WP2.2 news

Piergiulio Lenzi, Alberto Annovi
21st Novembre 2023

Tool for resource requests

The ICSC Resource Allocation Committee (RAC) is in office.

They have prepared a tool to submit resource requests at: https://pica.cineca.it/icsc/richiesta-risorse-e-servizi/

⇨   Requires "Loginmiur" credentials, or PICA credentials (form to request them).

Flagship PI are invited to look into it and see if they find it usable to submit their requests

A few caveats:

⇨   There is currently no way to specify a temporal development of the requests.
⇨   More instructions will come in the coming days.

Requests for Ultrafast simulation and Quasi interactive analysis drafted and being submitted.

Request for GPU in preparation. FPGA and ARM resource NOT ready for requests yet.

Resources one can (or will be able to) request

- Leonardo:
  - **Booster** module **already available:**
    - 3456 nodes, each equipped with:
      - 1 x CPU Intel Xeon 8358 32 cores, 2,6 GHz;
      - 512 GB RAM DDR4 3200 MHz;
      - 4 x NVidia custom Ampere GPU 64GB HBM2;
      - 2 x NVidia HDR 2×100 Gb/s cards;
    - 10% of the resources available for Italy, i.e.:
      - **up to 470'000 GPU hours per month**;
      - **up to 1 PB Work and 1 PB archive** (no quota on scratch);
  - **DC-GP** module **TBD**
    - **Available by the end of the year;**

INFN Resources Available by Now

Resources available for ICSC on the current INFNCLOUD infrastructure
availability of the hardware that is being procured via tenders on proje

- Compute:
  - 1500 vCPU; (HyperThread ON)
  - 200 TB net disk space;
  - a marginal number of GPUs (NVIDIA V100 and A100);

INFN: TERABIT HPC Bubbles

tender in the evaluation phase – not yet decided which fraction of the Terabit resources will be made ava

CPU Nodes		Min 112 cores (max 192) RAM > 8GB/core DDR5 IB NDR 400G 20TBL + OS disks
GPU Nodes		As CPU node + 4x NVIDIA H100 SXM5 - min 80GB and HBM2
FPGA Nodes		Min 32core RAM > 512GB DDR4 o DDR5 IB NDR 440G 4 x XILINX U55C o 4 x TerasicP0701
Storage Nodes (CEPH Bricks)		Min 48cores RAM >512GB DDR4 o DDR5 >360 TBL HDD + 12TBL SSD
Extras		Switch IB, Switch ETH Cables IB, Cables ETH Transceivers

INFN Resources made available during H1 2024 – procured via ICSC tenders

Compute:
- 40k core on the distributed infrastructure

Storage:
- 14PB DISK on the distributed infrastructure
- 6PB DISK on the CNAF Tier1 Datacenter
- tape library access for long term archival on the CNAF Tier1 Datacenter

Part of the resources will be accessible via Cloud interfaces, part via Grid systems

Slide cou
Daniele
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Meeting Spoke 2

- 18-20 December
  - 14:30 of the 18 → 12:00 of the 20
- Bologna + Zoom
- Agenda:
  https://agenda.infn.it/event/38374/
- Call for abstracts for the lightning talks
- Full details in Nov 10th email

Spoke2 Annual meeting

ICSC SPOKE 2

18–20 Dec 2023
CINECA
Europe/Rome timezone

Enter your search term

Overview
Call for Abstracts
Timetable
Contribution List
Book of Abstracts
Registration
Come arrivare & dove alloggiare
Bulletins

Timetable

| Mon 18/12 | Tue 19/12 | Wed 20/12 | All days |

Print | PDF | Full screen | Detailed view | Filter

14:00

Introduzione

CINECA   14:15 - 15:15

15:00

Stato dello Spoke 2

CINECA   15:15 - 16:15

16:00

Tea Break

CINECA   16:15 - 16:45

Stato dello Spoke 2

17:00

CINECA   16:45 - 17:45

Tavola Rotonda

18:00

Agenda for today

Bi-weekly WP2 meeting

📅 Tuesday 21 Nov 2023, 14:00 → 16:10 Europe/Rome

👤 Alberto Annovi (Istituto Nazionale di Fisica Nucleare), Piergiulio Lenzi (Istituto Nazionale di Fisica Nucleare)

Description   Zoom link: https://cern.zoom.us/j/61596304322?pwd=NVNxMGJQZWp0LzdZUzNUWk1rbkVGdz09

14:00 → 14:10   **News**   🕐 10m
   Speakers: Alberto Annovi (Istituto Nazionale di Fisica Nucleare), Piergiulio Lenzi (Istituto Nazionale di Fisica Nucleare)

14:10 → 15:00   **Development of ultra-fast algorithms running of FPGAs**
   Conveners: Bernardino Spisso (Istituto Nazionale di Fisica Nucleare), Simone Gennai (Istituto Nazionale di Fisica Nucleare)

   14:10   **News**   🕐 20m
      Speakers: Bernardino Spisso (Istituto Nazionale di Fisica Nucleare), Simone Gennai (Istituto Nazionale di Fisica Nucleare)

   14:35   **Report from Padova**   🕐 20m
      Speaker: Jacopo Pazzini (Istituto Nazionale di Fisica Nucleare)

15:10 → 16:00   **Physics validation of reconstruction code on ARM**
   Convener: Francesco Noferini (Istituto Nazionale di Fisica Nucleare)

   15:10   **News**   🕐 20m
      Speaker: Francesco Noferini (Istituto Nazionale di Fisica Nucleare)

Upcoming conferences

⇨ 2023 November LHCC meeting, student poster session.

⇨ 29 January 2024 to 2 February 2024, CERN, 6th Inter-experiment Machine Learning Workshop https://indico.cern.ch/event/1297159/

⇨ 4–7 Mar 2024, Clermont-Ferrand, AISSAI Anomaly Detection Workshop, https://indico.in2p3.fr/event/30272/

⇨ 30 April - 3 May 2024, Amsterdam, European AI for Fundamental Physics Conference https://www.eucaif.org/

⇨ 3–8 Jun 2024, Boston, USA, 12th Edition of the Large Hadron Collider Physics Conference https://indico.cern.ch/event/1253590/

⇨ **Please consider them for abstract submissions!**

Reporting

New procedure agreed with the referees:

For each project milestone we will need to produce a report for each flagship UC.

Milestones are:

⇨   Month 18 (Feb '24)   → Milestone 7

⇨   Month 22 (June '24) → Milestone 8

⇨   Month 26 (Oct '24)   → Milestone 9

⇨   Month 36 (Aug '25) → Milestone 10

Every two months an interim short report is needed as well for every flagship UC

Tracking WP2.2 activities

⇨ Tracking of WP2.2 will happen in <u>this document</u>. The document can be edited freely so you can update information. (Just the summary sheet is protected)

⇨ It contains also a list of conference opportunities (see next slide)

  ✓ **You are welcome to add in new conferences.**

	A	B	C	D	E	F	G
1	**Conference**	**Dates**	**Venue**	**Website**	comments		
2	IML2024	29/1/2024 - 2/2/2024	CERN	https://indico.cern.ch/eve	Call for abstracts closes on Nov 15th 2023		
3	AISSAI2024	4-7/3 2024	Clermont-Ferrand	https://indico.in2p3.fr/event/30272/			
4	EuCAIFCon	30/4-3/5/2025	Amsterdam	https://www.eucaif.org/			
5	LHCP2024	3-7/6/2024	Boston	https://indico.cern.ch/event/1253590/			
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+ ≡ **Conference Opportunities** ▾ Conferences ▾ Publications ▾ 🔒 Summary ▾

Backup

Upcoming events

⇨ CERN launches its Open Source Program Office (OSPO) on <u>Nov 28th</u> and <u>29th</u>.

Flagship use cases

Flagship documents available at these links:

➪ **Quasi interactive analysis of big data with high throughput**

✓ Tommaso Diotalevi (UniBo), Francesco Gravili (UniSalento)

➪ **Advanced ML: flash simulation and other bleeding edge applications**

✓ Lucio Anderlini (INFN Fi)

➪ **Development of ultra-fast algorithms running of FPGAs**

✓ Bernardino Spisso (UniNa), Simone Gennai (INFN MiB)

➪ **Porting of algorithms to GPUs**

✓ Adriano Di Florio (Poliba)

➪ **Physics validation of reconstruction code on ARM**

✓ Francesco Noferini (INFN Bo)

Thanks to the work of the PIs over the summer and to all of your contributions

Flagship UC mailing lists

⇨ Quasi interactive analysis of big data with high throughput

✓ [cn1-spoke2-wp2-analysisfacility], subscribe

⇨ Advanced ML: flash simulation and other bleeding edge applications

✓ [cn1-spoke2-wp2-flashsim], subscribe

⇨ Development of ultrafast algorithms running on FPGAs

✓ [cn1-spoke2-wp2-fpga], subscribe

Please subscribe to the list that is relevant for the work you are doing in ICSC.

ICSC spoke 2 github organization

Available at: https://github.com/ICSC-Spoke2-repo

People are encouraged to add repositories with software developed in the context of ICSC - spoke 2. Send us a request for the creation of repos/moving of repos

Important: if you are not the owner of a repository (e.g. because it is the repository of an experiment and it contains code other than the one developed in the context of ICSC), we'd still be interested in forking the repo in this organization

Having spoke 2 code in this organization is important for reporting/auditing from the referees