

# **Automated testing: A look at Architecture**

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## **Abstract**

This paper...

**Keywords:**

## Introduction

Automated testing is no new idea as the field of computer science strives to automate all that it can. However, the idea and implementation of automating the development pipeline, going under the name of continuous integration and continuous deployment is an ever-changing field. This has led to the rise of devops, also known as development operations, dedicated to maintaining and building such systems.

During a recent project tasked with the aim to create the pipeline from the ground up, there were many questions that had to be answered. Such as what is the difference between continuous integration and continuous deployment. How does each part of the system fit into the big picture. What is the end game of the system. This is covered in the first section of this paper.

Besides just understanding the reasoning and terms used behind the names, it was time to design and implement a system for the project. In addition to looking at the project that this idea spawned from, the paper will look at other attempts and experience from both industry and academic to understand the ideal architecture. This is covered in the second and third chapters.

From here the paper will look at how this architecture will work in practice, the patterns and the direction that this field is heading towards, making sure that it is on the right track. This is covered in the final sections four and five.

During the creation of the project, there seemed to be no coherent or common meanings behind some of the terms. There also was a lack of architectural designs and implementations, with most arguing about the systems' cost-benefits.

Therefore, the main aim of this paper is to help define and understand the systems and terms used in this field. In addition to looking at the common themes used in practice to provide a guide for the creation of other automated systems, and those looking to understand this area more in depth.

# 1 Background

background.

## 2 Evaluation

eval

### **3 Conclusion**

conc

## References



## 4 Appendix