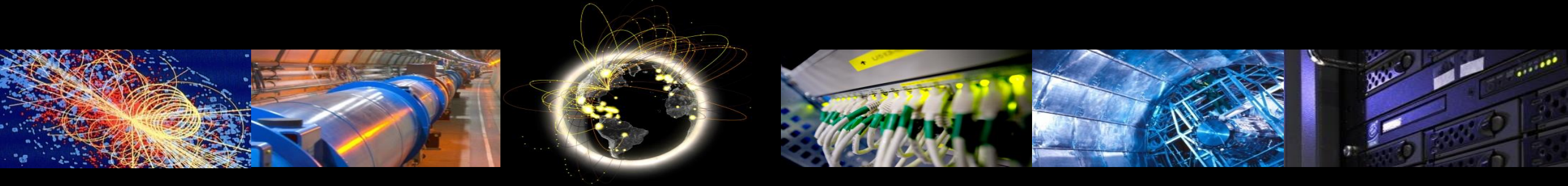


IPv6 deployment on WLCG compute services

A. Sciabà

HEPiX IPv6 working group meeting

Santiago de Compostela, 29-30 January 2025

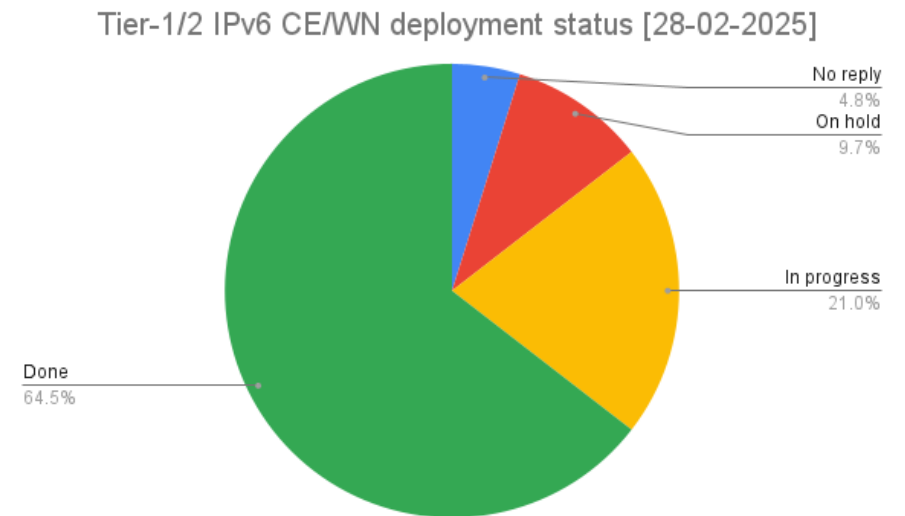
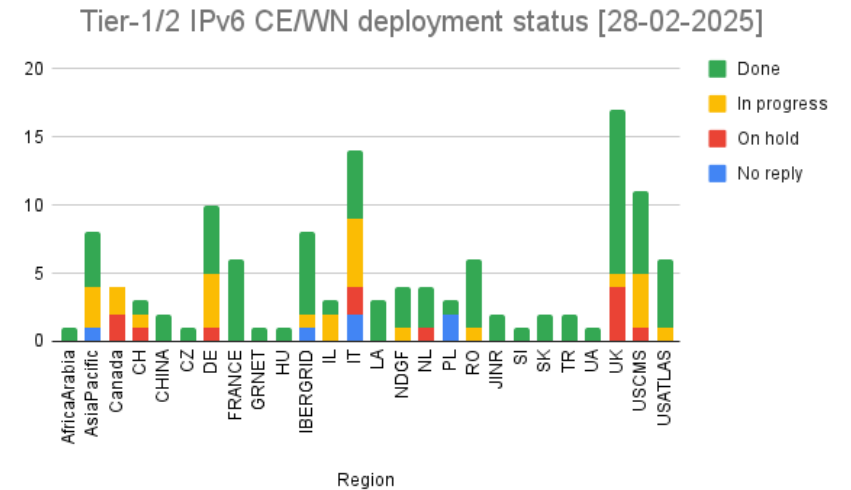


Ticketing campaign

- Launched on 28 November 2023 on all WLCG sites
 - Tier-3 sites not included
- **“Please deploy dual-stack connectivity (IPv4+IPv6) on your computing services (computing elements and worker nodes) as soon as possible and by 30 June 2024 at the latest”**
- Provide estimates for timescale and some details on the necessary steps
- It cannot meet the deadline, explain why

Current status

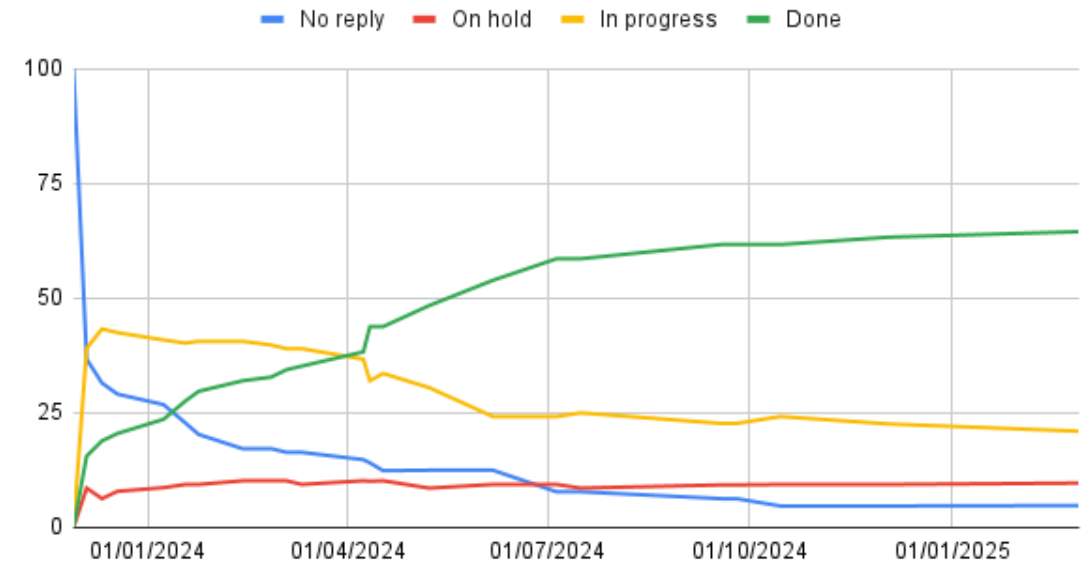
- Around 63% of sites completed IPv6 deployment
 - It was 44% at HEPiX in Paris
- A few regions have most of the “undone” sites
 - IT, DE, AsiaPacific, USCMS, Canada, UK
- Side note: Russian sites removed from the statistics apart from JINR



Time evolution

- About 20% of sites already had IPv6 on compute services at the start of the campaign
- Now we are 6 months after the deadline!
- In Paris, we said that a linear extrapolation would have 62% of sites done by the deadline
 - Clearly it did NOT happen
 - The slope abruptly changed after the deadline!

Tier-1/2 CE/WN IPv6 deployment status vs. time



Typical problems

- Need to couple it to wait for other changes (e.g. new OS, new hardware, new data centre, etc.)
- Other tasks have priority
- Hardware incompatibility (e.g. Skyway IB routers)
- The site uses HPC resources without IPv6 (and cannot do anything about it)
- A few sites supposedly ready, but are failing some check...
- And still some sites completely ignored the tickets

Conclusions

- Deployment on compute services has considerably slowed down
 - Passing the deadline has made things worse
- There is little incentive for sites to hasten the deployment
 - Often, they are helpless because of external factors