Splinter

Python Framework for Testing Web Applications

$ whoami

>> *Evgeny Shmarnev*

- work in Prague for SUSE
- Sr. OpenStack Automation Engineer
- specializing in Linux / OpenStack / Containers
- Docker Prague Meetup organizer

What is it all about?

Testing the web apps (easy way)

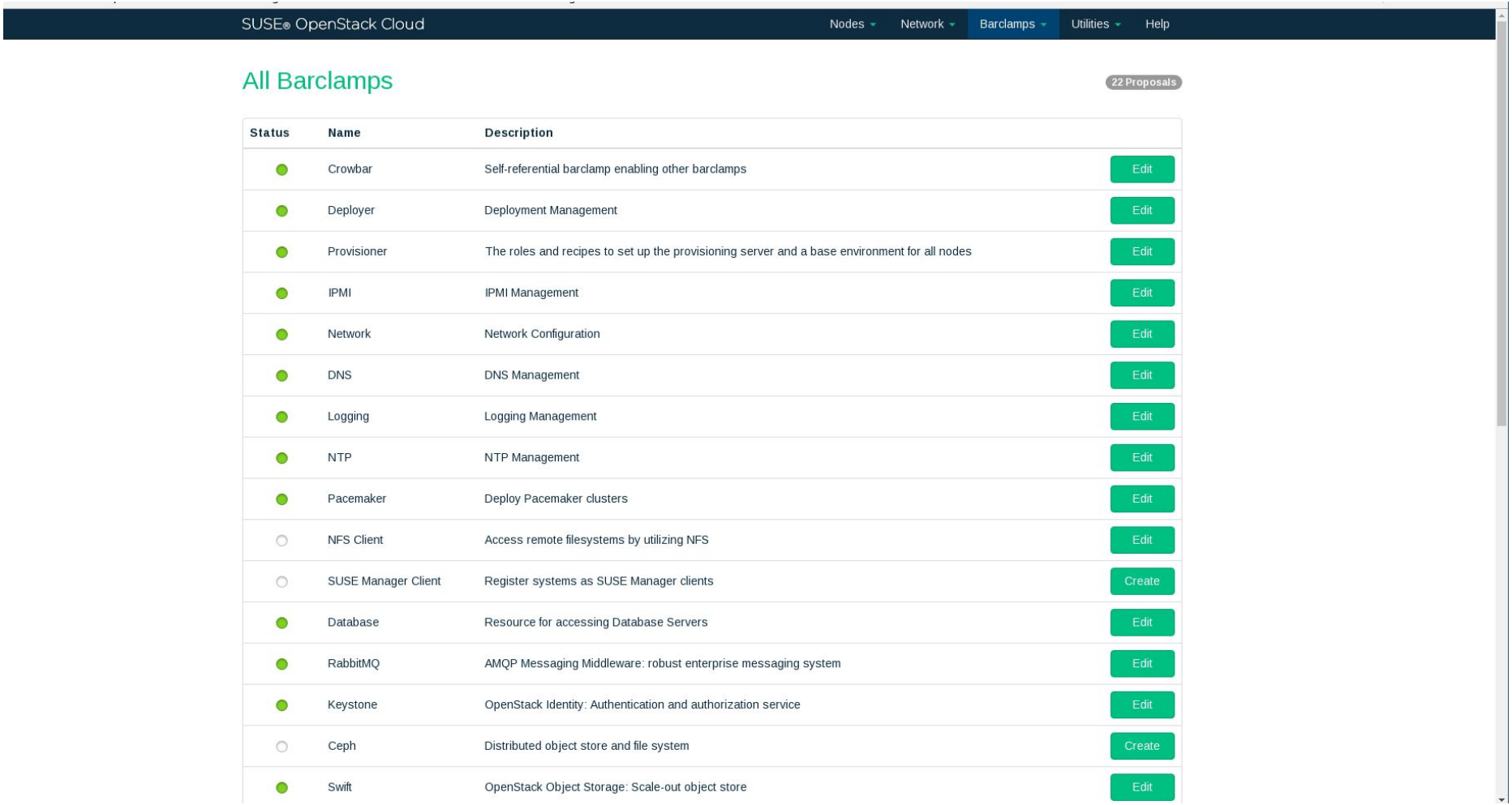
A Small Story

Hackweek at SUSE

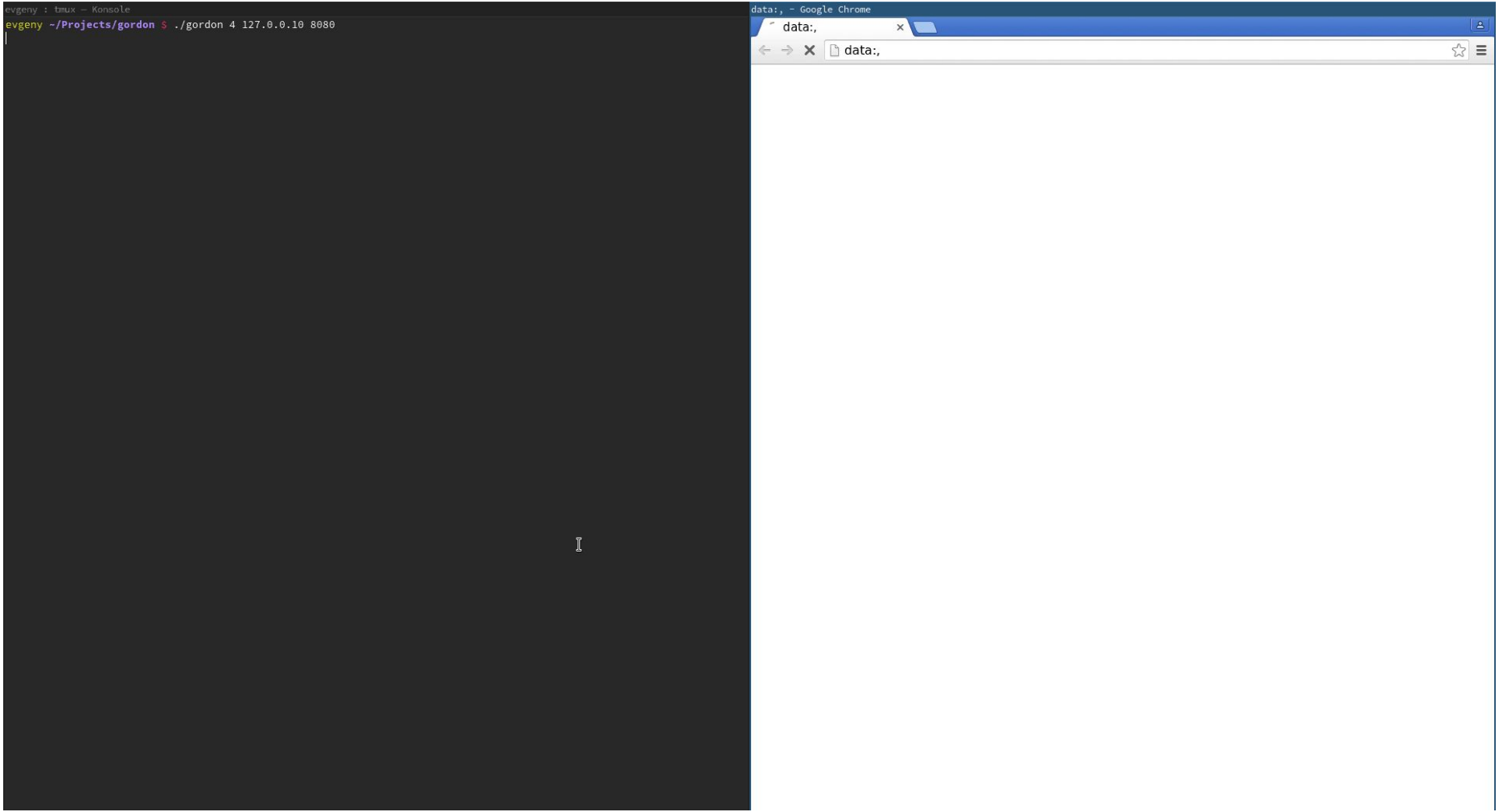
- a SUSE tradition since 2007
- two times per year
- the time for engineers to experiment, innovate & learn interruption-free
- more info: https://hackweek.suse.com/

Crowbar

- https://github.com/crowbar/crowbar
- It helps us to deploy the SUSE Cloud
- And it looks like this...


SUSE® OpenStack Cloud
Nodes
Network
Barclamps
Utilities
Help
All Barclamps
22 Proposals
Status
Name
Description
Crowbar
Self-referential barclamp enabling other barclamps
Edit
Deployer
Deployment Management
Edit
Provisioner
The roles and recipes to set up the provisioning server and a base environment for all nodes
Edit
IPMI
IPMI Management
Edit
Network
Network Configuration
Edit
DNS
DNS Management
Edit
Logging
Logging Management
Edit
NTP
NTP Management
Edit
Pacemaker
Deploy Pacemaker clusters
Edit
NFS Client
Access remote filesystems by utilizing NFS
Edit
SUSE Manager Client
Register systems as SUSE Manager clients
Create
Database
Resource for accessing Database Servers
Edit
RabbitMQ
AMQP Messaging Middleware: robust enterprise messaging system
Edit
Keystone
OpenStack Identity: Authentication and authorization service
Edit
Ceph
Distributed object store and file system
Create
Swift
OpenStack Object Storage: Scale-out object store
Edit

Python for the rescue!


evgeny : tmux — Konsole
evgeny ~/Projects/gordon $ ./gordon 4 127.0.0.10 8080
data:, - Google Chrome
data:,
data:,

Splinter

“Splinter is an open source tool for testing web applications using Python. It lets you automate browser actions, such as visiting URLs and interacting with their items.”

Abstraction Layer

Splinter is just an abstraction layer on top of Selenium. It makes easy to write automation tests for web applications.

Why Use Splinter?

So why?

- It’s really simple! (stay with me, samples will appear on the next slides :))
- You can use the same test code to do browser-based testing with Selenium as the backend and “headless” testing (no GUI) with zope.testbrowser as the backend.
- Splinter has drivers for Chrome and Firefox for browser-based testing, and zope.testbrowser and PhantomJS for headless testing.

Splinter's Features:

- Simple API
- Multi webdrivers (chrome, firefox, phantomjs, zopetestbrowser, remote webdriver)
- CSS and Xpath selectors
- Execute JavaScript
- Works with ajax and async JavaScript

Samples

Selenium

```
...

elem = browser.find_element.by_name('username')
elem.send_keys('janedoe')

...
```

VS

Splinter

```
...

browser.fill('username', 'janedoe')

...
```

AND MORE...

```
from splinter import Browser

with Browser() as browser:
    # Visit URL
    url = "http://www.bing.com"
    browser.visit(url)
    browser.fill('sb_form_q', 'evgeny shmarnev twitter')
    # Find and click the 'search' button
    button = browser.find_by_id('sb_form_go')
    # Interact with elements
    button.click()
```

Step by step

First of all, import `Browser` and instantiate it

```
from splinter import Browser
with Browser() as browser:
```

Step by step

Visit the website using the browser.visit method

```
url = "http://www.bing.com"
browser.visit(url)
```

Step by step

After a page is loaded, you can perform actions, such as clicking, filling text input, checking radio and checkbox.

```
browser.fill('sb_form_q', 'evgeny shmarnev twitter')
```

Step by step

Tell Splinter which button should be pressed. A button - or any other element - can be identified using its **css**, **xpath**, **id**, **tag** or **name**.

```
button = browser.find_by_id('sb_form_go')

button.click()
```

I can do EVERYTHING with Splinter!

I should throw Away all my Selenium stuff!

HELL NO!

Don't forget about The Dunning-Kruger effect!

"is a cognitive bias, wherein persons of low ability suffer from illusory superiority when they mistakenly assess their ability as greater than it is."

Help the Project

- https://github.com/cobrateam/splinter

Review

- Splinter is cool
- Splinter is simple
- Splinter is fast…
- ...even in terms of development time

But...

If you need to test a complex web applications you still should use some Selenium code.

Useful links

- Docs: https://goo.gl/ffcXBv
- GitHub: https://goo.gl/Z7Zl4W

My Contacts

E-mail: shmarnev@gmail.com

Twitter: eshmarnev

GitHub: Evalle

Questions?

Thank you!

PyCon CZ 2017
Prague, 8–10 June