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IPv6 deployment at CERN

Wednesday, 16 March 2016 14:00 (30 minutes)

In 2013 CERN completed the deployment of IPv6 in its Campus and Datacentre network. The full project lasted 2 years and involved several engineers to address all the aspects of a production level deployment, notably the management of addresses, the design and then the automatic provisioning of services. The presentation will explain how IPv6 has been deployed at CERN, the main design principles, the issues encountered and how they were solved. Special focus will be given to the addressing plan designed; to the development done on CSDB (the CERN network database and its network interface) and CFMGR (the CERN Network Management software); to the DNS configuration and how the users can modify it; to the DHCPv6 service and why and how it has been preferred to SLAAC (State Less Address Auto Configuration); to security aspects, especially on the tools given to the users to modify the CERN main firewall; to all the challenges encountered during the deployment; to the lessons learnt. The IPv6 deployment has required a large investment but will pay off when IPv6 will finally take over.

Summary

The talk describes how IPv6 has been implemented in the CERN network and management tools

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