

Chunks in Symbian OS

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Symbian OS uses chunks to represent contiguous regions of virtual memory. The size of a chunk is variable. The kernel uses the MMU to map physical memory to the virtual address range of the chunk, and to remap it quickly to different areas of virtual memory as needed, While chunks reserve a range of virtual memory addresses, the entire range need not have actual physical memory behind it. The kernel can add more physical memory behind the chunk as needed. Remember: virtual addresses are plentiful (4 GB!), real physical memory is much more scarce.

Minimum chunks created for a Process

Stack and Heap Chunk

This chunk is where the stack and heap resides for the main thread of the process (it's possible that additional threads in the process can have their own stack and heap, and thus separate chunks).

Static data chunk

Where all the static variables are kept for the process.

Code Chunk

The code chunk contains a copy of the code. There is only one copy of a code chunk in memory, shared by all running instances of that process executable. Note that if the executable is on the phone's Read Only Memory (ROM), then the code is run in place, without copying it to a code chunk.