

Understanding AWS Core Services - Services List

David Tucker



COMPUTE SERVICES	
Amazon EC2	Service that provides secure and resizable virtual servers on AWS
AWS Elastic Beanstalk	Platform (PaaS) for scaling and deploying web apps and services across a specific list of technologies
AWS Lambda	Service that enables you to use compute resources without having to launch or manage the underlying infrastructure - this is leveraged in serverless architectures <i>This service is commonly used in a serverless architecture.</i>
Amazon Elastic Container Service (ECS)	Service that enables you to deploy, manage, and scale containerized applications on AWS.
Amazon Elastic Kubernetes Service (EKS)	Service that enables you to run Kubernetes in the AWS cloud. You would utilize this if you had a specific need to run Kubernetes for your containerized applications.
AWS Fargate	Compute engine that works with both ECS and EKS. It is serverless and has a pay-for-what-you-use pricing model. <i>This service is commonly used in a serverless architecture for container applications.</i>
AWS App Runner	Service that enables you to build and run containerized web application without any prior container or infrastructure experience.

CONTENT AND NETWORK DELIVERY SERVICES	
Amazon Route 53	Highly-available AWS Domain Name Service (DNS) service that can be leveraged in creating highly available and fault tolerant applications. <i>This is a global service, and it can be used in a hybrid cloud architecture.</i>
Amazon VPC	Logically isolated section of the AWS Cloud where you can launch AWS resources in a virtual network that you define
AWS Direct Connect	Cloud service solution that makes it easy to establish a dedicated network connection from your data center to AWS. This connection does not go over the public Internet.
Amazon API Gateway	Fully managed API management service that handles concepts like authentication, logging, and throttling for your API layer
Amazon CloudFront	Amazon's global Content Delivery Network (CDN) service that enables your users to get content from a server that is closest to them. <i>This is a global service.</i>
AWS Global Accelerator	AWS networking service that routes your traffic through the AWS global network, increasing the overall speed through optimizations by AWS.
Elastic Load Balancing	Service that enables you to distribute traffic across multiple targets (including EC2, ECS, Lambda).

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FILE STORAGE AND DATA TRANSFER SERVICES	
Amazon Simple Storage Service (S3)	Service that provides object storage for objects up to 5 TB in size - with no limit on the total storage
S3 Glacier	<p>Archive storage classes for Amazon S3. These are designed for objects you need to keep but don't plan to access.</p> <p>Instant Retrieval – archive storage for data you don't plan to access but can be retrieved in milliseconds</p> <p>Flexible Retrieval – archive storage for data you don't plan to access but can be retrieved in minutes to hours</p> <p>Deep Archive – lowest cost archive storage for rarely access data which can be retrieved within 12 hours</p>
Amazon Elastic Block Store (EBS)	Persistent block storage designed for use with a single EC2 server. It can scale to support petabytes of data and supports different volume types.
Amazon Elastic File System (EFS)	<p>Fully managed NFS file system designed for Linux workloads with support for petabytes of data.</p> <p><i>This service can be used in a hybrid cloud architecture.</i></p>
AWS Snowball	<p>Petabyte scale data transfer service where a physical device is delivered to your organization and returned by a local carrier then loaded into Amazon S3</p> <p><i>This service can assist in data migration into the cloud from your data center.</i></p>
AWS Snowmobile	Exabyte scale data transfer service where a ruggedized shipping container is sent to your office then loaded into Amazon S3

	<i>This service can assist in data migration into the cloud from your data center.</i>
APP INTEGRATION SERVICES	
Amazon Simple Notification Service (SNS)	<p>Managed pub/sub (publish / subscribe) messaging service. This can enable fan-out architecture with one message triggering multiple actions.</p> <p><i>This service is commonly used in a serverless architecture.</i></p>
Amazon Simple Queue Service (SQS)	<p>Managed message queue service. This can enable fault tolerant and serverless applications. This supports standard and FIFO (first-in first-out) queues.</p> <p><i>This service is commonly used in a serverless architecture.</i></p>
AWS Step Functions	<p>Manages the orchestration of complex workflows which are defined using Amazon States Language. It can be leveraged in a serverless architecture.</p> <p><i>This service is commonly used in a serverless architecture.</i></p>

MANAGEMENT & GOVERNANCE SERVICES	
AWS CloudTrail	Service that provides audit trail for all services used in an AWS account (across all interaction methods)
AWS CloudFormation	Managed service for launching infrastructure based on templates. This approach is known as <i>infrastructure as code</i> . CloudFormation also provides drift detection to know when infrastructure has veered from what is defined in the template.

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AWS OpsWorks	An infrastructure configuration management service that provides a managed service for Chef and Puppet.
Amazon CloudWatch	Monitoring and management service that integrates with most AWS services. It provides both metrics and alarms based on those metrics as well as logs
AWS Config	Provides continual analysis of AWS resources to ensure they are meeting rules defined in the service
AWS Systems Manager	Service that provides a collection of tools and insight into operational data for central management of those cloud or on-premise instances.
AWS Control Tower	System that launches a multi-account configuration based on AWS best practices
DATABASE SERVICES & UTILITIES	
Amazon Relational Database Service (RDS)	Managed service for relational databases including support for MySQL, PostgreSQL, MariaDB, Oracle, SQL Server, and Amazon Aurora
Amazon Aurora	MySQL and PostgreSQL compatible database engine for RDS that was built for the cloud
Amazon Aurora Serverless for RDS	An on-demand and auto-scaling version of Amazon Aurora that does not require managing the underlying infrastructure. <i>This service is commonly used in a serverless architecture.</i>

Amazon DynamoDB	Fully managed NoSQL database service that has extremely low latency and scaling based on configuration. <i>This service is commonly used in a serverless architecture.</i>
Amazon Redshift	Managed petabyte scale data warehousing solution on AWS
Amazon Redshift Spectrum	Service for querying exabytes of data stored in Amazon S3
Amazon ElastiCache	Fully-managed in-memory data store that supports memcached and Redis engines
AWS Database Migration Service (DMS)	Service that enables you to move your data (from popular commercial and open source databases) easily onto the cloud. <i>This service can assist in data migration into the cloud from your data center.</i>
Amazon DocumentDB	Document database with MongoDB compatibility. You would leverage this if you needed to support a MongoDB database on AWS.
Amazon MemoryDB for Redis	In-memory database that is Redis-compatible and provides very low latency.
Amazon Neptune	Service that provides a graph database on AWS. Graph databases are ideal for storing connections between items, such as social network connections.

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Amazon Timestream

Database service that enables you to store data that is time-based. A simple example of this type of data would be temperature data coming from a sensor that needs to be stored at the specific time when a reading took place.

*This service can be used in a **serverless** architecture.*