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### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'DH\_set\_default\_method.3ossl'***

***\$ man DH\_set\_default\_method.3ossl***

DH\_SET\_METHOD(3ossl)          OpenSSL          DH\_SET\_METHOD(3ossl)

#### NAME

DH\_set\_default\_method, DH\_get\_default\_method, DH\_set\_method,  
DH\_new\_method, DH\_OpenSSL - select DH method

#### SYNOPSIS

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

The following functions have been deprecated since OpenSSL 3.0, and can be hidden entirely by defining OPENSSL\_API\_COMPAT with a suitable version value, see openssl\_user\_macros(7):

```
void DH_set_default_method(const DH_METHOD *meth);  
const DH_METHOD *DH_get_default_method(void);  
int DH_set_method(DH *dh, const DH_METHOD *meth);  
DH *DH_new_method(ENGINE *engine);  
const DH_METHOD *DH_OpenSSL(void);
```

#### DESCRIPTION

All of the functions described on this page are deprecated.

Applications should instead use the provider APIs.

A DH\_METHOD specifies the functions that OpenSSL uses for Diffie-

Hellman operations. By modifying the method, alternative implementations such as hardware accelerators may be used. IMPORTANT: See the NOTES section for important information about how these DH API functions are affected by the use of ENGINE API calls.

Initially, the default DH\_METHOD is the OpenSSL internal implementation, as returned by DH\_OpenSSL().

DH\_set\_default\_method() makes meth the default method for all DH structures created later. NB: This is true only whilst no ENGINE has been set as a default for DH, so this function is no longer recommended. This function is not thread-safe and should not be called at the same time as other OpenSSL functions.

DH\_get\_default\_method() returns a pointer to the current default DH\_METHOD. However, the meaningfulness of this result is dependent on whether the ENGINE API is being used, so this function is no longer recommended.

DH\_set\_method() selects meth to perform all operations using the key dh. This will replace the DH\_METHOD used by the DH key and if the previous method was supplied by an ENGINE, the handle to that ENGINE will be released during the change. It is possible to have DH keys that only work with certain DH\_METHOD implementations (e.g. from an ENGINE module that supports embedded hardware-protected keys), and in such cases attempting to change the DH\_METHOD for the key can have unexpected results.

DH\_new\_method() allocates and initializes a DH structure so that engine will be used for the DH operations. If engine is NULL, the default ENGINE for DH operations is used, and if no default ENGINE is set, the DH\_METHOD controlled by DH\_set\_default\_method() is used.

A new DH\_METHOD object may be constructed using DH\_meth\_new() (see DH\_meth\_new(3)).

## RETURN VALUES

DH\_OpenSSL() and DH\_get\_default\_method() return pointers to the respective DH\_METHODs.

DH\_set\_default\_method() returns no value.

DH\_set\_method() returns nonzero if the provided meth was successfully set as the method for dh (including unloading the ENGINE handle if the previous method was supplied by an ENGINE).

DH\_new\_method() returns NULL and sets an error code that can be obtained by ERR\_get\_error(3) if the allocation fails. Otherwise it returns a pointer to the newly allocated structure.

#### SEE ALSO

DH\_new(3), DH\_new(3), DH\_meth\_new(3)

#### HISTORY

All of these functions were deprecated in OpenSSL 3.0.

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