

**NAME**

openssl-rand - generate pseudo-random bytes

**SYNOPSIS**

**openssl rand** [-help] [-out *file*] [-base64] [-hex] [-engine *id*] [-rand *files*] [-writerand *file*] [-provider *name*] [-provider-path *path*] [-propquery *propq*] *num*

**DESCRIPTION**

This command generates *num* random bytes using a cryptographically secure pseudo random number generator (CSPRNG).

The random bytes are generated using the **RAND\_bytes(3)** function, which provides a security level of 256 bits, provided it managed to seed itself successfully from a trusted operating system entropy source. Otherwise, the command will fail with a nonzero error code. For more details, see **RAND\_bytes(3)**, **RAND(7)**, and **EVP\_RAND(7)**.

**OPTIONS****-help**

Print out a usage message.

**-out *file***

Write to *file* instead of standard output.

**-base64**

Perform base64 encoding on the output.

**-hex**

Show the output as a hex string.

**-engine *id***

See "Engine Options" in **openssl(1)**. This option is deprecated.

**-rand *files*, -writerand *file***

See "Random State Options" in **openssl(1)** for details.

**-provider *name*****-provider-path *path*****-propquery *propq***

See "Provider Options" in **openssl(1)**, **provider(7)**, and **property(7)**.

**SEE ALSO**

**openssl(1), RAND\_bytes(3), RAND(7), EVP RAND(7)**

**HISTORY**

The **-engine** option was deprecated in OpenSSL 3.0.

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