

# AWS Learning Accelerator

## *Module 0 - Design Components*

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### Key Points

The high level design components of our system are:

- **Image Storage** - We need image storage to retain user submitted photos. Images submitted can be large or small, and our storage component should be capable of handling this requirement. We also need fast performing uploads (latency/throughput) and durability of the images we store.
- **Compute** - We need compute to react to file uploads. One option is to use polling to detect new images. The second is to use an event driven architecture to automatically invoke your compute layer upon image upload. Reliable and fast performance are key for this component.
- **Facial Recognition** - This is the core of our application—detecting facial features. Facial recognition libraries usually use confidence bands to convey their analysis of an image. This component needs to be scalable and have low latency.
- **Database** - We need a database to store our approval/rejection details and references to our image. In our case, we are looking for a performant and scalable key value lookup store.
- **Notifications** - We need notifications to publish messages out to client services upon image evaluation. Using notifications is a great way to decouple microservices from one another and avoid relying on a “uber database”.
- **API** - We need an API to expose additional information about evaluation results.

These are the six themes we need to build our architecture.

Pause for a moment and try to come up with your own design for this project before moving on to the next video.