# PTMalloc分析

## 接口简介

1. ptmalloc\_init()

多线程时，必须第一个调用。否则不支持多线程

Initialize global configuration. When compiled for multiple threads,

this function must be called once before any other function in the

package. It is not required otherwise. It is called automatically

in the Linux/GNU C libray or when compiling with MALLOC\_HOOKS.

1. malloc(size\_t n)

返回至少n字节内存，可以大于n，内存不足时放回NULL

Return a pointer to a newly allocated chunk of at least n bytes, or null

if no space is available.

1. free(Void\_t\* p)

释放p，NULL时无影响

Release the chunk of memory pointed to by p, or no effect if p is null.

1. realloc(Void\_t\* p, size\_t n)

返回n大小，其中min(n, p's size)大小的数据和p数据相同的内容，

如果p为NULL,则相当于malloc, REALLOC\_ZERO\_BYTES\_FREES没有配置的话，realloc 0字节的会将会配置minimum-sized大小

Return a pointer to a chunk of size n that contains the same data

as does chunk p up to the minimum of (n, p's size) bytes, or null

if no space is available. The returned pointer may or may not be

the same as p. If p is null, equivalent to malloc. Unless the

#define REALLOC\_ZERO\_BYTES\_FREES below is set, realloc with a

size argument of zero (re)allocates a minimum-sized chunk.

memalign(size\_t alignment, size\_t n);

申请新内存，大小为n,alignment字节对齐，

Return a pointer to a newly allocated chunk of n bytes, aligned

in accord with the alignment argument, which must be a power of

two.

valloc(size\_t n);

Equivalent to memalign(pagesize, n), where pagesize is the page

size of the system (or as near to this as can be figured out from

all the includes/defines below.)

pvalloc(size\_t n);

Equivalent to valloc(minimum-page-that-holds(n)), that is,

round up n to nearest pagesize.

限制

暂时不支持的功能。

没有自动检测机制，去全面的检查所有的访问

Here are some features that are NOT currently supported

\* No automated mechanism for fully checking that all accesses

to malloced memory stay within their bounds.

\* No support for compaction.