

Follow up on the WLCG review of accounting and pledge management tools



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Overview

- During June 2023 WLCG held a review, assessing our tools and procedures for accounting and pledge management:
 - One survey targeted to site admins
 - One survey targeted to people who are dealing with federation topology and pledge management
 - Feedback from VOs participating in WLCG Operations Coordination
 - Input from the WLCG project office (which is responsible for collecting and maintaining pledges of the whole collaboration).
- Results were presented at the WLCG operations coordination meeting on October 12, 2023 and the January 2024 GDB
- Today, we will go through the results, giving updates on how the feedback was addressed.

- What did we ask about:
 - APEL
 - EGI Accounting Portal
 - WLCG Accounting Utility (WAU)
 - Accounting validation procedure and related UI
 - Monthly accounting reports
 - Overall procedure for the definition of the VO requirements and yearly pledges
 - CRIC UI for pledge and VO requirements definition





Site Survey Results

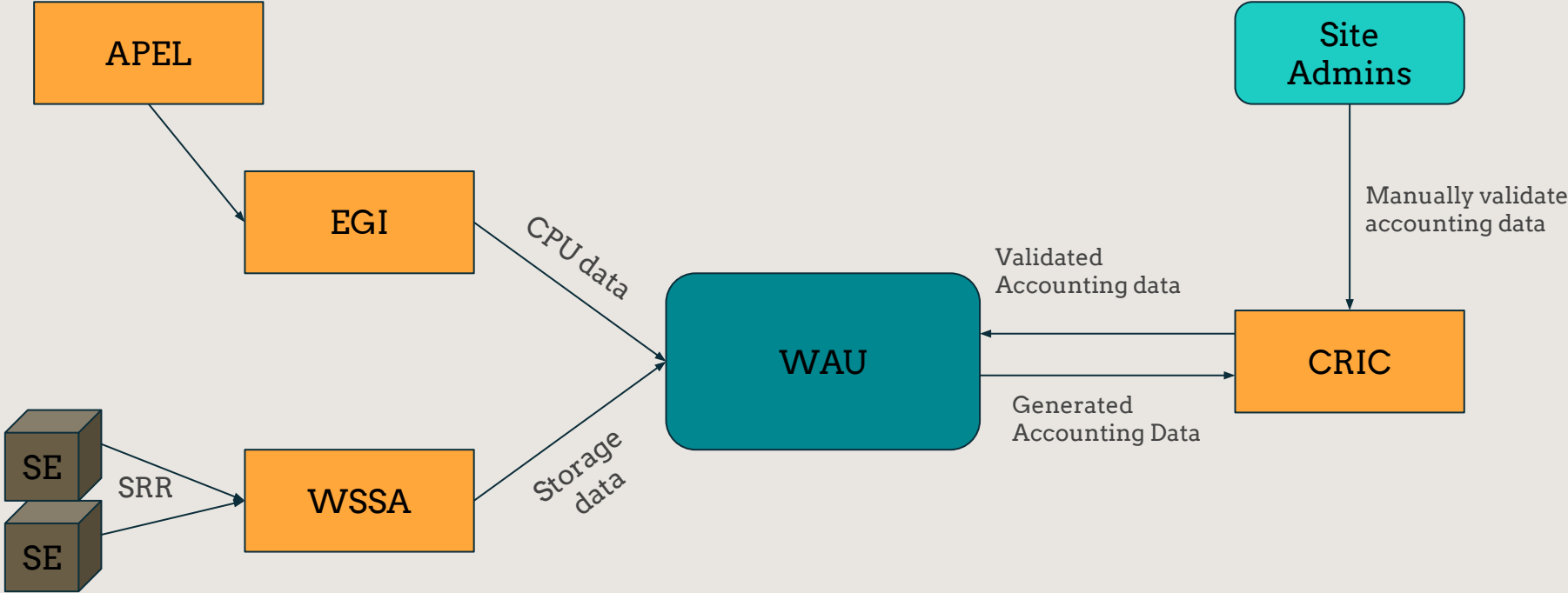
- 23 sites participated: 5 Tier-1s, 16 Tier-2s, 1 Tier-3
- APEL
 - People are mostly satisfied by data quality (although 10% rated it poorly)
 - 50% of participants are not satisfied with the support provided by APEL
- EGI
 - Overall, users are happy with the portal, but there were a few suggestions on how to improve site usability. These are being followed up with the portal developers.
- WAU
 - Unfortunately, not a lot of people were aware of the platform:
 - <https://monit-grafana-open.cern.ch/dashboards/f/e3b5d447-4a24-44f1-aa72-39fc7f18b532/wlwg-accounting>
- Monthly accounting validation
 - Overall very positive feedback

Improvements in the WLCG accounting ecosystem

WAU WSSA CRIC etc



Data Flow



Experiment data in WAU

- One of the main requests coming from the experiments is that they would be interested to crosscheck their accounting data with data in the EGI portal
- Experiment data are now being imported in WAU and can be compared with EGI data and CRIC validated numbers:
 - https://monit-grafana-open.cern.ch/d/GlwMwM_nk/4b6c4c7a-e54f-5db7-9efc-53f84bb951e3?orgId=16
- There are still improvements that need to be done
 - We only have ATLAS+CMS data for both wallclock time and wall clock work, LHCb only provides wallclock time and ALICE provides no data
 - There is ongoing work on getting ALICE data into some Grafana-compatible source
 - Only ATLAS data seem to be reliable; CMS shows big discrepancy which might be true but we do need to follow up further

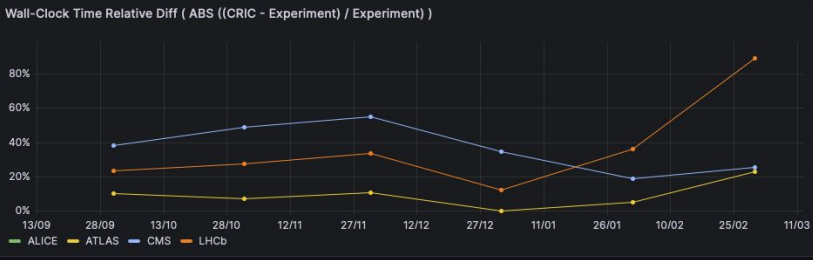
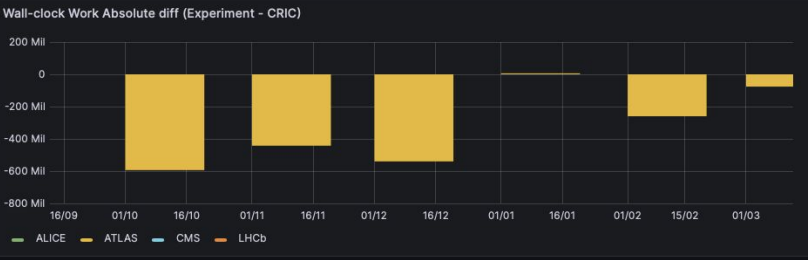


Overview & Help (0 panels)

Table View

CPU Summary (Validated / Experiment Validated)

vo	Validated WCT (hours)	Validated WCW (HEPscore23 hours)	Experiment WCT (hours)	Experiment WCW(HEPscore23 hours)	WCT % (Rel diff)	WCW % (Rel diff)
ALICE	691.60 Mil	7.86 Bil				
ATLAS	2.06 Bil	26.70 Bil	1.88 Bil	24.80 Bil	9.64%	7.68%
CMS	1.56 Bil	20.12 Bil	1.15 Bil		35.96%	
LHCb	482.07 Mil	6.42 Bil	351.86 Mil		37.01%	



Improvements on the Pledge and VO requirements definition



CRIC UI for pledge and VO requirements definition

- We received a few suggestions on how to improve the CRIC UI and the workflows around pledge submission
 - Improvements to the pledge definition process were suggested
 - Many problems would be solved by implementing in CRIC a new interface where each user can only see the pledges they are supposed to edit, thus removing any confusion. This was done!
 - The main request was the possibility to see in plots the evolution over the years of pledges and VO requirements together with the comparison between the two
 - All the historical data from CRIC were made available to Grafana where we now have plots that enable exploring the history of pledges and requirements
 - <https://monit-grafana-open.cern.ch/d/e9c3d51f-f377-4552-bdbf-799c3b15270d/>



Tier All Country All Federation All VO All Group By VO

Information

Please note:

Plots comparing pledged and required resources make sense only for grouping by VO or Tier

CPU

Pledged data for CPU



Required data for CPU



Comparison between pledged and required CPU (all Tier and all VOs)

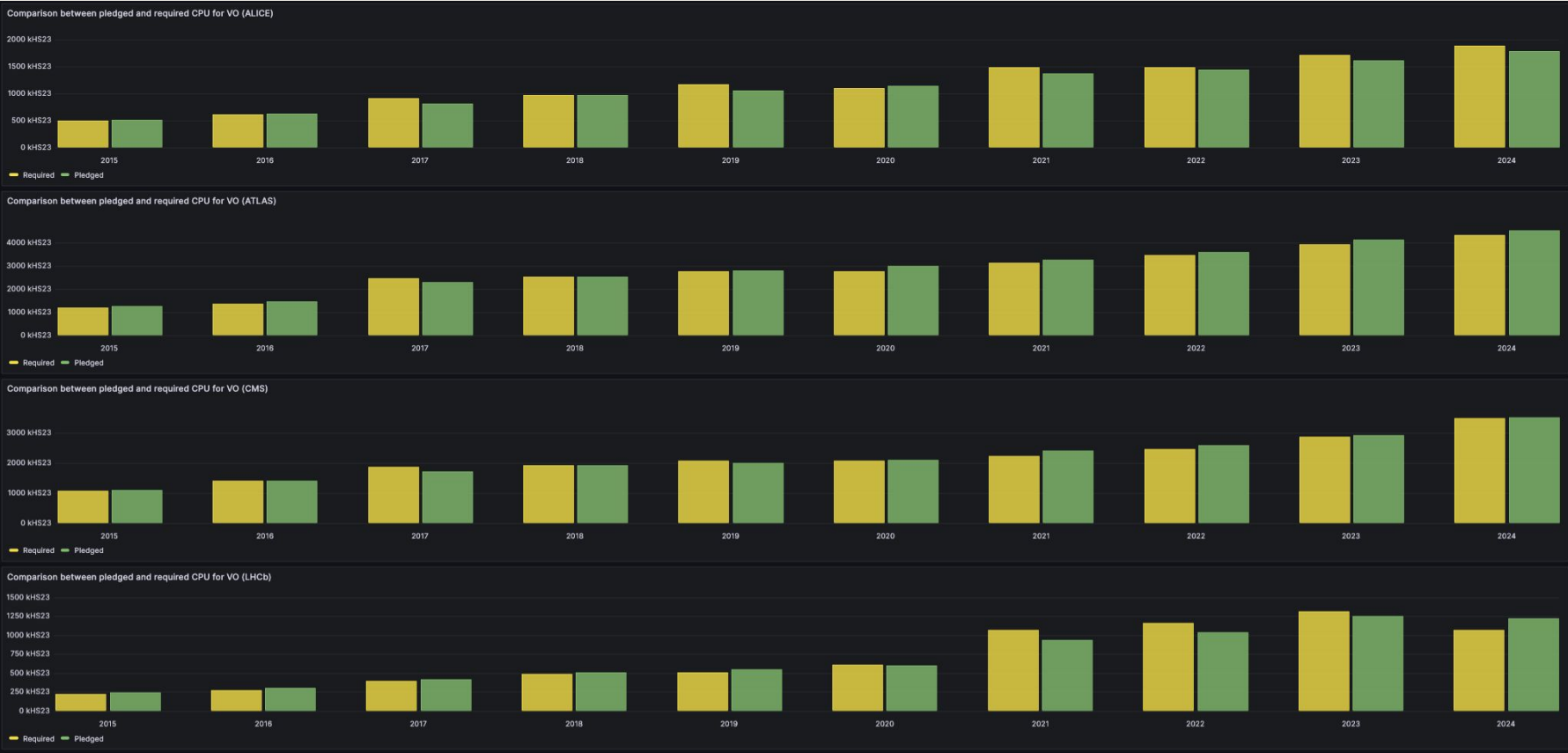


Comparison between pledged and required CPU for Tier (Tier-0)

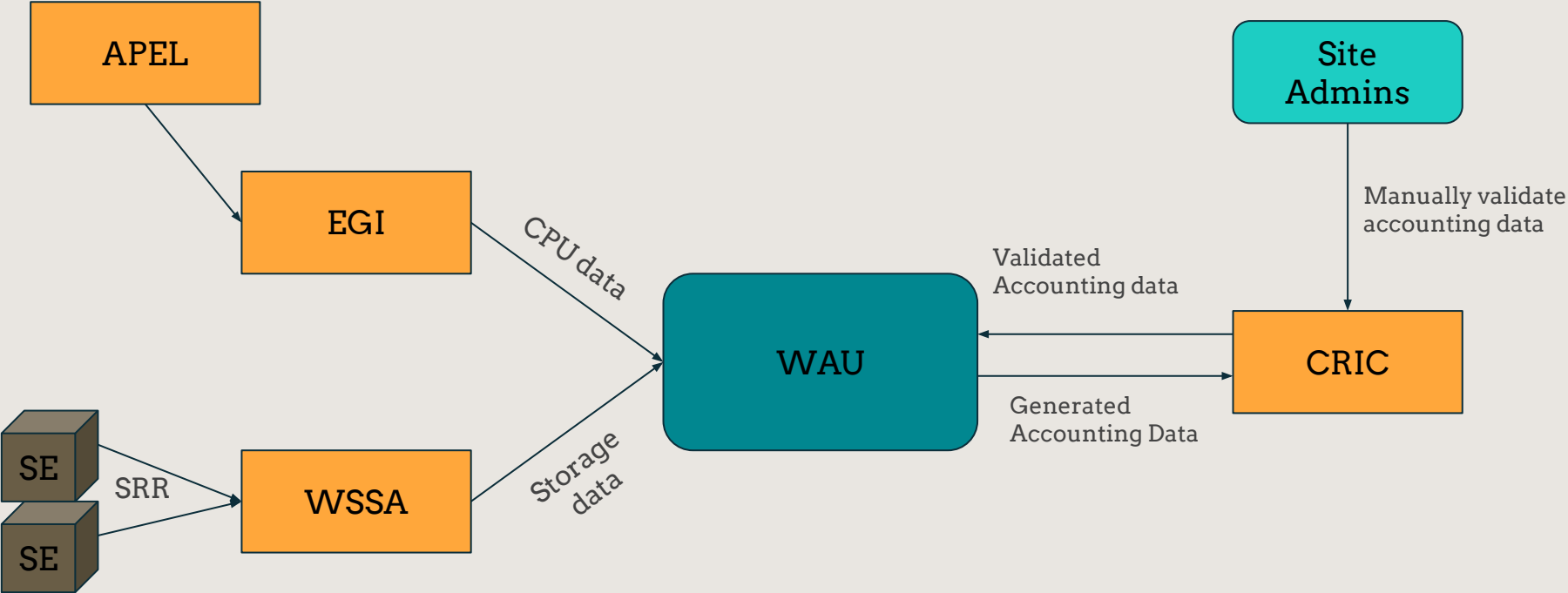


Comparison between pledged and required CPU for Tier (Tier-1)

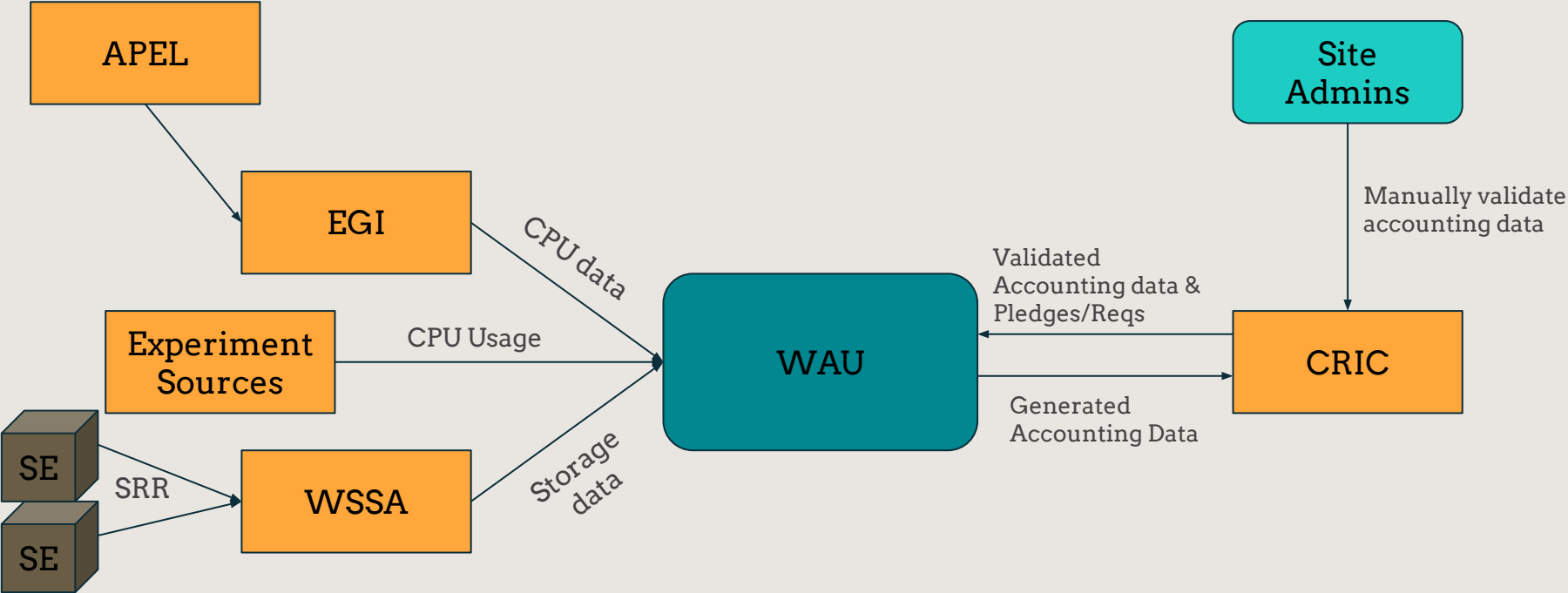




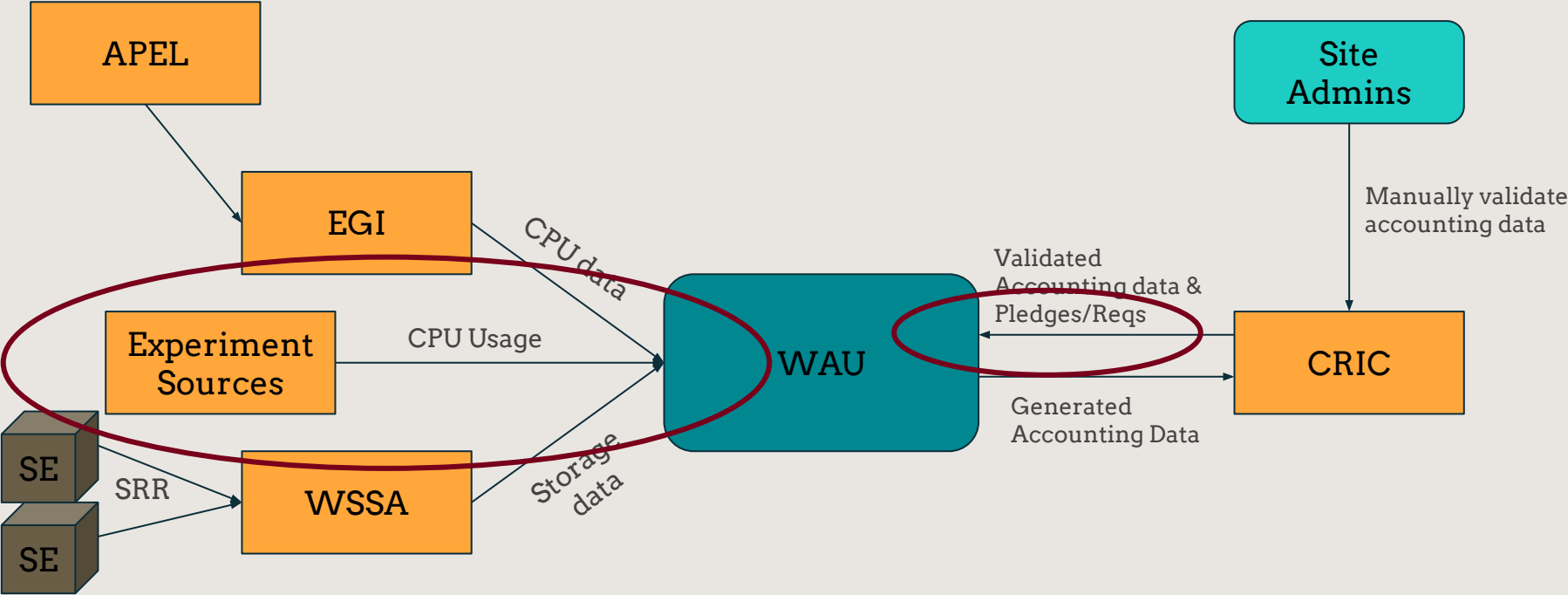
Data Flow



Data Flow



Data Flow



Input of the WLCG project office





WLCG project office input

- The input was focused on CRIC functionality for VO requirements and pledge definition
- Main points:
 - Single dedicated interface to enter pledges for the new year:
 - New personalised UI for each user, which will be linked to from all appropriate places **DONE**
 - An interface to lock/unlock pledges in bulk **DONE**
 - Many minor suggestions for UI usability improvements **DONE**

Bulk update of regional center pledges

Filters

Year:

Custom filter:

Combined field to filter by regional center pledge, VO Name/Federation/Tier level or Federation Accounting name

Search

Cancel

Search results

Show 20 entries

Search:

	Federation	Type	Tier	Country	Year	IS VALIDATED
	AT-HEPHY-VIENNA-UIBK	CPU	2	Austria	2024	🔒
	AT-HEPHY-VIENNA-UIBK	CPU	2	Austria	2024	🔒
	AT-HEPHY-VIENNA-UIBK	CPU	2	Austria	2024	🔒
	AT-HEPHY-VIENNA-UIBK	Disk	2	Austria	2024	🔒
	AT-HEPHY-VIENNA-UIBK	Disk	2	Austria	2024	🔒
	AT-HEPHY-VIENNA-UIBK	Disk	2	Austria	2024	🔒
	AU-ATLAS	CPU	2	Australia	2024	🔒
	AU-ATLAS	Disk	2	Australia	2024	🔒
	BE-TIER2	CPU	2	Belgium	2024	🔒
	BE-TIER2	Disk	2	Belgium	2024	🔒



Conclusions

- The review was very helpful, to humble the all-knowing developers and bring more usability to our tools.
- WLCG Accounting Utility is now in a production-ready state and in an open Grafana instance, with experiment's data and historical Pledges/VO Requirements imported.
- CRIC has seen various improvements including what was suggested from the review, regarding accounting data validation and pledge submission/management.
- All the requests targeted to WLCG central ops (CRIC/WAU/WSSA) have been addressed.
- EGI and APEL have also improved their functionality based on the outcome of the review.



Thank you!

