# BidEngine-Hack-a-thon

## Problem :

Create prototype of an efficient bid engine, capable of handling concurrent users on properties.

## Duration :

2 Weeks.

## Team :

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## Assumptions :

- Inventory of properties are available in database.
- We are using secured network with authentication and authorization in place.
- Notification engine is working and only integration is required to initiate appropriate notifications to the clients.
- Implementation scope is to demonstrate Place Bid functionality only.
- Error messages and business compliance are not yet in scope.

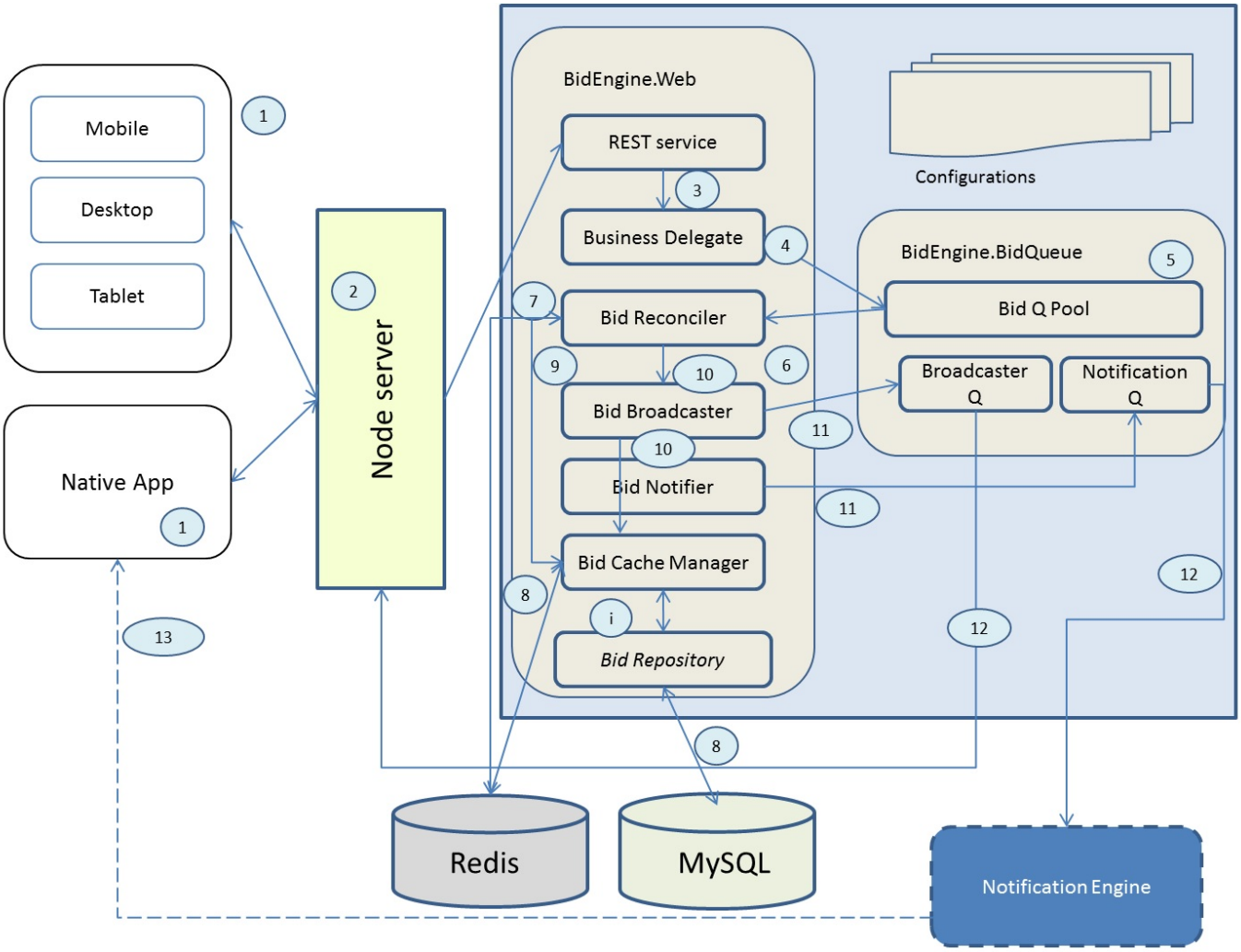
## Scope :

- Bid initiator module.
- Bid reconciling module.
- Bid Details broadcaster module.
- Notify Users through notification engine, Delivery of notification is out of scope.
- Monitoring and Audit capabilities of bidders.
- Appropriate exception handling.
- Provide flexibility and modularization to the system.

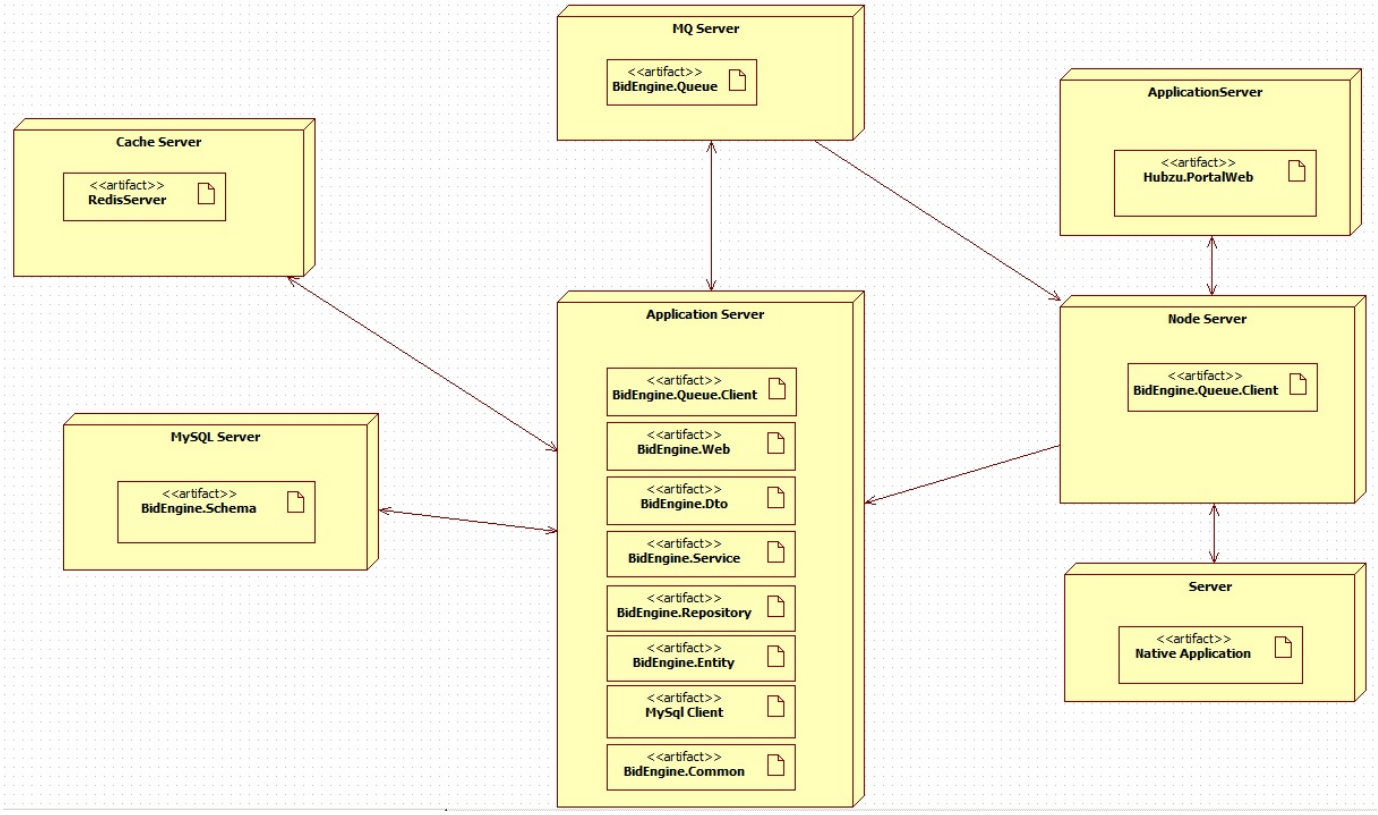
## Requirements :

- bidder project should allow users to
    - Bid on Inventory.
    - Multiple Customers should be allowed to bid on a single property at any given time.
    - Should allow functionalities like we have on Hubzu
        - Place Bid
    - Efficient and fast system
        - Modular design
        - Scalable product
        - Real time bidding experience
        - Flexible system.
        - Efficient monitoring and auditing capabilities
    - Notification to User
        - Use Notification Engine leverage
        - Capability to notify real time with real time error messages, informational messages
        - Broadcasting capabilities on SRP and PDP
        - Ability to broadcast and also serve users with specific user friendly guidance message to fulfill the bid activities.
    - ***Efficient handling of Concurrent Users without locking mechanism.***

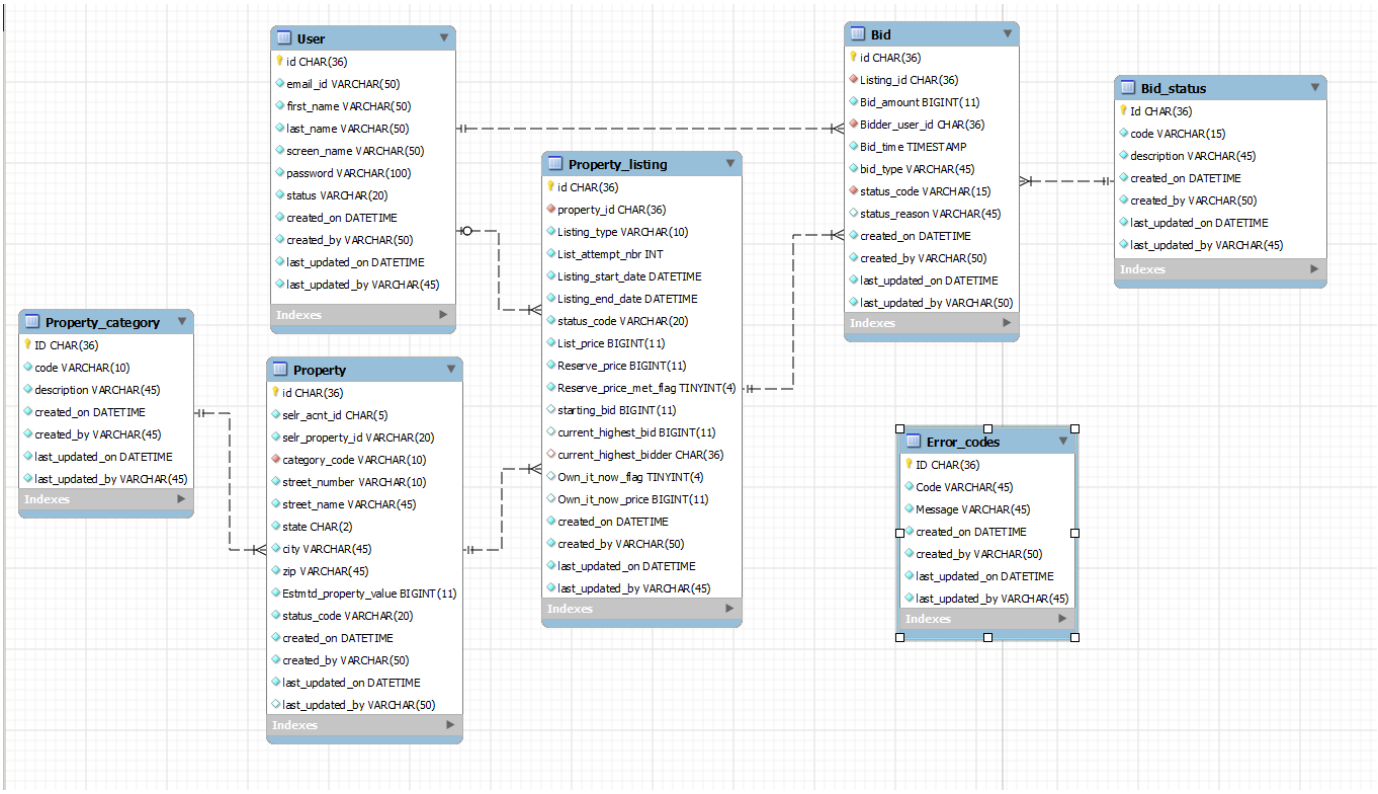
## High level block diagram :



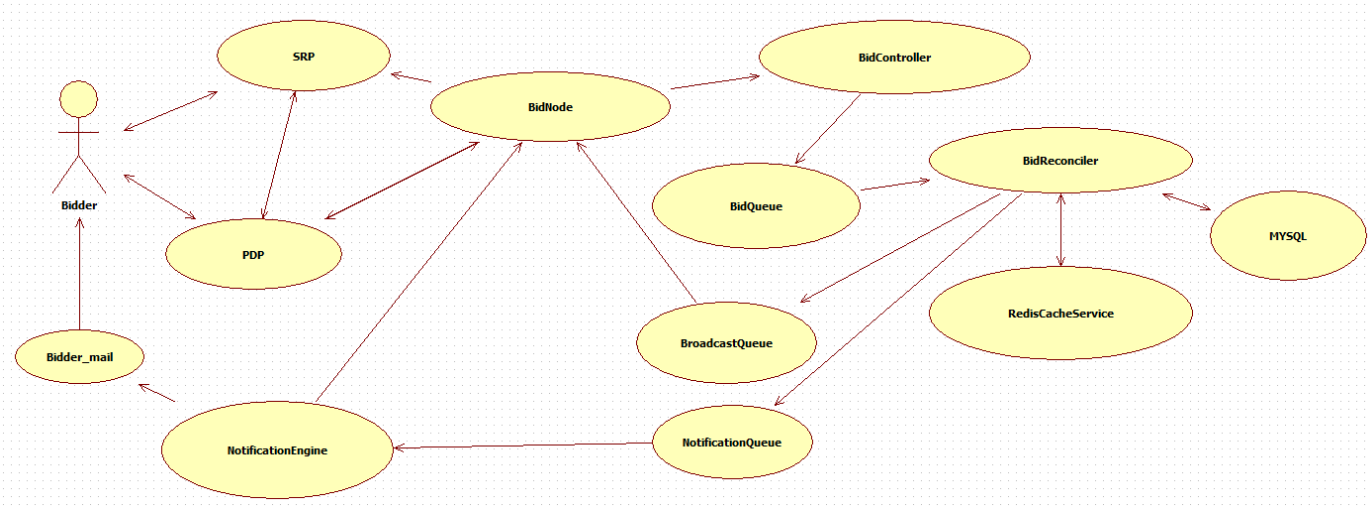

## Deployment diagram:



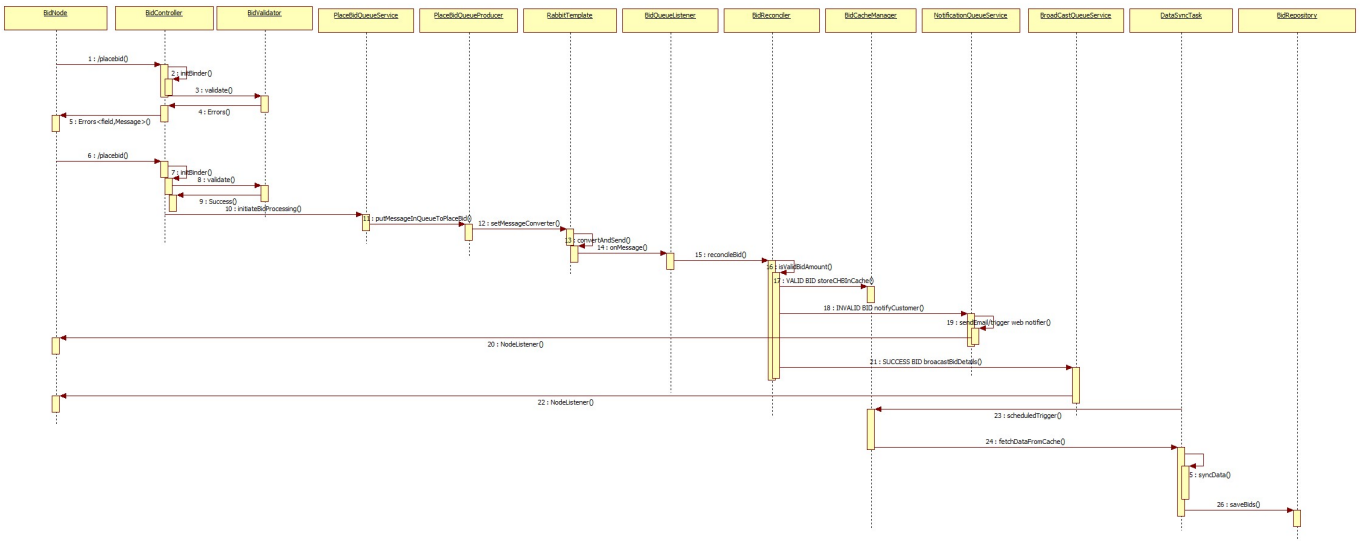

# Database and Tables :



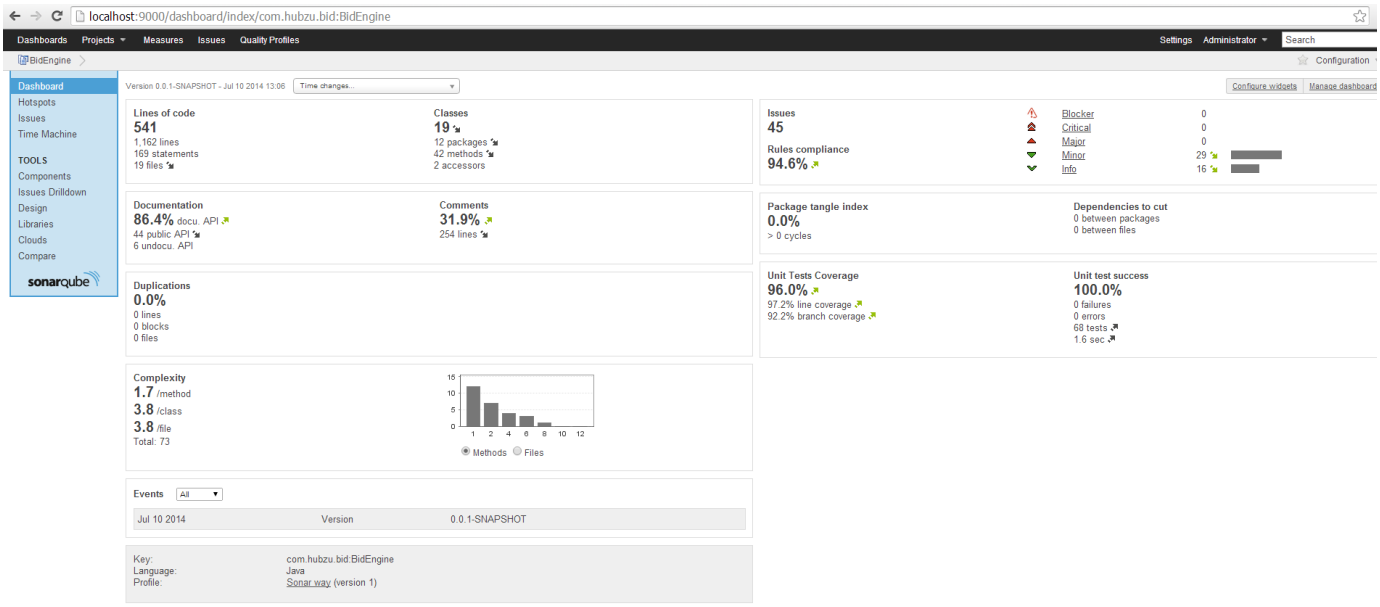
# Use Case Diagram :




# Sequence Diagram :




# Sonar Report :




# Tools and Technologies :

- RabbitMQ
- Redis Cache
- Node.js
- Angular.js
- Spring framework
- JPA
- JDK 1.7
- Maven
- Apache Tomcat
- MySql
- StarUML
- Sonar
- TestNG

# Future Work:

- DataSync between Redis and Mysql
- Integration with NotificationEngine
- Include
    - Own It Now
    - AutoBid
    - BackupBid

# SVN Location :

https://54.254.227.96/Hubzu_Training/Hackathon/Project3_BidEngine