# Do I have enough Random Access Memory (RAM)?

The RAM in your Mac is where all the documents and applications which you are using at any given moment are held. It should not be confused with disk space, where all your documents and applications and other software are stored permanently. When you power up your Mac, the Operating System software that is required is copied from the hard disk into RAM because RAM is so much faster. As you open applications and documents these also get copied into RAM. When you Save a document, it is copied from RAM back to the hard disk. If you have lots of documents and applications open, you can fill up the RAM in your Mac. When this happens the Mac then starts to use part of your hard disk as temporary RAM space. The consequence for you is that your Mac starts to slow down, sometimes significantly.

The amount of RAM you need depends on what you do on your Mac and how you use it. There is a simple way to monitor if you are running out of RAM. In your Utilities folder there is an application called **Activity Monitor**. To Open Activity Monitor either

Choose **Utilities** from the **Go** menu in the **Finder**:
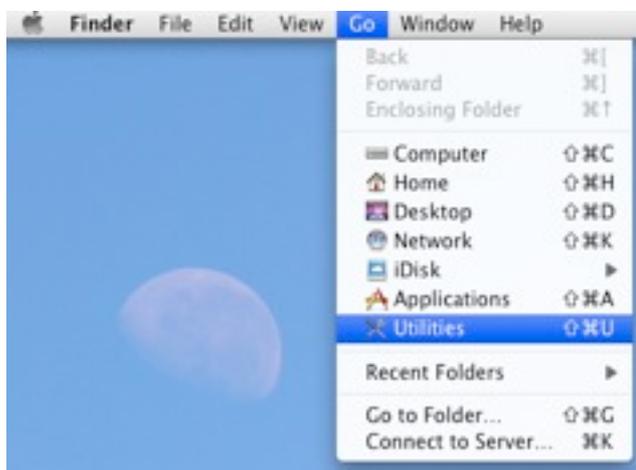
or, click on the **Applications** folder in a Finder window sidebar and then click on the **Utilities** folder:
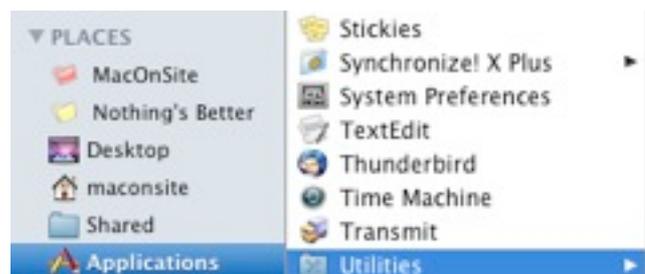
Locate Activity Monitor and double click it to open it. Once it has opened, click on the **System Memory** tab at the bottom of the window:

This pie chart shows you how the RAM is being used. The green section is the most important as this is the free RAM. If you have no green, you have no free RAM. So that you can monitor your RAM usage through the day, in **Activity Monitor** go to the **View** menu and from the **Dock Icon** pop-out sub-menu choose **Show Memory Usage**. This will put the pie chart of your RAM usage into the Dock:

Then you can choose **Hide Activity Monitor** from the **Activity Monitor** menu and the application will continue running in the background while you use your Mac. Keep your eye on the pie chart in the Dock as you open applications and documents to see if you run out of green.

If you want Activity Monitor to open automatically each time you start-up your Mac, add it to your **Login Items** in your **Account** in **System Preferences**.

What do I do if I am running out of RAM?

You only have two options:

1. Install more RAM. We can supply and fit RAM so just ask us for a quote. However, sometimes people find they are running out RAM and the Mac already has the maximum amount installed. In which case…

2. Change the way you work. Don't have so many applications open at the same time. Remember, clicking on the red button to close a window does NOT quit the application, so it is still taking up RAM. You need to quit the application by choosing **Quit** from the application menu, which is always at the top left hand corner of the screen next to the Apple. To see which applications you have open, look in your Dock. All the open applications have a little dot under them (the Finder will always have a dot because it is always running). If you are not using them, quit them.

If you need any further help with RAM, just call or email and we will see what we can do to help:

021-202-6512

rick@maconsite.co.nz

www.maconsite.co.nz