Storagae1

Rest Service/Take upload request

API Gateway

cache

Storagae2

User

Service to determine user to storage mapping

StoragaeN

Rest Service/Take upload request

Highlights of the design diagram

* Rest APIs are exposed to perform various user operations
  + Upload image
  + Modify/Update image
* To make sure the service availably an API gateway is used which take care of authentication and pass on the request to backend service
* Backend service are replicated to maintain the high availability, API gateway takes care of the load of the backend service and distributes request accordingly
* The storage box allocated based on UserID
* A service to determine user to storage map is provided, which can also be replicated for making sure one point failure
* A cache can be used for storing the images when user tends to modify
* For frequent users images also can be cached to improve performance.
* The number of backend service replication and storage requirement can be calculated and setup those accordingly.