CODE DRIVEN VENDOR NEUTRAL PACKAGING FOR SERVERLESS

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Abstract

Cloud computing enables developers and organizations to offload infrastructure related workloads such as maintaining, scaling, provisioning the servers to cloud providers. This model helped organizations to focus more on their business logic and it significantly reduces the cost, increases reliability and accessibility of the servers. Cloud computing has further evolved into a model that completely abstracts servers from the developers. As a result, cloud providers introduced serverless architecture allowing developers to focus only on writing code without worrying about any infrastructure. Serverless architecture offers significant advantages for the developers. This includes increased development velocity, seamless scaling including zero to scale, pay per resource usage and managed servers.

Serverless architecture has revolutionized the way applications are built but being vendor locked is a critical issue for the developers and serverless adoption. Most of the solutions for addressing vendor lock-in issues are open source serverless runtimes. Majority of the serverless developers prefers vendor based serverless solutions over open source runtimes due to reasons such as increased cost, lower performance despite being locked into a vendor.

This research proposes a developer centric approach to solve the vendor lock issue by introducing a vendor neutral definition language. It allows developers to programmatically define serverless functions and orchestrations using serverless concepts. The defined code will be transformed into cloud specific code in the build time by the compiler. This approach decouples the serverless code from cloud vendors and enables portability between cloud providers.