Unit 11: Microservices and Microkernels

Read Appendix A: the Tanenbaum-Torvalds debate in DiBona & Ockman (1999) then read Fritzsch et al (2019).

The forum has a message that says: "Torvalds has been proven wrong and it only took nearly thirty years. Microservices and microkernels are the future. "

In my opinion, the above statement is correct; Microservices and Microkernels are the future. One caveat with the above statement is for smaller scale projects, the advantages of using a monolithic architecture can outweigh the disadvantages. The ease of development, deployment, testing and debugging on a smaller scale project can make a monolithic architecture an attractive option. However, the obvious disadvantages are a lack of scalability and flexibility. Furthermore, small changes are difficult to make and deploy.

For larger projects, where future scaling and continuous upgrading is part of the planned life cycle for the software, microservices are the clear choice. Microservice architecture allows for easy distribution of tasks between teams of developers. They are easier to maintain and upgrade and are more reliable. The disadvantages are increased cost, potential for silo working between teams, and potential for a lack of consistency throughout the various Microservices (Gos & Zabierowski, 2020).

References

Gos, K. & Zabierowski, W. (2020) The comparison of Microservice and Monolithic Architecture. *2020 IEEE XVIth International Conference on the Perspective Technologies and Methods in MEMS Design* pp. 150-153