

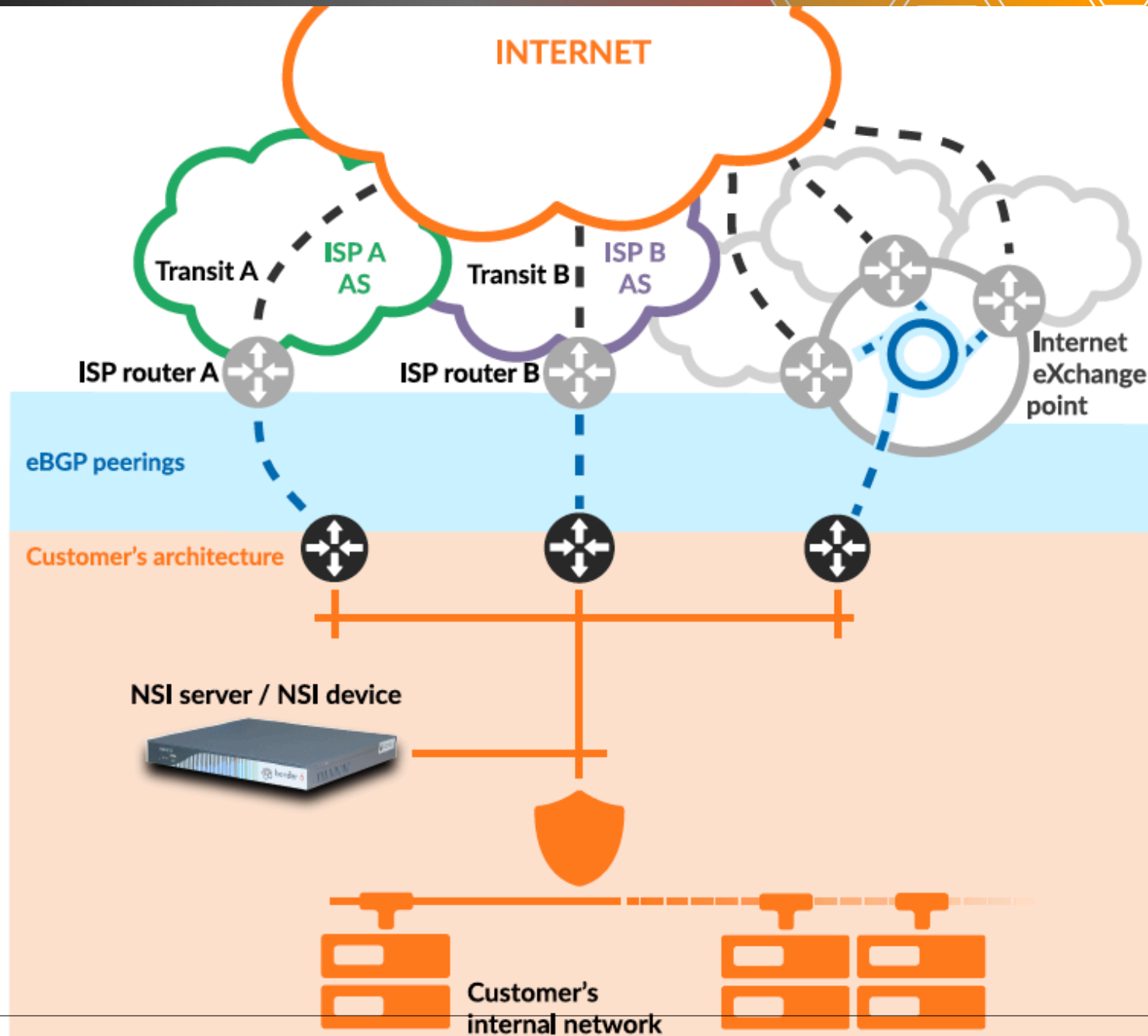
# - BORDER 6 NSI concepts -

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**border 6**  
NON STOP INTERNET

# BGP multi-homed access

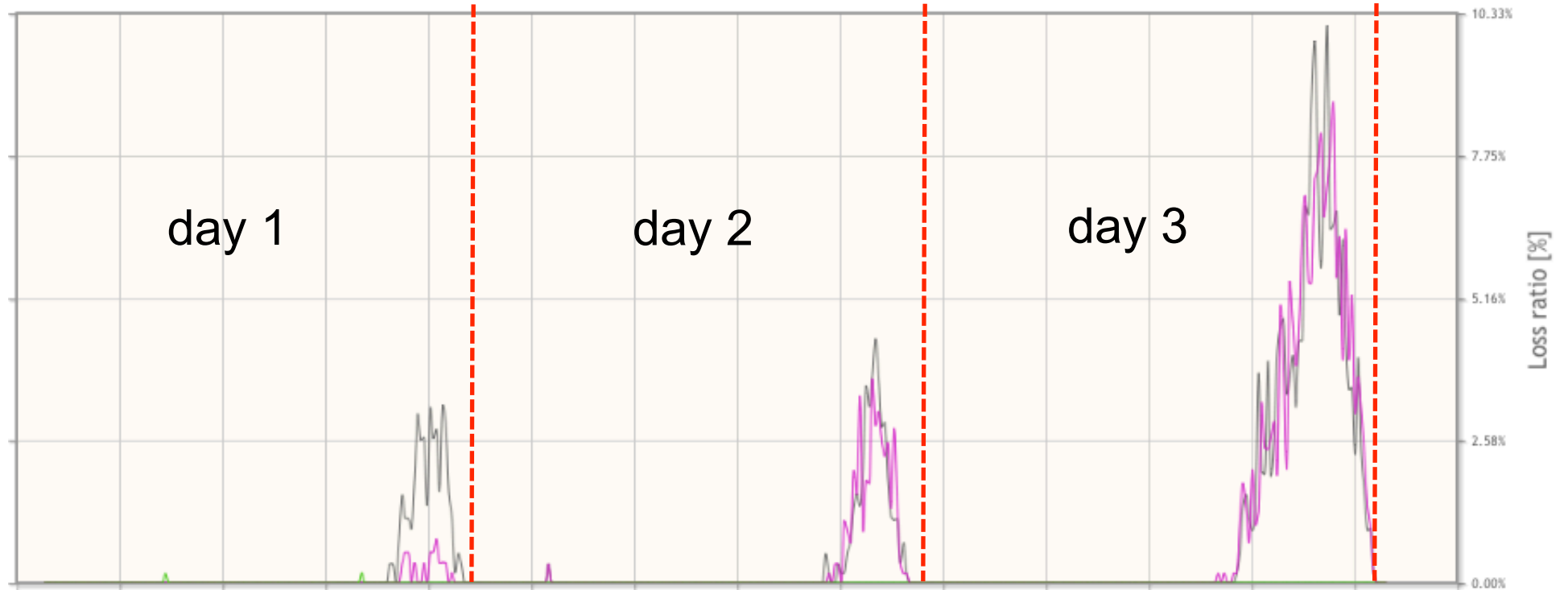


# Internet routing

Internet = BGP (Border Gateway Protocol)

- Routing decisions are based on administrative length of paths (+ random Tie-Break)
- No performance control
  - No information about the actual length of routes(Round Trip Delay)
  - Quality of routes ? (Packet loss, jitter)  
Increased quality problems due to OTT offerings
- Poor failure detection
  - e.g. Access-list
  - e.g. broken “Forwarding plane”
- No capacity management
  - Links congestions
  - Poor/static load balancing
  - Costs of bursts (CDR/interface speed)

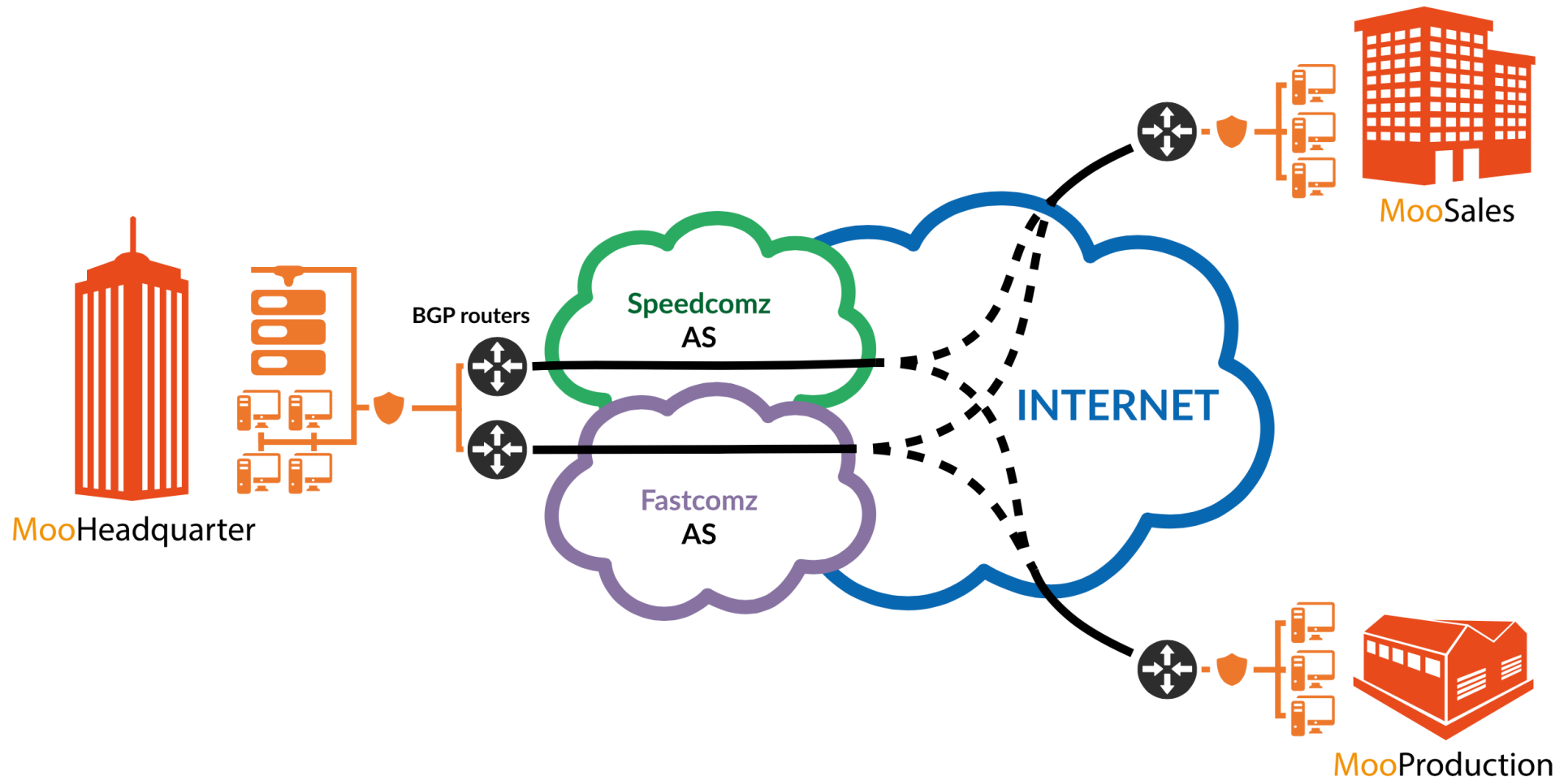
# Packet loss



Packet loss :  
- Transit 1  
- Transit 2  
- Actual BGP path

# Packet loss / use case

## → IPSec Mesh




# Google ranking

Official Google Webmaster Central Blog: Using site speed in web search ranking

Official Google Webmaster Cent... +

googlewebmastercentral.blogspot.fr/2010/04/using-site-speed-in-web-search-ranking.html

Google



Google Webmaster Central Blog  
Official news on crawling and indexing sites for the Google index

## Using site speed in web search ranking

Friday, April 09, 2010 at 11:00 AM  
Webmaster Level: All

You may have heard that here at Google we're obsessed with speed, in [our products](#) and [on the web](#). As part of that effort, today we're including a new signal in our search ranking algorithms: site speed. Site speed reflects how quickly a website responds to web requests.

Speeding up websites is important — not just to site owners, but to all Internet users. Faster sites create happy users and we've seen in our [internal studies](#) that when a site responds slowly visitors spend less time there. But faster sites don't just improve user experience; recent data shows that improving site speed also [reduces operating costs](#). Like us, our users place a lot of value in speed — that's why we've decided to take site speed into account in our search rankings. We use a variety of sources to determine the speed of a site relative to other sites.

If you are a site owner, webmaster or a web author, here are some free tools that you can use to evaluate the speed of your site:

- [Page Speed](#), an open source Firefox/Firebug add-on that evaluates the performance of web pages and gives suggestions for improvement.
- [YSlow](#), a free tool from Yahoo! that suggests ways to improve website speed.
- [WebPagetest](#) shows a waterfall view of your pages' load performance plus an optimization checklist.
- In [Webmaster Tools](#), Labs > Site Performance shows the speed of your website as experienced by users around the world as in the chart below. We've also blogged about [site performance](#).

Search

Archive

Site Feed

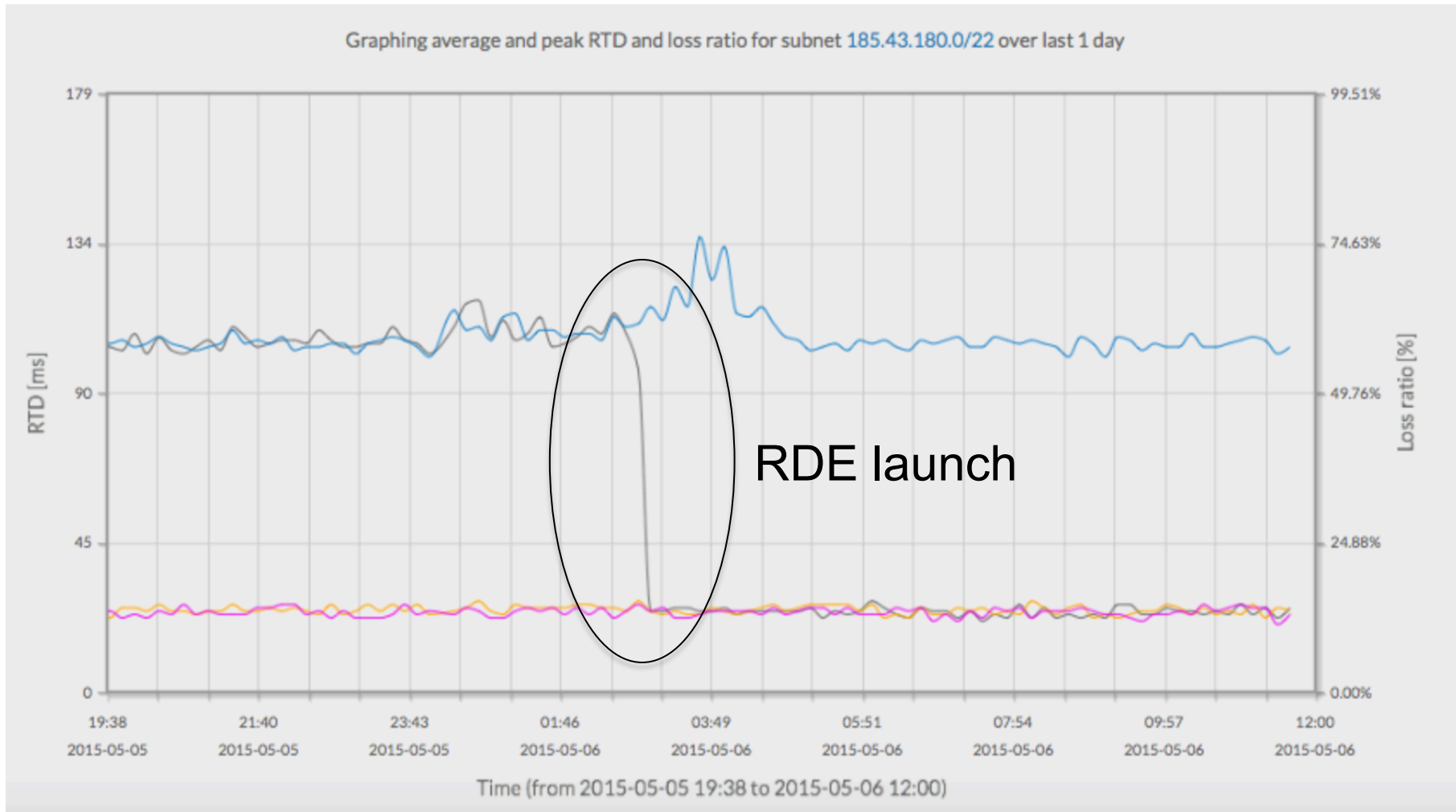
111K readers  
BY FEEDBURNER

Select Language

### Useful links

- [Google Webmaster Central](#)
- [Webmaster Help Center](#)
- [Google Webmaster Tools](#)
- [Webmaster Central on YouTube](#)
- [Traditional Chinese Blog](#)
- [Simplified Chinese Blog](#)
- [Webmaster Central Japanese Blog](#)

# High RTD



RTD :      - Transit 1                      - Transit 3  
              - Transit 2                      - Actual BGP path

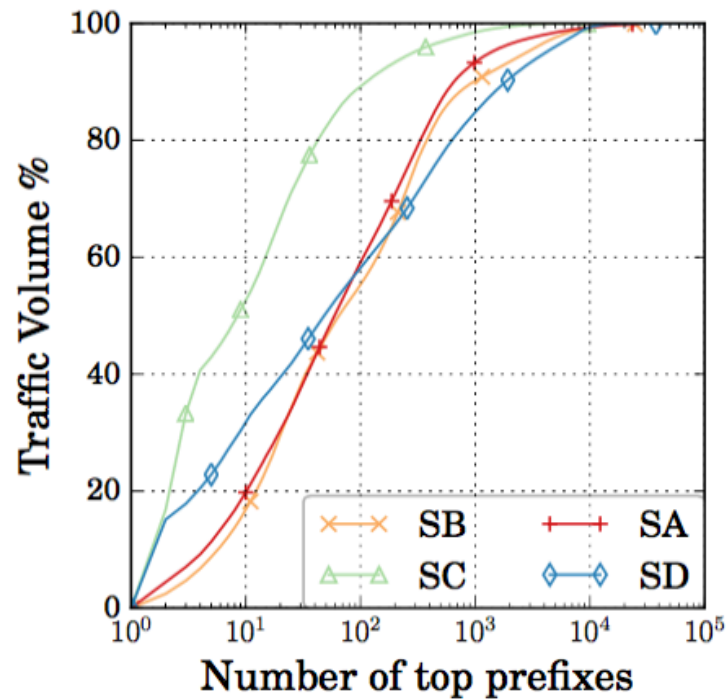
# Routing only the important Internet

Top 1K to 10K prefixes automatically “managed” for 7 days  
Managed = probed & optimized

Top volume Prefixes

Traffic Volume

Full Internet Routing Table  
5... .. routes

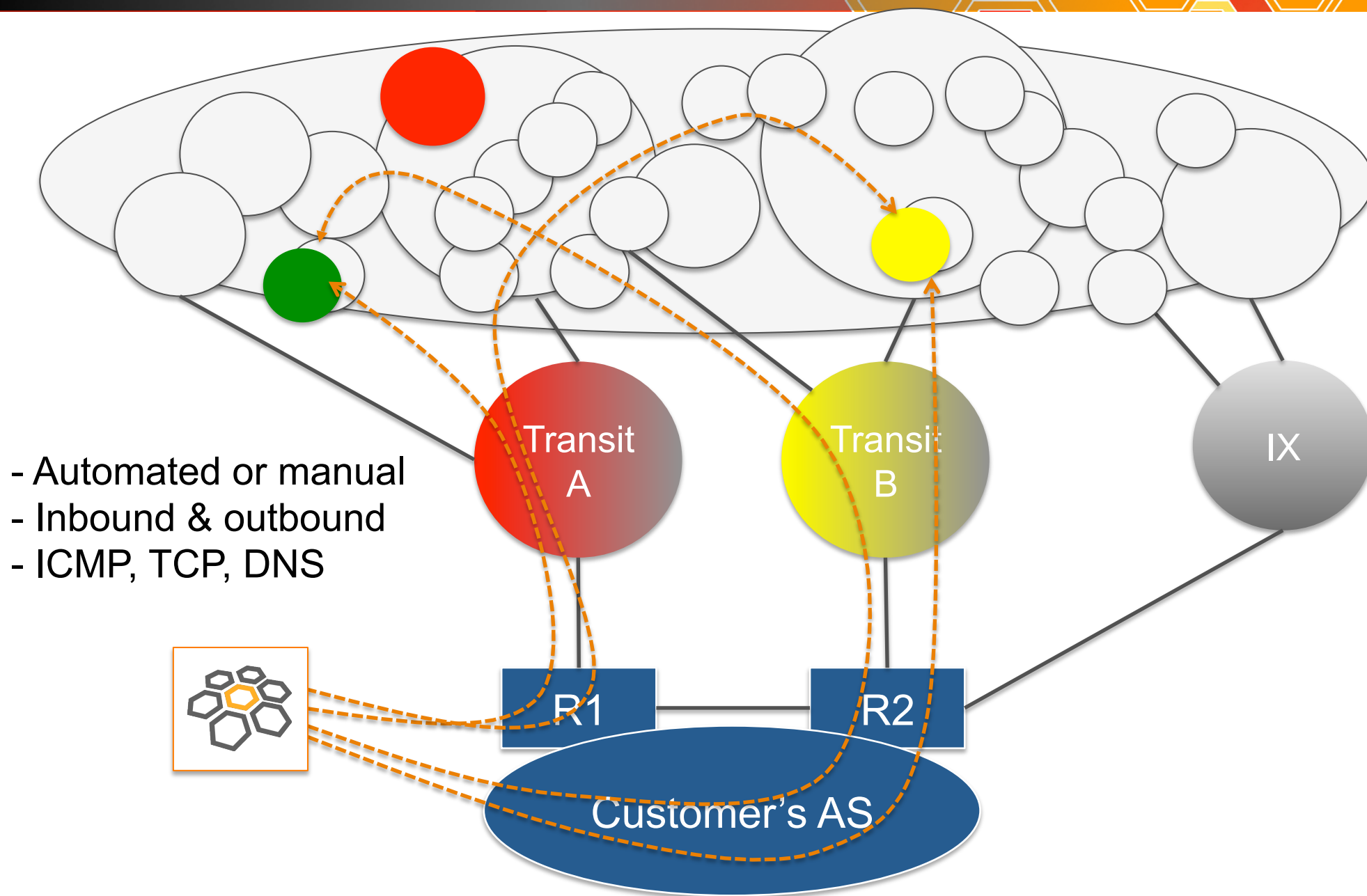


9X.Y% of last 24 hours traffic = “Managed subnets”

Lowest volume



# Probing



- Automated or manual
- Inbound & outbound
- ICMP, TCP, DNS