rfc6712bis and rfc4210bis

draft-ietf-lamps-rfc6712bis-03
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draft-ietf-lamps-rfc4210bis-07
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IETF 118 – LAMPS Working Group

Activities since IETF 117 on rfc6712bis

Changes since IETF 117:

- No updates since IETF117
- Draft on github.com/lamps-wg/cmp-updates/

Next Steps:

- Alignment of the draft after publication of CMP Updates (RFC 9480)

Activities since IETF 117 on rfc4210bis

Changes since IETF 117:
- No updates since IETF117
- Some changes in the pipeline at github.com/lamps-wg/cmp-updates/

Status:
- PoC implementation are ongoing during the hackathon
- Waiting for review feedback from the WG as requested by Russ during IETF 116 (“Russ: requests that the KEM section get a lot of review since this part is very new.”) Specifically opinions on the content of the KemOtherInfo is welcome.

Next Steps:
- Alignment of the draft after publication of CMP Updates (RFC 9480)
- Resolving issues in text on proof-of-possession structures using challenge-response, Section 5.2.8.3.

New ASN.1 structures

```
id-KemBasedMac OBJECT IDENTIFIER ::= {1 2 840 113533 7 66 TBD4}

KemBMParameter ::= SEQUENCE {
  kdf               AlgorithmIdentifier{KEY-DERIVATION, {...}},
  len               INTEGER (1..MAX),
  mac               AlgorithmIdentifier{MAC-ALGORITHM, {...}}
}
```

Algorithm identifier to be used in PKIHeader.protectionAlg when KEM-based MAC is used.
Entrust is willing to register the OID in the same branch like PBMParameter.

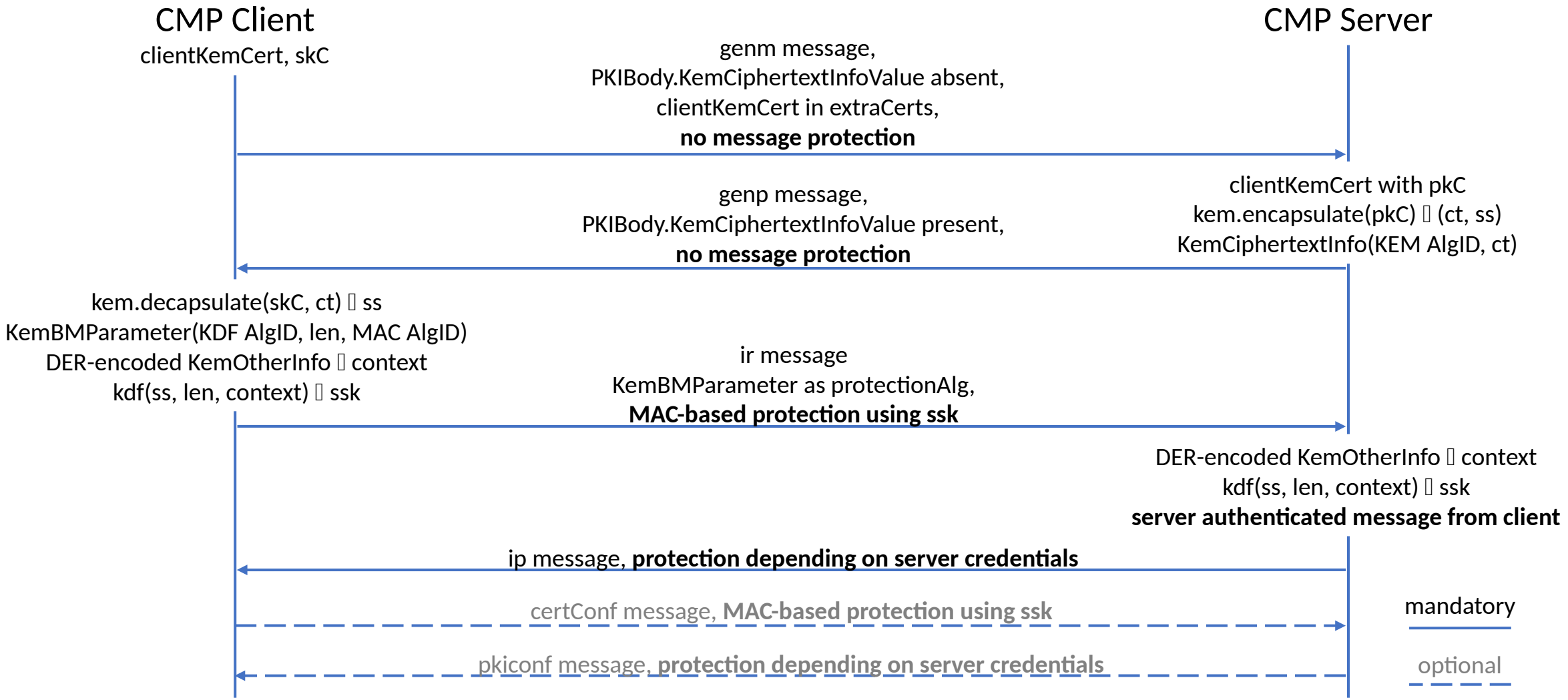
```
id-it-KemCiphertextInfo OBJECT IDENTIFIER ::= { id-it TBD1 }
KemCiphertextInfoValue ::= KemCiphertextInfo

KemCiphertextInfo ::= SEQUENCE {
  kem               AlgorithmIdentifier{KEM-ALGORITHM, {...}},
  ct                OCTET STRING
}
```

InfoTypeAndValue to deliver the KEM ciphertext in body of general message or in generalInfo field of message header.

```
KemOtherInfo ::= SEQUENCE {
  staticString      PKIFreeText,
  transactionID [0] OCTET STRING     OPTIONAL,
  senderNonce   [1] OCTET STRING     OPTIONAL,
  recipNonce    [2] OCTET STRING     OPTIONAL,
  len               INTEGER (1..MAX),
  mac               AlgorithmIdentifier{MAC-ALGORITHM, {...}},
  ct                OCTET STRING
}
```

Context information as input to the KDF for domain separation and for ensuring uniqueness of MAC-keys.
Uses transactionID, senderNonce, and recipNonce from the message containing the KemCiphertextInfoValue.ct, if present.

Client owns KEM key pair



Server owns KEM key pair