

VCPE

Customer Premise Equipment (CPE) devices enable enterprise or residential subscribers to avail the services provided by the Communication Service Providers (CSPs). The CSP's additionally need to manage the installation, configuration and the servicing costs of these devices. Introduction of newer services to the customers who prefer to have a flexible on demand subscription model is a challenge.

This talk covers the virtualization techniques that are available at the edge and at the central office re-orchestrated as a datacenter, to implement a cost effective solution. It explores the various options available for virtualization of a CPE, such as L2 NID or CPE as simple layer 3 device with service virtualization at the central office (CO). The talk touches on the approach where services can be dynamically configured to be rendered from the edge or from the central office based on policy or network/service availability status, orchestrated by an SDN Controller. The theme will be around a software based OpenFlow Data Plane (OFDP) at the CO server and OFDP at the edge (CPE with a General Purpose Processor).

The talk will conclude with the discussion on the challenges of virtualization of the CPE functionality and describes how the distributed solution based on the combination virtualization techniques such as lifecycle service orchestrations with data plane acceleration and OpenFlow based SDN methods realizes an effective solution to dynamically define the service delivery point.