

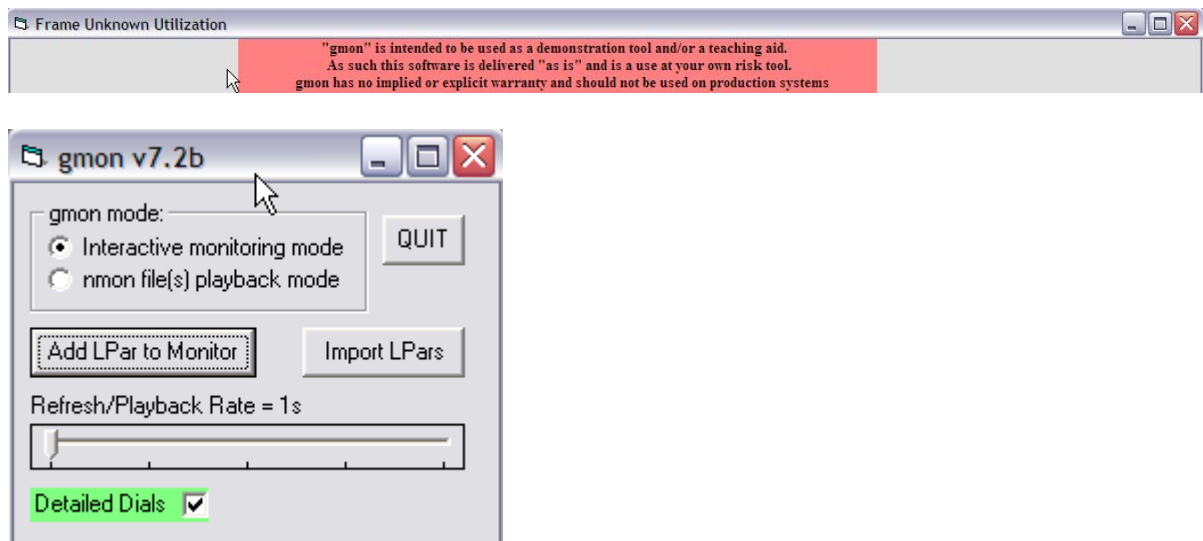
Running gmon

1. Ensure the Agent code is running on every LPar you wish to monitor with gmon (see the document 1-README-INSTALL-v72b.pdf)

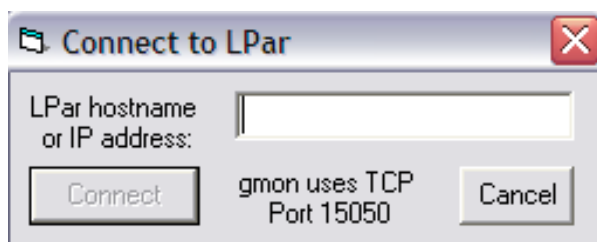
2. Start gmon:-

Start -> gmon -> gmon

You will see the CPU Meter and a dialog box to allow you to add LPar's you wish to monitor



To begin monitoring click the “Add LPar to Monitor” Button
A “Connect to LPar” dialog appears



Enter the IP address (or hostname) of the LPar you want to monitor and click “Connect”

gmon then initialises the connection and displays a dial screen, which is described on the next page. To monitor further LPar's click the Add LPar to Monitor button again.

gmon only supports Power Systems running AIX 5.3, AIX6.1 or AIX 7.1 (Dedicated and Shared LPar types), VIO 2.1 and above plus SUSE Linux and RedHat Linux

No testing has been done against AIX 5.2 or other types of Linux.

“gmon” Dial Display – one per LPar

% of Servers Capacity and % LPar's Entitled Capacity

Indicator of Physical CPU's being consumed by LPar

SMT mode indicator off, 2 and 4 (AIX only)

Virtual Processors Red when VP:EC=10:1 Green when VP:EC=1:1

Visual Cap Indicator Red when capped, Orange when Soft Cap, Not visible - Uncapped

LPar's Weight

LPar's Entitled Capacity

White edge on dial is a visual indication of the LPar's entitled capacity

Memory Free and Total Memory in LPar

**MM = Memory Map
S= % System Memory
P= % Memory Processes
N=% Memory file cache
F= % Free Memory**

Scan to Free page ratio turns red as ratio approaches 10

% of Paging Space used turns red as % increases

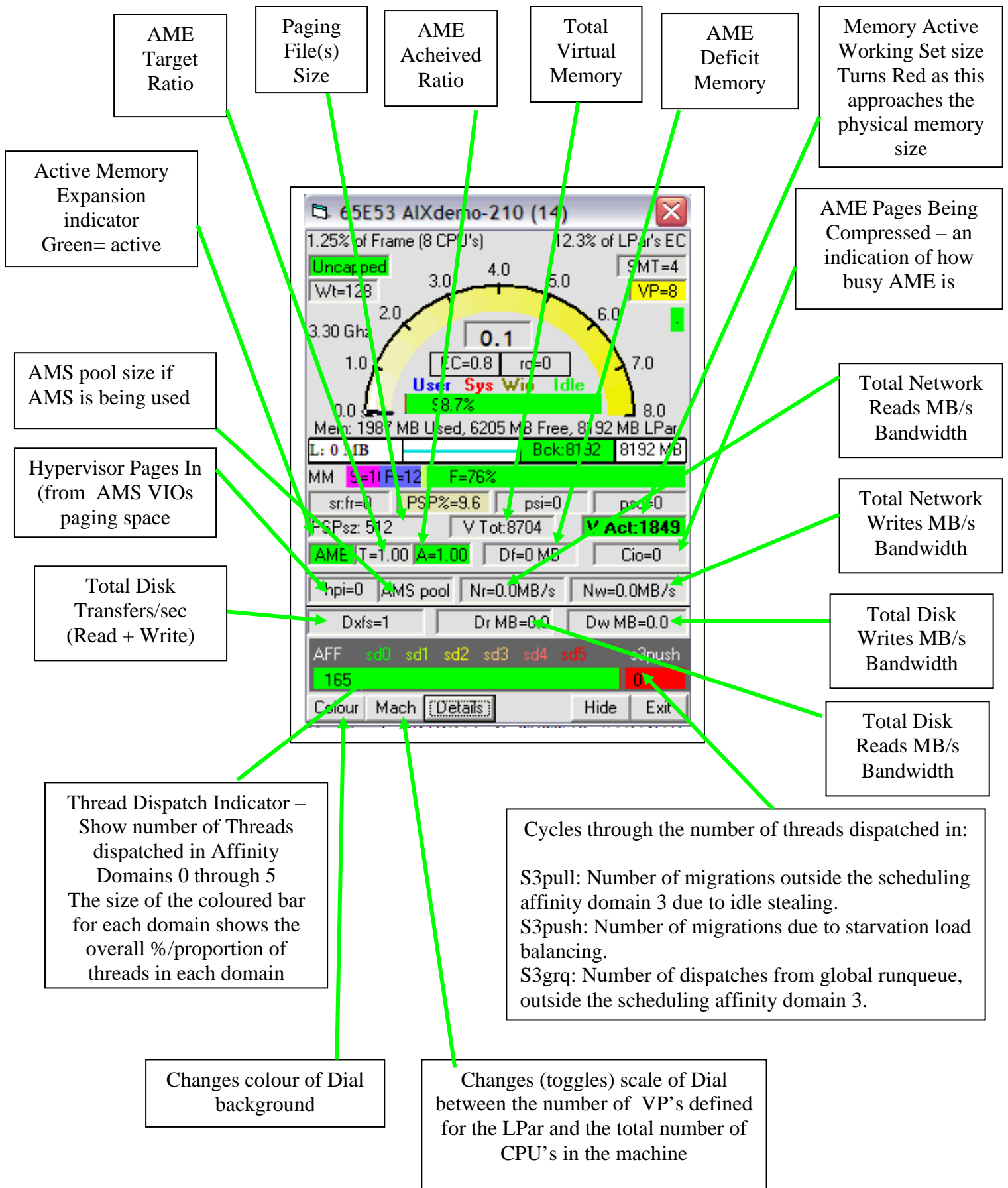
Number of pages paged in and out of paging space turns red as number of pages increases

**Memory indicator:
L= Memory Leveraged Via AMS and/or AME
Bck: = Physical memory backing the LPar at this time
Value on right= amount of memory AIX “thinks” it has.**

CPU usage bar. For AIX shows how physical CPU is being used. For Linux shows how Logical CPU is being used

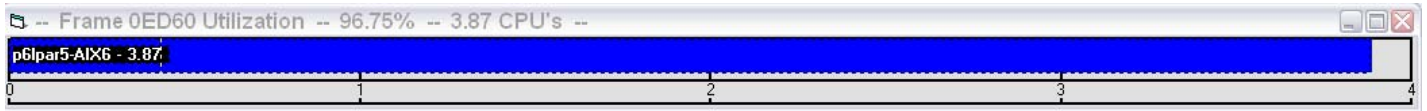
% User, %System, % Wait IO & % Idle CPU time

All the values displayed should update dynamically as the LPar's parameters are changed



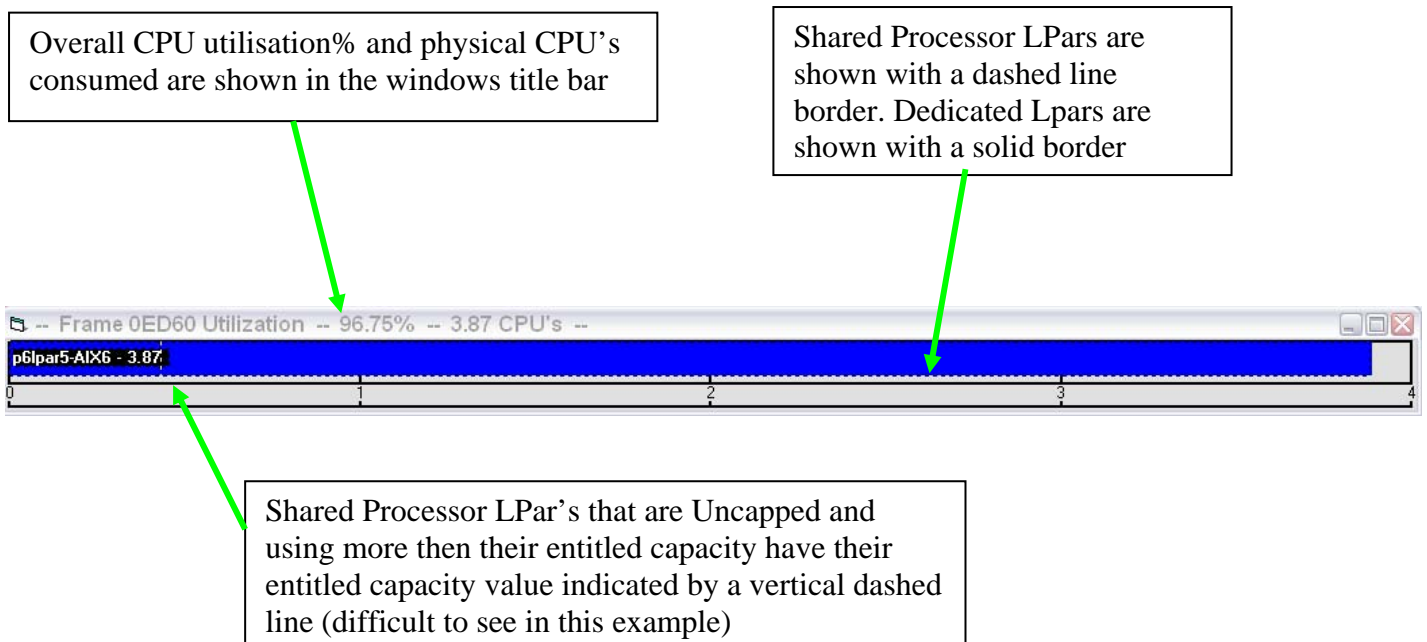
“gmon” Frame Utilization Display

The Frame Utilization Meter gives both a Visual display of how the LPAR's are mapped to the CPU resources (coloured boxes) and an overall indication of CPU usage in the windows title bar. The last 5 digits of the Frames serial number are used to identify a Frame.



Details

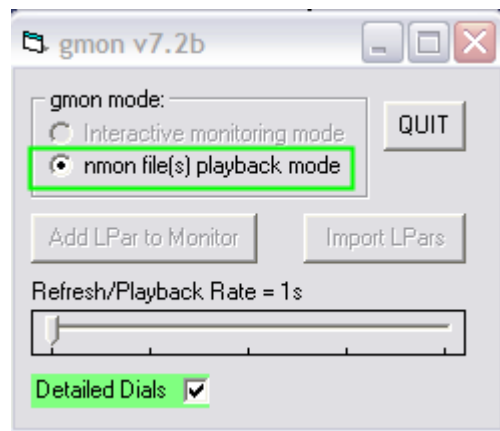
Dedicated LPar's are always displayed first in the Frame Utilization Meter, followed by any Shared processor LPar's. You may add any LPar's to this display at any time by using the “Add LPar to Monitor” button (see above). You may also remove LPar's from this display by pressing “Exit” on the corresponding Dial Meter, the Frame Utilization Meter display will adjust accordingly.



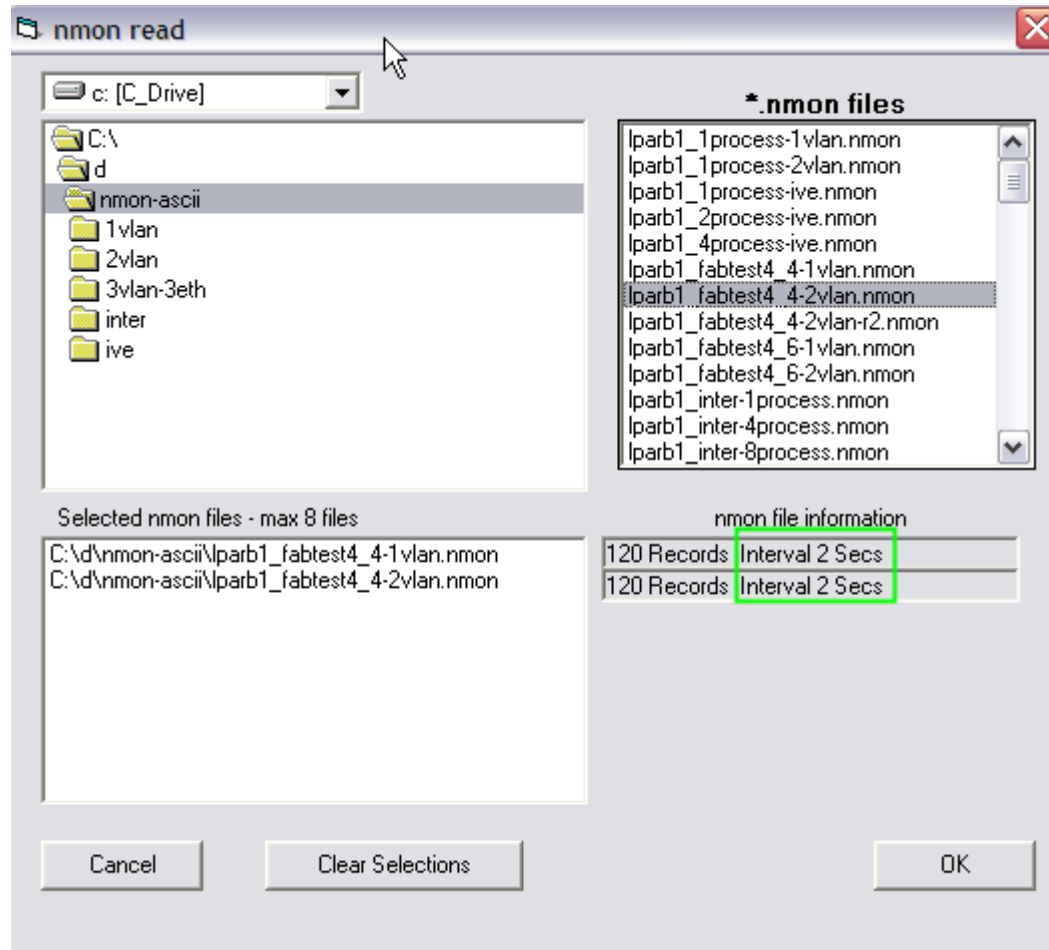
Multiple Frame utilization meters may be seen depending on which LPar's are being monitored. If LPar's are moved using Live Partition Migration operations that LPar will move from one utilization meter to another. If no other LPar is being monitored on the target Frame a new Utilization meter will automatically be created. The CPU Meter Display can be re-sized as is appropriate for you Display.

gmon & playback of “nmon” files

gmon can read and playback upto 8 nmon files at a time.

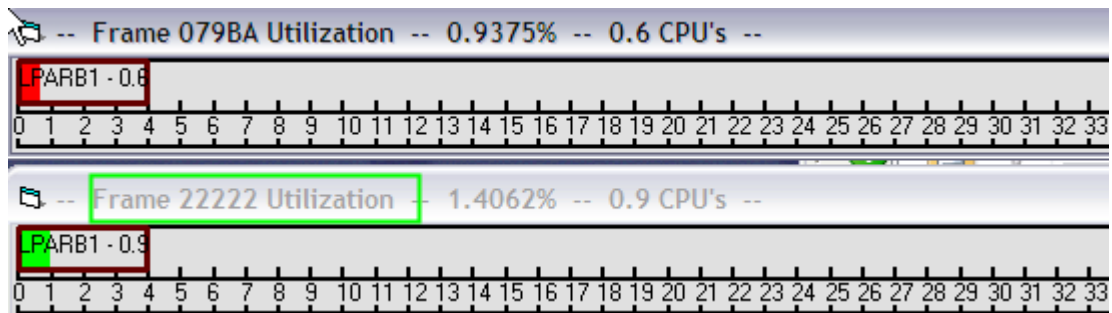
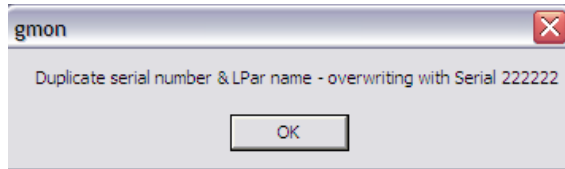


Each nmon file must have the same same sampling interval

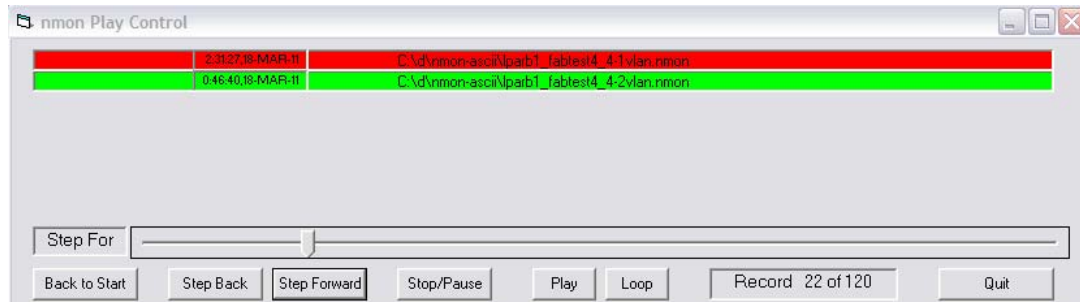


It is assumed by gmon that the nmon files were time synchronised

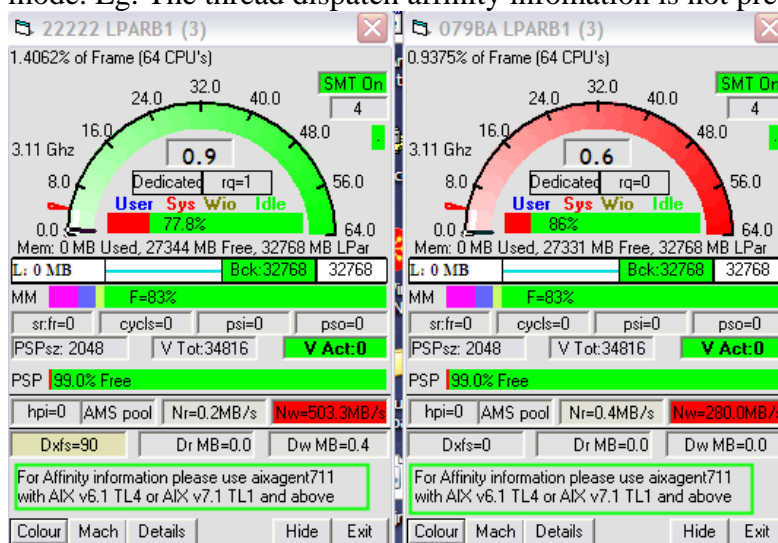
If two nmon files originate from the same machines and the same LPar – gmon overwrites the serial number in the second (and third etc..) nmon file which allows the nmon files to be displayed. This facility allows the comparison of runs from the same LPar’s side by side – eg. Form a batch job on day one and a batch job on day two with different tuning/LPar options.



The nmon play control window allows you to playback, pause, step forward and step back through the nmon files.



Not all parameters available in the gmon interactive mode are available in nmon mode. Eg. The thread dispatch affinity information is not present.



Known Problems & Limitations

gmon potential problems:

- Linux agents and interaction with gmon had not been extensively tested
- Some of the network socket error handling could be better.
- gmon does not handle changing between interactive and nmon playback mode very well. You may have to restart gmon to switch between modes on occasion
- nmon file playback: This part of gmon is relatively new – you may find some bugs. If you do please email the nmon file – or a sample of the nmon file you are trying to work with and I'll fix the issues.

Agent problems:

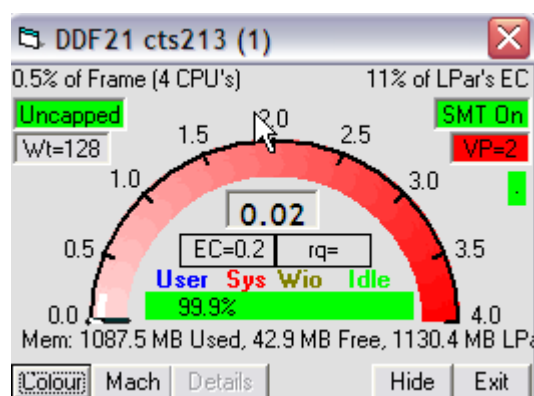
- If you exit/kill the gmon agent then restart it you may get an error something like “Bind address already in use”.

Workaround: Wait a few minutes and try starting the agent again – eventually it will work again.

Linux Display

The linuxagent for distributions of Linux that have /proc/ppc64/lparcfg up to and including version 1.8 (see installation document for more details) only sends a subset of information from the LPar's.

The Display for Linux LPar's is thus limited when compared to AIX & VIO LPar's:



The new linuxagent19 agent sends enriched data and the display closely matches the detailed information in AIX and VIO displays.