aws startups

3 ways to optimize your startup spend

How startups can cut costs and grow faster on AWS

Cost optimization is a priority for customers of all sizes, particularly for early-stage startups. Founders want to make sure their financial resources are used properly and that they're getting the most out of Amazon Web Services (AWS).

Think of the last time you forgot to turn off the lights in an empty room; nobody needed the lights on, yet you ended up paying for their use. This applies to your cloud resources as well. Fortunately, AWS empowers you to take control through full visibility of where your spend is going and the option to turn off resources when you don't need them.

AWS offers **more than 200 fully featured services** on a **pay-as-you-go pricing** model. This means you pay only for the services you need, and once you stop using them, there are no additional costs or termination fees. This level of flexibility enables startups to experiment and bring products to market faster than ever before—yet it does not have to come with increased costs.

These proven services enable you to continuously optimize your startup spend while building modern, scalable applications to meet your needs. The breadth of services and pricing options makes it easy to effectively manage your costs and maintain the performance and capacity that your teams require.

AWS experts are dedicated to helping startups achieve their highest saving potential. Wherever you are in your startup journey, we will work with you to develop a plan that meets your financial needs and operational requirements. Get started with the tips below that will have an immediate impact on your bill today.

3 ways to optimize your startup spend

TIP #1

Choose the right pricing models

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TIP #2

Match capacity with demand

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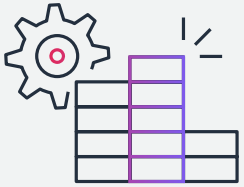

TIP #3

Implement processes to identify resource waste

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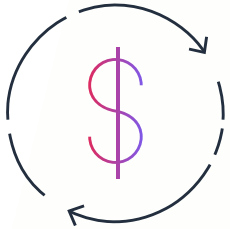

TIP #1:

Choose the right pricing models

Use AWS Cost Explorer to understand your expenses and determine a pricing model

As a startup, understanding your expenses to determine a pricing model is a priority. **AWS Cost Explorer** allows you to filter your spend according to **user-defined cost allocation tags**. For tags to appear on your billing reports, they must be activated in the Billing and Cost Management console. It can take up to 24 hours for the tags to appear in the console. Follow the instructions here to **activate the tags** that you created and applied to your resources. Breaking down costs in this manner helps you quickly validate pricing models as you test different prototypes. AWS also provides the broadest selection of purpose-built databases, allowing you to save, grow, and innovate faster.

Use AWS Reserved Instances (AWS RIs) to reduce the costs of Amazon Relational Database Service (Amazon RDS), Amazon Redshift, Amazon ElastiCache, and Amazon OpenSearch Service

For certain services, such as **Amazon Elastic Compute Cloud** (Amazon EC2) and **Amazon RDS**, you can invest in reserved capacity—saving you up to 72 percent over equivalent on-demand capacity. **AWS RIs** are available in three options: all upfront (AURI), partial upfront (PURI), and no upfront payments (NURI). Use the recommendations provided in AWS Cost Explorer RI purchase recommendations, which are based on your Amazon EC2, Amazon RDS, **Amazon Redshift**, **ElastiCache**, and **OpenSearch Service** usage.

Use Amazon EC2 Spot Instances to reduce EC2 costs

Customers can use Spot Instances to receive up to a 90 percent discount on On-Demand prices without making a term-based commitment. Spot Instances are an ideal option for fault-tolerant, scalable, or flexible applications, such as big data (**Amazon EMR**, Hadoop, and Spark clusters), containerized workloads (**Amazon Elastic Container Service** [Amazon ECS], **Amazon Elastic Kubernetes Service** [Amazon EKS], or self-managed Kubernetes), continuous integration and continuous delivery (CI/CD), web servers, high performance computing (HPC) (batch, grid servers, genomic sequencing), and test and development environments.

Use Compute Savings Plans to reduce the costs of Amazon EC2, AWS Fargate, and AWS Lambda

Savings Plans is a flexible pricing model that provides savings of up to 72 percent on your AWS compute usage. This pricing model offers lower prices on EC2 instances usage, regardless of instance family, size, operating system (OS), tenancy, or AWS Region, and applies to **Fargate** and **Lambda** usage.

Use the recommendations provided in AWS Cost Explorer, and ensure that you have chosen the “compute, one year, no upfront” options. Once you sign up for Savings Plans, your compute usage is automatically charged at the discounted Savings Plans prices.

72%

savings over equivalent on-demand capacity after switching to Reserved Instances

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SEON

About: Founded in 2017, this Hungarian fraud-prevention startup is a model of modern startup scaling. Without major refactors of its architecture, SEON has scaled rapidly for three consecutive years, tripling growth each year by building on AWS Cloud services.

The challenge: Scaling a startup involves increasing profit margins exponentially while keeping costs low. A variety of methods are used based on a startup's growth stage and needs. For SEON, manual approaches to provisioning of environments proved overly expensive and uncertain due to the hidden cost of time required to launch.

The AWS solution: A key driver of SEON's successful scaling is its use of more than 30 AWS solutions, including **Amazon RDS**, **Amazon API Gateway**, and **AWS Lambda**, which support real-time transactions for more than 5,000 customers. The flexible scaling of its AWS solutions enables SEON's architecture to thrive, even during periods of high load.

> **"...provisioning...without AWS...is expensive and has the hidden cost of time needed to launch. With AWS, we have more than 100 engineers delivering customer value on a diverse technical portfolio."**
>
> Adam Berkecz, Chief Architect, SEON

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TIP #2:

Match capacity with demand

Identify Amazon EC2 instances with low utilization, and reduce costs by stopping or rightsizing

Use **AWS Cost Explorer Resource Optimization** to provide a report of EC2 instances that are either idle or have low utilization. You can reduce costs by either stopping or downsizing these instances. Use **Instance Scheduler on AWS** to automatically stop instances. Use **Operations Conductor on AWS** to automatically resize the EC2 instances (based on the recommendations report from AWS Cost Explorer).

Identify Amazon RDS and Amazon Redshift instances with low utilization, and reduce costs by stopping with Amazon RDS and pausing with Amazon Redshift

Use the Trusted Advisor **Amazon RDS Idle DB instances check** to identify database (DB) instances that have not had any connections over the past seven days. To reduce costs, stop these DB instances by using the automation steps described in this **blog post**.

For Amazon Redshift, use the Trusted Advisor **Underutilized Redshift Clusters check** to identify clusters that have not had any connections over the past seven days and less than five percent cluster-wide average CPU utilization for 99 percent of the past seven days. To reduce costs, pause these clusters using the steps in this **blog**.

Analyze Amazon DynamoDB usage, and reduce costs by leveraging auto scaling or on demand

Analyze your **DynamoDB** usage by monitoring two metrics in **Amazon CloudWatch**: ConsumedReadCapacityUnits and ConsumedWriteCapacityUnits. Use the auto scaling feature to automatically scale in and out of your DynamoDB table.

Using the steps **here**, you can enable auto scaling on your existing tables. Alternately, you can use the on-demand option, allowing you to pay per read-and-write requests so that you only pay for what you use—making it easy to balance costs and performance.

qiscus

About: Qiscus is an Indonesia-based startup that helps companies connect with customers using real-time communication technology. Its two main products are a chat software development kit and a multichannel chat platform.

The challenge: Cost control is a major priority for Qiscus because its customers can range widely—from multinational enterprises to home-based operations that have limited budgets for chat services. Looking ahead, Qiscus plans to explore machine learning (ML) as part of its effort to continuously innovate its core products.

The AWS solution: For 24/7 cost monitoring, Qiscus relies on **AWS Cost Explorer**. The service breaks down the cost of each service and tags individual services to analyze the monthly spend—enabling more informed decision making on the setting of pricing models for each of its unique audiences.

> **"[AWS Cost Explorer] enables us to make more informed decisions when structuring our pricing models."**
>
> Evan Purnama, Co-Founder & CTO, Qiscus

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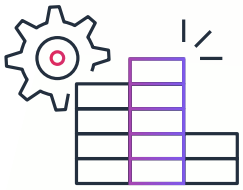

TIP #3:

Implement processes to identify resource waste

Identify Amazon Elastic Block Store (Amazon EBS) volumes with low utilization, and reduce costs by creating snapshots and then deleting them

Amazon EBS volumes that have very low activity (less than 1 IOPS per day) over a period of seven days indicate that they are probably not in use. Identify these volumes using the Trusted Advisor **Underutilizezd Amazon EBS Volumes check**. To reduce costs, first snapshot the volume (in case you need it later), then delete these volumes. You can automate the creation of snapshots using the **Amazon Data Lifecycle Manager**. Follow the steps **here** to delete Amazon EBS volumes.

Analyze Amazon Simple Storage Service (Amazon S3) usage and reduce costs by leveraging lower-cost storage tiers

Use **Amazon S3 analytics** to analyze storage access patterns on the object dataset for 30 days or longer. It makes recommendations on where you can leverage **S3 Standard-Infrequent Access** (S3 Standard-IA) to reduce costs. You can automate moving these objects to a lower-cost storage tier using **Amazon S3 Lifecycle policies**. Alternately, you can also use **Amazon S3 Intelligent-Tiering**, which automatically analyzes and moves objects to the appropriate storage tier.

Review networking and reduce costs by deleting idle load balancers

Use the Trusted Advisor **Idle Load Balancers check** to get a report of load balancers that have a RequestCount of less than 100 over the past seven days. Then, use the steps **here** to delete these load balancers for reduced costs. Additionally, use the steps provided in this **blog** to review your data transfer costs using AWS Cost Explorer.

belvo.

About: Belvo is a leading open-finance API platform in Latin America that helps fintech (financial technology) businesses and financial institutions access and interpret their users' financial data to create more modern, accessible, and inclusive products.

The challenge: In 2021, the startup began focusing on larger clients and regulated financial entities, which require strict adherence to data security best practices and compliance programs. Belvo needed an ISO 27001 certification to prove compliance.

The AWS solution: Belvo turned to automation using AWS services including **AWS Control Tower**, which is the easiest way to set up and govern a secure multi-account AWS environment, and **AWS Trusted Advisor**, which identifies ways to optimize customers' AWS infrastructure, reduce costs, and monitor service quotas. Using these two solutions, the startup follows AWS best practices for architecture, security, performance, cost optimization, and cloud governance.

> **"The scalability of AWS services means that we have never found ourselves in a situation where we couldn't grow at will."**
>
> Giuseppe Ciotta, VP of Engineering, Belvo

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Next steps

This is just the starting point of the various cost optimization options AWS offers. AWS enables you to take control of costs and continuously optimize your spend while building modern, scalable applications to meet your startup needs. The breadth of services and pricing options gives you the flexibility to effectively manage your costs and still keep the performance and capacity you require to grow your business.

Explore more cost optimization resources

Visit our website ›