

Biweekly Status Report 4 (10/11/19 - 10/25/19)

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

- Week 1 we worked on demoing our iot-deployment functionality to our client, performing a deployment of a specific piece of software to a remote device by 1) initializing the deployment via requests to the iot deployment service 2) pushing a change to the remote repo which had git hooks present to make a request to the deployment service to perform the deployment of the newly updated code in the repository.
- Week 2 we worked on API and UI functionality surrounding the users ability to view and create deployments. The deployment manager API saw the addition of 2 new routes allowing the frontend to query, or list, the status of a user's deployments. For the UI work, we added a basic 'IOT deployments' page, which should allow users to create, and monitor basic information about their deployments (status, time up, etc).
We also spent time working on storing a 'deployment's' logs on firebase. This is done by setting up a firebase collection and then pushing logs collected from each of the running deployments to it.

o Past Week(s) Accomplishments

- Added 2 new endpoints to the 'iot deployment manager' and 'iot deployment service' which will querying about the status of a given deployment.
- Demoed a deployment through our iot deployment service and manager via git hooks.
- Added 'IOT deployment' UI page.

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
- Add user authentication to the iot deployment suite
- Add device schema to the sql database so device records may be written to disc

o Individual Contributions

<u>Name</u>	<u>Individual Contributions</u>	<u>Weekly Hours</u>	<u>Total Hours</u>
Yussef	Set up the system on a new device Fixed some errors while running locally Started on migrating the system to Docker	9	61
Matt	<p>Added swagger documentation to the deployment manager (service should be very similar just have not gotten around to adding it). The documentation is auto generated from comments within the manager's code via the swaggerJsDoc package. The swagger documentation is an interactive webpage that is served at the route '/api-docs' whenever the manager is ran, allowing other developers to view and make requests to the API without needing to figure out the nature of each request by looking at the source code.</p> <p>Once the swagger generation/webpage was functional, I converted all of the route comments in the manager to yaml notation so the the full manager API would display within the documentation.</p> <p>I also added 2 new endpoints to the deployment manager, 'status' and 'deployments'. The 'status' endpoint will return the deployment record for the piece of software that the user requested. The 'deployments' will return all of the active deployments for that user.</p>	10	90
Brett	Added capability to get status of fleetManagement project to local Yggdrasil.	8	57
Chakib	Added data tables to firebase DB, studied the koma layer to divide and organize data gotten from the lot manager	9	64
Sobi	Played with firebase db, went into a deep understanding of DevOp methodology.	6	21

o **Plans for Next Week**

- Clean up the new UI functionality
- 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**

- N/A - Client was unavailable for meeting