

Generic Policy Engine for Virtual Infrastructure

Service management in form of ITIL or SLAs refers to the activities which are directed by policies. The main goal is to ensure the service delivery i.e. performance, QoS, availability, reliability of service to end user. To implement these policies requires two important stages; service as well policy offering and policy enforcement.

In a typical deployment, policy implementation is embedded onto the service code. Modification, customization or manipulation of policy offering and enforcement would be nearly impossible without major changes to the product. To separate the logic and implementation between service and policy would be difficult.

In this paper we proposed a generic policy engine that decouples both implementations. Our framework would be able to cater the policy management onto multiple services. We present three parts of work.

First, we present an analysis towards decoupling both service and policy. It requires the generalization of policy implementation and analysis of service life cycle at which point of time the enforcement of policy would execute. We identified two distinct phases; non-run time; prior to service provisioning or termination, and run-time; during the service lifetime.

Secondly, we proposed a framework that could be adapted for any services targeted for virtual infrastructure i.e. VM, SDN, or container technology as part of our proof of concept work.

Third, we present our prototype output that covers the policy offering; customization, packaging and enforcement strategies for both service run-time and non-run-time.

From this work, we are able to improve the service offering to the user by providing the flexibility to the service provider to create or customize the policy independently from the service itself.

Summary

This paper is to share the idea of Generic Policy Engine implemented on Virtual Infrastructure. It is part of our work in progress prototype solution.

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