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Centro Nazionale di Ricerca in HPC,  
Big Data and Quantum Computing

# *IDLImporter and INAF use cases*

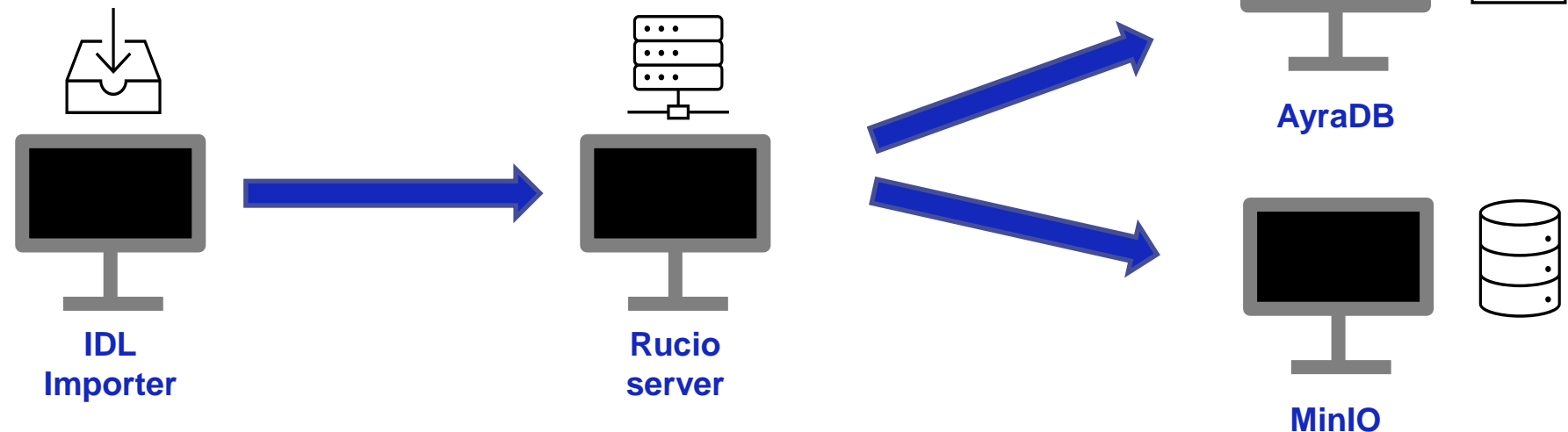
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Spoke 3 III Technical Workshop, Perugia May 26-29, 2025

## IDL INAF Infrastructure

- The final infrastructure has been deployed and it is mostly currently available;
- The importer software will be running on a new machine deployed on the ICSC cloud, shared with WP4, able to handle even massive datasets;
- A new Rucio server has been deployed to handle specifically these use cases;
- A new instance of AyraDB has been deployed on IA2 machines and it is currently accessible from the Importer machine for the metadata retrieval.

Filesystem	Size	Used	Avail	Use%	Mounted on
udev	3.9G	0	3.9G	0%	/dev
tmpfs	795M	628K	794M	1%	/run
/dev/vda1	79G	11G	66G	14%	/
tmpfs	3.9G	0	3.9G	0%	/dev/shm
tmpfs	5.0M	0	5.0M	0%	/run/lock
/dev/vda15	124M	12M	113M	10%	/boot/efi
/dev/vdb1	984G	28K	934G	1%	/data
tmpfs	795M	4.0K	795M	1%	/run/user/1003



# IDLImporter

- The IDLImporter software has been updated to comply with the new structure and the new Rucio server;
- The additional key-value pairs required by Rucio, the blockchain and AyraDB are now added to the metadata of the incoming file during the metadata extraction process and provided to the requiring agents;
- Additional methods to check for unique DIDs and versioning of the incoming files have been implemented;
- The deployment on the new infrastructure has been completed, together with the Tango Controls system that manages and supervises the IDLImporter and the local MariaDB database that holds the data descriptive model and the necessary mapping tables.

# INAF Use Cases

## – Completed data modelling:

- **Fermi data model produced for WP4 has been integrated with additional key-values pairs required by Rucio, blockchain and AyraDB;**
- **Birales data model already completed with all the additional key-values pairs;**
- **Pulsar data model acquired and modified to take into account the required key-value pairs.**



# INAF Use Cases

- Dataset identification for Pulsar use case completed, pulsar observations made with the Sardinia Radio Telescope will be used, part of a long monitoring program that ensures a homogeneous and easily describable data collection;
- A new code has been developed for the Fermi data retrieval:
  - it handles programmatically the download of the files;
  - it has been already used for the WP4 use case and has been proved effective.

<input checked="" type="checkbox"/>	File name	Policy	Proj id	Backend
<input type="checkbox"/>	20191223-003426-37-19-J0621+1002.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201003-052420-37-19-J0621+1002.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201003-062724-37-19-J1022+1001.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20191123-013611-37-19-J0613-0200.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20200117-114549-37-19-J2145-0750.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20200117-093228-37-19-J1744-1134.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20200117-083040-37-19-J1643-1224.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20200216-110936-37-19-J2145-0750.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201002-155016-37-19-J1643-1224.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20200216-073828-37-19-J1643-1224.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20191125-022703-37-19-J0621+1002.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201003-042242-37-19-J0613-0200.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201116-012431-37-19-J0613-0200.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20200216-073224-37-19-J1643-1224.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20200216-071808-37-19-J1643-1224.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201113-171717-37-19-J2317+1439.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201002-165154-37-19-J1744-1134.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201113-141025-37-19-J1744-1134.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20200216-104424-37-19-J2145-0750.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20190924-061352-37-19-J0621+1002.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201003-041252-37-19-J0613-0200.rf.gz	FREE	37-19	PDFB3
<input type="checkbox"/>	20201113-123831-37-19-B1933+16.sfgz	FREE	37-19	PDFB3









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*Thank you for your attention!*  
*Questions are welcome.*

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