پژوهشگاه دانش‌های بنیادی
پژوهشکده علوم کامپیوتر

سخنرانی علمی

Update of Forwarding Rules in Software-Defined Networks

مهدی دولتی
دکتری دانشگاه تهران

Abstract

In software-defined networks (SDN) data and control planes and logically separated and communicated through a standard interface. Thus, the control plane can collect data plane information and perform centralized decision-making. This centralization improves the performance of many network functions that traditionally are implemented in a distributed manner. In this scenario, data place functions (or applications) instruct the switches on how to handle traffic, and the data plane (network switches) focuses on the efficient forwarding of data packets. Control plane functions run on top of an entity called controller which handles the communication with network switches. Through the controller, control functions constantly monitor the network and change the network configuration to achieve a desirable network state. As traffic changes and control functions change their behavior through the change of installed rules in the memory of switches, it is crucial to ensure that all packets meet destinated switches in the network to receive the required function. Previous studies showed that without proper scheduling of control messages between the controller and switches, some packets may bypass important switches along their path during transient periods of network configuration change. In this talk, I will discuss several solutions for this problem.

Biography

Mahdi Dolati received his B.Sc. and M.Sc. degrees, both in software engineering, from the University of Tehran and Sharif University of Technology, respectively. He defended his Ph.D. dissertation in the department of electrical and computer engineering at the University of Tehran. He was a Ph.D. Visiting Student with the department of computer science at the University of Calgary from 2018 to 2019. He currently is a post-doc researcher with the Institute for Research in Fundamental Sciences. His research interests include resource allocation and performance optimization in virtualized software-defined networks.

زمان : چهارشنبه ۱۴۰۱/۴/۱۵ – ساعت۱۵:۰۰

ارائه به صورت مجازی انجام خواهد شد.

https://vmeeting.ipm.ir/b/com-uwd-qpp

***** شرکت برای عموم علاقه مندان آزاد است*****