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Tier 1 FY 23 and beyond milestones

WBS	Milestone #	Milestone	Baseline Date	Actual/ Estimated	Status
2.3.1	120	Old BNL data center decommissioned for compute	Jan '24	Jan '24	On Sched.
2.3.1	142	Medium-term model for central disk storage at Tier-1	Mar '23	Mar '23	On Sched.
2.3.1	143	Op Sys replacement for SL7 at T1 batch farm	Jun '23	Mar '24	Duplicate
2.3.1.2	175	Initiate the purchase of Network (SciZone, Firewall) Hardware upgrade and migration to new data center	Oct '22	Feb '23	Delayed
2.3.1.2	176	Initiate the purchase Network hardware for Storage Core in blg 515	Oct '22	Feb '23	Delayed
2.3.1.2, 2.3.1.3	177	Contribute to the US ATLAS/CMS report on Cloud computing cost model	Dec '22	Dec '22	On Sched.
2.3.1.2, 2.3.1.3	178	Deployment of 2023 ATLAS MoU CPU Pledge	Mar '23	Mar '23	On Sched.
2.3.1.2, 2.3.1.4	179	Deployment of 2023 ATLAS MoU Disk Pledge	Mar '23	Mar '23	On Sched.
2.3.1.2, 2.3.1.4	180	Deployment of 2023 ATLAS MoU Tape Pledge	Mar '23	Mar '23	On Sched.

- OS replacement delayed till Rocky v9 is evaluated. (transition SL7 to Rocky 9) needed by June 2024

- Network equipment purchase delayed due to availability of funds. (currently Continuing Resolution (CR))

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Tier 1 FY 23 and beyond milestones(2)

WBS	Milestone #	Milestone	Baseline Date	Actual/ Estimated	Status
2.3.1.4	181	HPSS 8.3.20 upgrade	Mar '23	Dec '22	Early
2.3.1.3, 2.3.1.5	182	Migration of the Storage test instance to using tokens for authentication/authorization	Mar '23	Mar '23	On Sched.
2.3.1.5	183	Federated identity access to Kubernetes Platform	Apr '23	Apr '23	On Sched.
2.3.1.4, 2.3.1.5	184	Commissioning of Rucio QoS at the Tier-1	Jun '23	Jun '23	On Sched.
2.3.1.3	185	Complete development modifications to the HEPscore application to support Apptainer, Podman, and multiple weights per container	Jun '23	Jun '23	On Sched.
2.3.1.2, 2.3.1.5	186	Migrate ATLAS HPC Disk standalone Globus endpoint to SDCC Globus endpoint	Jun '23	Aug '22	Early
2.3.1.5	187	New CVMFS testbed on VMs	Jun '23	Jun '23	On Sched. (?)
2.3.1.5	188	Upgrade hardware for FTS instance at BNL	Mar '23	Mar '23	On Sched.
2.3.1.5	189	Maintain FTS instance at BNL to meet requirements for Reliability and Availability FY23	Sep '23	Sep '23	On Sched.

- New CVMFS testbed might be delayed (half team working on project left BNL)

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Tier 1 FY 23 and beyond milestones(3)

WBS	Milestone #	Milestone	Baseline Date	Actual/ Estimated	Status
2.3.1.2, 2.3.1.5	190	Meet WLCG Pledge Site requirements for Reliability and Availability FY23	Sep '23	Sep '23	On Sched.
2.3.1.5	191	Complete CVMFS upgrade	Sep '23	Sep '23	On Sched(?)
2.3.1.2	192	RHEL 8/Puppet 6 migration	Sep '23	Sep '24	On Sched.
2.3.1.3	193	Rocky Linux 9 evaluation and migration plan for new OS on batch farm	Dec '23	Dec '23	On Sched.
2.3.1.3	194	Participate in running tests of proposed HEPscore candidates and report results	Dec '23	Aug '22	Early
2.3.1.2	195	Complete SciZone Perimeter Firewall upgrade and migration to new data center	Dec '23	Mar '24	Delayed
2.3.1.2, 2.3.1.3	196	Complete Storage Core Network migration in B515	Dec '23	Mar '24	Delayed

- Overall – most milestones on Schedule, A few are at risk of being delayed.
- Network equipment purchase delayed due to availability of funds. (currently Continuing Resolution (CR))
- Will meet the MOU pledge for April 2024 and fulfill all ATLAS requirements.

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Some of the SDCC Contributions to ATLAS and WLCG

- Alex Zaytsev, Chris Hollowell and Shigeki Misawa are participating in the WLCG Flat Budget Model Study Group and will contribute to the USATLAS/USCMS HPC/Cloud cost modeling report

- Ofer Rind - ADC Grid Infrastructure and Facilities.

- Shigeki - HPSS contributions to Data Carousel maturation (smart writing).

- Hiro Ito discovered dCache IPv6 bug and worked with developers to fix to the benefit of all.

- Carlos Gamboa, Qiulan Huang and Vincent Garonne work with the dCache core developers to find/report bugs and improve dCache for all.

- Hiro and Matt Snyder support FTS at SDCC on behalf of ATLAS.

- Hiro and Alex members of the WLCG network packet marking working group.

- Hiro member of the ADC ATLAS data placement working group.

- JD,Saroj – supports VOMS for ATLAS

- JD - supports CVMFS for US ATLAS (including AF's)

- Tony Wong - WLCG GDB steering group

There is always room to be better.

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Risks

- Supply Chain issues affect purchases (cost and time)
- Variable funding..
  - Cut in budget for CPU means fewer resources that can migrate into the shared HTCondor Pool for ATLAS analysis facility users.
- Staffing issues
  - Staff retention
    - Primary Lustre expert is leaving BNL this week.
  - Staff Hiring
    - Many places competing for the same talent pool.
  - Overloading of productive existing staff.
    - Run risk of "burn-out" or mistakes.
    - Slowing progress on existing/future projects
    - ATLAS Lustre storage at risk. (HPC Disk and Analysis Facility disk)

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Conclusions

- Long list of milestones show all of the activities at the Tier 1

- BNL SDCC is meeting its obligations to the ATLAS experiment.

- Staff members meaningfully contribute to US ATLAS, ATLAS, WLCG activities

- Risks continue to make things interesting.