NAT64CHECK

Version 2

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steffann

Internet Society

go6

BACKGROUND

(SIX DEGREES OF INNER TURBULENCE)

- Fast growing number of IPv6-only networks with NAT64 & DNS64
  - Works fine most of the time
- Breaks when web hosters do stupid things
  - Bad DNS records
  - Hard-coded IPv4 addresses in URLs

BACKGROUND

(SIX DEGREES OF INNER TURBULENCE)

- Bad AAAA records in DNS
  - ::
  - ::1
  - ::ffff:[IPv4_addr]
  - fe80::[some_value]
  - 64:ff9b::[some_value]
  - 2001:DB8::[some_value]

PROJECT HISTORY

(FALLING INTO INFINITY)

- Version 0:
  - Jan wrote some Bash scripts
- Version 1:
  - Sander wrote a Python/Django application
  - Corinne designed a web interface

nat64check

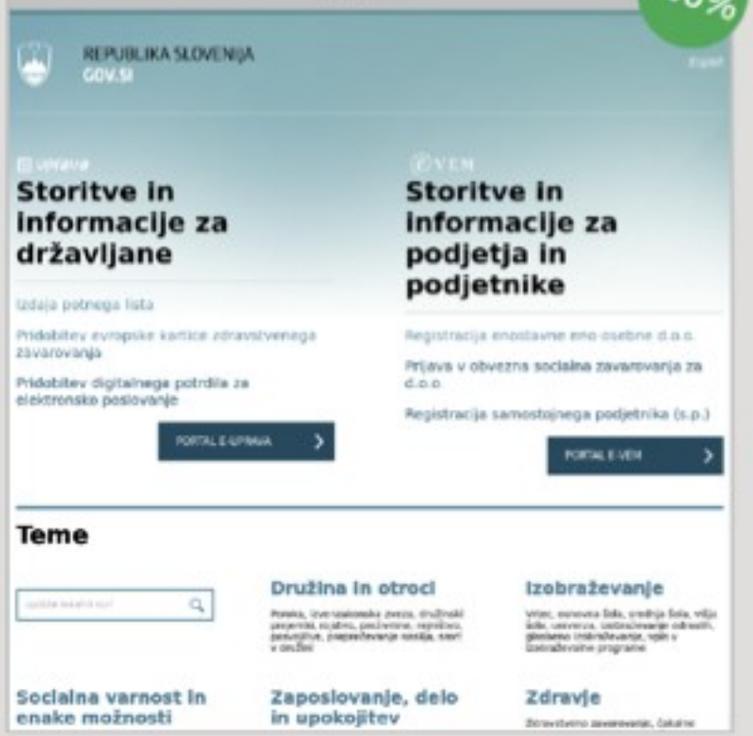
www.gov.si

Test again

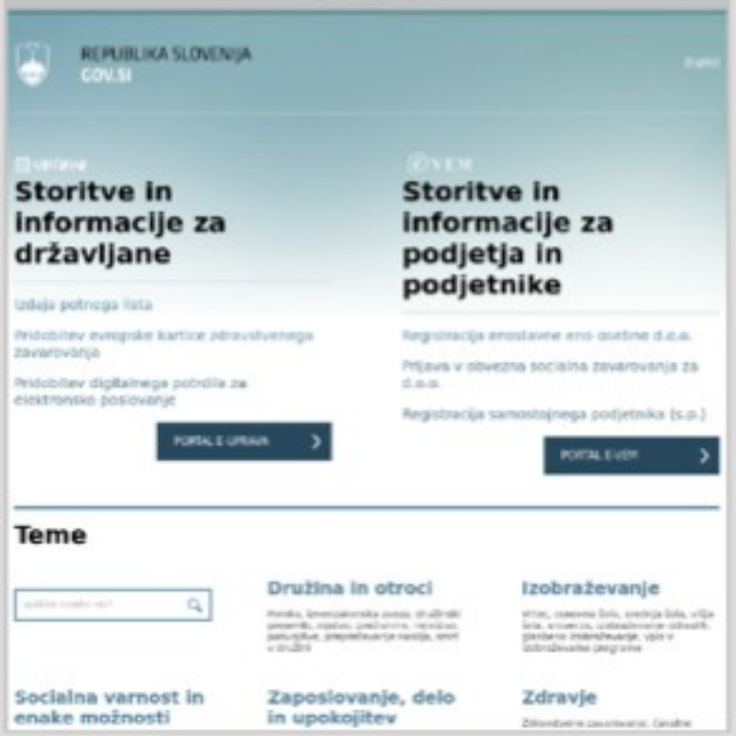
Last test finished:
6 September 2018, 12:07 CEST

Image match

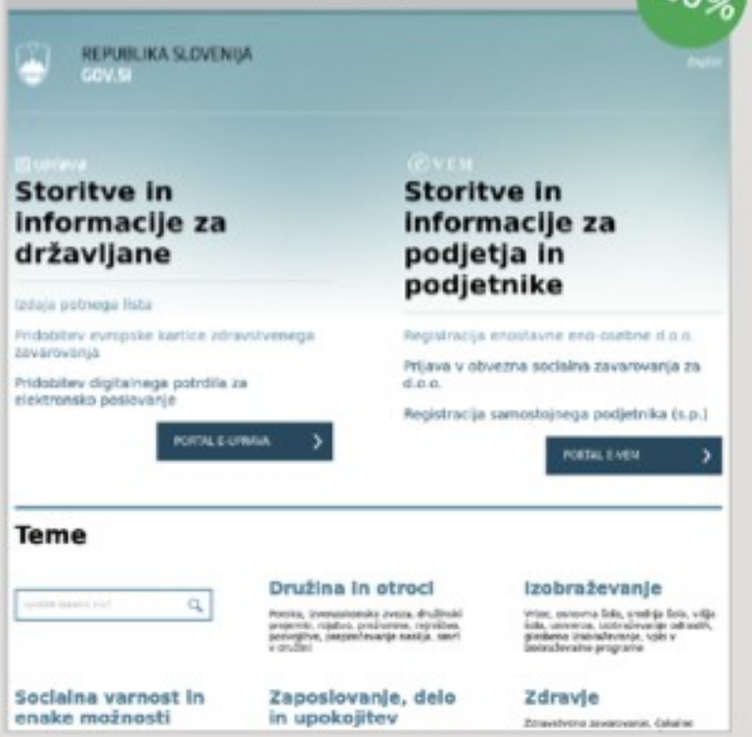
NAT64 — 100%



IPv4-only



IPv6-only — 100%



THE GOOD

(The mirror)

nat64check

textfiles.com

Test again

Last test finished:
6 September 2018, 12:18 CEST

Image match

NAT64	IPv4-only	IPv6-only
100%		

THE BAD

(The mirror)

nat64check

foxnews.com

Test again

Last test finished:
28 May 2018, 10:26 CEST

Image match

NAT64

IPv4-only

IPv6-only

THE UGLY

(The mirror)

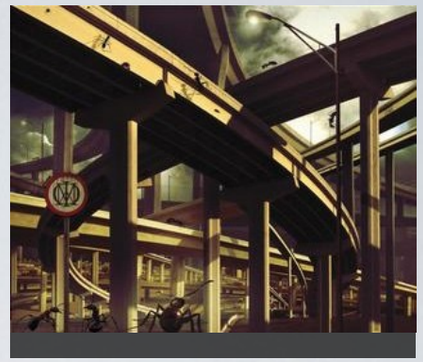
VERSION 1 FLAWS

(A change of seasons)

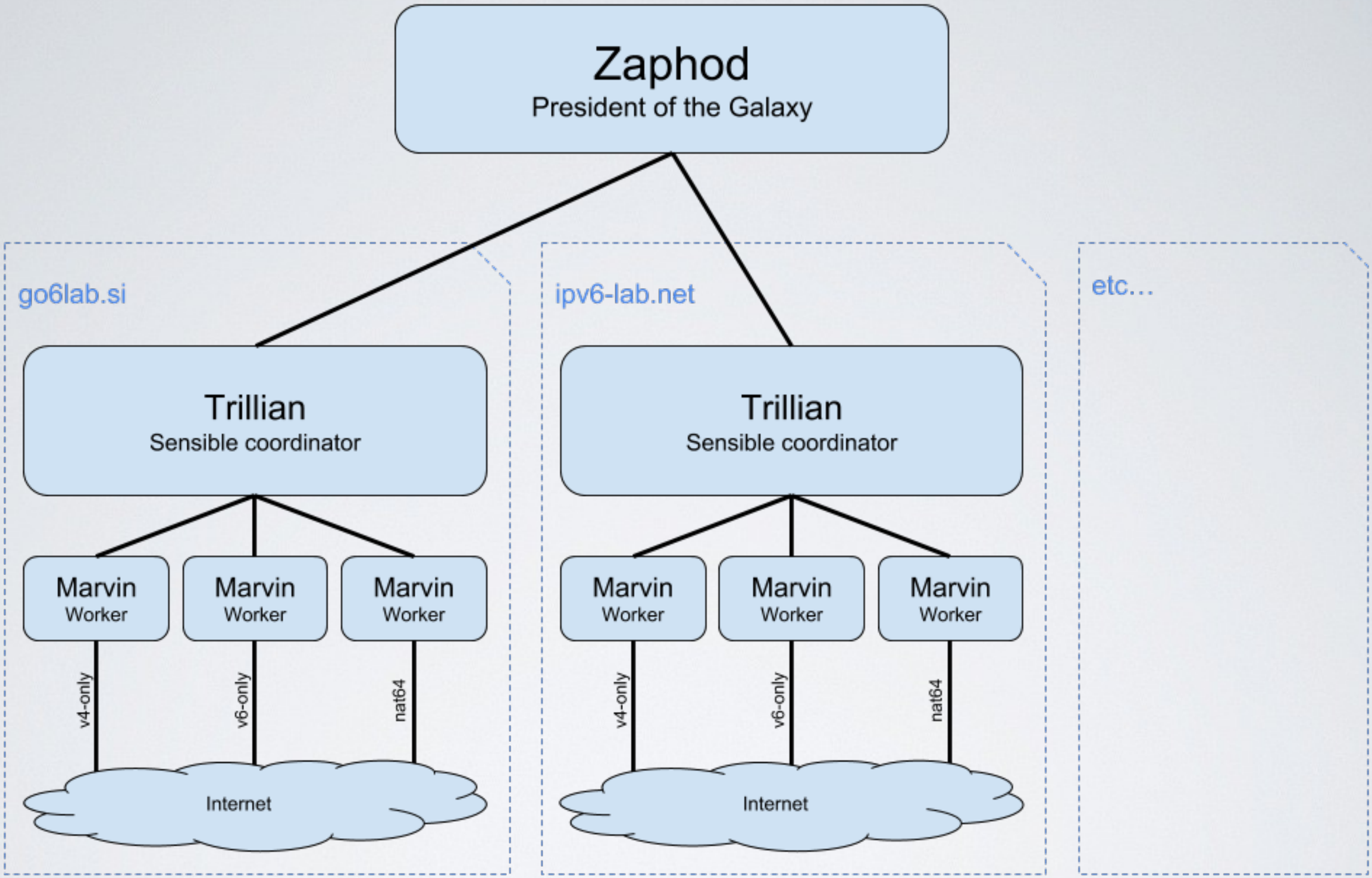
- Unclear what the cause of a failure is
- Bad error detection
- Two different systems:
  - ipv6-lab.net in NL
  - go6lab.si in SI
- No coordination between them
- Still online at https://nat64check.go6lab.si/

VERSION 2

(Systematic Chaos)

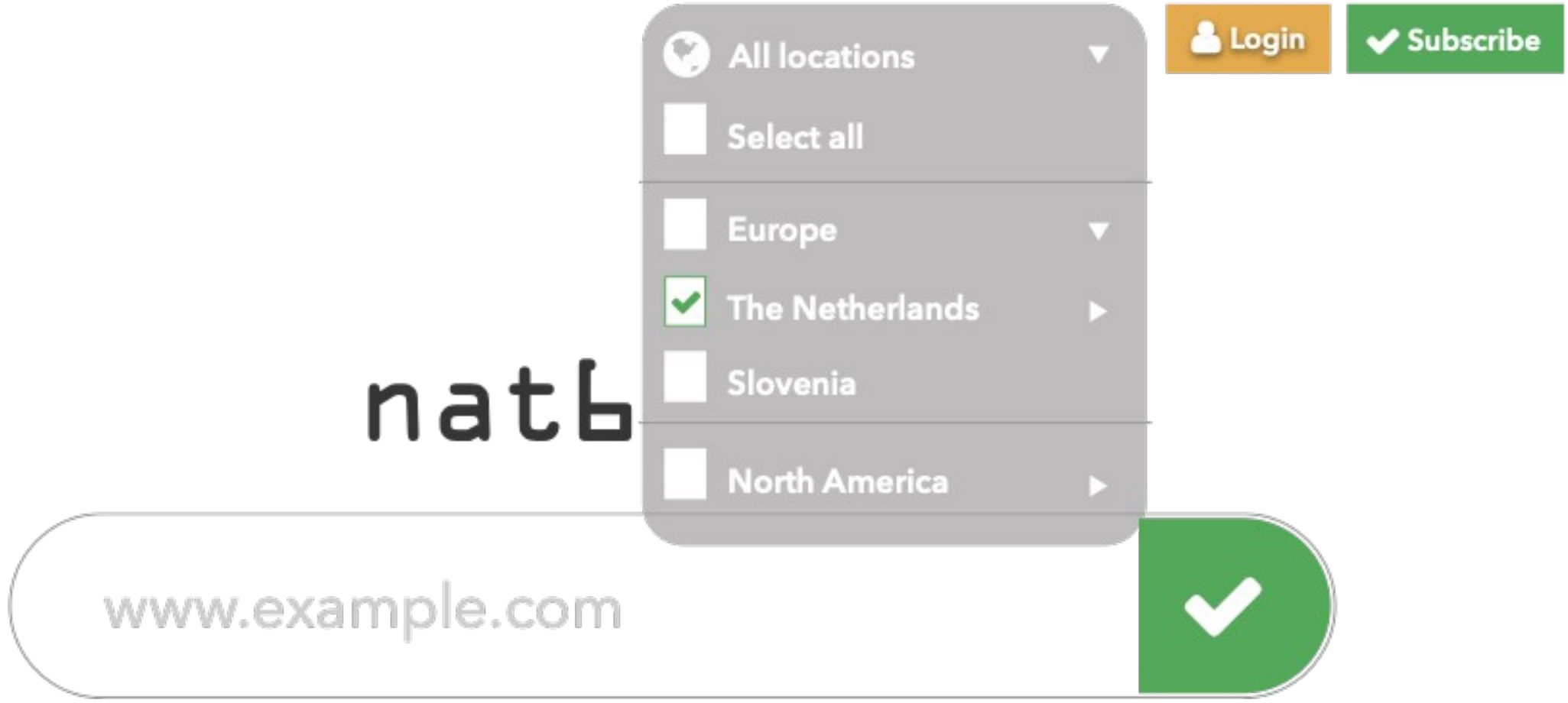


- Distributed system
  - Central web interface
  - Many test-locations possible
  - Easy to install if you want to run your own test-location
- Better error detection and feedback
- Extendability for different tests



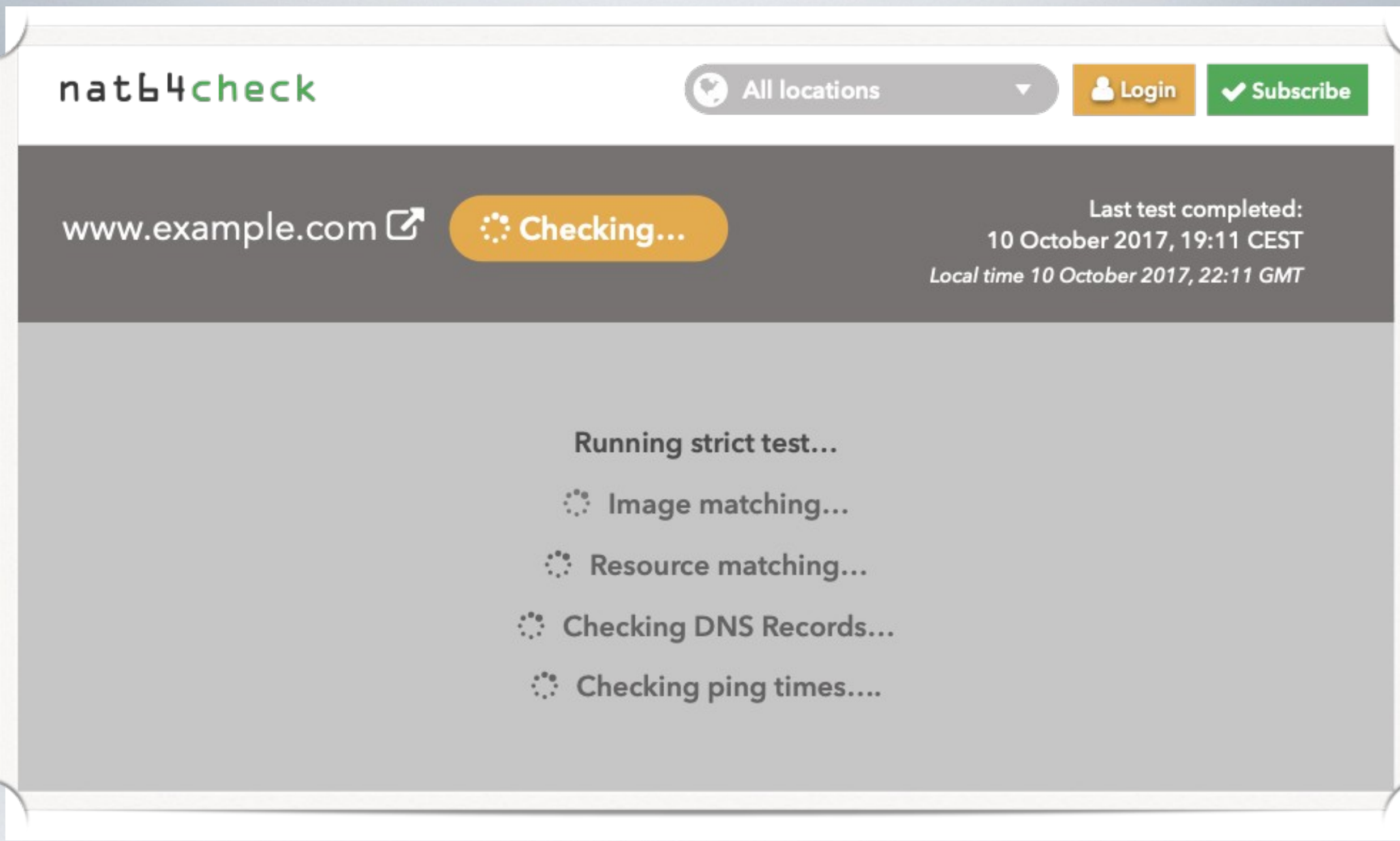
TECHNICAL DESIGN

(Illumination Theory)



COUNTRY SELECTION

multiple choices allowed
(The Astonishing)



BETTER FEEDBACK

while testing

(Octavarium)

nat64check

Sander Steffann

www.example.com

Check again

Last test completed:
10 October 2017, 19:11 CEST
Local time 10 October 2017, 22:11 GMT

Results

This website has an overall moderate rating. It is experiencing some problems with **NAT64** and **IPv6**. The following report details some of the steps you can take to improve your website's rating and reach more customers.

Overall rating
MODERATE

Summary | All locations | Search

Image matching

We compared snapshots of how your website looks over IPv4, NAT64 IPv6

CLEAR SUMMARY

all test locations combined

3 Customers on NAT64 see a different website

4 Missing files on NAT64

Print | Download report data | Sign up for an account

- Regular emails on how to improve your websites
- Schedule regular checks
- Added privacy options

latest trends in our blog.

Read the blog

nat64check

is an open source project.
You can run your own version, test locally, or add to the global pool.

Interested? Get in touch.

Internet Society | go6 | steffann | SIMPLY UNDERSTAND | max

About us

nat64check is an open source project, developed by the Internet Society.

Information

- Frequently Asked Questions
- Our blog
- Map
- About

Contact us

info@nat64check.org

CLEAR SUMMARY

all test locations combined

www.example.com

Check again

Last test completed:
10 October 2017, 19:11 CEST
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Results

This website has an overall moderate rating. It is experiencing some problems with **NAT64** and **IPv6**. The following report details some of the steps you can take to improve your website's rating and reach more customers.

Overall rating
POOR

Summary | steffann.nl | Search

Image match

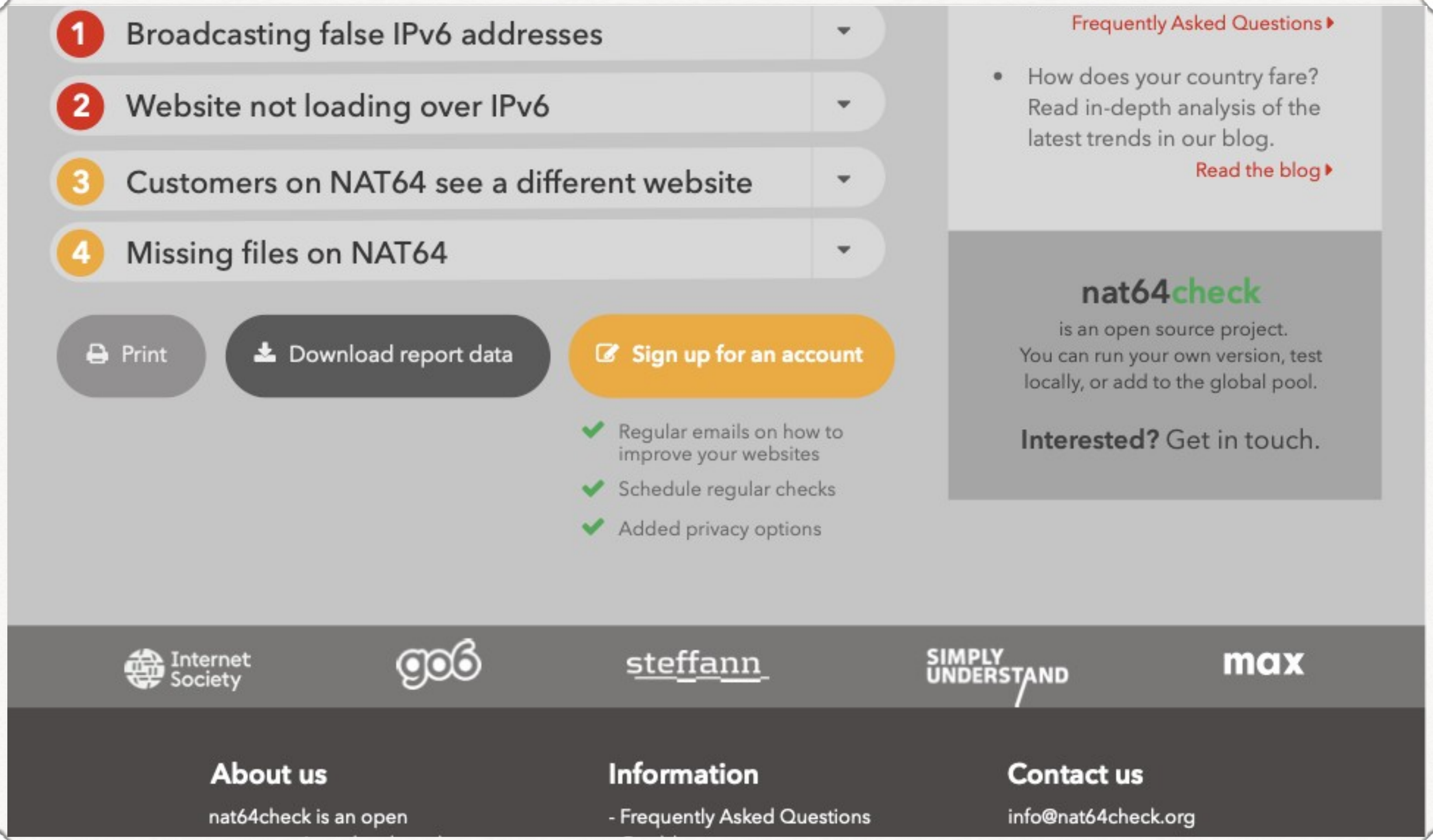
IPv4

NAT64 — 42%

IPv6

DETAILED VIEW

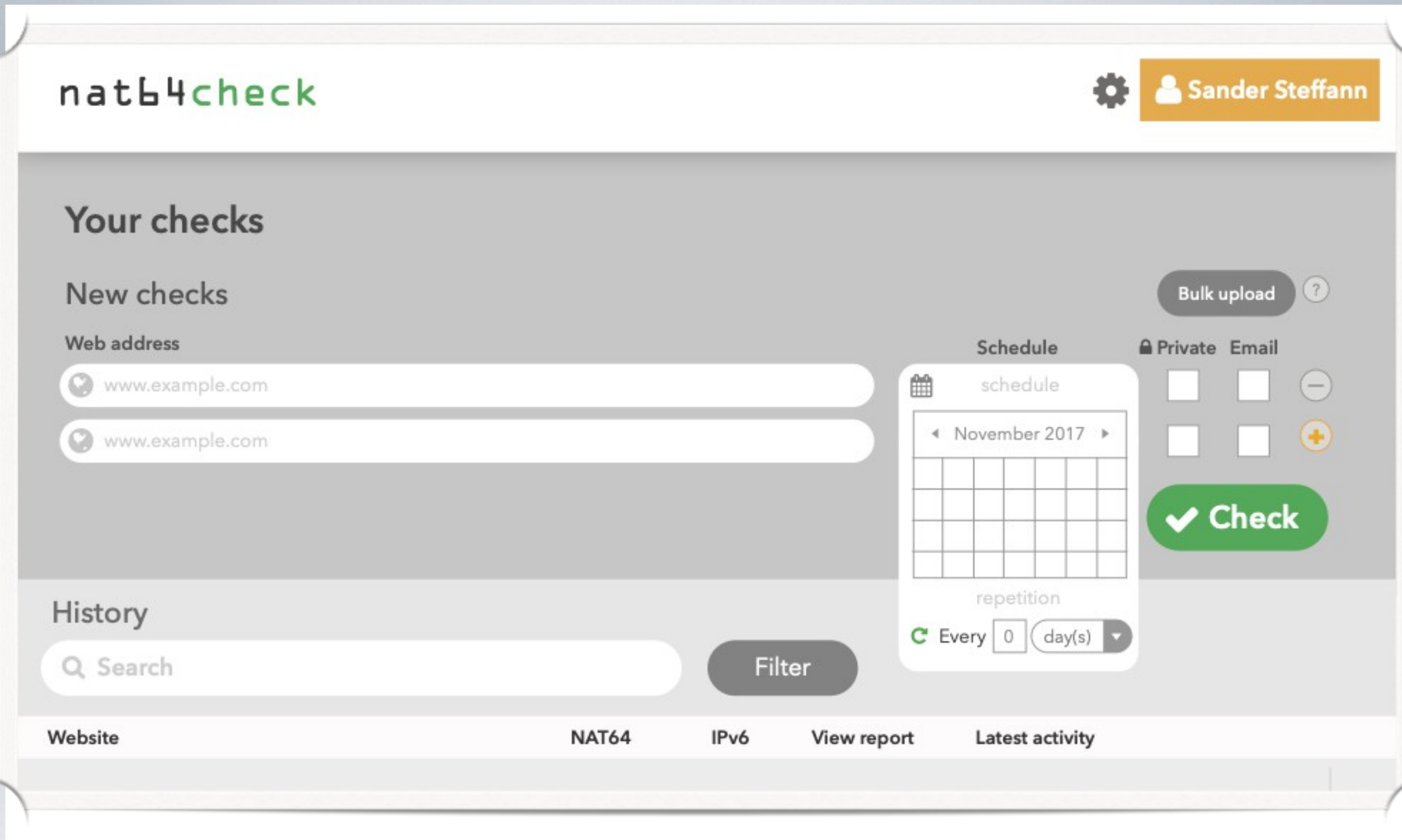
shown per test location
(Looking glass)



DETAILED VIEW

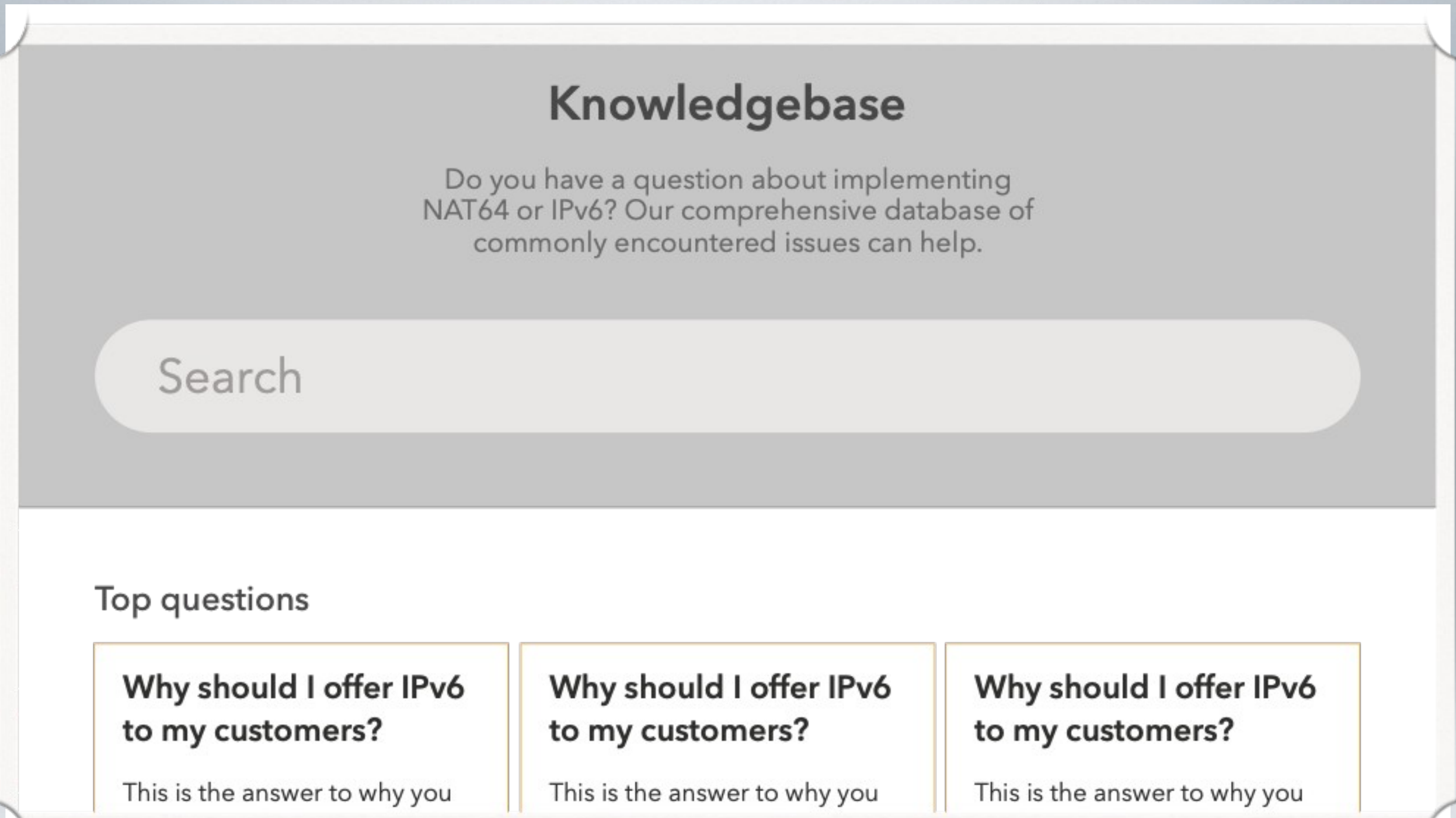
shown per test location

(Looking glass)



RECURRING TESTS

get alerts when things break



BACKGROUND INFORMATION

learn more about IPv6, NAT64 and the modern internet

(Train of Thought)

CREDITS / BLAME

(Images and Words)

- Project chaser:
  - Kevin Meynell
- Technical design:
  - Jan Žorž
  - Sander Steffann
- Marvin:
  - Prototype:
    Musa Stephen Honlue
  - Final implementation:
    Sander Steffann
- Trillian:
  - Implementation:
    Sander Steffann
- Zaphod:
  - Design:
    Corinne Pritchard
  - Front-end implementation:
    Internetbureau Max
  - Back-end implementation:
    Sander Steffann

VERSION 2 IS NOW OUT!

(LEARNING TO LIVE)

WE NEED VM'S AROUND THE WORLD!
…AS MANY AS POSSIBLE, SO THE PLATFORM GROWS.

HTTPS://WWW.NAT64CHECK.ORG/

MANY THANKS TO ISOC
FOR SPONSORING THE DEVELOPMENT

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