



AWS environment EC2 & RDS Instances pricing

What are the parameters that will impact the price?

How can we reduce the price?

What can we look at to optimize the cost?

Parameters that impact pricing

EC2 instance

- **Instance type:** Prices vary based on their computational power, memory, storage, and networking capabilities.
- **Region:** Infrastructure's costs and demand of the region also makes varies.
- **Usage hours:** Duration of the running instance (typically by hour)
- **Reserved Instances (RI) or Savings Plans:** usage over a period with Reserved Instances or Savings Plans.
- **On-Demand vs. Spot Instances:** On-Demand instances are billed at a fixed rate per hour, while Spot Instances allow you to bid for unused capacity, potentially reducing costs.

Parameters that impact pricing

RDS Instance

- **Instance type:** Similar to EC2, RDS instances have different types with varying pricing based on CPU, memory, storage, and networking capabilities.
- **Multi-AZ deployment:** Multi-AZ deployments incur additional costs compared to single-AZ deployments.
- **Storage:** Charges apply for allocated storage and I/O operations.
- **Backup storage:** Storing automated backups and manual snapshots incurs additional charges.
- **Data transfer:** Data transferred out of RDS instances to the internet or other AWS services may incur costs.

Price Reducing Techniques

EC2 instance & RDS

There are multiple factors contributing to the costs saving like : Use appropriate instance types , Utilize Reserved Instances or Savings Plans , Optimize storage , Monitor and adjust usage

Also there are advanced tools that take care of all the factors and guarantee quick big wins:

Vantage gives a set of analysis dashboards and a structured cloud cost and pricing API to help customers track AWS spend. <http://vantage.sh/>

Zesty can further reduce AWS costs if you're already using discount offerings. It can be used to reduce the number of instances running On-Demand, cover the remaining delta of instances that are not on discounts, save on expiring commitments. See your savings potential in minutes with a POC onboarding <https://zesty.co/>

Usage AI is incorporated into a customer's AWS environment via a secure IAM Policy + Role and proceeds to effectively wholesale no upfront Reserved Instances (RIs) and underwrite them with a Guaranteed Buyback Clause, thus meaning you'll receive the 57% savings of a 3-year, no-upfront RI without the need to commit to the full term. <https://usage.ai/>

Price Optimization Techniques

EC2 instance & RDS

To optimize AWS financial costs, there are several key practices every customer should adopt:

Right-size instances , Implement auto-scaling , Schedule instances to run only when needed , Optimize storage usage , Regularly review and delete unused resources , Continuously monitor and analyze cost reports

Tools and Technologies for Advanced Cost Optimization

Utilizing cutting-edge technologies for cost optimization:

1. AWS Cost Explorer

a robust cost allocation visualization engine.

The user-friendly interface facilitates effective management of AWS costs and usage over time.

also manages and saves on storage costs using Amazon S3 Intelligent-Tiering, a cloud storage class that delivers automatic cost savings by moving objects between four access tiers when access patterns change.

2. Alert Logic AWS Financial Management Strategies

Alert Logic offers essential tools for financial management strategies.

Define key cost metrics and allocate costs across AWS accounts, particularly for shared service usage.

Price Optimization Techniques

More advanced techniques

Maximizing Cost Efficiency with AWS Pricing Strategy

Savings Plans: strategically purchased a 3-year term Savings Plan, securing a 45-50% discount on hourly on-demand usage for instances, Lambda functions, and Fargate tasks.

Reserved Instances: By identifying long-term workloads, investing in Reserved Instances for RDS, achieving an immediate 30% average savings. Similar savings were realized for OpenSearch and ElastiCache.

This approach ensures significant cost optimization while maintaining performance and reliability.