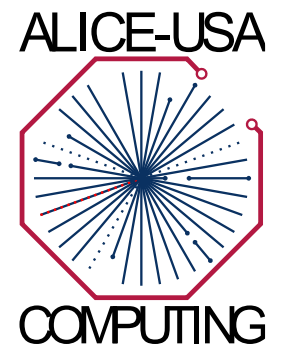


ALICE-USA Operations Monthly Status for February 2024

March 19, 2024



Availability and Reliability Reports

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



Tier-2 Availability and Reliability Report

ALICE

February 2024

Federation Details

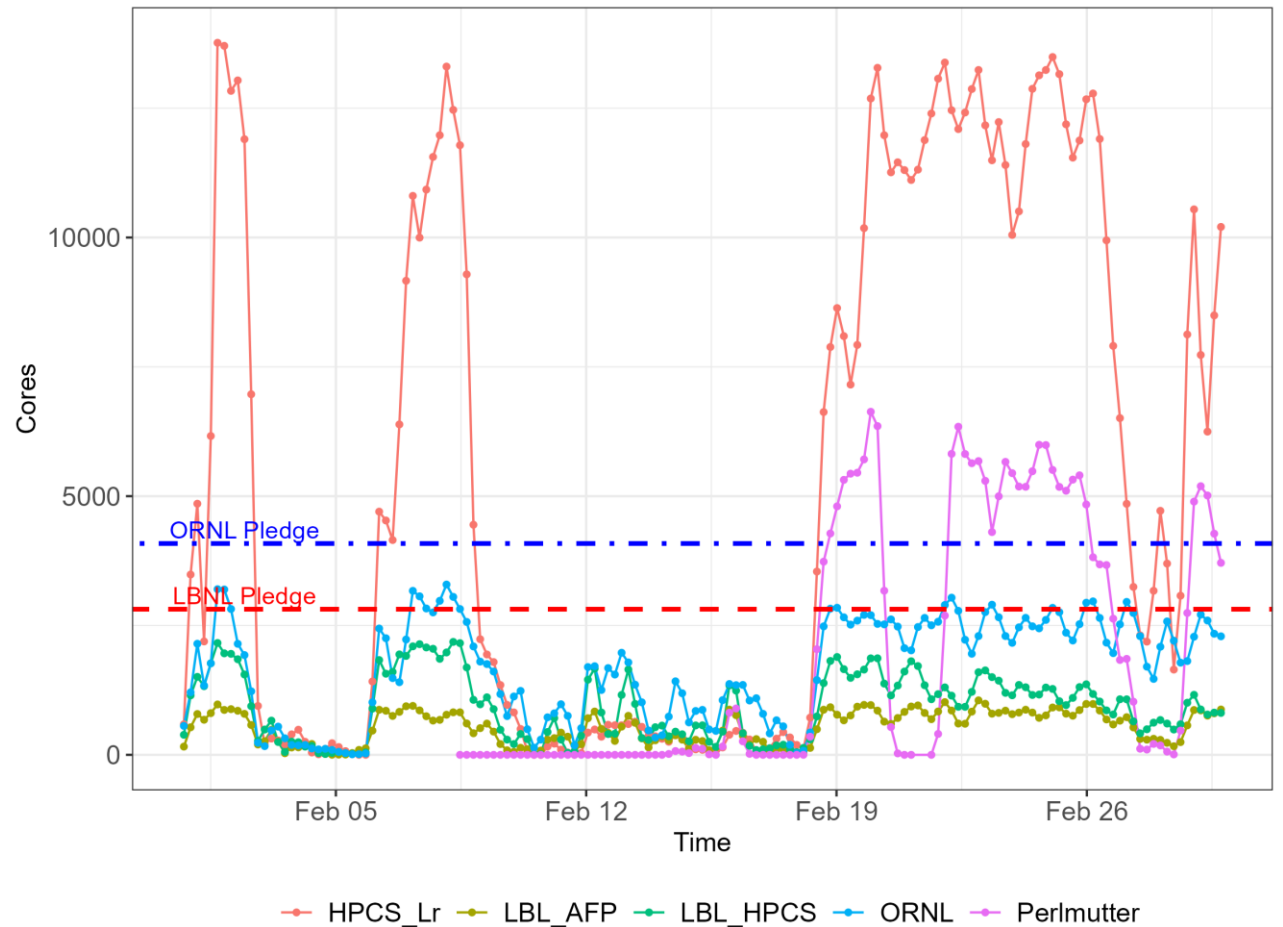
Availability Algorithm: @ALICE_CE * @ALICE_VOBOX * all AliEn-SE

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

Federation & Sites	Pledge CPU	Pledge Disk	Availability	Reliability	Unknown	Availability History		
						Nov-2023	Dec-2023	Jan-2024
US-LBNL-ALICE	94300	9800						
LBL_HPCS			100%	100%	0%	78%	100%	73%
ORNL			95%	95%	0%	90%	93%	97%

Job Summary

- Total number of jobs
 - Simulation load is increasing, but still not very consistent
- CEs
 - LBL-HPCS - **OK**
 - ORNL - **OK**
 - Lawrenceium - **OK**
 - Perlmutter - **OK**
 - LBL_AFP - **OK**

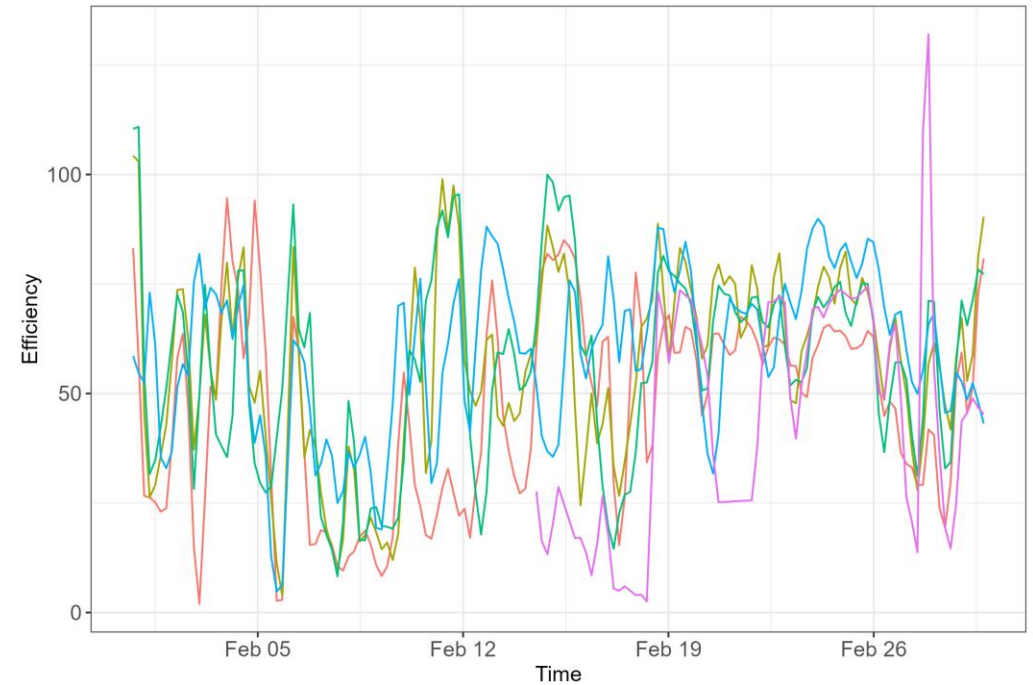


CPU Efficiency

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

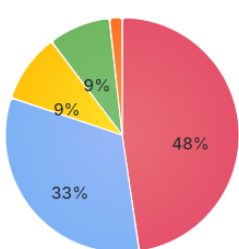
Jobs efficiency (cpu time / wall time)

	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	



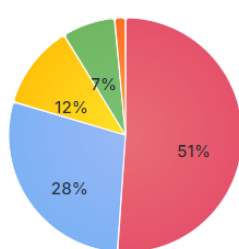
— HPCS_Lr — LBL_AFP — LBL_HPCS — ORNL — Perlmutter

Average Job Mix [LBL_HPCS]



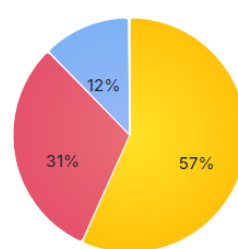
Hyperloop	48%
Train	33%
SIM	9%
Other	9%
DAQ	2%

Average Job Mix [LBL_AFP]



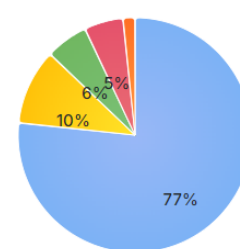
Hyperloop	51%
Train	28%
SIM	12%
Other	7%
DAQ	1%

Average Job Mix [Perlmutter]



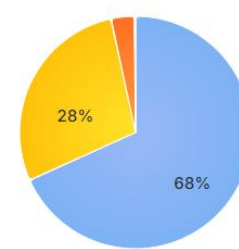
SIM	57%
Hyperloop	31%
Train	12%
DAQ	0%
Other	0%

Average Job Mix [ORNL]



Train	77%
SIM	10%
Other	6%
Hyperloop	5%
DAQ	2%

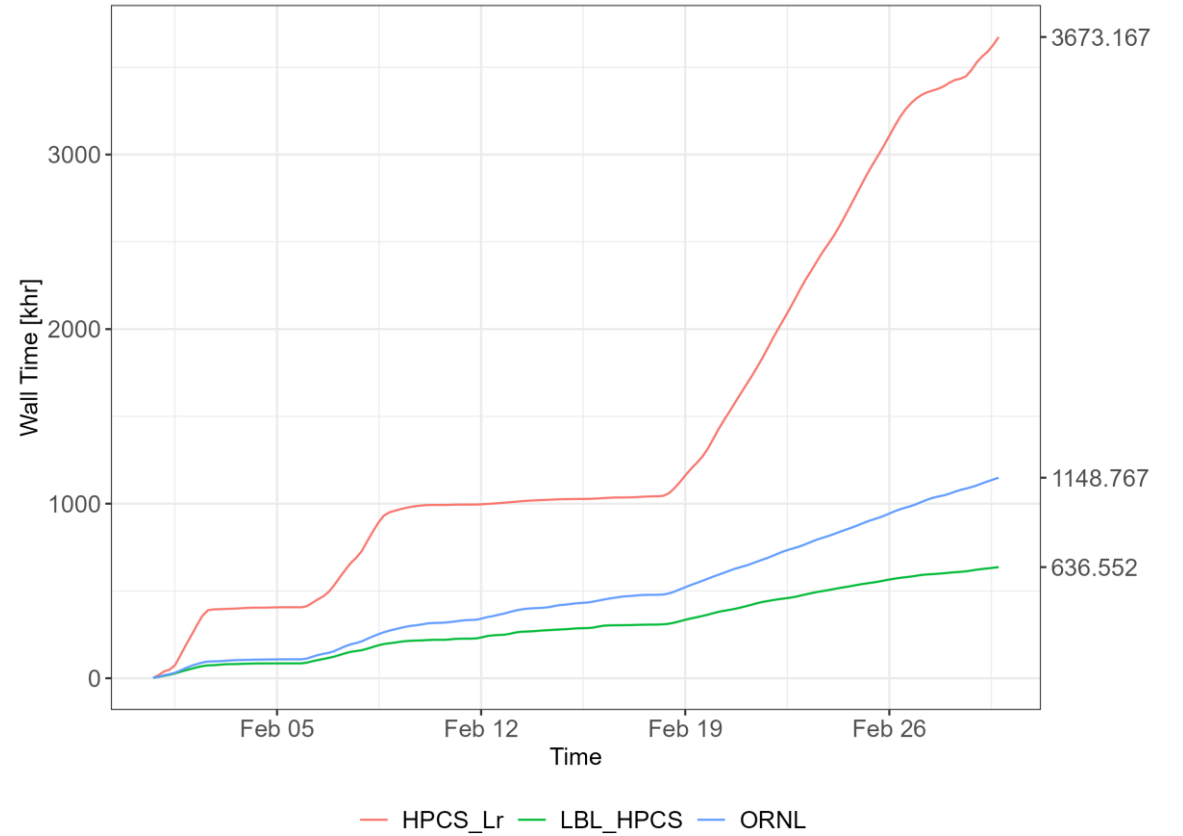
Average Job Mix [HPCS_Lr]



Train	68%
SIM	28%
DAQ	3%
Other	0%
Hyperloop	0%

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

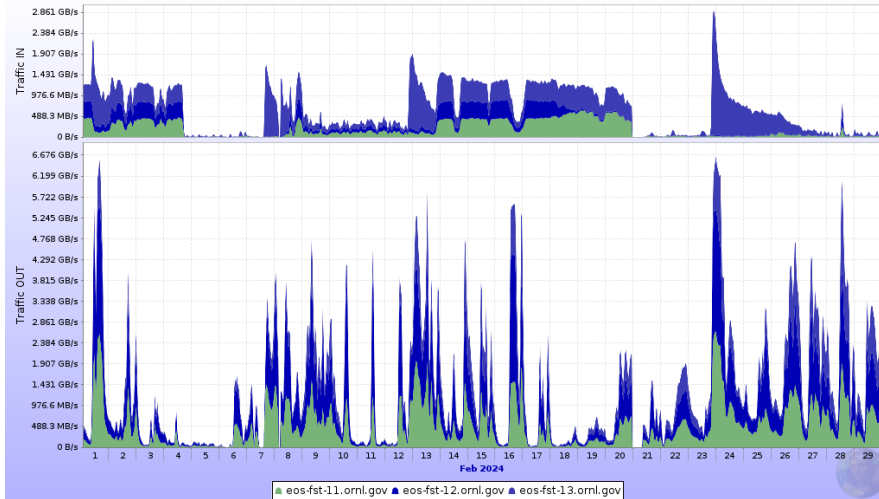
T2 Site	Monalisa (khr)	WLCG (khr)	%diff
HPCS_Lr	3673.17	7540.60	42.85
LBNL	636.55		
ORNL	1148.77	2105.05	45.43
Total	5,458.49	9,645.65	43.41



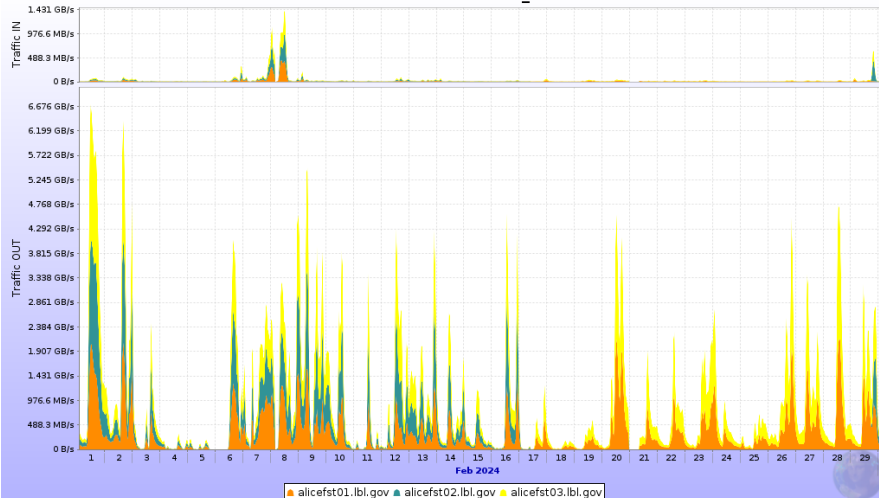
T2 Site and HPCS_Lr	CPU/Core [HS06/Core]	ALICE-USA Obligation [MHS06 x hr]	CPU Delivered [MHS06 x hr] (ML reporter)	CPU Delivered [MHS06 x hr] (WLCG reporter)	Delivered per Obligation [%] (ML reported)	Delivered per Obligation [%] (WLCG reported)
HPCS_Lr	12.0	32.71	44.08	90.49	134.7	276.6
LBNL	16.7		10.63			
ORNL	11.5	32.71	13.21	24.21	40.4	74.0
Total		65.42	67.92	114.70	103.81%	175.31%

Network Traffic at LBL and ORNL

Network traffic on ALICE::ORNL::EOS

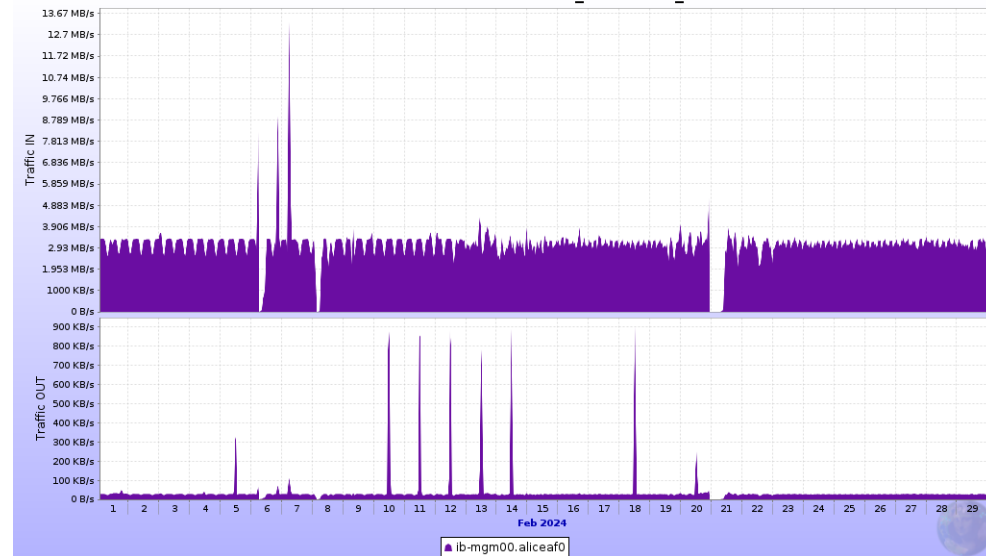


Network traffic on ALICE::LBL_HPCS::EOS

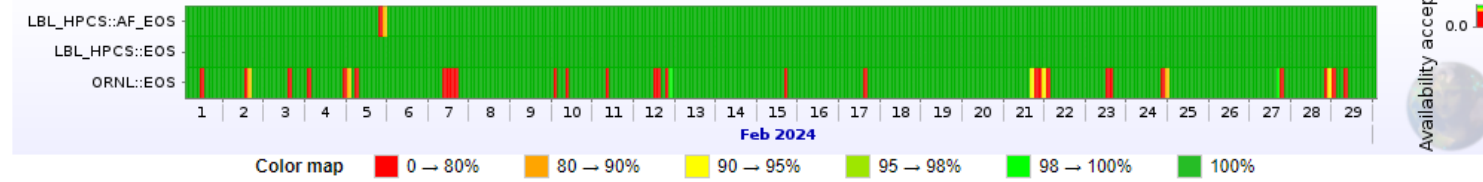


alicefst not reporting under the LBL_HPCS::AF_EOS
Some configuration needs to be pointing to this instance?

Network traffic on ALICE::LBL_HPCS::AF_EOS

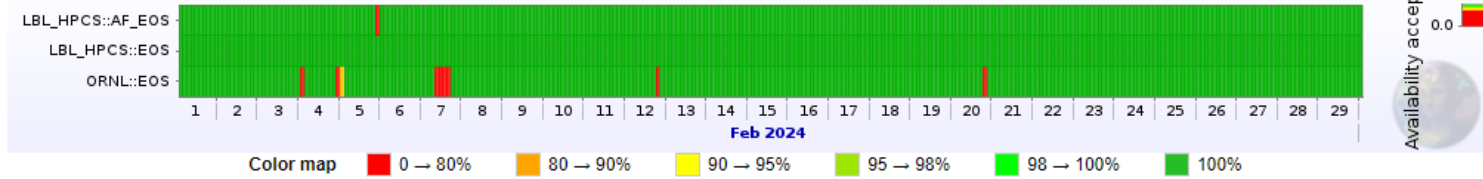


AliEn SEs availability for reading



Statistics						
Link name	Data		Individual results of reading tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Feb 2024 01:26	01 Mar 2024 01:39	699	1	99.86%	99.85%
LBL_HPCS::EOS	01 Feb 2024 01:36	01 Mar 2024 01:49	696	0	100%	100%
ORNL::EOS	01 Feb 2024 01:37	01 Mar 2024 01:50	662	33	95.25%	95.29%

AliEn SEs availability for writing

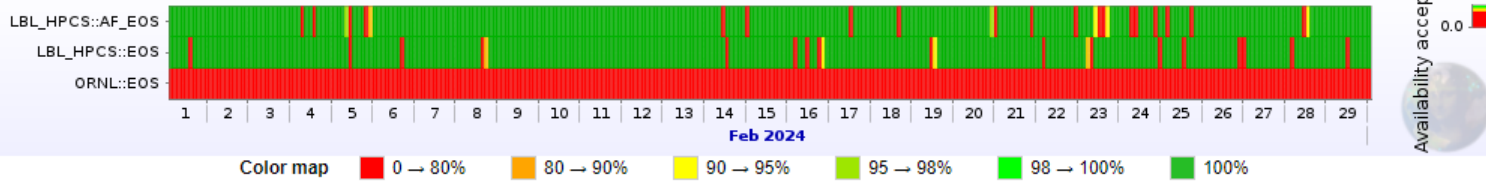


Statistics						
Link name	Data		Individual results of writing tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Feb 2024 01:26	01 Mar 2024 01:39	699	1	99.86%	99.85%
LBL_HPCS::EOS	01 Feb 2024 01:36	01 Mar 2024 01:49	696	0	100%	100%
ORNL::EOS	01 Feb 2024 01:37	01 Mar 2024 01:50	685	10	98.56%	98.60%

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	81.48 TB	1.021 PB	7.227%	139,763	FILE	1.092 PB	89.13 TB	1.005 PB	7.968%	Xrootd 5.5.10-1.el8.x86_64	
2. LBL_HPCS - EOS	ALICE::LBL_HPCS::EOS	2	3.48 PB	3.216 PB	269.8 TB	92.43%	63,440,451	FILE	3.48 PB	3.198 PB	288.4 TB	91.9%	Xrootd 5.5.10	5.1.30
3. ORNL - CCDB	ALICE::ORNL::CCDB	2	100 TB	3.668 TB	96.33 TB	3.668%	8,245,245	FILE	-	-	-	-		
4. ORNL - EOS	ALICE::ORNL::EOS	2	4.943 PB	3.183 PB	1.76 PB	64.39%	45,397,550	FILE	3.964 PB	3.241 PB	741.2 TB	81.74%		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	6.719 PB	3.691 PB		117,343,235		9.325 PB	6.768 PB	2.557 PB			

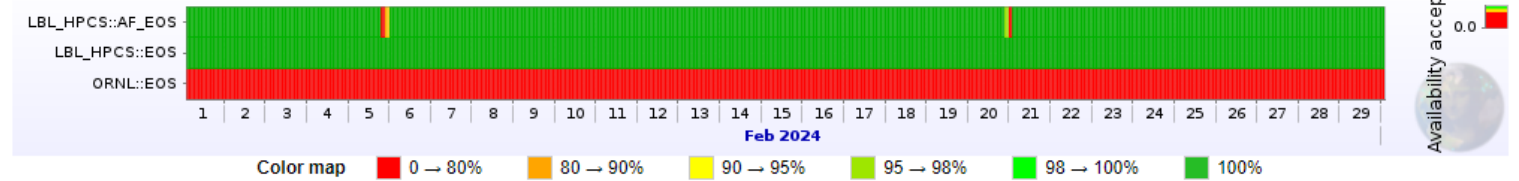
Using IPv6 Only

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 Feb 2024 01:26	01 Mar 2024 01:39	681	19	97.29%	97.29%
LBL_HPCS::EOS	01 Feb 2024 01:36	01 Mar 2024 01:49	679	16	97.70%	97.70%
ORNL::EOS	01 Feb 2024 01:39	01 Mar 2024 01:52	0	693	0%	0%

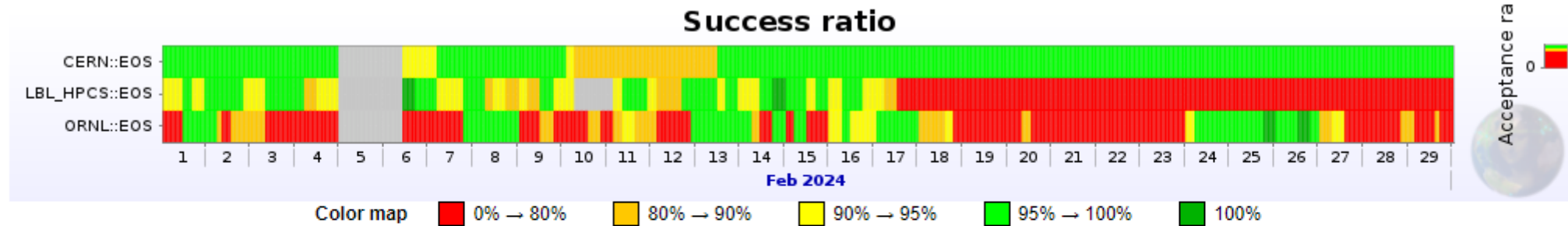
AliEn SEs availability for writing



Statistics						
Link name	Data		Individual results of writing tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Feb 2024 01:26	01 Mar 2024 01:39	698	2	99.71%	99.74%
LBL_HPCS::EOS	01 Feb 2024 01:36	01 Mar 2024 01:49	695	0	100%	100%
ORNL::EOS	01 Feb 2024 01:39	01 Mar 2024 01:52	0	693	0%	0%

EOS: Success Ratio

- ORNL showing some problems that I have not seen before
- Still no AF in crawler



Averaged metrics for the selected interval						
SE Name	Start	End	Success ratio	Corrupt ratio	Inaccessible ratio	Internal error ratio
CERN::EOS	01 Feb 2024 06:25	29 Feb 2024 19:22	97.90 %	0.02 %	2.04 %	0.04 %
LBL_HPCS::EOS	01 Feb 2024 06:28	29 Feb 2024 18:50	79.49 %	1.00 %	19.51 %	0.00 %
ORNL::EOS	01 Feb 2024 06:28	29 Feb 2024 19:05	78.62 %	0.25 %	21.14 %	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	20745	98.27 %	66.25 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	2	0.01 %	90.44 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	167	0.79 %	
	XROOTD_TIMED_OUT	1	0.00 %	
FILE_CORRUPT	LOCAL_FILE_SIZE_DIFFERENT	178	0.84 %	
	MD5_CHECKSUMS_DIFFER	17	0.08 %	
TOTAL		21110	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	25392	92.97 %	54.30 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	8	0.03 %	61.70 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	1529	5.60 %	
FILE_CORRUPT	LOCAL_FILE_SIZE_DIFFERENT	221	0.81 %	
	MD5_CHECKSUMS_DIFFER	163	0.60 %	
TOTAL		27313	100 %	

Site Status Dashboard

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

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	7 issues

This month