
pyopenxr
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CHAPTER
ONE

INSTALLATION

At the command line:

```
pip install pyopenxr
```

1.1 Prerequisites

- Python 3.6 or higher
- A working OpenXR runtime such as
 - SteamVR
 - Monado
 - Oculus
 - Windows Mixed Reality

**CHAPTER
TWO**

SUPPORT

The easiest way to get help is to post a question on the pyopenxr discussions at <https://github.com/cmbruns/pyopenxr/discussions>

The other good way is to open an issue at <https://github.com/cmbruns/pyopenxr/issues>

XR PACKAGE

3.1 Subpackages

3.1.1 xr.api_layer package

Subpackages

`xr.api_layer.linux package`

Module contents

`xr.api_layer.windows package`

Module contents

Submodules

`xr.api_layer.dynamic_api_layer_base module`

```
class xr.api_layer.dynamic_api_layer_base.DynamicApiLayerBase(name: str, description: str = "",  
                                                               json_path=None)
```

Bases: ABC

Base class for temporary dynamic runtime python OpenXR API layers.

`property name: str`

```
abstract negotiate_loader_api_layer_interface(loader_info: NegotiateLoaderInfo, layer_name:  
                                              str, api_layer_request:  
                                              NegotiateApiLayerRequest) → Result
```

Override this method in a derived class to create your own temporary dynamic OpenXR API layer.

If this layer is able to support the request, it must: return `xr.Result.SUCCESS` and:

Fill in `pname:layerRequest→pname:layerInterfaceVersion` with the API layer interface version it desires to support. Fill in `pname:layerRequest→pname:layerApiVersion` with the API version of OpenXR it will execute under. Fill in `pname:layerRequest→pname:getInstanceProcAddr` with a valid function pointer so that the loader can query function pointers to the remaining OpenXR commands supported by the API layer. Fill in `pname:layerRequest→pname:createLayerInstance` with a valid function pointer so that the loader can create the instance through the API layer call chain.

Otherwise, it must: return `XR_ERROR_INITIALIZATION_FAILED`

Param

loader_info: must be a valid pointer to a constant xr.NegotiateLoaderInfo structure.

Param

layer_name: must be a string listing the name of an API layer which the loader is attempting to negotiate with.

Param

api_layer_request: must be a valid pointer to a xr.NegotiateApiLayerRequest structure.

Returns

xr.Result.SUCCESS or xr.Result.ERROR_INITIALIZATION_FAILED

xr.api_layer.layer_path module

`xr.api_layer.layer_path.add_folder_to_api_layer_path(folder_name: str)`

`xr.api_layer.layer_path.expose_packaged_api_layers()`

Make pre-packaged layers available to the openxr loader

`xr.api_layer.layer_path.py_layer_library_path() → str`

Path to a shared library file used for dynamic API layer dispatch.

xr.api_layer.loader_interfaces module

`class xr.api_layer.loader_interfaces.ApiLayerCreateInfo`

Bases: Structure

loader_instance

Structure/Union member

next_info

Structure/Union member

settings_file_location

Structure/Union member

struct_size

Structure/Union member

struct_type

Structure/Union member

struct_version

Structure/Union member

`class xr.api_layer.loader_interfaces.NegotiateApiLayerRequest`

Bases: Structure

create_api_layer_instance

Structure/Union member

get_instance_proc_addr

Structure/Union member

layer_api_version

Structure/Union member

```
layer_interface_version
    Structure/Union member
struct_size
    Structure/Union member
struct_type
    Structure/Union member
struct_version
    Structure/Union member

class xr.api_layer.loader_interfaces.NegotiateLoaderInfo
    Bases: Structure
        max_api_version
            Structure/Union member
        max_interface_version
            Structure/Union member
        min_api_version
            Structure/Union member
        min_interface_version
            Structure/Union member
        struct_size
            Structure/Union member
        struct_type
            Structure/Union member
        struct_version
            Structure/Union member

xr.api_layer.loader_interfaces.PFN_xrCreateApiLayerInstance
    alias of CFunctionType

xr.api_layer.loader_interfaces.PFN_xrNegotiateLoaderApiLayerInterface
    alias of CFunctionType
```

[xr.api_layer.raw_functions module](#)

[xr.api_layer.steamvr_linux_destroyinstance_layer module](#)

Module contents

```
class xr.api_layer.ApiLayerCreateInfo
    Bases: Structure
        loader_instance
            Structure/Union member
        next_info
            Structure/Union member
```

```
settings_file_location
    Structure/Union member
struct_size
    Structure/Union member
struct_type
    Structure/Union member
struct_version
    Structure/Union member

class xr.api_layer.DynamicApiLayerBase(name: str, description: str = "", json_path=None)
Bases: ABC
Base class for temporary dynamic runtime python OpenXR API layers.

property name: str

abstract negotiate_loader_api_layer_interface(loader_info: NegotiateLoaderInfo, layer_name: str, api_layer_request: NegotiateApiLayerRequest) → Result
Override this method in a derived class to create your own temporary dynamic OpenXR API layer.

If this layer is able to support the request, it must: return xr.Result.SUCCESS and:
    Fill in pname:layerRequest→pname:layerInterfaceVersion with the API layer interface version it desires to support. Fill in pname:layerRequest→pname:layerApiVersion with the API version of OpenXR it will execute under. Fill in pname:layerRequest→pname:getInstanceProcAddr with a valid function pointer so that the loader can query function pointers to the remaining OpenXR commands supported by the API layer. Fill in pname:layerRequest→pname:createLayerInstance with a valid function pointer so that the loader can create the instance through the API layer call chain.

Otherwise, it must: return XR_ERROR_INITIALIZATION_FAILED

Param
    loader_info: must be a valid pointer to a constant xr.NegotiateLoaderInfo structure.

Param
    layer_name: must be a string listing the name of an API layer which the loader is attempting to negotiate with.

Param
    api_layer_request: must be a valid pointer to a xr.NegotiateApiLayerRequest structure.

Returns
    xr.Result.SUCCESS or xr.Result.ERROR_INITIALIZATION_FAILED

class xr.api_layer.NegotiateApiLayerRequest
Bases: Structure

create_api_layer_instance
    Structure/Union member
get_instance_proc_addr
    Structure/Union member
layer_api_version
    Structure/Union member
```

```
layer_interface_version
    Structure/Union member

struct_size
    Structure/Union member

struct_type
    Structure/Union member

struct_version
    Structure/Union member

class xr.api_layer.NegotiateLoaderInfo
    Bases: Structure

        max_api_version
            Structure/Union member

        max_interface_version
            Structure/Union member

        min_api_version
            Structure/Union member

        min_interface_version
            Structure/Union member

        struct_size
            Structure/Union member

        struct_type
            Structure/Union member

        struct_version
            Structure/Union member

xr.api_layer.PFN_xrCreateApiLayerInstance
    alias of CFunctionType

xr.api_layer.PFN_xrNegotiateLoaderApiLayerInterface
    alias of CFunctionType

xr.api_layer.expose_packaged_api_layers()
    Make pre-packaged layers available to the openxr loader
```

3.1.2 xr.extension package

Submodules

[xr.extension.HTCX_vive_tracker_interaction module](#)

Module contents

3.1.3 xr.platform package

Submodules

`xr.platform.linux module`

```
class xr.platform.linux.GraphicsBindingOpenGLWaylandKHR(display: Optional[LP_wl_display] = None,
                                                       next: Optional[c_void_p] = None, type:
                                                       StructureType = Structure-
                                                       Type.GRAPHICS_BINDING_OPENGL_WAYLAND_KHR)

Bases: Structure

display
    Structure/Union member

next
    Structure/Union member

type
    Structure/Union member

class xr.platform.linux.GraphicsBindingOpenGLXcbKHR(connection: Optional[LP_c_int] = None,
                                                       screen_number: int = 0, fbconfigid: int = 0,
                                                       visualid: int = 0, glx_drawable: int = 0,
                                                       glx_context: int = 0, next: Optional[c_void_p] =
                                                       None, type: StructureType = Structure-
                                                       Type.GRAPHICS_BINDING_OPENGL_XCB_KHR)

Bases: Structure

connection
    Structure/Union member

fbconfigid
    Structure/Union member

glx_context
    Structure/Union member

glx_drawable
    Structure/Union member

next
    Structure/Union member

screen_number
    Structure/Union member

type
    Structure/Union member

visualid
    Structure/Union member

class xr.platform.linux.GraphicsBindingOpenGLXlibKHR(x_display: Optional[LP_struct_XDisplay] =
                                                       None, visualid: int = 0, glx_fbconfig:
                                                       Optional[LP_struct__GLXFBCConfigRec] =
                                                       None, glx_drawable: c_ulong = 0, glx_context:
                                                       Optional[LP_struct__GLXcontextRec] =
                                                       None, next: Optional[c_void_p] = None, type:
                                                       StructureType = Structure-
                                                       Type.GRAPHICS_BINDING_OPENGL_XLIB_KHR)
```

Bases: Structure

glx_context
Structure/Union member

glx_drawable
Structure/Union member

glx_fbconfig
Structure/Union member

next
Structure/Union member

type
Structure/Union member

visualid
Structure/Union member

x_display
Structure/Union member

xr.platform.linux.GraphicsBindingVulkan2KHR
alias of *GraphicsBindingVulkanKHR*

class xr.platform.linux.GraphicsBindingVulkanKHR(*instance*: int = 0, *physical_device*: int = 0, *device*: int = 0, *queue_family_index*: int = 0, *queue_index*: int = 0, *next*: Optional[c_void_p] = None, *type*: StructureType = StructureType.GRAPHICS_BINDING_VULKAN_KHR)

Bases: Structure

device
Structure/Union member

instance
Structure/Union member

next
Structure/Union member

physical_device
Structure/Union member

queue_family_index
Structure/Union member

queue_index
Structure/Union member

type
Structure/Union member

```
class xr.platform.linux.GraphicsRequirementsOpenGLKHR(min_api_version_supported:  
    ~xr.version.Version = <xr.version.Version  
    object>, max_api_version_supported:  
    ~xr.version.Version = <xr.version.Version  
    object>, next:  
    ~typing.Optional[~ctypes.c_void_p] = None,  
    type: ~xr.enums.StructureType = Structure-  
    Type.GRAPHICS_REQUIREMENTS_OPENGL_KHR)
```

Bases: Structure

max_api_version_supported
Structure/Union member

min_api_version_supported
Structure/Union member

next
Structure/Union member

type
Structure/Union member

```
xr.platform.linux.GraphicsRequirementsVulkan2KHR
```

alias of *GraphicsRequirementsVulkanKHR*

```
class xr.platform.linux.GraphicsRequirementsVulkanKHR(min_api_version_supported:  
    ~xr.version.Version = <xr.version.Version  
    object>, max_api_version_supported:  
    ~xr.version.Version = <xr.version.Version  
    object>, next:  
    ~typing.Optional[~ctypes.c_void_p] = None,  
    type: ~xr.enums.StructureType = Structure-  
    Type.GRAPHICS_REQUIREMENTS_VULKAN_KHR)
```

Bases: Structure

max_api_version_supported
Structure/Union member

min_api_version_supported
Structure/Union member

next
Structure/Union member

type
Structure/Union member

```
xr.platform.linux.PFN_xrConvertTimeToTimespecTimeKHR
```

alias of CFunctionType

```
xr.platform.linux.PFN_xrConvertTimespecTimeToTimeKHR
```

alias of CFunctionType

```
xr.platform.linux.PFN_xrCreateVulkanDeviceKHR
```

alias of CFunctionType

```
xr.platform.linux.PFN_xrCreateVulkanInstanceKHR
    alias of CFunctionType

xr.platform.linux.PFN_xrGetOpenGLGraphicsRequirementsKHR
    alias of CFunctionType

xr.platform.linux.PFN_xrGetVulkanDeviceExtensionsKHR
    alias of CFunctionType

xr.platform.linux.PFN_xrGetVulkanGraphicsDevice2KHR
    alias of CFunctionType

xr.platform.linux.PFN_xrGetVulkanGraphicsDeviceKHR
    alias of CFunctionType

xr.platform.linux.PFN_xrGetVulkanGraphicsRequirements2KHR
    alias of CFunctionType

xr.platform.linux.PFN_xrGetVulkanGraphicsRequirementsKHR
    alias of CFunctionType

xr.platform.linux.PFN_xrGetVulkanInstanceExtensionsKHR
    alias of CFunctionType

class xr.platform.linux.SwapchainImageFoveationVulkanFB(image: int = 0, width: int = 0, height: int = 0, next: Optional[c_void_p] = None, type: StructureType = StructureType.SWAPCHAIN_IMAGE_FOVEATION_VULKAN_FB)
Bases: Structure

    height
        Structure/Union member

    image
        Structure/Union member

    next
        Structure/Union member

    type
        Structure/Union member

    width
        Structure/Union member

class xr.platform.linux.SwapchainImageOpenGLKHR(image: int = 0, next: Optional[c_void_p] = None, type: StructureType = StructureType.SWAPCHAIN_IMAGE_OPENGL_KHR)
Bases: Structure

    image
        Structure/Union member

    next
        Structure/Union member

    type
        Structure/Union member
```

`xr.platform.linux.SwapchainImageVulkan2KHR`

alias of `SwapchainImageVulkanKHR`

`class xr.platform.linux.SwapchainImageVulkanKHR(image: int = 0, next: Optional[c_void_p] = None, type: StructureType = StructureType.SWAPCHAIN_IMAGE_VULKAN_KHR)`

Bases: `Structure`

image

Structure/Union member

next

Structure/Union member

type

Structure/Union member

`class xr.platform.linux.SwapchainStateSamplerVulkanFB(min_filter: int = 0, mag_filter: int = 0, mipmap_mode: int = 0, wrap_mode_s: int = 0, wrap_mode_t: int = 0, swizzle_red: int = 0, swizzle_green: int = 0, swizzle_blue: int = 0, swizzle_alpha: int = 0, max_anisotropy: float = 0, border_color: Optional[Color4f] = None, next: Optional[c_void_p] = None, type: StructureType = StructureType.SWAPCHAIN_STATE_SAMPLER_VULKAN_FB)`

Bases: `Structure`

border_color

Structure/Union member

mag_filter

Structure/Union member

max_anisotropy

Structure/Union member

min_filter

Structure/Union member

mipmap_mode

Structure/Union member

next

Structure/Union member

swizzle_alpha

Structure/Union member

swizzle_blue

Structure/Union member

swizzle_green

Structure/Union member

swizzle_red

Structure/Union member

```

type
    Structure/Union member

wrap_mode_s
    Structure/Union member

wrap_mode_t
    Structure/Union member

class xr.platform.linux.VulkanDeviceCreateFlagsKHR(value==<object object>, *args, **kwargs)
    Bases: FlagBase
    An enumeration.

    NONE = 0

xr.platform.linux.VulkanDeviceCreateFlagsKHRCInt
    alias of c_ulong

class xr.platform.linux.VulkanDeviceCreateInfoKHR(system_id: c_ulong = 0, create_flags: VulkanDeviceCreateFlagsKHR = VulkanDeviceCreateFlagsKHR.NONE, pfn_get_instance_proc_addr: int = 0, vulkan_physical_device: int = 0, vulkan_create_info: Optional[LP_c_int] = None, vulkan_allocator: Optional[LP_c_int] = None, next: Optional[c_void_p] = None, type: StructureType = StructureType.VULKAN_DEVICE_CREATE_INFO_KHR)
    Bases: Structure

    create_flags
        Structure/Union member

    next
        Structure/Union member

    pfn_get_instance_proc_addr
        Structure/Union member

    system_id
        Structure/Union member

    type
        Structure/Union member

    vulkan_allocator
        Structure/Union member

    vulkan_create_info
        Structure/Union member

    vulkan_physical_device
        Structure/Union member

class xr.platform.linux.VulkanGraphicsDeviceGetInfoKHR(system_id: c_ulong = 0, vulkan_instance: int = 0, next: Optional[c_void_p] = None, type: StructureType = StructureType.VULKAN_GRAPHICS_DEVICE_GET_INFO_KHR)

```

Bases: Structure

next
Structure/Union member

system_id
Structure/Union member

type
Structure/Union member

vulkan_instance
Structure/Union member

class `xr.platform.linux.VulkanInstanceCreateFlagsKHR`(*value==<object object>*, **args*, ***kwargs*)

Bases: FlagBase

An enumeration.

NONE = 0

xr.platform.linux.VulkanInstanceCreateFlagsKHRCInt
alias of `c_ulong`

class `xr.platform.linux.VulkanInstanceCreateInfoKHR`(*system_id: c_ulong = 0, create_flags: VulkanInstanceCreateFlagsKHR = VulkanInstanceCreateFlagsKHR.NONE, pfn_get_instance_proc_addr: int = 0, vulkan_create_info: Optional[LP_c_int] = None, vulkan_allocator: Optional[LP_c_int] = None, next: Optional[c_void_p] = None, type: StructureType = StructureType.VULKAN_INSTANCE_CREATE_INFO_KHR]*)

Bases: Structure

create_flags
Structure/Union member

next
Structure/Union member

pfn_get_instance_proc_addr
Structure/Union member

system_id
Structure/Union member

type
Structure/Union member

vulkan_allocator
Structure/Union member

vulkan_create_info
Structure/Union member

```
class xr.platform.linux.VulkanSwapchainCreateInfoMETA(additional_create_flags: int = 0,
                                                       additional_usage_flags: int = 0, next:
                                                       Optional[c_void_p] = None, type:
                                                       StructureType = Structure-
                                                       Type.VULKAN_SWAPCHAIN_CREATE_INFO_META)
```

Bases: Structure

additional_create_flags
Structure/Union member

additional_usage_flags
Structure/Union member

next
Structure/Union member

type
Structure/Union member

```
class xr.platform.linux.VulkanSwapchainFormatListCreateInfoKHR(view_format_count: Optional[int]
                                                               = None, view_formats:
                                                               Union[None, POINTER, c_int,
                                                               Array, Sequence[c_int]] = None,
                                                               next: Optional[c_void_p] = None,
                                                               type: StructureType = Structure-
                                                               Type.VULKAN_SWAPCHAIN_FORMAT_LIST_CREATE_INFO_KHR)
```

Bases: Structure

next
Structure/Union member

type
Structure/Union member

view_format_count
Structure/Union member

property view_formats

xr.platform.windows module

Module contents

```
class xr.platform.GraphicsBindingOpenGLWaylandKHR(display: Optional[LP_wl_display] = None, next:
                                                       Optional[c_void_p] = None, type: StructureType =
                                                       Structure-
                                                       Type.GRAPHICS_BINDING_OPENGL_WAYLAND_KHR)
```

Bases: Structure

display
Structure/Union member

next
Structure/Union member

type

Structure/Union member

```
class xr.platform.GraphicsBindingOpenGLXcbKHR(connection: Optional[LP_c_int] = None,
                                                screen_number: int = 0, fbconfigid: int = 0, visualid: int
                                                = 0, glx_drawable: int = 0, glx_context: int = 0, next:
                                                Optional[c_void_p] = None, type: StructureType =
                                                Structure-
                                                Type.GRAPHICS_BINDING_OPENGL_XCB_KHR)
```

Bases: Structure

connection

Structure/Union member

fbconfigid

Structure/Union member

glx_context

Structure/Union member

glx_drawable

Structure/Union member

next

Structure/Union member

screen_number

Structure/Union member

type

Structure/Union member

visualid

Structure/Union member

```
class xr.platform.GraphicsBindingOpenGLXlibKHR(x_display: Optional[LP_struct_XDisplay] = None,
                                                visualid: int = 0, glx_fbconfig:
                                                Optional[LP_struct__GLXFBCConfigRec] = None,
                                                glx_drawable: c_ulong = 0, glx_context:
                                                Optional[LP_struct__GLXcontextRec] = None, next:
                                                Optional[c_void_p] = None, type: StructureType =
                                                Structure-
                                                Type.GRAPHICS_BINDING_OPENGL_XLIB_KHR)
```

Bases: Structure

glx_context

Structure/Union member

glx_drawable

Structure/Union member

glx_fbconfig

Structure/Union member

next

Structure/Union member

```
type
    Structure/Union member

visualid
    Structure/Union member

x_display
    Structure/Union member

xr.platform.GraphicsBindingVulkan2KHR
    alias of GraphicsBindingVulkanKHR

class xr.platform.GraphicsBindingVulkanKHR(instance: int = 0, physical_device: int = 0, device: int = 0,
                                             queue_family_index: int = 0, queue_index: int = 0, next:
                                             Optional[c_void_p] = None, type: StructureType =
                                             StructureType.GRAPHICS_BINDING_VULKAN_KHR)
Bases: Structure

device
    Structure/Union member

instance
    Structure/Union member

next
    Structure/Union member

physical_device
    Structure/Union member

queue_family_index
    Structure/Union member

queue_index
    Structure/Union member

type
    Structure/Union member

class xr.platform.GraphicsRequirementsOpenGLKHR(min_api_version_supported: ~xr.version.Version =
                                                <xr.version.Version object>,
                                                max_api_version_supported: ~xr.version.Version =
                                                <xr.version.Version object>, next:
                                                ~typing.Optional[~ctypes.c_void_p] = None, type:
                                                ~xr.enums.StructureType = Structure-
                                                Type.GRAPHICS_REQUIREMENTS_OPENGL_KHR)
Bases: Structure

max_api_version_supported
    Structure/Union member

min_api_version_supported
    Structure/Union member

next
    Structure/Union member
```

type

Structure/Union member

xr.platform.GraphicsRequirementsVulkan2KHR

alias of *GraphicsRequirementsVulkanKHR*

class xr.platform.GraphicsRequirementsVulkanKHR(*min_api_version_supported*: ~xr.version.Version = <xr.version.Version object>, *max_api_version_supported*: ~xr.version.Version = <xr.version.Version object>, *next*: ~typing.Optional[~ctypes.c_void_p] = None, *type*: ~xr.enums.StructureType = StructureType.GRAPHICS_REQUIREMENTS_VULKAN_KHR)

Bases: Structure

max_api_version_supported

Structure/Union member

min_api_version_supported

Structure/Union member

next

Structure/Union member

type

Structure/Union member

xr.platform.PFN_xrConvertTimeToTimespecTimeKHR

alias of CFunctionType

xr.platform.PFN_xrConvertTimespecTimeToTimeKHR

alias of CFunctionType

xr.platform.PFN_xrCreateVulkanDeviceKHR

alias of CFunctionType

xr.platform.PFN_xrCreateVulkanInstanceKHR

alias of CFunctionType

xr.platform.PFN_xrGetOpenGLGraphicsRequirementsKHR

alias of CFunctionType

xr.platform.PFN_xrGetVulkanDeviceExtensionsKHR

alias of CFunctionType

xr.platform.PFN_xrGetVulkanGraphicsDevice2KHR

alias of CFunctionType

xr.platform.PFN_xrGetVulkanGraphicsDeviceKHR

alias of CFunctionType

xr.platform.PFN_xrGetVulkanGraphicsRequirements2KHR

alias of CFunctionType

xr.platform.PFN_xrGetVulkanGraphicsRequirementsKHR

alias of CFunctionType

```
xr.platform.PFN_xrGetVulkanInstanceExtensionsKHR
    alias of CFunctionType

class xr.platform.SwapchainImageFoveationVulkanFB(image: int = 0, width: int = 0, height: int = 0, next:
    Optional[c_void_p] = None, type: StructureType =
    Structure-
    Type.SWAPCHAIN_IMAGE_FOVEATION_VULKAN_FB)

Bases: Structure

height
    Structure/Union member

image
    Structure/Union member

next
    Structure/Union member

type
    Structure/Union member

width
    Structure/Union member

class xr.platform.SwapchainImageOpenGLKHR(image: int = 0, next: Optional[c_void_p] = None, type:
    StructureType =
    StructureType.SWAPCHAIN_IMAGE_OPENGL_KHR)

Bases: Structure

image
    Structure/Union member

next
    Structure/Union member

type
    Structure/Union member

xr.platform.SwapchainImageVulkan2KHR
    alias of SwapchainImageVulkanKHR

class xr.platform.SwapchainImageVulkanKHR(image: int = 0, next: Optional[c_void_p] = None, type:
    StructureType =
    StructureType.SWAPCHAIN_IMAGE_VULKAN_KHR)

Bases: Structure

image
    Structure/Union member

next
    Structure/Union member

type
    Structure/Union member
```

```
class xr.platform.SwapchainStateSamplerVulkanFB(min_filter: int = 0, mag_filter: int = 0, mipmap_mode: int = 0, wrap_mode_s: int = 0, wrap_mode_t: int = 0, swizzle_red: int = 0, swizzle_green: int = 0, swizzle_blue: int = 0, swizzle_alpha: int = 0, max_anisotropy: float = 0, border_color: Optional[Color4f] = None, next: Optional[c_void_p] = None, type: StructureType = StructureType.SWAPCHAIN_STATE_SAMPLER_VULKAN_FB)
```

Bases: Structure

border_color

Structure/Union member

mag_filter

Structure/Union member

max_anisotropy

Structure/Union member

min_filter

Structure/Union member

mipmap_mode

Structure/Union member

next

Structure/Union member

swizzle_alpha

Structure/Union member

swizzle_blue

Structure/Union member

swizzle_green

Structure/Union member

swizzle_red

Structure/Union member

type

Structure/Union member

wrap_mode_s

Structure/Union member

wrap_mode_t

Structure/Union member

```
class xr.platform.VulkanDeviceCreateFlagsKHR(value=<object object>, *args, **kwargs)
```

Bases: FlagBase

An enumeration.

NONE = 0

```
xr.platform.VulkanDeviceCreateFlagsKHRCInt
```

alias of c_ulong

```
class xr.platform.VulkanDeviceCreateInfoKHR(system_id: c_ulong = 0, create_flags:  
    VulkanDeviceCreateFlagsKHR =  
    VulkanDeviceCreateFlagsKHR.NONE,  
    pfn_get_instance_proc_addr: int = 0,  
    vulkan_physical_device: int = 0, vulkan_create_info:  
    Optional[LP_c_int] = None, vulkan_allocator:  
    Optional[LP_c_int] = None, next: Optional[c_void_p] =  
    None, type: StructureType =  
    StructureType.VULKAN_DEVICE_CREATE_INFO_KHR)
```

Bases: Structure

create_flags

Structure/Union member

next

Structure/Union member

pfn_get_instance_proc_addr

Structure/Union member

system_id

Structure/Union member

type

Structure/Union member

vulkan_allocator

Structure/Union member

vulkan_create_info

Structure/Union member

vulkan_physical_device

Structure/Union member

```
class xr.platform.VulkanGraphicsDeviceGetInfoKHR(system_id: c_ulong = 0, vulkan_instance: int = 0,  
    next: Optional[c_void_p] = None, type:  
    StructureType = Structure-  
    Type.VULKAN_GRAPHICS_DEVICE_GET_INFO_KHR)
```

Bases: Structure

next

Structure/Union member

system_id

Structure/Union member

type

Structure/Union member

vulkan_instance

Structure/Union member

```
class xr.platform.VulkanInstanceCreateFlagsKHR(value=<object object>, *args, **kwargs)
```

Bases: FlagBase

An enumeration.

```
NONE = 0

xr.platform.VulkanInstanceCreateFlagsKHRInt
    alias of c_ulong

class xr.platform.VulkanInstanceCreateInfoKHR(system_id: c_ulong = 0, create_flags:  
    VulkanInstanceCreateFlagsKHR =  
        VulkanInstanceCreateFlagsKHR.NONE,  
    pfn_get_instance_proc_addr: int = 0,  
    vulkan_create_info: Optional[LP_c_int] = None,  
    vulkan_allocator: Optional[LP_c_int] = None, next:  
        Optional[c_void_p] = None, type: StructureType =  
            Structure-  
            Type.VULKAN_INSTANCE_CREATE_INFO_KHR)

Bases: Structure

create_flags
    Structure/Union member

next
    Structure/Union member

pfn_get_instance_proc_addr
    Structure/Union member

system_id
    Structure/Union member

type
    Structure/Union member

vulkan_allocator
    Structure/Union member

vulkan_create_info
    Structure/Union member

class xr.platform.VulkanSwapchainCreateInfoMETA(additional_create_flags: int = 0,  
    additional_usage_flags: int = 0, next:  
        Optional[c_void_p] = None, type: StructureType =  
            Structure-  
            Type.VULKAN_SWAPCHAIN_CREATE_INFO_META)

Bases: Structure

additional_create_flags
    Structure/Union member

additional_usage_flags
    Structure/Union member

next
    Structure/Union member

type
    Structure/Union member
```

```
class xr.platform.VulkanSwapchainFormatListCreateInfoKHR(view_format_count: Optional[int] =  
    None, view_formats: Union[None,  
    POINTER, c_int, Array, Sequence[c_int]]  
    = None, next: Optional[c_void_p] =  
    None, type: StructureType = Structure-  
    Type.VULKAN_SWAPCHAIN_FORMAT_LIST_CREATE_IN-
```

Bases: Structure

next
Structure/Union member

type
Structure/Union member

view_format_count
Structure/Union member

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