# “Irresponsibility at Scale” from a CERT point of view

**Dr. Cristine Hoepers**
cristine@cert.br

Computer Emergency Response Team Brazil - **CERT.br**
Brazilian Network Information Center - **NIC.br**
Brazilian Internet Steering Committee - **CGI.br**

# Which problems are we talking about?

**All those that are possible or amplified by the lack of best practices implementation by the various players, like:**

- **DDoS and DRDoS**
- **Spam**

**From the perspective of the ones that need to implement best practices**

- **There is no immediate benefit**
- **The effects of the attacks from their perspective are negligible**

**From the perspective of the ones being attacked**

- **almost nothing can be done to stop the attack**
- **the effects are big and complex to mitigate**

# But it is not only a network/ISP perspective problem

## Other sectors also need to be involved

- **Software development**
  - **in general developers think that security is an add-on**
    - **to be implemented by someone else**
  - **but it needs to be incorporated from design to deployment and maintenance**

- **Standards communities**
  - **standards are developed without security considerations**
  - **then they try to create security standards to try and patch the problems created by other standards**

# The best practices and security layers are being postponed

- BCP 38 (antispoofing), Botnet remediation (disinfection)
- End user awareness/education
  - the users should have a chance to understand the risks

Other times the sectors are stuck in a “chicken and the egg” dilemma

- DNSSEC adoption
- More security on the routing system
  - RPKI e S-BGP
- Improvements or alternatives to the current digital certificate system
  - the current trust model is broken

# Any examples on how we could start to move forward?

# Port 25 Management in Brazil

**A multistakeholder effort to reduce direct delivery from end user networks (mainly from botnets)**

- **Port 25 management is a technical recommendation from MAAWG, OECD, FTC, and so on**
- **So, why we don't all implement this on the Internet?**
  - **Real life is more complex: legal issues, consumer protection, regulatory dilemmas, risks of technical problems, costs of implementation, no clear definition of the benefits, etc**

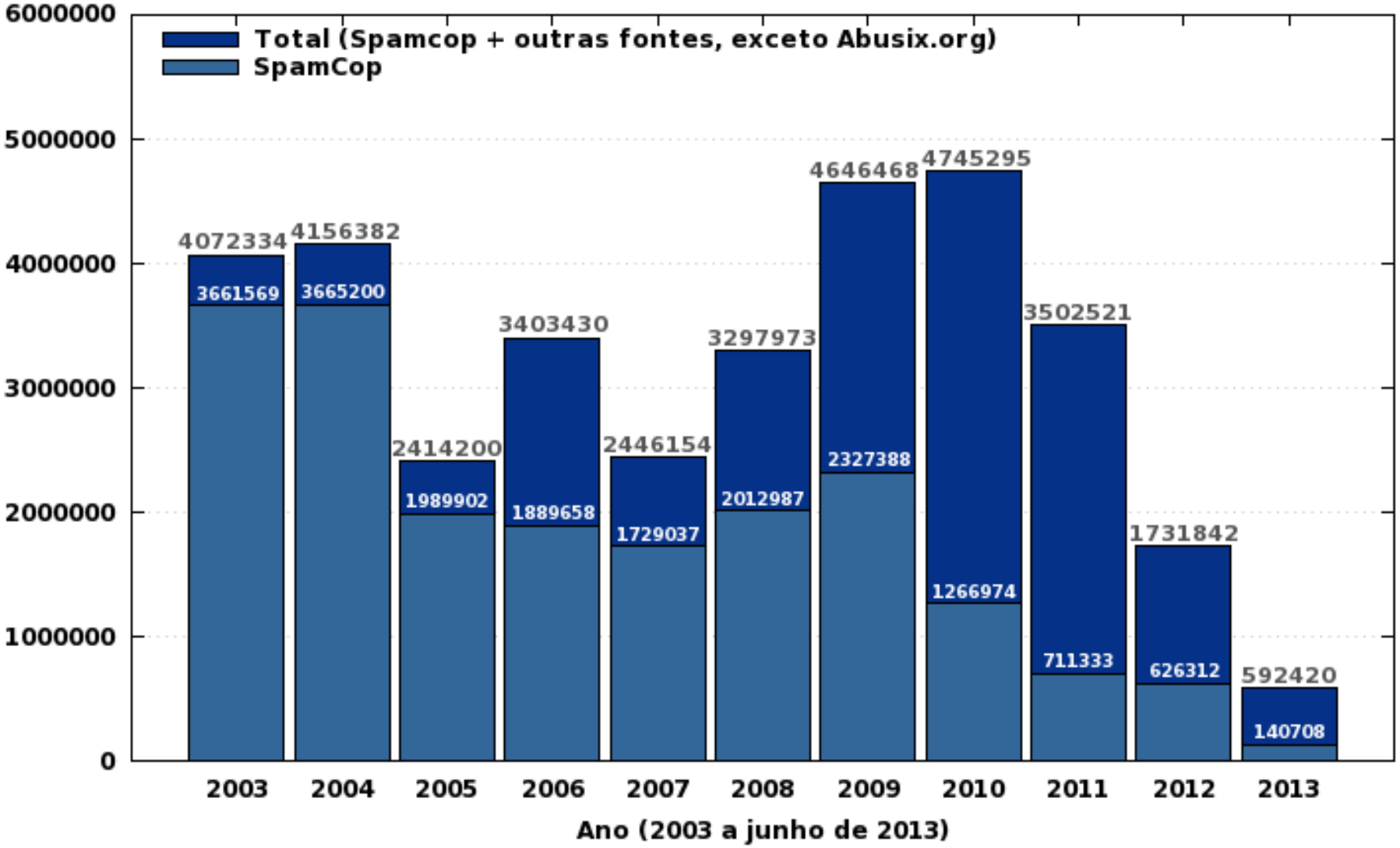
**Caveat: Other angles of the spam problem are being worked in other multistakeholder subgroups**

- **e-mail marketing self-regulation, legislation proposals, technical recommendations, user awareness**

# Regular Meetings to Negotiate Port 25 Mgmt Adoption

- Coordinated by CGI.br – with technical coordination by CERT.br/NIC.br
- Initial players: Telcos, ISPs and Associations of these sectors, Anatel (Telecom regulator), the CGI.br representatives for these sectors
- Players identified in further meetings: Federal Prosecutor's Office, Consumer Defense organizations and Ministry of Justice
- Agreed on a coordinated effort for adoption:
  - 1st: ISPs offering Message Submission services and changing at least 90% of their clients' configuration
  - 2nd:Telcos blocking outbound port 25 traffic – residential/3G networks
- A formal implementation agreement was signed
  - CGI.br, NIC.br, Anatel, Telcos and ISP Associations
  - The consumer protection associations formal support
- Once the agreement was signed, NIC.br started a national awareness campaign about
  - the importance of these measures and the impact on the consumers

# Results: Reduction of Spam Complaints sent to CERT.br



# Result: From CBL 1st in 2009 to 25th in 2013


**The deadline for the implementation was March 2013**

**Source of data: Spamhaus CBL (Composite Blocking List) Statistics**
**http://cbl.abuseat.org/statistics.html**

# We all need to work on the end user protection

**Systems should be less complex – and this requires a technology made for users not geeks...**

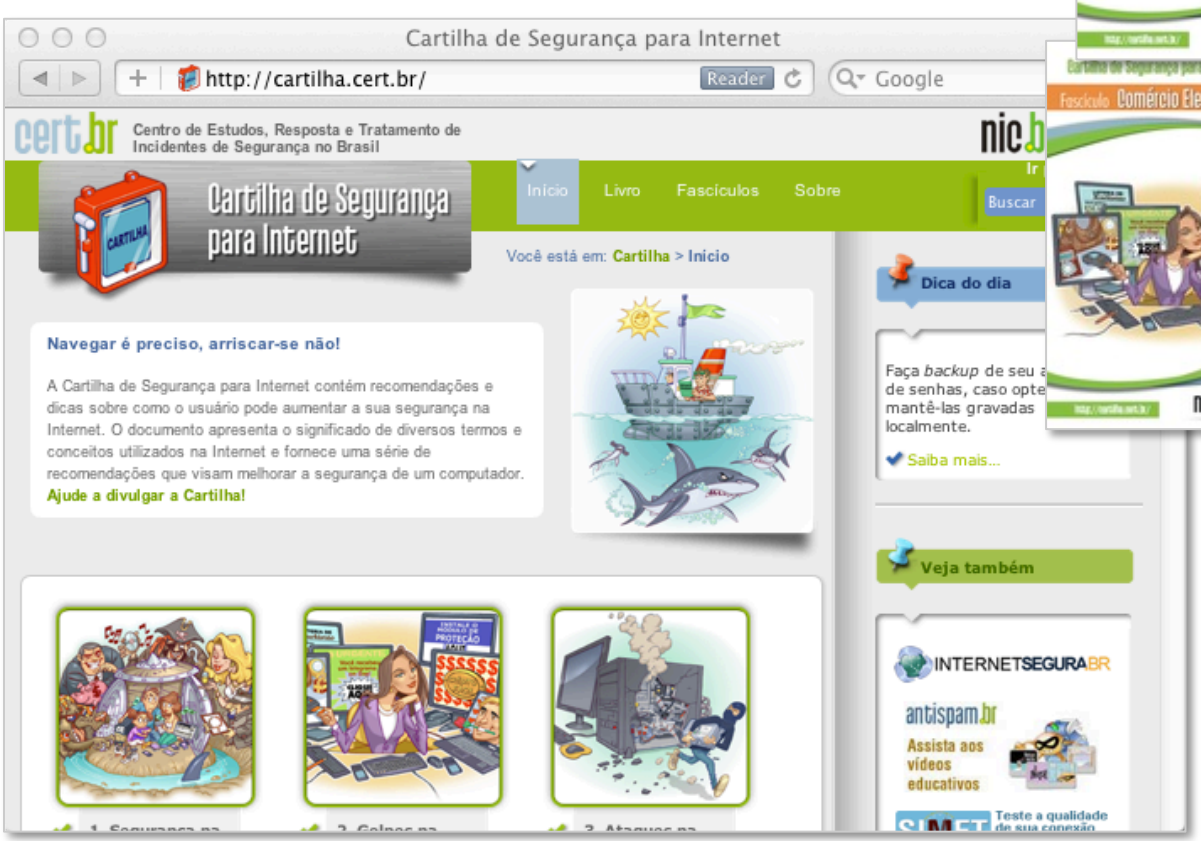
**ISPs and network admins in general need to be more proactive to fight malware and botnets**

- **RFC 6561: Recommendations for the Remediation of Bots in ISP Networks – examples:**
  - **iCODE – Australia**
  - **Botfrei.de – Germany**
  - **Irish Anti-Botnet Initiative (Botfree.ie) – Ireland**
  - **Cyber Clean Center (CCC) – Japan**
  - **Cyber Curing System / e-Call Center 118 – Korea**
  - **Anti-Botnet Working Group – Netherlands**
  - **Abuse Information Exchange – Netherlands**
  - **Autoreporter – Finland**
  - **U.S. Anti-Bot Code of Conduct (ABCs) for ISPs – US**
  - **Malware Free Switzerland – Switzerland**
  - **Advanced Cyber Defence Centre / Botfree.eu – European Union**

# We need to try and make security appealing

**PT: "*Cartilha de Segurança para Internet*"**
**http://cartilha.cert.br/**

**ES: Translation with support from ISOC:**
**"*Cartilla de Seguridad para Internet*"**
**http://cartilla.cert.br/**




# BCPs need to be easier and provide examples

Portal de Boas Práticas para a Internet no Brasil » Filtro antispoofing - exemplo para Juniper

bcp.nic.br/filtro-antispoofing-exemplo-para-juniper/

nic.br Núcleo de Informação e Coordenação do Ponto BR cgi.br

BCP Portal de boas práticas para a Internet no Brasil

Connect with: Usuário Senha Login

Registrar Perdeu a senha?

- Home
- Introdução
- Antispoofing
- Contato
- Licença
- Política de Privacidade

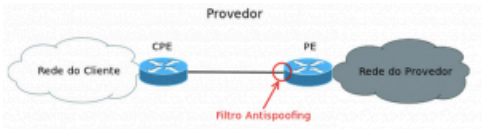
Buscar por...

Você está em: BCP.nic.br » antispoofing » Filtro antispoofing – exemplo para Juniper

## Filtro antispoofing – exemplo para Juniper

3 de December de 2012

É necessário que os provedores de acesso à Internet adotem medidas para evitar que seus usuários, intencionalmente ou não, enviem na rede pacotes com origens inválidas (diferentes dos endereços que lhe são atribuídos). Isso é chamado spoofing e muitas vezes é utilizado para ataques de negação de serviço. Apenas um filtro aplicado no próprio provedor de acesso, preferencialmente na interface do roteador conectada diretamente ao usuário, é eficaz contra isso.



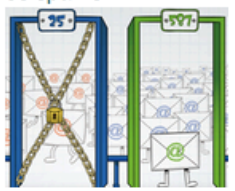

A configuração consiste basicamente em se habilitar o uRPF e em se criar um filtro secundário, baseado numa lista de bogons.

### Filtro para IPv4

```
interfaces {
   ge-0/0/0 {
```

Veja também


Feche a porta para os spams



INTERNET SEGURA BR

# Thank you!

**Dr. Cristine Hoepers**
cristine@cert.br

- CERT.br – Computer Emergency Response Team Brazil
  http://www.cert.br/
- NIC.br – Brazilian Network Information Center
  http://www.nic.br/
- CGI.br – Brazilian Internet Steering Committee
  http://www.cgi.br/