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WP5 report

Dario Gasparrini (INFN Tor Vergata)

Spoke 3 II Technical Workshop, Bologna Dec 17 -19, 2024



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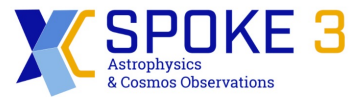
Scientific Rationale

- **Scope: Managing, maintaining and deploying an integrated environment providing the tools for the efficient development of the work described in the other WPs**
 - **T5.1 Collaborative software development, management and continuous integration platform**
 - **T5.2 Design, implementation and validation of an interoperable service architecture**
 - **T5.3 ML and Visualization enabling services deployment and HPC/Cloud integration**

Accomplished Work from last technical meeting

Task 5.1

The Website is up and running, we have a new person, Enrica Maria Oliveri that will help in filling the contents of the website



Home Obiettivi Partecipanti Attività News Repository Contatti



SPOKE 3 IT ASTROPHYSICS & COSMOS OBSERVATIONS

L'high performance computing (HPC) e la gestione dei big data sono strumenti importanti per modellare i complessi sistemi dinamici studiati in astronomia e cosmologia. Il loro uso è fondamentale per le attività di astrofisica e fisica astroparticellare, dalla riduzione e analisi di dati astronomici fino alla loro interpretazione e alla costruzione di modelli teorici e predittivi. La nuova generazione di telescopi e strumenti per l'osservazione spaziale, per esempio lo Square Kilometer Array Observatory (SKAO), il Cherenkov Telescope Array (CTA), i satelliti Euclid e WFIRST, l'esperimento su pallone LSPE, i satelliti LiteBIRD, DAMPE, Fermi e HERD, il Pulsar Timing Array, l'interferometro Einstein Telescope, produrrà in modo esponenziale una quantità di dati maggiore dei loro predecessori e avrà necessità di nuove risorse per il processamento, l'analisi e l'archiviazione di questi dati.

Lo scopo dello Spoke 3 è lo sviluppo di applicativi e software innovativi in grado di sfruttare a pieno le tecnologie all'avanguardia di HPC e soluzioni di archiviazione di big data, per raggiungere obiettivi

NEWS RECENTI

Secondo workshop tecnico – 17-18 Dicembre 2024

3 Dic 2024



Il secondo workshop tecnico generale dello Spoke 3 ASTROFISICA E OSSERVAZIONI COSMOS è dedicato alla presentazione dell'attività tecnica dei diversi partner. Il workshop sarà ospitato dall'Area di Ricerca di Bologna e organizzato con il supporto di INAF-IRA e INAF-OAS. Più dettagli e agenda delle giornate qui

LEGGI TUTTE

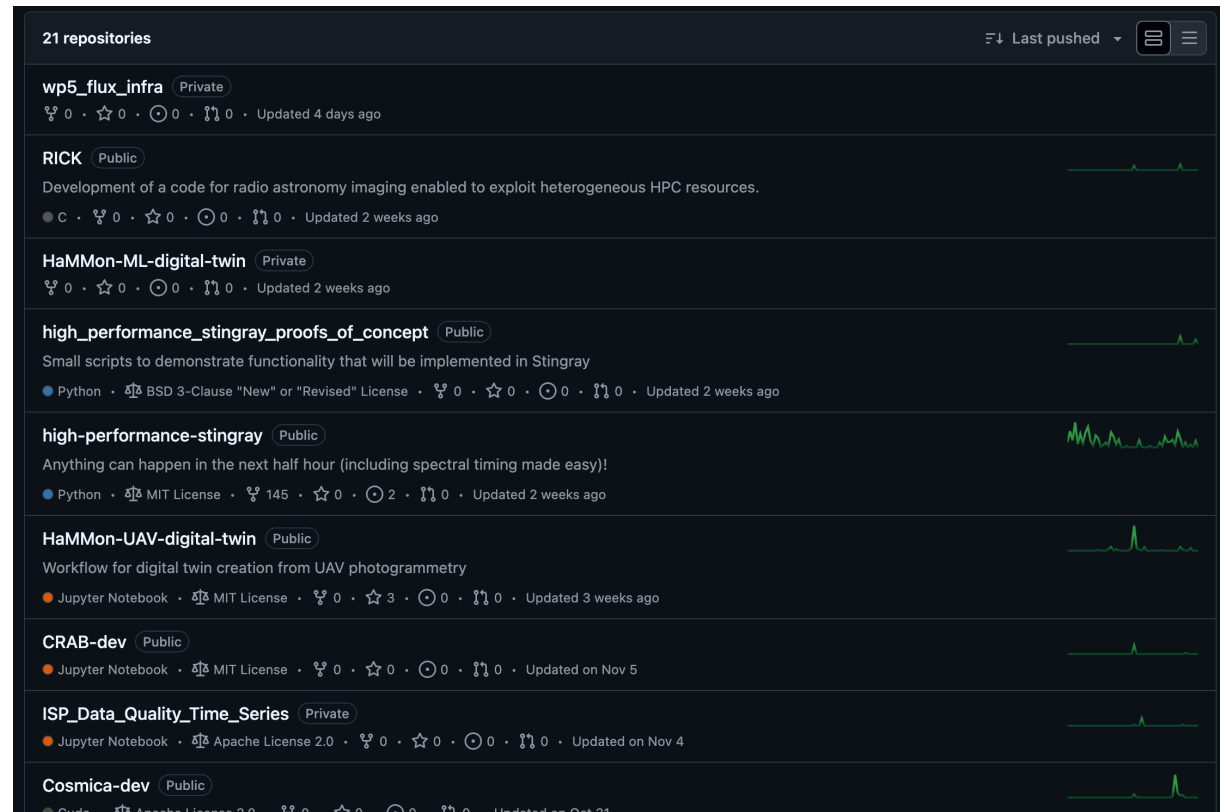
Accomplished Work from last technical meeting

Task 5.1

Also Spoke3 GitHub (<https://github.com/ICSC-Spoke3>) of is now filled with many people and repositories (21 repos up to know)

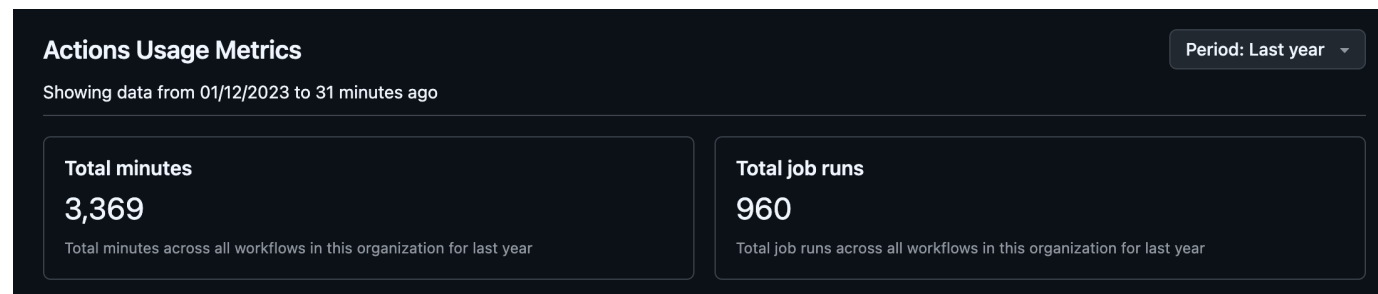
Some groups use it constantly, some others are quieter.

Feel free to send me a request and I will send you the invitation



Accomplished Work from last technical meeting

Task 5.1



**It seems that we finish the free quota for the LFS (Large File Storage).
The initial idea of the spoke repository was just a repository of the software.
It is good anyway to use it for run your own workflow.**

Please let us know if you need some other features



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Accomplished Work from last technical meeting

Collection of publications

For the scientific report, we collected manually the PDF of the publications that make a use of the resources of the Spoke

For the next time we are preparing an automated way to retrieve the papers and probably we need a standard format (it will be circulated in the next days) for the publication list.

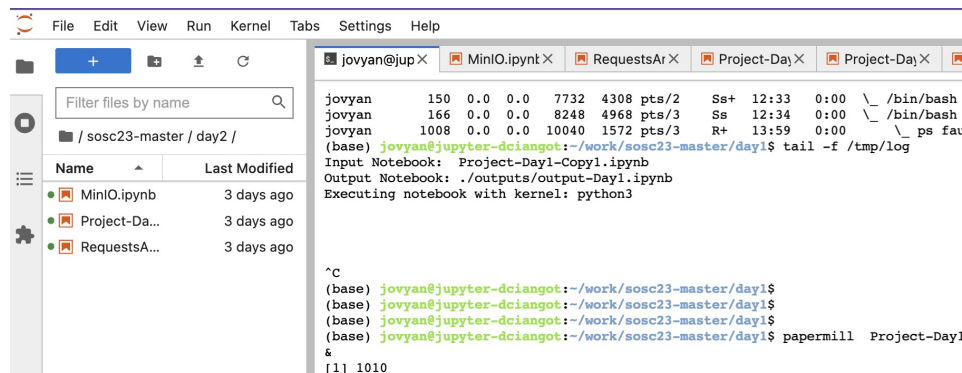
Please remember to add the acknowledgements paragraph (it is a big help for us):

This paper is supported by the Fondazione ICSC, Spoke 3 Astrophysics and Cosmos Observations. National Recovery and Resilience Plan (Piano Nazionale di Ripresa e Resilienza, PNRR) Project ID CN_00000013 "Italian Research Center on High-Performance Computing, Big Data and Quantum Computing" funded by MUR Missione 4 Componente 2 Investimento 1.4: Potenziamento strutture di ricerca e creazione di "campioni nazionali di R&S (M4C2-19)" - Next Generation EU (NGEU)

Accomplished Work from last technical meeting

Enhance and build on top of INFN DataCloud solution: an HUB providing on-demand interactive notebook experience on desired resource flavours. Meaning...

- Login through a federated AAI system
- Spawn analysis sessions/notebooks on specialised hardware nodes (on an HPC for instance)



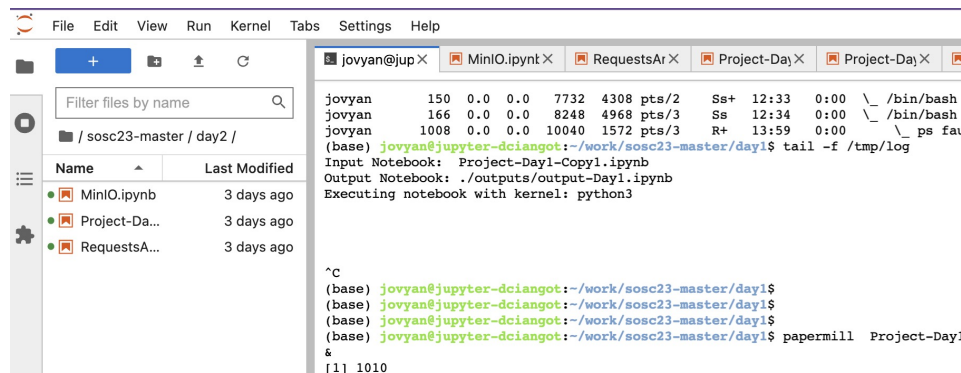
```
File Edit View Run Kernel Tabs Settings Help
+
Filter files by name
/sosc23-master / day2 /
Name Last Modified
MiniO.ipynb 3 days ago
Project-Da... 3 days ago
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jovyan 150 0.0 0.0 7732 4308 pts/2 Ss+ 12:33 0:00 \_ /bin/bash
jovyan 166 0.0 0.0 8248 4968 pts/3 Ss 12:34 0:00 \_ /bin/bash
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(base) jovyan@jupyter-dciangot:~/work/sosc23-master/day1$ tail -f /tmp/log
Input Notebook: Project-Day1-Copy1.ipynb
Output Notebook: ./outputs/output-Day1.ipynb
Executing notebook with kernel: python3
^C
(base) jovyan@jupyter-dciangot:~/work/sosc23-master/day1$
(base) jovyan@jupyter-dciangot:~/work/sosc23-master/day1$
(base) jovyan@jupyter-dciangot:~/work/sosc23-master/day1$
(base) jovyan@jupyter-dciangot:~/work/sosc23-master/day1$ papermill Project-Day1
&
[1] 1010
```



Accomplished Work from last technical meeting

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```
File Edit View Run Kernel Tabs Settings Help
+
Filter files by name
/sosc23-master / day2 /
Name Last Modified
MiniO.ipynb 3 days ago
Project-Da... 3 days ago
RequestsA... 3 days ago
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Thank you!