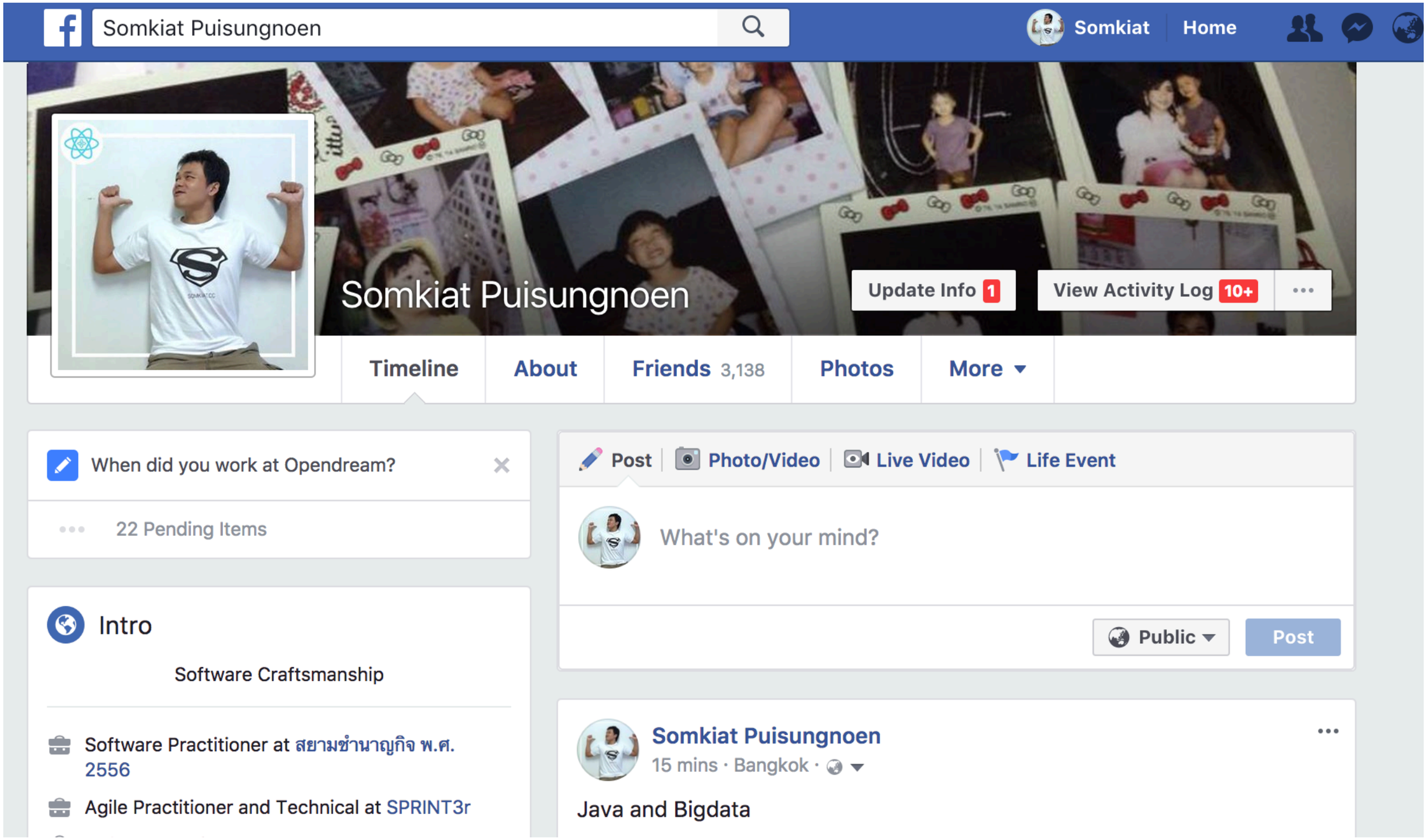
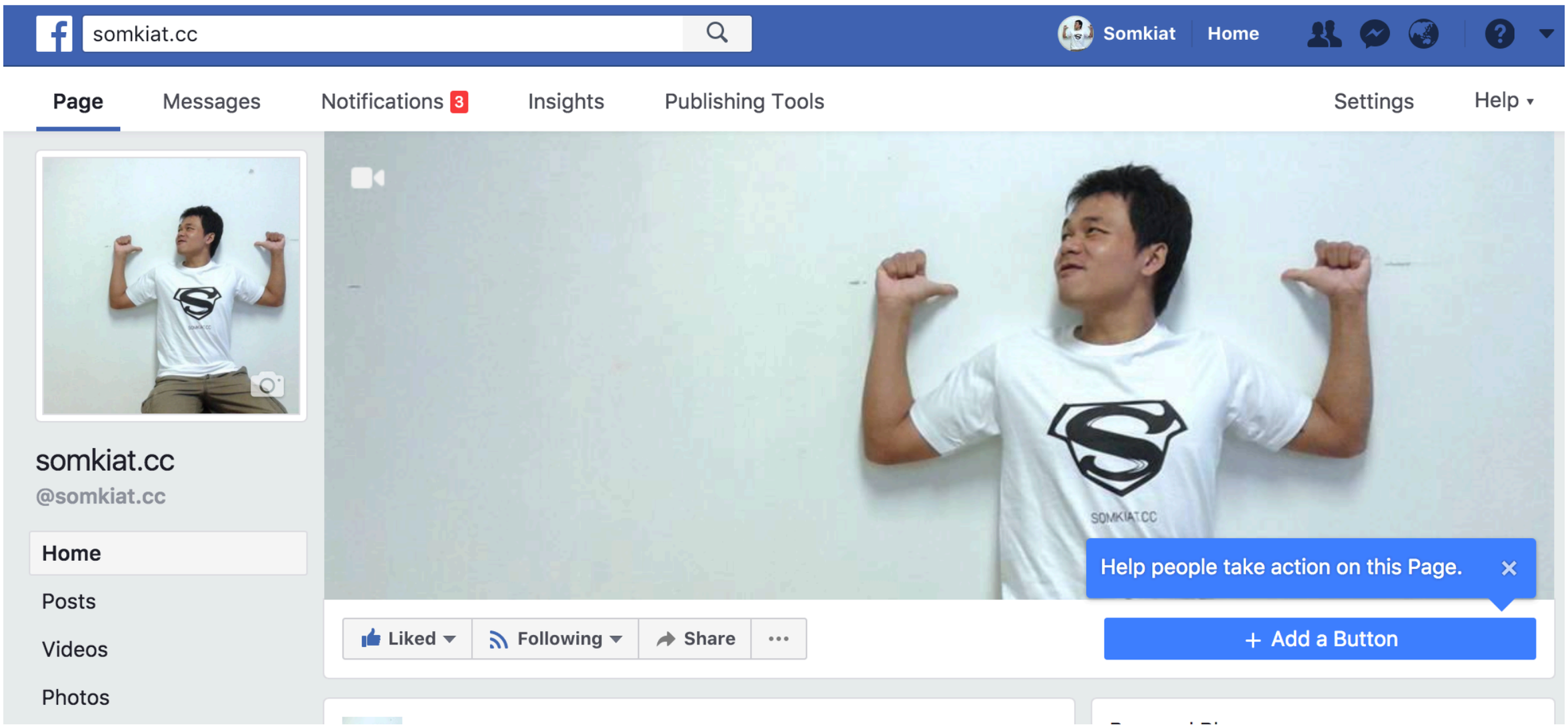
สยามชำนาญกิจ
SIAM CHAMNAN KIT

Advance Robot Framework





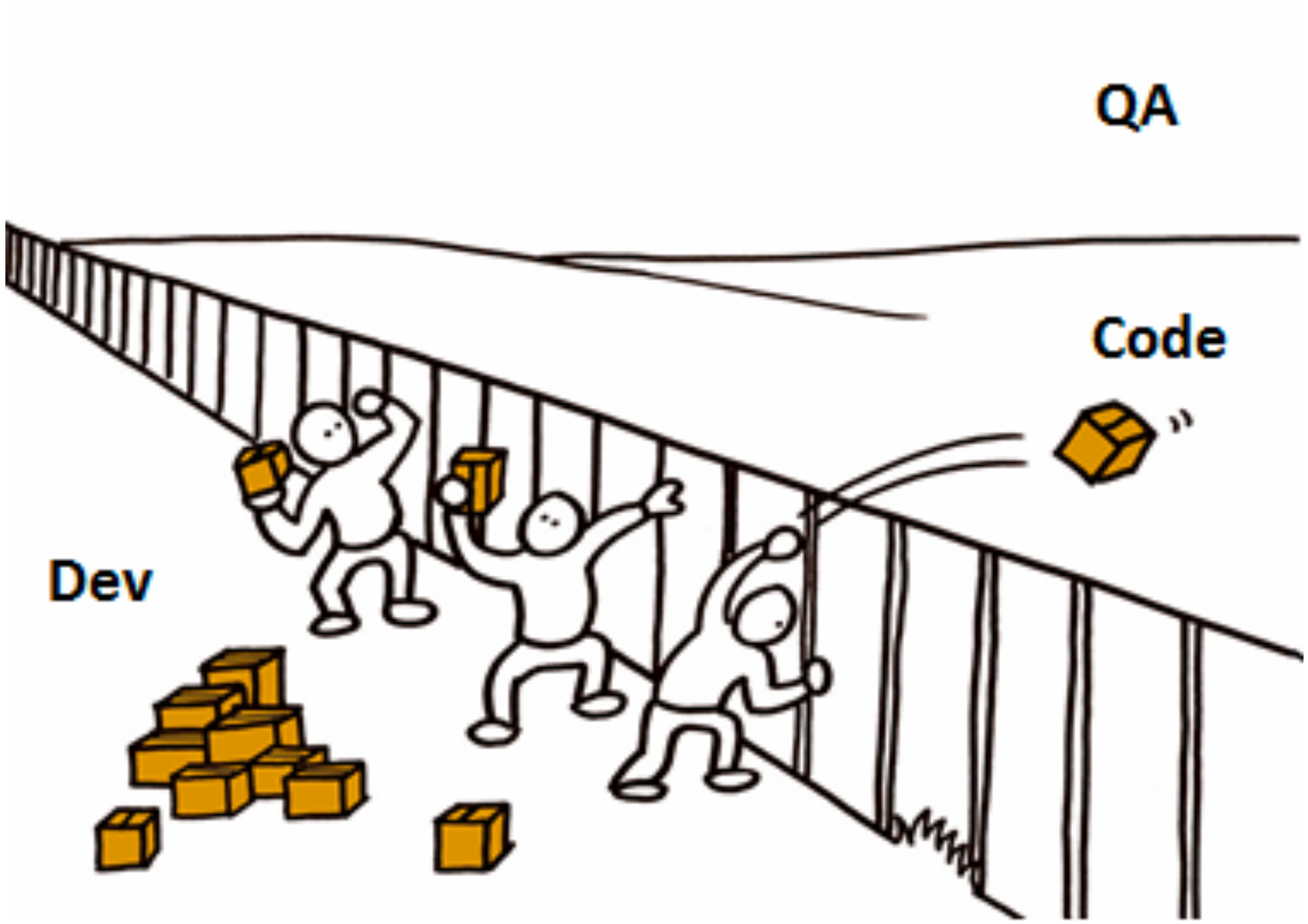
https://github.com/up1/course-advance-robotframework

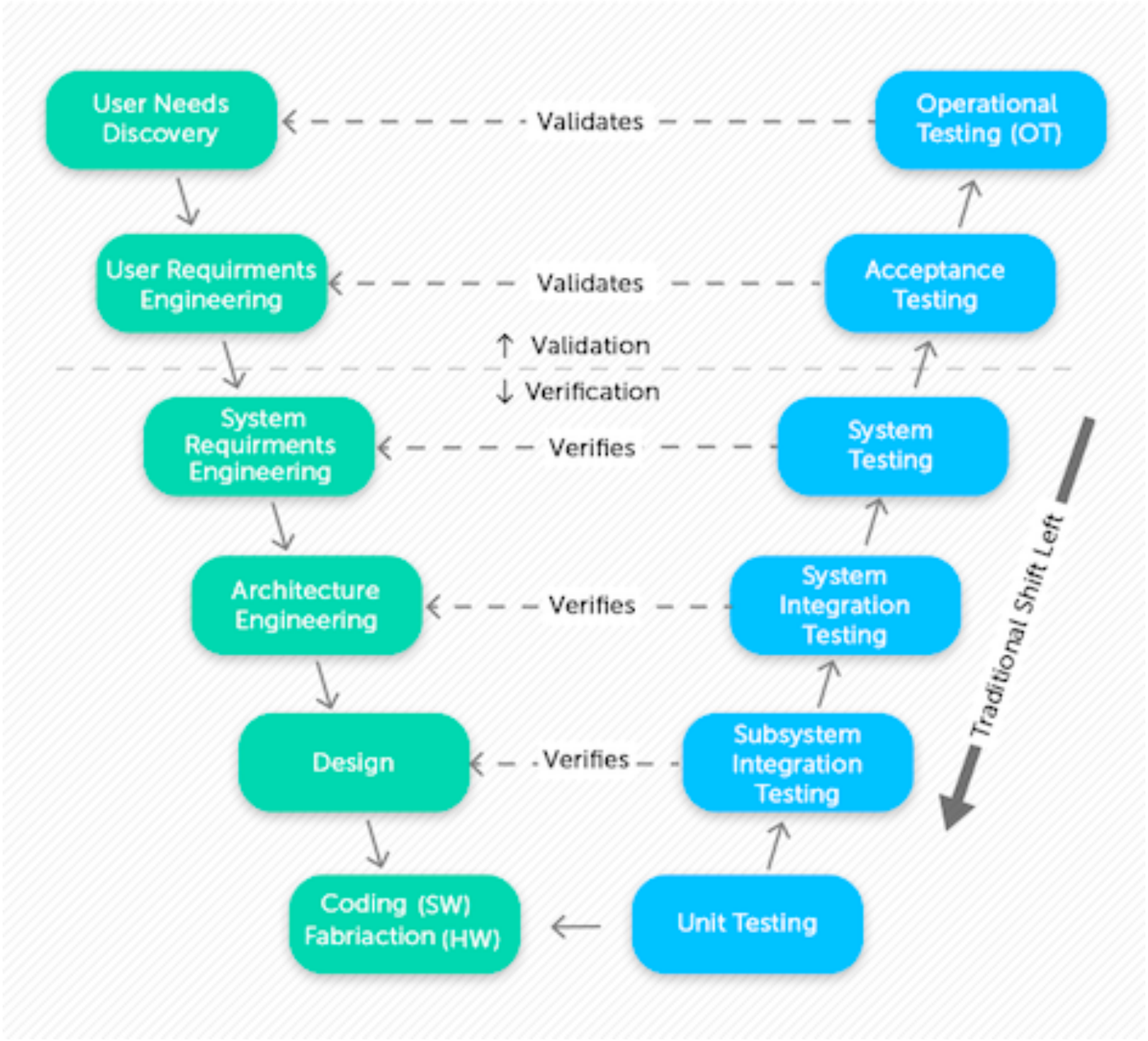
Agenda day 1

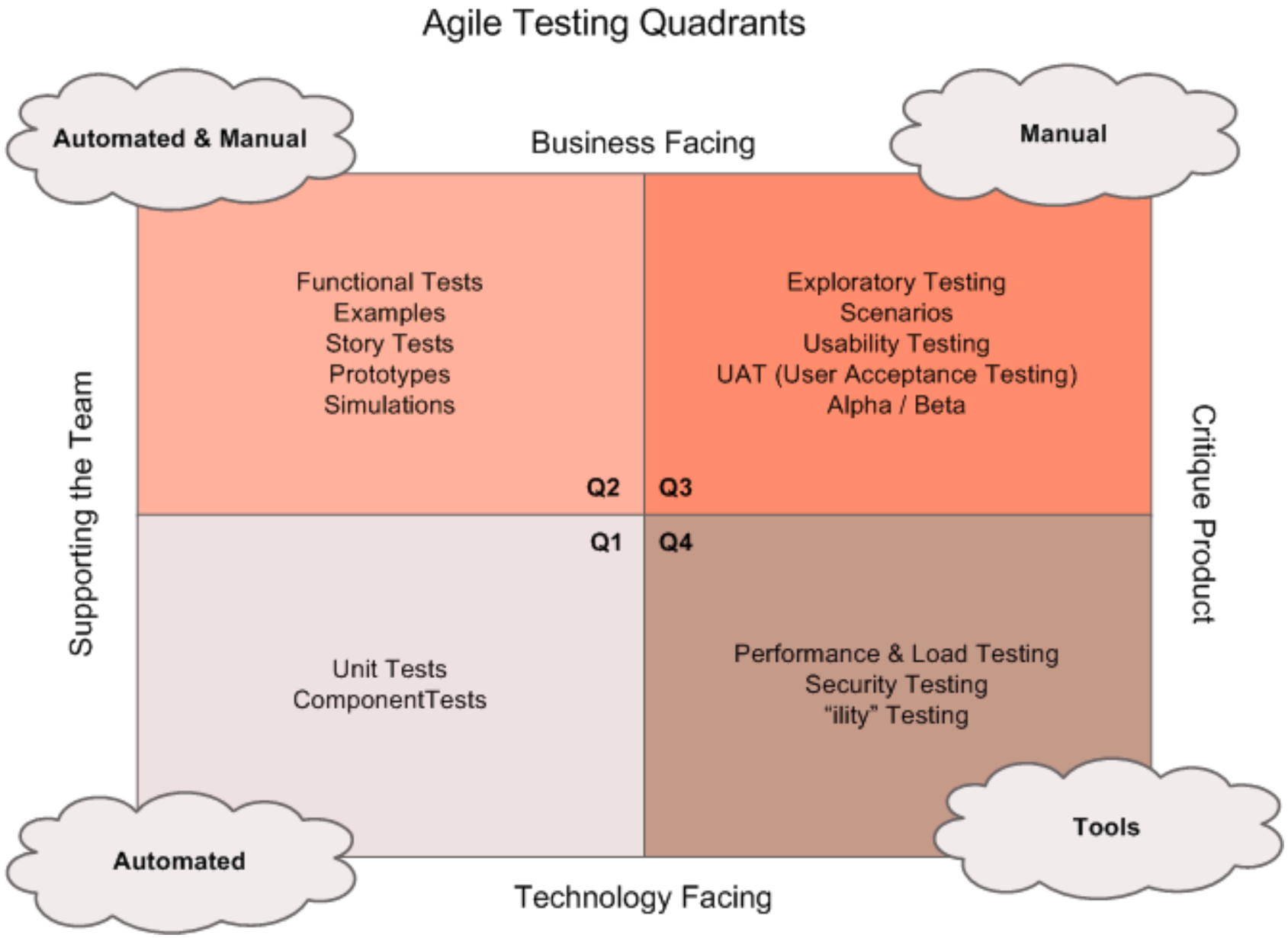
- Basic of python
- How to develop test library with python ?
- Type of test library
- Scope of test library
- How to use and publish test library ?
- Workshop

Agenda day 2

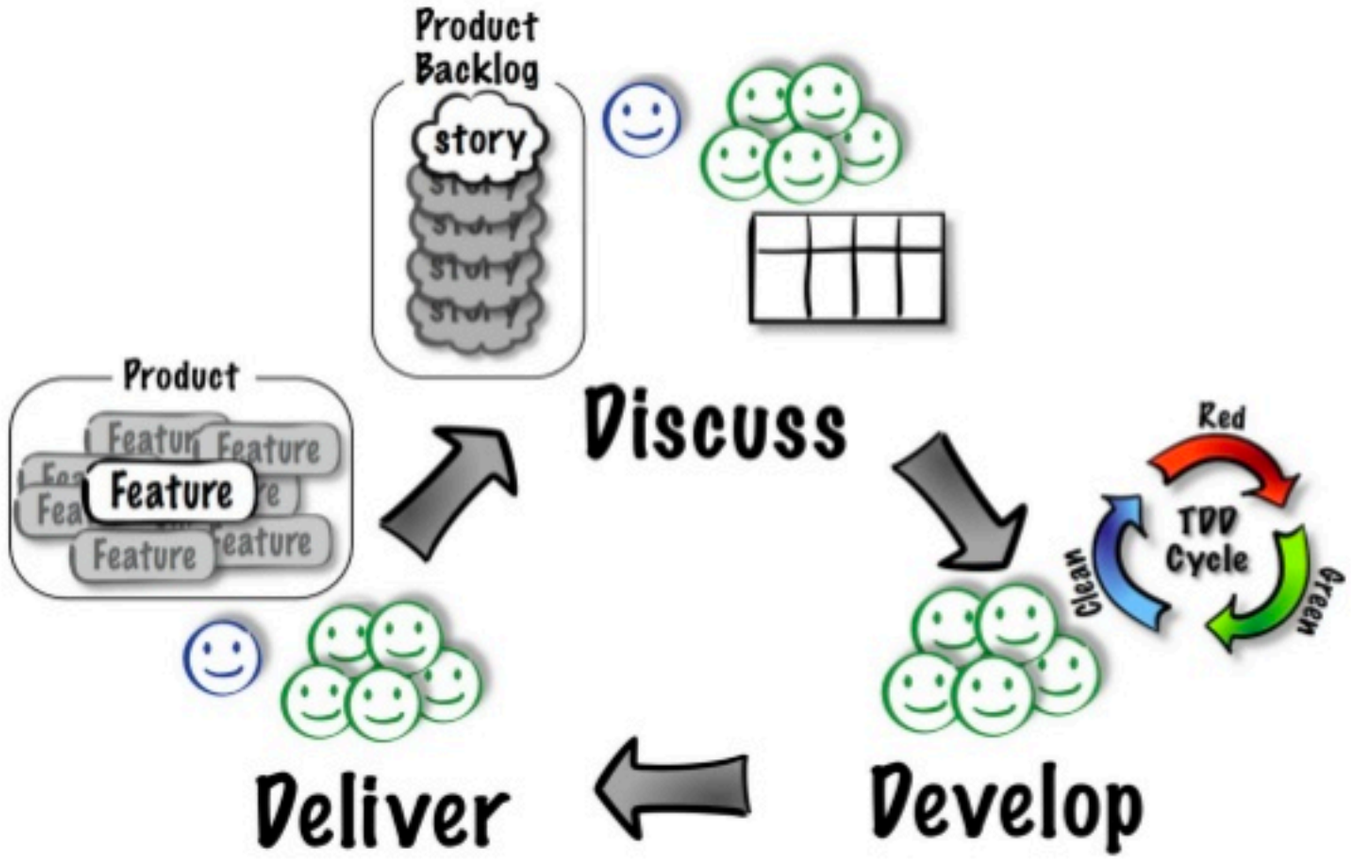
- Create keywords of test library
- How to generate documentation of test library ?
- Develop dynamic test library
- Develop test library by use case
- Workshop



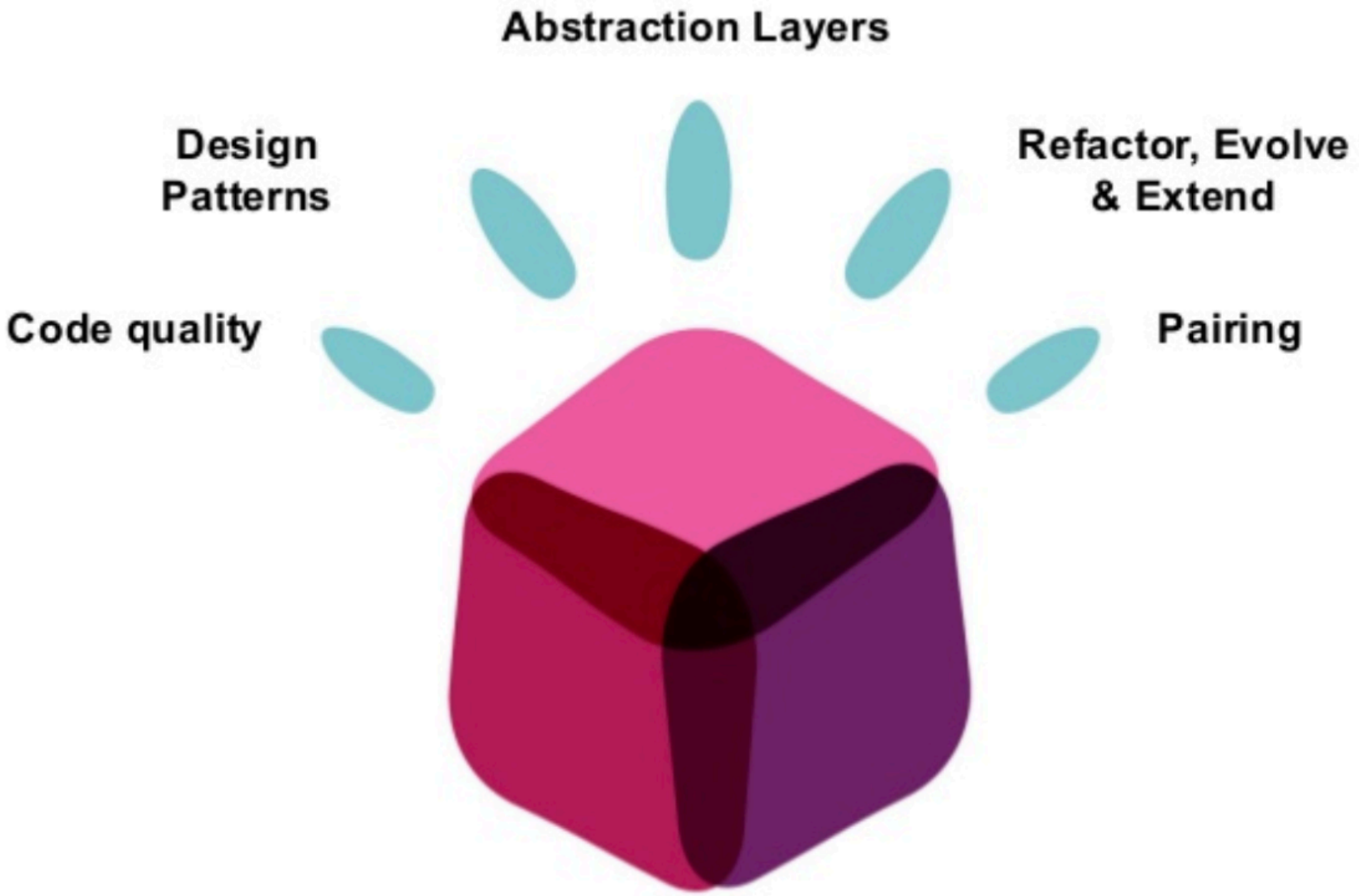




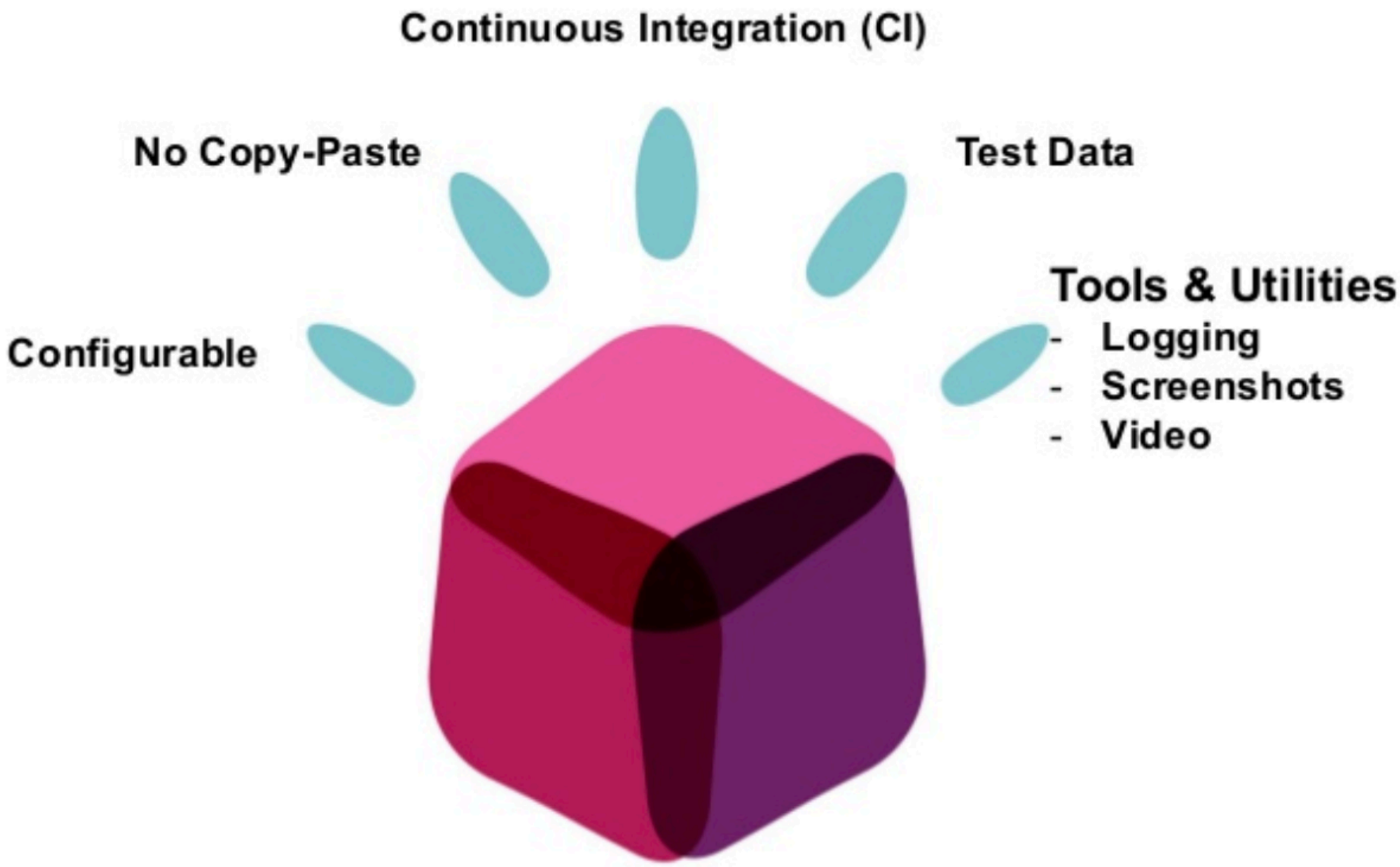
The ATDD cycle



Test automation framework



Test automation framework



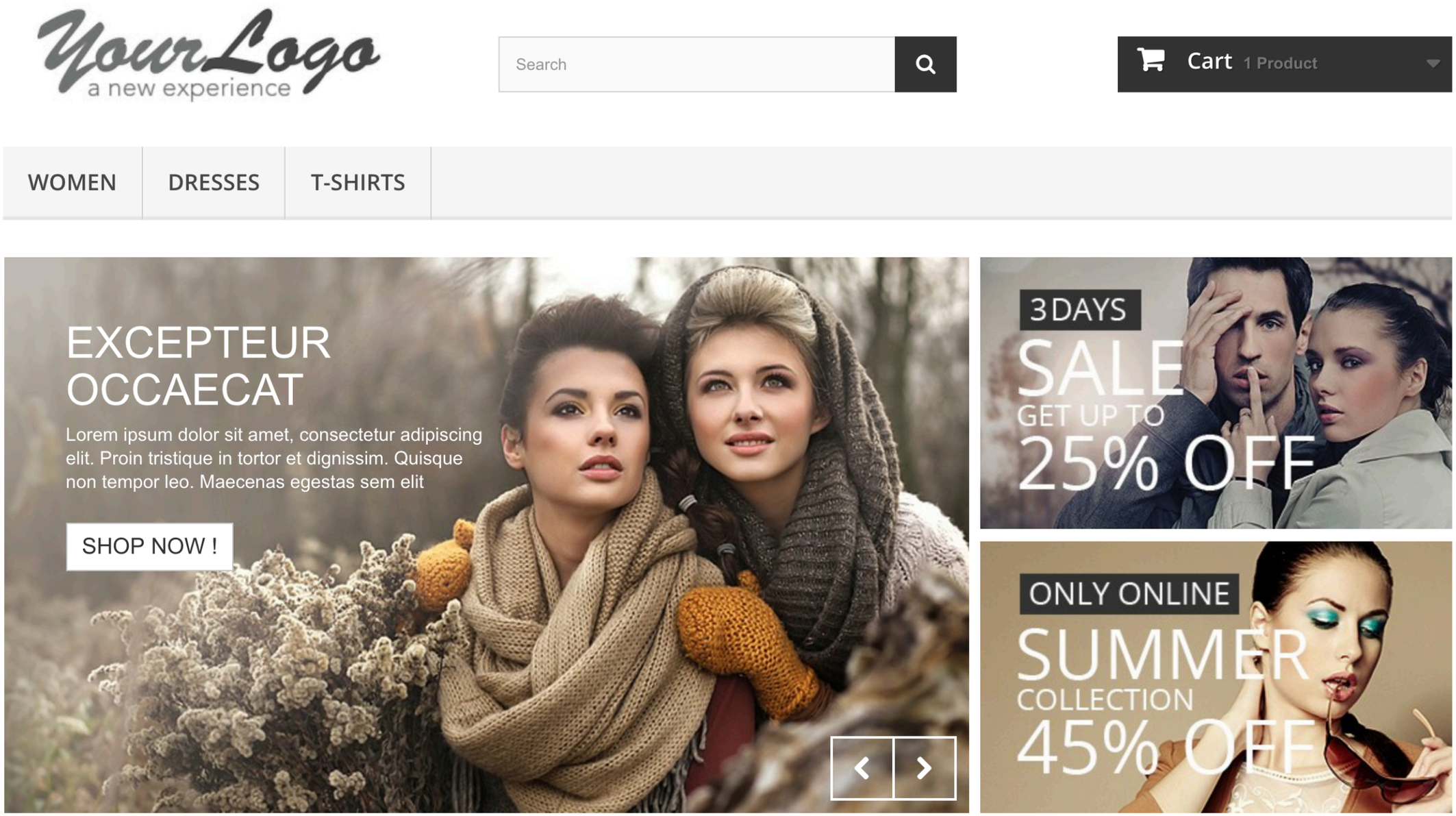
Recap RobotFramework

https://robotframework.org/

Recap Robotframework

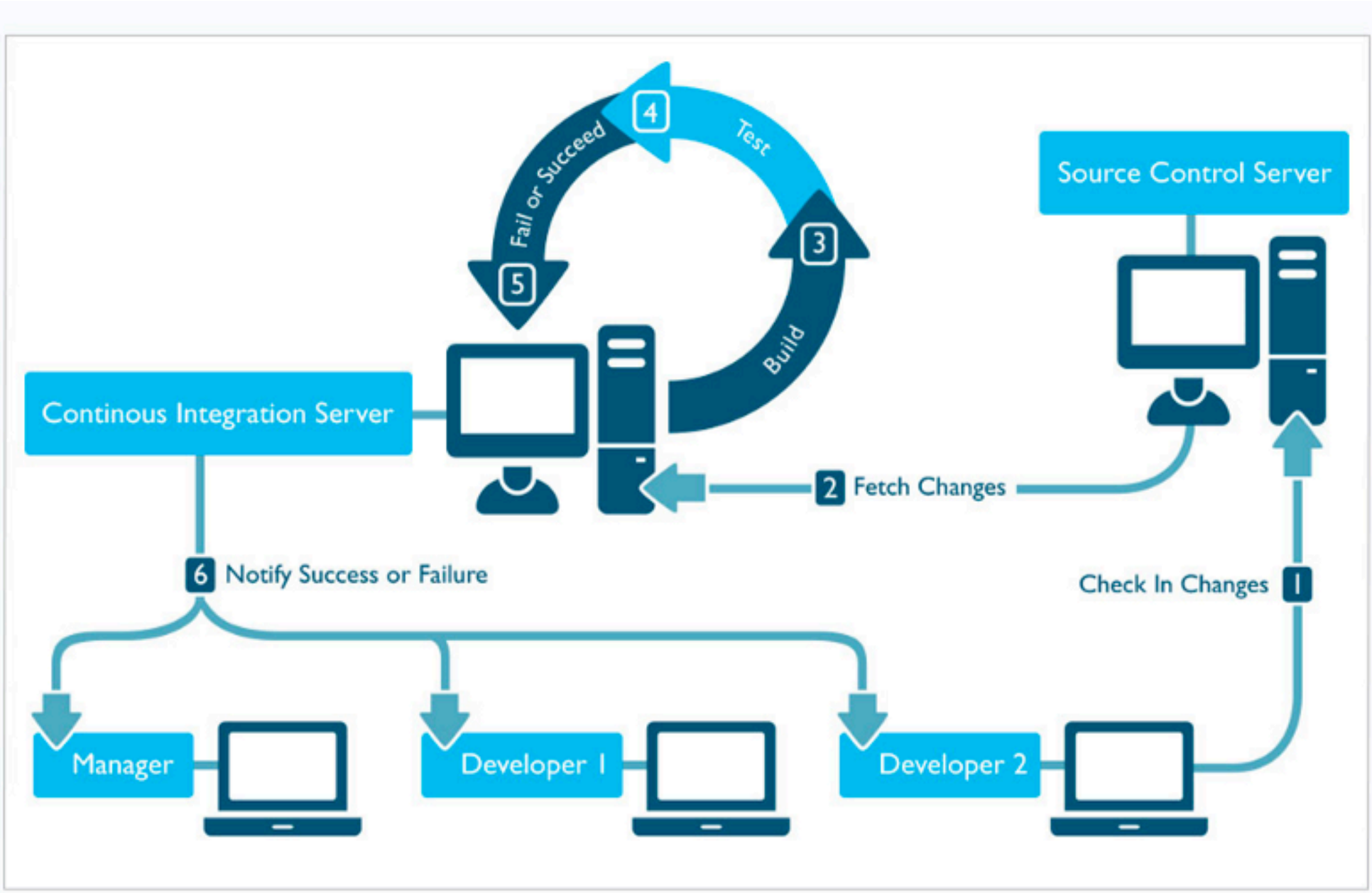
Workshop with automationpractice.com
Test structure, page object pattern
Robot command-line option

Automation Practice



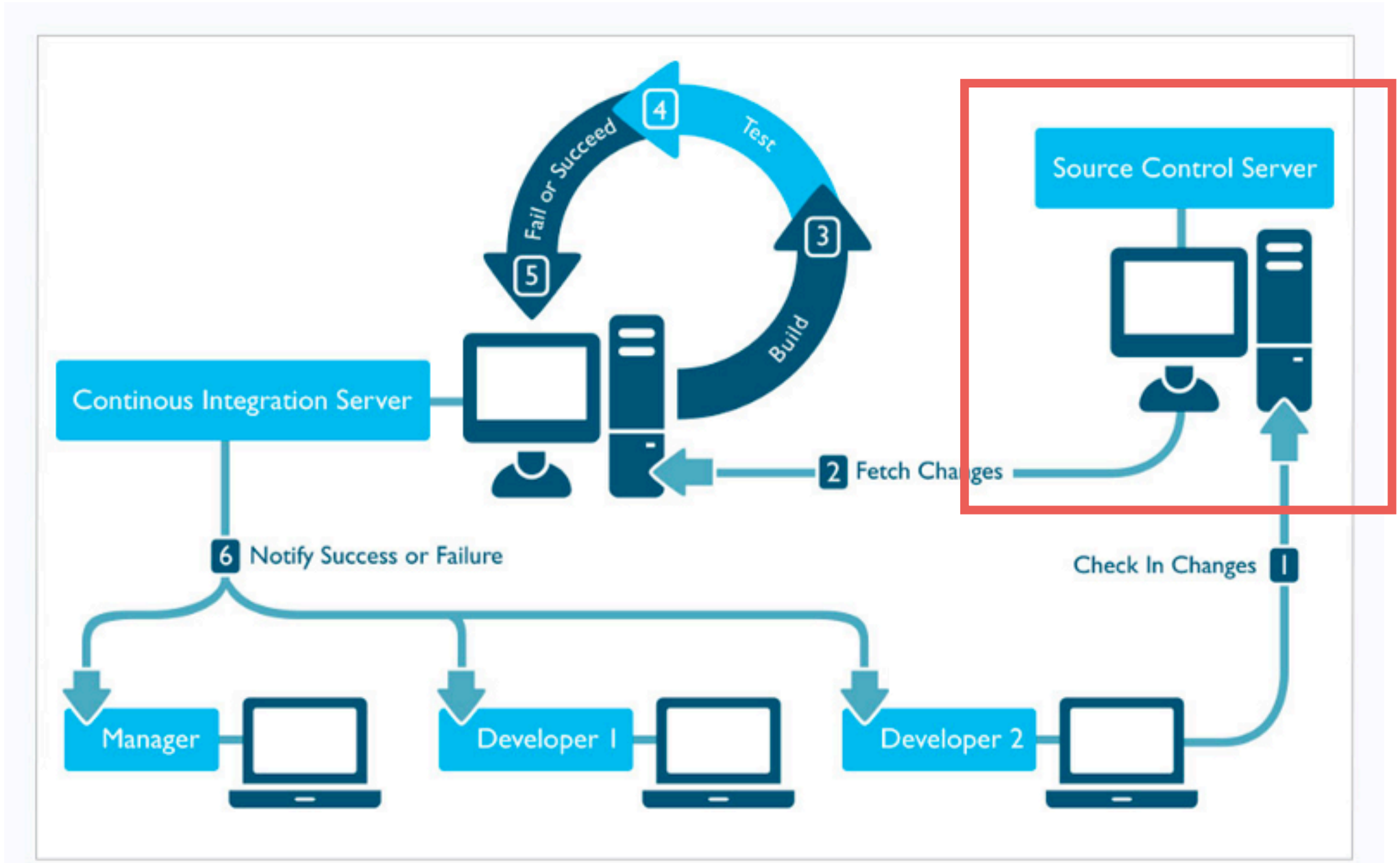
Continuous Integration

Continuous Integration process



Version Control System

Version Control System

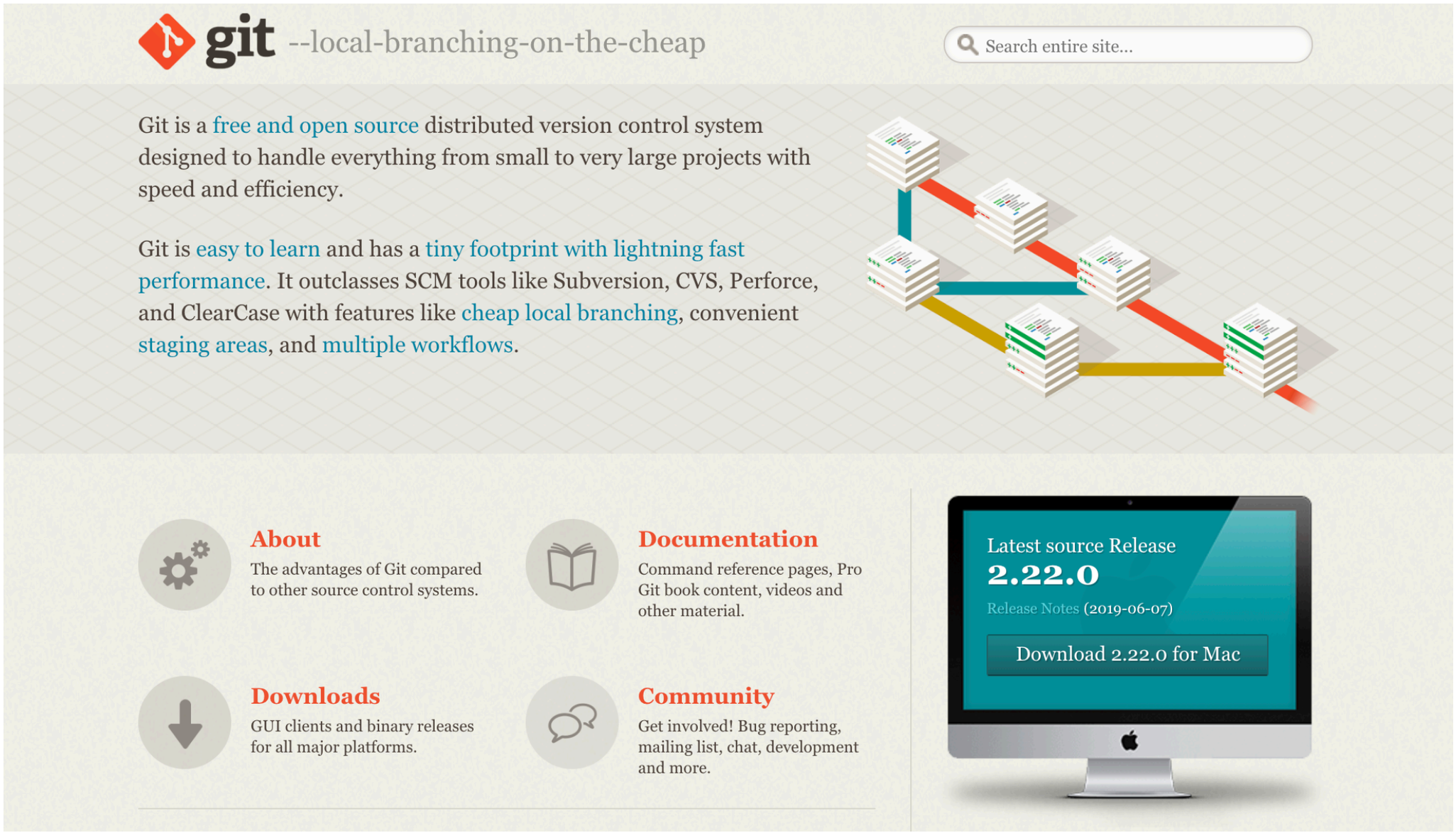


Version Control System

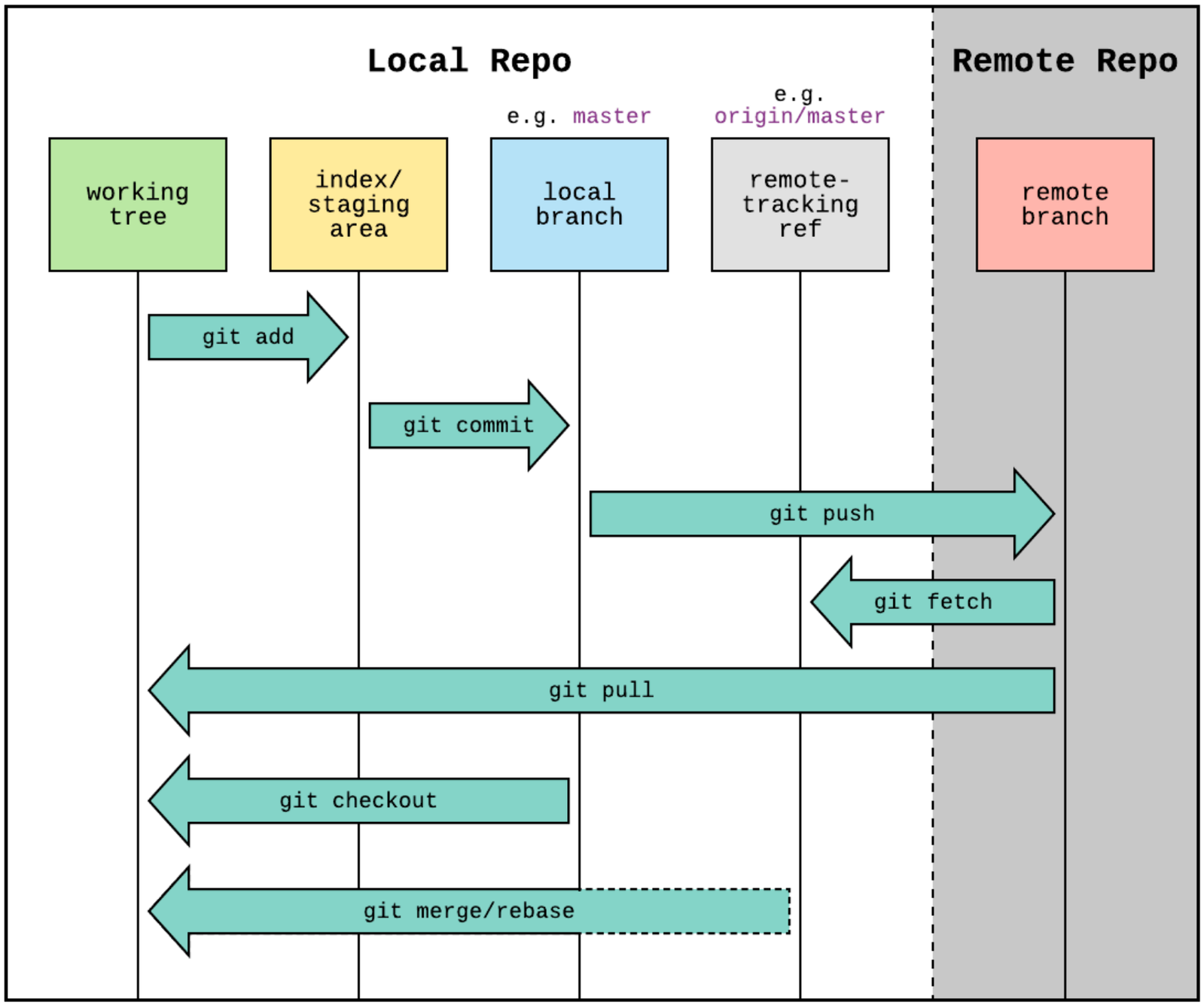
Git
Subversion (svn)
CVS

Git

Download from git-scm.org



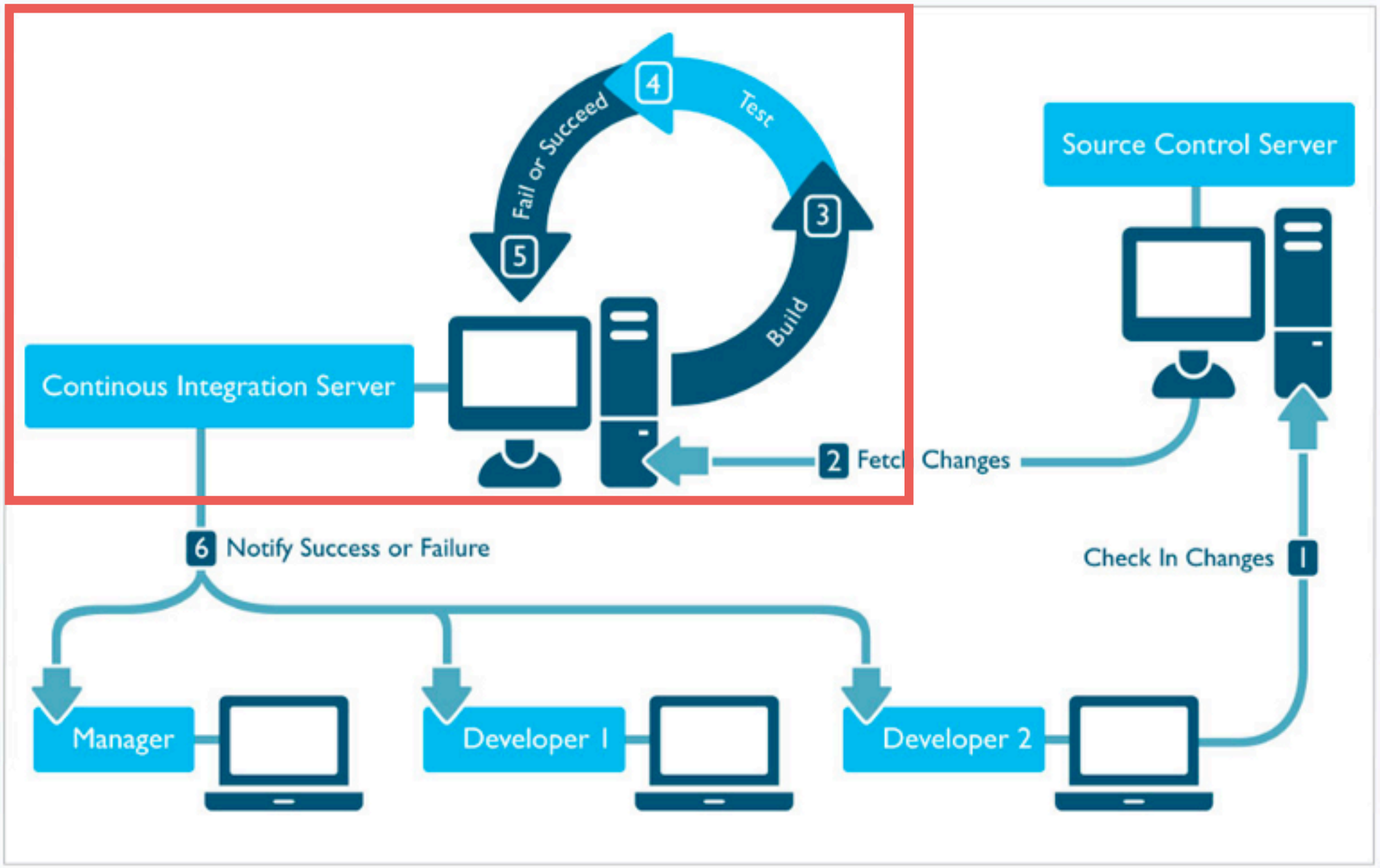
Git workflow



https://github.com/up1/course-advance-robotframework/wiki/Git-101

Continuous Testing

Continuous Testing



Jenkins

https://jenkins.io/

Start Jenkins

$java -jar Jenkins.war

Open url=http://localhost:8080 in browser

Start Jenkins with port

$java -jar Jenkins.war --httpPort=9090

Open url=http://localhost:9090 in browser

Create new job with freestyle

Enter an item name

robot

» *Required field*

Freestyle project

This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

Pipeline

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

External Job

This type of job allows you to record the execution of a process run outside Jenkins, even on a remote machine. This is designed so that you can use Jenkins as a dashboard of your existing automation system.

Source code management

General | **Source Code Management** | Build Triggers | Build Environment | Build | Post-build Actions

Source Code Management

- ○ None
- ○ CVS
- ○ CVS Projectset
- ◉ Git

Repositories

Repository URL: https://github.com/up1/robot-swpark.git

Credentials: - none - | Add

Advanced...

Add Repository

Branches to build

X

Branch Specifier (blank for 'any'): */master

Add Branch

Build trigger (every minute)

Build Triggers

- [ ] Trigger builds remotely (e.g., from scripts)
- [ ] Build after other projects are built
- [ ] Build periodically
- [ ] GitHub hook trigger for GITScm polling
- [x] Poll SCM

Schedule `* * * * *`

Do you really mean "every minute" when you say "* * * * *"? Perhaps you meant "H * * * *" to poll once per hour

Would last have run at Friday, July 19, 2019 12:00:38 AM ICT; would next run at Friday, July 19, 2019 12:00:38 AM ICT.

- [ ] Ignore post-commit hooks

Build => run with robot

Install RobotFramework report plugin

Install RobotFramework report plugin

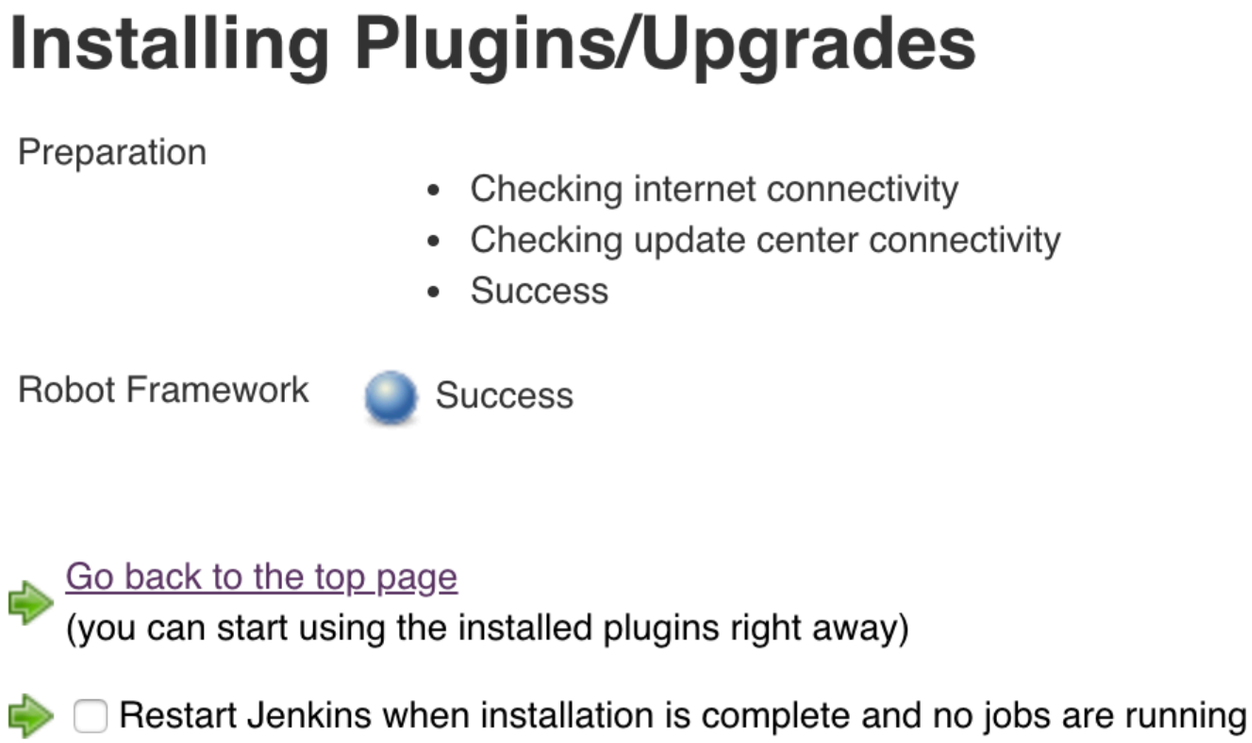
Filter: robot

Updates | **Available** | Installed | Advanced

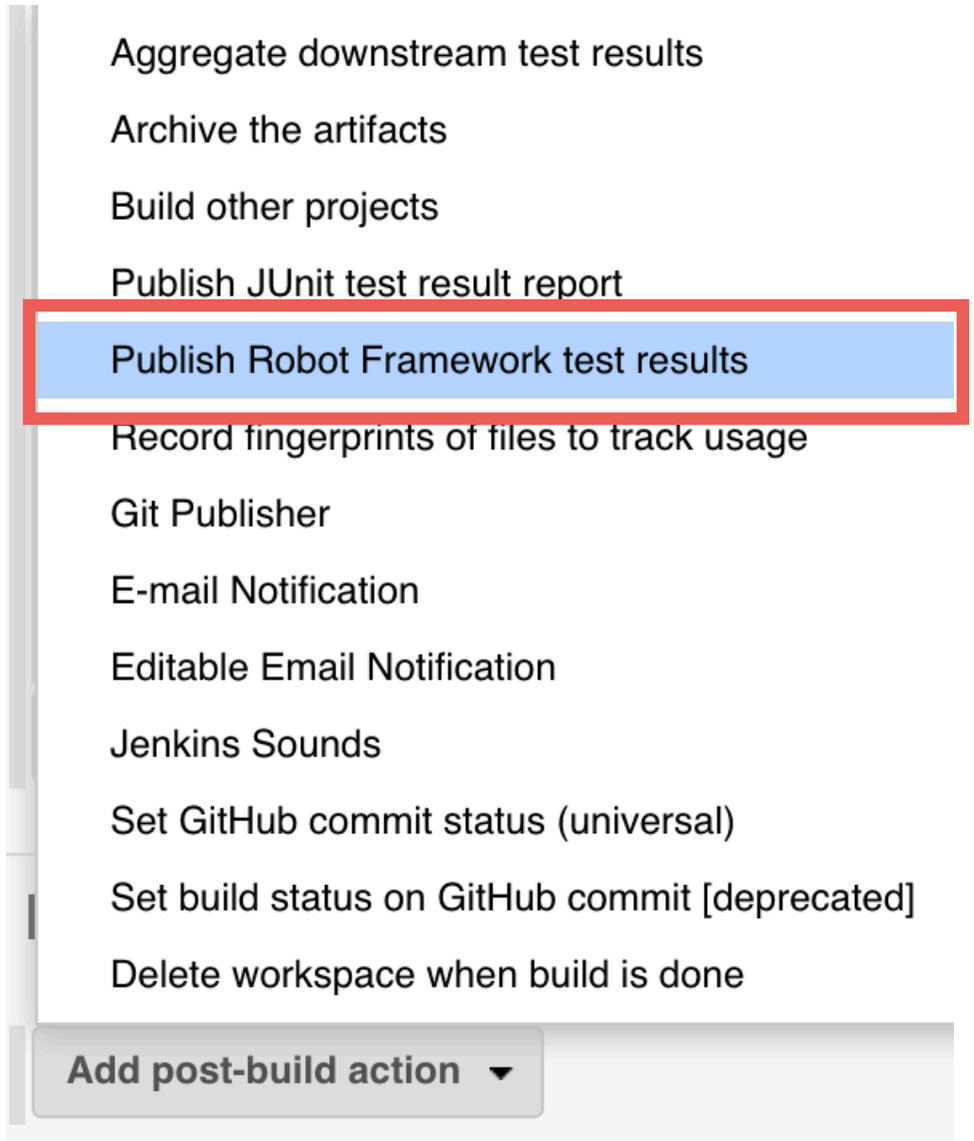
Install ↓	Name	Version
☑	Robot Framework This publisher stores Robot Framework test reports for builds and shows summaries of them in project and build views along with trend graph.	1.6.5

Install without restart | **Download now and install after restart** | Update information obtained: 8 hr 22 min ago | **Check now**

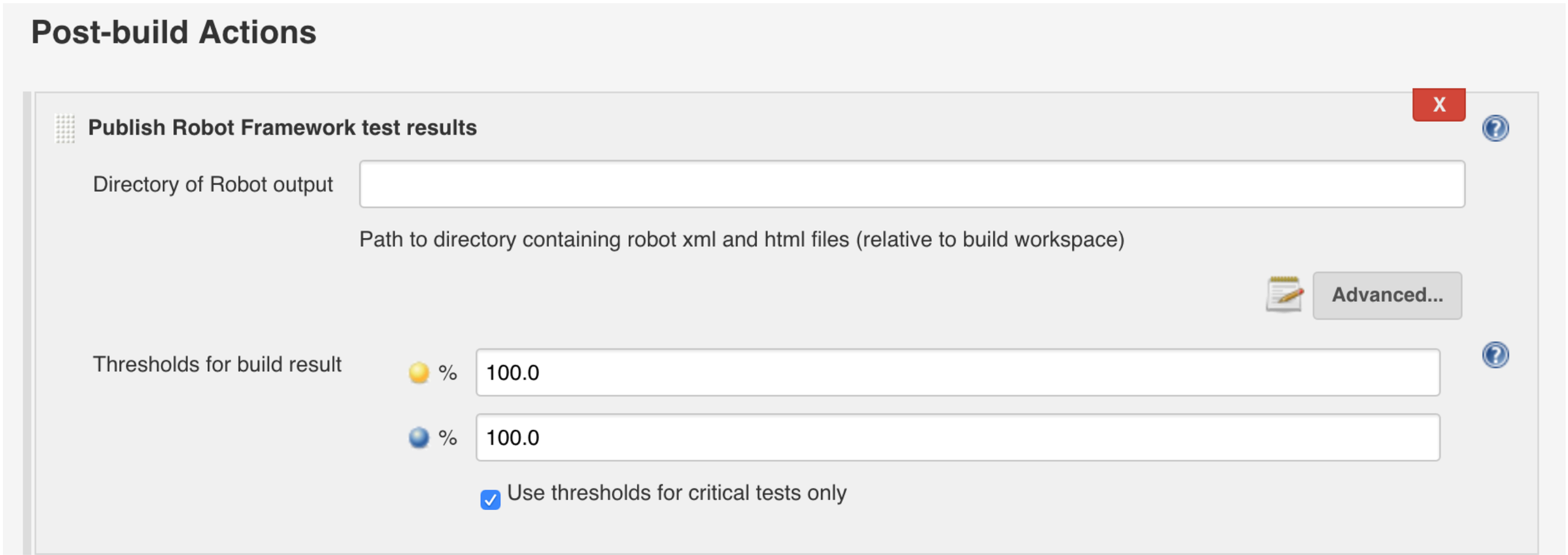
Install RobotFramework report plugin



Post Build with RobotFramework report



Post Build with RobotFramework report



Run and see report

Project robot_test

add description

Disable Project

Workspace

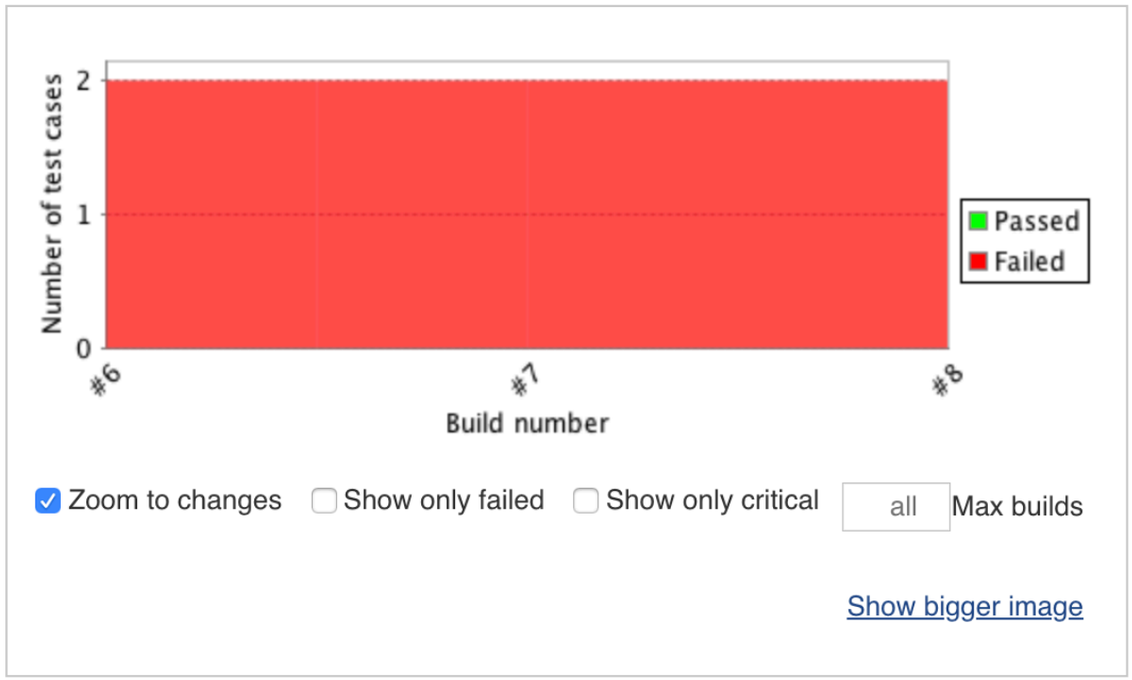
Recent Changes

Latest Robot Results:

	Total	Failed	Passed	Pass %
Critical tests	2	2	0	0.0
All tests	2	2	0	0.0

- Browse results
- Open report.html
- Open log.html

Robot Framework Tests Trend (all tests)

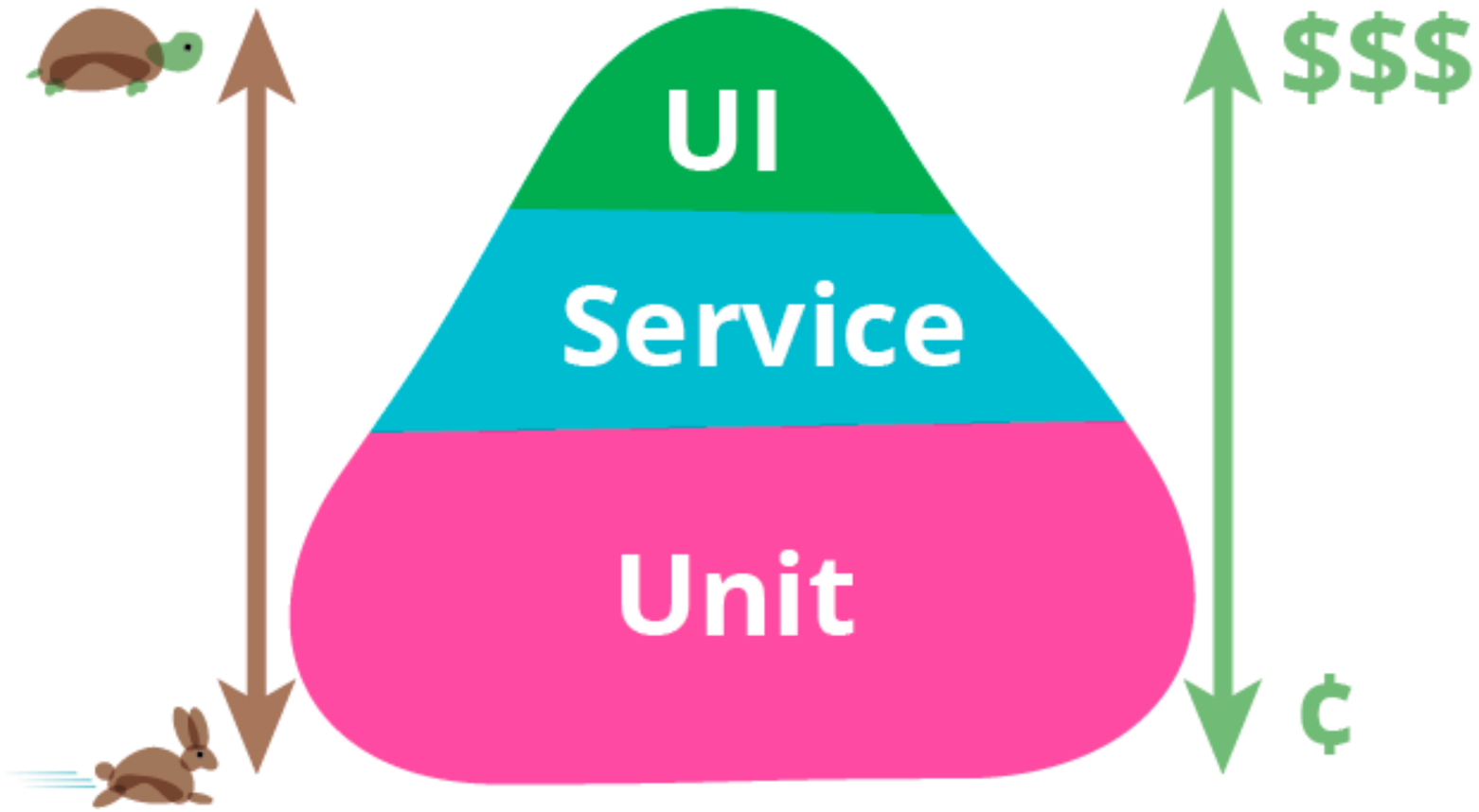


Zoom to changes Show only failed Show only critical all Max builds

Show bigger image

Permalinks

- Last build (#8), 7 hr 12 min ago
- Last stable build (#2), 7 hr 51 min ago
- Last successful build (#2), 7 hr 51 min ago
- Last failed build (#8), 7 hr 12 min ago
- Last unsuccessful build (#8), 7 hr 12 min ago
- Last completed build (#8), 7 hr 12 min ago



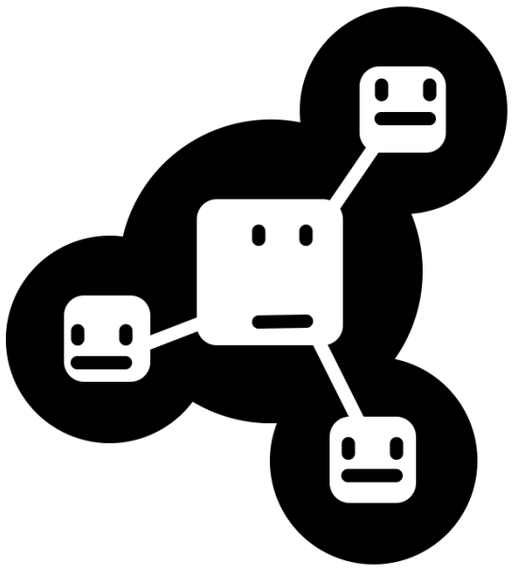
Scaling Testing

Scaling Testing

- Pabot
- Selenium Grid

Pabot

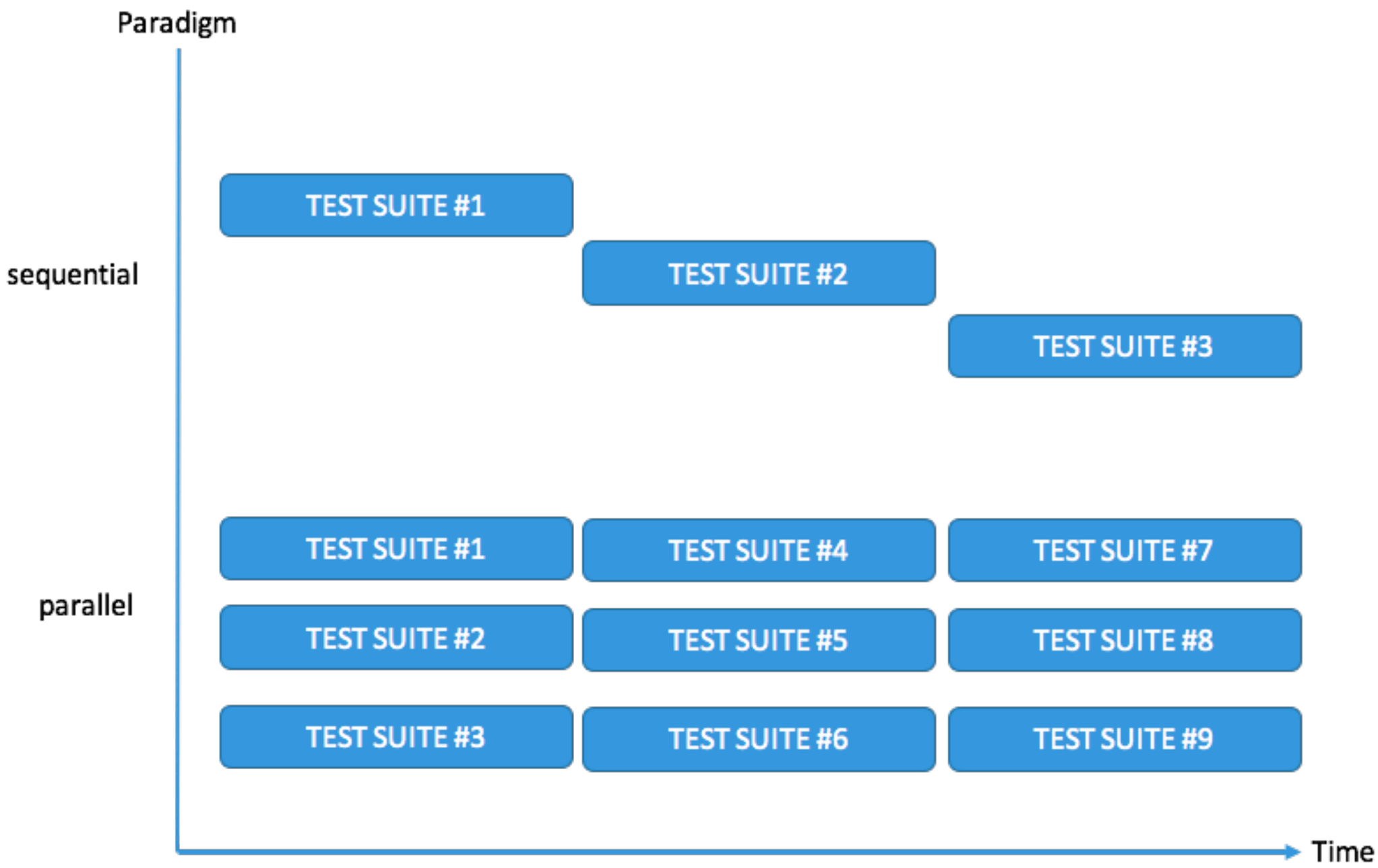
Parallel executor for Robot Framework
Split one execution into multiple
https://pabot.org/



Pabot

GitHub

Test execution



Using Pabot

$pip install -U robotframework-pabot
$pabot

Parallel test suites

$pabot flow_dress_sorting.robot

Parallel test cases

$pabot **--testlevelsplit**
flow_dress_sorting.robot

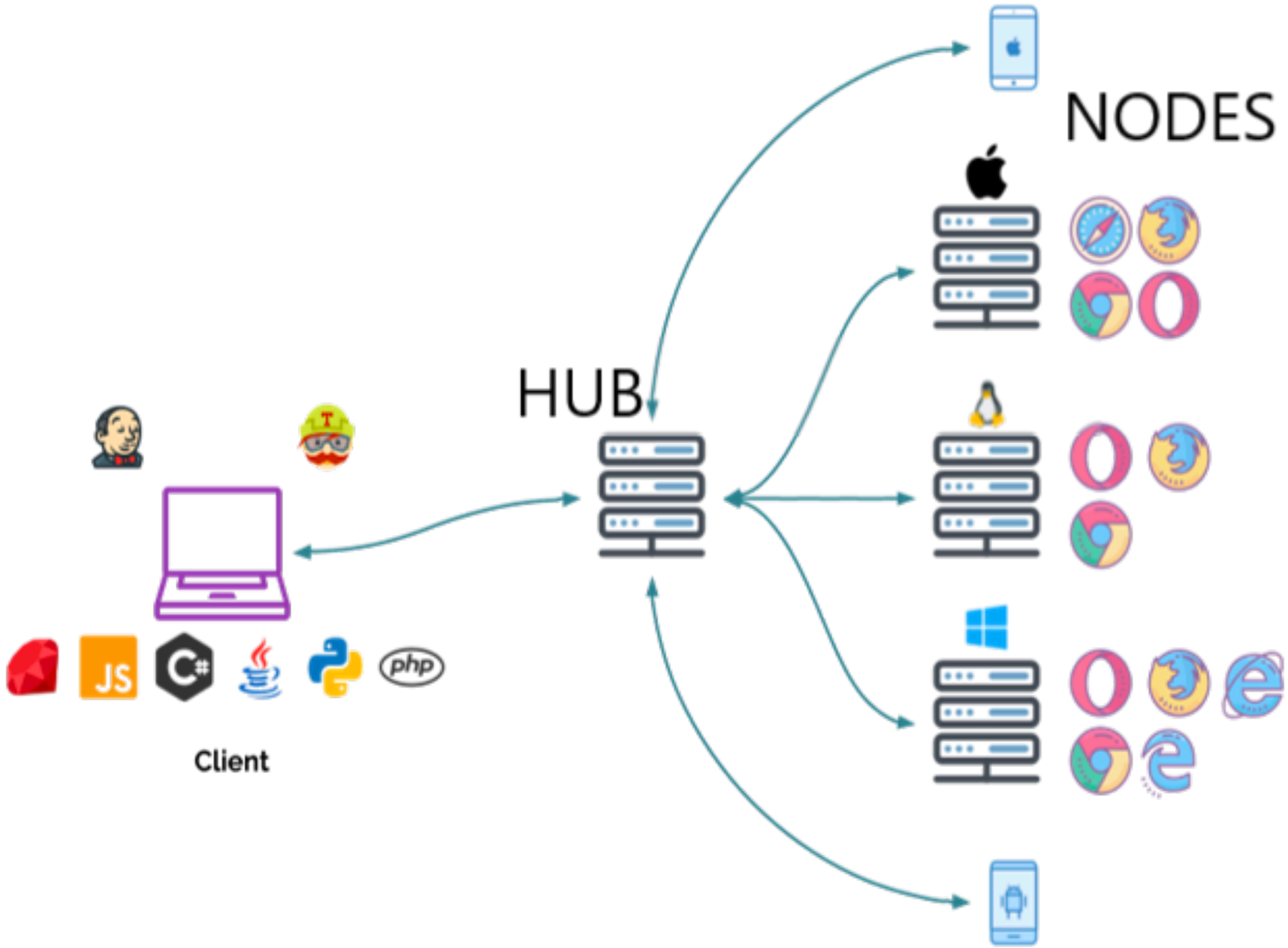
Workshop with Pabot

Selenium grid

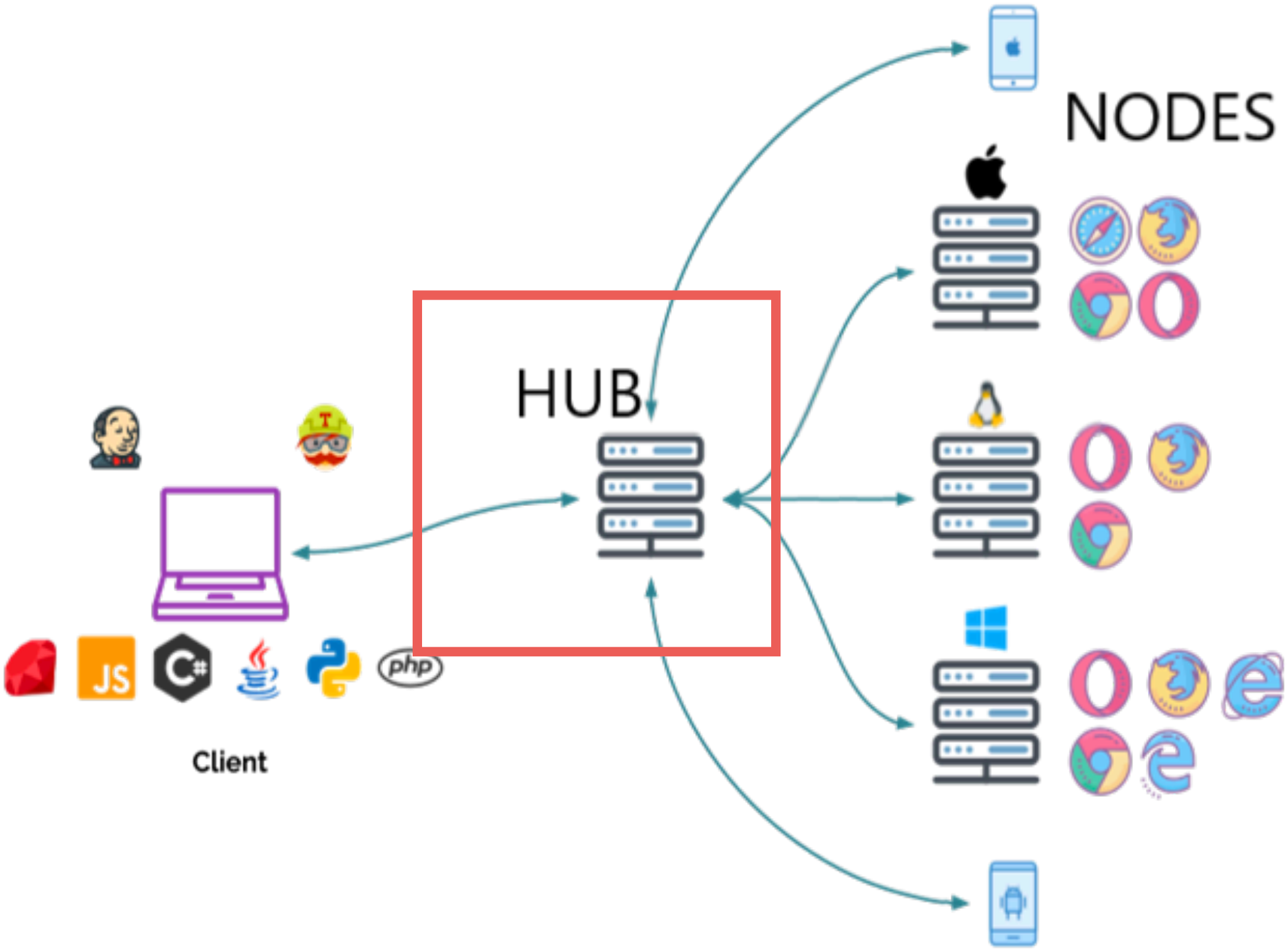
Run test cases on different machines
Parallel testing

https://github.com/SeleniumHQ/selenium/wiki/Grid2

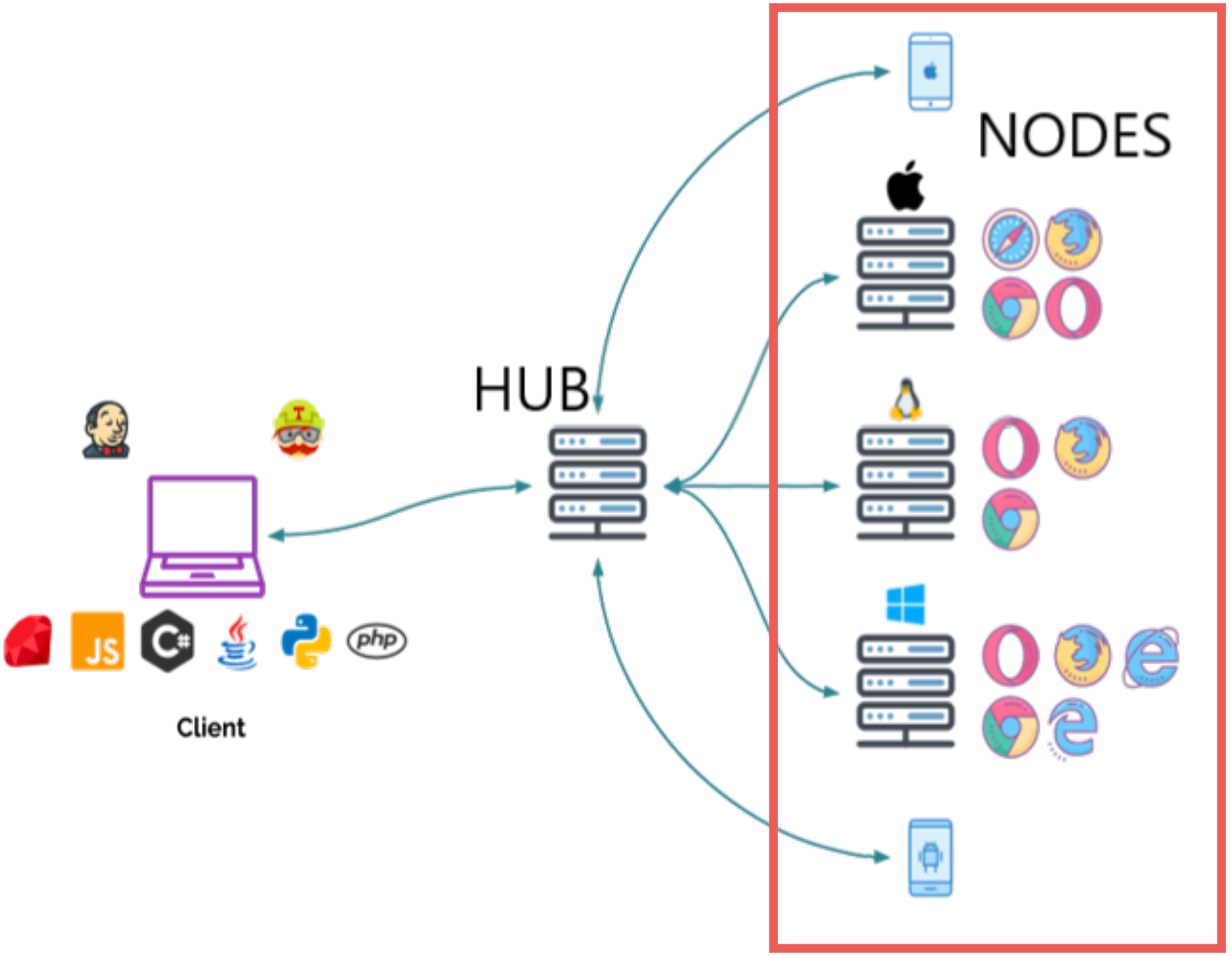
Selenium grid architecture



Selenium grid architecture



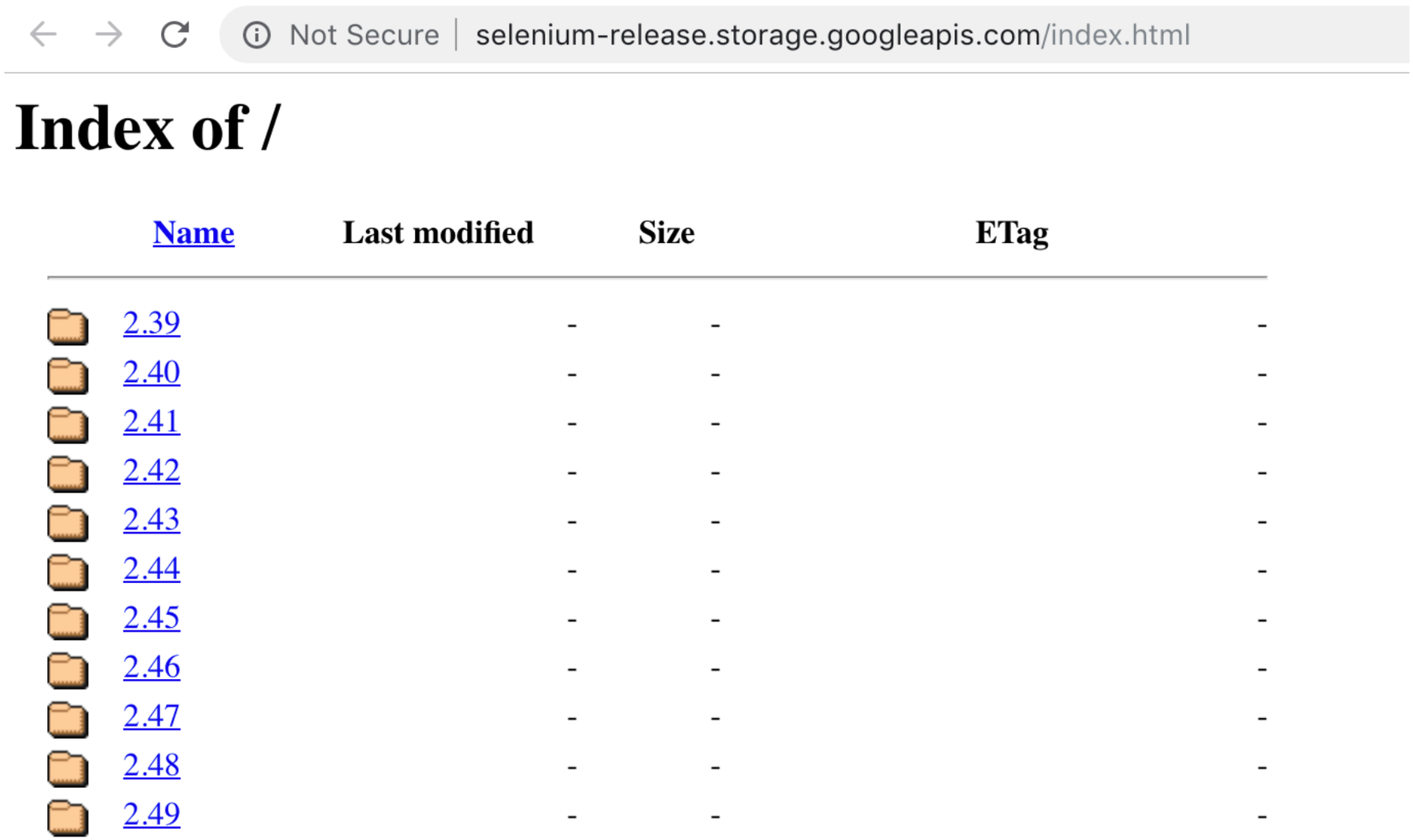
Selenium grid architecture



Selenium grid architecture

Hub
Nodes

Download selenium grid



http://selenium-release.storage.googleapis.com/index.html

Download selenium grid 4.0

Not Secure | selenium-release.storage.googleapis.com/index.html?path=4.0/

Index of /4.0/

Name	Last modified	Size	ETag
Parent Directory		-	
selenium-html-runner-4.0.0-alpha-1.jar	2019-04-24 16:17:02	13.52MB	2eca35318710f46d1ba5ed5543a906c9
selenium-html-runner-4.0.0-alpha-2.jar	2019-07-01 21:32:41	13.76MB	346d72e4f425bfec91c7073a46c96208
selenium-java-4.0.0-alpha-1.zip	2019-04-24 16:17:01	8.46MB	db9ed262a07c1cd2bb6098263c7f1e7b
selenium-java-4.0.0-alpha-2.zip	2019-07-01 21:32:33	8.74MB	2d31929580c3d829197eea97ade5f4f0
selenium-server-4.0.0-alpha-1.jar	2019-04-24 16:16:58	10.62MB	c32b1dd1c12cdb42b48f345d65d657fb
selenium-server-4.0.0-alpha-1.zip	2019-04-24 16:16:59	10.20MB	7f0bc4bb4fc2a5a7f0a262f62bf782d3
selenium-server-4.0.0-alpha-2.jar	2019-07-01 21:32:04	10.79MB	d0676e6b3ee508b48416aba603662573
selenium-server-4.0.0-alpha-2.zip	2019-07-01 21:32:11	10.47MB	fb19d62db44a7b163f1fbc2fff9dff0a
selenium-server-standalone-4.0.0-alpha-1.jar	2019-04-24 16:17:00	11.98MB	ac553ec987d16d2af8c8e3ef9061772c
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selenium-server-standalone-4.0.0-alpha-2.jar	2019-07-01 21:32:19	12.33MB	d000d97d24389fde5bfb94f450ede780
selenium-server-standalone-4.0.0-alpha-2.zip	2019-07-01 21:32:27	12.26MB	2466773c71eeddea02004371a5e32324

http://selenium-release.storage.googleapis.com/index.html

Start Hub

$java -jar selenium-server-standalone-<version>.jar **-role hub**

Start Hub

Open url=http://localhost:4444

Selenium Grid Hub v.4.0.0-alpha-2

Whoops! The URL specified routes to this help page.

For more information about Selenium Grid Hub please see the docs and/or visit the wiki. Or perhaps you are looking for the Selenium Grid Hub console.

Happy Testing!

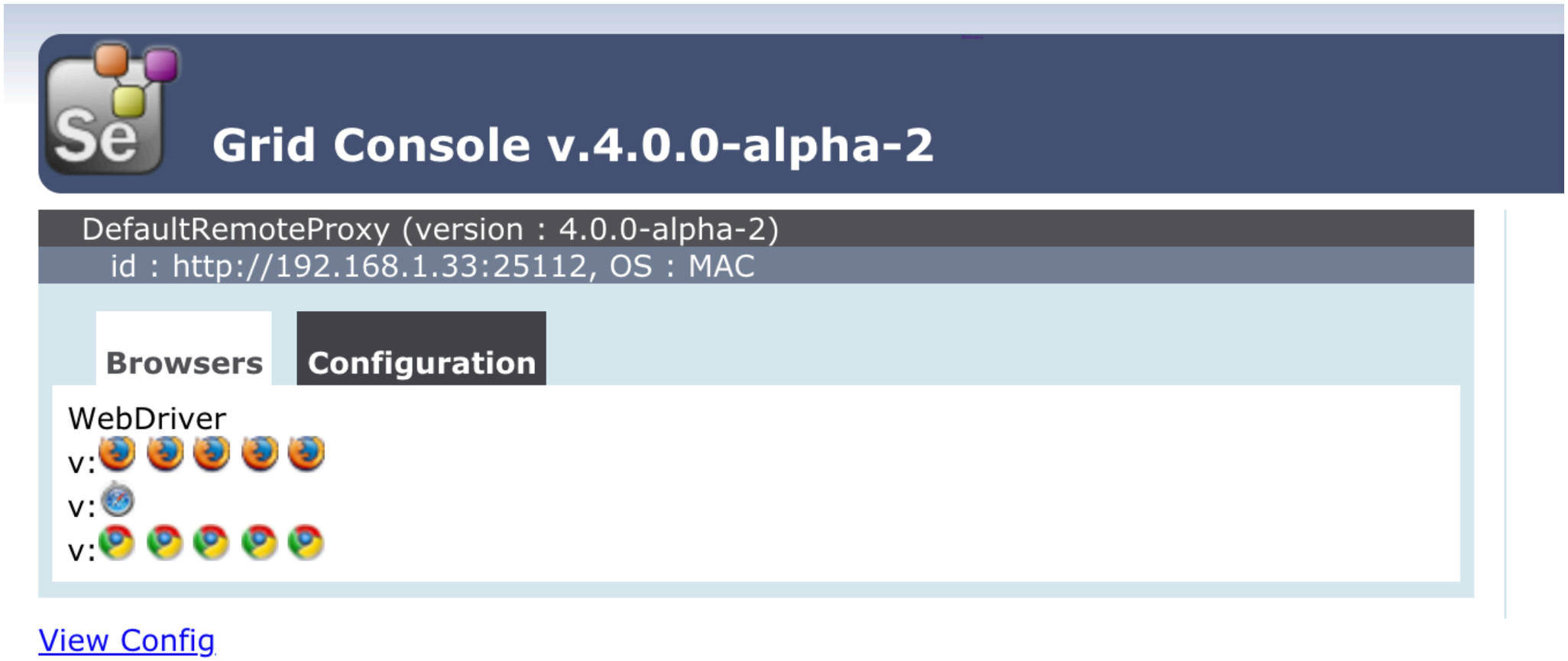
Selenium is made possible through the efforts of our open source community, contributions from these people, and our sponsors.

Start Node

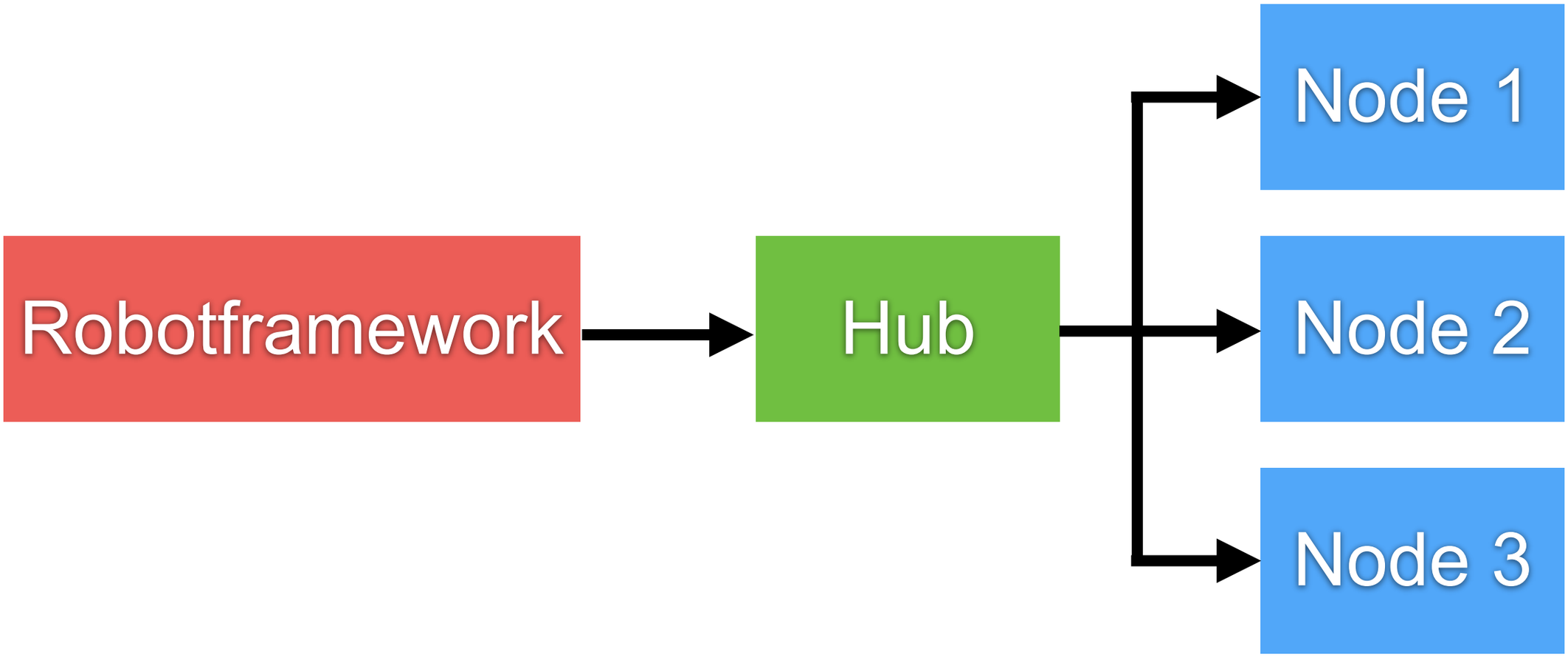
$java -jar selenium-server-standalone-<version>.jar **-role node -hub http://localhost:4444/grid/register**

Start Node

Open url=http://localhost:4444/grid/console



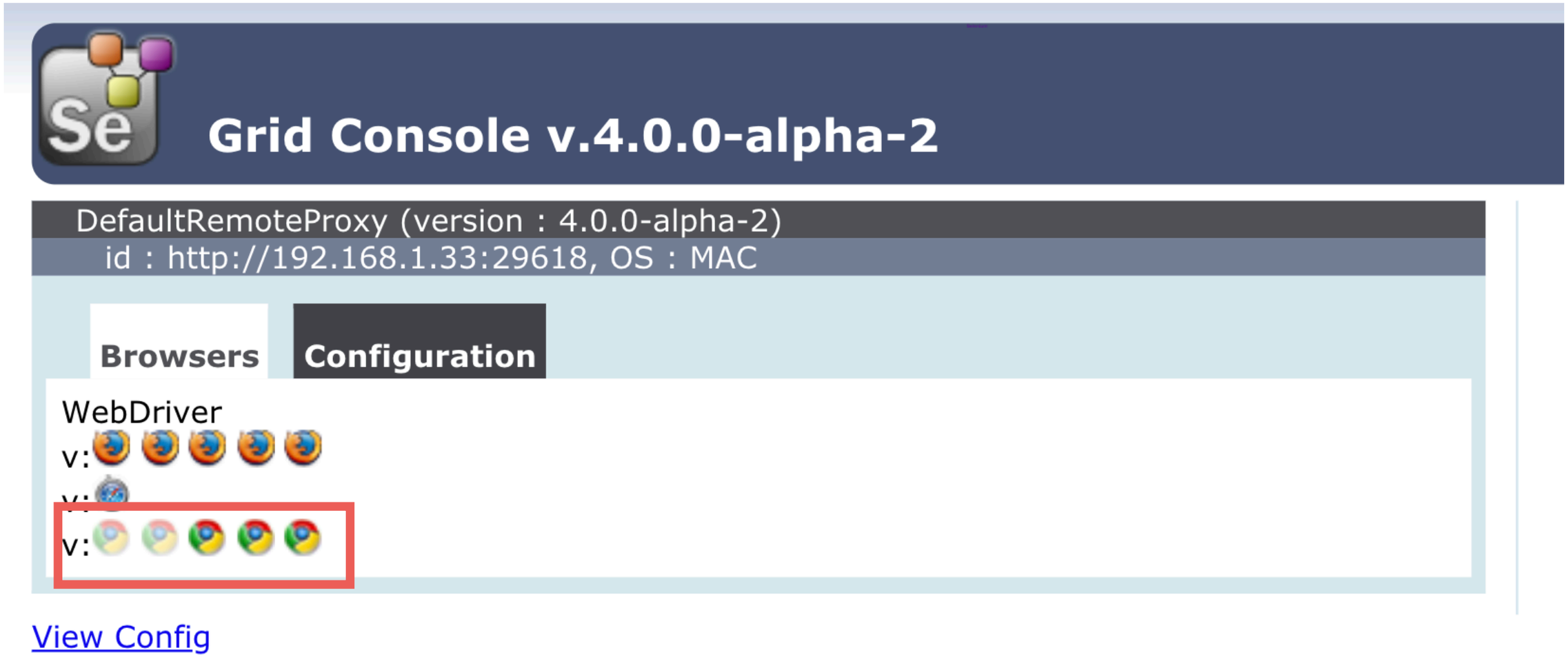
Testing with Robotframework



Testing with Robotframework

```
*** Keywords ***
Open with selenium grid
    Open Browser    ${URL}
    ...  browser=${BROWSER}
    ...  remote_url=http://localhost:4444/wd/hub
    ...  desired_capabilities=browserName:chrome
```

State of nodes in selenium grid



Close browser in each test case

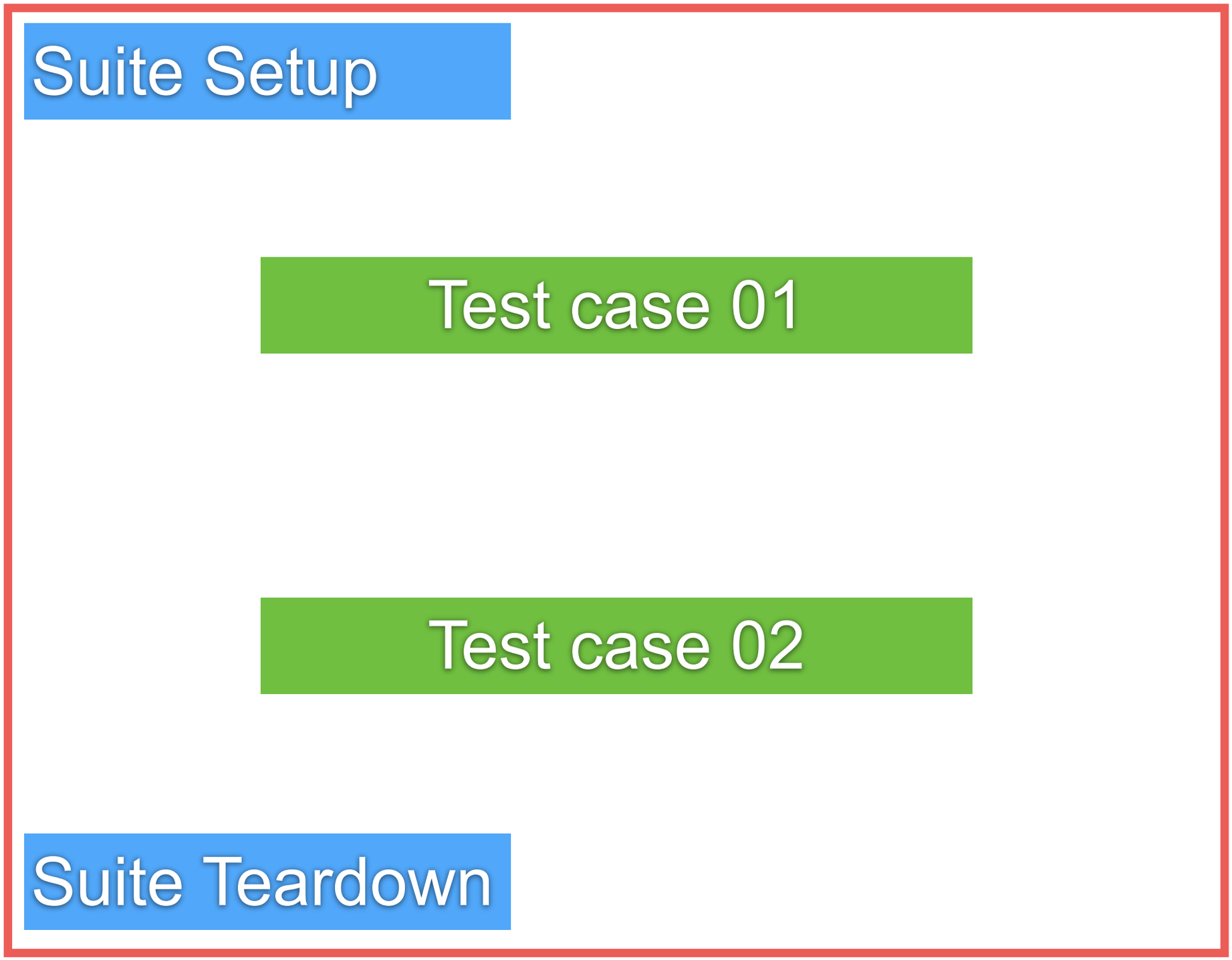
```
*** Settings ***
Resource  ./pages/welcome.robot
Resource  ./pages/catalog.robot
Test Teardown  Close Browser
```

Testing life cycle

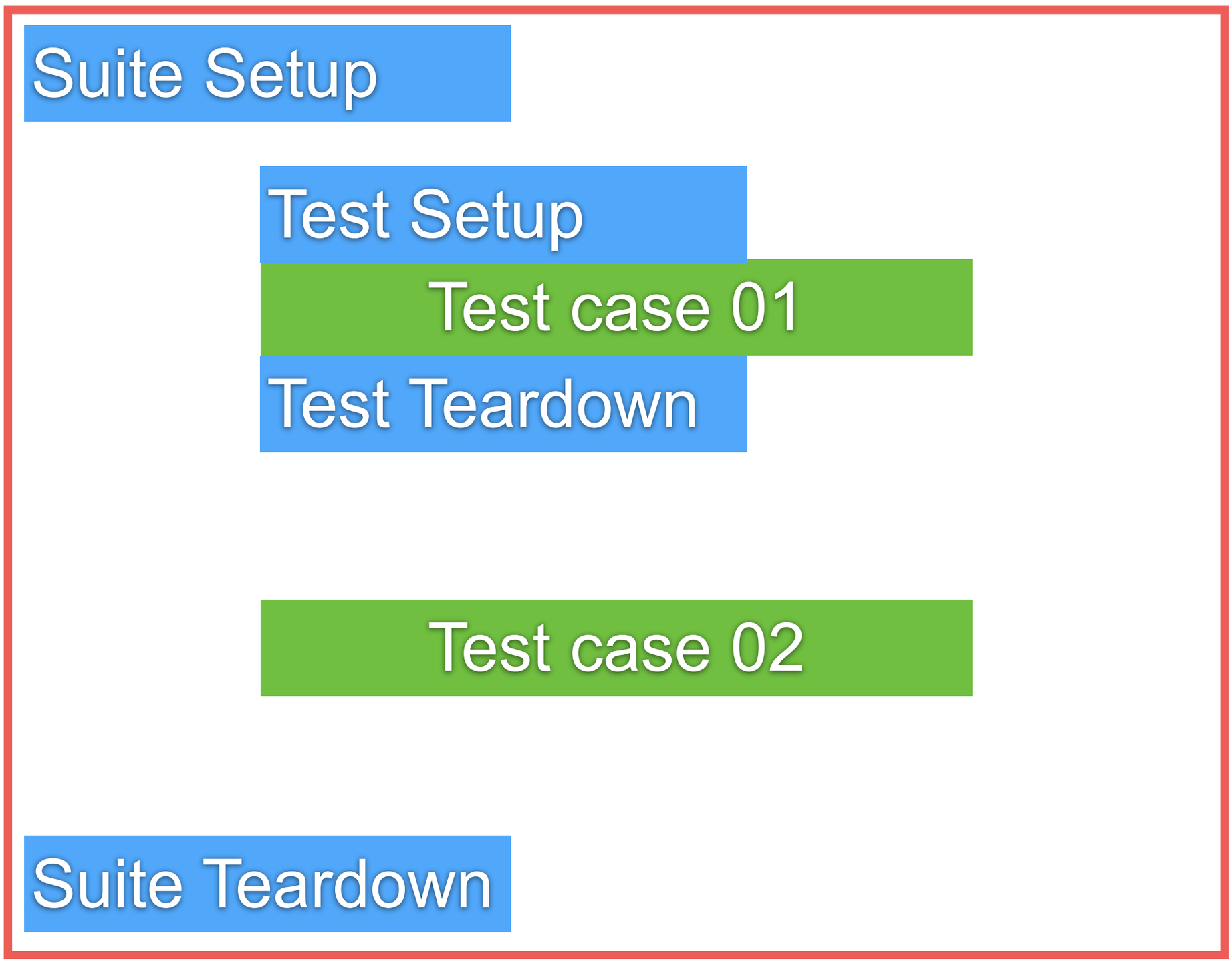
Test case 01

Test case 02

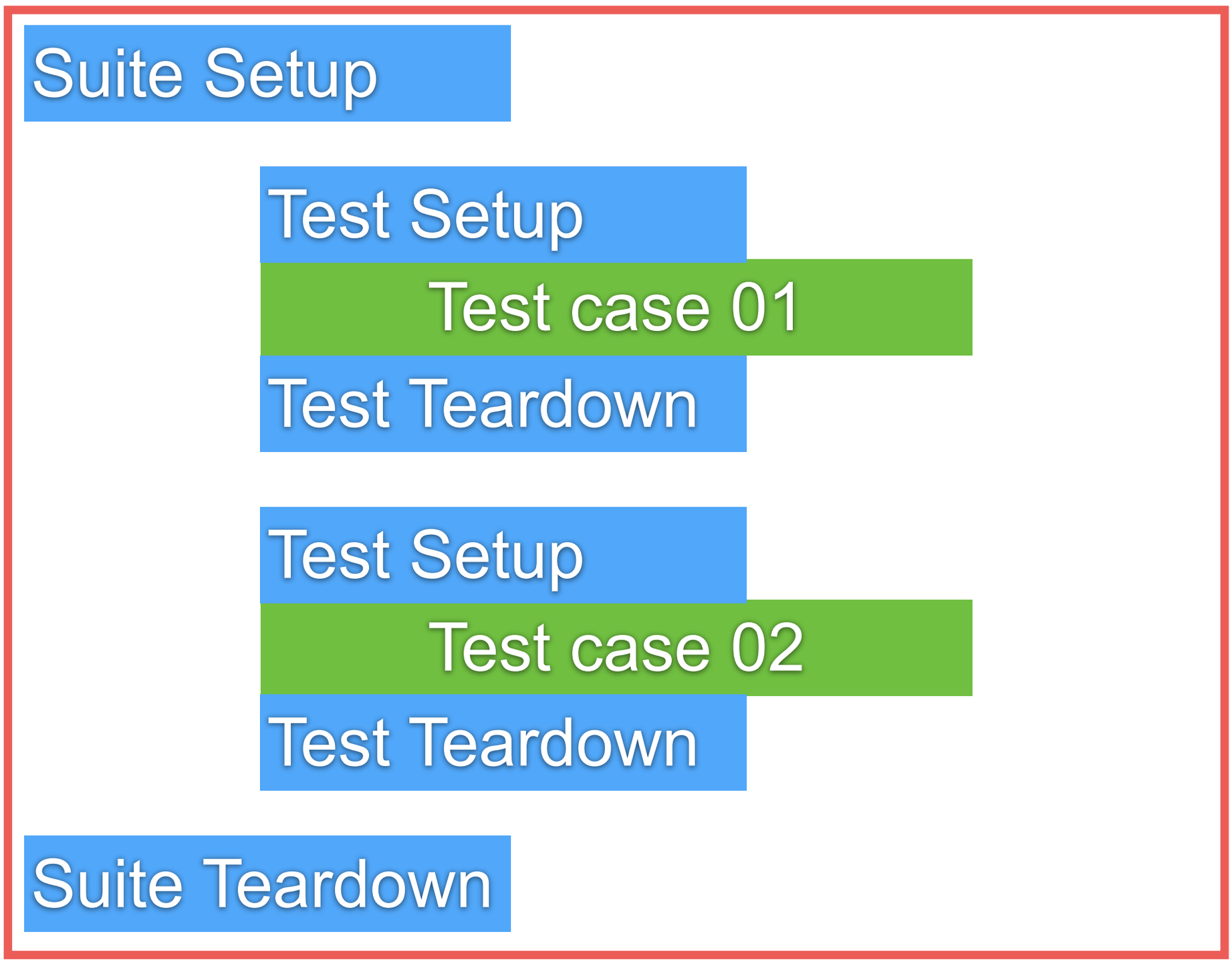
Testing life cycle



Testing life cycle



Testing life cycle



Workshop with Selenium grid

API testing

API testing

Robot framework
Postman

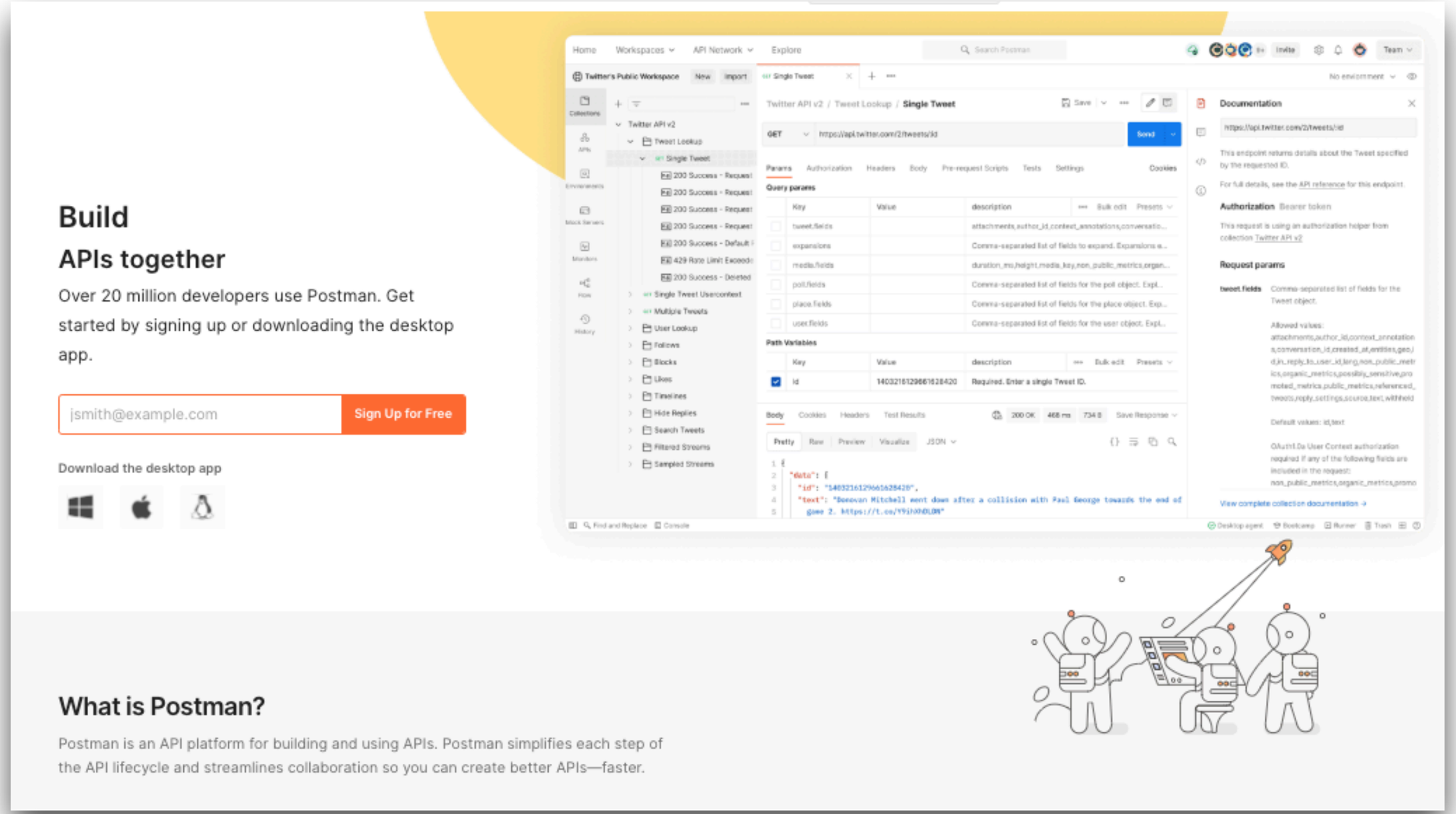
API testing with Robot

Using RequestsLibrary

$pip install -U requests
$pip install -U robotframework-requests

https://github.com/bulkan/robotframework-requests

API testing with Postman



https://www.postman.com/

Postman in command line

$npm install -g newman
$newman run <collection file>
$newman run <collection file> **-r cli,junit**

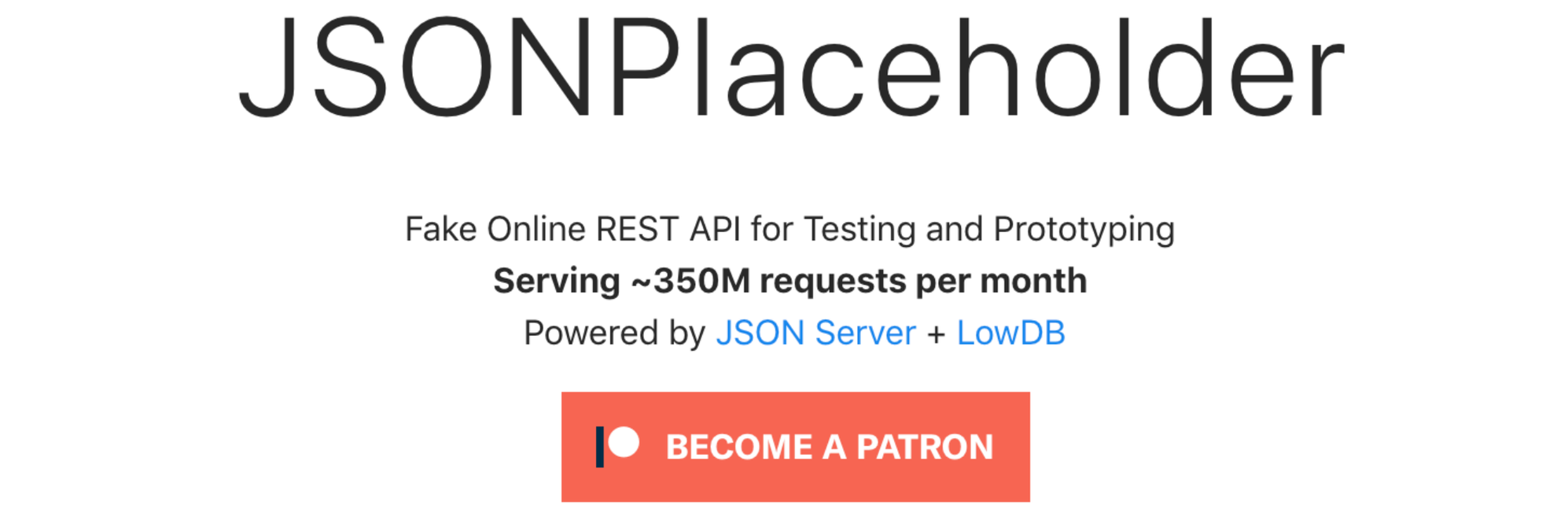
$newman run <collection file> **-r cli,junit**
--reporter-junit-export outputfile.xml

https://www.npmjs.com/package/newman

Workshop API testing

Workshop API testing

https://jsonplaceholder.typicode.com/



Workshop API testing

https://jsonplaceholder.typicode.com/users


```
[
  - {
        id: 1,
        name: "Leanne Graham",
        username: "Bret",
        email: "Sincere@april.biz",
    - address: {
        street: "Kulas Light",
        suite: "Apt. 556",
        city: "Gwenborough",
        zipcode: "92998-3874",
      - geo: {
            lat: "-37.3159",
            lng: "81.1496"
        }
    },
```


Create library of Robot Framework

Programming language

Python

Java

Basic of Python

Python 3+

Hello with Python

```python
def sayHi(name):
    return 'Hi, %s' %(name)


if __name__ == '__main__':
    result = sayHi('somkiat')
    print(result)
```

OOP with Python

Hello with OOP

```
class Hello:
    def __init__(self):
        self._result = ''

    def set_name(self, name):
        self._name = name

    def get_result(self):
        return 'Hi, %s' %(self._name)

if __name__ == '__main__':
    h = Hello()
    h.set_name('somkiat')
    print(h.get_result())
```

Custom Library with Robot Framework

Types of Library

Static library
Dynamic library
Hybrid library

Static Library

Hello World (1)

Create a new library with python

```
1    *** Settings ***
2    Library    HelloWorld.py
3
4    *** Testcases ***
5    First library
6      Say Hi
7
8    Second library with argument
9      Say Hi  somkiat
```

Hello World (2)

Create file **HelloWorld.py** and method **say_hi()**

```
1     def say_hi(name = ""):
2         print("Say hi " + name)
3
```

Hello World (3)

$pybot test.robot

```
==============================================================================
Test
==============================================================================
First library                                                         | PASS |
------------------------------------------------------------------------------
Second library with argument                                          | PASS |
------------------------------------------------------------------------------
Test                                                                  | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
==============================================================================
```

Hello World (4)

See in report.html

Test Details

Totals | Tags | Suites | Search

Name:	Test
Status:	2 critical test, 2 passed, 0 failed 2 test total, 2 passed, 0 failed
Start / End Time:	20180603 22:28:28.540 / 20180603 22:28:28.578
Elapsed Time:	00:00:00.038
Log File:	log.html#s1

Name	Documentation
Test.First library	
Test.Second library with argument	

Improve naming of Library

Improve name of library

Need to change to HelloWorld

```
1    *** Settings ***
2    Library   HelloWorld
3
4    *** Testcases ***
5    First library
6      Say Hi
7
8    Second library with argument
9      Say Hi  somkiat
```

Run with python path

$pybot **--pythonpath** . test.robot

```
==============================================================================
Test
==============================================================================
First library                                                         | PASS |
------------------------------------------------------------------------------
Second library with argument                                          | PASS |
------------------------------------------------------------------------------
Test                                                                  | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
==============================================================================
```

Working with OOP

Hello World (2)

Create file **HelloWorld.py** and method **say_hi()**

```
1     class HelloWorld:
2         def say_hi(self, name = ""):
3             print("Say hi " + name)
4
5
```

Scope of test library

Scope of Test Library

TEST CASE (default)
TEST SUITE
GLOBAL

TEST CASE

Create a new instance for every test case

TEST SUITE

Create a new instance for every test suite

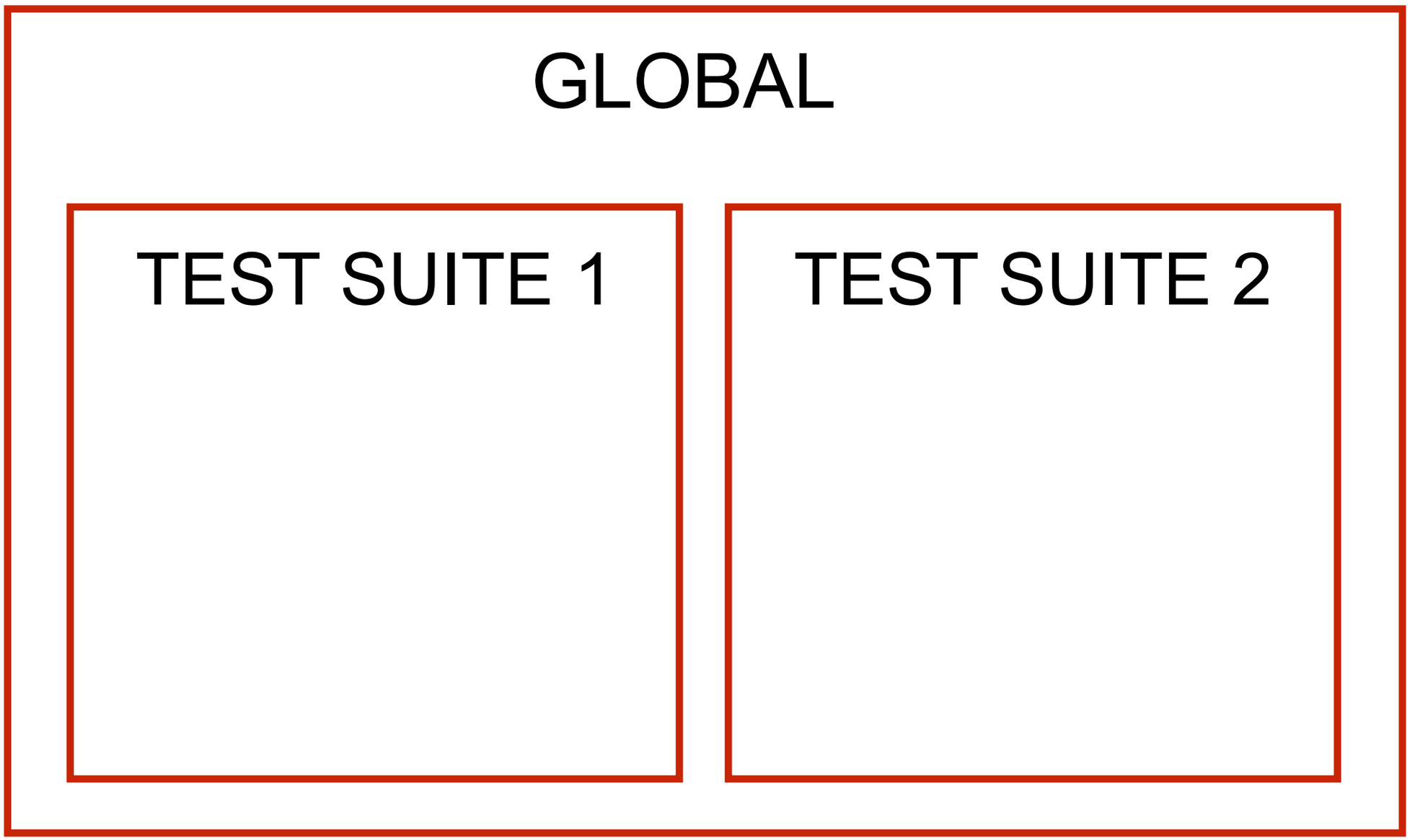
GLOBAL

Only one instance and shared by all test cases and test suites

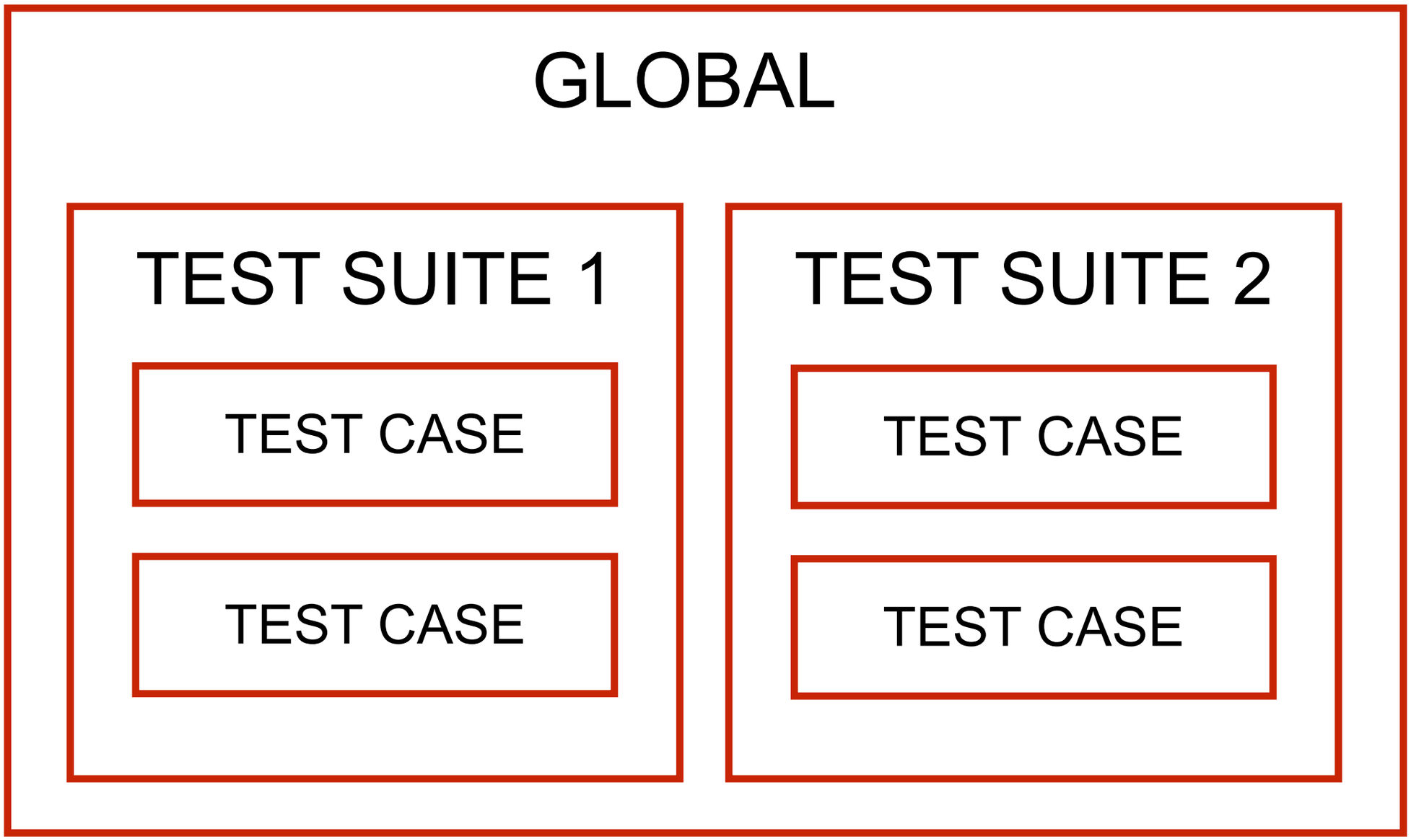
Scopes (1)

GLOBAL

Scopes (2)



Scopes (3)



Using TEST CASE scope

Create attribute ROBOT_LIBRARY_SCOPE

```
1     class HelloWorld:
2         ROBOT_LIBRARY_SCOPE = 'TEST CASE'
3
4         def __init__(self):
5             self.name = "Noname"
6
7         def say_hi(self):
8             print("Say hi " + self.name)
9
10        def say_hi2(self, name):
11            self.name = name
12            print("Say hi " + self.name)
13
```

My test cases

```
*** Settings ***
Library   HelloWorld

*** Testcases ***
First library
  Say Hi

Second library with argument
  Say Hi2  somkiat

Third library
  Say Hi
```

Run with python path

TEST **First library**

Full Name: Test.First library

Start / End / Elapsed: 20180603 23:22:02.490 / 20180603 23:22:02.491 / 00:00:00.001

Status: PASS (critical)

KEYWORD HelloWorld . **Say Hi**

Start / End / Elapsed: 20180603 23:22:02.491 / 20180603 23:22:02.491 / 00:00:00.000

23:22:02.491 INFO Say hi Noname

Name = “Noname”

TEST **Second library with argument**

Full Name: Test.Second library with argument

Start / End / Elapsed: 20180603 23:22:02.492 / 20180603 23:22:02.493 / 00:00:00.001

Status: PASS (critical)

KEYWORD HelloWorld . **Say Hi2** somkiat

Start / End / Elapsed: 20180603 23:22:02.492 / 20180603 23:22:02.493 / 00:00:00.001

23:22:02.492 INFO Say hi somkiat

Name = “somkiat”

TEST **Third library**

Full Name: Test.Third library

Start / End / Elapsed: 20180603 23:22:02.493 / 20180603 23:22:02.494 / 00:00:00.001

Status: PASS (critical)

KEYWORD HelloWorld . **Say Hi**

Start / End / Elapsed: 20180603 23:22:02.494 / 20180603 23:22:02.494 / 00:00:00.000

23:22:02.494 INFO Say hi Noname

Name = “Noname”

Using TEST SUITE scope

```
1     class HelloWorld:
2         ROBOT_LIBRARY_SCOPE = 'TEST SUITE'
3
4         def __init__(self):
5             self.name = "Noname"
6
7         def say_hi(self):
8             print("Say hi " + self.name)
9
10        def say_hi2(self, name):
11            self.name = name
12            print("Say hi " + self.name)
```

Run with python path

TEST **First library**

Full Name: Test.First library

Start / End / Elapsed: 20180603 23:16:43.825 / 20180603 23:16:43.826 / 00:00:00.001

Status: PASS (critical)

KEYWORD HelloWorld . **Say Hi**

Start / End / Elapsed: 20180603 23:16:43.825 / 20180603 23:16:43.826 / 00:00:00.001

23:16:43.826 INFO Say hi Noname

Name = “Noname”

TEST **Second library with argument**

Full Name: Test.Second library with argument

Start / End / Elapsed: 20180603 23:16:43.826 / 20180603 23:16:43.827 / 00:00:00.001

Status: PASS (critical)

KEYWORD HelloWorld . **Say Hi2** somkiat

Start / End / Elapsed: 20180603 23:16:43.827 / 20180603 23:16:43.827 / 00:00:00.000

23:16:43.827 INFO Say hi somkiat

Name = “somkiat”

TEST **Third library**

Full Name: Test.Third library

Start / End / Elapsed: 20180603 23:16:43.828 / 20180603 23:16:43.829 / 00:00:00.001

Status: PASS (critical)

KEYWORD HelloWorld . **Say Hi**

Start / End / Elapsed: 20180603 23:16:43.828 / 20180603 23:16:43.828 / 00:00:00.000

23:16:43.828 INFO Say hi somkiat

Name = “somkiat”

Using GLOBAL scope

```
1     class HelloWorld:
2         ROBOT_LIBRARY_SCOPE = 'GLOBAL'
3
4         def __init__(self):
5             self.name = "Noname"
6
7         def say_hi(self):
8             print("Say hi " + self.name)
9
10        def say_hi2(self, name):
11            self.name = name
12            print("Say hi " + self.name)
13
```

Run with python path

TEST First library

Full Name: Test.First library

Start / End / Elapsed: 20180603 23:16:43.825 / 20180603 23:16:43.826 / 00:00:00.001

Status: PASS (critical)

KEYWORD HelloWorld . Say Hi

Start / End / Elapsed: 20180603 23:16:43.825 / 20180603 23:16:43.826 / 00:00:00.001

`23:16:43.826` INFO `Say hi Noname`

Name = “Noname”

TEST Second library with argument

Full Name: Test.Second library with argument

Start / End / Elapsed: 20180603 23:16:43.826 / 20180603 23:16:43.827 / 00:00:00.001

Status: PASS (critical)

KEYWORD HelloWorld . Say Hi2 somkiat

Start / End / Elapsed: 20180603 23:16:43.827 / 20180603 23:16:43.827 / 00:00:00.000

`23:16:43.827` INFO `Say hi somkiat`

Name = “somkiat”

TEST Third library

Full Name: Test.Third library

Start / End / Elapsed: 20180603 23:16:43.828 / 20180603 23:16:43.829 / 00:00:00.001

Status: PASS (critical)

KEYWORD HelloWorld . Say Hi

Start / End / Elapsed: 20180603 23:16:43.828 / 20180603 23:16:43.828 / 00:00:00.000

`23:16:43.828` INFO `Say hi somkiat`

Name = “somkiat”

Run with another test suite

Create new test suite => test2.robot

```
1     *** Settings ***
2     Library   HelloWorld
3
4     *** Testcases ***
5     Another test case
6       Say Hi
```

Run with python path

$pybot **--pythonpath** . *.robot

SUITE **Test2**

Full Name:	Test & Test2.Test2
Source:	/Users/somkiat/data/slide/robot-framework/adva
Start / End / Elapsed:	20180603 23:31:04.939 / 20180603 23:31:04.9
Status:	1 critical test, 1 passed, 0 failed

1 test total, 1 passed, 0 failed

TEST **Another test case**

Full Name:	Test & Test2.Test2.Another test case
Start / End / Elapsed:	20180603 23:31:04.941 / 20180603 23:31:0
Status:	PASS (critical)

KEYWORD HelloWorld . **Say Hi**

Start / End / Elapsed: 20180603 23:31:04.941 / 20180603 23:31:04.942

```
23:31:04.942    INFO    Say hi somkiat
```

Name = “somkiat”

Publish Library

Publish Library

Git provider => Github

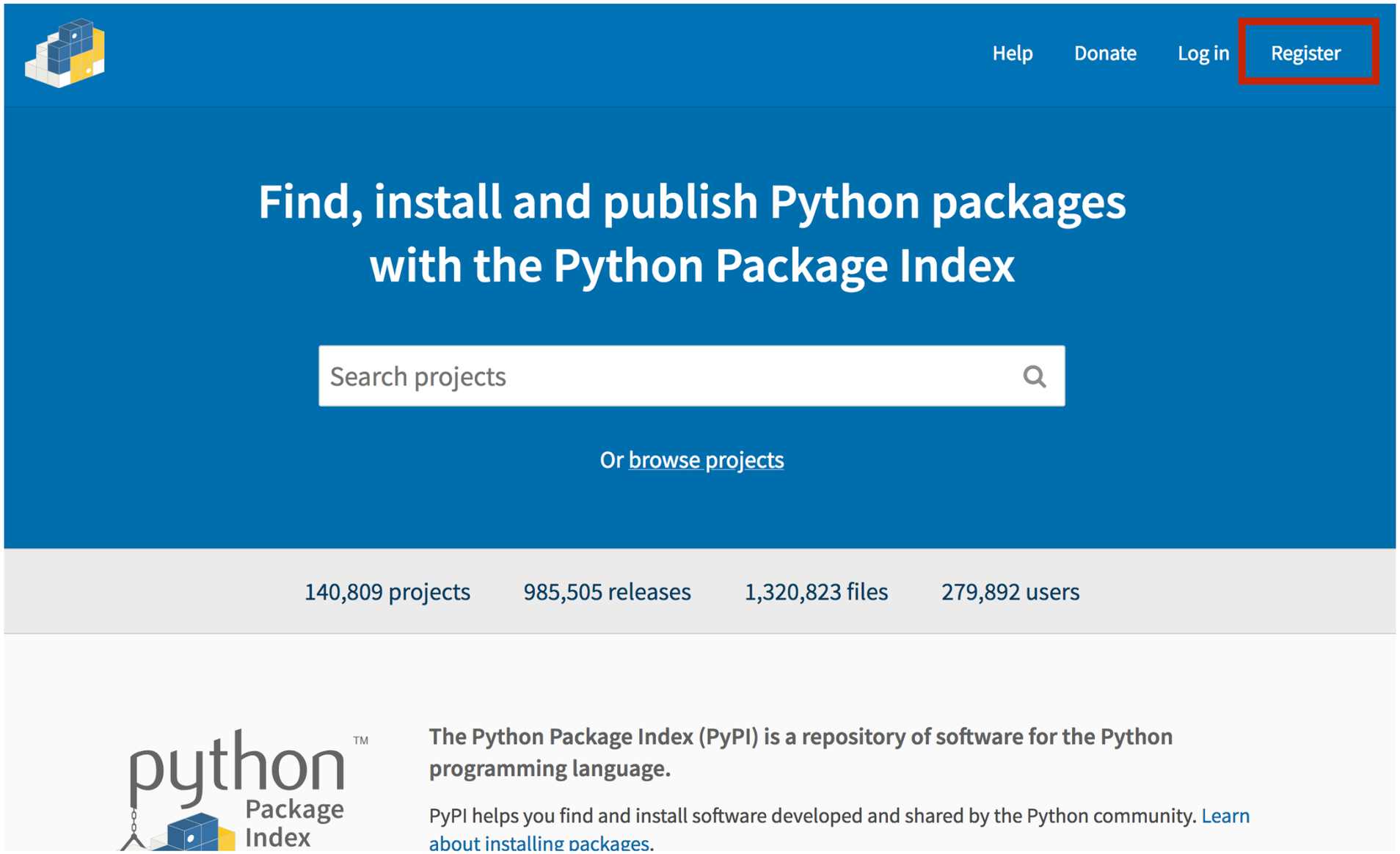
pypi.org

Publish Library with pypi.org

https://packaging.python.org/guides/migrating-to-pypi-org/#uploading

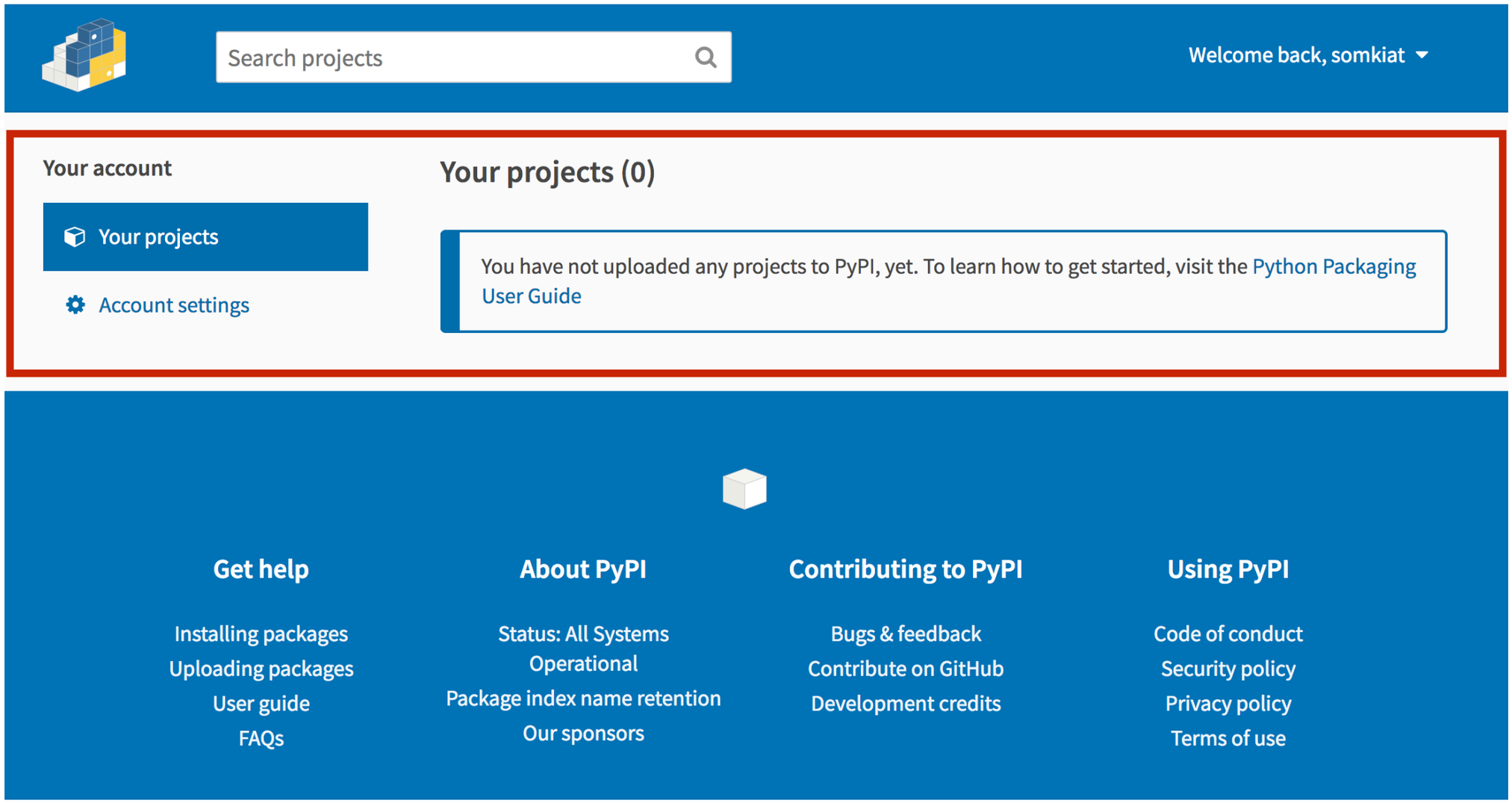
Step 1

Register account at https://pypi.org/



Step 2

Verify and see your project



Step 3

Start to develop your package

```
├── MANIFEST
├── MANIFEST.in
├── README.txt
├── install.txt
├── requirements.txt
├── setup.py
├── src
│   └── HelloWorld
│       ├── HelloWorldKeywords.py
│       └── __init__.py
└── test_suite.robot
```

Step 4 (1)

Create file **setup.py** to configure test library

```
├── MANIFEST
├── MANIFEST.in
├── README.txt
├── install.txt
├── requirements.txt
├── setup.py
├── src
│   └── HelloWorld
│       ├── HelloWorldKeywords.py
│       └── __init__.py
└── test_suite.robot
```

Step 4 (2)

Specify name and version of library

```
from setuptools import setup

setup(
    name="helloworld-library",
    version='0.1',
    package_dir={'' : 'src'},
    packages=['HelloWorld'],
    url='https://github.com/up1/demo-helloworld-library',
    author='Somkiat',
    author_email='somkiat.p@gmail.com',
)
```

Step 4 (3)

Specify package structure and name

```
1     from setuptools import setup
2
3     setup(
4         name="helloworld-library",
5         version='0.1',
6         package_dir={'' : 'src'},
7         packages=['HelloWorld'],
8         url='https://github.com/up1/demo-helloworld-library',
9         author='Somkiat',
10        author_email='somkiat.p@gmail.com',
11    )
```

Step 4 (4)

Required metadata of test library

```
1    from setuptools import setup
2
3    setup(
4        name="helloworld-library",
5        version='0.1',
6        package_dir={'' : 'src'},
7        packages=['HelloWorld'],
8        url='https://github.com/up1/demo-helloworld-library',
9        author='Somkiat',
10       author_email='somkiat.p@gmail.com',
11   )
```

Step 5
Develop HelloWorld library

Structure of package

Create directory src/HelloWorld

```
├── MANIFEST
├── MANIFEST.in
├── README.txt
├── install.txt
├── requirements.txt
├── setup.py
├── src
│   └── HelloWorld
│       ├── HelloWorldKeywords.py
│       └── __init__.py
└── test_suite.robot
```

Define keywords of library

Create file HelloWorldKeywords.py

```
1     class HelloWorldKeywords(object):
2         def __init__(self):
3             self.name = "Noname"
4
5         def say_hi(self):
6             print("Say hi " + self.name)
7
8         def say_hi2(self, name):
9             self.name = name
10            print("Say hi " + self.name)
11
```

Define keywords of library

Create file __init__.py

```
1    from HelloWorldKeywords import HelloWorldKeywords
2
3    class HelloWorld(HelloWorldKeywords):
4        ROBOT_LIBRARY_SCOPE = 'TEST_CASE'
5
```

Step 6
Publish library to pypi.org

Create file ~/.pypirc

Configuration for publish library to pypi.org

```
[distutils]
index-servers =
  pypi

[pypi]
#repository=https://pypi.python.org/pypi
username=<your username>
password=<your password>
```

Publish library to pypi.org

$pip install -U pip setuptools twine

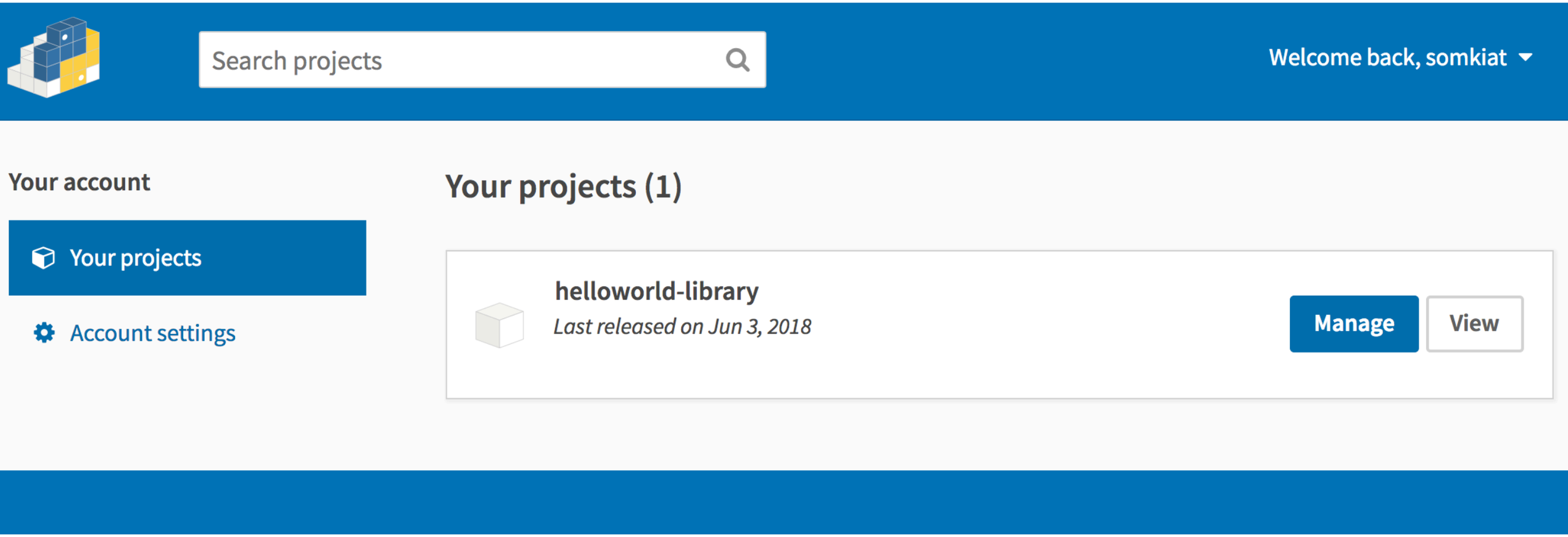
$python setup.py sdist

$twine upload dist/*

```
Writing helloworld-library-0.2/setup.cfg
Creating tar archive
removing 'helloworld-library-0.2' (and everything under it)
Uploading distributions to https://upload.pypi.org/legacy/
Uploading helloworld-library-0.2.tar.gz
100%|████████████| 3.54k/3.54k [00:01<00:00, 2.86kB/s]
```

Check your library (1)

Go to pypi.org



Check your library (2)

helloworld-library 0.1

```
pip install helloworld-library
```

Latest version

Last released: About 5 hours ago.

No project description provided

Manage project

Navigation

- Project description
- Release history
- Download files

Project links

- Homepage

Project description

The author of this package has not provided a project description

Use HelloWorld library

$pip install helloworld-library

```
Collecting helloworld-library
  Downloading https://files.pythonhosted.org/packages/8f/a2
92e220deb5cb908b1d6f358f1d36e8e8307e9211a8c382b91a0225/hell
library-0.2.tar.gz
Building wheels for collected packages: helloworld-library
  Running setup.py bdist_wheel for helloworld-library ... d
  Stored in directory: /Users/somkiat/Library/Caches/pip/wh
/b4/6b/db550e3f32243f1d2397f064d34ed13b3178cb7b90b29f4c5e
Successfully built helloworld-library
Installing collected packages: helloworld-library
Successfully installed helloworld-library-0.2
```

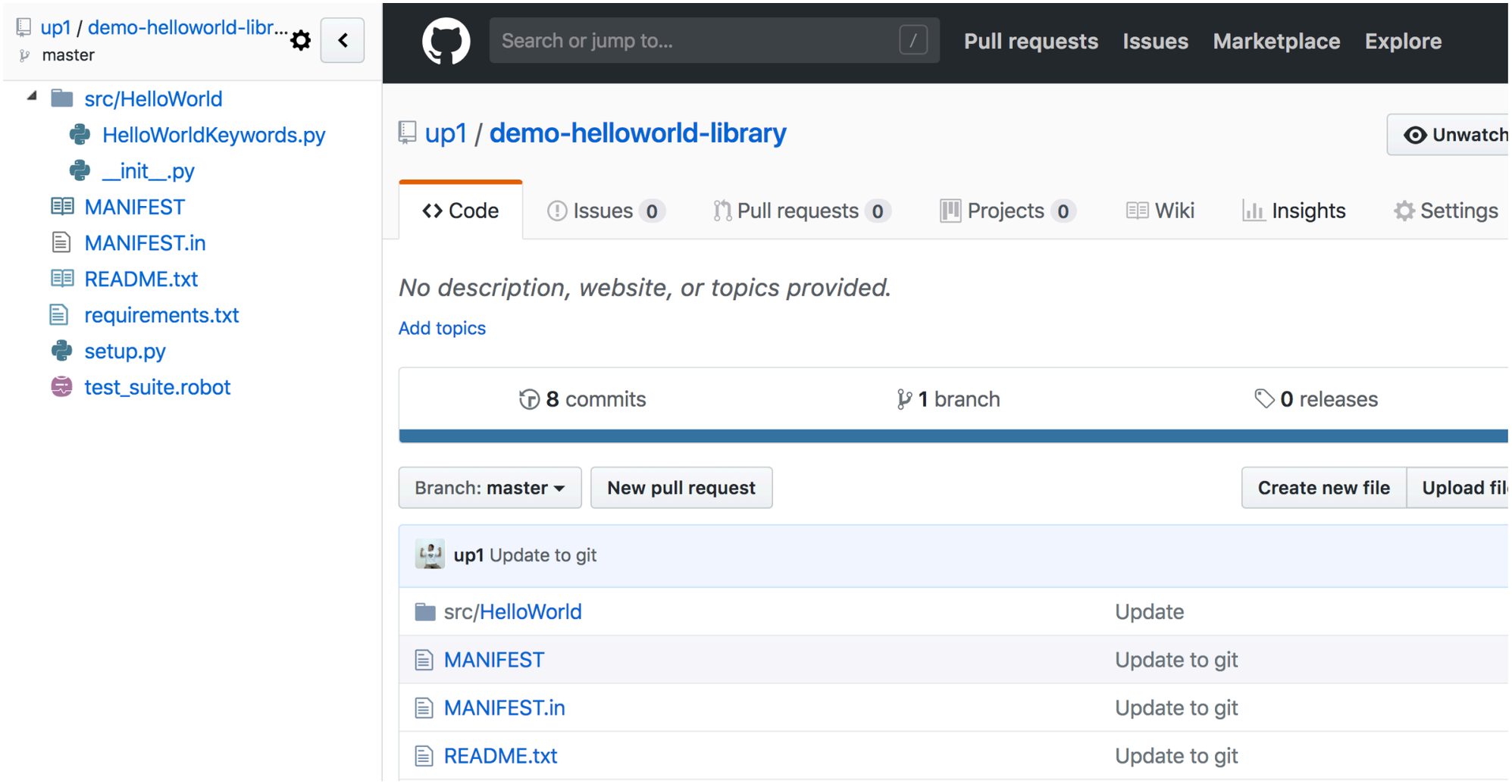
Use HelloWorld library

```
*** Settings ***
Library   HelloWorld

*** Testcases ***
First library
    Say Hi

Second library with argument
    Say Hi2  somkiat

```

Publish Library with github

Publish library to github

1. Push your code to your Github repository



https://github.com/up1/demo-helloworld-library

2. Install library from Github (1)

$pip install -r **requirements.txt**

$pip uninstall -r **requirements.txt**

git+https://github.com/up1/demo-helloworld-library.git#egg=helloworld-library

Name of library

2. Install library from Github (2)

$pip install -r **requirements.txt**

```
Collecting helloworld-library from git+https://github.com/up1
library.git#egg=helloworld-library (from -r requirements.txt
  Cloning https://github.com/up1/demo-helloworld-library.git
olders/t5/8kg23s_97z9dw44tfc1d6dqw0000gn/T/pip-install-d20dok
rary
Building wheels for collected packages: helloworld-library
  Running setup.py bdist_wheel for helloworld-library ... don
  Stored in directory: /private/var/folders/t5/8kg23s_97z9dw4
T/pip-ephem-wheel-cache-svb7x4pk/wheels/6e/77/72/2c1098f915d8
e47d24d0c0f106fe5b667
Successfully built helloworld-library
Installing collected packages: helloworld-library
Successfully installed helloworld-library-0.2
```

How to generate document of test library ?

http://robotframework.org/robotframework/latest/RobotFrameworkUserGuide.html#specifying-documentation-format

Generate document of library

Robotframework 2.7.5+ use **Libdoc** to generate the documentation of library

http://robotframework.org/robotframework/latest/RobotFrameworkUserGuide.html#libdoc

Support formats

ROBOT (default)
HTML
TEXT (plain text)
reST (reStructuredText)

How to use ?

Example with ROBOT format

```
1   from HelloWorldKeywords import HelloWorldKeywords
2
3   class HelloWorld(HelloWorldKeywords):
4       """ A keyword library for Robot Framework. It provides keywords for
5       learning how to create a new library. For more information
6       on underlying methods and documentation, see:
7           http://eclipse.org/paho/clients/python/docs/
8       """
9
10      ROBOT_LIBRARY_SCOPE = 'TEST_CASE'
11
12
```

How to use ?

Document in each keyword

```
5         def say_hi(self):
6             """ Say hi with out argument
7             Examples:
8             | Say Hi |
9             """
10            print("Say hi " + self.name)
11
12        def say_hi2(self, name):
13            """ Say hi with a argument.
14            `name` Your name
15            Examples:
16            Say hi   <name>
17            | Say Hi | somkiat |
18            """
19            self.name = name
20            print("Say hi " + self.name)
```

Generate documentation

$pip install -U helloworld-library

$python -m robot.libdoc HelloWorld ./docs/HelloWorld-Library.html

Documentation of Library (1)

HelloWorld

Library scope: test case
Named arguments: supported

Introduction

A keyword library for Robot Framework. It provides keywords for learning how to create a new library. For more information on underlying

Shortcuts

Say Hi · **S**ay Hi2

Keywords

Keyword	Arguments	
Say Hi		Say hi with out argument Examples: Say Hi
Say Hi2	*name*	Say hi with a argument. *name* Your name Examples Say Hi somkiat

Altogether 2 keywords.
Generated by Libdoc on 2018-06-04 00:34:08.

Documentation of Library (2)

HelloWorld

Library scope:	test case
Named arguments:	supported

Introduction

A keyword library for Robot Framework. It provides keywords for learning how to create a new library. For more information on underlying

Shortcuts

Say Hi · **S**ay Hi2

Keywords

Keyword	Arguments	
Say Hi		Say hi with out argument Examples: Say Hi
Say Hi2	*name*	Say hi with a argument. *name* Your name Examples Say Hi somkiat

Altogether 2 keywords.
Generated by Libdoc on 2018-06-04 00:34:08.

Workshop

Working with CSV file

Working with CSV file

Using csv library from Python 3
Read and Write

https://docs.python.org/3/library/csv.html

Working with CSV file

Design first with (Robot keyword)

```
1    *** Settings ***
2    Library    csv_library.py
3
4    *** Test Cases ***
5    Design process
6        ${result}=    Read    users.csv
7        Write    $result    new.csv
```

Working with CSV file

Coding with Python (read and write)

```python
import csv

def read(filename):
    with open(filename) as csvfile:
        spamreader = csv.reader(csvfile)
        for row in spamreader:
            for c in row:
                print(c, end='-')
            print()
```

Working with Database

Working with Email