

UiB Site Report May 2025

Emmanuel Moutoussamy Scientific computing group, UiB 13/05/2025

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UiB site report

- Group presentation
- Grid site compute
- Network link upgrade
- Tape status
- Tape upgrade status
- Disk status

Group Presentaion

Datacenter group



Raymond Andre Kristiansen Management infrastructure



Terje Furenes infrastructure

Scientific computing group (Alex Oltu & Dhanya Pushpadas)



Matthias Richter Department of Physics & Technology Management & Technical support 50%



Emmanuel Moutoussamy Monitoring & Technical support 50%

Grid Site Compute



Installed: 325 virtual nodes with 16 cores \rightarrow 5200 cores

Pledged: 55 kHS06 (target 41.2 kHS06)

Improvement of the cluster usage due to the use a of a better job assignement method implement in Nov. 2024

Also providing opportunistic ressources (old hardware)

On Average, 140% of the pledge has been used by ALICE in past 90 days

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Network Link Upgrade

Two 100 Gb/s links have been put into operation in March 2025

Last year



Last 3 months



Network link is not bottleneck anymore

Can we now run more jobs on real data access, even if JAliEn does not implement data staging

Tape Status

2 tape write pools: one active, one standby 1 tape read pool, spare slot on the infrastructure to make a second one pledged 2024: 4 PB (target 5.71 PB), still free \sim 1.5 PB

Transfer requests (add new request)											
		NDGF::DCACHE_TAPE	- any - 🗸 🗸					Filter			
ID	Path	Target SE	Status	Progress	Files	Total size	Started	Ended			
84617.	Copy 299 runs to ALICE::NDGF::DCACHE_TAPE	ALICE::NDGF::DCACHE_TAPE	Done		725 <u>26</u>	601.3 TB	20 Feb 2025 07:58	04 Mar 2025 21:44			
23523.	Copy 7 runs to ALICE::NDGF::DCACHE_TAPE	ALICE::NDGF::DCACHE_TAPE	Done		199310	1.479 PB	09 Feb 2024 00:42	02 Apr 2024 05:16			

There have been only very few transfer requests

Tape Upgrade Status

Upgrade 2025 – What has been done:

All tape library rearrangement in the server room finished New drives and frame TSM server upgrade Testing phase (â d'in progress...) Additional capacity: 5 PB Working into integration into dCache

How to integrate two tape libraries at UiB into NT1 dCache?

Two options (Maybe more... open to suggestions):

Option A: Two separate libraries accessed from one pool node

Writing only to one library at a time

Option B: Two tape libraries integrated by two separated UiB pool nodes

Disk Status

23 disk pool instances Almalinux 9, each mounting 240 TiB Ceph volume

Ceph backend: 49 Dell R740XD servers, 8.6 PB raw storage 5.6 PB Ceph storage

Pledged 5.6 PB (target 4.1 PB), free space 1.8 PB

lhc_uib_no_001	node001_dcache_lhc_uib_no_Domain	251658240	10460727	
lhc_uib_no_002	node002_dcache_lhc_uib_no_Domain	251658240	708782	
lhc_uib_no_003	node003_dcache_lhc_uib_no_Domain	251658240	50415427	
lhc_uib_no_004	node004_dcache_lhc_uib_no_Domain	251658240	45649346	
lhc_uib_no_005	node005_dcache_lhc_uib_no_Domain	251658240	51825369	_
lhc_uib_no_006	node006_dcache_lhc_uib_no_Domain	251658240	31002224	
lhc_uib_no_007	node007_dcache_lhc_uib_no_Domain	251658240	24137745	
lhc_uib_no_008	node008_dcache_lhc_uib_no_Domain	251658240	19277466	
lhc_uib_no_009	node009_dcache_lhc_uib_no_Domain	251658240	19693695	
lhc_uib_no_010	node010_dcache_lhc_uib_no_Domain	251658240	18636284	
lhc_uib_no_011	$node011_dcache_lhc_uib_no_Domain$	251658240	22720449	
lhc_uib_no_012	node012_dcache_lhc_uib_no_Domain	251658240	21299073	
lhc_uib_no_013	node013_dcache_lhc_uib_no_Domain	251658240	20379060	
lhc_uib_no_014	node014_dcache_lhc_uib_no_Domain	251658240	25813649	
lhc_uib_no_015	$node015_dcache_lhc_uib_no_Domain$	251658240	29884115	
lhc_uib_no_016	node016_dcache_lhc_uib_no_Domain	251658240	65532418	
lhc_uib_no_017	$node017_dcache_lhc_uib_no_Domain$	251658240	65343955	
lhc_uib_no_018	$node018_dcache_lhc_uib_no_Domain$	251658240	43573963	
lhc_uib_no_019	node019_dcache_lhc_uib_no_Domain	251658240	20727559	
lhc_uib_no_020	node020_dcache_lhc_uib_no_Domain	251658240	25649754	
lhc_uib_no_021	node021_dcache_lhc_uib_no_Domain	251658240	122803240	
lhc_uib_no_022	node022_dcache_lhc_uib_no_Domain	251658240	123101481	
lhc_uib_no_023	$node023_dcache_lhc_uib_no_Domain$	251658240	123063600	

Future plans

- Testing the link speed
- Integration of new tape ressources
- Planning partial replacement of compute and storage servers early 2026