iamneo

AWS Fundamentals and Security

Overview of AWS

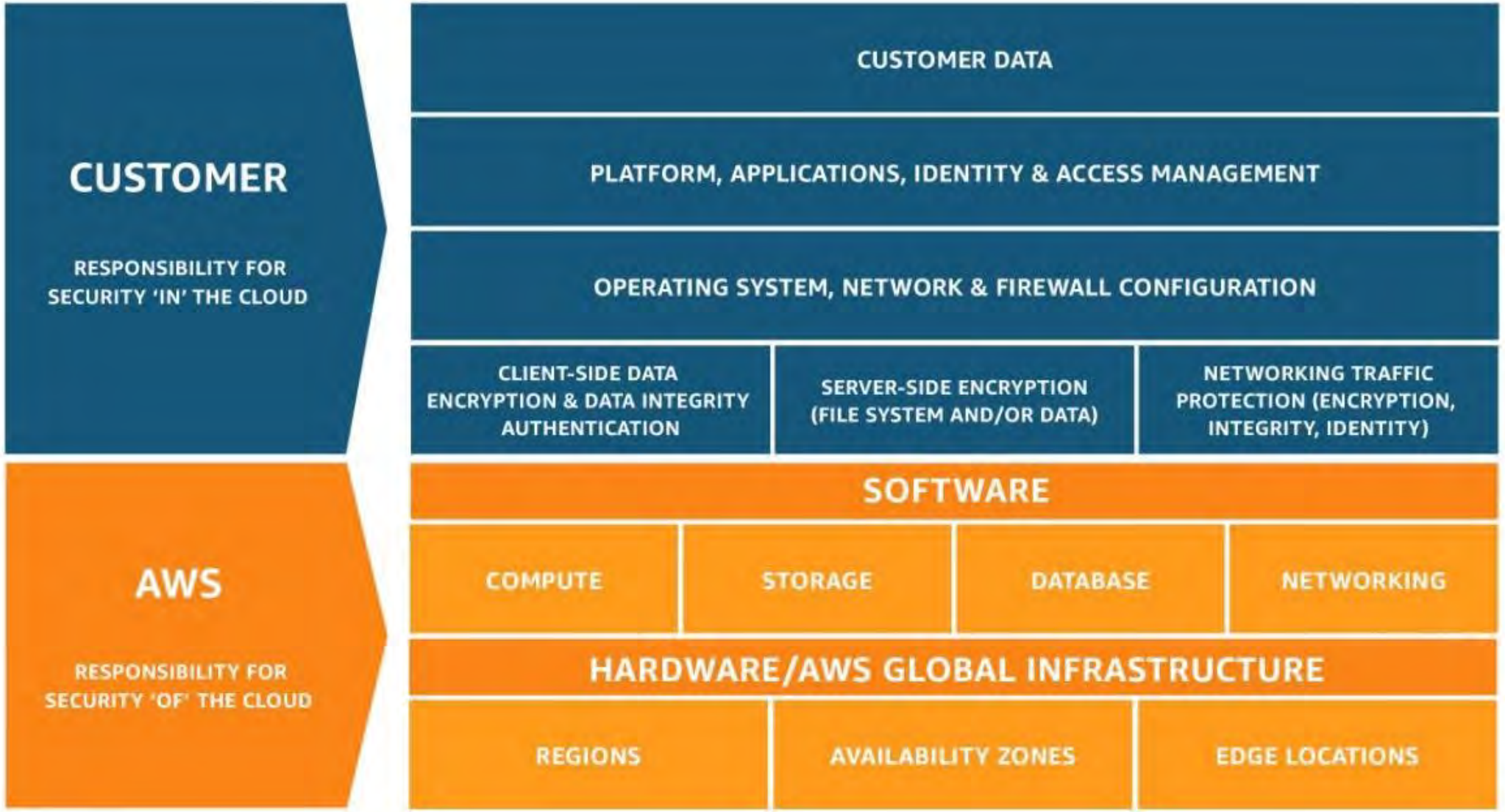
Amazon Web Services (AWS) is a cloud computing platform that offers a wide range of services including computing power, storage, security, analytics, and more. It is a comprehensive platform that enables developers to build and deploy applications quickly and efficiently.

Fast

Reliable

Secure

What is Shared Responsibility Model?



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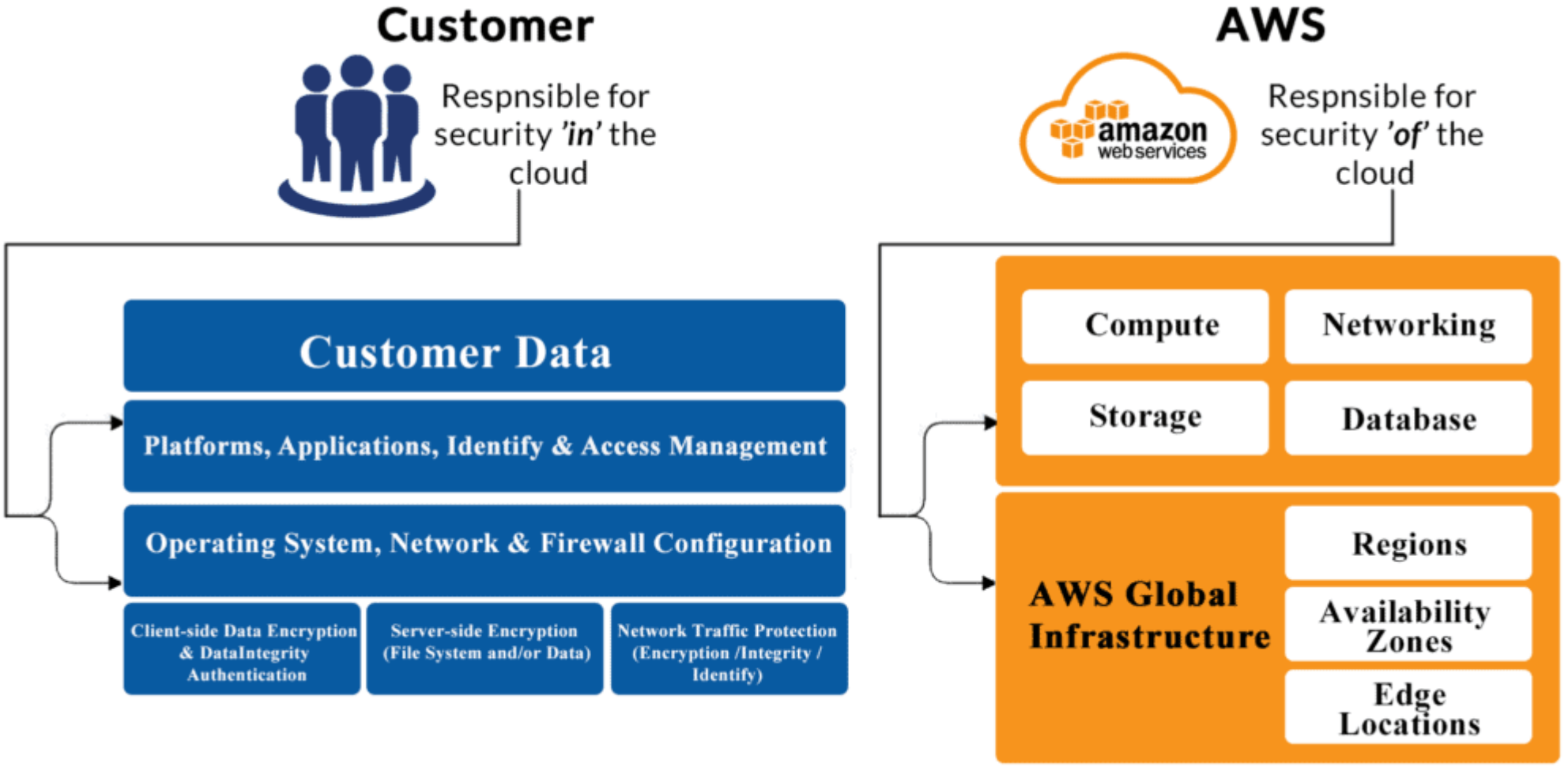


AWS Security Controls

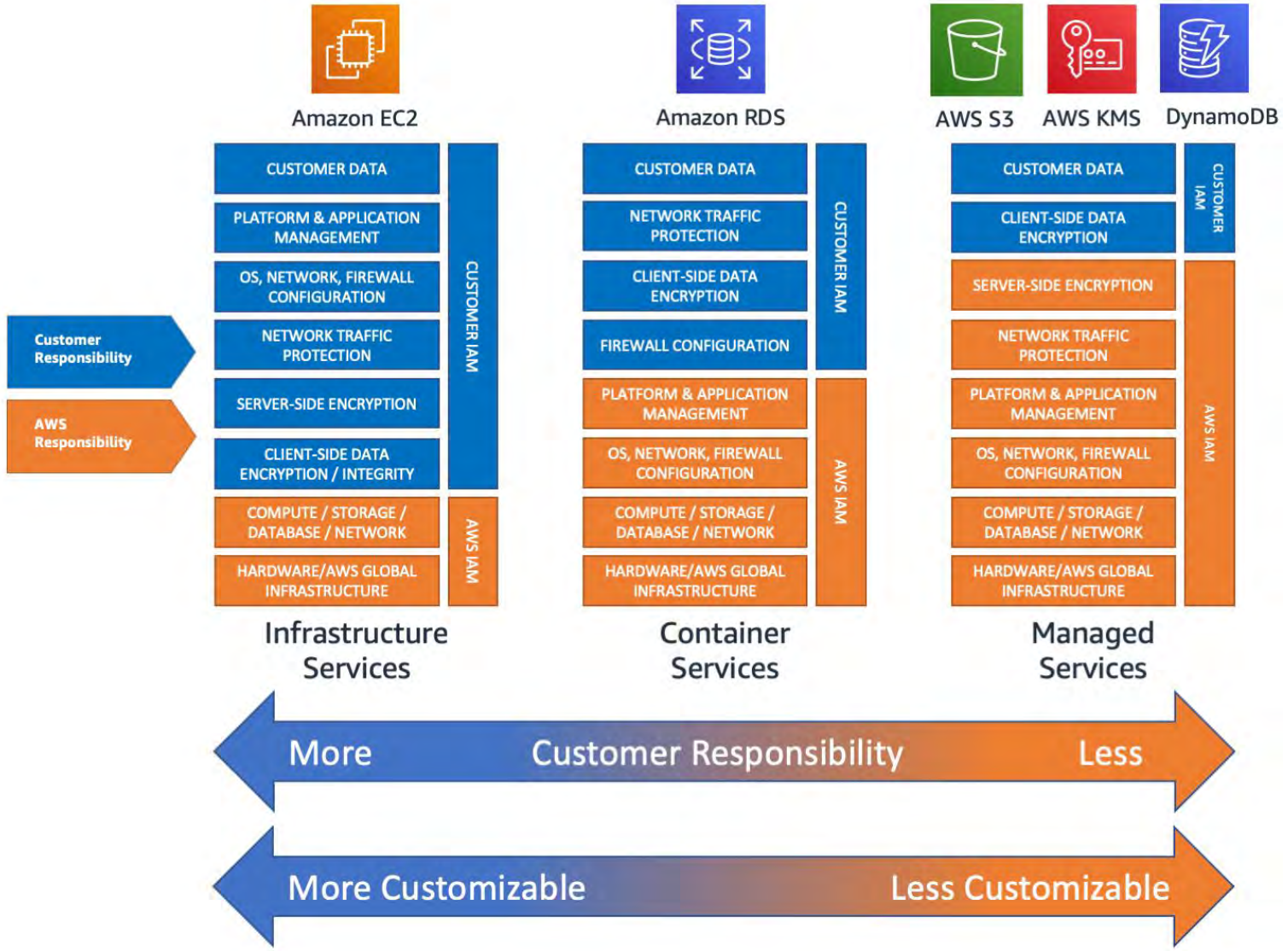
AWS provides a variety of security controls to help customers secure their data and information. These measures include access controls, encryption, threat detection, and security management tools.

Access Controls

Encryption

Threat Detection

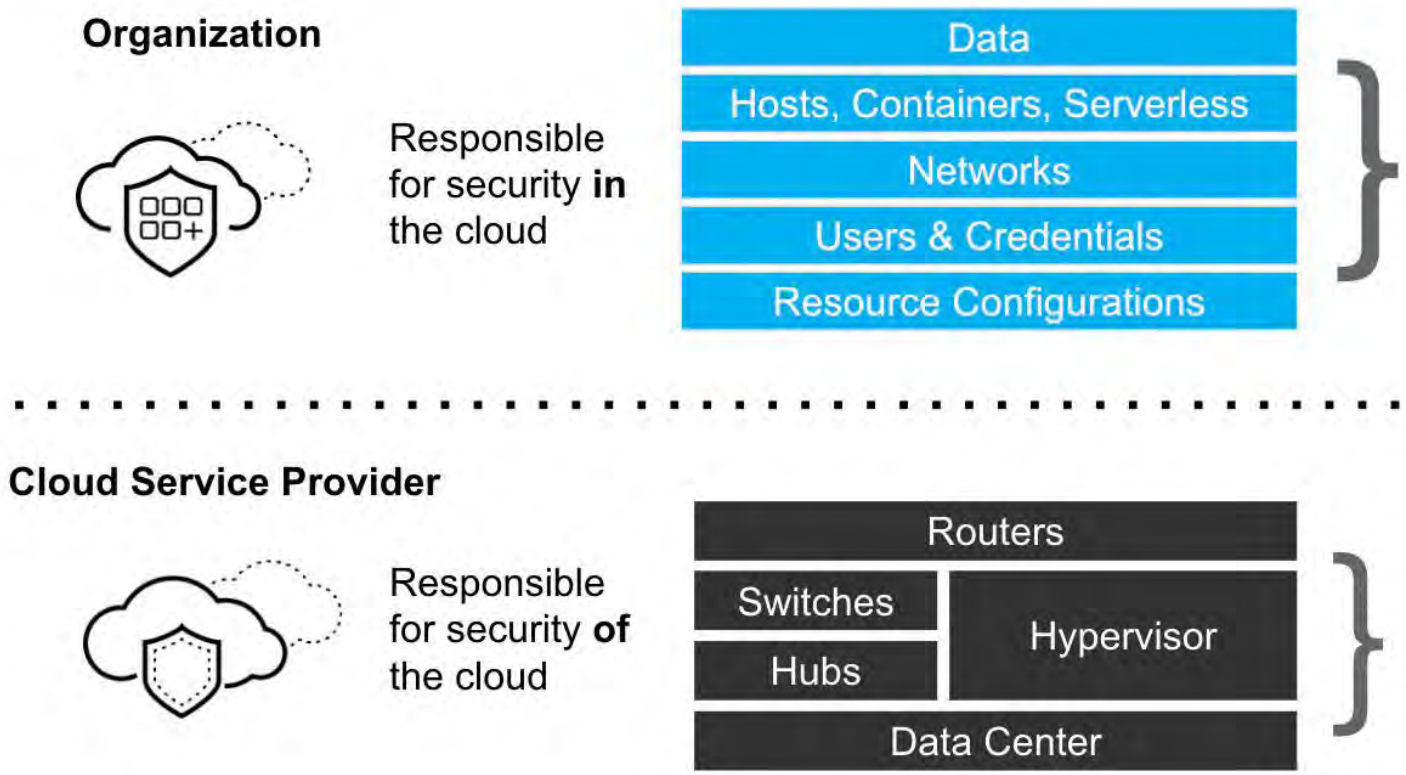
Your Responsibility in Shared Responsibility Model



Benefits of Shared Responsibility Model

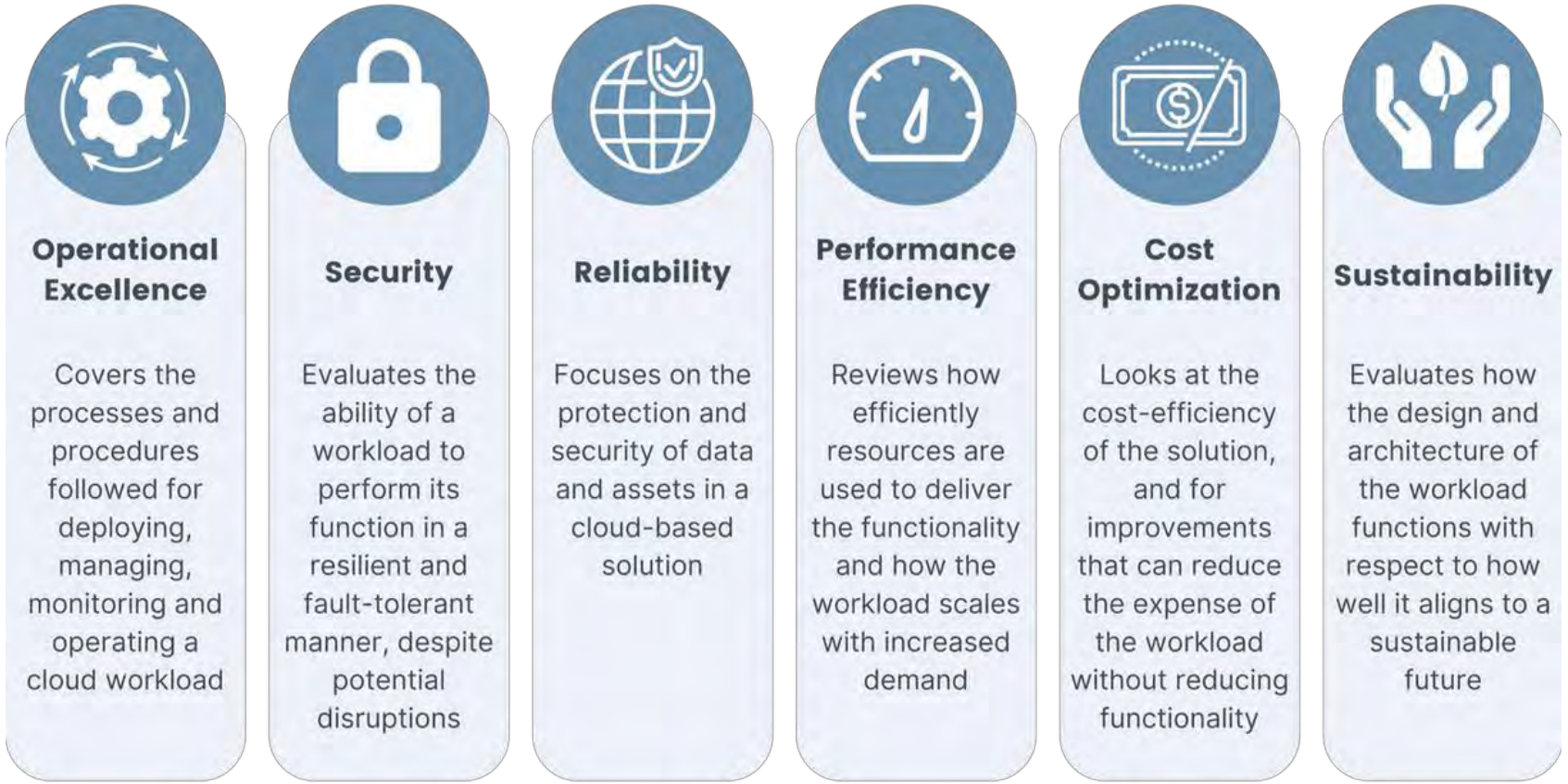
The benefits of a shared responsibility model include:

- **1. AWS focus on Security, 2. Better Compliance, 3. Transparency and Collaboration**



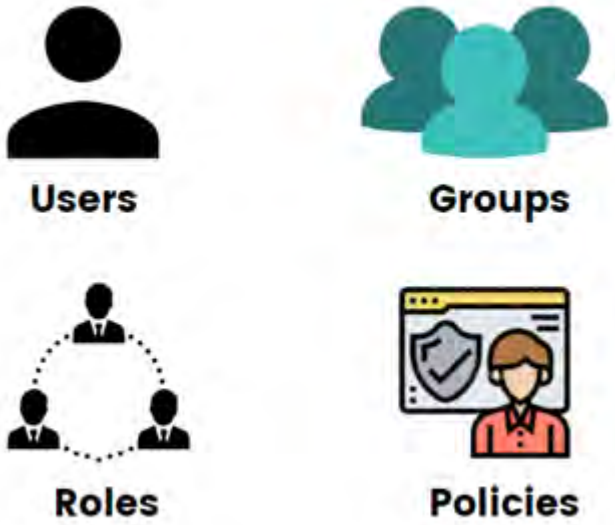
AWS Well-Architected Framework

As technology becomes more integrated into our daily lives, it is essential to understand security best practices. The AWS Well-Architected Framework provides a comprehensive guide to secure cloud computing.



AWS Best Practices for Security

Identity and Access Management



Encryption and Data Protection

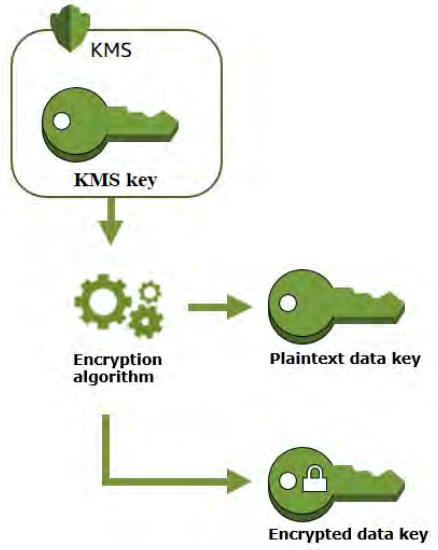
Network Security

Data Encryption in AWS

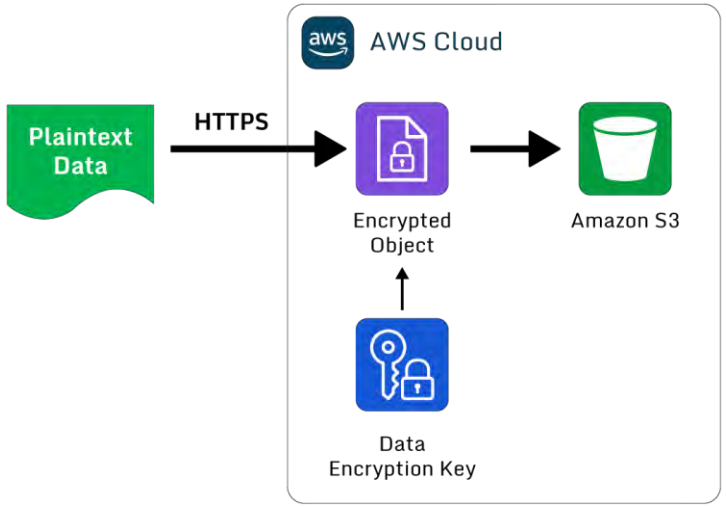
AWS offers a range of encryption options to secure your data, both in transit and at rest. Let's dive in!

Encryption at Rest

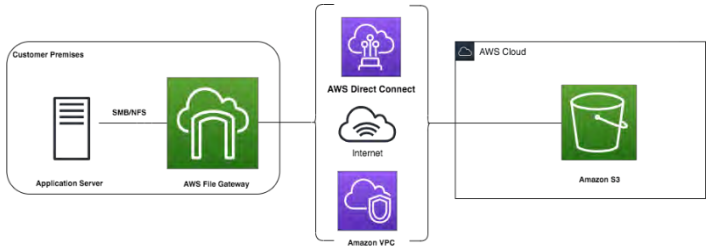
AWS Key Management Service (KMS)



Server-Side Encryption (SSE)



AWS Storage Gateway



AWS Key Management Service (KMS)

Create Encryption Keys

Create, manage, and retain complete control over your encryption keys that protect your data stored in AWS.

Manage Key Policies

Set and control access to your encryption keys according to your organizational compliance policies.

Integrated with Other AWS Services

Use KMS keys for encrypting Amazon EBS volumes, Amazon S3 objects, Amazon RDS databases, and more.

KMS and ACM Integration

KMS Automated Certificate Management (ACM)

KMS ACM enables you to manage your SSL/TLS certificates and services that use HTTPS with AWS

services that support ACM.

SSL/TLS Key Management with KMS

KMS enables you to control your keys and Certificates used for SSL/TLS, and automatically renew

certificates

Data Encryption Best Practices

- Design for Security
- Control Access to Encryption keys
- Automate Key Management

KMS key Practical Demonstration

Creating CMK and assigning to a user for encrypting S3 bucket