



Rabobank IPv6

What happened after

Friso Feenstra





Initial investigation in 2014



- Is IPv6 needed for the Rabobank on our external website?
- Is IPv6 needed for the Rabobank for our internal network?

Initial investigation in 2014



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- First idea: I don't think so!

Initial investigation in 2014



- Is IPv6 needed for the Rabobank on our external website?
- Is IPv6 needed for the Rabobank for our internal network?

- First idea: I don't think so!
 - Private internal is good enough
 - /16 for external is good enough
 - NAT for Internet access
 - We can wait

Investigation showed



- ISPs are still rolling out new networks
- ISPs don't have enough IPv4 for new networks
- So they use Carrier Grade NAT (GCN) for new networks
- And use IPv6 to avoid massive translation for big content sites (Google, Facebook, etc.)
- Incoming customers with GCN don't have a recognisable source IP address
- Source IP is important for fraud and phishing detection
- Enable external site on IPv6 and customer is again recognisable

So



Rabobank external website is
reachable over IPv6

Current status



- IPv6 external website on IPv6
- Plans made for IPv6 on internal network
- Reasons:
 - Prepare for IPv6
 - In a few years IPv6 will be the leading protocol on the Internet
 - Currently over 20% and growing more than 10% per year
 - Facebook in US over 50% IPv6
 - New development, features, options first (only) on IPv6
 - Lead-time for IPv6 only 6 months
 - Implementation time on corporate network 3-5 years

Result



- No Project
- Because
 - No clear business case
 - Other projects have direct attention – clearer sponsoring
 - Main path is into the cloud so on-prem implementations with less attention
 - Reorganisations
- So what is next

Next strategy – sneak it in



- IPv6 is not a CIO decision (like BGP, BFD). It is just a network feature
- Enable it with LCM of components
 - LCM core network – Make it also route IPv6
 - LCM server attachment core – Enable IPv6 as option for VLANs
 - IPv6 for Test segments to let platforms gain experience for IPv6
 - Ask third parties if connections can be based on IPv6
 - Etc.

What is most blocking IPv6 deployment



- Cloud services not ready for IPv6
 - Zscaler mail and content gateways do not support IPv6
 - Akamai front end on IPv6; backhaul connection IPv4 only
 - Limited support at cloud providers (Amazon, Azure, Google) for IPv6
 - SD-WAN providers do not yet support IPv6
- And for SD-WAN providers what to use
- Corporate IP space
 - ISP IP space
 - Both
 - ISP and corporate IP

Conclusion



- Treat external and internal implementation separately
- Main reason for external: quality of source IP address
- If you can find a good business case to have a corporate project, use it
- If not sneak it in with limited visibility (network feature)
- When a real requirement arises it will take a significant effort to implement on Internal network from scratch
- and you will probably only get 6 months to implement it