



Architecture Specification

Version 2.0

History of the uPick'em Platform

- The uPick'em Football and uPick'em Squares applications are built on the uPick'em Platform.
- The uPick'em Football application actually has a long history dating back to 1996 when the application was first written as a web application using DHTML and Perl.
- The web application was rewritten using various versions of Enterprise Java and the Struts MVC framework from 1999 thru 2002. The web front end code was rewritten in 2007 replacing the Struts MVC framework with the JavaServer Faces MVC framework.
- The business logic was rewritten in 2010 replacing the Enterprise Java platform API's with the Spring Framework and deploying the web application to a physical Linux Server running the Apache Web Server, Tomcat, and MySQL database.
- The web front end code was deprecated and ported to the iOS and Android mobile platforms in 2013.
- The server side code was deployed to the Amazon Cloud in 2014 and the OpenShift Cloud in 2015.

Technologies That Power the uPick'em Platform

- The uPick'em Platform is architected with state of the art open source technologies that enable the platform to scale and that are supported by millions of developers.
- The technologies that power the uPick'em Platform include:



Objective-C

eclipse



spring



Apache
maven

JUnit



Companies That Power the uPick'em Platform

- **Redhat OpenShift** for QA and Production Cloud Servers



- **Mailgun** for Email Server



- **Uptime Robot** for Uptime Server Monitoring



- **New Relic** for Application Performance Management  **New Relic.**

- **Fantasy Data** for NFL Sports Data



- **Flood IO** for Load Testing via a Cloud Server

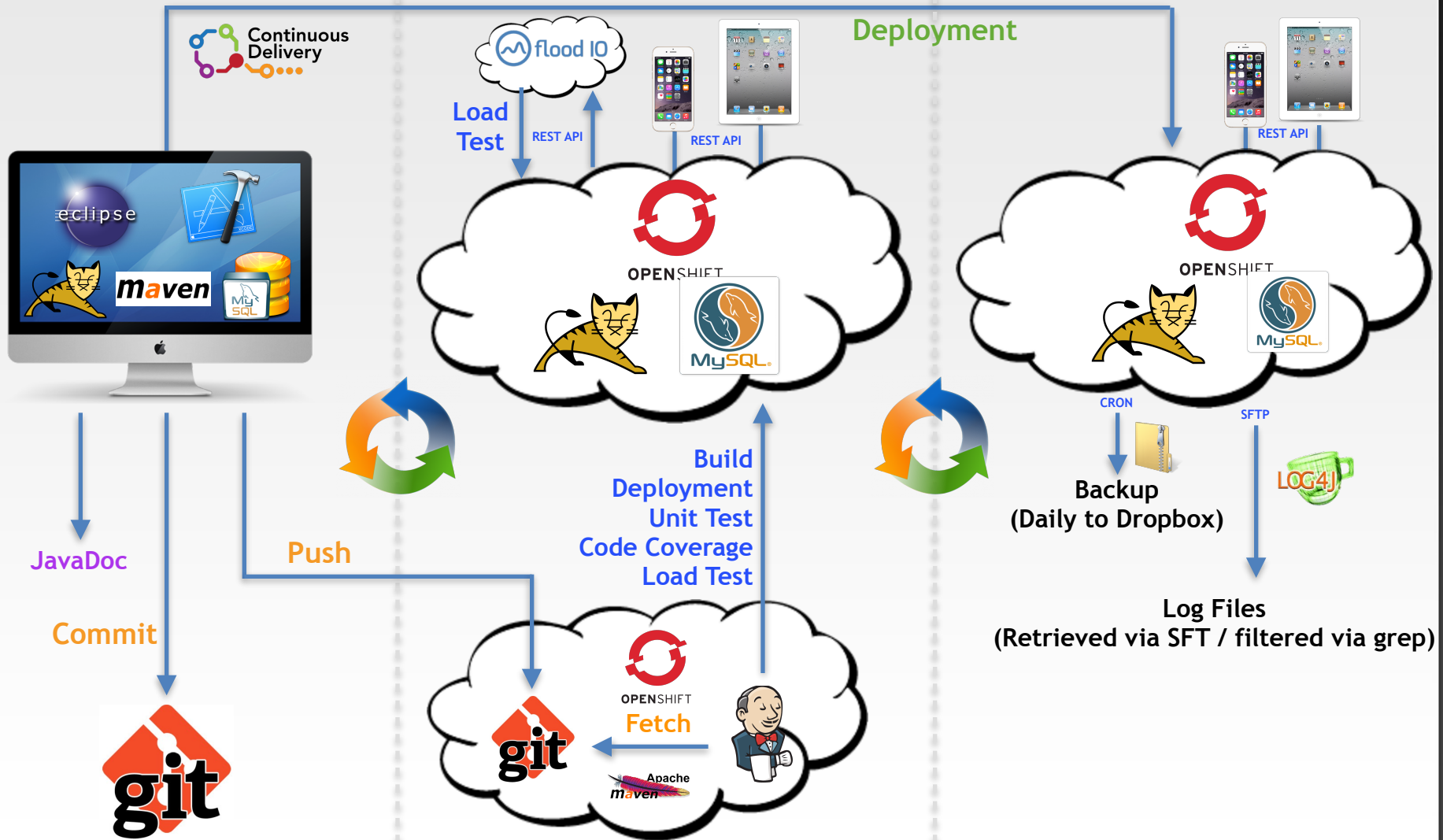


Continuous Integration / Continuous Delivery

Dev Environment

QA Test Environment

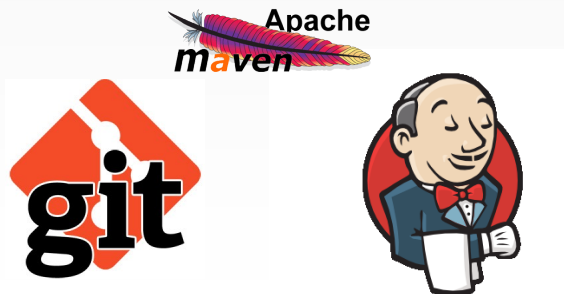
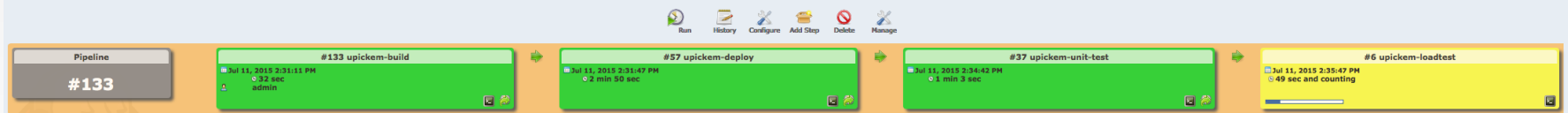
Production Environment



Cloud Powered CI/CD Pipeline

- Automated Jenkins CI/CD Pipeline to build, deploy, execute unit tests, code coverage, and execute a load test using a dedicated OpenShift Cloud QA Test environment.
- Manual deployment to OpenShift Cloud Production environment once all unit tests and functional tests pass in OpenShift Cloud QA Test environment.

Build Pipeline



Cloud Powered Code Coverage

Each build in the Automated Jenkins CI/CD Pipeline includes running a Unit Test Suite along with validating that Code Coverage metrics are still being met.

Coverage Report - All Packages

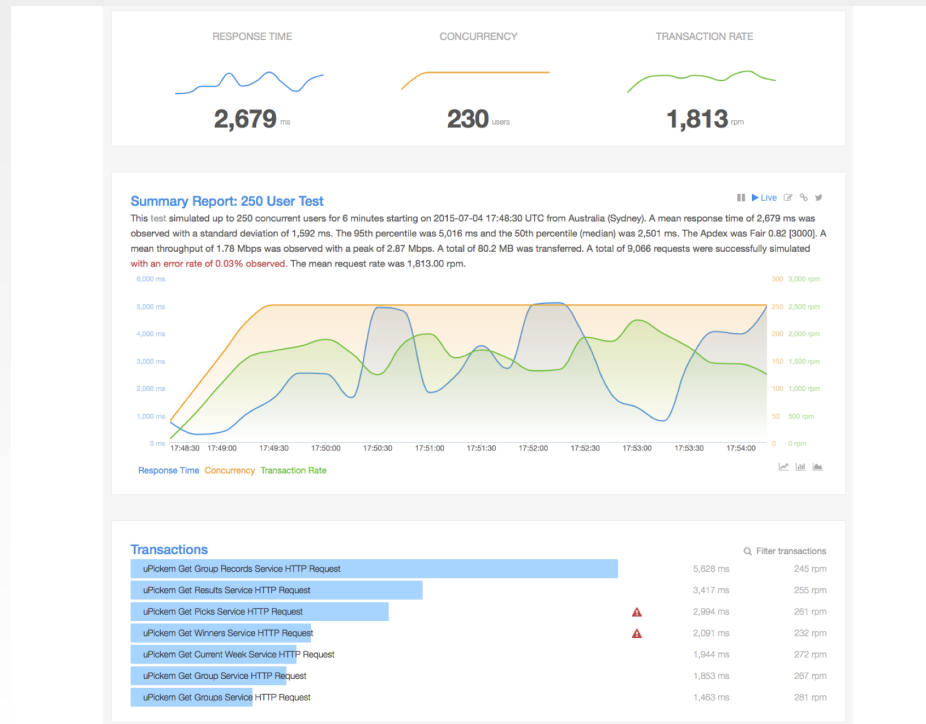
Package /	# Classes	Line Coverage		Branch Coverage		Complexity
All Packages	36	61%	1375/2238	55%	343/618	2.652
com.ontheedgesc.nfipool.beans	20	77%	376/488	67%	19/28	1.079
com.ontheedgesc.nfipool.business	3	55%	337/612	45%	135/296	4.574
com.ontheedgesc.nfipool.data	3	49%	236/477	43%	28/64	4.07
com.ontheedgesc.nfipool.exceptions	4	25%	4/16	N/A	N/A	1
com.ontheedgesc.nfipool.util	5	61%	153/250	53%	28/52	3.091
com.ontheedgesc.nfipool.web.service	1	68%	269/395	74%	133/178	9.538

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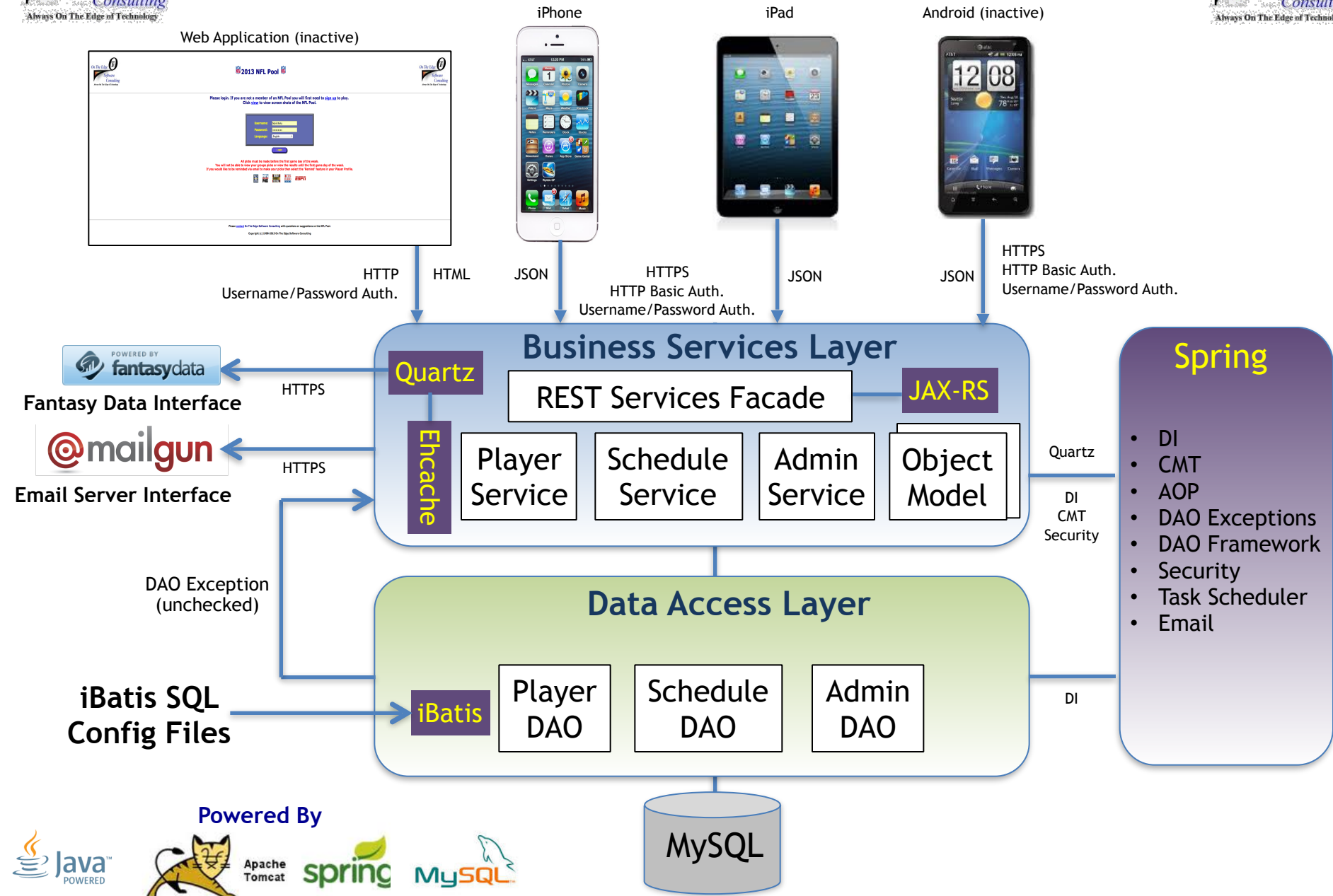


Cloud Powered Load Testing

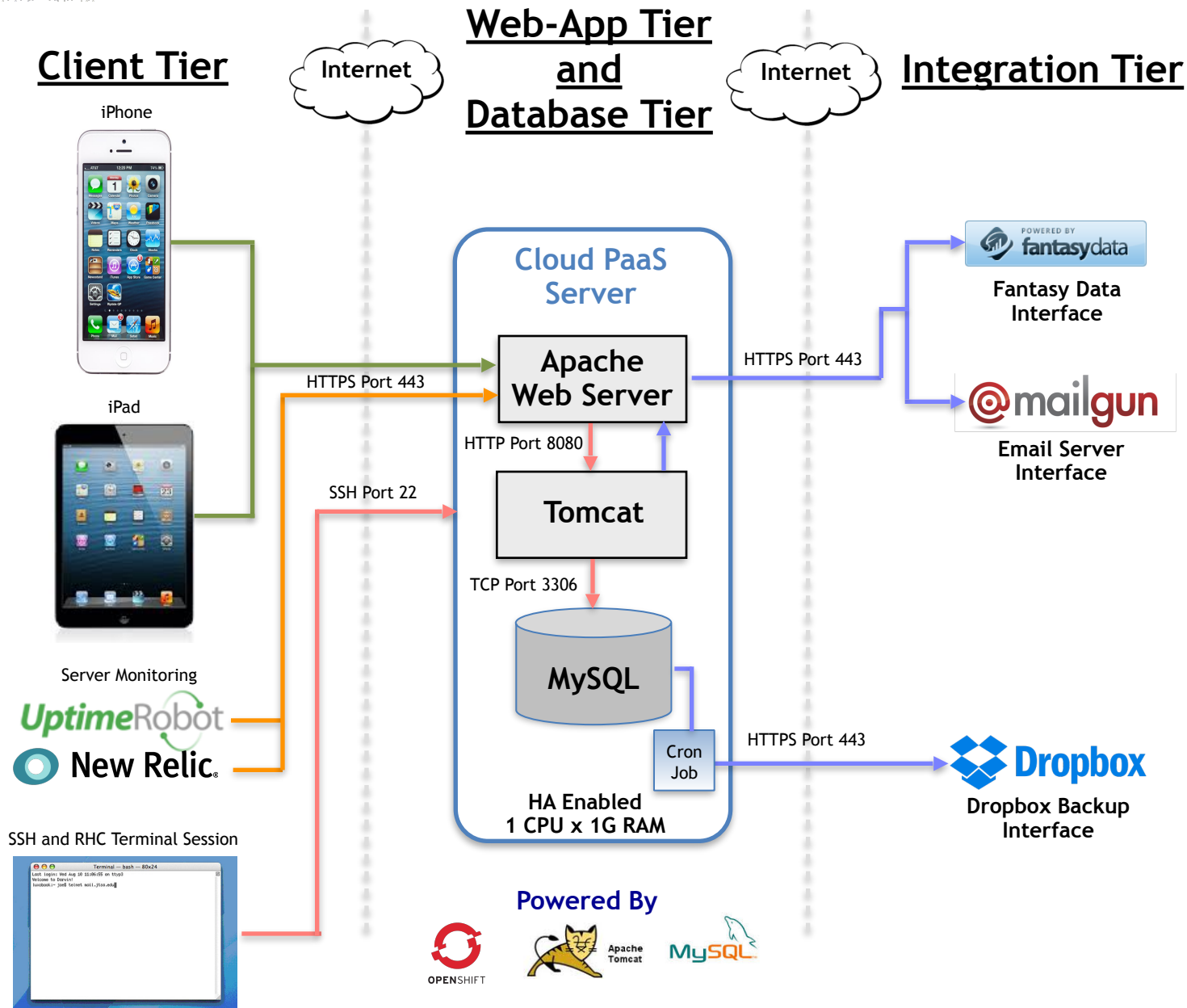
Each build in the Automated Jenkins CI/CD Pipeline includes running a 250 user JMeter Load Test using the Flood IO Cloud Load Test environment.



Logical Server Side Architecture

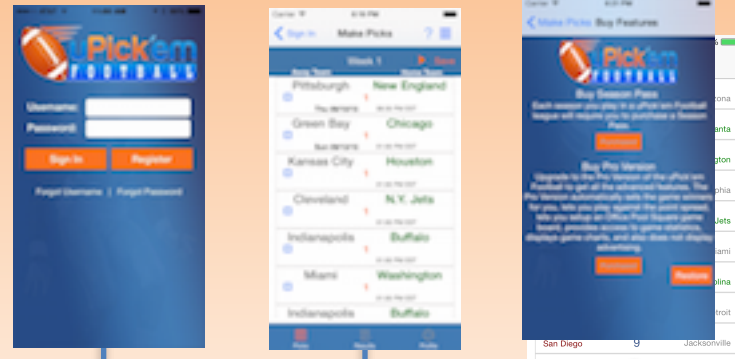


Physical Server Side Architecture



iOS Application Architecture

iPhone/iPad Presentation Layer



Views
(Storyboards)

Login
Controller

Make Picks
Controller

Other
Controllers

Controllers

Utility Services

Utility
Service

HTTP
Service

JSON
Service

Object
Model

Model

JSON

HTTPS

HTTP Basic Auth.

Username/Password Auth.

MVC Design Pattern
Delegate Design Pattern

Powered By



Software Development Kit (SDK)

The uPick'em Platform Software Development Kit (SDK) enables you to build your own Office Pool Sports applications. The Platform supports virtually any sport you desire including Pro Football, College Football, and Basketball. Depending on your needs the SDK comes in Silver and Gold packages.

	<i>Silver SDK</i>	<i>Gold SDK</i>
<i>API Documentation</i>	✓	✓
<i>Database Model</i>	✓	✓
<i>Installable Binaries</i>		✓
<i>Server Side Source Code</i>		✓
<i>iOS Source Code</i>		✓
<i>Support and Training</i>	<i>0 hours</i>	<i>80 hours</i>
<i>Cost</i>	<i>Free</i>	<i>Contact Us</i>