



European Parliament

IPv6 in the European Parliament

Benedikt Riedel - VEI Global

IPv6 Council Annual Meeting 21st November 2023

About



- Established 2010 in Naas, Ireland
- Specialists in WAN, LAN, Wi-Fi, IPT professional services
- Multi-Skilled Engineering Team
- World wide service delivery

Benedikt Riedel

- Technical Director in VEI
- 21+ years in the industry
- First 'real' IPv6 touch point in 2010
- Major Flagship Native IPv6 Deployment in 2021

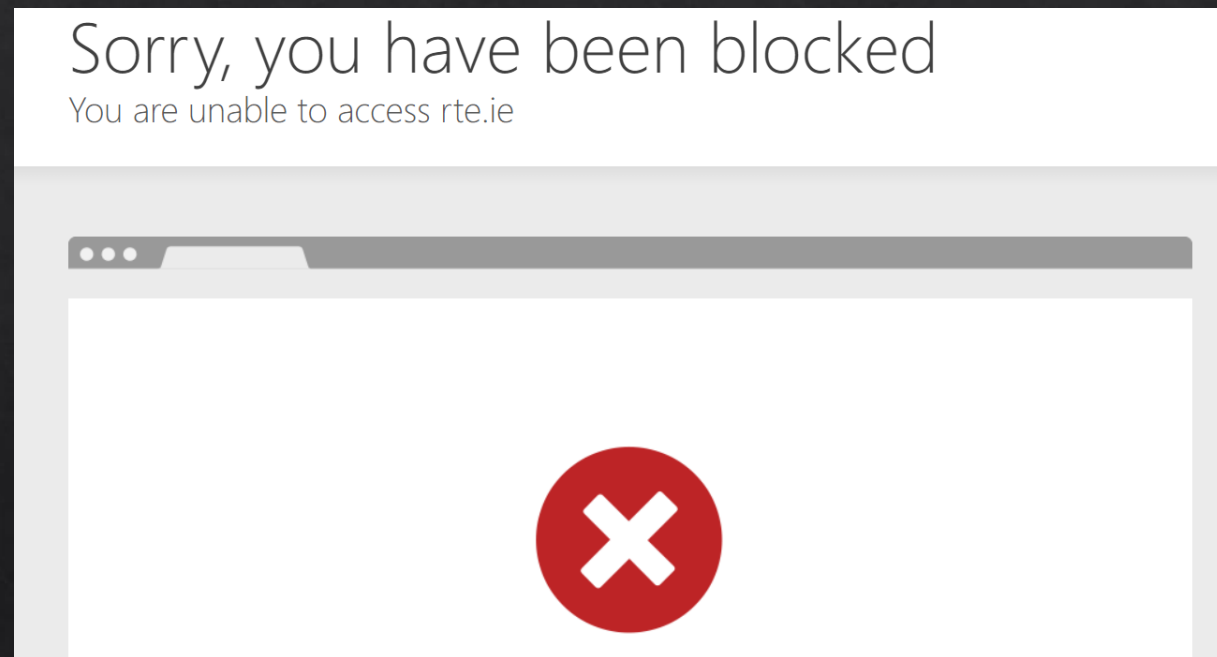
European Parliament

- Forum for political debate and decision-making at the EU level
- Public facing facilities and offices in every EU member state and UK
- ~8000 staff



The Challenge

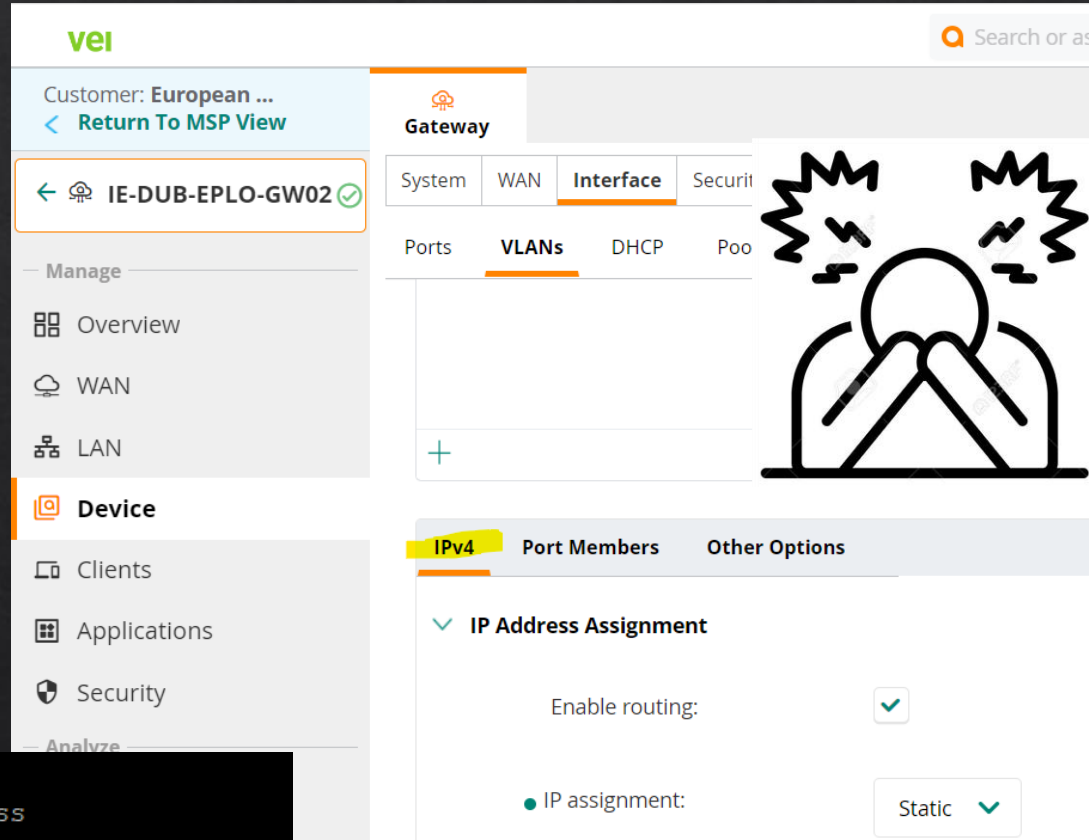
- ◆ Delivery of service into 27 + 1 countries
- ◆ Physical Installation / Logistics
- ◆ Varying Usage Levels
- ◆ Feel Like Home? Travelling MEPs and Staff
- ◆ Uniform Security/Experience
- ◆ VEI: Can we use IPv6?
 - ◆ EP: Yes!



The Solution?



```
(DR-Mode) [mm] (config-submode)#ipv6 address
dhcp6-client      Use DHCPv6 to obtain IPv6 address
link-local        Link local address
pd                Use the prefix obtained by PD client on uplink
X:X:X:X::X/<0-128> IPv6 prefix
```



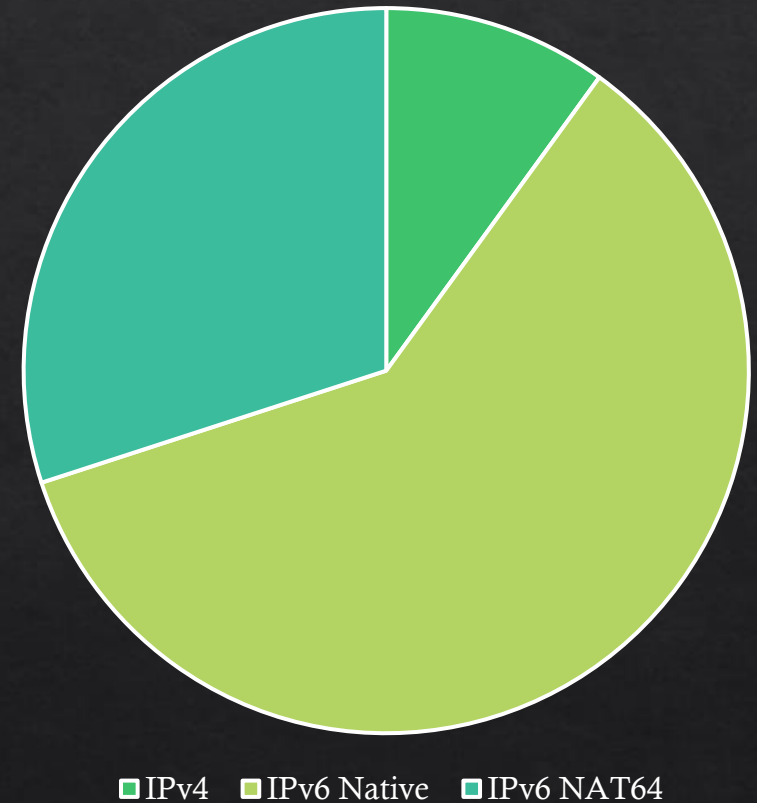
The Solution

- ◆ DIA/Cellular WAN Circuits
- ◆ User Authentication on wired and wireless network
 - ◆ EAP TLS for MEPs, Staff
 - ◆ Captive Portal for personal devices or visitors and press
 - ◆ Now we know where u are from!
- ◆ SD WAN overlay to DCs in Central Europe
- ◆ /40 PI space assigned to EP
- ◆ /48 per country (country: & geoloc: attribute)
- ◆ Dual Stack for Legacy
- ◆ NAT64/DNS64



The Numbers

- ◇ 90% of generated user traffic is IPv6
- ◇ Legacy User traffic remains IPv4
- ◇ Excludes none user traffic (VoIP, BMS, Backups)
- ◇ Great difference on a country by country basis – report released in Q3/Q4 2024 covering the EU elections



Next Steps

- ◆ Add Native IPv6 support on ISP level
- ◆ Disable Dual Stack and run IPv6 only on Legacy
- ◆ Migrate Management to IPv6 (only) – please cloud catch up!
- ◆ Automate network creation with NetBox.dev
- ◆ Improve logging capabilities and traffic measurement
- ◆ Implement IPv6 in other network segments

Questions?

Thank you!

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VEI Global

<https://www.vei.global>

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