

A Cloud-based SDN/NFV Network Slicing in 4G/5G core Network: Testbed for Rural connectivity perspectives

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Many rural and remote areas throughout the world lack appropriate connectivity, resulting in a rising digital divide (particularly in Sub-Saharan Africa). For several years, prominent laboratories and institutions have prioritized research on rural broadband. Several solutions are being tested around the world. Our interest in network slicing as an approach has been concentrated in this paper. Therefore, we provide a testbed that proposes the implementation, management, and orchestration of network slices in the core network. We drew on earlier research to create a practical and scalable testbed that considers the rural setting and demands of rural communities. We have also highlighted key areas in rural areas (agriculture, health, and education) that could be addressed and positively impacted by our testbed. After we built our testbed, we ran a throughput test on each slice we made. The results show that our testbed is working properly.

Primary author: KONÉ, Benjamin (Ecole Supérieure Multinationale de Télécommunication de Dakar)

Co-author: Prof. KORA, Ahmed Dooguy (Ecole Supérieure Multinationale de Télécommunication de Dakar)

Presenters: KONÉ, Benjamin (Ecole Supérieure Multinationale de Télécommunication de Dakar); Prof. KORA, Ahmed Dooguy (Ecole Supérieure Multinationale de Télécommunication de Dakar)

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