



NAT64CHECK

Version 2

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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)

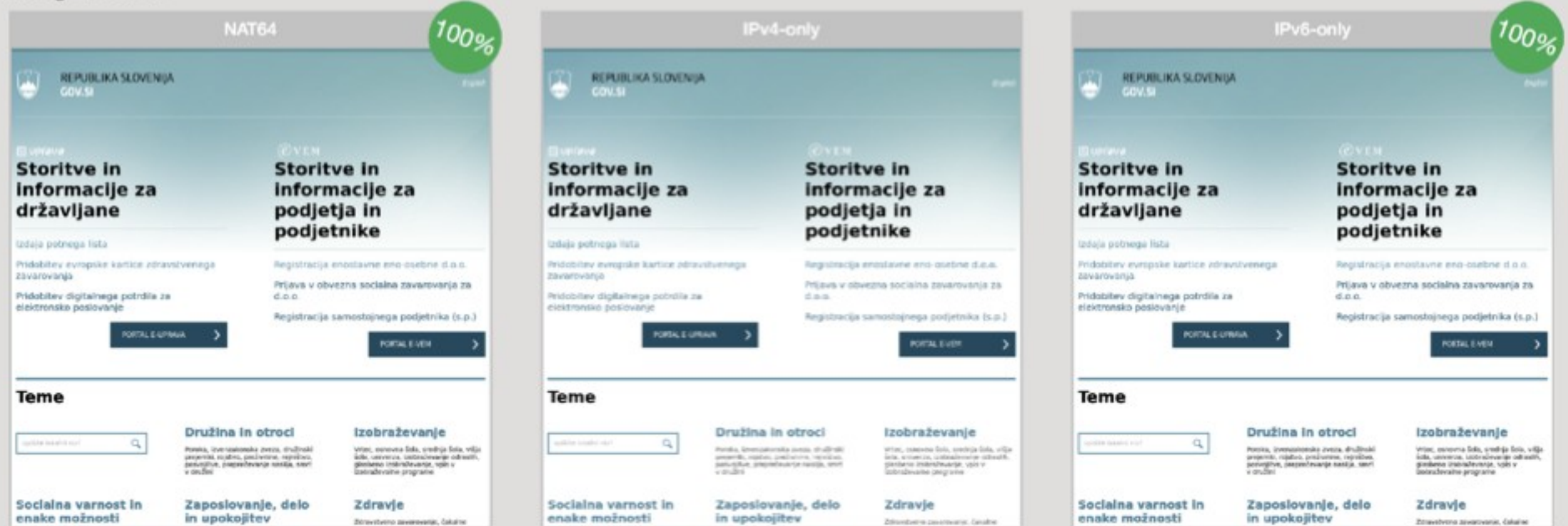
- Bad AAAA records in DNS
 - ::
 - ::1
 - ::ffff:[IPv4_addr]
 - fe80::[some_value]
 - 64:ff9b::[some_value]
 - 2001:DB8::[some_value]

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

Image match



THE GOOD

(The mirror)

Image match

NAT64

100%

TEXTFILES.COM Mirror Sites:
US DE JE DE USNA US FL US NV BC CA

If you enjoy textfiles.com, tweet about it with hashtag #textfiles.

textfiles.com

On the face of things, we seem to be merely talking about text-based files, containing only the letters of the English Alphabet (and the occasional punctuation mark).

On deeper inspection, of course, this isn't quite the case. What this site offers is a glimpse into the history of writers and artists bound by the 128 characters that the American Standard Code for Information Interchange (ASCII) allowed them. The focus is on mid-1980's textfiles and the world as it was then, but even these files are sometimes released 1980s and 1970s works, and offshoots of this culture exist to this day.

Where are the files? Who are you? Why does this matter?
What was it like? How can I help?

TEXTFILES.COM Sites

ASCII BRIDGECOMMENTARY ARTSCENE BRIDGECOMMENTARY CD DIGEST WEB BRIDGECOMMENTARY TIMELINE PDF AUDIO 16

IPv4-only

TEXTFILES.COM Mirror Sites:
US DE JE DE USNA US FL US NV BC CA

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TEXTFILES.COM Sites

ASCII BRIDGECOMMENTARY ARTSCENE BRIDGECOMMENTARY CD DIGEST WEB BRIDGECOMMENTARY TIMELINE PDF AUDIO 16

IPv6-only



THE BAD

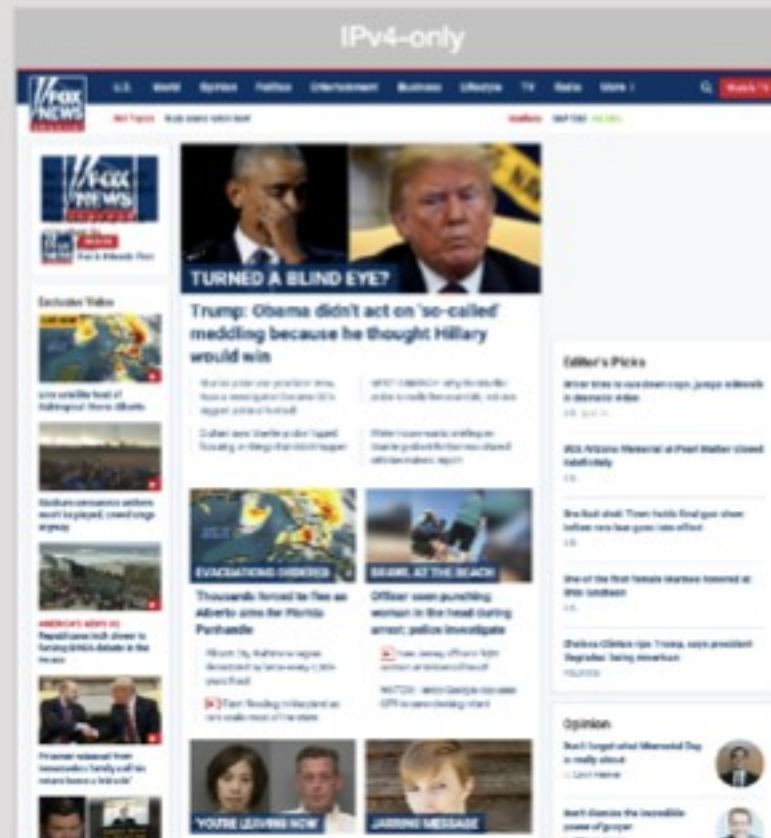
(The mirror)

Image match

NAT64



IPv4-only



IPv6-only



THE UGLY

(The mirror)

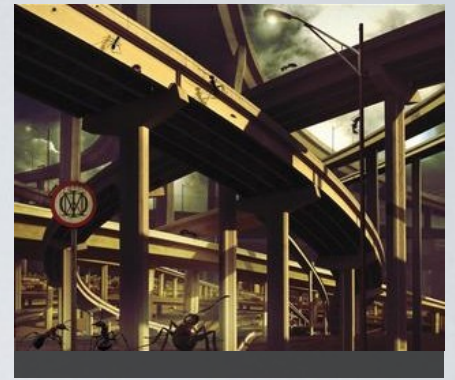
VERSION 1 FLAWS

(A change of seasons)

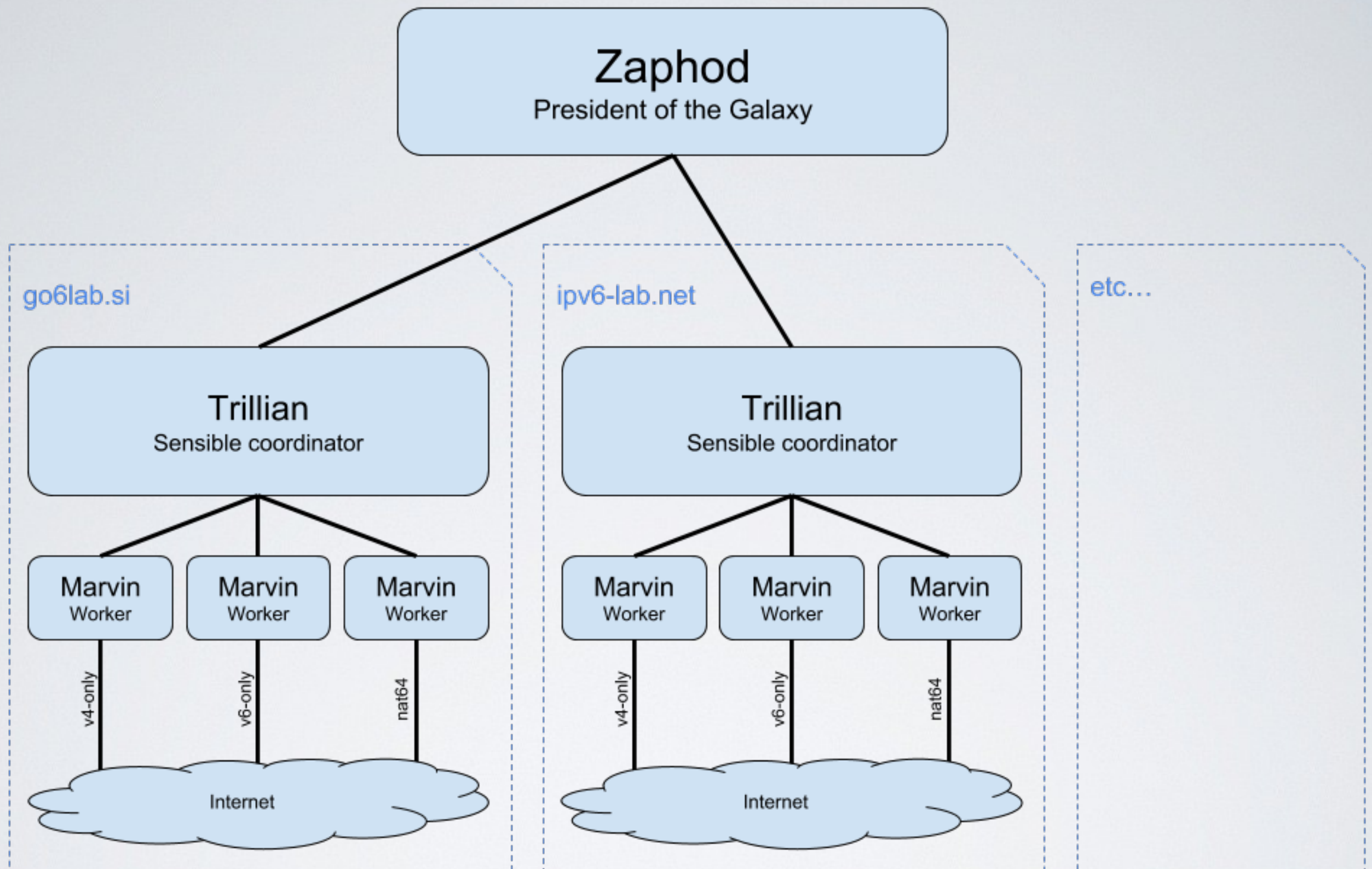
- Unclear what the cause of a failure is
- Bad error detection
- Two different systems:
 - ipv6-lab.net in NL
 - go6lab.si in SI
- No coordination between them
- Still online at <https://nat64check.go6lab.si/>

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)

natb

☐ All locations

☐ Select all

☐ Europe

☒ The Netherlands

☐ Slovenia

☐ North America

COUNTRY SELECTION

multiple choices allowed
(The Astonishing)

www.example.com

Checking...

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

Running strict test...

Image matching...

Resource matching...

Checking DNS Records...

Checking ping times....

BETTER FEEDBACK

while testing
(Octavarium)



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

Read in depth analysis of the 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.



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



DETAILED VIEW

shown per test location
(Looking glass)

1 Broadcasting false IPv6 addresses

2 Website not loading over IPv6

3 Customers on NAT64 see a different website

4 Missing files on NAT64

Frequently Asked Questions ▶

- How does your country fare?
Read in-depth analysis of the latest trends in our blog.

[Read the blog ▶](#)

Print

Download report data

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nat64check

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About us

nat64check is an open

Information

- Frequently Asked Questions

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DETAILED VIEW

shown per test location
(Looking glass)

Your checks

New checks

Web address

www.example.com

www.example.com

Bulk upload



Schedule

Private ☐ Email ☐



schedule

◀ November 2017 ▶

repetition

Every day(s)

Check

History

Search

Filter

Website

NAT64

IPv6

View report

Latest activity

RECURRING TESTS

get alerts when things break

Knowledgebase

Do you have a question about implementing NAT64 or IPv6? Our comprehensive database of commonly encountered issues can help.

Search

Top questions

Why should I offer IPv6 to my customers?

This is the answer to why you

Why should I offer IPv6 to my customers?

This is the answer to why you

Why should I offer IPv6 to my customers?

This is the answer to why you

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/](https://www.nat64check.org/)

MANY THANKS TO ISOC
FOR SPONSORING THE DEVELOPMENT