**Main cost calculator:**

https://docs.aws.amazon.com/whitepapers/latest/how-aws-pricing-works/welcome.html

https://aws.amazon.com/ec2/pricing/

**Main Instances:**

Elastic Kubernetes Service (Amazon EKS): for running services.

Amazon Elastic Container Service (ECS): for running services

Amazon ec2: backbone of the network most of the items running on network.

**Services**

**Day to Day:**

[**Service Quotas**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/Service%20Quotas): used to set limits on aws accounts.

[**Amazon DevOps Guru**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/Amazon%20DevOps%20Guru): create a standard use case profile for an account type and have DevOps Guru monitor for behavior that differs from the standard profile and either freeze the profile or notify the admins.

[**AWS Control Tower**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/AWS%20Control%20Tower): sets the limits on what each account is allowed to access and build based on budgets.

[**License Manager**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/License%20Manager): for software that champlain buys, license keys will be issued and distributed though here.

[**AWS Trusted Advisor**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/AWS%20Trusted%20Advisor): machine learning to find places to save costs.

[**Compute Optimizer**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/Compute%20Optimizer): run every few months to find where costs can be saved and optimized.

[**CloudTrail**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/CloudTrail): to make sure all accounts are following billing guidelines.

[**IAM Access Analyzer**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/IAM%20Access%20Analyzer): used to configure user accounts and allows fine control placement.

**Budget overdraft response**

[**AWS Audit Manager**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/AWS%20Audit%20Manager): In case of service overage or projected overage will create a report that can be used to find where the overage is happening. General report.

[**Artifact**](https://us-east-1.console.aws.amazon.com/organizations/v2/home/services/Artifact): In case of service overage or projected overage will create a report that can be used to find where the overage is happening. Security report.

**AWS Billing:**

AWS budgets: set several budgets with alerts for current budgets and forecasted.

Budgets to include, Overall budget, backbone infrastructure budget, class budgets, subscription budget, and user budgets.

AWS cost management: reports

Automatically create reports about the cost breakdowns of our aws services.

AWS cost management:AWS cost anomaly detection

To detect is there are any unusual costs or changes to the aws account.

AWS cost management: Rightsizing recommendations

To find cost saving measures.

AWS billings: to see payments, creddits, cost categories and conduct billing

AWS Application Cost Profiler: if we decide to pay by usage rather than block

**Savings plans**

AWS cost management: savings plans for the backbone network where costs are constant playing upfront to get a discount

AWS cost management: Reservations

On days where there will be an extreme amount of demand(ie people checking if they were accepted) reservations so the services don't get billed an excessive amount due to needing to scale up for a day.

Policies:

| Account type | Credit Amount |
| --- | --- |
| Admin | unlimited |
| Faculty | $500 with ability to request more |
| Student | $100 ability to request more with faculty sign off |

Billing audits every month

Cost analizis run every month

Optimizations run monthly

Yearly overview and upcoming years budget approval