

# **Weekly Report for Week Ending 03/29/2013**

## **IBM - OpenStack**

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### **Status Summary**

This week we concentrated our efforts on continuing to work on Quantum, Hadoop, and Heat. We also have been working on how-to documentation with each component's implementation. This week we were able to meet with Michael and IBM twice. The first meeting we discussed possible methods with fixing Quantum and the game plan for the week. Our second meeting was to recap what we've done over the week and to address any questions that may have accumulated over the week. We've also started the sprint 3 reports and almost have them complete.

### **Top Highlights**

- Got a semi-working OpenStack instance on physical hardware
- Got a simple Heat script working
- Discovery of Savanna - OpenStack Elastic Map/Reduce solution

### **Top Lowlights**

- One of our development Devstack environments crashed and took our work with it.
- The development environment on physical hardware isn't fully functional yet.

## Accomplishments vs. Plan

- Accomplishment
  - Research and learned Heat and AWS Template format.
  - Owner: Justin
  - Status: Mostly-Completed
- Accomplishment - OpenStack on physical hardware
  - Grizzly has been installed on the physical hardware, though not all components are working yet. Cesar and John spent most of the week debugging errors and trying to get all components working.
  - Cesar also setup a physical machine running Cinder, but after running Linux updates there is a problem with the kernel so we're going to have to rebuilt the machine.
  - Found out that the Ubuntu packages of Grizzly are very buggy.
  - Owner: Cesar
  - Status: In progress - New plan task to rebuild this environment.
- Accomplishment - Achieved a stable OpenStack Folsom build
  - John got an almost entirely working OpenStack Folsom environment working without using devstack. Quantum is installed and is allowing networks to be built, however there's still an issue between the compute node and controller as building instance VMs hangs at the scheduling stage.
  - Owner: John
  - Status: In progress - John hopes to resolve the scheduling issue and be able to have valid configuration files for future reference.
- Accomplishment - Savanna
  - Jack struck gold and found an elastic Map/Reduce OpenStack component called Savanna that will achieve everything that we've been working on for deploying Hadoop.
  - We're very excited to begin using this as it will be a much better long term solution since it will continue to be developed and supported after the conclusion of our capstone project.
  - Owner: Jack
  - Status: Complete

- Plan - Rebuild OpenStack on physical hardware
  - Since Grizzly was overly buggy, we're going to rebuild our development environment this weekend on Folsom. We hope to have Quantum fully operational by the end of the weekend.
  - We have every intention of upgrading this environment to Grizzly in a couple weeks as Grizzly officially releases next week.
  - Owner: John and Cesar
  - Status: In work queue to begin on Saturday 3/30/2013.
- Plan - Deploy Savanna
  - We will deploy Savanna and begin testing it.
  - We have tested in in our Devstack development environment but need more resources to build a Hadoop cluster.
  - Owner: Jack
  - Status: Pending a working OpenStack environment.
- Plan - Document how to deploy and use Savanna
  - Document Hadoop deployment from the perspective of an administrator and end user.
  - Owner: Jack and Justin
  - Status: Pending Savanna working on the physical environment.

## **Goals for Next Week**

- Working Folsom environment on physical hardware including Quantum and possibly Cinder.
- Working Savanna.
- In-class status update and all related documentation.

## Risks

| ID#  | Status   | Risk                               | Owner | Probability / Priority | Impact                     | Trigger  | Recommendation / Resolution  |
|------|----------|------------------------------------|-------|------------------------|----------------------------|--|--|
| R001 | Complete | Unable to complete design document | Team  | 100%/Medium            | Will set back our progress | Decision with team and mentors during next meeting | We will complete this document by Monday evening for review on Tuesday |

## Issues

| ID#  | RID# | Status                 | Issue                        | Owner | Due Date   | Impact  | Recommendation / Resolution |
|------|------|------------------------|------------------------------|-------|------------|---|-----------------------------|
| I001 |      | Resolved on 02/05/2013 | Need access to more hardware | Team  | 02/05/2013 | Having more hardware will provide us a system that is in a controlled environment | Contact Robert              |

| <b>Project Success Indicator</b>  | <b>02/<br/>01</b> | <b>02/<br/>08</b> | <b>02/<br/>15</b> | <b>02/<br/>22</b> | <b>03/<br/>01</b> | <b>03/<br/>08</b> | <b>03/<br/>15</b> | <b>03/<br/>22</b> | <b>03/<br/>29</b> | <b>04/<br/>05</b> | <b>04/<br/>12</b> | <b>04/<br/>26</b> | <b>05/<br/>03</b> |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Planned milestone events are being met  | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Budget is under control   | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Quality control results are within specifications                               | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Change control process indicated minimal requests for change                    | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Project resources are being supplied per schedule and skill levels are adequate | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Project team appears to be cohesive and reasonably happy                        | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Users seem satisfied with progress of the work                                  | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Top management remains visibly supportive of project goals                      | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Third-party vendors are delivering quality items on schedule                    | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Risk events are under control and nothing unusual is appearing                  | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Project training program is progressing according to plan                       | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |
| Relationships with support groups appear to have no identifiable issues         | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                | OK                |                   |                   |                   |                   |