



CLOUD PLATFORM REFERENCE

Amazon Web Services.

Complete Services Guide

A structured, category-by-category reference covering AWS's compute, storage, database, networking, AI/ML, data analytics, security, and developer tooling services — with what each service does, how it's used, and where it fits.

Compute

Storage & Databases

Networking

AI & ML

Data & Analytics

Security & Identity

DevOps & Management

Integration & Messaging

SERVICES COVERED

60+

CATEGORIES

9

EDITION

2026

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07 DevOps, Management & Ops	CI/CD, monitoring, IaC, cost tools
08 Integration & Messaging	Queues, events, workflows, APIs
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01

Compute.

AWS's original and largest category — virtual machines, container orchestration, and event-driven serverless compute — covering every level of infrastructure control.

EC2

Lambda

ECS

EKS

Fargate

Elastic Beanstalk

Batch

Lightsail

Outposts

01

Compute

From raw virtual machines to fully serverless functions — the compute layer underpins nearly every other AWS service.

Amazon EC2

IAAS

Resizable virtual servers in the cloud, with hundreds of instance types across general-purpose, compute-optimized, memory-optimized, and GPU families. Supports Spot, Reserved, and Savings Plans pricing.

Best for: Custom workloads, legacy apps, full control Pricing model: On-Demand, Spot, Reserved

AWS Lambda

FAAS

Run code without provisioning servers, triggered by events from over 200 AWS services. Scales automatically from a single request to thousands per second, billed per millisecond of execution.

Best for: Event-driven, short-lived workloads Pricing model: Pay-per-invocation

Amazon ECS & EKS

CONTAINERS

ECS is AWS's native container orchestrator; EKS is managed Kubernetes. Both run on EC2 or serverlessly via Fargate, with deep integration into IAM, VPC, and CloudWatch.

Best for: Microservices, container orchestration Modes: EC2-backed, Fargate serverless

AWS Fargate

SERVERLESS

Serverless compute engine for containers, working with both ECS and EKS. Removes the need to provision or manage the underlying EC2 instances for container workloads.

Best for: Containers without infra management

AWS Elastic Beanstalk

PAAS

Upload application code and Elastic Beanstalk automatically handles provisioning, load balancing, scaling, and health monitoring on top of EC2, S3, and Elastic Load Balancing.

Best for: Quick app deployment without infra depth

AWS Batch

HPC

Fully managed batch computing that dynamically provisions the optimal quantity and type of compute resources based on the volume and requirements of submitted jobs.

Best for: HPC, scientific & batch processing

Amazon Lightsail

SIMPLIFIED VPS

Simplified virtual private servers bundling compute, storage, and networking at flat monthly rates — aimed at simpler workloads and smaller projects.

AWS Outposts

HYBRID

Physical racks of AWS-managed infrastructure installed on-premises, extending native AWS services and APIs into a customer's own data center.

02

Storage & Databases.

AWS's storage and database catalog spans object, block, and file storage alongside purpose-built relational, NoSQL, and in-memory database engines.

- S3
- EBS
- EFS
- RDS
- Aurora
- DynamoDB
- ElastiCache
- Neptune
- DocumentDB

02

Storage & Databases

Managed storage and purpose-built databases, each optimized for a specific access pattern rather than one-size-fits-all.

Amazon S3

Industry-standard object storage offering 99.999999999% durability, with Standard, Intelligent-Tiering, Infrequent Access, Glacier, and Glacier Deep Archive storage classes for cost-optimized lifecycle management.

Best for: Unstructured data, backups, data lakes **Durability:** 11 nines

OBJECT STORAGE

Amazon RDS

Managed relational database supporting MySQL, PostgreSQL, MariaDB, Oracle, and SQL Server, with automated backups, patching, and Multi-AZ failover for high availability.

Best for: Traditional relational workloads **Engines:** MySQL, PostgreSQL, MariaDB, Oracle, SQL Server

RELATIONAL

Amazon Aurora

MySQL- and PostgreSQL-compatible database engineered for the cloud, claiming up to 5x the throughput of standard MySQL, with storage that auto-scales up to 128 TB and continuous replication across Availability Zones.

Best for: High-performance relational at scale

RELATIONAL

Amazon DynamoDB

Fully managed key-value and document database delivering single-digit-millisecond performance at any scale, with on-demand or provisioned capacity and built-in global tables for multi-region replication.

Best for: High-scale, low-latency applications

NOSQL

Amazon ElastiCache

Fully managed Redis and Memcached for microsecond-latency caching, session stores, and real-time leaderboards, with a serverless option that scales automatically.

IN-MEMORY

Amazon EBS

Persistent block storage volumes for EC2, with SSD- and HDD-backed types tuned for transactional or throughput-heavy workloads.

BLOCK STORAGE

Amazon EFS

Fully managed, elastic NFS file system that scales automatically, shareable across thousands of concurrent EC2 and container connections.

FILE STORAGE

Amazon DocumentDB

MongoDB-compatible document database built for scalability and availability, commonly used for content management and catalog data.

NOSQL DOCUMENT

Amazon Neptune

Fully managed graph database for highly connected datasets, supporting both property graph and RDF models — used for fraud detection and recommendation engines.

GRAPH

03

Networking & Content Delivery.

A global backbone connecting AWS regions, edge locations, and on-premises networks — with traffic distribution, DNS, and edge caching built in.

- VPC
- Elastic Load Balancing
- CloudFront
- Route 53
- Direct Connect
- Site-to-Site VPN
- Transit Gateway
- Global Accelerator

03

Networking & Content Delivery

Software-defined networking, global traffic management, and secure connectivity between AWS, other clouds, and on-premises infrastructure.

Amazon VPC

CORE NETWORK

Logically isolated virtual network for AWS resources, with full control over IP ranges, subnets, route tables, and gateways, plus VPC Peering and PrivateLink for private connectivity between VPCs and services.

Elastic Load Balancing (ELB)

TRAFFIC MGMT

Distributes incoming traffic across targets via three load balancer types: Application (Layer 7), Network (Layer 4), and Gateway, each optimized for different traffic patterns.

Amazon CloudFront

EDGE

Global content delivery network integrated with AWS Shield and WAF for DDoS and application-layer protection, caching content at edge locations close to end users.

Amazon Route 53

CORE NETWORK

Highly available and scalable managed DNS service, with health checks, latency-based routing, and domain registration in one product.

AWS Direct Connect

HYBRID

Dedicated physical network connection between on-premises infrastructure and AWS, bypassing the public internet for consistent, low-latency throughput.

AWS Site-to-Site VPN

HYBRID

Managed IPsec VPN connection between on-premises networks and Amazon VPC, typically paired with Direct Connect for failover redundancy.

AWS Transit Gateway

HYBRID

Central hub that connects VPCs and on-premises networks through a single gateway, simplifying network topology at scale.

AWS Global Accelerator

EDGE

Improves availability and performance of applications by routing traffic through AWS's global network infrastructure using static anycast IPs.

AWS App Mesh

SERVICE MESH

Application-level networking that makes it easy to monitor and control microservices communication across ECS, EKS, and EC2.

AWS Shield & WAF

EDGE SECURITY

Managed DDoS protection (Shield) and web application firewall (WAF) that filters malicious traffic before it reaches applications.

04

AI & Machine Learning.

AWS's AI stack runs from pretrained perception APIs to Amazon Bedrock for foundation models and SageMaker for full custom ML lifecycles. In 2026, Amazon Connect was rebranded into a four-product agentic AI family, led by Amazon Connect Customer.

- Amazon Bedrock
- Amazon SageMaker
- Amazon Q
- Rekognition
- Comprehend
- Textract
- Transcribe / Polly
- Translate

04

AI & Machine Learning

Note: Amazon Connect was rebranded in 2026 as part of a broader push into agentic AI, now spanning four products under the Amazon Connect portfolio, led by Amazon Connect Customer.

Amazon Bedrock

Fully managed service offering foundation models from Anthropic, Meta, Mistral, Amazon's own Nova models, and others through a single API, with fine-tuning, Guardrails, Knowledge Bases for RAG, and Agents for orchestration.

Best for: Generative AI apps, RAG, agents

FOUNDATION MODELS

Amazon SageMaker

End-to-end platform for building, training, and deploying custom machine learning models, with managed notebooks, distributed training, model monitoring, and MLOps pipelines.

Best for: Custom ML model development

ML PLATFORM

Amazon Q

Generative AI-powered assistant family spanning Q Business (enterprise data Q&A), Q Developer (coding assistant across the SDLC), and embedded Q experiences across AWS applications.

Best for: Enterprise assistants, developer productivity

APPLIED AI

Amazon Connect Customer

Rebranded flagship of the Amazon Connect portfolio, an AI-native contact center platform designed around autonomous agents handling customer interactions end-to-end rather than bolted-on AI features.

AGENTIC AI / CX

Amazon Rekognition

Image and video analysis for object/scene detection, facial analysis, and content moderation via API.

PRETRAINED API

Amazon Comprehend

Natural language processing to extract entities, key phrases, sentiment, and language from text.

PRETRAINED API

Amazon Transcribe & Polly

Automatic speech recognition (Transcribe) and lifelike text-to-speech (Polly) across dozens of languages.

PRETRAINED API

Amazon Translate

Neural machine translation service supporting dozens of language pairs with custom terminology support.

PRETRAINED API

Amazon Textract

Extracts text, forms, and tables from scanned documents automatically, beyond simple OCR.

PRETRAINED API

Amazon Lex

Builds conversational interfaces using the same speech and language models that power Amazon Alexa.

CONVERSATIONAL AI

05

Data Analytics & Big Data.

Serverless data warehousing, stream and batch processing, cataloging, and business intelligence tools built to work together across the AWS data ecosystem.

Redshift

EMR

Glue

Athena

Kinesis

QuickSight

Lake Formation

MSK

05

Data Analytics & Big Data

Data warehousing, ETL, streaming, and visualization services spanning fully serverless and cluster-based options.

Amazon Redshift

Fully managed, petabyte-scale data warehouse with a serverless option, columnar storage, and Redshift Spectrum for querying data directly in S3 without loading it first.

Best for: SQL analytics at scale

DATA WAREHOUSE

AWS Glue

Serverless data integration service for discovering, preparing, and combining data for analytics, ML, and app development, with a visual ETL builder and a central Data Catalog.

ETL

Amazon Kinesis

Family of services for real-time data streaming and processing at scale, including Data Streams, Firehose for delivery to storage/analytics, and Data Analytics for SQL/Flink processing.

STREAMING

Amazon Athena

Serverless, interactive query service that analyzes data directly in Amazon S3 using standard SQL, with no infrastructure to manage.

QUERY ENGINE

Amazon EMR

Managed cluster platform for running big-data frameworks like Apache Spark, Hive, and Presto at scale.

MANAGED HADOOP

Amazon QuickSight

Serverless, cloud-native business intelligence service with ML-powered insights (Q&A in natural language) and embeddable dashboards.

BI

AWS Lake Formation

Simplifies setting up a secure data lake in days, with centralized access control and cataloging across S3-based data.

DATA GOVERNANCE

Amazon MSK

Fully managed Apache Kafka service for building and running streaming applications without operating Kafka clusters manually.

STREAMING

06

Security & Identity.

Identity, encryption, and continuous threat detection services layered across every AWS account under a shared-responsibility security model.

- IAM
- KMS
- Secrets Manager
- GuardDuty
- Security Hub
- WAF & Shield
- Cognito

06 Security & Identity

AWS operates under a shared-responsibility model — AWS secures the cloud infrastructure; these services help secure what runs on it.

AWS IAM

CORE SECURITY

Fine-grained access control for AWS resources, defining users, groups, roles, and policies, with support for multi-factor authentication and temporary security credentials.

AWS KMS

ENCRYPTION

Centralized creation and management of cryptographic keys used to encrypt data across AWS services, with CloudHSM available for dedicated hardware security modules.

Amazon GuardDuty

THREAT DETECTION

Intelligent threat detection service that continuously monitors for malicious activity and unauthorized behavior using machine learning and threat intelligence feeds.

AWS Secrets Manager

ENCRYPTION

Securely stores, rotates, and retrieves database credentials, API keys, and other secrets programmatically.

AWS Security Hub

POSTURE MGMT

Central dashboard aggregating security findings and compliance status across GuardDuty, Inspector, Macie, and third-party tools.

Amazon Cognito

IDENTITY

Managed customer identity and access management for web and mobile apps, including sign-up, sign-in, and social identity federation.

Amazon Macie

DATA SECURITY

Uses machine learning to discover and protect sensitive data such as PII stored in Amazon S3.

07

DevOps, Management & Ops.

Tools for building, deploying, monitoring, and governing infrastructure and applications — covering CI/CD, observability, infrastructure as code, and cost management.

CodePipeline

CloudFormation

CloudWatch

CloudTrail

Systems Manager

Cost Explorer

07

DevOps, Management & Ops

Continuous integration/delivery, observability, and infrastructure automation tools for shipping and operating software reliably.

AWS CodePipeline & CodeBuild

CI/CD

Fully managed continuous delivery service (CodePipeline) paired with a build/test service (CodeBuild) to automate release pipelines across AWS and third-party tools.

AWS CloudFormation

IAC

Provisions and manages AWS resources through declarative JSON/YAML templates, treating infrastructure as version-controlled code. The AWS Cloud Development Kit (CDK) layers familiar programming languages on top.

Amazon CloudWatch

OBSERVABILITY

Monitoring and observability service collecting metrics, logs, and traces, with alarms, dashboards, and anomaly detection across the full AWS resource fleet.

AWS CloudTrail

AUDIT

Records account activity and API calls across AWS infrastructure for governance, compliance, and operational auditing.

AWS Systems Manager

OPS MGMT

Unified interface for viewing operational data and automating tasks across AWS resources, including patch management and run command execution.

AWS Cost Explorer & Budgets

FINOPS

Visualizes, tracks, and forecasts spending patterns, with custom budgets and alerts to prevent cost overruns.

AWS Trusted Advisor

OPTIMIZATION

Provides real-time recommendations across cost optimization, performance, security, and fault tolerance based on AWS best practices.

DEVOPS, MANAGEMENT & OPS

07 / 09

08

Integration & Messaging.

Services that connect applications, decouple components, and orchestrate workflows — the connective tissue linking compute, data, and third-party systems.

[SQS](#)

[SNS](#)

[EventBridge](#)

[Step Functions](#)

[API Gateway](#)

[AppFlow](#)

08 Integration & Messaging

Managed messaging, event routing, and orchestration services for building loosely coupled, resilient distributed systems.

Amazon SQS

QUEUES

Fully managed message queuing service that decouples and scales microservices and distributed systems, supporting both standard and FIFO (exactly-once) queues.

Amazon EventBridge

EVENTS

Serverless event bus that routes events from AWS services, SaaS applications, and custom apps to targets, with schema discovery and rule-based filtering.

AWS Step Functions

ORCHESTRATION

Visual workflow service for coordinating multiple AWS services into serverless workflows, with built-in error handling and retry logic for complex state machines.

Amazon SNS

PUB/SUB

Fully managed pub/sub messaging for application-to-application and application-to-person communication, including SMS, email, and push notifications.

Amazon API Gateway

API MANAGEMENT

Fully managed service for creating, publishing, and securing REST, HTTP, and WebSocket APIs at any scale.

Amazon AppFlow

INTEGRATION

Fully managed integration service for securely transferring data between SaaS applications like Salesforce and Amazon S3 or Redshift.

Amazon MQ

MESSAGING

Managed message broker service for Apache ActiveMQ and RabbitMQ, useful for migrating existing applications without rewriting messaging code.

09

Migration & Hybrid Cloud.

Tooling for moving workloads onto AWS and for extending AWS-managed infrastructure into on-premises and edge environments.

[Application Migration Service](#)

[Database Migration Service](#)

[Snow Family](#)

[Outposts](#)

[Transfer Family](#)

09

Migration & Hybrid Cloud

Services for moving existing workloads to AWS and for running AWS-managed infrastructure outside the public cloud.

AWS Application Migration Service (MGN)

MIGRATION

Automates lift-and-shift migration of physical, virtual, and cloud-based servers to AWS with minimal downtime, using continuous block-level replication.

AWS Database Migration Service (DMS)

MIGRATION

Migrates databases to AWS with minimal downtime, supporting homogeneous and heterogeneous migrations (e.g. Oracle to Aurora) with ongoing replication for minimal cutover risk.

AWS Snow Family

MIGRATION

Physical devices (Snowcone, Snowball, Snowmobile) for transferring large volumes of data into AWS or running edge compute in disconnected environments.

AWS Transfer Family

MIGRATION

Fully managed support for file transfers directly into and out of Amazon S3 or EFS using SFTP, FTPS, and FTP protocols.

Amazon EKS Anywhere / ECS Anywhere

HYBRID

Runs AWS's managed container orchestrators on customer-managed infrastructure, on-premises or at the edge.

AWS DataSync

MIGRATION

Automates and accelerates online data transfer between on-premises storage and AWS storage services.

Choosing the right service.

AWS offers well over 200 individual products. The categories in this guide group the most commonly used services by function — compute, data, AI, networking, security, and operations — as a starting map rather than an exhaustive catalog.

Naming and product boundaries shift often (Amazon Connect's 2026 rebrand into an agentic AI family is a recent example), and new services and model integrations ship on a near-monthly cadence. Always check official documentation for current names, pricing, and availability before making architectural decisions.

Full service catalog	aws.amazon.com/products
Pricing calculator	calculator.aws
What's new	aws.amazon.com/new
Architecture guidance	aws.amazon.com/architecture