



amazon web services™

Amazon CloudWatch

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Amazon CloudWatch

- Amazon CloudWatch is a monitoring service for AWS cloud resources and the applications you run on AWS.
- You can use Amazon CloudWatch to **collect and track metrics, collect and monitor log files, and set alarms**.
- Amazon CloudWatch can monitor AWS resources such as Amazon EC2 instances, Amazon DynamoDB tables, and Amazon RDS DB instances, as well as **custom metrics** generated by your applications and services, and **any log files** your applications generate.
- You can use Amazon CloudWatch to gain system-wide visibility into resource utilization, application performance, and operational health. You can use these insights to react and keep your application running smoothly

Monitor Amazon EC2

- View metrics for CPU utilization, data transfer, and disk usage activity from Amazon EC2 instances (**Basic Monitoring**) for no additional charge. For an additional charge, CloudWatch provides **Detailed Monitoring** for EC2 instances with higher resolution and metric aggregation. No additional software needs to be installed

Monitor Other AWS Resources

- Monitor metrics on Amazon DynamoDB tables, Amazon EBS volumes, Amazon RDS DB instances, Amazon Elastic MapReduce job flows, Elastic Load Balancers, Amazon SQS queues, Amazon SNS topics, and more for no additional charge. No additional software needs to be installed

Monitor Custom Metrics

- Submit Custom Metrics generated by your own applications via a simple API request and have them monitored by Amazon CloudWatch. You can send and store metrics that are important to your application's operational performance to help you troubleshoot and spot trends

Monitor and Store Logs

- You can use CloudWatch Logs to monitor and **troubleshoot** your systems and applications using your existing system, application, and custom log files. You can send your existing system, application, and custom log files to CloudWatch Logs and monitor these logs in near real-time. This can help you better understand and operate your systems and applications, and you can store your logs using highly durable, low-cost storage for later access

Set Alarms

- Set alarms on any of your metrics to send you notifications or take other automated actions. For example, when a specific Amazon EC2 metric crosses your alarm threshold, you can use Auto Scaling to dynamically add or remove EC2 instances or send you a notification

View Graphs and Statistics

- View graphs and statistics for any of your metrics on the Amazon CloudWatch dashboard, and get a quick overview of all your alarms and monitored AWS resources in one location

CloudWatch Details:

- Amazon CloudWatch provides a reliable, scalable, and flexible monitoring solution that you can start using **within minutes**. You no longer need to set up, manage, and scale your own monitoring systems and infrastructure.
- Amazon CloudWatch enables you to monitor your AWS resources in near real-time, including Amazon **EC2 instances, Amazon EBS volumes, Elastic Load Balancers, and Amazon RDS DB instances**. Metrics such as **CPU utilization, latency, and request counts** are provided automatically for these AWS

resources. You can also supply your **own logs** or custom application and system metrics, such as **memory usage, transaction volumes, or error rates**, and Amazon CloudWatch will monitor these too.

- With Amazon CloudWatch, you can access **up-to-the-minute** statistics, view **graphs**, and set **alarms** for your metric data to help you troubleshoot, spot trends, and take automated action based on the state of your cloud environment.
- Amazon CloudWatch functionality is accessible via API, command-line tools, the AWS SDK, and the **AWS Management Console**

Monitor Amazon EC2

Monitor EC2 instances automatically, without installing additional software:

- **Basic Monitoring for Amazon EC2 instances:** Seven pre-selected metrics at **five-minute** frequency and three status check metrics at one-minute frequency, for no additional charge.
- **Detailed Monitoring for Amazon EC2 instances:** All metrics available to Basic Monitoring at **one-minute** frequency, for an additional charge. Instances with Detailed Monitoring enabled allows data aggregation by Amazon **EC2 AMI ID and instance type**.
- If you use Auto Scaling or Elastic Load Balancing, Amazon CloudWatch will also provide Amazon EC2 instance metrics aggregated by Auto Scaling group and by Elastic Load Balancer, regardless of whether you have chosen Basic or Detailed Monitoring. Monitoring data is **retained for two weeks**, even if your AWS resources have been **terminated**. This enables you to quickly look back at the metrics preceding an event of interest to you. **Basic Monitoring is already enabled automatically** for all Amazon EC2 instances, and you can access these metrics in either the Amazon EC2 tab or the Amazon CloudWatch tab of the AWS Management Console, or by using the Amazon CloudWatch API

Monitor Other AWS Resources

- Amazon CloudWatch automatically monitors **Elastic Load Balancers** for metrics such as request count and latency; **Amazon EBS volumes** for metrics such as read/write latency; **Amazon RDS DB** instances for metrics such as freeable memory and available storage space; **Amazon SQS queues** for metrics such as number of messages sent and received; and **Amazon SNS topics** for metrics such as number of messages published and delivered. **No additional software** needs to be installed to monitor other AWS resources.

Compute and Networking

- No additional software needs to be installed.
- **Auto Scaling groups:** seven pre-selected metrics at one-minute frequency, optional and for an additional charge.
- **Elastic Load Balancers:** thirteen pre-selected metrics at one-minute frequency, for no additional charge.
- **Amazon Route 53 health checks:** One pre-selected metric at one-minute frequency, for no additional charge.

Storage and Content Delivery

- **Amazon EBS PIOPS (SSD) volumes:** ten pre-selected metrics at one-minute frequency, for no additional charge.
- **Amazon EBS General Purpose (SSD) volumes:** ten pre-selected metrics at one-minute frequency, for no additional charge.
- **Amazon EBS Magnetic volumes:** eight pre-selected metrics at five-minute frequency, for no additional charge.
- **AWS Storage Gateways:** eleven pre-selected gateway metrics and five pre-selected storage volume metrics at five-minute frequency, for no additional charge.
- **Amazon CloudFront:** six pre-selected metrics at one-minute frequency, for no additional charge.

Database and Analytics

- **Amazon DynamoDB tables:** seven pre-selected metrics at five-minute frequency, for no additional charge.
- **Amazon ElastiCache nodes:** thirty-nine pre-selected metrics at one-minute frequency, for no additional charge.
- **Amazon RDS DB instances:** fourteen pre-selected metrics at one-minute frequency, for no additional charge.
- **Amazon Elastic MapReduce job flows:** twenty-six pre-selected metrics at five-minute frequency, for no additional charge.
- **Amazon Redshift:** Sixteen pre-selected metrics at one-minute frequency, for no additional charge.

Other AWS Resources

- **Amazon SNS topics:** four pre-selected metrics at five-minute frequency, for no additional charge.
- **Amazon SQS queues:** eight pre-selected metrics at five-minute frequency, for no additional charge.
- **AWS Opsworks:** fifteen pre-selected metrics at one-minute frequency, for no additional charge.
- **Estimated charges on your AWS bill:** you can also choose to enable metrics to monitor your AWS charges.
- The number of metrics depends on the AWS products and services that you use, and these metrics are at no additional charge
- **Amazon CloudWatch Pricing**

Free Tier

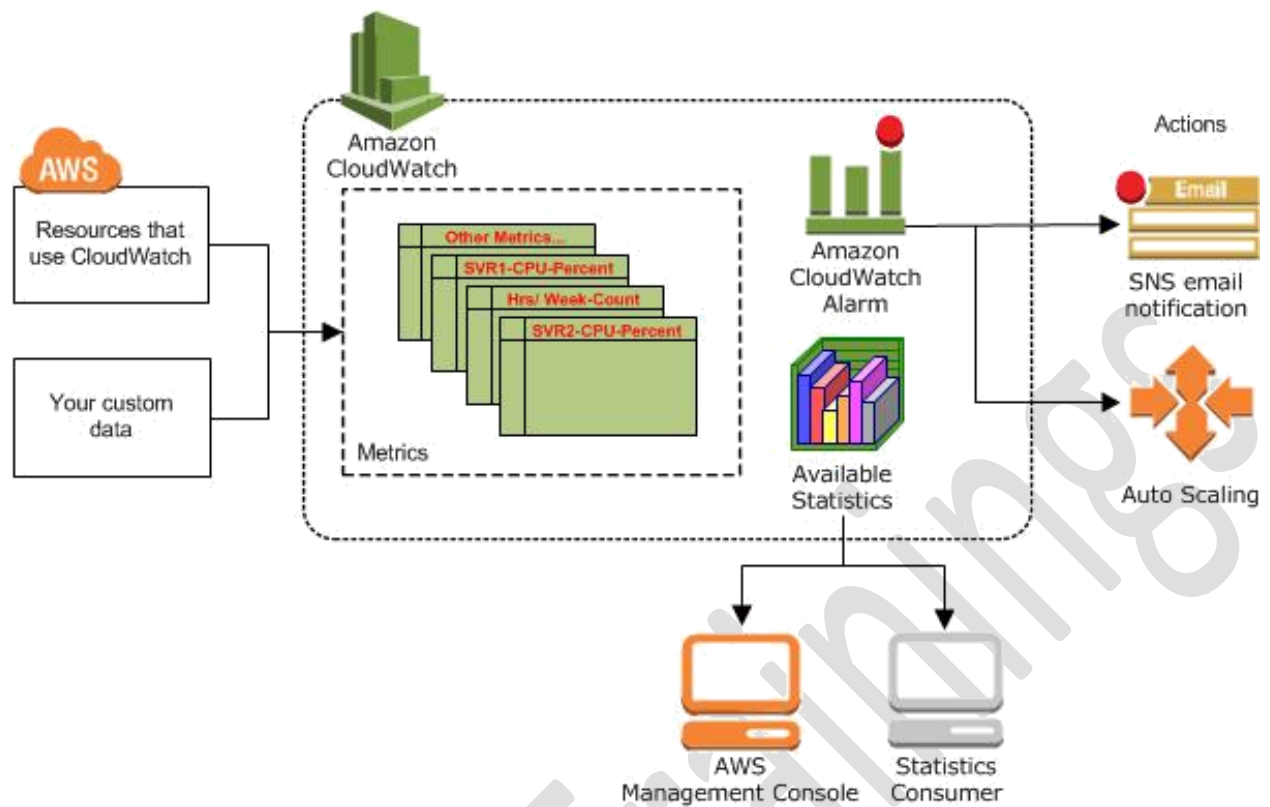
- You can get started with Amazon CloudWatch for free. Many applications should be able to operate within these free tier limits

Basic Monitoring metrics (at five-minute frequency) for Amazon EC2 instances are free of charge, as are all metrics for Amazon EBS volumes, Elastic Load Balancers, and Amazon RDS DB instances.

- New and existing customers also receive 10 metrics (applicable to Detailed Monitoring for Amazon EC2 instances, Custom Metrics, or CloudWatch Logs*), 10 alarms, and 1 million API requests each month at no additional charge.
- New and existing customer also receive 5 GB of data ingestion and 5 GB of archived storage per month at no additional charge.
- Pay only for what you use. There is no minimum fee. You will be charged at the end of the month for your usage.

Region: US East (N. Virginia)

- Detailed Monitoring for Amazon EC2 Instances
\$3.50 per instance per month for Detailed Monitoring at 1-minute frequency
- Amazon CloudWatch Custom Metrics \$0.50 per metric per month
- Amazon CloudWatch Alarms
\$0.10 per alarm per month
- Amazon CloudWatch API Requests
\$0.01 per 1,000 GetMetricStatistics, ListMetrics, or PutMetricData requests
- Amazon CloudWatch Logs*
\$0.50 per GB ingested**
\$0.03 per GB archived per month***
- Data Transfer OUT from CloudWatch Logs is priced equivalent to the “Data Transfer OUT from Amazon EC2 To” and “Data Transfer OUT from Amazon EC2 to Internet” tables on the EC2 Pricing Page



Online Trainings