

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.

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Int 31H, AH=0CH, AL=00H

Version

1.0

Brief

Install Resident Service Provider Callback

Input

```
AX = 0C00H
ES:(E)DI = selector:offset of 40-byte buffer with the following structure:
```

Offset	Length	Contents
00H	8	Descriptor for 16-bit data segment
08H	8	Descriptor for 16-bit code segment
10H	2	Offset of 16-bit callback procedure
12H	2	Reserved
14H	8	Descriptor for 32-bit data segment
1CH	8	Descriptor for 32-bit code segment

Offset	Length	Contents
24H	4	Offset of 32-bit callback procedure

Return

```
if function successful
Carry flag = clear

if function unsuccessful
Carry flag = set
AX = error code
8021H   invalid value (access rights/type bytes invalid, or offset outside
segment limits)
8025H   invalid linear address (descriptor references a linear address range
outside that allowed for DPMI clients)
8015H   callback unavailable (host unable to allocate resources for resident
handler initialization callback)
```

Notes

Protected mode resident service providers (protected mode TSRs) can provide services to 16-bit DPMI programs, 32-bit DPMI programs, or both. A resident service provider uses this function to request notification from the host whenever another DPMI program in the same virtual machine is loaded or terminated.

A DPMI client that uses this function declares its intent to provide resident protected mode services. The client must subsequently terminate and stay resident using Int 31H Function 0C01H. DPMI clients which intend to stay resident only to provide services to real mode programs should not use this function.The data structure provides room for a data descriptor, a code descriptor, and an offset for both 16-bit and 32-bit protected modes. The client can conveniently initialize the descriptor fields to valid values by fetching copies of its current code and data descriptors with Int 31H Function 000BH.

If only one mode is supported by the resident service provider, then the code descriptor for the unsupported mode should be initialized to zero.

This function is called on the locked protected mode stack.

For further details on programming of resident service providers, see that page.

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	

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