WBS 2.3.2.4

Southwest Tier-2 (SWT2)

University of Texas at Arlington

University of Oklahoma

Patrick McGuigan (on behalf of the SWT2 Collaboration)

2.3.2.4 FTE Summary

	FY22 US ATLAS Funded	FY22 Other Funding	FY23 US ATLAS Funded	FY23 Other Funding	Job description
Patrick McGuigan	1.0		1.0		UTA sys admin
Mark Sosebee	0.5		0.5		UTA sys admin
Horst Severini		0.5		0.5	OU sys admin
Chris Walker	0.5		0.5		OU sys admin
Kaushik De		0.2		0.1	Management
Total	2.0	0.7	2.0	0.6	

- Other activities:
  - Patrick, Mark, and Chris - none
  - Horst - Oklahoma supercomputer system administrator
  - Kaushik - faculty / NSF

SWT2: Summary of Current Capacities

- SWT2 Resources
  - SWT2_CPB_K8
  - OU_OSCER
  - SWT2_CPB
- CPU with imminent deployments and removals:
  - Job slots (threads): 22+ k
  - Total HEP-SPEC06: 300+ k (Required: 98 k / 190 k)
  - Additional opportunistic slots (OU): typically 500-1500 /10.9 k
- Disk storage deployed:
  - ~ 13.8 PB (Required: 10.3 PB)
  - ~ 3.5 PB beyond requirements available to ATLAS as needed

SWT2: Retirements & Procurement

- Retirements Planned in the coming year:
  - 2.9 - 3.3 PB of MD3460 based storage
  - Up to 3,000 slots 24 kHS06 R410 based compute nodes
- Procurement Plan LINK
  - $420K with carry-over and this year's funds
  - ~$60K set aside for UPS refurbishment
  - split 70/30 on Storage/Compute for remaining funds
    - Based on Last purchases, we expect to buy:
      - 4 PB storage
      - 14.5 kHS06

SWT2: Milestones

❖ Milestones:

Ordinal	Title	Date	Status	Notes
66	SWT2 procurement plans	12/30/2022	Completed	
71	SWT2 Operation and milestones plan drafted	2/28/2023	On Schedule	
90	SWT2 identifies next OS	6/30/2023	On Schedule	New Mgmt sw
98	SWT2 completed FY23 procurement plans	9/30/2023	On Schedule	
109	SWT2 LAN upgrade	12/31/2022	On Schedule	Tight
110	SWT2 rack power balance	1/31/2023	On Schedule	
111	SWT2 pledge deployment	3/31/2023	Completed	
112	SWT2 FY23 equipment order	7/31/0203	On Schedule	
126	Kubernetes cluster development	3/31/2023	On Schedule	see 109/110

SWT2: Benefits to Facility/ATLAS

- ATLAS Benefits:
  - 2nd Largest Tier 2 Storage Site
  - 3rd Largest Tier 2 CPU seconds producer for successful jobs
  - 4th Largest Tier 2 processor of bytes
- Facility Benefits
  - Provides alternate solutions for storage and local scheduling
    - XRootD
    - SLURM
  - Provides testbed for Pilot development
  - Tends to push ahead with new OS before rest of facility

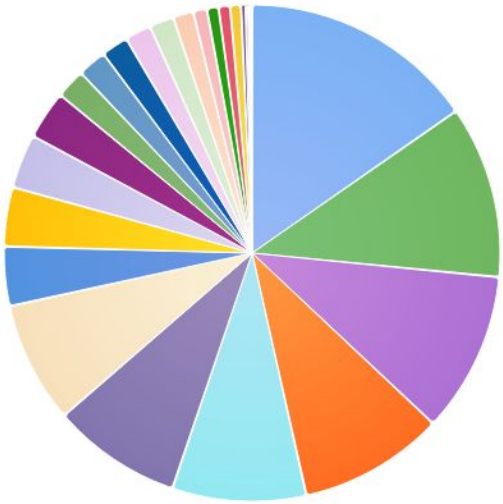
SWT2 DDM Volume

DDM Monitoring / DDM Site Accounting

Last 2 years UTC

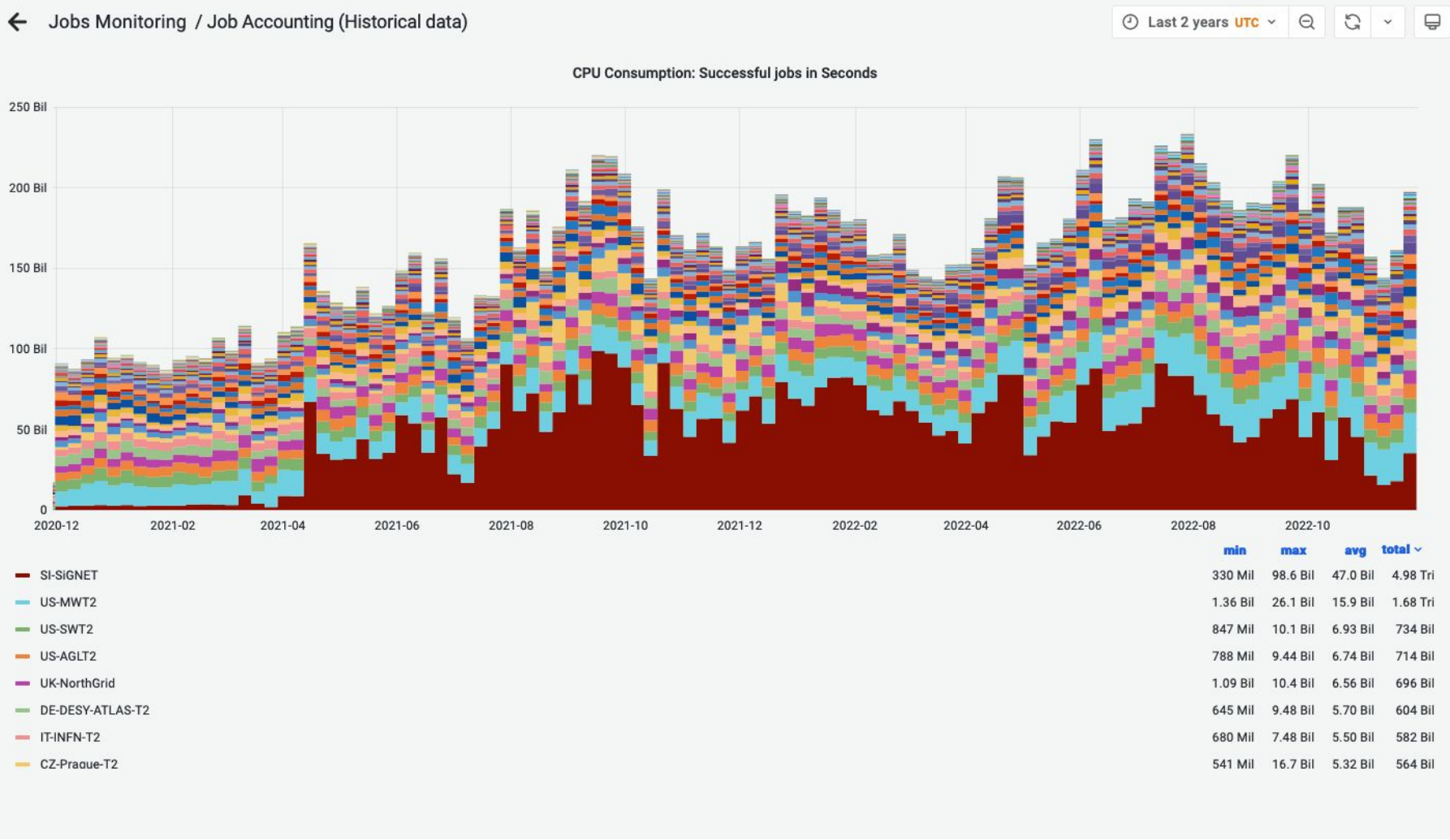
Volume by federation

Last 24 hours

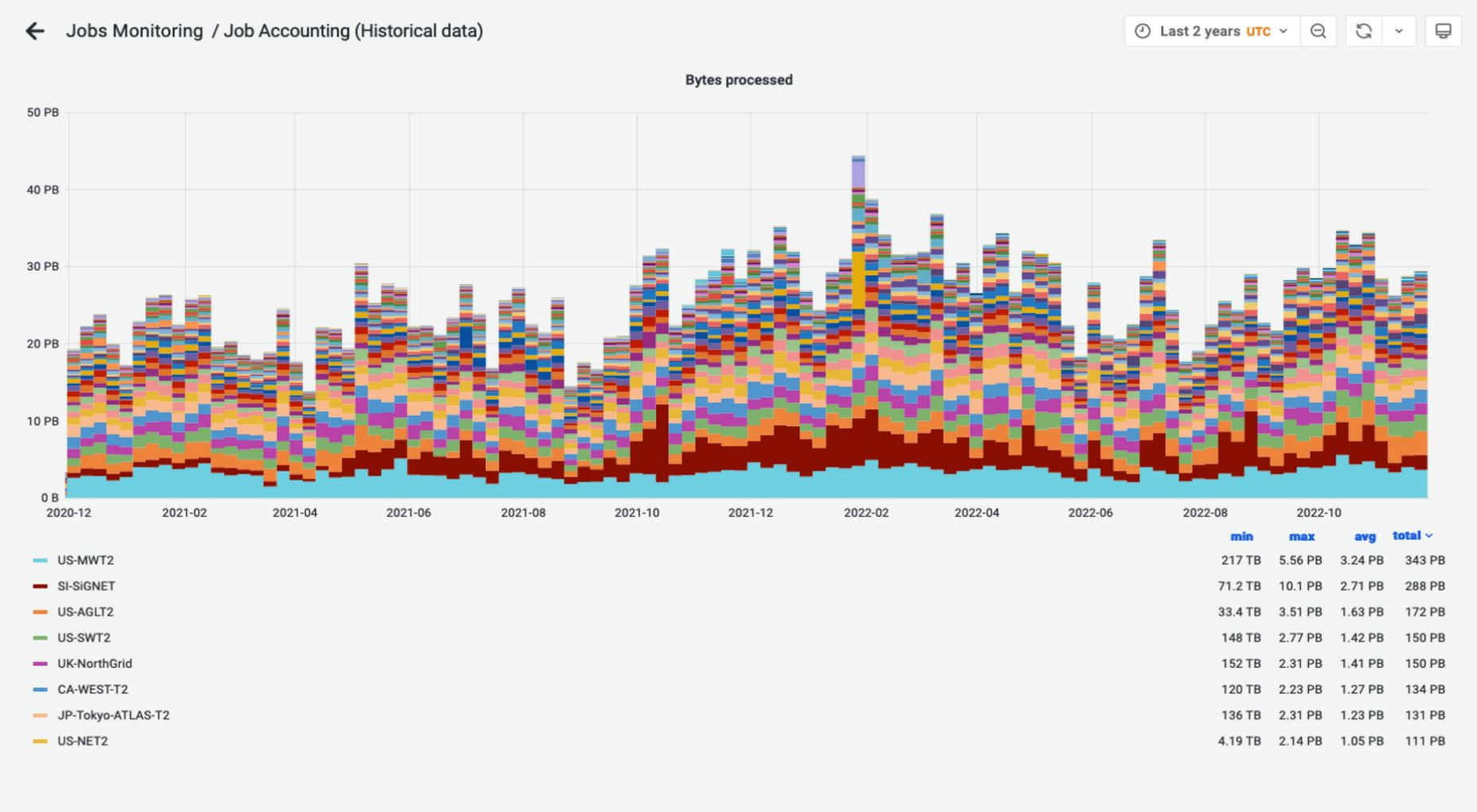


	Value	Percent
US-MWT2	16.9 PB	16%
US-SWT2	12.4 PB	11%
UK-NorthGrid	11.5 PB	11%
US-AGLT2	10.4 PB	10%
IT-INFN-T2	9.60 PB	9%
UK-London-Tier2	9.30 PB	9%
JP-Tokyo-ATLAS-T2	8.69 PB	8%
UK-ScotGrid	4.20 PB	4%
US-NET2	4.18 PB	4%

SWT2 CPU Consumption



SWT2 Bytes Processed



SWT2 Concerns/Issues

- Power/Cooling consumption by rack / by facility
- Moving to new provisioning/management layer
- Replacing RR-DNS based I/O hosts with XRootD redirector based solution