**IAM:** AWS Identity and Access Management (IAM) enables you to manage access to AWS services and resources securely. Using IAM, you can create and manage AWS users and groups, and use permissions to allow and deny their access to AWS resources. IAM is a feature of your AWS account offered at no additional charge. You will be charged only for use of other AWS services by your users.

**IAM Roles:** An IAM role is an IAM identity that you can create in your account that has specific permissions. An IAM role is similar to an IAM user, in that it is an AWS identity with permission policies that determine what the identity can and cannot do in AWS. However, instead of being uniquely associated with one person, a role is intended to be assumable by anyone who needs it. Also, a role does not have standard long-term credentials such as a password or access keys associated with it. Instead, when you assume a role, it provides you with temporary security credentials for your role session.

**IAM policies:** You manage access in AWS by creating policies and attaching them to IAM identities (users, groups of users, or roles) or AWS resources. A policy is an object in AWS that, when associated with an identity or resource, defines their permissions. AWS evaluates these policies when an IAM principal (user or role) makes a request. Permissions in the policies determine whether the request is allowed or denied. Most policies are stored in AWS as JSON documents. AWS supports six types of policies: identity-based policies, resource-based policies, permissions boundaries, Organizations SCPs, ACLs, and session policies.

**User:** A user is a unique identity recognized by AWS services and applications. Similar to a login user in an operating system like Windows or UNIX, a user has a unique name and can identify itself using familiar security credentials such as a password or access key. A user can be an individual, system, or application requiring access to AWS services. IAM supports users (referred to as "IAM users") managed in AWS's identity management system, and it also enables you to grant access to AWS resources for users managed outside of AWS in your corporate directory (referred to as "federated users").

**Group:** A group is a collection of IAM users. Manage group membership as a simple list:

* Add users to or remove them from a group.
* A user can belong to multiple groups.
* Groups cannot belong to other groups.
* Groups can be granted permissions using access control policies. This makes it easier to manage permissions for a collection of users, rather than having to manage permissions for each individual user.
* Groups do not have security credentials, and cannot access web services directly; they exist solely to make it easier to manage user permissions.

**Cognito**: Amazon Cognito User Pools provide a secure user directory that scales to hundreds of millions of users. With Amazon Cognito, your users can sign in through social identity providers such as Google, Facebook, and [Amazon](https://developer.amazon.com/login-with-amazon), and through enterprise identity providers such as [Microsoft Active Directory](https://aws.amazon.com/directoryservice/active-directory/) via [SAML](https://aws.amazon.com/identity/saml/). Amazon Cognito supports multi-factor authentication and encryption of data-at-rest and in-transit. Amazon Cognito is [HIPAA eligible](https://aws.amazon.com/compliance/hipaa-compliance/) and [PCI DSS](https://aws.amazon.com/compliance/pci-dss-level-1-faqs/), [SOC](https://aws.amazon.com/compliance/soc-faqs/), [ISO/IEC 27001](https://aws.amazon.com/compliance/iso-27001-faqs/), [ISO/IEC 27017](https://aws.amazon.com/compliance/iso-27017-faqs/), [ISO/IEC 27018](https://aws.amazon.com/compliance/iso-27018-faqs/), and [ISO 9001](https://aws.amazon.com/compliance/iso-9001-faqs/) compliant.

**User pool:** A user pool is a user directory in Amazon Cognito. With a user pool, your users can sign in to your web or mobile app through Amazon Cognito. Your users can also sign in through social identity providers like Google, Facebook, Amazon, or Apple, and through SAML identity providers. Whether your users sign in directly or through a third party, all members of the user pool have a directory profile that you can access through a Software Development Kit (SDK).

**Identity pools:** Amazon Cognito identity pools provide temporary AWS credentials for users who are guests (unauthenticated) and for users who have been authenticated and received a token. An identity pool is a store of user identity data specific to your account.

**S3:** Amazon Simple Storage Service (Amazon S3) is an object storage service that offers industry-leading scalability, data availability, security, and performance. This means customers of all sizes and industries can use it to store and protect any amount of data for a range of use cases, such as websites, mobile applications, backup and restore, archive, enterprise applications, IoT devices, and big data analytics. Amazon S3 provides easy-to-use management features so you can organize your data and configure finely-tuned access controls to meet your specific business, organizational, and compliance requirements. Amazon S3 is designed for 99.999999999% (11 9's) of durability, and stores data for millions of applications for companies all around the world.

**DynamoDB:** Amazon DynamoDB is a key-value and document database that delivers single-digit millisecond performance at any scale. It's a fully managed, multiregion, multimaster, durable database with built-in security, backup and restore, and in-memory caching for internet-scale applications. DynamoDB can handle more than 10 trillion requests per day and can support peaks of more than 20 million requests per second.

**Lambda**: AWS Lambda lets you run code without provisioning or managing servers. You pay only for the compute time you consume. With Lambda, you can run code for virtually any type of application or backend service - all with zero administration. Just upload your code and Lambda takes care of everything required to run and scale your code with high availability. You can set up your code to automatically trigger from other AWS services or call it directly from any web or mobile app.

**SQS**: Amazon Simple Queue Service (SQS) is a fully managed message queuing service that enables you to decouple and scale microservices, distributed systems, and serverless applications. SQS eliminates the complexity and overhead associated with managing and operating message oriented middleware, and empowers developers to focus on differentiating work. Using SQS, you can send, store, and receive messages between software components at any volume, without losing messages or requiring other services to be available. Get started with SQS in minutes using the AWS console, Command Line Interface or SDK of your choice, and three simple commands.

**SNS**: Amazon Simple Notification Service (SNS) is a highly available, durable, secure, fully managed pub/sub messaging service that enables you to decouple microservices, distributed systems, and serverless applications. Amazon SNS provides topics for high-throughput, push-based, many-to-many messaging. Using Amazon SNS topics, your publisher systems can fan out messages to a large number of subscriber endpoints for parallel processing, including [Amazon SQS](https://aws.amazon.com/sqs/) queues, [AWS Lambda](https://aws.amazon.com/lambda/) functions, and HTTP/S webhooks. Additionally, SNS can be used to fan out notifications to end users using mobile push, SMS, and email.

**Step Functions:** AWS Step Functions lets you coordinate multiple AWS services into serverless workflows so you can build and update apps quickly. Using Step Functions, you can design and run workflows that stitch together services, such as AWS Lambda, AWS Fargate, and Amazon SageMaker, into feature-rich applications. Workflows are made up of a series of steps, with the output of one step acting as input into the next. Application development is simpler and more intuitive using Step Functions, because it translates your workflow into a state machine diagram that is easy to understand, easy to explain to others, and easy to change. Step Functions automatically triggers and tracks each step, and retries when there are errors, so your application executes in order and as expected. With Step Functions, you can craft long-running workflows such as machine learning model training, report generation, and IT automation. You can also build high volume, short duration workflows such as IoT data ingestion, and streaming data processing.

**Elastic Beanstalk:** AWS Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services developed with Java, .NET, PHP, Node.js, Python, Ruby, Go, and Docker on familiar servers such as Apache, Nginx, Passenger, and IIS. You can simply upload your code and Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, auto-scaling to application health monitoring. At the same time, you retain full control over the AWS resources powering your application and can access the underlying resources at any time.

**CloudFormation**: AWS CloudFormation provides a common language for you to model and provision AWS and third party application resources in your cloud environment. AWS CloudFormation allows you to use programming languages or a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all regions and accounts. This gives you a single source of truth for your AWS and third party resources.

**ElastiCache:** Amazon ElastiCache allows you to seamlessly set up, run, and scale popular open-Source compatible in-memory data stores in the cloud. Build data-intensive apps or boost the performance of your existing databases by retrieving data from high throughput and low latency in-memory data stores. Amazon ElastiCache is a popular choice for real-time use cases like Caching, Session Stores, Gaming, Geospatial Services, Real-Time Analytics, and Queuing.

**CloudFront:** Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds, all within a developer-friendly environment. CloudFront is integrated with AWS – both physical locations that are directly connected to the AWS global infrastructure, as well as other AWS services. CloudFront works seamlessly with services including AWS Shield for DDoS mitigation, Amazon S3, Elastic Load Balancing or Amazon EC2 as origins for your applications, and Lambda@Edge to run custom code closer to customers’ users and to customize the user experience. Lastly, if you use AWS origins such as Amazon S3, Amazon EC2 or Elastic Load Balancing, you don’t pay for any data transferred between these services and CloudFront.

**CloudWatch**: Amazon CloudWatch is a monitoring and observability service built for DevOps engineers, developers, site reliability engineers (SREs), and IT managers. CloudWatch provides you with data and actionable insights to monitor your applications, respond to system-wide performance changes, optimize resource utilization, and get a unified view of operational health. CloudWatch collects monitoring and operational data in the form of logs, metrics, and events, providing you with a unified view of AWS resources, applications, and services that run on AWS and on-premises servers. You can use CloudWatch to detect anomalous behavior in your environments, set alarms, visualize logs and metrics side by side, take automated actions, troubleshoot issues, and discover insights to keep your applications  
running smoothly.