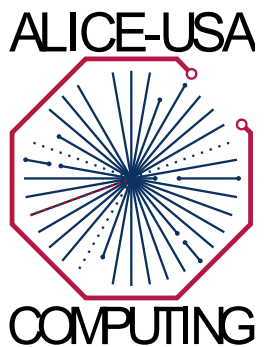


ALICE-USA Operations Monthly Status for April 2024

May 21, 2024



Availability and Reliability Reports

ALICE_CE(Jobs Running) x ALICE_VOBOX x AliEn::SE(tests)



Tier-2 Availability and Reliability Report ALICE

April 2024

Federation Details

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

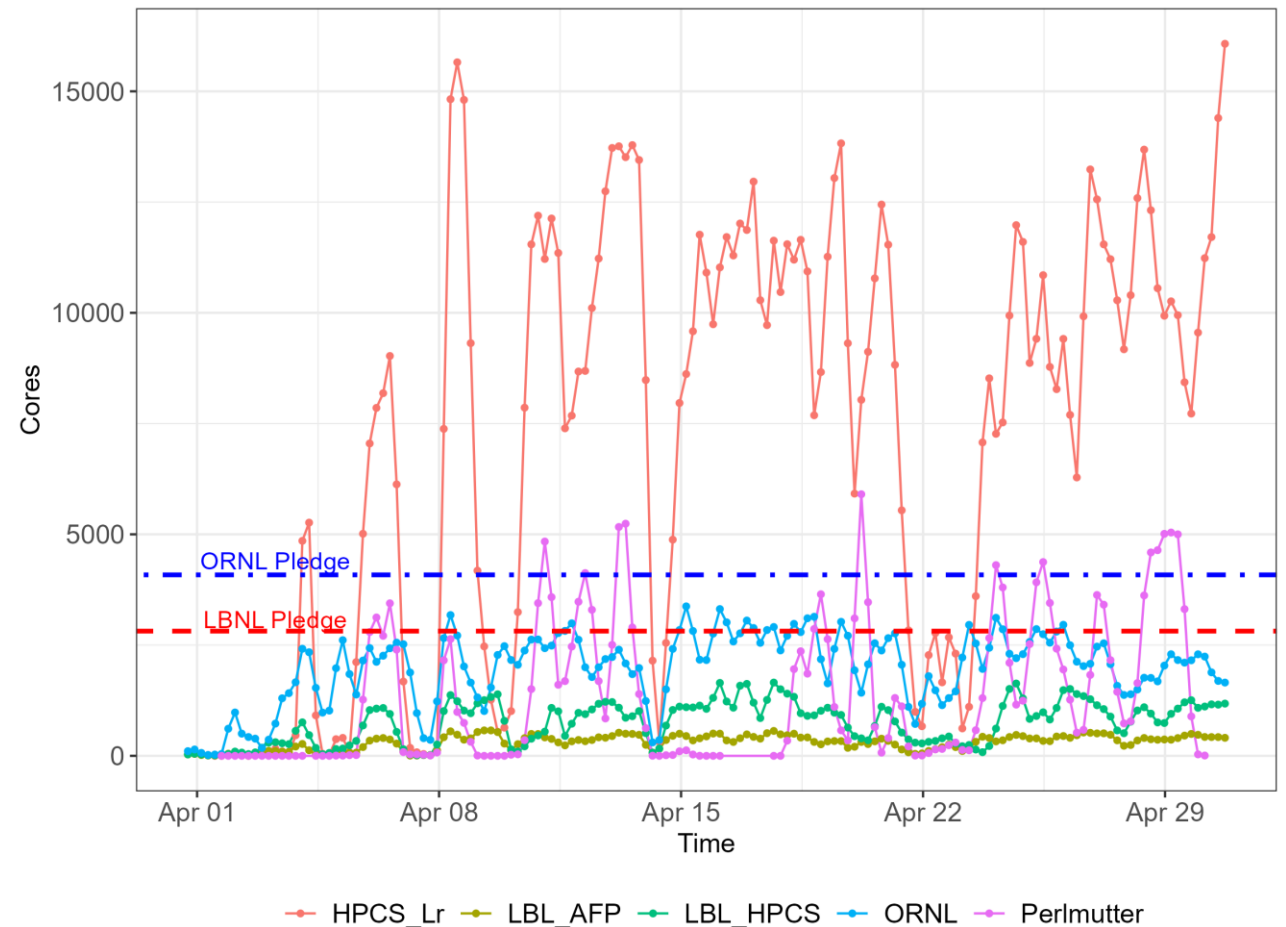
Color coding: N/A <30% <60% <90% >=90%

Availability History

Federation & Sites	Pledge CPU	Pledge Disk	Availability	Reliability	Unknown	Jan-2024	Feb-2024	Mar-2024
US-LBNL-ALICE	100900	10900						
LBL_HPCS			95%	95%	0%	73%	100%	100%
ORNL			92%	92%	0%	97%	95%	99%

Job Summary

- Total number of jobs
 - Simulation load is increasing, but still not very consistent
 - Perlmutter load is a good indication of MC jobs, as we only run MC on it
- CEs
 - LBL-HPCS - **OK**
 - ORNL - **OK**
 - Lawrenceium - **OK**
 - Perlmutter - **OK**
 - LBL_AFP - **OK**

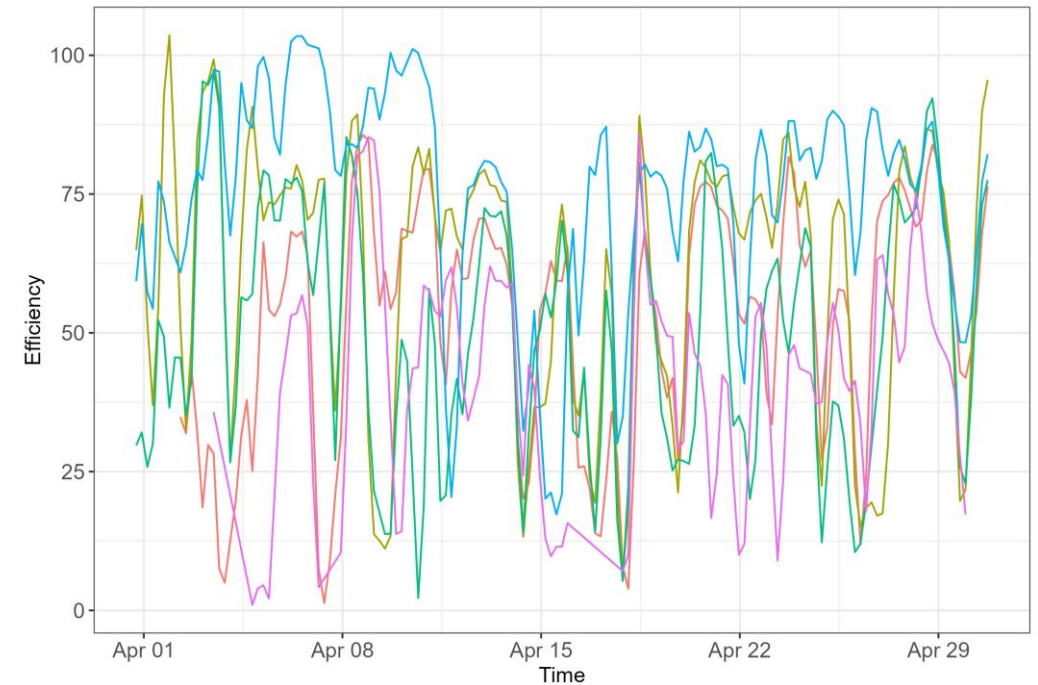


CPU Efficiency

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

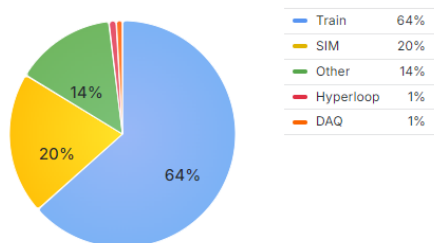
Jobs efficiency (cpu time / wall time)

	Series	Last value	Min	Avg	Max
1.	HPCS_Lr	78.57	0	46.91	154
2.	LBL_AFP	87.44	0	56.26	219.2
3.	LBL_HPCS	77.88	0	56.38	278
4.	NIHAM	79.41	0	59.4	210.9
5.	ORNL	44.14	0.082	59.02	160.6
6.	Perlmutter	45.65	0	46.33	1099
7.	UPB	89.13	0.065	70.08	157.8
Total		71.74		56.34	

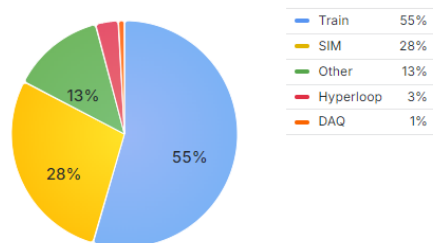


— HPCS_Lr — LBL_AFP — LBL_HPCS — ORNL — Perlmutter

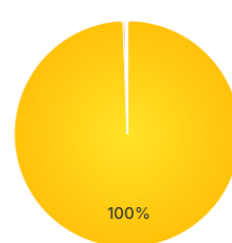
Average Job Mix [LBL_HPCS]



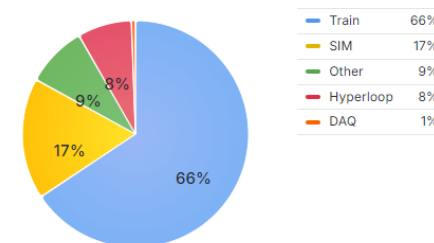
Average Job Mix [LBL_AFP]



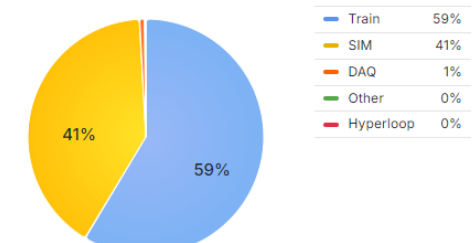
Average Job Mix [Perlmutter]



Average Job Mix [ORNL]

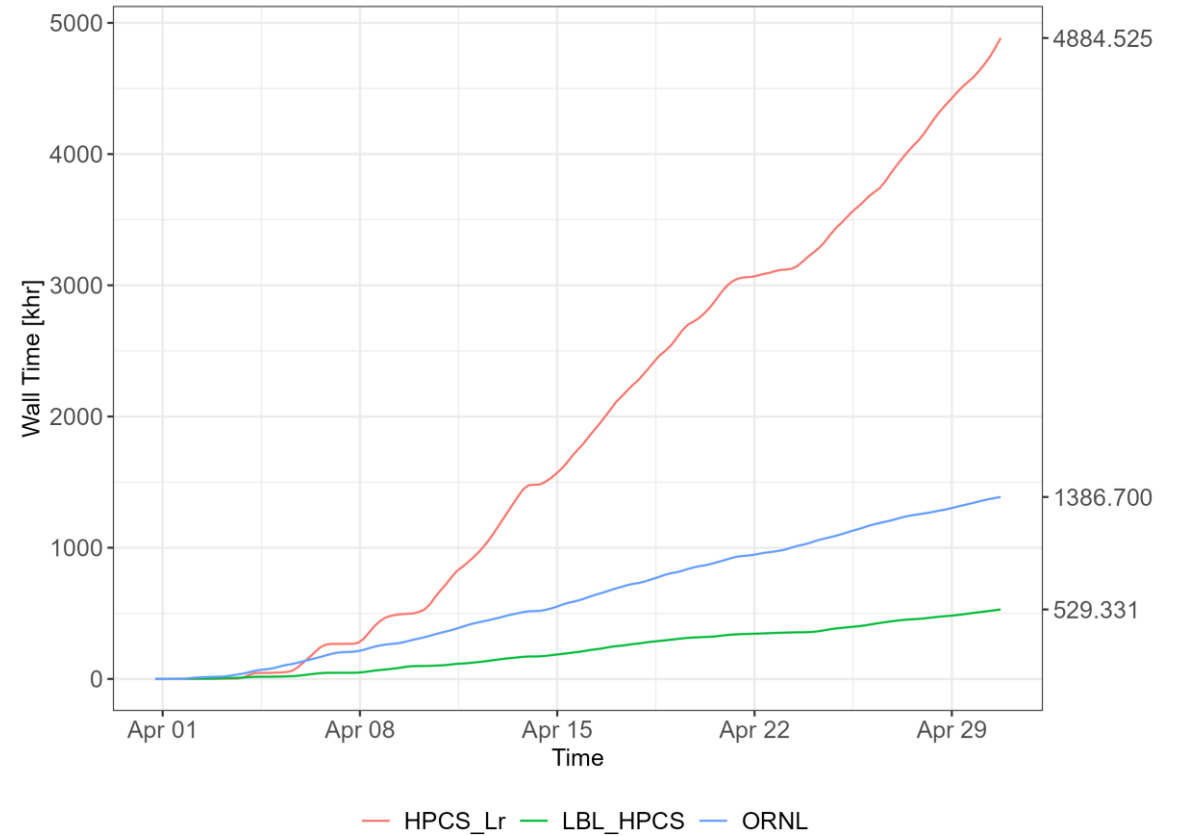


Average Job Mix [HPCS_Lr]



CPU Obligations		kHS06
ALICE-USA		100.9
LBNL HPCS T2		50.45
ORNL T2		50.45

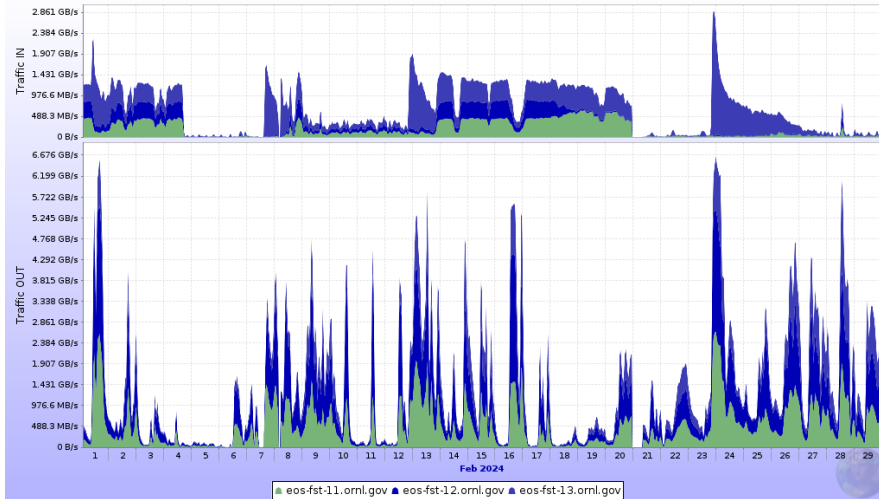
T2 Site	Monalisa (khr)	WLCG (khr)	%diff
HPCS_Lr	4884.53	9424.57	42.56
LBNL	529.33		
ORNL	1386.70	2300.00	39.71
Total	6,800.56	11,724.57	42.00



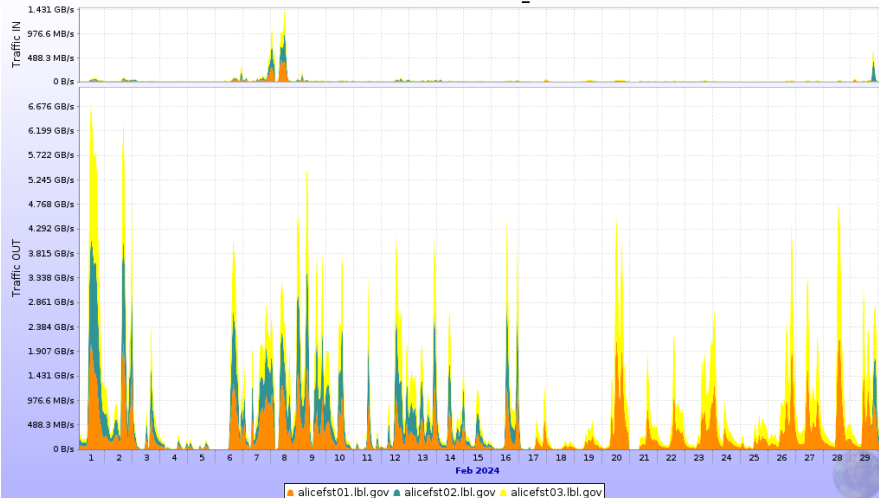
T2 Site and HPCS_Lr	CPU/Core [HS06/Core]	ALICE-USA Obligation [MHS06 x hr]	CPU Delivered [MHS06 x hr] (ML reporter)	CPU Delivered [MHS06 x hr] (WLCG reporter)	Delivered per Obligation [%] (ML reported)	Delivered per Obligation [%] (WLCG reported)
HPCS_Lr	12.0	36.32	58.61	113.09	161.4	311.4
LBNL	16.7		8.84		24.3	
ORNL	11.5	36.32	15.95	26.45	43.9	72.8
Total		72.65	83.40	139.54	114.80%	192.08%

Network Traffic at LBL and ORNL

Network traffic on ALICE::ORNL::EOS

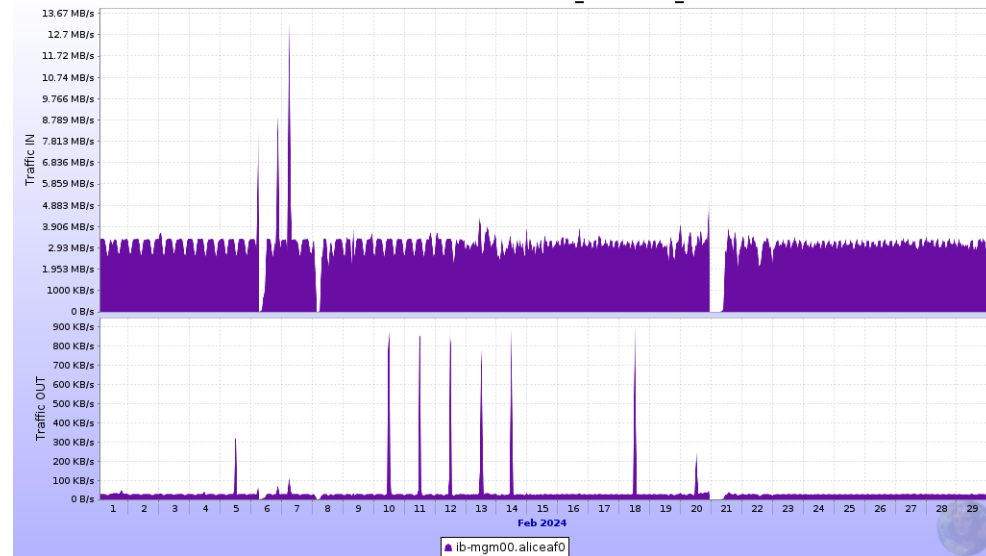


Network traffic on ALICE::LBL_HPCS::EOS

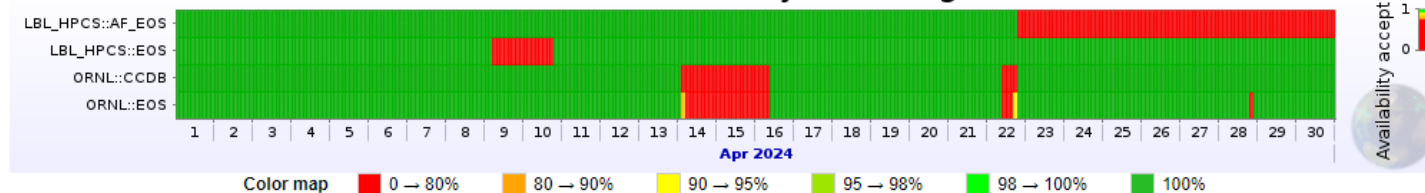


aliceafst not reporting under the LBL_HPCS::AF_EOS
Some configuration needs to be pointing to this instance?

Network traffic on ALICE::LBL_HPCS::AF_EOS

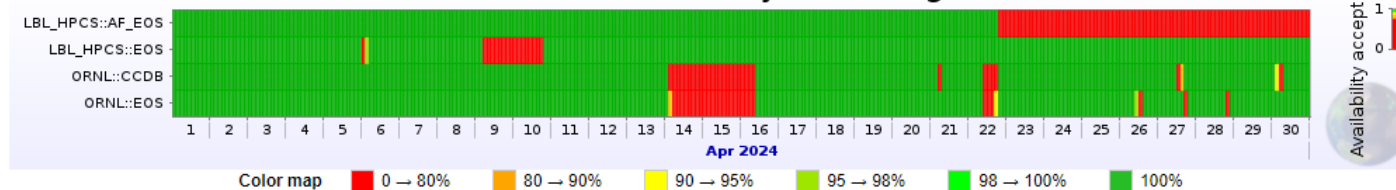


AliEn SEs availability for writing



Statistics						
Link name	Data		Individual results of writing tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	31 Mar 2024 23:13	30 Apr 2024 23:49	533	198	72.91%	72.80%
LBL_HPCS::EOS	31 Mar 2024 23:23	30 Apr 2024 23:56	688	37	94.90%	95.01%
ORNL::CCDB	31 Mar 2024 23:10	30 Apr 2024 23:44	672	60	91.80%	91.68%
ORNL::EOS	31 Mar 2024 23:23	30 Apr 2024 23:56	666	59	91.86%	91.82%

AliEn SEs availability for reading

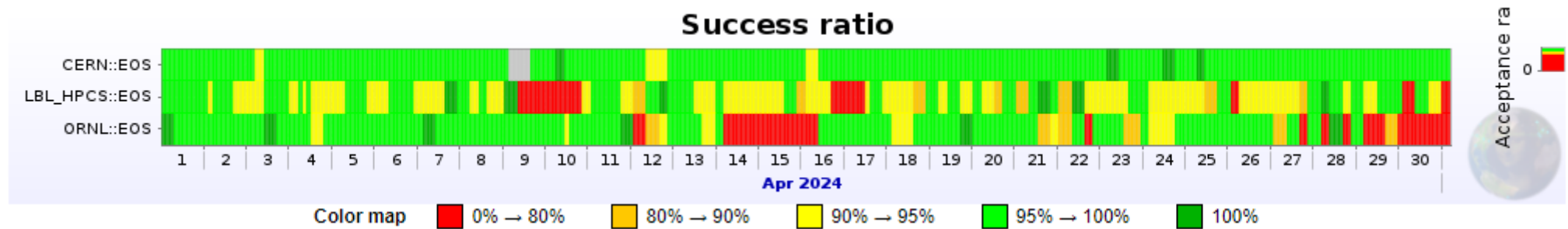


Statistics						
Link name	Data		Individual results of reading tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	31 Mar 2024 23:13	30 Apr 2024 23:49	533	198	72.91%	72.81%
LBL_HPCS::EOS	31 Mar 2024 23:23	30 Apr 2024 23:56	687	38	94.76%	94.87%
ORNL::CCDB	01 Apr 2024 00:10	30 Apr 2024 23:44	668	63	91.38%	91.25%
ORNL::EOS	31 Mar 2024 23:23	30 Apr 2024 23:56	664	61	91.59%	91.54%

SE Name	AliEn SE		Catalogue statistics					Storage-provided information						
	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	64.26 TB	1.038 PB	5.7%	68,152	FILE	1.092 PB	77.14 TB	1.017 PB	6.896%	Xrootd 5.5.10-1.el8.x86_64	
2. LBL_HPCS - EOS	ALICE::LBL_HPCS::EOS	2	3.48 PB	3.267 PB	218 TB	93.88%	66,156,479	FILE	3.48 PB	3.249 PB	236.3 TB	93.37%	Xrootd 5.5.10	5.1.30
3. ORNL - CCDB	ALICE::ORNL::CCDB	2	100 TB	4.17 TB	95.83 TB	4.17%	9,803,804	FILE	-	-	-	-		
4. ORNL - EOS	ALICE::ORNL::EOS	2	4.943 PB	2.907 PB	2.037 PB	58.8%	47,357,593	FILE	3.964 PB	3.051 PB	935.5 TB	76.95%		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	6.477 PB	3.933 PB		123,506,254		9.325 PB	6.618 PB	2.707 PB			

EOS: Success Ratio

- File corruption needs attention
- We need to rerun FSCK for both sites and generate lists for Costin to tend to



Averaged metrics for the selected interval						
SE Name	Start	End	Success ratio	Corrupt ratio	Inaccessible ratio	Internal error ratio
CERN::EOS	01 Apr 2024 03:39	01 May 2024 01:22	99.29 %	0.17 %	0.49 %	0.04 %
LBL_HPCS::EOS	01 Apr 2024 03:40	01 May 2024 01:10	86.04 %	1.36 %	12.60 %	0.00 %
ORNL::EOS	01 Apr 2024 03:40	01 May 2024 01:29	88.24 %	0.14 %	11.62 %	0.00 %

Status from the File Crawler

Status codes extracted from the crawler

SE Name: Interval:

Status Type	Status Code	Status Count	Status Code Ratio	Download throughput
FILE_OK	S_FILE_CHECKSUM_MATCH	12242	67.01 %	64.70 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	6000	32.84 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	27	0.15 %	
TOTAL		18269	100 %	

Status codes extracted from the crawler

SE Name: Interval:

Status Type	Status Code	Status Count	Status Code Ratio	Download throughput
FILE_OK	S_FILE_CHECKSUM_MATCH	19755	94.51 %	60.83 Mb/s
FILE_INACCESSIBLE	E_CATALOGUE_MD5_IS_BLANK	48	0.23 %	41.69 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	737	3.53 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	361	1.73 %	
FILE_CORRUPT	LOCAL_FILE_SIZE_DIFFERENT	2	0.01 %	
TOTAL		20903	100 %	

We observed that due to some strange process corrupted files may have been copied to ORNL
Clean-up is urgently needed

Site Status Dashboard

Last Month

ORNL, LBL	
Site name	VOBox and SE problems
ORNL voboxslr.alice.ornl.gov	ALICE::ORNL::EOS redirector ALICE::ORNL::EOS doesn't see all nodes, only 3.964 PB out of 4.943 PB total space is connected 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	Site name	Comma-separated list of site name prefixes	VOBox and SE problems
	HPCS_Lr lrc-vobox.lbl.gov		Networking : low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking : No IPv6 public address CVMFS : old CVMFS version detected (2.10.1), please upgrade to 2.11.3.
	ORNL voboxslr.alice.ornl.gov		ALICE::ORNL::EOS redirector ALICE::ORNL::EOS doesn't see all nodes, only 3.964 PB out of 4.943 PB total space is connected Networking : low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking : No IPv6 public address CVMFS : old CVMFS version detected (2.11.2), please upgrade to 2.11.3.
	Perlmutter alice-sfapi.lbl.gov		Networking : low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking : No IPv6 public address CVMFS : old CVMFS version detected (2.10.0), please upgrade to 2.11.3.
	LBL_HPCS alice-vobox.lbl.gov		Networking : low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking : No IPv6 public address CVMFS : old CVMFS version detected (2.11.2), please upgrade to 2.11.3. 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 CVMFS : old CVMFS version detected (2.11.2), please upgrade to 2.11.3.
	5 sites		16 issues

This month