1. One approach to evaluate reference architecture is to use general scenarios (rather than concrete scenarios) and follow appropriate scenario-based architecture evaluation methods. The authors ruled out all such methods. However, the evaluation conducted seemed a rather simple instantiation for a particular use case. It is hard to accept such evaluation for the large variety of big data architecture and diverse requirements.
2. The characteristics and the requirements defined are too general. IMHO, more concrete requirements should be evaluated in order to define a reference architecture with more concrete modules.
3. A workflow of the different modules, and the different alternatives, should be presented in order to identify the interactions. Currently, only the different modules and their responsibilities are detailed. IMHO, the authors can also provide some information about the flow of the information and the interactions among modules.
4. The Figure 1 is difficult to read. I would recommend the authors to increase its size.
5. The evaluation of the RA should be increased. As the authors claim in the paper, it is difficult to validate a RA. Nevertheless, the authors can provide some information about its application in several domains or projects and the level of usefulness of the defined RA.
6. Finally, I would suggest the authors to provide a related work sections comparing the defined RA with other RAs already defined in the literature (some of them already pointed out by the authors.)
7. By mixing this with variability, the proposal has the risk of trying to describe a generic architecture (instead of an actual RA) in which every potential style of big data may fit, but which lacks a clear structure - as it would actually become a "summary" (a vocabulary) rather than an architecture.
8. However, the paper never actually justifies why microservices would be a natural fit for big data systems. All the justifications are general, for any software project - but why should it be the main foundation of a specific RA?
9. The paper has still many merits, but - the architectural justification must be clarified. As it is, the contribution is unclear