**Assignment**

Presentation with your own group about which method that will you use to handle these case

Case:

* Newly Launched eCommerce
* Large eCommerce with millions of user
* Financial Institution
* Government
* Personal Static Website
* Email Application

Method:

* Traditional Computing
* Cloud Computing
* Hybrid Cloud Computing

**Submission**

* Submit the URL of the GitHub Repository that contains your work to NTU black board.

# Case: The Government of India Powers a Population-Scale Vaccine Drive on AWS

**Project Type**: AWS Microservices-based Cloud Native Development, Support & Monitoring

**Business Challenge:** In 2021, the [Ministry of Health and Family Welfare](https://www.mohfw.gov.in/), Government of India, needed a highly reliable, scalable, and resilient technical infrastructure to power a large-scale COVID-19 vaccination drive for India’s more than 1.3 billion citizens. The ideal solution would support vaccine access for India’s diverse population and be deployable quickly.

**Solution**: Using the elasticity and agility of AWS-managed solutions, the Ministry of Health and Family Welfare launched the Co-WIN application quickly at population scale. [Co-WIN](https://www.cowin.gov.in/) scales in seconds to handle user registrations and consistently supports 10 million vaccinations daily.

**Description of Co-Win**:

* The CoWIN application was built leveraging Amazon Web Services (AWS) Cloud and powered by Intel Technology (AWS Partner).
* By using Amazon DynamoDB—which critically supports data persistence—alongside Amazon EKS, Amazon API Gateway, and Amazon CloudFront, the Co-WIN application can scale dynamically without manual intervention to manage the incoming load and help prevent downtime. On AWS, 99 percent of Co-WIN application requests have a response time of less than 2 seconds. The Co-WIN solution is deployed across three Availability Zones to support business continuity and deliver high availability to users.
* Additionally, to monitor the solution at scale and keep the system healthy, the Government of India relies on [Amazon CloudWatch](https://aws.amazon.com/cloudwatch/), a monitoring and observability service.
* Co-WIN also runs detailed analytical reports that provide insights to administrators at the state, district, and facility levels using [Amazon Redshift](https://aws.amazon.com/redshift/). Analytics dashboards refresh within a few minutes using transactional data streamed from Amazon DynamoDB to Amazon Redshift using [Amazon Kinesis Data Firehose](https://aws.amazon.com/kinesis/data-firehose/), which practically provides real-time analytics services.

#### Benefits of AWS:

* Deployed a secure and highly scalable solution quickly.
* Scaled from 6,000 requests per second to 46,000 requests per second in 1 minute.
* Registered 13.4 million people and supported 3 million vaccinations on April 28, 2021
* Delivered 25.1 million vaccinations on September 17, 2021
* Supported 70,000 API hits per second and served 4.9 billion CDN requests in one day.
* Scales automatically and delivers high availability, supporting 10 million vaccinations per day.
* Delivers a response time of less than 2 seconds on 99% of requests
* Supports vaccine access and administration.