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Núcleo de Informação
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Comitê Gestor da
Internet no Brasil

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TOP – *Teste os Padrões* **(Test the Standards)**

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22/11/30

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Our Agenda

TOP – *Teste os Padrões* (Test the Standards)

- ❖ **Project**
- ❖ **Diferences from Internet.nl**
- ❖ **Main Obstacles**
- ❖ **Statistics**
- ❖ **Implementation impacts**



TOP – *Teste os Padrões* – Project

Developed by NIC.br to disseminate the best security practices in Brazil for web sites, e-mail services and user connection to Internet

Uses the open-source code provided by the Dutch implementation of Internet.nl with a web interface in Portuguese to attend Brazilian users

Name: TOP – *Teste os Padrões* (Test the Standards)

Start of operation in Dec/21

Access: <https://top.nic.br>



<https://top.nic.br>

TOP – Diferences from Internet.nl

Translation of website content into Portuguese in Django .po format, which facilitate the work

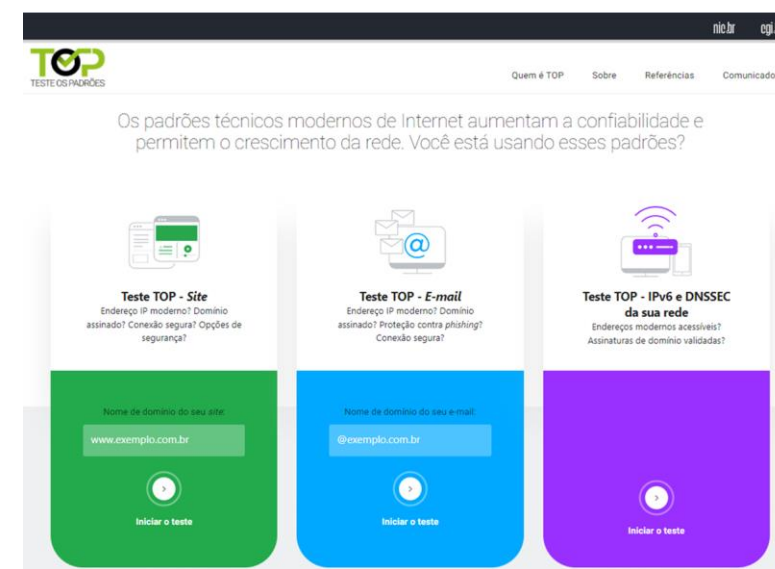
Many links have been redirected to documents in Portuguese and new links were created to contents and courses from the NIC.br

A new visual identity was created: with new name and logo, and change of user usability according NIC.br website standards

Technically there are no relevant differences



<https://top.nic.br>



TOP – Differences from Internet.nl

New stamps were created to *Quem é TOP*

(Who is TOP – Hall of Fame in Internet.nl)



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TOP – Main Obstacles of implementation

The main difficulty encountered was the GAP between the available documentation and the inference of what had to be made to deploy the tool



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Whenever external help was needed, we opened issues on GitHub, and we've always been quickly and kindly attended

Although it is based on free and open-source software (FOSS) tools, the challenge was to make everything work together as a solution

The implementation is not very complicated, but our engineering team's experience in DNS projects has been crucial to implement it

TOP – Main Obstacles of implementation

At first we were concerned about how the project would be maintained and updated, from the point of view of bugs and security patches

Now we see that Internet Standards are following a clear and suitable roadmap for the tool evolution

The development of the TOP was carried out in collaboration with several NIC.br internal areas: Registro.br Engineering, Development Systems, CERT.br, Communication and Legal

The TOP current version corresponds to Internet.nl v.1.4

The implementation of RPKI and security.txt is planned for 1H23



<https://top.nic.br>

TOP – Statistics

An internal tool was developed to monitor the use of the TOP, which accesses its database and provides statistical data about the measurements carried out



<https://top.nic.br>

Some statistics from Brazil:

- [% of IPv6 usage in Brazil: 38% \(APNIC \)](#)
- **% of domains tested by the TOP Test – Site with IPv6 100%: 24%**
- [Number of .br domains: 5,000,000](#)
- [Number of .br domains with DNSSEC configured: 1,500,000 \(30%\)](#)
- **% of domains tested by the TOP Test – Site with DNSSEC 100%: 20%**

TOP – Statistics

Unique Domains - Site
10.465

Total Measurements - Site
24.932

TOP Test - Site

Quem TOP - Site
300

IPv6 100% - Site
2.473

DNSSEC 100% - Site
2.129

TLS 100% - Site
731

% Quem é TOP - Site
3%

% IPv6 - Site
24%

% DNSSEC - Site
20%

% TLS - Site
7%



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TOP – Statistics

Unique Domains -
Email
2.896

Total Measurements
- E-mail
8.478

TOP Test - E-mail

Quem é TOP - E-mail
49

IPv6 100% - E-mail
645

DNSSEC 100% -
E-mail
330

Authenticity Marks -
E-mail
600

STARTTLS 100% -
E-mail
62

% Quem é TOP -
E-mail
1%

% IPv6 - E-mail
22%

% DNSSEC - E-mail
11%

% Authenticity Marks
- Email
21%

% STARTTLS - E-mail
2%



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TOP – Statistics

TOP Test - IPv6 DNSSEC - Recursive and User Network

Total Measurements
Completed - IPv6 DNSSEC

69.966

Recursive DNS Server tested
with Validated DNSSEC

41.999

% Recursive DNS Server
tested with Validated DNSSEC

60%

Unique AS tested

4387

Recursive DNS Server and
User tested with IPv6

42.923

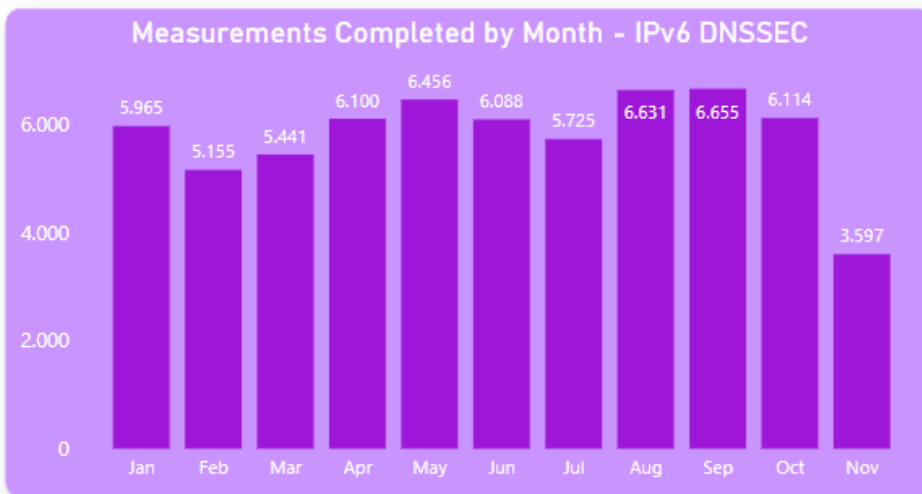
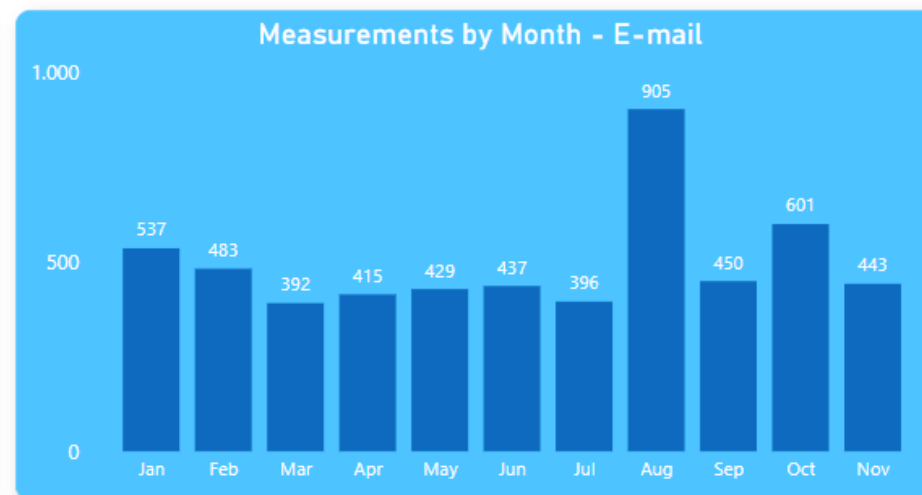
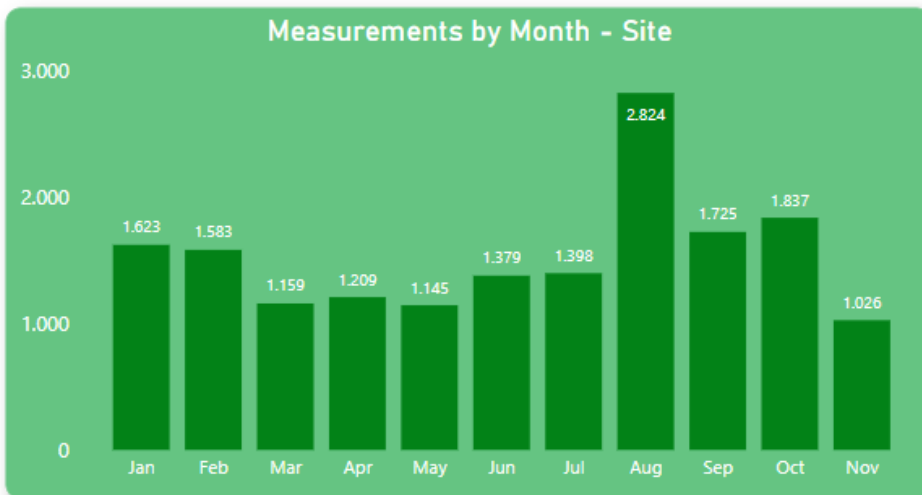
% Recursive DNS Server and
User tested with IPv6

61%



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TOP – Statistics



TOP Test Measurements - *Site, E-mail, DNSSEC IPv6*



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TOP – Implementation impacts

- The software was recently deployed : Dec/21
- **Dissemination the tool in technical events and in specific sectors such as government and academia**
- Partnership with the Associations of Internet Service Providers (ISP) in Brazil and Academia, which help to publicize the tool in their events
- **With the dissemination of the tool, it is already possible to observe some actors adopting the good practices verified by the tool**
- Brazil has continental dimensions, and it is a challenge to follow the evolution of the use of standards
- **We are working to take measurements on controlled groups such as government websites, academia and banks**



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TOP – Associations of Brazilian ISPs and Academia



A CONECTIVIDADE AO SEU ALCANCE



Thank you

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