Contents

1 Introduction **1**

2 Related Work **3**

3 Experimental Environments **4**
3.1 Server running environment - Cloud Foundry 4
3.1.1 Cloud Foundry at SAP 4
3.1.2 PaaS - Service plans, Backing services and more 4
3.1.3 Limitations 4
3.2 Client running environments 4
3.2.1 Influential factors for measuring 4
3.2.2 Client in local machine 4
3.2.3 Client in Cloud Foundry 4
3.2.4 Client in Monsoon 4

4 Testing tool **5**
4.1 Apache JMeter 5
4.1.1 JMeter introduction 5
4.1.2 JMeter Limitations 5
4.2 Load generator - a self implemented scalable client 5
4.2.1 Design and function of load generator 5
4.2.2 Limitations 5

5 Measuring tool **6**
5.1 Response time 6
5.1.1 Apache JMeter and its limitations 6
5.1.2 Recording with Load Generator and its limitations 6
5.1.3 Retrieving data from ELK and its limitations 6
5.2 CPU and Memory consumption 6
5.2.1 Cloud Foundry CLI and its limitations 6
5.2.2 A self-implemented Ruby application and its limitations . . 6

6 Test Scenario **7**
6.1 IO Intensive 7

6.2 Compute Intensive 7

7 Test Results and Analysis **8**
7.1 IO Intensive 8
7.2 Compute Intensive 8

8 Conclusion **9**

List of Tables **v**

List of Figures **vi**

Source references **vii**