Amazon ElasticSearch Service

FULLY MANAGED, SCALABLE, RELIABLE ELASTICSEARCH SERVICE

Amazon Elasticsearch Service (Amazon ES) is a fully managed service that makes it easy for you to deploy, secure, operate, and scale Elasticsearch in the AWS Cloud so you can search, analyze, and visualize your data at scale. Its easy-to-use APIs, real-time capabilities, and integrations with open-source tools and other AWS Services enables you to discover trends and insights from raw data quickly and securely.

Faster Time-to-Value
Get a production-ready Elasticsearch cluster up and running in minutes

Maximize Resources
Focus on building applications and features that meet customer requirements instead of managing and maintaining your Elasticsearch cluster

Real-Time Operational Insights
Get instant access to user trends and insights from all your log data – from any source, for any industry

End-to-End Security
Keep your sensitive data secure with network isolation, data encryption, and user authentication

Improved Reliability
Identify issues along with the root cause in near real time to troubleshoot effectively and reduce downtime

Cost Effective
Pay as you go with no upfront costs; no infrastructure requirements – we have you covered

---

Key benefits

Fully managed: Deploy a production-ready Elasticsearch cluster in minutes with the flexibility to choose the configuration that best fits your use case. Amazon ES simplifies time-consuming management tasks such as hardware provisioning, software installing and patching, failure recovery, backups, and monitoring, so you can focus on developing innovative applications.

Easily scalable: Launch large-scale (up to 1.5 PB) clusters and scale them up and down via a single API call or a few clicks in the AWS Management Console along with the ability to monitor your cluster through Amazon CloudWatch. You can also select from a range of instance types and storage options including SSD-powered EBS volumes to meet your performance requirements.

Highly available: Replicates data between two availability zones in the same region. Amazon ES also monitors the health of your clusters and automatically replaces failed nodes to prevent downtime or service outages.

Supports Open-Source APIs and Tools: Gives you direct access to the Elasticsearch open-source APIs so you don't have to learn new programming skills. Amazon ES also supports Logstash, an open-source data ingestion, transformation, and loading tool, and provides built-in Kibana, an open-source visualization tool, making it easier for you to ingest, analyze, and visualize your data. It also supports Beats, so you can ship all kinds of data – metrics, log files, heartbeat, and more directly to Elasticsearch for processing and indexing.

Integrated with other AWS Services: Offers built-in integrations with other AWS services including Kinesis Data Firehose, AWS IoT, and Amazon CloudWatch Logs for data ingestion; AWS CloudTrail for auditing; Amazon VPC, AWS KMS, Amazon Cognito, and AWS IAM for security; and AWS CloudFormation for cloud orchestration.

Secure: Run mission-critical workloads. Amazon ES provides authentication and access control using Amazon Cognito and AWS Identity and Access Management (IAM), encryption of data at rest using AWS Key Management Service (KMS), and network isolation using Amazon Virtual Private Cloud (VPC). Amazon Cognito integration also supports federated identity providers for SSO.

Pay as you go pricing: Pay only for what you use with no upfront and minimum fees. Amazon ES also offers Reserved Instances for even greater cost savings.
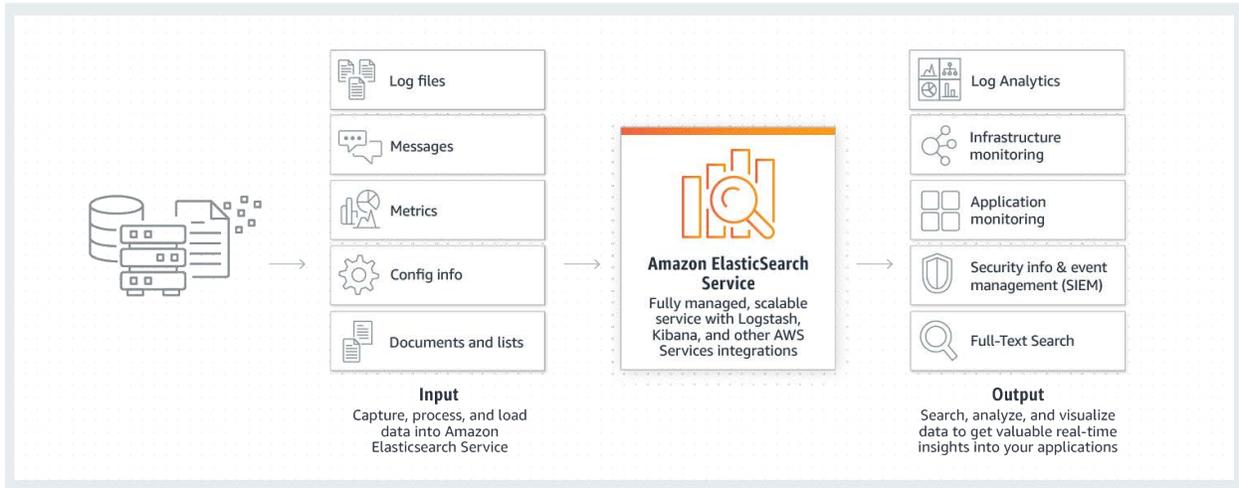
Key use cases

Log analytics: Analyze logs generated by applications, websites, mobile devices, servers, storage, network, cloud infrastructure, IoT sensors, and more in real time. Popular use cases include: click-stream analytics, IoT analytics, security information and event management (SIEM), root cause analysis, and operational monitoring in financial services, gaming, IoT, media, and various other verticals.

- **Real-Time application monitoring:** Capture and ingest petabytes of log data from a variety of sources and transform it into actionable intelligence using Logstash and Kibana for real-time application monitoring and issue resolution. With Amazon Elasticsearch service you get real-time visibility across the application for optimal application performance and user experience.

Expedia, one of the world's largest travel companies, uses Amazon ES for application monitoring and root-cause analysis and to create centralized logging for all users. With Amazon ES, Expedia is able to analyze huge volumes of Docker startup logs cost-effectively, identify and troubleshoot issues in real-time, and not worry about managing the infrastructure.

- **Security Analytics:** Enables security practitioners to centralize and analyze events from across the entire organization to locate and prevent data breaches and security threats in real time across all their applications and systems.

- **Clickstream analytics:** Deliver real-time metrics on digital content to enable marketers to better understand user behavior, optimize user experience, and target them more effectively. Load billions of events to Amazon Elasticsearch Service using Amazon Kinesis Firehose. With Amazon Elasticsearch Service, you can then aggregate, filter, and process the data, and refresh content performance dashboards in near real-time.

Hearst Corporation built a clickstream analytics platform using Amazon Elasticsearch Service to transmit and process 30 terabytes of data a day from 300+ Hearst websites worldwide. With this platform, Hearst is able to make the entire data stream—from website clicks to aggregated data—available to editors in minutes.

Full-Text search: Provide a low-latency, high-throughput, personalized search experience for your users across e-commerce applications, website, data lake catalogs, and other curated application data. Amazon Elasticsearch Service provides direct access to all of Elasticsearch's rich search APIs, supporting natural language search across free text, Boolean combinations of text and metadata search, auto-completion, faceted search, location-aware search, and much more.

Mirrorweb uses Amazon ES to make the UK Government and UK Parliament's web archives searchable. With Amazon ES, Mirrorweb indexed 1.4 billion documents for just $337 and indexed 146 MM docs per hour – 14x faster than the previously used technology.

Getting started with Amazon ES
IT'S EASY TO START USING AMAZON ES

Signup for an account
Get instant access to the Amazon ES free tier.

Learn more
Get hands-on experience with labs & tutorials.

Get started
Follow this user guide to build & deploy an Amazon ES domain.