

Service Mesh

An Annotated Bibliography

Mohammad Reza Saleh Sedghpour¹

Department of Computing Science, Umeå University, Umeå, Sweden
`msaleh@cs.umu.se`

References

1. Ponomarev, K.Y.: Attribute-based access control in service mesh. In: 2019 Dynamics of Systems, Mechanisms and Machines (Dynamics). pp. 1–4 (2019)

This paper presents an abstract model of a service mesh and a protocol for interservice communications, which uses ABE for authorization and confidentiality of the messages. In order to solve the problems of interservice interaction in this highly dynamic environment, an additional software infrastructure layer called service mesh is introduced. Service mesh mechanisms are responsible for: load balancing, processing of network requests, service discovery, authentication, authorization, etc. It is possible to solve these problems with Attribute-based encryption (ABE) methods. This layer provides a single point of interaction with the network for each service.

2. Simkin, M.V., Roychowdhury, V.P.: A theory of web traffic. *EPL (Europhysics Letters)* **82**(2), 28006 (mar 2008)

The graphs of daily downloads are highly non-homogeneous with long periods of low activity interrupted by bursts of heavy traffic. We analyze access statistics of several popular webpages for a period of several years. We extrapolate these findings to construct a model of the entire web. In this regime, the most interesting webpages are in a near-critical state, with a power law distribution of traffic intensity. According to the model, the competition between webpages for viewers pushes the web into a self-organized critical state. These bursts are due to avalanches of blog entries, referring to the page.