

## NAME

OPENSSL\_gmtime, OPENSSL\_gmtime\_adj, OPENSSL\_gmtime\_diff - platform-agnostic OpenSSL time routines

## SYNOPSIS

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

```
struct tm *OPENSSL_gmtime(const time_t *timer, struct tm *result);  
int OPENSSL_gmtime_adj(struct tm *tm, int offset_day, long offset_sec);  
int OPENSSL_gmtime_diff(int *pday, int *psec,  
                        const struct tm *from, const struct tm *to);
```

## DESCRIPTION

**OPENSSL\_gmtime()** returns the UTC time specified by *timer* into the provided *result* argument.

**OPENSSL\_gmtime\_adj()** adds the offsets in *offset\_day* and *offset\_sec* to *tm*.

**OPENSSL\_gmtime\_diff()** calculates the difference between *from* and *to*.

## NOTES

It is an error to call **OPENSSL\_gmtime()** with *result* equal to NULL. The contents of the *time\_t* given by *timer* are stored into the *result*. Calling with *timer* equal to NULL means use the current time.

**OPENSSL\_gmtime\_adj()** converts *tm* into a days and seconds value, adds the offsets, then converts back into a *struct tm* specified by *tm*. Leap seconds are not considered.

**OPENSSL\_gmtime\_diff()** calculates the difference between the two *struct tm* structures *from* and *to*. The difference in days is placed into *\*pday*, the remaining seconds are placed to *\*psec*. The value in *\*psec* will be less than the number of seconds per day (3600). Leap seconds are not considered.

## RETURN VALUES

**OPENSSL\_gmtime()** returns NULL on error, or *result* on success.

**OPENSSL\_gmtime\_adj()** and **OPENSSL\_gmtime\_diff()** return 0 on error, and 1 on success.

## HISTORY

**OPENSSL\_gmtime()**, **OPENSSL\_gmtime\_adj()** and **OPENSSL\_gmtime\_diff()** have been in OpenSSL since 1.0.0.

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