

## **Networking at the WLCG: R&D activities and DC24 testing**

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In recent years, different R&D activities have been developed at CERN within the WLCG (World LHC Computing Grid) to exploit the network and provide new capabilities for future applications. An example is NOTED (Network Optimised Transfer of Experimental Data) to dynamically reconfigure network links to increase the effective bandwidth available for FTS-driven transfers by using dynamic circuit provisioning systems such as SENSE and AutoGOLE. Another example is the packet marking initiative of the RNTWG (Research Network Technical Working Group) to increase network visibility and distinguish network flows by LHC experiment and application, through use of the flow label field of IPv6 packets. Additionally, the RNTWG is working on packet pacing with BBR (Bottleneck Bandwidth and Round-trip propagation time) and Jumbo frames. In this way, during DC24 the different R&D activities have been tested at scale and based on the results analyse their feasibility for future applications.

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