

Docker + Grids

Podem facilitar o seu trabalho

Eduardo Mendes

Testes com Selenium

Uma nova esperança



Olar BBs

{twitter,
git(lab|hub),
instagram,
telegram
} /dunossauro



youtube.com/c/eduardomendes

The screenshot shows the YouTube channel page for 'Live de Python' by Eduardo Mendes. The channel has 7,88 mil inscritos. The main navigation bar includes links for INÍCIO, VÍDEOS (which is underlined), PLAYLISTS, COMUNIDADE, CANAIS, SOBRE, and a search icon. There are also buttons for PERSONALIZAR O CANAL and YOUTUBE STUDIO (BETA). Below the navigation, there are two rows of video thumbnails. The first row contains six videos: 'Live de Python #107 - Flask templates a vera - com StatusOK' (1.55:05), 'Live de Python #106 - Integração contínua' (1:37:38), 'Criando uma API com flask + BDD + TDD + Marshmallow' (2:53:49), 'Live de Python #105 - Estruturas de decisão' (1:45:43), 'Live de Python #104 - 12 FactorApp - Com Bruno Rocha' (2:01:13), and 'Live de Python #103 - Fazendo música com FoxDot - Com Diego Dukka' (1:31:54). The second row contains three more videos: 'Live de Python #103 - Fazendo música com FoxDot - Com Diego Dukka' (16:46), 'Live de Python #102 - TDD com Mamba e Expect' (1:43:12), and 'Live de Python #101 - WSGI, Unicorn, PEP-333(3)' (1:35:10). Each video thumbnail includes a small profile picture of Eduardo Mendes.

Vídeo	Descrição	Duração
Live de Python #107 - Flask templates a vera - com StatusOK	Flask templates a vera - com StatusOK	1.55:05
Live de Python #106 - Integração contínua	Integração contínua	1:37:38
Criando uma API com flask + BDD + TDD + Marshmallow		2:53:49
Live de Python #105 - Estruturas de decisão	Estruturas de decisão	1:45:43
Live de Python #104 - 12 FactorApp - Com Bruno Rocha	12 FactorApp - Com Bruno Rocha	2:01:13
Live de Python #103 - Fazendo música com FoxDot - Com Diego Dukka	Fazendo música com FoxDot - Com Diego Dukka	1:31:54
Live de Python #103 - Fazendo música com FoxDot - Com Diego Dukka	Fazendo música com FoxDot - Com Diego Dukka	16:46
Live de Python #102 - TDD com Mamba e Expect	TDD com Mamba e Expect	1:43:12
Live de Python #101 - WSGI, Unicorn, PEP-333(3)	WSGI, Unicorn, PEP-333(3)	1:35:10

Selenium

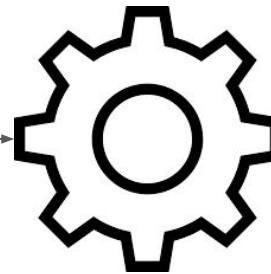


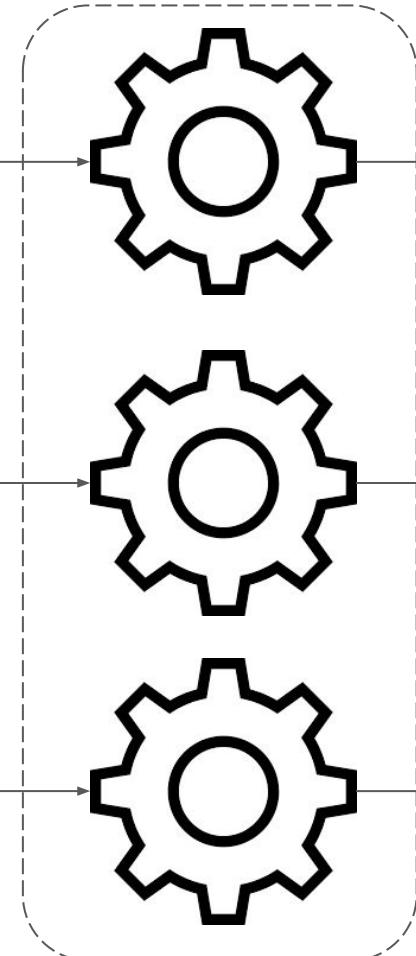
<https://www.seleniumhq.org/>

Selenium

O projeto selenium foi iniciado em 2004 e de lá pra cá se tornou um “padrão” para automação de browsers.

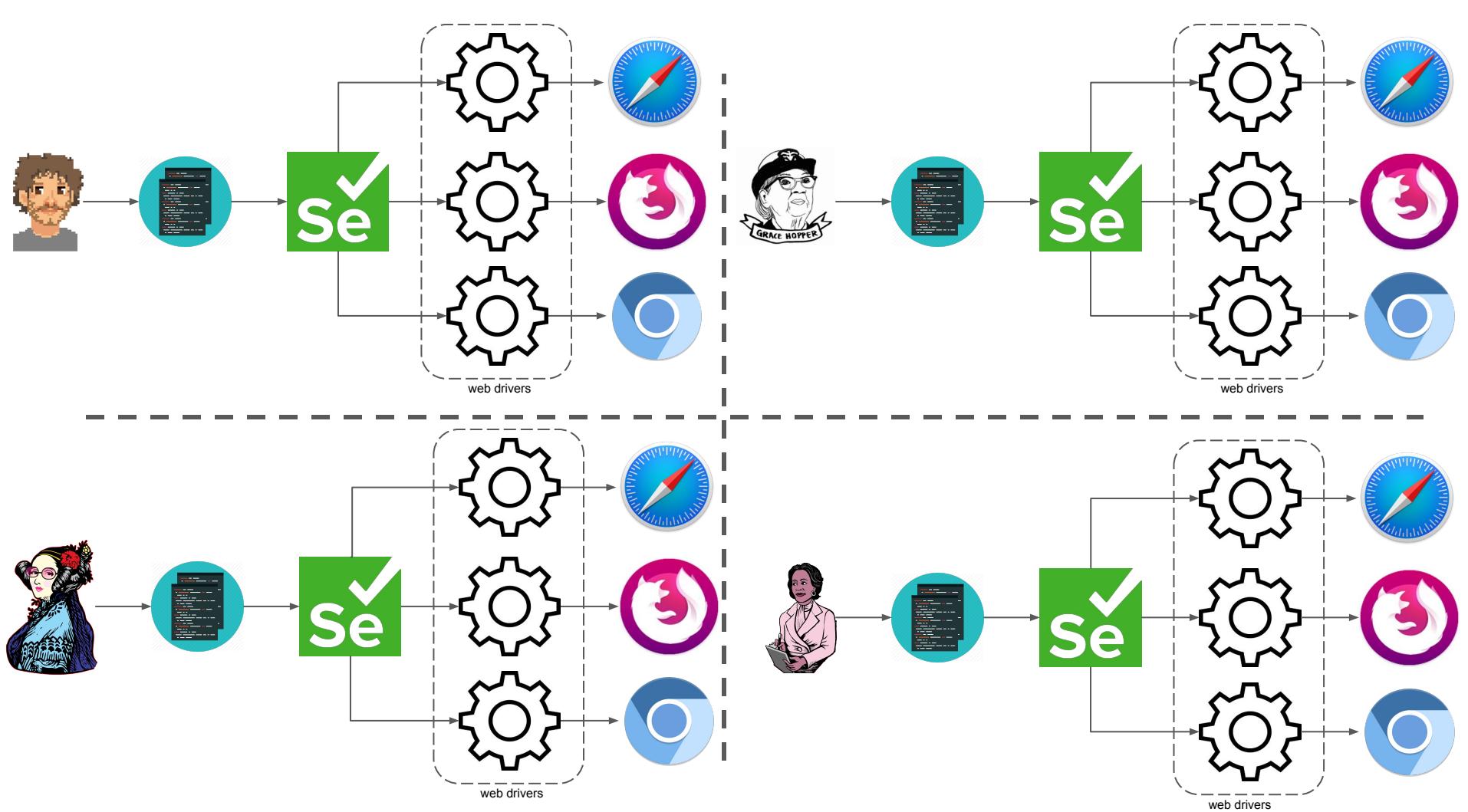


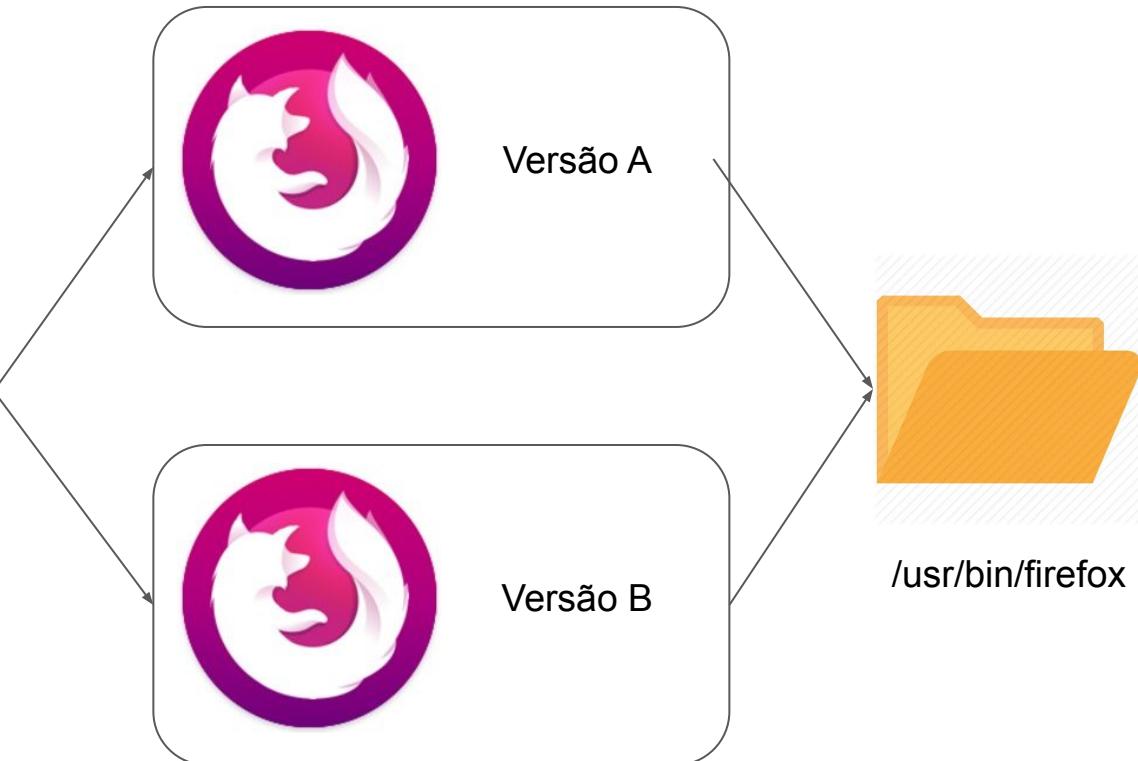
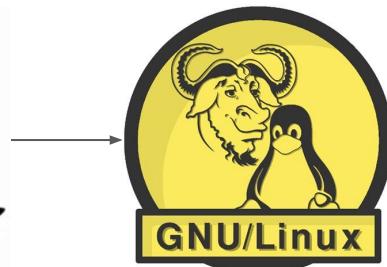




web drivers

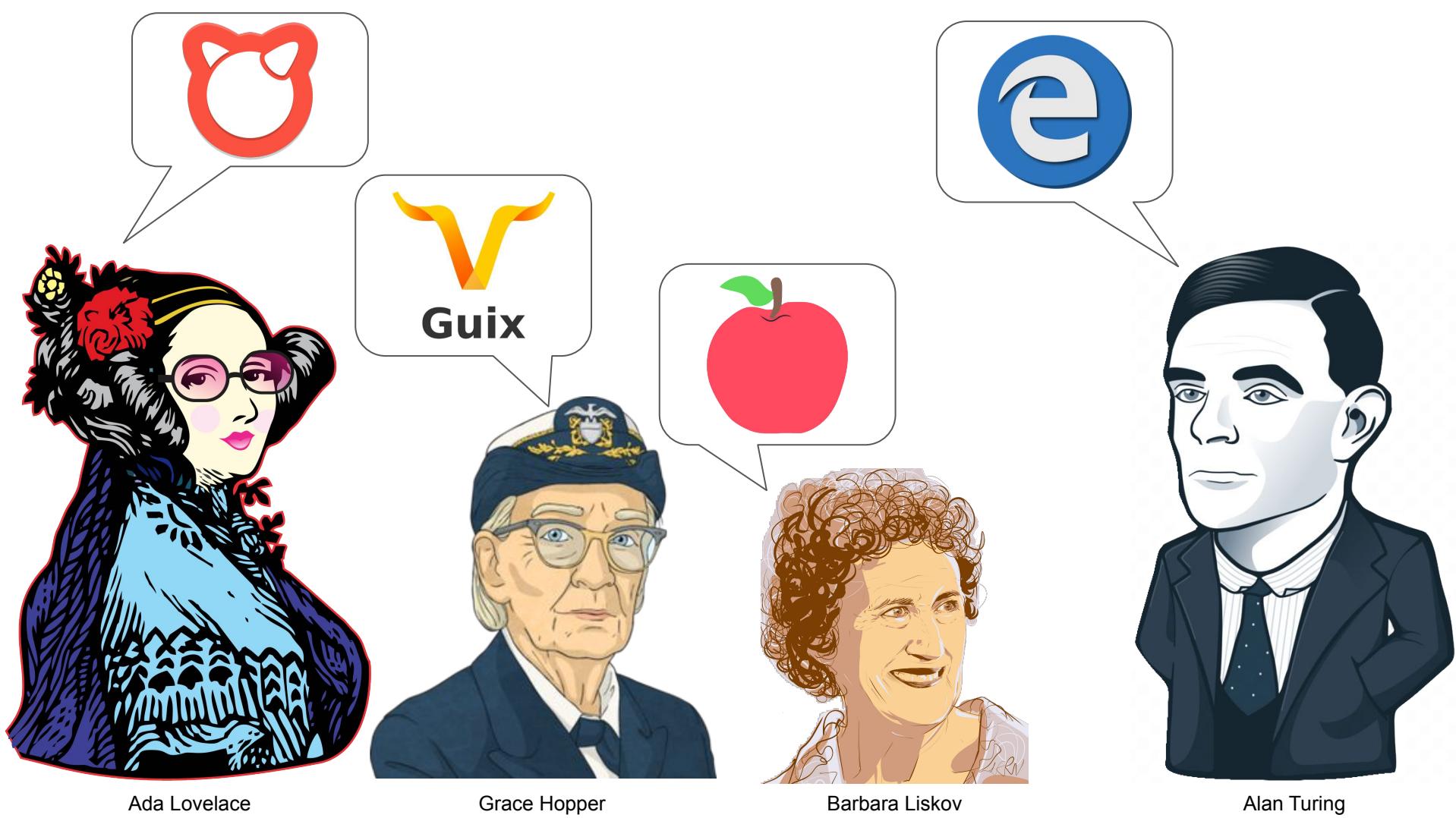
Nem tudo são flores!







Alan Turing

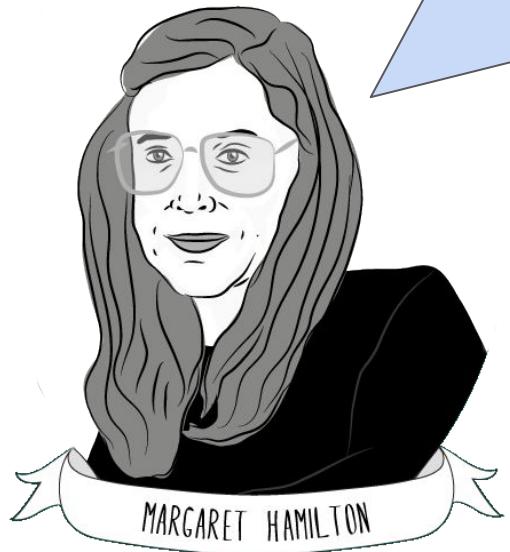
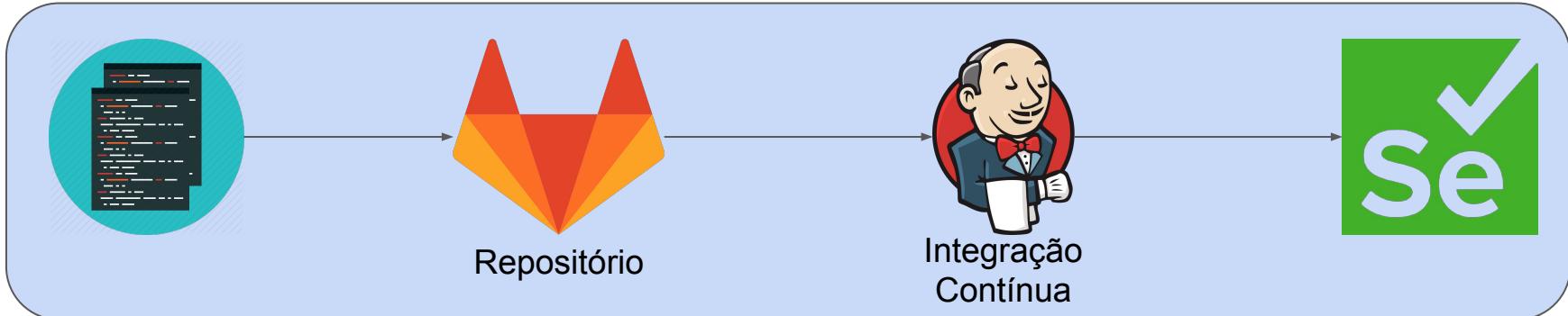


Ada Lovelace

Grace Hopper

Barbara Liskov

Alan Turing



Bá, qual a versão do
Gecko driver que tenho
que usar pra funcionar
com o Firefox 57?



Annie Easley



Você tem que ir no site
de releases do gecko
pra saber! :(

Barbara Liskov



Annie Easley

 Code

 Issues 147

 Pull requests 0

 Security

 Insights

 Releases

 Tags

 Latest release

 v0.26.0

 79bc0ed

v0.26.0



andreasstt released this 5 days ago

Built from [e9783a644016](#).

Note that with this release the minimum recommended Firefox version has changed to Firefox ≥60.

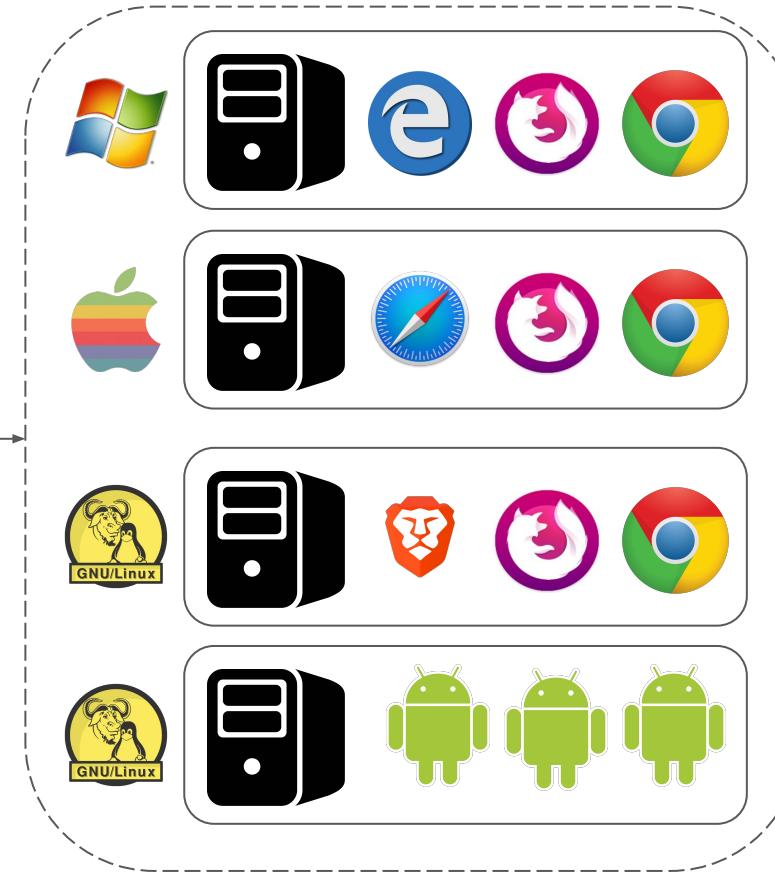
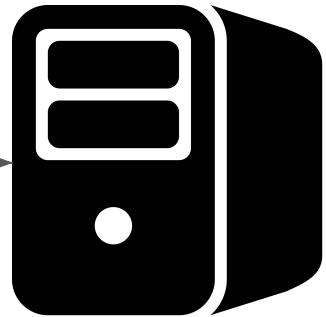
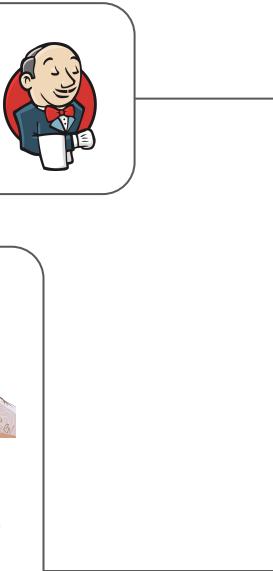
Selenium Grid



Automações



Time



Nodes

Nem tudo são flores!

1. Não existe uma maneira programática de montar essa arquitetura.

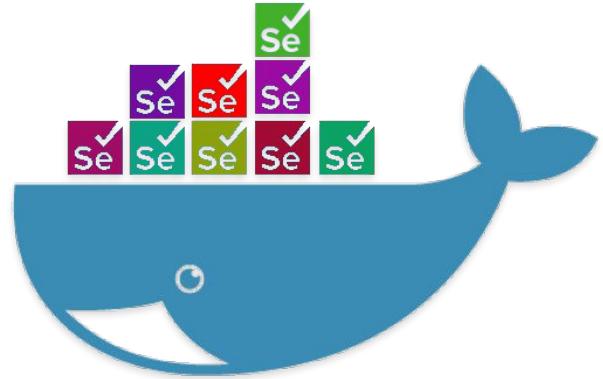
- Instalar o java
- Baixar o selenium
- Baixar os web drivers
- Desempacotar os web drivers
- Instalar todas as versões de browsers correspondentes

Repetir operação em todos os nodes com SOs diferentes

2. Browsers sem foco

3. Custo para manter a infra

Selenium Docker



<https://github.com/SeleniumHQ/docker-selenium>

Selenium Docker

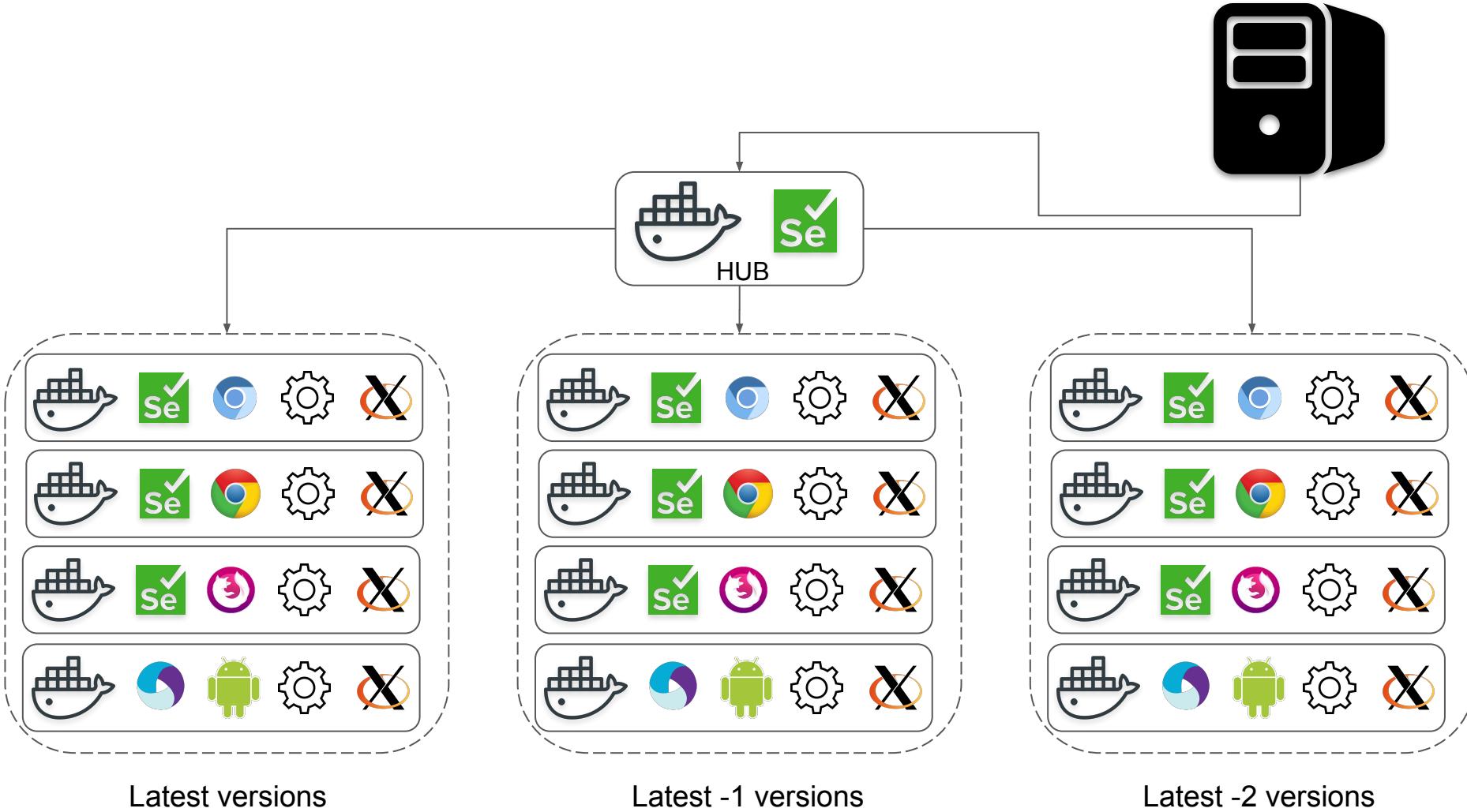
The project is made possible by volunteer contributors who have put in thousands of hours of their own time, and made the source code freely available under the [Apache License 2.0](#).

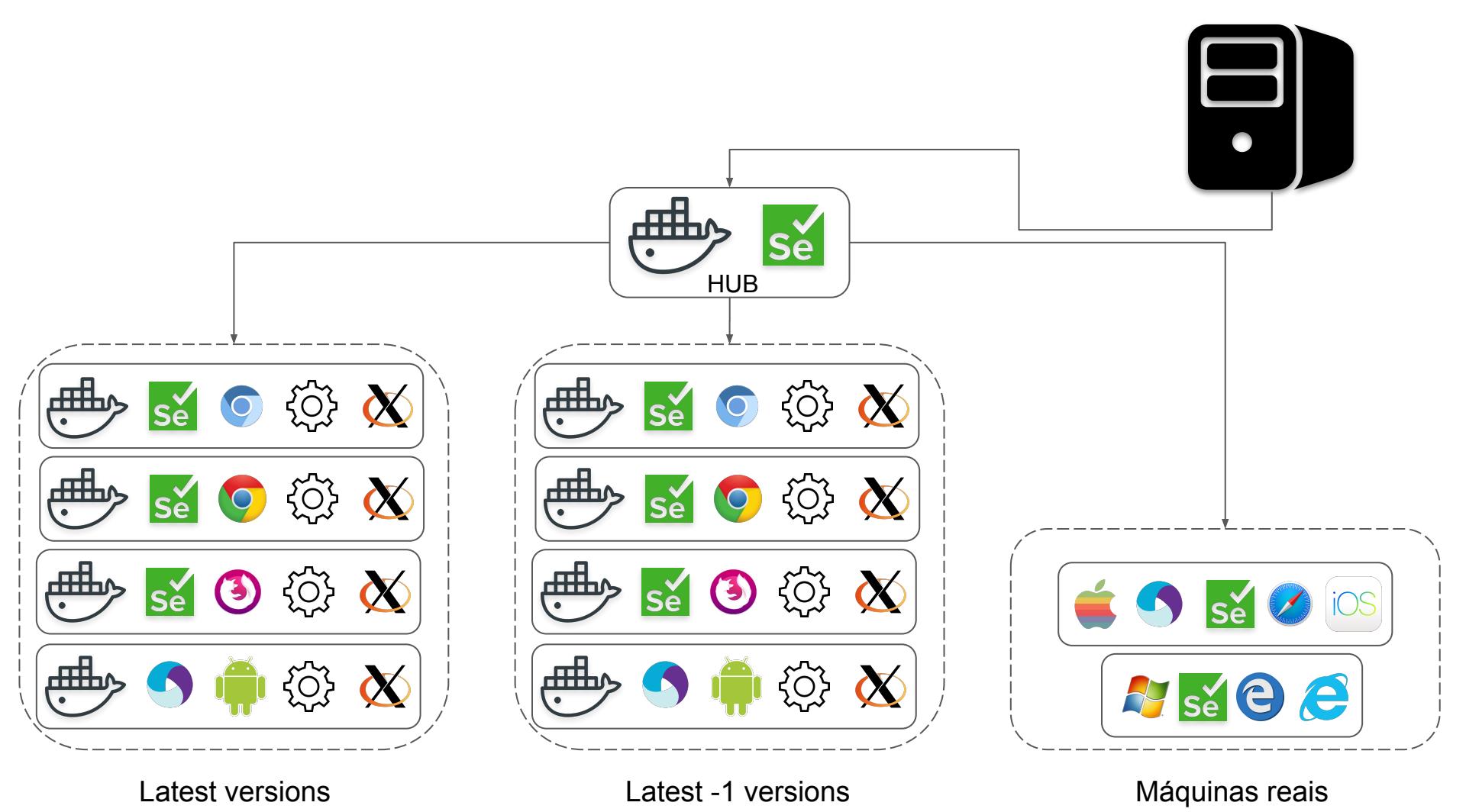
Docker images for Selenium Standalone Server Hub and Node configurations with Chrome and Firefox

[Travis CI](#)

Images included:

- **selenium/base**: Base image which includes Java runtime and Selenium Server JAR file
- **selenium/hub**: Image for running a Grid Hub
- **selenium/node-base**: Base image for Grid Nodes which includes a virtual desktop environment
- **selenium/node-chrome**: Grid Node with Chrome installed, needs to be connected to a Grid Hub
- **selenium/node-firefox**: Grid Node with Firefox installed, needs to be connected to a Grid Hub
- **selenium/node-chrome-debug**: Grid Node with Chrome installed and runs a VNC server, needs to be connected to a Grid Hub
- **selenium/node-firefox-debug**: Grid Node with Firefox installed and runs a VNC server, needs to be connected to a Grid Hub
- **selenium/standalone-chrome**: Selenium Standalone with Chrome installed
- **selenium/standalone-firefox**: Selenium Standalone with Firefox installed
- **selenium/standalone-chrome-debug**: Selenium Standalone with Chrome installed and runs a VNC server
- **selenium/standalone-firefox-debug**: Selenium Standalone with Firefox installed and runs a VNC server





```
version: '2'
services:
  firefox:
    image: selenium/node-firefox:3.14.0-gallium
    volumes:
      - /dev/shm:/dev/shm
    depends_on:
      - hub
    environment:
      HUB_HOST: hub

  chrome:
    image: selenium/node-chrome:3.14.0-gallium
    volumes:
      - /dev/shm:/dev/shm
    depends_on:
      - hub
    environment:
      HUB_HOST: hub

  hub:
    image: selenium/hub:3.14.0-gallium
    ports:
      - "4444:4444"
```

```
version: '2'
services:
  firefox:
    image: selenium/node-firefox:3.14.0-gallium
    volumes:
      - /dev/shm:/dev/shm
    depends_on:
      - hub
    environment:
      HUB_HOST: hub

  chrome:
    image: selenium/node-chrome:3.14.0-gallium
    volumes:
      - /dev/shm:/dev/shm
    depends_on:
      - hub
    environment:
      HUB_HOST: hub

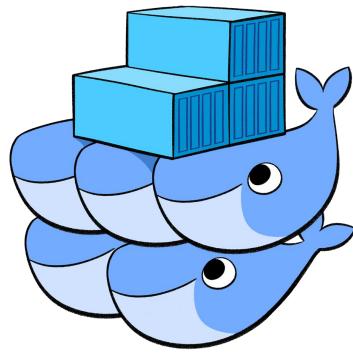
  hub:
    image: selenium/hub:3.14.0-gallium
    ports:
      - "4444:4444"
```

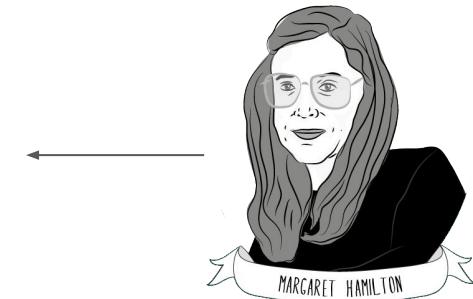
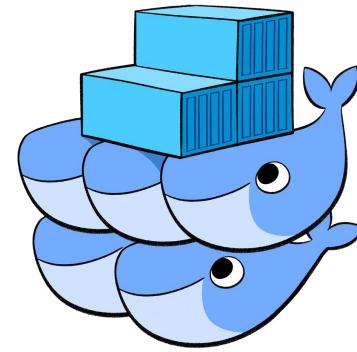
Fácil de manter

\$ docker-compose up --build

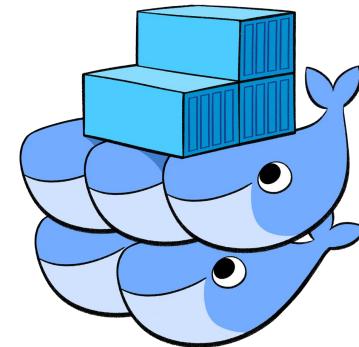
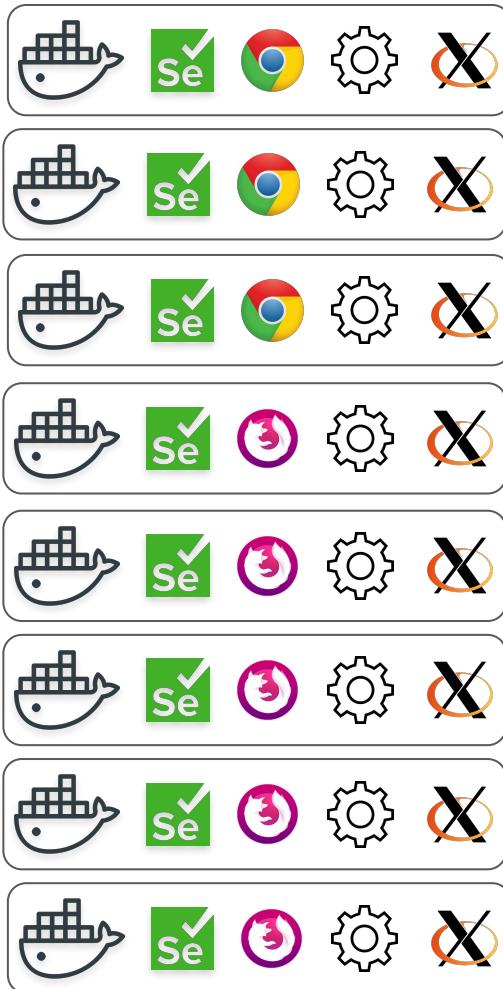
\$ docker-compose scale firefox=5

\$ docker-compose scale chrome=5





```
$ docker-compose up --build
```



```
$ docker-compose scale chrome=3
```

```
$ docker-compose scale firefox=5
```

Nem tudo são flores!

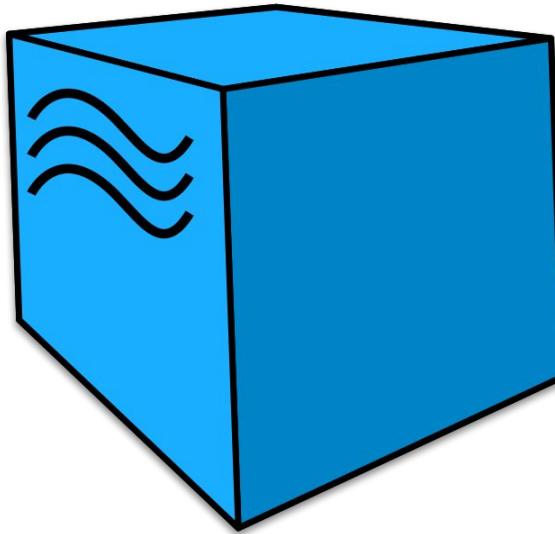
Consumo do grid

- Cada container exige ~150MB para ficar em modo de espera
- Um container conectado consome ~300MB
- + xxxMB da abertura da página

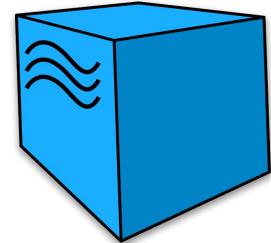
```
$ docker-compose scale firefox=50
```



Selenoid



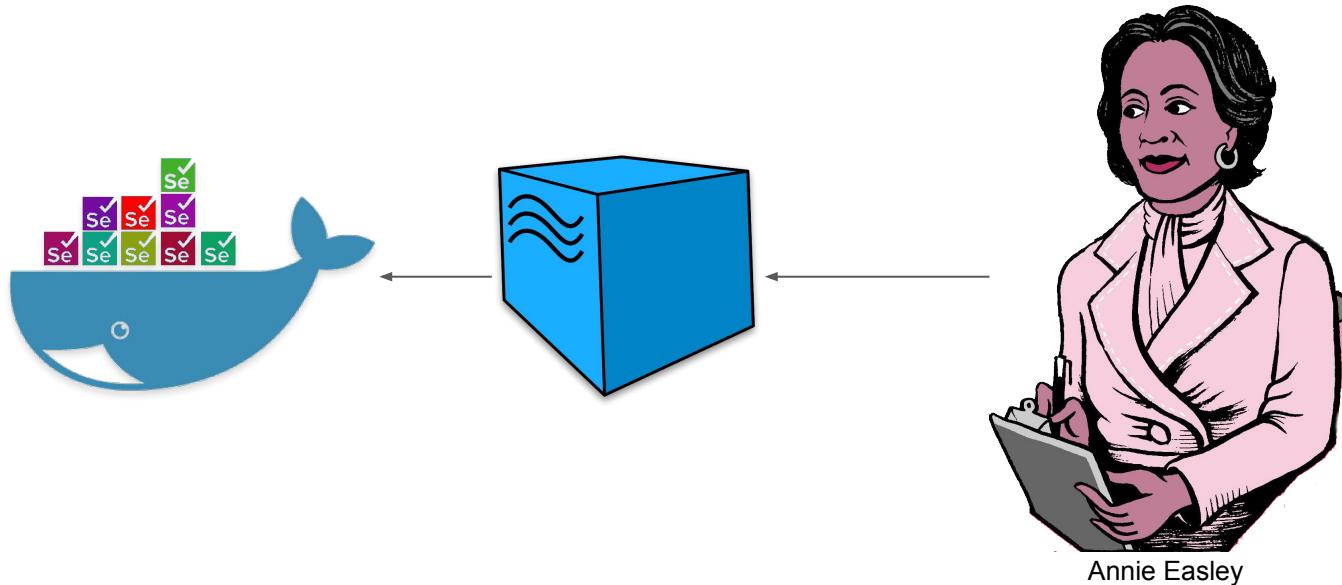
<https://github.com/aerokube/selenoid>



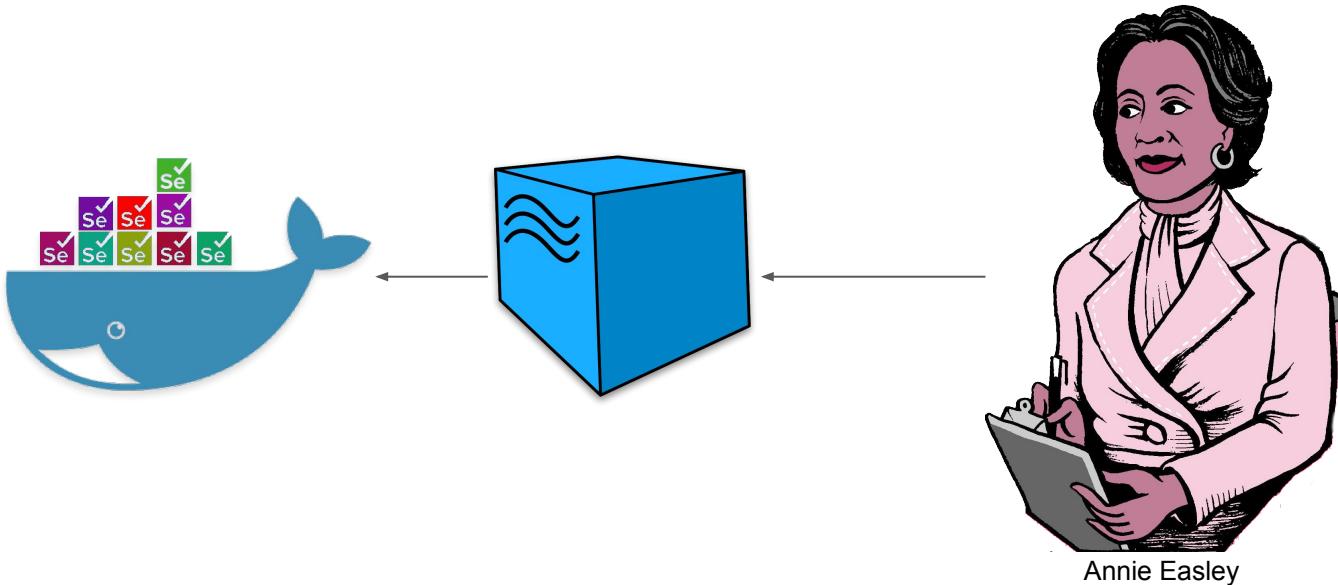
Selenoid

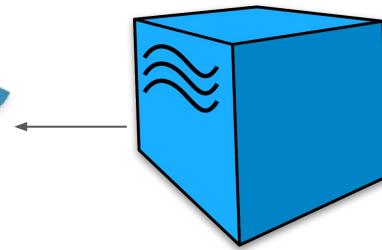
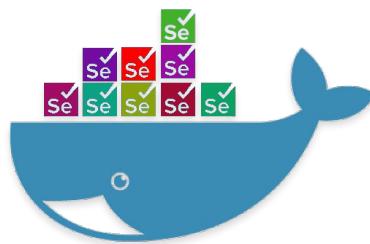
É um projeto iniciado em 2017, pela Aerokube, que fornece uma poderosa implementação em Go do Selenium hub original. Com as mesmas chamadas, porém gerenciando os containers para você.

```
$ curl -s https://aerokube.com/cm/bash  
$ ./cm selenoid start
```



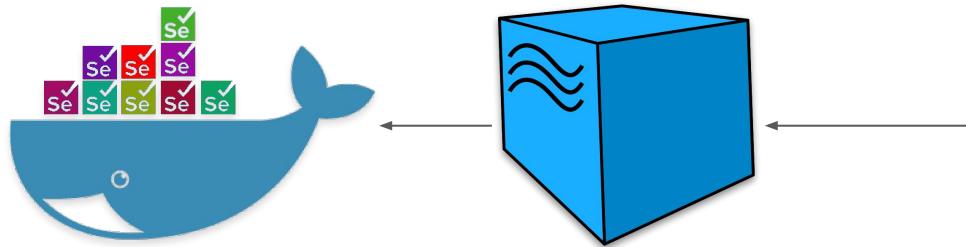
```
driver = webdriver.Remote(  
    command_executor="http://localhost:4444/wd/hub",  
    desired_capabilities=ff_capabilities  
)
```





Annie Easley

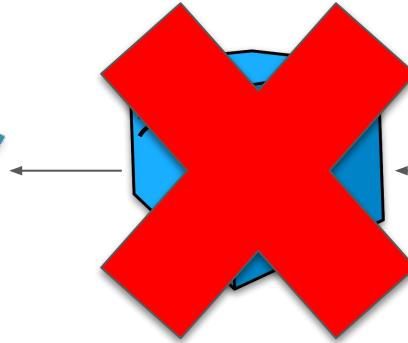
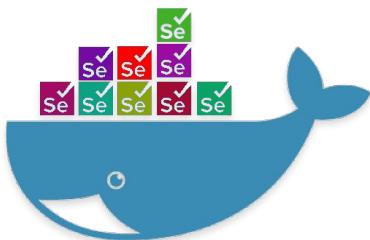
```
driver = webdriver.Remote(  
    command_executor="http://localhost:4444/wd/hub",  
    desired_capabilities=gc_capabilities  
)
```



Annie Easley

Nem tudo são flores!

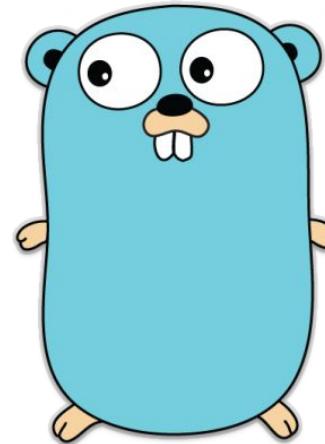
**Não é tolerante
a falhas**



Annie Easley

GGR

Go Grid Router



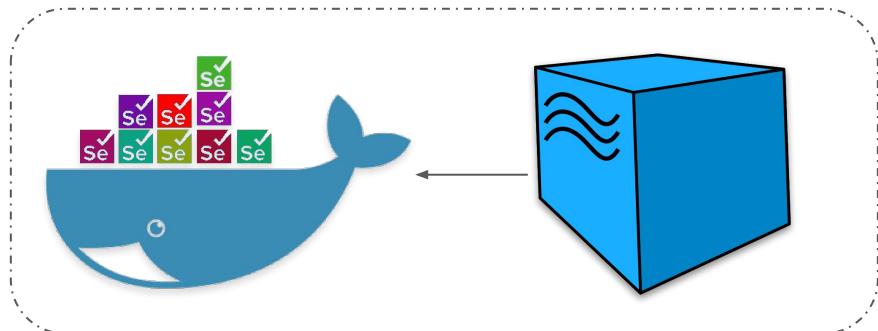
<https://github.com/aerokube/ggr>



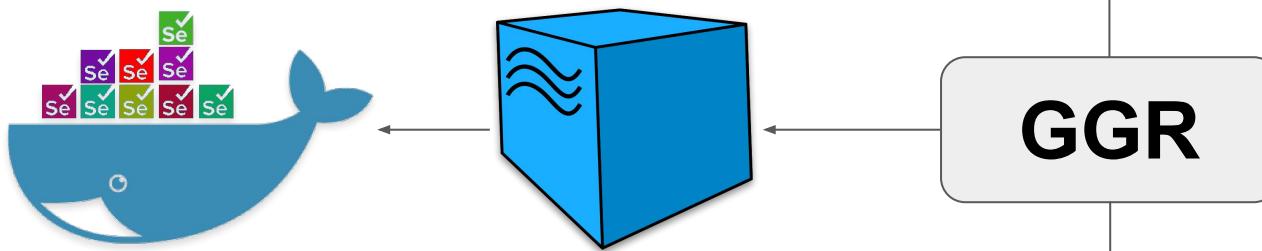
Go Grid Router

É um projeto iniciado em 2016, pela Aerokube, que fornece uma poderosa implementação em Go do GR (grid router) mantida pelo time do seleniumkit, que não escalava tão bem e tinha problemas de instalação.

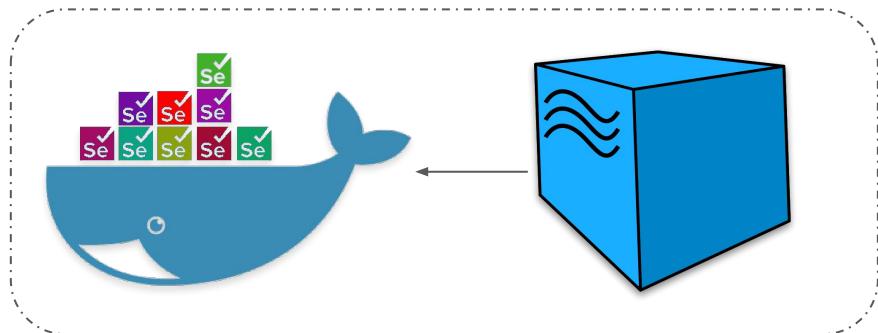
Brasil



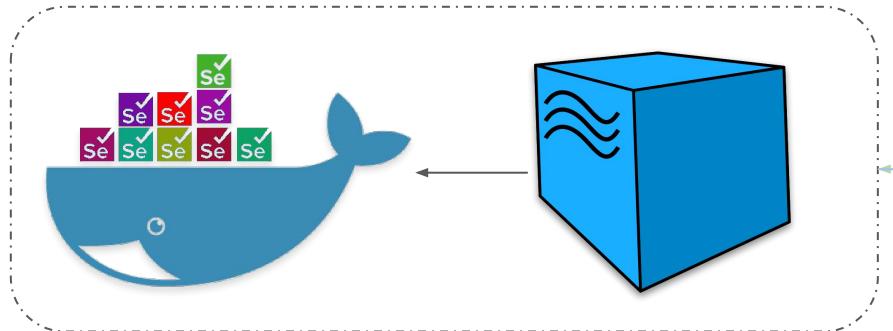
?????



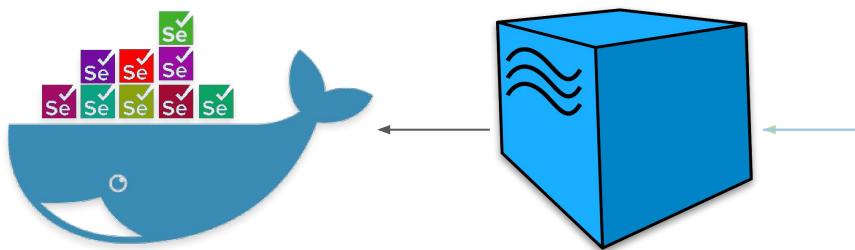
Estonia



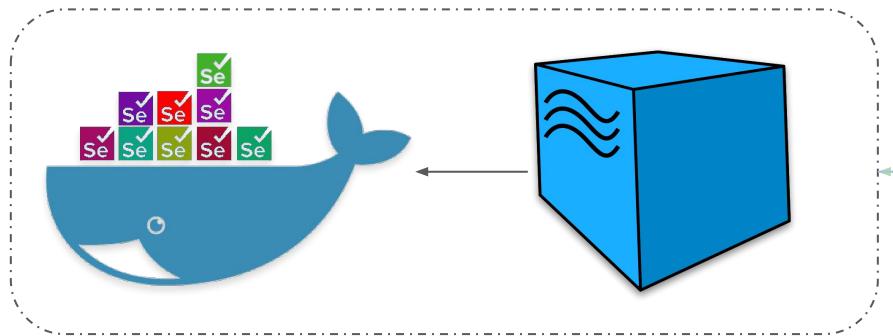
Brasil



?????



Estonia



Quotas

```
<qa:browsers xmlns:qa="urn:config.gridrouter.qatools.ru">
  <browser name="firefox" defaultVersion="33.0">
    <version number="38.0">
      <region name="us-west">
        <host name="ff33-hub-1.example.com" port="4444" count="5"/>
      </region>
    </version>
  </browser>

  <browser name="chrome" defaultVersion="42.0">
    <version number="42.0">
      <region name="us-east">
        <host name="ch42-hub-1.example.com" port="4444" count="10"/>
      </region>
    </version>
  </browser>
</qa:browsers>
```

GGR



Autenticação HTTP

```
capabilities = {  
    "browserName": "firefox",  
    "version": "68.0",  
    "enableVNC": True,  
    "enableVideo": False  
}  
  
driver = webdriver.Remote(  
    command_executor="http://username:password@ggr-server.com:4444/wd/hub",  
    desired_capabilities=capabilities  
)
```



GGR





xoxo

{twitter,
git(lab|hub),
instagram,
telegram
} /dunossauro

