

Foundations of Modern Networking (Stallings)
Chapter 4 SDN Data Plane and OpenFlow

1) The SDN data plane is where network forwarding devices perform the transport and processing of data according to decisions made by the SDN control plane.

Answer:

Remediation Link: 4.1 SDN Data Plane

2) The data forwarding function interacts with the SDN control layer to support programmability via resource-control interfaces.

Answer:

Remediation Link: 4.1 SDN Data Plane

3) _____ accepts incoming data flows from other network devices and end systems and forwards them along the data forwarding paths that have been computed and established according to the rules defined by the SDN applications.

- A) Control support function
- B) Northbound API
- C) Data forwarding function
- D) Service function chaining

Answer:

Remediation Link: 4.1 SDN Data Plane

4) The OpenFlow channel is the interface between an Open/Flow switch and an OpenFlow controller, and is used by the controller to manage the switch.

Answer:

Remediation Link: 4.2 OpenFlow Logical Network Device

5) An _____ is where packets enter and exit the OpenFlow pipeline.

- A) OpenFlow port
- B) OpenFlow switch
- C) OpenFlow channel
- D) OpenFlow reserve

Answer:

Remediation Link: 4.2 OpenFlow Logical Network Device

6) What are the three types of tables in the logical switch architecture as defined by the OpenFlow specification? (Choose all correct answers.)

- A) Flow table
- B) Group table
- C) Meter table
- D) Data table

Answer:

Remediation Link: 4.2 OpenFlow Logical Network Device

7) A flow is a sequence of packets traversing a network that share a set of header field values.

Answer:

Remediation Link: 4.2 OpenFlow Logical Network Device

8) The basic building block of the logical switch architecture is the group table.

Answer:

Remediation Link: 4.2 OpenFlow Logical Network Device

9) Actions describe packet forwarding, packet modification, and group table processing operations.

Answer:

Remediation Link: 4.2 OpenFlow Logical Network Device

10) An action set is a list of actions associated with a packet that are accumulated while the packet is processed by each table and that are executed when the packet exits the processing pipeline.

Answer:

Remediation Link: 4.2 OpenFlow Logical Network Device

11) Each group table consists of a number of rows, consisting of four components: group identifier, group type, counters, and action buckets.

Answer:

Remediation Link: 4.2 OpenFlow Logical Network Device

12) The OpenFlow protocol describes message exchanges that take place between an OpenFlow controller and an OpenFlow switch.

Answer:

Remediation Link: 4.3 OpenFlow Protocol

13) The OpenFlow protocol supports _____ messages. (Choose all correct answers.)

A) Asynchronous

B) Symmetric

C) Indirect

D) Controller to switch

Answer:

Remediation Link: 4.3 OpenFlow Protocol

14) The OpenFlow protocol provides the SDN controller with which types of information to be used in managing the network? (Choose all correct answers.)

- A) Encapsulated packets
- B) Flow statistics
- C) Event-based messages
- D) Action bucket

Answer:

Remediation Link: [4.3 OpenFlow Protocol](#)

15) The OpenFlow protocol enables the controller to manage the logical structure of a switch with regard to the details of how the switch implements the OpenFlow logical architecture.

Answer:

Remediation Link: [4.3 OpenFlow Protocol](#)