Can big data systems benefit from microservices patterns ?

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1 Research components:

1. Systematic literature review (following the guidelines of PRISMA and Barbara An Kitchenham)
2. Improved searched strategy by using PRISMA-S
3. Thematic synthesis using Cruzes, D. S. & Dybå approach
4. Capturing microservices patterns following the TOGAF template
5. Understanding the current state of big data architectures
6. Mapping the microservices patterns against big data architectures and see if they can solve some of its issues
7. Discussion
8. Threat to validity
9. Conclusion and further research

2 Timeline:

- two systematic literature review - 1 month (end of June) 10th June - 10th July
- Thematic synthesis (1 week) - 6th July - 13th July
- Capturing patterns in the synthesis (1 week) - 13th July - 20th July
- Critical discussion (1 week) - 20th July - 27th July
- Polish and final edits (1 week) - 27th July - 3rd August

3 Hard Deadlines:

- IEEE Big Data - Aug 20, 2022
- Journal of big data - Aug 30, 2022

4 Chosen Databases:

- IEEE Explore
- ScienceDirect
- SpringerLink
- ACM library
- MIS Quarterly
- Elsevier
- Scopus
- Aisel

5 SLR on Microservices

5.1 Keywords

- microservice* AND pattern*
- microservice* AND architecture*
- microservice* AND design*
- microservice* AND building block*
- microservice* AND best practice*

6 SLR on Big data architecture (following the same methodology by paper published to ACIS (Pouya Ataei - Alan Litchfield) and extend it for the years 2020-2022)

7 Phase 1: search

7.1 Progress report (date):

we have found n number of paper with the following search strategy, and n number has been deduplicated.

8 Phase 2: developing inclusion, exclusion criteria, quality framework

8.1 Progress report (date):

we have found n number of paper with the following search strategy, and n number has been deduplicated.