Registration Interface Information Model and Data Model (draft-hyun-i2nsf-registration-interface-im-03, draft-hyun-i2nsf-registration-interface-dm-02)

Taekyun Roh
Department of Software/Computer Science and Engineering
Sungkyunkwan University
tkroh0198@skku.edu
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S.Hyun  T.Roh
S.Wi     J.Jeong   J.Park
Introduction

- Information model & data model for the Registration Interface are required for the following functions:
  - To register the capabilities of NSF created by Developer’s Management System (DMS)
  - To send a query of NSF capabilities to DMS
  - To request DMS to instantiate/de-instantiate an NSF

- Secure the registration of distributed NSFs via the Registration Interface in a centralized manner
Registration of NSFs

- Developer’s Management System (DMS) register the NSF to Security Controller via Registration Interface

*The capabilities based on draft-hares-i2nsf-capability-data-model-05
Additional Usages of Registration Interface

• Motivation
  • Security Controller send a query to DMS to search NSFs with required capabilities via Registration Interface
  • Security Controller request instantiation/de-instantiation of NSFs to DMS

The existing information model (draft-i2nsf-capability-00) & data model (draft-hares-i2nsf-capability-data-model-05) are used to describe the security capability(s) of an NSF.
Capability-based NSF Search (1/2)

1. Request high level policy

2. Identify required capabilities

3. Send queries of required capabilities\* to DMS(s)

Assume that some of the required capabilities is not currently available in the system.

*The capabilities based on draft-hares-i2nsf-capability-data-model-05
Capability-based NSF Search (2/2)

④ Register NSF capabilities

If DMS find a NSF with required capabilities

I2NSF User

Security Controller

NSF capabilities

Registration Interface

Developer’s Mgmt System

NSF

NSF
Instantiation Request of NSF

1. Request to create new NSF

Security Controller

Registration Interface

NSF capabilities

Developer’s Mgmt System

I2NSF User

NSF

NSF

NSF

NSF
Updated from Previous Version

- In draft-hyun-i2nsf-registration-interface-im-03,
  - We revised the document to explain on demand instantiation/de-instantiation of NSFs depending on capability requirements.

- In draft-hyun-i2nsf-registration-interface-dm-02, we updated the YANG data model accordingly in order to align with the updates in draft-i2nsf-registration-interface-im-03
Next Step

• We will implement the following functions in the 102\textsuperscript{th} IETF Hackathon:
  1) Implement instantiation/de-instantiation functions of registration Interface in OpenStack environment
Thank you

M.S. Taekyun Roh  tkroh0198@skku.edu
Prof. Sangwon Hyun  swhyun77@skku.edu
M.S. Sarang Wi  dnl9795@skku.edu
Prof. Jaehoon Paul Jeong  pauljeong@skku.edu