

# Collective responsibility and collaboration for Routing Resilience and Security

## Routing Resilience Manifesto

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# Objectives

- Describe what good looks like
- Emphasize collective focus

*“While the mass media often create awareness-knowledge of an innovation, interpersonal communication with peers is necessary to persuade most individuals to adopt a new idea”  
(Rogers & Kincaid, 1981).*

- Although we are not talking about new ideas or innovations here

# Objectives

- Raise awareness and encourage actions by demonstrating commitment of the growing group of supporters
- Demonstrate industry ability to address complex issues
- Clear and tangible message:

*“We do at least this and expect you to do the same”*

# Routing Resilience Manifesto

- Principles of addressing issues of routing resilience
  - Interdependence and reciprocity (including collaboration)
  - Commitment to Best Practices
  - Encouragement of customers and peers
- Guidelines indicating the most important actions
  - BGP Filtering
  - Anti-spoofing
  - Coordination and collaboration
- High-level document specifying “what”
  - “How” is in external documents (e.g. BCPs)

# The end product

- Landing page
- Published document
- Growing list of supporters
- Pointers to more specific information, e.g. BCOPs

# Work in progress

- A small group of network operators drafting text
- ISOC as a neutral platform (convener and promoter)
- Following slides should be seen as an illustration, rather than *fait accompli*

# L9 - Principles

- 1) The organization (ISP/network operator) recognizes the interdependent nature of the global routing system and its own role in contributing to a secure and resilient Internet
- 2) The organization integrates best current practices related to routing security and resilience in its network management processes in line with the Guidelines
- 3) The organization is committed to preventing, detecting and mitigating routing incidents through collaboration and coordination with peers and other ISPs in line with the Guidelines
- 4) The organization encourages its customers and peers to adopt these Principles and Guidelines

# Guidelines – 3 requested actions

1. Prevent propagation of incorrect routing information
2. Prevent traffic with spoofed source IP address
3. Facilitate global operational communication and coordination between the network operators



# Guidelines – requested actions

## Prevent propagation of incorrect routing information

*Network operators are encouraged to define a clear routing policy and implement a system that ensures correctness of their own announcements and announcements from their customers to adjacent networks. Network operators will utilise prefix-based filters. Network operators should be able to communicate to their adjacent networks which announcements are correct.*

# Guidelines – requested actions

## Prevent traffic with spoofed source IP address

*Network operators should implement a system that enables source address validation for at least single-homed stub customer networks, their own end-users and infrastructure. Network operators are encouraged to implement filtering to prevent packets with incorrect source IP address from entering and leaving the network.*

# Guidelines – requested actions

Facilitate global operational communication and coordination between the network operators

*Network operators should maintain globally accessible up-to-date contact information.*

# Next steps

- Finalize the draft – if you are interested find me in the hallway
- Solicit wider feedback from network operators
- Create a webspace, “founding members”
- Launch and promote

# Questions

- Is this needed, useful?
- Is this the right direction?
- Is something missing?
  - Overall framework, specific guidelines?
- Are you interested in contributing?
- Will you support the Manifesto?



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