

FAQ: How much memory?

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Admins and users frequently ask a variation of "How much memory is being used by ..." Below I will keep adding questions as I think of them (and/or get asked (again)).

Q. What options should I give to ps to show memory usage?

A.
Don't bother - because you should switch to svmon when working on AIX. However, if you must have output compatible with another *NIX system - just use the same options on AIX as you do there. The columns will match up - but not necessarily the interpretation. The problem with ps these days come, in part, because the design of ps was back in the days before 'demand paging'. It is not impossible - but it is difficult to get an overview of - let's say exclusive memory usage. So - look to "How should I examine memory usage on AIX?"

Q. How should I examine memory usage on AIX?

A.
The preferred program to use is svmon.
The default output is to give a summary of the memory usage for whole system. Any user can use svmon - but only root or RBAC enabled users can see the data from other users. A regular user can only see statistics for their own processes.

Examples:

```
michael@x071:[/home/michael]jd
```

```
uid=199(michael) gid=1(staff) groups=1(staff),33(httpd)
```

```
michael@x071:[/home/michael]svmon -G -O unit=MB
```

```
Unit: MB
```

```
-----
      size   inuse   free   pin  virtual available  mmode
memory  4096.00  3810.58  285.42  503.50  1051.61  2884.20  Ded
pg space 1024.00   10.3
```

```
      work   pers   clnt  other
pin    356.39    0    8.23  138.88
```

in use 1051.61 0 2758.96

michael@x071:[/home/michael]svmon -P -t 3 -O unit=MB

Unit: MB

```
-----
```

Pid	Command	Inuse	Pin	Pgsp	Virtual
5111976	sshd	93.1	53.3	0	92.5
7340166	sshd	93.1	53.3	0	92.5
7274520	sshd	93.1	53.3	0	92.5

michael@x071:[/home/michael]su -

root's Password:

root@x071:[/root]svmon -G -O unit=MB

Unit: MB

```
-----
```

	size	inuse	free	pin	virtual	available	mmode
memory	4096.00	3811.25	284.75	503.58	1052.26	2883.55	Ded
pg space	1024.00	10.3					

	work	pers	clnt	other
pin	356.47	0	8.23	138.88
in use	1052.26	0	2759.00	

```
root@x071: [/root]svmon -P -t 3 -O unit=MB
```

```
Unit: MB
```

```
-----
  Pid Command      Inuse   Pin   Pgps Virtual
11403298 httpd      676.31  53.3   0  118.94
5243106 httpd        676.19  53.3   0  118.81
8716510 httpd        676.06  53.3   0  118.69
```

Q. How can I get a human readable output from svmon?

A. The default output options of svmon are modified by the option '-O'. The first one I recommend you memorize is "-O unit=MB", Generally a report in MegaBytes is sufficient. You can also choose for GB - or auto. KB is also an option - I just never use it.

When 'unit=' is not specified the value is a page count. Unfortunately page counts can refer to different sizes (e.g., 4k and 64k) so it is conceivable that the numeric value 10 is smaller than 1 physically (10 x 4K is 40K compared to 1 x 64K).

Last thing to remember: when using 'unit=auto' all the values have 2-letter size value behind them. When using a 'static' size (e.g., MB) all values are rounded to the nearest unit. So, if you are worried about rounding effects - use auto or KB.

Examples

```
michael@x071: [/home/michael]svmon -P -t 3 -O unit=auto
```

```
Unit: auto
```

```
-----
  Pid Command      Inuse   Pin   Pgps Virtual
5111976 sshd        93.1M  53.3M   0K  92.5M
7340166 sshd        93.1M  53.3M   0K  92.5M
```

```
7274520 sshd      93.1M  53.3M   0K  92.5M
```

```
michael@x071:[/home/michael]svmon -P -t 3 -O unit=KB
```

Unit: KB

```
-----
  Pid Command      Inuse   Pin   Pgps Virtual
5111976 sshd      95364  54544   0  94712
7340166 sshd      95356  54544   0  94704
7274520 sshd      95356  54544   0  94704
```

```
michael@x071:[/home/michael]svmon -P -t 3 -O unit=MB
```

Unit: MB

```
-----
  Pid Command      Inuse   Pin   Pgps Virtual
5111976 sshd       93.1   53.3   0   92.5
7340166 sshd       93.1   53.3   0   92.5
7274520 sshd       93.1   53.3   0   92.5
```

```
michael@x071:[/home/michael]svmon -P -t 3 -O unit=GB
```

Unit: GB

```
-----
  Pid Command      Inuse   Pin   Pgps Virtual
5111976 sshd       0.09   0.05   0   0.09
7340166 sshd       0.09   0.05   0   0.09
7274520 sshd       0.09   0.05   0   0.09
```

Q. How much memory I'm using is unique?

A. With svmon that is fairly easy to establish. One option I tend to add always is `-O unit={MB|GB}` depending on system size. Just add the option `filtercat=exclusive`

Example

michael@x071:[/home/michael]svmon -P -t 3 -O unit=MB,filtercat=exclusive

Unit: MB

Pid	Command	Inuse	Pin	Pgsp	Virtual
8716312	svmon	2.00	0.19	0	1.67
12386544	ksh	0.59	0.02	0	0.59
4587748	ksh	0.59	0.02	0	0.59