Development pipeline for continuous experimentation

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***Abstract*—There is a need in many software-based companies to evolve their software development practices towards continuous deployment and continuous experimentation. This allows a company to frequently integrate and deploy their work and in consequence also opens opportunities for getting feedback from customers on a regular basis. Ideally, this feedback is used to support design decisions early, e.g., to determine which features should be maintained over time and which features should be skipped. In more general terms, the entire R&D system of an organization should be in a state where it is able to respond and act quickly based in instant customer feedback and where actual deployment of software functionality is seen as a way of fast experimenting and testing what customers need. Experimentation refers here to fast validation of a hypothesis or assumption. Reaching such a state of continuous experimentation implies a lot of challenges for organizations. In this paper we review existing software development pipelines that implement continuous deployment and continuous experimentation. We also explore the main issues and attributes required for the pipeline to allow gathering feedback in real-time. We aim for a coherent view of essential features required to build a development pipeline in such manner.**

I. Introduction

References