

An easy approach to do web automation

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Outline

- Background
- Approaches
- Demo
- Limitations

Background

- I joined CNV QE team last year and then I was working on the UX team without any web automation experience, I have to do researches on my own. I could find some existing UI frameworks on the Internet, but they're not easy.
- I was told to look at Selenium.
- I found something interesting casually.
- It's not about new technologies.

Background

My understandings about web UI operations:

- Browsing web is all about inputs and navigations.
- Navigation is all about clicking buttons or links.

Two problems need to be solved

- Automate inputs
- Automate navigation - (Click button or links)

Approaches

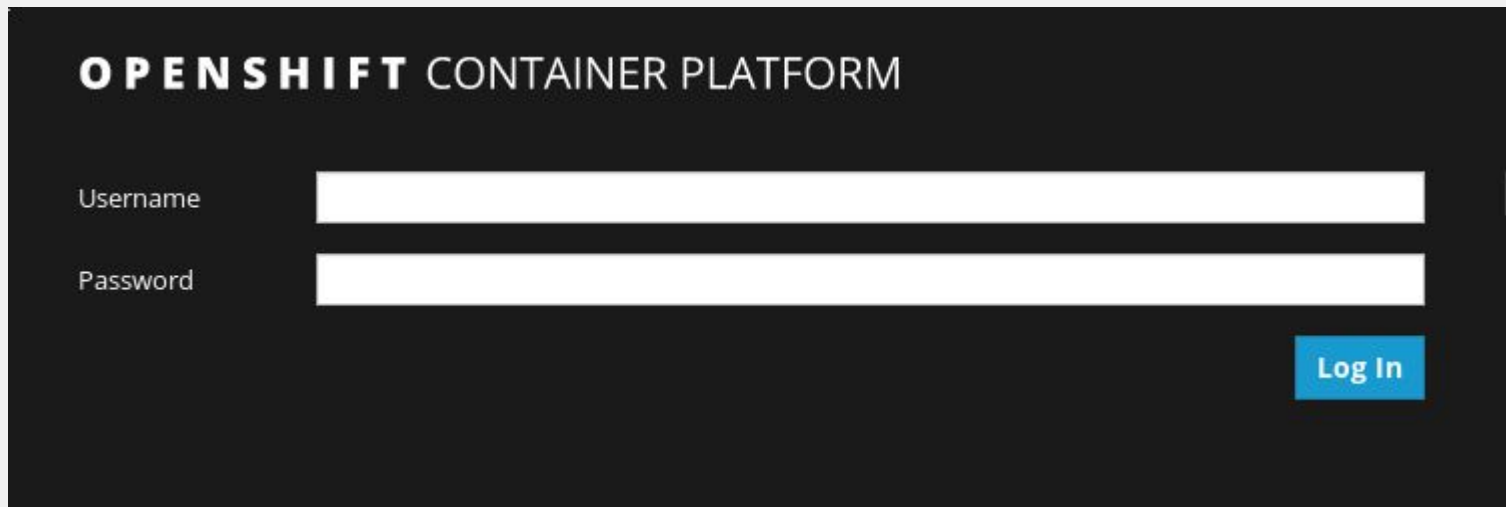
- A tool or library to send keys.
It even does not need it to control mouse, handle window and event listener. But do not just limited to keys, use others when it's necessary.
- An approach to do navigations.
Simply, it's about to follow links.

Approaches

- Key tool: [robotgo](#) (Go Native cross-platform GUI automation)
 - Alternatives: It can be other tools written in any languages
- Follow link tool: [Vimium](#) (Chrome extension)
 - Alternatives: QuantumVim, vim-vixen

Examples about Inputs

Input string into dialog



A login dialog for the OpenShift Container Platform. The dialog has a dark background with the text "OPENSIFT CONTAINER PLATFORM" at the top. Below this, there are two input fields: "Username" and "Password". The "Username" field is a white rectangle. The "Password" field is a white rectangle. To the right of the "Password" field is a blue button with the text "Log In".

OPENSIFT CONTAINER PLATFORM

Username

Password

Log In

Examples about Inputs

```
robotgo.TypeString("test")  
robotgo.KeyTap("-", "shift")  
robotgo.TypeString("admin")
```

```
robotgo.KeyTap("tab")
```

```
robotgo.TypeString("123456")
```

```
robotgo.KeyTap("enter")
```

Examples about following links

Press “f” to show the shortcuts of links

L

tual Machines

 > vm-cirros

vm-cirros created 7 minutes ago

M

ibevirt.io/vm

SM

irros

P

Details

SP

metrics

SS

Events

Status

Node:

cnv-executor-qwang-1011-node1.example.com

Virtual Machine Instance:

+

W

irros

Pod:

SW

auncher-vm-cirros-s7z4v

Configuration

Memory:

64M

CPU:

--

Operating system:

--

Examples about following links

To follow a link:

```
robotgo.KeyTap("f")  
robotgo.Sleep(1)  
robotgo.TypeString("sl")  
robotgo.Sleep(5)
```

All you need to do is replacing the shortcut of each link,
and repeating these 4 simple lines.

Demo

Limitations

- It needs to open browser
- It requires an add-on for browser
- The shortcuts are not predictable on modern websites
- Cannot run parallelly
- Cannot integrate with CI, at least not easy

Questions?

Thank You!