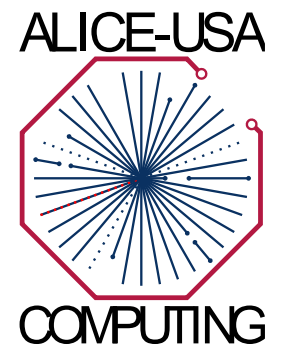# ALICE-USA Operations
Monthly Status for October 2024

November 19, 2024

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

Tier-2 Availability and Reliability Report

ALICE

Federation Details

November 2024

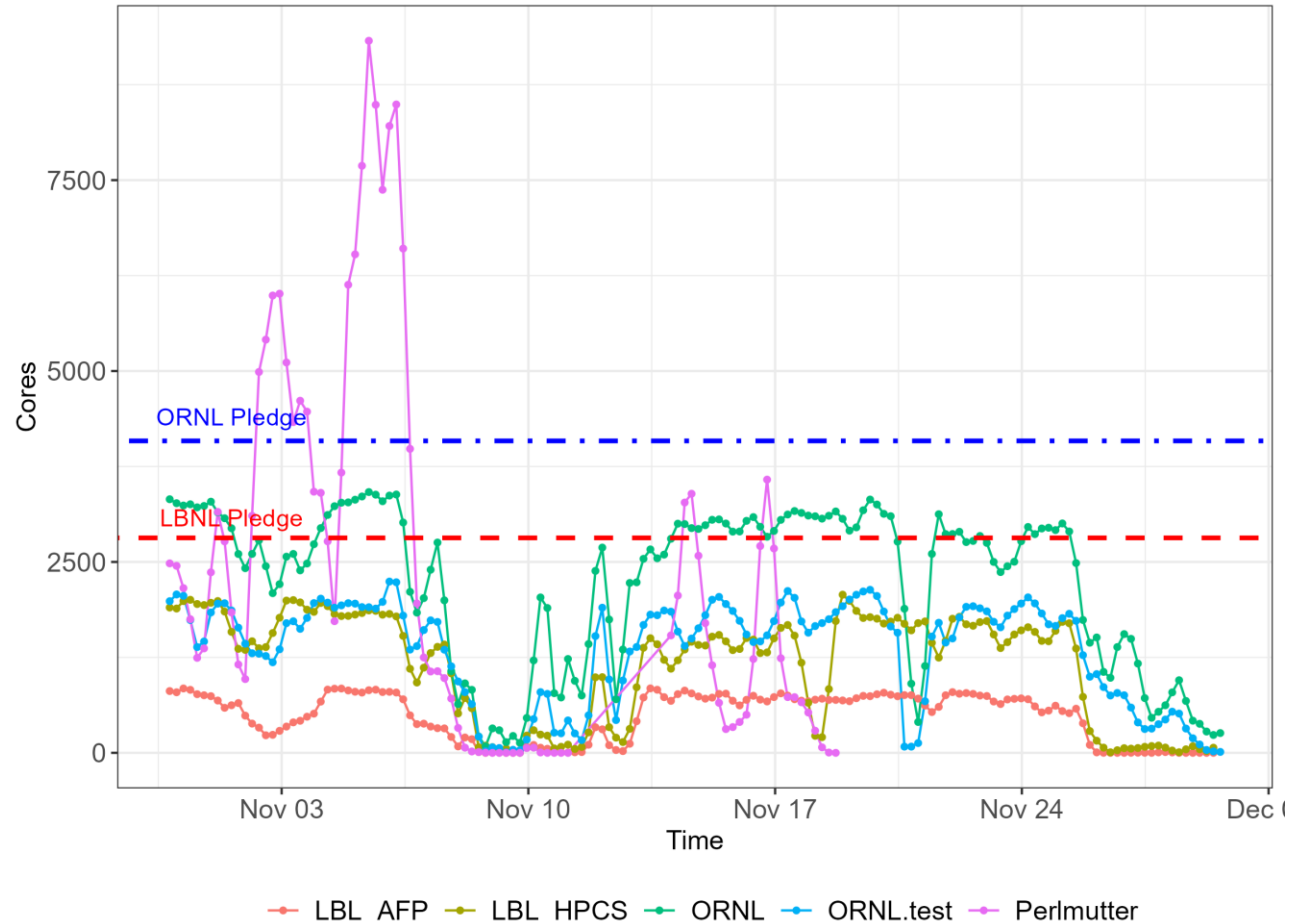Availability Algorithm: @ALICE_CE * @ALICE_VOBOX * all AliEn-SE

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

Federation & Sites	Pledge CPU	Pledge Disk	Availability	Reliability	Unknown	Aug-2024	Sep-2024	Oct-2024
US-LBNL-ALICE	**100900**	**10900**						
LBL_HPCS			91%	91%	2%	45%	73%	85%
ORNL			97%	97%	2%	99%	97%	99%

Availability History

Job Summary

- CEs
  - LBL-HPCS – **OK**
  - ORNL – **OK**
    - Old and new clusters need to be merged
    - Total current ORNL capacity satisfies the half of the US pledge (keeping the old nodes)
  - ORNL-test
    - This will become ORNL once the old WNs join it
  - Lawrencium - **OUT**
  - Perlmutter – **OK**
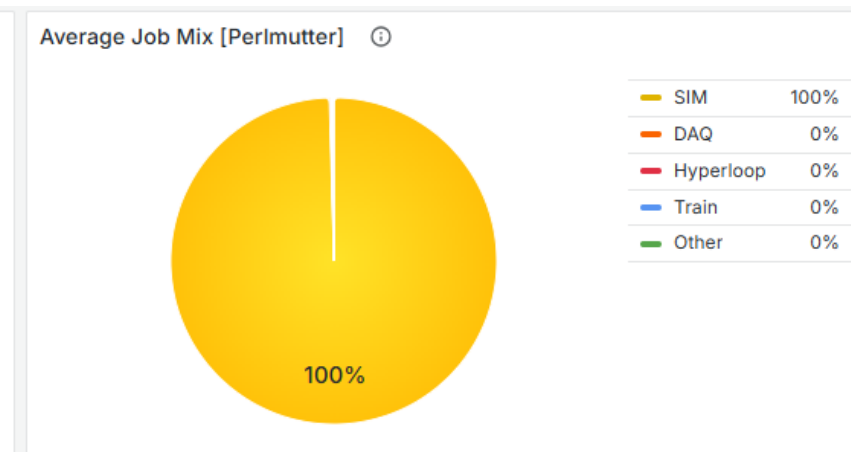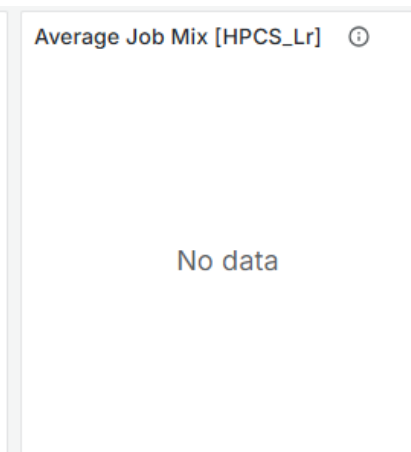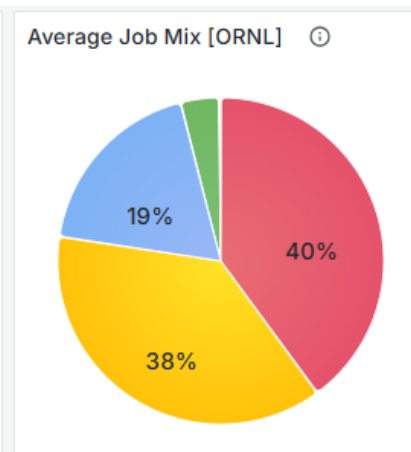   - Some very large allocations followed by the very low period
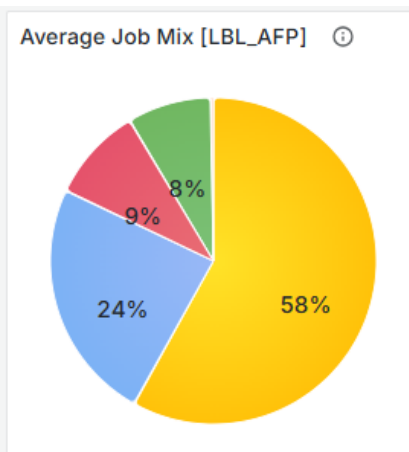 - LBL_AFP - **OK**

CPU Efficiency
Target Efficiency is… <u>no such thing anymore…</u>

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	0.00	1500.00	45.70
LBNL	814.50		
ORNL	2501.30	3547.50	29.49
Total	3,315.80	5,047.50	34.31

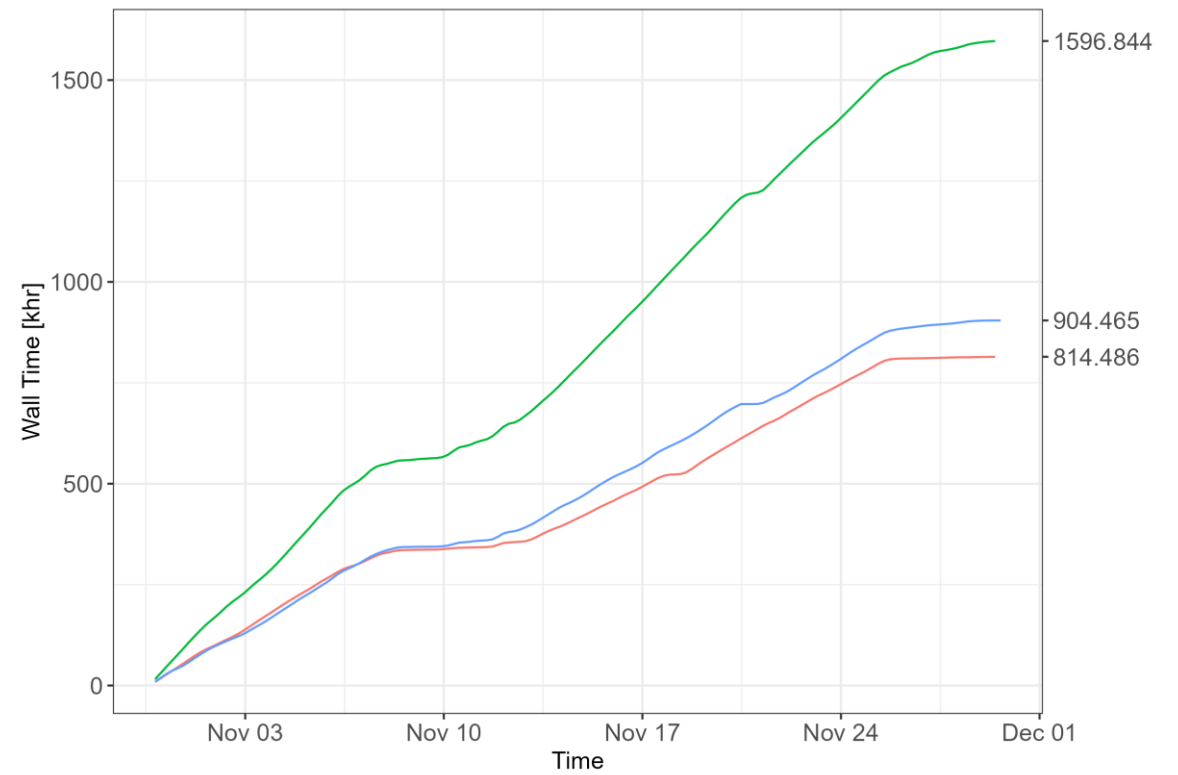| T2 Site and HPCS_Lr	CPU/Core [HS06/Core]	ALICE-USA Obligation [MHS06 x hr]	CPU Delivered [MHS23 x hr] (ML reporter)	CPU Delivered [MHS23 x hr] (WLCG reporter)	Delivered per Obligation [%] (ML reported)	Delivered per Obligation [%] (WLCG reported)
HPCS_Lr	12.0		0.00		0.0	
		36.32		18.00		49.6
LBNL	16.7		13.60		37.4	
ORNL	11.5	36.32	28.76	40.80	79.2	112.3
Total		72.65	42.37	58.80	58.32%	80.93%

N.B. We do not run accounting on Perlmutter & AFP. Including these we provided over 100% this month.

Network Traffic at LBL and ORNL
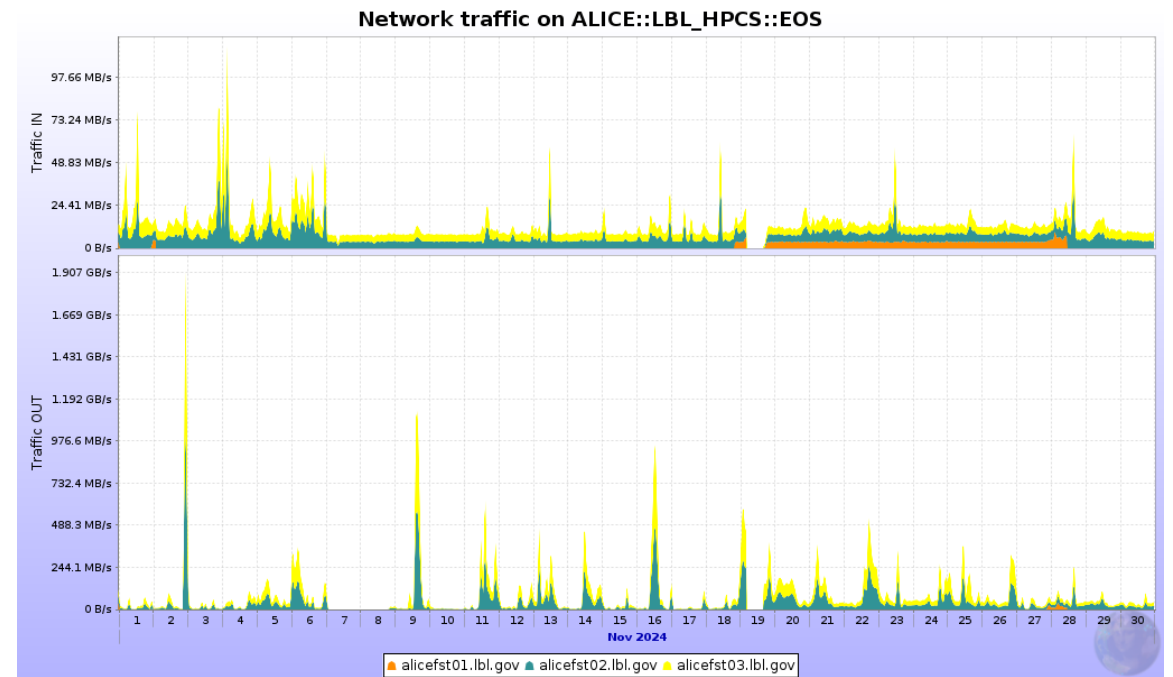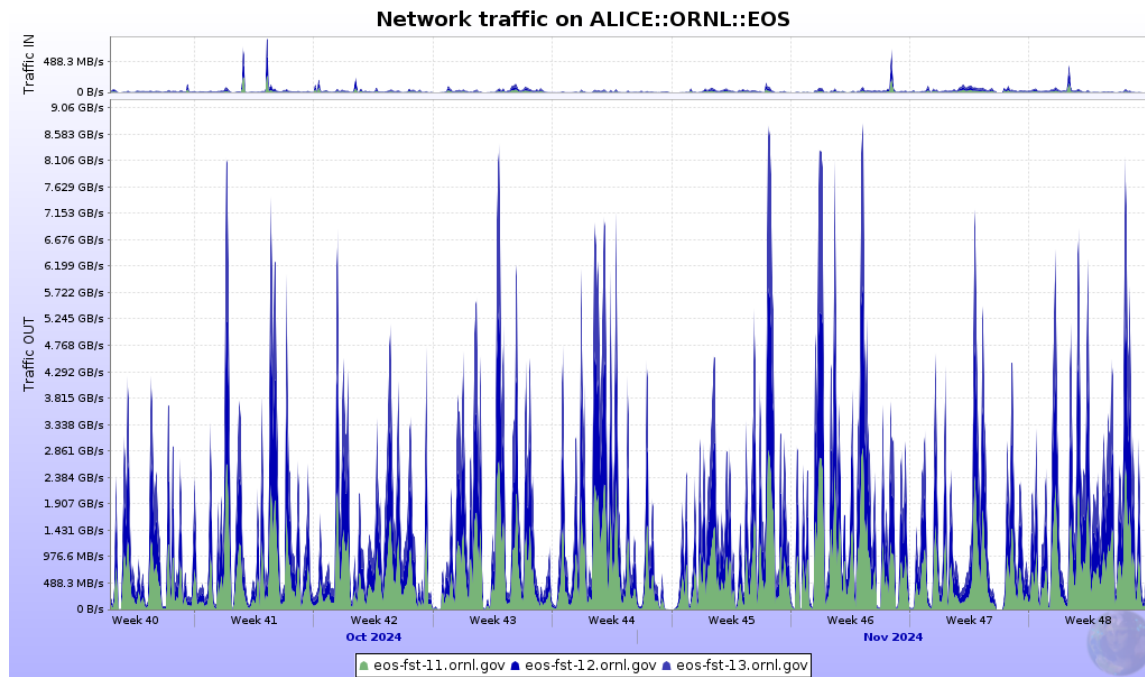
- alicefst01 seems to have some problems
- John mentioned we will most likely need to replace it

AliEn SEs availability for writing

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	31 Oct 2024 23:17	01 Dec 2024 00:23	680	45	93.79%	93.93%
ORNL::EOS	31 Oct 2024 23:17	01 Dec 2024 00:23	715	10	98.62%	98.63%

AliEn SEs availability for reading

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

Statistics

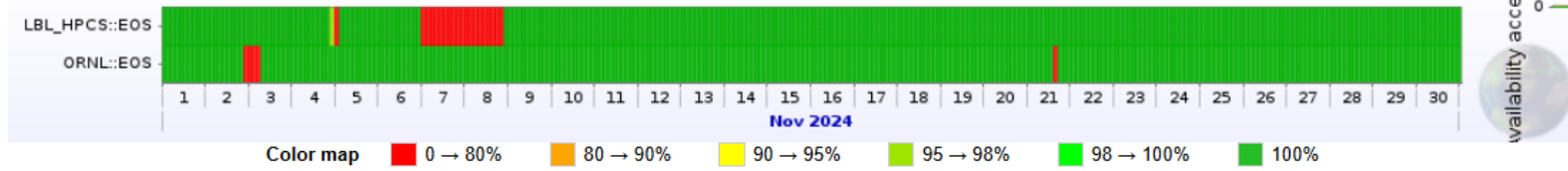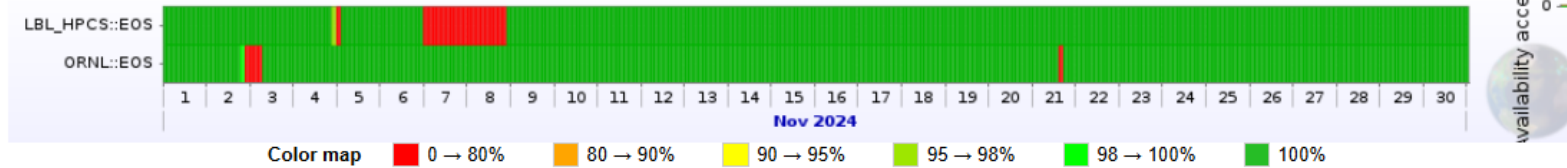| Link name	Data		Individual results of reading tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::EOS	31 Oct 2024 23:17	01 Dec 2024 00:23	680	45	93.79%	93.93%
ORNL::EOS	31 Oct 2024 23:17	01 Dec 2024 00:23	715	10	98.62%	98.63%

	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 - AF_EOS	ALICE::LBL_HPCS::AF_EOS	2	1.092 PB	884.7 TB	233.9 TB	79.09%	761,026	FILE	1.092 PB	900.9 TB	217.7 TB	80.54%	Xrootd 5.7.1-2.el8.x86_64	
2. LBL_HPCS - EOS	ALICE::LBL_HPCS::EOS	2	3.48 PB	2.972 PB	519.6 TB	85.42%	67,171,211	FILE	3.471 PB	3.121 PB	357.8 TB	89.93%	Xrootd 5.7.1	5.2.27
3. ORNL - CCDB	ALICE::ORNL::CCDB	2	100 TB	5.8 TB	94.2 TB	5.8%	15,585,765	FILE	-	-	-	-		
4. ORNL - EOS	ALICE::ORNL::EOS	2	3.964 PB	2.838 PB	1.126 PB	71.59%	59,766,562	FILE	3.964 PB	2.909 PB	1.055 PB	73.38%		
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%		
Total			9.422 PB	6.917 PB	2.505 PB		143,404,790		9.316 PB	7.153 PB	2.163 PB			

EOS: Success Ratio

- ORNL extremely well performant
- John has worked on solving the mgm/fst hardware problems
  - It seems EOS is not able to diagnose and address the issues we are having with the rocky8 OS
  - We need to consider the potential solution to this problem.

Success ratio

Color map: 0% → 80% (red), 80% → 90% (orange), 90% → 95% (yellow), 95% → 100% (light green), 100% (dark green)
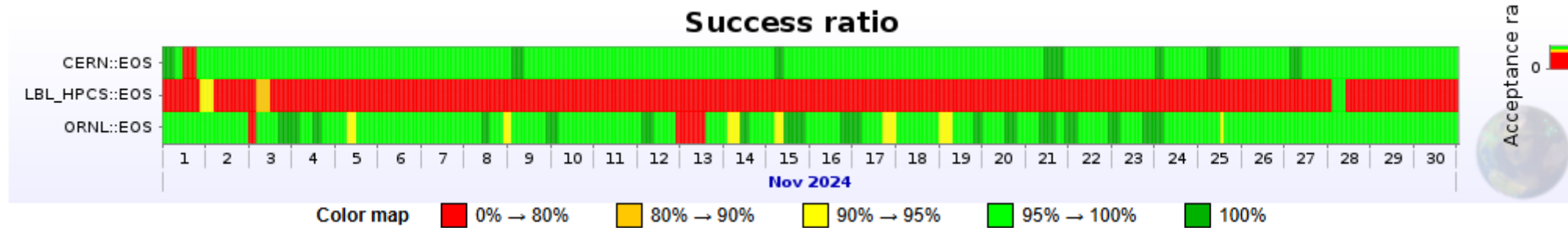
Averaged metrics for the selected interval

SE Name	Start	End	Success ratio	Corrupt ratio	Inaccessible ratio	Internal error ratio
CERN::EOS	01 Nov 2024 01:20	01 Dec 2024 00:38	99.42 %	0.05 %	0.48 %	0.05 %
LBL_HPCS::EOS	01 Nov 2024 01:22	01 Dec 2024 00:40	63.06 %	0.46 %	36.48 %	0.01 %
ORNL::EOS	01 Nov 2024 01:23	01 Dec 2024 00:43	97.13 %	0.24 %	2.63 %	0.00 %

Site Status Dashboard

Last Month

ORNL, LBL, HPCS_Lr, Per		R
Site name	**VOBox and SE problems**	
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.	
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 (2.11.2), please upgrade to 2.11.5.	
LBL_HPCS alice-vobox.lbl.gov	ALICE::LBL_HPCS::EOS redirector **ALICE::LBL_HPCS::EOS** doesn't see all nodes, only 2.373 PB out of 3.48 PB total space is connected Networking: too large buffer size kernel parameters: tcp_wmem_max=64 MB Networking: No IPv6 public address	
ORNL-test vobox.alice.ornl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only 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	
HPCS_Lr lrc-vobox.lbl.gov	MonALISA service is not online since *25 Oct 2024 20:53* (for 21d 4:25). Networking: No IPv6 public address CVMFS: old CVMFS version detected (2.11.3), please upgrade to 2.11.5.	
6 sites	**16 issues**	r

This month

ORNL, LBL, HPCS_Lr, Perlmutt		
Site n	Comma-separated list of site name prefixes	**VOBox and SE problems**
HPCS_Lr lrc-vobox.lbl.gov		Networking: too large buffer size kernel parameters: tcp_wmem_max=64 MB Networking: No IPv6 public address
ORNL vobox.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: 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.
LBL_AFP alice-afp.lbl.gov		Networking: too large buffer size kernel parameters: tcp_wmem_max=64 MB Networking: No IPv6 public address
5 sites		**11 issues**