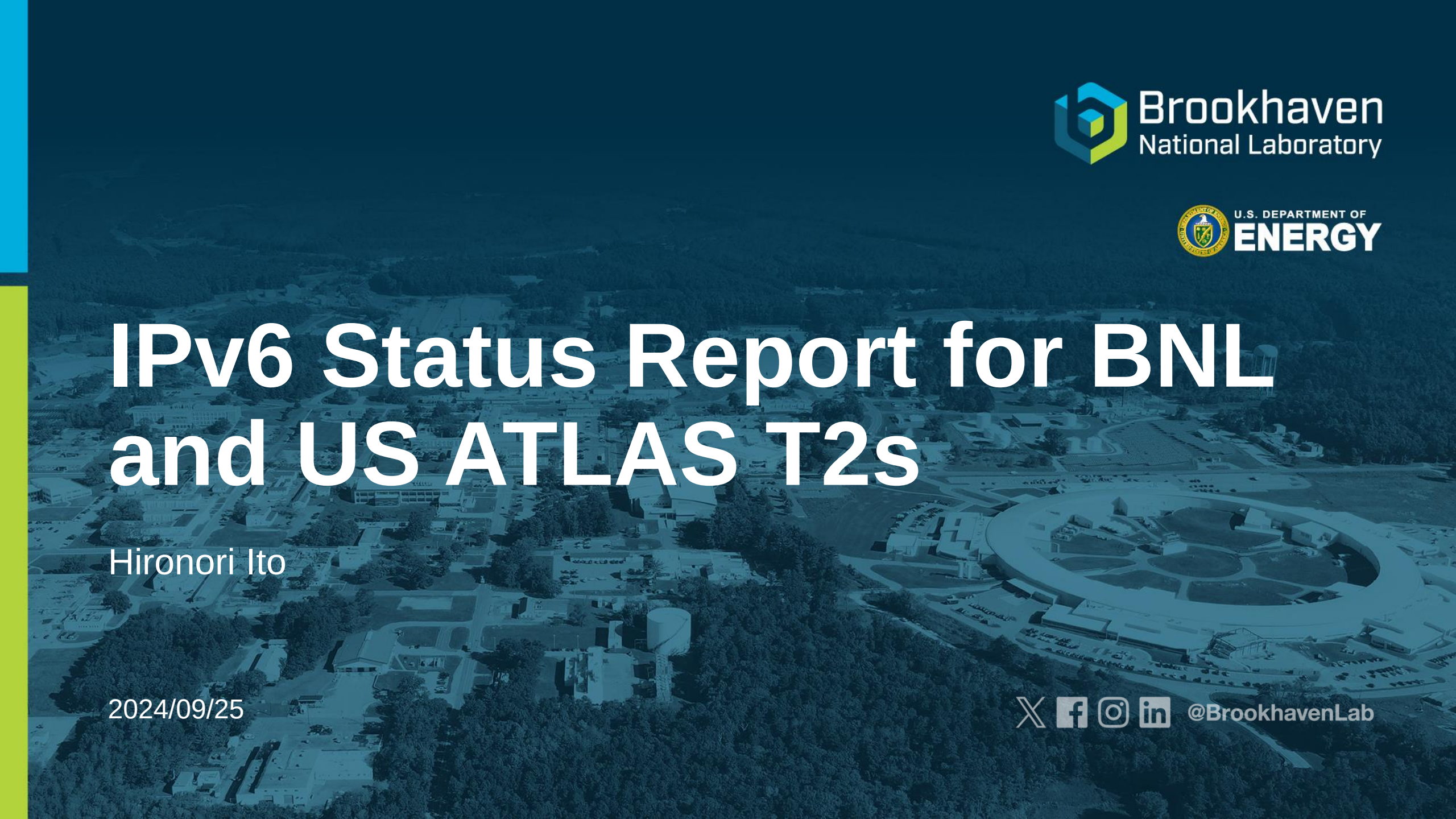

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U.S. DEPARTMENT OF ENERGY

IPv6 Status Report for BNL and US ATLAS T2s

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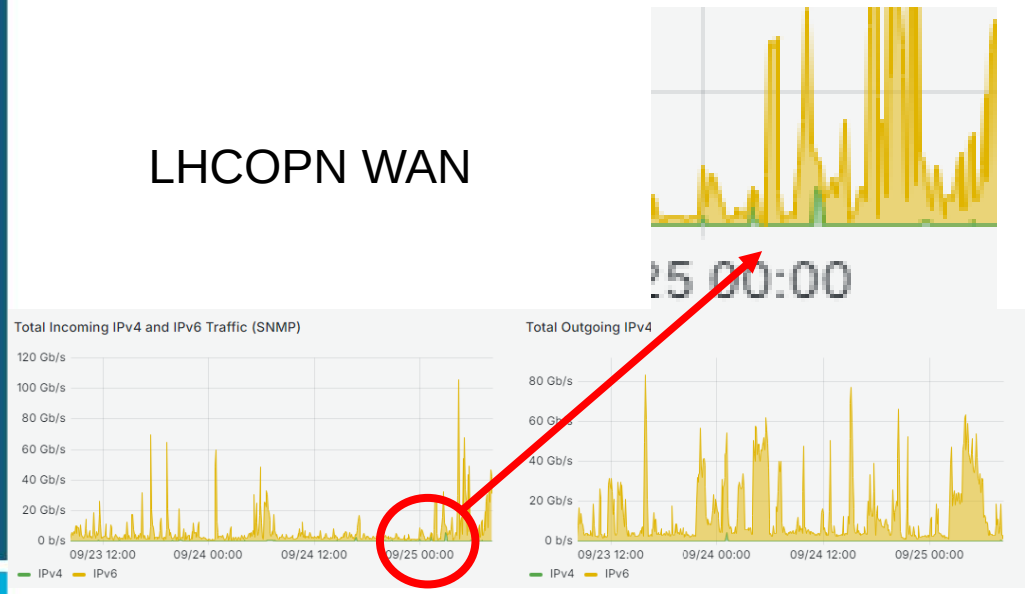
BNL

- FTS and ATLAS T1 storage on WAN side has been dual stack for years
- ATLAS T1 storage on LAN side has been dual stack for about a year
- ATLAS T1 worker nodes became dual stack by June 2024 as they were rebuilt to ALMA9.
- Worker nodes used for ATLAS T3, Belle II, sPHENIX, STAR, etc… are still on IPv4 only. They will be on dual stack as those hosts are upgraded to ALMA9.
  - Belle II is testing ALMA9 worker nodes right now.
  - All of them are expected to be upgraded with dual stack by the end of this year.

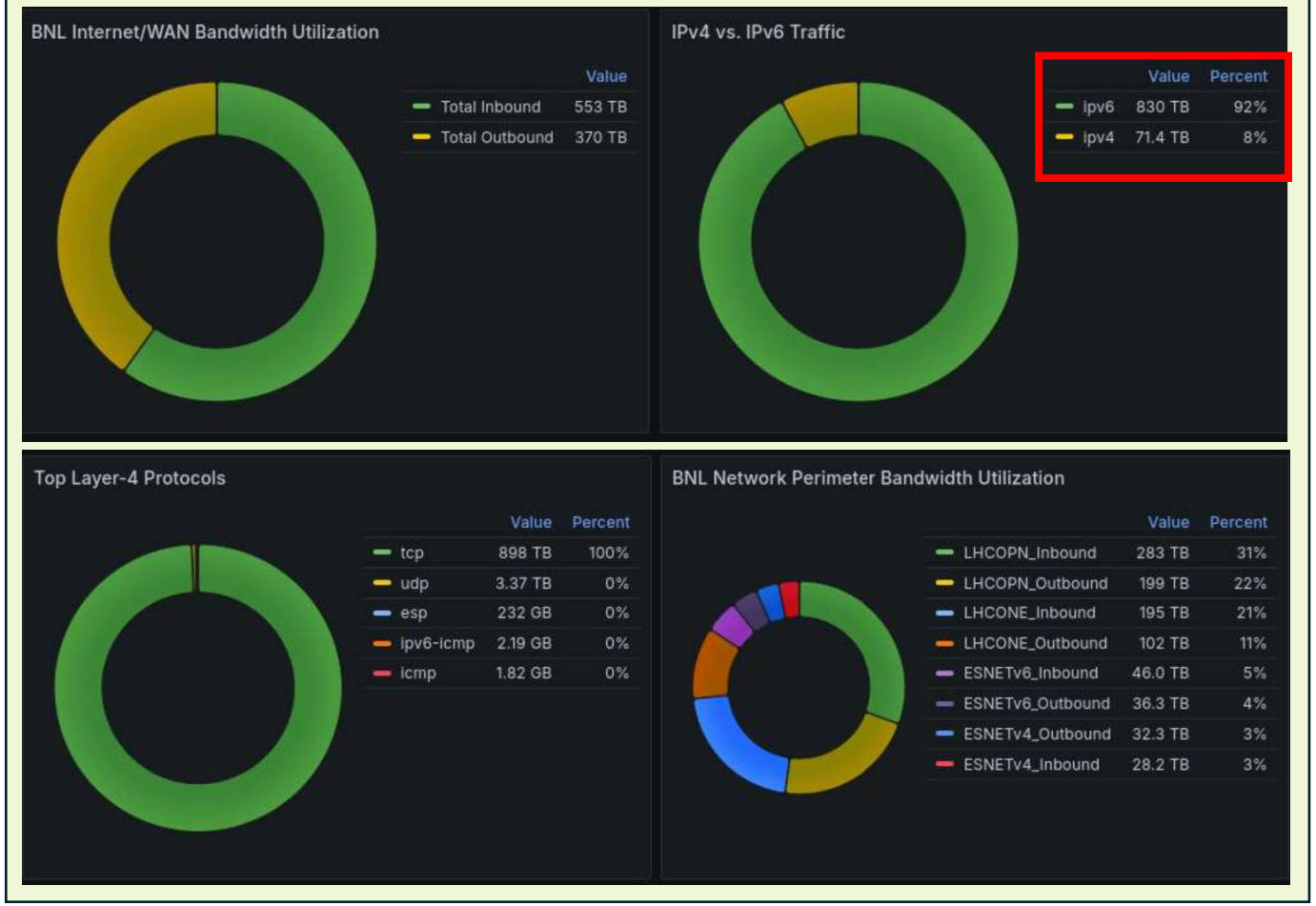
Network Monitor for BNL

- Exceeding 90% of the site wide throughput is over IPv6
  - Some experiments are still IPv4
  - Some LHC sites are still IPv4

LHCOPN WAN



BNL WAN (site wide)



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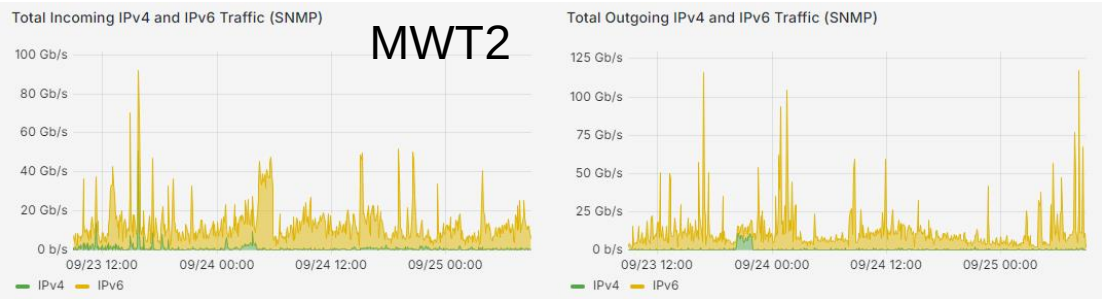
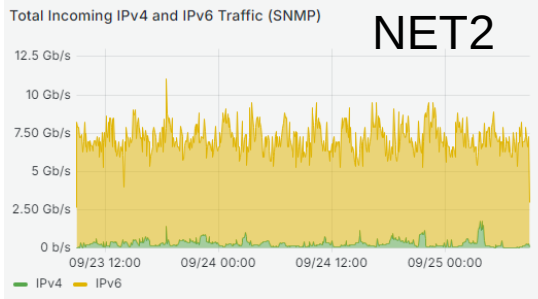
US T2s

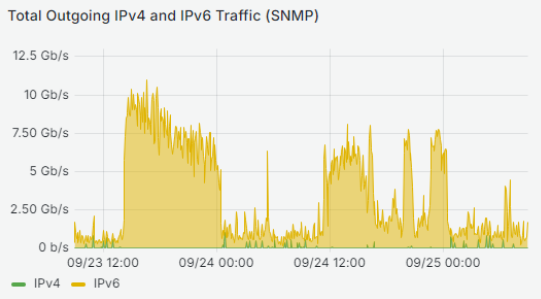
- AGLT2
  - Dual stack for both storage and worker nodes (RHEL 9)
- MWT2
  - Dual stack for both storage and worker nodes (ALMA9 at UC and IU, CentOS7 at UIUC)
- NET2
  - Dual stack for both storage and worker nodes (ALMA9)
- SWT2
  - Storage are dual stack
  - Worker nodes are still IPv4 at UTA (CentOS7) and dual stack at OU (Cent OS7). They are planned to be upgraded.

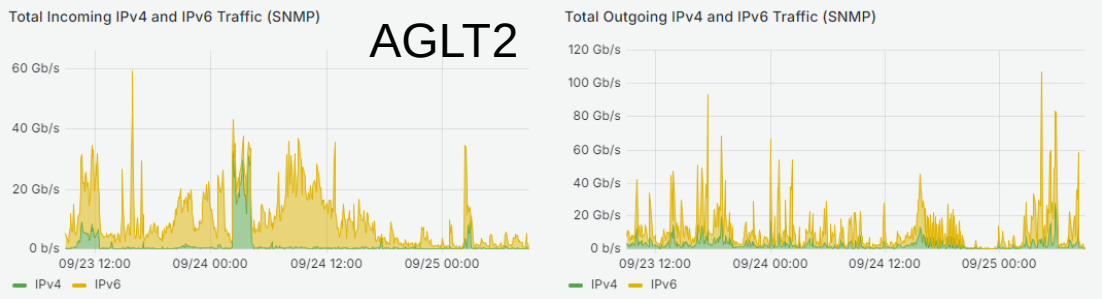
IPv6 vs IPv4 on US T2s

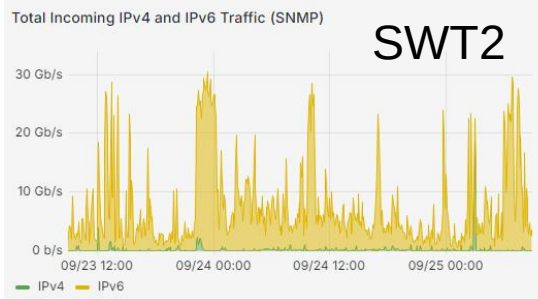
- Mostly IPv6
- Still see some IPv4 due to some remote sites not being IPv6

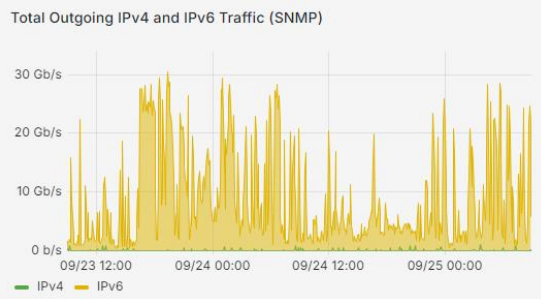












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BNL and US ATLAS T2s

- All sites have their definite plans for upgrade to implement dual stack network.
  - US ATLAS is closely following the progress for all sites.
  - Most sites are upgraded to dual stack.
- From WAN traffic monitor, large fractions are over IPv6.
  - Small fractions are coming over IPv4 due to mostly remote sites being IPv4