

Biweekly Status Report 3

SE 492: Team sddec19-24

DevOps Framework for IOT

Client / Faculty Advisor: Lotfi Ben Othmane

Team Members:

Yussef Saleh	<i>Team Leader</i>
Matt Bechtel	<i>Chief Designer / Engineer</i>
Brett Wilhelm	<i>UI Lead / Engineer</i>
Chakib Ahlouche	<i>Assistant Programmer / Engineer</i>
Ahmed Sobi	<i>Assistant Programmer / Engineer</i>

Git repositories for extensions mentioned below:

<https://git.ece.iastate.edu/sddec19-24/iot-deployment-manager/>

<https://git.ece.iastate.edu/sddec19-24/iot-deployment-service/>

o Bi-Weekly Summary

- Work has been divided up and development has begun. We have started implementing the remaining pieces of our new services, the iot deployment service and manager, as well as planned our specific modifications to the existing services, endor, koma, and yggdrasil.

o Past Week(s) Accomplishments

- Set up an AWS account for the deployment
- Added 'kill' functionality to the deployment manager, giving the user the ability to kill a running instance they have started.
- Added 'updateAndStart' route to the deployment manager. This pulls down new commits for a given repository, kills the existing running instance (if there is one present) and starts a new one with the updated code.
- Created a demo repository with a basic express server that serves a webpage. Added a post-update github hook on the remote of the demo repository which kicks off a deployment of the code in the repository via our deployment service and manager. The hook simply makes a 'updateAndStart' request to the deployment service.

o Pending Issues

- To include Jenkins with AWS deployment
- Collect logging information on running software started by the iot deployment manager. Send that data to the hammerio firebase for retrieval.
- Find a way to Collect statistics from Skadi

o Individual Contributions

<u>Name</u>	<u>Individual Contributions</u>	<u>Weekly Hours</u>	<u>Total Hours</u>
Yussef	*Finished getting all the requirements for docker environment *started on the plan for adding the existing system on Docker	4	52
Matt	Added new update and start functionality to the deployment manager and service. Thus is the route or request that will be used by a git to perform a deployment. The controller updates the given repository, kills the existing instance if present and then starts the newly updated code. Created demo repository with post-update git hooks pointing to our deployment service, making a request to 'updateAndStart' the code in the demo repository. (This allows a user to deploy their changes with a simple git push, allowing for easy deployment by devs). Added more process management capability to the deployment manager, that is, when a process is started through the manager, the user can request the manager to kill that process.	9	80
Brett	Set up locally-hosted frontend, spent more time learning about the underlying code and began creating a new page for the site.	2	49
Chakib	Worked on setting up the AWS account , along with playing on setting node.js deployment to our AWS account using web request and the AWS library .	6	55
Sobi	Went through the design documentation and project plan. Familiarized with the existing code repositories and their functionalities. Also learned more about the IoT-deployment manager and services. Formulated a task plan with team members to work on the deployment manager and service.	5	15

o Plans for Next Week

- Perform a full deployment, via a git hook, of the 'Fleet Management' software.
- Begin addition of user management to the deployment service (utilize existing user management present in endor)
- Add a device DB table to the hammer-io DB. Each device will have a foreign key to the user who owns it).

o Summary of Advisory Meeting

- Demoed new git push deployment (hooks are now set up on a test repository to send a request to our new deployment service, to perform a deployment of the new code, upon a push to the remote).
- Discussed the next steps for the project
 - Integrate user management from endor into the deployment service
 - Research and plan for the case where a user wants to use jenkins for deployment, i.e. a web server deployment job through jenkins with logs and statistics being surfaced through hammer-io
 - Use fleet management as test case for git push deployment.