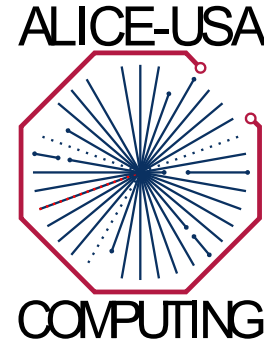
ALICE-USA Operations
Monthly Status for October 2023

November 17, 2023



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

Tier-2 Availability and Reliability Report

ALICE

October 2023

Federation Details

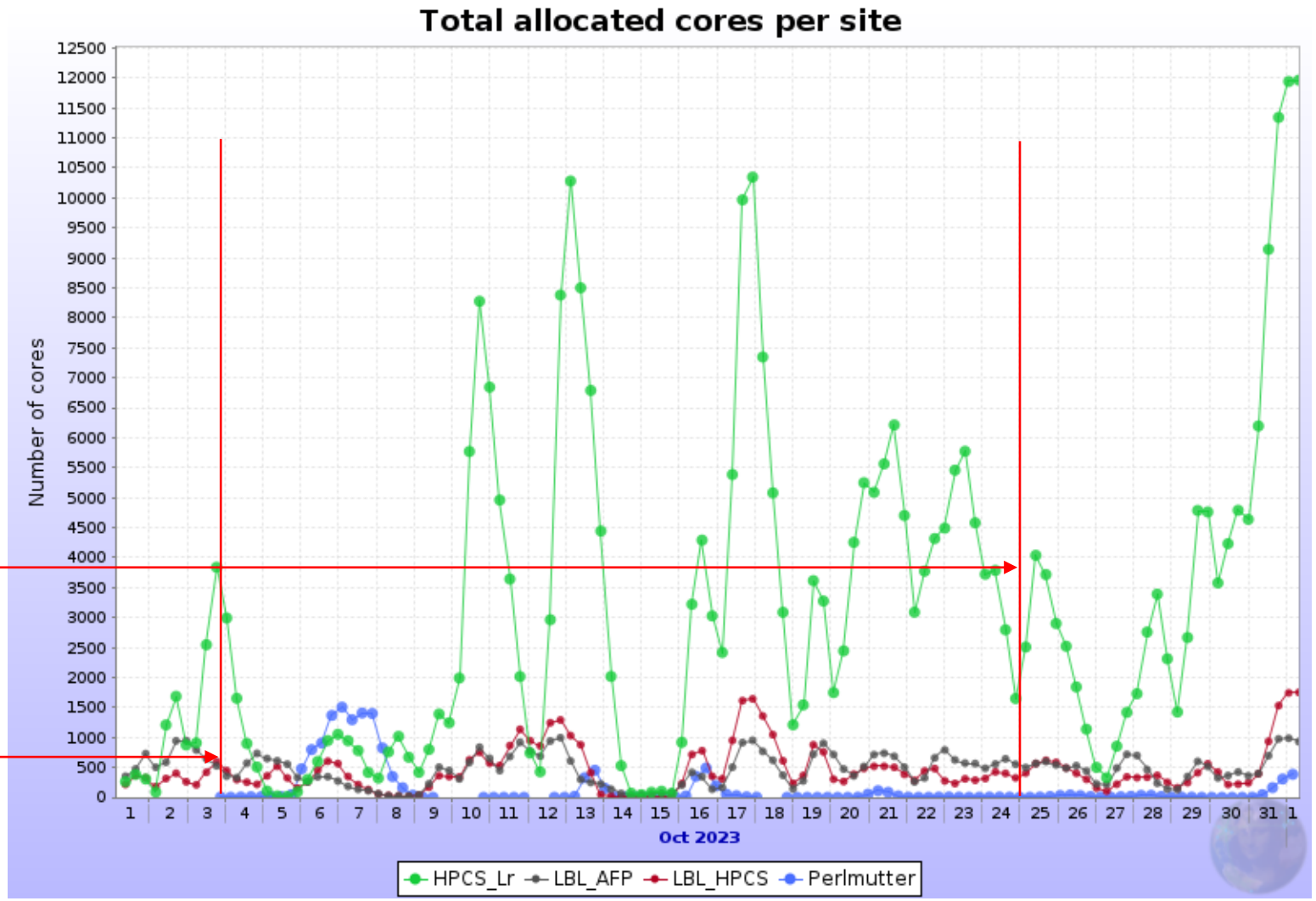
Availability Algorithm: @ALICE_CE * @ALICE_VOBOX * all AliEn-SE

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

						Availability History		
Federation & Sites	**Pledge CPU**	**Pledge Disk**	**Availability**	**Reliability**	**Unknown**	**Jul-2023**	**Aug-2023**	**Sep-2023**
US-LBNL-ALICE	**94300**	**9800**						
LBL_HPCS			91%	91%	3%	64%	67%	100%
ORNL			94%	94%	0%	99%	99%	99%

Job Summary

- Total number of jobs
  - Low overall job pressure
- LBL-HPCS
  - Steady handling
- ORNL
  - Steady handling
- Lawrencium
  - Added Lr7 to our scavenging queue
- Perlmutter
  - Came back but had issues with xRoodD [Sergiu has to revert to the older version]

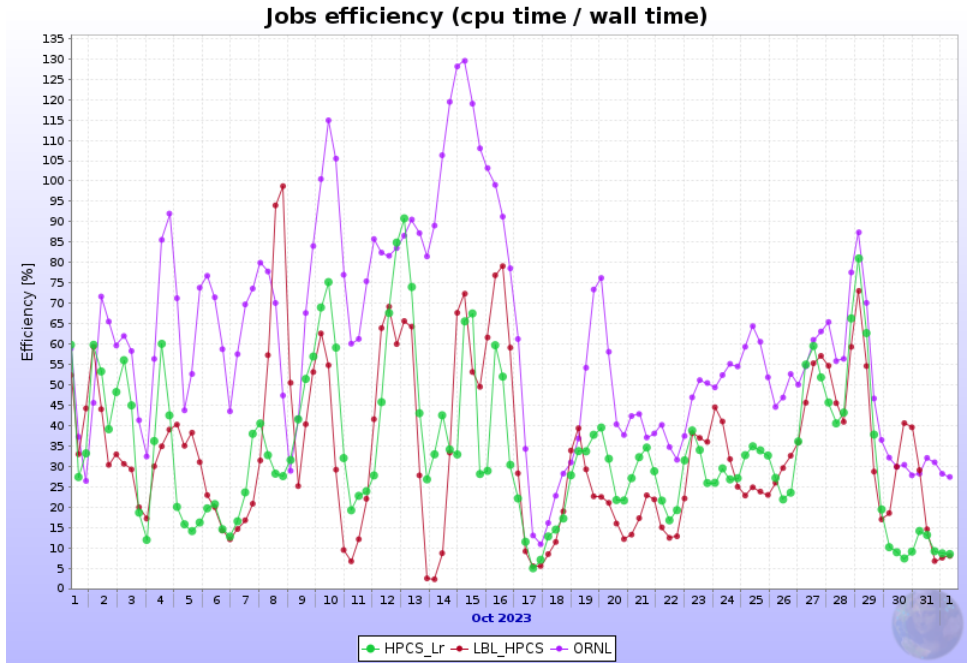


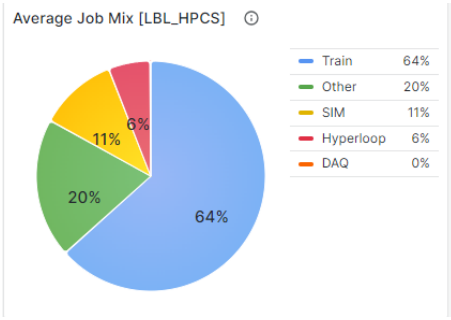
CPU Efficiency

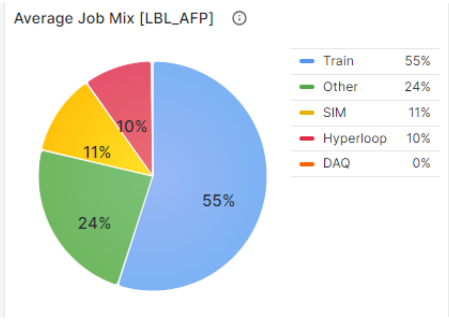
Target Efficiency is ~80%

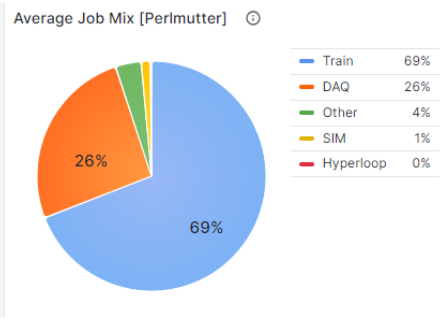
Jobs efficiency (cpu time / wall time)

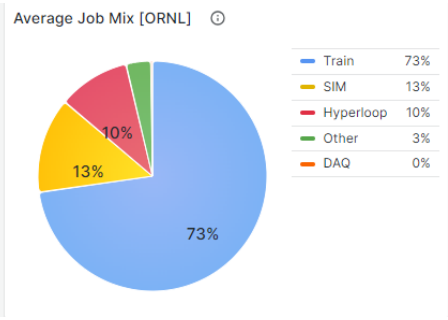
	Series	Last value	Min	Avg	Max
1.	HPCS_Lr	8.386	0	34.29	112.3
2.	LBL_HPCS	8.298	0.149	34.08	1704
3.	ORNL	27.34	0	60.31	191
Total		**14.67**		**42.89**	

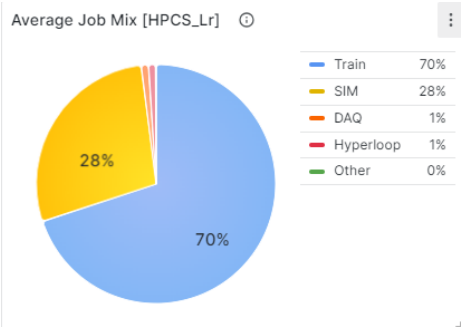




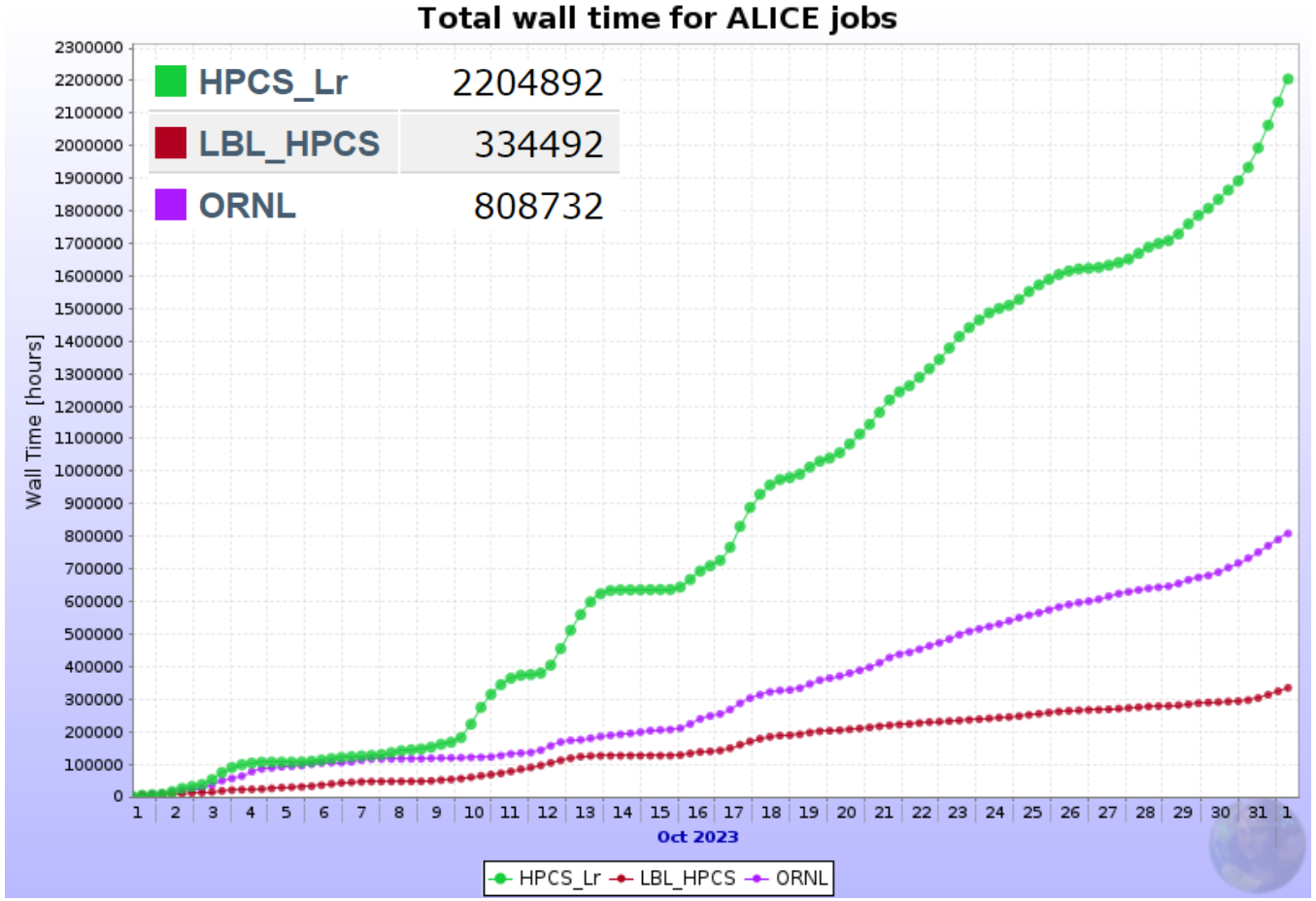








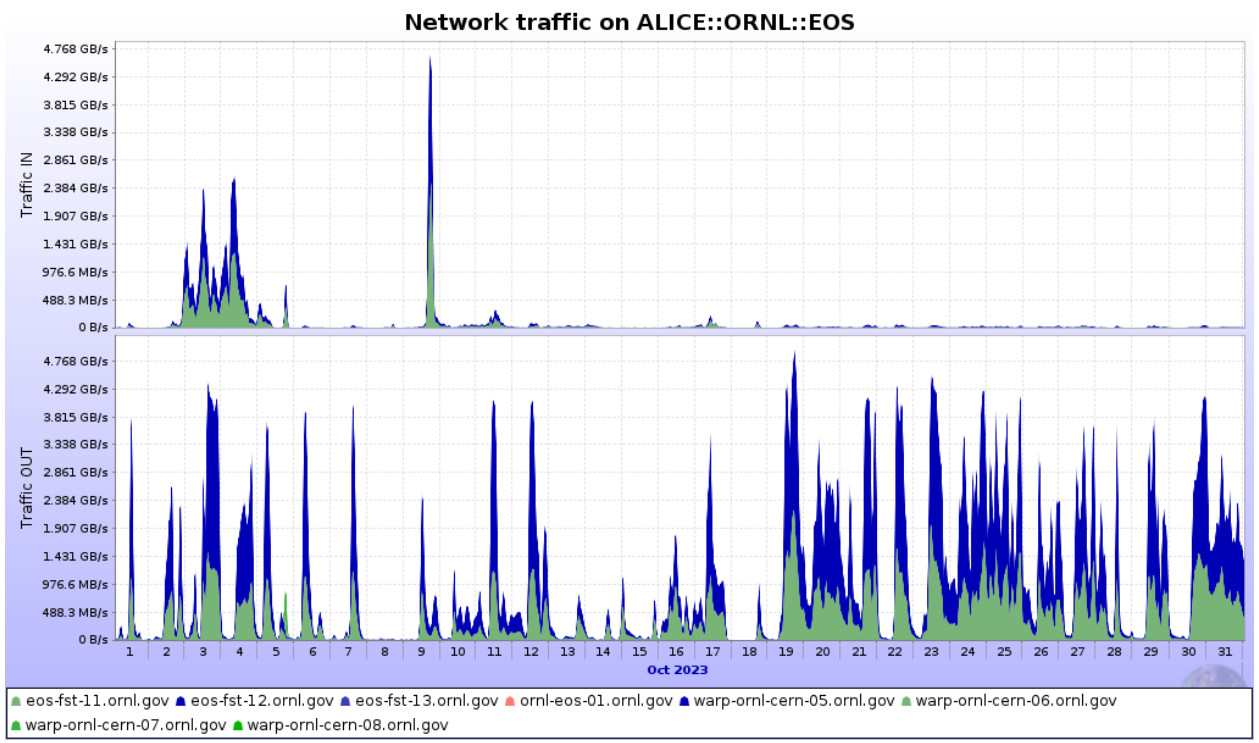
CPU Obligations	kHS06
ALICE-USA	94
LBNL HPCS T2	47
ORNL T2	47

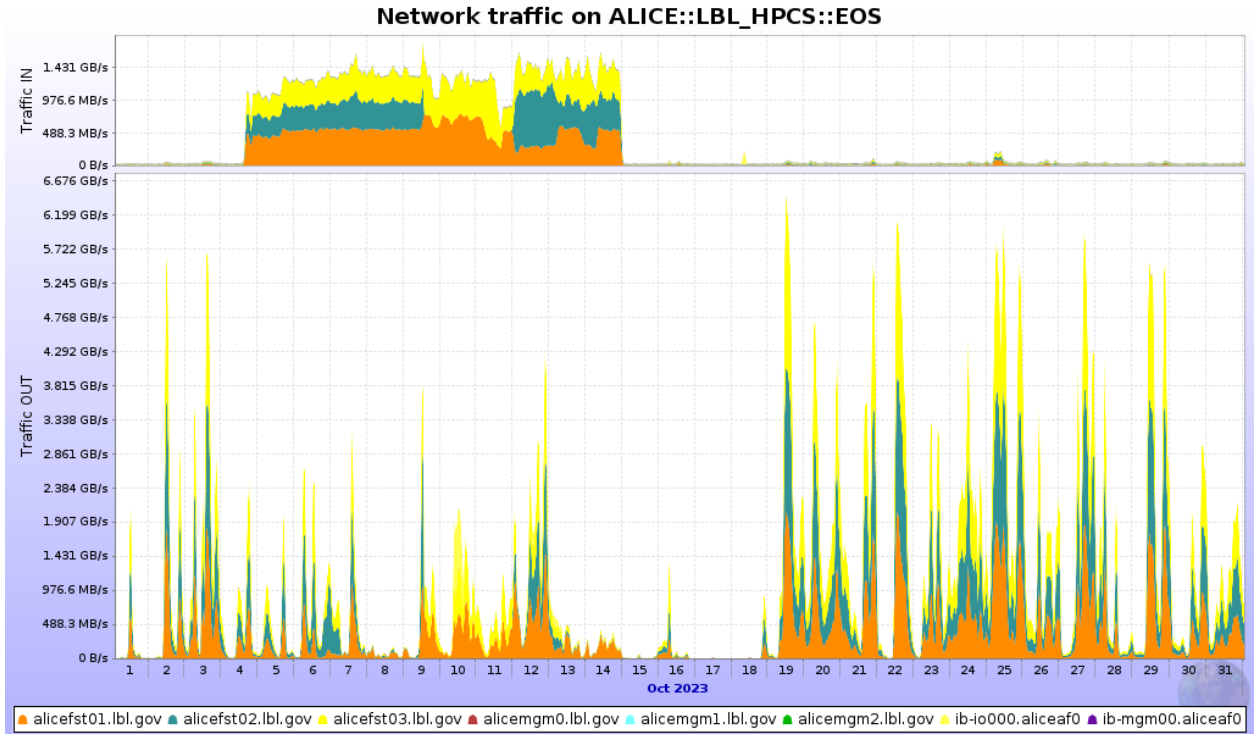


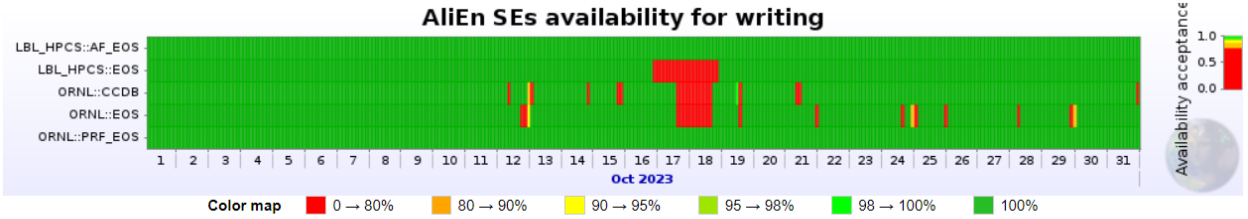
T2 Site	Monalisa (khr)	WLCG (khr)	%diff
HPCS_Lr	2204.90	5183.80	51.01
LBNL	334.50		
ORNL	808.70	2226.50	63.68
Total	**3,348.10**	**7,410.30**	**54.82**

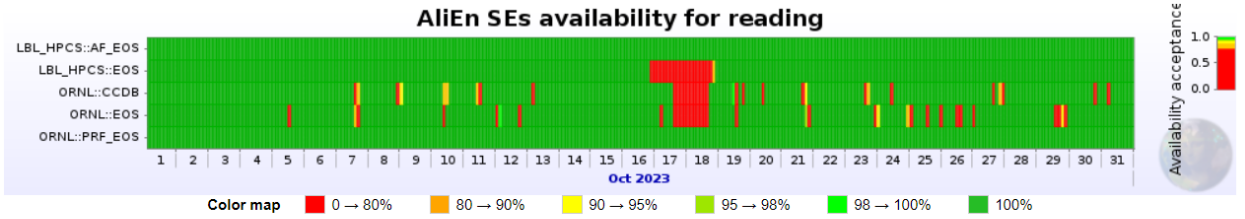
T2 Site and HPCS_Lr	CPU/Core [HS06/Core]	ALICE-USA Obligation [MHS06 x hr]	CPU Delivered [MHS06 x hr] (ML reporter)	CPU Delivered [MHS06 x hr] (WLCG reporter)	Delivered per Obligation [%] (ML reported)	Delivered per Obligation [%] (WLCG reported)
HPCS_Lr	12.0	34.97	26.46	62.21	75.7	177.9
LBNL	16.7		5.59		16.0	
ORNL	11.5	34.97	9.30	25.60	26.6	73.2
Total		**69.94**	**41.35**	**87.81**	**59.12%**	**125.56%**

Network Traffic at LBL and ORNL









Statistics

Link name	Data		Individual results of writing tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	01 Oct 2023 00:48	01 Nov 2023 00:07	748	0	100%	100%
LBL_HPCS::EOS	01 Oct 2023 00:57	01 Nov 2023 00:16	701	47	93.72%	93.70%
ORNL::CCDB	01 Oct 2023 00:45	01 Nov 2023 00:04	716	33	95.59%	95.61%
ORNL::EOS	01 Oct 2023 00:58	01 Nov 2023 00:17	713	34	95.45%	95.53%
ORNL::PRF_EOS	01 Oct 2023 00:46	01 Nov 2023 00:05	749	0	100%	100%

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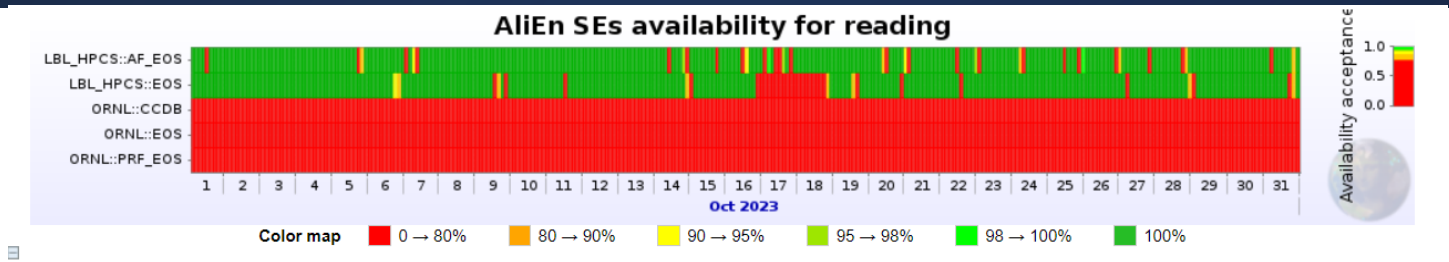
ORNL::CCDB	01 Oct 2023 00:45	01 Nov 2023 00:04	707	42	94.39%	94.43%
ORNL::EOS	01 Oct 2023 00:58	01 Nov 2023 00:17	704	43	94.24%	94.34%
ORNL::PRF_EOS	01 Oct 2023 00:46	01 Nov 2023 00:05	749	0	100%	100%

	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	1.841 TB	1.099 PB	0.163%	4,931	FILE	1.101 PB	9.708 TB	1.092 PB	0.861%		
2. LBL_HPCS - EOS	ALICE::LBL_HPCS::EOS	2	3.48 PB	3.159 PB	327.9 TB	90.8%	58,624,586	FILE	3.48 PB	3.111 PB	377.4 TB	89.41%	Xrootd 5.5.10	5.1.27
3. ORNL - CCDB	ALICE::ORNL::CCDB	2	100 TB	3.588 TB	96.41 TB	3.588%	8,014,411	FILE	-	-	-	-		
4. ORNL - EOS	ALICE::ORNL::EOS	2	4.943 PB	1.977 PB	2.966 PB	40%	36,887,393	FILE	4.943 PB	2.035 PB	2.908 PB	41.16%	Xrootd v5.5.5	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**	**5.379 PB**	**5.031 PB**		**103,651,547**		**10.31 PB**	**5.398 PB**	**4.915 PB**			

Using IPv6 Only



Statistics

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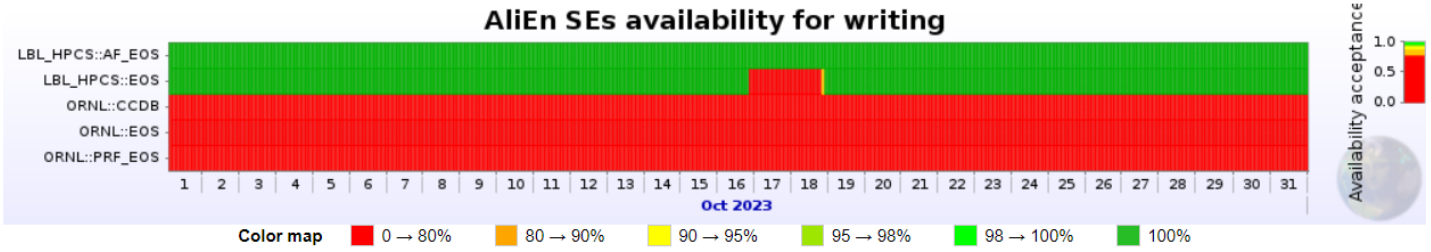
LBL_HPCS::AF_EOS	01 Oct 2023 00:48	01 Nov 2023 00:07	724	24	96.79%	96.85%
LBL_HPCS::EOS	01 Oct 2023 00:57	01 Nov 2023 00:16	690	58	92.25%	92.28%
ORNL::CCDB	01 Oct 2023 00:48	01 Nov 2023 00:07	0	748	0%	0%
ORNL::EOS	01 Oct 2023 01:00	01 Nov 2023 00:19	0	747	0%	0%
ORNL::PRF_EOS	01 Oct 2023 00:49	01 Nov 2023 00:08	0	748	0%	0%



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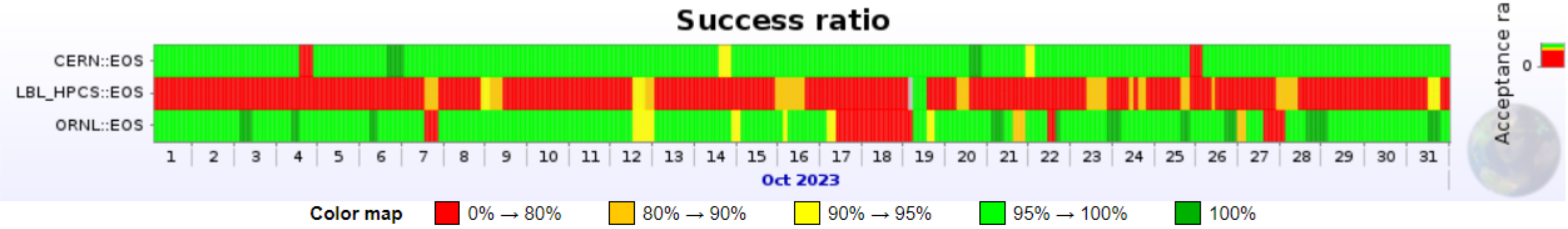
ORNL::EOS	01 Oct 2023 01:00	01 Nov 2023 00:19	0	747	0%	0%
ORNL::PRF_EOS	01 Oct 2023 00:49	01 Nov 2023 00:08	0	748	0%	0%

EOS: Success Ratio



Averaged metrics for the selected interval

SE Name	Start	End	Success ratio	Corrupt ratio	Inaccessible ratio	Internal error ratio
CERN::EOS	01 Oct 2023 04:08	31 Oct 2023 21:53	98.58 %	0.73 %	0.66 %	0.03 %
LBL_HPCS::EOS	30 Sep 2023 03:25	31 Oct 2023 21:29	55.95 %	0.67 %	43.38 %	0.00 %
ORNL::EOS	01 Oct 2023 04:05	31 Oct 2023 21:36	94.54 %	0.27 %	5.19 %	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	11974	81.28 %	45.00 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	1	0.01 %	54.65 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	2751	18.67 %	
	XROOTD_TIMED_OUT	1	0.01 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	3	0.02 %	
	LOCAL_FILE_SIZE_DIFFERENT	1	0.01 %	
TOTAL		14731	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	11589	60.31 %	42.19 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	5	0.03 %	18.49 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	7528	39.18 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	93	0.48 %	
TOTAL		19215	100 %	

Site Status Dashboard

Last Month

ORNL, LBL		
Site name	**VOBox and SE problems**	**Remarks**
ORNL voboxslr.alice.ornl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking: No IPv6 public address CVMFS: old CVMFS version detected (2.9.3), please upgrade to 2.11.0.	Underperforming: the site is only running **251** jobs at the moment, expecting at least **316** jobs.
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 (2.10.0), please upgrade to 2.11.0. ALICE::LBL_HPCS::EOS: xrootd data server **ib-mgm00.aliceaf0** fails ADD test.	Low long-term average job efficiency Underperforming: the site is only running **158** jobs at the moment, expecting at least **173** jobs.
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 (2.10.0), please upgrade to 2.11.0.	Low long-term average job efficiency
3 sites	**9 issues**	**4 remarks**

This month

Site name	VOBox and SE problems	Remarks
ORNL voboxslr.alice.ornl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking: No IPv6 public address	
LBL_HPCS nat-88.eth2.vfw-50b-2275-s4-hpclhc.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 2.11.2. ALICE::LBL_HPCS::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 (2.11.0), please upgrade to 2.11.2.	Low long-term average job efficiency