




# DArT data transfer and storage

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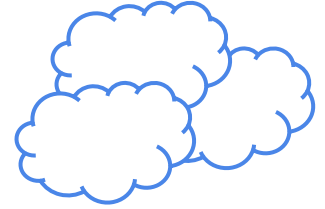
*DArT weekly meeting*

May 4, 2022



# Current status

- The latest data runs backed-up at CIEMAT and CNAF (Grid).



Run	status	Date	Time	Duration	Size (GB)	Detector location	Data storage (Pablo)		
							local	CIEMAT T2	CNAF T1
reference	-	1/5/2022	9:00	hh:mm		-	disk	no	no
500	running	1/5/2022	9:00	hh:mm		-	disk	no	no
425	test	27/4/2022	16:47	07:08	44.66	LSC-Hall A	disk	yes	yes
424	test	27/4/2022	13:44	05:59	7.53	LSC-Hall A	disk	yes	yes
423	test	27/4/2022	10:37	1:31	10.03	LSC-Hall A	disk	yes	yes
422	test	27/4/2022	0:22	10:10	244.42	LSC-Hall A	disk	yes	yes
421	test	26/4/2022	15:52	08:19	88.75	LSC-Hall A	disk	yes	yes
408	good	22/4/2022	13:16	93.00	251.00	LSC-Hall A	disk	yes	yes
212	good	9/3/2022	9:24	19:13	31.93	LSC-Hall A	disk	yes	yes
205	good	8/3/2022	11:42	38:37	36.73	LSC-Hall A	disk	yes	yes
192	good	22/2/2022	6:31	19:41	0.42	LSC-Hall A	disk	yes	yes
181	good	21/2/2022	10:22	21:56	1.79	LSC-Hall A	disk	yes	yes
180	good	20/2/2022	12:22	90:12	10.21	LSC-Hall A	disk	yes	yes
150	good	8/2/2022	16:51	19:34	4.38	LSC-Hall A	disk	yes	yes
126	good	2/2/2022	15:41	7:36	1.34	LSC-Hall A	deleted	yes	yes
110	good	26/1/2022	10:38	24:00	8.73	LSC-Hall A	deleted	yes	yes
108	good	25/1/2022	16:42	13:20	127.94	LSC-Hall A	deleted	yes	yes
105	good	25/1/2022	15:02	1:00	0.17	LSC-Hall A	deleted	yes	yes
104	good	25/1/2022	12:18	1:00	7.88	LSC-Hall A	deleted	yes	yes
103	good	24/1/2022	17:55	9:32	1.66	LSC-Hall A	deleted	yes	yes
87	good	3/12/2021	12:54	0:21	3.39	LSC-Hall A	deleted	yes	yes

- Ludovico has Grid **certificates** and knows how to transfer files from LSC to CIEMAT and how to access Grid files at CNAF.



- No need for copying files to local storage at CNAF from LSC.

# Current status

Run	status	Date	Time	Duration	Size (GB)	Detector location	Data storage (Pablo)		
							local	CIEMAT T2	CNAF T1
reference	-	1/5/2022	9:00	hh:mm		-	disk	no	no
500	running	1/5/2022	9:00	hh:mm		-	disk	no	no
425	test	27/4/2022	16:47	07:08	44.66	LSC-Hall A	disk	yes	yes
424	test	27/4/2022	13:44	05:59	7.53	LSC-Hall A	disk	yes	yes
423	test	27/4/2022	10:37	1:31	10.03	LSC-Hall A	disk	yes	yes
422	test	27/4/2022	0:22	10:10	244.42	LSC-Hall A	disk	yes	yes
421	test	26/4/2022	15:52	08:19	88.75	LSC-Hall A	disk	yes	yes
408	good	22/4/2022	13:16	93:00	251.00	LSC-Hall A	disk	yes	yes
212	good	9/3/2022	9:24	19:13	31.93	LSC-Hall A	disk	yes	yes
205	good	8/3/2022	11:42	38:37	36.73	LSC-Hall A	disk	yes	yes
182	good	22/2/2022	6:31	19:41	0.42	LSC-Hall A	disk	yes	yes
181	good	21/2/2022	10:22	21:56	1.79	LSC-Hall A	disk	yes	yes
180	good	20/2/2022	12:22	90:12	10.21	LSC-Hall A	disk	yes	yes
150	good	8/2/2022	16:51	19:34	4.38	LSC-Hall A	disk	yes	yes
126	good	2/2/2022	15:41	7:36	1.34	LSC-Hall A	deleted	yes	yes
110	good	26/1/2022	10:38	24:00	8.73	LSC-Hall A	deleted	yes	yes
108	good	25/1/2022	16:42	13:20	127.34	LSC-Hall A	deleted	yes	yes
105	good	25/1/2022	15:02	1:00	0.17	LSC-Hall A	deleted	yes	yes
104	good	25/1/2022	12:18	1:00	7.88	LSC-Hall A	deleted	yes	yes
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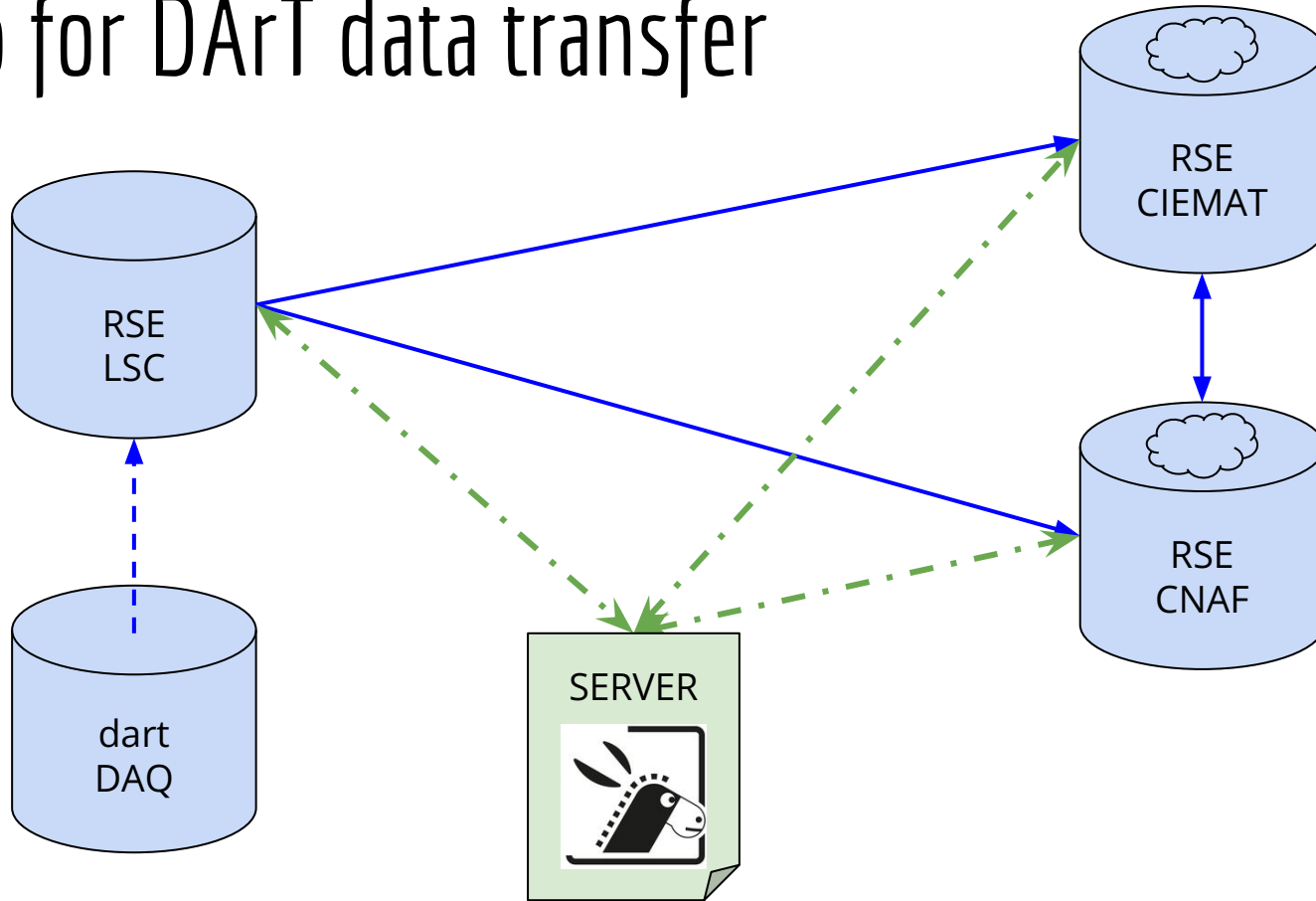
<http://darkmatter.ciemat.es/links/dart-run-list>

# Setup for DArT data transfer



- Data transfer must be decoupled from DAQ to avoid overload:
  - **Filling up the dartDAQ disk is not an option.**
  - An independent PC is mandatory to act as **data buffer: dartDATA** (high capacity).
  - **dartDATA** will access RAW data asynchronously: direct link to **dartDAQ** (fibre, eth, ...)
- Set up a fully automated transfer system based on RUCIO:
  - Three RUCIO storage elements (RSE) will host the data: LSC, CIEMAT and CNAF.
  - One RUCIO server will be in charge of data transfers:
    - We tell RUCIO what to transfer (rules).
    - RUCIO decides the best moment and optimal path for data transfer, based on bandwidth, network status, site availability, etc.
    - **Who will host the server?**
  - In contact with Valerio and CNAF staff: expect help from them.

# Setup for DArT data transfer



# Conclusions

- We are establishing more formal and robust procedures for data transfer:
  - fine for the testing phase of DArT.
- A plan for a long term data transfer strategy is taking shape.