

Bolted System: Auto-deployment Cloud Project (Sprint 4)

Vidya Anandamurali

Pei Jia

Yuxi Jiang

Jiangnan Zou

Project Description (Recap)

Automate the deployment of Bolted which consists of:

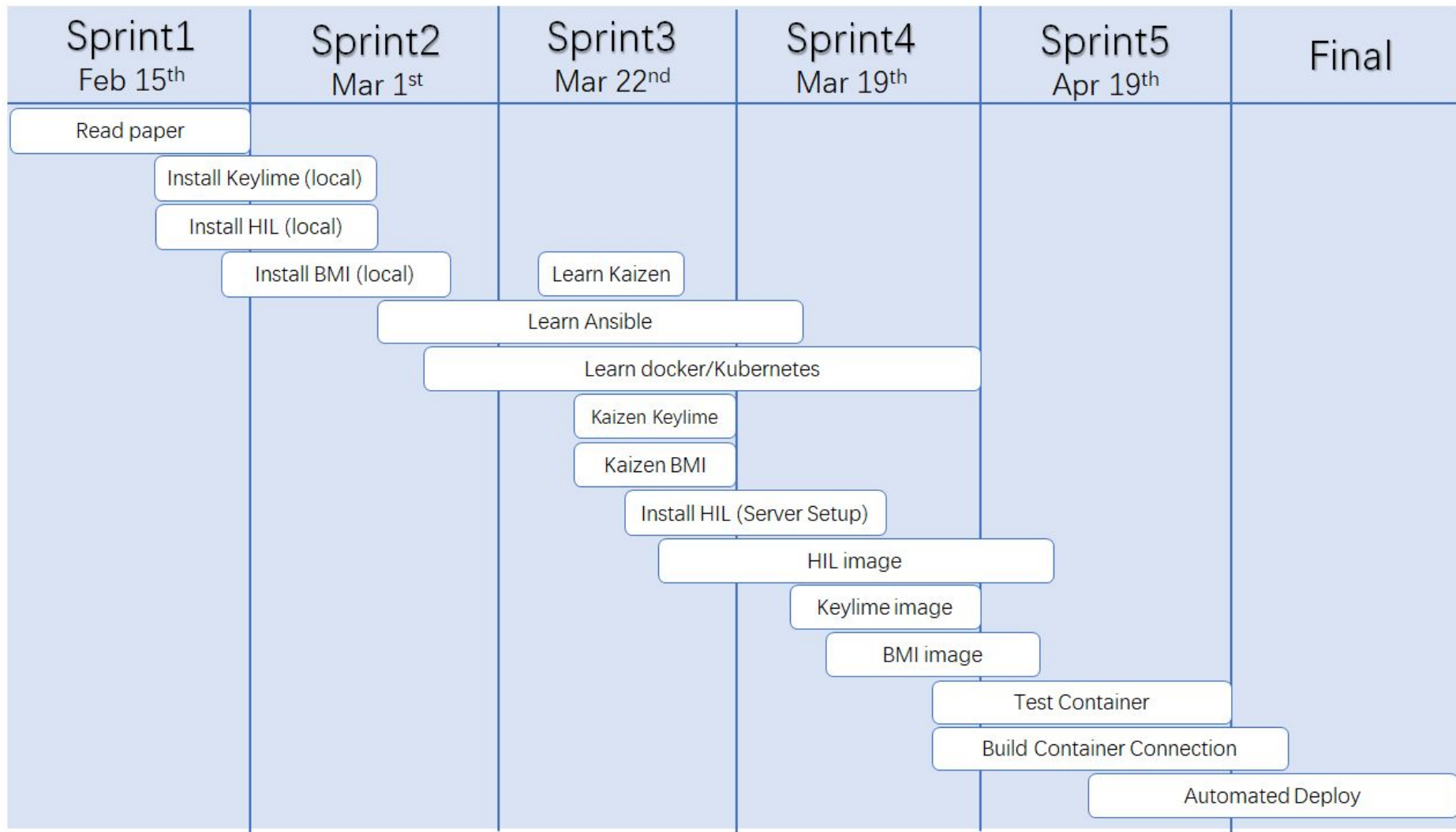
- Container image of each component of the Bolted system (HIL, BMI, Keylime and orchestration)
- Automated deployment of component containers on a cloud platform

Burndown Chart

2018 BUCS528 SECURE CLOUD AUTOMATED DEP... BU CS 528 CLOUD COMPUTING - DEMO 4 22 MAR 2018-0



Project Plan



Last Sprint Report

- Built container image of each component
 - Containerize Keylime
 - Containerize HIL
 - Containerize BMI
- Learned and built HIL server in production setup that is able to handle node request
- Built and tested communication between the system components
 - Keylime registrar, Keylime verifier and Keylime node
 - BMI and HIL

Project Progress (BMI)

- Rewrite BMI Dockerfile based on its obsolete version (Done !)
- Challenges and Solutions - Deeper study on the characteristics of container
 - service status control
 - User's privilege control
- Study on the interaction (IP and Port bridging) between **containerized** BMI and HIL
- Deploy BMI container on Kaizen (Ready for demo !)

Project Progress (Keylime)

- Learned Docker and Kubernetes (ALWAYS !)
- Build Keylime container image (DONE !)
- Test keylime image (All tests PASSED !)
- Uploaded Keylime image to Docker hub for later deployment use either Kubernetes/OpenShift (DONE !)
- Test the communication between each component of Keylime inside docker environment (DEMO later)

Project Progress (HIL)

- Full production setup installation running on Kaizen (DONE !)
- Build HIL server container image in production setup (STUCK !)

Main Encountered Problem

Can not use systemctl and run system service inside container. But Hil and BMI server need to use systemctl to run system service and daemon to set up the component.

Demo

Responsibilities for next sprint

- Finish build container image of HIL
- Learn Kubernetes
- Find a solution to deploy containers automatically
- Build necessary connection between components
- Test Keylime running on multiple VMs
- Test HIL and BMI containers running on multiple VMs

Thank you

Question ?