

Enterprise Application Development in the Cloud Workshop

Executive Deck v0.5



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Introduction

- The next generation Development Platform for developing Enterprise Applications will be browser and cloud based.
- This Workshop will demonstrate what this Development Platform will look like and give students a hands on opportunity to experience this platform.
- The Development Platform will consist of the following components:
 - ★ Cloud based IDE - Codenvy
 - ★ Cloud based Development Runtimes - Codenvy
 - ★ Cloud based Production Runtimes - Microsoft Azure and/or Redhat OpenShift or Google Cloud (on PaaS)
 - ★ Cloud based Source Control System - Github
 - ★ Cloud based Automated Build System - Redhat Openshift (using Jenkins)
 - ★ Cloud based DevOps Automation - Jenkins, JUnit, Maven, JMeter (using flood.io)



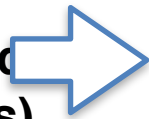
Student Learning Objectives

- The Workshop will focus on the following learning objectives:
 - ★ Teach students how to develop Enterprise Application using a Cloud based IDE
 - ★ Teach students how to deploy Enterprise Application to a PaaS Cloud
 - ★ Teach students how to build responsive applications using Bootstrap and Laravel Framework
 - ★ Teach students how to build REST based API's using Spring Framework and Tomcat/Wildfly/Jetty
 - ★ Teach students how to build Performance Load Tests using JMeter and Flood.io
 - ★ Teach students how to apply DevOps automation principles using Maven, JUnit, and Jenkins

Student Learning Opportunities

- The Reference Architecture used in the Workshop demonstrates MANY programming languages, frameworks, and tools already taught to our students as part of the GCU CSET Computer Programming program.
- The Reference Architecture used in the Workshop will provide a fantastic learning opportunity for the students by gaining hands on expertise with a number of additional new technologies.

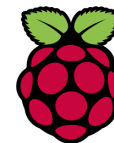
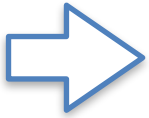
Apply Prior Learned Knowledge
(Languages and Frameworks)



New Learning Opportunity:
(Languages and Frameworks)



New Learning Opportunity:
(Cloud and Tools)



Student Activities

- The Workshop will be held as a series of weekly hands on Explore More sessions:
 - ★ Students will be given an introduction to the Reference Architecture and SDK
 - ★ Students will design and build the IoT back end based application using the Spring Framework
 - ★ Students will design and build the Reporting front end application using the Laravel framework
 - ★ Students will do all development in the Cloud using Codenvy and deploy to OpenShift/Azure:
 - ❖ A Github account can be setup for free
 - ❖ A Codenvy account can be setup for free
 - ❖ A Redhat OpenShift and Microsoft Azure developer account can be setup for free
 - ❖ The students will simply need a laptop with only a browser installed
 - ❖ Note: My Raspberry Pi and IoT application will be provided for use in the Workshop

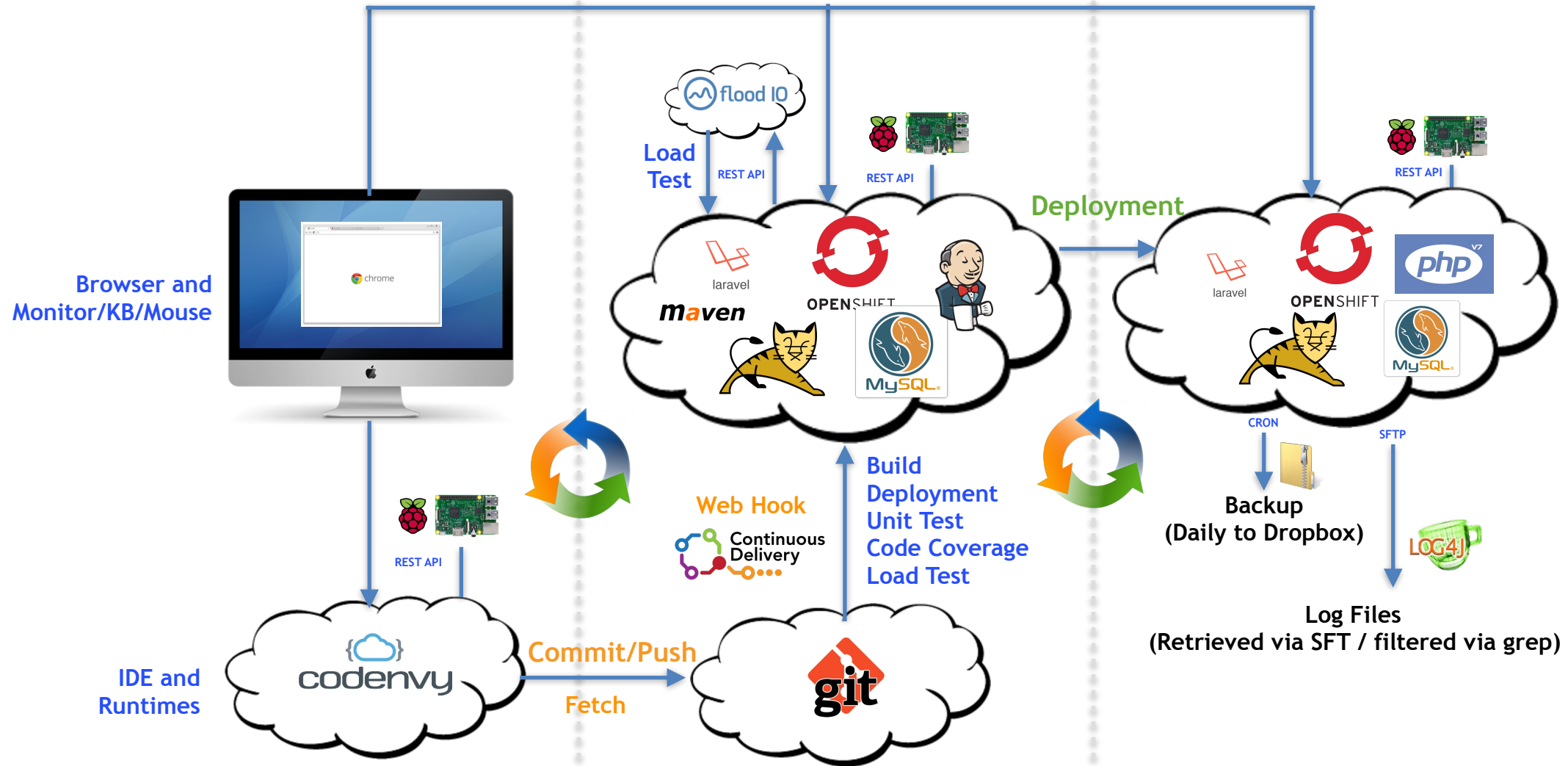


Cloud Based Development Platform

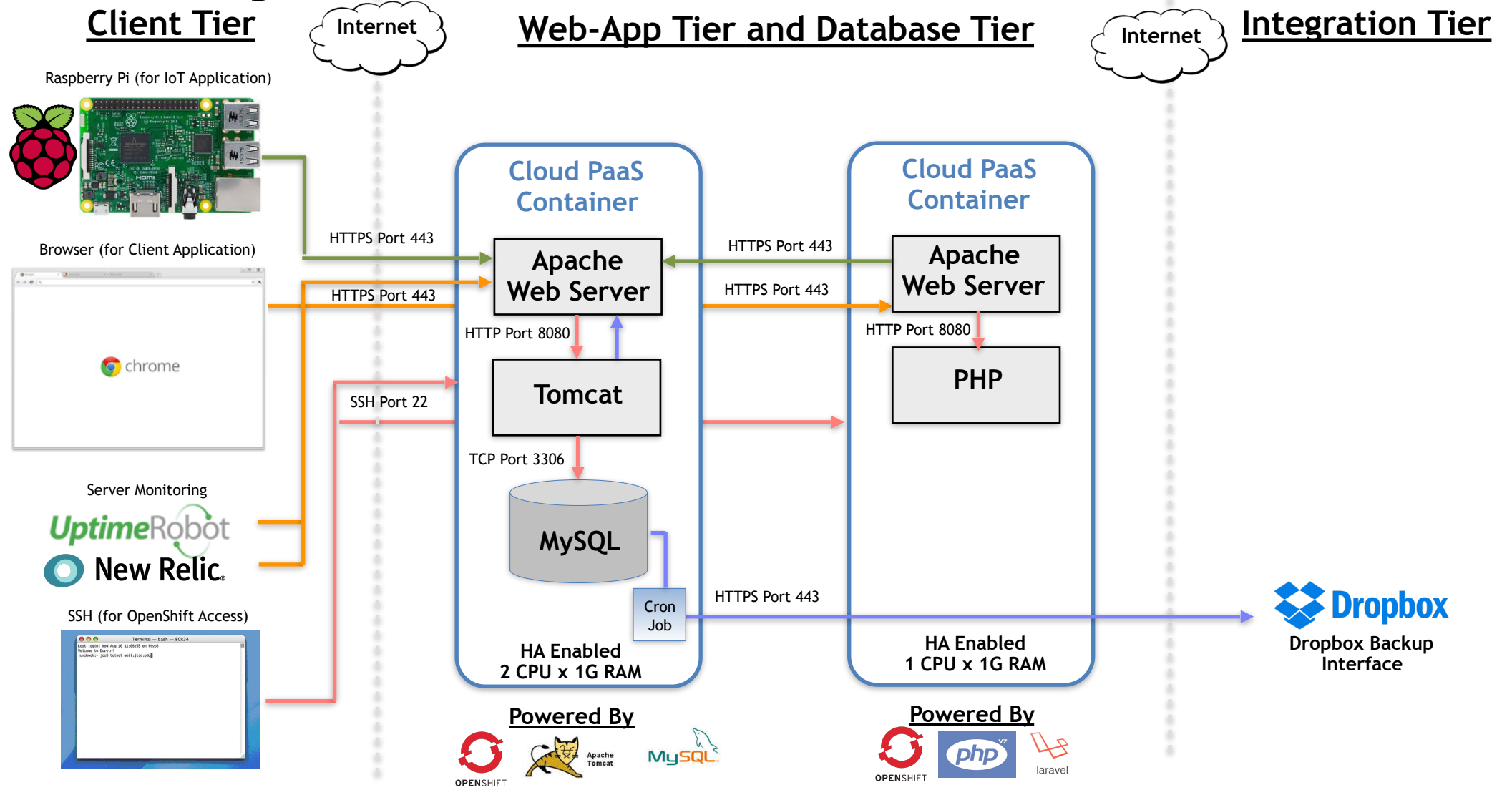
Development Environment

QA Testing Environment

Production Environment



Physical Cloud Architecture



DevOps Reference Architecture

