Rafay Cost Management Service

Centralized Kubernetes cost visibility, management, and governance across your fleet of clusters

TECHNOLOGY BENEFITS

Centralized Cost Management

The ability for fleet-wide tracking of costs through central dashboards, standardized cluster blueprints, and custom cost profiles

Showback and Chargeback

Ability to create chargeback groups and bill internal teams based on resource consumption for shared cluster and multi-tenant environments

Cost Visibility

Real-time visibility and reporting of cost and utilization metrics for clusters to optimize spend across public cloud and on-premise datacenters

BUSINESS BENEFITS

Improve Financial Governance

Optimize your cloud budget by billing internal teams and multi-tenant teams based on their resource consumption of shared clusters and resources

Accurate Enterprise-Wide Chargeback

Effectively operationalize and allocate costs across teams in shared cluster/resource scenarios, including granular resource utilization metrics from clusters and customized reports

Increase Cost Transparency

Centralize visibility for Kubernetes cloud cost metrics across your fleet and simplified cost policy updates for accelerated service delivery

With Rafay's Cost Management Service, Operations and FinOps teams have a centralized place to monitor Kubernetes consumption and costs in cloud and on-premises environments, enabling them to implement flexible chargeback and showback policies enterprise-wide. The dashboard allows teams to track overall expenditures at the project and organization levels providing visibility and insights into various metrics generated at the project, cluster, and namespace levels. It also provides a time series view of historical data, a convenient efficiency score for single-point evaluation, and a list of all top spending. Longer-term retention of historical cost information makes it possible to anticipate future expenses. Chargeback and showback groups can be created based on projects, clusters, namespaces, or workload labels.

Figure 1 shows the Cost Management Overview Dashboard providing real-time visibility into Kubernetes cloud cost metrics for platform and application teams filtered by their role, cluster, namespace, or label.
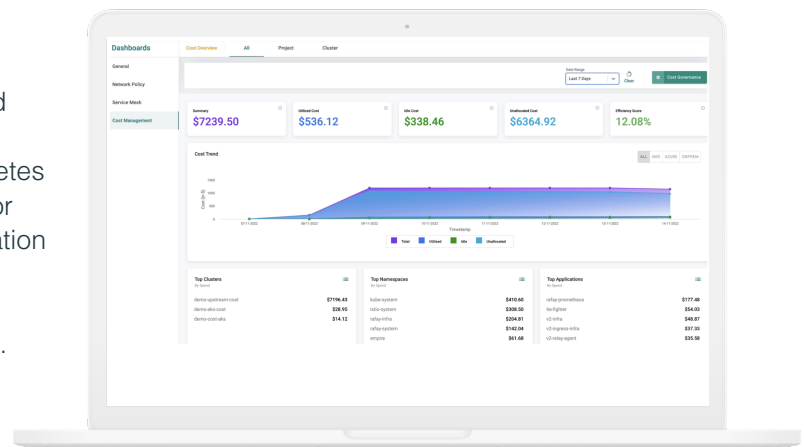

Figure 1 - Rafay Cost Management Dashboards

The Challenge

Kubernetes resource consumption and spending can rapidly increase—soaring past budgets—making it incredibly difficult to not only view the organization's cloud spend across infrastructure but also report how it is allocated across internal departments. With organizations and enterprises overspending in the cloud and a renewed focus on business efficiency in light of current economic conditions, platform and FinOps teams need a cost service to accurately view Kubernetes cloud spend with fine-grained visibility and management.

Enterprise requirements that solve these challenges include:

- **Real-time cost monitoring** to get an accurate picture of Kubernetes cloud spend in real-time so that you can grow your Kubernetes footprint with confidence and avoid sticker shock

- **Enterprise-wide chargeback capability** to optimize your cloud budget by appropriately billing internal teams based on their consumption of shared clusters, namespaces and resources

- **Centralized cost management** to prevent wasted Kubernetes cloud spend by centralizing visibility for every cluster across on-premises data centers, multiple cloud accounts and vendors

- **Fine-grained access control** to govern accessibility to cost metrics based on role

Key Capabilities of Rafay Cost Management Service

The Rafay Cost Management Service centrally provides full visibility into Kubernetes cloud cost and utilization metrics with showback and chargeback capabilities to track and bill internal teams based on resource consumption for shared resources. As a result, enterprises easily avoid Kubernetes cloud cost sticker shock by monitoring and managing costs enterprise-wide.

The Cost Management provides:

- **Centralized Cluster Cost Management**: More effectively operationalize and allocate Kubernetes cloud costs across teams in shared cluster and multi-tenant scenarios. This is done by the accurate collection and aggregation of granular resource utilization metrics from fleet-wide clusters

- **Installation Cost Profile**: Ensures that Kubernetes cloud cost metrics are accurate by considering the organization's custom pricing and cluster type. Cost Profiles are attached to clusters via Rafay's Cluster Blueprint capability

- **Built-in Dashboards**: Visibility into fleet-wide Kubernetes cloud cost network traffic across clusters and namespaces

- **RBAC Integration**: Provides real-time visibility to cost metrics to platform and application teams based on their role. This increases transparency and reduces the time to execute any 'closing the loop' cost optimization exercises

Platform and FinOps Teams enable Cost Management for fleet-wide Kubernetes clusters with a simple, centralized enable selection via the Rafay Controller shown in Figure 2. Cost Management Installation Profile provides a list of custom and system profiles with default options available for AWS and Azure environments. Organizations can customize specific profile parameters to ensure the accuracy of cost metrics (e.g., for specific clusters or types of environments). In addition, the installation profile ensures that cost metrics are accurate by taking the organization's custom pricing and cluster type into consideration and chargeback based on project, cluster, namespaces, and labels.
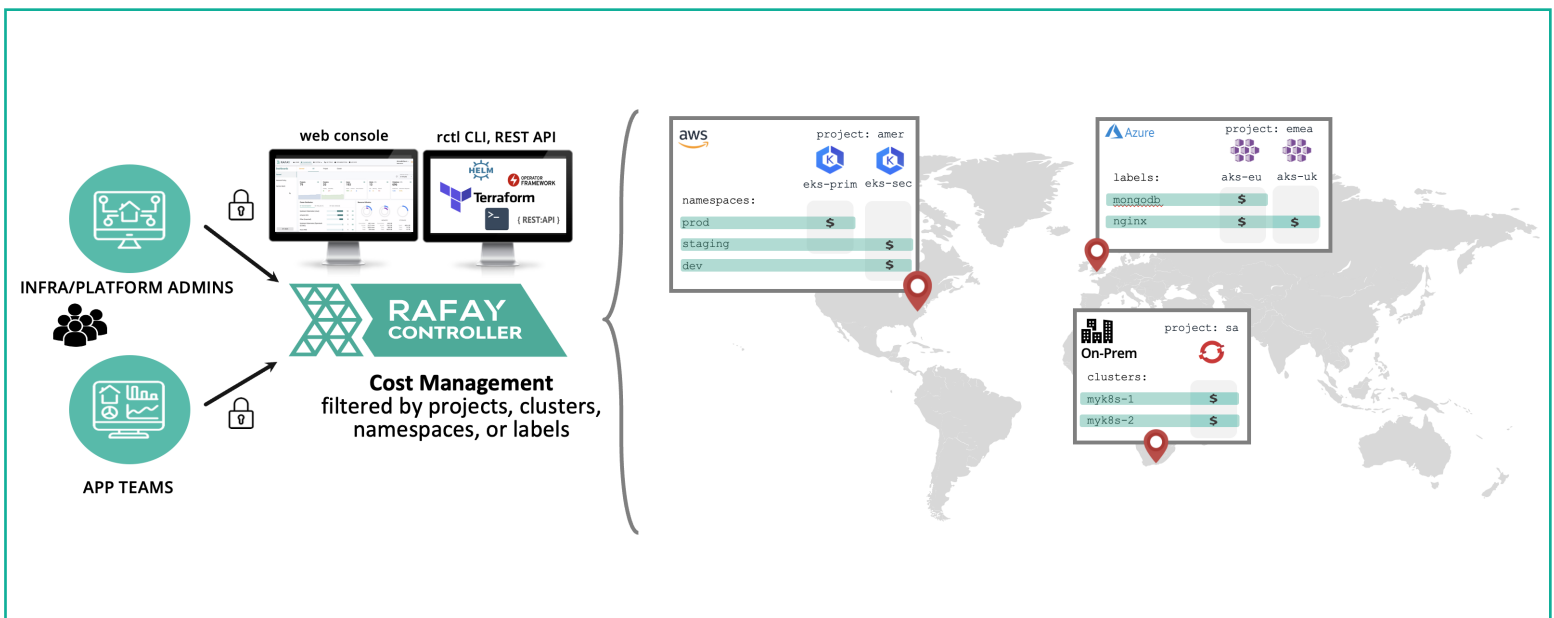

Figure 2 - Rafay Cost Management

The Cost Management Dashboard provides visibility and insights into various metrics generated at the cluster/project level. They give a bird's eye view of costs and efficiencies for projects, clusters, and namespaces. Access is controlled by the assigned role with pre-integration with Rafay's Zero-Trust Access Service. Top clusters, namespaces, and application sections of the Dashboard show who or what consumed the highest cost across the infrastructure. Initially, metrics data will be stored hourly for the last 14 days. Older data will be down-sampled to a daily granularity level and will be available for an additional six months. More details can be found in Rafay's online documentation.

Summary

The Rafay Cost Management Service provides centralized Kubernetes cloud cost visibility for every cluster across your infrastructure and allocates costs across teams, increasing cost transparency for financial governance. In addition, the service provides flexible chargeback and reporting policies to enable the unallocated cost of the clusters to be shared across the tenants adding extra granularity and value for Amazon EKS, Microsoft AKS, and on-premise environments.

Key highlights are:

Cost Management Policy	delivers centralized visibility and utilization metrics reporting for every cluster across your fleet, optimizing cloud budgets and increasing financial governance.
Installation Cost Profile	provides management, deployment, and standardized policies for financial reporting across the fleet-wide infrastructure. Create chargeback groups to track and bill internal teams based on resource consumption for shared clusters simplifying billback processes.
Cost Monitoring Dashboards	provide visibility and insights into various metrics generated at the project, cluster, and namespace levels. Longer-term retention of historical cost information makes it possible to anticipate future expenses to increase cost transparency.