



# Tech Info Library

## A/UX: Swap Space Running Low Messages (9/94)

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Security: Everyone

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TOPIC -----

Even though I have lots of swap space and only a little bit is being used, I STILL get a lot of messages saying that my swap space is running low. Why does this occur?

DISCUSSION -----

Unix is justifiably concerned about having adequate swap space. A system crash caused by this can be difficult to recover from. If you do a `"/etc/swap -l"` and see that you're only using a small portion of your swap space and have a "lot" left, then you can safely ignore the messages (just how much is a "lot" is hard to say, but if you have 25000 blocks and are only using 1000 or 2000, then I'd say you were fine). If you DO need more swap space, then you have a few options:

- a. Using 'kconfig', reduce the number and size of buffers.  
This isn't really a good idea since it could really degrade performance as well as possibly causing more panics.
- b. Add more swap space.  
Fine, if you have it. You could either add another disk as swap (nice) or repartition your present disk to create a larger Swap partition (Ack!).
- c. Add more memory.  
If you have more memory, then this will reduce the need to augment it with swap space... RAM's cheap too! There is an old rule of thumb that the size of Swap should be about 2 to 3 times the amount of RAM, which would seem to contradict the above. The thing is that if with the `_present_` workload you are swapping like crazy, then adding RAM will reduce tha swapping. If, however, you start increasing the work-load, then swapping will start again, and you better have

enough of it! This was the original intent of the Rule-Of-Thumb. At the very least, Swap should always be at least as big as the amount of RAM you have.

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