ALICE-USA Operations
Monthly Status for September 2022

October 18, 2022

ALICE-USA
COMPUTING
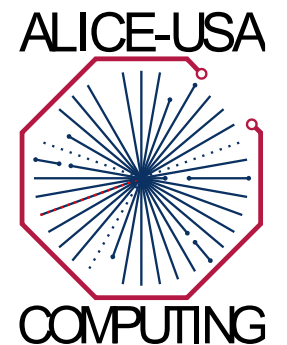
Availability and Reliability Reports
ALICE_CE(Jobs Running) x ALICE_VOBOX x AliEn::SE(tests)

Tier-2 Availability and Reliability Report
ALICE

September 2022

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	Jun-2022	Jul-2022	Aug-2022
US-LBNL-ALICE	**82000**	**8400**						
LBL_HPCS			98%	98%	0%	100%	100%	100%
ORNL			100%	100%	0%	100%	100%	100%

Availability History: Jun-2022, Jul-2022, Aug-2022

Job Summary

- Awaiting new hardware to meet RRB2022 pledges
- LBL-HPSC
  - /etc was filled by another user that caused issues
  - /etc was cleared and CE and ML restarted
  - ML restart sometimes does not report Site_UserJobs_Summary
  - I mentioned it to Costin. Follow up on this is on my low priority todo list
- ORNL
  - Steady dealing with the load
- Lawrencium
  - Great performance
- Cori
  - Was steadily up for a while, then machine was rebooted
 - Right now, jobs are pending in the regular queue
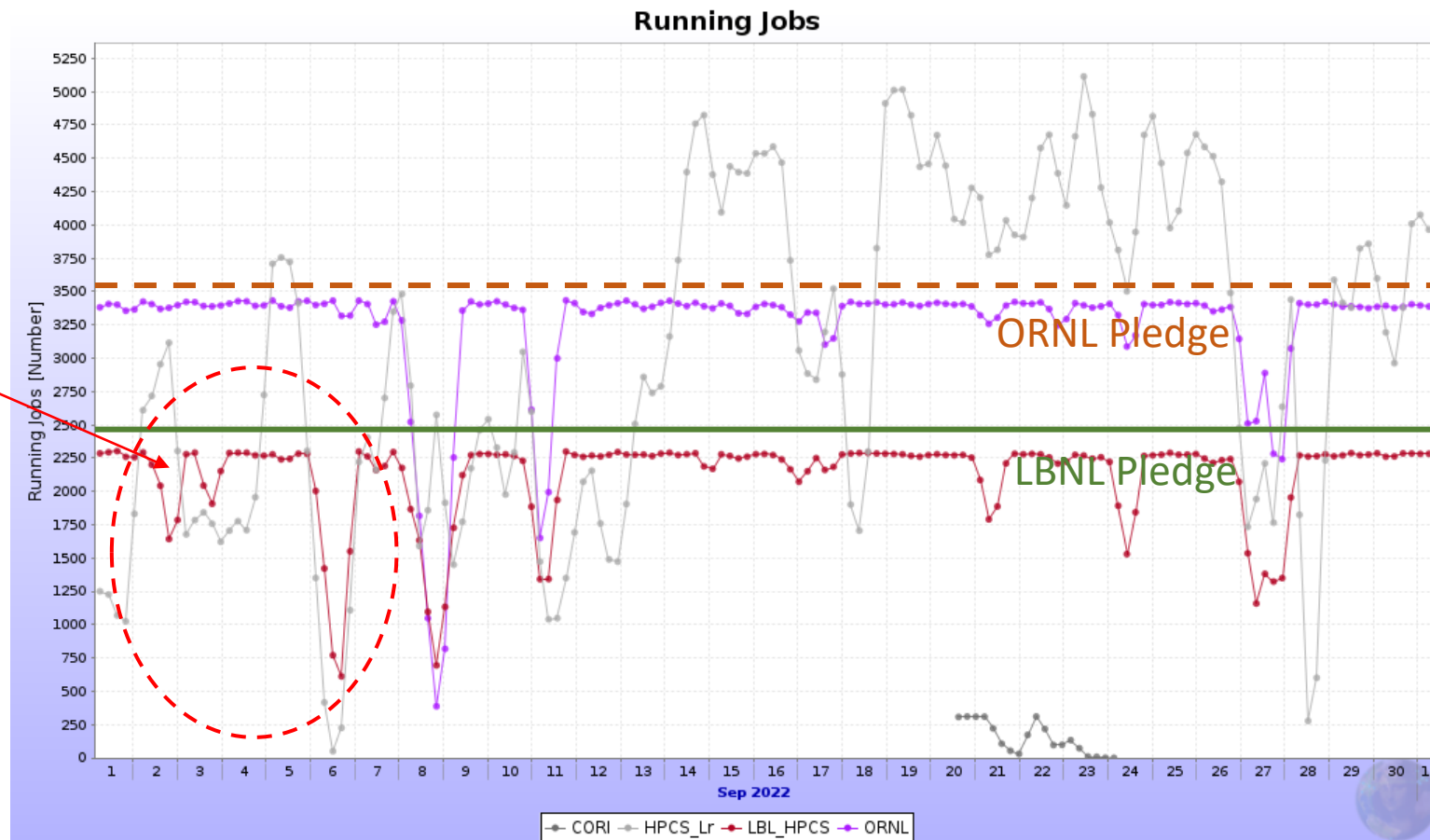
Running Jobs

CPU Efficiency

- CPU Efficiency target is ~80%

- We are on target

- Lawrencium is now running analysis jobs

Jobs efficiency (cpu time / wall time)

	Series	Last value	Min	Avg	Max
1.	HPCS_Lr	84.97	3.297	74.88	109.9
2.	LBL_HPCS	85.15	0	84.59	96.2
3.	NIHAM	68.38	0	87.33	99.06
4.	ORNL	94.56	23.2	91.09	102.4
5.	Subatech	96.69	13.23	94.24	104.8
6.	UPB	84.91	20.5	83.73	96.78
	Total	**85.78**		**85.98**	

Jobs efficiency (cpu time / wall time)
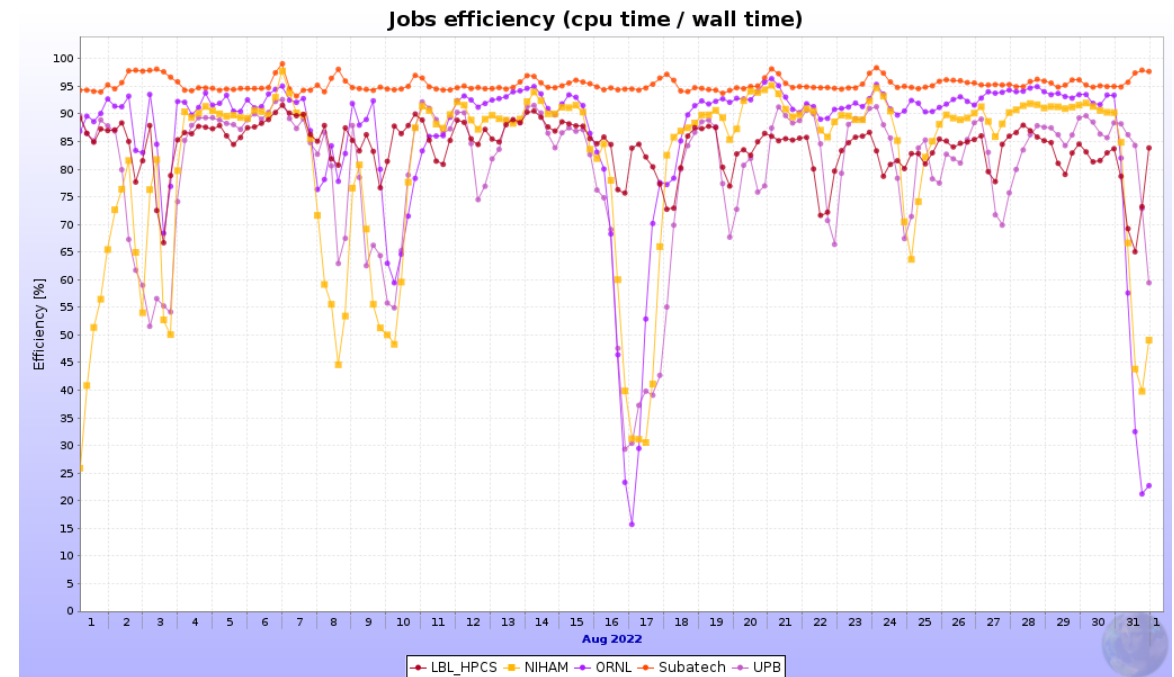
CPU Obligations	kHS06
ALICE-USA	82
LBNL HPCS T2	41
ORNL T2	41

T2 Site	Monalisa (khr)	WLCG (khr)	%diff
LBNL	1,319.95	4,625.44	20.06
HPCS_Lr	2,377.67		
ORNL	2,387.83	2,432.61	1.84
Total	6,085.45	7,058.05	13.78

Total wall time for ALICE jobs

HPCS_Lr	2377667
LBL_HPCS	1319950
ORNL	2387827

T2 Site	CPU/Core [HS06/Core]	CPU Delivered [MHS06 x hr]	ALICE-USA Obligation [MHS06 x hr]	Delivered per Obligation [%]
HPCS_Lr	12.0	28.53	29.52	96.7
LBNL	16.7	22.04		74.7
ORNL	11.5	27.46	29.52	93.0
Total		78.04	59.04	132.17
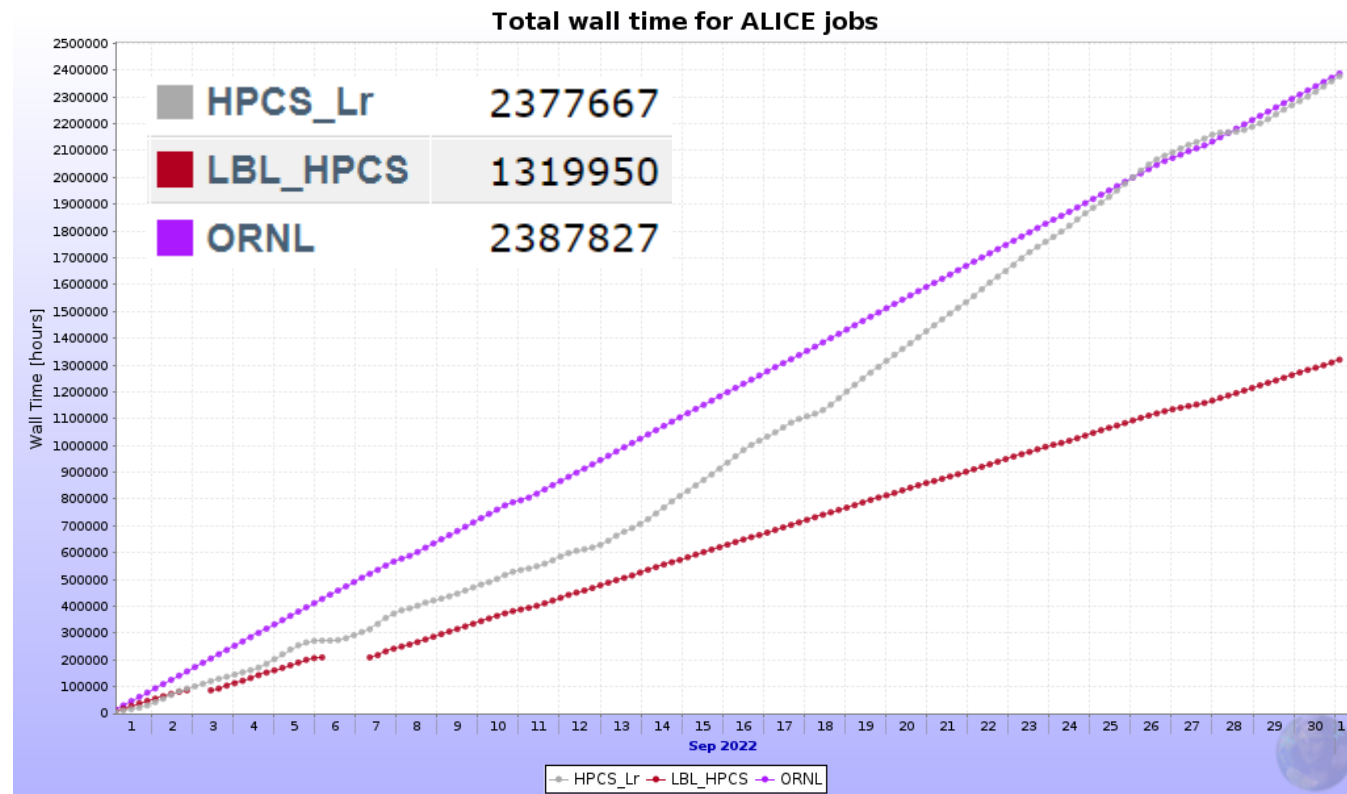
Network Traffic at LBL and ORNL
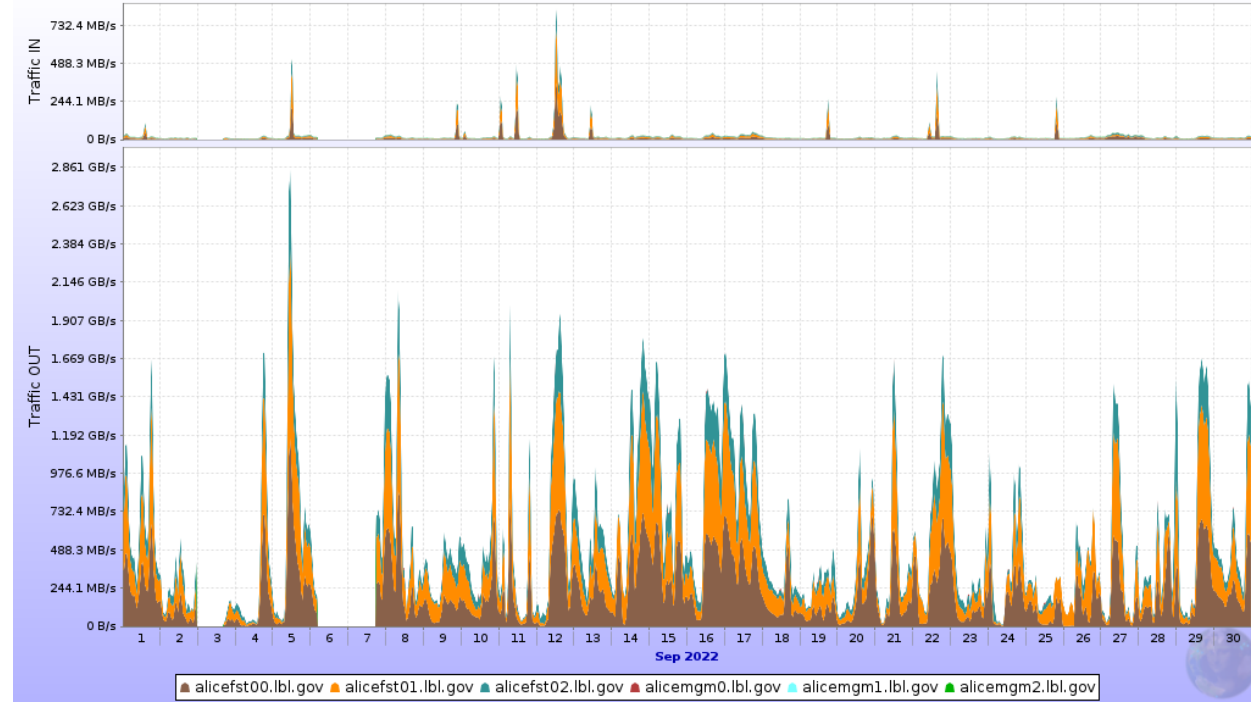
AliEn SEs availability for writing

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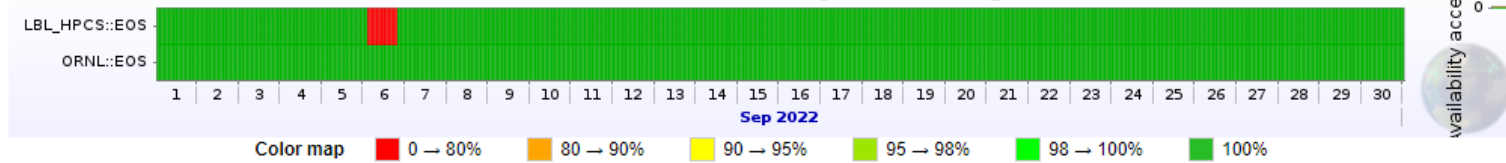
Statistics

Link name	Data		Individual results of writing tests			Overall
	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::EOS	31 Aug 2022 23:58	01 Oct 2022 00:11	709	14	98.06%	98.06%
ORNL::EOS	31 Aug 2022 23:59	01 Oct 2022 00:12	723	0	100%	100%

AliEn SEs availability for reading
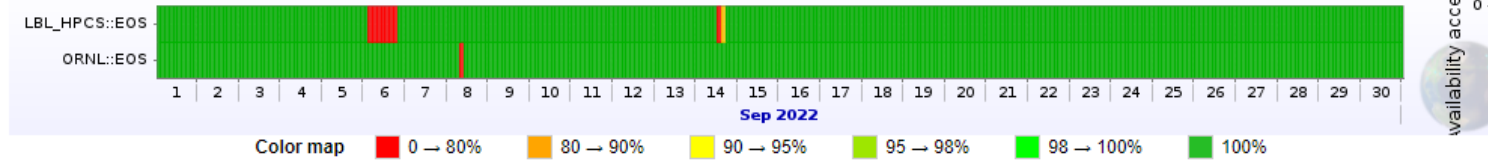
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	Starts	Ends	Successful	Failed	Success ratio	Availability
LBL_HPCS::EOS	31 Aug 2022 23:58	01 Oct 2022 00:11	708	15	97.93%	97.92%
ORNL::EOS	31 Aug 2022 23:59	01 Oct 2022 00:12	722	1	99.86%	99.86%

Storage-provided information

SE Name	Size	Used	Free	Usage	Version	EOS Version
1. LBL_HPCS - EOS	2.749 PB	1.572 PB	1.178 PB	57.16%	Xrootd v4.12.8	4.8.89
2. ORNL - EOS	2.693 PB	759.5 TB	1.951 PB	27.54%	Xrootd v4.12.8	4.8.40
Total	5.442 PB	2.313 PB	3.129 PB			

Using IPv6 Only

AliEn SEs availability for writing
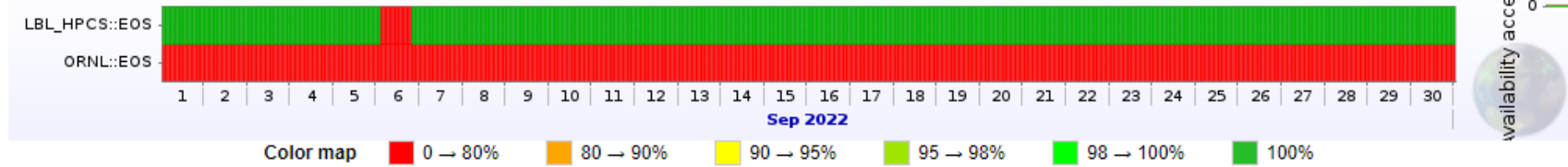
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Sep 2022

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

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AliEn SEs availability for reading
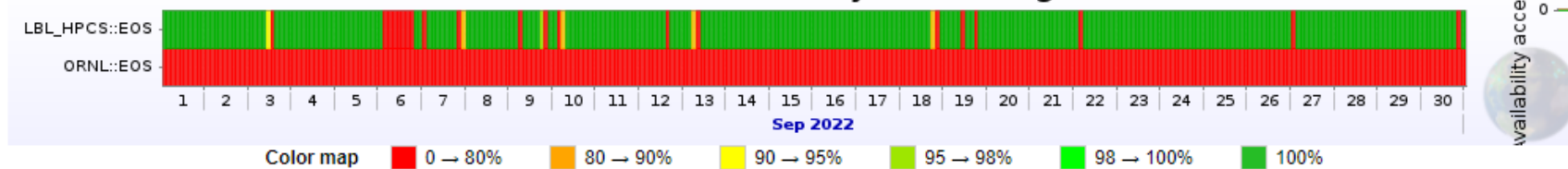
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

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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 CVMFS: old CVMFS version detected (2.7.0), please upgrade to 2.9.4.
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 (2.9.2), please upgrade to 2.9.4.
2 sites	**6 issues**

Last month

This month

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 CVMFS: old CVMFS version detected (2.7.0), please upgrade to 2.9.4.
LBL_HPCS alice-vobox.lbl.gov	Networking: low buffer size kernel parameters: tcp_wmem_max=4 MB only Networking: No IPv6 public address
2 sites	**5 issues**

Status from the File Crawler
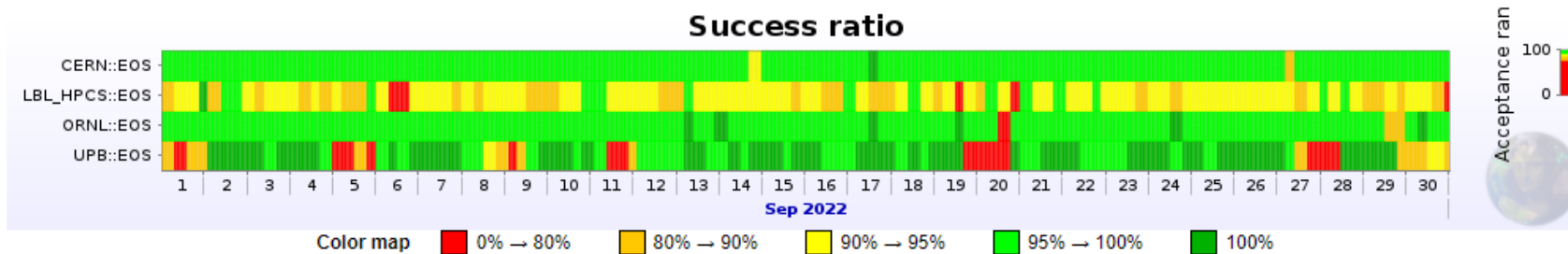
Status codes extracted from the crawler

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	19964	92.74 %	55.74 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	2	0.01 %	58.63 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	1359	6.31 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	200	0.93 %	
	LOCAL_FILE_SIZE_DIFFERENT	1	0.00 %	
TOTAL		21526	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	17468	98.94 %	54.81 Mb/s
	E_CATALOGUE_MD5_IS_BLANK	58	0.33 %	54.92 Mb/s
FILE_INACCESSIBLE	XROOTD_EXITED_WITH_CODE	116	0.66 %	
FILE_CORRUPT	MD5_CHECKSUMS_DIFFER	13	0.07 %	
TOTAL		17655	100 %	

Success ratio

CERN::EOS
LBL_HPCS::EOS
ORNL::EOS
UPB::EOS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Sep 2022

Acceptance ran 100 0

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	01 Sep 2022 04:47	30 Sep 2022 16:25	99.38 %	0.11 %	0.43 %	0.09 %
LBL_HPCS::EOS	01 Sep 2022 04:39	30 Sep 2022 22:32	90.22 %	2.21 %	7.57 %	0.00 %
ORNL::EOS	01 Sep 2022 04:42	30 Sep 2022 22:38	98.47 %	0.33 %	1.20 %	0.00 %
UPB::EOS	01 Sep 2022 04:43	30 Sep 2022 22:33	94.44 %	0.02 %	5.53 %	0.01 %