



## CloudiQS Services Solutions for – AWS Compute & Networking

At CloudiQS, we have extensive experience helping customers navigate the complexities of AWS compute services. Our expertise allows us to address various challenges and deliver tailored solutions across key areas.

### AWS Auto Scaling:

**Customers Challenges** – SMB customers often experience unpredictable traffic patterns, leading to performance degradation during peak usage and overspending during low-demand periods. For example, an e-commerce platform for one of our customers [Zyda.com](https://www.zyda.com) might face a surge in traffic during a sale, causing slow load times or outages if the infrastructure is not configured to auto-scale based on traffic workload scaled appropriately.

**CloudiQS Solution** - We implemented automation & AWS Auto Scaling to dynamically adjust resource capacity based on real-time demand, ensuring optimal performance while minimizing costs during off-peak hours.

### Amazon EC2:

**Customers Challenge** - Startups & SMBs with inconsistent workloads often experience inconsistent compute capacity, affecting application performance and user experience. For example, a video streaming service might see spikes in user activity during peak hours, leading to slow streaming if compute resources are insufficient.

**CloudiQS Solution** - We provisioned Amazon EC2 instances, allowing for scalable, on-demand compute resources that automatically adjust to match workload requirements, ensuring consistent application performance.

### AWS Lambda:

**Customers Challenge** - Many of our customers require real-time processing capabilities but do not want to maintain dedicated servers for these tasks, leading to inefficient use of resources. For example, a travelling agent platform might need to process user interactions in real-time without over-provisioning resources.

**CloudiQS Solution:** We guide customers to leverage AWS Lambda for event-driven computing, enabling organizations to run code in response to specific triggers, thereby improving response times and reducing operational costs.

### AWS Batch:

**Customers Challenge** - Our SMB's customers are often required to process large volumes of data the challenges with resource allocation and job scheduling, resulting in idle resources during non-peak times. For instance, a financial services company may have specific reporting periods that require extensive data processing, leaving compute resources underutilized at other times.

**CloudiQS Solution** - We utilized AWS Batch to automate job scheduling and resource allocation, enabling efficient use of resources and minimizing operational overhead, allowing the company to focus on core business activities.

### AWS Elastic Beanstalk:

**Customers Challenge** - Our customer development teams often find the complexities of managing underlying infrastructure to be a barrier to rapid application deployment, delaying time-to-market for new features. For example, a startup may have innovative ideas but lacks the resources to manage server configurations effectively.

**CloudiQS Solution** - By deploying AWS Elastic Beanstalk, we simplified the application deployment process, allowing teams to focus on development rather than infrastructure management, and speeding up their ability to launch new applications.

### AWS Fargate:

**Challenge** - We help our customers adopt containerization and not to face the challenge of managing the underlying server infrastructure, which can become bulky and lead to resource misallocation. For instance, a gaming company <https://www.unseen-tokyo.com/> launching a new title might struggle to balance server resources during unpredictable peak loads.

**CloudiQS Solution** - We utilized AWS Fargate, allowing our customers to run their containers without the need for server management, enhancing scalability and allowing for automatic adjustments based on traffic.

## AWS Serverless Application Repository

**Customers Challenge** – Our customer's Dev teams often face lengthy development cycles when creating serverless applications from scratch, delaying project timelines. For instance, our customers looking to implement microservices may struggle to find reusable components.

**CloudiQS Solution:** By implementing AWS Serverless Application Repository, we provided access to pre-built serverless applications, enabling teams to accelerate deployment and reduce development time.

## Amazon ECR:

**Customer Challenge** - As customers transition to containerization, managing container images securely and efficiently becomes a critical need, often leading to bottlenecks in deployment pipelines. For instance, a tech startup may have multiple versions of images that need to be stored and accessed securely.

**CloudiQS Solution:** We help and guide customers to utilise Amazon ECR to provide a secure and efficient way to store and manage Docker images, streamlining the deployment process and improving overall development efficiency.

## Amazon ECS:

**Customers Challenge** - Orchestrating containerized applications can become complicated, particularly as the number of containers increases. For example, a logistics customer managing multiple microservices may find it challenging to coordinate updates and ensure service availability.

**CloudiQS Solution** - By implementing Amazon ECS, we simplified the orchestration and management of Docker containers, allowing for easier scaling and ensuring high availability for critical applications.

## Amazon EKS:

**Customers Challenge** – Our customers who are looking to run Kubernetes applications often face operational complexities in managing the infrastructure, hindering deployment speed and increasing overhead. For example, one of our healthcare customers [www.ubslabs.com](http://www.ubslabs.com) finds it hard to manage with compliance and security while managing Kubernetes clusters.

**CloudiQS Solution** - We deployed Amazon EKS, enabling organizations to operate Kubernetes applications with enhanced security and scalability while minimizing operational responsibility.

## Amazon Lightsail:

**Customer Challenge** - Small businesses we support often need a straightforward cloud solution for specific workloads but struggle with complex configurations and setups. For instance, one of our customers who runs a local restaurant might want to set up an online ordering system without extensive technical expertise.

**CloudiQS Solution** - We recommended Amazon Lightsail for its user-friendly interface, providing a simplified deployment option for virtual servers, thus improving operational agility.

## Amazon Linux 2022:

**Challenge** - Ensuring a stable and optimized operating environment for applications can be a challenge, especially when organizations use diverse software stacks. For example, our enterprise customers need an operating system that is compatible with their applications and optimized for AWS.

**CloudiQS Solution** - We implemented Amazon Linux 2022 to provide an optimized, secure, and stable environment for workloads, ensuring reliability and performance.

## Amazon VPC:

**Customers Challenge** – Our customers often require secure and isolated networking for their cloud resources to comply with regulatory standards and enhance security. For example, a financial institution is required to isolate sensitive data to meet compliance requirements.

**CloudiQS Solution:** We designed and implemented a custom Amazon VPC, allowing organizations to control their network environment, enhance security, and maintain compliance with industry standards.

## AWS Direct Connect:

**Customer Challenge** – an SMB customer with a hybrid architecture, with mission-critical applications, was run on-premises and faced inconsistent connectivity when using public internet to connect to AWS, which led to poor application performance during peak traffic times.

**CloudiQS Solution** – We implemented AWS Direct Connect, which provided a dedicated network link from the client's data centre to AWS. This not only reduced network latency by 30%, but also enhanced the security and consistency of data transfer, leading to more reliable performance for critical application

## AWS Transit Gateway:

**Customer Challenge** – Managing multiple VPCs and hybrid networks led to a complex and error-prone environment, where routing misconfigurations caused intermittent outages.

**CloudiQS Solution** – We deployed AWS Transit Gateway, connecting all VPCs and on-premises networks through a single hub. This simplified network management reduced operational overhead and provided better visibility into network traffic. As a result, the client was able to scale their environment more easily while maintaining high network availability.

## Amazon API Gateway:

**Customer Challenge** – A customer using API service was struggling to scale with fluctuating traffic, resulting in frequent downtime and increased support costs due to manual intervention.

**CloudiQS Solution** – By leveraging Amazon API Gateway, we enabled the customer to deploy scalable APIs that could handle traffic bursts automatically. With built-in security features like DDoS protection, we ensured the APIs remained secure while operating seamlessly under high traffic, reducing downtime and support costs by 70%

### Elastic Load Balancing (ELB):

**Customer Challenge** – A client running a customer-facing application saw frequent downtime during traffic surges, leading to lost revenue and customer dissatisfaction.

**CloudiQS Solution** – We implemented Elastic Load Balancing to distribute incoming traffic across multiple EC2 instances, providing fault tolerance and ensuring seamless scalability during peak demand. This solution eliminated downtime during surges, improved overall user experience, and reduced operational costs associated with manual intervention.

### Amazon Route 53:

**Customer Challenge** – one of our global customer's use of an application experienced slow DNS resolution times, causing delays in accessing the app. Managing DNS records for multiple regions also became cumbersome.

**CloudiQS Solution** – We utilized Amazon Route 53 for its high-availability DNS solution, routing traffic to the optimal region based on user location, and enabling automatic failover. This resulted in faster response times and a more resilient DNS infrastructure that could handle regional outages seamlessly.

### Amazon CloudFront:

**Customer Challenge** – A media company needed to serve video content to users around the world but was facing slow loading times and buffering issues due to inconsistent content delivery.

**CloudiQS Solution** – Implementing Amazon CloudFront, we distributed the client's content to edge locations worldwide, drastically reducing latency and improving the user experience. The company's video start times decreased by 40%, and overall customer satisfaction improved significantly.