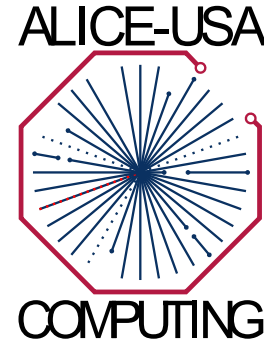
ALICE-USA Operations
Monthly Status for January 2024

February 20, 2024



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

Tier-2 Availability and Reliability Report
ALICE

January 2024

Federation Details

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	Availability History Oct-2023	Nov-2023	Dec-2023
US-LBNL-ALICE	**94300**	**9800**						
LBL_HPCS			73%	87%	0%	91%	78%	100%
ORNL			97%	97%	0%	94%	90%	93%

Tier-2 Availability and Reliability Report
ALICE

December 2023

Federation Details

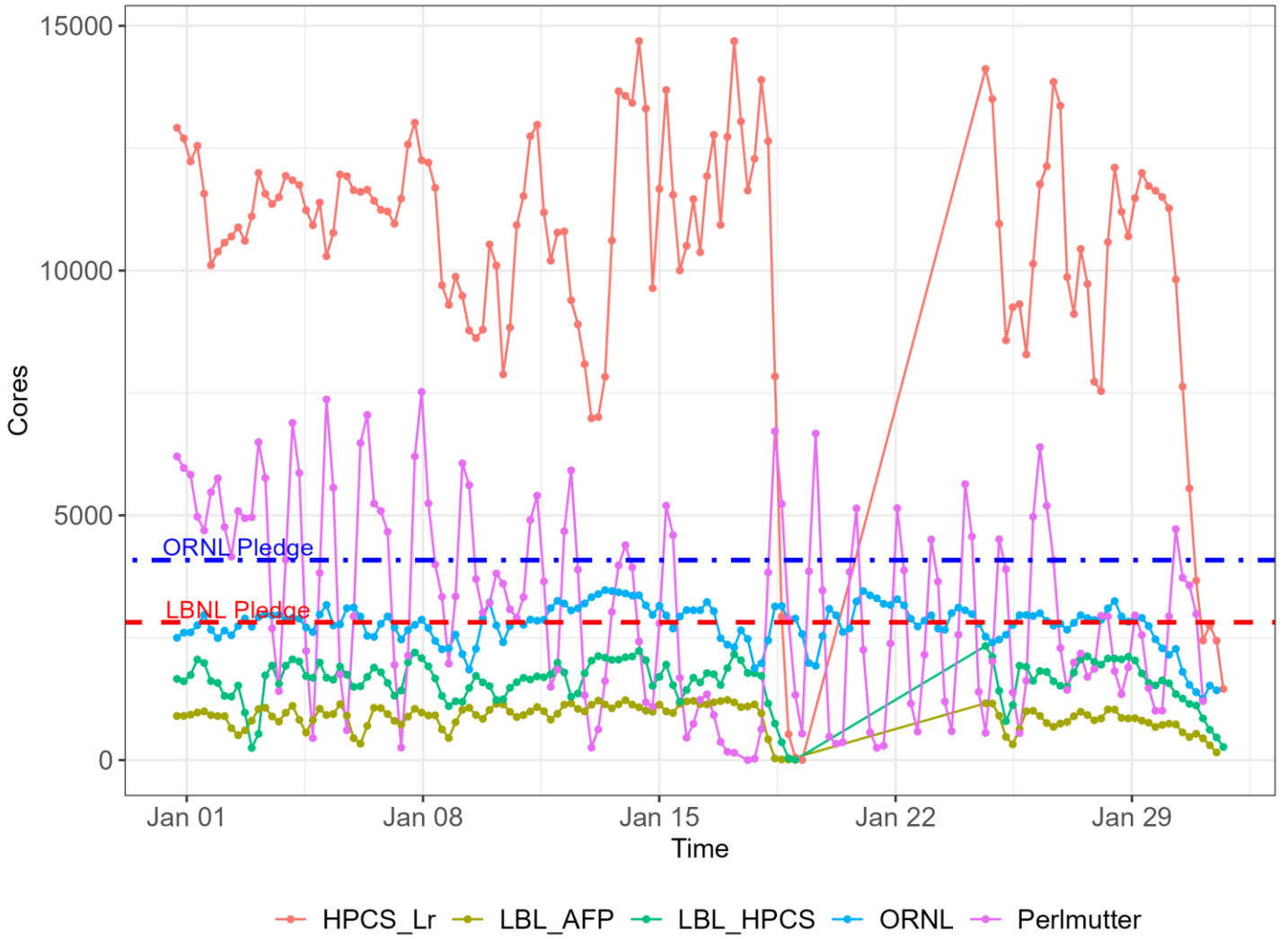
Availability Algorithm: @ALICE_CE * @ALICE_VOBOX * all AliEn-SE

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

Federation & Sites	Pledge CPU	Pledge Disk	Availability	Reliability	Unknown	Availability History Sep-2023	Oct-2023	Nov-2023
US-LBNL-ALICE	**94300**	**9800**						
LBL_HPCS			87%	87%	13%	100%	91%	78%
ORNL			93%	93%	0%	99%	94%	90%

Job Summary

- Total number of jobs
  - Starting mid December simulation jobs are back
- LBL-HPCS
  - Downtime in mid January
  - Steady handling
- ORNL
  - Steady handling
- Lawrencium
  - Downtime in mid January
  - Steady handling
- Perlmutter
  - We kept VO box up during the downtime
  - Steady handling
- LBL_AFP
  - Downtime in mid January
  - Steady handling

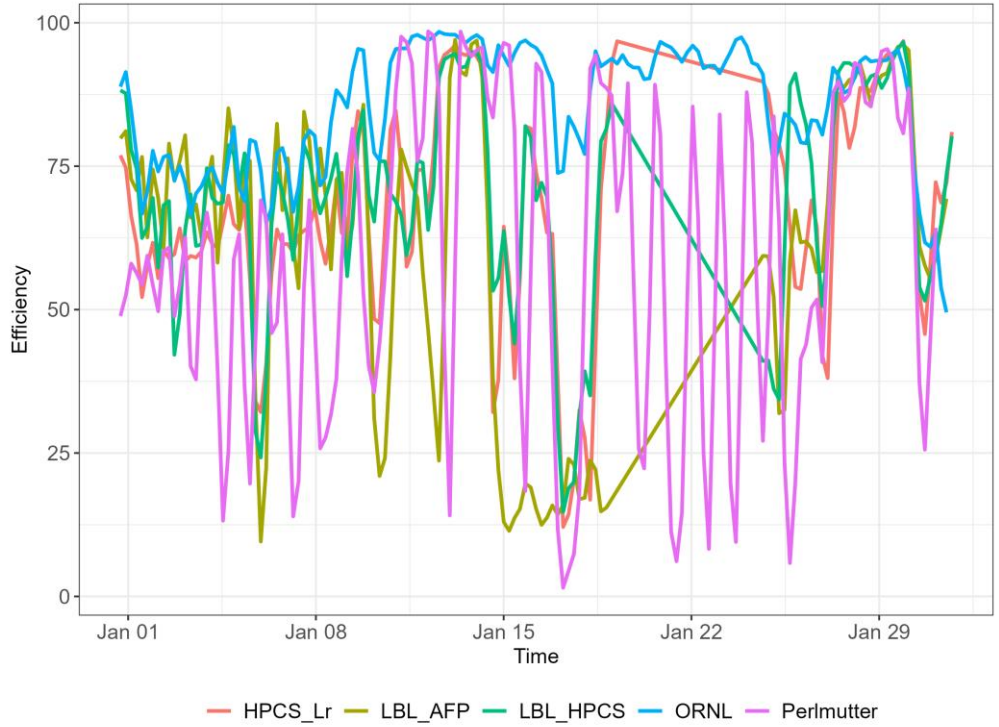


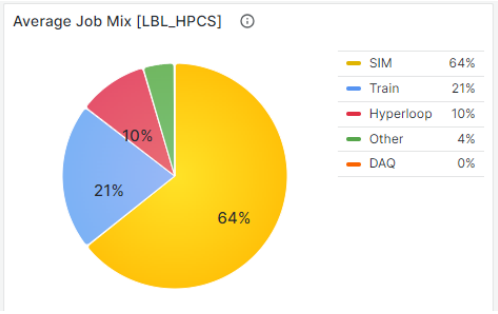
CPU Efficiency

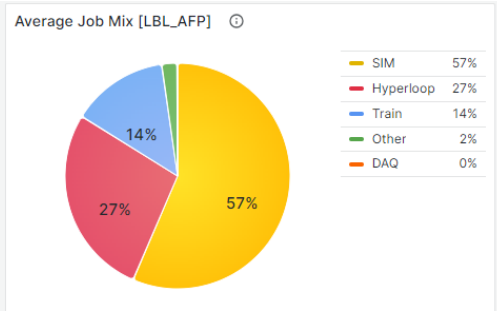
Target Efficiency is… no such thing anymore…

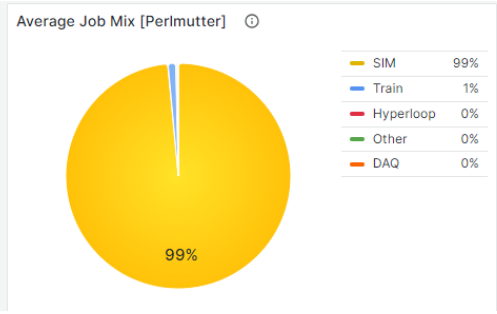
Jobs efficiency (cpu time / wall time)

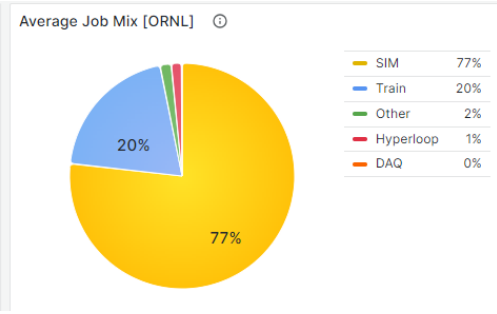
	Series	Last value	Min	Avg	Max
1.	HPCS_Lr	80.96	0	66.76	99.97
2.	LBL_AFP	69.34	0.612	60.06	118.9
3.	LBL_HPCS	80.19	4.534	69.05	107.3
4.	ORNL	49.53	18.37	85.58	101.7
5.	Perlmutter	62.94	0.118	59.26	100.1
Total		**68.59**		**68.14**	

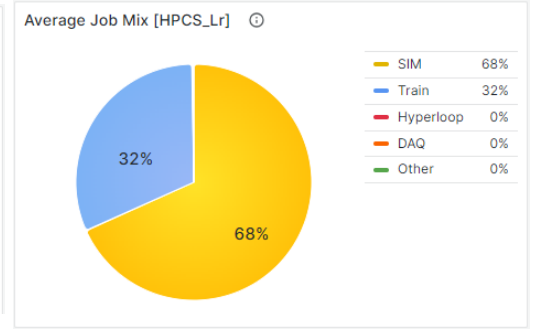




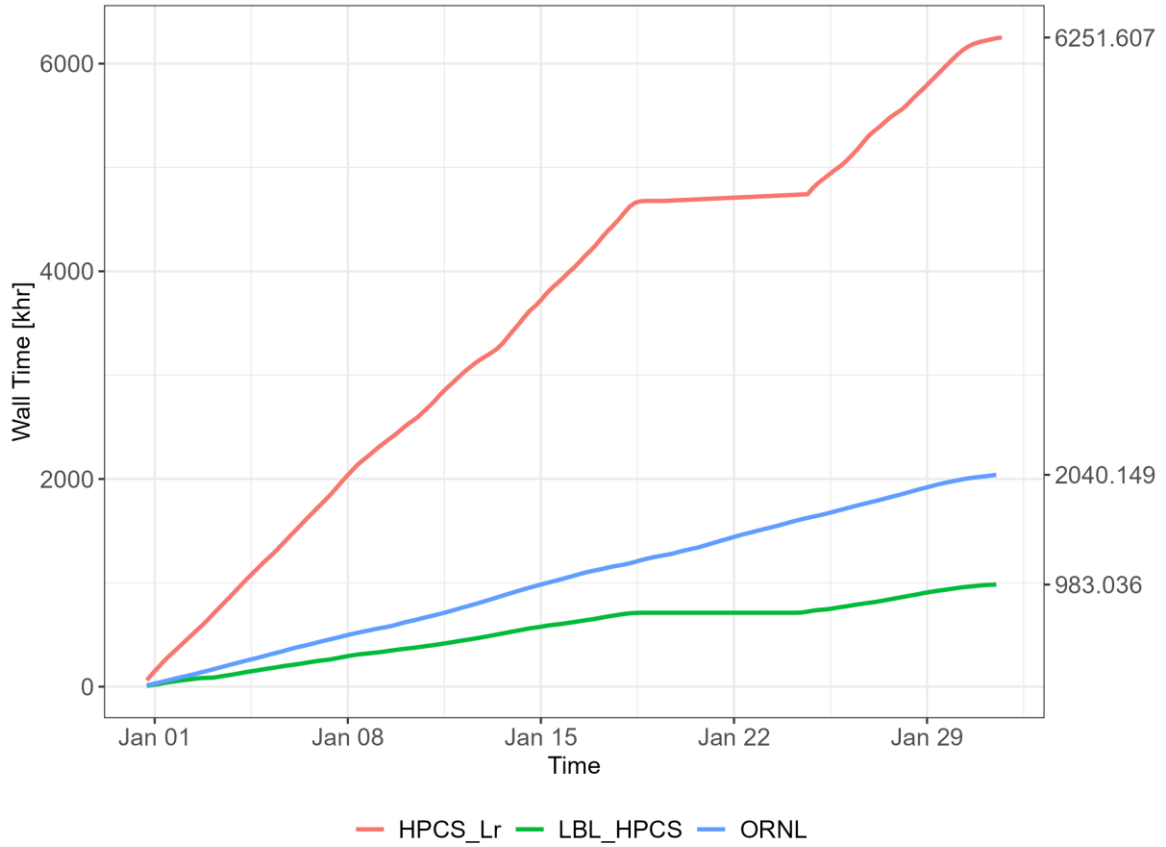








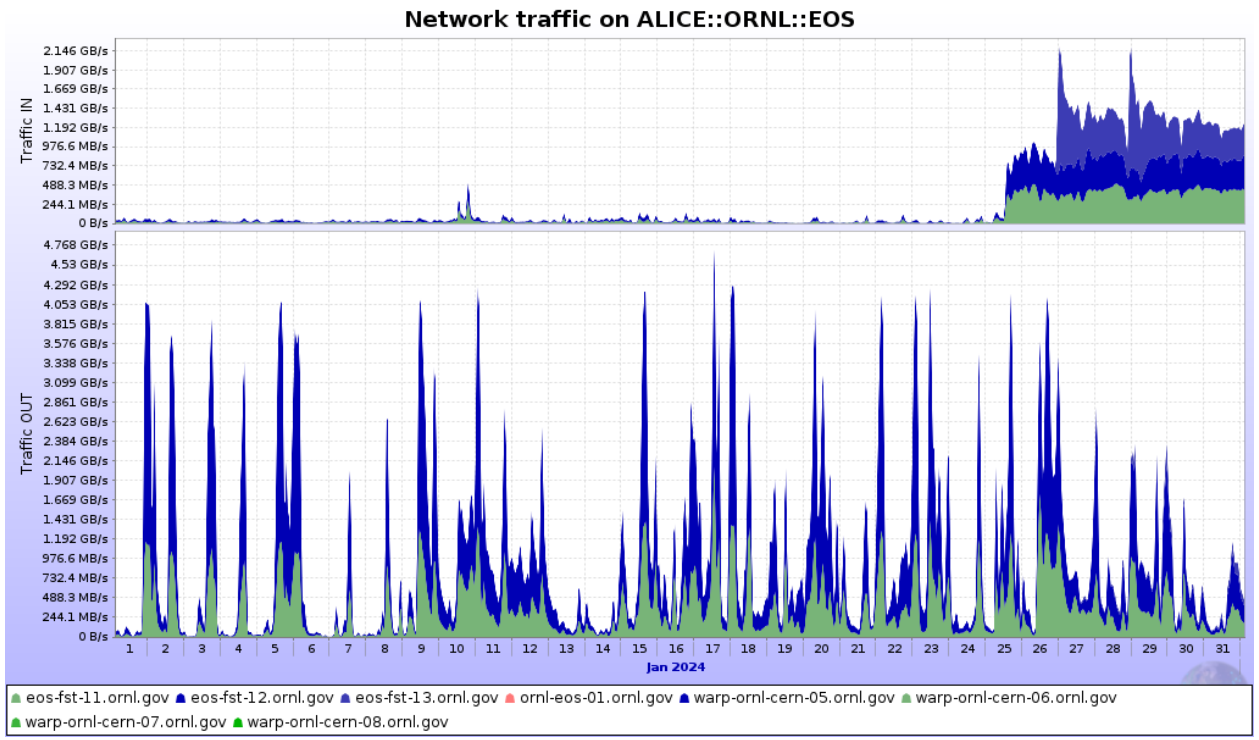
CPU Obligations	kHS06
ALICE-USA	94
LBNL HPCS T2	47
ORNL T2	47

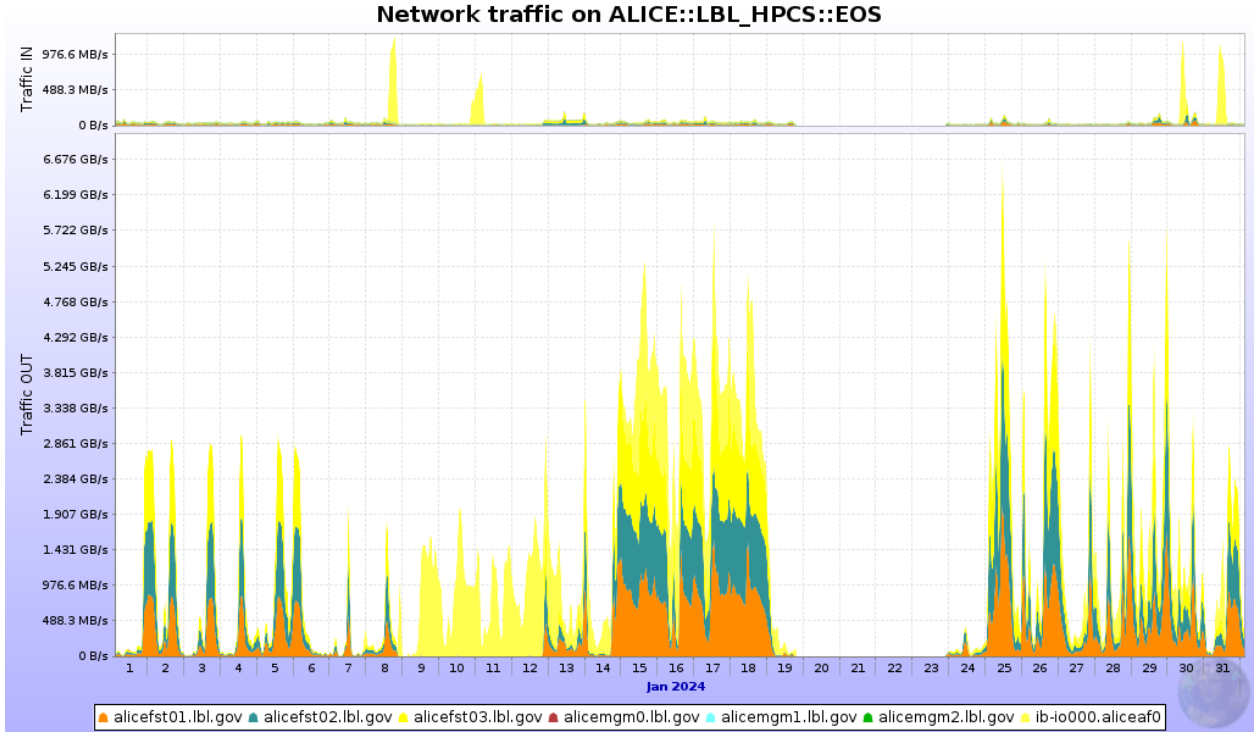


T2 Site	Monalisa (khr)	WLCG (khr)	%diff
HPCS_Lr	6251.50	10146.40	28.70
LBNL	983.00		
ORNL	2040.10	2579.20	20.90
Total	**9,274.60**	**12,725.60**	**27.12**

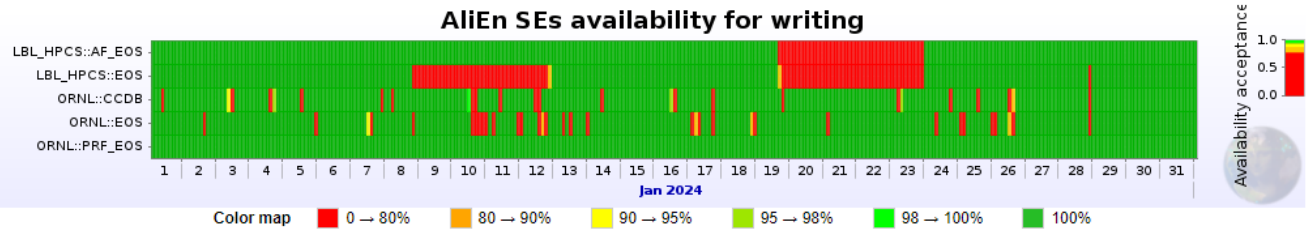
T2 Site and HPCS_Lr	CPU/Core [HS06/Core]	ALICE-USA Obligation [MHS06 x hr]	CPU Delivered [MHS06 x hr] (ML reporter)	CPU Delivered [MHS06 x hr] (WLCG reporter)	Delivered per Obligation [%] (ML reported)	Delivered per Obligation [%] (WLCG reported)
HPCS_Lr	12.0	34.97	75.02	121.76	214.5	348.2
LBNL	16.7		16.42		46.9	
ORNL	11.5	34.97	23.46	29.66	67.1	84.8
Total		**69.94**	**114.90**	**151.42**	**164.29%**	**216.51%**

Network Traffic at LBL and ORNL





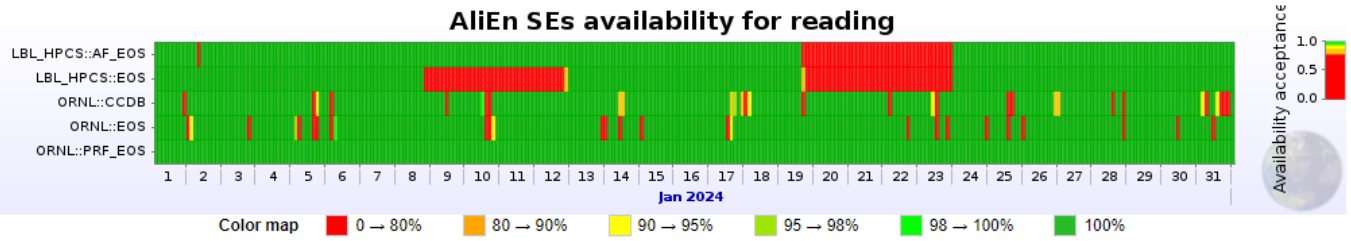
AliEn SEs availability for writing



Statistics

Link name	Data		Individual results of writing tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Jan 2024 01:29	01 Feb 2024 02:26	645	103	86.23%	86.35%
LBL_HPCS::EOS	01 Jan 2024 01:38	01 Feb 2024 01:36	547	200	73.23%	73.34%
ORNL::CCDB	01 Jan 2024 02:26	01 Feb 2024 02:24	725	22	97.05%	97.20%
ORNL::EOS	01 Jan 2024 01:39	01 Feb 2024 01:37	717	30	95.98%	96.22%
ORNL::PRF_EOS	01 Jan 2024 01:27	01 Feb 2024 02:24	748	0	100%	100%

AliEn SEs availability for reading

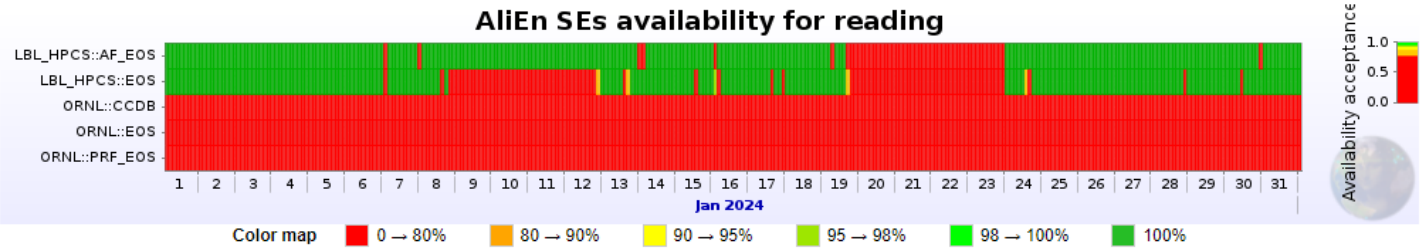


Statistics

Link name	Data		Individual results of reading tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Jan 2024 01:29	01 Feb 2024 02:27	644	104	86.10%	86.22%
LBL_HPCS::EOS	01 Jan 2024 01:38	01 Feb 2024 01:36	548	199	73.36%	73.46%
ORNL::CCDB	01 Jan 2024 02:26	01 Feb 2024 02:24	721	26	96.52%	96.68%
ORNL::EOS	01 Jan 2024 01:39	01 Feb 2024 01:37	723	24	96.79%	96.88%
ORNL::PRF_EOS	01 Jan 2024 01:27	01 Feb 2024 02:24	748	0	100%	100%

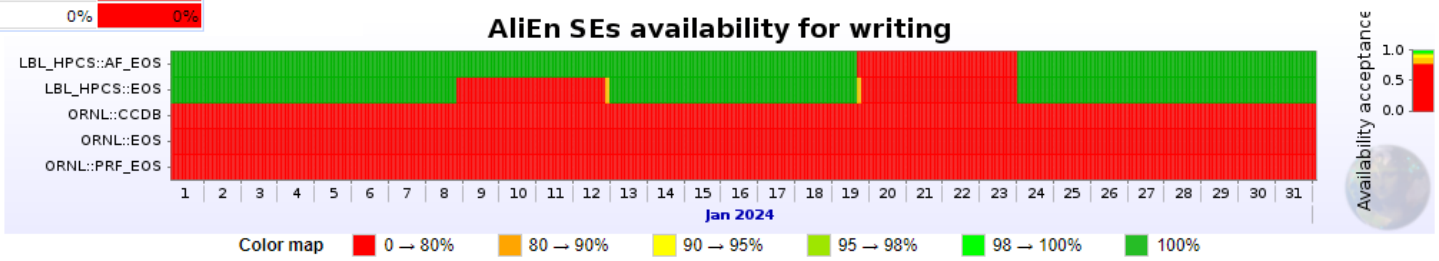
	AliEn SE		Catalogue statistics						Storage-provided information					
SE Name	AliEn name	Tier	Size	Used	Free	Usage	No. of files	Type	Size	Used	Free	Usage	Version	EOS Version
1. LBL_HPCS - AF_EOS	ALICE::LBL_HPCS::AF_EOS	2	1.101 PB	98.55 TB	1.005 PB	8.741%	48,555	FILE	1.101 PB	106.5 TB	1021 TB	9.442%	Xrootd 5.5.10	5.1.30
2. LBL_HPCS - EOS	ALICE::LBL_HPCS::EOS	2	3.48 PB	3.241 PB	244.1 TB	93.15%	63,291,532	FILE	3.48 PB	3.222 PB	263.5 TB	92.6%	Xrootd 5.5.10	5.1.30
3. ORNL - CCDB	ALICE::ORNL::CCDB	2	100 TB	3.662 TB	96.34 TB	3.662%	8,223,096	FILE	-	-	-	-		
4. ORNL - EOS	ALICE::ORNL::EOS	2	4.943 PB	3.095 PB	1.848 PB	62.61%	44,276,862	FILE	4.959 PB	3.165 PB	1.794 PB	63.81%		5.1.27
5. ORNL - PRF_EOS	ALICE::ORNL::PRF_EOS	2	807.7 TB	243 TB	564.7 TB	30.09%	120,226	FILE	807.7 TB	248.7 TB	559 TB	30.79%		5.1.14
Total			**10.41 PB**	**6.673 PB**	**3.737 PB**		**115,960,271**		**10.33 PB**	**6.734 PB**	**3.595 PB**			

Using IPv6 Only



Statistics

Link name	Data		Individual results of reading tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Jan 2024 01:29	01 Feb 2024 02:27	638	110	85.29%	85.41%
LBL_HPCS::EOS	01 Jan 2024 01:39	01 Feb 2024 01:36	539	208	72.16%	72.24%
ORNL::CCDB	01 Jan 2024 01:29	01 Feb 2024 02:27	0	748	0%	0%
ORNL::EOS	01 Jan 2024 01:42	01 Feb 2024 01:39	0	747	0%	0%
ORNL::PRF_EOS	01 Jan 2024 01:30	01 Feb 2024 02:27	0	748	0%	0%

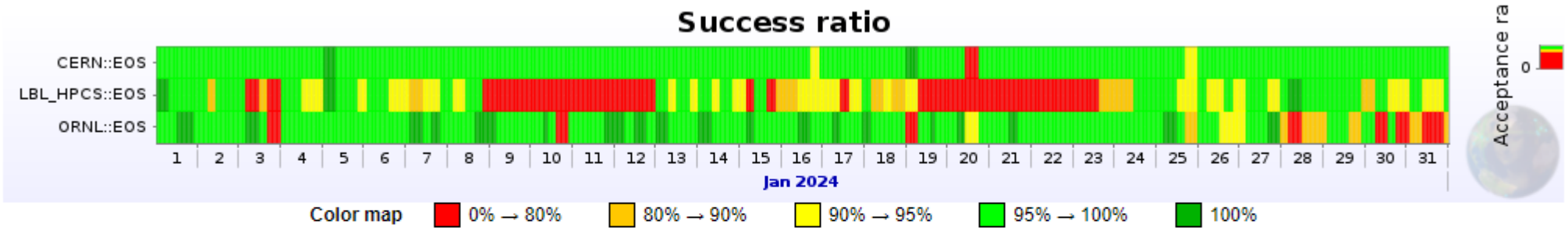


Statistics

Link name	Data		Individual results of writing tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Jan 2024 01:29	01 Feb 2024 02:27	645	103	86.23%	86.36%
LBL_HPCS::EOS	01 Jan 2024 01:39	01 Feb 2024 01:36	549	198	73.49%	73.60%
ORNL::CCDB	01 Jan 2024 01:29	01 Feb 2024 02:27	0	748	0%	0%
ORNL::EOS	01 Jan 2024 01:42	01 Feb 2024 01:39	0	747	0%	0%
ORNL::PRF_EOS	01 Jan 2024 01:30	01 Feb 2024 02:27	0	748	0%	0%

EOS: Success Ratio

- Very strange behavior with file on LBL_HPCS
- Why is crawler not testing AFP EOS?



Averaged metrics for the selected interval

SE Name	Start	End	Success ratio	Corrupt ratio	Inaccessible ratio	Internal error ratio
CERN::EOS	01 Jan 2024 02:02	01 Feb 2024 00:25	98.91 %	0.03 %	1.02 %	0.04 %
LBL_HPCS::EOS	01 Jan 2024 02:05	01 Feb 2024 00:12	74.78 %	0.68 %	24.53 %	0.01 %
ORNL::EOS	01 Jan 2024 02:06	31 Jan 2024 23:57	95.43 %	0.12 %	4.45 %	0.00 %

Status from the File Crawler

Status codes extracted from the crawler

SE Name: ALICE::ORNL::EOS **Interval:** Last 3 days

Status Type	Status Code	Status Count	Status Code Ratio	Download throughput
FILE_OK	S_FILE_CHECKSUM_MATCH	14112	84.38 %	71.66 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	3	0.02 %	74.66 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	2591	15.49 %	
	XROOTD_TIMED_OUT	2	0.01 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	16	0.10 %	
TOTAL		16724	100 %	

Status codes extracted from the crawler

SE Name: ALICE::LBL_HPCS::EOS **Interval:** Last 3 days

Status Type	Status Code	Status Count	Status Code Ratio	Download throughput
FILE_OK	S_FILE_CHECKSUM_MATCH	14420	68.59 %	86.28 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	2	0.01 %	101.27 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	6476	30.81 %	
	XROOTD_TIMED_OUT	6	0.03 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	118	0.56 %	
TOTAL		21022	100 %	

Site Status Dashboard

Last Month

Site name	VOBox and SE proble
ORNL voboxslr.alice.ornl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking: No IPv6 public address ALICE::ORNL::TEMP: ADD test fails since *31 Oct 2019 12:57* (for 4y 76d).
LBL_HPCS alice-vobox.lbl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking: No IPv6 public address ALICE::LBL_HPCS::AF_EOS: xrootd data server **ib-mgm00.aliceaf0** fails ADD test.
LBL_AFP alice-afp.lbl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking: No IPv6 public address
3 sites	**7 issues**

This month

ORNL, LBL

Site name	VOBox and SE problems
ORNL voboxslr.alice.ornl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking: No IPv6 public address
LBL_HPCS alice-vobox.lbl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking: No IPv6 public address ALICE::LBL_HPCS::AF_EOS: xrootd data server **ib-mgm00.aliceaf0** fails ADD test.
LBL_AFP alice-afp.lbl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking: No IPv6 public address
3 sites	**6 issues**