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***Rocky Enterprise Linux 9.2 Manual Pages on command 'life\_cycle-mac.7ssl'***

***\$ man life\_cycle-mac.7ssl***

LIFE\_CYCLE-MAC(7SSL)                      OpenSSL                      LIFE\_CYCLE-MAC(7SSL)

**NAME**

life\_cycle-mac - The MAC algorithm life-cycle

**DESCRIPTION**

All message authentication codes (MACs) go through a number of stages in their life-cycle:

**start**

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

**newed**

This state represents the MAC after it has been allocated.

**initialised**

This state represents the MAC when it is set up and capable of processing input.

**updated**

This state represents the MAC when it is set up and capable of processing additional input or generating output.

**finalled**

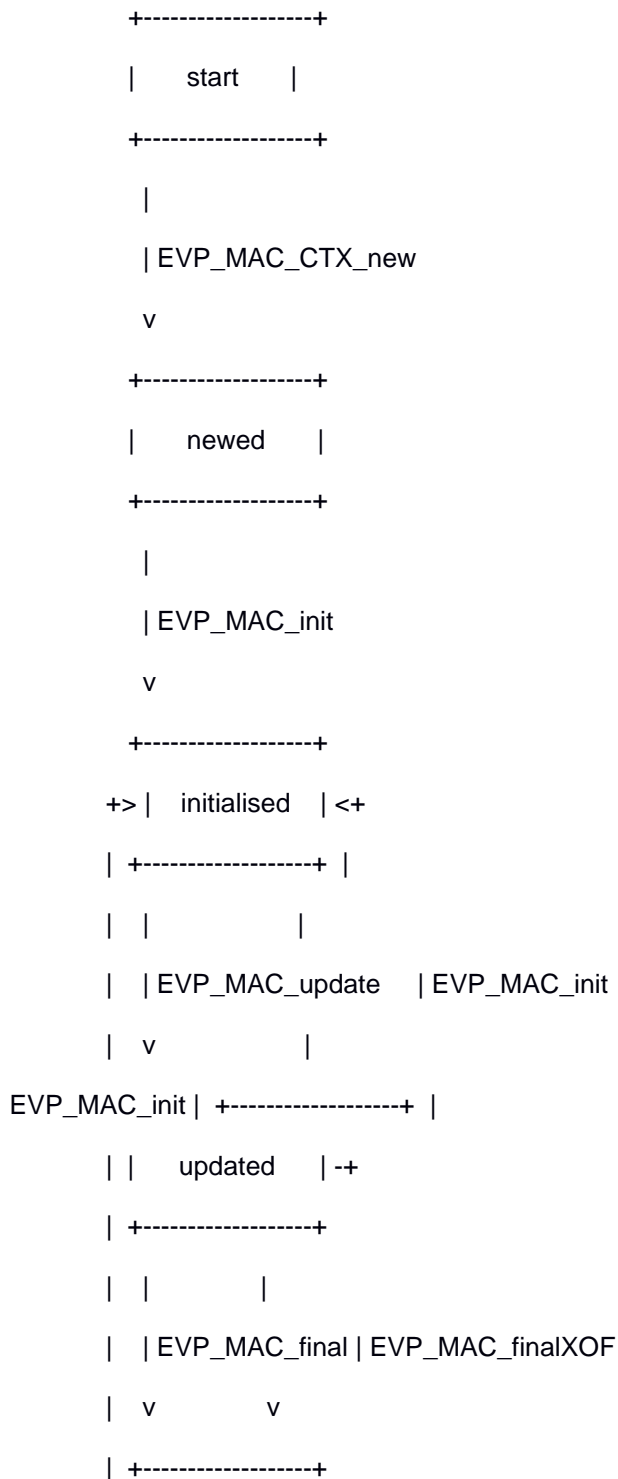
This state represents the MAC when it has generated output.

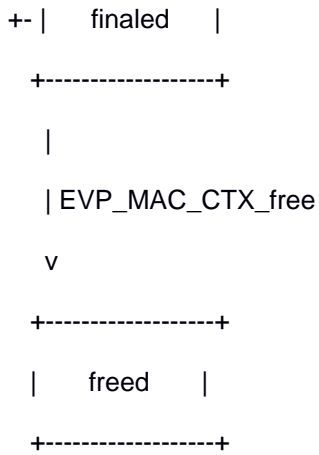
freed

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

### State Transition Diagram

The usual life-cycle of a MAC 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 finaled
freed		
EVP_MAC_CTX_new		newed
EVP_MAC_init		initialised initialised initialised initialised
EVP_MAC_update		updated updated
EVP_MAC_final		finaled
EVP_MAC_finalXOF		finaled
EVP_MAC_CTX_free		freed freed freed freed freed
EVP_MAC_CTX_get_params		newed initialised updated
EVP_MAC_CTX_set_params		newed initialised updated
EVP_MAC_CTX_gettable_params		newed initialised updated
EVP_MAC_CTX_settable_params		newed initialised updated

### NOTES

At some point the EVP layer will begin enforcing the transitions described herein.

### SEE ALSO

provider-mac(7), EVP\_MAC(3).

### HISTORY

The provider MAC interface was introduced in OpenSSL 3.0.

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3.0.2

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