Architecture Evolution Activity

Based on your reading this week, could you write a section that might be appended to this paper, Salah et al, 2016, which would present the next phase of evolution history, from microservices to the technologies which are commonly in use today?

Answer

Microservices are still at the forefront of modern software architectures (Kumar, 2021). However, the underlying architectural principles have been adapted in line with the latest available technologies (Jamshidi et al., 2018). The following is a list of commonly applied advancements in terms of technologies and patterns used nowadays within the microservices domain:

- Adaption and use of frameworks that support microservice architectures (Kumar, 2021).
- Standard APIs (Kumar, 2021).
- The use of a service mesh to facilitate service-to-service communications between services or microservices (Kumar, 2021; Jamshidi et al., 2018).
- Build software in line with cloud-native architectures, where containers, service meshes, microservices, immutable infrastructure, and declarative APIs are typical (Kumar, 2021).
- Applying the principle of observability, which is the measure of how well a system is functioning internally by external outputs like metrics, events, traces, and logs (Kumar, 2021; Jamshid et al., 2018).
- Kubernetes is a prominent technology for a platform as a service used during implementation (Kumar, 2021).
- Leveraging managed services available via cloud services (Kumar, 2021).
- Use zero-trust architectures (Kumar, 2021).
- Various automation trends (Kumar, 2021).

References

Kumar, A. (2021) Top 10 Tips you Should Know as a Modern Software Architect. Available from: https://vedcraft.com/architecture/top-10-tips-you-should-know-as-a-modern-software-architect/ [Accessed 29 January 2022].

P, Jamshidi., C, Pahl., N, Mendonça., J, Lewis., S, Tilkov. (2018) Microservices: The Journey So Far and Challenges Ahead. *IEEE Software*, 35(3): 24-35.