
- **https://openqa.opensuse.org/**

Thank you.