Six core perspectives of the Cloud Adoption Framework

At the highest level, the **AWS Cloud Adoption Framework (AWS CAF)** organizes guidance into six areas of focus, called **Perspectives**. Each Perspective addresses distinct responsibilities. The planning process helps the right people across the organization prepare for the changes ahead.

In general, the **Business**, **People**, and **Governance** Perspectives focus on business capabilities, whereas the **Platform**, **Security**, and **Operations** Perspectives focus on technical capabilities.

Business Perspective

The **Business Perspective** ensures that IT aligns with business needs and that IT investments link to key business results.

Use the Business Perspective to create a strong business case for cloud adoption and prioritize cloud adoption initiatives. Ensure that your business strategies and goals align with your IT strategies and goals.

Common roles in the Business Perspective include:

- Business managers
- Finance managers
- Budget owners
- Strategy stakeholders

People Perspective

The **People Perspective** supports development of an organization-wide change management strategy for successful cloud adoption.

Use the People Perspective to evaluate organizational structures and roles, new skill and process requirements, and identify gaps. This helps prioritize training, staffing, and organizational changes.

Common roles in the People Perspective include:

- Human resources
- Staffing
- People managers

Governance Perspective

The **Governance Perspective** focuses on the skills and processes to align IT strategy with business strategy. This ensures that you maximize the business value and minimize risks.

Use the Governance Perspective to understand how to update the staff skills and processes necessary to ensure business governance in the cloud. Manage and measure cloud investments to evaluate business outcomes.

Common roles in the Governance Perspective include:

- Chief Information Officer (CIO)
- Program managers
- Enterprise architects
- Business analysts
- Portfolio managers

Platform Perspective

The **Platform Perspective** includes principles and patterns for implementing new solutions on the cloud, and migrating on-premises workloads to the cloud.

Use a variety of architectural models to understand and communicate the structure of IT systems and their relationships. Describe the architecture of the target state environment in detail.

Common roles in the Platform Perspective include:

- Chief Technology Officer (CTO)
- IT managers
- Solutions architects

Security Perspective

The **Security Perspective** ensures that the organization meets security objectives for visibility, auditability, control, and agility.

Use the AWS CAF to structure the selection and implementation of security controls that meet the organization's needs.

Common roles in the Security Perspective include:

- Chief Information Security Officer (CISO)
- IT security managers
- IT security analysts

Operations Perspective

The **Operations Perspective** helps you to enable, run, use, operate, and recover IT workloads to the level agreed upon with your business stakeholders.

Define how day-to-day, quarter-to-quarter, and year-to-year business is conducted. Align with and support the operations of the business. The AWS CAF helps these stakeholders define current operating procedures and identify the process changes and training needed to implement successful cloud adoption.

Common roles in the Operations Perspective include:

- IT operations managers
- IT support managers

6 strategies for migration

When migrating applications to the cloud, six of the most common migration strategies that you can implement are:

- Rehosting
- Replatforming
- Refactoring/re-architecting
- Repurchasing
- Retaining
- Retiring

Rehosting

Rehosting also known as “lift-and-shift” involves moving applications without changes. In the scenario of a large legacy migration, in which the company is looking to implement its migration and scale quickly to meet a business case, the majority of applications are rehosted.

Replatforming

Replatforming, also known as “lift, tinker, and shift,” involves making a few cloud optimizations to realize a tangible benefit. Optimization is achieved without changing the core architecture of the application.

Refactoring/re-architecting

Refactoring (also known as **re-architecting**) involves reimagining how an application is architected and developed by using cloud-native features. Refactoring is driven by a strong business need to add features, scale, or performance that would otherwise be difficult to achieve in the application’s existing environment.

Repurchasing

Repurchasing involves moving from a traditional license to a software-as-a-service model.

For example, a business might choose to implement the repurchasing strategy by migrating from a customer relationship management (CRM) system to Salesforce.com.

Retaining

Retaining consists of keeping applications that are critical for the business in the source environment. This might include applications that require major refactoring before they can be migrated, or, work that can be postponed until a later time.

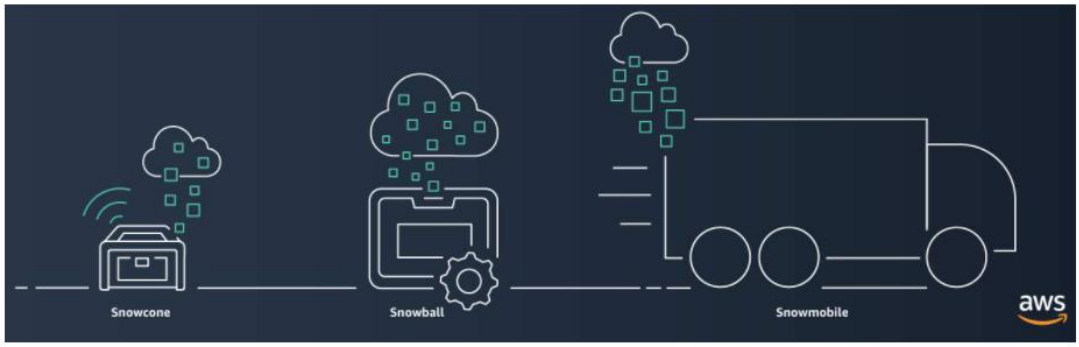
Retiring

Retiring is the process of removing applications that are no longer needed.

AWS Snow Family members

The **AWS Snow Family** is a collection of physical devices that help to physically transport up to exabytes of data into and out of AWS.

AWS Snow Family is composed of **AWS Snowcone**, **AWS Snowball**, and **AWS Snowmobile**.



These devices offer different capacity points, and most include built-in computing capabilities. AWS owns and manages the Snow Family devices and integrates with AWS security, monitoring, storage management, and computing capabilities.

To learn about each category, select each tab.

AWS SNOWCONE | AWS SNOWBALL | AWS SNOWMOBILE

AWS Snowcone is a small, rugged, and secure edge computing and data transfer device.

It features 2 CPUs, 4 GB of memory, and 8 TB of usable storage.

AWS SNOWCONE | AWS SNOWBALL | AWS SNOWMOBILE

AWS Snowball offers two types of devices:

- **Snowball Edge Storage Optimized** devices are well suited for large-scale data migrations and recurring transfer workflows, in addition to local computing with higher capacity needs.
  - Storage: 80 TB of hard disk drive (HDD) capacity for block volumes and Amazon S3 compatible object storage, and 1 TB of SATA solid state drive (SSD) for block volumes.
  - Compute: 40 vCPUs, and 80 GiB of memory to support Amazon EC2 sbe1 instances (equivalent to C5).
- **Snowball Edge Compute Optimized** provides powerful computing resources for use cases such as machine learning, full motion video analysis, analytics, and local computing stacks.
  - Storage: 42-TB usable HDD capacity for Amazon S3 compatible object storage or Amazon EBS compatible block volumes and 7.68 TB of usable NVMe SSD capacity for Amazon EBS compatible block volumes.
  - Compute: 52 vCPUs, 208 GiB of memory, and an optional NVIDIA Tesla V100 GPU. Devices run Amazon EC2 sbe-c and sbe-g instances, which are equivalent to C5, M5a, G3, and P3 instances.

AWS SNOWCONE | AWS SNOWBALL | AWS SNOWMOBILE

AWS Snowmobile is an exabyte-scale data transfer service used to move large amounts of data to AWS.

You can transfer up to 100 petabytes of data per Snowmobile, a 45-foot long ruggedized shipping container, pulled by a semi trailer truck.

Innovation with AWS

Innovate with AWS Services

When examining how to use AWS services, it is important to focus on the desired outcomes. You are properly equipped to drive innovation in the cloud if you can clearly articulate the following conditions:

- The current state
- The desired state
- The problems you are trying to solve

Consider some of the paths you might explore in the future as you continue on your cloud journey.

Serverless applications

With AWS, **serverless** refers to applications that don't require you to provision, maintain, or administer servers. You don't need to worry about fault tolerance or availability. AWS handles these capabilities for you.

AWS Lambda is an example of a service that you can use to run serverless applications. If you design your architecture to trigger Lambda functions to run your code, you can bypass the need to manage a fleet of servers.

Building your architecture with serverless applications enables your developers to focus on their core product instead of managing and operating servers.

Artificial intelligence

AWS offers a variety of services powered by **artificial intelligence (AI)**.

For example, you can perform the following tasks:

- Convert speech to text with Amazon Transcribe.
- Discover patterns in text with Amazon Comprehend.
- Identify potentially fraudulent online activities with Amazon Fraud Detector.
- Build voice and text chatbots with Amazon Lex.

Machine learning

Traditional **machine learning (ML)** development is complex, expensive, time consuming, and error prone. AWS offers Amazon SageMaker to remove the difficult work from the process and empower you to build, train, and deploy ML models quickly.

You can use ML to analyze data, solve complex problems, and predict outcomes before they happen.

When it comes to machine learning and artificial intelligence, AWS has the broadest and deepest set of machine learning and AI services for your business. You can choose from pre-trained AI services for computer vision, language recommendations, and forecasting. Amazon SageMaker: Quickly build, train, and deploy machine learning models at scale.

Or build custom models with support for all the popular open-source frameworks. Our capabilities are built on the most comprehensive cloud platform, optimized for machine learning with high performance compute and no compromises on security and analytics. Tools like Amazon SageMaker and Amazon Augmented AI, or Amazon A2I, provide a machine learning platform that any business can build upon without needing PhD level expertise in-house. Or perhaps, ready-to-go AI solutions like Amazon Lex, the heart of Alexa.

[Alexa] Hello . What can I help you with?

Helps you build interactive chat bots.

Or what about Amazon Textract. Extracting text and data from documents to make them more usable for your enterprise instead of them just being locked away in a repository.

Do you wanna put machine learning literally into the hands of your developers? Why not try AWS DeepRacer? A chance for your developers to experiment with reinforcement learning. One of the newest branches of machine learning algorithms, all while having fun in a racing environment.

AWS offers brand new technologies in things like Internet of Things. Enabling connected devices to communicate all around the world.

Speaking of communication around the world, have you ever wanted to have your own satellite? Too expensive to launch your own? Why not just use AWS Ground Station and only pay for the satellite time you actually need?