CMPE 226
Project Proposal
Multi-Cloud DBMS

By

Karthik Thirugnanam Jagadeesan(011545248), Swayam Swaroop Mishra (013725595),
Maulik Bhatt (012421019), Shantanu Gupta (012445901), Vishweshkumar Patel (012461371)

Title- Multi-Cloud DBMS

DBMS for a multi-cloud management system

Mini World-

In today's competitive cloud computing environment, using a single cloud provider results in vendor dependency and risk of single point of failure. Multi-Cloud is an unified cloud service provider which aggregates the different cloud providers for building a cost effective yet highly scalable, reliable and available cloud services. It purchases cloud from different CSPs (Cloud Service Providers) - Amazon AWS, Microsoft Azure, IBM Softlayer, etc. in advance. Later it provides an unified cloud service to end customer which includes different CSP stacks. This way it satisfies the customer's need and provides a smooth and reliable experience in the minimum possible cost and makes cloud-agnostic system at the same time. The system provides customized attention to individual user, keeping priorities straight.

Purpose of the database and intended users-

Multi-Cloud DBMS is the agnostic cloud provider which provides range of options to fit every customer needs. To make our service affordable to user we buy cloud space from multiple Cloud Service Provider and use them as per the requirement.

Objects/Actors/Roles-

Objects-

1. Bill
2. Order
3. Computing Machine

Actors-

1. Customer - Places an order for cloud services by specifying computation power and duration of service.
2. Cloud Provider - Public Provides cloud services to the cloud aggregator.
3. Cloud Aggregator - Takes order from customers and provides cloud services using cloud purchase from different CSPs.

Planned functionality and operations-

1) All passwords from the user will be encrypted before saving into database.
2) Customer:-
    2.1) Sign up for an account. Customer will provide his firstname, lastname, email, billing information.
    2.2) Customer can select a default plan which can be changed in future.
    2.3) Can report of any problem
    2.4) Can view his history, payment plan
3) Cloud Provider:-
    3.1) Can accept/decline request for cloud service
    3.2) Decide payment rate for services
4) Cloud Aggregator:-
    4.1) Purchases the services from different CSPs.
    4.2) Integrate those different services and decide final payment rate.
    4.3) Offers a complete cost effective package for cloud services to end user.

Scenarios- The application provides a signup, signin page which allows user to login as a customer, service provider, admin.

Sign-in as customer:-

1) After sign-in a customer can see his dashboard where he can view a list of services he is currently enrolled in.
2) He can order cloud services according to requirements for given period. Also can pre-order for future requirements.
3) He is also provided with the option of account settings in which he can directly update his profile or services.
4) Payment plan option is also provided on the dashboard where a user can see the payment due and also the payment history.

Sign-in as Cloud Service Provider:-

1) After sign-in as a cloud provider can see current, past and future purchases of cloud services from cloud aggregator.
2) Add type of machines or modify configuration of existing machines i.e. AWS' micro instance, mini instance
3) See payment history and payment due from cloud aggregator.

Sign-in as Cloud Service Aggregator:-

1) After sign-in as a cloud aggregator can see current, past and future sales of cloud services and also billing from CSPs.
2) Can add/remove/modify CSPs and customers
3) Decide ratio of purchases from CSPs and also decide final pricing.
4) Gather customer requirements and accordingly purchase cloud services from CSPs.