Policy Object for I2NSF


Liang Xia
Qiushi Lin
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**Motivation**

- **Problems with attribute based policy rule configuration**
  - Repetitive configuration when creating new policy rules
  - Hard to maintain consistency, and time consuming to make modification

- **Object based configuration has been widely used in NSFs**
  - Re-usability: A policy object can be referenced in different policy rules as required.
  - Simplicity: The modification of a policy object will be propagated to the I2NSF policy rules that refer to this policy object.

- **Propose to introduce the “object” concept in I2NSF policy rule, and define commonly used policy objects**
  - This document is aligned with the previous information model draft and provides YANG groupings for the reusable policy objects
Policy Object Overview

- This document provides a minimal set of commonly used policy objects:
Policy Object - Examples

**grouping addr-objects:**
---rw addr-object* [name]
  ---rw name address-set-name
  + ...
  ---rw elements* [elem-id]
    ---rw elem-id uint16
    ---rw (object-items)
      +++:(ipv4)
      | ...
      +++:(ipv6)
      | ...
      +++:(mac)
      | ...
      +++:(ipv4-range)
      | ...
      +++:(ipv6-range)
      ...

**grouping addr-groups:**
---rw addr-group* [name]
  ---rw name address-set-name
  + ...
  ---rw elements* [elem-id]
    ---rw elem-id uint16
    ---rw addr-object-name
      address-set-name

**grouping service-objects:**
---rw pre-defined-service* [name]
  | ...
  ---rw service-object* [name]
    ---rw name service-set-name
    + ...
    ---rw items* [id]
      ---rw id uint16
      ---rw (item)
        +++:(tcp-item)
        | ...
        +++:(udp-item)
        | ...
        +++:(sctp-item)
        | ...
        +++:(icmp-item)
        | ...
        +++:(icmp6-item)
        | ...
        +++:(protocol-id)
        ...

**grouping services-groups:**
---rw service-group* [name]
  ---rw name service-set-name
  + ...
  ---rw elements* [elem-id]
    ---rw elem-id uint16
    ---rw service-object-name
      service-set-name
Questions/Comments

• Adopt “policy object” in I2NSF policy rule?

• The implementation of policy object?
  • This document: provide policy object for NSF-facing interface
  • Does Client-facing interface also need policy object?

• The group’s opinion?
  ✓ Individual draft or incorporating it into existing drafts?

• Please review and comment