

8 Special notes on memtype parameter in proc.mem items

The memtype parameter is supported on *AIX*, *FreeBSD*, *Linux* and *Solaris* platforms. On all these platforms 3 common values of memtype are supported: pmem, rss, vsize. On some of the platforms also platform-specific memtype values are supported.

AIX

memtype value	Is default	Description	Tries to be compatible with
vsize	*	virtual memory size	
pmem		percentage of real memory	ps -o pmem
rss		resident set size	ps -o rssize
size		size of process (code + data)	"ps gvw" SIZE column
dsize		data size	
tsize		text (code) size	"ps gvw" TSIZ column
sdsiz		data size from shared library	
drss		data resident set size	
trss		text resident set size	
dvm		data virtual memory size	shows the same value as 'size'

FreeBSD

memtype value	Is default	Description	Tries to be compatible with
vsize		virtual size	ps -o vsz
pmem		percentage of real memory	ps -o pmem
rss		resident set size	ps -o rss
size	*	size of process (code + data + stack)	
tsize		text (code) size	ps -o tsiz
dsize		data size	ps -o dsiz
ssize		stack size	ps -o ssiz

Linux

memtype value	Is default	Description
vsize	*	virtual memory size
pmem		percentage of real memory
rss		resident set size
data		size of data segment
exe		size of code segment
hwm		peak resident set size
lck		size of locked memory
lib		size of shared libraries
peak		peak virtual memory size
pin		size of pinned pages
pte		size of page table entries
size		size of process code + data + stack segments
stk		size of stack segment

memtype value	Is default	Description
swap		size of swap space used

Notes for Linux:

1. Not all memtype values are supported by older Linux kernels. For example, Linux 2.4 kernels do not support hwm, pin, peak, pte and swap values.
2. We have noticed that self-monitoring of Zabbix agent active checks process with `proc.mem[...,..., data]` shows a value 4 kB larger than reported by VmData line in the agent's `/proc/<pid>/status` file. At time of self-measurement the agent's data segment increases by 4 kB and then returns to the previous size.

Solaris

memtype value	Is default	Description	Tries to be compatible with
vsize	*	size of process image	ps -o vsz
pmem		percentage of real memory	ps -o pmem
rss		resident set size It may be underestimated - see rss description in "man ps".	ps -o rss

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