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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'EVP_OpenInit.3oss1' command

\$ man EVP_OpenInit.3oss1

EVP_OPENINIT(3oss1) OpenSSL EVP_OPENINIT(3oss1)

NAME

EVP_OpenInit, EVP_OpenUpdate, EVP_OpenFinal - EVP envelope decryption

SYNOPSIS

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

int EVP_OpenInit(EVP_CIPHER_CTX *ctx, EVP_CIPHER *type, unsigned char *ek,
                int ekl, unsigned char *iv, EVP_PKEY *priv);

int EVP_OpenUpdate(EVP_CIPHER_CTX *ctx, unsigned char *out,
                  int *outl, unsigned char *in, int inl);

int EVP_OpenFinal(EVP_CIPHER_CTX *ctx, unsigned char *out, int *outl);
```

DESCRIPTION

The EVP envelope routines are a high-level interface to envelope decryption. They decrypt a public key encrypted symmetric key and then decrypt data using it.

EVP_OpenInit() initializes a cipher context ctx for decryption with cipher type. It decrypts the encrypted symmetric key of length ekl bytes passed in the ek parameter using the private key priv. The IV is supplied in the iv parameter.

EVP_OpenUpdate() and EVP_OpenFinal() have exactly the same properties as the EVP_DecryptUpdate() and EVP_DecryptFinal() routines, as documented on the EVP_EncryptInit(3) manual page.

NOTES

It is possible to call EVP_OpenInit() twice in the same way as

EVP_DecryptInit(). The first call should have priv set to NULL and (after setting any cipher parameters) it should be called again with type set to NULL.

If the cipher passed in the type parameter is a variable length cipher then the key length will be set to the value of the recovered key length. If the cipher is a fixed length cipher then the recovered key length must match the fixed cipher length.

RETURN VALUES

EVP_OpenInit() returns 0 on error or a non zero integer (actually the recovered secret key size) if successful.

EVP_OpenUpdate() returns 1 for success or 0 for failure.

EVP_OpenFinal() returns 0 if the decrypt failed or 1 for success.

SEE ALSO

evp(7), RAND_bytes(3), EVP_EncryptInit(3), EVP_SealInit(3)

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