# CERN DNS and DHCP service improvement plans

*Tuesday, 26 March 2019 14:00 (25 minutes)*

The configuration of the CERN IT central DNS servers, based on ISC BIND, is generated automatically from scratch every 10 minutes using a software developed at CERN several years ago. This in-house set of Perl scripts has evolved and is reaching its limits in terms of maintainability and architecture. CERN is in the process of reimplementing the software with a modern language and is taking the opportunity to redefine the DNS service architecture by introducing a redundant solution for the master DNS. Meanwhile, Anycast is being evaluated in order to increase the DNS service robustness and scalability. Finally, CERN is considering the possibility of moving from a static to a dynamic zone for the cern.ch domain to allow immediate commissioning while controlling the update process.

Concerning the DHCP services, ISC DHCP has been the software of choice to support dynamic host configuration for almost 20 years. However system provisioning has massively scaled in the last years and DHCP software shortcomings have lead ISC to develop Kea. CERN intends to modernize the service replacing ISC DHCP with Kea, which will allow the implementation of a highly available and geographically dispersed DHCP service, as well as a fast provisioning so that changes in the network database are immediately propagated to the DHCP servers.

**Primary author:** BARRAND, Quentin (CERN)

**Co-authors:** GUTIERREZ RUEDA, David (CERN); LEFEBURE, Veronique (CERN)

**Presenter:** BARRAND, Quentin (CERN)

**Session Classification:** Networking & Security

**Track Classification:** Networking & Security