

## **Ambassador Interview Blueprint**

The goal of this interview is to attest that a potential Ambassador candidate has vendor-neutral, conceptual knowledge of the major domains of computer networking practices with a focus on Software Defined Networking (SDN) and Network Function Virtualization (NFV).

### **Required legacy networking concepts:**

- Ethernet networks
- Function of routers and switches
- Routing Protocols
  - Interior vs. exterior gateway protocols (e.g. OSPF vs BGP)
- IP Network Services
  - DHCP, DNS, ARP, NAT, ICMP
- Layer 2 addressing, including address resolution
- IPv4 fundamentals

### **Required SDN concepts:**

- History of SDN
- What is SDN?
- SDN main characteristics
  - Control/data-plane separation
  - Simplified forwarding element (i.e. “dumb” programmable switch)
  - Logically-centralized control
  - Network automation
  - Virtualization
  - Openness
- SDN use cases
  - Service providers
  - Data center
  - Campus networks
  - Enterprise
  - Mobile networks
- SDN devices
  - Controllers, switches

### **Required SDN architectural components:**

- Northbound API
- Southbound API
- East/west API
- High-availability

**Required NFV concepts:**

- Definition, What is...
  - NFV
  - Network Functions Virtualisation Infrastructure (NFVI)
  - NFV M&O (Management and Orchestration)
  - Virtual Network Function (VNF)
  - Service chaining / service composition
- Benefit - what is the advantage of NFV?
- Relationship between NFV and SDN. How to use together? Can you give an example?

**Required ONOS concepts:**

- [work in progress]

**Required CORD concepts:**

- What is a Central Office
- What challenge service providers are facing in their COs
- Purpose of following CORD components
  - XOS
  - ONOS
  - OpenStack
- What is service composition
- What is disaggregation
- Use case - what is the scenario. What is the problem each use case want to solve?
  - R-CORD
  - E-CORD
  - M-CORD