

**NAME**

RAND\_egd, RAND\_egd\_bytes, RAND\_query\_egd\_bytes - query entropy gathering daemon

**SYNOPSIS**

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

```
int RAND_egd_bytes(const char *path, int num);
```

```
int RAND_egd(const char *path);
```

```
int RAND_query_egd_bytes(const char *path, unsigned char *buf, int num);
```

**DESCRIPTION**

On older platforms without a good source of randomness such as `/dev/urandom`, it is possible to query an Entropy Gathering Daemon (EGD) over a local socket to obtain randomness and seed the OpenSSL RNG. The protocol used is defined by the EGDs available at <http://egd.sourceforge.net/> or <http://prngd.sourceforge.net/>.

**RAND\_egd\_bytes()** requests **num** bytes of randomness from an EGD at the specified socket **path**, and passes the data it receives into **RAND\_add()**. **RAND\_egd()** is equivalent to **RAND\_egd\_bytes()** with **num** set to 255.

**RAND\_query\_egd\_bytes()** requests **num** bytes of randomness from an EGD at the specified socket **path**, where **num** must be less than 256. If **buf** is **NULL**, it is equivalent to **RAND\_egd\_bytes()**. If **buf** is not **NULL**, then the data is copied to the buffer and **RAND\_add()** is not called.

OpenSSL can be configured at build time to try to use the EGD for seeding automatically.

**RETURN VALUES**

**RAND\_egd()** and **RAND\_egd\_bytes()** return the number of bytes read from the daemon on success, or -1 if the connection failed or the daemon did not return enough data to fully seed the PRNG.

**RAND\_query\_egd\_bytes()** returns the number of bytes read from the daemon on success, or -1 if the connection failed.

**SEE ALSO**

**RAND\_add(3)**, **RAND\_bytes(3)**, **RAND(7)**

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