

EE/CprE/SE 491 WEEKLY REPORT

1/27/2020 – 2/13/2020

Group number: 12

Project title: Applying Blockchain to Energy Delivery Systems

Client &/Advisor: Grant Johnson (Client), Manimaran Govindarasu (Advisor)

Team Members/Role:

Anthony Cosimo: Test Engineer

Jacob Dawson: Project Manager

Keegan Bloedel: API Architect

Katherine Ringgenberg: UI Architect

Steven Rein: Blockchain Architect

Dakota Moore: Cybersecurity Manager

○ **Weekly Summary**

Completed the configuration of a production environment running all aspects of our project on the virtual machines provided. Began in-depth discussions on specific formation of use cases and data models.

○ **Past week accomplishments**

- Anthony Cosimo:
 - Attended the meeting with Gelli, worked with Steven and Keegan.
- Jacob Dawson:
 - Reviewed Merge Requests, attended meetings with Gelli and Burhan regarding VM provisioning and use case criteria.
- Keegan Bloedel:
 - Attended a meeting with Burhan regarding VM. Worked with Steven on trying to help deploy to the VMs
- Katherine Ringgenberg:
 - Edited logic of some existing React components, rewrote and added to existing tests, added tests for all other components components
- Steven Rein:
 - Deployed blockchain network and chaincode to PowerCyber VMs, fixing communication issues between all nodes. Integrated the

blockchain network with the API and integrated the API with the UI.

- Dakota Moore:
 - Set up the file structure to contain our deliverable documents for the semester, including importing templates and personalizing them for our project. I also began reviewing the network configurations for the VMs the BC is hosted on.

○ **Pending issues** *(If applicable: Were there any unexpected complications? Please elaborate.)*

- Anthony Cosimo: No unique issues.
- Jacob Dawson: No issues.
- Keegan Bloedel: No issues.
- Katherine Ringgenberg: none
- Steven Rein: No pending issues.
- Dakota Moore: No project issues.

○ **Individual contributions**

| <u>NAME</u> | <u>Individual Contributions</u> <i>(Quick list of contributions. This should be short)</i> | <u>Hours this week</u> | <u>HOURS cumulative</u> |
|-----------------------|--|-------------------------------|--------------------------------|
| Anthony Cosimo | Catching up, VMs | 8 | 15 |
| Jacob Dawson | Discussed above | 8 | 20 |
| Keegan Bloedel | Discussed above | 10 | 16 |
| Katherine Ringgenberg | Discussed above | 8 | 16 |
| Steven Rein | Blockchain network and demo chaincode, small API changes, small UI demo to prove connectivity. | 64 | 80 |
| Dakota Moore | Discussed Above, set up documents framework and secured network settings. | 12 | 14 |

○ **Comments and extended discussion**

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○ **Plans for the upcoming week**

- Anthony Cosimo: Initialize smart contracts
- Jacob Dawson: Updating API endpoints, initializing smart contracts depending on if specific use cases are defined.
- Keegan Bloedel: Work with Jacob on establishing API endpoints and setting up smart contracts. Constructing use cases from the meeting with Burhan. Start to write new code to help implement the new use cases
- Katherine Ringgenberg: restart and finish connecting ui to api (api calls in the ui)
- Steven Rein: Gather newly defined requirements for blockchain network, begin work on deployment of improved blockchain network, hopefully finish by next report.
- Dakota Moore: I plan to finish going through the VMs checking for vulnerabilities as well as finishing reviewing the UI for possible vulnerabilities. I'd also like to work a little more on future documents.

○ **Summary of weekly advisor meeting**

Friday, 7 February - API, UI, and BC network deployed, going into a phase of domain knowledge gathering on intended use cases.