ALICE-USA Operations
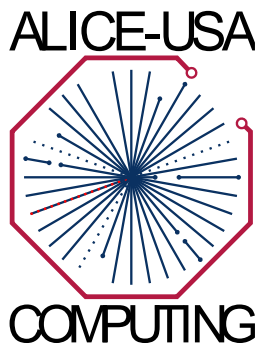## Monthly Status for December 2024

ALICE-USA
COMPUTING

January 21, 2025

Availability and Reliability Reports
ALICE_CE(Jobs Running) x ALICE_VOBOX x AliEn::SE(tests)

Tier-2 Availability and Reliability Report
ALICE
Federation Details

December 2024

Availability Algorithm: @ALICE_CE * @ALICE_VOBOX * all AliEn-SE

Color coding: N/A | <30% | <60% | <90% | >=90%

Federation & Sites	Pledge CPU	Pledge Disk	Availability	Reliability	Unknown	Sep-2024	Oct-2024	Nov-2024
US-LBNL-ALICE	**100900**	**10900**						
LBL_HPCS			33%	33%	0%	73%	85%	91%
ORNL			85%	85%	0%	97%	99%	97%

Availability History

Job Summary

- CEs
  - LBL-HPCS – **OK**

  - ORNL – **OK**
    - Old and new clusters fully merged
    - Total current ORNL capacity satisfies the half of the US pledge (keeping the old nodes)

  - Lawrencium – **Back and doing great**

  - Perlmutter – **OK**
   - Switched to the priority queue

  - LBL_AFP - **OK**

CPU Efficiency
Target Efficiency is... no such thing anymore...

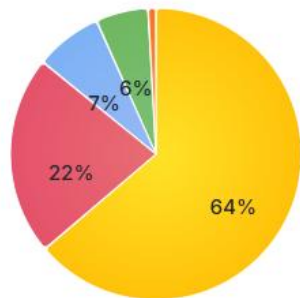**Jobs efficiency (cpu time / wall time)**

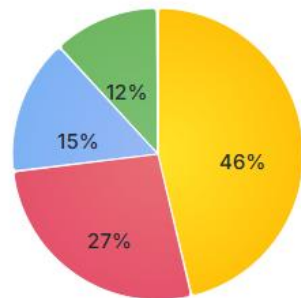|	Series	Last value	Min	Avg	Max
1.	🟩 HPCS_Lr	87.7	3.106	75.83	104.2
2.	⬛ LBL_AFP	101.2	0.746	83.93	209.4
3.	🟥 LBL_HPCS	100.5	3.187	82.37	150.2
4.	🟨 NIHAM	94.85	16.15	78.29	181.9
5.	🟪 ORNL	98.04	0.029	83.32	150
6.	🟥 ORNL-test	66.45	0.012	67.7	162.1
7.	🟪 UPB	91.7	0.126	76.2	97.9
	Total	**91.49**		**78.24**	
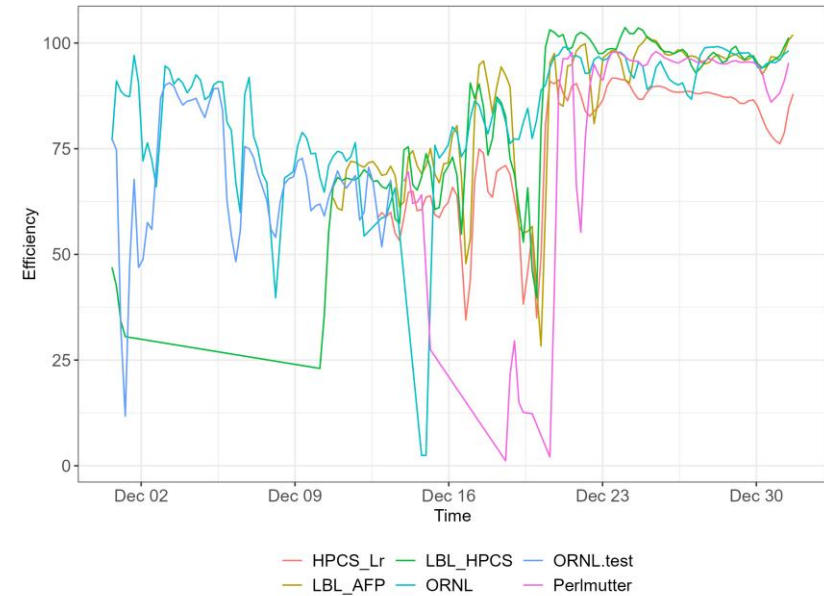
Average Job Mix [LBL_HPCS]
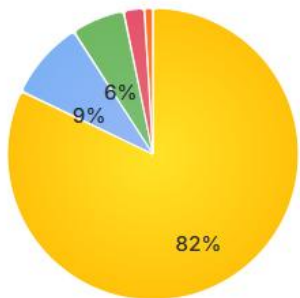
Average Job Mix [LBL_AFP]

Average Job Mix [ORNL]

Average Job Mix [HPCS_Lr]

Average Job Mix [Perlmutter]

🟨 SIM	100%	
🟧 DAQ	0%	
🟩 Other	0%	
🟦 Train	0%	
🟥 Hyperloop	0%	
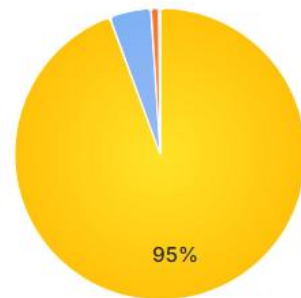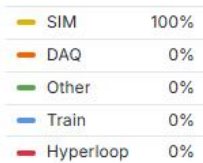
CPU Obligations	kHS06
ALICE-USA	100.9
LBNL HPCS T2	50.45
ORNL T2	50.45

| T2 Site	Monalisa (khr)	WLCG (khr)	%diff
HPCS_Lr	8004.00	12050.00	24.26
LBNL	1123.00		
ORNL	2678.00	3490.00	23.27
Total	11,805.00	15,540.00	24.03
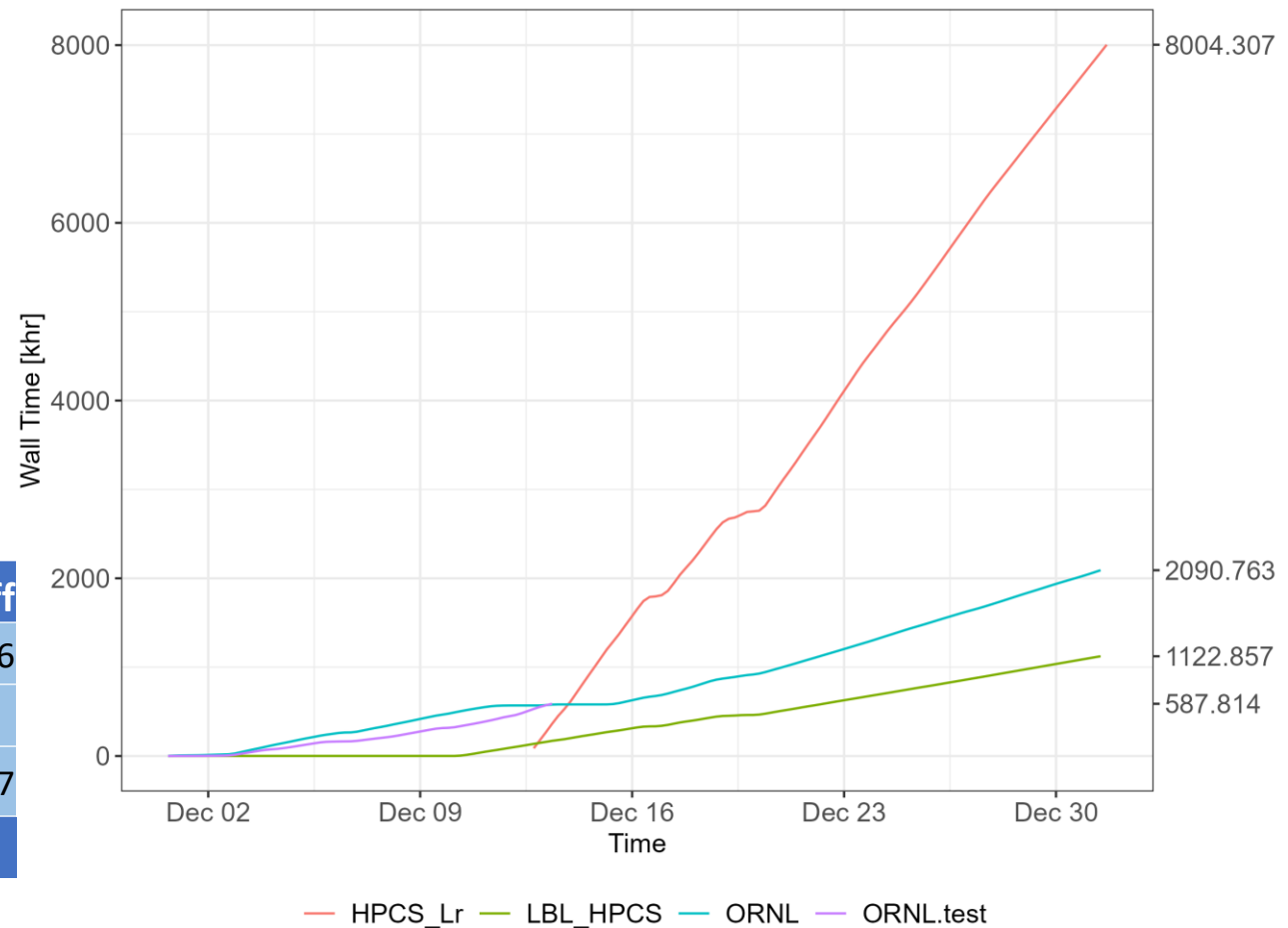
| T2 Site and HPCS_Lr	CPU/Core [HS06/Core]	ALICE-USA Obligation [MHS06 x hr]	CPU Delivered [MHS23 x hr] (ML reporter)	CPU Delivered [MHS23 x hr] (WLCG reporter)	Delivered per Obligation [%] (ML reported)	Delivered per Obligation [%] (WLCG reported)
HPCS_Lr	12.0	24.22	96.05	144.60	396.6	597.1
LBNL	16.7		18.75		77.4	
ORNL	11.5	37.08	30.80	40.14	83.1	108.2
Total		61.30	145.60	184.74	237.53%	301.38%

Network Traffic at LBL and ORNL

Network traffic on ALICE::ORNL::EOS
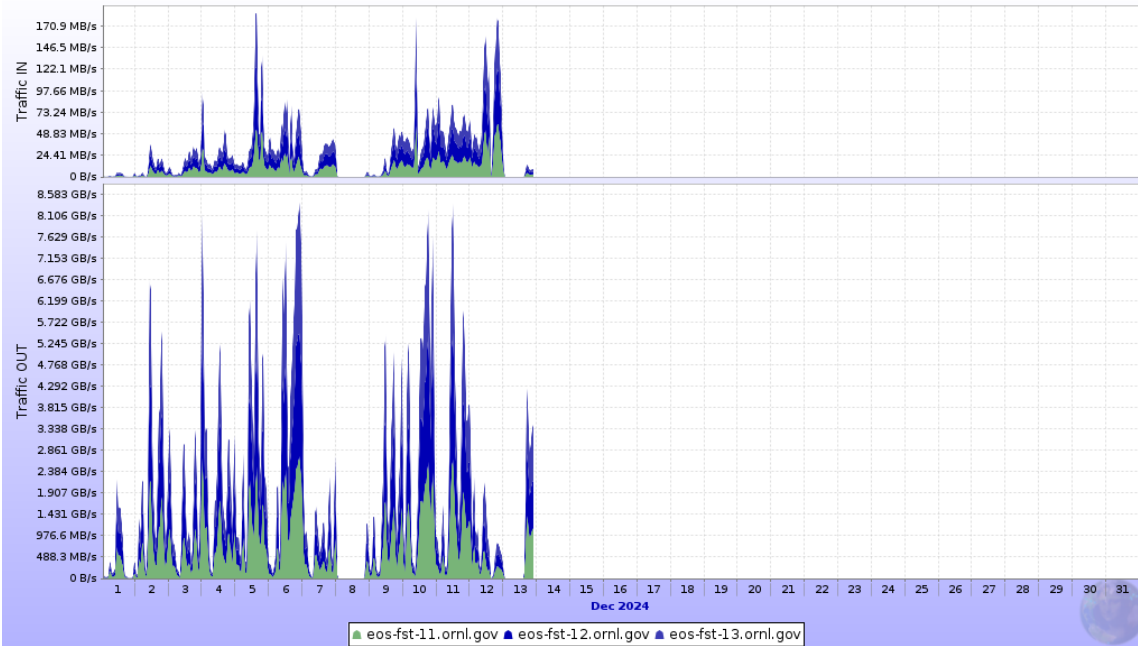

Network traffic on ALICE::LBL_HPCS::EOS
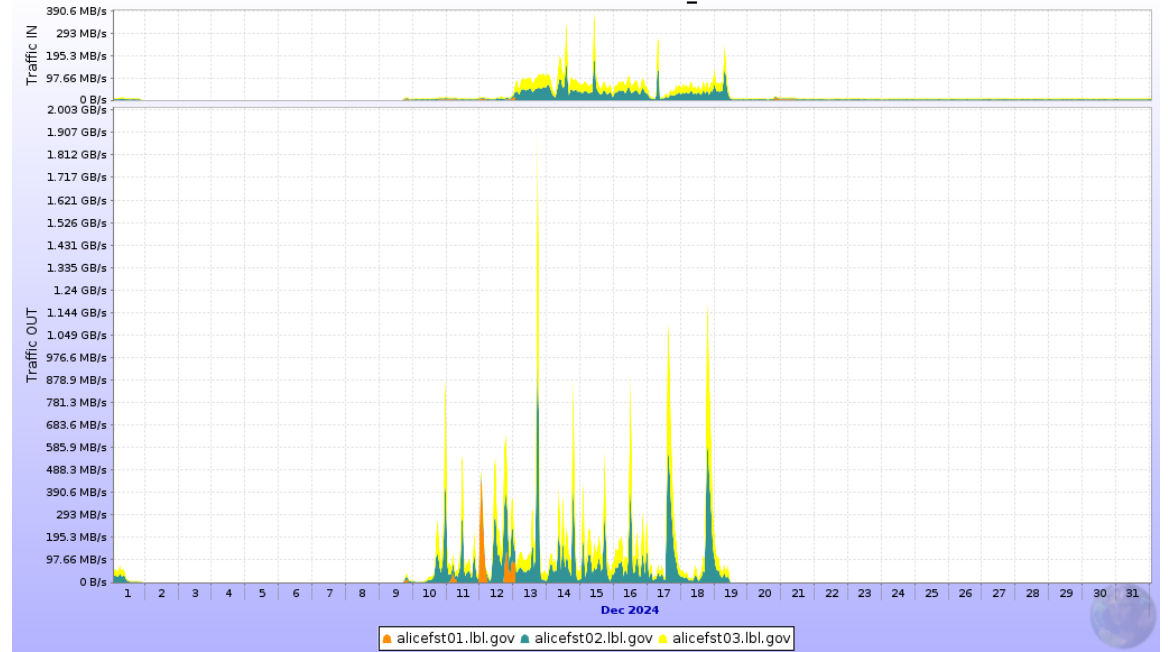
AliEn SEs availability for writing

Color map: ■ 0 → 80% ■ 80 → 90% ■ 90 → 95% ■ 95 → 98% ■ 98 → 100% ■ 100%
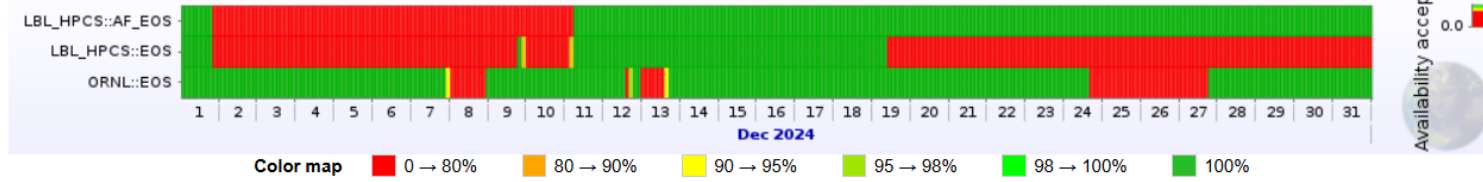
Statistics

Link name	Data		Individual results of writing tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Dec 2024 00:14	01 Jan 2025 00:32	526	223	70.23%	70.10%
LBL_HPCS::EOS	01 Dec 2024 00:23	31 Dec 2024 23:43	229	518	30.66%	30.45%
ORNL::EOS	01 Dec 2024 00:23	31 Dec 2024 23:41	635	112	85.01%	84.97%

AliEn SEs availability for reading

Color map: ■ 0 → 80% ■ 80 → 90% ■ 90 → 95% ■ 95 → 98% ■ 98 → 100% ■ 100%
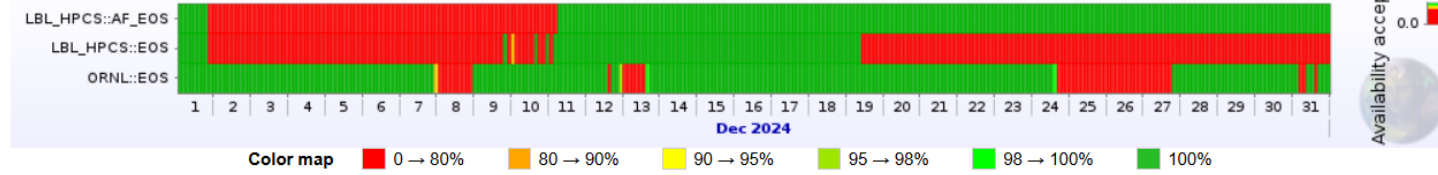
Statistics

Link name	Data		Individual results of reading tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Dec 2024 00:14	01 Jan 2025 00:32	526	223	70.23%	70.11%
LBL_HPCS::EOS	01 Dec 2024 00:23	01 Jan 2025 00:44	246	502	32.89%	32.72%
ORNL::EOS	01 Dec 2024 00:23	01 Jan 2025 00:41	633	115	84.63%	84.57%

	AliEn SE			Catalogue statistics (1024-base units)						Storage-provided information (1024-base units)					
SE Name	AliEn name	Tier	Size	Used	Free	Usage	No. of files	Type	Size	Used	Free	Usage	Version	EOS Version
1. LBL_HPCS - AF_EOS	ALICE::LBL_HPCS::AF_EOS	2	1.092 PB	883.5 TB	235.1 TB	78.98%	901,549	FILE	1.092 PB	899.8 TB	218.8 TB	80.44%	Xrootd 5.7.1-2.el8.x86_64	
2. LBL_HPCS - EOS	ALICE::LBL_HPCS::EOS	2	3.48 PB	2.073 PB	1.406 PB	59.58%	67,876,204	FILE	3.453 PB	2.217 PB	1.236 PB	64.22%	Xrootd 5.7.1	5.2.27
3. ORNL - CCDB	ALICE::ORNL::CCDB	2	100 TB	5.825 TB	94.17 TB	5.825%	15,683,467	FILE	-	-	-	-		
4. ORNL - EOS	ALICE::ORNL::EOS	2	6.586 PB	2.797 PB	3.789 PB	42.47%	58,879,395	FILE	6.586 PB	2.894 PB	3.692 PB	43.95%		5.3.0
5. ORNL - PRF_EOS	ALICE::ORNL::PRF_EOS	2	807.7 TB	0	807.7 TB	-	0	FILE	807.7 TB	240.4 TB	567.3 TB	29.76%		
Total			12.04 PB	5.739 PB	6.305 PB		143,340,615		11.92 PB	6.225 PB	5.695 PB			

EOS: Success Ratio

- ORNL extremely well performant
- The LBL health metrics is a mixture of SE being down a lot and a low accessibility that we get
  - There is a suspicion that the crawler does not quite test the random sample...
  - I am trying to see what can be found out

Success ratio

Color map: 0% → 80% | 80% → 90% | 90% → 95% | 95% → 100% | 100%
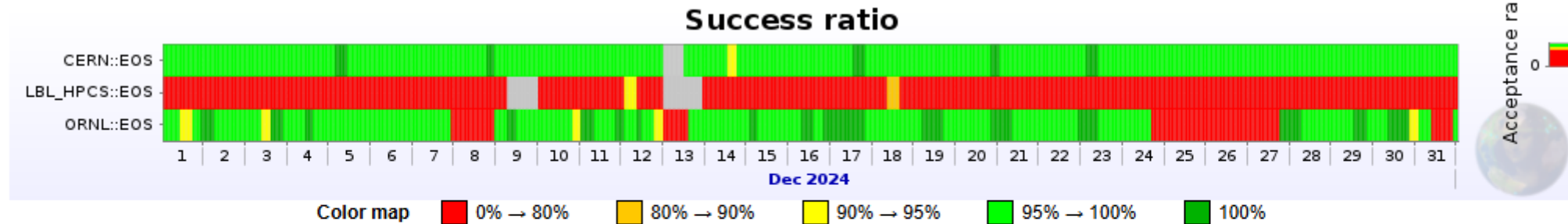
Averaged metrics for the selected interval

SE Name	Start	End	Success ratio	Corrupt ratio	Inaccessible ratio	Internal error ratio
CERN::EOS	01 Dec 2024 06:40	31 Dec 2024 22:58	99.68 %	0.02 %	0.27 %	0.03 %
LBL_HPCS::EOS	01 Dec 2024 06:41	31 Dec 2024 23:02	26.00 %	0.36 %	73.63 %	0.00 %
ORNL::EOS	01 Dec 2024 06:42	31 Dec 2024 22:58	83.33 %	0.18 %	16.48 %	0.01 %

Site Status Dashboard

Last Month

This month