



I2NSF Security Controller-Facing Interface YANG Data Model for Cross-Domain Security Parameter Exchange

draft-kim-i2nsf-security-controller-facing-interface-dm-00

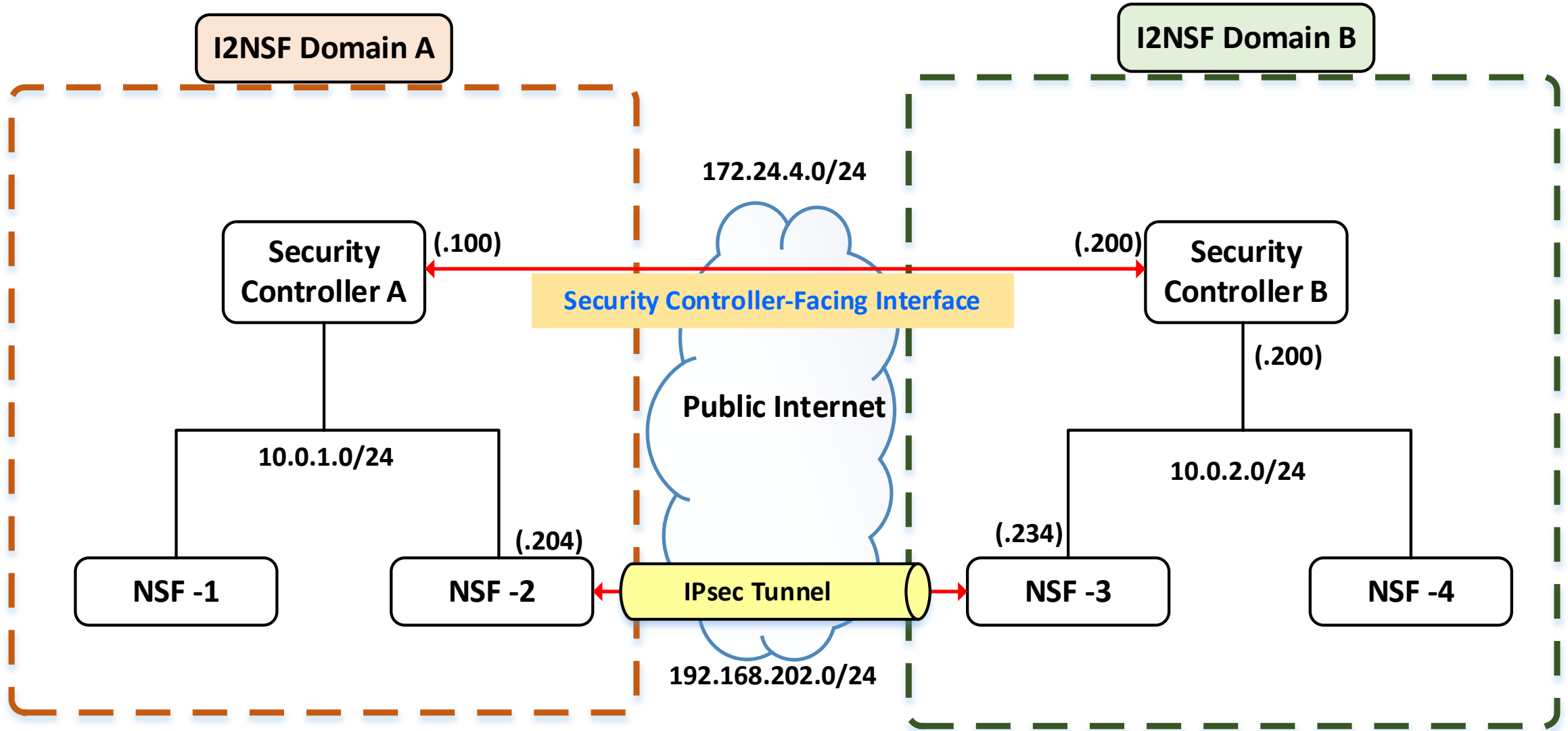
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Jeonghyeon (Joshua) Kim, Jaehoon (Paul) Jeong [Editor], Patrick Lingga,
Susan Hares and Rafa Marin-Lopez

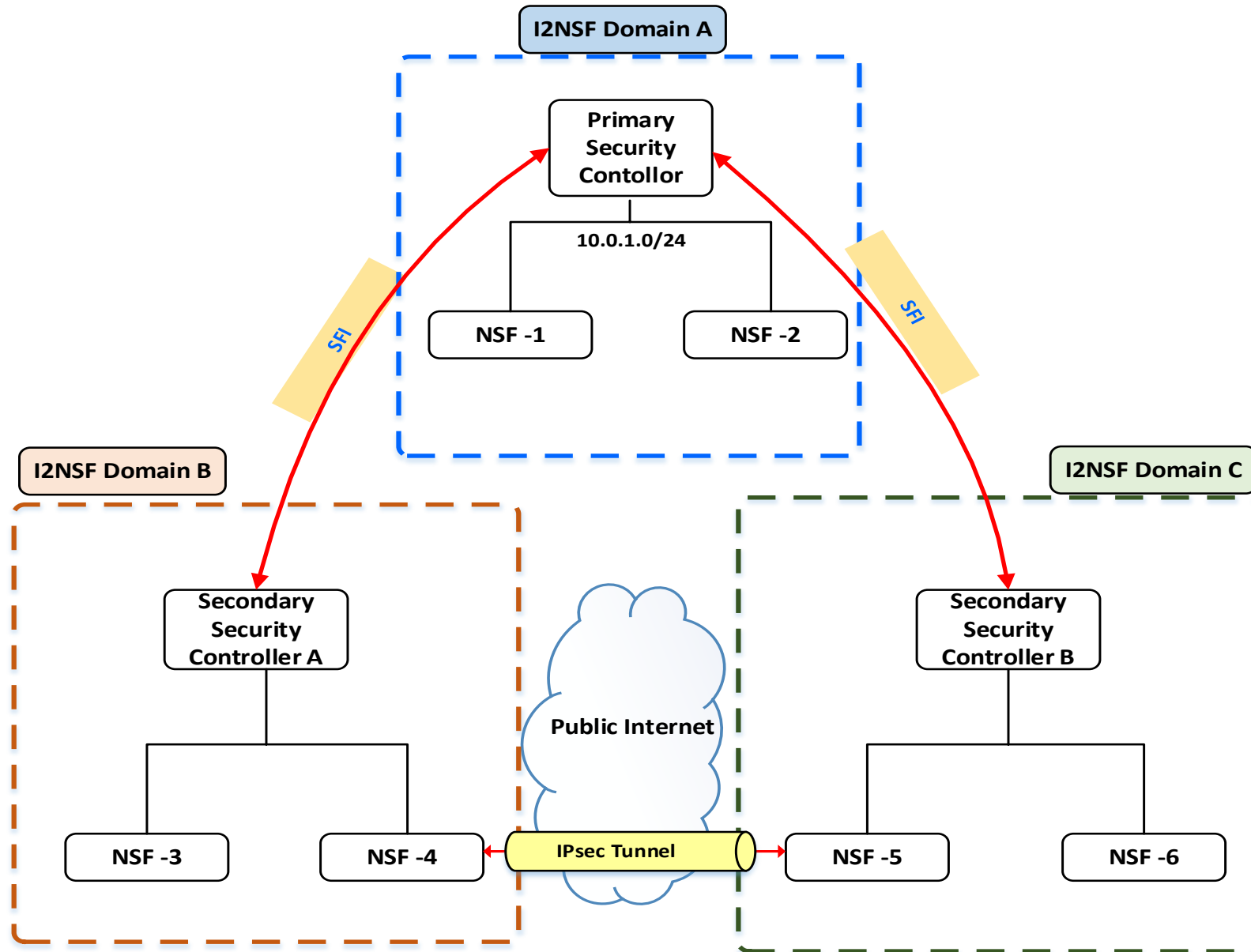
Security Controller-Facing Interface

- **Security Controller-Facing Interface (SFI):**
 - The RFC 9061 covered flow protection between NSFs located in one I2NSF domain.
 - As the SDN network expands (SD-WAN), I2NSF needs expansion to exchange security parameters and cooperate with I2NSFs located in different I2NSF domains (Peer-to-Peer scenario).
 - Also, need a centralized point to manage multiple I2NSF domains (Hierarchical scenario).
 - For this expansion, SFI is required to exchange security parameter information between security controllers located in different domains.

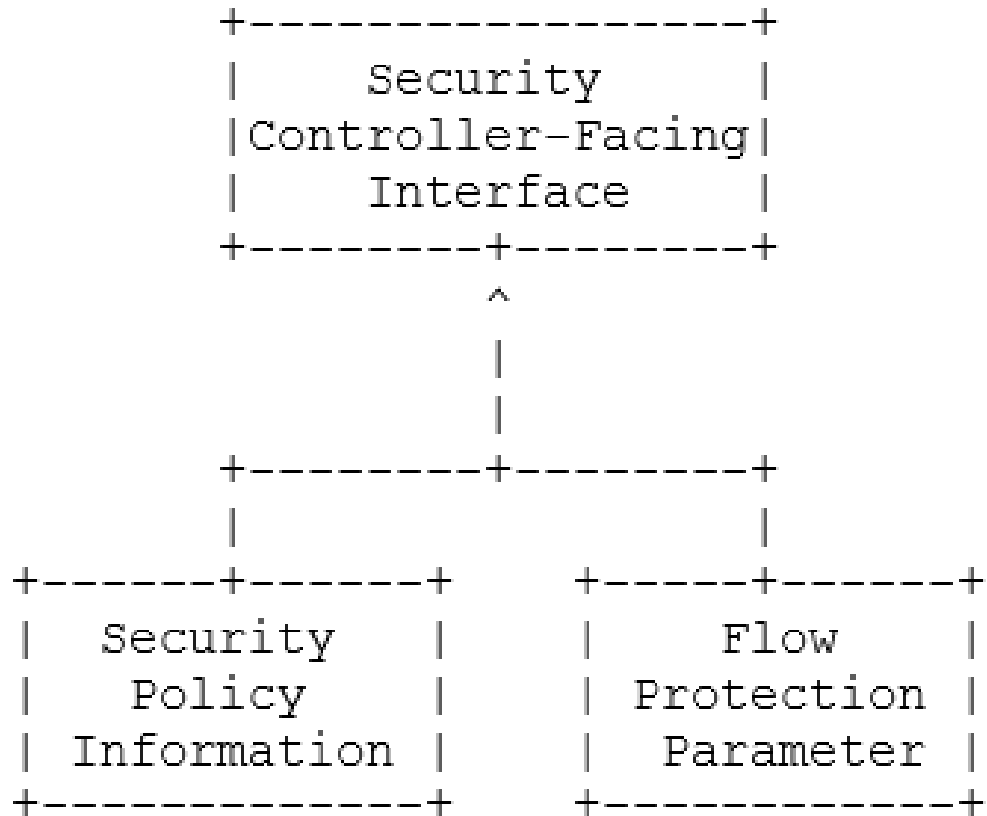
I2NSF Framework for Cross-Domain Security Parameter Exchange (Peer-to-Peer Case): IPsec Tunnel for SFC and BGP



I2NSF Framework for Cross-Domain Security Parameter Exchange (Hierarchical Case): IPsec Tunnel for SFC and BGP



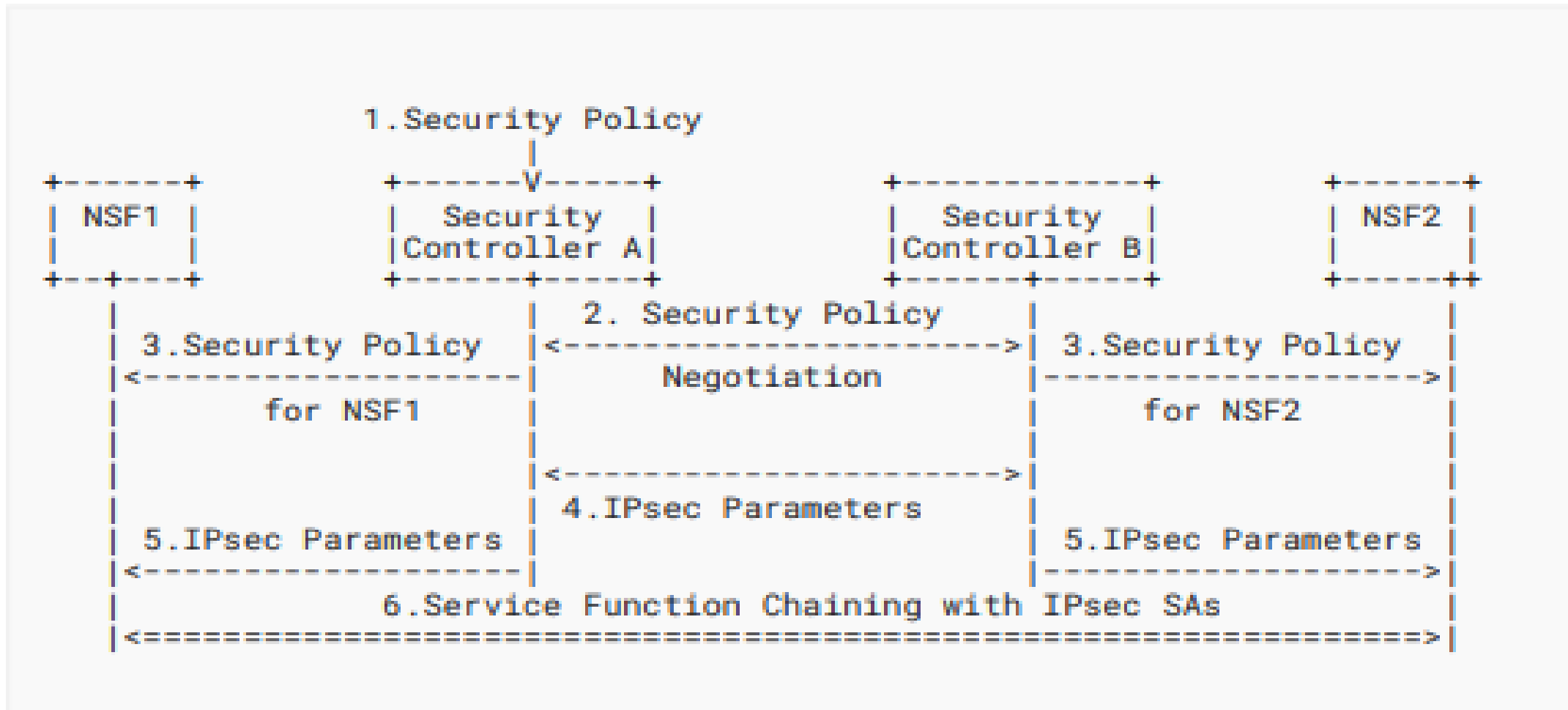
Information Model for Security Controller-Facing Interface



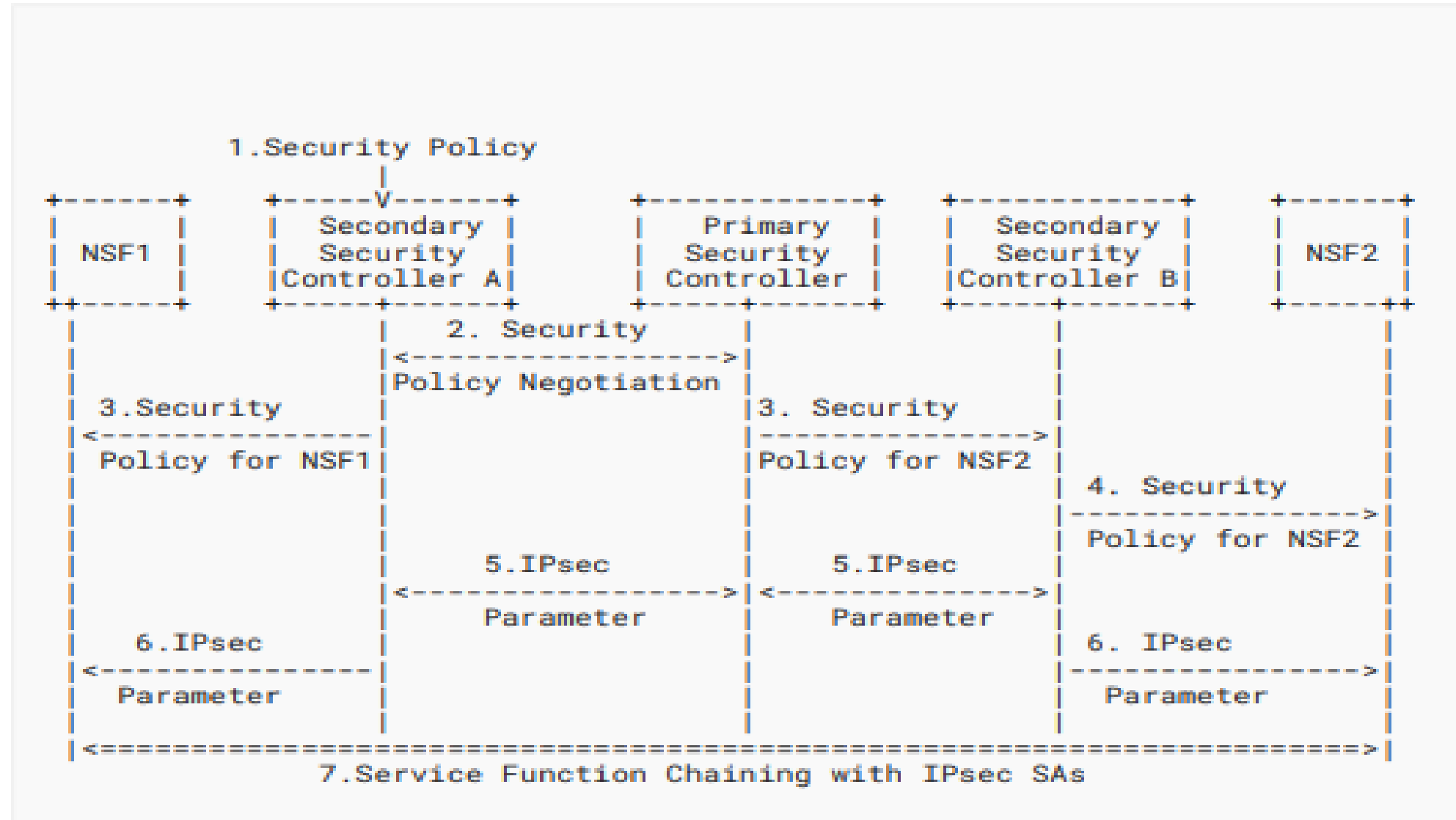
➤ Security Policy Information: **Security Policy** (e.g., SFC for firewall and web-filter) that a security administrator wants to configure.

➤ Flow Protection Parameters: **Security Parameters** required to establish IPsec SAs [RFC9061].

Peer-to-Peer Case for the Security Controller-Facing Interface in Cross-Domain Environments



Hierarchical Use Cases for the Security Controller-Facing Interface in Cross-Domain Environments



Next Step

- This draft introduces Security Controller-Facing Interface (SFI) for cross-domain security parameter exchange for IPsec tunnels for SFC and BGP.
- It suggests I2NSF expansion architecture with SFI and its use cases (e.g., peer-to-peer and hierarchical cases).
- The revision of the draft will include another example for setting up an IPsec tunnel for BGP.
- This draft is proposed as a WG item in I2NSF Re-chartering.