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# Applicability Issues for Supporting IPsec NAT-Traversal Mechanism in NAT-PT

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# Overview

- RFC 3948 (UDP Encapsulation of IPsec ESP Packets) and RFC 3947 (Negotiation of NAT-Traversal in the IKE) may be used to support IPsec in NAT-PT
- Issues when applying them to NAT-PT
  - IKE negotiation issue
    - ID type mismatch during IKE negotiation, if IPv6 host uses ID\_IPV6\_ADDR
    - It is desirable to use ID\_FQDN as ID type
  - Transport mode ESP/UDP encapsulation issue
    - TCP/UDP checksum recomputation relies on NAT-OA option
    - But, only ID\_IPV4\_ADDR and ID\_IPV6\_ADDR types are allowed
    - IPv4 only node needs to parse NAT-OA option including IPv6 address

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# Why revisit IPsec Support in NAT-PT?

- NAT-PT mechanism has been deprecated
  - Efforts to redesign IPv4/IPv6 translator in v6ops WG
    - IPsec support is mandatory (RFC 3948 )
    - Issues may need to be considered
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