Saunders, Jerren

FY'18 Year-End Performance review (1-Mar-2017 - 28-Feb-2018)

Systems Software Developer II

Organization: QNX Wireless Framework (Karen [redacted])

Manager: Karen [redacted]

Location: Cary, CG2

Evaluated By: Karen [redacted]

03/01/2017 - 02/28/2018

Overall

Manager Overall Evaluation

Rating: Fully Meets Expectations

Goals

FY18 QNX Revenue

Line up from [redacted]Revenue goal of [redacted] for FY18 (45% total weight)

Line up from [redacted] goal of building products to sustain long term growth of revenue but also ensure we continue short term revenue through billable services dollars via CE (Custom engineering), CSP (Customer service Plan) or Priority Support. Ensure development and delivery of gated projects. Determine important roadmap features to maintain and grow customer base.

[redacted] Benchmark testing - Participate in team to define objectives, determine internal and 3rd party test suites, run tests, gather and present results.

Due Date: 02/28/2018 Status: In Progress Completion Date:

FY18 QNX Revenue

Line up from [redacted] Revenue goal of [redacted] for FY18 (45% total weight)

Line up from [redacted] goal of building products to sustain long term growth of revenue but also ensure we continue short term revenue through billable services dollars via CE (Custom engineering), CSP (Customer service Plan) or Priority Support. Ensure development and delivery of gated projects. Determine important roadmap features to maintain and grow customer base.

FY18 Delivery Accuracy

Line up to [redacted] goal of [redacted]% FY18 Delivery Accuracy (10% weight)

Line up to [redacted] goal of measure development teams against estimates and project commitment dates. Report on progress against project commitments through the use of metrics. Meet project commitments that are gated or provided as part of Job work orders in Services. Manage partner relationships needed for QNX product delivery

Testing: Test support for IDE/ tools – Complete timely testing and support of IDE/tools work as needed by Ottawa counterpart. Follow through with defect Jiras and verification of fixes.

Due Date: 02/28/2018 Status: In Progress Completion Date:

Performance Evaluation Questions

Highlight Key Accomplishments/Achievements:

Manager Evaluation

Comment: Jerren's contributions this year have been focused on testing the [redacted] IDE and improving test infrastructure and automation. His work on [redacted] IDE testing involved significantly expanding the scope of test coverage and stabilizing the test suite. His work on stabilizing the test suite resulted in more reliable test runs and reducing the total runtime! He successfully completed the necessary test development and testing towards the [redacted] IDE which allowed for QNX to release 2 GA patches for the [redacted] IDE.

Jerren added a secondary task to his work scope involving database development to store test results and generate trending information. Jerren tackled this new task with lots of ideas and turned those ideas into a functioning prototype. He is adept at automation, scripting, databases and application development. Jerren was able to leverage previous work in these areas towards the BlackFishDB development.

His flexibility and initiative are valuable and have allowed him to take on new challenges and delivery results for QNX, contributing to the corporate goals of delivery accuracy and QNX revenue.

Jerren also serves as the surrogate IT support for the site. Many folks use his skills in this area, and it is very beneficial to the team and site. Jerren also submitted a couple ideas to go/bbideas which gained traction with the patent team. Nice job Jerren!

Employee Evaluation

Comment: I Began working with the [redacted] team in Ottawa, to write and fix test for the IDE. Dozens of new test cases have been written and many others fixed to become more stable. One notable accomplishment during this work was that many existing test that were dependent on communication with a target were inconsistent because of problems automating communication with the target via [redacted]. Also, many test that I was tasked to create had not been written before because they required a lot of setup work to be done on the target first (such as creating files, folders, starting processes, etc), and/or validation that an action in the IDE had effected the target in the expected way. With the instability of communicating with the target via [redacted], the outcome of these test was unreliable, and slow to execute. To improve this bottleneck, I was able to develop a method that hooked into the [redacted] service and pass shell commands down to be executed directly on the target, then retrieve the STDOUT/STDERR output to be parsed by the test code for validation. This more reliable communication method resulted not only in a higher percentage of consistently passing test cases, but also executed much faster than previous methods and once old test cases were converted to using this method instead, the total runtime for the nightly test was reduce from about 12 hours, to under 10 hours - a 20% improvement.

This year, I submitted a few ideas to [redacted] ideas. Several concepts within two of my submissions caught the eye of a BlackBerry

patent attorney and I was requested to file an Intellectually Property Disclosure, with instructions to focus one specific concept; co-authored with M[redacted]. The disclosure was approved for filing, however during the process, prior art was discovered which overlapped too much with to our idea. The attorney (D[redacted]) indicated that they wanted to investigate some of the other concepts within the original BBIdeas submission before attempting a filing, but this was never followed up.

M[redacted] and I have designed and begun to implement a new system for storing test results that will help with identifying trends by aggregating information across historical test runs, facilitate in chart and report generation, and lay the foundation to allow future automated testing. Going by the name BlackFishDB, this system will allow for monitoring applications to be developed that can identify KPIs that are slowly degrading and also automatically provide an early warning if certain KPIs fall outside an allowed tolerance. BlackFishDB will also allow interfaces to be created that will assist in the creation of charts and reports of test results. A future goal of using this system to automate scheduling of test and management of test devices has also be considered in the design.
One goal we had of the BlackFishDB (Test Result) project is to not limit its usage to the Windows OS, but to make it cross-platform. As a side project back when I worked as a GateKeeper in BlackBerry, I had developed an application in C#.Net that took the role of a server and client manager, and allowed plugins to be added to handle many different roles. This design allows for quick development of application that handle various task, without having to reimplement the overhead of client management, secure TCP/IP connections, interactive command line interface, etc. Traditionally .NET applications were primarily limited to Windows OS, but recent advancements have allowed for .NET application to run on Mac and Linux OSes as well. To leverage the prior work put into this [redacted]Service (DTS) application for the BlackFishDB project, but also allow BlackFishDB to be labeled as cross-platform, I pursued porting DTS over to run on the mono

framework on Ubuntu. Within 2 days, I was able to port 100% of the application; this will save many weeks of development on the tools for BlackFishDB. Also, when running under Ubuntu, the application actually performed faster, when placed under a load, than it had in Windows. Another benefit of the porting is that I have not only successfully run DTS on an old Lenovo laptop running Ubuntu 16.04, but also a BeagleBone Black and Raspberry Pi3 board, all with fast performance. The option to use cheaper hardware ($30-50 boards) instead of many higher cost machines, should be a big cost savings to the company.

Highlight areas where company values have been demonstrated. Share specific examples about how the goals were achieved in a way that supported the BlackBerry values of Customer Focus, Innovation, Integrity, Team Work, Mutual Respect and Accountability:

Manager Evaluation

Comment:

Jerren consistently demonstrates company values on a daily basis. His work towards [redacted] IDE testing was very good He filled in a big gap in test coverage. He showed integrity and customer focus by expanding the scope and reliability of the [redacted] IDE testing to ensure QNX is delivering a high quality solution.

This year Jerren showed solid innovation through his idea submissions on go/[redacted] as well as his work on the BlackFishDB. Jerren also demonstrated mutual respect through his work with both Ottawa colleagues on IDE testing and locally with the BlackFishDB. He works to meet tasks assignments while building collaborative work relationships. He follows through on his tasks, and ensures his work is completed.

Jerren is a great team-worker who is dedicated to team objectives. He goes above an beyond to setup the TechTalks for the team and handle local IT issues. Often these tech talks and IT issues are completely outside the scope of his assignments, but Jerren is willing to fill in this gap as well. He has a knack for fulfilling team needs, helping to elevate the efficiency of the whole team.

Employee Evaluation

Comment:

My customers are typically internal: my co-workers. This past year, I have continued filling the role of being the local hands and feet for IT, assisting with troubleshooting, replacing, verifying and configuring equipment in the server room. I also frequently help coworkers to identify and resolve issues they are having with their computers and other equipment.
I have also supported fellow employees by helping with automating and optimizing processes when possible. One example was a script that I was able to write for R[redacted] to automate a process of collection patches, drivers and other files from QNX's Software Release Table in TeamForge. Manually, the process was taking him approximately 5-6 hours each time, to download all the files he needed to recreate builds to work on issues raised by external customers. The script I authored reduced this down to 10-15 minutes.

Innovation came in the form of BBIdea and IDF filings this year. Some of the ideas presented in these submissions propose features that could be implemented in the BlackBerry [redacted] project to add significant value, cost savings, and capabilities for our customers.

The BlackFishDB project also provides an innovative solution for collecting, storing and

retrieving historical data from test reports to allow automation in several aspects of the test process. Initially the project will be used for [redacted] Benchmark testing, but we have incorporated concepts needed by other test areas so that the project is not tailored for one specific purpose, and can be leveraged by others in the company and also future project. This project also demonstrates accountability by helping to improve the testing process and provide the means for comparing our results against competitor products and our own KPI trends over time.

Tech Talks were started this year at our site as a result of some of the work I did to automate processes and the request to share these scripts with others on the team to use. Since August, I have coordinated Nine Tech Talks where various members of our team share processes, knowledge and tools they use, have developed or learned about that aids in their roles and that may be beneficial to their colleagues. These Tech Talks provide a forum where employees can share these pockets of knowledge and scripts they've developed and acquired. With the local team spread across several projects now, and not all working together on a common project, individuals were attaining skills and information from teammates at other sites, but had no forum to share this with others on the team. These sessions have also provided an opportunity where process improvements can be discussed. The response from these Tech Talks has been positive and well received by the team and the momentum appears to be picking up with others starting to approaching me about topics they want to see covered, or want to offer to share.

Highlight areas of improvement required in the current role:

Manager Evaluation

Comment: I commend Jerren for taking on tasks that required on-the-job learning. He has battled through a number of new areas, and ramped his knowledge in the [redacted] IDE build environment. With the departure of his Ottawa counterpart, we need to investigate how the IDE testing should best be accomplished in the future.

Employee Evaluation

Comment: This year I was asked to assist the [redacted] team in Ottawa with testing the IDE. This role presented many new challenges and required skillsets that I did not possess, including working with Eclipse and SWTBot. I was also required to learn a lot more about the QNX OS and various target board that I had not worked with in my prior roles at QNX. This work also

required that I dust off my Java programming knowledge that hadn't been exercised in 13 years.
The learning curve has been slow and challenging for me on this project and I still have a ways to go. The steepness of the challenge is mainly because of having to tackle learning so many new skills all at once, since they are all intertwined in the [redacted] IDE test environment and results are only attainable when all components are working together.
With the recent departure of my Ottawa counterpart on this project and also the manager of the team, even more fronts have been introduced that present their own challenges and large voids that must be filled just to keep the automated test running.

I am excited to work on the BlackFishDB project, but it also presents its own challenges. This project is the first time that I've worked with NoSQL databases. While some of my experience with relational databases translate, NoSQL databases require a paradigm shift and attempting to enforce some relational database ideas can actually introduce a negative performance impact. The benefits of using a NoSQL database in this project outweigh those risk, so the challenge here will be to adapt to the new way of thinking before developing some aspect of the project that causes issues.

Highlight areas that can support you in your career development (12 - 18 months):

Manager Evaluation

Comment: I would support enabling Jerren with online training needed towards the NoSQL database concepts.

Employee Evaluation

Comment: In addition to learning the best practices when using a NoSQL database, it appears that I will need to acquire knowledge of Node.js, JavaScript, REST API design, Office Addin development, and web development for the BlackFishDB project. Some areas of the BlackFishDB project could be implemented using my C# knowledge, however when it comes to the UI, this would limit usability to the Windows platform in some cases, or require duplicate functionality in different components. Instead, it appears the universal approach, and optimal code-reuse will be achieved by implementing many of the UI components with Node.js, JavaScript, Angular2 and/or React,

none which I have experience in.

Section Summary

Manager Evaluation

Comment: Overall, Jerren is a valuable team member, he can be counted on to dig into problem areas, figure out how to make progress against development objectives and deliver results for the company. He takes on challenging tasks and makes good progress, producing successful results for the company. Thank you Jerren!

Employee Evaluation

Comment: