

SUPERCOMPUTING WORK

1. TOPIC

Analyze, in detail, one of the top twenty Supercomputers listed in the Top500: <https://www.top500.org/lists/top500/2022/11/> This analysis should include an accurate description of the technology used by the machine, focused into their computational architecture, network, memory and management of input/output, their performance and a discussion about the main contributions of the described machine in relation to the others.

Let me remember that you can choose between doing this activity or the comparison of your HPC project solution in relation to the strategies followed by your classmates. Whatever was your choice, you must do an oral presentation of your chosen work at the end of the semester.

2. CONTENTS

The work will be carried out according to the following guidelines:

- **Proposal:** Each student or group of students must send an email to the teacher (jordi.onrubia@udl.cat) before **1th of June** with the name of your proposal. Once, the teacher has accepted the proposal, you can begin to develop your work. You can do this activity with the same group than previous activities.
- **Report:** This report should include an analysis of the most characteristic features of each machine: interconnection network, memory type, processor segmentation, processors vs GPUs, methods to save energy consumption, file system, According to this, you need to use your knowledge in the area of computer architecture, to justify and analyze the chosen supercomputer **from a critical point of view. Be careful not to fall into the commercial tricks.**
- **Structure of the report:** In general, all the works should have at least the following items:
 - I.- Justification of the chosen supercomputer.
 - II.- Analysis and description of the chosen supercomputer.
 - III.- Discussion and comparison with other supercomputers: Remember to explain main contributions of this supercomputer.
 - IV.- Conclusions.
 - V.-Bibliography.
- **Length:** 10 pages at maximum.
- **Presentation:** The report must be **uploaded from the Sakai Campus before of 18th June**. All the students must present this work in an exhibition open to everyone. The **presentation** will go on 10 minutes and 5 for discussion. The expected date for presentation is the **26th of June**.