Analytics

Amazon Athena: (Serverless interactive query service)	Amazon Athena is an interactive query service that makes it easy to analyze data in Amazon S3 using standard SQL. Athena is serverless, so there is no infrastructure to manage, and you pay only for the queries that you run.
Amazon EMR: (Managed Hadoop framework)	Amazon EMR provides a managed Hadoop framework that makes it easy, fast, and cost-effective to process vast amounts of data across dynamically scalable Amazon EC2 instances.
Amazon CloudSearch (manage service for setting up search solution)	Amazon CloudSearch is a managed service in the AWS Cloud that makes it simple and cost-effective to set up, manage, and scale a search solution for your website or application.
Amazon Elasticsearch Service (Elasticsearch for search, analyze, visualize logs/data)	Amazon Elasticsearch Service makes it easy to deploy, secure, operate, and scale Elasticsearch to search, analyze, and visualize data in real-time.
Amazon Kinesis (collect, process and analyze real time data)	Amazon Kinesis makes it easy to collect, process, and analyze real-time, streaming data so you can get timely insights and react quickly to new information.
Amazon Kinesis Data Firehose (load streaming data to S3, managed service)	Amazon Kinesis Firehose is the easiest way to reliably load streaming data into data stores and analytics tools. It can capture, transform, and load streaming data into Amazon S3, Amazon Redshift, Amazon Elasticsearch Service, and Splunk, enabling near real-time analytics It can also batch, compress, transform, and encrypt the data before loading it, minimizing the amount of storage used at the destination and increasing security.
Amazon Kinesis Data Analytics (analyze streaming data)	Amazon Kinesis Data Analytics is the easiest way to analyze streaming data, gain actionable insights, and respond to your business and customer needs in real time
Amazon Kinesis Data Streams (real time data streaming)	Amazon Kinesis Data Streams (KDS) is a massively scalable and durable real-time data streaming service.The data collected is available in milliseconds to enable real-time analytics use cases such as real-time dashboards, real-time anomaly detection, dynamic pricing, and more.
Amazon Kinesis Video Streams (video streaming)	
Amazon Redshift (analyze data across data warehouse)	Amazon Redshift is a fast, scalable data warehouse that makes it simple and cost-effective to analyze all your data across your data warehouse and data lake.

	Redshift delivers ten times faster performance than other data warehouses by using machine learning, massively parallel query execution, and columnar storage on high-performance disk.
Amazon QuickSight (Business intelligence service, create and publish dashboards)	Amazon QuickSight is a fast, cloud-powered business intelligence (BI) service that makes it easy for you to deliver insights to everyone in your organization. QuickSight lets you create and publish interactive dashboards that can be accessed from browsers or mobile devices.
AWS Data Pipeline (Move data between compute and storage devices)	AWS Data Pipeline is a web service that helps you reliably process and move data between different AWS compute and storage services, as well as on-premises data sources, at specified intervals. AWS Data Pipeline helps you easily create complex data processing workloads that are fault tolerant, repeatable, and highly available.
AWS Glue (prepare and load data for analytics)	AWS Glue is a fully managed extract, transform, and load (ETL) service that makes it easy for customers to prepare and load their data for analytics. You can create and run an ETL job with a few clicks in the AWS Management Console.
AWS Lake Formation	AWS Lake Formation is a service that makes it easy to set up a secure data lake in days. A data lake is a centralized, curated, and secured repository that stores all your data, both in its original form and prepared for analysis. A data lake enables you to break down data silos and combine different types of analytics to gain insights and guide better business decisions.

Application Integration

AWS Step Functions (design workflows)	Using Step Functions, you can design and run workflows that stitch together services such as AWS Lambda and Amazon ECS 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. You can monitor each step of execution as it happens, which means you can identify and fix problems quickly.
Amazon MQ (Apache ActiveMQ: allow diff soft to communicate and exchange info,)	Amazon MQ is a managed message broker service for Apache ActiveMQ that makes it easy to set up and operate message brokers in the cloud. Message brokers allow different software systems–often using different programming languages, and on different platforms–to communicate and exchange information. Connecting your current applications to Amazon MQ is easy because it uses industry-standard APIs and protocols for

	messaging, including JMS, NMS, AMQP, STOMP, MQTT, and WebSocket. Using standards means that in most cases, there's no need to rewrite any messaging code when you migrate to AWS.
Amazon SQS (fully managed message queuing service)	Amazon Simple Queue Service (Amazon 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. SQS offers two types of message queues: **Standard queues** offer maximum throughput, best-effort ordering, and at-least-once delivery. **SQS FIFO queues** are designed to guarantee that messages are processed exactly once, in the exact order that they are sent.
Amazon SNS (pub/sub messaging)	Amazon Simple Notification Service (Amazon 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 queues, AWS Lambda functions, and HTTP/S webhooks. Additionally, SNS can be used to fan out notifications to end users using mobile push, SMS, and email.
Amazon SWF (run background jobs and track states)	Amazon Simple Workflow (Amazon SWF) helps developers build, run, and scale background jobs that have parallel or sequential steps. You can think of Amazon SWF as a fully-managed state tracker and task coordinator in the cloud. If your application's steps take more than 500 milliseconds to complete, you need to track the state of processing. If you need to recover or retry if a task fails, Amazon SWF can help you.

AR and VR

Amazon Sumerian	Amazon Sumerian lets you create and run virtual reality (VR), augmented reality (AR), and 3D applications quickly and easily without requiring any specialized programming or 3D graphics expertise. With Sumerian, you can build highly immersive and interactive scenes that run on popular hardware such as Oculus Go, Oculus Rift, HTC Vive, HTC Vive Pro, Google Daydream, and Lenovo Mirage as well as Android and iOS mobile devices.

AWS Cost Management

AWS Cost Explorer (visualize and manage your AWS costs and usage over time)	AWS Cost Explorer has an easy-to-use interface that lets you visualize, understand, and manage your AWS costs and usage over time. Get started quickly by creating custom reports (including charts and tabular data) that analyze cost and usage data, both at a high level (e.g., total costs and usage across all accounts) and for highly-specific requests (e.g., m2.2xlarge costs within account Y that are tagged “project: secretProject”).
AWS Budgets	AWS Budgets gives you the ability to set custom budgets that alert you when your costs or usage exceed (or are forecasted to exceed) your budgeted amount. You can also use AWS Budgets to set RI utilization or coverage targets and receive alerts when your utilization drops below the threshold you define. RI alerts support Amazon EC2, Amazon RDS, Amazon Redshift, and Amazon ElastiCache reservations.
AWS Cost & Usage Report	The AWS Cost & Usage Report lists AWS usage for each service category used by an account and its IAM users in hourly or daily line items, as well as any tags that you have activated for cost allocation purposes. You can also customize the AWS Cost & Usage Report to aggregate your usage data to the daily or monthly level.
Reserved Instance (RI) Reporting	Using the RI Utilization and Coverage reports available in AWS Cost Explorer, you can visualize your RI data at an aggregate level or inspect a particular RI subscription. To access the most detailed RI information available, you can leverage the AWS Cost & Usage Report. You can also set a custom RI utilization target via AWS Budgets and receive alerts when your utilization drops below the threshold you define. The AWS Cost & Usage Report lists AWS usage for each service category used by an account and its IAM users in hourly or daily line items, as well as any tags that you have activated for cost allocation purposes. You can also customize the AWS Cost & Usage Report to aggregate your usage data to the daily or monthly level.

Blockchain

Amazon Managed Blockchain (fully managed service to setup blockchain network)	Amazon Managed Blockchain is a fully managed service that makes it easy to create and manage scalable blockchain networks using the popular open source frameworks Hyperledger Fabric and Ethereum. Blockchain makes it possible to build applications where multiple parties can execute transactions without the need for a trusted, central authority. Amazon Managed Blockchain eliminates the overhead required to create the network, and automatically scales to meet the demands of thousands of applications running millions of transactions.

Business Applications

Alexa for Business	Alexa for Business is a service that enables organizations and employees to use Alexa to get more work done. With Alexa for Business, employees can use Alexa as their intelligent assistant to be more productive in meeting rooms, at their desks, and even with the Alexa devices they already have at home.
Amazon WorkDocs	Amazon WorkDocs is a fully managed, secure enterprise storage and sharing service with strong administrative controls and feedback capabilities that improve user productivity. Users can comment on files, send them to others for feedback, and upload new versions without having to resort to emailing multiple versions of their files as attachments
Amazon WorkMail	Amazon WorkMail is a secure, managed business email and calendar service with support for existing desktop and mobile email client applications
Amazon Chime	You can use Amazon Chime for online meetings, video conferencing, calls, chat, and to share content, both inside and outside your organization.

Compute Services

Amazon EC2	Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. Instance Types: • On-Demand Instances—With On-Demand instances, you pay for compute capacity by the hour with no long-term commitments. • Reserved Instances—Reserved Instances provide you with a significant discount (up to 75%) compared to On-Demand instance pricing. You have the flexibility to change families, operating system types, and tenancies while benefiting from Reserved Instance pricing when you use Convertible Reserved Instances. • Spot Instances—Spot Instances are available at up to a 90% discount compared to On-Demand prices and let you take advantage of unused EC2 capacity in the AWS Cloud.
Amazon EC2 Auto Scaling	Amazon EC2 Auto Scaling helps you maintain application availability and allows you to automatically add or remove EC2 instances according to conditions you define You can also use the dynamic and predictive scaling features of Amazon EC2 Auto Scaling to add or remove EC2 instances.
Amazon Elastic Container Registry	Amazon Elastic Container Registry (ECR) is a fully-managed Docker container registry that makes it easy for developers to store, manage, and deploy Docker container images. Amazon ECR eliminates the need to operate your own container repositories or worry about scaling the underlying infrastructure. Amazon ECR hosts your images in a highly available and scalable architecture, allowing you to reliably deploy containers for your applications.
Amazon Elastic Container Service	Amazon Elastic Container Service (Amazon ECS) is a highly scalable, igh-performance container orchestration service that supports Docker containers and allows you to easily run and scale containerized applications on AWS. Amazon ECS eliminates the need for you to install and operate your own container orchestration software, manage and scale a cluster of virtual machines, or schedule containers on those virtual machines.
Amazon Elastic Kubernetes Service	Amazon Elastic Kubernetes Service (Amazon EKS) makes it easy to deploy, manage, and scale containerized applications using Kubernetes on AWS.

Amazon Lightsail (easy and predictable way to run vps)	Amazon Lightsail is designed to be the easiest way to launch and manage a virtual private server with AWS. Lightsail plans include everything you need to jumpstart your project – a virtual machine, SSD based storage, data transfer, DNS management, and a static IP address – for a low, predictable price.
AWS Batch (run batch jobs)	AWS Batch enables developers, scientists, and engineers to easily and efficiently run hundreds of thousands of batch computing jobs on AWS. AWS Batch dynamically provisions the optimal quantity and type of compute resources (e.g., CPU or memory-optimized instances) based on the volume and specific resource requirements of the batch jobs submitted. With AWS Batch, there is no need to install and manage batch computing software or server clusters that you use to run your jobs, allowing you to focus on analyzing results and solving problems.
AWS Elastic Beanstalk (upload the code, aws manages the deployment)	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 Internet Information Services (IIS). You can simply upload your code, and AWS Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, and 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.
AWS Fargate (run containers without having to manage underlying infrastructure)	AWS Fargate is a compute engine for Amazon ECS that allows you to run containers without having to manage servers or clusters. With AWS Fargate, you no longer have to provision, configure, and scale clusters of virtual machines to run containers. This removes the need to choose server types, decide when to scale your clusters, or optimize cluster packing. AWS Fargate removes the need for you to interact with or think about servers or clusters. Fargate lets you focus on designing and building your applications instead of managing the infrastructure that runs them. Amazon ECS has two modes: Fargate launch type and EC2 launch type. With Fargate launch type, all you have to do is package your application in containers, specify the CPU and memory requirements, define networking and IAM policies, and launch the application. EC2 launch type allows you to have server-level, more granular control over the infrastructure that runs your container applications. With EC2 launch type, you can use Amazon ECS to manage a cluster of servers and schedule placement of containers on the servers. Amazon ECS keeps track of all the CPU, memory and other resources in your cluster, and also finds the best server for a container to run on based on your specified resource requirements.
AWS Lambda	AWS Lambda lets you run code without provisioning or managing servers. You pay only for the compute time you consume—there is no charge when your code is not

	running 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 you can call it directly from any web or mobile app.
AWS Serverless Application Repository (like github)	The AWS Serverless Application Repository enables you to quickly deploy code samples, components, and complete applications for common use cases such as web and mobile back-ends, event and data processing, logging, monitoring, IoT, and more. Each application is packaged with an AWS Serverless Application Model (SAM) template that defines the AWS resources used. Publicly shared applications also include a link to the application's source code. There is no additional charge to use the Serverless Application Repository - you only pay for the AWS resources used in the applications you deploy. You can also use the Serverless Application Repository to publish your own applications and share them within your team, across your organization, or with the community at large. To share an application you've built, publish it to the AWS Serverless Application Repository.
AWS Outposts	AWS Outposts bring native AWS services, infrastructure, and operating models to virtually any data center, co-location space, or on-premises facility. You can use the same APIs, the same tools, the same hardware, and the same functionality across on-premises and the cloud to deliver a truly consistent hybrid experience. Outposts can be used to support workloads that need to remain on-premises due to low latency or local data processing needs. AWS Outposts come in two variants: 1) VMware Cloud on AWS Outposts allows you to use the same VMware control plane and APIs you use to run your infrastructure, 2) AWS native variant of AWS Outposts allows you to use the same exact APIs and control plane you use to run in the AWS cloud, but on-premises.
VMware Cloud on AWS	VMware Cloud on AWS is an integrated cloud offering jointly developed by AWS and VMware delivering a highly scalable, secure and innovative service that allows organizations to seamlessly migrate and extend their on-premises VMware vSphere-based environments to the AWS Cloud running on next-generation Amazon Elastic Compute Cloud (Amazon EC2) bare metal infrastructure. VMware Cloud on AWS is ideal for enterprise IT infrastructure and operations organizations looking to migrate their on-premises vSphere-based workloads to the public cloud, consolidate and extend their data center capacities, and optimize, simplify and modernize their disaster recovery solutions.

Customer Engagement

Amazon Connect	Amazon Connect is a self-service, cloud-based contact center service that makes it easy for any business to deliver better customer service at lower cost. The self-service graphical interface in Amazon Connect makes it easy for non-technical users to design contact flows, manage agents, and track performance metrics – no specialized skills required.
Amazon SES	Amazon Simple Email Service (Amazon SES) is a cloud-based email sending service designed to help digital marketers and application developers send marketing, notification, and transactional emails. SNS 1. sends a. email messages b. SMS c. push notifications to mobile device d. messages between services/apps 2. Clients have to subscribe, to receive above notifications SES 1. sends a. email messages 2. No subscriptions required

Database

Amazon Aurora	Amazon Aurora is a MySQL and PostgreSQL compatible relational database engine that combines the speed and availability of high-end commercial databases with the simplicity and cost-effectiveness of open source databases. Amazon Aurora is up to five times faster than standard MySQL databases and three times faster than standard PostgreSQL databases. It provides the security, availability, and reliability of commercial databases at 1/10th the cost. Amazon Aurora is fully managed by Amazon Relational Database Service (RDS), which automates time-consuming administration tasks like hardware provisioning, database setup, patching, and backups. Amazon Aurora features a distributed, fault-tolerant, self-healing storage system that auto-scales up to 64TB per database instance. It delivers high performance and availability with up to 15 low-latency read replicas, point-in-time recovery, continuous backup to Amazon S3, and replication across three Availability Zones (AZs).
Amazon Relational Database Service	Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale a relational database in the cloud. It provides cost-efficient and resizable capacity while automating time consuming administration tasks such as hardware provisioning, database setup, patching and backups. It frees you to focus on your applications so you can give them the fast performance, high availability, security and compatibility they need. Amazon RDS is available on several database instance types - optimized for memory, performance or I/O - and provides you with six familiar database engines to choose from, including Amazon Aurora, PostgreSQL, MySQL, MariaDB, Oracle Database, and SQL Server. You can use the AWS Database Migration Service to easily migrate or replicate your existing databases to Amazon RDS.
Amazon RDS on VMware	Amazon Relational Database Service (Amazon RDS) on VMware lets you deploy managed databases in on-premises VMware environments using the Amazon RDS technology enjoyed by hundreds of thousands of AWS customers. Amazon RDS provides cost-efficient and resizable capacity while automating time-consuming administration tasks including hardware provisioning, database setup, patching, and backups, freeing you to focus on your applications.
Amazon 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 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 support peaks of more than 20 million requests per second.

Amazon ElastiCache	Amazon ElastiCache is a web service that makes it easy to deploy, operate, and scale an in-memory cache in the cloud. The service improves the performance of web applications by allowing you to retrieve information from fast, managed, in-memory caches, instead of relying entirely on slower disk-based databases. Amazon ElastiCache supports two open-source in-memory caching engines: Redis Memcached
Amazon Neptune (graph database service)	Amazon Neptune is a fast, reliable, fully-managed graph database service that makes it easy to build and run applications that work with highly connected datasets. The core of Amazon Neptune is a purpose built, high-performance graph database engine optimized for storing billions of relationships and querying the graph with milliseconds latency. Amazon Neptune is highly available, with read replicas, point-in-time recovery, continuous backup to Amazon S3, and replication across Availability Zones. Neptune is secure with support for encryption at rest. Neptune is fully-managed, so you no longer need to worry about database management tasks such as hardware provisioning, software patching, setup, configuration, or backups.
Amazon Quantum Ledger Database (QLDB)	Amazon QLDB is a fully managed ledger database that provides a transparent, immutable, and cryptographically verifiable transaction log owned by a central trusted authority. Amazon QLDB tracks each and every application data change and maintains a complete and verifiable history of changes over time. Ledgers are typically used to record a history of economic and financial activity in an organization. Many organizations build applications with ledger-like functionality because they want to maintain an accurate history of their applications' data, for example, tracking the history of credits and debits in banking transactions, verifying the data lineage of an insurance claim, or tracing movement of an item in a supply chain network. Amazon QLDB is a new class of database that eliminates the need to engage in the complex development effort of building your own ledger-like applications. With QLDB, your data’s change history is immutable – it cannot be altered or deleted – and using cryptography, you can easily verify that there have been no unintended modifications to your application’s data. QLDB uses an immutable transactional log, known as a journal, that tracks each application data change and maintains a complete and verifiable history of changes over time.
Amazon Timestream	Amazon Timestream is a fast, scalable, fully managed time series database service for IoT and operational applications that makes it easy to store and analyze trillions of events per day at 1/10th the cost of relational databases. Driven by the rise of IoT devices, IT systems, and smart industrial machines, time-series data — data that

	measures how things change over time — is one of the fastest growing data types. With Timestream, you can easily store and analyze log data for DevOps, sensor data for IoT applications, and industrial telemetry data for equipment maintenance. As your data grows over time, Timestream's adaptive query processing engine understands its location and format, making your data simpler and faster to analyze.
Amazon DocumentDB	Amazon DocumentDB (with MongoDB compatibility) is a fast, scalable, highly available, and fully managed document database service that supports MongoDB workloads. Amazon DocumentDB implements the Apache 2.0 open source MongoDB 3.6 API by emulating the responses that a MongoDB client expects from a MongoDB server, allowing you to use your existing MongoDB drivers and tools with Amazon DocumentDB.

Desktop and App Streaming

Amazon WorkSpaces	Amazon WorkSpaces is a fully managed, secure cloud desktop service. You can use Amazon WorkSpaces to provision either Windows or Linux desktops in just a few minutes and quickly scale to provide thousands of desktops to workers across the globe.
Amazon AppStream 2.0	Amazon AppStream 2.0 is a fully managed application streaming service. You centrally manage your desktop applications on AppStream 2.0 and securely deliver them to any computer. You can easily scale to any number of users across the globe without acquiring, provisioning, and operating hardware or infrastructure. AppStream 2.0 is built on AWS, so you benefit from a data center and network architecture designed for the most security-sensitive organizations. Each user has a fluid and responsive experience with your applications, including GPU-intensive 3D design and engineering ones, because your applications run on virtual machines (VMs) optimized for specific use cases and each streaming session automatically adjusts to network conditions

Developer Tools

AWS CodeCommit	AWS CodeCommit is a fully managed source control service that makes it easy for companies to host secure and highly scalable private Git repositories.
CodeBuild	CodeBuild is a fully managed build service that compiles source code, runs tests, and produces software packages that are ready to deploy. With CodeBuild, you don't need to provision, manage, and scale your own build servers. CodeBuild scales continuously and processes multiple builds concurrently, so your builds are not left waiting in a queue. You can get started quickly by using prepackaged build environments, or you can create custom build environments that use your own build tools.
CodeDeploy	CodeDeploy is a service that automates code deployments to any instance, including EC2 instances. You can use CodeDeploy to automate software deployments, eliminating the need for error-prone manual operations. The service scales with your infrastructure so you can easily deploy to one instance or thousands.
CodePipeline	CodePipeline is a fully managed continuous delivery service that helps you automate your release pipelines for fast and reliable application and infrastructure updates. CodePipeline automates the build, test, and deploy phases of your release process every time there is a code change, based on the release model you define. This enables you to rapidly and reliably deliver features and updates. You can easily integrate CodePipeline with third-party services such as GitHub or with your own custom plugin. With AWS CodePipeline, you only pay for what you use. There are no upfront fees or long-term commitments
AWS CodeStar	AWS CodeStar enables you to quickly develop, build, and deploy applications on AWS. AWS CodeStar provides a unified user interface, enabling you to easily manage your software development activities in one place. With AWS CodeStar, you can set up your entire continuous delivery toolchain in minutes, allowing you to start releasing code faster. AWS CodeStar makes it easy for your whole team to work together securely, allowing you to easily manage access and add owners, contributors, and viewers to your projects. Each AWS CodeStar project comes with a project management dashboard, including an integrated issue tracking capability powered by Atlassian JIRA Software. With the AWS CodeStar project dashboard, you can easily track progress across your entire software development process, from your backlog of work items to teams' recent code deployments. For more information, see AWS CodeStar features.
Amazon Corretto	Amazon Corretto is a no-cost, multiplatform, production-ready distribution of the Open Java Development Kit (OpenJDK). With Corretto, you can develop and run Java

	applications on popular operating systems, including Amazon Linux 2, Windows, and macOS. Amazon Corretto 8 is in Preview.
AWS Cloud9	AWS Cloud9 is a cloud-based integrated development environment (IDE) that lets you write, run, and debug your code with just a browser. It includes a code editor, debugger, and terminal.
AWS X-Ray	AWS X-Ray helps developers analyze and debug distributed applications in production or under development, such as those built using a microservices architecture. With X-Ray, you can understand how your application and its underlying services are performing so you can identify and troubleshoot the root cause of performance issues and errors. X-Ray provides an end-to-end view of requests as they travel through your application, and shows a map of your application's underlying components. You can use X Ray to analyze both applications in development and in production, from simple three-tier applications to complex microservices applications consisting of thousands of services.

Game Tech

Amazon GameLift	Amazon GameLift is a managed service for deploying, operating, and scaling dedicated game servers for session-based multiplayer games. Amazon GameLift makes it easy to manage server infrastructure, scale capacity to lower latency and cost, match players into available game sessions, and defend from distributed denial-of-service (DDoS) attacks. You pay for the compute resources and bandwidth your games actually use, without monthly or annual contracts
Amazon Lumberyard	Amazon Lumberyard is a free, cross-platform, 3D game engine for you to create the highest-quality games, connect your games to the vast compute and storage of the AWS Cloud, and engage fans on Twitch. By starting game projects with Lumberyard, you can spend more of your time creating great gameplay and building communities of fans, and less time on the undifferentiated heavy lifting of building a game engine and managing server infrastructure.

Internet of Things (IoT)

AWS IoT Core	AWS IoT Core is a managed cloud service that lets connected devices easily and securely interact with cloud applications and other devices. AWS IoT Core can support billions of devices and trillions of messages, and can process and route those messages to AWS endpoints and to other devices reliably and securely. With AWS IoT Core, your applications can keep track of and communicate with all your devices, all the time, even when they aren't connected. AWS IoT Core makes it easy to use AWS services like AWS Lambda, Amazon Kinesis, Amazon S3, Amazon SageMaker, Amazon DynamoDB, Amazon CloudWatch, AWS CloudTrail, and Amazon QuickSight to build Internet of Things (IoT) applications that gather, process, analyze and act on data generated by connected devices, without having to manage any infrastructure.
FreeRTOS	FreeRTOS (a:FreeRTOS) is an operating system for microcontrollers that makes small, low-power edge devices easy to program, deploy, secure, connect, and manage. Microcontrollers frequently run operating systems that do not have built-in functionality to connect to local networks or the cloud, making IoT applications a challenge. FreeRTOS helps solve this problem by providing both the core operating system (to run the edge device) as well as software libraries that make it easy to securely connect to the cloud (or other edge devices) so you can collect data from them for IoT applications and take action.
AWS IoT Greengrass	AWS IoT Greengrass seamlessly extends AWS to devices so they can act locally on the data they generate, while still using the cloud for management, analytics, and durable storage. With AWS IoT Greengrass, connected devices can run AWS Lambda functions, execute predictions based on machine learning models, keep device data in sync, and communicate with other devices securely – even when not connected to the Internet.
AWS IoT 1-Click	AWS IoT 1-Click is a service that enables simple devices to trigger AWS Lambda functions that can execute an action. AWS IoT 1-Click supported devices enable you to easily perform actions such as notifying technical support, tracking assets, and replenishing goods or services. AWS IoT 1-Click supported devices are ready for use right out of the box and eliminate the need for writing your own firmware or configuring them for secure connectivity.

AWS IoT Analytics	AWS IoT Analytics is a fully-managed service that makes it easy to run and operationalize sophisticated analytics on massive volumes of IoT data without having to worry about the cost and complexity typically required to build an IoT analytics platform.
AWS IoT Button	The AWS IoT Button is a programmable button based on the Amazon Dash Button hardware. This simple Wi-Fi device is easy to configure, and it's designed for developers to get started with AWS IoT Core, AWS Lambda, Amazon DynamoDB, Amazon SNS, and many other Amazon Web Services without writing device-specific code. You can code the button's logic in the cloud to configure button clicks to count or track items, call or alert someone, start or stop something, order services, or even provide feedback. For example, you can click the button to unlock or start a car, open your garage door, call a cab, call your spouse or a customer service representative, track the use of common household chores, medications or products, or remotely control your home appliances.
AWS IoT Device Defender	AWS IoT Device Defender is a fully managed service that helps you secure your fleet of IoT devices. AWS IoT Device Defender continuously audits your IoT configurations to make sure that they aren't deviating from security best practices. A configuration is a set of technical controls you set to help keep information secure when devices are communicating with each other and the cloud. AWS IoT Device Defender makes it easy to maintain and enforce IoT configurations, such as ensuring device identity, authenticating and authorizing devices, and encrypting device data. AWS IoT Device Defender continuously audits the IoT configurations on your devices against a set of predefined security best practices. AWS IoT Device Defender sends an alert if there are any gaps in your IoT configuration that might create a security risk, such as identity certificates being shared across multiple devices or a device with a revoked identity certificate trying to connect to AWS IoT Core. AWS IoT Device Defender also lets you continuously monitor security metrics from devices and AWS IoT Core for deviations from what you have defined as appropriate behavior for each device. If something doesn't look right, AWS IoT Device Defender sends out an alert so you can take action to remediate the issue. For example, traffic spikes in outbound traffic might indicate that a device is participating in a DDoS attack. AWS IoT Greengrass and FreeRTOS automatically integrate with AWS IoT Device Defender to provide security metrics from the devices for evaluation. AWS IoT Device Defender can send alerts to the AWS IoT Console, Amazon CloudWatch, and Amazon SNS. If you determine that you need to take an action based on an alert, you can use AWS IoT Device Management to take mitigating actions such as pushing security fixes.
AWS IoT Device Management (securely onboard, organize, monitor, and remotely manage	AWS IoT Device Management makes it easy to securely onboard, organize, monitor, and remotely manage IoT devices at scale.

IoT devices)	With AWS IoT Device Management, you can register your connected devices individually or in bulk, and easily manage permissions so that devices remain secure. You can also organize your devices, monitor and troubleshoot device functionality, query the state of any IoT device in your fleet, and send firmware updates over-the-air (OTA).
AWS IoT Events (detect and respond to events from IoT sensors)	AWS IoT Events is a fully managed IoT service that makes it easy to detect and respond to events from IoT sensors and applications. Using AWS IoT Events, it's simple to detect events across thousands of IoT sensors sending different telemetry data, such as temperature from a freezer, humidity from respiratory equipment, and belt speed on a motor, and hundreds of equipment management applications. You simply select the relevant data sources to ingest, define the logic for each event using simple 'if-then-else' statements, and select the alert or custom action to trigger when an event occurs. AWS IoT Events continuously monitors data from multiple IoT sensors and applications, and it integrates with other services, such as AWS IoT Core and AWS IoT Analytics, to enable early detection and unique insights into events. AWS IoT Events automatically triggers alerts and actions in response to events based on the logic you define.
AWS IoT SiteWise (collect and organize data from industrial equipment)	AWS IoT SiteWise is a managed service that makes it easy to collect and organize data from industrial equipment at scale. You can easily monitor equipment across your industrial facilities to identify waste, such as breakdown of equipment and processes, production inefficiencies, and defects in products. IoT SiteWise simplifies this process by providing software running on a gateway that resides in your facilities and automates the process of collecting and organizing industrial equipment data. This gateway securely connects to your on-premises data servers, collects data, and sends the data to the AWS Cloud. You can run the IoT SiteWise software on an AWS Snowball Edge gateway or install the IoT SiteWise software on popular third-party industrial gateways. These gateways are specifically designed for industrial environments that are likely already in your facilities connecting your industrial equipment. You can use IoT SiteWise to monitor operations across facilities, quickly compute common industrial performance metrics, and build applications to analyze industrial equipment data, prevent costly equipment issues, and reduce production inefficiencies.
AWS IoT Things Graph	AWS IoT Things Graph is a service that makes it easy to visually connect different devices and web services to build IoT applications. AWS IoT Things Graph provides a visual drag-and-drop interface for connecting and coordinating devices and web services, so you can build IoT applications quickly.

	For example, in a commercial agriculture application, you can define interactions between humidity, temperature, and sprinkler sensors with weather data services in the cloud to automate watering.
AWS Partner Device Catalog (find devices and hardware for IoT solutions)	The AWS Partner Device Catalog helps you find devices and hardware to help you explore, build, and go to market with your IoT solutions. Search for and find hardware that works with AWS, including development kits and embedded systems to build new devices, as well as off-the-shelf-devices such as gateways, edge servers, sensors, and cameras for immediate IoT project integration. The choice of AWS enabled hardware from our curated catalog of devices from APN partners can help make the rollout of your IoT projects easier.

Machine Learning

SageMaker (helps developers to quickly build, train and deploy ai)	SageMaker is a fully-managed platform that enables developers and data scientists to quickly and easily build, train, and deploy machine learning models at any scale. SageMaker removes all the barriers that typically slow down developers who want to use machine learning. SageMaker removes the complexity that holds back developer success with each of these steps. SageMaker includes modules that can be used together or independently to build, train, and deploy your machine learning models.
SageMaker Ground Truth (helps you build datasets for training)	SageMaker Ground Truth helps you build highly accurate training datasets for machine learning quickly. SageMaker Ground Truth offers easy access to public and private human labelers and provides them with built-in workflows and interfaces for common labeling tasks. Additionally, SageMaker Ground Truth can lower your labeling costs by up to 70% using automatic labeling, which works by training Ground Truth from data labeled by humans so that the service learns to label data independently. Building a computer vision system that is reliable enough to identify objects - such as traffic lights, stop signs, and pedestrians - requires thousands of hours of video recordings that consist of hundreds of millions of video frames. Each one of these frames needs all of the important elements like the road, other cars, and signage to be labeled by a human before any work can begin on the model you want to develop.

	Amazon SageMaker Ground Truth significantly reduces the time and effort required to create datasets for training to reduce costs.
Amazon Comprehend (Natural language processing)	Amazon Comprehend is a natural language processing (NLP) service that uses machine learning to find insights and relationships in text. No machine learning experience required. There is a treasure trove of potential sitting in your unstructured data. Customer emails, support tickets, product reviews, social media, even advertising copy represents insights into customer sentiment that can be put to work for your business. Amazon Comprehend uses machine learning to help you uncover the insights and relationships in your unstructured data. The service identifies the language of the text; extracts key phrases, places, people, brands, or events; understands how positive or negative the text is. For extracting complex medical information from unstructured text, you can use Amazon Comprehend Medical.
Amazon Lex (helps developers to build chatbots)	With Amazon Lex, the same deep learning technologies that power Amazon Alexa are now available to any developer, enabling you to quickly and easily build sophisticated, natural language, conversational bots (“chatbots”).
Amazon Polly (text to speech)	Amazon Polly is a service that turns text into lifelike speech. Polly lets you create applications that talk, enabling you to build entirely new categories of speech-enabled products.
Amazon Rekognition (Image analysis / face recognition)	Amazon Rekognition is a service that makes it easy to add image analysis to your applications. With Rekognition, you can detect objects, scenes, and faces in images. You can also search and compare faces.
Amazon Translate	Amazon Translate is a neural machine translation service that delivers fast, high-quality, and affordable language translation.
Amazon Transcribe (speech to text)	Amazon Transcribe is an automatic speech recognition (ASR) service that makes it easy for developers to add speech-to-text capability to their applications. Using the Amazon Transcribe API, you can analyze audio files stored in Amazon S3 and have the service return a text file of the transcribed speech.
Amazon Elastic Inference	Amazon Elastic Inference allows you to attach low-cost GPU-powered acceleration to Amazon EC2 and SageMaker instances to reduce the cost of running deep learning inference by up to 75%. Amazon Elastic Inference

	supports TensorFlow, Apache MXNet, and ONNX models, with more frameworks coming soon.
Amazon Forecast	Amazon Forecast is a fully managed service that uses machine learning to deliver highly accurate forecasts. Companies today use everything from simple spreadsheets to complex financial planning software to attempt to accurately forecast future business outcomes such as product demand, resource needs, or financial performance. These tools build forecasts by looking at a historical series of data. Amazon Forecast is a fully managed service, so there are no servers to provision, and no machine learning models to build, train, or deploy.
Amazon Textract (extract text from scanned document)	Amazon Textract is a service that automatically extracts text and data from scanned documents. Amazon Textract goes beyond simple optical character recognition (OCR) to also identify the contents of fields in forms and information stored in tables.
Amazon Personalize	Amazon Personalize is a machine learning service that makes it easy for developers to create individualized recommendations for customers using their applications. Machine learning is being increasingly used to improve customer engagement by powering personalized product and content recommendations, tailored search results, and targeted marketing promotions Amazon Personalize allows developers with no prior machine learning experience to easily build sophisticated personalization capabilities into their applications, using machine learning technology perfected from years of use on Amazon.com.
Amazon Deep Learning AMIs (launch ec2 with preinstalled ai software)	The Amazon Deep Learning AMIs provide machine learning practitioners and researchers with the infrastructure and tools to accelerate deep learning in the cloud, at any scale. You can quickly launch Amazon EC2 instances pre-installed with popular deep learning frameworks such as Apache MXNet and Gluon, TensorFlow, Microsoft Cognitive Toolkit, Caffe, Caffe2, Theano, Torch, PyTorch, Chainer, and Keras to train sophisticated, custom AI models, experiment with new algorithms, or to learn new skills and techniques.
AWS DeepLens	AWS DeepLens helps put deep learning in the hands of developers, literally, with a fully programmable video camera, tutorials, code, and pre-trained models designed to expand deep learning skills.

AWS DeepRacer	RL is an advanced machine learning (ML) technique which takes a very different approach to training models than other machine learning methods. Its super power is that it learns very complex behaviors without requiring any labeled training data, and can make short term decisions while optimizing for a longer term goal.
Apache MXNet on AWS	Apache MXNet on AWS is a fast and scalable training and inference framework with an easy-to-use, concise API for machine learning.
TensorFlow on AWS	TensorFlow™ enables developers to quickly and easily get started with deep learning in the cloud. The framework has broad support in the industry and has become a popular choice for deep learning research and application development, particularly in areas such as computer vision, natural language understanding and speech translation.
AWS Inferentia	AWS Inferentia is a machine learning inference chip designed to deliver high performance at low cost. AWS Inferentia will support the TensorFlow, Apache MXNet, and PyTorch deep learning frameworks, as well as models that use the ONNX format.

Management and Governance

Amazon CloudWatch (monitoring)	Amazon CloudWatch is a monitoring and management service.

AWS Auto Scaling	AWS Auto Scaling monitors your applications and automatically adjusts capacity to maintain steady, predictable performance at the lowest possible cost. If you're already using Amazon EC2 Auto Scaling to dynamically scale your Amazon EC2 instances, you can now combine it with AWS Auto Scaling to scale additional resources for other AWS services. The service provides a simple, powerful user interface that lets you build scaling plans for resources including Amazon EC2 instances and Spot Fleets, Amazon ECS tasks, Amazon DynamoDB tables and indexes, and Amazon Aurora Replicas.
AWS Control Tower	Control Tower automates the set-up of their landing zone and configures AWS management and security services based on established best practices in a secure, compliant, multi-account environment. Distributed teams are able to provision new AWS accounts quickly, while central teams have the peace of mind knowing that new accounts are aligned with centrally established, company-wide compliance policies. This gives you control over your environment, without sacrificing the speed and agility AWS provides your development teams.
AWS Systems Manager	With Systems Manager, you can group resources, like Amazon EC2 instances, Amazon S3 buckets, or Amazon RDS instances, by application, view operational data for monitoring and troubleshooting, and take action on your groups of resources. AWS Systems Manager contains the following tools • Resource groups: Lets you create a logical group of resources associated with a particular workload Insights Dashboard: Displays operational data that the AWS Systems Manager automatically aggregates for each resource group. Systems Manager eliminates the need for you to navigate across multiple AWS consoles to view your operational data. • Run Command: Provides a simple way of automating common administrative tasks like remotely executing shell scripts or PowerShell commands • State Manager: Helps you define and maintain consistent OS configurations such as firewall settings and anti-malware definitions to comply with your policies.

	• Inventory: Helps you collect and query configuration and inventory information about your instances and the software installed on them. • Maintenance Window: Lets you define a recurring window of time to run administrative and maintenance tasks across your instances. • Patch Manager: Helps you select and deploy operating system and software patches automatically across large groups of instances. You can define a maintenance window so that patches are applied only during set times that fit your needs. • Automation: • Parameter Store: Provides an encrypted location to store important administrative information such as passwords and database strings. • Distributor: Helps you securely distribute and install software packages. • Session Manager: Provides a browser-based interactive shell and CLI for managing Windows and Linux EC2 instances, without the need to open inbound ports, manage SSH keys, or use bastion hosts
AWS CloudFormation	
AWS CloudTrail	AWS CloudTrail is a web service that records AWS API calls for your account and delivers log files to you. The recorded information includes the identity of the API caller, the time of the API call, the source IP address of the API caller, the request parameters, and the response elements returned by the AWS service.
AWS Config	AWS Config is a fully managed service that provides you with an AWS resource inventory, configuration history, and configuration change notifications to enable security and governance. The Config Rules feature enables you to create rules that automatically check the configuration of AWS resources recorded by AWS Config With AWS Config, you can discover existing and deleted AWS resources, determine your overall compliance against rules, and dive into configuration details of a resource at any point in time. These capabilities enable compliance auditing, security analysis, resource change tracking, and troubleshooting.

	– Keeps inventory of AWS resources – Ensures resources are configured as per compliance standards – Has historical view of resource configuration changes – Sends notifications when configuration of resource changes – Analyzes relationships between resources Configuration recorder
AWS OpsWorks	AWS OpsWorks is a configuration management service that provides managed instances of Chef and Puppet.
AWS Service Catalog	AWS Service Catalog allows organizations to create and manage catalogs of IT services that are approved for use on AWS. You will see products under the service catalog. You can provision these products without needing access to underlying resources.
AWS Trusted Advisor	AWS Trusted Advisor is an online resource to help you reduce cost, increase performance, and improve security by optimizing your AWS environment. 
AWS Personal Health Dashboard	AWS Personal Health Dashboard provides alerts and remediation guidance when AWS is experiencing events that might affect you. While the Service Health Dashboard displays the general status of AWS services, Personal Health Dashboard gives you a personalized view into the performance and availability of the AWS services underlying your AWS resources.
AWS Managed Services	AWS Managed Services provides ongoing management of your AWS infrastructure so you can focus on your applications. By implementing best practices to maintain your infrastructure, AWS Managed Services helps to

	reduce your operational overhead and risk. AWS Managed Services automates common activities such as change requests, monitoring, patch management, security, and backup services.
AWS Console Mobile Application	The AWS Console Mobile Application lets customers view and manage a select set of resources to support incident response while on-the-go.
AWS License Manager	AWS License Manager makes it easier to manage licenses in AWS and on-premises servers from software vendors such as Microsoft, SAP, Oracle, and IBM. AWS License Manager lets administrators create customized licensing rules that emulate the terms of their licensing agreements, and then enforces these rules when an instance of EC2 gets launched. Administrators can use these rules to limit licensing violations, such as using more licenses than an agreement stipulates or reassigning licenses to different servers on a short-term basis.
AWS Well-Architected Tool	The AWS Well-Architected Tool helps you review the state of your workloads and compares them to the latest AWS architectural best practices. To use this free tool, available in the AWS Management Console, just define your workload and answer a set of questions regarding operational excellence, security, reliability, performance efficiency, and cost optimization. The AWS Well-Architected Tool then provides a plan on how to architect for the cloud using established best practices.

Migration and Transfer

AWS Migration Hub	AWS Migration Hub provides a single location to track the progress of application migrations across multiple AWS and partner solutions. For example, you might use AWS Database Migration Service, AWS Server Migration Service, and partner migration tools such as ATADATA ATAmotion, CloudEndure Live Migration, or RiverMeadow Server Migration Saas to migrate an application comprised of a database, virtualized web servers, and a bare metal server. Using Migration Hub, you can view the migration progress of all the resources in the application.
AWS Application Discovery Service	AWS Application Discovery Service helps enterprise customers plan migration projects by gathering information about their on-premises data centers. Planning data center migrations can involve thousands of workloads that are

	often deeply interdependent. Server utilization data and dependency mapping are important early first steps in the migration process. AWS Application Discovery Service collects and presents configuration, usage, and behavior data from your servers to help you better understand your workloads.
AWS Database Migration Service (Migrate databases)	AWS Database Migration Service helps you migrate databases to AWS easily and securely. The source database remains fully operational during the migration. The service supports homogeneous migrations such as Oracle to Oracle, as well as heterogeneous migrations between different database platforms, such as Oracle to Amazon Aurora or Microsoft SQL Server to MySQL
AWS Server Migration Service (Migrate servers)	AWS Server Migration Service (SMS) is an agentless service which makes it easier and faster for you to migrate thousands of on-premises workloads to AWS. AWS SMS allows you to automate, schedule, and track incremental replications of live server volumes, making it easier for you to coordinate large-scale server migrations
AWS Snowball	AWS Snowball is a petabyte-scale data transport solution that uses secure appliances to transfer large amounts of data into and out of AWS. Simply create a job in the AWS Management Console and a Snowball appliance will be automatically shipped to you.
AWS Snowball Edge (snowball with CPU)	AWS Snowball Edge is a data migration and edge computing device that comes in two options. **Snowball Edge Storage Optimized** provides 100 TB of capacity and 24 vCPUs and is well suited for local storage and large scale data transfer. Snowball Edge Compute Optimized provides 52 vCPUs and an optional GPU. Customers can use these two options for data collection, machine learning and processing, and storage in environments with intermittent connectivity
AWS Snowmobile (Truck with shipping container)	AWS Snowmobile is an exabyte-scale data transfer service used to move extremely large amounts of data to AWS. You can transfer up to 100 PB per Snowmobile, a 45-foot long ruggedized shipping container, pulled by a semi-trailer truck.
AWS DataSync	AWS DataSync is a data transfer service that makes it easy for you to

(Sync data from on premises to S3 or EFS)	automate moving data between on-premises storage and Amazon S3 or Amazon Elastic File System (Amazon EFS).
AWS Transfer for SFTP	AWS Transfer for SFTP is a fully managed service that enables the transfer of files directly into and out of Amazon S3 using the Secure File Transfer Protocol (SFTP)—also known as Secure Shell (SSH) File Transfer Protocol.

Networking and Content Delivery

Amazon VPC	
Amazon CloudFront (CDN)	Amazon CloudFront is a fast content delivery network (CDN) service.
Amazon Route 53	Amazon Route 53 is a highly available and scalable cloud Domain Name System (DNS) web service.
AWS PrivateLink	AWS PrivateLink provides private connectivity between VPCs, AWS services, and on-premises applications, securely on the Amazon network.
AWS Direct Connect (dedicated network connection)	AWS Direct Connect makes it easy to establish a dedicated network connection from your premises to AWS.
AWS Global Accelerator (Global Load balancer)	AWS Global Accelerator is a networking service that improves the availability and performance of the applications that you offer to your global users. Today, if you deliver applications to your global users over the public internet, your users might face inconsistent availability and performance as they traverse through multiple public networks to reach your application. These public networks are often congested and each hop can introduce availability and performance risk. AWS Global Accelerator uses the highly available and congestion-free AWS global network to direct internet traffic from your users to your applications on AWS, making your users' experience more consistent.

	AWS Global Accelerator improves application availability by continuously monitoring the health of your application endpoints and routing traffic to the closest healthy endpoints.
Amazon API Gateway (API gateway)	Amazon API Gateway is a fully managed service that makes it easy for developers to **create, publish, maintain, monitor, and secure APIs** at any scale.
AWS Transit Gateway (Acts as a hub for VPCs)	AWS Transit Gateway is a service that enables customers to connect their Amazon Virtual Private Clouds (VPCs) and their on-premises networks to a single gateway. With AWS Transit Gateway, you only have to create and manage a single connection from the central gateway in to each Amazon VPC, on-premises data center, or remote office across your network. Transit Gateway acts as a hub that controls how traffic is routed among all the connected networks which act like spokes.
AWS App Mesh	AWS App Mesh makes it easy to run microservices by providing consistent visibility and network traffic controls for every microservice in an application. App Mesh removes the need to update application code to change how monitoring data is collected or traffic is routed between microservices. App Mesh configures each microservice to export monitoring data and implements consistent communications control logic across your application. This makes it easy to quickly pinpoint the exact location of errors and automatically re-route network traffic when there are failures or when code changes need to be deployed. You can use App Mesh with Amazon ECS and Amazon EKS to better run containerized microservices at scale.
AWS Cloud Map	AWS Cloud Map is a cloud resource discovery service. With Cloud Map, you can define custom names for your application resources, and it maintains the updated location of these dynamically changing resources. Cloud Map allows you to register any application resources such as databases, queues, microservices, and other cloud resources with custom names. Cloud Map then constantly checks the health of resources to make sure the location is up-to-date.

Elastic Load Balancing	

Robotics

AWS RoboMaker	AWS RoboMaker is a service that makes it easy to develop, test, and deploy intelligent robotics applications at scale.

Satellite

AWS Ground Station	AWS Ground Station is a fully managed service that lets you control satellite communications, downlink and process satellite data, and scale your satellite operations quickly, easily and cost-effectively without having to worry about building or managing your own ground station infrastructure.

Security, Identity, and Compliance

AWS Security Hub **(single place which shows security alerts from Guard duty, Amazon Inspector, Macie)**	AWS Security Hub gives you a comprehensive view of your high-priority security alerts and compliance status across AWS accounts. With Security Hub, you now have a single place that aggregates, organizes,

	and prioritizes your security alerts, or findings, from multiple AWS services, such as Amazon GuardDuty, Amazon Inspector, and Amazon Macie, as well as from AWS Partner solutions.
Amazon Cloud Directory	Amazon Cloud Directory enables you to build flexible, cloud-native directories for organizing hierarchies of data along multiple dimensions. With Cloud Directory, you can create directories for a variety of use cases, such as organizational charts, course catalogs, and device registries. While traditional directory solutions, such as Active Directory Lightweight Directory Services (AD LDS) and other LDAP-based directories, limit you to a single hierarchy.
AWS Identity and Access Management	Using IAM, you can create and manage AWS users and groups, and use permissions to allow and deny their access to AWS resources.
Amazon GuardDuty **(threat detection service, continuously monitor for malicious or unauthorized behavior)**	Amazon GuardDuty is a threat detection service that continuously monitors for malicious or unauthorized behavior to help you protect your AWS accounts and workloads. It monitors for activity such as unusual API calls or potentially unauthorized deployments that indicate a possible account compromise. GuardDuty also detects potentially compromised instances or reconnaissance by attackers.
Amazon Inspector **(Check vulnerabilities in EC2)**	Security assessment service and to test network accessibility of EC2 instances. It helps you to identify vulnerabilities within your EC2 instances and applications.
Amazon Macie **(Use ML to find sensitive data in S3)**	Amazon Macie is a security service that uses machine learning to automatically discover, classify, and protect sensitive data in AWS. Amazon Macie recognizes sensitive data such as personally identifiable information (PII) or intellectual property, and provides you with dashboards and alerts that give visibility into how this data is being accessed or moved.
AWS Artifact	AWS Artifact is your go-to, central resource for compliance-related information that matters to you. It provides on-demand access to AWS' security and compliance reports and select online agreements.
AWS Certificate Manager **(Provision manage and deploy SSL certificates)**	AWS Certificate Manager is a service that lets you easily provision, manage, and deploy Secure Sockets Layer/Transport Layer Security (SSL/TLS) certificates for use with AWS services and your internal connected resources.
AWS CloudHSM **(KMS with control over hardware)**	The AWS CloudHSM is a cloud-based hardware security module (HSM) that enables you to easily generate and use your own encryption keys on the AWS Cloud.
AWS Directory Service (Managed microsoft AD service)	AWS Directory Service for Microsoft Active Directory, also known as **AWS Managed Microsoft AD**, enables your directory-aware workloads and AWS resources to use managed Active Directory in the AWS Cloud.

AWS Firewall Manager (Centrally manage AWS WAF and Security groups)	AWS Firewall Manager is a security management service that makes it easier to centrally configure and manage AWS WAF rules across your accounts and applications. Using Firewall Manager, you can easily roll out AWS WAF rules for your Application Load Balancers and Amazon CloudFront distributions across accounts in AWS Organizations. Now you have a single service to build firewall rules, create security policies, and enforce them in a consistent, hierarchical manner across your entire Application Load Balancers and Amazon CloudFront infrastructure.
AWS Key Management Service **(Create and manage keys)**	AWS Key Management Service (KMS) makes it easy for you to create and manage keys and control the use of encryption across a wide range of AWS services and in your applications. Types: Symmetric Keys Asymmetric keys: public/private key pair
AWS Organizations **(create groups of accounts, centrally manage them using SCP)**	AWS Organizations offers policy-based management for multiple AWS accounts. With Organizations, you can create groups of accounts, automate account creation, apply and manage policies for those groups. Organizations enable you to centrally manage policies across multiple accounts, without requiring custom scripts and manual processes. Using AWS Organizations, you can create **Service Control Policies (SCPs)** that centrally control AWS service use across multiple AWS accounts.
AWS Secrets Manager **(store secrets)**	AWS Secrets Manager helps you protect secrets needed to access your applications, services, and IT resources.
AWS Shield **(DDoS protection)**	AWS Shield is a managed Distributed Denial of Service (DDoS) protection service that safeguards web applications running on AWS. AWS Shield provides always-on detection and automatic inline mitigations that minimize application downtime and latency, so there is no need to engage AWS Support to benefit from DDoS protection. There are two tiers of AWS Shield: Standard and advanced.
AWS Single Sign-On (Manage SSO access for multiple accounts)	AWS Single Sign-On (SSO) is a cloud SSO service that makes it easy to centrally manage SSO access to multiple AWS accounts and business applications.

AWS WAF **(Web application firewall that protects your web apps)**	AWS WAF is a web application firewall that helps protect your web applications from common web exploits that could affect application availability, compromise security, or consume excessive resources.

Storage

Amazon S3	Amazon Simple Storage Service (Amazon S3) is an object storage service.
Amazon Elastic Block Store **(EBS hard disk)**	Amazon Elastic Block Store (Amazon EBS) provides persistent block storage volumes for use with Amazon EC2 instances in the AWS Cloud. Types: Io1 io2 gp2 Throughput optimized SSD Cold HDD
Amazon Elastic File System **(like NFS, parallel shared access)**	It is designed to provide massively parallel shared access to thousands of Amazon EC2 instances.
Amazon FSx for Lustre **(Storage for high performance computing parallel storage)** EFS on steroids	Amazon FSx for Lustre is a fully managed file system that is optimized for **compute-intensive workloads**, such as high performance computing, machine learning, and media data processing workflows. Many of these applications require the **high-performance and low latencies** of scale-out, parallel file systems.
Amazon FSx for Windows File Server	
Amazon S3 Glacier	low-cost storage service for data archiving and long-term backup.
AWS Storage Gateway	The AWS Storage Gateway is a hybrid storage service that enables your on-premises applications to seamlessly use AWS cloud storage.

(on premises apps to use AWS cloud storage)	You can use the service for backup and archiving, disaster recovery, cloud data processing, storage tiering, and migration. Your applications connect to the service through a virtual machine or hardware gateway appliance using standard storage protocols, such as NFS, SMB and iSCSI. **Amazon S3 File Gateway** **Tape Gateway** **Volume Gateway**

Mobile Services

AWS Amplify	Amplify provisions and manages backends for your mobile applications. You just select the capabilities you need such as authentication, analytics, or offline data sync and Amplify will automatically provision and manage the AWS service that powers each of the capabilities.
Amazon Cognito (add signup / signin to your apps quickly)	Amazon Cognito lets you add user sign-up, sign-in, and access control to your web and mobile apps quickly and easily. With Amazon Cognito, you also have the option to authenticate users through social identity providers such as Facebook, Twitter, or Amazon, with SAML identity solutions, or by using your own identity system.
Amazon Pinpoint	Amazon Pinpoint makes it easy to send targeted messages to your customers through multiple engagement channels. Examples of targeted campaigns are promotional alerts and customer retention campaigns, and transactional messages are messages such as order confirmations and password reset messages. You can integrate Amazon Pinpoint into your mobile and web apps to capture usage data to provide you with insight into how customers interact with your

	apps.
AWS Device Farm (app testing service)	AWS Device Farm is an app testing service that lets you test and interact with your Android, iOS, and web apps on many devices at once, or reproduce issues on a device in real time.
AWS AppSync	AWS AppSync makes it easy to build data driven mobile and web applications by handling securely all the application data management tasks like online and offline data access, data synchronization, and data manipulation across multiple data sources. AWS AppSync uses GraphQL, an API query language designed to build client applications by providing an intuitive and flexible syntax for describing their data requirement.

Media Services

Amazon Elastic Transcoder	convert (or transcode) media files from their source format into versions that will play back on devices like smartphones, tablets, and PCs.
AWS Elemental MediaConnect	You can use MediaConnect to ingest live video from a remote event site (like a stadium), share video with a partner (like a cable TV distributor), or replicate a video stream for processing (like an over-the top service).
AWS Elemental MediaConvert	With AWS Elemental MediaConvert, you can focus on delivering compelling media experiences without having to worry about the complexity of building and operating your own video processing infrastructure. It allows you to easily create video-on-demand (VOD) content for broadcast and multiscreen delivery at scale. The service combines advanced video and audio capabilities with a simple web services interface and pay-as-you-go pricing.
AWS Elemental MediaLive	The service works by encoding your live video streams in real-time, taking a larger-sized live video source and compressing it into smaller versions for distribution to your viewers.
AWS Elemental MediaPackage	AWS Elemental MediaPackage reliably prepares and protects your video for delivery over the Internet. From a single video input, AWS Elemental MediaPackage creates video streams formatted to play on connected TVs, mobile phones, computers, tablets, and game consoles.

AWS Elemental MediaStore	AWS Elemental MediaStore acts as the origin store in your video workflow.
AWS Elemental MediaTailor	AWS Elemental MediaTailor lets video providers insert individually targeted advertising into their video streams without sacrificing broadcast-level quality-of-service.