Stato proposal presentati

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Horizon Europe:

- INFRA-2024-EOSC-01-05:
  - **EOSC Data Commons**
- INFRA-2024-TECH-01-01:
  - **RI-SCALE (era SCALE-AI)**
  - **M2TECH**
- INFRA-2024-TECH-01-04:
  - **ARTEMIS**
- INFRA-2023-SERV-01-02:
  - **ACME**
- INFRA-2023-EOSC-01-01:
  - **OSCARs**: cascading grants

MUR - Cooperazione Italia-Serbia:

- **ARV-HEP - Low Power Platforms for Scientific Computing**

Tabella in cui sono stati raccolti i dati dei progetti per la discussione in C3SN e la richiesta di autorizzazione alla GE:

https://l.infn.it/schede-progetti

EOSC DATA Commons (EOSC-01-05)

- **Nome progetto:** **EOSC Data Commons**
- **Goal:**
  - Enable AI-based data discovery and access over a federation of structured and unstructured data sources
  - Facilitate data usage, exploitation and reproducibility in EOSC pairing data and software
  - Accelerate data analysis with automated deployment and orchestration of data and software
  - Increase Data FAIRness in EOSC integrating FAIR and data quality assessment tools in the research lifecycle
  - Integrate services for the research lifecycle with capabilities delivered by the EOSC Nodes
- **Referente INFN: Daniele Spiga (PG)**
- **Sedi coinvolte:** Perugia, Bari
- **FTE staff necessari:** 0.5 FTE a PG; 0.5 BA (Si prevede un limitato overlap con i progetti InterTwin e AI4EOSC, quindi l'effort di personale staff è sotto controllo)
- **budget totale:** 7Meuro
- **budget INFN:** NON ancora definito probabilmente 36 PM x 6k + OH (circa 270k)
- **durata:** 3 anni
- **personale TD:** 0
- **Capofila:** Diego Scardaci ed Enol Fernandez (EGI)
- **partnership:** ETH Zurich, UPV,SIB,SRCE,CERN,UU,UH-Luomus,UST/AGH (Cyfronet),CESNET,FZJ,INFN,COAR,UFR,CNRS/CC-IN2P3,SWITCH,UZH,CIRMMP

RI-SCALE (TECH-01-01)

- **Nome progetto: RI-SCALE: Unlocking RI potential with Scalable AI and Data**
- **Goal:**
  - Empowering RIs to scale out their compute intensive data analysis activities to national cloud/HPC centres
- **Referenti INFN: Daniele Spiga (PG), Francesco Giacomini (CNAF)**
- **Sedi coinvolte:** CNAF, PG
- **FTE staff necessari:** 24 PM (per AAI) + 10 PM (per Offloading)
- **budget totale:** 10.5 M€
- **budget INFN:** 268 K€
- **durata:** 3 anni
- **personale TD:** 0
- **Capofila:** Malgorzata Krakovian, Gergely Sipos, Andrea Manzi (EGI)
- **partnership:** EGI, CERN, EMBL,Fondazione CMCC, UNITN, BBMRI-ERIC, MU, MMCI, EISCAT, MUG, KTH, Euro-BioImaging, Lulea, GRNET, TUBITAK, TUWien, Juelich, UPV, DKRZ, Archimede Solutions SARL, Hypermeteo

M2TECH (TECH-01-01)

- **Nome** progetto: **M2TECH**
- Goal: Sviluppo di nuove tecnologie che possano essere condivise e impiegate in più esperimenti di astronomia multi-messaggera come KM3NeT, ET, CTA
- **Referenti INFN: Tommaso Chiarusi (BO)** - anche WP5 Leader
- **Sedi coinvolte:** Bologna, Torino, Perugia, CNAF (per il calcolo), più Roma Tor Vergata, Padova, Napoli, LNS, Genova (TBC)
- **FTE staff necessari:** 8 FTE di cui 0.1 al cnaf per il calcolo
- **budget totale:** 10 MEUR
- **budget INFN:** ~1.8MEUR (Gross)
- **durata:** 4 anni
- **personale TD:** 18 FTE, di cui 5.5 per la parte calcolo (circa ⅓ per ogni sede)
- **Capofila:** CNRS
- **partnership:** Affiliated Entities (Univ. Bologna - TBC); altre Università rappresentate nel proposal sotto l'egida INFN (ma solo con contributi in-kind): Padova, Roma La Sapienza, Camerino

ARTEMIS (TECH-01-04)

- **Nome progetto:** ARTEMIS - Applying Reactive Twins to Enhance the Monument Information Systems
- **Goal:** Cultural Heritage research and innovation, conservation, safeguard and valorisation of heritage assets using digital technologies.
- **Referente INFN: Alessandro Costantini (CNAF)**
- **Sedi coinvolte:** Firenze, CNAF, CHNet
- **FTE staff necessari:** 15PM (CNAF), 20PM (Firenze)
- **budget totale:** 11.6 M euro
- **budget INFN:** euro 322.5 K€
- **durata:** 36 mesi
- **personale TD:** 4PM CNAF, il resto non rendicontabile
- **Capofila:** PIN (Firenze)
- **partnership:** PIN, ARIADNE, CNR-INO, INGV, UNIBO, UNIFI, UNIPI, NUMENA, KIK-IRPA, New York Nat. Gallery, Getty, OPD, Venaria Reale, ICCROM, Inception, Europeana

ACME (ripescato dalla scorsa call INFRA-2023-SERV-01-02)

- **Nome progetto: ACME**
- **Goal:** Astrophysics Center for Multimessenger studies in Europe
- **Referenti INFN: Giancarlo Cella (PI)**
- **Sedi coinvolte:** Pisa, Firenze, Perugia, Roma2, Torino (Potrebbe servire qualche cambiamento collegato agli aggiustamenti degli FTE)
- **FTE staff necessari:** 1.45 FTE (Questo andrà ridiscusso, probabilmente salirà a 2.05 FTE)
- **budget totale:** 14499999.2
- **budget INFN:** 738143.75
- **durata:** 48 mesi
- **personale TD:** da ridefinire (fondi per 40 PM su attività di calcolo e 48 PM su altro, da capire come gestire in termini di posizioni)
- **Capofila:** CNRS
- **partnership:** 41 partner

OSCARs (INFRA-2023-EOSC-01-01)

Our mission

OSCARS aims to further consolidate past achievements of the Science Clusters into lasting interdisciplinary FAIR data services and working practices.

Through a cascading grant mechanism, a broad range of research communities will be involved for the development of new, innovative Open Science projects, that together will drive the uptake of FAIR-data-intensive research throughout the European Research Area (ERA).

OSCARS will thus give an opportunity for inter-cluster cross-adoption and co-development of services that will be part of the EOSC Exchange portfolio.

Through OSCARS community-based Competence Centres will be established and operated, virtual research environments will be deployed fostering the alignment of practices in scientific data analysis. Both objectives will contribute to consolidate the role of the clusters as thematic "EOSC Science Cluster Nodes.

The five Science Clusters of research infrastructures

ENVRI Community | LIFE SCIENCE RI | ESCAPE European Science Cluster of Astronomy & Particle physics ESFR research Infrastructures | panosc photon and neutron open science cloud | SSH OpenCluster Social Sciences & Humanities Resources

Open Call for Open Science Projects

Launch event

15 March 2024
Online

Funded by the European Union

- Opens: ~ **March 2024 / Nov. 2024**
- Submission within **60 days**
- Project start: **Sept-Dec. 2024 / Aug-Oct. 2025**
- Budget: **100 - 250 k€** / project
- Duration: **1 - 2 years**

GOAL:

<u>Build on the science cluster approach to ensure the uptake of EOSC</u>, i.e., consolidate FAIR services of the five Science Clusters and, more broadly, perform excellent science and pursue societal benefits by leveraging an Open Research approach.

TARGET USER COMMUNITIES:

Science Clusters and wider community (RIs, Universities, Institutes, either consortia, or individual researchers)

Evaluation criteria for the independent expert panel

- Project description: clear objectives, towards **FAIRness** and/or **openness**
- Scientific impacts: excellent science per **domain RI, multiple RIs / cross-cluster**
- Digital resources: "data", **SCL and EOSC** services / new service
- Implementation: **realistic** within budget

ALL DOMAINS

	Astrophysics, Cosmology, Particle or Nuclear Physics	Social Science and Humanities	Photon/neutron sources-based experimental research	Life sciences	Earth and environmental sciences	Other (specify)
Open Science Project						
Open Science Service						
Industry cooperation						
Citizen science						
Main RI concerned						
Cross-domain/ Cross-RI						
Other (specify)						

The calls are open to proposals responding to Open Science / Data FAIRNESS challenge(s) in all domains (as shown in the table)
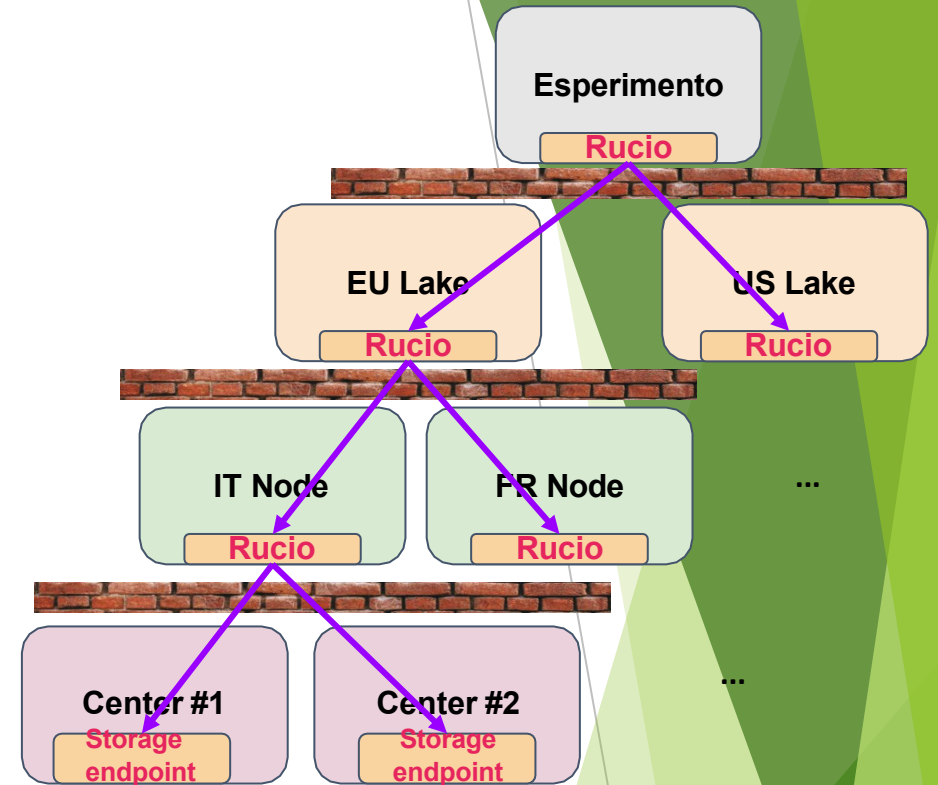
Proposal INFN-CERN

Idea progettuale: realizzare un testbed di un RUCIO gerarchico, con caratteristiche di delegation e di hiding dell'infrastruttura fine

- Budget richiesto 250 k€

- compiti: cern: un FTE per 18-24 mesi per la parte di modifiche a RUCIO (~180 kEur); INFN: 1 FET per 18-24 mesi (~70 kEur) per test di integrazione, deployment, funzionalita'

- personale: 18-24 mesi di AdR Senior (o quello che esisterà)

- persone coinvolte per ora: INFN (Boccali, Spiga, Ciangottini), CERN (Barisitis, Campana)

1. Quale sistema di gestione del (dei) lake? A momento candidato migliore e' **Rucio** (gia' accettato per LHC, SKA, Dune, ….). Ci immaginiamo fino a 3 Rucio in cascata per delimitare le responsabilità

2. Rucio deve implementare la QoS a tutti i livelli, sempre in modo compartimentato: se la richiesta e' "mantieni 2 copie del dato", il sistema deve reagire a problemi in modo automatico

3. l'istanziazione delle caches e' un aspetto interessante: devono essere vicine ai siti, domain / protocol specific, o non domain specific a livello infrastrutturale, per esempio nei POP?

ARV-HEP (MUR)

- **Nome progetto: ARV-HEP - Low Power Platforms for Scientific Computing**
- **Goal:** High Performance Computing (HPC) and Big Data, HPC integration for scientific codes, Low power computing (ARM, Risc-V).
- **Referente INFN: Andrea Chierici (CNAF)**
- **Sedi coinvolte:** CNAF
- **FTE staff necessari:** 12PM (CNAF)
- **budget totale:** 450 kE
- **budget INFN:** 210 kE (finanziamento) + 90 kE (in-kind in personale da INFN)
- **durata:** 36M
- **personale TD:** 24PM CNAF
- **Capofila:** INFN
- **partnership:** INFN-CNAF, Vinca Institute / U. Belgrade