

How can I check the memory usage of Heckle ?

There are different answers.

You might use your OS services and look for your process and how much memory it takes. Depending on the OS results may be different.

You can also use tools dedicated for monitoring memory consumption in computing facilities, like [idrmemmpi](#) at IDRIS.

Also, Heckle has its own monitoring tool, named HeckleMem, in the directory src/.

Heckle re-defines malloc() into memory_allocate() and free() into memory_free(). Those two functions are able to keep track of the amount of memory used by the code in real time.

any call to

```
memory_status();
```

will print something like this ;

```
_____ Memory Status _____  
Rank 0 memory consumption : 3074586736 (B)      3002526 (KB)      2932 (MB)      2 (GB)  
Rank 1 memory consumption : 3074586736 (B)      3002526 (KB)      2932 (MB)      2 (GB)  
Rank 2 memory consumption : 3074586736 (B)      3002526 (KB)      2932 (MB)      2 (GB)  
Rank 3 memory consumption : 3074586736 (B)      3002526 (KB)      2932 (MB)      2 (GB)
```

Be aware that this function in its current form calls MPI_Barrier() and therefore should not be used in production runs

This code can also be called just for **estimating** the memory that should be required by each process, for a given heckle.txt. It is based on the size of the main structures allocated in the code, and quits just after printing the status.