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## **Red Hat Enterprise Linux Release 9.2 Manual Pages on 'OSSL\_CMP\_validate\_cert\_path.3ossl' command**

```
$ man OSSL_CMP_validate_cert_path.3ossl
```

```
OSSL_CMP_VALIDATE_MSG(3ossl)    OpenSSL    OSSL_CMP_VALIDATE_MSG(3ossl)
```

### NAME

OSSL\_CMP\_validate\_msg, OSSL\_CMP\_validate\_cert\_path - functions for verifying CMP message protection

### SYNOPSIS

```
#include <openssl/cmp.h>

int OSSL_CMP_validate_msg(OSSL_CMP_CTX *ctx, OSSL_CMP_MSG *msg);

int OSSL_CMP_validate_cert_path(const OSSL_CMP_CTX *ctx,
                                X509_STORE *trusted_store, X509 *cert);
```

### DESCRIPTION

This is the API for validating the protection of CMP messages, which includes validating CMP message sender certificates and their paths while optionally checking the revocation status of the certificates(s).

OSSL\_CMP\_validate\_msg() validates the protection of the given msg using either password-based mac (PBM) or a signature algorithm.

In case of signature algorithm, the certificate to use for the signature check is preferably the one provided by a call to OSSL\_CMP\_CTX\_set1\_srvCert(3). If no such sender cert has been pinned

then candidate sender certificates are taken from the list of certificates received in the msg extraCerts, then any certificates provided before via OSSL\_CMP\_CTX\_set1\_untrusted(3), and then all trusted certificates provided via OSSL\_CMP\_CTX\_set0\_trustedStore(3), where a candidate is acceptable only if has not expired, its subject DN matches the msg sender DN (as far as present), and its subject key identifier is present and matches the senderKID (as far as the latter present). Each acceptable cert is tried in the given order to see if the message signature check succeeds and the cert and its path can be verified using any trust store set via OSSL\_CMP\_CTX\_set0\_trustedStore(3).

If the option OSSL\_CMP\_OPT\_PERMIT\_TA\_IN\_EXTRACERTS\_FOR\_IR was set by calling OSSL\_CMP\_CTX\_set\_option(3), for an Initialization Response (IP) message any self-issued certificate from the msg extraCerts field may also be used as trust anchor for the path verification of an acceptable cert if it can be used also to validate the issued certificate returned in the IP message. This is according to TS 33.310 [Network Domain Security (NDS); Authentication Framework (AF)] document specified by the The 3rd Generation Partnership Project (3GPP).

Any cert that has been found as described above is cached and tried first when validating the signatures of subsequent messages in the same transaction.

OSSL\_CMP\_validate\_cert\_path() attempts to validate the given certificate and its path using the given store of trusted certs (possibly including CRLs and a cert verification callback) and non-trusted intermediate certs from the ctx.

## NOTES

CMP is defined in RFC 4210 (and CRMF in RFC 4211).

## RETURN VALUES

OSSL\_CMP\_validate\_msg() and OSSL\_CMP\_validate\_cert\_path() return 1 on success, 0 on error or validation failed.

## SEE ALSO

OSSL\_CMP\_CTX\_new(3), OSSL\_CMP\_exec\_certreq(3)

## HISTORY

The OpenSSL CMP support was added in OpenSSL 3.0.

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