EVALUATIONS W4_EV (20 points possibles)

Question W4.EV.1: OpenFlow can only be used with software switches (such as OpenvSwitch)? (NA=1)

- ○ Yes

- ○ No ✔

?

EXPLANATION

Hardware switch may also implement OpenFlow.

Question W4.EV.2: what is the OpenFlow monitoring mode being the most similar to IPFIX? (NA=1)

- ○ active

- ○ passive ✔

?

EXPLANATION

In passive mode, statistics about flows are retrieved when they expire. They are thus push-based like in NETCONF.

Question W4.EV.3: what is the OpenFlow message sent by the controller to the switch to inform about an incoming packet? (NA=1)

- ○ PacketOut

- ○ PacketForward

○ PacketIn ✔

○ PacketEnter

○ InSwitch

?

Question W4.EV.4: among the following, what it the best definition of OpenFlow? (NA=1)

○ a new formalism to define trafic flow in networking

○ a protocol which allows to define a per-flow action on each individual switch ✔

○ a protocol which allows to define a per-flow action for all switches in a network

○ an abstration of switch interfaces

?

Question W4.EV.5: each device to be configured with NETCONF needs to run a NETCONF client to retrieve information configuration (NA=1)

○ yes

○ no ✔

?

EXPLANATION

Each device runs a NETCONF server being requested by the client.

Question W4.EV.6: among the following, what are NETCONF base operations? (NA=4)

get ✔

get-config ✔

edit

edit-config ✔

copy

copy-config ✔

?

Question W4.EV.7: what is the NETCONF operation to apply candidate configuration to the running configuration (only operation name without XML encoding)? (NA=1)

validate

commit ✔

save

?

EXPLANATION

commit operation allows to make effective the candidate configuration by replacing the running configuration

Question W4.EV.8: NETCONF subscription to notifications only allows to get future events? (NA=1)

○ yes

○ no ✔

?

EXPLANATION

It is possible to retrieve past event if the server supports it.

Question W4.EV.9: what are the particularities of YANG state data? (NA=2)

☐ no list is allowed

☐ being read-access only ✔

☐ no container is allowed

☐ being accessible with the get operation ✔

?

Question W4.EV.10: in which usual order the configuration datastore should be modified to apply a new configurationwith NETCONF? (NA=1)

○ startup, running, candidate, startup

○ candidate, running, startup ✔

○ candidate, running, candidate, startup

○ candidate, startup

?

> **EXPLANATION**
>
> In a usual process, the running config is copied to the candidate config, being then modified before being applied back to the running config. Then, a final copy to the startup config allows to make the new configuration being loaded at the next startup.

Question W4.EV.11: in order to guarentee a coherency over monitored data, IPFIX ensures that a single flow record is uniquely stored? (NA=1)

○ yes

○ no ✔

?

> **EXPLANATION**
>
> An exporting process can export flow to multiple collectors.

Question W4.EV.12: an IPFIX monitoring device needs: (NA=1)

○ 0 metering process

○ 1 metering process

○ 1 or more metering processes ✔

?

Question W4.EV.13: IPFIX defines its own primitives to ensure its security (NA=1)

○ yes

○ no ✔

?

EXPLANATION

IPFIX relies on underlying security protocol such as TLS.

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○ yes

○ no ✔

?

EXPLANATION

Several metering process can be used within a single device and with a different configuration.

Question W4.EV.15: how to reduce the grain with IPFIX? (NA=2)

☐ by adding a mediator

☐ by using more fields as key ✔

☐ by using IPFIX in a pull-mode

☐ by reducing the sampling rate ✔

?

EXPLANATION

IPFIX works in a push-mode. By extending key definition, less packets will be aggregated within a single flow. By reducing the sampling rate, less packets will be discarded. Both leads to more

fine-grained flow.

○ no ✔

?

EXPLANATION

IPFIX can be used for various purposes, not only security

Question W4.EV.17: are NETCONF and NetFlow equivalent protocols in terms of functionality? (NA=1)

○ yes

○ no ✔

?

EXPLANATION

IPFIX is only dedicated to monitoring.

Question W4.EV.18: the OpenFlow protocol is used between the following entities (NA=1)

○ a controller and an OpenFlow application

○ a controller and a switch ✔

○ two switches

○ an OpenFlow application and a switch

?

Question W4.EV.19: is NETCONF a single-client protocol? (NA=1)

○ yes

○ no ✔

?

EXPLANATION

Multiple clients can connect to the devices to be configured. The client can use the lock/unlock oeprations to protect their modifications to be modified by others.

Question W4.EV.20: is OpenFlow suitable for deep packet inspection (on its own)? (NA=1)

○ yes

○ no ✔

?

EXPLANATION

Although it is possible to export each received packet to the controller for further analysis with a table-miss default entry, its is not practicable at line-rate.

Vous avez utilisé 0 essais sur 3