



Wat hebben IPv6 en broccoli gemeenschappelijk

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IPv6







How is IPv6 like broccoli?

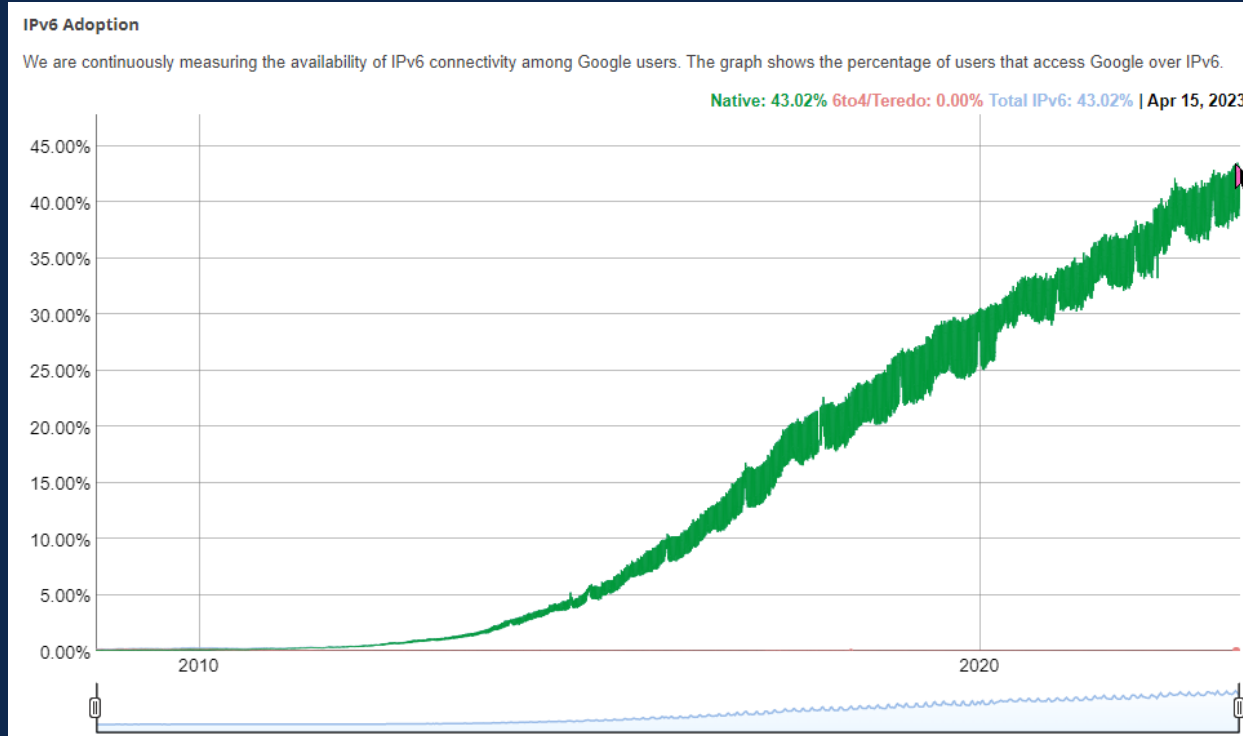


Nobody Uses IPv6



<https://blog.apnic.net/2018/09/04/ipv6-nobody-uses-ipv6/>

Nobody Uses IPv6



<https://www.google.com/intl/en/ipv6/statistics.html>

I have enough legacy protocol space!

What about IPv6?

IPv6



IPv4



Depleting a /64

- The LAN size standard prefix for a host has been set at a /64
 - 18,446,744,073,709,600,000 IPv6 addresses
- Let's attempt to exhaust all of the available addresses
 - We allocate 10,000,000 addresses per second
 - There are 31,536,000 seconds per year
 - $10,000,000 \times 31,536,000 = 315,360,000,000,000$ addresses per year

$$\frac{18,446,744,073,709,600,000}{315,360,000,000,000} = 58,494 \text{ years}$$

Depleting a /48

- Assume we allocate a /48 to a Data Centre Network
 - A /48 contains 65,536 /64's
- It takes 58,494 years to deplete a /64 at 10M addresses per second
 - $65,536 \times 58,494 = 3,833,478,626$ years
- **3.8B years to deplete a /48 at 10M addresses per second !!!**



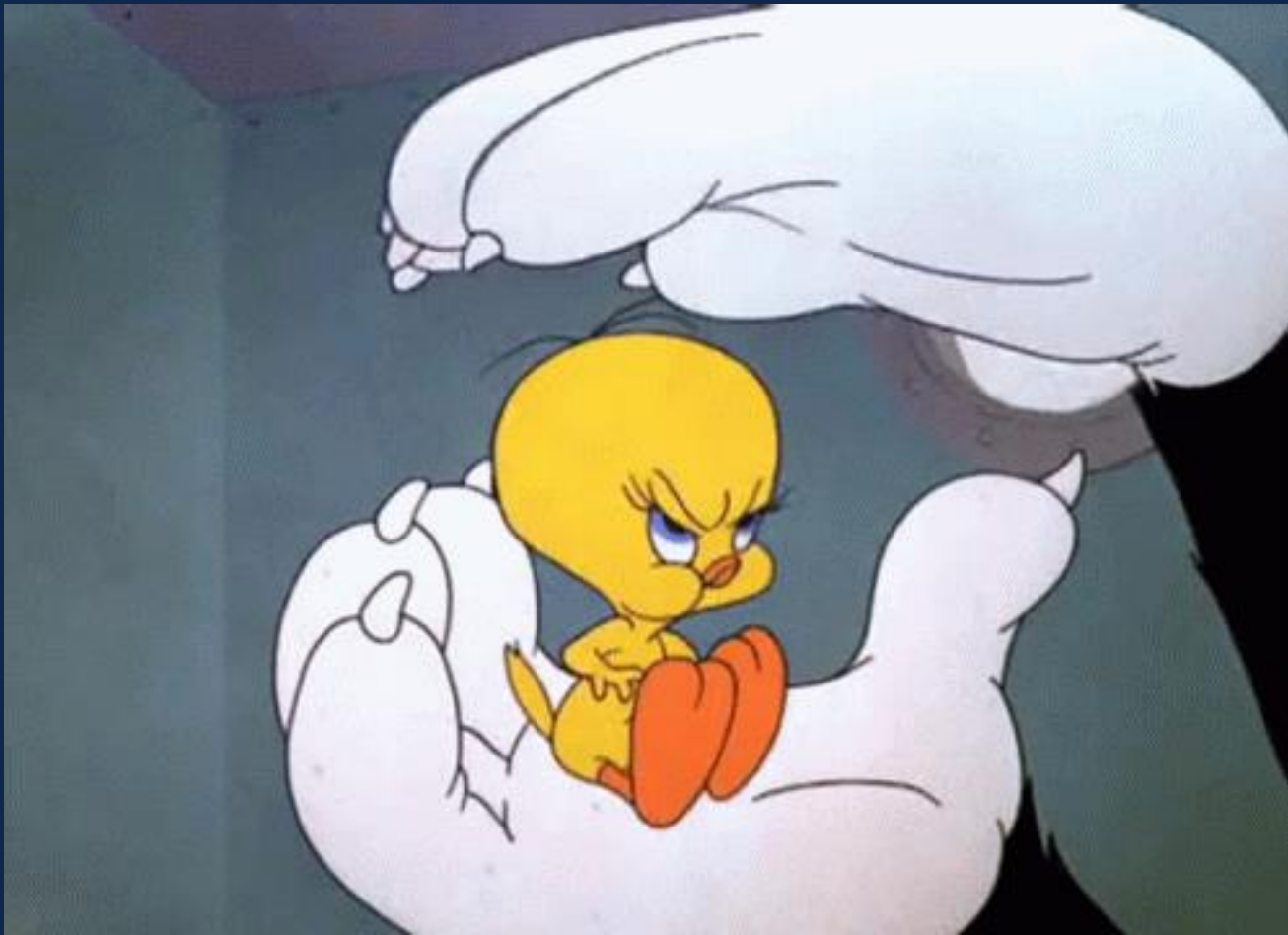
<http://www.howfunky.com/2015/06/ipv6-docker-and-building-for-scale.html>

Convinced?



IPv6 and NATs

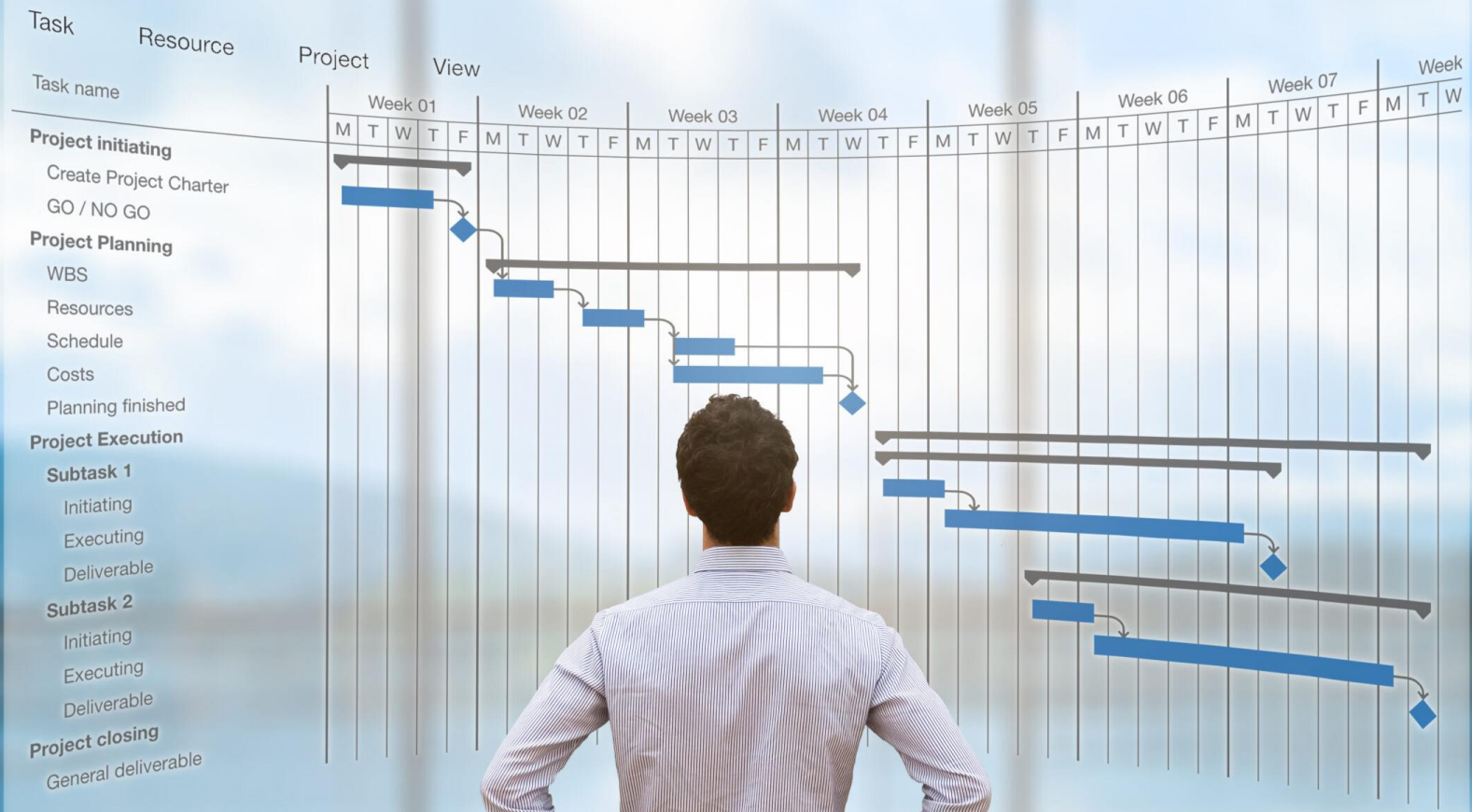




Who is running IPv6 in their network?







Let go of traditional strategies when it comes to IPv6 address planning

By [Nicole Wajer](#) on 20 Sep 2022



As an enthusiastic IPv6 person who has talked passionately to customers on the subject for more than 14 years, it's been refreshing to see that we're moving away from the narrative of 'nobody uses IPv6', which I last wrote about on this blog four years ago, to companies now seriously looking at deploying IPv6 in their networks.

However, I'm still confronted by the same questions, doubts, and ideas from IT administrators who try to use their IPv4 addressing knowledge to develop an IPv6 address plan. Whenever I'm confronted by these people, I start singing in my Elsa voice...



<https://blog.apnic.net/2022/09/20/let-go-of-traditional-strategies-when-it-comes-to-ipv6-address-planning/>

IPv6 the journey

- Dual-Stack where you can, tunnel where you MUST (2012)
- IPv6-only where you can, Dual-Stack where you MUST (2023!?)





IPv6 is good for you, but nice to eat. So is broccoli





"IPv6 is Internet broccoli.
Good for us in the long run but no
immediate sugar rush from deploying it
now"

Shameless self promotion of my own Quotes – Nicole Wajer



The bridge to possible