New push for Ukrainian science from European Commission.

Comment by **Alexey Kurov**, research associate at the Kharkiv Institute of Physics and Technology (KIPT) (http://www.kipt.kharkov.ua), responsible for network operation of the KIPT computing facility dedicated to processing of data from the Large Hadron Collider (LHC) at the CERN.

Thanks to EapConnect project (https://www.eapconnect.eu) the Ukrainian Research and Academic Network (http://uran.ua) received a new 10 Gbps connection to GÉANT. It opens new opportunities for the scientific and educational community in Ukraine**.**

New possibilities of the URAN structure allow Ukraine to increase the collaboration in many science fields: astronomy, medical practice, technology for defense and nanotechnologies. New 10 Gbps Ukraine – GÉANT data channel and renovated URAN data centers with ten times upgraded performance, both EU supported, allow to dramatically increase effectiveness of the nuclear research in Ukraine. The peak two-way network traffic intensity between CERN and KIPT has increased fourfold within the last six months
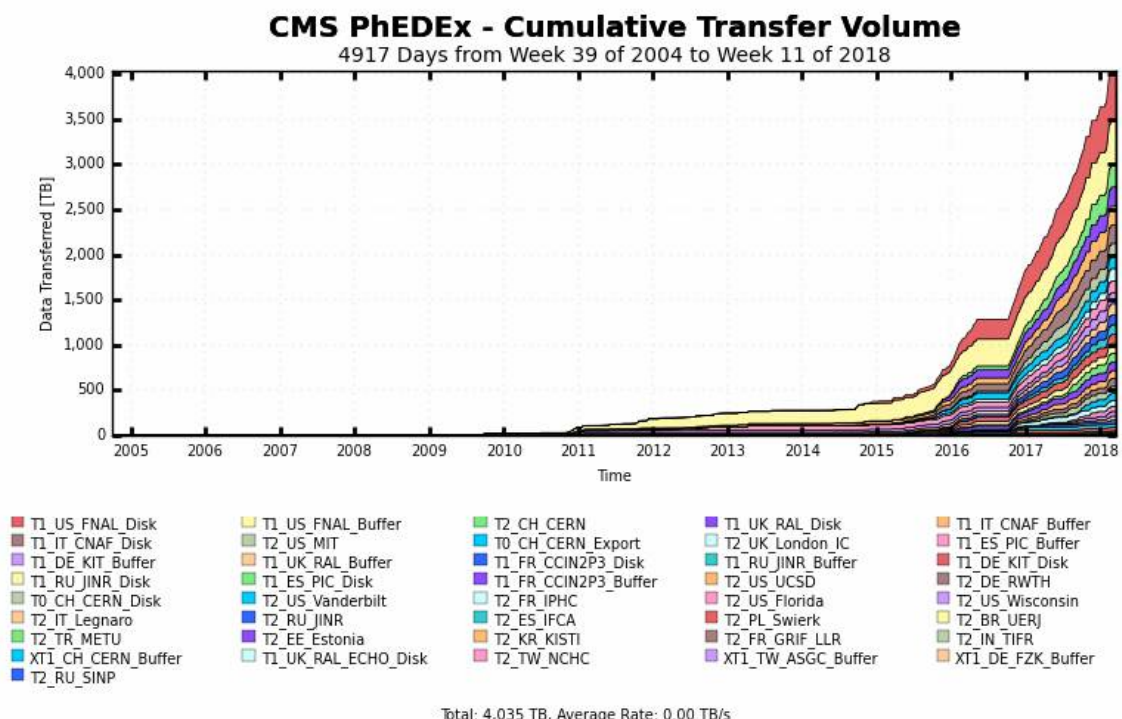
Alexey Kurov sais (supplying the comment by plots presented at the **XVI Conference on High-Energy and Nuclear Physics and Accelerators**, Kharkiv, Ukraine, 20-23 March 2018):

> *"We were able to increase the rate of data exchange with other sites, which are involved in the Worldwide LHC Grid (WLCG) and take part in the distributed processing of data accumulated in the CMS experiment, almost four times. This is a benchmark achievement for us, since the WAN connectivity for WLCG/CMS Tier-2 centres (like ours) should be ~10 Gbps or better, and, now, we have it (or, at least, are close to what is required). After configuration of the new 10 Gbps connection to GÉANT in 2017, the total amount of CMS data transferred for processing to the KIPT has doubled compared to what had been transferred earlier, from ~2000 to ~4000 TB (see Fig.1).*

> *Further, our team provides a high quality performance of the KIPT CMS Tier-2 centre (T2_UA_KIPT) operation. This quality level is determined by percentage of time, when a site is ready (based on some metrics) for data taking and processing, and, in this respect, our site is one of the best CMS Ter-2 centres (see Fig. 2 that displays the CMS Tier-2 site readiness rating for the last two years, 2017 - 2018).*

> *Now, we have known that the present Ukraine – GÉANT link is provided only until the EapConnect project will be finished in 2020. We ask the URAN to prolong the support of this channel further, with (if possible) extending its bandwidth. This is a crucial issue for us."*
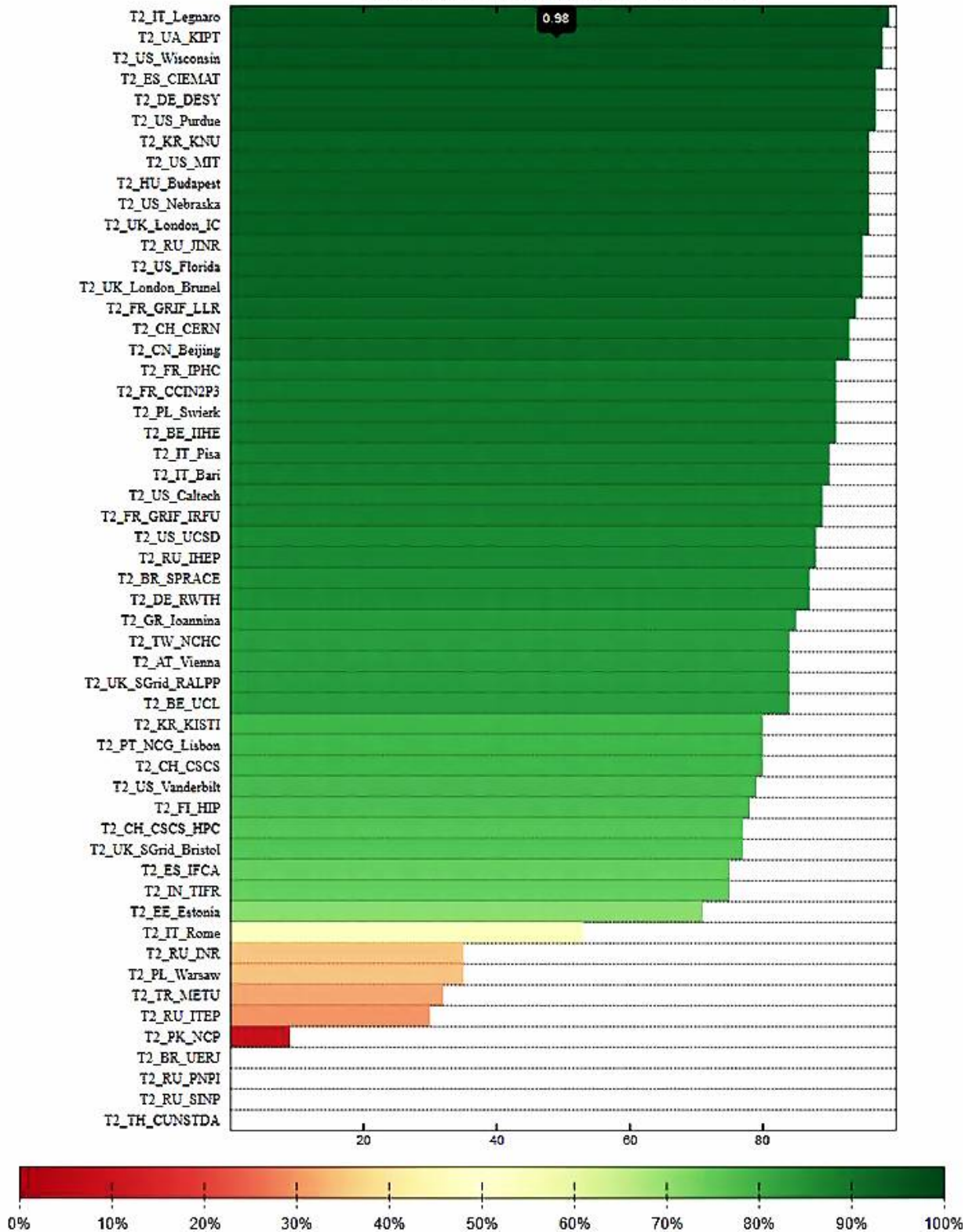
Fig.1

Fig.2

The URAN executive director **Volodymyr Galagan** explains the way to keep this connection in the future:

"Firstly – is to elaborate together with GÉANT the possibility to prolong the project for next period or to establish a new similar one. And other way is to implement in frame of EaPconnect project URAN owned channel to GÈANT with payment only operational cost for the channel which will be significantly less than leased channel and will be able payed by URAN."