Workshop 2 - Hyperconnectivity for European HPC Supercomputers
Feedback from HPC users and providers

22 November 2023, 10:00 - 15:00 CET
Online

Workshop summary report

The 22nd November EuroHyPerCon workshop's main objective was, on one hand, to discuss the hyperconnectivity needs and requirements with both HPC users and providers and, on the other hand, to present and discuss the draft questionnaires, which will be one main tool to gather feedback. There were 91 registrations for the workshop and 83 participants joining. So, the workshop was very well attended and very lively.

Christos Datsikas, EuroHPC JU, provided a comprehensive overview of the JU strategy highlighting aspects such as the JU HPC and Quantum infrastructure, hyperconnectivity, the ongoing federation call and the application support actions. Fotis Karayannis, the EuroHyPerCon coordinator, then detailed the study's objectives, followed by Dennis Hoppe from HLRS, who elaborated on the stakeholder consultation, requirements capture methodology, and instruments employed. Dennis also recapped the inputs from the first workshop held on the 30th of October, which primarily focused on stakeholder identification and initial requirements gathering.

A subsequent session featured a panel discussion on the present and future landscape of HPC connectivity needs, consisting of both HPC users and providers from various scales. The panel's feedback highlighted several key points:

- The current networks interconnecting the EuroHPC and other national HPC systems (i.e. NRENs/GEANT) do not face any issues; still, they need to evolve/upgrade, taking into account big user requirements, such as Destination Earth (DestinE)
- DestinE reported very demanding needs among its data lakes and a set of specific EuroHPC sites for running specific simulations (e.g. for extreme weather events forecast and impact assessment), in the order of n x 1 PB/day.
- Security is a key requirement for several applications, and affects the perceived network performance one way or another. Different challenges and approaches at networking or application levels were discussed. There is a need for solutions that can utilise the full potential/capacity of the network.
- The EuroHPC JU federation call and the related federated access across the EUroHPC sites are relevant to this study. Still, the timeline is not well aligned with the study, but effort will be made to consider related developments and inputs.
- In terms of bottlenecks/issues there have been some cases reported at different levels (network and beyond), which need to be studied further, possibly also via the planned interviews and focus groups.

In the next session, the two questionnaires for users and providers were presented and discussed in dedicated breakout sessions. The feedback received was documented (either directly in the questionnaires or in other forms), and it will be integrated before the questionnaires are published.

Finally, the feedback received was summarised, along with the next steps, including the publication of the questionnaires (before the 11th of December) and a series of focus groups and interviews with key stakeholders. The workshop closed with a set of polls, which showed that the participants were mostly satisfied or very satisfied with the workshop's content, and the same with the draft questionnaires.