Enabling Swedish SMEs and the public sector on EuroHPC JU systems

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The EuroCC National Competence Center Sweden (ENCCS) is a joint initiative between the ten main Swedish research universities and RISE Research Institutes of Sweden established on 1st of September 2020 in correlation with EuroCC EU project. The initiative is funded by the EuroHPC Joint Undertaking (JU), Swedish Research Council (Vetenskapsrådet) and the Swedish Innovation Agency (Vinnova). It is designed to prioritize support based on needs of academic users with large scale allocations, the current industrial usage of HPC and their future HPC and Artificial Intelligence (AI) needs and needs for training and support to enable a wide range of Swedish users to use the new hardware deployed in EuroHPC JU petascale and pre-exascale systems.

Since its establishment ENCCS has been working to create a network with the Swedish public sector entities, Swedish large industries and small and medium enterprises (SMEs) in order to discuss and explore their needs of High Performance Computing (HPC), Artificial Intelligence (AI) and High Performance Data Analytics (HPDA) competences. The RISE partner within ENCCS played an important role towards collaborations with industry and publics sector based on its previous long experience. RISE offers over 100 testbeds and demonstration environments for future-proof technologies, products and services. This is a potential possibility for different sectors to introduce HPC via ENCCS. The results of the 1,5 year work of ENCCS were successful as the first industrial access to the EuroHPC JU petascale system Vega system was by a large industry from Sweden called NorthVolt AB which is researching and producing green batteries. Moreover, two public sector governmental oranisations: the National Library of Sweden (KB) and Sweden's innovation agency Vinnova, has been awarded development type of access to these systems to carry out machine learning project. Vinnova is developing text analysis tool that constitutes an aid for analysis of calls for proposals for funding while KB working on high-quality training data and a suitable deep neural network (NN) model for sentiment analysis of texts and speech-to-text transformation. Except these, ENCCS also enabled six SMEs to carry their research on EuroHPC JU and PRACE systems.

We will detail on the workflows we carry out to attract the Swedish public and private sectors to HPC, their needs and limitations as well as we will detail on several success stories of individual projects running on pre-exascale systems.

REFERENCES

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