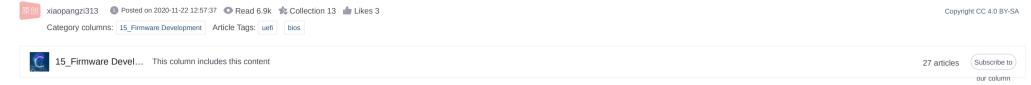
UEFI Basic Tutorial (15) - Get UEFI MemoryMap



This article introduces a C code for obtaining EFI memory map, which repeatedly calls GetMemoryMap function until the complete memory map information is successfully obtained. The code shows how to check memory types such as reserved memory and loader code, and counts the number of different types of memory pages.

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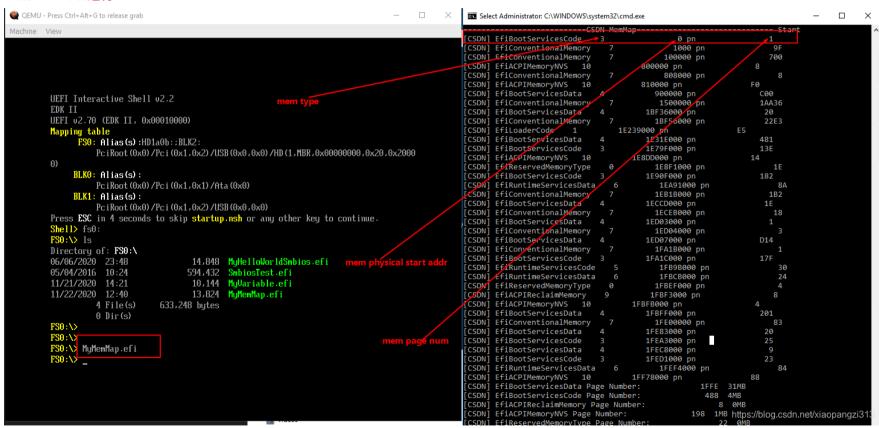
The summary is generated in C Know, supported by DeepSeek-R1 full version, go to experience>

1. Write source code

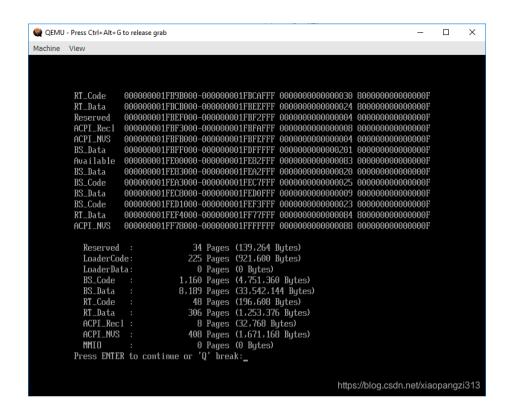
EfiMemoryMapSize = 0; 2 EfiMemoryMap = NULL; 3 Status = gBS->GetMemoryMap (4 &EfiMemoryMapSize, 5 EfiMemoryMap, 6 &EfiMapKey, 7 &EfiDescriptorSize, 8 &EfiDescriptorVersion 9); 10 ASSERT (Status == EFI_BUFFER_T00_SMALL); 11 do { 12 13 EfiMemoryMap = AllocatePool (EfiMemoryMapSize); 14 if (EfiMemoryMap == NULL){ 15 DEBUG ((EFI_D_ERROR, "ERROR!! Null Pointer returned by AllocatePool ()\n")); 16 ASSERT EFI ERROR (EFI OUT OF RESOURCES); 17 return Status; 18 19 Status = gBS->GetMemoryMap (20 &EfiMemoryMapSize, twen EfiMemoryMap, twen &EfiMapKey, twen &EfiDescriptorSize, twen &EfiDescriptorVersion 25); 26 if (EFI_ERROR(Status)) { 27 FreePool (EfiMemoryMap); 28 29 } while (Status == EFI_BUFFER_T00_SMALL); 30 31 DEBUG((DEBUG_ERROR | DEBUG_PAGE, "[CSDN] EfiMemoryMapSize=0x%x EfiDescriptorSize=0x%x EfiMemoryMap=0x%x \n", EfiMemoryMapSize, EfiDescriptorSize, (UINTN)EfiMemoryMap)); 32

```
33
      EfiMemoryMapEnd = (EFI MEMORY DESCRIPTOR *)((UINT8 *)EfiMemoryMap + EfiMemoryMapSize);
 34
      EfiEntry = EfiMemoryMap:
 35
 36
      37
 38
      while (EfiEntry < EfiMemoryMapEnd) {</pre>
 39
 40
          if (EfiEntry->Type == EfiReservedMemoryType){
 41
            DEBUG((DEBUG ERROR | DEBUG PAGE, "[CSDN] EfiReservedMemoryType %3d %16lx pn %16lx \n". EfiEntry->Type, EfiEntry->PhysicalStart, EfiEntry->NumberOfPages)):
 42
            ReservedMemoryTypePage = ReservedMemoryTypePage + EfiEntry->NumberOfPages;
 43
          }else if (EfiEntry->Type == EfiLoaderCode){
 44
            DEBUG (DEBUG ERROR | DEBUG PAGE, "[CSDN] EfiLoaderCode %3d %16lx pn %16lx \n", EfiEntry->Type, EfiEntry->PhysicalStart, EfiEntry->NumberOfPages));
 45
            LoaderCodePage = LoaderCodePage + EfiEntry->NumberOfPages;
 46
401
                                                                                      收起 へ
```

2. 编译 Generate EFI file & 运行



This is a memmap dump demo. You can use this demo to get the current BIOS mem region allocation. You can also use the built-in memmap command in the shell to view the current memory map.



Mem map DEMO source code

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