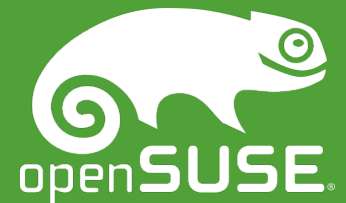# Selenium in OpenQA

testing web pages and more

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openSUSE

OpenQA system

- Release management tool

  .. with included acceptance/integration testing

OpenQA tests

- UX focus

- Multi-Machine - parallel, serial, results reuse

- Advanced networking – open vSwitch support

- Multiple architecture support

- Scalable – remote workers, asset caching

- Infrastructure integration – RabbitMQ, fedmsg, GRU

testing web - OpenQA

```
x11_start_program('firefox');
assert_screen('firefox_started');
assert_and_click('url_bar');
type_string("www.opensuse.org\n");
assert_screen('opensuse.org-looks-fine');
assert_and_click('link_to_portal');
...
```

testing web - Selenium

```perl
$driver->find_element('#user-action a')->click();
$driver->find_element_by_link_text('Audit log')->click();
wait_for_data_table;
like($driver->get_title(), qr/Audit log/, 'on audit log');
my $table = $driver-
>find_element_by_id('audit_log_table');
ok($table, 'audit table found');

my $search = $driver->find_element('input.form-control');
ok($search, 'search box found');

my @entries = $driver->find_child_elements($table,
'tbody/tr', 'xpath');
is(scalar @entries, 3, 'three elements without filter');
```

OpenQA tests architecture

- ~/main.pm

- ~/tests/

- ~/needles/

- ~/lib/

- ~/data/

- ~/products/

OpenQA tests architecture

- ~/main.pm   ➜test loader
- ~/tests/   ➜test directory

                     } mandatory

- ~/needles/   ➜matching templates
- ~/lib/   ➜support libraries
- ~/data/   ➜static test data
- ~/products/   ➜product specific data

lib/

- Automatically added to @INC

- Base test modules and libraries

- No ABI specified for libraries

selenium.pm

- Install phase

    - selenium-server on SUT

    - chrome and chromedriver

- Run phase

    - obtain IP of SUT

    - start server and connect driver (Selenium::Remote::Driver)

- Helper subroutines

    - wait_for_xpath, wait_for_link, ...

Better of both worlds

```perl
my $driver = selenium_driver();
$self->register_barriers('suma_minion_ready');

wait_for_link("Pending Minions", -tries => 10, -wait => 15,
-reload_after_tries => 1)->click();
wait_for_xpath("//button[\@title='accept']")->click();

wait_for_link(".openqa.suse.de", -tries => 10, -wait => 15,
-reload_after_tries => 1)->click();

save_screenshot;

$self->apply_highstate();

$self->registered_barrier_wait('suma_minion_ready');
```
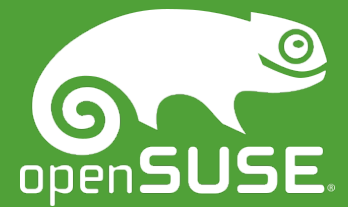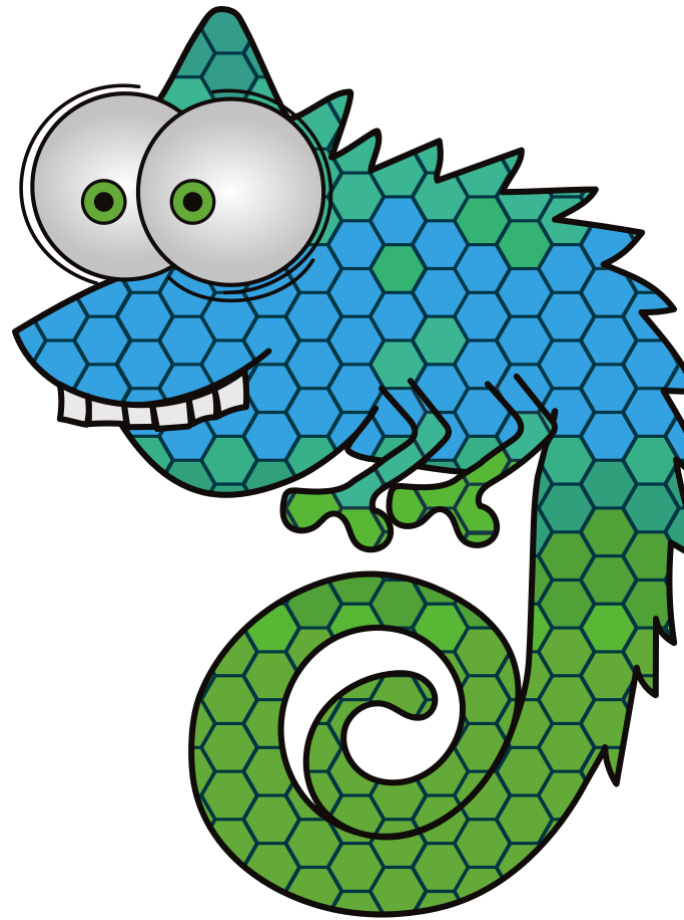
Demo

Future

- new helpers

- openSUSE distri split into individual libraries

- support for WinAppDriver as an exercise

Questions?

openSUSE.

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