RU-VRF for LHCONE in 2015-2016

Eygene Ryabinkin

National Research Centre “Kurchatov Institute”

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RU-VRF: an overview

- Another VRF in LHCONE
- Connects major WLCG-related Russian sites
- Operated by Kurchatov Institute
- Co-funded by KI and JINR
- Joint NOC team from KI and JINR
- Started as pilot in 2014 with full transit from NORDUnet to KI as a client
- Running in VRF mode since December 2015
- Viewing as the long-term project of Kurchatov Institute computing center coupled to other network-related activities for HEP and supercomputers

Technical details: our side

- AS 57484, dedicated AS for RU-VRF
- 5 connected institutions: KI (AS 59624), JINR (AS 2875), IHEP (AS 2643), ITEP (AS 2148) and PNPI (AS 29493)
- Details are documented at the TWiki
- Doing incoming prefix filtering for our clients
- Supporting all LHCONE mandatory BGP communities
- Running on virtual chassis of two Juniper MX240 routers located at two different DCs inside Kurchatov Institute
- Connected to the Moscow M9 exchange point with 8x 10GE links
- Three connected sites run proper VRFs or different routers: KI, JINR and PNPI
- IHEP and ITEP currently run PBR. IHEP plans to transition to the split hardware mode this year. We actively help ITEP to transform their configuration to the VRF mode

Technical details: external connectivity

- 10 Gbit/sec (shared with LHCOPN ring) to CERNlight
- 10 Gbit/sec via Gloriad to ESnet and Internet2
- 10 Gbit/sec to NORDUnet in Espoo (coming soon, circuit to CSC should be ready in April 2016); were connected to NORDUnet up to the end of 2015 via L2 transit from RUNNet
- 10 Gbit/sec (shared with Gloriad circuit up to Amsterdam) to NL-T1
- NL-T1 is currently a private-type peering: we move traffic between our clients and SARA/NIKHEF, but not announcing them to the rest of the LHCONE

Our NOC

- Eygene Ryabinkin, KI (it's /me)
- Yury Gugel, KI: used to be CTO in RUNNet, now works with us as the WAN architect and technical lead
- Andrey Shitov, KI: works in our NOC since its inception, does the majority of operations
- Andrey Dorovatovskiy, KI: joined our NOC last year, mainly works on monitoring tasks
- Andrey Dolbilov, JINR: lead networking person in laboratory of informational technologies (LIT)
- Anton Balandin, JINR: LHCONE/LHCOPN operations person from LIT

Current activities

- In April Gloriad will cease its operations, actively trying to understand how to continue to be connected to ESnet/Internet2 and try to peer with CANARIE
- Acquiring old M/Light port at Netherlight and converting it to 10GE with the help of SURFnet NOC
- Resurrecting our connection to NORDUnet, doing new circuit to CSC (Espoo, Finland)
- Building new monitoring system that will be also accessible by our connected sites
- Trying to understand how to approach GEANT with LHCONE peering (anyone?)
- Political item: planning to go into more “official” mode in 2017

That's all, folks!

Questions, comments?