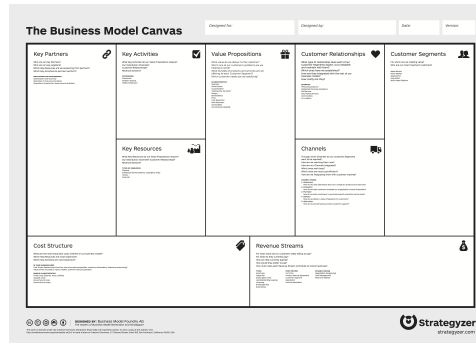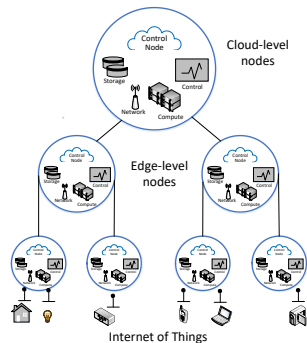# Business Models for Fog Computing

Bachelor thesis

1   Motivation

Fog computing combines processing at the edge of the network with cloud-based computational resources [1]. It has recently received a lot of attention by the industry as well as the research community. One important challenge that needs to be faced in order to get a wide adoption of fog computing is the conceptualization of business models for the fog.

Therefore, within this thesis, it is the goal to identify potential revenue and incentive models for fog computing [2, 3]. As a first step, it is necessary to identify stakeholders in fog computing, i.e., companies, organizations, private persons, etc., who might be interested in a fog-based business model, e.g., by offering fog devices to customers. Second, business models in related areas, e.g., the Internet of Things (IoT), need to be identified. Based on this background, business models for the fog need to be identified.

2   Work Description

- Literature work on business models for fog computing, the IoT, and related areas.
- Development of business models for fog computing, based on the Business Model Canvas or a similar model.

3   Further Information

Start: Immediately (might also be later)

Basic Requirements: This topic primarily aims at students of Business Informatics at TU Wien. However, it might also be suitable for students of Software & Information Engineering. In the best case, the student has acquired the "Diploma Supplement on Innovation" or is currently enrolled in this program, but this is definitely not a must.

References

[1] F. Bonomi, R. Milito, P. Natarajan, and J. Zhu. Fog Computing: A Platform for Internet of Things and Analytics. In *Big Data and Internet of Things: A Roadmap for Smart Environments*, volume 546 of *Studies in Computational Intelligence*, pages 169–186. Springer, 2014.

[2] I. Petri, O. F. Rana, J. Bignell, S. Nepal, and N. Auluck. Incentivising Resource Sharing in Edge Computing Applications. In *14th International Conference on the Economics of Grids, Clouds, Systems, and Services*, volume 10537 of *Lecture Notes in Computer Science*, pages 204–215. Springer, 2017.

[3] J. Weinman. The 10 Laws of Fogonomics. *IEEE Cloud Computing*, 6:8–14, 2017.

-3	-2	-1	0	1	2	3
						X

Conceptual (Analytical)

-3	-2	-1	0	1	2	3
	X					

Empirical (Simulation)

-3	-2	-1	0	1	2	3
	X					

Practical (Implementation)

-3	-2	-1	0	1	2	3
						X

Literature Work

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