Hosting the UK IPv6 Council An IPv6 Operations Tale

Jeffry Handal



Disclaimer: The views and opinions expressed in this presentation are those of the speaker and do not necessarily reflect the views or positions of their employer.

Agenda

Lessons

- The Road to Council
- IT Operations
 - Cisco Meraki Offices
 - Future Plans
- Demo
- Recommendations

Technical takeaways...



Getting Comfortable with the Business Side of IPv6

...continue part of the journey from 2023

The Road to Council





IPv6 and the Business

Request:

Add IPv6 to the Meraki guest network

Purposes:

Demo IPv6 capabilities on the Meraki platform. Host the UKv6 Council November 2024 in the London office

Background: Example UKv6 council meeting: <u>https://www.ipv6.org.uk/2023/09/19/ipv6-council-annual-meeting-2023/</u>

Happy to support the design effort.

IT Service Ticket

IPv6 and Layer 8

- Be targeted
- Request with purpose
- Support and mentor

Demo and Learn IPv6



Why should one demo IPv6?

- Number of countries with IPv6 mandates exploding
- New support on Cisco platforms
- Training and development
- Improved user experience*

Hosting Today's Event



IT Operations

Cisco Meraki Offices



Cloud-Managed Digital Operations



London Office

1.0

Medium size Secure SD-WAN branch served by multiple ISPs. It supports many operational groups (e.g., IT, Sales, Operations, Marketing, Engineering and Development, Technical Support (TAC)).

cisco

London Office – High Level



Corporate and Guest Network

Adding IPv6 in London Office – IT View

- Step 1: Received request to add IPv6
- Step 2: Check documentation on how Cisco Meraki platforms support IPv6
- Step 3: Request IPv6 addresses from ISP(s)
 - Typical result: 1 x P2P /64 for Uplink + 1 x Routed Block /48 for VLANs
- Step 4: Configure MX SD-WAN Firewall Uplink for Corp Use
- Step 5: Configure MX SD-WAN Firewall Uplink for Guest Use
- Step 6: Configure LAN Prefixes
- Step 7: Configure SLAAC RA options (i.e., RFC8106)
- Step 8: Test/Validate (<u>test-ipv6.com</u>)
- Step 9: Document



Adding IPv6 in London Office – Champion





It takes a village

Thank you, Rupert!

"The IPv6 setup was simple and highly automated." - Rupert

Adding IPv6 in London Office – The ISP Market

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Make IPv6 a first-class citizen and on by default

User Experience Case Study: UK Market



An IPv6 stack creates the opportunity for improving user experience (e.g., Code of Practice on Better Broadband Speeds)



Adding IPv6 in London Office – Production Value

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Getting comfortable for production

Adding IPv6 in London Office – Feature Request

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New features requested and delivered!

Future Plans





IPv6 to other offices



Improving employee experiences

Learning to operate IPv6only/mostly

Demo



The Guest Network



You are part of the experiment

Welcome UK IPv6 Council!



Recommendations

Wisdom for the Future



Make IPv6 your default minimum viable operation



Connect technology to the needs of the business

IPv6 default on mindset



Thank you