ESP transform in HIP draft-jokela-hip-esp-00

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Purpose of this draft

- Defines the ESP transform usage with HIP
 - Originally included in HIP base spec -01
 - Mandatory for HIP implementations
- Functionality
 - Setting up ESP SAs between HIP nodes
 - Updating an existing ESP association (rekeying)

Parameters

- ESP_INFO
 - Combines earlier SPI and NES parameters
 - Remote's old SPI, new SPI, KEYMAT index
- ESP_TRANSFORM
 - Encryption and authentication transforms
- New NOTIFY error types
 - NO_ESP_PROPOSAL_CHOSEN
 - INVALID_ESP_PROPOSAL_CHOSEN

Setting up a new ESP SA pair

HIP Host

HIP Host

HES1: ESP_TRANSFORM (proposed)

HES2: ESP_TRANSFORM (selected), ESP_INFO (SPI value)

HES3: ESP_INFO (SPI value)

Updating an existing ESP SA pair

HIP Host

HIP Host

HER1: ESP_INFO (old + new SPIs, keymat index)

HER2: ESP_INFO (old + new SPIs, keymat index)

Open issues

- Shall we maintain the current "look"
 - Conceptual packet exchanges (HER, HES) or
 - Parameters tightly bound to the base exchange and UPDATE packets as it was in base draft -01
- ESP support a MUST implement protocol
- Sections 3 and 4 will be re-written

Next steps

- Adopt as a working group draft?
- Issue a revised version in April
- Proceed hand-in-hand with the base spec