Accounting

EGI provides an accounting service for EOSC. This Accounting service can collect, store, aggregate, and display usage information about the following types of services:

- High Throughput Compute
- Infrastructure-as-a-Service cloud virtual machines
- Storage space providers
- Data set providers

This usage data is collected from those Resource Centres that provide the above types of services, and that connect their service endpoints to the centrally managed Accounting Service. Accounting information is gathered from the service by probes and sensors according to certain data formats.

Probes and sensors are deployed locally at the service providers. Data is forwarded from the sensors into a central Accounting Repository where those data are processed to generate various summaries and views for display in the Accounting Portal. Depending on the complexity of the provider the accounting data may go via intermediate repositories that collate accounting data for particular regions, sub-infrastructures or communities. EOSC service providers can either directly publish accounting information into the EOSC Accounting Repository or can do so via an intermediate repository that serves for example a specific region or group of providers. It is up to the provider (group) to use the central repository directly, or to apply an intermediary accounting infrastructure and connect it to EOSC.

Why to use it

The EOSC-hub Accounting service stores user accounting records from various services. It works thanks to a network of message brokers that transfer usage data from the host to a central repository of information. The data is handled securely and can be consulted online through the Accounting Portal. Accounting gives:

- Increased control over resource consumption
- Reduced overhead of defining data models, architecture and setup of an accounting system
- Reduced cost of maintaining an accounting infrastructure
- Access to a reliable, high available, high performance service
- User friendly web interface

Features

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- Reduced overhead of defining data models, architecture and setup of an accounting system
- Reduced cost of maintaining an accounting infrastructure
- Access to a reliable, high available, high performance service
- User friendly web interface

High-level service architecture
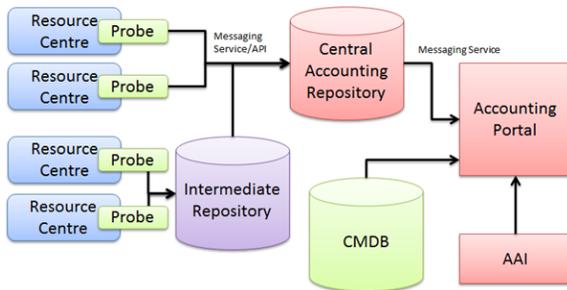
Resource centres that provide compute or storage to the infrastructure have a collector (a stand-alone script or program, or a built in function of their resource system) that gathers accounting metrics formatted into a standardised record format. These metrics are then transferred via a messaging service to the Accounting Repository, which stores and processes the data to produce aggregations that are then sent to the Accounting Portal for display.

The Accounting Portal retrieves topology information on how resource centres relate to national infrastructures and regions from a configuration management database (CMDB) and community affiliation from the AAI service to properly organise the accounting data. Information related to groups or VOs should also contain information about scientific disciplines to allow the Portal to properly classify the resource usage.

Resource centres can either directly publish accounting information to the central Accounting Repository or via an intermediate repository that can be related to an infrastructure (European, regional or thematic etc.).

Service documentation

For community managers and end-users

The link below provides documentation on using the Portal:

- EGI Accounting Portal User's Guide

For resource providers

The link below provides guidance on using the APEL client:

- APEL Client User Guide

The link below provides guidance on using the SSM messaging software:

- SSM Documentation

Integration guidelines

If a resource provider or infrastructure would like to integrate with the accounting system through a method not covered by the above then they should consult the EOSC-hub Technical Specification - Accounting.