

**NAME**

openssl-pkey, pkey – public or private key processing tool

**SYNOPSIS**

**openssl pkey** [**-help**] [**-inform PEM|DER**] [**-outform PEM|DER**] [**-in filename**] [**-passin arg**] [**-out filename**] [**-passout arg**] [**-traditional**] [**-cipher**] [**-text**] [**-text\_pub**] [**-noout**] [**-pubin**] [**-pubout**] [**-engine id**] [**-check**] [**-pubcheck**]

**DESCRIPTION**

The **pkey** command processes public or private keys. They can be converted between various forms and their components printed out.

**OPTIONS****-help**

Print out a usage message.

**-inform DER|PEM**

This specifies the input format DER or PEM. The default format is PEM.

**-outform DER|PEM**

This specifies the output format, the options have the same meaning and default as the **-inform** option.

**-in filename**

This specifies the input filename to read a key from or standard input if this option is not specified. If the key is encrypted a pass phrase will be prompted for.

**-passin arg**

The input file password source. For more information about the format of **arg** see the **PASS PHRASE ARGUMENTS** section in **openssl** (1).

**-out filename**

This specifies the output filename to write a key to or standard output if this option is not specified. If any encryption options are set then a pass phrase will be prompted for. The output filename should **not** be the same as the input filename.

**-passout password**

The output file password source. For more information about the format of **arg** see the **PASS PHRASE ARGUMENTS** section in **openssl** (1).

**-traditional**

Normally a private key is written using standard format: this is PKCS#8 form with the appropriate encryption algorithm (if any). If the **-traditional** option is specified then the older “traditional” format is used instead.

**-cipher**

These options encrypt the private key with the supplied cipher. Any algorithm name accepted by **EVP\_get\_cipherbyname()** is acceptable such as **des3**.

**-text**

Prints out the various public or private key components in plain text in addition to the encoded version.

**-text\_pub**

Print out only public key components even if a private key is being processed.

**-noout**

Do not output the encoded version of the key.

**-pubin**

By default a private key is read from the input file: with this option a public key is read instead.

**-pubout**

By default a private key is output: with this option a public key will be output instead. This option is automatically set if the input is a public key.

**-engine id**

Specifying an engine (by its unique **id** string) will cause **pkey** to attempt to obtain a functional reference to the specified engine, thus initialising it if needed. The engine will then be set as the default for all available algorithms.

**-check**

This option checks the consistency of a key pair for both public and private components.

**-pubcheck**

This option checks the correctness of either a public key or the public component of a key pair.

**EXAMPLES**

To remove the pass phrase on an RSA private key:

```
openssl pkey -in key.pem -out keyout.pem
```

To encrypt a private key using triple DES:

```
openssl pkey -in key.pem -des3 -out keyout.pem
```

To convert a private key from PEM to DER format:

```
openssl pkey -in key.pem -outform DER -out keyout.der
```

To print out the components of a private key to standard output:

```
openssl pkey -in key.pem -text -noout
```

To print out the public components of a private key to standard output:

```
openssl pkey -in key.pem -text_pub -noout
```

To just output the public part of a private key:

```
openssl pkey -in key.pem -pubout -out pubkey.pem
```

**SEE ALSO**

**genpkey**(1), **rsa**(1), **pkcs8**(1), **dsa**(1), **genrsa**(1), **gendsa**(1)

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