Note: This API calls are shared between DOS and Win16 personality.

DPMI is a shared interface for DOS applications to access Intel 80286+ CPUs services. DOS DMPI host provides core services for protected mode applications. Multitasking OS with DOS support also provides DMPI in most cases. Windows standard and extended mode kernel is a DPMI client app. Standard and extended mode kernel differs minimally and shares common codebase. Standard Windows kernel works under DOSX extender. DOSX is a specialized version of 16-bit DPMI Extender (but it is standard DPMI host). Standard mode is just DPMI client, exnhanced mode is DPMI client running under Virtual Machime Manager (really, multitasker which allow to run many DOS sessions). Both modes shares DPMI interface for kernel communication. The OS/2 virtual DOS Protected Mode Interface (VDPMI) device driver provides Version 0.9 DPMI support for virtual DOS machines. Win16 (up to Windows ME) provides Version 0.9 DPMI support. Windows in Standard Mode provides DPMI services only for Windows Applications, not DOS sessions.

DPMI host often merged with DPMI extender. Usually DPMI extender provide DPMI host standard services and DOS translation or True DPMI services.

2021/08/05 10:15 · prokushev · 0 Comments

Int 31H, AH=05H, AL=04H

Version

1.0

Brief

Allocate Linear Memory Block

Input

```
AX = 0504H
EBX = desired page-aligned linear address of memory block, or zero if linear
address unspecified
ECX = size of block (bytes, must be nonzero)
EDX = flags
```

Bit	Significance
0	0 = create uncommitted pages 1 = create committed pages
1-31	reserved, should be zero

```
if function successful
Carry flag = clear
EBX = linear address of memory block
ESI = handle for memory block

if function unsuccessful
Carry flag = set
AX = error code
8001H   unsupported function (16-bit host)
8012H   linear memory unavailable
8013H   physical memory unavailable
8014H   backing store unavailable
8016H   handle unavailable
8021H   invalid value (ECX = 0)
8025H   invalid linear address (EBX not page aligned)
```

Notes

Allocates a block of page-aligned linear address space. The base address of the block may be specified by the client, and pages within the block may be committed or uncommitted.

A DPMI 1.0 host that is 16-bit only will not support this function.

A 16-bit client of a 32-bit DPMI 1.0 host can use this function.

The allocated block is always page-aligned. If a specific linear address is not requested (EBX = 0), the DPMI host allocates the memory block at any available page-aligned linear address. If a specific linear address is requested (EBX nonzero), the host either allocates the block at the specified address or returns error code 8012H (linear memory unavailable).

Int 31H Function 0501H, which can also be used to allocate linear memory blocks, does not necessarily page-align its blocks and does not have the ability to create uncommitted pages or allocate a block at a specific linear address.

See also

Note

Text based on http://www.delorie.com/djgpp/doc/dpmi/

DPMI	
Process manager	**INT 2FH** 1680H, 1687H
Signals	
Memory manager	
Misc	**INT 2FH** 1686H, 168AH
Devices	

2021/08/13 14:23 · prokushev · 0 Comments