TECHNICAL SHEET

CALL FOR ADVANCED COMPUTER PROJECTS (2nd edition)

Ref: FCT/CPCA/2021/01

Under the terms of the Regulations for Advanced Computing Projects, the Call Notice for Advanced Computing Projects (CPCA) is presented together with a technical sheet that includes the technical configuration of the Hardware and Software available.

Preliminary note: some information presented in the table relates to the characteristics of each Advanced Computing Platform in its whole, although only part of the capacity will be made available in this call.

Computational model: High Performance Computing (HPC)

- • **Hardware *(table being updated)***

Platform & Centre	Bob MACC	Navigator/Navigator+ LCA-UC	Oblivion HPC-EU	Cirrus-A INCD
Peak performance	1 PFLOP	86 TFLOPS	239 TFLOPS	---
Full colours	12800	3936 + 1280	2492	---
Total nodes	800	196	68	---
CPU type (compute nodes)	2x Intel Xeon *Sandy Bridge* (16-core) @2.7GHz	2 x Intel Xeon *E5-2697v2* (12-core) @ 2.70 GHz, 2x Intel Xeon *Gold 6148* (20-core) @ 2.40 GHz, 2x Intel Xeon Gold *6154* (36-core) @ 3 GHz	2x Intel Xeon *Gold 6154* (36-core) @ 3GHz	2x AMD EPYC 7501 (64-core) @2.6GHz & others *Consult remaining CPU in URL
Memory (GB RAM/core)	2	4,8 - 8	5.33	---
Disk storage	1.5 PB	220 TB + 1,27 PB	576 TB	---
Storage Limit	Variable	Variable	Max: 100TB per project	Variable
GPU (y/n)	Yes(4)	Yes (8)	Vision (8)	Yes (6)
GPU type	Nvidia Tesla T4	NVIDIA Tesla V100-PCIe 16GB	-----	Nvidia Tesla T4
Infiniband	FDR 56 Gb/s	FDR 2:1 + EDR 100 Gb/s	EDR HCA	FDR 56 Gb/s

		non-blocking		
File system	LUSTRE	LUSTRE	BeeGFS	LUSTRE
Job Queue Manager	SLURM	SLURM	SLURM	SLURM
Jobs prioritization	fairshare - waiting time in queues - job size			
Maximum available capacity at 12 months	5 million CPU core.hours*	20 million CPU core.hours	15 million CPU core.hours	4 million CPU core.hours and 4.5 million vCPU.hours
URL for more details	https://docs.macc.fccn.pt/	https://www.uc.pt/lca/ClusterResources/Navigator/description	https://www.oblivion.uevora.pt/	Wiki INCD

*Indicated capacity available between September and December 2021, for accesses A0 and A1. Cluster Bob with limited capacity from January 2022.

- **GPU (*Graphic Processing Unit)***

	Bob MACC	**Navigator LCA-UC**	**Vision HPC-EU**	**Cirrus-A INCD**
Model	Nvidia Tesla T4	Nvidia Tesla V100	Nvidia Tesla A100	Nvidia Tesla T4
Number of plates available	4	8	8	6
Maximum available capacity at 12 months	35 040 GPU.hours	70 080 GPU.hours	**	52 560 GPU.hours

**Maximum capacity of 70 080 GPU.hours to be available from Dec 2021/Jan 2022

- **Software**

Bob MACC	**Navigator LCA-UC**	**Oblivion HPC-EU**	**Cirrus-A INCD**
https://docs.macc.fccn.pt/en/macc/environment-modules	https://www.uc.pt/lca/ClusterResources/Navigator/programs	https://www.oblivion.uevora.pt/user-info/software/	https://wiki.incd.pt/books/software/page/software-list

- **Contacts for further information**

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Computing model: Cloud Computing

- See details at https://wiki.incd.pt/shelves/cloud-user-documentation

Access policies and other useful documents

Access Policies or Acceptable Use Policies (AUP)

MACC: https://docs.macc.fccn.pt/

INCD: https://www.incd.pt/?p=acceptable-use-policy & https://wiki.incd.pt/

LCA-UC and HPC-UE: Under development

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