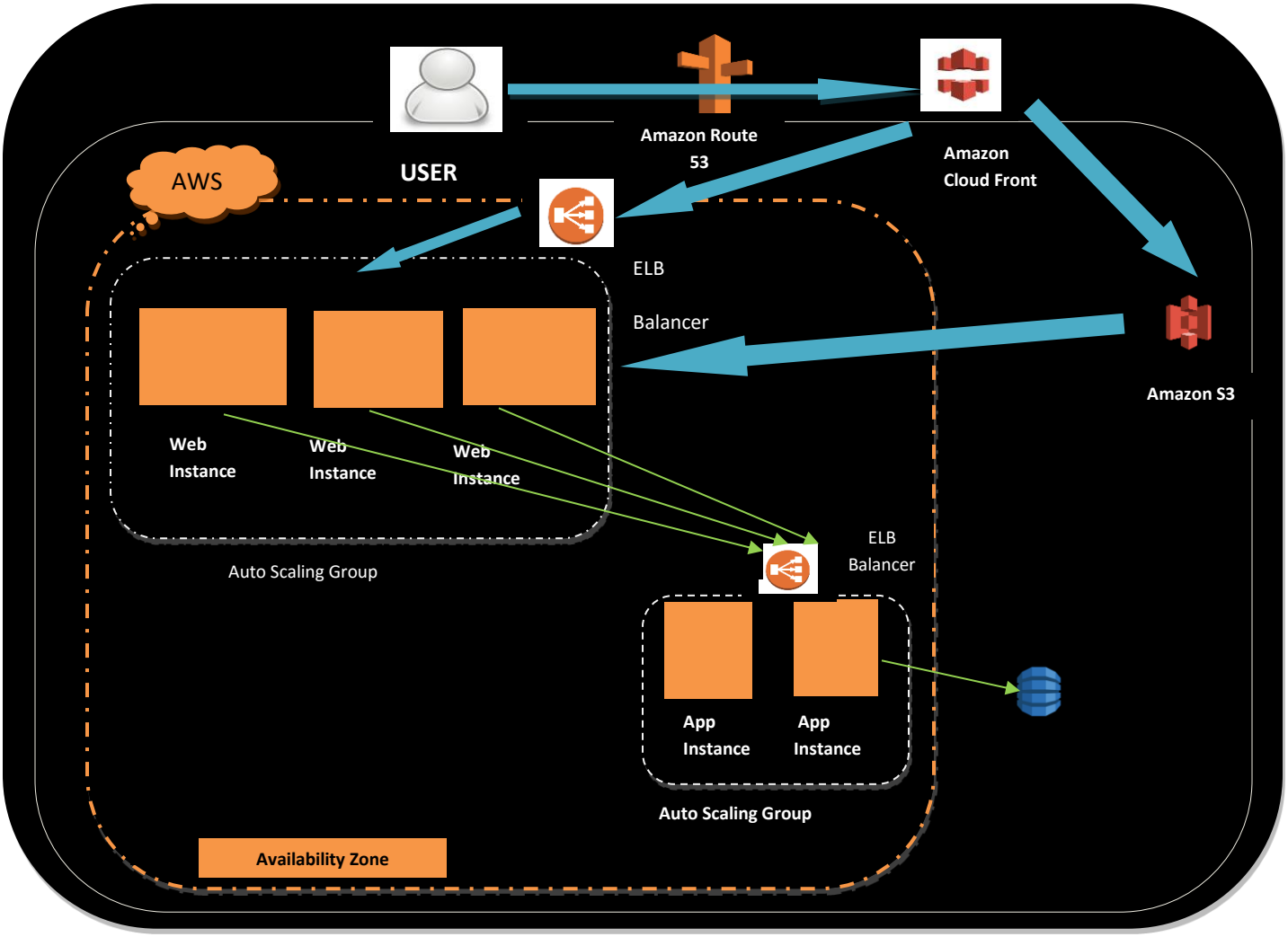
Assignment 3



App stack architecture for High Availability & Fault tolerance

Explanations:

- The use of Amazon route 53 is a highly available and scalable cloud DNS web service that connects Amazon EC2 instances, Elastic Load Balancers or Amazon S3 buckets based on DNS health checks.
- The use of Amazon CloudFront caches frequently accessed dynamic and static content into edge locations making it accessible to users faster.
- Static content can even be stored on Amazon S3.
- The use of Elastic Load Balancer among tiers and between tires to load balance traffic between multiple web host instances or multiple App host instances located in same or different Availability zones (AZ's).In case of failure the traffic is redirected to another healthy web host

instance in the same or different AZ's. In the extreme case of outage of a whole region the multi region ELB can redirect traffic to another region.

- The use of AutoScaling group for dynamic scale up and scale down of web and app instances based on various pre-defined CloudWatch metrics and custom metrics namely CPU load percentage. The auto scaling group helps in better cost management and efficient use of resources.

Assumptions:

- The above architecture is based on the assumption that the App stack is leveraging the power of AWS components.
- The App delivers both static and dynamic contents.
- The App is hosted in a single region but multiple AZ's.