

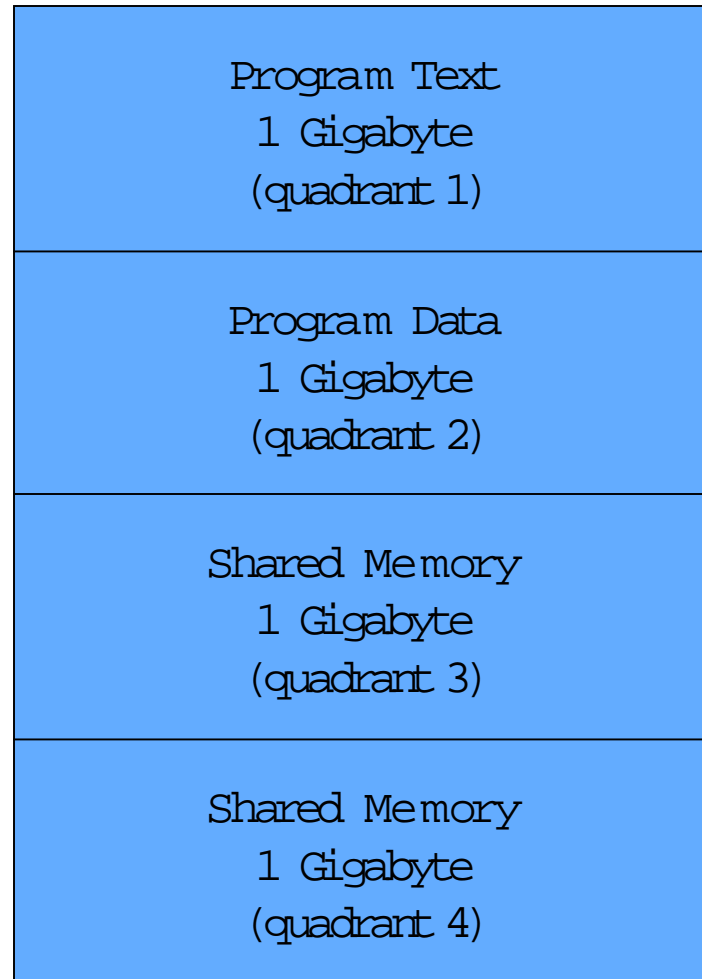


hp education services
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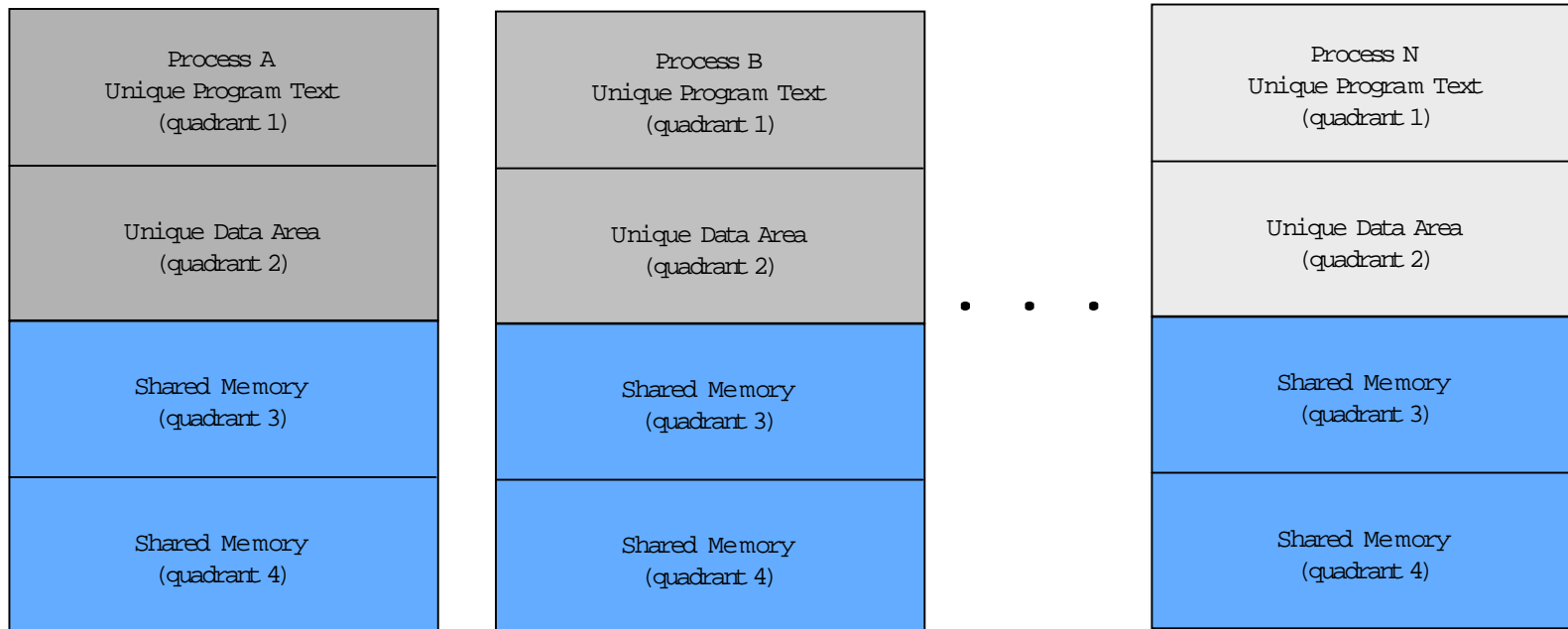
Memory Windows

HP World 2001

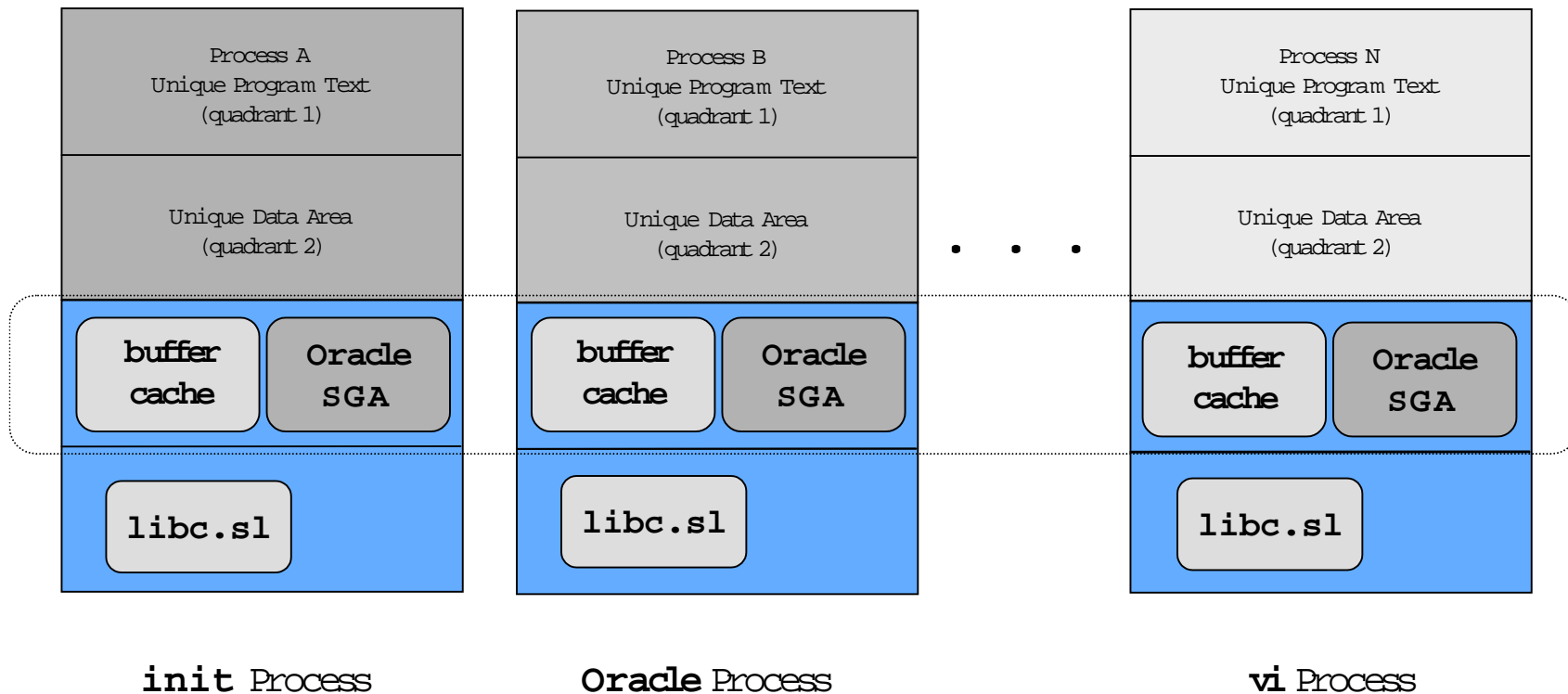
Limitations of a 32-Bit Address Space



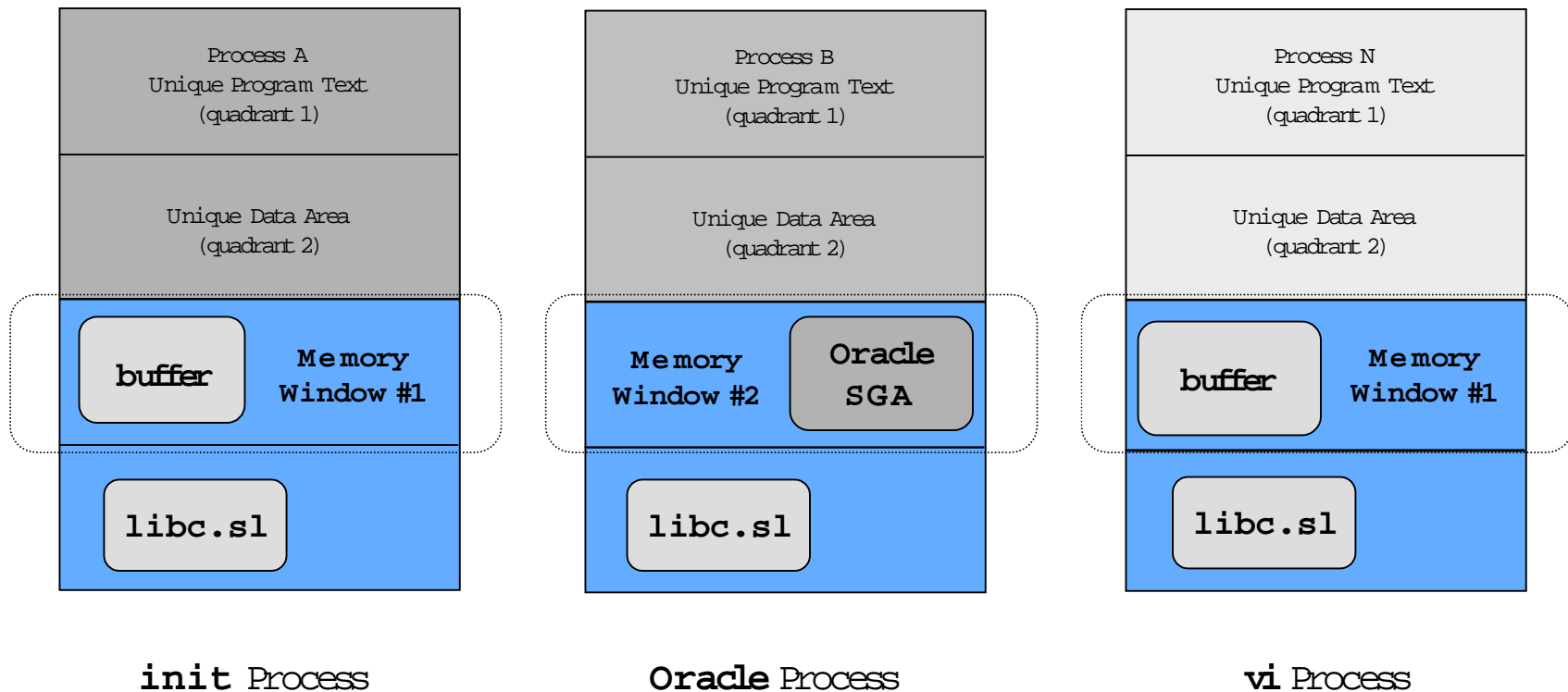
Shared versus Private Quadrants



Quadrant 3 without Memory Windows



Quadrant 3 with Memory Windows



Questions to Consider before Using Memory Windows

1. Which configurations are most likely to benefit from Memory Windows?
2. How is the maximum number of Memory Windows specified?
3. How is the maximum number of Memory Windows determined?
4. What are the commands for using and configuring Memory Windows?



Configuring Memory Windows

1. Set the tunable kernel parameter, **max_mem_window**, to the desired number of Memory Windows.
2. Recompile kernel and reboot system so change can take effect.
3. Use **setmemwindow** command with new or existing processes to specify the desired memory window for the process.
4. Optionally, create the **/etc/services.window** file to coordinate the use of the memory windows.
5. Use **getmemwindow** command to retrieve a memory window ID when a program or process needs a memory window.

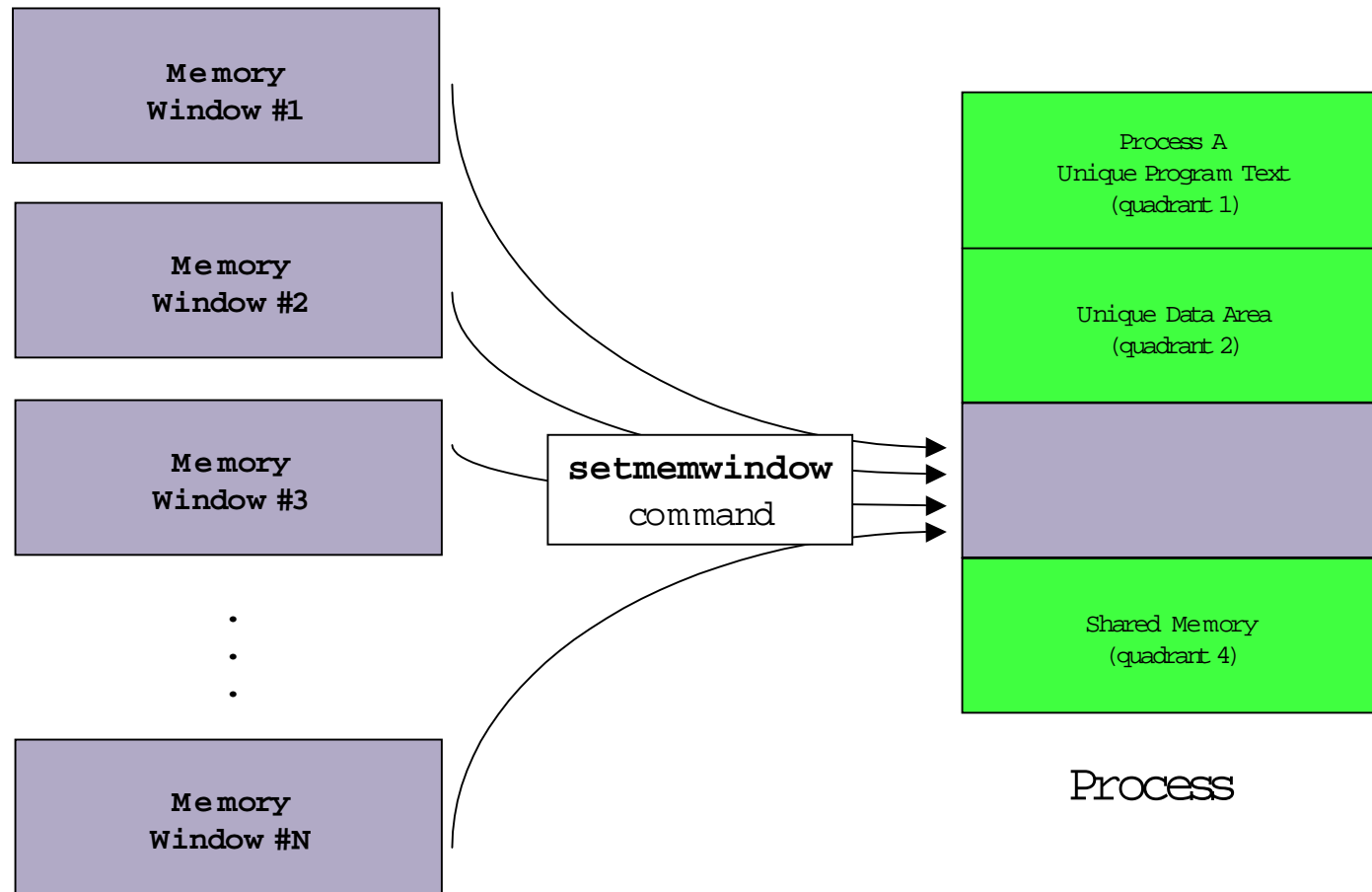
The `memwin_stats` Command

```
# /tmp/memwin_stats -w
Entry  USER_KEY KERN_KEY  QUAD2_AVAIL  QUAD3_AVAIL  PID  REFCNT
Memory Windows:
  0  Global      0      262128      258577      0      218
  1  Private    1        0          0          0        1
  2    1        2      262128      262138      4497     1
  3   20       3      262128      262144      6124     8
  4   30       4      262128      262144      6128     4
  5   40       5      262128      262144      6132     3
  6  Unused    6      262128      262144      0        0
  7  Unused    7      262128      262144      0        0
  8  Unused    8      262128      262144      0        0

# /tmp/memwin_stats -p 6124
Process Id (6124)
  User Key: 20
  Kernel Id: 3

# /tmp/memwin_stats -p 6132
Process Id (6132)
  User Key: 40
  Kernel Id: 5
```


The `setmemwindow` Command



Automating Memory Windows

```
/etc/services.window
```

```
#  
# /etc/services.window format  
#  
# Name      <user_key>  
  
informix    20  
oracle     30  
sybase     40
```

```
#  
# Some application startup shell script  
#  
# This starts the executable dbstart with argument "pfile=init.ora"  
# in the memory window associated with the Oracle key  
#  
  
WinID=$(getmemwindow "oracle")  
setmemwindow -I $WinID dbstart pfile=init.ora
```