Rethinking the K8s DNS for the Modern Enterprise

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Session Description

The Domain Name System (DNS) is the component that provides the most vital piece of information for one to locate and communicate with services running in a Kubernetes cluster. This technology provides a set of features for name resolution, service discovery, metrics collection, query tracing, etc. However, this is only sufficient to satisfy the requirements of traditional workloads, and modern enterprises demand more.

In this talk, we will discuss the state-of-the-art in the modern enterprise in the context of the Kubernetes DNS. We will present use-cases like extensive aliasing, multi-tenancy, security, etc. that stretch the capabilities of currently available DNS solutions. We will then examine possible approaches to solve these challenges and see where these technologies fall short and how they could be improved.

Benefits to the Ecosystem

The DNS is one of the prime components in the Kubernetes ecosystem. It is often ignored but has quite some potential for solving some of the fundamental challenges in the modern enterprise. This talk will educate the community about a new set of challenges and ways to solve them, which they can then apply in their everyday life. Beyond that, this talk will also create possibilities for the enhancement of DNS solutions in the Kubernetes space, and broader collaborations with the open source community.