CIUK Cluster challenge

DiRAC Day

e-Durham
10th September 2020

COMPUTING INSIGHT UK 2020

DiRAC

Background

- The UKRI e-Infrastructure Roadmap highlighted the essential need for increased numbers of skilled people to support the successful exploitation of HPC and AI in UK science and industry

- CIUK 2020 will feature the inaugural CIUK Student Cluster Challenge as a step towards addressing this need

  - Developing the next generation of HPC experts

  - Encouraging engagement with industry partners in innovation projects

- CIUK and committee recognised the importance of this initiative and were determined to ensure the competition proceeded in the virtual-only format for CIUK 2020.

Challenge structure

- Modelled on the annual International Supercomputing Student Cluster Challenge supported by the HPC-AI Advisory Council, and following its T&Cs

- The 2020 cluster challenge will be virtual-only

- Teams will complete a number of weekly mini-challenges over the weeks leading up to the CIUK conference, starting in October
  - Challenges will increase in difficulty over the course of the programme
  - Focus on hardware and software optimisation on selected key applications within a 3kW power envelope.
  - Teams will be given access to remote systems from participating companies and asked to complete a challenge within a two hour time limit.

- A final challenge will be completed during the CIUK event on 3 December.

- A league table will be updated after each challenge with the winning team announced on Friday 4 December.

- Based on the CIUK competition, a CIUK team will be identified to compete in the International Supercomputing Student Cluster Challenge in Frankfurt in June 2021.

Teams

- Each student team will comprise six students with up to two advisors.

- Both undergraduate and graduate students are eligible to participate

- Team registration closes on 30 September:

  - go to **www.stfc.ac.uk/ciuk** and follow the *Cluster Challenge* link.

- The programme of challenges will be issued in early October.

Vendors

- Great opportunity to be associated with a UK cluster challenge national league and sponsor the talent of tomorrow.

- Requirements:

1. Remote access to one of your systems for 6-8 teams for 2 hours each.

- System power should be capped at 3kW

- Systems need to be available sometime between mid-October and 3 December.

- Once vendor list is finalised, a programme will be created confirming which week each company will be required

2. Full instructions for accessing your system

3. At least one person available as a mentor to help with any issues teams may have accessing the systems or running jobs.

- To sign up as a vendor, e-mail Damian Jones (CIUK@stfc.ac.uk)

- Suggestions for challenges are also being accepted - e-mail to Damian

Vendor Practicalities

Access

- At the start of your scheduled week instructions will be circulated to the competing teams and on your scheduled day the teams will log-in to complete their challenge.

- Each challenge must be completed over a 2 hour period

  - Access can be either a single 2 hour block for all teams, or separate 2-hour slots with each team allocated a specific time to log-on.

Publicity

- a sustained social media campaign around the Cluster Challenge will be run during the weeks leading up to the Conference

- CIUK organisers will work with vendors to maximise their exposure during their nominated challenge week.

Summary

- Team registration:

- www.stfc.ac.uk/ciuk and follow the Cluster Challenge link.

- Deadline 30th Sept

Vendor sign-up: e-mail Damian Jones (CIUK@stfc.ac.uk)

For more information www.stfc.ac.uk/ciuk or e-mail CIUK@stfc.ac.uk)