

CAOS: a tool for OpenStack accounting management

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The analysis and understanding of resources utilization in shared infrastructures, such as cloud environments, is crucial in order to provide better performance, administration and capacity planning.

The management of resource usage of the OpenStack-based cloud infrastructures hosted at INFN-Padova, the Cloud Area Padovana and the INFN-PADOVA-STACK instance of the EGI Federated Cloud, started with the deployment of Ceilometer, the OpenStack component responsible to collect and manage accounting information. However, by using Ceilometer alone we found some limiting problems related to the way it handles information: among others, the imbalance between storage and data retention requirements, and the complexity in computing custom metrics.

In this contribution we present a tool, called CAOS, which we have been implementing to overcome the aforementioned issues. CAOS collects, manages and presents the data concerning resource usage of our OpenStack-based cloud infrastructures. By gathering data from both the Ceilometer service and OpenStack API, CAOS enables us to track resource usage at different levels (e.g. per project), in such a way that both current and past consumption of resources can be easily determined, stored and presented.

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