



# AWS Services and Service Categories

## Cloud Foundations

Welcome to AWS Services and Service Categories.

# What you will learn

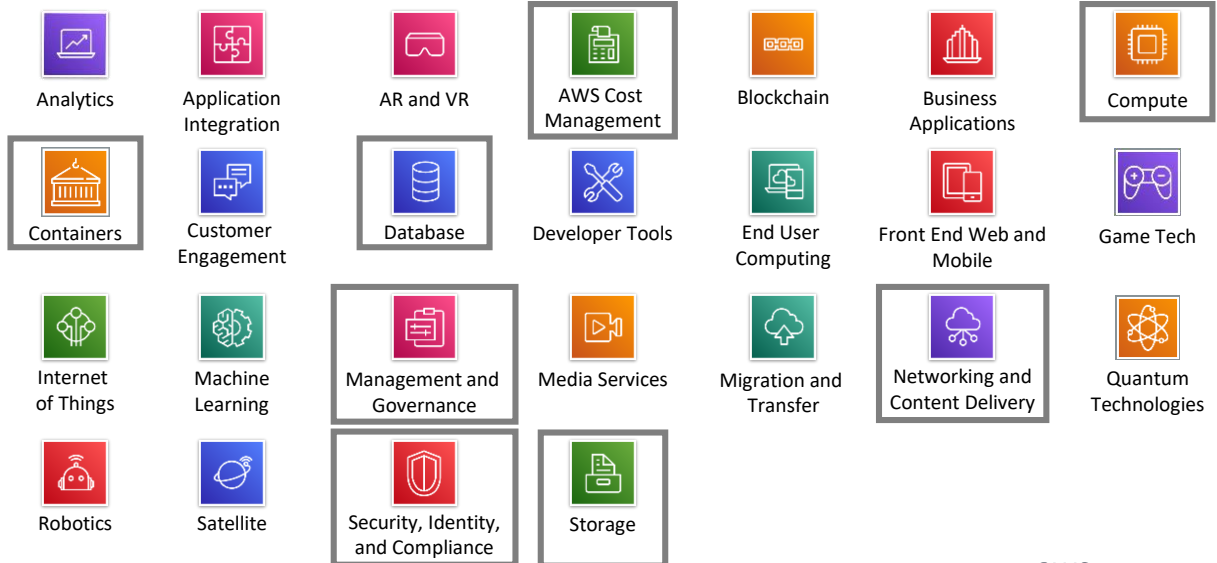
## At the core of the lesson

You will learn how to identify AWS services and service categories.



After completing this module, you should be able to identify AWS services and service categories.

## AWS service categories



3 © 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws re/start

AWS offers a broad set of cloud-based services in many different product or service categories. Each category consists of one or more services. This course won't introduce you to each service. Instead, the focus of this course is on the most widely used services, which will provide a good introduction to the AWS Cloud. This course also focuses on services that are more likely to be covered in the AWS Certified Cloud Practitioner exam.

This slide highlights the following categories that this course will discuss:

- AWS Cost Management
- Compute
- Containers
- Database
- Management and Governance
- Networking and Content Delivery
- Security, Identity, and Compliance
- Storage

For more information about AWS offerings, see the AWS Cloud Products page at <https://aws.amazon.com/products>. All AWS offerings are organized into service categories. For example, if you choose **Compute**, Amazon Elastic Compute Cloud (Amazon EC2) is the first service on the list. The Compute category also lists other products and services.

If you choose **Amazon EC2**, the Amazon EC2 page opens. Each product page provides a detailed description of the product and lists some of its benefits.

Explore the different service groups to understand the categories and services in them. Now that you know how to locate information about different services, this module will discuss the highlighted service categories in the next slides.

Legend:

- Augmented reality (AR)
- Virtual reality (VR)

## Storage service category



### AWS Storage services



Amazon Simple Storage Service (Amazon S3)



Amazon Elastic Block Store (Amazon EBS)



Amazon Elastic File System (Amazon EFS)



Amazon Simple Storage Service Glacier

AWS Storage services include the services listed here and many others.

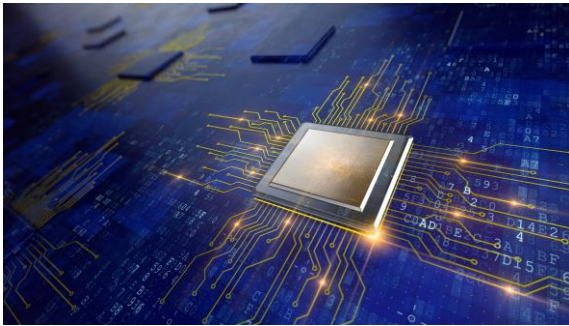
**Amazon Simple Storage Service (Amazon S3)** is an object storage service that offers scalability, data availability, security, and performance. Use it to store and protect any amount of data for websites and mobile apps. It is also used for backup and restore, archive, enterprise applications, Internet of Things (IoT) devices, and big data analytics.

**Amazon Elastic Block Store (Amazon EBS)** is high-performance block storage that is designed for use with Amazon EC2 for both throughput-intensive and transaction-intensive workloads. It is used for various workloads, such as relational and non-relational databases, enterprise applications, containerized applications, big data analytics engines, file systems, and media workflows.

**Amazon Elastic File System (Amazon EFS)** provides a scalable, fully managed elastic Network File System (NFS) file system for AWS Cloud services and on-premises resources. It is built to scale on demand to petabytes, growing and shrinking automatically as you add and remove files. Using Amazon EFS reduces the need to provision and manage capacity to accommodate growth.

**Amazon Simple Storage Service Glacier** is a secure, durable, and low-cost Amazon S3 cloud storage class for data archiving and long-term backup. It is designed to deliver 11 9s (99.99999999 percent) of durability and to provide comprehensive security and compliance capabilities to meet stringent regulatory requirements.

## Compute service category



### AWS Compute services



Amazon Elastic  
Compute Cloud  
(Amazon EC2)



Amazon EC2  
Auto Scaling



AWS Elastic  
Beanstalk



AWS Lambda

AWS Compute services include the services that are listed here and many others.

**Amazon Elastic Compute Cloud (Amazon EC2)** provides resizable compute capacity as virtual machines in the cloud.

**Amazon EC2 Auto Scaling** gives you the ability to automatically add or remove EC2 instances according to conditions that you define.

**AWS Elastic Beanstalk** is a service for deploying and scaling web applications and services. It deploys them on familiar servers such as Apache HTTP Server and Microsoft Internet Information Services (IIS).

**AWS Lambda** gives you the ability to run code without provisioning or managing servers. You pay for only the compute time that you consume, so you won't be charged when your code isn't running.

## Containers service category



### AWS Containers services



Amazon Elastic  
Container Service  
(Amazon ECS)



Amazon Elastic  
Container Registry  
(Amazon ECR)



Amazon Elastic  
Kubernetes Service  
(Amazon EKS)



AWS Fargate

AWS Containers services include the services listed here and many others.

**Amazon Elastic Container Service (Amazon ECS)** is a highly scalable, high-performance container orchestration service that supports Docker containers.

**Amazon Elastic Container Registry (Amazon ECR)** is a fully managed Docker container registry that facilitates storing, managing, and deploying Docker container images.

**Amazon Elastic Kubernetes Service (Amazon EKS)** facilitates deploying, managing, and scaling containerized applications that use Kubernetes on AWS.

**AWS Fargate** is a compute engine for Amazon ECS that you can use to run containers without managing servers or clusters.

## Database service category



### AWS Database services



Amazon Relational  
Database Service  
(Amazon RDS)



Amazon Aurora



Amazon Redshift



Amazon DynamoDB

AWS Database services include the services that are listed here and many others.

**Amazon Relational Database Service (Amazon RDS)** facilitates setting up, operating, and scaling a relational database in the cloud. It provides resizable capacity while automating time-consuming administration tasks, such as hardware provisioning, database setup, patching, and backups.

**Amazon Aurora** is a relational database that is compatible with MySQL and PostgreSQL. It is up to five times faster than standard MySQL databases and three times faster than standard PostgreSQL databases.

**Amazon Redshift** gives you the ability to run analytic queries against petabytes of data that is stored locally in Amazon Redshift. You can also run queries directly against exabytes of data that are stored in Amazon S3. Amazon Redshift delivers fast performance at any scale.

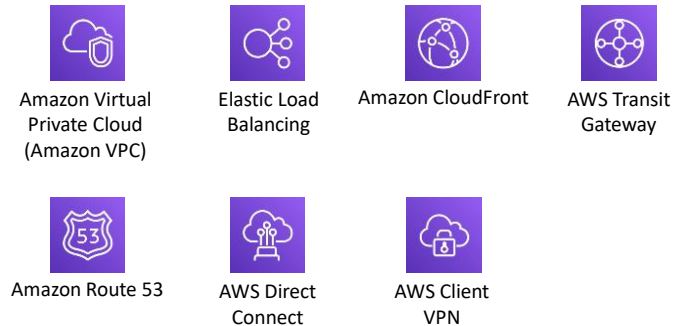
**Amazon DynamoDB** is a key-value and document database that delivers single-digit millisecond performance at any scale with built-in security, backup and restore, and in-memory caching.



## Networking and Content Delivery service category



### AWS Networking and Content Delivery services



AWS Networking and Content Delivery services include the services listed here and many others.

**Amazon Virtual Private Cloud (Amazon VPC)** gives you the ability to provision logically isolated sections of the AWS Cloud.

**Elastic Load Balancing** automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, IP addresses, and Lambda functions.

**Amazon CloudFront** is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and application programming interfaces (APIs) to customers globally. It has low latency and high transfer speeds.

**AWS Transit Gateway** is a service that customers can use to connect their virtual private clouds (VPCs) and their on-premises networks to a single gateway.

**Amazon Route 53** is a scalable, cloud Domain Name System (DNS) web service. It is designed to give you a reliable way to route end users to internet applications. Route 53 translates names (like *www.example.com*) into the numeric IP addresses (like *192.0.2.1*) that computers use to connect to each other.

**AWS Direct Connect** provides a way to establish a dedicated private network

connection from your data center or office to AWS. Using AWS Direct Connect can reduce network costs and increase bandwidth throughput.

**AWS Client VPN** provides a secure private tunnel from your network or device to the AWS global network.

## Security, Identity, and Compliance service category



### AWS Security, Identity, and Compliance services



AWS Identity and Access Management (IAM)



AWS Organizations



Amazon Cognito



AWS Artifact



AWS Key Management Service (AWS KMS)



AWS Shield

AWS Security, Identity, and Compliance services include the services listed here and many others.

**AWS Identity and Access Management (IAM)** gives you the ability to manage access to AWS services and resources securely. By using IAM, you can create and manage AWS users and groups. You can use IAM permissions to allow and deny user and group access to AWS resources.

**AWS Organizations** permits you to restrict what services and actions are allowed in your accounts.

**Amazon Cognito** gives you the ability to add user sign-up, sign-in, and access control to your web and mobile apps.

**AWS Artifact** provides on-demand access to AWS security and compliance reports and select online agreements.

**AWS Key Management Service (AWS KMS)** provides the ability to create and manage keys. You can use AWS KMS to control the use of encryption across a wide range of AWS services and in your applications.

**AWS Shield** is a managed distributed denial of service (DDoS) protection service that safeguards applications running on AWS.

## AWS Cost Management service category



### AWS Cost Management services



AWS Cost and  
Usage Report



AWS Budgets



AWS Cost  
Explorer

AWS Cost Management services include the services listed here and others.

The **AWS Cost and Usage Report** contains the most comprehensive set of AWS cost and usage data available. It includes additional metadata about AWS services, pricing, and reservations.

**AWS Budgets** provides the ability to set custom budgets that alert you when your costs or usage exceeds (or will likely exceed) your budgeted amount.

**AWS Cost Explorer** has an easy-to-use interface that you can use to visualize, understand, and manage your AWS costs and usage over time.

## Management and Governance service category



### AWS Management and Governance services


  
AWS Management Console

  
AWS Config

  
Amazon CloudWatch

  
AWS Auto Scaling

  
AWS Command Line Interface (AWS CLI)

  
AWS Trusted Advisor

  
AWS Well-Architected Tool

  
AWS CloudTrail

AWS Management and Governance services include the services listed here and others.

The **AWS Management Console** provides a web-based user interface for accessing your AWS account.

**AWS Config** provides a service that helps you track resource inventory and changes.

**Amazon CloudWatch** gives you the ability to monitor resources and applications.

**AWS Auto Scaling** provides features that you can use to scale multiple resources to meet demand.

**AWS Command Line Interface (AWS CLI)** provides a unified tool to manage AWS services.

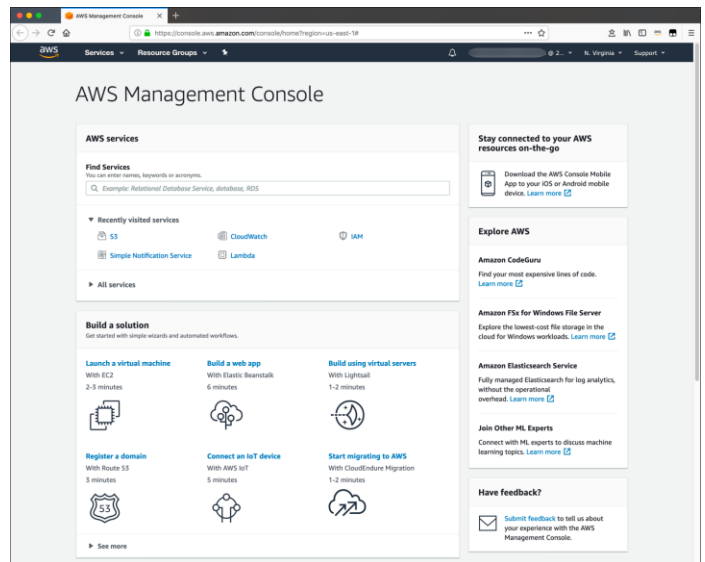
**AWS Trusted Advisor** helps you optimize performance and security.

**AWS Well-Architected Tool** provides help in reviewing and improving your workloads.

**AWS CloudTrail** tracks user activity and API usage.

# Activity

## AWS Management Console clickthrough



aws re/start

In this instructor-led activity, you will sign in to the AWS Management Console. The activity instructions are on the next slide. You will be challenged to answer five questions. The instructor leads the class in a discussion of each question and reveals the correct answers.

## Hands-on activity: AWS Management Console clickthrough

1. Launch the **Sandbox** hands-on environment and connect to the **AWS Management Console**.
2. Explore the AWS Management Console.
  - A. Choose the **Services** menu.
  - B. Notice how services are grouped into service categories. For example, the **Amazon EC2** service appears in the **Compute** service category.

**Question #1:** Which service category is the **IAM** service in?

**Question #2:** Which service category is the **Amazon VPC** service in?
  - C. Choose the **Amazon VPC** service. In the upper-right corner, notice that the dropdown menu displays an AWS Region (for example, it might display **N. Virginia**).
  - D. Choose the **Region** menu, and switch to a different Region. For example, choose **EU (London)**.
  - E. Choose **Subnets** (on the left of the screen). The Region has three subnets in it. Select one of the subnets. In the bottom half of the screen, notice that it displays details about this subnet.

**Question #3:** Does the subnet that you selected exist at the level of the Region or at the level of the Availability Zone?
  - F. Choose **Your VPCs**. An existing VPC is already selected.

**Question #4:** Does the VPC exist at the level of the Region or at the level of the Availability Zone?

**Question #5:** Which services are global instead of Regional? Check Amazon EC2, IAM, Lambda, and Route 53.

The purpose of this activity is to expose you to the AWS Management Console. You will gain experience navigating between AWS service consoles (such as the Amazon VPC console and the Amazon EC2 console). You will also practice navigating to services in different service categories. Finally, the console will help you distinguish whether a given service or service resource is global or Regional.

Follow the instructions on the slide. After most or all students have completed the steps, the educator will review the questions and answers with the whole class.

## Activity answer key

- **Question #1:** Which service category is the **IAM** service in?
  - **Answer: Security, Identity, and Compliance**
- **Question #2:** Which service category is the **Amazon VPC** service in?
  - **Answer: Networking and Content Delivery**
- **Question #3:** Does the subnet that you selected exist at the level of the Region or at the level of the Availability Zone?
  - **Answer:** Subnets exist at the **level of the Availability Zone**.
- **Question #4:** Does the VPC exist at the level of the Region or at the level of the Availability Zone?
  - **Answer:** VPCs exist at the **Region level**.
- **Question #5:** Which services are global instead of Regional? Check Amazon EC2, IAM, Lambda, and Route 53.
  - **Answer: IAM** and **Route 53** are global. **Amazon EC2** and **Lambda** are Regional.

This slide provides an answer key to the questions from the previous slide. The educator will use this slide to lead a discussion and debrief the hands-on activity.



## Key takeaways



- AWS offers a broad set of **cloud-based services** that span multiple categories, including the **Compute**, **Networking**, and **Storage** categories.
- The AWS Management Console provides a web interface that you can use to **access and manage your AWS cloud resources**.

This module includes the following key takeaways:

- AWS offers a broad set of cloud-based services that span multiple categories, including the Compute, Networking, and Storage categories.
- The AWS Management Console provides a web interface that you can use to access and manage your AWS Cloud resources.



# Thank you



© 2022 Amazon Web Services, Inc. or its affiliates. All rights reserved. This work may not be reproduced or redistributed, in whole or in part, without prior written permission from Amazon Web Services, Inc. Commercial copying, lending, or selling is prohibited. Corrections, feedback, or other questions? Contact us at <https://support.aws.amazon.com/#/contacts/aws-training>. All trademarks are the property of their owners.

Thank you for completing this module.