I2NSF Capability YANG Data Model

draft-hares-i2nsf-capability-data-model-03

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Introduction

- This draft is an updated version from draft-hares-i2nsf-capability-yang-01.

- This draft introduces YANG data model for Security Controller to express description and discovery of the capabilities of NSF devices.

- Security Controller can give the information of optimal NSFs to service function forwarder or other components with capabilities.

- We verified our YANG data model through a prototype in IETF-99 Hackathon.

Updates from -02 Version

- Grouping
  - I2nsf-net-sec-control-caps
    - Retrieve the network security control information
  - I2nsf-con-control-capabilities
    - Retrieve the network content control information
  - I2nsf-attack-mitigation-control-caps
    - Retrieve the attack mitigation control information
  - Capabilities-information
    - Retrieve the information of capabilities such as capability location and IT resources.

Difference Between NSF-Facing and Capability YANG Data Model

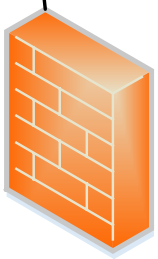
- NSF-Facing YANG Data Model: NSF-Facing Interface YANG Data Model is used to configure the rules of a policy into NSFs.

- Capability YANG Data Model: Capability YANG Data Model is used to retrieve capability information of an NSF.

NSF-Facing Interface (1/2)

The administrator is confused about setting up.

I2NSF User



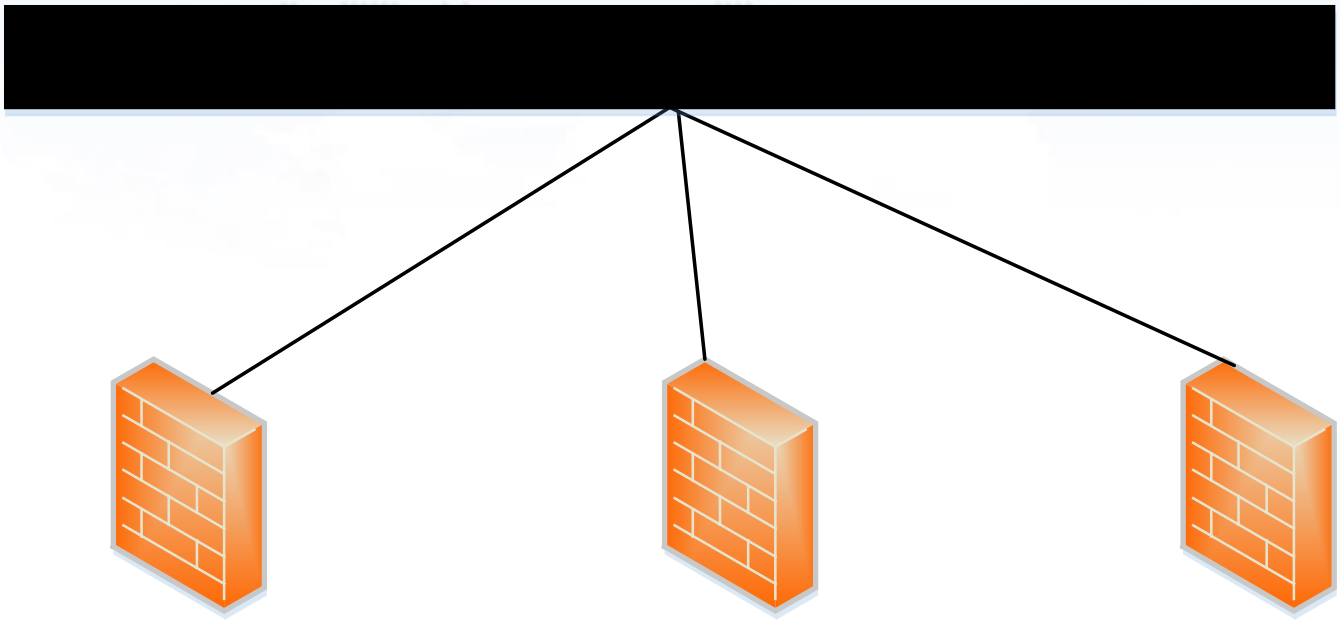
Company (A)
Interface:
ls

Company (B)
Interface:
dir

Company (C)
Interface:
le

NSF-Facing Interface (2/2)

Show Directory List
Interface:
DL

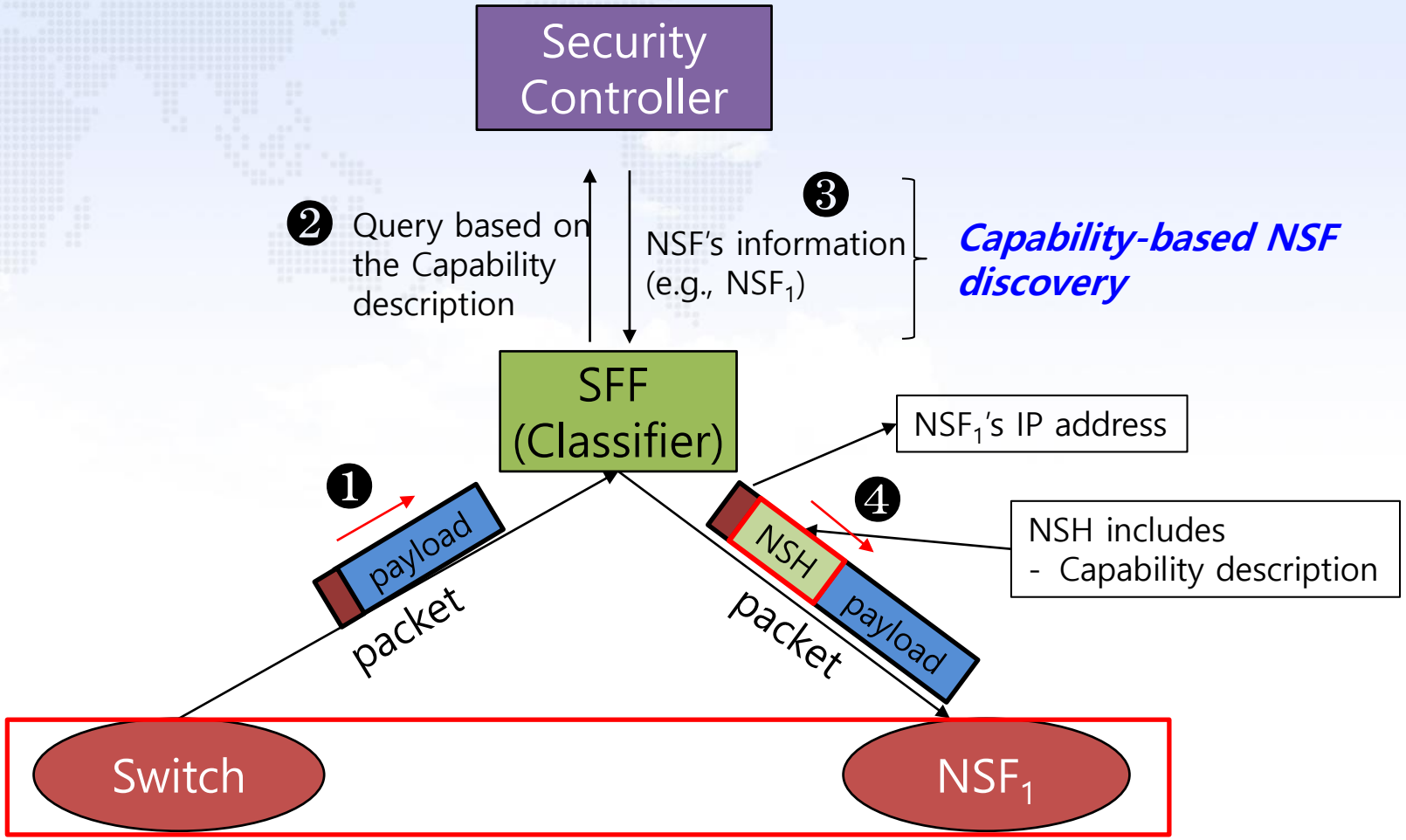


Company (A)
Interface:
DL -> ls

Company (B)
Interface:
DL -> dir

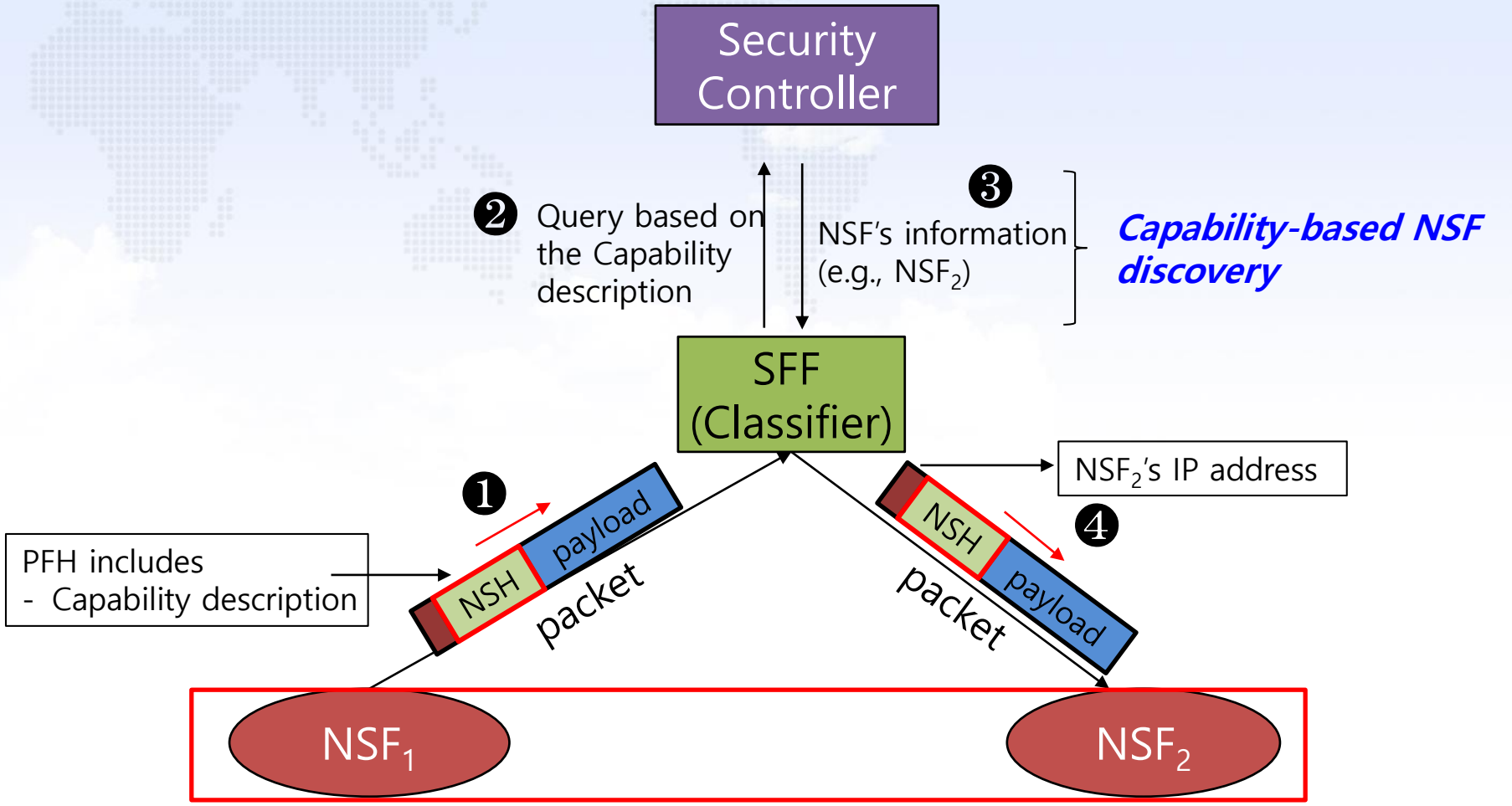
Company (C)
Interface:
DL -> le

Capability Data Model (1/2)



NSH: Network Service Header
SFF: Service Function Forwarder

Capability Data Model (2/2)



NSH: Network Service Header
SFF: Service Function Forwarder

Next Steps

- We will improve the contents for IT-Resources.

- We will verify our YANG data model by implementing a prototype in IETF-100 Hackathon.