aws

Amazon Lightsail, AWS Elastic Beanstalk, or Amazon EC2?

Amazon Lightsail, AWS Elastic Beanstalk, or Amazon EC2?: AWS Decision guide

Table of Contents

Amazon Lightsail, AWS Elastic Beanstalk, or Amazon EC2?

Understand the differences and pick the one that's right for you

Purpose	To explore whether Amazon Lightsail, AWS Elastic Beanstalk, or Amazon EC2 meets your needs for a cloud platform or compute web service.
Last updated	February 17, 2025
Covered services	• [Amazon Lightsail](#) • [AWS Elastic Beanstalk](#) • [Amazon EC2](#)

Introduction

Amazon Web Services (AWS) offers services that can meet your needs for a cloud platform or compute web service. Three services that are often considered alongside one another are:
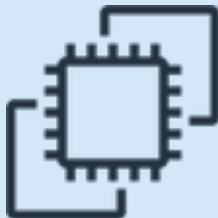
- **Amazon Lightsail** — a set of core services designed to help you build websites or web applications. Consider Lightsail if you want a simple unified platform with a few foundational services, including virtual servers, HTTP load balancing, managed databases, public container deployment, content delivery network (CDN), DNS management, and domain registration. Lightsail provides fixed and predictable monthly pricing.

- **AWS Elastic Beanstalk** — a service that makes it easy to deploy, manage, and scale web applications and services. It supports several programming languages such as Python, Java, PHP, Node.js, Ruby, .NET, and Go. With Elastic Beanstalk, you simply upload your application code, and AWS handles the underlying infrastructure, including provisioning resources like Amazon EC2 instances, load balancers, and databases, as well as auto-scaling and monitoring. It provides built-in integration with AWS services like RDS, Amazon S3, and CloudWatch. Elastic Beanstalk offers a balance between control and automation, giving developers the ability to customize infrastructure while offloading operational overhead. There is no additional charge for Elastic
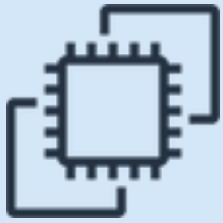
Beanstalk. You pay for AWS resources (e.g. Amazon EC2 instances or Amazon S3 buckets) you create to store and run your application.
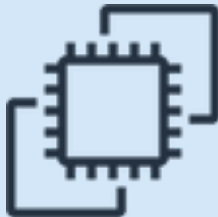
- **Amazon Elastic Compute Cloud (Amazon EC2)** — an AWS service that provides on-demand, scalable computing capacity, with the goal of allowing you to develop, deploy, and scale applications faster. You can use it to launch as many or as few compute instances as you need, configure security and networking, and manage storage. You can also add capacity by provisioning larger instances (up to hundreds of cores and thousands of GiB memory) or load balancing clusters of smaller instances. Several different pricing models are available depending on your requirements.
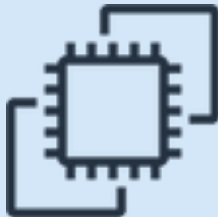
When choosing between Lightsail, Elastic Beanstalk, and Amazon EC2, keep in mind the future growth of your workload and how you intend to grow your AWS environment. If your future deployment requires advanced networking or integration with AWS services such as Amazon Relational Database Service (Amazon RDS), Amazon DynamoDB, or AWS Lambda, you should strongly consider using Amazon EC2.
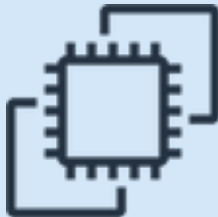
Here's a high-level view of the key differences between these services to get you started.

	Amazon Lightsail	**Elastic Beanstalk**	**Amazon EC2**
Instance Size	Multiple instance types, ranging from 512 MiB to 64 GiB of RAM, and 2 to 16 vCPUs. For more information, see the *compute and block storage* tab in the [differences](#) section below.	400+ instance types, from 0.5 GiB to 24 TiB of RAM, and 1 to 448 vCPUs.	400+ instance types, from 0.5 GiB to 24 TiB of RAM, and 1 to 448 vCPUs.

	Amazon Lightsail	Elastic Beanstalk	Amazon EC2
Block Storage	Preconfigured disks up to 640 GB per instance (storage size is tied to instance type). Attach additional disks up to 16 TB with variable pricing.	Amazon EBS volumes up to 64 TB per volume. Input/output operations per second (IOPS) up to 64,000 per volume (storage size is independent of instance type).	Amazon EBS volumes up to 64 TB per volume. Input/output operations per second (IOPS) up to 64,000 per volume (storage size is independent of instance type).
Application Blueprints	35 pre-configured blueprints, including WordPress, Magento, Drupal, Node.js, and more.	A number of managed platforms on Amazon Linux (Docker, Go, Java, Ruby, Python, .NET core, Tomcat), and .NET/IIS on Windows Server.	Common operating systems and with pre-configured software and services in the AWS Marketplace.

	Amazon Lightsail	**Elastic Beanstalk**	**Amazon EC2**
Container Support	Simple deployment of public container images for a fixed monthly cost including data transfer.	Supports individual Docker containers, multiple containers with Docker Compose as well as Amazon Elastic Container Service (Amazon ECS).	Run container workloads natively on Amazon EC2 using self-managed Docker or Kubernetes, or deploy containers to separate AWS container services such as Amazon ECS, Amazon EKS, AWS Fargate, AWS App Runner, AWS Elastic Beanstalk, Lambda, and others.
Data Transfer	Generous data transfer allocation included with the fixed monthly fee for every Lightsail compute instance.	Pay per GB data transfer (out) with flexible pricing tiers and no cost for ingress traffic.	Pay per GB data transfer (out) with flexible pricing tiers and no cost for ingress traffic.

	Amazon Lightsail	Elastic Beanstalk	Amazon EC2
Load Balancing	Basic load balancing of HTTP/HTTPS for low volume web traffic (up to 5 GB per hour).	Flexible load balancing for any type of networking use case, including HTTP, HTTPS, TCP, UDP, health checks, auto scaling, and more.	Flexible load balancing for any type of networking use case, including HTTP, HTTPS, TCP, UDP, health checks, auto scaling, and more.
CDN Support	Global content delivery from Lightsail sources for a fixed monthly fee (up to 50 GB per month included for the first year).	Amazon CloudFront integration provides flexible content delivery from Amazon EC2 or other AWS or external sources on a pay per GB basis (1 TB per month included for the first year).	Amazon CloudFront integration provides flexible content delivery from Amazon EC2 or other AWS or external sources on a pay per GB basis (1 TB per month included for the first year).
Performance	Choose from 2 to 8 vCPUs (1 to 4 cores), and 512 MiB to 32 GiB memory.	Unlimited scaling from a single shared to hundreds of CPU cores, and 1 to 1000s of GiB memory.	Unlimited scaling from a single shared to hundreds of CPU cores, and 1 to 1000s of GiB memory.

	Amazon Lightsail	**Elastic Beanstalk**	**Amazon EC2**
Pricing	Fixed and predictable monthly pricing.	There is no additional charge for AWS Elastic Beanstalk. You pay for AWS resources (e.g. Amazon EC2 instances or Amazon S3 buckets) you create to store and run your application.	Flexible pay-per-use hourly, or commit-based pricing.

Details on the differences

Explore differences between Lightsail, AWS Elastic Beanstalk, and Amazon EC2 in six areas. These cover ease of use, compute and block storage, container deployments, load balancing, content delivery network, and managed database support.

Ease of use

Ease of use

Lightsail offers a set of core services to deploy web servers and database backed applications, with support for load balancing, containers, content delivery network (CDN), DNS management, and domain registration. You can also choose from a set of application blueprints to deploy standard applications such as a WordPress site, or LAMP stack application. Lightsail is a good fit for organizations with simple website and application requirements, and those who prefer fixed, predictable monthly pricing.

Elastic Beanstalk, on the other hand, is a more flexible service for deploying and scaling web applications. It supports multiple programming languages and web servers, automatically

handles capacity provisioning, load balancing, auto-scaling, and application health monitoring. Elastic Beanstalk integrates seamlessly with other AWS services like RDS and CloudWatch, allowing for more complex architectures and fine-grained control over the underlying resources.

With Amazon EC2, you have greater flexibility to configure workloads over a broader set of compute capacities, features, and integrations with other AWS services. Amazon EC2 provides more flexible purchase options including on-demand hourly and lower commit-based pricing. A typical deployment of Amazon EC2 may require the use of other AWS services, such as databases and load balancers, that each have their own pricing models and configuration details.

Compute and block storage

Compute and block storage

Lightsail provides multiple options for your instance size, ranging from 2 vCPUs, 512 MiB memory, and 20 GB of SSD storage, up to 16 vCPUs, 64 GiB of memory, and 1280 GB of SSD storage. Lightsail compute instances also include a generous free data transfer allocation, and are billed with fixed, predictable pricing.

Elastic Beanstalk and Amazon EC2 support hundreds of instance types supporting any workload, with 1 to 100s of vCPUs, and 1000s of GiB RAM. Multiple individually sized storage volumes can be attached to Elastic Beanstalk and Amazon EC2 instances with various performance tiers. Elastic Beanstalk and Amazon EC2 also both support Spot Instances and Graviton-based instances, allowing cost-efficient scaling and high-performance computing.

Container deployments

Container deployments

Lightsail containers provide a straightforward way to get started deploying public container images on AWS compute instances, with 0.25 vCPUs and 512 MiB RAM, to 4 vCPUs and 8 GiB RAM. Every Lightsail container deployment comes with 500 GB of data transfer for a fixed monthly fee.

Elastic Beanstalk can run individual Docker containers, multiple containers with Docker Compose, or deploy to Amazon ECS, a fully managed container orchestration service which manages and scales the Amazon EC2 instances running containers.

Containers can be self-managed on Amazon EC2, or deployed to a fully managed AWS container service such as Amazon ECS, Amazon EKS, App Runner, Elastic Beanstalk, and

Lambda. These services support both public and private images, more flexible hourly or commit-based billing, and greater vertical and horizontal scaling capabilities.

Load balancing

Load balancing

Lightsail provides a simple HTTP or HTTPS load balancer for low volume web traffic (up to 5 GB and 400k connections per hour). Lightsail load balancers handle certificate management and are available for a fixed monthly cost.

You can enable load balancing for your Elastic Beanstalk environment, which will create an Elastic Load Balancing load balancer dedicated to your environment. Elastic Beanstalk fully manages this load balancer, taking care of security settings and of terminating the load balancer when you terminate your environment.

Alternatively, you can choose to share a load balancer across several Elastic Beanstalk environments. With a shared load balancer, you save on operational cost by avoiding a dedicated load balancer for each environment. Elastic Beanstalk supports the Classic Load Balancer, the Application Load Balancer, and the Network Application Load Balancer types.

Amazon EC2 Elastic Load Balancing (ELB) offers a broader and more scalable range of load balancer options using more flexible on demand or commit pricing. Amazon EC2 load balancers support both application (HTTP, HTTPS, WebSockets) and network (TCP, UDP) traffic.

Content delivery network

Content delivery network

To improve web content load time, Lightsail lets you add a content delivery network (CDN) distribution to your website or application. Lightsail CDN distributions are available in three monthly data transfer tiers, including 50 GB included for the first year, 200 GB, and 500 GB, for a fixed monthly price.

After you have created and deployed your Elastic Beanstalk application you can sign up for CloudFront and start using CloudFront to distribute your content.

Amazon EC2 and Elastic Load Balancing work directly with the Amazon CloudFront CDN (the same CDN used by Lightsail). Using CloudFront directly offers more integration possibilities with other AWS services or external origins. It also offers more flexible on demand and commit-based pricing than Lightsail.

Managed database support

Managed database support

Lightsail offers managed databases in four standard, and four high availability configurations, ranging from 1 to 2 processor cores, 1 GiB to 8 GiB RAM, and 40 GB to 240 GB storage. Lightsail databases are billed using a fixed, predictable monthly price.

Elastic Beanstalk provides integration with [Amazon Relational Database Service (Amazon RDS)](). You can use Elastic Beanstalk to add a MySQL, PostgreSQL, Oracle, or SQL Server database to an existing environment or a new one when you create it. When you add a database instance, Elastic Beanstalk provides the connection information to your application. It does this by setting the environment properties for the database hostname, port, user name, password, and database name. You can also connect to an external database managed outside of Elastic Beanstalk which allows you to use database types that aren't supported with integrated databases. This option will require additional security group and connection string configuration.

Amazon EC2 works directly with Amazon RDS and NoSQL services, such as Amazon DynamoDB. Amazon RDS offers a more scalable and broader range of configurations, including fixed instance types ranging from 2 to dozens of vCPUs, and 100s of GiB RAM, unlimited storage, and seamlessly scalable serverless options.

Here's a decision table comparing **Amazon Lightsail, AWS Elastic Beanstalk, and Amazon EC2** based on key decision factors:

Criteria	Amazon Lightsail	AWS Elastic Beanstalk	Amazon EC2
Best For	Simple applications, small-scale deployments	Web applications with automated deployment	Full control over infrastructure
Ease of Use	Very easy, simplified UI, preconfigured instances	Easy, managed deployment with minimal setup	Complex, requires manual setup and management

Criteria	Amazon Lightsail	AWS Elastic Beanstalk	Amazon EC2
Scalability	Limited auto-scaling, designed for small workloads	Supports auto-scaling, but not as granular as EC2	Fully customizable auto-scaling
Customization	Limited configuration options	Moderate customization with platform choices	Full control over OS, networking, and resources
Pricing	Fixed pricing, budget-friendly	Pay for underlying EC2, but with some automation	Pay-as-you-go, can be expensive if mismanaged
Performance	Best for low to medium workloads	Good for web applications with auto-scaling	Best for high-performance and compute-intensive workloads
Management	Fully managed, minimal maintenance	Managed deployment, but needs monitoring	Fully self-managed, requires expertise
Supported Languages	Limited, works best with common stacks (LAMP, Node.js, etc.)	Supports multiple runtimes (Node.js, Python, Java, .NET, etc.)	Any OS and runtime supported
Integration	Limited integrations with AWS services	Good AWS integrations (RDS, S3, CloudWatch)	Full AWS integration
Security	Basic security features, simpler to manage	Automated security updates, but still needs monitoring	Full control over security settings

Criteria	Amazon Lightsail	AWS Elastic Beanstalk	Amazon EC2
Use Case Examples	Personal blogs, small websites, MVPs, prototyping	Web applications, APIs, SaaS platforms	Large-scale applications, databases, custom networking

Decision Guidelines:

- Choose **Lightsail** if you want a simple, budget-friendly solution with minimal setup.
- Choose **Elastic Beanstalk** if you need easy application deployment with some level of control and scalability.
- Choose **EC2** if you need full control over your infrastructure, high performance, or custom configurations.

Use

Now that you've learned about what these services (and the supporting AWS tools and services) are optimized for, you can now dive deeper into how best to use them.

Amazon Lightsail

- **What is Amazon Lightsail?**

  Get the full story on Amazon Lightsail, including what it does, and how you can benefit from it. This guide also includes step-by-step guidance to help you get started using Lightsail — and then configure it to meet your needs.

  [Explore the guide](#)

- **Creating Lightsail container service images**

  Learn how to create a container image on your local machine using a Dockerfile. You can then push it to your Lightsail container service to deploy it.

  [Use the tutorial](#)

- **Amazon Lightsail resource center**

Explore Lightsail tutorials, videos, and links to core concept documentation.

[Visit the resource center](#)

Elastic Beanstalk

- **What is Elastic Beanstalk?**

  Get an overview of AWS Elastic Beanstalk. This guide not only provides an introduction of the service, but also covers how to get started using it and then provides in-depth descriptions of key features and how to use them.

  [Explore the guide](#)

- **Getting started with Elastic Beanstalk**

  To help you understand how AWS Elastic Beanstalk works, this tutorial walks you through creating, exploring, updating, and deleting an Elastic Beanstalk application. It takes less than an hour to complete.

  [Use the tutorial](#)

- **Set up the Elastic Beanstalk command line interface**

  In this step-by-step tutorial, you will set up the Elastic Beanstalk Command Line Interface (EB CLI).

  [Use the tutorial](#)

Amazon EC2

- **What is Amazon EC2?**

  Get an overview of Amazon EC2. This guide not only provides an introduction of the service, but also covers how to get started using it and then provides in-depth descriptions of key features and how to use them.

  [Explore the guide](#)

- **Amazon EC2 instance types**

  When you launch an EC2 instance, the instance type that you specify determines the hardware of the host computer used for your instance. Each instance type offers different compute, memory, and storage capabilities, and is grouped in an instance family based on these capabilities. This guide walks you through EC2 instance types.

  Explore the guide

- **Amazon EC2 Auto Scaling with EC2 Spot Instances**

  Learn how to create a stateless, fault tolerant workload using Amazon EC2 Auto Scaling with launch templates to request Amazon EC2 Spot Instances.

  Get started with the tutorial

Document history

The following table describes the important changes to this decision guide. For notifications about updates to this guide, you can subscribe to an RSS feed.

Change	Description	Date
Content update	Added content about the Elastic Beanstalk service as a choice between Lightsail, Elastic Beanstalk, and Amazon EC2.	February 17, 2025
Content update	Update to Lightsail supported instance types.	July 23, 2024
Content update	Enhanced introduction and differences sections with improved content for choosing between Lightsail and EC2.	April 15, 2024
Initial release	Initial release of the decision guide.	April 5, 2024