January CHIPP @ CSCS Review

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Activities

- ## 2020 Maintenance Schedule:
    - May 13th, 2020
    - September 9th, 2020

- ## Accounting Data Verified, awaiting EGI cleanup

- ## Completed an 8 day test of using reservations to flatten Atlas utilization
    - Preliminary report out for review

- ## In the process of configuring a dCache Test Lab
    - Goal is to match the production system and test the upgrade steps
    - Will be able to spot problems before applying changes to the production system
    - Also allows for optimizing upgrades to complete more efficiently
    - Evaluating the change logs of previous versions to spot changes and adapt the configuration
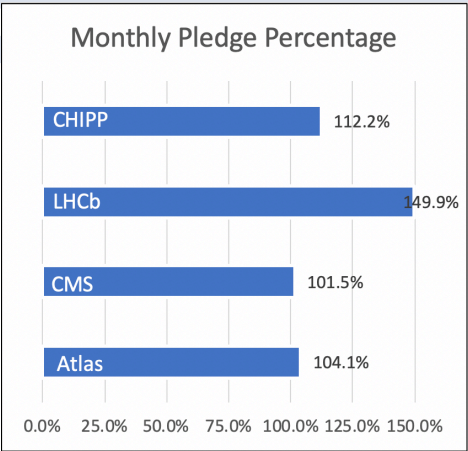
January Monthly Utilization

Running Core Count per Account (atlas + cms + lhcb) and partitions (wlcg + wlcg1)
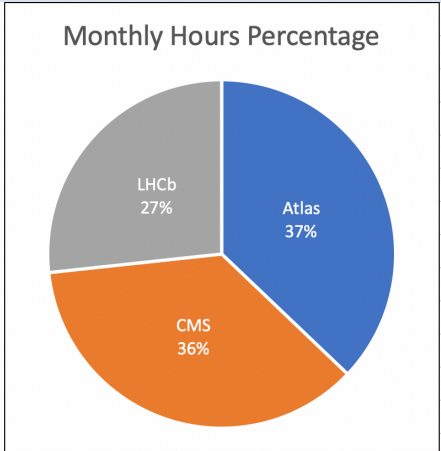
#1 **#2** **#3** **#4**

4 Areas Identified to Explore in Detail
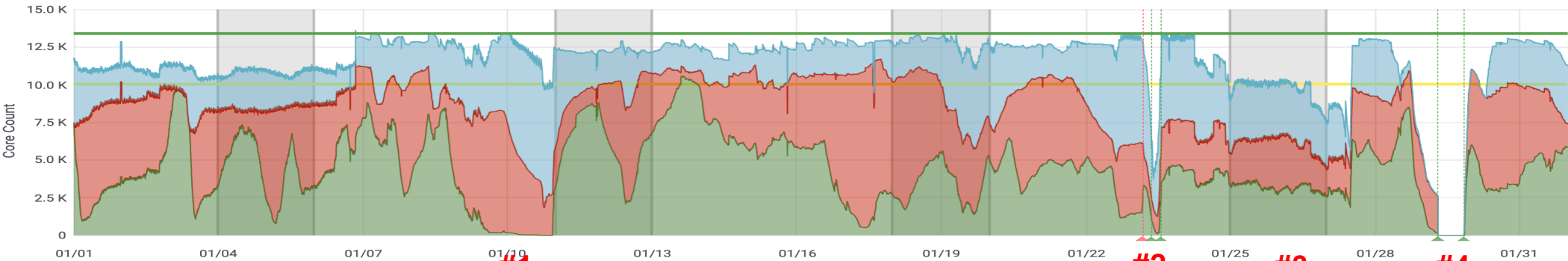
	max	avg	current
Pledges	10.03 K	10.03 K	10.03 K
atlas	10.57 K	4.26 K	5.86 K
cms	10.63 K	4.21 K	1.55 K
lhcb	8.21 K	3.02 K	3.85 K
Capacity	13.40 K	13.40 K	13.40 K

Monthly Pledge Percentage

CHIPP	112.2%
LHCb	149.9%
CMS	101.5%
Atlas	104.1%

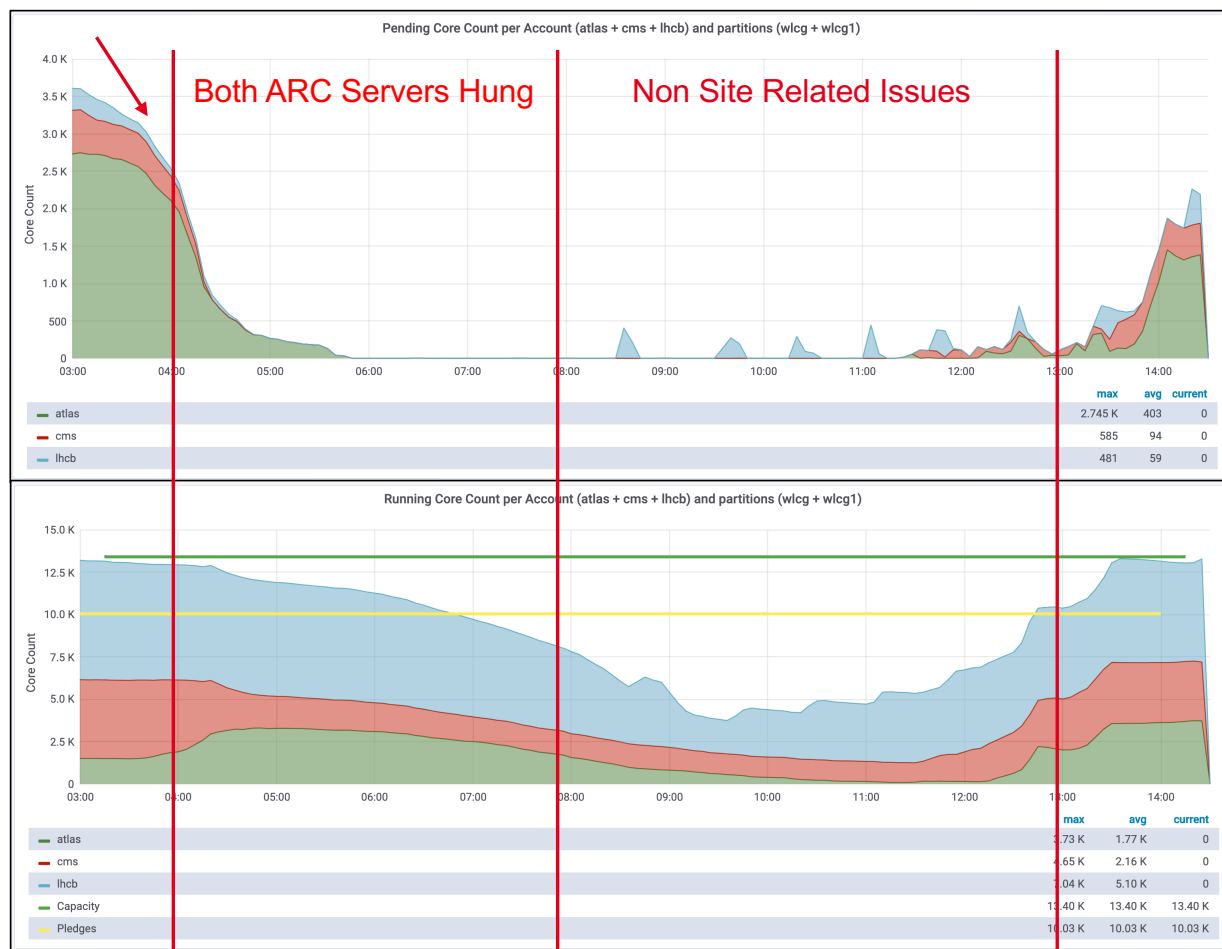| Core Hours	
Atlas	3'109'545
CMS	3'032'322
LHCb	2'237'899

Monthly Hours Percentage

- LHCb 27%
- Atlas 37%
- CMS 36%

Area #1
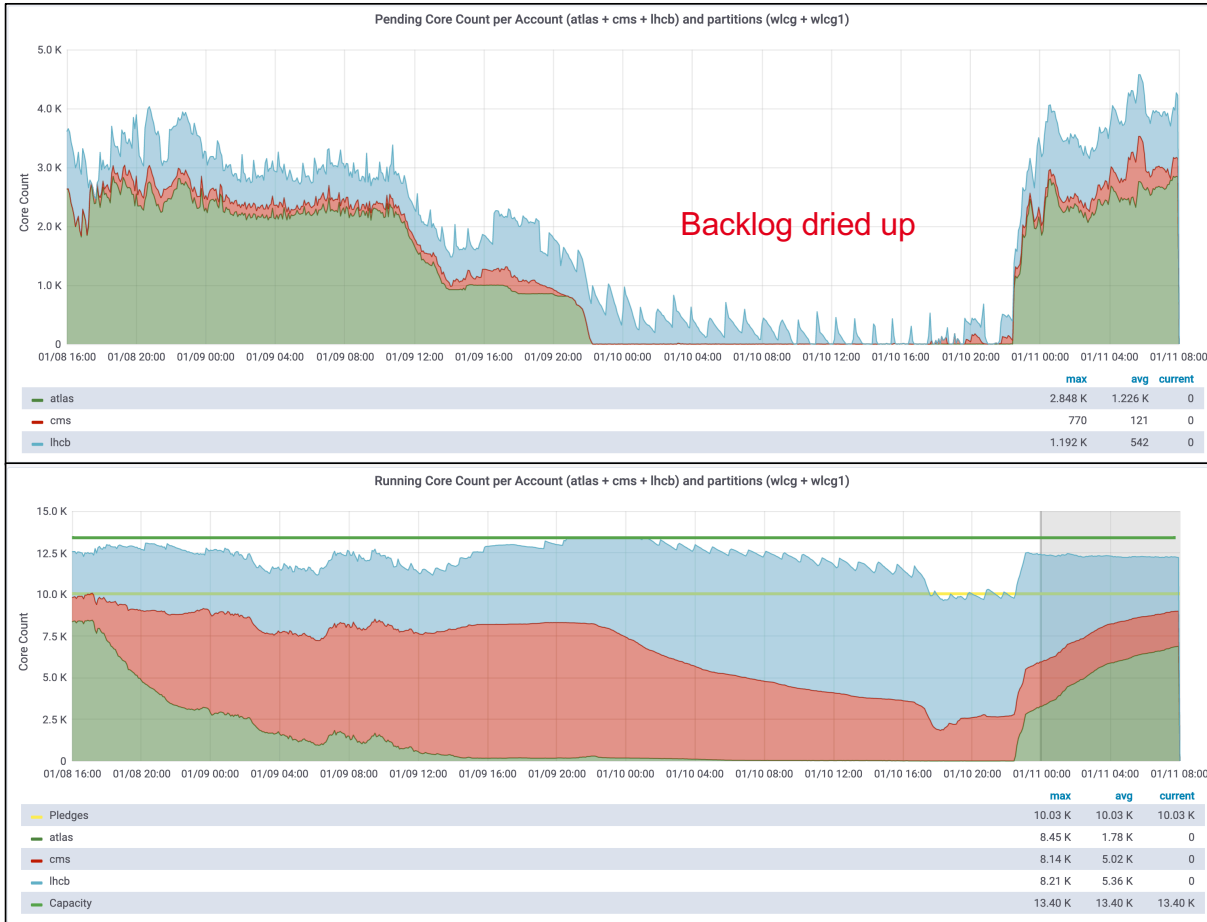
Backlog dried up for unknown reasons. Presumed to be non site related. Primarily affected Atlas.

Area #2

Pending Core Count per Account (atlas + cms + lhcb) and partitions (wlcg + wlcg1)

Both ARC Servers Hung   Non Site Related Issues

	max	avg	current
atlas	2.745 K	403	0
cms	585	94	0
lhcb	481	59	0

Running Core Count per Account (atlas + cms + lhcb) and partitions (wlcg + wlcg1)

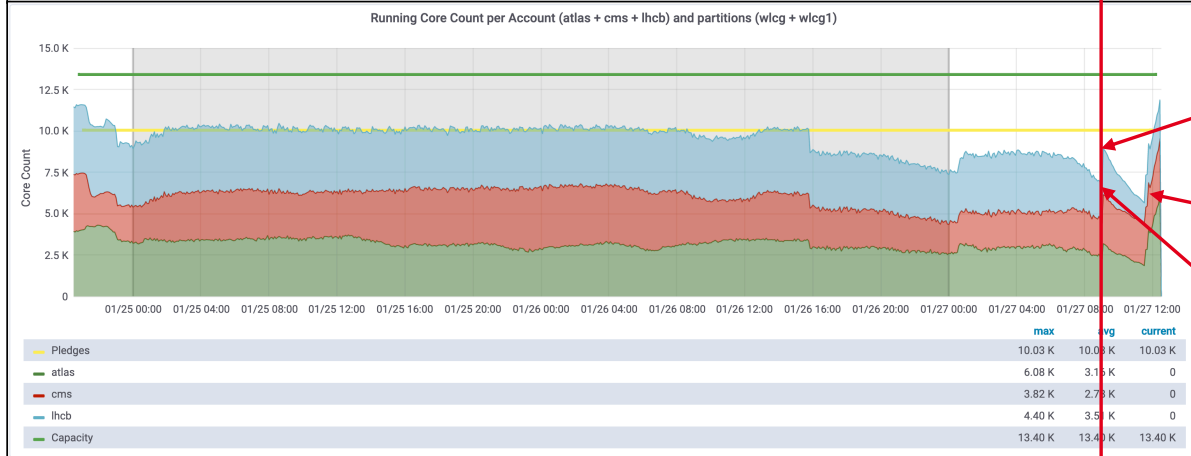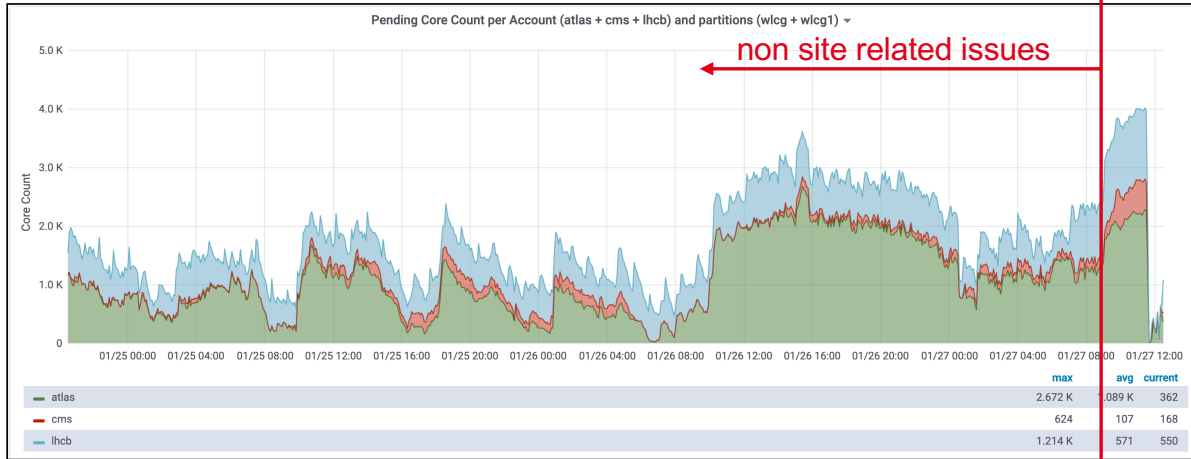|	max	avg	current
atlas	3.73 K	1.77 K	0
cms	4.65 K	2.16 K	0
lhcb	7.04 K	5.10 K	0
Capacity	13.40 K	13.40 K	13.40 K
Pledges	10.03 K	10.03 K	10.03 K

ARC Servers Hung: Both ARC servers hung and required restarting.

A non site related issue drained the site's pending workload. This possibly began prior to the ARC servers hang as a decline in pending work can be observed (see arrow).

The result was that a large amount of computing time went unused due to not having a backlog of work as a result of the non site related issue. This primarily affected Atlas, but all 3 VOs seem to have been impacted.

Area #3

Pending Core Count per Account (atlas + cms + lhcb) and partitions (wlcg + wlcg1)

non site related issues

	max	avg	current
atlas	2.672 K	1.089 K	362
cms	624	107	168
lhcb	1.214 K	571	550

Running Core Count per Account (atlas + cms + lhcb) and partitions (wlcg + wlcg1)

	max	avg	current
Pledges	10.03 K	10.03 K	10.03 K
atlas	6.08 K	3.16 K	0
cms	3.82 K	2.73 K	0
lhcb	4.40 K	3.56 K	0
Capacity	13.40 K	13.40 K	13.40 K

Unknown non site related issue affected utilization. A large amount of compute hours went unused.
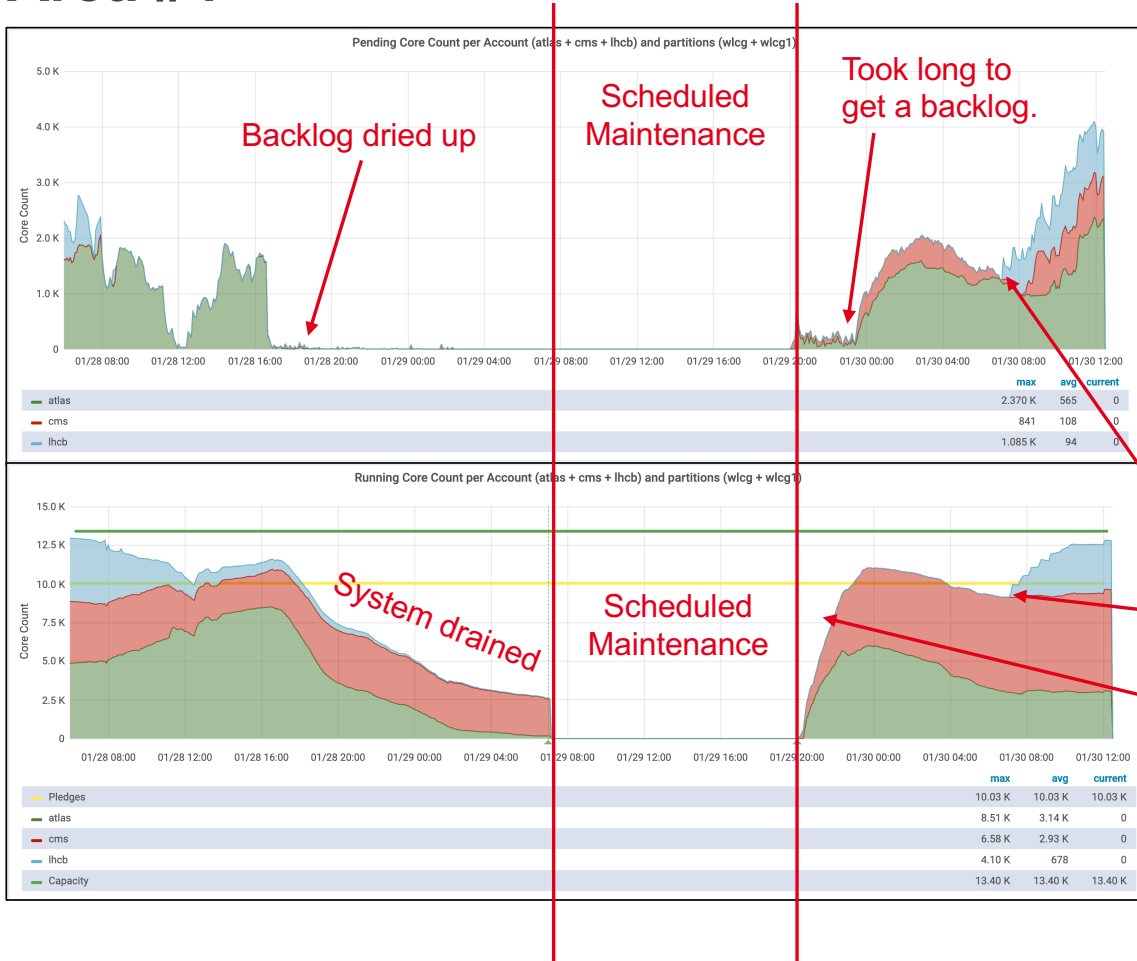
Oversight in leaving CHIPP nodes in maintenance reservation. Reservation kicked in right after non site related issue was resolved.

Maintenance reservation started

CHIPP nodes released from maintenance reservation

Issue resolved
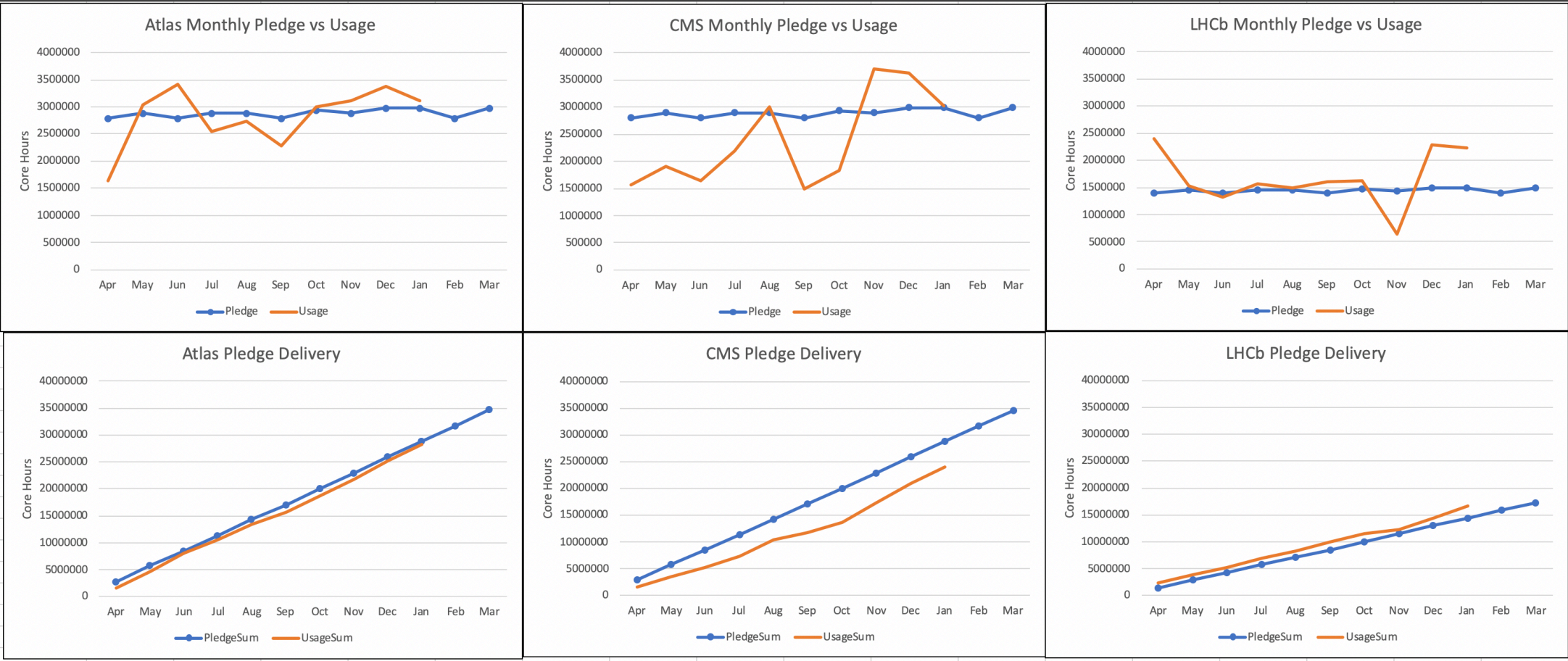
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Area #4

Unknown why the backlog dried up prior to the maintenance, presumed to be a non site related issue.

Unknown why it took so long to get a sufficient backlog or why LHCb had such a delayed start. Presumed to be non site related issues.
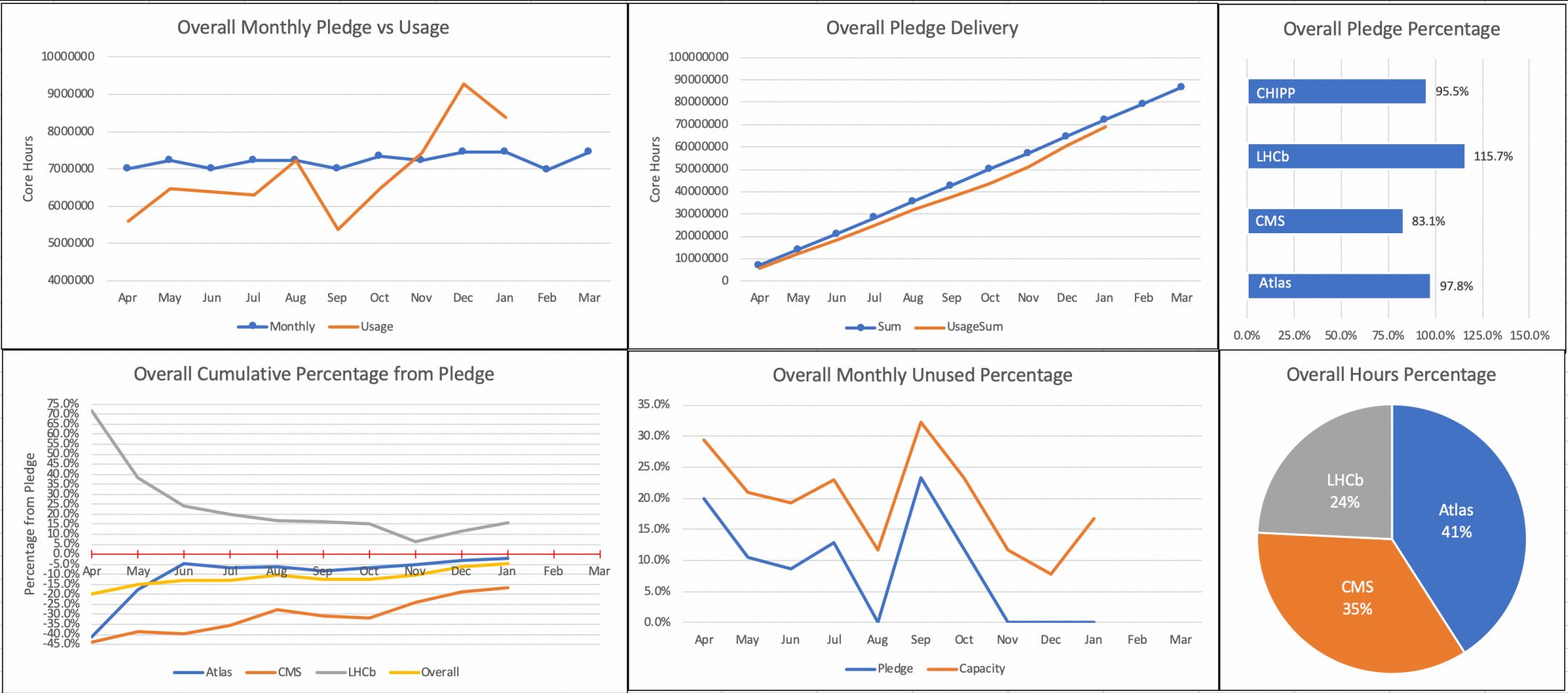
April 1, 2019 through January 31, 2020 VO Utilization

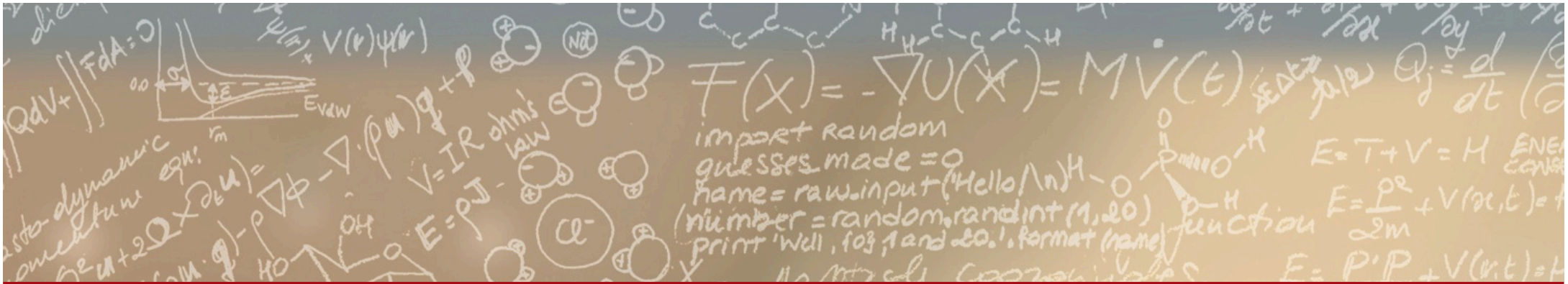# CHIPP Progress on Pledge Delivery

Summary

- All 3 VOs exceeded their monthly pledge

- CHIPP exceeded the monthly pledge

- Several non site related issues affected utilization
  - Resulted in lower than expected consumption of resources

- Would be useful to get a report of the non site related issues so that they can be documented for future reference

Thank you for your attention.