Backend solution for a REST API and CMS of a mobile application.
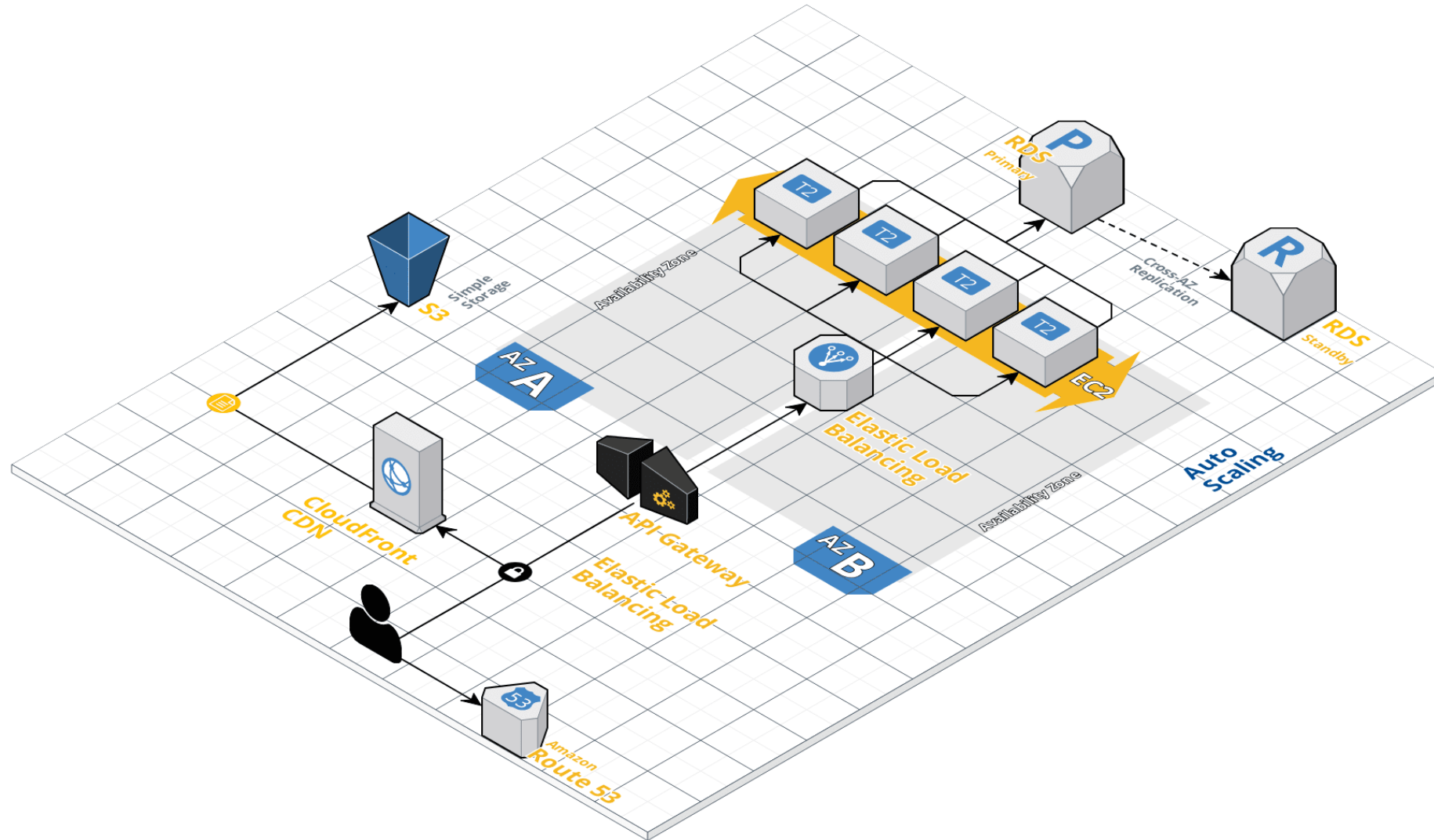
Architecture with AWS Component

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Question

Building Architecture

- Using different AWS component, design a backend solution for a REST API and CMS of a mobile application.

- The design needs to take into consideration of scalability and high availability.

- Perform an estimation the monthly cost that will occur with the design proposed.

- Use Cloudcraft to present your solution.

Architecture

AWS Services

AWS Component	Description
Amazon Route 53	A highly available and scalable cloud Domain Name System (DNS) web service. 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 S3	An object storage service that offers industry-leading scalability, data availability, security, and performance.
Amazon Cloud Front	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. CloudFront is integrated with AWS – both physical locations that are directly connected to the AWS global infrastructure, as well as other AWS services.
API Gateway	A mobile application running on a user's smartphone and API Gateway Amazon API Gateway opens up a variety of presentation tier possibilities. An Internet-accessible HTTPS API can be consumed by any client capable of HTTPS communication.

AWS Services

AWS Component	Description
Elastic Load Balancer	Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, IP addresses, and Lambda functions. It can handle the varying load of your application traffic in a single Availability Zone or across multiple Availability Zones.
EC2	Setup in Multiple Available Zone to with highly scalable backend infrastructure to support the variable usage created by mobile users.
Amazon RDS	The basic building block of Amazon RDS is the DB instance. A DB instance is an isolated database environment in the AWS Cloud. Setup in high availability with a primary instance and a synchronous secondary instance that you can fail over to when problems occur.

Budget

Category	Type	Instance Type	Size	Volume Type	Role	Count	Unit Price	Total Count
Compute	EC2	T2-Burst	Medium			4	$33.87	$135.49
Storage	S3			Standard		1	$8.87	$8.87
Networking	Load Balancer					1	$22.27	$22.27
Database	RDS	T2-Burst	small		Primary	1	$49.64	$49.64
Database	RDS	T2-Burst	small		Read Replica	1	$49.64	$49.64
App Service	API Gateway					1	$45.24	$45.24
							TOTAL BUDGET	$311.14

Budget for REST API-CMS Mobile Application ✎

Compute	**$135.49** / mo ⌄	
Storage	**$8.87** / mo ⌄	
Networking	**$22.27** / mo ⌄	
Database	**$99.28** / mo ⌄	
App services	**$45.24** / mo ⌄	
Total	**$311.14** / mo	

MONTHLY   EFFECTIVE RATE   USD   ⬇ EXPORT

API Gateway 14.5 %
EC2 43.5 %
Compute 43.5 %
RDS 31.9 %
S3 2.9 %
Load balancer 7.2 %