Automated browser interaction using WWW::Selenium

Gordon Child

WWW::Selenium

- Details on Selenium
- Authoring Selenium tests
- Tweaking the test

What is Selenium

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    - Selenium Server (RC)
    - Selenium Grid

How does Selenium work?

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WWW::Selenium

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SeleniumRC

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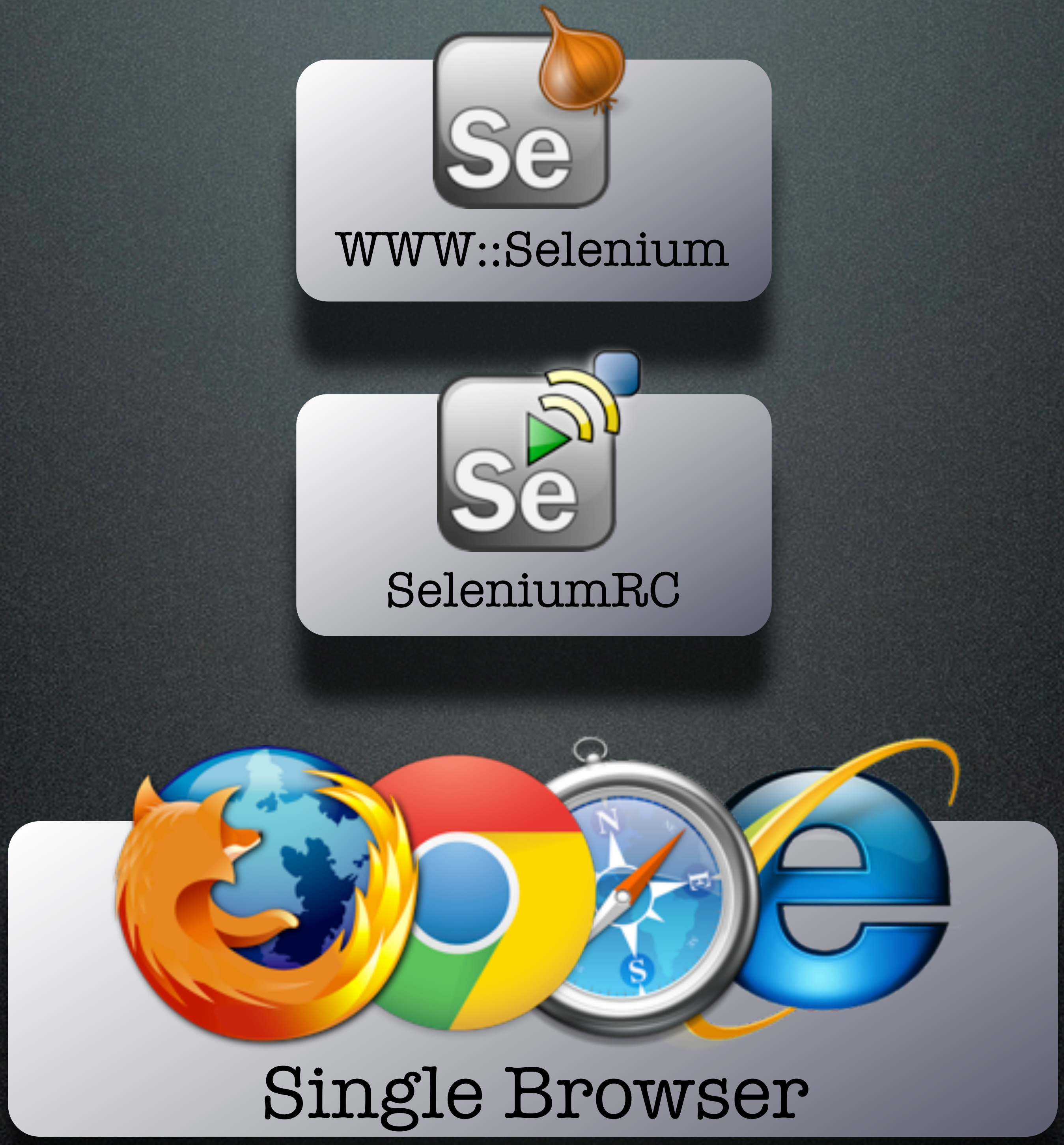

WWW::Selenium

SeleniumRC

Single Browser

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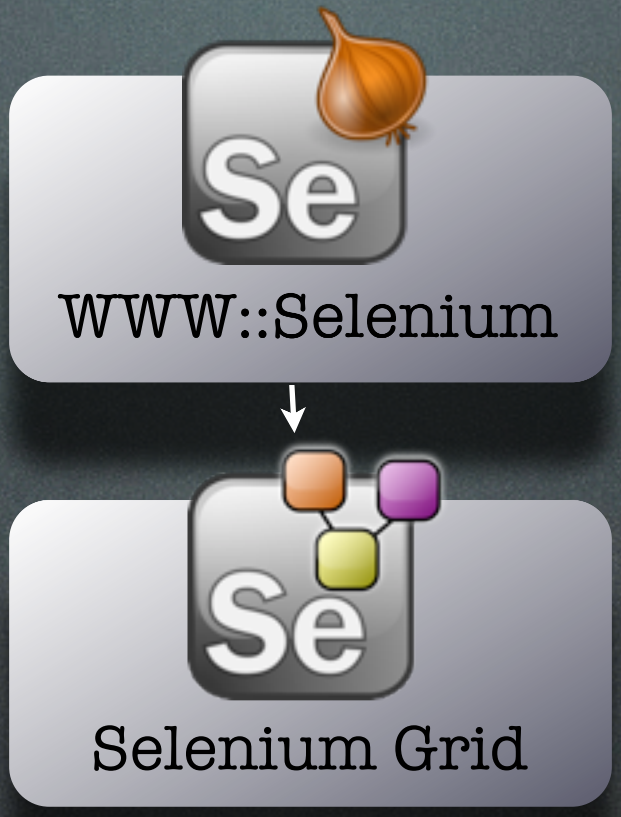

WWW::Selenium

Selenium Grid

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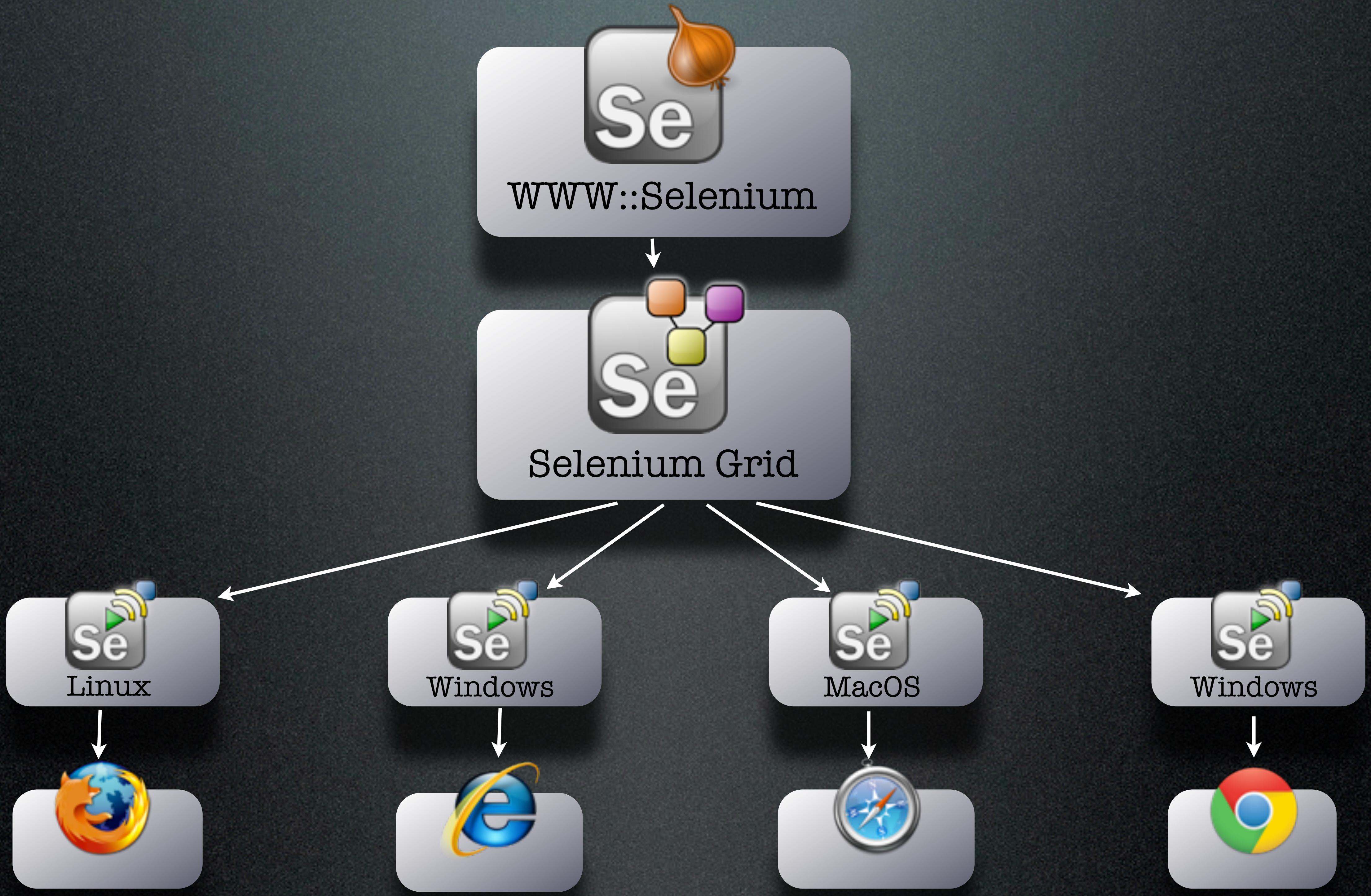
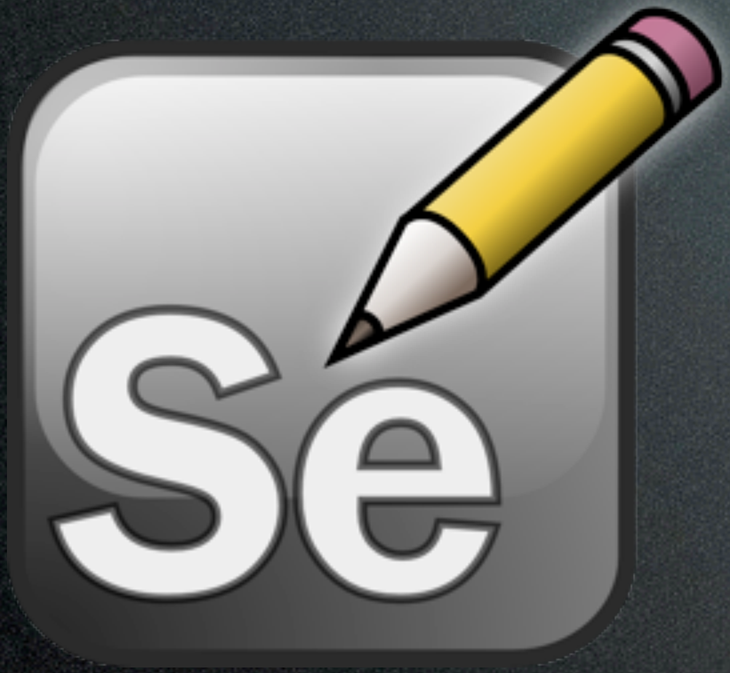


How does Selenium really work?

1. Selenium client (WWW::Selenium) connects to SeleniumRC
2. SeleniumRC prepares Firefox session with special extension installed
3. Selenium Core appears
4. Using javascript, Selenium Core launches a new child window which becomes the test session
5. Selenium Core controls test session all via javascript functions
6. Results are reported back to SeleniumRC
7. SeleniumRC reports back to Client

How do I author Selenium Tests?



Record using SeleniumIDE

Convert to Perl

test!
debug...
test!
debug...
ad infinitum

Demo

http://gordonchild.com/sel/google_maps.t

Waiting on the browser...

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Waiting on the browser...

- wait_for_page_to_load/click_and_wait
  - Works for the most part
  - Race condition can occur where the page loads faster than selenium can put in it's onLoad javascript event

Waiting on the browser...

- wait_for_element_present
  - The most recommended way of waiting for a page
  - Issues can occur if website uses addEventListener in onLoad events

Waiting on the browser...

- Other useful selenese commands
  - wait_for_condition (waits for a true value to any javascript sent)
  - wait_for_text_present
  - wait_for_attribute
  - wait_for_visible

http://release.seleniumhq.org/selenium-core/0.8.0/reference.html

Demo cont…

Searching for Elements

- id=my_id   # looks for element with id
- name=username #name attribute
- dom=document.forms[‘myForm’] #uses javascript to find element in the DOM
- xpath=//div[@id=‘foo’]/span[2]/a   #find element using the xpath
- link=Click*   #looks for a link with the text that matches the pattern
- css=span[class=”main”] #css selector

Demo

http://gordonchild.com/sel/wordpress.t

Events

- type_keys
    - fires events properly
    - has troubles if you use special chars(!@#$%^&*)
- key_press_native, key_down_native, key_up_native
    - uses java.awt.Robot to emulate a keyboard
    - also has troubles with special chars

Events

- type + fire_event
  - Allows you to manually fire an event using javascript
  - If the listener has not yet been loaded when the event is fired, the desired effect will not happen.

Demo

http://gordonchild.com/sel/facebook_album_fetcher.t

Other useful Selenese phrases

- get_eval($script)
  - executes javascript eval
- window_maximize()
- window_focus()
- capture_screenshot($filename)
- capture_screenshot_to_string()
  - returns base64 encoded string of screenshot

The End