

IdP/SP Software Testbed

Details:

<https://wiki.geant.org/x/TgCeDQ>

General topics

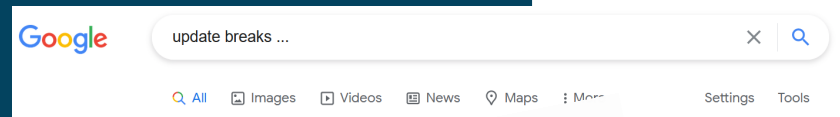
- Why do we need to test?
- Why it is hard?
- The solution
- Demonstration
- Next steps

Updates can break things !

Sometimes changes do more harm than good, especially in software development.

The likelihood of this increases with complexity.

You may not notice it happening until release.



- <https://www.makeuseof.com> › Tech News

The Latest Windows 10 Update

Mar 8, 2021 — Windows 10's February 2021 update is quite a few features
- <https://www.tomshardware.com> › news › ubuntu-bug-b...

Ubuntu Bug Breaks EFI on 21.04 Update With Older Machines ...

3 hours ago — Updating from previous versions of Ubuntu to 21.04 has been temporarily paused due to a bug which may see st...
- <https://www.techrepublic.com> › Topic › Mobility

Google breaks SMS and then quickly rolls it back ...

Dec 11, 2020 — As it turns out, Google released an update to the Messages app that had an issue tucked within Carrier Services v50, which is the communication ...
- <https://www.computerworld.com> › article › when-wind...

Windows bug fixes go bad, IT can now roll back ...

... software update / fix / patch] ... lets IT professionals roll back individual non-
- <https://piunikaweb.com> › 2021/04/12 › samsung-galax...

Samsung Galaxy A80 One UI 3.1 (Android 11) breaks calling ...

Apr 12, 2021 — The One UI 3.1 update based on Android 11 for the Samsung Galaxy A80 has broken the calling function for some and here're some ...
- <https://www.express.co.uk> › Life & Style › Tech

Latest Android update can BREAK certain phones - do not ...

Apr 16, 2020 — Latest Android update can BREAK certain phones - do not install it ...

Why testing is hard and takes a long time:

- Testing your own product is hard enough
- There are multiple IdP-s and SP-s and various accessory software
DS like:
 Pyff, Seamless access
Other software like:
 SaToSa



The solution: IdP/SP software testbed

The tools used:

Docker

Selenium/behave

Gitlab



The solution: IdP/SP software testbed

Docker:

- Domain Name Resolution
- Metadata Exchange
- Log Management
- Test users

Initially we are doing the packageing
IdP/SP product developers seem to be willing to take that
burden in the future.

First IdP/SP products + accessory software is dockerized. www.geant.org



The solution: IdP/SP software testbed

Selenium/behave

Selenium is a portable framework used to test web applications, behave is built on top of that.

They can be used to create automated tests for our dockers.

The test cases are well defined

known locations like `fqdn/Shibboleth.sso,fqdn/simplesaml/module.php/core/frontpage_federation.php` etc.

First test implemented



The solution: IdP/SP software testbed

Gitlab:

Our continuous integration tool of choice.

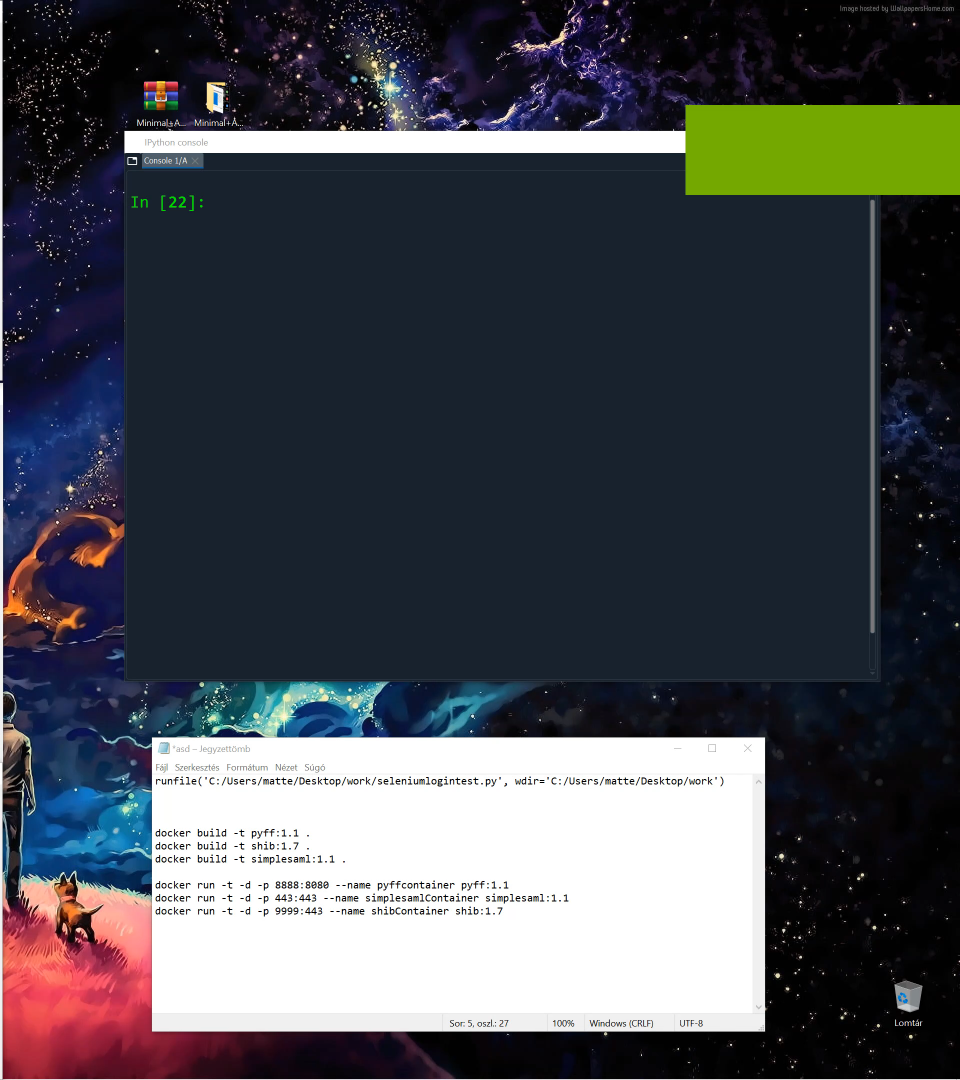
Whenever we change something on the dockers it's able to automatically deploy the dockers and run selenium tests on them to verify they still work.

The configuration is not yet integrated into gitlab.

```
gusti@debGM: ~  
root@debGM:~/dockerproba/simplesaml# docker build -t simplesaml:1.1 .
```

```
gusti@debGM: ~  
root@debGM:~/dockerproba/shib# docker build -t shib:1.7 .
```

```
gusti@debGM: ~  
root@debGM:~/dockerproba/pyff# docker build -t pyff:1.1 .
```





Next steps

- Implement more tests
- Add more SAML products
- Establish collaboration
with SimpleSamlPHP and Shibboleth
- Define a more exact docker specification

Thank you

Any questions?

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