

a **do-ut-des** approach to improve  
the appeal of BGP route collecting

**Alessandro Improta**

[alessandro.improta@iit.cnr.it](mailto:alessandro.improta@iit.cnr.it)



Consiglio Nazionale delle Ricerche  
Istituto di Informatica e Telematica



# Unveiling the Internet structure with BGP data

## Problem: data incompleteness

Data collected by BGP route collectors has been unvaluable to reveal the Internet inter-domain characteristics, but it is largely incomplete



## Possible motivation: lack of interest

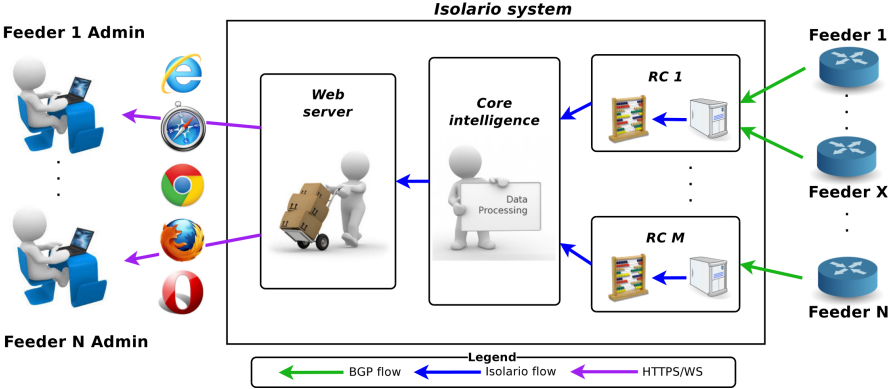
We believe that one of the reason is that most AS administrators do not see any direct outcome in sharing their routing data

## Isolario project: a do-ut-des approach to push more ASes to join

- Participants **need to open a BGP session** with Isolario providing the BGP full routing table and its evolution over time
- In change, Isolario offers **real-time** services based on the aggregation of every routing information collected

# Isolario real-time system overview

Incoming BGP flows are used as **real-time streams** for services dedicated to participants



Results are provided to users via WebSockets

# Isolario free services for feeders

## Real-time services

### **Something is happening**

How is my RIB(s) evolving?  
How is my reachability affected?

## Alerting System

### **Something is happening NOW!**

Check real-time services!  
Do something! (if needed)

## Daily report

### **Did something happen yesterday?**

Check historic services!  
Do something! (if needed)

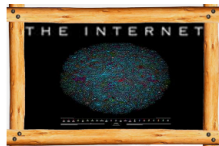
## Historic services

### **Something happened**

How was my RIB(s) evolving?  
How was my reachability affected?



work in progress



Thank you for your attention

**Join us and help us to unveil the Internet structure!**



Please, try our free services with guest credentials at:  
**<https://www.isolario.it>**

For any question about Isolario, contact me at:  
**[alessandro.improta@iit.cnr.it](mailto:alessandro.improta@iit.cnr.it)**