I2NSF Capability YANG Data Model
(draft-hares-i2nsf-capability-data-model-01)

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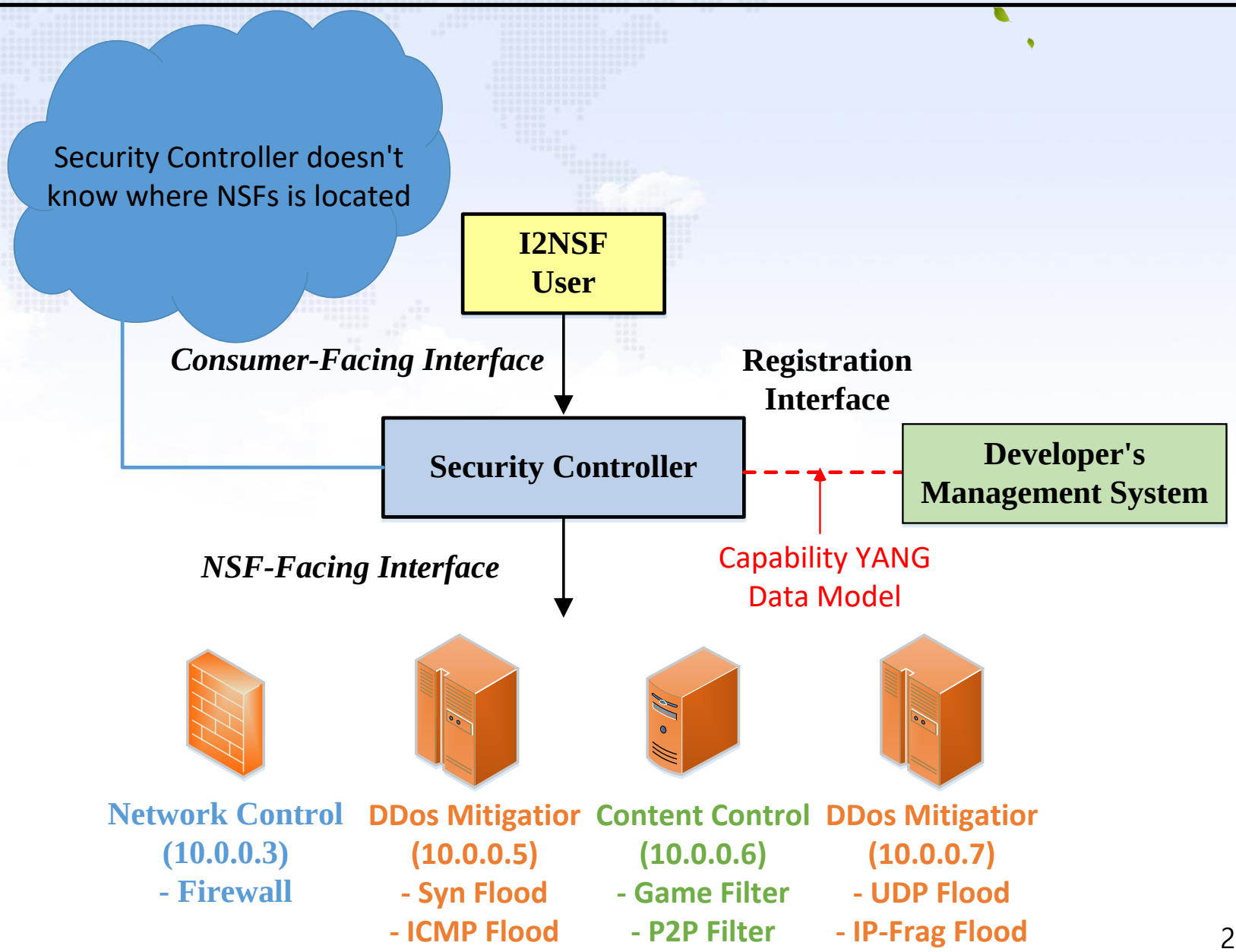
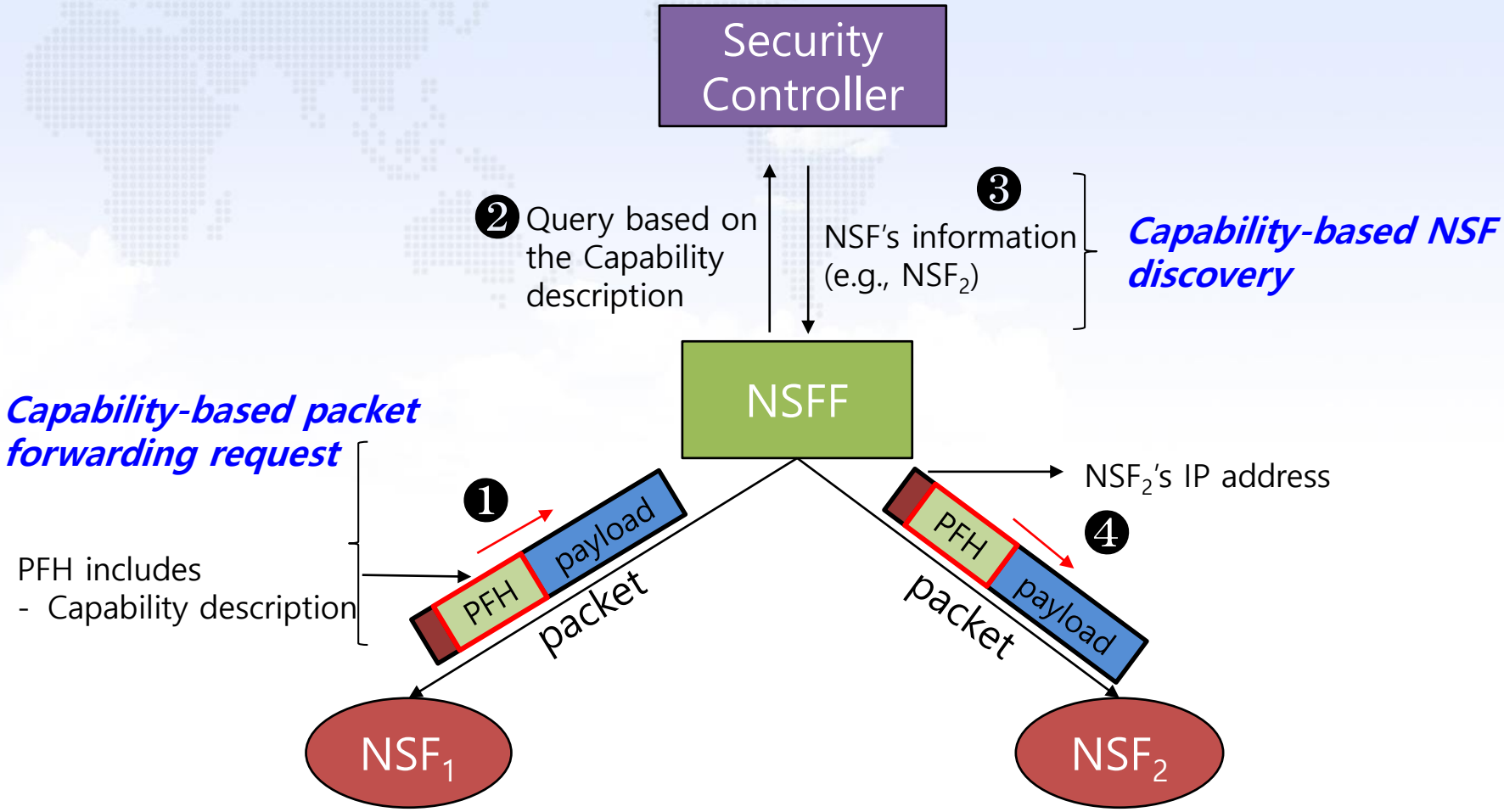
Capability YANG Data Model (1/2)



Capability YANG Data Model (2/2)



PFH: Packet Forwarding Header
NSFF: NSF Forwarder

Introduction

- This draft is an updated version from draft-hares-i2nsf-capability-yang-00.

- This draft introduces YANG data model for security controller to express and discover the capabilities of NSF devices.

- This YANG model can also be used by the list of I2NSF capabilities that can be controlled by security controller.

Update of Version 01

- Types of IP Addresses used by NSF devices
  - IPv4 address
  - IPv6 address

- Enhanced Content Security Control
  - dns filter
  - ftp filter
  - games filter
  - rpc filter
  - sql filter
  - telnet filter
  - tftp filter

Types of IP Addresses used by NSF devices

OLD

```
module : ietf-i2nsf-capability
  +--rw sec-ctl-capabilities
  +--rw nsf-capabilities
    +--rw nsf* [nsf-name]
      +--rw nsf-name  string
      +--rw nsf-address  inet:ipv4-address
      +--rw net-sec-control-capabilities
      |  uses i2nsf-net-sec-control-caps
      +--rw con-sec-control-capabilities
      |  uses i2nsf-con-sec-control-caps
      +--rw attack-mitigation-capabilities
      |  uses i2nsf-attack-mitigation-control-caps
      +--rw it-resource
      |  uses i2nsf-it-resources
```

NEW

```
module : ietf-i2nsf-capability
  +--rw sec-ctl-capabilities
  +--rw nsf-capabilities
    +--rw nsf* [nsf-name]
      +--rw nsf-name  string
      +--rw nsf-address
      |  +--rw (nsf-address-type)?
      |    +--: (ipv4-address)
      |    |  +--rw ipv4-address  inet:ipv4-address
      |    +--: (ipv6-address)
      |       +--rw ipv6-address  inet:ipv6-address
      +--rw net-sec-control-capabilities
      |  uses i2nsf-net-sec-control-caps
      +--rw con-sec-control-capabilities
      |  uses i2nsf-con-sec-control-caps
      +--rw attack-mitigation-capabilities
      |  uses i2nsf-attack-mitigation-control-caps
      +--rw it-resource
      |  uses i2nsf-it-resources
```

Enhanced Content Security Control

```
+--rw dns-filter
|  +--rw dns-filter-support?  boolean
|  +--rw dns-filter-fcn*  [dns-filter-name]
|    +--rw dns-filter-fcn-name  string  //std or vendor name
+--rw ftp-filter
|  +--rw ftp-filter-support?  boolean
|  +--rw ftp-filter-fcn*  [ftp-filter-fcn-name]
|    +--rw ftp-filter-fcn-name  string  //std or vendor name
+--rw games-filter
|  +--rw games-filter-support?  boolean
|  +--rw games-filter-fcn*  [games-filter-fcn-name]
|    +--rw games-filter-fcn-name  string  //std or vendor name
+--rw p2p-filter
|  +--rw p2p-filter-support?  boolean
|  +--rw p2p-filter-fcn*  [p2p-filter-fcn-name]
|    +--rw p2p-filter-fcn-name  string  //std or vendor name
+--rw rpc-filter
|  +--rw rpc-filter-support?  boolean
|  +--rw rpc-filter-fcn*  [rpc-filter-fcn-name]
|    +--rw rpc-filter-fcn-name  string  //std or vendor name
+--rw sql-filter
|  +--rw sql-filter-support?  boolean
|  +--rw sql-filter-fcn*  [sql-filter-fcn-name]
|    +--rw sql-filter-fcn-name  string  //std or vendor name
+--rw telnet-filter
|  +--rw telnet-filter-support?  boolean
|  +--rw telnet-filter-fcn*  [telnet-filter-fcn-name]
|    +--rw telnet-filter-fcn-name  string  //std or vendor name
+--rw tftp-filter
|  +--rw tftp-filter-support?  boolean
|  +--rw tftp-filter-fcn*  [tftp-filter-fcn-name]
|    +--rw tftp-filter-fcn-name  string  //std or vendor name
```

Next Step

- We will implement and test a prototype to use the enhanced data YANG model:
  - Types of IP Addresses for NSFs,
  - Content Security Control, and
  - Attack Mitigation Control.