Outline Combined Projekt- und Diplomarbeit

Continuous Delivery

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Summary

Continuous delivery is the name of an engineering practice where a commit to a project's code repository is put into production without any intermediate human intervention. It is the next step after continuous integration […] [1] [2]. It is not well-defined yet but promises short feedback cycles that make software development faster and bring a product closer to its users. Current continuous delivery practices are based on metaphors with no or limited precision. Terms like experiments, immune system, deployment manager etc. are waiting for clarification and definition. This combined Projekt- and Diplomarbeit will apply continuous delivery to the JDownloader project and report about the lessons learned.

Expected Results

1. Related work review
   - Review of continuous deployment/delivery literature
   - Review of purpose of continuous deployment in software engineering
   - Review of current tools and frameworks that support continuous deployment
2. Definition of a conceptual model for continuous deployment
   - Clarification of core metaphors found in literature
   - Clarification of required system components and their interaction
   - Definition of missing parts and a possible definition thereof
3. Design and implementation of first version of continuous deployment for the JDownloader project
   - Application of conceptual model to JDownloader situation
   - Design and implementation of software
     - Includes test (staged) updates, feedback, rollback
     - Includes detailed tracking of statistics relevant for analysis
4. Review of experiences and statistics for revision of software and process
5. Implementation of revision, including tracking
6. Review and analysis

Projektarbeit (3 months)

Includes parts 1-3 (or only 1-2).

Diplomarbeit (6 months)

Includes parts 3-6, including write-up and final analysis.

References

[1] Continuous deployment at kaChing.

[2] Continuous deployment at Digg.