SYSTEM ANALYSIS

1 PROBLEM STATEMENT

We build an online book store for people, The online book store will contain the book details and at the reasonable price. Many students and people found it difficult to go to library to issue the book or to purchase from the market after bargaining with the seller. This become very wasteful and frustrating for students and others. This online bookstore is a solution to this. It will provide a service where a user can search the book effectively with the help of the advance search and later can but it online without any trouble.

2 TECHNOLOGY IN BRIEF

This ERP system is created using the salesforce platform. We have developed a mobile application on the salesforce platform which will help to meet our objective.

2.1 AMAZON WEB SERVCES

- AMAZON WEB SERVICES(AWS) is a collection of remote computing web services that together make up a cloud computing platform, offered over the internet by AMAZON.
- The AWS Global Cloud Infrastructure is the most secure, extensive, and reliable cloud platform, offering over 175 fully featured services from data centers globally. Whether you need to deploy your application workloads across the globe in a single click, or you want to build and deploy specific applications closer to your end-users with single-digit millisecond latency, AWS provides you the cloud infrastructure where and when you need it.

2.1.1 AWS Global Infrastructure Map

AWS now spans 77 Availability Zones within 24 geographic regions around the world, and has announced plans for nine more Availability Zones and three more AWS Regions in Indonesia, Japan, and Spain.

2.1.2 AWS OFFERS

- Pay-As-You-Go pricing.
- Instant Elasticity & Scalability.
- Speed & Agility.
- Global Reach.
- Open & flexible.
- Secure.

2.2 ELASTIC COMPUTE CLOUD (AWS EC-2)

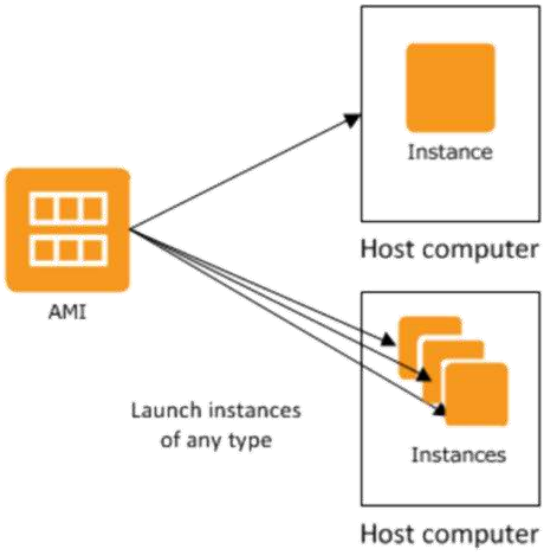
- Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) cloud.
- Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster.
- You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage.
- Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic

2.2.1 Features of Amazon EC2

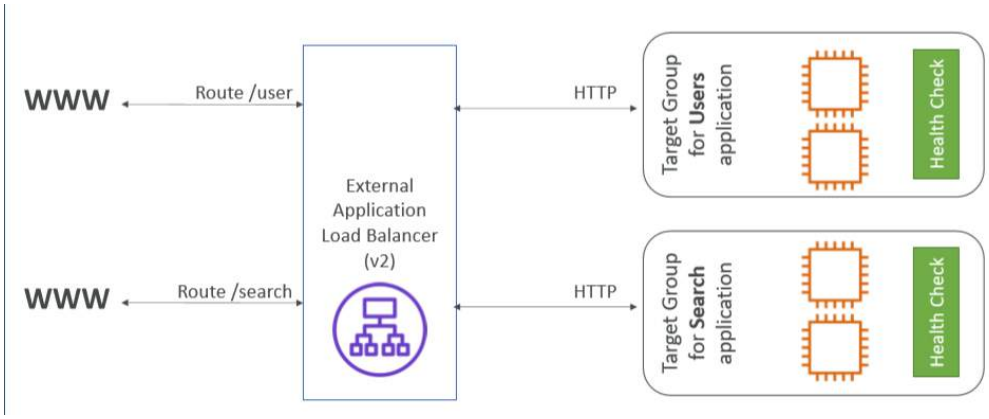
- Virtual computing environments, known as INSTANCES.
- Preconfigured templates for your instances, known as Amazon Machine Images (AMIs), that package the bits you need for your server (including the operating system and additional software).
- Various configurations of CPU, memory, storage, and networking capacity for your instances, known as Instance Types.
- Secure login information for your instances using key pairs (AWS stores the public key, and you store the private key in a secure place).
- Storage volumes for temporary data that's deleted when you stop or terminate your instance, known as instance store volumes.
- Persistent storage volumes for your data using Amazon Elastic Block Store (Amazon EBS), known as Amazon EBS volumes
- Multiple physical locations for your resources, such as instances and Amazon EBS volumes, known as Regions and Availability Zones.
- A firewall that enables you to specify the protocols, ports, and source IP ranges that can reach your instances using SECURITY GROUPS.
- Static IPv4 addresses for dynamic cloud computing, known as Elastic IP addresses
- Metadata, known as tags, that you can create and assign to your Amazon EC2 resources
- Virtual networks you can create that are logically isolated from the rest of the AWS cloud, and that you can optionally connect to your own network, known as virtual private clouds (VPCs).

2.2.2 Amazon Machine Images and instances

- An Amazon Machine Image (AMI) is a template that contains a software configuration (for example, an operating system, an application server, and applications).
- From an AMI, you launch instances, which are copies of the AMI running as virtual servers in the cloud.
- You can also create your own custom AMI.
- You can launch different types of instances from a single AMI.
- An instance type essentially determines the hardware of the host computer used for your instance. Each instance type offers different compute and memory facilities.



2.3 AMAZON LOAD BALANCER



Elastic Load Balancing distributes incoming application or network traffic across multiple targets, such as Amazon EC2 instances, containers, and IP addresses, in multiple Availability Zones. Elastic Load Balancing scales your load balancer as traffic to your application changes over time. It can automatically scale to the vast majority of workloads.

2.3.1 Load Balancer Benefits

- A load balancer distributes workloads across multiple compute resources, such as virtual servers. Using a load balancer increases the availability and fault tolerance of your applications.
- You can add and remove compute resources from your load balancer as your needs change, without disrupting the overall flow of requests to your applications.
- You can configure health checks, which monitor the health of the compute resources, so that the load balancer sends requests only to the healthy ones. You can also offload the work of encryption and decryption to your load balancer so that your compute resources can focus on their main work.

2.3.2 Features

- High availability:
- Health checks:
- Security features:
- TLS termination:
- Layer 4 or Layer 7 load balancing:
- Operational monitoring:

2.3.3 Application Load Balancer

- If you need flexible application management.
- Application Load Balancer is Layer 7(HTTP).
- Load balancing to multiple HTTP applications across machines (target groups).
- Support to HTTP/s and WebSocket.
- Routing to different target groups.
- Application Load Balancer are a great fit for micro services & container-based application (ex: Docker & Amazon ECS).
- Has a port mapping feature to redirect to a dynamic port in ECS.
- You are charged for each hour or partial hour that an Application Load Balancer is running and the number of Load Balancer Capacity Units (LCU) used per hour.

2.4 AMAZON CLOUDFRONT

- Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds, all within a developer-friendly environment.
- Amazon CloudFront is a web service that speeds up distribution of your static and dynamic web content, such as .html, .css, .js, and image files, to your users. CloudFront delivers your content through a worldwide network of data centers called edge locations.
- CloudFront offers the most advanced security capabilities, including field level encryption and HTTPS support, seamlessly integrated with AWS Shield, AWS Web Application Firewall and Route 53 to protect against multiple types of attacks including network and application layer DDoS attacks.

- If the content is already in the edge location with the lowest latency, CloudFront delivers it immediately.
- If the content is not in that edge location, CloudFront retrieves it from an origin that you've defined—such as an Amazon S3 bucket, a MediaPackage channel, or an HTTP server (for example, a web server) that you have identified as the source for the definitive version of your content.
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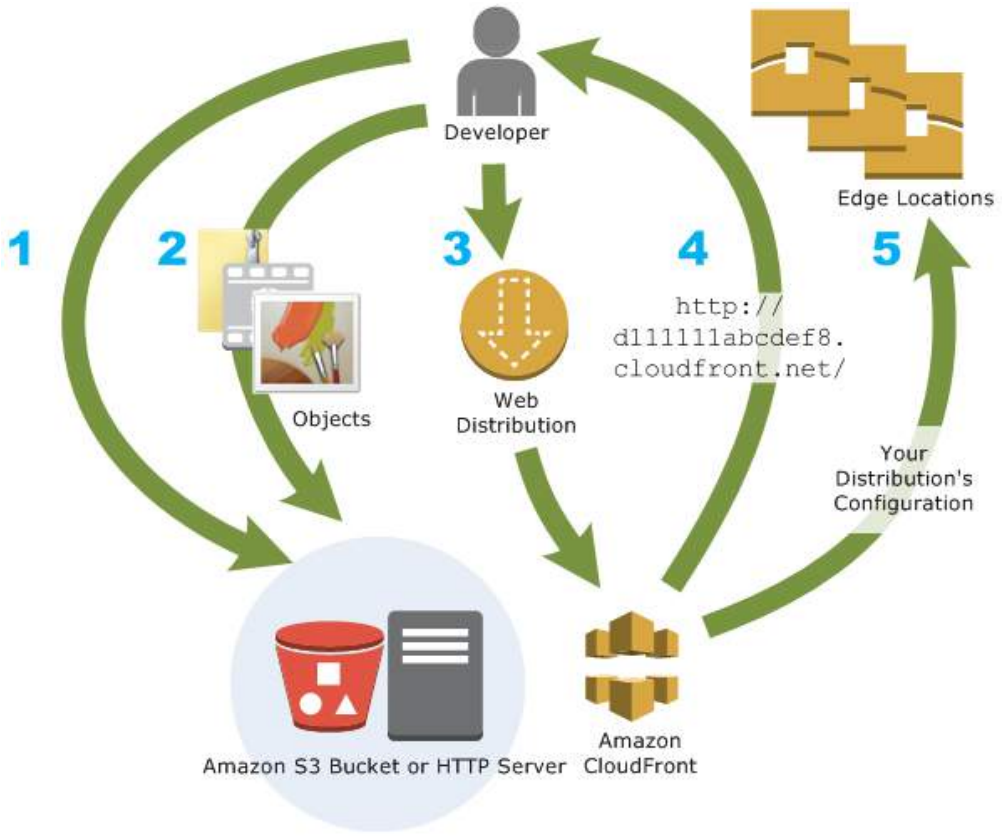


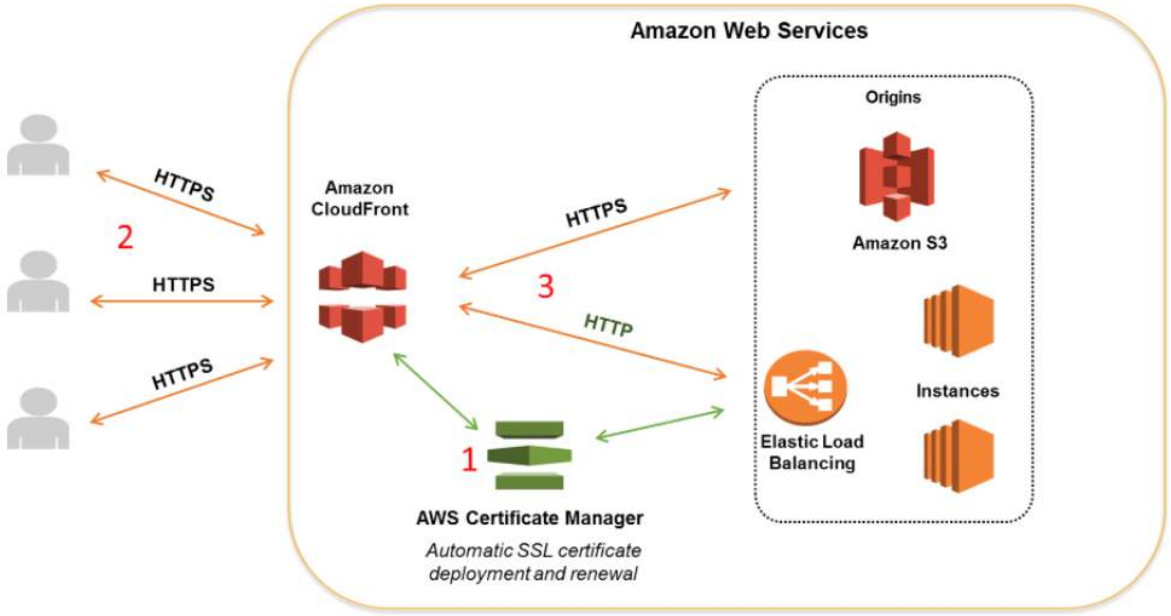
2.4.1 Features of Amazon Cloudfront

- Global Scaled Network for Fast Content Delivery
- Global Scaled Network for Fast Content Delivery
- Highly Programmable and Secure Edge Computing
- Deep Integration with AWS
- Cost-Effective

2.4.2 Use cases

- Website Delivery and Security
- Dynamic Content & API Acceleration
- Live & On-demand Video Streaming
- Software Distribution, Game Delivery and IoT OTA

2.5 AWS CERTIFICATE MANAGER



- AWS Certificate Manager is a service that lets you easily provision, manage, and deploy public and private Secure Sockets Layer/Transport Layer Security (SSL/TLS) certificates for use with AWS services and your internal connected resources.
- SSL/TLS certificates are used to secure network communications and establish the identity of websites over the Internet as well as resources on private networks. AWS Certificate Manager removes the time-consuming manual process of purchasing, uploading, and renewing SSL/TLS certificates.
- With AWS Certificate Manager, you can quickly request a certificate, deploy it on ACM-integrated AWS resources, such as Elastic Load Balancers, Amazon CloudFront distributions, and APIs on API Gateway, and let AWS Certificate Manager handle certificate renewals.
- It also enables you to create private certificates for your internal resources and manage the certificate lifecycle centrally. Public and private certificates provisioned through AWS Certificate Manager for use with ACM-integrated services are free.
- You pay only for the AWS resources you create to run your application. With AWS Certificate Manager Private Certificate Authority, you pay monthly for the operation of the private CA and for the private certificates you issue.

2.5.1 Benefits

- Free public certificates for ACM-integrated services
- Managed certificate renewal
- Get certificates easily

2.5.2 Use Cases

- Protect and secure your website
- Protect and secure your internal resources
- Help meet compliance requirements
- Improved uptime

2.6 AMAZON R53

Amazon Route 53 is a highly available and scalable Domain Name System (DNS) web service. You can use Route 53 to perform three main functions in any combination: domain registration, DNS routing, and health checking. If you choose to use Route 53 for all three functions, perform the steps in this order:

- Register domain names

  Your website needs a name, such as example.com. Route 53 lets you register a name for your website or web application, known as a domain name.

- Route internet traffic to the resources for your domain

  When a user opens a web browser and enters tour domain name in the address bar, R53 helps connect the browser with your website or web application

- Check the health of your resources

  Route 53 sends automated requests over the internet to a resource, such as a web server, to verify that it's reachable, available, and functional. You also can choose to receive notifications when a resource becomes unavailable and choose to route internet traffic away from unhealthy resources.

- Amazon Route 53 effectively connects user requests to infrastructure running in AWS – such as Amazon EC2 instances, Elastic Load Balancing load balancers, or Amazon S3 buckets – and can also be used to route users to infrastructure outside of AWS.
- Amazon Route 53 Traffic Flow makes it easy for you to manage traffic globally through a variety of routing types, including Latency Based Routing, Geo DNS, Geo proximity, and Weighted Round Robin—all of which can be combined with DNS Failover in order to enable a variety of low-latency, fault-tolerant architectures. Using Amazon Route 53 Traffic Flow's simple visual editor, you can easily manage how your end-users are routed to your application's endpoints—whether in a single AWS region or distributed around the globe.
- Amazon Route 53 also offers Domain Name Registration – you can purchase and manage domain names such as example.com and Amazon Route 53 will automatically configure DNS settings for your domains

2.6.1 Benefits

- Highly available and reliable
- Flexible
- Designed for use with other Amazon Web Services
- Simple
- Fast

- Cost-Effective
- Secure
- Scalable
- Simplify the hybrid cloud

3 MODULES/ FEATURES

- A Home Page
- Sign in-/Sign-up
- Search
- Search by Title, Search by publisher name, search by category, search by author name
- Book Details
- Shopping Cart
- Manager