SHIM6 Privacy Analysis

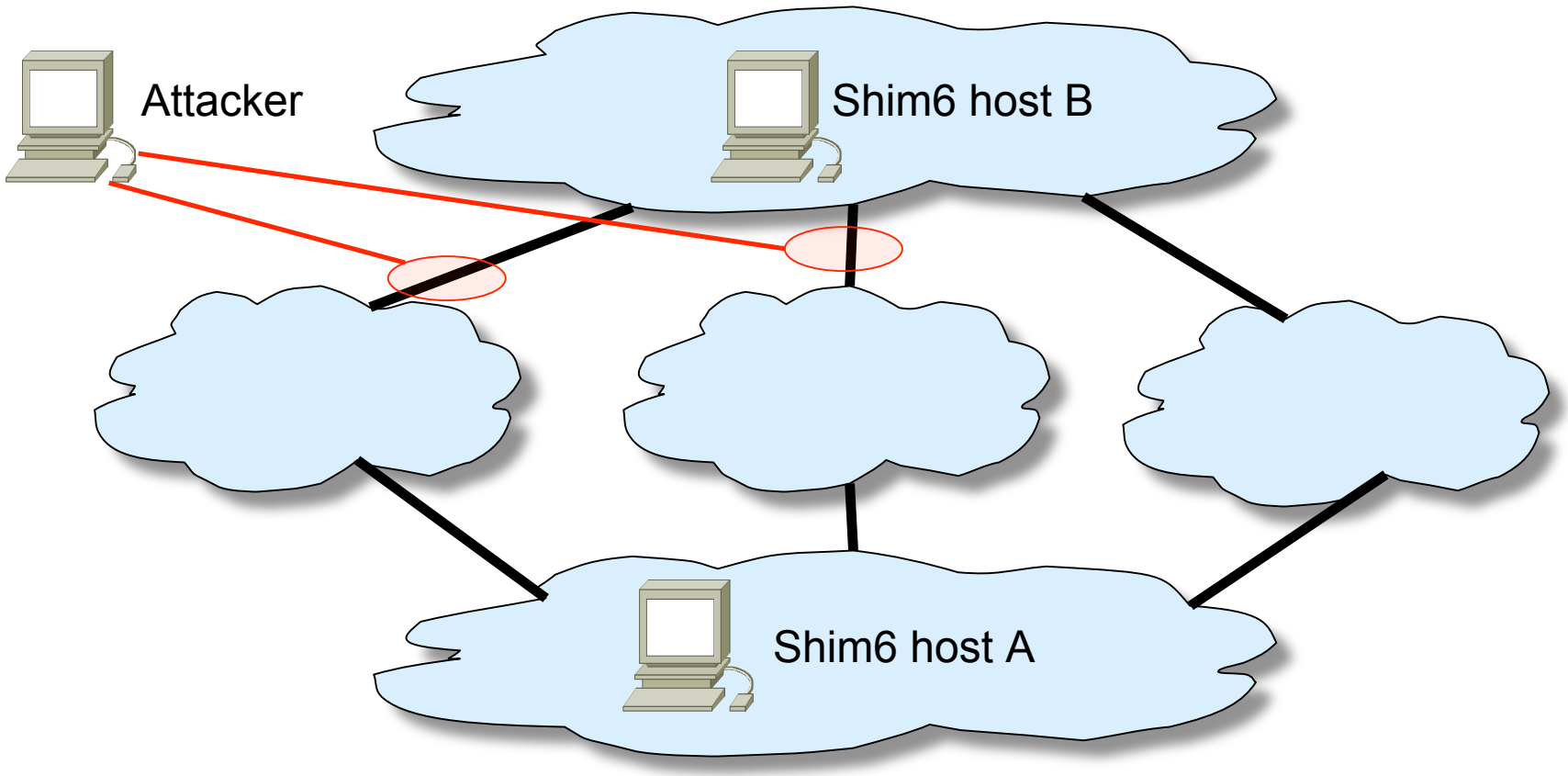
draft-bagnulo-shim6-privacy-00

Marcelo Bagnulo

shim6 wg

IETF 65 - Dallas

Scenario



ULID-pair Context Establishment Exchange (I)

- Sensitive Information in I1 packet
  - ULID-pair option (related to locator pair)
  - Context tag
- Sensitive Information in R1 packet
  - none

ULID-pair Context Establishment Exchange (II)

- Sensitive Information in I2 packet
  - ULID-pair option
  - Context Tag
  - Locator Set option
  - CGA Parameter Data Structure Option

ULID-pair Context Establishment Exchange (III)

- Sensitive Information in R2 packet
  - Context Tag
  - Locator Set option
  - CGA Parameter Data Structure Option

Packets with the Payload header

- Possibility of correlating packets with different locator pairs using the context tag
- Bind different locators to a single host

Update messages

- Sensitive Information Update Request
  - Context tag
  - Locator pair list
  - CGA Parameter Data Strucutre
- Sensitive Information in Ack
  - The context tag
  - Nonce information (if different locators are used)

Keepalive & probe messages

- Context tags
- Identifier

Solution space

- For most of the information in I2, R2, Update, Probe, Keepalive:
  - Negotiate shared secret (DH) and encrypt
- For context tags
  - Need that different locator pair carry different CT. CT must be known beforehand by the peer.
- For I1 message:
  - Remove sensible information or,
  - Add previous message exchange to negotiate a shared secret

Do we (need to) care about this?