

ALICE-USA Operations

Monthly Status for September 2025

October 21, 2025



Availability and Reliability Reports

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



Tier-2 Availability and Reliability Report

ALICE

September 2025

Federation Details

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

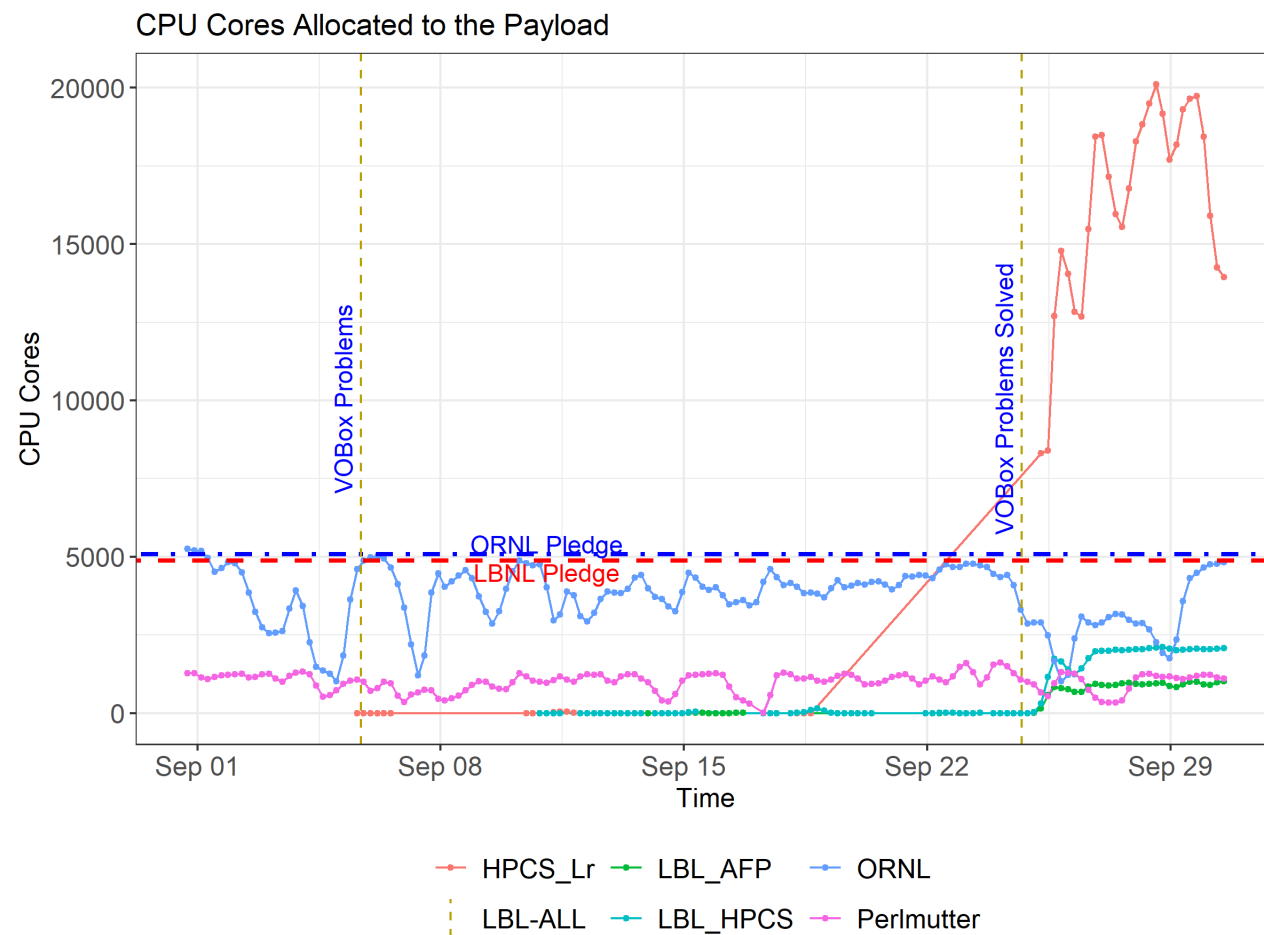
Color coding: N/A <30% <60% <90% >=90%

Availability History

Federation & Sites	Pledge CPU	Pledge Disk	Availability	Reliability	Unknown	Jun-2025	Jul-2025	Aug-2025
US-LBNL-ALICE	119700	13100						
LBL_HPCS			60%	97%	0%	84%	100%	68%
ORNL			98%	98%	0%	98%	97%	94%

Job Summary

- Ces
 - LBL-ALL
 - After we came back from the downtime, jobs were not starting
 - Problem was tracked to whole-node not getting the entire RAM
 - SLURM flag was adjusted to get the entire node memory
 - LBL-HPCS - **OK**
 - ORNL - **OK**
 - Strange behaviour of condor, cancelling some jobs. But it is only cancelling pilots and only sometimes, so overall performance is stable
 - SOLVED for the requeuing of PeriodicRemove
 - Strange requeuing after restarts...
 - Lawrenceium - **OK**
 - Perlmutter - **OK**
 - Daily removal of work dirs is necessary
 - Working on native work dir cleanup
 - LBL_AFP - **OK**

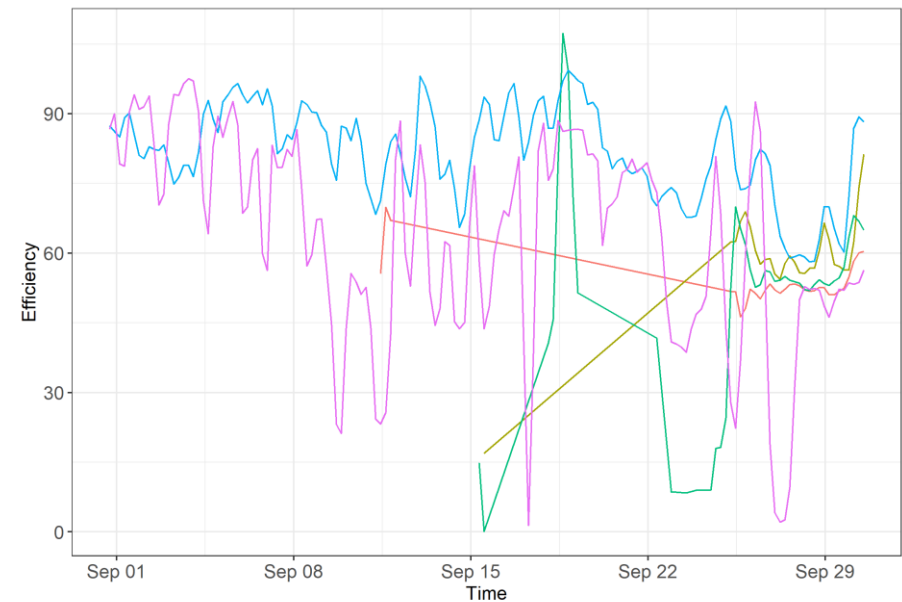


CPU Efficiency

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

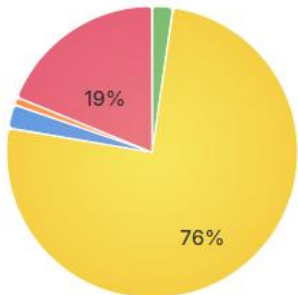
Jobs efficiency (cpu time / wall time)

	Series	Last value	Min	Avg	Max
1.	 Hiroshima	75.71	0.151	70.37	127.7
2.	 HPCS_Lr	60.69	1.152	53.75	662.1
3.	 LBL_AFP	83.47	1.183	59.56	217.1
4.	 LBL_HPCS	64.9	0.008	46.52	317.6
5.	 NIHAM	68.78	26.36	75.49	108.7
6.	 ORNL	88.6	13.26	81.7	120.6
7.	 UPB	90.4	6.826	90.39	150.3
Total		76.08		68.25	

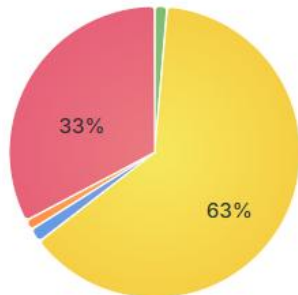


— HPCS_Lr — LBL_AFP — LBL_HPCS — ORNL — Perlmutter

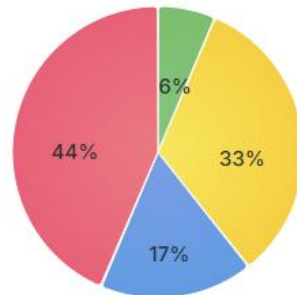
Average Job Mix [LBL_HPCS] ⓘ



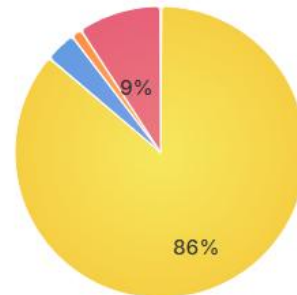
Average Job Mix [LBL_AFP] ⓘ



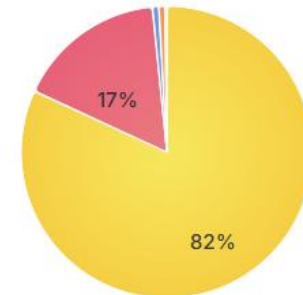
Average Job Mix [ORNL] ⓘ



Average Job Mix [HPCS_Lr] ⓘ



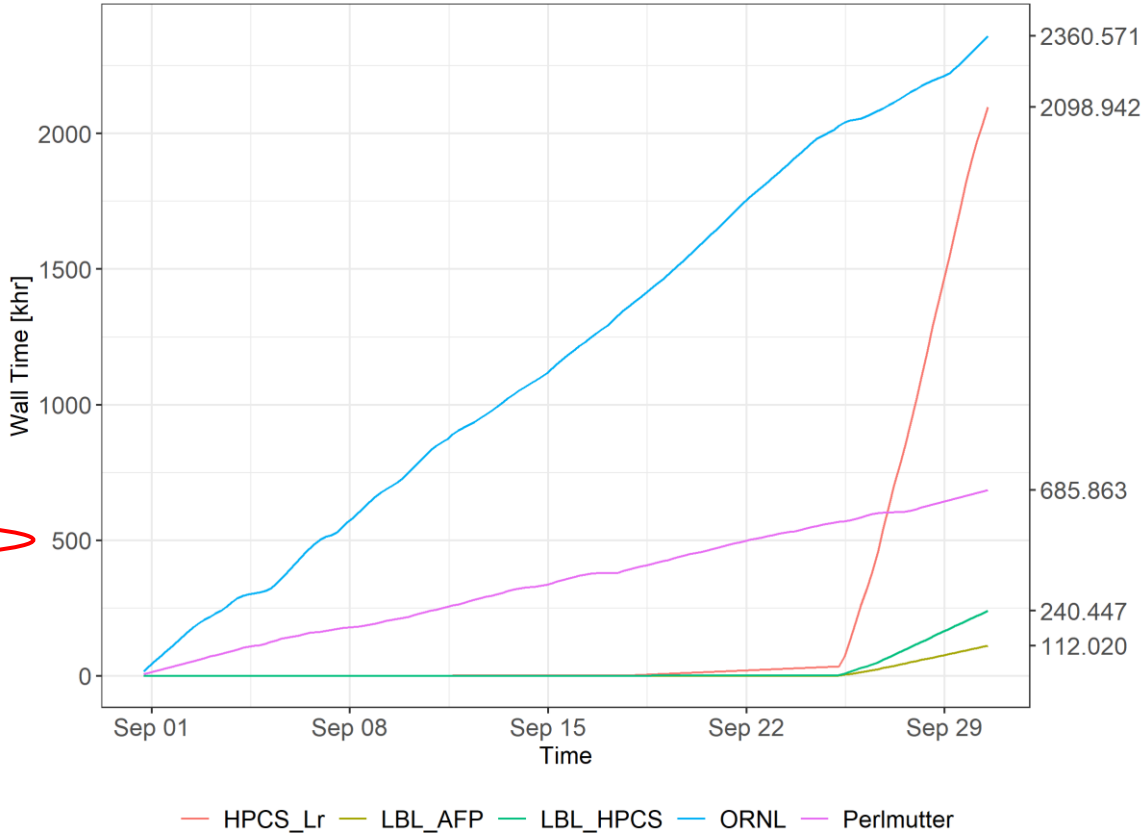
Average Job Mix [Perlmutter] ⓘ



— SIM 82%
— Hyperloop 17%
— Train 1%
— DAQ 1%
— Other 0%

CPU Obligations		kHS23
ALICE-USA		116.8
LBNL HPCS T2		58.4
ORNL T2		58.4

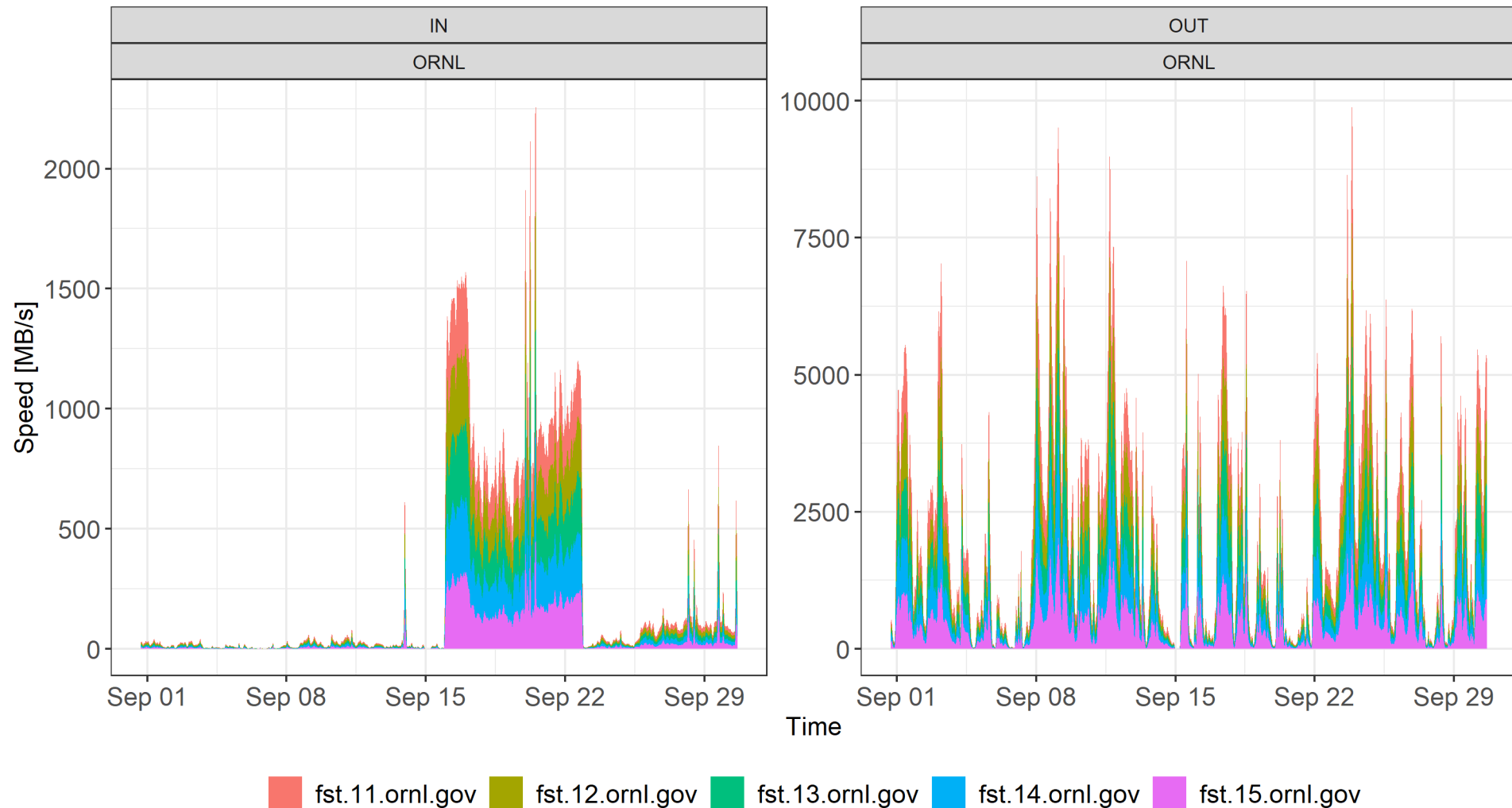
T2 Site	Monalisa (khr)	WLCG (khr)	%diff
HPCS_Lr	2098.90	538.00	-355.63
LBNL	240.40		
AFP	112.00		
ORNL	2360.60	3000.00	21.31
Total	4,811.90	3,538.00	(36.01)

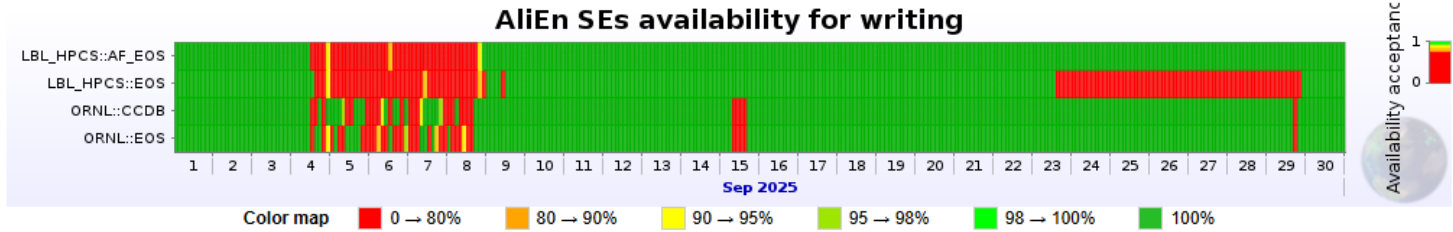


T2 Site and HPCS_Lr	CPU/Core [HS23/Core]	ALICE-USA Obligation [MHS23 x hr]	CPU Delivered [MHS23 x hr] (ML reporter)	CPU Delivered [MHS23 x hr] (WLCG reporter)	Delivered per Obligation [%] (ML reported)	Delivered per Obligation [%] (WLCG reported)
HPCS_Lr	10.0	17.70	20.99	5.38	118.6	30.4
LBNL	12.0		2.88		16.3	
AFP	12.0		1.34		7.6	
ORNL	11.5	42.05	27.15	34.50	64.6	82.0
Total		59.74	52.36	39.88	87.65%	66.75%

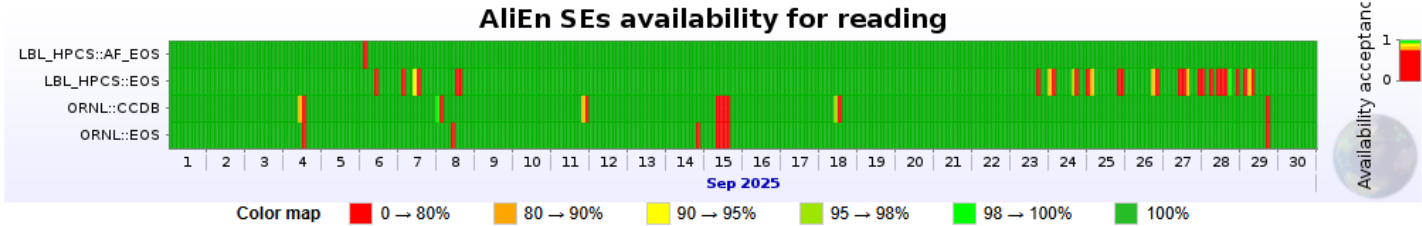
Network Traffic at LBL and ORNL

LBNL was down for power work and there was no data traffic





Statistics						
Link name	Data		Individual results of writing tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	31 Aug 2025 23:36	30 Sep 2025 23:32	670	68	90.79%	90.87%
LBL_HPCS::EOS	31 Aug 2025 23:45	30 Sep 2025 23:41	510	224	69.48%	69.35%
ORNL::CCDB	31 Aug 2025 23:34	30 Sep 2025 23:30	709	34	95.42%	95.54%
ORNL::EOS	31 Aug 2025 23:46	30 Sep 2025 23:42	694	40	94.55%	94.79%

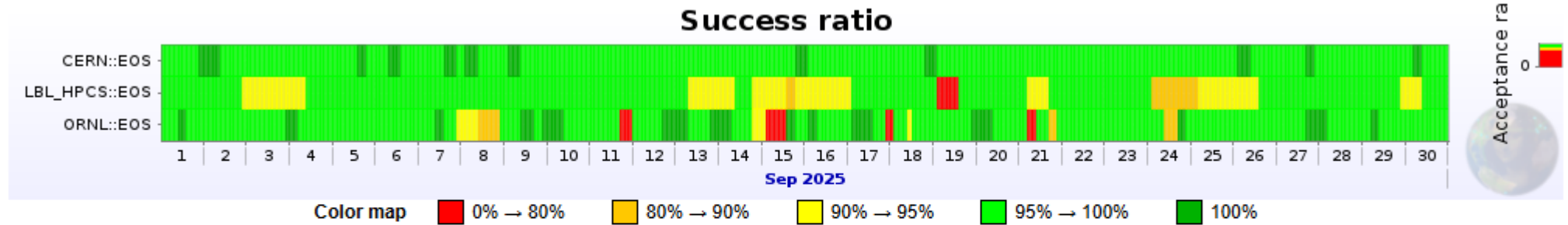


Statistics						
Link name	Data		Individual results of reading tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::AF_EOS	31 Aug 2025 23:36	30 Sep 2025 23:32	727	1	99.86%	99.88%
LBL_HPCS::EOS	31 Aug 2025 23:45	30 Sep 2025 23:41	699	25	96.55%	96.54%
ORNL::CCDB	31 Aug 2025 23:34	30 Sep 2025 23:30	720	12	98.36%	98.33%
ORNL::EOS	31 Aug 2025 23:46	30 Sep 2025 23:42	712	12	98.34%	98.35%

AliEn SE			Catalogue statistics (1024-base units)							Storage-provided information (1024-base units)				
SE Name	AliEn name	Tier	Size	Used	Free	Usage	No. of files	Type	Size	Used	Free	Usage	Version	EOS Version
1. LBL_HPCS - AF2_EOS	ALICE::LBL_HPCS::AF2_EOS	2	1.083 PB	896.1 TB	213.4 TB	80.76%	1,010,269	FILE	1.2 PB	896.2 TB	332.6 TB	72.93%	Xrootd 5.7.1	
2. LBL_HPCS - AF_EOS	ALICE::LBL_HPCS::AF_EOS	2	1.092 PB	8.977 GB	1.092 PB	0.001%	30	FILE	1.083 PB	39.3 TB	1.045 PB	3.543%	Xrootd 5.7.1	
3. LBL_HPCS - EOS	ALICE::LBL_HPCS::EOS	2	6.313 PB	5.071 PB	1.242 PB	80.33%	88,530,128	FILE	6.295 PB	5.935 PB	367.9 TB	94.29%	Xrootd 5.7.1	5.2.31
4. ORNL - CCDB	ALICE::ORNL::CCDB	2	100 TB	7.863 TB	92.14 TB	7.863%	20,949,373	FILE	-	-	-	-	Xrootd 5.8.3	
5. ORNL - EOS	ALICE::ORNL::EOS	2	6.586 PB	5.782 PB	823.3 TB	87.79%	69,917,920	FILE	6.586 PB	5.844 PB	759.6 TB	88.74%	Xrootd 5.8.3	5.3.15
Total			15.17 PB	11.74 PB	3.436 PB		180,407,720		15.16 PB	12.69 PB	2.471 PB			

EOS: Success Ratio

- Whenever this happens mgm restart seems to help
- Looks like at least two fsts at LBL are affected



Averaged metrics for the selected interval						
SE Name	Start	End	Success ratio	Corrupt ratio	Inaccessible ratio	Internal error ratio
CERN::EOS	01 Sep 2025 03:45	30 Sep 2025 21:52	99.80 %	0.05 %	0.13 %	0.03 %
LBL_HPCS::EOS	31 Aug 2025 15:21	30 Sep 2025 21:53	94.68 %	0.51 %	3.30 %	1.52 %
ORNL::EOS	01 Sep 2025 03:47	30 Sep 2025 22:20	96.55 %	0.17 %	3.28 %	0.01 %

Site Status Dashboard

Site name	VOBox and SE problems
HPCS_Lr lrc-vobox.lbl.gov	Networking: No IPv6 public address
LBL_HPCS alice-vobox.lbl.gov	Networking: No IPv6 public address
LBL_AFP alice-afp.lbl.gov	Networking: too large buffer size kernel parameters: tcp_wmem_max=64 MB Networking: No IPv6 public address
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 2.11.5.
4 sites	7 issues

Last Month

Site	Comma-separated list of site name prefixes	VOBox and SE problems	Remarks
HPCS_Lr lrc-vobox.lbl.gov		CVMFS: old CVMFS version detected (2.11.5), please upgrade to 2.13.2.	Last month average job efficiency was 69% .
ORNL vobox-alice.ornl.gov		Networking: IPv6 address: 2620:0:2b3d:100:0:0:1:3c ALICE::ORNL::PRF_EOS: ADD test fails since 21 Jan 2025 16:46 (for 272d 0:43).	Last month average job efficiency was 84% .
LBL_HPCS alice-vobox.lbl.gov		ALICE::LBL_HPCS::AF2_EOS reports more total space (1.2 PB) than declared in LDAP (1.083 PB), consider updating the LDAP value to 1319413953331 ALICE::LBL_HPCS::AF2_EOS reports more total space (1.2 PB) than declared in LDAP (1.083 PB), consider updating the LDAP value to 1319413953331 Networking: No IPv6 public address CVMFS: old CVMFS version detected (2.11.5), please upgrade to 2.13.2.	Last month average job efficiency was 77% .
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 2.13.2.	Last month average job efficiency was 65% .
LBL_AFP alice-afp.lbl.gov		Networking: No IPv6 public address CVMFS: old CVMFS version detected (2.11.5), please upgrade to 2.13.2.	Last month average job efficiency was 80% .
5 sites		10 issues	0 remarks

This month