Adopting Continuous Integration Practices to Achieve Quality in DevOps

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Abstract: *DevOps phenomenon is gaining popularity through its ability to support continuous value delivery. Every software process transition, technical practices has its own challenges so as DevOps. The aim of this study is to systematically review and analyse challenges confronted and practices adopted in continuous integration practice of software development to improve quality of software in DevOps. We have done systematic literature review of 44 papers. We conclude 26 challenges and 28 practices which are majorly in the continuous practices, automation, tools, monitoring and pipeline. These practices are having evidences of improving quality through faster release, monitoring performance, reduced risk, reduced testing time and efforts, improved security, fast feedback loop. In further research we have to measure the quality factors by using case study methods on selected software applications to quantify impact of presented practices.*

Keywords: DevOps, Continuous Integration, Continuous Practices, Continuous Software Engineering