



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'life_cycle-cipher.7oss1' command

\$ man life_cycle-cipher.7oss1

LIFE_CYCLE-CIPHER(7oss1) OpenSSL LIFE_CYCLE-CIPHER(7oss1)

NAME

life_cycle-cipher - The cipher algorithm life-cycle

DESCRIPTION

All symmetric ciphers (CIPHERs) go through a number of stages in their life-cycle:

start

This state represents the CIPHER before it has been allocated. It is the starting state for any life-cycle transitions.

newed

This state represents the CIPHER after it has been allocated.

initialised

These states represent the CIPHER when it is set up and capable of processing input. There are three possible initialised states:

initialised using EVP_CipherInit

initialised for decryption using EVP_DecryptInit

initialised for encryption using EVP_EncryptInit

updated

These states represent the CIPHER when it is set up and capable of processing additional input or generating output. The three possible states directly correspond to those for initialised above.

The three different streams should not be mixed.

finalised

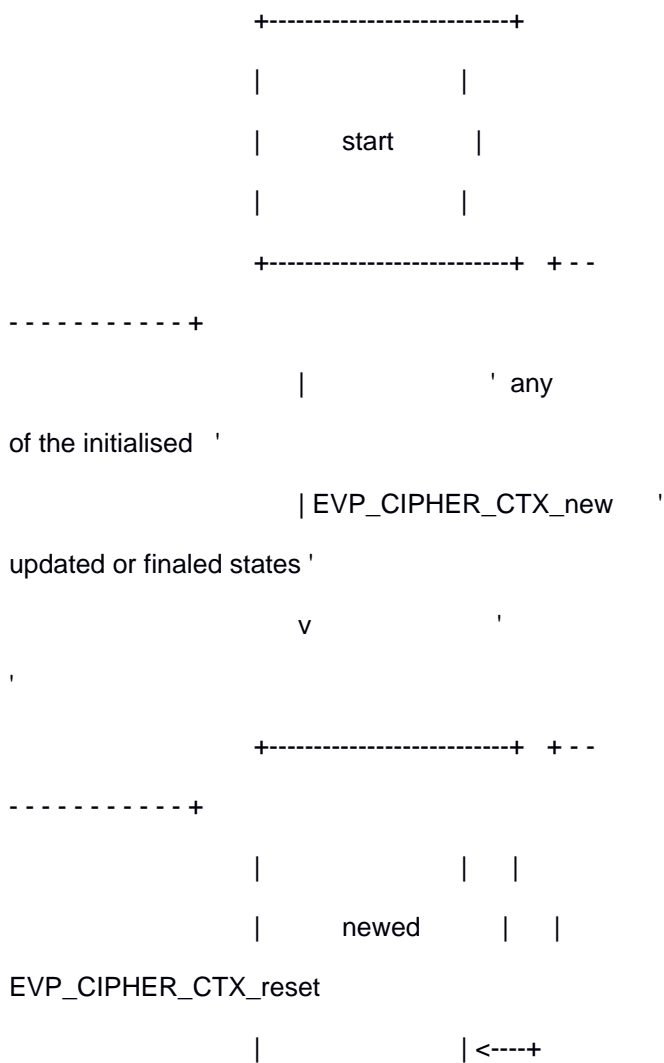
This state represents the CIPHER when it has generated output.

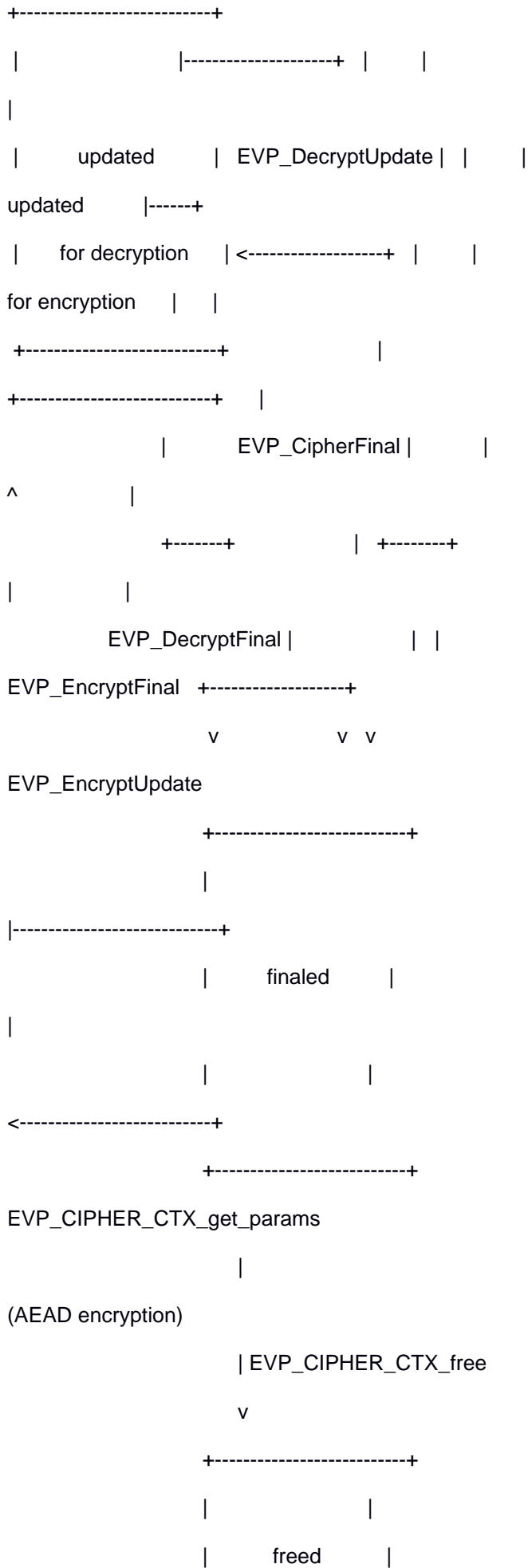
freed

This state is entered when the CIPHER is freed. It is the terminal state for all life-cycle transitions.

State Transition Diagram

The usual life-cycle of a CIPHER is illustrated:







Formal State Transitions

This section defines all of the legal state transitions. This is the canonical list.

Function Call

```

----- Current State
-----

start newed initialised updated
finalised initialised updated initialised updated freed
                                decryption
decryption encryption encryption
EVP_CIPHER_CTX_new          newed
EVP_CipherInit              initialised initialised initialised
initialised initialised initialised initialised initialised
EVP_DecryptInit             initialised initialised initialised
initialised initialised initialised initialised initialised
                                decryption decryption decryption
decryption decryption decryption decryption decryption
EVP_EncryptInit             initialised initialised initialised
initialised initialised initialised initialised initialised
                                encryption encryption encryption
encryption encryption encryption encryption encryption
EVP_CipherUpdate            updated updated
EVP_DecryptUpdate
updated updated
                                decryption
decryption
EVP_EncryptUpdate
updated updated
                                encryption
encryption

```


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