

Data Analytics on Automation of Test Case Infrastructure with Jira and ZephyrScale

1st Aniket Dey

Dougherty Valley High School
San Ramon, U.S.
aniketdey2023@gmail.com

2nd Amit Baranwal

DataCore Software
Fort Lauderdale, U.S.
amit.baranwal@datacore.com

3rd Sugandha Sahay

Carnegie Mellon University
Pittsburg, U.S.
sugandhs@alumni.cmu.edu

Abstract

As competitive advantages drive revenues and market share, the predictability and velocity of product delivery have become key metrics of today's software industry and business management practices. To achieve velocity of production, companies have adopted product management methodologies such as Agile to deliver frequent and smaller minimum viable products than in past markets. Traditionally, this type of methodology for the software product life cycle has two major components: development and testing. While software development is inherently creative and is thus not well suited for automation, software testing can be highly automated and accelerates product time-to-market. Current manual testing of specific cases in company infrastructure is cost-ineffective and time consuming. Automation enables tests to be run repeatedly at no additional cost, decreasing the time to run repetitive tests and improving efficiency in the workplace. However, the process of automation requires a shift in the basic infrastructure of companies. Should the shift become incomplete or mishandled, automating could foment a much larger problem in business management. Thus, to avoid the loss of data or other drastic consequences, reports on data analytics should be made directly available to management personnel. This study provides a novel system for collecting data analytics on the status of automation in test case infrastructure for corporations. A combination of Atlassian Jira™, SmartBear Zephyr Scale, and Rest APIs are used to authenticate and pull test case data from the cloud servers of a corporation, which are then parsed to provide critical insights into automation and test case components.

Keywords—Automation, Data Analytics, Corporate Software Development