Especialista en NFV Y SDN

Redes definidas por software (SDN)

Unit 1: Introduction to SDN. Motivation for SDN. Centralised and distributed control planes. Splitting control and data planes. Traditional mechanisms for control and configuration of network nodes (SMTP, Protocols for MPLS signalling of paths, 802.1 protocols for configuration of VLANs, etc.). Need for programmatical networking

Unit 2: OpenFlow. Introduction to OpenFlow. Architecture. Forwarding table, actions and match rules. Protocol operation. Applications and scenarios for the use of OpenFlow. OF-CONFIG & OF-WIRE.

Unit 3: OpenFlow Controllers. Architecture of OpenFlow Controllers. Overview of different OpenFlow Controllers and frameworks (OpenDaylight, Ryu, Floodlight/Beacon, etc.). Testing with Virtual Infrastructures: Mininet

Unit 4: Related programming interfaces and utilities. Flowbricks. Network Hypervisors (e.g., CISCO OverDrive). Debugging SDN: ndb. Related projects: Pyretic, Network Modelling Language, NetIDE

Unit 5: Other SDN protocols. NETCONF, NETMOD, YANG format. I2RS. FORCES. Application-Based Network Operations (ABNO).

Unit 6: Relevant Standardisation efforts. IETF. ONF.