This document outlines the software architecture of Elasticsearch. We identified different stakeholders and used several architectural perspectives to gain insight into the system. We also identified and analyzed the technical debt in the Elasticsearch code base from a code quality and testing perspective.

We can draw a variety of interesting conclusions. First, we think the different modules in the Elasticsearch codebase are well organized. Each package has a clear responsibility to extract reusable modules that provide good isolation between core functionality and other features.

The Elasticsearch team also places great emphasis on performance and scalability. There is an extensive benchmarking suite that can also be used in GitHub discussions when making consolidation decisions.

However, there are some problems in the system. There is a large amount of technical debt in the system. In addition, there are some basic issues with building systems that fail to generate test coverage reports. The main focus of core developers is on the user experience, not the developer experience.