

On-demand Cloud Gaming

Play graphics intensive games on any devices and at a reduced cost!

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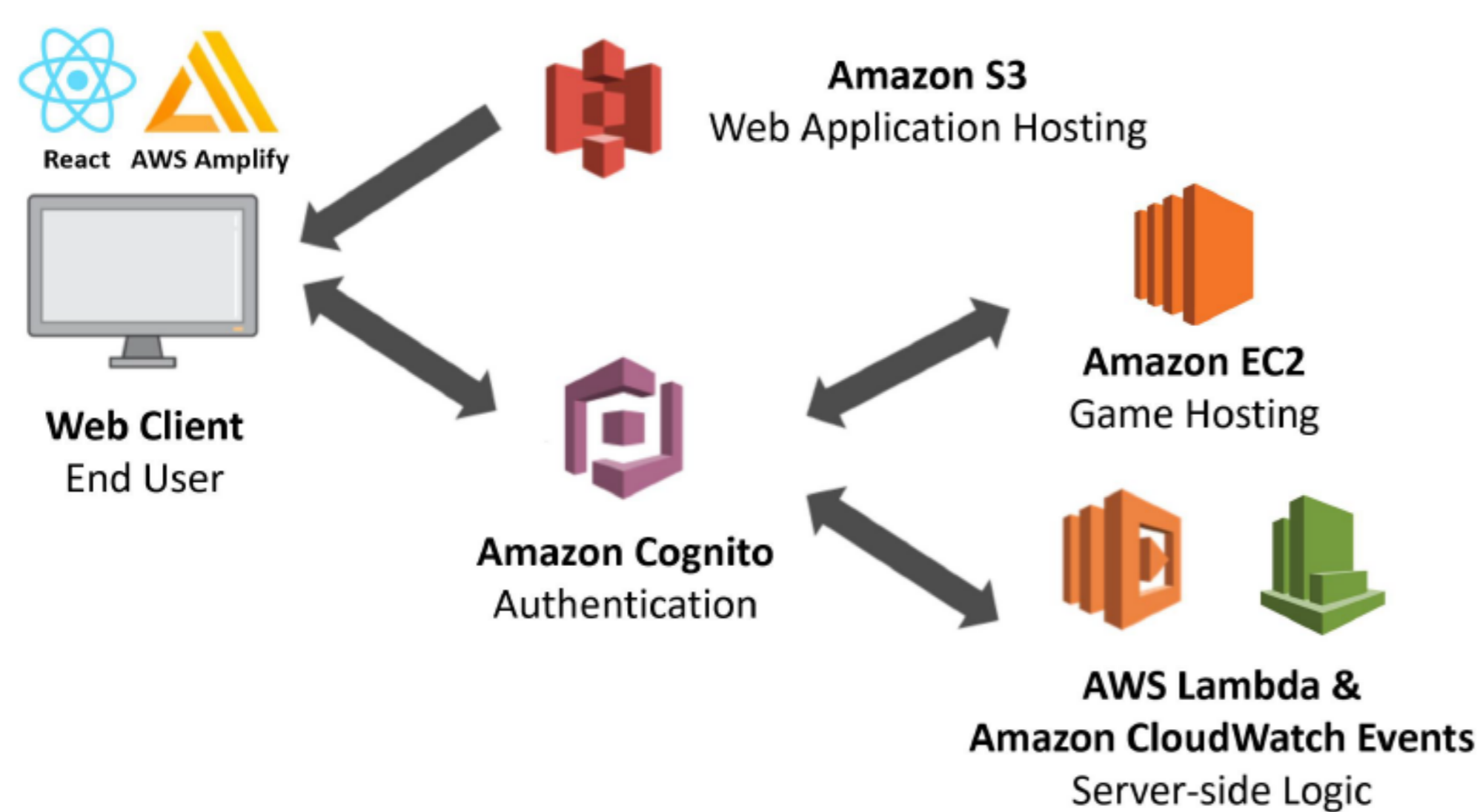
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Objectives:

1. To develop a web-based cloud gaming system, which enables one-click deployment of games onto the cloud server.
2. To analyze and optimize the cost of using the cloud resources by implementing a cost-effective resource provisioning algorithm.

Cloud Gaming System

Implemented using Serverless Architecture with Amazon Web Services as the Cloud Computing services provider and Parsec as the game streaming service provider.



Cost-effective Resource Provisioning Algorithm

Implemented these key ideas to save instance-hours usage:

- All instances were installed with all available games.
- When a user requests for an instance, a running instance will be prioritized instead of a stopped instance.
- When an instance is released, the instance will be kept running until it almost reaches a multiple of an hour of running time.

Result

Approximately 30.6% of the total instance-hours consumed can be saved by implementing the cost-effective resource provisioning algorithm.

