DEVELOPER CENTRIC DATA CENTER PATCHING SYSTEM BASED ON DISTRIBUTED VERSION CONTROL SYSTEM

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Any software product which serves large customer base needs to be maintained and enhanced periodically. This is mainly achieved through a release life cycle and a patch management process. In contrast, patching process plays a crucial role in delivering bug fixes and quick enhancements over release life cycle. Therefore this project focus on modeling a Developer Centric Data Center Patching System for the TradeCard system. TradeCard is a large cloud base supply chain collaboration platform with dozens of developers around the world. As a results of demanding business and technical requirements it have forced us to continuously deliver changes in to the this cloud environment. This is achieved through creating and applying patches, which contain individual units of development. Since the patching process is different from system to system this project is based on the TradeCard patching process, but same concepts can be applied to any other system with similar architecture. Patch management process have many aspects, in this case it only focuses on creating and delivering of patches to the datacenter, then a datacenter personal can deploy it to one of the running environments. Because of the manual process used in creating patches have introduce an unnecessary delay and have led to inefficient and error prone process. During this project we have identified that patching process is closely coupled with the Version Control System and the Issue Tracking System. In the TradeCard system it uses GIT as the distributed version control system and JIRA as its issues tracking system. Therefore in this project we have implemented a patching tool to create and deliver patches easily based on the version control system and the issue tracking system.

Java technologies were used to implement an interface between GIT and the JIRA systems. This tool also provide an easy user interface to the developers when creating and delivering necessary patches. As a result of that they were able reduced the time needs to make a patch by 90% and also ensures the integrity and the accuracy of the patching process. Apart from that it have also taken measures to implements security aspects and enforce the workflow of the patching process. Finally this project introduces the future enchantment which can be added and how they will benefit to the patching process.