

# AWS Costs Breakdown

A Comprehensive Analysis

July 2025

# Understanding Your AWS Spend

Cloud cost management is a critical aspect of maintaining operational efficiency in today's digital landscape. Understanding your AWS expenditure provides valuable insights into resource utilization and helps identify opportunities for optimization.

- ↗ Identify cost trends and patterns
- 🔍 Pinpoint major cost contributors
- 💡 Discover optimization opportunities
- ⚖️ Balance performance and expenditure



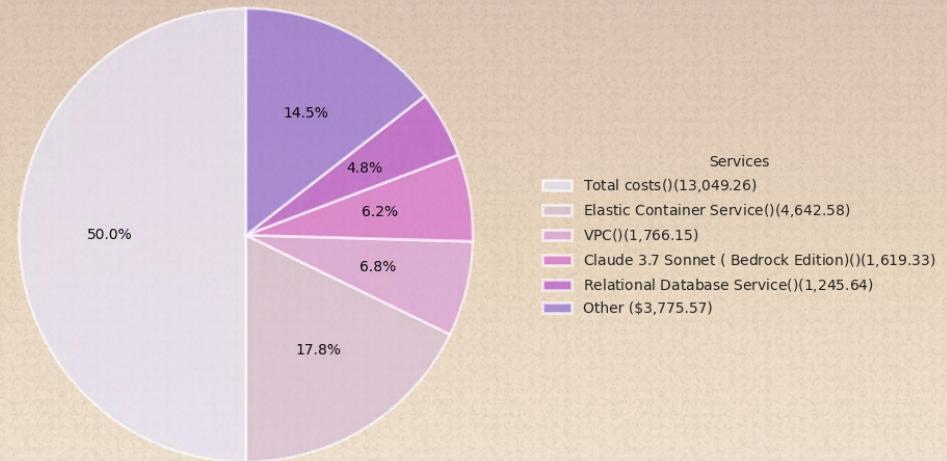
# Total AWS Expenditure

Analysis of the AWS cost data reveals the distribution of expenditure across various services. Understanding this breakdown is essential for effective cost management and optimization.

**Total AWS Cost: \$13,049.26**

- Elastic Container Service accounts for 35.6% of total costs
- VPC and networking services represent 13.5% of expenditure
- AI services (Claude models) comprise 12.4% of costs
- Database services account for 9.5% of total spending

AWS Cost Distribution by Service



# Identifying Key Cost Contributors

Five services account for over 80% of the total AWS expenditure. Understanding these key cost drivers is essential for targeted optimization efforts.

## 1. Elastic Container Service: \$4,642.58

Container orchestration service for running and managing Docker containers

## 2. Virtual Private Cloud: \$1,766.15

Networking service for isolating cloud resources

## 3. Claude 3.7 Sonnet: \$1,619.33

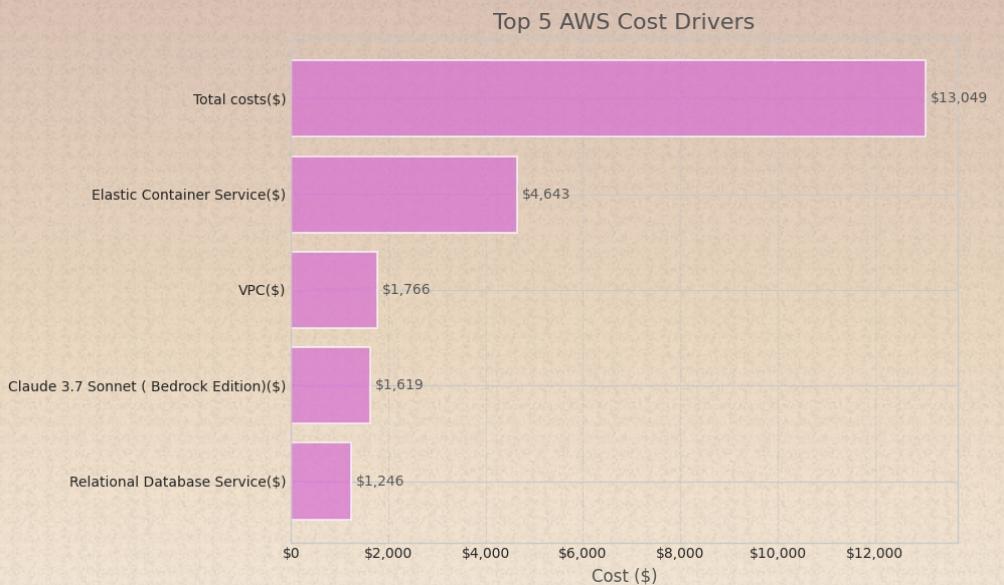
AI language model service via Amazon Bedrock

## 4. Relational Database Service: \$1,245.64

Managed database service for SQL databases

## 5. Tax: \$1,077.43

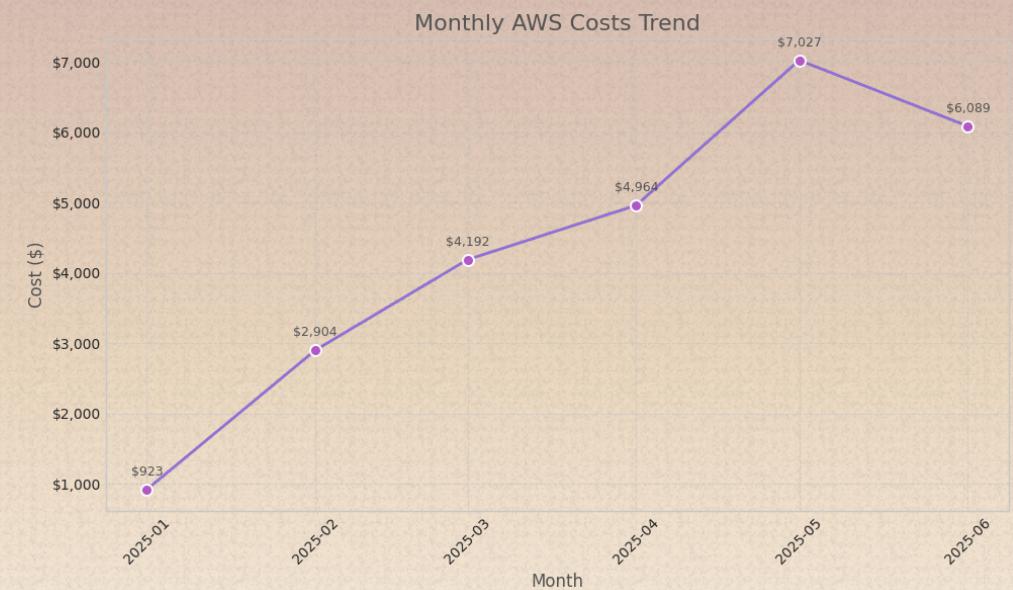
Applicable taxes on AWS services



# AWS Spending Over Time

Monthly AWS costs show a clear upward trend from January to May 2025, with a slight decrease in June. This pattern reflects the organization's cloud resource utilization and growth.

- ↗ Costs increased **7.6x** from January (\$923) to May (\$7,027), indicating significant expansion of cloud operations
- ↘ June shows a **13.4%** decrease from May's peak, suggesting potential optimization efforts or reduced workloads
- ↖ The steepest monthly increase occurred between February and March, with costs rising by **44.3%**
- 📅 The average monthly cost across the first half of 2025 is **\$4,350**, with significant variance between months



# Service Cost Comparison

Comparing the cost trends of top services reveals distinct usage patterns and growth rates. This comparison helps identify which services are driving the overall cost increases.

## Elastic Container Service

Shows consistent growth throughout H1 2025, with the steepest increase between April and May. This suggests expanding containerized workloads and applications.

## Virtual Private Cloud

Demonstrates more gradual cost increases, indicating stable network infrastructure growth. The costs plateau between May and June.

## Claude 3.7 Sonnet

Shows the most dramatic fluctuations, with significant increases in May followed by a decrease in June, suggesting variable AI workload demands.

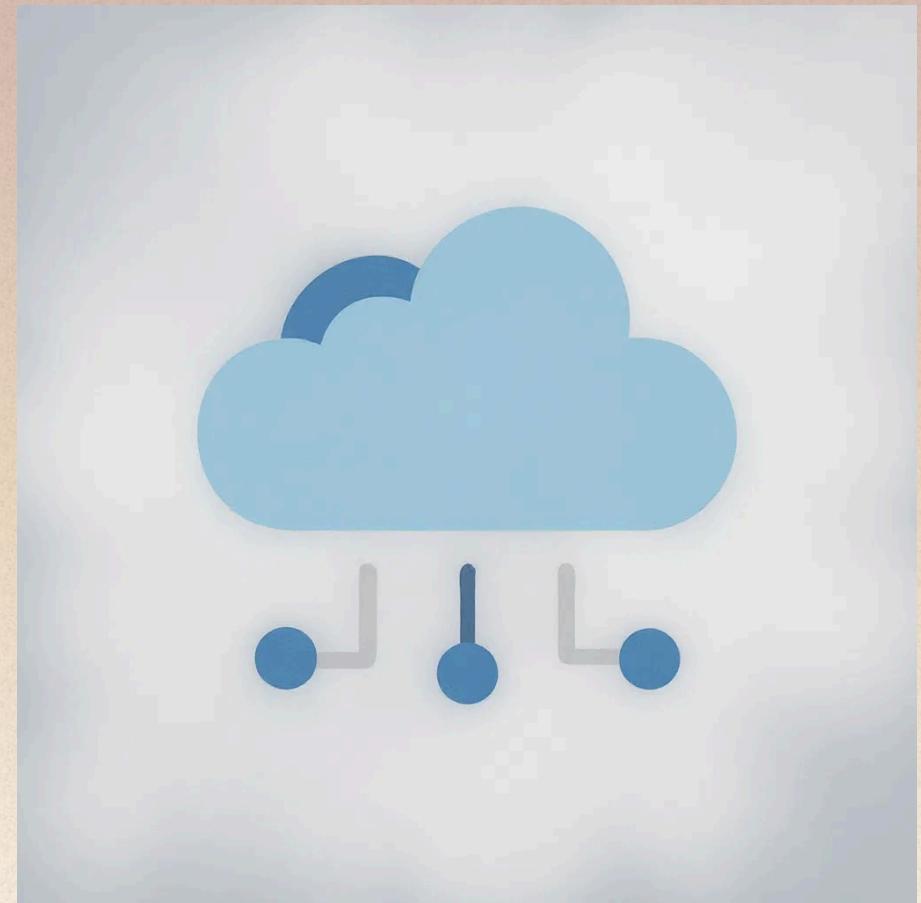


# Elastic Container Service: A Closer Look

Elastic Container Service (ECS) is the largest cost driver, accounting for \$4,642.58 (35.6%) of total AWS expenditure. This service provides orchestration for Docker containers, allowing applications to be deployed and managed at scale.

ECS costs have increased by 82% from January to June 2025, with the most significant jump occurring between April and May. This suggests rapid expansion of containerized workloads.

- 💡 Right-size container instances based on actual resource utilization patterns
- 💰 Consider Fargate Spot for non-critical workloads to reduce costs by up to 70%
- 📅 Implement auto-scaling based on time schedules for predictable workloads
- 🏷️ Improve cost allocation with comprehensive tagging strategy for containers



# Virtual Private Cloud: Network Costs

Virtual Private Cloud (VPC) is the second-largest cost driver at \$1,766.15 (13.5%) of total AWS expenditure. VPC provides the networking foundation for AWS resources, enabling secure and isolated cloud environments.

## Data Transfer

Cross-AZ and cross-region traffic typically accounts for 60-70% of VPC costs

## NAT Gateway

Hourly charges and data processing fees for private subnet internet access

## VPN Connections

Site-to-site VPN and client VPN endpoint hourly charges

## Endpoint Services

Interface and gateway endpoints for private connectivity

*Optimizing VPC costs requires careful architecture planning to minimize cross-AZ data transfer and strategic placement of resources to reduce network traffic costs.*



# Strategies for Cost Efficiency

Based on the analysis of AWS cost data, several optimization strategies can be implemented to enhance cost efficiency while maintaining performance.

## ⌚ Right-Sizing

- Match instance types to workload requirements
- Implement automated scaling based on usage

## ⌚ Pricing Models

- Utilize Savings Plans for predictable workloads
- Leverage Spot Instances for non-critical tasks

## 🔧 Architecture

- Minimize cross-AZ data transfer costs
- Implement lifecycle policies for storage

## 监听页面

- Set up budget alerts and anomaly detection
- Implement tagging for cost allocation



# Summary and Future Actions

- ✓ Total AWS costs for H1 2025 reached \$13,049, with a clear upward trend indicating expanding cloud operations
- ✓ Five services account for over 80% of costs, with ECS, VPC, and AI services being the primary drivers
- ✓ Monthly costs increased 7.6x from January to May, with a slight decrease in June suggesting potential optimization

## Recommended Next Steps

- 1 Implement detailed cost monitoring with service-specific alerts
- 2 Conduct right-sizing analysis for ECS and EC2 resources
- 3 Evaluate Savings Plans for consistent workloads
- 4 Review network architecture to minimize cross-AZ data transfer

