ALICE-USA Operations
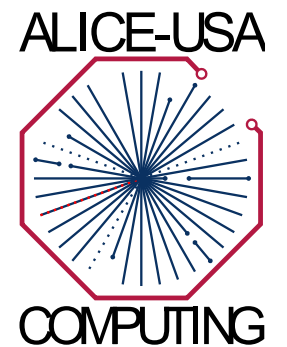## Monthly Status for August 2023

September 19, 2023

ALICE-USA
COMPUTING

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

Tier-2 Availability and Reliability Report
ALICE
Federation Details

August 2023

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	May-2023	Jun-2023	Jul-2023
US-LBNL-ALICE	**94300**	**9800**						
LBL_HPCS			67%	67%	0%	100%	100%	64%
ORNL			99%	99%	0%	86%	87%	99%

Availability History (May-2023, Jun-2023, Jul-2023)

Job Summary

- Total number of jobs
  - Low availability second half of the month

- LBL-HPCS
  - Number of jobs were reduced during and for some period after EOS issues

- ORNL
  - Good performance

- Lawrencium
  - Good performance
  - Looking forward to lr7 in our pool (at least the STAR nodes pls ☺)

- Perlmutter
  - TTL is now 24 hours
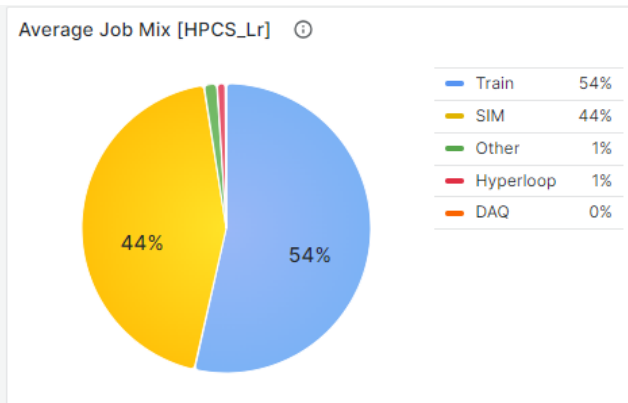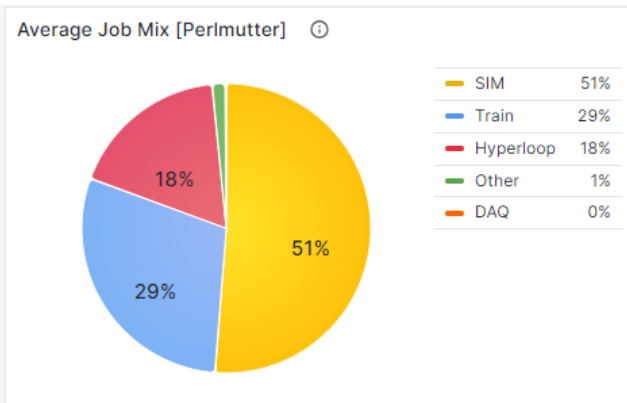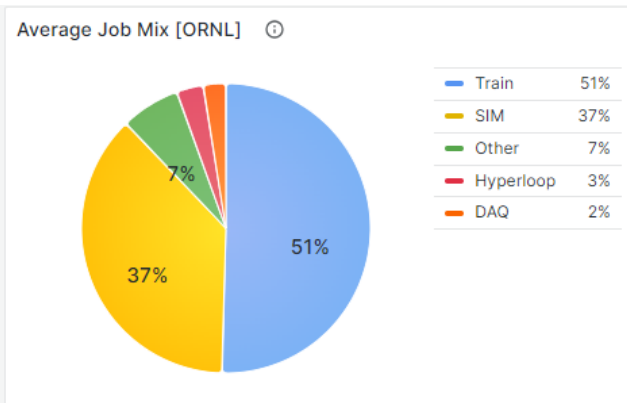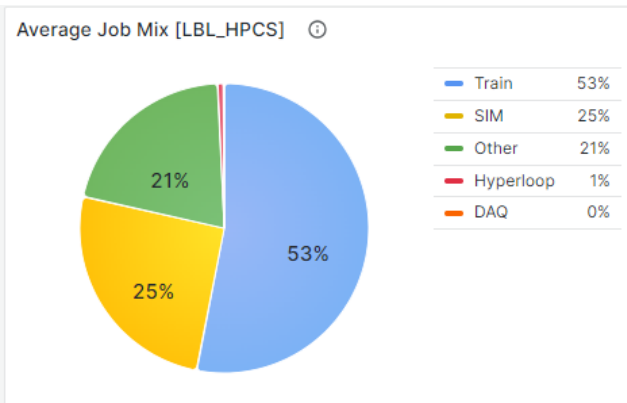 - Need to solve the issue with number of open files allowed

Total allocated cores per site
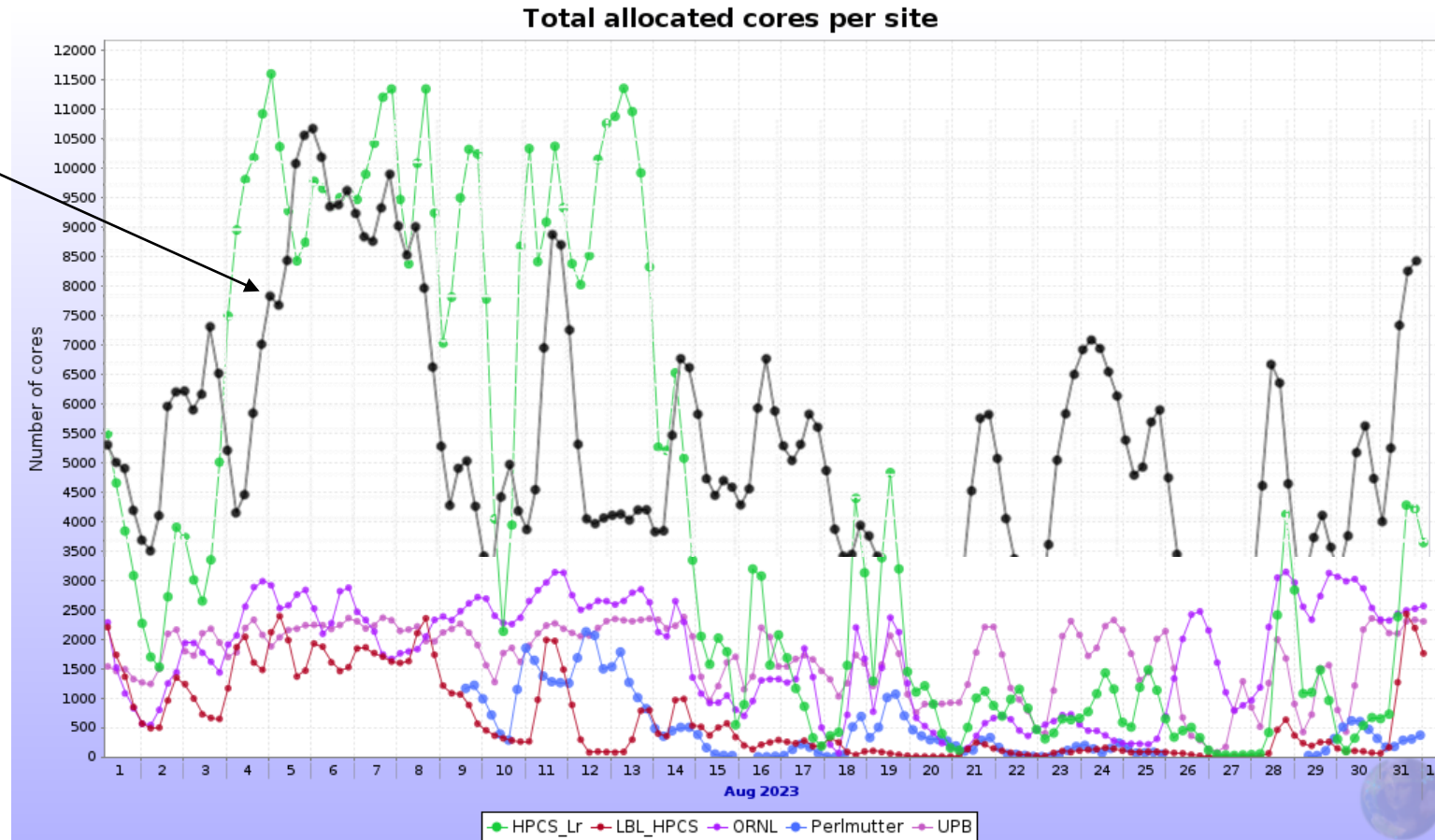
CPU Efficiency
Target Efficiency is ~80%

Jobs efficiency (cpu time / wall time)

	Series	Last value	Min	Avg	Max
1.	HPCS_Lr	7.647	0.684	50.35	123.6
2.	LBL_HPCS	7.223	0.215	49.98	803.6
3.	NIHAM	75.07	8.245	67.84	277.9
4.	ORNL	68.4	0.428	70.58	136.1
5.	Perlmutter	73.93	0.128	34.97	198.6
6.	UPB	89.32	3.692	75.2	131.6
Total		**53.6**		**58.15**	

Jobs efficiency (cpu time / wall time)

Average Job Mix [LBL_HPCS]

Train	53%
SIM	25%
Other	21%
Hyperloop	1%
DAQ	0%

Average Job Mix [ORNL]

Train	51%
SIM	37%
Other	7%
Hyperloop	3%
DAQ	2%

Average Job Mix [Perlmutter]

SIM	51%
Train	29%
Hyperloop	18%
Other	1%
DAQ	0%

Average Job Mix [HPCS_Lr]

Train	54%
SIM	44%
Other	1%
Hyperloop	1%
DAQ	0%
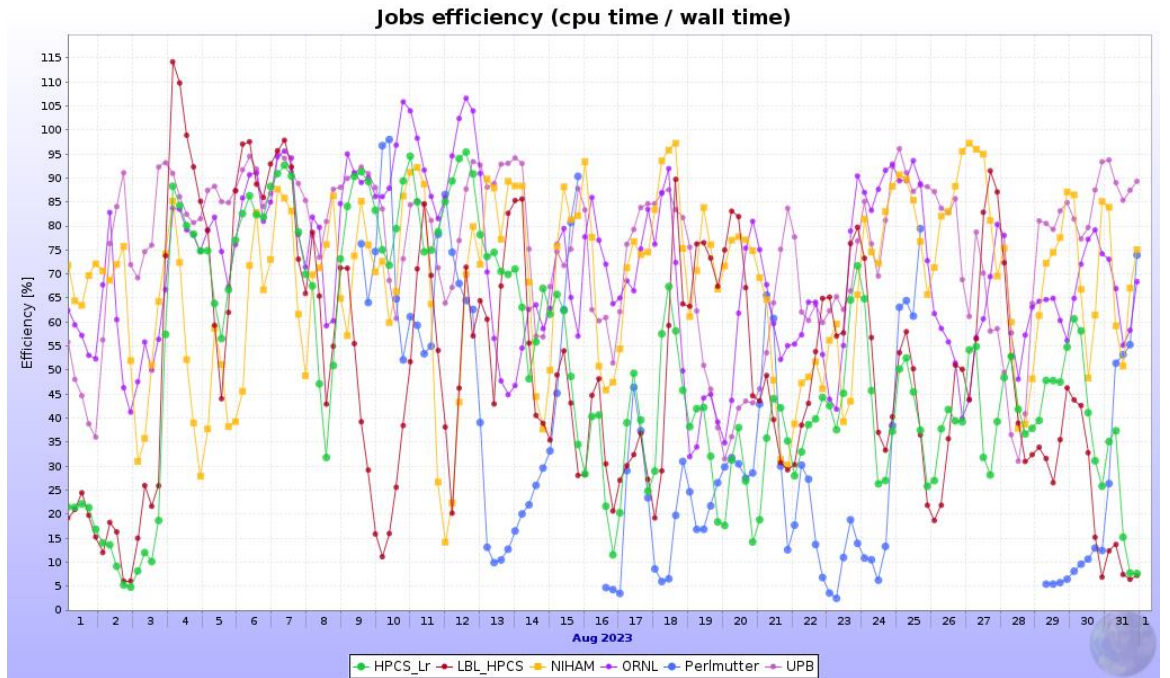
CPU Obligations	kHS06
ALICE-USA	94
LBNL HPCS T2	47
ORNL T2	47

T2 Site	Monalisa (khr)	WLCG (khr)	%diff
HPCS_Lr	2988.10		
LBNL	422.60		
ORNL	809.70	1343.40	39.73
Total	**4,220.40**	**5,776.20**	**26.93**

Total wall time for ALICE jobs

|	
HPCS_Lr	2988103
LBL_HPCS	442630
ORNL	809703
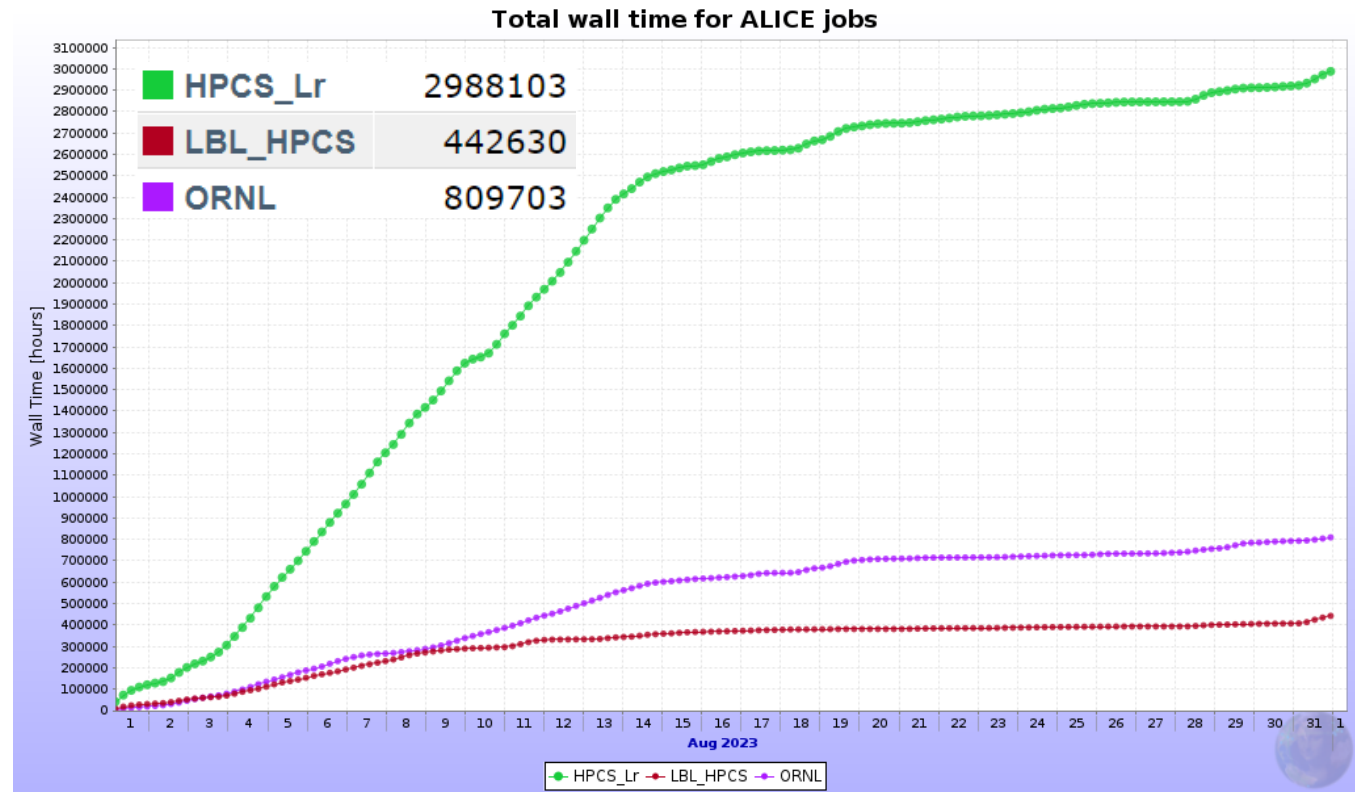
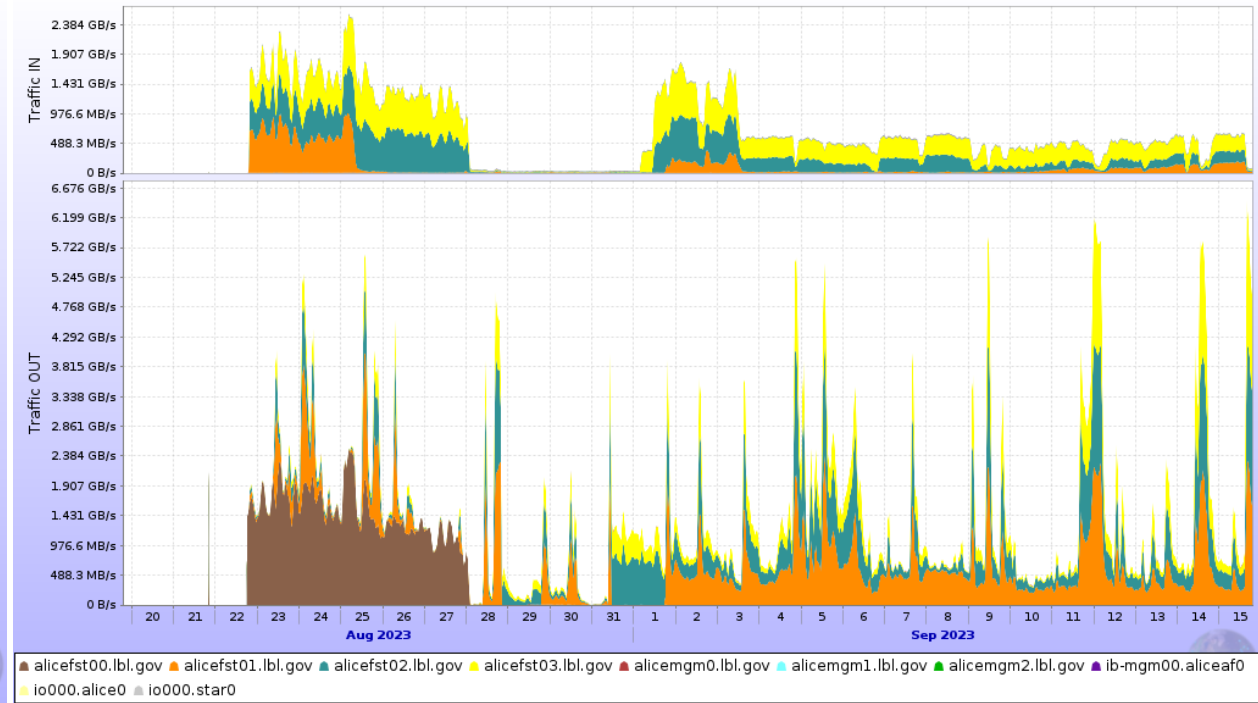| T2 Site and HPCS_Lr	CPU/Core [HS06/Core]	ALICE-USA Obligation [MHS06 x hr]	CPU Delivered [MHS06 x hr] (ML reporter)	CPU Delivered [MHS06 x hr] (WLCG reporter)	Delivered per Obligation [%] (ML reported)	Delivered per Obligation [%] (WLCG reported)
HPCS_Lr	12.0	34.97	35.86		102.5	
LBNL	16.7		7.06		20.2	
ORNL	11.5	34.97	9.31	15.45	26.6	44.2
Total		**69.94**	**52.23**	**68.64**	**74.68%**	**44.2%**

Network Traffic at LBL and ORNL
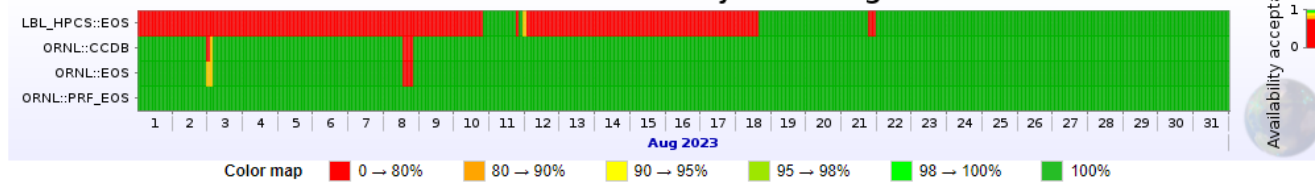

Network traffic on ALICE::ORNL::EOS
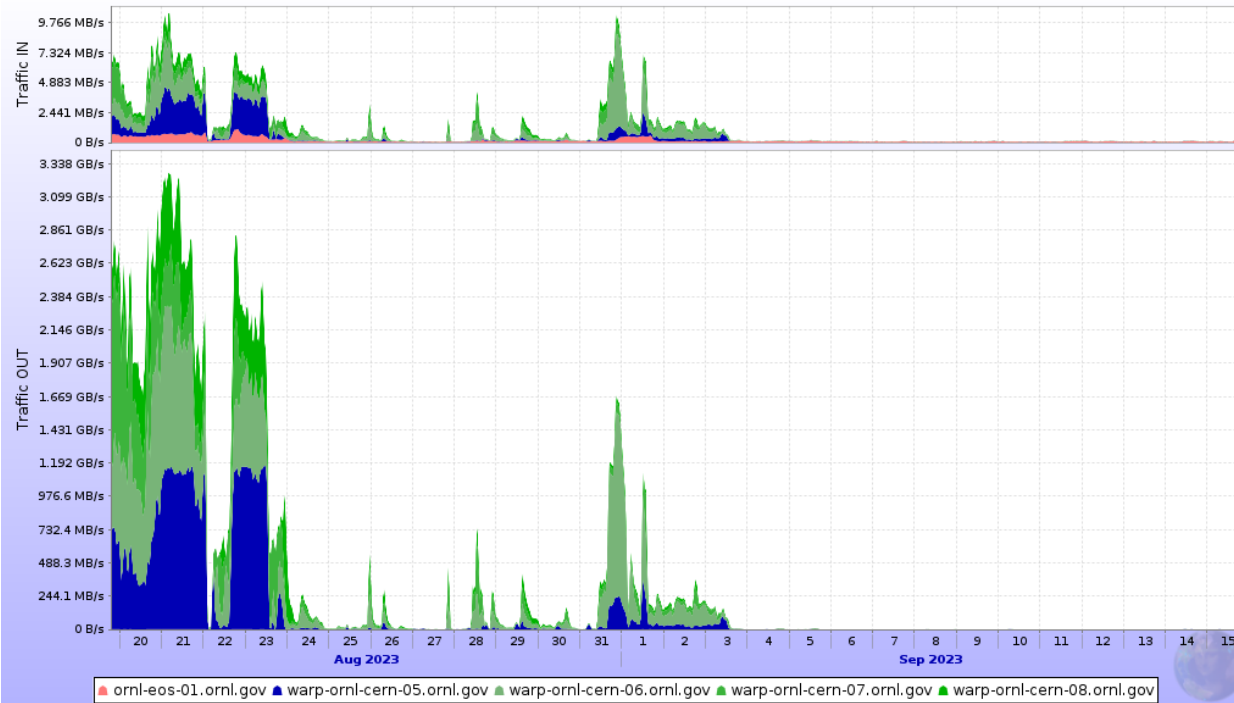
Network traffic on ALICE::LBL_HPCS::EOS

AliEn SEs availability for writing

Aug 2023

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::EOS	01 Aug 2023 00:26	31 Aug 2023 23:43	357	390	47.79%	47.57%
ORNL::CCDB	01 Aug 2023 00:11	01 Sep 2023 00:32	749	7	99.07%	99.07%
ORNL::EOS	01 Aug 2023 00:23	31 Aug 2023 23:44	741	6	99.20%	99.20%
ORNL::PRF_EOS	01 Aug 2023 00:11	01 Sep 2023 00:32	756	0	100%	100%

AliEn SEs availability for reading

Aug 2023

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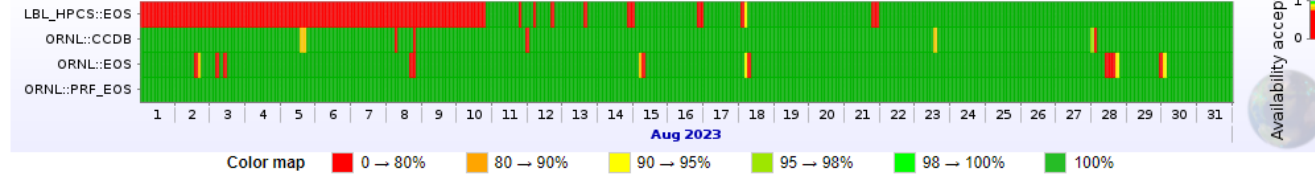
Statistics

Link name	Data		Individual results of reading tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::EOS	01 Aug 2023 00:26	31 Aug 2023 23:43	501	246	67.07%	66.91%
ORNL::CCDB	01 Aug 2023 00:11	01 Sep 2023 00:32	749	7	99.07%	99.15%
ORNL::EOS	01 Aug 2023 00:24	31 Aug 2023 23:44	736	11	98.53%	98.56%
ORNL::PRF_EOS	01 Aug 2023 00:12	01 Sep 2023 00:32	755	0	100%	100%

SE Name	Storage-provided information					
	Size	Used	Free	Usage	Version	EOS Version
1. LBL_HPCS - AF_EOS	1.101 PB	7.867 TB	1.094 PB	0.698%		
2. LBL_HPCS - EOS	3.48 PB	2.186 PB	1.294 PB	62.82%	Xrootd 5.5.10	5.1.27
3. ORNL - CCDB	-	-	-	-		
4. ORNL - EOS	4.943 PB	1.456 PB	3.487 PB	29.46%	Xrootd v5.5.5	5.1.27
5. ORNL - PRF_EOS	807.7 TB	240.4 TB	567.3 TB	29.76%		5.1.14
Total	**10.31 PB**	**3.884 PB**	**6.428 PB**			

Using IPv6 Only

AliEn SEs availability for writing

AliEn SEs availability for reading

EOS: Success Ratio

Success ratio

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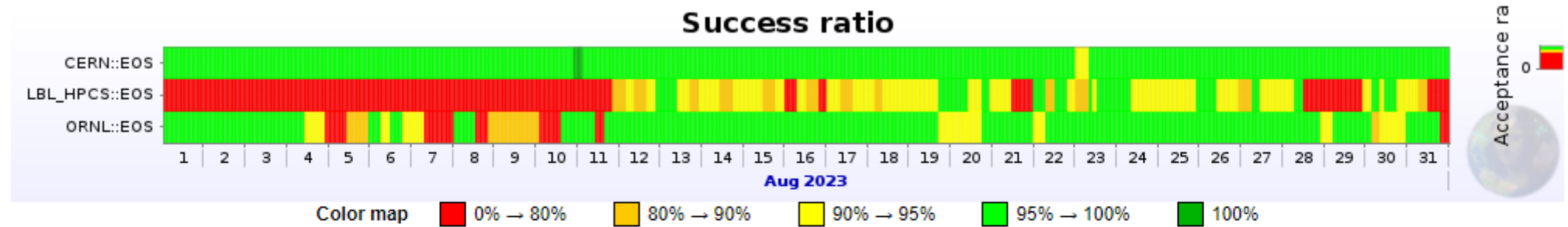
Averaged metrics for the selected interval

SE Name	Start	End	Success ratio	Corrupt ratio	Inaccessible ratio	Internal error ratio
CERN::EOS	31 Jul 2023 23:37	31 Aug 2023 21:06	99.50 %	0.03 %	0.43 %	0.04 %
LBL_HPCS::EOS	01 Aug 2023 05:40	31 Aug 2023 21:00	62.83 %	0.87 %	36.29 %	0.00 %
ORNL::EOS	01 Aug 2023 05:41	31 Aug 2023 21:04	93.99 %	0.30 %	5.71 %	0.00 %

Status from the File Crawler

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	14717	66.88 %	81.66 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	4	0.02 %	102.19 Mb/s
INTERNAL_ERROR	XRDFS_CANNOT_CONFIRM_UPLOAD	1	0.00 %	
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	7208	32.75 %	
	XROOTD_TIMED_OUT	1	0.00 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	75	0.34 %	
TOTAL		22006	100 %	

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	18556	99.36 %	70.24 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	39	0.21 %	47.45 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	66	0.35 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	15	0.08 %	
TOTAL		18676	100 %	

Site Status Dashboard

Last Month

This month