Amazon Cloud Watch

[Amazon Cloud Watch](https://aws.amazon.com/cloudwatch/) is a monitoring service for AWS Cloud resources and the applications that you run on AWS. You can use Amazon Cloud Watch to collect and track metrics, collect and monitor log files, set alarms, and automatically react to changes in your AWS resources.

Amazon Cloud Watch Events

[Amazon Cloud Watch Events](https://docs.aws.amazon.com/AmazonCloudWatch/latest/events/WhatIsCloudWatchEvents.html) delivers a near real-time stream of system events that describe changes in AWS resources. Using simple rules that you can quickly set up, you can match events and route them to one or more target functions or streams. Cloud Watch Events becomes aware of operational changes as they occur.

Amazon Cloud Watch Logs Metrics

You can use [Amazon Cloud Watch Logs](https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/WhatIsCloudWatchLogs.html) to monitor, store, and access your log files from Amazon EC2 instances, AWS Cloud Trail, Amazon Route 53, and other sources. You can then retrieve the associated log data from Cloud Watch Logs.

You can collect [metrics](https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/CW_Support_For_AWS.html) from servers by installing the Cloud Watch agent on the server. You can install the agent on both Amazon EC2 instances and on-premises servers, and on servers that run either Linux or Windows Server.

[Elastic Load Balancing](https://aws.amazon.com/elasticloadbalancing/) (ELB) automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, and IP addresses. It can handle the varying load of your application traffic in a single Availability Zone or across multiple Availability Zones.

ELB offers three types of load balancers that all feature the high availability, automatic scaling, and robust security that are necessary to make your applications fault-tolerant.

An Application Load Balancer operates at the request level (Layer 7), routing traffic to targets--such as EC2 instances, micro services and containers--within Amazon VPC, based on the content of the request. It's ideal for the advanced load balancing of Hypertext Transfer Protocol (HTTP) and Secure HTTP (HTTPS) traffic.

A Network Load Balancer operates at the connection level (Layer 4), routing connections to targets--such as Amazon EC2 instances, micro services, and containers--within Amazon VPC, based on IP protocol data. It's ideal for load-balancing Transmission Control Protocol (TCP) traffic.

The Classic Load Balancer provides basic load balancing across multiple Amazon EC2 instances, and it operates at both the request level and the connection level.

[Amazon EC2 Auto Scaling](https://aws.amazon.com/ec2/autoscaling) helps you maintain application availability, and it allows you to dynamically scale your Amazon EC2 capacity up or down automatically according to conditions that you define. You can use Amazon EC2 Auto Scaling for fleet management of Amazon EC2 instances, which can help maintain the health and availability of your fleet, and ensure that you are running your desired number of Amazon EC2 instances. You can also use Amazon EC2 Auto Scaling to dynamically scale Amazon EC2 instances. Dynamic scaling automatically increases the number of Amazon EC2 instances during demand spikes to maintain performance and decrease capacity during lulls, which can help reduce costs. Amazon EC2 Auto Scaling is well-suited to applications that have stable demand patterns, or applications that experience hourly, daily, or weekly variability in usage.