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## ***Red Hat Enterprise Linux Release 9.2 Manual Pages on 'BUF\_MEM\_grow\_clean.3ossl' command***

***\$ man BUF\_MEM\_grow\_clean.3ossl***

BUF\_MEM\_NEW(3ossl)            OpenSSL            BUF\_MEM\_NEW(3ossl)

### NAME

BUF\_MEM\_new, BUF\_MEM\_new\_ex, BUF\_MEM\_free, BUF\_MEM\_grow,  
BUF\_MEM\_grow\_clean, BUF\_reverse - simple character array structure

### SYNOPSIS

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

```
BUF_MEM *BUF_MEM_new(void);
```

```
BUF_MEM *BUF_MEM_new_ex(unsigned long flags);
```

```
void BUF_MEM_free(BUF_MEM *a);
```

```
int BUF_MEM_grow(BUF_MEM *str, int len);
```

```
size_t BUF_MEM_grow_clean(BUF_MEM *str, size_t len);
```

```
void BUF_reverse(unsigned char *out, const unsigned char *in, size_t size);
```

### DESCRIPTION

The buffer library handles simple character arrays. Buffers are used for various purposes in the library, most notably memory BIOs.

`BUF_MEM_new()` allocates a new buffer of zero size.

`BUF_MEM_new_ex()` allocates a buffer with the specified flags. The flag `BUF_MEM_FLAG_SECURE` specifies that the data pointer should be allocated on the secure heap; see `CRYPTO_secure_malloc(3)`.

`BUF_MEM_free()` frees up an already existing buffer. The data is zeroed before freeing up in case the buffer contains sensitive data.

`BUF_MEM_grow()` changes the size of an already existing buffer to `len`. Any data already in the buffer is preserved if it increases in size.

`BUF_MEM_grow_clean()` is similar to `BUF_MEM_grow()` but it sets any free'd or additionally-allocated memory to zero.

`BUF_reverse()` reverses size bytes at `in` into `out`. If `in` is `NULL`, the array is reversed in-place.

## RETURN VALUES

`BUF_MEM_new()` returns the buffer or `NULL` on error.

`BUF_MEM_free()` has no return value.

`BUF_MEM_grow()` and `BUF_MEM_grow_clean()` return zero on error or the new size (i.e., `len`).

## SEE ALSO

`bio(7)`, `CRYPTO_secure_malloc(3)`.

## HISTORY

The `BUF_MEM_new_ex()` function was added in OpenSSL 1.1.0.

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