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Núcleo de Informação
e Coordenação do
Ponto BR

egi.br

Comitê Gestor da
Internet no Brasil

registro.br cert.br cetic.br ceptro.br ceweb.br ix.br

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

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Our Agenda

TOP – Teste os Padrões

- **About NIC.br**
- The Project
- **Program for a Safer Internet**
- Security Notifications, MANRS and TOP Statistics
- Implementation remarks



About **NIC.br**

- The Brazilian Network Information Center, NIC.br, is a non-profit civil entity that since 2005 has been assigned with the administrative and operational functions related to the .br domain
- In addition to providing and maintaining the domain names registration activity, **NIC.br** goes beyond similar entities in other countries, investing in actions and projects that bring a series of benefits to improve the Internet infrastructure in Brazil, with a revenue collected exclusively through the provision of domain names registration
- Some of our efforts are focused on many sectors of Brazilian society, disseminating knowledge about best practices to be adopted in networks and related areas. In some cases, we strengthen relationships with private, governmental, and nonprofit entities to encourage the adoption of best practices to be adopted in Internet services

TOP – Teste os Padrões The Project

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



<https://top.nic.br>

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

The project is part of the **Program for a Safer Internet** in Brazil, which works with ISPs and incumbent operators to disseminate the best security practices that they should implement on their respective networks.

Start of operation in Dec/21

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

Program for a Safer Internet Objectives

Act in support of the Internet technical community

- Reduction of Denial of Service attacks (CERT.br)
- **Improvement of the Network Routing Security (MANRS – Internet Society initiative)**
- Spread DNS security best practices (TOP)
- **Disseminate best security practices for configuring websites and e-mail services (TOP)**
- Encourage the implementation of IPv6 in final users and Internet services (TOP)



Program for a Safer Internet

Plan of Actions performed by NIC.br

Several internal teams of NIC.br participate in the Program (CERT.br, CEPTR0.br, Registro.br, IX.br, Systems)

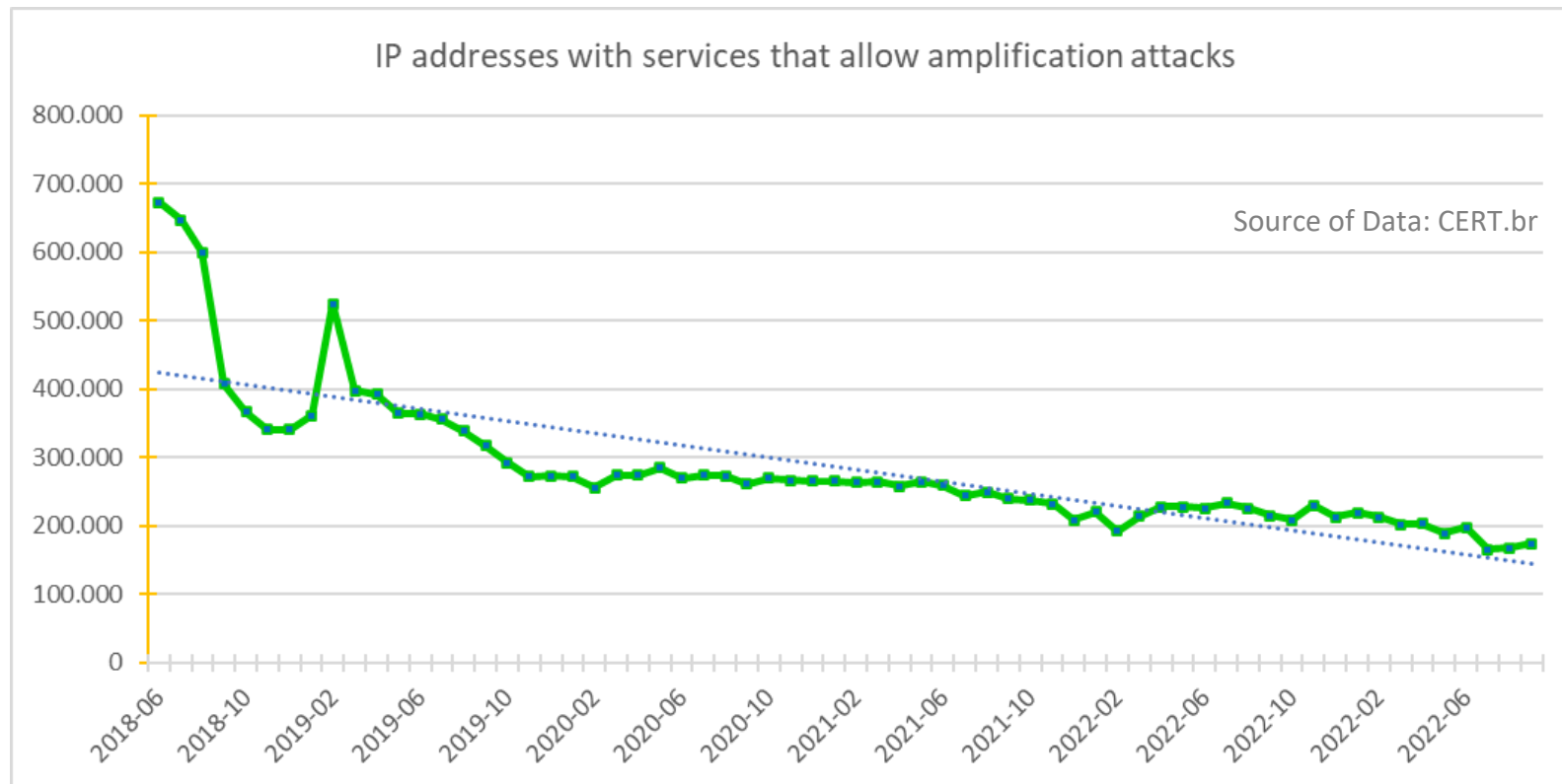


- **Creating technical materials and good practices**
- Raising awareness in the technical community by lectures, courses and training
- **Having direct interaction with network operators by bilateral meetings to explain how to implement the best practices recommended in each situation**
- Defining KPIs to monitor the effectiveness of actions

Program for a Safer Internet

Statistics of Notifications of IP Addresses

- Quantity of IP addresses notified with misconfigured services



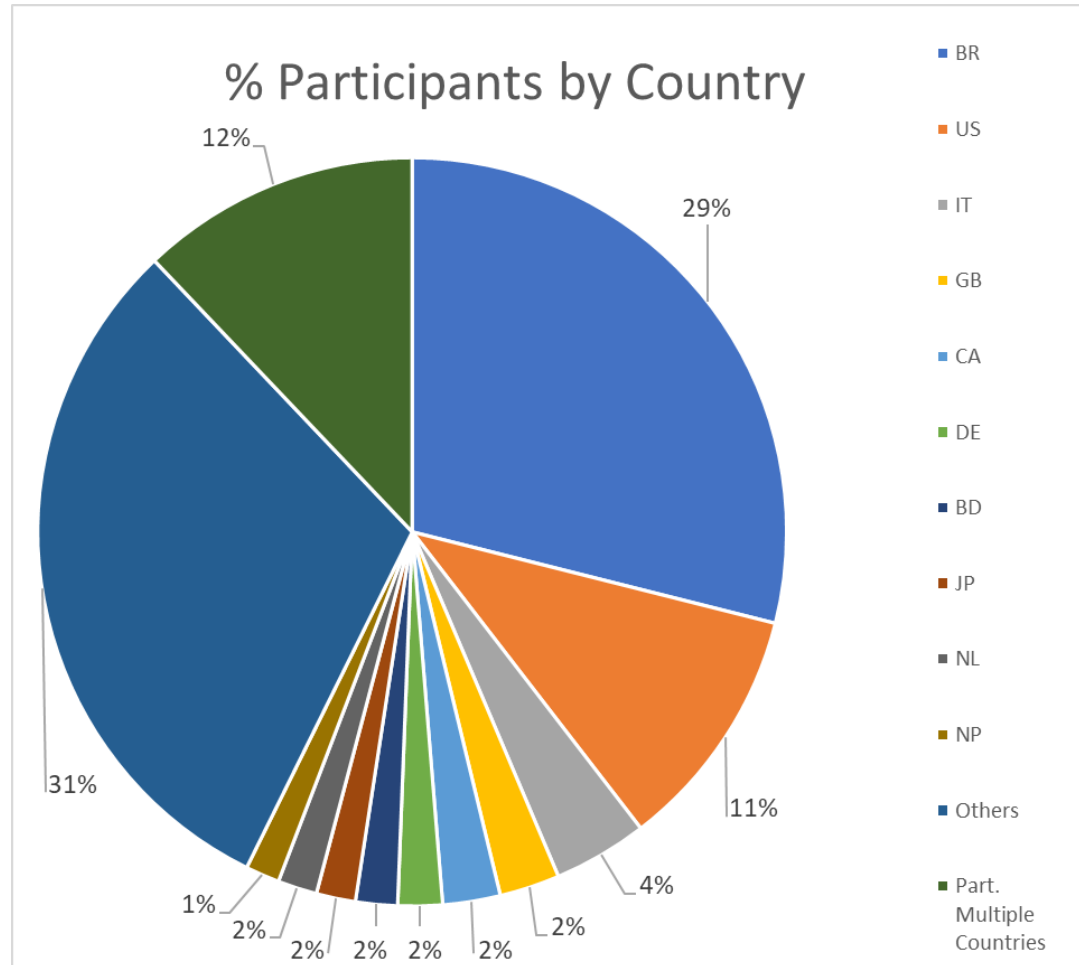
Reduction of misconfigured IP addresses since the start of the Program

Program for a Safer Internet

Statistics of MANRS Participants by Country



- Distribution by country of providers participating of the MANRS initiative



Total of MANRS participants: 885

Participants in Brazil: 256 (Set/23)

206 (2022)

174 (2021)

140 (2020)

Source: <https://www.manrs.org/netops/participants/> Access set/23

Program for a Safer Internet

Statistics of TOP for Connections Tests

TOP Test - IPv6 DNSSEC - Recursive and User Network

Total Measurements
Completed - IPv6 DNSSEC

148.788

Recursive DNS Server tested
with Validated DNSSEC

95.914

% Recursive DNS Server
tested with Validated DNSSEC

64%

Unique AS tested

5.819

User tested with IPv6

93.466

% User tested with IPv6

63%

Total IPv6 measurements 100%



26/9/23

Program for a Safer Internet

Statistics of TOP for Web Site Tests

Unique Domains - Site

31.408

Total Measurements -
Site

58.662

TOP Test - Site

Quem TOP - Site

433

IPv6 100% - Site

5.298

DNSSEC 100% - Site

6.147

TLS 100% - Site

1.467

% Quem é TOP - Site

1%

% IPv6 - Site

17%

% DNSSEC - Site

20%

% TLS - Site

5%

Program for a Safer Internet

Statistics of TOP for Email Tests

Unique Domains -
Email

16 Mil

29.025

Medições - E-mail

TOP Test - E-mail

Quem é TOP - E-mail

71

IPv6 100% - E-mail

1.851

DNSSEC 100% -
E-mail

1.837

Authenticity Marks
100% - E-mail

2.259

STARTTLS 100% -
E-mail

89

% Quem é TOP -
E-mail

0%

% IPv6 - E-mail

12%

% DNSSEC - E-mail

12%

% Authenticity Marks
- Email

14%

% STARTTLS - E-mail

1%

TOP – Associations of Brazilian ISPs and Academia



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TOP – Teste os Padrões Implementation remarks

- TOP was delivered in Dec/21, currently is running 1.4 version of Internet.nl
- **The 1.7 version of Internet.nl is implemented and in phase of validation**
- The best practices recommended by the tool are recommendations from NIC.br to the technical community in Brazil
- **The tool is being disseminated together with the Program for a Safer Internet at technical events and for specific sectors such as government, academia and Internet operators**



TOP – Teste os Padrões

Implementation remarks



- The accounting area of Brazil's legislature carried out tests of the websites and e-mail services used by the government
- **The TOP tool provides important indication of the implementation status of recommended best practices and provides a baseline for operators to implement them in their networks**
- Brazil has continental dimensions and it is a challenge to keep up with the evolution of the use of standards

Thank you

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