Resource Allocation in Cloud and Content Delivery Network (CDN)

Mots clés :
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- Unité de recherche : Services répartis Architectures MOdélisation Validation Administration des Réseaux
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Résumé du projet de recherche (Langue 1)

High energy costs and carbon emissions are two significant problems in distributed computing domain from distributed clouds to CDNs. Resource allocation methods (e.g., in form of VM or VNF placement algorithms) have a direct effect on cost, carbon emission and Quality of Service(QoS).

Résumé du projet de recherche (Langue 2)

This thesis includes three related parts. First, it targets problem of resource allocation (i.e., in form of network aware VM placement algorithms) for distributed clouds and proposes cost and carbon emission efficient resource allocation algorithms for green distributed clouds. Due to similarity of network-aware VM placement problem in distributed clouds with VNF placement problem, the second part of the thesis, getting experience from the first part, proposes a new cost efficient resource allocation algorithm (i.e., VNF placement) for network service provision in data centers and ISP network. Finally, last part of the thesis presents new cost efficient resource allocation algorithms (i.e., VNF placement) for value-added service provisioning in NFV-based CDNs.