

Method 1: Implicit List

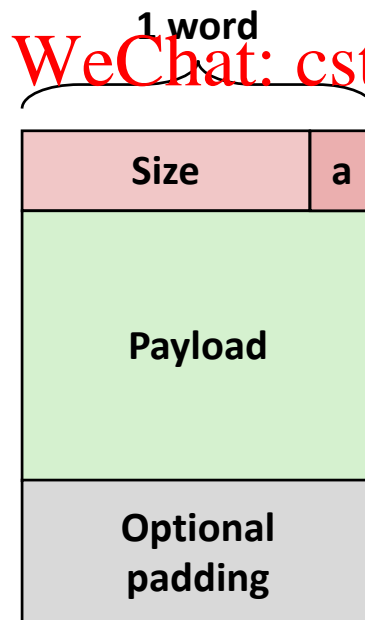
■ For each block we need both size and allocation status

- Could store this information in two words: wasteful!

■ Standard trick

- If blocks are aligned, some low-order address bits are always 0
- Instead of storing an always-0 bit, use it as a allocated/free flag
- When reading size word, must mask out this bit

*Format of
allocated and
free blocks*



a = 1: Allocated block

a = 0: Free block

Size: block size

**Payload: application data
(allocated blocks only)**

Header Example

- **Size = 16, allocation status = 1**

- 16 = 00010000



- **Need to “zero out” the LSB to get the size**

- **-2 = 11111110**

- Least significant bit is 0

- **Bitwise AND with -2 sets LSB to 0**



Double-word aligned

Free blocks: unshaded

Headers: labeled with size in bytes/allocated bit