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# Tenancy over Distributed Workflows using Blockchain Technology exemplified by Network Slicing

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**Master-Arbeit**

Jordi Bisbal Ansaldo

KOM-type-number

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Fachbereich Informatik (Zweitmitglied)  
Fachgebiet Multimedia Kommunikation  
Prof. Dr.-Ing. Ralf Steinmetz

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### **Ehrenwörtliche Erklärung**

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Hiermit versichere ich, die vorliegende Master-Arbeit ohne Hilfe Dritter und nur mit den angegebenen Quellen und Hilfsmitteln angefertigt zu haben. Alle Stellen, die aus den Quellen entnommen wurden, sind als solche kenntlich gemacht worden. Diese Arbeit hat in dieser oder ähnlicher Form noch keiner Prüfungsbehörde vorgelegen. Die schriftliche Fassung stimmt mit der elektronischen Fassung überein.

Darmstadt, den 30.05.2018

Jordi Bisbal Ansaldo



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## Abstract

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The abstract goes here...





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## 1 Introduction

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Hint:

This chapter should motivate the thesis, provide a clear description of the problem to be solved, and describe the major contributions of this thesis. The chapter should have a length of about two pages!

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### 1.1 Motivation

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What is the motivation for doing research in this area?

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### 1.2 Problem Statement and Contribution

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What is the problem that should be solved with this thesis?

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### 1.3 Outline

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How is the rest of this thesis structured?



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## 2 Background

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### Hint:

This chapter should give a comprehensive overview on the background necessary to understand the thesis. The chapter should have a length of about five pages!

BibTeX-Test: [SW05] (author?) [SW05]

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### 2.1 Background Topic 1

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### 2.2 Background Topic 2

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### 2.3 Summary

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### 3 Related Work

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Hint:

This chapter should give a comprehensive overview on the related work done by other authors followed by an analysis why the existing related work is not capable of solving the problem described in the introduction. The chapter should have a length of about three to five pages!

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#### 3.1 Related Work Area 1

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#### 3.2 Related Work Area 2

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#### 3.3 Analysis of Related Work

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#### 3.4 Summary

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## 4 Design

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### Hint:

This chapter should describe the design of the own approach on a conceptional level without mentioning the implementation details. The section should have a length of about five pages.

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### 4.1 Requirements and Assumptions

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### 4.2 System Overview

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#### 4.2.1 Component 1

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#### 4.2.2 Component 2

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### 4.3 Summary

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## 5 Implementation

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### Hint:

This chapter should describe the details of the implementation addressing the following questions:

1. What are the design decisions made?
2. What is the environment the approach is developed in?
3. How are components mapped to classes of the source code?
4. How do the components interact with each other?
5. What are limitations of the implementation?

The section should have a length of about five pages.

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### 5.1 Design Decisions

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### 5.2 Architecture

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### 5.3 Interaction of Components

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### 5.4 Summary

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## 6 Evaluation

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### Hint:

This chapter should describe how the evaluation of the implemented mechanism was done.

1. Which evaluation method is used and why? Simulations, prototype?
2. What is the goal of the evaluation? Comparison? Proof of concept?
3. Which metrics are used for characterizing the performance, costs, fairness, and efficiency of the system?
4. What are the parameter settings used in the evaluation and why? If possible always justify why a certain threshold has been chosen for a particular parameter.
5. What is the outcome of the evaluation?

The section should have a length of about five to ten pages.

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### 6.1 Goal and Methodology

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### 6.2 Evaluation Setup

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### 6.3 Evaluation Results

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### 6.4 Analysis of Results

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## 7 Conclusions

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### Hint:

This chapter should summarize the thesis and describe the main contributions of the thesis. Subsequently, it should describe possible future work in the context of the thesis. What are limitations of the developed solutions? Which things can be improved? The section should have a length of about three pages.

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### 7.1 Summary

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### 7.2 Contributions

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### 7.3 Future Work

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### 7.4 Final Remarks

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## Bibliography

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- [SW05] Ralf Steinmetz and Klaus Wehrle, editors. *Peer-to-Peer Systems and Applications (Lecture Notes in Computer Science)*. Springer, 1 edition, 10 2005.