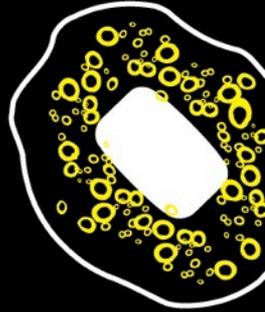


UNIVERSITY OF TWENTE.



# ITSA

INTERNET TRAFFIC STATISTICS ARCHIVE



Martijn Hoogesteger  
Ricardo de O. Schmidt  
Aiko Pras



# HAVE YOU EVER...

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- Assumed HTTP accounts for most of our Internet traffic?
- Wondered if HTTPS is slowly taking over more and more HTTP traffic?
- Been interested in the differences in Internet traffic between countries or continents?
- Thought about how Internet traffic grows?

# INTRODUCTION & MOTIVATION



Table 7. Detailed Application Types (Full Data Set)

## Internet2 NetFlow: Weekly Reports

NetFlow data from all core routers of the Internet2 network are analyzed to produce weekly reports of the network. In essence, this is a weekly version of the "[Bulk TCP Use and Performance on Internet2](#)" by [Stanislav Shalunov](#) and [Benjamin Teitelbaum](#) (note, however, that the paper used one day of data while the reports use a week of data each and that the paper used data from the busiest router while the reports present a network-wide view).

The reports are produced automatically using programs written by [Andrew Lap](#) and [Stanislav Shalunov](#). The CWEB program [nfstat.w](#) reads large daily files and produces intermediate results that are further digested by a collection of Perl programs.

Weekly reports for weeks starting on the following dates are available:

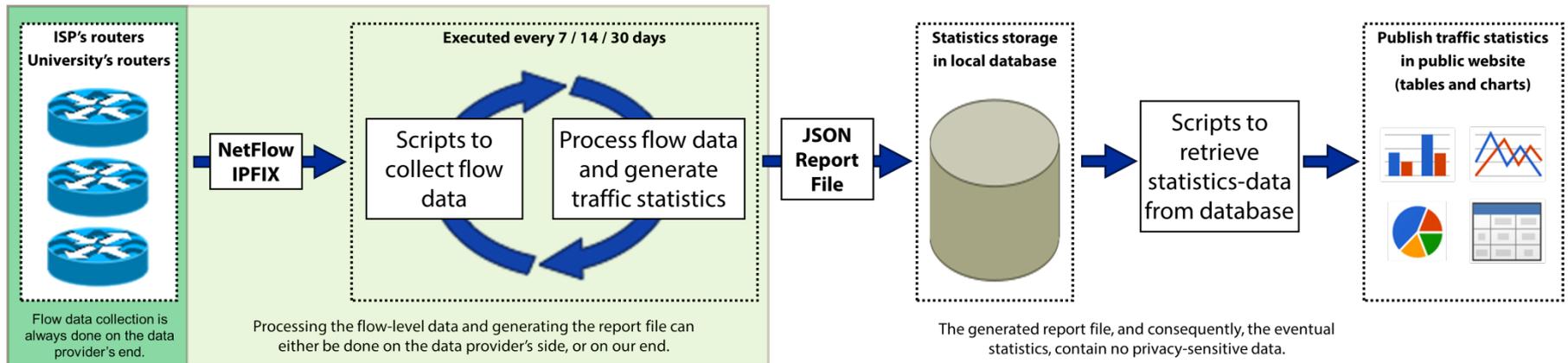
- [20100426](#)
- [20100419](#)
- [20100412](#)
- [20100405](#)
- [20100329](#)
- [20100322](#)
- [20100315](#)
- [20100308](#)

**A new source of information is needed**

Shoutcast	0.25%	4.556T	0.30%	7.292G
BitTorrent	0.10%	1.815T	0.09%	2.226G

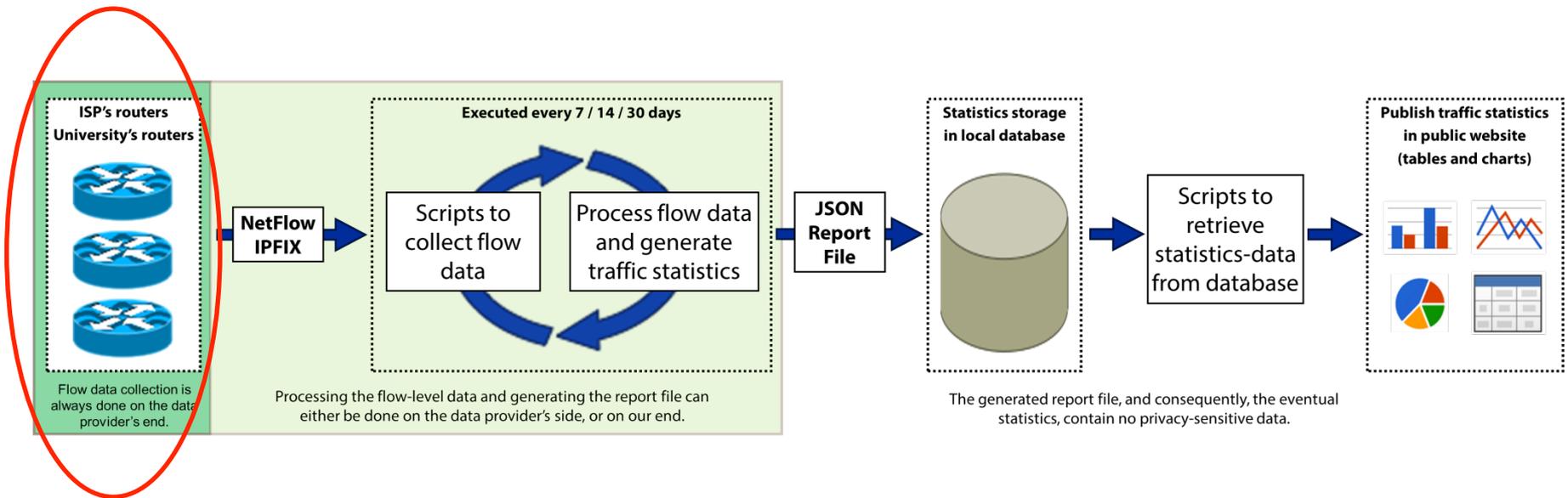
# INTERNET TRAFFIC STATISTICS ARCHIVE (ITSA)

## A NEW SYSTEM



# ITSA

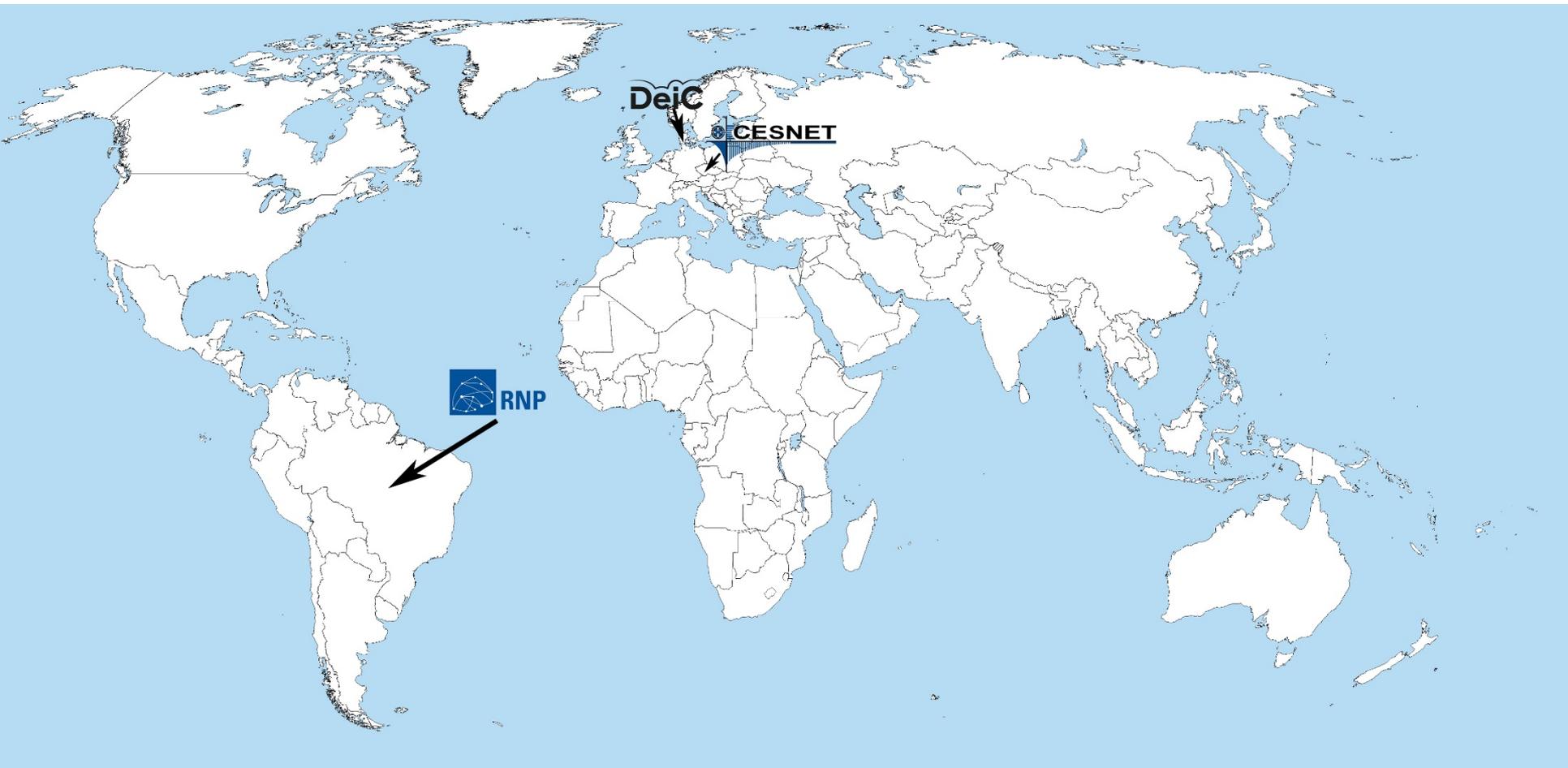
## DATA PROVIDERS



# ITSA

## DATA PROVIDERS

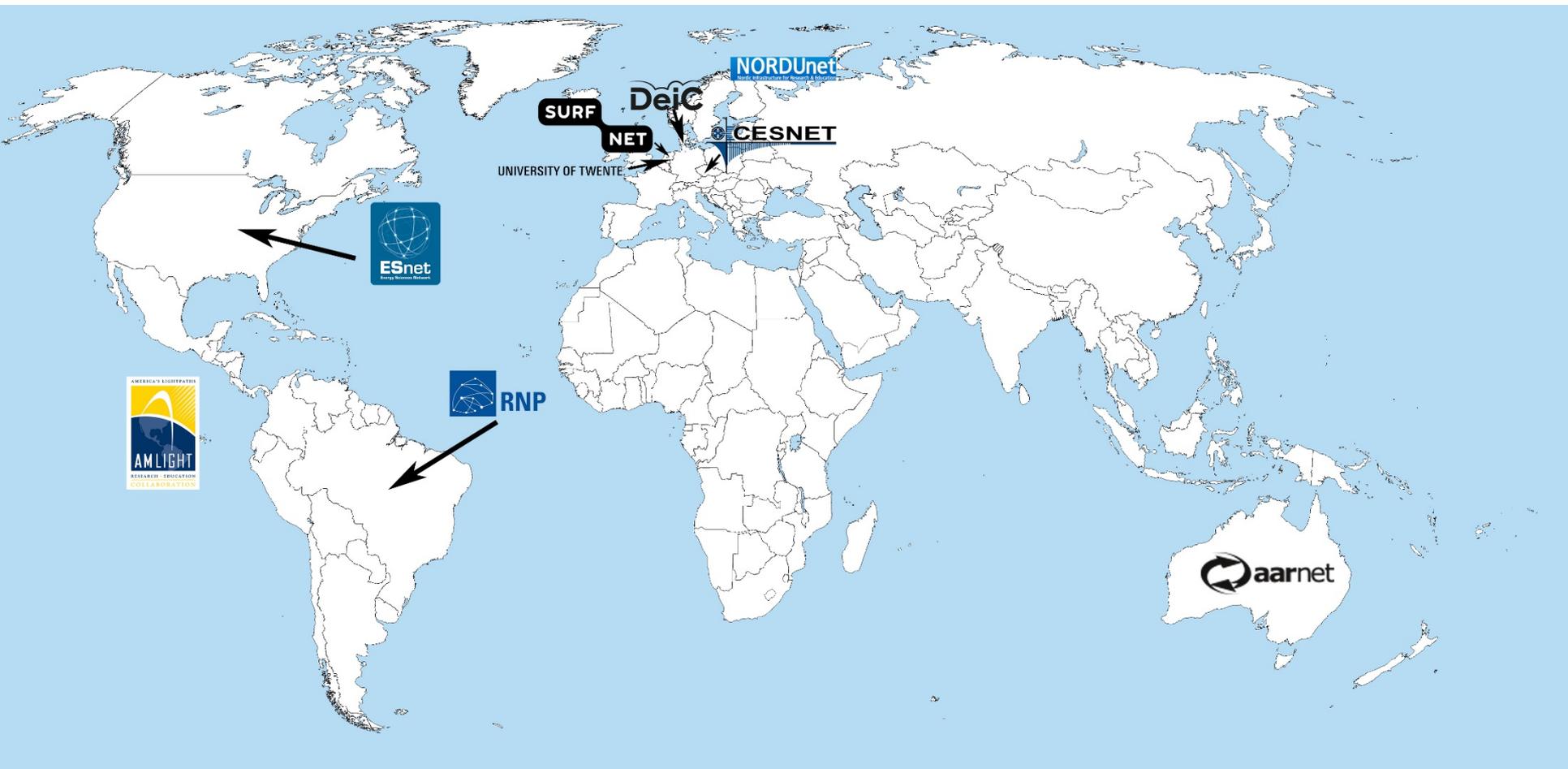
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# ITSA

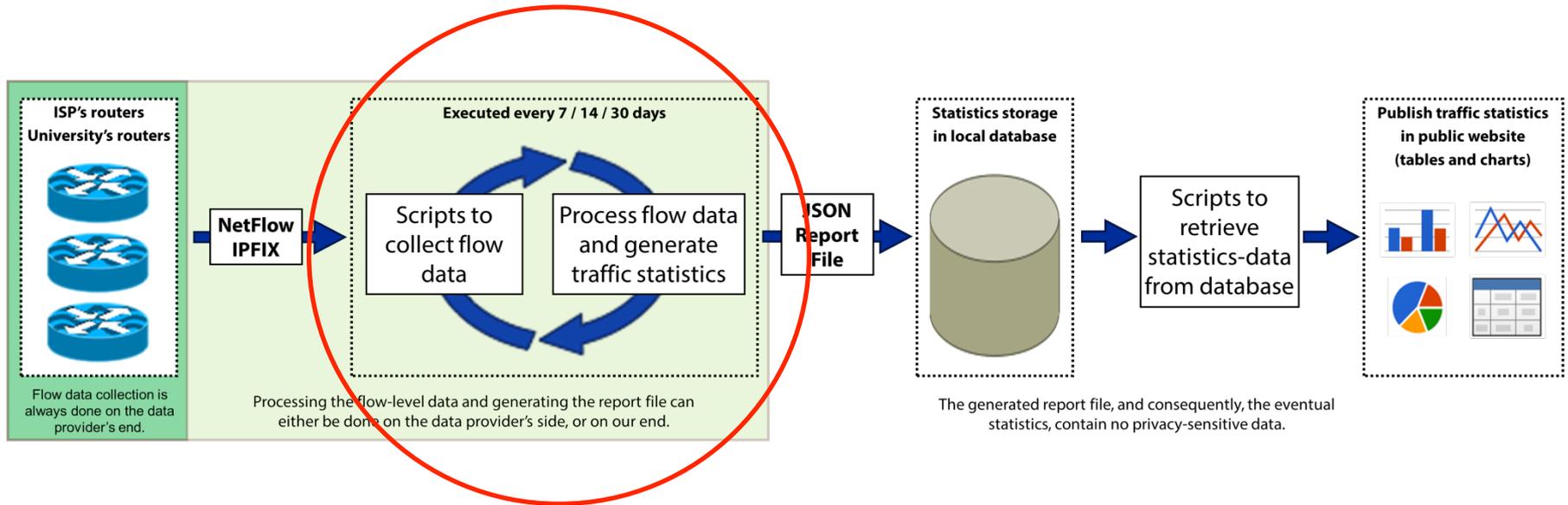
## FUTURE DATA

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# ITSA

## REPORT GENERATION



# ITSA

## REPORT GENERATION

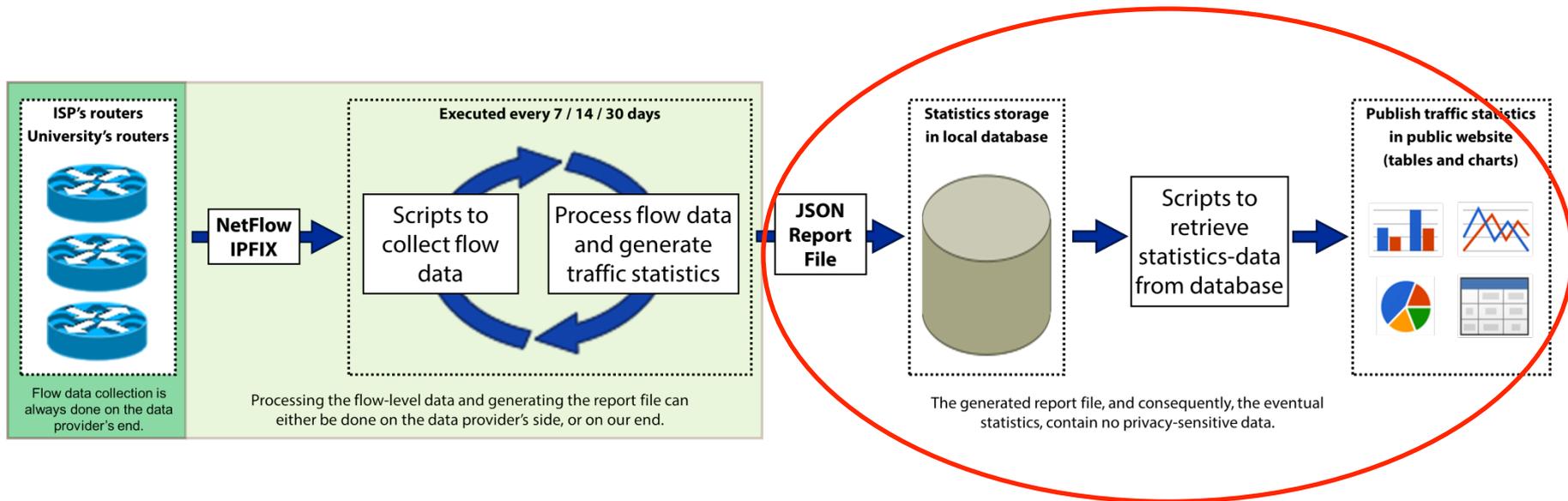
---

- Most used ports
- Most used IP-Protocols
- Flow duration
- Packet count
- Byte count
- Transfer rate
- Packets per second
- Bytes per packet

```
{
  "location": "TEST",
  "week": 4,
  "statistics": [
    {
      "name": "Top Protocols",
      "identifier": "AGG1",
      "values": {
        "HTTP":5000,
        "FTP":4000,
        "SSH":350
      }
    },
    {
      "name": "Top IP-Protocols",
      "identifier": "AGG2",
      "values": {
        "TCP":50000,
        "UDP":20000,
        "ICMP":350
      }
    }
  ]
}
```

# ITSA

## TO THE CENTRAL SERVER



# IT'S A WEBSITE



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WEEKS

- » **Year 2015**
  - Week 18 (2015-04-27)
  - Week 17 (2015-04-20)
  - Week 16 (2015-04-13)
  - Week 14 (2015-03-30)
  - Week 13 (2015-03-23)
  - Week 11 (2015-03-09)
  - Week 10 (2015-03-02)
  - Week 8 (2015-02-16)
  - Week 7 (2015-02-09)
  - Week 6 (2015-02-02)
  - Week 5 (2015-01-26)
  - Week 4 (2015-01-19)
  - Week 3 (2015-01-12)
  - Week 2 (2015-01-05)
  - Week 1 (2014-12-29)
- » **Year 2014**
- » **Year 2013**

## Report for Week 18

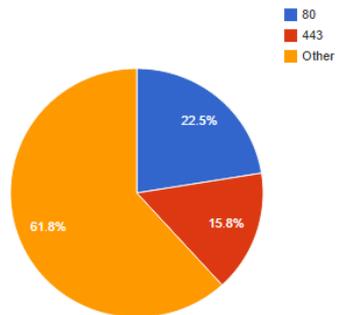
[Download report JSON file](#)



### Ports



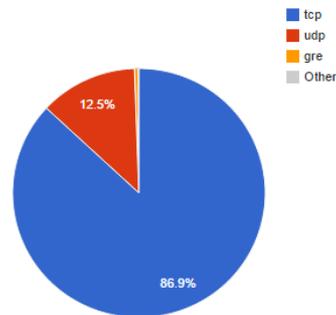
Ports distribution (ports with share < 0.5% aggregated in 'Other')



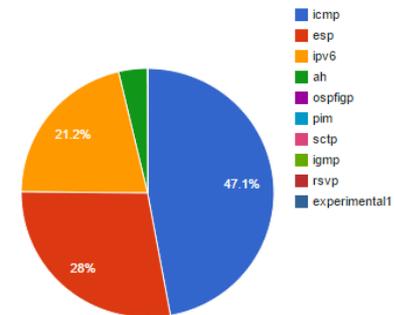
### IP protocols



IP Protocols distribution high-end



IP Protocols distribution low-end



# ITSA

## FUTURE

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- IPv6
- More data sources
- Historical views
- Comparative views
- Aggregated views



# QUESTIONS? COMMENTS?

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