**Sprint Report Document**

IBM

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**1. Sprint Planning Meeting –** 4/11/15

**1.1 Sprint Backlog**

* Backlog currently contained within the Github website:
  + https://github.com/the0ldknighte/IBM\_Capstone\_Project

**2. Sprint Review Meeting – 4/27/15**

**2.1 Customer Demo**

* Grafana is correctly configured
* Graphite-web correctly configured
* Carbon Daemon and whisper storage working
* Tests run on Jenkins and sent to Grafana
* Grafana dashboards have been saved with personalized data
* Communication across all components
* Ansible playbooks complete

**2.2 Stakeholder Involvement Review**

* Mentors
  + Have kept up to date with project progress
  + Have answered any relevant questions that need to be answered via Email
  + Given us a second VM for testing purposes regarding Ansible
* Scott
  + Updated documentation for audits, Project Closure beginning sprint report, Specification Document (Project Closure, Requirements (User Stories), Test Plan, User Interface)
  + Wrote weekly reports
  + Grafana installation & file structure research
  + Set up correct graphite file dependencies
* Madeline
  + Worked on testing in Jenkins to send different metrics to Grafana
    - Coverage Reports
    - Nosetests through JUnit
* Sprint Reports, Project Specifications Document (Project Vision and Objectives, Project Planning, & Project Tracking, Project Closure)
* Work with connecting Jenkins server to graphite and plugins to feed data into graphite
* Worked with sending different types and amounts of test data
* Brandon
  + Completed Ansible Playbooks
    - Tested
    - Ready for deployment
  + Specifications Document (Design Document)
* Adam
  + Project Postmortem, MS Project plan, Project video, Specifications Document (Design)
  + Set up a home computer to use as our Graphite server
  + Installation of graphite-web
  + Work with connecting Jenkins server to graphite and plugins to feed data into graphite
  + Configured Grafana and graphite to run behind apache
  + Fixed back-end storage error for Grafana

**2.3 Data Management Review**

* Currently there is no formal data configuration provided, all used data is test data that does not require formatting based upon the project specifications

**2.4 Requirements Review**

* Two VM’s supplied by IBM for deployment testing
* Graphite server
* Grafana UI layer instead of graphite-web
* Jenkins servers for each group member
* Ansible instead of Chef for automated deployment

**2.5 Progress Review**

* Completed:
  + Research on all technologies as well as their data structures
  + Jenkins Servers set up for each member
  + Graphite correctly installed
  + Grafana correctly installed
  + Data passed from Jenkins to Graphite to Grafana
  + Dashboards saved with different types of test data from Jenkins
  + Ansible playbooks ready for deployment
* In progress:
  + Finishing up documents
  + Write final presentation

**3. Sprint Retrospective Meeting –** 4/21/15

**3.1 Top Highlights**

* New technologies better understood
* All components installed correctly
* Communication across components resulting in viewable graphs with relevant data
* Ansible playbooks deploying correctly

**3.2 Top Lowlights**

* VM provided by NDSU blocking our project traffic
* Technologies not understood (ex. Linux operating system, apache, graphite, etc.)
* Issue with Grafana back end storage from the deployed version of Grafana

**3.3 Reflection on Improvements**

* Increased communication
  + Group meetings
  + Emails
* Continued work with understanding Grafana, Graphite, and Jenkins and their capabilities
* Researching different ways of generating data that Grafana will save and display

**4.**

**4.1 Recommendations for Future Projects**

* Communication is very important
* Well-defined roles

**4.2 Project Size and Effort Estimates**

**4.2.1 Size Estimates**

For our project we had little idea how to estimate the amount of work since most of it was new to all of us. We estimated that the research portion and the configuration/installation portions would be the largest. This turned out to be true for us. The bulk of the time was spent learning about the various technologies we would be using and how to configure them. We also estimated that our project would have little to no coding involved. There turned out to be even less coding involved than we originally thought. We had assumed that there might be a little bit of Python coding, when it turned out there was not any. There was some writing involved in the Ansible playbooks, however.

The process altogether took a bit longer than we had expected. We had been hoping to have Grafana running and displaying data by midterm, then have the rest of the time to perfect it and write our playbooks. We were not quite finished by midterm, however in several weeks later we had completed this aspect. There were also a few instances where we had underestimated (mentioned previously) as well as a few surprises we encountered while working that set us back. For instance, we initially had installed graphite without the numerous package dependencies that it required. We have managed to, for the most part; create relatively accurate estimates for the amount of work.

**4.2.2 Effort Breakdown**

|  |  |
| --- | --- |
| **Project Area** | **% Effort** |
| Training | 60% |
| Requirements | 5% |
| Design | 15% |
| Coding | 0% |
| Testing | 10% |
| Mid-term and Final Reports | 10% |