



Science and
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Facilities Council

APEL Accounting Repository Status and Technical Roadmap

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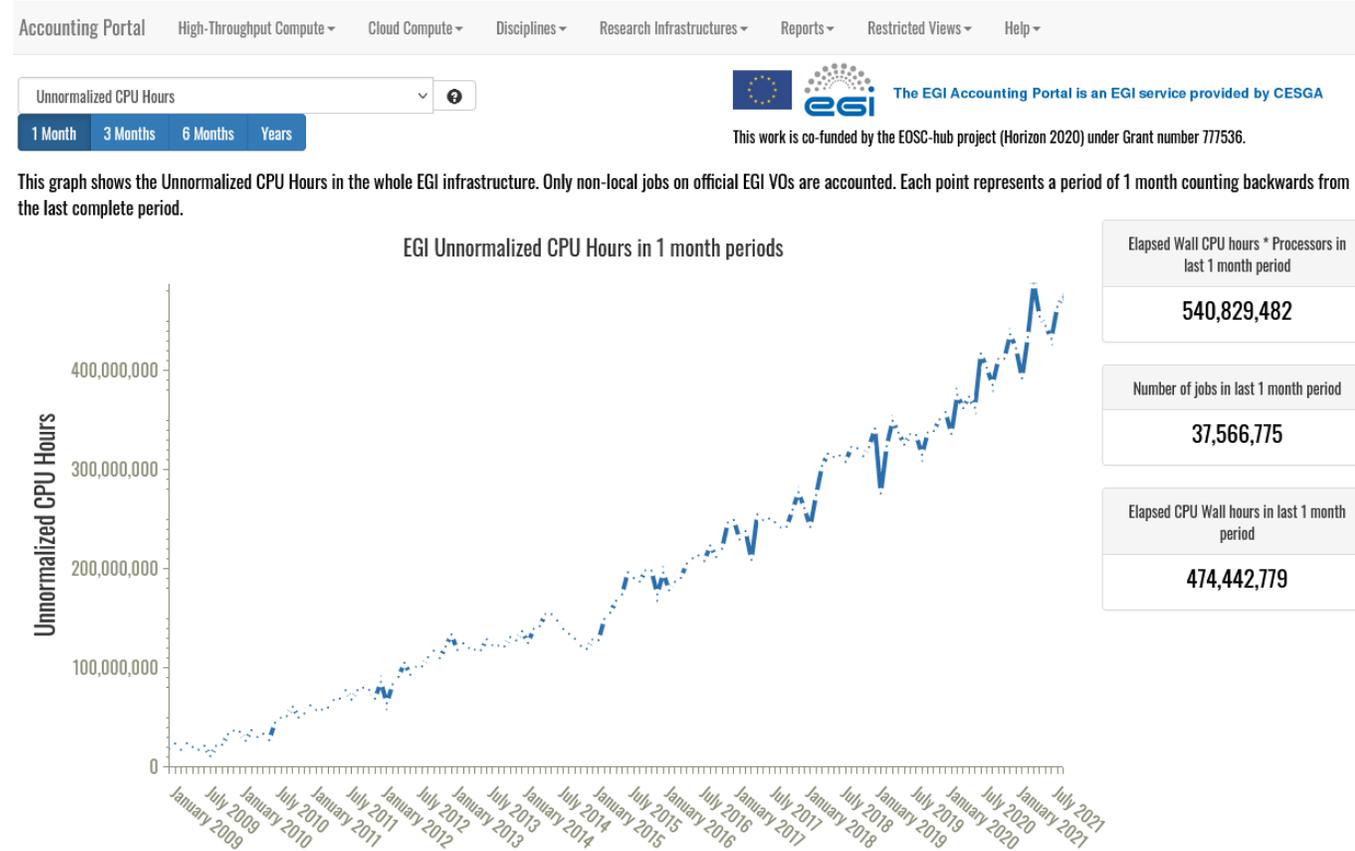
EGI Conference – 20th October 2021

Outline

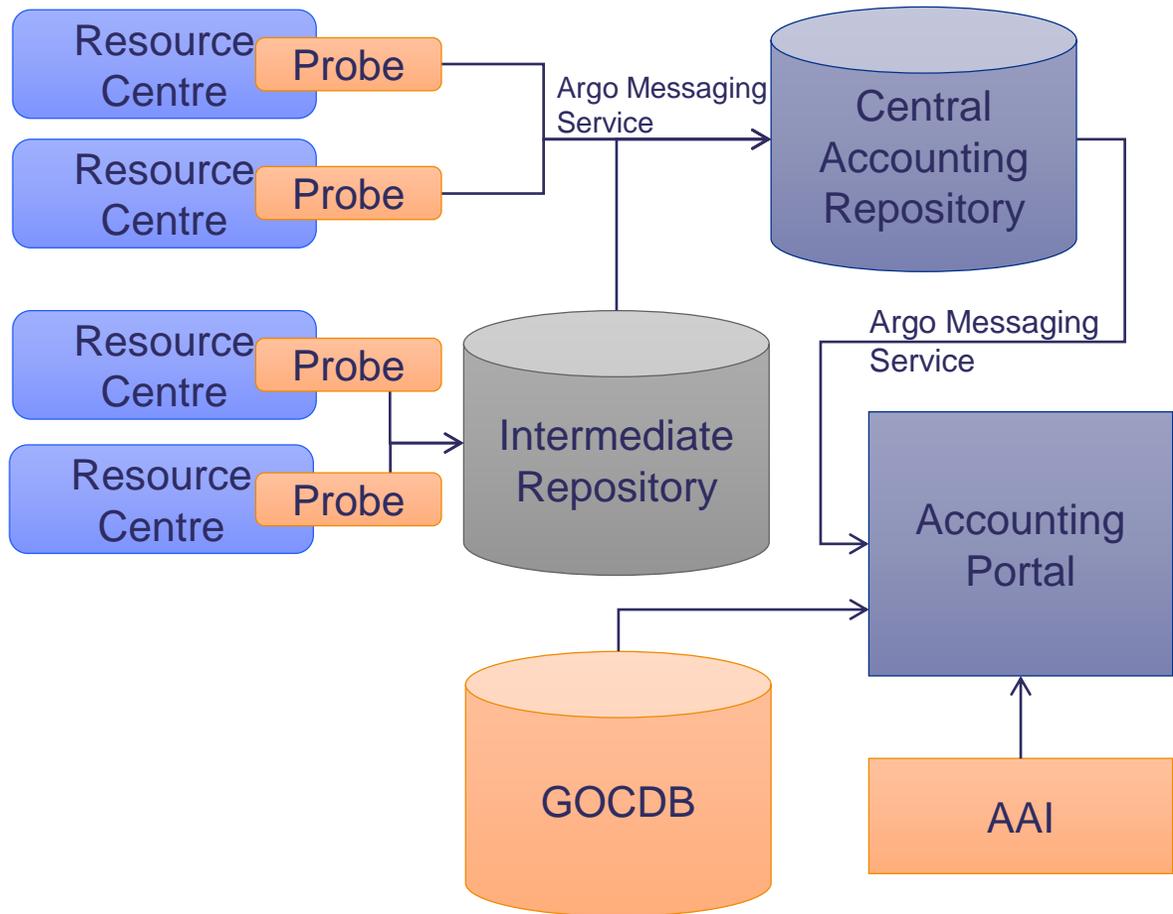
- Introduction to APEL
- High-level architecture
- Recent work
- Roadmap
 - Cloud VM GPU Accounting
 - Alternative Grid Benchmark
 - EOSC Future work
 - Other items

Introduction to APEL

- The APEL Accounting Repository collects, processes and stores usage information on HTC compute, storage space and cloud VM resources
- Accounting is a central part of a federated e-infrastructure as it enables funders and users to check that resources are being delivered and used



High-level architecture



- Resource centres run a collector that gathers metrics formatted into a standardised format
- Metrics are then sent via the Argo Messaging Service to the Repository which produces aggregations across all centres to send to the Portal
- The Portal retrieves topology information and community affiliation from other services to properly organise the accounting data

Recent Work

- Switchover to AMS for messaging (up to June)
 - New versions of SSM to interface with it
 - Supported system which gives us more control than the old brokers
- Repository availability and publishing tests changed so we could retire an old host
- Since last EGI Conference:
 - 1 major APEL client/server software release
 - 4 minor SSM updates to improve integration with AMS

Cloud VM GPU Accounting

- Record format agreed with FedCloud
- Update for APEL to support this nearing completion
- Update to cASO accounting extractor for OpenStack ongoing with aim for production release by the end of the year
- Next step to test these parts together

Alternative Grid Benchmark

- Requested by WLCG to enable a smooth transition to a new benchmark for grid accounting
- Plan to add field for additional benchmark in records and Repository
 - Allows direct comparisons to be made between old and new benchmarks
 - Requires additional record fields and schema changes
- Change workflow between clients, Repository and Portal
 - Will require sites sending normalised summaries to revert to plain summaries so aggregations can be done for both benchmarks
 - Includes changes to accounting clients, Repository, schemas, and record formats

EOSC Future work

- Accounting needs to support usage tracking for virtual access
- Ongoing work to define accounting model for VA
- Integration and collaboration between the different accounting a metrics tools still being planned

Other items

- Full Python 3 compatibility for both APEL and SSM packages
 - SSM mostly compatible, APEL still needs significant work
- Preparation for RHEL 7 end of life
- Rationalisation of servers to reduce operational burden
- Improved monitoring of accounting to spot and fix bad data more rapidly



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Thank you