

IPv4 Phaseout

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Overview

- Need
- Constraints
- Plan



Need

- IPv4 exhaustion
 - We have a /22 IPv4 LHCOPN split over 8-10 networks
 - Space and performance needed for run4 will likely require many more dCache pool nodes than today
 - Thus: Some of the networks are likely to get tight or run out
- Maintaining two sets of IP ACLs is worse than one
 - Especially since the v4 one can't be sensibly subsubnetted



Constraints

- Not all computing speaks IPv6 yet
 - Years since the WLCG deadline
 - Needs to be fixed in the next couple of years
- Some legacy code needs IPv4 storage
 - ALICE some old code for special cases
 - ATLAS?
 - We can solve this by still having a legacy door that proxies connections instead of redirecting



Constraints

- Experiments would rather not see such a big change during data taking
 - We should get this done during the long stop, 2026-2029
- Getting ready by the next data challenge in 2027 would be great
 - But some doubt due to previous slide
- Local site issues?
 - Specifically about dropping the IPv4 addresses on the LHCOPN for dCache pool nodes
 - No other IPv4 address with default route, ideally



Tentative Plan

- Drop IPv4 from pools in preprod
 - Check if all of our monitoring and management still works
 - Check if ATLAS is fine with this
- Communicate with ATLAS and ALICE about timing
 - Also involve WLCG
- Fix a proxying xrootd and webdav door for legacy access
 - Need to decide on HA or not, depending on experiment feedback
- Do the thing





Questions?

