Cognitive SLA enforcement in Software Network

Mots clés :
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● Unité de recherche : Services répartis, Architectures, MOdélisation, Validation, Administration des Réseaux
● Ecole doctorale : École Doctorale Informatique, Télécommunications, Électronique de Paris
● Domaine scientifique principal: Divers

Résumé du projet de recherche (Langue 1)
The main goal of the PhD activities is to define and develop architecture and mechanisms to ensure consistency and continuity of the operations and behaviors in mixed physical/virtual environments, characterized by a high level of dynamicity, elasticity and heterogeneity by applying a cognitive approach to the architecture where applicable. The target is then to avoid the “build it first, manage it later” paradigm. The research questions targeted by the PhD are the following: 1. Identify the changes on Network Operation Support Systems implementation when using SDN as a design approach for future networks. The study could be restricted to mobile networks for example, or sub-part of it(CORE networks, RAN, data centers, etc); 2.Identify the needed evolution at the management interfaces level: a. Shall we need alternative to the well-known FCAPS and do we still need the element management system? b. What will change to provision an SDN based service? c. How to ensure resiliency of SDN based networks?

Résumé du projet de recherche (Langue 2)
Dynamic and agile services production for 5G networks remains a key challenge when the goal is to automate the process, reduce the time needed for service creation and at the same time ensure SLA enforcement via a cognitive management framework that can detect and treat SLO breaches. This challenge has been identified also by 5G PPP and the international community focusing on addressing this challenge by relying on SDN, NFV and cloud services and architectures.

Informations complémentaires (Langue 1)
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