VkPhysicalDeviceMemoryProperties

```
void vkGetPhysicalDeviceMemoryProperties(
                                                                              VkPhysicalDevice
     VkPhysicalDevice
                                                 physicalDevice,←
     VkPhysicalDeviceMemoryProperties* pMemoryProperties
);
  ↓typedef struct VkPhysicalDeviceMemoryProperties {
         uint32_t
                             memoryTypeCount;
        VkMemoryType
                             memoryTypes[VK_MAX_MEMORY_TYPES];
        uint32_t
                             memoryHeapCount;
        VkMemoryHeap
                             memoryHeaps[VK_MAX_MEMORY_HEAPS]; -
   } VkPhysicalDeviceMemoryProperties;
                                                                              typedef struct VkMemoryHeap {

→typedef struct VkMemoryType {
                                                                                   VkDeviceSize
             VkMemoryPropertyFlags
                                             propertyFlags;
                                                                                   VkMemoryHeapFlags
                                                                                                              flags;
             uint32_t
                                             heapIndex;
                                                                              } VkMemoryHeap;
       } VkMemoryType;
       typedef enum VkMemoryPropertyFlagBits { |
                                                                            ↓typedef enum VkMemoryHeapFlagBits {
            VK_MEMORY_PROPERTY_DEVICE_LOCAL_BIT = 0x00000001, VK_MEMORY_PROPERTY_HOST_VISIBLE_BIT = 0x00000002,
                                                                                  VK_MEMORY_HEAP_DEVICE_LOCAL_BIT = 0x00000001,
                                                                                // Provided by VK_VERSION_1_1
           VK_MEMORY_PROPERTY_HOST_COHERENT_BIT = 0x00000004, VK_MEMORY_PROPERTY_HOST_CACHED_BIT = 0x00000008,
                                                                               VK_MEMORY_HEAP_MULTI_INSTANCE_BIT = 0x000000002,
// Provided by VK_KHR_device_group_creation
            VK_MEMORY_PROPERTY_LAZILY_ALLOCATED_BIT = 0x00000010,
                                                                                 VK_MEMORY_HEAP_MULTI_INSTANCE_BIT_KHR
          // Provided by VK_VERSION_1_1
VK_MEMORY_PROPERTY_PROTECTED_BIT = 0x00000020,
                                                                                     = VK_MEMORY_HEAP_MULTI_INSTANCE_BIT,
                                                                              } VkMemoryHeapFlagBits;
          // Provided by VK_AMD_device_coherent_memory
            VK_MEMORY_PROPERTY_DEVICE_COHERENT_BIT_AMD = 0x00000040,
          // Provided by VK_AMD_device_coherent_memory
            VK_MEMORY_PROPERTY_DEVICE_UNCACHED_BIT_AMD = 0x00000080,
          // Provided by VK_NV_external_memory_rdma
VK_MEMORY_PROPERTY_RDMA_CAPABLE_BIT_NV = 0x00000100,
        } VkMemoryPropertyFlagBits;
```

```
Example from NVIDIA Geforce RTX 3060 8GB KFA2
memoryTypeCount: 5
memoryTypes[0].heapIndex: 1
memoryTypes[0].propertyFlags:
memoryTypes[1].heapIndex: 0
memoryTypes[1].propertyFlags: VK_MEMORY_PROPERTY_DEVICE_LOCAL_BIT
memoryTypes[2].heapIndex: 1
memoryTypes[2].propertyFlags: VK_MEMORY_PROPERTY_HOST_VISIBLE_BIT
                              VK_MEMORY_PROPERTY_HOST_COHERENT_BIT
memoryTypes[3].heapIndex: 1
memoryTypes[3].propertyFlags: VK_MEMORY_PROPERTY_HOST_VISIBLE_BIT
                              VK_MEMORY_PROPERTY_HOST_COHERENT_BIT
                              VK_MEMORY_PROPERTY_HOST_CACHED_BIT
memoryTypes[4].heapIndex: 2
memoryTypes[4].propertyFlags: VK_MEMORY_PROPERTY_DEVICE_LOCAL_BIT
                              VK_MEMORY_PROPERTY_HOST_VISIBLE_BIT
                              VK_MEMORY_PROPERTY_HOST_COHERENT_BIT
memoryHeapCount: 3
memoryHeaps[0].size 8192[MB]
memoryHeaps[0].flags: VK_MEMORY_HEAP_DEVICE_LOCAL_BIT
memoryHeaps[1].size 24016[MB]
memoryHeaps[1].flags:
memoryHeaps[2].size 246[MB]
memoryHeaps[2].flags: VK_MEMORY_HEAP_DEVICE_LOCAL_BIT
```