

Applying Abstraction for a More Efficient and Fair Network Usage

Dr. Diego R. Lopez
Telefonica I+D
Valladolid, Spain
diego@tid.es

ABSTRACT

Achieving a more fair and efficient usage of network infrastructures require a direct collaboration between the applications using the networks, and the networks themselves. Note here the intentional plural, since in most conceivable real cases, applications must rely on different networks, with different technologies and constraints and, what is of most importance, different administrative realms.

This talk will introduce the need of applying abstraction mechanisms to make this collaboration possible, both at the northbound (application-to-network) and eastbound (network-realm-to-network-realm) interfaces. We will explore as well how recent proposals like the ALTO protocol, the new overlay and encapsulation methods, or the SDN paradigm can be applied to reach these objectives.

Categories and Subject Descriptors

C.2.3 [Network Operations]: *Network management.*

General Terms

Management, Performance.

Keywords

Capacity Sharing, SDN, Cross-Stratum Optimization.

BIOGRAHY

Dr Diego R. Lopez is in charge of the Technology Exploration activities within the GCTO Unit of Telefónica I+D. After working for several years in the academic sector, as responsible for middleware infrastructures in RedIRIS (the Spanish NREN), he joined Telefónica I+D in 2011. Diego is currently focused on identifying and evaluating new opportunities in technologies applicable to network infrastructures, and the coordination of national and international collaboration activities.

His current interests are related to network intelligence and virtualization, infrastructural services, and new network architectures. When not struggling with this stuff, Diego devotes his time to comics, cheeses and wines, long walks, and engaging into long discussions about whatever intricate issue he can find a suitable opponent.