Master Thesis Review

Faculty of Mathematics and Physics, Charles University

Thesis author	Roman Firment
Thesis title	Monitoring Support for Manta Flow Agent in Cloud-Based Architecture
Submitted	2022
Program	Computer Science **Specialization** Software Systems

Review author	Filip Kliber **Role** reviewer
Position	Department of Distributed and Dependable Systems

Review text:

The goal of this thesis is to add the support for collecting, storing and visualizing different metrics coming from various sources throughout the deployment of the Manta Flow platform (notably Manta Flow Agent and it's extractor plugins) for the purpose of monitoring the system's state.

Textual part of the thesis is well-written and well-structured. Introduction to the problematic is sufficient. By analyzing a possible use case, the author sets reasonable functional requirements that the thesis should implement. The analysis is conducted in great detail, although sometimes it is not completely clear which functional requirement is currently being analyzed. This is probably due to the fact that number of possible tools and libraries listed is too high and as the reader might easily get lost in what role would the analyzed library play. Afterwards, the author however sums up the proposed frameworks which reasons their choice. In few statements of the analysis, it is not clear whether it is the author's point of view or general knowledge (e.g. the author states that JVMTI *is a very low-level API and its usage could cause a significant slowdown in our application* without any reference).

From the text of the thesis, it is not very clear how is the situation with multiple agents per customer tackled, or if it is not actually a problem, as the metrics are stored on the Manta Admin GUI (cloud).

The source code of the implementation looks well written and tested. As the implementation is part of a proprietary tool, and the deployed solution is rather big in terms of dependencies needed, I was not able to test the application myself. The author was however kind enough to provide a demonstration which did work well.

I recommend the thesis for defense.

I suggest to not consider the thesis for the annual award.

26.5.2022

Signature: