



# Open CORE™

OSCL API

Build Version: CORE\_9.000.1.1\_RC1

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# **Chapter 1**

## **Todo List**

Global **MAX\_NUMBER\_OF\_BYTE\_PER\_UTF8** Handle 4-byte surrogate pair representation



# Chapter 2

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# Chapter 3

## Data Structure Index

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# Chapter 5

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| <a href="#">oscl_namestring.h</a> (Name string class include file ) . . . . .   | 755 |

|  |     |
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| <a href="#">oscl_opaque_type.h</a> (The file <code>oscl_opaque_type.h</code> defines pure virtual classes for working with opaque types ) . . . . .  | 756 |
| <a href="#">oscl_pqueue.h</a> (Implements a priority queue data structure similar to STL ) . . . . .   | 757 |
| <a href="#">oscl_procstatus.h</a> . . . . .  | 758 |
| <a href="#">oscl_queue.h</a> (The file <code>oscl_queue.h</code> defines the template class <code>Oscl_Queue</code> . It is similar to the <code>STL::queue</code> class, with some differences:   |     |
| • less complete  |     |
| • based on array rather than a deque   |     |
| • some interfaces modeled on <code>oscl_vector</code> , for ease of transition Memory allocation is abstracted through the use of an allocator template parameter  |     |
| ) . . . . .  | 759 |
| <a href="#">oscl_rand.h</a> (Provides pseudo-random number generation ) . . . . .  | 760 |
| <a href="#">oscl_refcounter.h</a> (A general purpose reference counter to object lifetimes ) . . . . .   | 761 |
| <a href="#">oscl_refcounter_memfrag.h</a> (This file provides the definition of reference counted memory fragment, which provides access to a buffer and helps manage its lifetime through the refcount ) . . . . .  | 762 |
| <a href="#">oscl_registry_access_client.h</a> (Client-side implementation Registry Access implementation ) . .   | 763 |
| <a href="#">oscl_registry_client.h</a> (Client-side implementation of OsclRegistry ) . . . . .   | 764 |
| <a href="#">oscl_registry_client_impl.h</a> (Client-side implementation of OsclRegistryInterface ) . . . . .   | 765 |
| <a href="#">oscl_registry_serv_impl.h</a> (Server-side implementation of OsclRegistry interfaces ) . . . . .   | 766 |
| <a href="#">oscl_registry_serv_impl_global.h</a> . . . . .   | 767 |
| <a href="#">oscl_registry_serv_impl_tls.h</a> . . . . .  | 768 |
| <a href="#">oscl_registry_types.h</a> (Common types used in Oscl registry interfaces ) . . . . .   | 769 |
| <a href="#">oscl_scheduler.h</a> . . . . .   | 770 |
| <a href="#">oscl_scheduler_ao.h</a> (Oscl Scheduler user execution object classes ) . . . . .  | 771 |
| <a href="#">oscl_scheduler_aobase.h</a> (Oscl Scheduler internal active object classes ) . . . . .   | 772 |
| <a href="#">oscl_scheduler_readyq.h</a> (Ready q types for oscl scheduler ) . . . . .  | 773 |
| <a href="#">oscl_scheduler_threadcontext.h</a> (Thread context functions needed by oscl scheduler ) . . . . .  | 774 |
| <a href="#">oscl_scheduler_tuneables.h</a> (Tunable settings for Oscl Scheduler ) . . . . .  | 775 |
| <a href="#">oscl_scheduler_types.h</a> (Scheduler common types include file ) . . . . .  | 776 |
| <a href="#">oscl_semaphore.h</a> (This file provides implementation of mutex ) . . . . .   | 777 |
| <a href="#">oscl_shared_ptr.h</a> (This file defines a template class <code>OsclSharedPtr</code> which is a "smart pointer" to the parameterized type ) . . . . .  | 778 |
| <a href="#">oscl_singleton.h</a> (This file defines the OsclSingleton class. This class provides a container which used to give access to a set of process-level singleton objects. Each object is indexed by an integer ID, listed below. There can only be one instance of each object per process at a given time ) . . . . . | 779 |
| <a href="#">oscl_snprintf.h</a> (Provides a portable implementation of snprintf ) . . . . .  | 780 |
| <a href="#">oscl_socket.h</a> (The file <code>oscl_socket.h</code> defines the OSCL Socket APIs ) . . . . .  | 781 |
| <a href="#">oscl_socket_accept.h</a> . . . . .   | 782 |
| <a href="#">oscl_socket_bind.h</a> . . . . .   | 783 |
| <a href="#">oscl_socket_connect.h</a> . . . . .  | 784 |
| <a href="#">oscl_socket_imp.h</a> . . . . .  | 785 |
| <a href="#">oscl_socket_imp_base.h</a> . . . . .   | 786 |
| <a href="#">oscl_socket_imp_pv.h</a> . . . . .   | 787 |
| <a href="#">oscl_socket_listen.h</a> . . . . .   | 788 |
| <a href="#">oscl_socket_method.h</a> . . . . .   | 789 |
| <a href="#">oscl_socket_recv.h</a> . . . . .   | 790 |
| <a href="#">oscl_socket_recv_from.h</a> . . . . .  | 791 |
| <a href="#">oscl_socket_request.h</a> . . . . .  | 792 |
| <a href="#">oscl_socket_send.h</a> . . . . .   | 793 |
| <a href="#">oscl_socket_send_to.h</a> . . . . .  | 794 |

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| <a href="#">oscl_socket_serv_imp.h</a>   | 795 |
| <a href="#">oscl_socket_serv_imp_base.h</a>  | 796 |
| <a href="#">oscl_socket_serv_imp_pv.h</a>  | 797 |
| <a href="#">oscl_socket_serv_imp_reqlist.h</a>   | 798 |
| <a href="#">oscl_socket_shutdown.h</a>   | 799 |
| <a href="#">oscl_socket_stats.h</a>  | 800 |
| <a href="#">oscl_socket_tuneables.h</a>  | 802 |
| <a href="#">oscl_socket_types.h</a>  | 803 |
| <a href="#">oscl_stdstring.h</a> (This file provides standard string operations such as strlen, strcpy, etc. ANSI defines undefined behavior when the destination pointer is null for operations such as strcpy, strncat, etc. But, we chose to define one. In such cases, we return the destination as null )   | 805 |
| <a href="#">oscl_str_ptr_len.h</a> (Defines a data structure for string containment/manipulations where the storage for the string is maintained externally )  | 807 |
| <a href="#">oscl_string.h</a> (Provides a standardized set of string containers that can be used in place of character arrays )  | 808 |
| <a href="#">oscl_string_containers.h</a> (Provides a standardized set of string containers that can be used in place of character arrays )   | 809 |
| <a href="#">oscl_string_rep.h</a> (Contains some internal implementation for string containers )   | 810 |
| <a href="#">oscl_string_uri.h</a> (Utilities to unescape URIs )  | 811 |
| <a href="#">oscl_string_utf8.h</a> (Utilities to validate and truncate UTF-8 encoded strings )   | 812 |
| <a href="#">oscl_string_utils.h</a> (Utilities to parse and convert strings )  | 813 |
| <a href="#">oscl_string_xml.h</a> (Utilities to escape special characters in XML strings )   | 814 |
| <a href="#">oscl_tagtree.h</a> (The file <a href="#">oscl_tagtree.h</a> .. )   | 815 |
| <a href="#">oscl_tcp_socket.h</a>  | 816 |
| <a href="#">oscl_thread.h</a>  | 817 |
| <a href="#">oscl_tickcount.h</a> (Defines a data structure for string containment/manipulations where the storage for the string is maintained externally )  | 819 |
| <a href="#">oscl_time.h</a> (The file <a href="#">oscl_time.h</a> defines two classes <a href="#">NTPTime</a> and <a href="#">TimeValue</a> for getting, manipulating, and formatting time values. The <a href="#">TimeValue</a> class is based on the native system time format while <a href="#">NTPTime</a> is used for the standard Network Time Protocol format ) | 820 |
| <a href="#">oscl_timer.h</a>   | 822 |
| <a href="#">oscl_tls.h</a>   | 823 |
| <a href="#">oscl_tree.h</a> (The file <a href="#">oscl_tree.h</a> defines the template class <a href="#">Oscl_Rb_Tree</a> which has a very similar API as the STL Tree class. It is an implementation of a Red-Black Tree for use by the <a href="#">Oscl_Map</a> class. Memory allocation is abstracted through the use of an allocator template parameter )          | 824 |
| <a href="#">oscl_types.h</a> (This file contains basic type definitions for common use across platforms )  | 825 |
| <a href="#">oscl_udp_socket.h</a>  | 826 |
| <a href="#">oscl_utf8conv.h</a> (Utilities to convert unicode to utf8 and vice versa )   | 827 |
| <a href="#">oscl_uuid.h</a> (This file defines the OSCL UUID structure used for unique identifiers as well as the short (32-bit) identifiers OsclUid32 )   | 828 |
| <a href="#">oscl_uuid_utils.h</a>  | 829 |
| <a href="#">oscl_vector.h</a> (The file <a href="#">oscl_vector.h</a> defines the template class <a href="#">Oscl_Vector</a> which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter )                                      | 830 |
| <a href="#">osclconfig.h</a> (This file contains configuration information for the linux platform )  | 831 |
| <a href="#">osclconfig_ansi_memory.h</a> (This file contains common typedefs based on the ANSI C limits.h header )   | 833 |
| <a href="#">osclconfig_check.h</a>   | 834 |
| <a href="#">osclconfig_compiler_warnings.h</a> (This file contains the ability to turn off/on compiler warnings )  | 835 |
| <a href="#">osclconfig_error.h</a> (This file contains the common typedefs and header files needed to compile osclerror )  | 836 |

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| osclconfig_error_check.h . . . . .   | 837 |
| osclconfig_global_new_delete.h . . . . .   | 838 |
| osclconfig_global_placement_new.h . . . . .  | 839 |
| osclconfig_io.h (This file contains common typedefs based on the ANSI C limits.h header ) . . . . .                      | 840 |
| osclconfig_io_check.h . . . . .  | 850 |
| osclconfig_ix86.h (This file contains configuration information for the ix86 processor family ) . . . . .                | 851 |
| osclconfig_lib.h (This file contains configuration information for the ANSI build ) . . . . .                            | 852 |
| osclconfig_lib_check.h . . . . .   | 853 |
| osclconfig_limits_typedefs.h (This file contains common typedefs based on the ANSI C limits.h header ) . . . . .         | 854 |
| osclconfig_memory.h . . . . .  | 855 |
| osclconfig_memory_check.h . . . . .  | 856 |
| osclconfig_no_os.h . . . . .   | 857 |
| osclconfig_proc.h (This file contains configuration information for the linux platform ) . . . . .                       | 858 |
| osclconfig_proc_check.h . . . . .  | 859 |
| osclconfig_proc_unix_android.h . . . . .   | 861 |
| osclconfig_proc_unix_common.h . . . . .  | 863 |
| osclconfig_time.h . . . . .  | 865 |
| osclconfig_time_check.h . . . . .  | 866 |
| osclconfig_unix_android.h . . . . .  | 867 |
| osclconfig_unix_common.h . . . . .   | 871 |
| osclconfig_util.h . . . . .  | 875 |
| osclconfig_util_check.h . . . . .  | 876 |
| pvlogger.h (This file contains basic logger interfaces for common use across platforms ) . . . . .                       | 877 |
| pvlogger_accessories.h . . . . .   | 885 |
| pvlogger_c.h (This file contains basic logger interfaces for common use across platforms. C-callable version ) . . . . . | 886 |
| pvlogger_registry.h . . . . .  | 888 |



# Chapter 6

## Module Documentation

### 6.1 OSCL config

#### Defines

- #define OSCL\_HAS\_UNIX\_SUPPORT 0
- #define OSCL\_HAS\_MSWIN\_SUPPORT 0
- #define OSCL\_HAS\_MSWIN\_PARTIAL\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_SUPPORT 0
- #define OSCL\_HAS\_SAVAJE\_SUPPORT 0
- #define OSCL\_HAS\_PV\_C\_OS\_SUPPORT 0
- #define OSCL\_HAS\_ANDROID\_SUPPORT 0
- #define OSCL\_HAS\_IPHONE\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_ERRORTRAP 0
- #define OSCL\_HAS\_SYMBIAN\_MEMORY\_FUNCS 0
- #define OSCL\_HAS\_PV\_C\_OS\_API\_MEMORY\_FUNCS 0
- #define OSCL\_HAS\_PV\_C\_OS\_TIME\_FUNCS 0
- #define OSCL\_HAS\_UNIX\_TIME\_FUNCS 0
- #define OSCL\_HAS\_SYMBIAN\_TIMERS 0
- #define OSCL\_HAS\_SYMBIAN\_MATH 0
- #define OSCL\_HAS\_SYMBIAN\_SCHEDULER 0
- #define OSCL\_HAS\_SEM\_TIMEDWAIT\_SUPPORT 0
- #define OSCL\_HAS\_PTHREAD\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_COMPATIBLE\_IO\_FUNCTION 0
- #define OSCL\_HAS\_SAVAJE\_IO\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_SOCKET\_SERVER 0
- #define OSCL\_HAS\_SYMBIAN\_DNS\_SERVER 0
- #define OSCL\_HAS\_BERKELEY\_SOCKETS 0

#### Typedefs

- typedef int8 \_\_int8\_\_check\_\_
- typedef uint8 \_\_uint8\_\_check\_\_
- typedef int16 \_\_int16\_\_check\_\_
- typedef uint16 \_\_uint16\_\_check\_\_
- typedef int32 \_\_int32\_\_check\_\_
- typedef uint32 \_\_uint32\_\_check\_\_



### 6.1.1 Define Documentation

- 6.1.1.1 #define OSCL\_HAS\_ANDROID\_SUPPORT 0
- 6.1.1.2 #define OSCL\_HAS\_BERKELEY\_SOCKETS 0
- 6.1.1.3 #define OSCL\_HAS\_IPHONE\_SUPPORT 0
- 6.1.1.4 #define OSCL\_HAS\_MSWIN\_PARTIAL\_SUPPORT 0
- 6.1.1.5 #define OSCL\_HAS\_MSWIN\_SUPPORT 0
- 6.1.1.6 #define OSCL\_HAS\_PTHREAD\_SUPPORT 0
- 6.1.1.7 #define OSCL\_HAS\_PV\_C\_OS\_API\_MEMORY\_FUNCS 0
- 6.1.1.8 #define OSCL\_HAS\_PV\_C\_OS\_SUPPORT 0
- 6.1.1.9 #define OSCL\_HAS\_PV\_C\_OS\_TIME\_FUNCS 0
- 6.1.1.10 #define OSCL\_HAS\_SAVAJE\_IO\_SUPPORT 0
- 6.1.1.11 #define OSCL\_HAS\_SAVAJE\_SUPPORT 0
- 6.1.1.12 #define OSCL\_HAS\_SEM\_TIMEDWAIT\_SUPPORT 0
- 6.1.1.13 #define OSCL\_HAS\_SYMBIAN\_COMPATIBLE\_IO\_FUNCTION 0
- 6.1.1.14 #define OSCL\_HAS\_SYMBIAN\_DNS\_SERVER 0
- 6.1.1.15 #define OSCL\_HAS\_SYMBIAN\_ERRORTRAP 0
- 6.1.1.16 #define OSCL\_HAS\_SYMBIAN\_MATH 0
- 6.1.1.17 #define OSCL\_HAS\_SYMBIAN\_MEMORY\_FUNCS 0
- 6.1.1.18 #define OSCL\_HAS\_SYMBIAN\_SCHEDULER 0
- 6.1.1.19 #define OSCL\_HAS\_SYMBIAN\_SOCKET\_SERVER 0
- 6.1.1.20 #define OSCL\_HAS\_SYMBIAN\_SUPPORT 0
- 6.1.1.21 #define OSCL\_HAS\_SYMBIAN\_TIMERS 0
- 6.1.1.22 #define OSCL\_HAS\_UNIX\_SUPPORT 0
- 6.1.1.23 #define OSCL\_HAS\_UNIX\_TIME\_FUNCS 0

### 6.1.2 Typedef Documentation

6.1.2.1 `typedef int16 __int16__check__`

6.1.2.2 `typedef int32 __int32__check__`

6.1.2.3 `typedef int8 __int8__check__`

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6.1.2.4 `typedef uint16 __uint16__check__`

6.1.2.5 `typedef uint32 __uint32__check__`

6.1.2.6 `typedef uint8 __uint8__check__`

## 6.2 OSCL Base

### Data Structures

- class [\\_OsclBasicAllocator](#)
- class [Oscl\\_Alloc](#)
- class [Oscl\\_Dalloc](#)
- class [Oscl\\_DefAlloc](#)
- class [OsclDestructDealloc](#)
- class [OsclAllocDestructDealloc](#)
- class [Oscl\\_TAlloc< T, Alloc >](#)
- class [OsclExclusivePtr< T >](#)

*The [OsclExclusivePtr](#) class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the [OsclExclusivePtr](#) expires, its destructor uses delete to free the memory.*

- class [OsclExclusiveArrayPtr< T >](#)

*The [OsclExclusiveArrayPtr](#) class is a template class that defines an array pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the [OsclExclusiveArrayPtr](#) expires, its destructor uses delete to free the memory.*

- class [OsclExclusivePtrA< T, Alloc >](#)

*The [OsclExclusivePtrA](#) class is a template class that defines any pointer like object intended to be assigned an address obtained (directly or or indirectly) through Alloc. When the [OsclExclusivePtrA](#) expires, Alloc is used to free the memory.*

- class [LinkedListElement< LLClass >](#)
- class [Oscl\\_Linked\\_List\\_Base](#)
- class [Oscl\\_Linked\\_List< LLClass, Alloc >](#)
- class [Oscl\\_MTLinkedList< LLClass, Alloc, TheLock >](#)
- class [OsclLockBase](#)
- class [OsclNullLock](#)
- class [OsclScopedLock< LockClass >](#)

*The [OsclScopedLock](#) class is a template class that handles unlocking an abstract class on destruction. This is very useful for ensuring that the lock is released when the [OsclScopedLock](#) goes out of scope.*

- struct [Oscl\\_Less< T >](#)
- struct [Oscl\\_Select1st< V, U >](#)
- class [Oscl\\_Map< Key, T, Alloc, Compare >](#)
- class [Oscl\\_Opaque\\_Type\\_Alloc](#)
- class [Oscl\\_Opaque\\_Type\\_Compare](#)
- class [Oscl\\_Opaque\\_Type\\_Alloc\\_LL](#)
- class [Oscl\\_Queue\\_Base](#)
- class [Oscl\\_Queue< T, Alloc >](#)
- class [OsclRefCounter](#)
- class [OsclRefCounterDA](#)
- class [OsclRefCounterSA< DeallocType >](#)
- class [OsclRefCounterMTDA< LockType >](#)
- class [OsclRefCounterMTSA< DeallocType, LockType >](#)
- class [Oscl\\_DefAllocWithRefCounter< DefAlloc >](#)
- class [OsclRefCounterMemFrag](#)

- class [OsclSharedPtr< TheClass >](#)

*A parameterized smart pointer class.*

- struct [Oscl\\_Tag\\_Base](#)
- struct [Oscl\\_Tag< Alloc >](#)
- class [Oscl\\_TagTree< T, Alloc >](#)
- class [NTPTime](#)

*The [NTPTime](#) class represents a time value as the number of seconds since 0h (UTC) Jan. 1, 1900.*

- class [TimeValue](#)

*The [TimeValue](#) class represents a time value in a format native to the system.*

- class [TLSStorageOps](#)
- class [OsclTLSRegistry](#)
- class [OsclTLS< T, ID, Registry >](#)
- struct [Oscl\\_Pair< T1, T2 >](#)
- struct [Oscl\\_Rb\\_Tree\\_Node\\_Base](#)
- struct [Oscl\\_Rb\\_Tree\\_Node< Value >](#)
- struct [Oscl\\_Rb\\_Tree\\_Iterator< Value >](#)
- struct [Oscl\\_Rb\\_Tree\\_Const\\_Iterator< Value >](#)
- class [Oscl\\_Rb\\_Tree\\_Base](#)
- class [Oscl\\_Rb\\_Tree< Key, Value, KeyOfValue, Compare, Alloc >](#)
- struct [OsclMemoryFragment](#)
- class [Oscl\\_Vector\\_Base](#)
- class [Oscl\\_Vector< T, Alloc >](#)

## Files

- file [oscl\\_assert.h](#)

*The file [oscl\\_assert.h](#) provides an OSCL\_ASSERT macro to document assumptions and test them during development.*

- file [oscl\\_base.h](#)

*The file [oscl\\_base.h](#) is the public header that should be included to pick up the platform configuration, basic type definitions, and common macros.*

- file [oscl\\_base\\_alloc.h](#)

*A basic allocator that does not rely on other modules.*

- file [oscl\\_base\\_macros.h](#)

*This file defines common macros and constants for basic compilation support.*

- file [oscl\\_byte\\_order.h](#)

*This file defines functions providing byte ordering utility (e.g., switching between big and little endian orders).*

- file [oscl\\_defalloc.h](#)

*The file defines simple default memory allocator classes. These allocators are used by the [Oscl\\_Vector](#) and [Oscl\\_Map](#) class, etc.*

- file [oscl\\_dll.h](#)

*Defines a DLL entry point.*

- file [oscl\\_exclusive\\_ptr.h](#)

*This file defines the [OsclExclusivePtr](#) template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.*

- file [oscl\\_linked\\_list.h](#)

*The file [oscl\\_linked\\_list.h](#) defines the template class [Oscl\\_Linked\\_List](#) which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.*

- file [oscl\\_lock\\_base.h](#)

*This file defines an abstract lock class, [OsclLockBase](#), that is used for APIs potentially requiring multi-thread safety. A null-lock implementation, [OsclNullLock](#), is also provided for single-thread configurations (basically a noop for lock/unlock). Also provides the [OsclScopedLock](#) class which is template class takes care of freeing the lock when the class goes out of scope.*

- file [oscl\\_map.h](#)

*The file [oscl\\_map.h](#) defines the template class [Oscl\\_Map](#) which has a very similar API as the STL Map class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.*

- file [oscl\\_mem\\_inst.h](#)

*The file defines default memory instrumentation level.*

- file [oscl\\_opaque\\_type.h](#)

*The file [oscl\\_opaque\\_type.h](#) defines pure virtual classes for working with opaque types.*

- file [oscl\\_queue.h](#)

*The file [oscl\\_queue.h](#) defines the template class [Oscl\\_Queue](#). It is similar to the `STL::queue` class, with some differences:*

- less complete
- based on array rather than a deque
- some interfaces modeled on [oscl\\_vector](#), for ease of transition Memory allocation is abstracted through the use of an allocator template parameter.

- file [oscl\\_refcounter.h](#)

*A general purpose reference counter to object lifetimes.*

- file [oscl\\_refcounter\\_memfrag.h](#)

*This file provides the definition of reference counted memory fragment, which provides access to a buffer and helps manage its lifetime through the refcount.*

- file [oscl\\_shared\\_ptr.h](#)

*This file defines a template class [OsclSharedPtr](#) which is a "smart pointer" to the parameterized type.*

- file [oscl\\_stdstring.h](#)

*This file provides standard string operations such as `strlen`, `strncpy`, etc. ANSI defines undefined behavior when the destination pointer is null for operations such as `strncpy`, `strncat`, etc. But, we chose to define one. In such cases, we return the destination as null.*

- file `oscl_tagtree.h`

*The file `oscl_tagtree.h` ...*

- file `oscl_time.h`

*The file `oscl_time.h` defines two classes `NTPTime` and `TimeValue` for getting, manipulating, and formatting time values. The `TimeValue` class is based on the native system time format while `NTPTime` is used for the standard Network Time Protocol format.*

- file `oscl_tree.h`

*The file `oscl_tree.h` defines the template class `Oscl_Rb_Tree` which has a very similar API as the STL Tree class. It is an implementation of a Red-Black Tree for use by the `Oscl_Map` class. Memory allocation is abstracted through the use of an allocator template parameter.*

- file `oscl_types.h`

*This file contains basic type definitions for common use across platforms.*

- file `oscl_vector.h`

*The file `oscl_vector.h` defines the template class `Oscl_Vector` which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.*

## Defines

- `#define OSCL_ASSERT(_expr) ((_expr)?((void)0):OSCL_Assert(# _expr,__FILE__,__LINE__))`
- `#define OSCL_HAS_SINGLETON_SUPPORT 1`
- `#define NULL (0)`

*The `NULL_TERM_CHAR` is used to terminate c-style strings.*

- `#define OSCL_INLINE inline`
- `#define OSCL_COND_EXPORT_REF`
- `#define OSCL_COND_IMPORT_REF`
- `#define OSCL_CONST_CAST(type, exp) ((type)(exp))`

*Type casting macros.*

- `#define OSCL_STATIC_CAST(type, exp) ((type)(exp))`
- `#define OSCL_REINTERPRET_CAST(type, exp) ((type)(exp))`
- `#define OSCL_DYNAMIC_CAST(type, exp) ((type)(exp))`
- `#define OSCL_VIRTUAL_BASE(type) type`
- `#define OSCL_UNUSED_ARG(vbl) (void)(vbl)`
- `#define OSCL_UNUSED_RETURN(value) return value`
- `#define OSCL_MIN(a, b) ((a) < (b) ? (a) : (b))`
- `#define OSCL_MAX(a, b) ((a) > (b) ? (a) : (b))`
- `#define OSCL_ABS(a) ((a) > (0) ? (a) : -(a))`
- `#define EPV_ARM_GNUC 1`
- `#define EPV_ARM_RVCT 2`
- `#define EPV_ARM_MSEVC 3`
- `#define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE`
- `#define ALLOCATE(n) allocate(n)`
- `#define ALLOC_AND_CONSTRUCT(n) alloc_and_construct(n)`

- #define **OSCL\_DLL\_ENTRY\_POINT()** void oscl\_dll\_entry\_point() {}
- #define **OSCL\_DLL\_ENTRY\_POINT\_DEFAULT()**
- #define **OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**
- #define **PVMEM\_INST\_LEVEL** 0
- #define **OSCL\_DISABLE\_WARNING\_RETURN\_TYPE\_NOT\_UDT**
- #define **OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**
- #define **OSCL\_TLS\_BASE\_SLOTS OSCL\_TLS\_ID\_BASE\_LAST +1**
- #define **OSCL\_TLS\_MAX\_SLOTS** ( **OSCL\_TLS\_BASE\_SLOTS** + **OSCL\_TLS\_EXTERNAL\_SLOTS**)
- #define **OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**

## Typedefs

- typedef char **CtimeStrBuf** [**CTIME\_BUFFER\_SIZE**]
- typedef char **PV8601timeStrBuf** [**PV8601TIME\_BUFFER\_SIZE**]
- typedef char **ISO8601timeStrBuf** [**ISO8601TIME\_BUFFER\_SIZE**]
- typedef **OsclAny** **TOsclTlsKey**
- typedef int **c\_bool**

*The c\_bool type is mapped to an integer to provide a bool type for C interfaces.*

- typedef void **OsclAny**

*The OsclAny is meant to be used the context of a generic pointer (i.e., no specific type).*

- typedef char **mbchar**

*mbchar is multi-byte char (e.g., UTF-8) with null termination.*

- typedef unsigned int **uint**

*The uint type is a convenient abbreviation for unsigned int.*

- typedef uint8 **octet**

*The octet type is meant to be used for referring to a byte or collection bytes without suggesting anything about the underlying meaning of the bytes.*

- typedef float **OsclFloat**

*The Float type defined as OsclFloat.*

- typedef **OSCL\_NATIVE\_INT64\_TYPE** **int64**
- typedef **OSCL\_NATIVE\_UINT64\_TYPE** **uint64**
- typedef **OSCL\_NATIVE\_WCHAR\_TYPE** **oscl\_wchar**
- typedef **oscl\_wchar** **OSCL\_TCHAR**

*define OSCL\_TCHAR*

## Enumerations

- enum **TimeUnits** { **SECONDS** = 0, **MILLISECONDS** = 1, **MICROSECONDS** = 2 }

*The TimeUnits enum can be used when constructing a **TimeValue** class.*

## Functions

- **OSCL\_COND\_IMPORT\_REF void `_OSCL_Abort()`**

*This function terminates the current process abnormally.*
- **OSCL\_IMPORT\_REF void `OSCL_Assert` (const char \*expr, const char \*filename, int line\_number)**

*OSCL\_ASSERT macro evaluates an expression and when the result is false, prints a diagnostic message and aborts the program.*
- **void `PVOsclBase_Init()`**
- **void `PVOsclBase_Cleanup()`**
- **void `little_endian_to_host` (char \*data, uint32 size)**

*Convert little endian to host format.*
- **void `host_to_little_endian` (char \*data, unsigned int size)**

*Convert host to little endian format.*
- **void `big_endian_to_host` (char \*data, unsigned int size)**

*Convert big endian to host format.*
- **void `host_to_big_endian` (char \*data, unsigned int size)**

*Convert host to big endian format.*
- **OsclSharedPtr::OsclSharedPtr (TheClass \*inClassPtr, OsclRefCounter \*in\_refcnt)**

*Constructor.*
- **OsclSharedPtr::OsclSharedPtr (const OsclSharedPtr &inSharedPtr)**

*Copy constructor.*
- **virtual OsclSharedPtr::~OsclSharedPtr ()**

*Destructor.*
- **TheClass \* OsclSharedPtr::operator-> ()**
- **TheClass & OsclSharedPtr::operator\* ()**

*The indirection operator returns a reference to an object of the parameterized type.*
- **OsclSharedPtr::operator TheClass \* ()**

*Casting operator.*
- **TheClass \* OsclSharedPtr::GetRep ()**

*Use this function to get a pointer to the wrapped object.*
- **OsclRefCounter \* OsclSharedPtr::GetRefCounter ()**

*Get the refcount pointer. This should primarily be used for conversion operations.*
- **int OsclSharedPtr::get\_count ()**

*Get a count of how many references to the object exist.*
- **void OsclSharedPtr::Bind (const OsclSharedPtr &inHandle)**

*Use this function to bind an existing `OsclSharedPtr` to a already-wrapped object.*

- void `OsclSharedPtr::Bind` (TheClass \*ptr, `OsclRefCounter` \*in\_refcnt)

*Use this function to bind an existing `OsclSharedPtr` to a new (unwrapped) object.*

- void `OsclSharedPtr::Unbind` ()

*Use this function of unbind an existing `OsclSharedPtr`.*

- `OsclSharedPtr & OsclSharedPtr::operator=` (const `OsclSharedPtr` &inSharedPtr)

*Assignment operator.*

- bool `OsclSharedPtr::operator==` (const `OsclSharedPtr` &b) const

*Test for equality to see if two PVHandles wrap the same object.*

- OSCL\_IMPORT\_REF uint32 `oscl_strlen` (const char \*str)

- OSCL\_IMPORT\_REF uint32 `oscl_strlen` (const `oscl_wchar` \*str)

- OSCL\_IMPORT\_REF char \* `oscl_strncpy` (char \*dest, const char \*src, uint32 count)

- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_strncpy` (`oscl_wchar` \*dest, const `oscl_wchar` \*src, uint32 count)

- OSCL\_IMPORT\_REF int32 `oscl_strcmp` (const char \*str1, const char \*str2)

- OSCL\_IMPORT\_REF int32 `oscl_strcmp` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2)

- OSCL\_IMPORT\_REF int32 `oscl_strncmp` (const char \*str1, const char \*str2, uint32 count)

- OSCL\_IMPORT\_REF int32 `oscl_strncmp` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2, uint32 count)

- OSCL\_IMPORT\_REF char \* `oscl_strncat` (char \*dest, const char \*src, uint32 count)

- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_strncat` (`oscl_wchar` \*dest, const `oscl_wchar` \*src, uint32 count)

- OSCL\_IMPORT\_REF const char \* `oscl_strchr` (const char \*str, int32 c)

- OSCL\_IMPORT\_REF char \* `oscl_strchr` (char \*str, int32 c)

- OSCL\_IMPORT\_REF const `oscl_wchar` \* `oscl_strchr` (const `oscl_wchar` \*str, int32 c)

- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_strchr` (`oscl_wchar` \*str, int32 c)

- OSCL\_IMPORT\_REF const char \* `oscl strrchr` (const char \*str, int32 c)

- OSCL\_IMPORT\_REF char \* `oscl strrchr` (char \*str, int32 c)

- OSCL\_IMPORT\_REF const `oscl_wchar` \* `oscl strrchr` (const `oscl_wchar` \*str, int32 c)

- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl strrchr` (`oscl_wchar` \*str, int32 c)

- OSCL\_IMPORT\_REF char \* `oscl_strset` (char \*dest, char val, uint32 count)

- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_strset` (`oscl_wchar` \*dest, `oscl_wchar` val, uint32 count)

- OSCL\_IMPORT\_REF int32 `oscl_CIstrcmp` (const char \*str1, const char \*str2)

- OSCL\_IMPORT\_REF int32 `oscl_CIstrcmp` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2)

- OSCL\_IMPORT\_REF int32 `oscl_CIstrncmp` (const char \*str1, const char \*str2, uint32 count)

- OSCL\_IMPORT\_REF int32 `oscl_CIstrncmp` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2, uint32 count)

- OSCL\_IMPORT\_REF char `oscl_tolower` (const char car)

- OSCL\_IMPORT\_REF `oscl_wchar` `oscl_tolower` (const `oscl_wchar` car)

- OSCL\_IMPORT\_REF bool `oscl_isLetter` (const char car)

- OSCL\_IMPORT\_REF const char \* `oscl strstr` (const char \*str1, const char \*str2)

- OSCL\_IMPORT\_REF char \* `oscl strstr` (char \*str1, const char \*str2)

- OSCL\_IMPORT\_REF const `oscl_wchar` \* `oscl strstr` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2)

- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl strstr` (`oscl_wchar` \*str1, const `oscl_wchar` \*str2)

- OSCL\_IMPORT\_REF char \* `oscl_streat` (char \*dest, const char \*src)
- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_streat` (`oscl_wchar` \*dest, const `oscl_wchar` \*src)
- OSCL\_IMPORT\_REF void `PV8601ToRFC822` (`PV8601timeStrBuf` pv8601\_buffer, `CtimeStrBuf` ctime\_buffer)
- OSCL\_IMPORT\_REF void `ISO8601ToRFC822` (`ISO8601timeStrBuf` iso8601\_buffer, `CtimeStrBuf` ctime\_buffer)
- OSCL\_IMPORT\_REF void `RFC822ToPV8601` (`CtimeStrBuf` ctime\_buffer, `PV8601timeStrBuf`)
- OSCL\_COND\_IMPORT\_REF `TimeValue operator-` (const `TimeValue` &a, const `TimeValue` &b)
- OSCL\_COND\_IMPORT\_REF `TimeValue operator+` (const `TimeValue` &a, const int32 bSeconds)
- OSCL\_COND\_IMPORT\_REF `TimeValue operator+` (const int32 aSeconds, const `TimeValue` &b)
- OSCL\_COND\_IMPORT\_REF `TimeValue operator-` (const `TimeValue` &a, const int32 bSeconds)
- OSCL\_COND\_IMPORT\_REF `TimeValue operator-` (const int32 aSeconds, const `TimeValue` &b)

## Variables

- const int `CTIME_BUFFER_SIZE` = 26
- const int `PV8601TIME_BUFFER_SIZE` = 21
- const int `ISO8601TIME_BUFFER_SIZE` = 21
- const long `USEC_PER_SEC` = 1000000
- const long `MSEC_PER_SEC` = 1000
- const uint32 `unix_ntp_offset` = 2208988800U
- const uint32 `OSCL_TLS_ID_MAGICNUM` = 0
- const uint32 `OSCL_TLS_ID_ERRORHOOK` = 1
- const uint32 `OSCL_TLS_ID_PVLOGGER` = 2
- const uint32 `OSCL_TLS_ID_TEST` = 3
- const uint32 `OSCL_TLS_ID_PVSCHEDULER` = 4
- const uint32 `OSCL_TLS_ID_PVERRORTRAP` = 5
- const uint32 `OSCL_TLS_ID_SDPMEDIAPARSER` = 6
- const uint32 `OSCL_TLS_ID_PAYLOADPARSER` = 7
- const uint32 `OSCL_TLS_ID_PVMFRECOGNIZER` = 8
- const uint32 `OSCL_TLS_ID_WMDRM` = 9
- const uint32 `OSCL_TLS_ID_OSCLREGISTRY` = 10
- const uint32 `OSCL_TLS_ID_SQLITE3` = 11
- const uint32 `OSCL_TLS_ID_BASE_LAST` = 11

### 6.2.1 Detailed Description

Additional osclbase comment

## 6.2.2 Define Documentation

**6.2.2.1 #define ALLOC\_AND\_CONSTRUCT(n) alloc\_and\_construct(n)**

**6.2.2.2 #define ALLOCATE(n) allocate(n)**

**6.2.2.3 #define EPV\_ARM\_GNUC 1**

**6.2.2.4 #define EPV\_ARM\_MSEVC 3**

**6.2.2.5 #define EPV\_ARM\_RVCT 2**

**6.2.2.6 #define NULL (0)**

The NULL\_TERM\_CHAR is used to terminate c-style strings.

if the NULL macro isn't already defined, then define it as zero.

Referenced by BufFragGroup< ChainClass, max\_frags >::AddFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), Oscl\_TAlloc< node\_type, Alloc >::alloc\_and\_construct(), OsclMemBasicAllocDestructDealloc< T >::allocate(), OsclMemAllocDestructDealloc< T >::allocate(), OsclMemAllocator::allocate(), OsclErrorAllocator::allocate(), Oscl\_TAlloc< node\_type, Alloc >::allocate(), OsclSharedPtr< TheClass >::Bind(), OsclErrorAllocator::deallocate(), OsclSharedPtr< TheClass >::get\_count(), OSCL\_wHeapString< Alloc >::get\_cstr(), OSCL\_HeapString< Alloc >::get\_cstr(), OSCL\_wHeapString< Alloc >::get\_str(), OSCL\_HeapString< Alloc >::get\_str(), BufFragGroup< ChainClass, max\_frags >::GetBufferState(), OsclRegistryClientImpl::GetFactory(), BufFragGroup< ChainClass, max\_frags >::GetFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::GetLocalFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::GetMediaFragment(), Oscl\_TagTree< PVLogger \*, alloc\_type >::insert(), PVActiveBase::IsInAnyQ(), MediaData< ChainClass, max\_frags, local\_bufsize >::IsLocalData(), LinkedListElement< LLClass >::LinkedListElement(), OsclDoubleRunner< T >::operator T \*(), OsclDoubleRunner< T >::operator++(), OSCL\_HeapString< Alloc >::OSCL\_HeapString(), OSCL\_StackString< MaxBufSize >::OSCL\_StackString(), Oscl\_TagTree< PVLogger \*, alloc\_type >::Oscl\_TagTree(), OSCL\_wHeapString< Alloc >::OSCL\_wHeapString(), OSCL\_wStackString< MaxBufSize >::OSCL\_wStackString(), OsclDoubleRunner< T >::OsclDoubleRunner(), OsclMemStatsNode::OsclMemStatsNode(), OsclRefCounterDA::OsclRefCounterDA(), OsclRefCounterMTDA< LockType >::OsclRefCounterMTDA(), OsclRefCounterMTSA< DeallocType, LockType >::OsclRefCounterMTSA(), OsclRefCounterSA< DeallocType >::OsclRefCounterSA(), OsclSocketServIBase::OsclSocketServIBase(), OsclTrapStackItem::OsclTrapStackItem(), OsclExclusivePtrA< T, Alloc >::release(), OsclExclusiveArrayPtr< T >::release(), OsclExclusivePtr< T >::release(), OsclSocketServRequestList::Remove(), OSCL\_wStackString< MaxBufSize >::set(), OSCL\_StackString< MaxBufSize >::set(), OsclExclusivePtrA< T, Alloc >::set(), OsclExclusiveArrayPtr< T >::set(), OsclExclusivePtr< T >::set(), TReadyQueLink::TReadyQueLink(), OsclSharedPtr< TheClass >::Unbind(), OsclSharedPtr< TheClass >::~OsclSharedPtr(), and OsclTimer< Alloc >::~OsclTimer().

**6.2.2.7 #define OSCL\_ABS(a) ((a) > (0) ? (a) : -(a))**

Referenced by OsclTimer< Alloc >::TimerBaseElapsed().

---

**6.2.2.8 #define OSCL\_ASSERT(\_expr) ((\_expr)?((void)0):OSCL Assert(#\_expr, \_\_FILE\_\_, \_\_LINE\_\_))**

Referenced by OsclErrorAllocator::allocate(), OsclPtr::Append(), Oscl\_Queue< T, Alloc >::back(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::compare\_EQ(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::compare\_LT(), OsclErrorAllocator::deallocate(), Oscl\_Queue< T, Alloc >::front(), OsclTLSRegistryEx::getInstance(), OsclSingletonRegistryEx::getInstance(), OsclJump::Jump(), OsclPtrC::Left(), OsclSingletonRegistryEx::lockAndGetInstance(), OsclRefCounterDA::OsclRefCounterDA(), OsclRefCounterMTDA< LockType >::OsclRefCounterMTDA(), OsclRefCounterMTSA< DeallocType, LockType >::OsclRefCounterMTSA(), OsclRefCounterSA< DeallocType >::OsclRefCounterSA(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::pop\_back(), OsclTLSRegistryEx::registerInstance(), OsclSingletonRegistryEx::registerInstance(), OsclSingletonRegistryEx::registerInstanceAndUnlock(), OsclPtrC::Right(), OsclPtr::SetLength(), OsclPtrC::SetLength(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::swap(), OsclJump::Top(), and OsclJump::~OsclJump().

**6.2.2.9 #define OSCL\_COND\_EXPORT\_REF**
**6.2.2.10 #define OSCL\_COND\_IMPORT\_REF**
**6.2.2.11 #define OSCL\_CONST\_CAST(type, exp) ((type)(exp))**

Type casting macros.

**Parameters**

*type* Destination type of cast

*exp* Expression to cast

**6.2.2.12 #define OSCL\_DISABLE\_WARNING\_RETURN\_TYPE\_NOT\_UDT**
**6.2.2.13 #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**
**6.2.2.14 #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**
**6.2.2.15 #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**
**6.2.2.16 #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**
**6.2.2.17 #define OSCL\_DLL\_ENTRY\_POINT() void oscl\_dll\_entry\_point() {}**

DLL entry/exit point.

Allows you to define custom operations at the entry and exit of the DLL. Place this macro within one source file for each DLL.

Functions with the custom commands for the DLL entry and exit point must also be defined. The entry point custom function is LocalDllEntry(), and the exit point custom function is LocalDllExit().

These functions will be called as a result of executing this macro.

Usage :

---

```
LocalDllEntry() { custom operations... }
LocalDllExit() { custom operations... }
OSCL_DLL_ENTRY_POINT()
```

#### **6.2.2.18 #define OSCL\_DLL\_ENTRY\_POINT\_DEFAULT()**

Default DLL entry/exit point function.

The body of the DLL entry point is given. The macro only needs to be declared within the source file.

Usage :

```
OSCL_DLL_ENTRY_POINT_DEFAULT()
```

#### **6.2.2.19 #define OSCL\_DYNAMIC\_CAST(type, exp) ((type)(exp))**

#### **6.2.2.20 #define OSCL\_HAS\_SINGLETON\_SUPPORT 1**

#### **6.2.2.21 #define OSCL\_INLINE inline**

#### **6.2.2.22 #define OSCL\_MAX(a, b) ((a) > (b) ? (a) : (b))**

Referenced by OsclTimer< Alloc >::TimerBaseElapsed().

#### **6.2.2.23 #define OSCL\_MIN(a, b) ((a) < (b) ? (a) : (b))**

#### **6.2.2.24 #define OSCL\_REINTERPRET\_CAST(type, exp) ((type)(exp))**

#### **6.2.2.25 #define OSCL\_STATIC\_CAST(type, exp) ((type)(exp))**

Referenced by Oscl\_TAlloc< node\_type, Alloc >::alloc\_and\_construct(), Oscl\_TAlloc< node\_type, Alloc >::alloc\_and\_construct\_fl(), Oscl\_TAlloc< node\_type, Alloc >::allocate(), Oscl\_TAlloc< node\_type, Alloc >::allocate\_fl(), GetHostByNameParam::canPersistMoreHostAddresses(), Oscl\_TAlloc< node\_type, Alloc >::destruct\_and\_dealloc(), OsclTLS< T, ID, Registry >::OsclTLS(), GetHostByNameParam::PersistHostAddress(), OsclTLS< T, ID, Registry >::set(), OsclTLSEEx< T, ID, Registry >::set(), and OsclSingletonEx< T, ID, Registry >::set().

#### **6.2.2.26 #define OSCL\_TLS\_BASE\_SLOTS OSCL\_TLS\_ID\_BASE\_LAST +1**

#### **6.2.2.27 #define OSCL\_TLS\_MAX\_SLOTS ( OSCL\_TLS\_BASE\_SLOTS + OSCL\_TLS\_EXTERNAL\_SLOTS)**

#### **6.2.2.28 #define OSCL\_UNUSED\_ARG(vbl) (void)(vbl)**

The following two macros are used to avoid compiler warnings.

**OSCL\_UNUSED\_ARG(vbl)** is used to "reference" an otherwise unused parameter or variable, often one which is used only in an OSCL\_ASSERT and thus unreferenced in release mode. **OSCL\_UNUSED\_RETURN(val)** provides a "return" of a value, in places which will not actually be executed, such as after an OSCL\_LEAVE or Thread::exit or abort. The value needs to be of an appropriate type for the current function, though zero will usually suffice. Note that OSCL\_UNUSED\_RETURN will not be necessary for 'void' functions, as there is no requirement for a value-return operation.

Referenced by PVLogger::AddAppender(), PVLogger::AddFilter(), Oscl\_DefAlloc::allocate\_fl(), Oscl\_Alloc::allocate\_fl(), Oscl\_TAlloc< node\_type, Alloc >::deallocate(), Oscl\_TAlloc< node\_type, Alloc >::destroy(), OsclMemBasicAllocDestructDealloc< T >::destruct\_and\_dealloc(), OsclMemAllocDestructDealloc< T >::destruct\_and\_dealloc(), AllPassFilter::FilterOpaqueMessge(), AllPassFilter::FilterString(), OsclErrorAllocator::operator delete(), MM\_AllocNode::operator new(), MM\_AllocInfo::operator new(), MM\_Stats\_CB::operator new(), OsclMemStatsNode::operator new(), MM\_FailInsertParam::operator new(), MM\_Stats\_t::operator new(), OsclErrorAllocator::operator new(), HeapBase::operator new[ ](), PVLogger::RemoveAppender(), PVLogger::SetLogLevel(), and OsclAsyncFile::Write().

#### **6.2.2.29 #define OSCL\_UNUSED\_RETURN(value) return value**

#### **6.2.2.30 #define OSCL\_VIRTUAL\_BASE(type) type**

#### **6.2.2.31 #define PVMEM\_INST\_LEVEL 0**

### **6.2.3 Typedef Documentation**

#### **6.2.3.1 typedef int c\_bool**

The c\_bool type is mapped to an integer to provide a bool type for C interfaces.

#### **6.2.3.2 typedef char CtimeStrBuf[CTIME\_BUFFER\_SIZE]**

#### **6.2.3.3 typedef OSCL\_NATIVE\_INT64\_TYPE int64**

#### **6.2.3.4 typedef char ISO8601timeStrBuf[ISO8601TIME\_BUFFER\_SIZE]**

#### **6.2.3.5 typedef char mbchar**

mbchar is multi-byte char (e.g., UTF-8) with null termination.

#### **6.2.3.6 typedef uint8 octet**

The octet type is meant to be used for referring to a byte or collection bytes without suggesting anything about the underlying meaning of the bytes.

#### **6.2.3.7 typedef oscl\_wchar OSCL\_TCHAR**

define OSCL\_TCHAR

#### **6.2.3.8 typedef OSCL\_NATIVE\_WCHAR\_TYPE oscl\_wchar**

#### **6.2.3.9 typedef void OsclAny**

The OsclAny is meant to be used the context of a generic pointer (i.e., no specific type).

### 6.2.3.10 `typedef float OsclFloat`

The Float type defined as OsclFloat.

### 6.2.3.11 `typedef char PV8601timeStrBuf[PV8601TIME_BUFFER_SIZE]`

### 6.2.3.12 `typedef OsclAny TOscTlsKey`

### 6.2.3.13 `typedef unsigned int uint`

The uint type is a convenient abbreviation for unsigned int.

### 6.2.3.14 `typedef OSCL_NATIVE_UINT64_TYPE uint64`

## 6.2.4 Enumeration Type Documentation

### 6.2.4.1 `enum TimeUnits`

The TimeUnits enum can be used when constructing a [TimeValue](#) class.

**Enumerator:**

*SECONDS*

*MILLISECONDS*

*MICROSECONDS*

## 6.2.5 Function Documentation

### 6.2.5.1 `OSCL_COND_IMPORT_REF void _OSCL_Abort ()`

This function terminates the current process abnormally.

Referenced by OsclJump::Jump().

### 6.2.5.2 `void big_endian_to_host (char * data, unsigned int size)`

Convert big endian to host format.

This function takes a buffer of data which is assumed to be in big endian order and rearranges it to the native order of the machine running the code. If the machine is a big endian machine, nothing is done.

#### Parameters

*data* A pointer to the input/output buffer

*size* The number of bytes in the buffer.

### 6.2.5.3 `template<class TheClass > void OsclSharedPtr< TheClass >::Bind (TheClass * ptr, OsclRefCounter * in_refcnt) [inline, inherited]`

Use this function to bind an existing [OsclSharedPtr](#) to a new (unwrapped) object.

References NULL, and OsclRefCounter::removeRef().

**6.2.5.4 template<class TheClass > void OsclSharedPtr< TheClass >::Bind (const OsclSharedPtr< TheClass > & *inHandle*) [inline, inherited]**

Use this function to bind an existing `OsclSharedPtr` to a already-wrapped object.

References `OsclRefCounter::addRef()`, `NULL`, and `OsclRefCounter::removeRef()`.

Referenced by `OsclSharedPtr< TheClass >::operator=()`, and `OsclSharedPtr< TheClass >::Unbind()`.

**6.2.5.5 template<class TheClass> int OsclSharedPtr< TheClass >::get\_count () [inline, inherited]**

Get a count of how many references to the object exist.

References `OsclRefCounter::getCount()`, and `NULL`.

**6.2.5.6 template<class TheClass> OsclRefCounter\* OsclSharedPtr< TheClass >::GetRefCounter () [inline, inherited]**

Get the refcount pointer. This should primarily be used for conversion operations.

**6.2.5.7 template<class TheClass> TheClass\* OsclSharedPtr< TheClass >::GetRep () [inline, inherited]**

Use this function to get a pointer to the wrapped object.

Referenced by `PVLogger::RemoveAppender()`.

**6.2.5.8 void host\_to\_big\_endian (char \* *data*, unsigned int *size*)**

Convert host to big endian format.

This function takes a buffer of data which is assumed to be in native host order and rearranges it to big endian format. If the machine is a big endian machine, nothing is done.

**Parameters**

*data* A pointer to the input/output buffer

*size* The number of bytes in the buffer.

**6.2.5.9 void host\_to\_little\_endian (char \* *data*, unsigned int *size*)**

Convert host to little endian format.

This function takes a buffer of data which is assumed to be in the host's native order and rearranges it to the little endian format. If the machine is a little endian machine, nothing is done.

**Parameters**

*data* A pointer to the input/output buffer

*size* The number of bytes in the buffer.

---

**6.2.5.10 OSCL\_IMPORT\_REF void ISO8601ToRFC822 (ISO8601timeStrBuf *iso8601\_buffer*, CtimeStrBuf *ctime\_buffer*)**

**6.2.5.11 void little\_endian\_to\_host (char \* *data*, uint32 *size*)**

Convert little endian to host format.

This function takes a buffer of data which is assumed to be in little endian order and rearranges it to the native order of the machine running the code. If the machine is a little endian machine, nothing is done.

#### Parameters

*data* A pointer to the input/output buffer

*size* The number of bytes in the buffer.

**6.2.5.12 template<class TheClass> OsclSharedPtr< TheClass >::operator TheClass \* ()  
[inline, inherited]**

Casting operator.

**6.2.5.13 template<class TheClass> TheClass& OsclSharedPtr< TheClass >::operator\* ()  
[inline, inherited]**

The indirection operator returns a reference to an object of the parameterized type.

**6.2.5.14 OSCL\_COND\_IMPORT\_REF TimeValue operator+ (const int32 *aSeconds*, const TimeValue & *b*)**

**6.2.5.15 OSCL\_COND\_IMPORT\_REF TimeValue operator+ (const TimeValue & *a*, const int32 *bSeconds*)**

**6.2.5.16 OSCL\_COND\_IMPORT\_REF TimeValue operator- (const int32 *aSeconds*, const TimeValue & *b*)**

**6.2.5.17 OSCL\_COND\_IMPORT\_REF TimeValue operator- (const TimeValue & *a*, const int32 *bSeconds*)**

**6.2.5.18 OSCL\_COND\_IMPORT\_REF TimeValue operator- (const TimeValue & *a*, const TimeValue & *b*)**

**6.2.5.19 template<class TheClass> TheClass\* OsclSharedPtr< TheClass >::operator-> ()  
[inline, inherited]**

The dereferencing operator returns a pointer to the parameterized type and can be used to access member elements of TheClass.

**6.2.5.20 template<class TheClass> OsclSharedPtr& OsclSharedPtr< TheClass >::operator= (const OsclSharedPtr< TheClass > & *inSharedPtr*) [inline, inherited]**

Assignment operator.

References OsclSharedPtr< TheClass >::Bind().

**6.2.5.21 template<class TheClass > bool OsclSharedPtr< TheClass >::operator==(const OsclSharedPtr< TheClass > & b) const [inline, inherited]**

Test for equality to see if two PVHandles wrap the same object.

**6.2.5.22 OSCL\_IMPORT\_REF void OSCL\_Assert (const char \*expr, const char \*filename, int line\_number)**

OSCL\_ASSERT macro evaluates an expression and when the result is false, prints a diagnostic message and aborts the program.

**Parameters**

*expr* is the expression to be evaluated

*filename* is the name of the current source file

*line\_number* is the line number in the current source file

**6.2.5.23 OSCL\_IMPORT\_REF int32 oscl\_CIstrcmp (const oscl\_wchar \*str1, const oscl\_wchar \*str2)**

Case in-sensitive string comparision.

**Parameters**

*str1* string to compare

*str2* string to compare

**Returns**

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

**6.2.5.24 OSCL\_IMPORT\_REF int32 oscl\_CIstrcmp (const char \*str1, const char \*str2)**

Case in-sensitive string comparision.

**Parameters**

*str1* string to compare

*str2* string to compare

**Returns**

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

**6.2.5.25 OSCL\_IMPORT\_REF int32 oscl\_CIstrncmp (const oscl\_wchar \*str1, const oscl\_wchar \*str2, uint32 count)**

Lexicographically compares(case in-sensitive), at most, the first count characters in str1 and str2 and returns a value indicating the relationship between the substrings.

**Parameters**

*str1* string to compare  
*str2* string to compare  
*count* Number of characters to compare

**Returns**

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

**6.2.5.26 OSCL\_IMPORT\_REF int32 oscl\_Clstrncmp (const char \* str1, const char \* str2, uint32 count)**

Lexicographically compares(case in-sensitive), at most, the first count characters in str1 and str2 and returns a value indicating the relationship between the substrings.

**Parameters**

*str1* string to compare  
*str2* string to compare  
*count* Number of characters to compare

**Returns**

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

**6.2.5.27 OSCL\_IMPORT\_REF bool oscl\_isLetter (const char car)**

check if supplied parameter is an alphabet (ASCII only).

**Parameters**

*car*

**Returns**

1 if car is an alphabet 0 if car is not an alphabet.

**6.2.5.28 OSCL\_IMPORT\_REF oscl\_wchar\* oscl\_streat (oscl\_wchar \* dest, const oscl\_wchar \* src)**

Appends up to count characters from string src to string dest, and then appends a terminating null character. The initial character of src overwrites the null character at the end of dest. Subsequent characters in src are appended to dest until either the end of src is reached or count characters have been copied. If copying takes place between objects that overlap, the behavior is undefined.

**Parameters**

*dest* null terminated destination string  
*src* source string  
*count* number of characters to append.

**Returns**

*dest*

**6.2.5.29 OSCL\_IMPORT\_REF char\* oscl\_streac (char \* dest, const char \* src)**

Appends string src to string dest, and then appends a terminating null character. The initial character of src overwrites the null character at the end of dest. Subsequent characters in src are appended to dest until the end of src is reached. If copying takes place between objects that overlap, the behavior is undefined.

**Parameters**

*dest* null terminated destination string

*src* source string

**Returns**

dest

**6.2.5.30 OSCL\_IMPORT\_REF oscl\_wchar\* oscl\_strchr (oscl\_wchar \* str, int32 c)****6.2.5.31 OSCL\_IMPORT\_REF const oscl\_wchar\* oscl\_strchr (const oscl\_wchar \* str, int32 c)**

Finds the first occurrence of c in string, or it returns NULL if c is not found. The null-terminating character is included in the search.

**Parameters**

*str* null terminated source string

*c* character to search for

**Returns****6.2.5.32 OSCL\_IMPORT\_REF char\* oscl\_strchr (char \* str, int32 c)****6.2.5.33 OSCL\_IMPORT\_REF const char\* oscl\_strchr (const char \* str, int32 c)**

Finds the first occurrence of c in string, or it returns NULL if c is not found. The null-terminating character is included in the search.

**Parameters**

*str* null terminated source string

*c* character to search for

**Returns****6.2.5.34 OSCL\_IMPORT\_REF int32 oscl\_strcmp (const oscl\_wchar \* str1, const oscl\_wchar \* str2)**

Lexicographically compares two NULL terminated strings, str1 and str2, and returns a value indicating the relationship between them.

**Parameters**

*str1* String to compare  
*str2* String to compare

**Returns**

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

**6.2.5.35 OSCL\_IMPORT\_REF int32 oscl\_strcmp (const char \* str1, const char \* str2)**

Lexicographically compares two NULL terminated strings, str1 and str2, and returns a value indicating the relationship between them.

**Parameters**

*str1* String to compare  
*str2* String to compare

**Returns**

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

Referenced by GetHostNameParam::canPersistMoreHostAddresses(), OsclNetworkAddress::operator==(), and GetHostNameParam::PersistHostAddress().

**6.2.5.36 OSCL\_IMPORT\_REF uint32 oscl\_strlen (const oscl\_wchar \* str)**

Gets the length of a wide char string

**Parameters**

*str* NULL terminated string.

**Returns**

Returns the number of characters in string, excluding the terminal NULL.

**6.2.5.37 OSCL\_IMPORT\_REF uint32 oscl\_strlen (const char \* str)**

Gets the length of a string

**Parameters**

*str* NULL terminated string.

**Returns**

Returns the number of characters in string, excluding the terminal NULL.

Referenced by WStrPtrLen::operator=(), StrPtrLen::operator=(), OSCL\_wStackString< MaxBufSize >::set(), OSCL\_StackString< MaxBufSize >::set(), OSCL\_wHeapString< Alloc >::set(), OSCL\_HeapString< Alloc >::set(), StrPtrLen::StrPtrLen(), Oscl\_Tag\_Base::tag\_cmp(), Oscl\_Tag\_Base::tag\_copy(), Oscl\_Tag\_Base::tag\_len(), and WStrPtrLen::WStrPtrLen().

**6.2.5.38 OSCL\_IMPORT\_REF oscl\_wchar\* oscl\_strncat (oscl\_wchar \* dest, const oscl\_wchar \* src, uint32 count)**

Appends up to count characters from string src to string dest, and then appends a terminating null character. The initial character of src overwrites the null character at the end of dest. Subsequent characters in src are appended to dest until either the end of src is reached or count characters have been copied. If copying takes place between objects that overlap, the behavior is undefined.

**Parameters**

*dest* null terminated destination string

*src* source string

*count* number of characters to append.

**Returns**

dest

**6.2.5.39 OSCL\_IMPORT\_REF char\* oscl\_strncat (char \* dest, const char \* src, uint32 count)**

Appends up to count characters from string src to string dest, and then appends a terminating null character. The initial character of src overwrites the null character at the end of dest. Subsequent characters in src are appended to dest until either the end of src is reached or count characters have been copied. If copying takes place between objects that overlap, the behavior is undefined.

**Parameters**

*dest* null terminated destination string

*src* source string

*count* number of characters to append.

**Returns**

dest

**6.2.5.40 OSCL\_IMPORT\_REF int32 oscl\_strncmp (const oscl\_wchar \* str1, const oscl\_wchar \* str2, uint32 count)**

Lexicographically compares, at most, the first count characters in str1 and str2 and returns a value indicating the relationship between the substrings.

**Parameters**

*str1* String to compare

*str2* String to compare

*count* Number of characters to compare

**Returns**

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

### 6.2.5.41 OSCL\_IMPORT\_REF int32 oscl\_strcmp (const char \* str1, const char \* str2, uint32 count)

Lexicographically compares, at most, the first count characters in str1 and str2 and returns a value indicating the relationship between the substrings.

#### Parameters

- str1* String to compare
- str2* String to compare
- count* Number of characters to compare

#### Returns

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

Referenced by WStrPtrLen::operator==(), StrPtrLen::operator==(), and Oscl\_Tag\_Base::tag\_cmp().

### 6.2.5.42 OSCL\_IMPORT\_REF oscl\_wchar\* oscl\_strncpy (oscl\_wchar \* dest, const oscl\_wchar \* src, uint32 count)

Copies the chars of one string to another.

Copies the initial count characters of src to dest and returns dest. If count is less than or equal to the length of src, a null character is not appended automatically to the copied string. If count is greater than the length of src, the destination string is padded with null characters up to length count. The behavior of strncpy is undefined if the source and destination strings overlap.

#### Parameters

- dest* Destination string
- src* NULL terminated source string
- count* Number of chars to copy

#### Returns

Returns dest.

### 6.2.5.43 OSCL\_IMPORT\_REF char\* oscl\_strncpy (char \* dest, const char \* src, uint32 count)

Copies the chars of one string to another.

Copies the initial count characters of src to dest and returns dest. If count is less than or equal to the length of src, a null character is not appended automatically to the copied string. If count is greater than the length of src, the destination string is padded with null characters up to length count. The behavior of strncpy is undefined if the source and destination strings overlap.

#### Parameters

- dest* Destination string
- src* NULL terminated source string
- count* Number of chars to copy

**Returns**

Returns dest.

Referenced by Oscl\_Tag\_Base::tag\_copy().

**6.2.5.44 OSCL\_IMPORT\_REF oscl\_wchar\* oscl\_strrchr (oscl\_wchar \* str, int32 c)****6.2.5.45 OSCL\_IMPORT\_REF const oscl\_wchar\* oscl\_strrchr (const oscl\_wchar \* str, int32 c)****6.2.5.46 OSCL\_IMPORT\_REF char\* oscl\_strrchr (char \* str, int32 c)****6.2.5.47 OSCL\_IMPORT\_REF const char\* oscl\_strrchr (const char \* str, int32 c)**

Finds the last occurrence of c in string, or it returns NULL if c is not found. The null-terminating character is included in the search.

**Parameters**

*str* null terminated source string

*c* character to search for

**Returns****6.2.5.48 OSCL\_IMPORT\_REF oscl\_wchar\* oscl\_strset (oscl\_wchar \* dest, oscl\_wchar val, uint32 count)**

Sets the characters of a string to a specified character

**Parameters**

*dest* buffer to modify

*val* character to set

*count* number of chars to set

**Returns**

the value of dest

**6.2.5.49 OSCL\_IMPORT\_REF char\* oscl\_strset (char \* dest, char val, uint32 count)**

Sets the characters of a string to a specified character

**Parameters**

*dest* buffer to modify

*val* character to set

*count* number of chars to set

**Returns**

the value of dest

---

**6.2.5.50 OSCL\_IMPORT\_REF oscl\_wchar\* oscl\_strstr (oscl\_wchar \* str1, const oscl\_wchar \* str2)**

**6.2.5.51 OSCL\_IMPORT\_REF const oscl\_wchar\* oscl\_strstr (const oscl\_wchar \* str1, const oscl\_wchar \* str2)**

find the occurrence of sub-string in a string.

#### Parameters

*str1* string.

*str2* sub-string

#### Returns

pointer to the begining of sub-string.

**6.2.5.52 OSCL\_IMPORT\_REF char\* oscl\_strstr (char \* str1, const char \* str2)**

**6.2.5.53 OSCL\_IMPORT\_REF const char\* oscl\_strstr (const char \* str1, const char \* str2)**

find the occurrence of sub-string in a string.

#### Parameters

*str1* string.

*str2* sub-string

#### Returns

pointer to the begining of sub-string.

**6.2.5.54 OSCL\_IMPORT\_REF oscl\_wchar oscl\_tolower (const oscl\_wchar car)**

convert upper case ASCII character to lower case. behaviour of this function for non-ASCII characters is not defined.

#### Parameters

*car* upper case character.

#### Returns

lower case character.

**6.2.5.55 OSCL\_IMPORT\_REF char oscl\_tolower (const char car)**

convert upper case ASCII character to lower case. behaviour of this function for non-ASCII characters is not defined.

#### Parameters

*car* upper case character.

### Returns

lower case character.

**6.2.5.56 template<class TheClass> OsclSharedPtr< TheClass >::OsclSharedPtr (const OsclSharedPtr< TheClass > & *inSharedPtr*) [inline, inherited]**

Copy constructor.

References OsclRefCounter::addRef().

**6.2.5.57 template<class TheClass> OsclSharedPtr< TheClass >::OsclSharedPtr (TheClass \* *inClassPtr*, OsclRefCounter \* *in\_refcnt*) [inline, inherited]**

Constructor.

### Parameters

*inClassPtr* A pointer to an instance of the parameterized type that the new [OsclSharedPtr](#) will wrap.

**6.2.5.58 OSCL\_IMPORT\_REF void PV8601ToRFC822 (PV8601timeStrBuf *pv8601\_buffer*, CtimeStrBuf *ctime\_buffer*)**

**6.2.5.59 void PVOsclBase\_Cleanup ()**

Cleanup OsclBase functionality OsclBase should be cleaned once OsclBase functions are no longer needed

**6.2.5.60 void PVOsclBase\_Init ()**

Initializes OsclBase functionality. OsclBase must be initialized before any OsclBase functionality can be used.

### Exceptions

*leaves* if out-of-memory

**6.2.5.61 OSCL\_IMPORT\_REF void RFC822ToPV8601 (CtimeStrBuf *ctime\_buffer*, PV8601timeStrBuf)**

**6.2.5.62 template<class TheClass> void OsclSharedPtr< TheClass >::Unbind () [inline, inherited]**

Use this function of unbind an existing [OsclSharedPtr](#).

References OsclSharedPtr< TheClass >::Bind(), and NULL.

**6.2.5.63 template<class TheClass> virtual OsclSharedPtr< TheClass >::~OsclSharedPtr ()  
[inline, virtual, inherited]**

Destructor.

References NULL, and OsclRefCounter::removeRef().

## 6.2.6 Variable Documentation

**6.2.6.1 const int CTIME\_BUFFER\_SIZE = 26**

**6.2.6.2 const int ISO8601TIME\_BUFFER\_SIZE = 21**

**6.2.6.3 const long MSEC\_PER\_SEC = 1000**

**6.2.6.4 const uint32 OSCL\_TLS\_ID\_BASE\_LAST = 11**

**6.2.6.5 const uint32 OSCL\_TLS\_ID\_ERRORHOOK = 1**

**6.2.6.6 const uint32 OSCL\_TLS\_ID\_MAGICNUM = 0**

**6.2.6.7 const uint32 OSCL\_TLS\_ID\_OSCLREGISTRY = 10**

**6.2.6.8 const uint32 OSCL\_TLS\_ID\_PAYLOADPARSER = 7**

**6.2.6.9 const uint32 OSCL\_TLS\_ID\_PVERRORTRAP = 5**

**6.2.6.10 const uint32 OSCL\_TLS\_ID\_PVLOGGER = 2**

**6.2.6.11 const uint32 OSCL\_TLS\_ID\_PVMFRECOGNIZER = 8**

**6.2.6.12 const uint32 OSCL\_TLS\_ID\_PVSCHEDULER = 4**

**6.2.6.13 const uint32 OSCL\_TLS\_ID\_SDPMEDIAPARSER = 6**

**6.2.6.14 const uint32 OSCL\_TLS\_ID\_SQLITE3 = 11**

**6.2.6.15 const uint32 OSCL\_TLS\_ID\_TEST = 3**

**6.2.6.16 const uint32 OSCL\_TLS\_ID\_WMDRM = 9**

**6.2.6.17 const int PV8601TIME\_BUFFER\_SIZE = 21**

**6.2.6.18 const uint32 unix\_ntp\_offset = 2208988800U**

**6.2.6.19 const long USEC\_PER\_SEC = 1000000**

## 6.3 OSCL Memory

### Data Structures

- class [OsclMem](#)
- class [OsclAuditCB](#)
- class [OsclMemAllocator](#)
- class [OsclMemBasicAllocator](#)
- class [OsclMemAllocDestructDealloc< T >](#)
- class [OsclMemBasicAllocDestructDealloc< T >](#)
- class [OsclMemGlobalAuditObject](#)
- class [HeapBase](#)
- struct [MM\\_Stats\\_t](#)
- struct [MM\\_FailInsertParam](#)
- class [OsclMemStatsNode](#)
- struct [MM\\_Stats\\_CB](#)
- struct [MM\\_AllocQueryInfo](#)
- struct [MM\\_AllocInfo](#)
- struct [MM\\_AllocNode](#)
- struct [MM\\_AuditOverheadStats](#)
- class [MM\\_Audit\\_Imp](#)
- class [OsclMemAudit](#)
- struct [MM\\_AllocBlockHdr](#)
- struct [MM\\_AllocBlockFence](#)
- class [OSCLMemAutoPtr< T, \\_Allocator >](#)

*The oscl\_auto\_ptr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the oscl\_auto\_ptr expires, its destructor uses delete to free the memory.*

- class [OsclMemPoolFixedChunkAllocatorObserver](#)
- class [OsclMemPoolFixedChunkAllocator](#)
- class [OsclMemPoolResizableAllocatorObserver](#)
- class [OsclMemPoolResizableAllocatorMemoryObserver](#)
- class [OsclMemPoolResizableAllocator](#)
- class [allocator](#)

### Files

- file [oscl\\_mem\\_basic\\_functions.h](#)

*This file contains prototypes for the basic memory functions.*

- file [oscl\\_mem.h](#)

*This file contains basic memory definitions for common use across platforms.*

- file [oscl\\_mem\\_audit.h](#)

*This file contains the definition and partial implementation of MM\_Audit class.*

- file [oscl\\_mem\\_audit\\_internals.h](#)

*This file contains the internal definitions for the mem audit library.*

- file [oscl\\_mem\\_auto\\_ptr.h](#)

*This file defines the oscl\_mem\_auto\_ptr template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.*

- file [oscl\\_mem\\_mempool.h](#)

*This file contains the definition of memory pool allocators.*

## Defines

- #define [OSCL\\_DISABLE\\_WARNING\\_TRUNCATE\\_DEBUG\\_MESSAGE](#)
- #define [OSCL\\_DISABLE\\_WARNING\\_TRUNCATE\\_DEBUG\\_MESSAGE](#)
- #define [OSCL\\_CLEANUP\\_BASE\\_CLASS\(T\)](#) \_OSCL\_CLEANUP\_BASE\_CLASS(T)
- #define [OSCL\\_ALLOC\\_NEW\(T\\_allocator, T, params\)](#) new(T\_allocator.allocate(1)) T params
- #define [OSCL\\_TRAP\\_ALLOC\\_NEW\(T\\_ptr, T\\_allocator, T, params\)](#) \_OSCL\_TRAP\_NEW(T\_allocator.allocate(1),T\_allocator.deallocate,T\_ptr,T,params)
- #define [OSCL\\_ALLOC\\_DELETE\(ptr, T\\_allocator, T\)](#)
- #define [OSCL\\_MALLOC\(count\)](#) \_oscl\_malloc(count)
- #define [oscl\\_malloc\(a\)](#) OSCL\_MALLOC(a)
- #define [OSCL\\_DEFAULT\\_MALLOC\(x\)](#) OSCL\_MALLOC(x)
- #define [OSCL\\_AUDIT\\_MALLOC\(auditCB, count\)](#) \_oscl\_malloc(count)
- #define [OSCL\\_CALLOC\(num, size\)](#) \_oscl\_calloc(num,size)
- #define [oscl\\_calloc\(a, b\)](#) OSCL\_CALLOC(a,b)
- #define [OSCL\\_AUDIT\\_CALLOC\(auditCB, num, size\)](#) \_oscl\_calloc(num,size)
- #define [OSCL\\_REALLOC\(ptr, new\\_size\)](#) \_oscl\_realloc(ptr,new\_size)
- #define [oscl\\_realloc\(a, b\)](#) OSCL\_REALLOC(a,b)
- #define [OSCL\\_AUDIT\\_REALLOC\(auditCB, ptr, new\\_size\)](#) \_oscl\_realloc(ptr,new\_size)
- #define [OSCL\\_FREE\(ptr\)](#) \_oscl\_free(ptr)
- #define [oscl\\_free\(x\)](#) OSCL\_FREE(x)
- #define [OSCL\\_DEFAULT\\_FREE\(x\)](#) OSCL\_FREE(x)
- #define [OSCL\\_NEW\(T, params\)](#) new T params
- #define [OSCL\\_PLACEMENT\\_NEW\(ptr, constructor\)](#) new(ptr) constructor
- #define [OSCL\\_TRAP\\_NEW\(T\\_ptr, T, params\)](#) \_OSCL\_TRAP\_NEW(\_oscl\_default\_new(sizeof(T)),\_oscl\_free,T\_ptr,T,params)
- #define [OSCL\\_AUDIT\\_NEW\(auditCB, T, params\)](#) new(\_oscl\_default\_new(sizeof(T))) T params
- #define [OSCL\\_TRAP\\_AUDIT\\_NEW\(T\\_ptr, auditCB, T, params\)](#) \_OSCL\_TRAP\_NEW(\_oscl\_default\_new(sizeof(T)),\_oscl\_free,T\_ptr,T,params)
- #define [OSCL\\_DELETE\(ptr\)](#)
- #define [OSCL\\_AUDIT\\_ARRAY\\_NEW\(auditCB, T, count\)](#) new(\_oscl\_default\_new(sizeof(T)\*(count))) T
- #define [OSCL\\_ARRAY\\_NEW\(T, count\)](#) new T[count]
- #define [OSCL\\_ARRAY\\_DELETE\(ptr\)](#) delete [ ] ptr
- #define [\\_OSCL\\_TRAP\\_NEW\(exp, freeFunc, T\\_ptr, T, params\)](#)
- #define [\\_OSCL\\_CLEANUP\\_BASE\\_CLASS\(T\)](#) this->T::~T()
- #define [OSCL\\_DISABLE\\_WARNING\\_TRUNCATE\\_DEBUG\\_MESSAGE](#)
- #define [MM\\_ALLOC\\_MAX\\_QUERY\\_FILENAME\\_LEN](#) 128
- #define [MM\\_ALLOC\\_MAX\\_QUERY\\_TAG\\_LEN](#) 64
- #define [MM\\_AUDIT\\_VALIDATE\\_BLOCK](#) 1
- #define [MM\\_AUDIT\\_PREFILL\\_FLAG](#) 0x1
- #define [MM\\_AUDIT\\_POSTFILL\\_FLAG](#) 0x2

- #define MM\_AUDIT\_VALIDATE\_ALL\_HEAP\_FLAG 0x4
- #define MM\_AUDIT\_VALIDATE\_ON\_FREE\_FLAG 0x8
- #define MM\_AUDIT\_ALLOC\_NODE\_ENABLE\_FLAG 0x10
- #define MM\_AUDIT\_SUPPRESS\_FILENAME\_FLAG 0x20
- #define DEFAULT\_MM\_AUDIT\_MODE 0
- #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE
- #define MM\_AUDIT\_ALLOC\_NODE\_SUPPORT 1
- #define MM\_AUDIT\_FENCE\_SUPPORT 0
- #define MM\_AUDIT\_INCLUDE\_ALL\_HEAP\_VALIDATION 1
- #define MM\_AUDIT\_FILL\_SUPPORT 0
- #define MM\_AUDIT\_FAILURE\_SIMULATION\_SUPPORT 1
- #define FENCE\_PATTERN 0xAA
- #define MIN\_FENCE\_SIZE 4
- #define MEM\_ALIGN\_SIZE 8
- #define COMPUTE\_MEM\_ALIGN\_SIZE(x, y, z) (y+(((x+y)%z) ? (z - (x+y)%z) : 0))
- #define DEFAULT\_PREFILL\_PATTERN 0x96
- #define DEFAULT\_POSTFILL\_PATTERN 0x5A
- #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE
- #define OSCL\_DISABLE\_WARNING\_RETURN\_TYPE\_NOT\_UDT

## Typedefs

- typedef OSCLMemAutoPtr< char, Oscl\_TAlloc< char, OsclMemBasicAllocator > > MMAuditCharAutoPtr
- typedef OSCLMemAutoPtr< uint8, Oscl\_TAlloc< uint8, \_OsclBasicAllocator > > MMAuditUInt8AutoPtr
- typedef OSCLMemAutoPtr< MM\_AllocNode, Oscl\_TAlloc< MM\_AllocNode, OsclMemBasicAllocator > > MM\_AllocNodeAutoPtr
- typedef OSCLMemAutoPtr< OsclMemStatsNode, Oscl\_TAlloc< OsclMemStatsNode, OsclMemBasicAllocator > > MM\_StatsNodeTagTreeType
- typedef OSCLMemAutoPtr< OsclMemStatsNode, Oscl\_TAlloc< OsclMemStatsNode, OsclMemBasicAllocator > > OsclMemStatsNodeAutoPtr
- typedef Oscl\_TAlloc< MM\_StatsNodeTagTreeType, OsclMemBasicAllocator > TagTree\_Allocator
- typedef Oscl\_TagTree< MM\_StatsNodeTagTreeType, TagTree\_Allocator > OsclTagTreeType

## Functions

- OSCL\_COND\_IMPORT\_REF void \* \_oscl\_malloc (int32 count)
- OSCL\_COND\_IMPORT\_REF void \* \_oscl\_calloc (int32 nelems, int32 size)
- OSCL\_COND\_IMPORT\_REF void \* \_oscl\_realloc (void \*src, int32 count)
- OSCL\_COND\_IMPORT\_REF void \_oscl\_free (void \*src)
- OSCL\_COND\_IMPORT\_REF void \* oscl\_memcpy (void \*dest, const void \*src, uint32 count)
- OSCL\_COND\_IMPORT\_REF void \* oscl\_memmove (void \*dest, const void \*src, uint32 count)
- OSCL\_COND\_IMPORT\_REF void \* oscl\_memmove32 (void \*dest, const void \*src, uint32 count)
- OSCL\_COND\_IMPORT\_REF void \* oscl\_memset (void \*dest, uint8 val, uint32 count)
- OSCL\_COND\_IMPORT\_REF int oscl\_memcmp (const void \*buf1, const void \*buf2, uint32 count)
- OSCL\_COND\_IMPORT\_REF uint oscl\_mem\_aligned\_size (uint size)
- OSCL\_IMPORT\_REF void OsclMemInit (OsclAuditCB &auditCB)
- OSCL\_IMPORT\_REF void \* \_oscl\_default\_new (size\_t nBytes)

- void \* **operator new** (size\_t aSize)
- void **operator delete** (void \*aPtr)
- void \* **operator new[ ]** (size\_t aSize)
- void **operator delete[ ]** (void \*aPtr)

## Variables

- static const uint32 **MM\_AllocBlockHdr::ALLOC\_NODE\_FLAG** = 0x80000000

### 6.3.1 Define Documentation

#### 6.3.1.1 #define \_OSCL\_CLEANUP\_BASE\_CLASS(T) this->T::~T()

This macro is used to cleanup the base class in a derived-class constructor just before a leave occurs.

##### Parameters

*T*,: base class name.

#### 6.3.1.2 #define \_OSCL\_TRAP\_NEW(exp, freeFunc, T\_ptr, T, params)

##### Value:

```
{\
    int32 __err; \
    OsclAny*__ptr=exp; \
    OSCL_TRY(__err,T_ptr=new(__ptr) T params); \
    if(__err){ \
        freeFunc(__ptr); \
        T_ptr=NULL; \
        OsclError::Leave(__err); \
    } \
}
```

Internal-use macro to catch leaves in constructors. If the constructor leaves, this will free the memory before allowing the leave to propagate to the next level. It is the constructor's responsibility to cleanup any memory in the partially constructed object before leaving. This cleanup may include cleaning up the base class using the OSCL\_CLEANUP\_BASE\_CLASS macro.

##### Parameters

*exp*,: expression to allocate memory.

*Tptr:variable* to hold result.

*T*,: type

*params*,: constructor arg list

*freeFunc*,: delete or free function.

6.3.1.3 #define COMPUTE\_MEM\_ALIGN\_SIZE(x, y, z) (y+(((x+y)%z) ? (z - (x+y)%z) : 0))

6.3.1.4 #define DEFAULT\_MM\_AUDIT\_MODE 0

6.3.1.5 #define DEFAULT\_POSTFILL\_PATTERN 0x5A

6.3.1.6 #define DEFAULT\_PREFILL\_PATTERN 0x96

6.3.1.7 #define FENCE\_PATTERN 0xAA

Referenced by MM\_AllocBlockFence::check\_fence(), and MM\_AllocBlockFence::fill\_fence().

6.3.1.8 #define MEM\_ALIGN\_SIZE 8

6.3.1.9 #define MIN\_FENCE\_SIZE 4

6.3.1.10 #define MM\_ALLOC\_MAX\_QUERY\_FILENAME\_LEN 128

6.3.1.11 #define MM\_ALLOC\_MAX\_QUERY\_TAG\_LEN 64

6.3.1.12 #define MM\_AUDIT\_ALLOC\_NODE\_ENABLE\_FLAG 0x10

6.3.1.13 #define MM\_AUDIT\_ALLOC\_NODE\_SUPPORT 1

6.3.1.14 #define MM\_AUDIT\_FAILURE\_SIMULATION\_SUPPORT 1

6.3.1.15 #define MM\_AUDIT\_FENCE\_SUPPORT 0

6.3.1.16 #define MM\_AUDIT\_FILL\_SUPPORT 0

6.3.1.17 #define MM\_AUDIT\_INCLUDE\_ALL\_HEAP\_VALIDATION 1

6.3.1.18 #define MM\_AUDIT\_POSTFILL\_FLAG 0x2

6.3.1.19 #define MM\_AUDIT\_PREFILL\_FLAG 0x1

6.3.1.20 #define MM\_AUDIT\_SUPPRESS\_FILENAME\_FLAG 0x20

6.3.1.21 #define MM\_AUDIT\_VALIDATE\_ALL\_HEAP\_FLAG 0x4

6.3.1.22 #define MM\_AUDIT\_VALIDATE\_BLOCK 1

6.3.1.23 #define MM\_AUDIT\_VALIDATE\_ON\_FREE\_FLAG 0x8

6.3.1.24 #define OSCL\_ALLOC\_DELETE(ptr, T\_allocator, T)

**Value:**

```
{ \
    ptr->~T(); \
    T_allocator.deallocate(ptr); \
}
```

Deletes the object of type T using the given allocator

#### Parameters

- T\_allocator* allocator for objects of type T
- T* type of object to delete
- ptr* pointer to previously created object

#### Exceptions

*none,unless* thrown by the given allocator

### 6.3.1.25 #define OSCL\_ALLOC\_NEW(*T\_allocator*, *T*, *params*) new(*T\_allocator.allocate(1)*) *T params*

\*\*\*\*\* Macros for new/delete with a given allocator/deallocator. Creates an object of type T using the given allocator to acquire the memory needed.

#### Parameters

- T\_allocator* allocator for objects of type T, must be an Oscl\_TAlloc<T, Allocator>, where Allocator is an [Oscl\\_DefAlloc](#)
- T* type of object to create
- params* object initialization parameters

#### Returns

pointer to created object

#### Exceptions

*none,unless* thrown by the given allocator

### 6.3.1.26 #define OSCL\_ARRAY\_DELETE(*ptr*) delete [] *ptr*

Oscl array delete operator..

#### Parameters

- ptr* pointer to memory block previously allocated with OSCL\_ARRAY\_NEW

#### Returns

void

### 6.3.1.27 #define OSCL\_ARRAY\_NEW(*T*, *count*) new *T[count]*

Oscl array "new" operator. This uses the global memory audit object.

#### Parameters

- T* data type for 'new' operation

*count* number of elements to create

#### Returns

pointer to the newly created object array of type T

#### Exceptions

*may* leave with code = bad alloc

### 6.3.1.28 #define OSCL\_AUDIT\_ARRAY\_NEW(auditCB, T, count) new(\_oscl\_default\_- new(sizeof(T)\*(count))) T

\*\*\*\*\* Macros for array new/delete with memory management. These only work for simple array types and cannot be used for class types with constructor/destructors.

Note: some compilers do not support placement array new operator, so these macros don't use it. Oscl array "new" operator. This uses the input memory audit object.

#### Parameters

*auditCB* input memory management audit object

*T* data type for 'new' operation

*count* number of elements to create

#### Returns

pointer to the newly created object array of type T

#### Exceptions

*may* leave with code = bad alloc

### 6.3.1.29 #define OSCL\_AUDIT\_CALLOC(auditCB, num, size) \_oscl\_calloc(num,size)

Allocates a memory block using the specified audit object. The block is initialized to zero.

#### Parameters

*auditCB* input memory management audit object

*num* number of elements

*size* number of bytes to allocate for each element

#### Returns

a void pointer to the allocated space, or NULL if there is insufficient memory available.

#### Exceptions

*none*

**6.3.1.30 #define OSCL\_AUDIT\_MALLOC(auditCB, count) \_oscl\_malloc(count)**

Allocates a memory block using the given audit object.

**Parameters**

*auditCB* input memory management audit object  
*count* number of bytes to allocate

**Returns**

a void pointer to the allocated space, or NULL if there is insufficient memory available.

**Exceptions**

*none*

**6.3.1.31 #define OSCL\_AUDIT\_NEW(auditCB, T, params) new(\_oscl\_default\_new(sizeof(T))) T  
params**

Oscl "new" operator. This uses the specified memory audit object.

**Parameters**

*auditCB* input memory management audit object  
*T* data type for 'new' operation  
*params* object initialization parameters

**Returns**

pointer to the newly created object of type T

**Exceptions**

*may* leave with code = bad alloc

**6.3.1.32 #define OSCL\_AUDIT\_REALLOC(auditCB, ptr, new\_size) \_oscl\_realloc(ptr,new\_size)**

Re-Allocates a memory block using the specified audit object.

**Parameters**

*auditCB* input memory management audit object  
*ptr* original memory block  
*new\_size* New size of the block

**Returns**

a void pointer to the allocated space, or NULL if there is insufficient memory available.

**Exceptions**

*none*

**6.3.1.33 #define oscl\_calloc(a, b) OSCL\_CALLOC(a,b)****6.3.1.34 #define OSCL\_CALLOC(num, size) \_oscl\_calloc(num,size)**

Allocates a memory block using the memory management's global audit object. The block is initialized to zero.

**Parameters**

*num* number of elements

*size* number of bytes to allocate for each element

**Returns**

a void pointer to the allocated space, or NULL if there is insufficient memory available.

**Exceptions**

*none*

**6.3.1.35 #define OSCL\_CLEANUP\_BASE\_CLASS(T) \_OSCL\_CLEANUP\_BASE\_CLASS(T)**

Cleans up the base class of a partially-constructed derived class. This macro will call the destructor if necessary, based on the error-handling implementation.

**Parameters**

*T*: name of the base class.

**6.3.1.36 #define OSCL\_DEFAULT\_FREE(x) OSCL\_FREE(x)**

Another back-compatibility definition.

**6.3.1.37 #define OSCL\_DEFAULT\_MALLOC(x) OSCL\_MALLOC(x)**

Another back-compatibility definition.

**6.3.1.38 #define OSCL\_DELETE(ptr)****Value:**

```
{ \
    if (ptr) {delete (ptr); } \
}
```

Oscl "delete" operator.

**Parameters**

*ptr* pointer to memory block previously allocated with OSCL\_NEW

**Returns**

`void`

Referenced by `OsclBuf::Delete()`, `OsclBuf::NewL()`, `MM_AllocNode::~MM_AllocNode()`, and `OsclMemStatsNode::~OsclMemStatsNode()`.

**6.3.1.39 #define OSCL\_DISABLE\_WARNING\_RETURN\_TYPE\_NOT\_UDT**

**6.3.1.40 #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**

**6.3.1.41 #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**

**6.3.1.42 #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**

**6.3.1.43 #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**

Previously this was in `oscl_mem_imp.h`

**6.3.1.44 #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE**

Previously this was in `oscl_mem_imp.h`

**6.3.1.45 #define oscl\_free(x) OSCL\_FREE(x)**

**6.3.1.46 #define OSCL\_FREE(ptr) \_oscl\_free(ptr)**

Deallocates or frees a memory block.

**Parameters**

*ptr* pointer to previously allocated memory block using the given audit object

Referenced by `OsclMemAllocator::deallocate()`, and `OsclBuf::Delete()`.

**6.3.1.47 #define oscl\_malloc(a) OSCL\_MALLOC(a)**

**6.3.1.48 #define OSCL\_MALLOC(count) \_oscl\_malloc(count)**

Allocates a memory block using the memory management's global audit object.

**Parameters**

*count* number of bytes to allocate

**Returns**

a void pointer to the allocated space, or NULL if there is insufficient memory available.

**Exceptions**

*none*

Referenced by `OsclBuf::NewL()`.

**6.3.1.49 #define OSCL\_NEW(T, params) new T params**

\*\*\*\*\* Macros for new/delete with memory management. Oscl "new" operator. This uses the global memory audit object.

**Parameters**

*T* data type for 'new' operation  
*params* object initialization parameters

**Returns**

pointer to the newly created object of type T

**Exceptions**

*may* leave with code = bad alloc

Referenced by OsclBuf::NewL().

**6.3.1.50 #define OSCL\_PLACEMENT\_NEW(ptr, constructor) new(ptr) constructor**

Referenced by OsclTimer< Alloc >::OsclTimer().

**6.3.1.51 #define oscl\_realloc(a, b) OSCL\_REALLOC(a,b)****6.3.1.52 #define OSCL\_REALLOC(ptr, new\_size) \_oscl\_realloc(ptr,new\_size)**

Re-Allocates a memory block using the memory management's global audit object.

**Parameters**

*ptr* original memory block  
*new\_size* New size of the block

**Returns**

a void pointer to the allocated space, or NULL if there is insufficient memory available.

**Exceptions**

*none*

**6.3.1.53 #define OSCL\_TRAP\_ALLOC\_NEW(T\_ptr, T\_allocator, T, params) \_OSCL\_TRAP\_NEW(T\_allocator.allocate(1),T\_allocator.deallocate,T\_ptr,T,params)**

Creates an object of type T using the given allocator to acquire the memory needed. This macro is similar to OSCL\_ALLOC\_NEW except that it handles constructors that leave. If the constructor leaves, the destructor will be called, and allocated memory will be freed before allowing the leave to propagate to the next level.

**Parameters**

*T\_ptr* variable to hold return value-- pointer to new object of type T.

*T\_allocator* allocator for objects of type T, must be an Oscl\_TAlloc<T, Allocator>, where Allocator is an [Oscl\\_DefAlloc](#)

*T* type of object to create

*params* object initialization parameters

### Returns

pointer to created object

### Exceptions

*none,unless* thrown by the given allocator

**6.3.1.54 #define OSCL\_TRAP\_AUDIT\_NEW(T\_ptr, auditCB, T, params) \_OSCL\_TRAP\_NEW(\_oscl\_default\_new(sizeof(T)),\_oscl\_free,T\_ptr,T,params)**

Oscl "new" operator. This uses the specified memory audit object. This macro is similar to OSCL\_AUDIT\_NEW except that it will handle constructors that leave. If the constructor leaves, the destructor will be called, and allocated memory will be freed before allowing the leave to propagate to the next level.

### Parameters

*T\_ptr* variable to hold return value-- pointer to new object of type T.

*auditCB* input memory management audit object

*T* data type for 'new' operation

*params* object initialization parameters

### Returns

pointer to the newly created object of type T

### Exceptions

*may* leave with code = bad alloc

**6.3.1.55 #define OSCL\_TRAP\_NEW(T\_ptr, T, params) \_OSCL\_TRAP\_NEW(\_oscl\_default\_new(sizeof(T)),\_oscl\_free,T\_ptr,T,params)**

Oscl "new" operator. This uses the global memory audit object. This operator is similar to OSCL\_NEW except that it will handle constructors that leave. If the constructor leaves, the destructor will be called, and allocated memory will be freed before allowing the leave to propagate to the next level.

### Parameters

*T\_ptr* variable to hold return value-- pointer to new object of type T.

*T* data type for 'new' operation

*params* object initialization parameters

### Returns

pointer to the newly created object of type T

### Exceptions

*may* leave with code = bad alloc

### 6.3.2 Typedef Documentation

- 6.3.2.1 **typedef OSCLMemAutoPtr<MM\_AllocNode, Oscl\_TAlloc<MM\_AllocNode, OsclMemBasicAllocator> > MM\_AllocNodeAutoPtr**
- 6.3.2.2 **typedef OSCLMemAutoPtr<OsclMemStatsNode, Oscl\_TAlloc<OsclMemStatsNode, OsclMemBasicAllocator> > MM\_StatsNodeTagTreeType**
- 6.3.2.3 **typedef OSCLMemAutoPtr<char, Oscl\_TAlloc<char, OsclMemBasicAllocator> > MMAuditCharAutoPtr**
- 6.3.2.4 **typedef OSCLMemAutoPtr<uint8, Oscl\_TAlloc<uint8, \_OsclBasicAllocator> > MMAuditUInt8AutoPtr**
- 6.3.2.5 **typedef OSCLMemAutoPtr<OsclMemStatsNode, Oscl\_TAlloc<OsclMemStatsNode, OsclMemBasicAllocator> > OsclMemStatsNodeAutoPtr**
- 6.3.2.6 **typedef Oscl\_TagTree<MM\_StatsNodeTagTreeType, TagTree\_Allocator> OsclTagTreeType**
- 6.3.2.7 **typedef Oscl\_TAlloc<MM\_StatsNodeTagTreeType, OsclMemBasicAllocator> TagTree\_Allocator**

### 6.3.3 Function Documentation

6.3.3.1 **OSCL\_COND\_IMPORT\_REF void\* \_oscl\_calloc (int32 *nelems*, int32 *size*)**

6.3.3.2 **OSCL\_IMPORT\_REF void\* \_oscl\_default\_new (size\_t *nBytes*)**

\*\*\*\*\* Macros for malloc/free with memory management.

Referenced by HeapBase::operator new(), operator new[], HeapBase::operator new[ ](), and operator new[ ]().

6.3.3.3 **OSCL\_COND\_IMPORT\_REF void \_oscl\_free (void \* *src*)**

Referenced by OsclMemBasicAllocator::deallocate(), HeapBase::operator delete(), operator delete[], HeapBase::operator delete[ ](), and operator delete[ ]().

6.3.3.4 **OSCL\_COND\_IMPORT\_REF void\* \_oscl\_malloc (int32 *count*)**

Referenced by OsclMemBasicAllocator::allocate(), and OsclMemAllocator::allocate().

6.3.3.5 **OSCL\_COND\_IMPORT\_REF void\* \_oscl\_realloc (void \* *src*, int32 *count*)**

6.3.3.6 **void operator delete (void \* *aPtr*) [inline]**

References \_oscl\_free().

**6.3.3.7 void operator delete[ ] (void \* *aPtr*) [inline]**

References `_oscl_free()`.

**6.3.3.8 void\* operator new (size\_t *aSize*) [inline]**

References `_oscl_default_new()`.

**6.3.3.9 void\* operator new[ ] (size\_t *aSize*) [inline]**

References `_oscl_default_new()`.

**6.3.3.10 OSCL\_COND\_IMPORT\_REF uint oscl\_mem\_aligned\_size (uint *size*)**

Get memory-aligned size of an object.

**Parameters**

*size* size of object

**Returns**

memory-aligned size

**6.3.3.11 OSCL\_COND\_IMPORT\_REF int oscl\_memcmp (const void \* *buf1*, const void \* *buf2*, uint32 *count*)**

Compare characters in two buffers

**Parameters**

*buf1* first buffer

*buf2* second buffer

*count* number of bytes to compare

**Returns**

<0 buf1 less than buf2 0 buf1 equal to buf2 >0 buf1 greater than buf2

**6.3.3.12 OSCL\_COND\_IMPORT\_REF void\* oscl\_memcpy (void \* *dest*, const void \* *src*, uint32 *count*)**

Copies characters between buffers The `oscl_memcpy` function copies *count* bytes of *src* to *dest*. If the source and destination overlap, this function does not ensure that the original source bytes in the overlapping region are copied before being overwritten. Use `oscl_memmove` to handle overlapping regions

**Parameters**

*dest* new buffer

*src* buffer to copy

**count** number of bytes to copy

#### Returns

the value of dest

Referenced by MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), OsclUuid::operator=(), and OsclUuid::OsclUuid().

### 6.3.3.13 OSCL\_COND\_IMPORT\_REF void\* oscl\_memmove (void \* *dest*, const void \* *src*, uint32 *count*)

Moves chars from one buffer to another. The memmove function copies count bytes of characters from src to dest. If some regions of the source area and the destination overlap, memmove ensures that the original source bytes in the overlapping region are copied before being overwritten.

#### Parameters

*dest* new buffer

*src* buffer to copy

**count** number of bytes to copy

#### Returns

the value of dest

Referenced by BufFragGroup< ChainClass, max\_frags >::AddFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), and OsclPtr::Append().

### 6.3.3.14 OSCL\_COND\_IMPORT\_REF void\* oscl\_memmove32 (void \* *dest*, const void \* *src*, uint32 *count*)

Same functionality as oscl\_memmove, yet optimized for memory aligned on 32-bit boundary

#### Parameters

*dest* new buffer

*src* buffer to copy

**count** number of bytes to copy

#### Returns

the value of dest

### 6.3.3.15 OSCL\_COND\_IMPORT\_REF void\* oscl\_memset (void \* *dest*, uint8 *val*, uint32 *count*)

Sets the bytes of a buffer to a specified character

#### Parameters

*dest* buffer to modify

*val* character to set

*count* number of bytes to set

### Returns

the value of dest

Referenced by OsclMemBasicAllocator::allocate(), OsclMemAllocator::allocate(), BufFragGroup<ChainClass, max\_frags>::BufFragGroup(), MediaData<ChainClass, max\_frags, local\_bufsize>::Clear(), BufFragGroup<ChainClass, max\_frags>::Clear(), MM\_AllocBlockFence::fill\_fence(), MM\_AllocInfo::MM\_AllocInfo(), MM\_AllocNode::MM\_AllocNode(), MM\_FailInsertParam::MM\_FailInsertParam(), MM\_Stats\_CB::MM\_Stats\_CB(), MM\_Stats\_t::MM\_Stats\_t(), OsclUuid::OsclUuid(), MM\_FailInsertParam::reset(), and MM\_Stats\_t::reset().

#### 6.3.3.16 OSCL\_IMPORT\_REF void OsclMemInit (OsclAuditCB & *auditCB*)

Initialize an [OsclAuditCB](#) object. Sets the stats node pointer to null, and sets the audit pointer to the global audit object.

#### Parameters

*auditCB* memory management audit object

### 6.3.4 Variable Documentation

#### 6.3.4.1 const uint32 MM\_AllocBlockHdr::ALLOC\_NODE\_FLAG = 0x80000000 [static, inherited]

Referenced by MM\_AllocBlockHdr::isAllocNodePtr(), and MM\_AllocBlockHdr::setAllocNodeFlag().

## 6.4 OSCL Util

### Data Structures

- class [OsclRegistryAccessClient](#)
- class [OsclRegistryClient](#)
- class [OsclRegistryClientImpl](#)
- class [OsclRegistryAccessClientImpl](#)
- class [OsclRegistryClientTlsImpl](#)
- class [OsclRegistryAccessClientTlsImpl](#)
- class [OsclRegistryAccessElement](#)
- class [OsclComponentRegistryElement](#)
- class [OsclComponentRegistryData](#)
- class [OsclComponentRegistry](#)
- class [OsclRegistryServTlsImpl](#)
- class [OsclBinStream](#)
- class [OsclBinIStream](#)
- class [OsclBinIStreamLittleEndian](#)
- class [OsclBinIStreamBigEndian](#)
- class [OsclBinOStream](#)

*Class [OsclBinOStream](#) implements the basic stream functions for an output stream.*

- class [OsclBinOStreamLittleEndian](#)

*Class [OsclBinOStreamLittleEndian](#) implements a binary output stream using little endian byte ordering.*

- class [OsclBinOStreamBigEndian](#)

*Class [OsclBinOStreamBigEndian](#) implements a binary output stream using big endian byte ordering.*

- class [MemAllocator< T >](#)
- class [BufferMgr](#)
- class [BufferState](#)
- class [BufferFragment](#)
- class [BuffFragGroup< ChainClass, max\\_frags >](#)
- class [MediaData< ChainClass, max\\_frags, local\\_bufsize >](#)
- class [BuffFragStatusClass](#)
- class [MediaStatusClass](#)
- class [OsclPriorityQueueBase](#)
- class [OsclCompareLess< T >](#)
- class [OsclPriorityQueue< Qelem, Alloc, Container, Compare >](#)
- class [OsclRand](#)
- struct [StrPtrLen](#)

*This data structure encapsulates a set of functions used to perform.*

- struct [WStrPtrLen](#)

*This data structure encapsulates a set of functions used to perform.*

- struct [StrCSumPtrLen](#)

*same as [StrPtrLen](#), but includes checksum field and method to speed up querying*

- class [OSCL\\_String](#)

- class [OSCL\\_wString](#)
- class [OSCL\\_HeapString< Alloc >](#)
- class [OSCL\\_wHeapString< Alloc >](#)
- class [OSCL\\_HeapStringA](#)
- class [OSCL\\_wHeapStringA](#)
- class [OSCL\\_StackString< MaxBufSize >](#)
- class [OSCL\\_wStackString< MaxBufSize >](#)
- class [OSCL\\_FastString](#)
- class [OSCL\\_wFastString](#)
- class [CHheapRep](#)
- class [CStackRep](#)
- class [CFastRep](#)
- class [OsclTickCount](#)

## Files

- file [oscl\\_string\\_utils.h](#)  
*Utilities to parse and convert strings.*
- file [oscl\\_registry\\_access\\_client.h](#)  
*Client-side implementation Registry Access implementation.*
- file [oscl\\_registry\\_client.h](#)  
*Client-side implementation of OsclRegistry.*
- file [oscl\\_registry\\_client\\_impl.h](#)  
*Client-side implementation of OsclRegistryInterface.*
- file [oscl\\_registry\\_types.h](#)  
*Common types used in Oscl registry interfaces.*
- file [oscl\\_registry\\_serv\\_impl.h](#)  
*Server-side implementation of OsclRegistry interfaces.*
- file [oscl\\_registry\\_serv\\_impl.h](#)  
*Server-side implementation of OsclRegistry interfaces.*
- file [oscl\\_registry\\_serv\\_impl.h](#)  
*Server-side implementation of OsclRegistry interfaces.*
- file [oscl\\_bin\\_stream.h](#)  
*Defines a set of binary stream classes which handle portable input / output of binary data regardless of the native byte order.*
- file [oscl\\_math.h](#)  
*Provides math functions.*
- file [oscl\\_media\\_data.h](#)  
*Defines a container class for media data made up of a collection of memory fragments.*

- file [oscl\\_media\\_status.h](#)

*Defines a status values for the [MediaData](#) containers.*

- file [oscl\\_priqueue.h](#)

*Implements a priority queue data structure similar to STL.*

- file [oscl\\_rand.h](#)

*Provides pseudo-random number generation.*

- file [oscl\\_snprintf.h](#)

*Provides a portable implementation of snprintf.*

- file [oscl\\_str\\_ptr\\_len.h](#)

*Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.*

- file [oscl\\_string.h](#)

*Provides a standardized set of string containers that can be used in place of character arrays.*

- file [oscl\\_string\\_containers.h](#)

*Provides a standardized set of string containers that can be used in place of character arrays.*

- file [oscl\\_string\\_rep.h](#)

*Contains some internal implementation for string containers.*

- file [oscl\\_string\\_uri.h](#)

*Utilities to unescape URIs.*

- file [oscl\\_string\\_utf8.h](#)

*Utilities to validate and truncate UTF-8 encoded strings.*

- file [oscl\\_string\\_xml.h](#)

*Utilities to escape special characters in XML strings.*

- file [oscl\\_tickcount.h](#)

*Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.*

- file [oscl\\_utf8conv.h](#)

*Utilities to convert unicode to utf8 and vice versa.*

## Defines

- #define [oscl\\_isdigit\(c\)](#) ((c) >= '0' && (c) <= '9')
- #define [OSCLTICKCOUNT\\_MAX\\_TICKS](#) 0xffffffff
- #define [MAX\\_NUMBER\\_OF\\_BYTE\\_PER\\_UTF8](#) 3

## Typedefs

- `typedef OsclAny * OsclComponentFactory`
- `typedef void(* BufferFreeFuncPtr )(void *)`
- `typedef uint32 MediaTimestamp`
- `typedef struct StrPtrLen StrPtrLen`

*This data structure encapsulates a set of functions used to perform.*

- `typedef struct WStrPtrLen WStrPtrLen`

*This data structure encapsulates a set of functions used to perform.*

- `typedef StrCSumPtrLen StrCSumPtrLen`

*same as `StrPtrLen`, but includes checksum field and method to speed up querying*

- `typedef WStrPtrLen OSCL_TStrPtrLen`

## Enumerations

- `enum TOSCL_StringOp { EOSCL_StringOp_CompressASCII, EOSCL_StringOp_UTF16ToUTF8 }`
- `enum TOSCL_wStringOp { EOSCL_wStringOp_ExpandASCII, EOSCL_wStringOp_UTF8ToUTF16 }`

## Functions

- `OSCL_IMPORT_REF const char * skip_whitespace (const char *ptr)`
- `OSCL_IMPORT_REF char * skip_whitespace (char *ptr)`
- `OSCL_IMPORT_REF const char * skip_whitespace (const char *start, const char *end)`
- `OSCL_IMPORT_REF const char * skip_to_whitespace (const char *start, const char *end)`
- `OSCL_IMPORT_REF const char * skip_to_line_term (const char *start_ptr, const char *end_ptr)`
- `OSCL_IMPORT_REF const char * skip_whitespace_and_line_term (const char *start, const char *end)`
- `OSCL_IMPORT_REF int extract_string (const char *in_ptr, char *outstring, int maxsize)`
- `OSCL_IMPORT_REF int extract_string (const char *start, const char *end, char *outstring, int maxsize)`
- `OSCL_IMPORT_REF bool PV_atoi (const char *buf, const char new_format, uint32 &value)`
- `OSCL_IMPORT_REF bool PV_atoi (const char *buf, const char new_format, int length, uint32 &value)`
- `OSCL_IMPORT_REF bool PV_atoi (const char *buf, const char new_format, int length, uint64 &value)`
- `OSCL_IMPORT_REF bool PV_atof (const char *buf, OsclFloat &value)`
- `OSCL_IMPORT_REF bool PV_atof (const char *buf, int length, OsclFloat &value)`
- `OSCL_IMPORT_REF int oscl_abs (int aVal)`
- `OSCL_COND_IMPORT_REF double oscl_log (double value)`
- `OSCL_COND_IMPORT_REF double oscl_log10 (double value)`
- `OSCL_COND_IMPORT_REF double oscl_sqrt (double value)`
- `OSCL_COND_IMPORT_REF double oscl_pow (double x, double y)`
- `OSCL_COND_IMPORT_REF double oscl_exp (double value)`
- `OSCL_COND_IMPORT_REF double oscl_sin (double value)`
- `OSCL_COND_IMPORT_REF double oscl_cos (double value)`

- OSCL\_COND\_IMPORT\_REF double `oscl_tan` (double value)
- OSCL\_COND\_IMPORT\_REF double `oscl_asin` (double value)
- OSCL\_COND\_IMPORT\_REF double `oscl_atan` (double value)
- OSCL\_COND\_IMPORT\_REF double `oscl_floor` (double value)
- OSCL\_IMPORT\_REF int32 `oscl_snprintf` (char \*str, uint32 count, const char \*fmt,...)
- OSCL\_IMPORT\_REF int32 `oscl_snprintf` (`oscl_wchar` \*str, uint32 count, const `oscl_wchar` \*fmt,...)
- OSCL\_IMPORT\_REF int32 `oscl_vsnprintf` (char \*str, uint32 count, const char \*fmt, va\_list args)
- OSCL\_IMPORT\_REF int32 `oscl_vsnprintf` (`oscl_wchar` \*str, uint32 count, const `oscl_wchar` \*fmt, va\_list args)
- OSCL\_IMPORT\_REF bool `oscl_str_unescape_uri` (const char \*str\_buf\_in, char \*str\_buf\_out, uint32 max\_out\_buf\_bytes, uint32 max\_bytes, uint32 &out\_buf\_len)
 

*unescape any of the special escape sequence in the uri string*
- OSCL\_IMPORT\_REF bool `oscl_str_unescape_uri` (const `OSCL_String` &oscl\_str\_in, `OSCL_String` &oscl\_str\_out, uint32 &out\_buf\_len)
 

*unescape any of the special escape sequence in the uri string*
- OSCL\_IMPORT\_REF bool `oscl_str_is_valid_utf8` (const uint8 \*str\_buf, uint32 &num\_valid\_characters, uint32 max\_bytes=0, uint32 max\_char\_2\_valid=0, uint32 \*num\_byte\_4\_char=NULL)
 

*Check if the input string contains any illegal UTF-8 character. The function scans the string and validate that each character is a valid utf-8. It stops at the first NULL character, invalid character or the max\_byte value. The string is valid if and only if every character is a valid utf-8 character and the scanning stopped on a character boundary.*
- OSCL\_IMPORT\_REF int32 `oscl_str_truncate_utf8` (uint8 \*str\_buf, uint32 max\_char, uint32 max\_bytes=0)
 

*Truncates the UTF-8 string upto the required size.*
- OSCL\_IMPORT\_REF bool `oscl_str_need_escape_xml` (const char \*str\_buf, uint32 &num\_escape\_bytes, uint32 max\_bytes=0)
 

*Check if the input string contains any special ASCII character like &, <, >, ', ". The function scans the string and check if each character is a special character. It stops at the first NULL character (if max\_bytes = 0), or the max\_byte value.*
- OSCL\_IMPORT\_REF int32 `oscl_str_escape_xml` (const char \*str\_buf\_in, char \*str\_buf\_out, uint32 max\_out\_buf\_bytes, uint32 max\_bytes=0, uint32 \*num\_bytes\_written=NULL)
 

*Escape any of the following special characters in the string Special ASCII characters: &, <, >, ', ".*
- OSCL\_IMPORT\_REF int32 `oscl_UTF8ToUnicode` (const char \*input, int32 inLength, `oscl_wchar` \*output, int32 outLength)
 

*Convert UTF8 byte sequence to Unicode string.*
- OSCL\_IMPORT\_REF int32 `oscl_UnicodeToUTF8` (const `oscl_wchar` \*input, int32 inLength, char \*output, int32 outLength)
 

*Convert Unicode string to UTF8 byte sequence.*
- `BufferFragment * BufFragGroup::GetFragment` (const int32 idx)
- `BufferState * BufFragGroup::GetBufferState` (const int32 idx)
- uint32 `OSCL_HeapString::get_size` () const
- uint32 `OSCL_wHeapString::get_size` () const
- uint32 `OSCL_HeapString::get_maxsize` () const

- uint32 `OSCL_wHeapString::get_maxsize () const`
- const chartype \* `OSCL_HeapString::get_cstr () const`
- const chartype \* `OSCL_wHeapString::get_cstr () const`
- chartype \* `OSCL_HeapString::get_str () const`
- chartype \* `OSCL_wHeapString::get_str () const`
- `OSCL_HeapString::OSCL_HeapString ()`
- `OSCL_wHeapString::OSCL_wHeapString ()`
- `OSCL_HeapString::OSCL_HeapString (const chartype *cstr)`
- `OSCL_wHeapString::OSCL_wHeapString (const chartype *cstr)`
- void `OSCL_HeapString::set (const chartype *buf, uint32 length)`
- void `OSCL_wHeapString::set (const chartype *buf, uint32 length)`
- void `OSCL_HeapString::set (const other_chartype *buf, optype op)`
- void `OSCL_wHeapString::set (const other_chartype *buf, optype op)`
- void `OSCL_HeapString::set (const other_chartype *buf, uint32 length, optype op)`
- void `OSCL_wHeapString::set (const other_chartype *buf, uint32 length, optype op)`
- `OSCL_HeapString::OSCL_HeapString (const chartype *buf, uint32 length)`
- `OSCL_wHeapString::OSCL_wHeapString (const chartype *buf, uint32 length)`
- `OSCL_HeapString::OSCL_HeapString (const OSCL_HeapString &src)`
- `OSCL_wHeapString::OSCL_wHeapString (const OSCL_wHeapString &src)`
- `OSCL_HeapString::OSCL_HeapString (const OSCL_String &src)`
- `OSCL_wHeapString::OSCL_wHeapString (const OSCL_wString &src)`
- `OSCL_HeapString::~OSCL_HeapString ()`
- `OSCL_wHeapString::~OSCL_wHeapString ()`
- `OSCL_HeapString & OSCL_HeapString::operator= (const OSCL_HeapString &src)`
- `OSCL_wHeapString & OSCL_wHeapString::operator= (const OSCL_wHeapString &src)`
- `OSCL_HeapString & OSCL_HeapString::operator= (const OSCL_String &src)`
- `OSCL_wHeapString & OSCL_wHeapString::operator= (const OSCL_wString &src)`
- `OSCL_HeapString & OSCL_HeapString::operator= (const chartype *cstr)`
- `OSCL_wHeapString & OSCL_wHeapString::operator= (const chartype *cstr)`
- uint32 `OSCL_StackString::get_size () const`
- uint32 `OSCL_wStackString::get_size () const`
- uint32 `OSCL_StackString::get_maxsize () const`
- uint32 `OSCL_wStackString::get_maxsize () const`
- const chartype \* `OSCL_StackString::get_cstr () const`
- const chartype \* `OSCL_wStackString::get_cstr () const`
- chartype \* `OSCL_StackString::get_str () const`
- chartype \* `OSCL_wStackString::get_str () const`
- `OSCL_StackString::OSCL_StackString ()`
- `OSCL_wStackString::OSCL_wStackString ()`
- `OSCL_StackString::OSCL_StackString (const chartype *cstr)`
- `OSCL_wStackString::OSCL_wStackString (const chartype *cstr)`
- void `OSCL_StackString::set (const chartype *buf, uint32 length)`
- void `OSCL_wStackString::set (const chartype *buf, uint32 length)`
- void `OSCL_StackString::set (const other_chartype *buf, optype op)`
- void `OSCL_wStackString::set (const other_chartype *buf, optype op)`
- void `OSCL_StackString::set (const other_chartype *buf, uint32 length, optype op)`
- void `OSCL_wStackString::set (const other_chartype *buf, uint32 length, optype op)`
- `OSCL_StackString::OSCL_StackString (const chartype *buf, uint32 length)`
- `OSCL_wStackString::OSCL_wStackString (const chartype *buf, uint32 length)`
- `OSCL_StackString::OSCL_StackString (const OSCL_StackString &src)`

- `OSCL_wStackString::OSCL_wStackString (const OSCL_wStackString &src)`
- `OSCL_StackString::OSCL_StackString (const OSCL_String &src)`
- `OSCL_wStackString::OSCL_wStackString (const OSCL_wString &src)`
- `OSCL_StackString::~OSCL_StackString ()`
- `OSCL_wStackString::~OSCL_wStackString ()`
- `OSCL_StackString & OSCL_StackString::operator= (const OSCL_StackString &src)`
- `OSCL_wStackString & OSCL_wStackString::operator= (const OSCL_wStackString &src)`
- `OSCL_StackString & OSCL_StackString::operator= (const OSCL_String &src)`
- `OSCL_wStackString & OSCL_wStackString::operator= (const OSCL_wString &src)`
- `OSCL_StackString & OSCL_StackString::operator= (const chartype *cstr)`
- `OSCL_wStackString & OSCL_wStackString::operator= (const chartype *cstr)`

## Variables

- `const int32 APPEND_MEDIA_AT_END = -1`
- `const uint8 OSCL_ASCII_CASE_MAGIC_BIT = 0x20`

### 6.4.1 Define Documentation

#### 6.4.1.1 #define MAX\_NUMBER\_OF\_BYTE\_PER\_UTF8 3

Define the maximum UTF8 representation in bytes.

##### **Todo**

Handle 4-byte surrogate pair representation

#### 6.4.1.2 #define oscl\_isdigit(c) ((c) >= '0' && (c) <= '9')

#### 6.4.1.3 #define OSCLTICKCOUNT\_MAX\_TICKS 0xffffffff

### 6.4.2 Typedef Documentation

#### 6.4.2.1 typedef void(\* BufferFreeFuncPtr)(void \*)

#### 6.4.2.2 typedef uint32 MediaTimestamp

#### 6.4.2.3 typedef WStrPtrLen OSCL\_TStrPtrLen

#### 6.4.2.4 typedef OsclAny\* OsclComponentFactory

OsclComponentFactory is an opaque pointer.

#### 6.4.2.5 typedef StrCSumPtrLen StrCSumPtrLen

same as `StrPtrLen`, but includes checksum field and method to speed up querying

#### 6.4.2.6 `typedef struct StrPtrLen StrPtrLen`

This data structure encapsulates a set of functions used to perform standard string operations. It should be used for null-terminated constant (non-modifiable) strings of char type.

#### 6.4.2.7 `typedef struct WStrPtrLen WStrPtrLen`

This data structure encapsulates a set of functions used to perform standard string operations. It should be used for null-terminated constant strings (non-modifiable) of wchar type.

### 6.4.3 Enumeration Type Documentation

#### 6.4.3.1 `enum TOSCL_StringOp`

Conversion operations for [OSCL\\_String](#) classes

**Enumerator:**

*EOSCL\_StringOp\_CompressASCII*  
*EOSCL\_StringOp\_UTF16ToUTF8*

#### 6.4.3.2 `enum TOSCL_wStringOp`

Conversion operations for [OSCL\\_wString](#) classes

**Enumerator:**

*EOSCL\_wStringOp\_ExpandASCII*  
*EOSCL\_wStringOp\_UTF8ToUTF16*

### 6.4.4 Function Documentation

#### 6.4.4.1 `OSCL_IMPORT_REF int extract_string (const char * start, const char * end, char * outstring, int maxsize)`

#### 6.4.4.2 `OSCL_IMPORT_REF int extract_string (const char * in_ptr, char * outstring, int maxsize)`

#### 6.4.4.3 `template<uint32 MaxBufSize> const OSCL_wStackString<MaxBufSize>::chartype * OSCL_wStackString<MaxBufSize>::get_cstr () const [inline, virtual, inherited]`

Implements [OSCL\\_wString](#).

References CStackRep::buffer.

Referenced by OSCL\_wStackString<MaxBufSize>::set().

**6.4.4.4 template<uint32 MaxBufSize> const OSCL\_StackString< MaxBufSize >::chartype \* OSCL\_StackString< MaxBufSize >::get\_cstr () const [inline, virtual, inherited]**

This function returns the C-style string for read access.

Implements [OSCL\\_String](#).

References CStackRep::buffer.

Referenced by OSCL\_StackString< MaxBufSize >::set().

**6.4.4.5 template<class Alloc > const OSCL\_wHeapString< Alloc >::chartype \* OSCL\_wHeapString< Alloc >::get\_cstr () const [inline, virtual, inherited]**

Implements [OSCL\\_wString](#).

References CHheapRep::buffer, and NULL.

Referenced by OSCL\_wHeapString< Alloc >::set().

**6.4.4.6 template<class Alloc > const OSCL\_HeapString< Alloc >::chartype \* OSCL\_HeapString< Alloc >::get\_cstr () const [inline, virtual, inherited]**

This function returns the C-style string for read access.

Implements [OSCL\\_String](#).

References CHheapRep::buffer, and NULL.

Referenced by OSCL\_HeapString< Alloc >::set().

**6.4.4.7 template<uint32 MaxBufSize> uint32 OSCL\_wStackString< MaxBufSize >::get\_maxsize () const [inline, virtual, inherited]**

Implements [OSCL\\_wString](#).

References CStackRep::maxsize.

**6.4.4.8 template<uint32 MaxBufSize> uint32 OSCL\_StackString< MaxBufSize >::get\_maxsize () const [inline, virtual, inherited]**

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implements [OSCL\\_String](#).

References CStackRep::maxsize.

**6.4.4.9 template<class Alloc > uint32 OSCL\_wHeapString< Alloc >::get\_maxsize () const [inline, virtual, inherited]**

Implements [OSCL\\_wString](#).

References CHheapRep::maxsize.

---

**6.4.4.10 template<class Alloc > uint32 OSCL\_HeapString< Alloc >::get\_maxsize () const  
[inline, virtual, inherited]**

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implements [OSCL\\_String](#).

References CHeapRep::maxsize.

**6.4.4.11 template<uint32 MaxBufSize> uint32 OSCL\_wStackString< MaxBufSize >::get\_size () const [inline, virtual, inherited]**

Implements [OSCL\\_wString](#).

References CStackRep::size.

**6.4.4.12 template<uint32 MaxBufSize> uint32 OSCL\_StackString< MaxBufSize >::get\_size () const [inline, virtual, inherited]**

Pure virtuals from [OSCL\\_String](#)

Implements [OSCL\\_String](#).

References CStackRep::size.

**6.4.4.13 template<class Alloc > uint32 OSCL\_wHeapString< Alloc >::get\_size () const [inline, virtual, inherited]**

Implements [OSCL\\_wString](#).

References CHeapRep::size.

**6.4.4.14 template<class Alloc > uint32 OSCL\_HeapString< Alloc >::get\_size () const [inline, virtual, inherited]**

Pure virtuals from [OSCL\\_String](#)

Implements [OSCL\\_String](#).

References CHeapRep::size.

**6.4.4.15 template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize >::chartype \* OSCL\_wStackString< MaxBufSize >::get\_str () const [inline, virtual, inherited]**

Implements [OSCL\\_wString](#).

References CStackRep::buffer.

---

**6.4.4.16 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize >::chartype \* OSCL\_StackString< MaxBufSize >::get\_str () const [inline, virtual, inherited]**

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implements [OSCL\\_String](#).

References CStackRep::buffer.

**6.4.4.17 template<class Alloc > OSCL\_wHeapString< Alloc >::chartype \* OSCL\_wHeapString< Alloc >::get\_str () const [inline, virtual, inherited]**

Implements [OSCL\\_wString](#).

References CHheapRep::buffer, and NULL.

**6.4.4.18 template<class Alloc > OSCL\_HeapString< Alloc >::chartype \* OSCL\_HeapString< Alloc >::get\_str () const [inline, virtual, inherited]**

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implements [OSCL\\_String](#).

References CHheapRep::buffer, and NULL.

**6.4.4.19 template<class ChainClass , uint32 max\_frags> BufferState \* BufFragGroup< ChainClass, max\_frags >::GetBufferState (const int32 idx) [inline, inherited]**

References BufFragGroup< ChainClass, max\_frags >::buffer\_states, NULL, and BufFragGroup< ChainClass, max\_frags >::num\_fragments.

**6.4.4.20 template<class ChainClass , uint32 max\_frags> BufferFragment \* BufFragGroup< ChainClass, max\_frags >::GetFragment (const int32 idx) [inline, inherited]**

References BufFragGroup< ChainClass, max\_frags >::fragments, NULL, and BufFragGroup< ChainClass, max\_frags >::num\_fragments.

**6.4.4.21 template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize > & OSCL\_wStackString< MaxBufSize >::operator= (const chartype \* cstr) [inline, inherited]**

Reimplemented from [OSCL\\_wString](#).

References OSCL\_wString::set\_rep().

**6.4.4.22 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize > & OSCL\_StackString< MaxBufSize >::operator= (const chartype \* cstr) [inline, inherited]**

Assignment operator

## Parameters

null-terminated string

Reimplemented from [OSCL\\_String](#).

References OSCL\_wString::set\_rep().

**6.4.4.23 template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize > &  
OSCL\_wStackString< MaxBufSize >::operator= (const OSCL\_wString & src) [inline, inherited]**

Reimplemented from [OSCL\\_wString](#).

References OSCL\_wString::set\_rep().

**6.4.4.24 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize > &  
OSCL\_StackString< MaxBufSize >::operator= (const OSCL\_String & src) [inline, inherited]**

Assignment operator

Reimplemented from [OSCL\\_String](#).

References OSCL\_wString::set\_rep().

**6.4.4.25 template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize > &  
OSCL\_wStackString< MaxBufSize >::operator= (const OSCL\_wStackString < MaxBufSize > & src) [inline, inherited]**

References OSCL\_wString::set\_rep().

**6.4.4.26 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize > &  
OSCL\_StackString< MaxBufSize >::operator= (const OSCL\_StackString < MaxBufSize > & src) [inline, inherited]**

Assignment operators

References OSCL\_wString::set\_rep().

**6.4.4.27 template<class Alloc > OSCL\_wHeapString< Alloc > & OSCL\_wHeapString< Alloc >::operator= (const chartype \* cstr) [inline, inherited]**

Reimplemented from [OSCL\\_wString](#).

References OSCL\_wString::set\_rep().

**6.4.4.28 template<class Alloc > OSCL\_HeapString< Alloc > & OSCL\_HeapString< Alloc >::operator= (const chartype \* cstr) [inline, inherited]**

Assignment operator

**Parameters**

null-terminated string

Reimplemented from [OSCL\\_String](#).

References OSCL\_wString::set\_rep().

**6.4.4.29 template<class Alloc > OSCL\_wHeapString< Alloc > & OSCL\_wHeapString< Alloc >::operator= (const OSCL\_wString & src) [inline, inherited]**

Reimplemented from [OSCL\\_wString](#).

References OSCL\_wString::set\_rep().

**6.4.4.30 template<class Alloc > OSCL\_HeapString< Alloc > & OSCL\_HeapString< Alloc >::operator= (const OSCL\_String & src) [inline, inherited]**

Assignment operator

Reimplemented from [OSCL\\_String](#).

References OSCL\_wString::set\_rep().

**6.4.4.31 template<class Alloc > OSCL\_wHeapString< Alloc > & OSCL\_wHeapString< Alloc >::operator= (const OSCL\_wHeapString< Alloc > & src) [inline, inherited]**

References CHeapRep::assign(), and OSCL\_wString::set\_rep().

**6.4.4.32 template<class Alloc > OSCL\_HeapString< Alloc > & OSCL\_HeapString< Alloc >::operator= (const OSCL\_HeapString< Alloc > & src) [inline, inherited]**

Assignment operators

References CHeapRep::assign(), and OSCL\_wString::set\_rep().

**6.4.4.33 OSCL\_IMPORT\_REF int oscl\_abs (int aVal)**

**6.4.4.34 OSCL\_COND\_IMPORT\_REF double oscl\_asin (double value)**

Calculates the arc sine of a number

**Parameters**

*value* source value

**6.4.4.35 OSCL\_COND\_IMPORT\_REF double oscl\_atan (double value)**

Calculates the arc tangent of a number

**Parameters**

*value* source value

**6.4.4.36 OSCL\_COND\_IMPORT\_REF double oscl\_cos (double *value*)**

Calculates the cosine of a number

**Parameters**

*value* source value

**6.4.4.37 OSCL\_COND\_IMPORT\_REF double oscl\_exp (double *value*)**

Calculates the exponential of e for a number

**Parameters**

*value* source value

**6.4.4.38 OSCL\_COND\_IMPORT\_REF double oscl\_floor (double *value*)**

Calculates the floor of a number

**Parameters**

*value* source value

**6.4.4.39 template<class Alloc > OSCL\_HeapString< Alloc >::OSCL\_HeapString (const OSCL\_String & *src*) [inline, inherited]**

References OSCL\_wString::set\_rep().

**6.4.4.40 template<class Alloc > OSCL\_HeapString< Alloc >::OSCL\_HeapString (const OSCL\_HeapString< Alloc > & *src*) [inline, inherited]**

Creates a heap string that contains a copy of the input string.

**Parameters**

*src*,: input string.

References CHepRep::assign(), and OSCL\_wString::set\_rep().

**6.4.4.41 template<class Alloc > OSCL\_HeapString< Alloc >::OSCL\_HeapString (const chartype \* *buf*, uint32 *length*) [inline, inherited]**

Creates a heap string that contains a copy of the input string or character array.

**Parameters**

*src*,: character array, not necessarily null-terminated.

*length*,: number of characters to copy.

**6.4.4.42 template<class Alloc > OSCL\_HeapString< Alloc >::OSCL\_HeapString (const chartype \* *cstr*) [inline, inherited]**

Creates a heap string that contains a copy of the input string.

**Parameters**

*cp*,: null-terminated string.

References OSCL\_wString::set\_rep().

**6.4.4.43 template<class Alloc > OSCL\_HeapString< Alloc >::OSCL\_HeapString () [inline, inherited]**

The default constructor creates an empty string.

References NULL, and OSCL\_wString::set\_rep().

**6.4.4.44 OSCL\_COND\_IMPORT\_REF double oscl\_log (double *value*)**

Calculates the natural log of a number

**Parameters**

*value* source value

**6.4.4.45 OSCL\_COND\_IMPORT\_REF double oscl\_log10 (double *value*)**

Calculates the logarithm to base 10 of a number

**Parameters**

*value* source value

**6.4.4.46 OSCL\_COND\_IMPORT\_REF double oscl\_pow (double *x*, double *y*)**

Calculates the value of *x* to the power of *y*

**Parameters**

*x* base value

*y* power

**6.4.4.47 OSCL\_COND\_IMPORT\_REF double oscl\_sin (double *value*)**

Calculates the sine of a number

**Parameters**

*value* source value

---

**6.4.4.48 OSCL\_IMPORT\_REF int32 oscl\_snprintf (oscl\_wchar \*str, uint32 count, const oscl\_wchar \*fmt, ...)**

**6.4.4.49 OSCL\_IMPORT\_REF int32 oscl\_snprintf (char \*str, uint32 count, const char \*fmt, ...)**

**6.4.4.50 OSCL\_COND\_IMPORT\_REF double oscl\_sqrt (double value)**

Calculates the square root of a number

#### Parameters

*value* source value

**6.4.4.51 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize >::OSCL\_StackString (const OSCL\_String &src) [inline, inherited]**

References OSCL\_wString::set\_rep().

**6.4.4.52 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize >::OSCL\_StackString (const OSCL\_StackString< MaxBufSize > &src) [inline, inherited]**

Creates an [OSCL\\_StackString](#) with a copy of the input string. The string may be truncated to fit the available storage.

#### Parameters

*src*,: input string.

References OSCL\_wString::set\_rep().

**6.4.4.53 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize >::OSCL\_StackString (const chartype \*buf, uint32 length) [inline, inherited]**

Creates an [OSCL\\_StackString](#) with a copy of the input string. The string may be truncated to fit the available storage.

#### Parameters

*src*,: a character array, not necessarily null-terminated.

*length*,: the number of characters to copy.

**6.4.4.54 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize >::OSCL\_StackString (const chartype \*cstr) [inline, inherited]**

Creates an [OSCL\\_StackString](#) with a copy of the input string. The string may be truncated to fit the available storage.

#### Parameters

*cp*,: a null-terminated string.

References OSCL\_wString::set\_rep().

---

**6.4.4.55 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize >::OSCL\_StackString  
()** [inline, inherited]

Creates an [OSCL\\_StackString](#) initialized with an empty string.

References NULL, and OSCL\_wString::set\_rep().

**6.4.4.56 OSCL\_IMPORT\_REF int32 oscl\_str\_escape\_xml (const char \* str\_buf\_in, char  
\* str\_buf\_out, uint32 max\_out\_buf\_bytes, uint32 max\_bytes = 0, uint32 \*  
num\_bytes\_written = NULL)**

Escape any of the following special characters in the string Special ASCII characters: &, <, >, ', ".

The function scans the string and replaces each special character with its corresponding escape sequence. It stops at the first NULL character, the max\_byte value.

#### Parameters

**str\_buf\_in** Ptr to an input string

**str\_buf\_out** Ptr to an output buffer which stores the modified string

**max\_out\_buf\_bytes** The size of str\_buf\_out.

**max\_bytes** The maximum number of bytes to read (a zero value means read to the first NULL character). It is the length of str\_buf\_in.

**num\_bytes\_written** Number of bytes written in the output buffer, str\_buf\_out

#### Returns

It returns the number of bytes in the str\_buf\_outring if succeeded. It returns negative number if failed, and its absolute value indicates the total number bytes written to the output buffer, str\_buf\_out, if str\_buf\_out != null.

**6.4.4.57 OSCL\_IMPORT\_REF bool oscl\_str\_is\_valid\_utf8 (const uint8 \* str\_buf, uint32 &  
num\_valid\_characters, uint32 max\_bytes = 0, uint32 max\_char\_2\_valid = 0, uint32 \*  
num\_byte\_4\_char = NULL)**

Check if the input string contains any illegal UTF-8 character. The function scans the string and validate that each character is a valid utf-8. It stops at the first NULL character, invalid character or the max\_byte value. The string is valid if and only if every character is a valid utf-8 character and the scanning stopped on a character boundary.

### UTF-8 String Manipulation

These routines operate on UTF-8 character string.

#### Parameters

**str\_buf** Ptr to an input string, which may not terminate with null, to be checked

**num\_valid\_chars** This is an output parameter which is the number of valid utf-8 characters actually read.

**max\_bytes** The maximum number of bytes to read (a zero value means read to the first NULL character).

***max\_char\_2\_valid*** This is an input parameter. Specify the number of utf-8 characters the caller wants to validate.

***num\_byte\_4\_char*** This is an output parameter. The number of bytes used by the max\_char characters

### Returns

True if the string is valid and false otherwise.

#### 6.4.4.58 OSCL\_IMPORT\_REF bool oscl\_str\_need\_escape\_xml (const char \* str\_buf, uint32 & num\_escape\_bytes, uint32 max\_bytes = 0)

Check if the input string contains any special ASCII character like &, <, >, ', ". The function scans the string and check if each character is a special character. It stops at the first NULL character (if max\_bytes = 0), or the max\_byte value.

### XML String Manipulation

These routines handle the special characters, which needs to be escaped, for xml document.

#### Parameters

***str\_buf*** Ptr to an input string, which may not terminate with null, to be checked

***num\_escape\_bytes*** This is an output parameter which is the number of bytes needed to hold the result string. Value 0 indicates that there is no special character found. If max\_bytes = 0, the return value does not include the null character.

***max\_bytes*** The maximum number of bytes to read (a zero value means read to the first NULL character).

#### Returns

True if the function succeeds, and num\_escape\_bytes = 0 means that no special character is found, num\_escape\_bytes >0 means the number of bytes of the result string. False if there is any error occurred.

#### 6.4.4.59 OSCL\_IMPORT\_REF int32 oscl\_str\_truncate\_utf8 (uint8 \* str\_buf, uint32 max\_char, uint32 max\_bytes = 0)

Truncates the UTF-8 string upto the required size.

The function will modify the str\_buf so that it contains AT MOST len valid utf-8 characters. If a NULL character is found before reading len utf-8 characters, then the function does not modify the string and simply returns the number of characters. If an invalid character is found, then it will insert a NULL character after the last valid character and return the length. Otherwise, it will insert a NULL character after len valid utf-8 characters and return the length.

#### Parameters

***str\_buf*** Ptr to an input string which may not terminate with null

***max\_char*** The max number of the UTF-8 CHARACTERS

***max\_bytes*** The maximum number of bytes to read (a zero value means read to the first NULL character).

#### Returns

It returns the length of the truncated string in utf-8 characters.

**6.4.4.60 OSCL\_IMPORT\_REF bool oscl\_str\_unescape\_uri (const OSCL\_String & *oscl\_str\_in*, OSCL\_String & *oscl\_str\_out*, uint32 & *out\_buf\_len*)**

unescape any of the special escape sequence in the uri string

The function scans the string and replaces each escape sequence with its corresponding character. It stops at the first null character, or the max\_byte value. It returns false if the string contains any illegal escape sequence or the output buffer is not big enough. The out\_buf\_len value indicates the needed buffer length or the index of the byte that causes the error respectively.

**Parameters**

*oscl\_str\_in* Ptr to an input [OSCL\\_String](#)

*oscl\_str\_out* Ptr to an output [OSCL\\_String](#) which stores the modified string

*out\_buf\_len* The length of the result string (not including the null character)

**Returns**

It returns true if succeeds, otherwise false.

**6.4.4.61 OSCL\_IMPORT\_REF bool oscl\_str\_unescape\_uri (const char \* *str\_buf\_in*, char \* *str\_buf\_out*, uint32 *max\_out\_buf\_bytes*, uint32 *max\_bytes*, uint32 & *out\_buf\_len*)**

unescape any of the special escape sequence in the uri string

**URI String Manipualation**

These routines handle all of the special escape sequences in the URI.

The function scans the string and replaces each escape sequence with its corresponding character. It stops at the first null character, or the max\_byte value. It returns false if the string contains any illegal escape sequence or the output buffer is not big enough. The out\_buf\_len value indicates the needed buffer length or the index of the byte that causes the error respectively.

**Parameters**

*str\_buf\_in* Ptr to an input string

*str\_buf\_out* Ptr to an output buffer which stores the modified string

*max\_out\_buf\_bytes* The size of str\_buf\_out.

*max\_bytes* The maximum number of bytes to read. It is the length of str\_buf\_in.

*out\_buf\_len* The length of the result string (not including the null character)

**Returns**

It returns true if succeeds, otherwise false.

**6.4.4.62 OSCL\_COND\_IMPORT\_REF double oscl\_tan (double *value*)**

Calculates the tangential of a number

**Parameters**

*value* source value

#### 6.4.4.63 OSCL\_IMPORT\_REF int32 oscl\_UnicodeToUTF8 (const oscl\_wchar \* *input*, int32 *inLength*, char \* *output*, int32 *outLength*)

Convert Unicode string to UTF8 byte sequence.

The function converts Unicode string to UTF8 byte sequence. The length of input Unicode string is specified. It stops at two conditions: (A) Whole input Unicode string is successfully converted. (B) Destination buferr is not enough for output. In case of (A), it adds a terminated ” at the end of the output UTF8 byte sequence. and returns length of the output UTF8 byte sequence(without counting terminated ”). In case of (B), it converts as much as possible to the output buffer and adds a terminated ” at the end of the output UTF8 byte sequence"(no '\0' added if outLength is less than or equal to 0, return 0)", and returns 0.

##### Parameters

*input* Ptr to an input Unicode string. ” termanation is not neccesary.

*inLength* The length of the input Unicode string, without counting terminated ”(if any).

*output* Ptr to an output buffer which output UTF8 byte sequence is written in.

*outLength* The size of output buffer, also the maximum number of char could be written in.

##### Returns

length of output (excludes ”) : completely converts all input string and appends ” to output; 0 : insufficient buffer or error in conversion

#### 6.4.4.64 OSCL\_IMPORT\_REF int32 oscl\_UTF8ToUnicode (const char \* *input*, int32 *inLength*, oscl\_wchar \* *output*, int32 *outLength*)

Convert UTF8 byte sequence to Unicode string.

The function converts UTF8 byte sequence (or ASCII sequence) to Unicode string. The length of input UTF8 byte sequence is specified. It stops at two conditions: (A) Whole input UTF8 byte sequence is successfully converted. (B) Output buferr is not enough for output, or parse error. In case of (A), it adds a terminated ” at the end of the output Unicode string, and returns length of the output Unicode string(without counting terminated ”). In case of (B), it converts as much as possible to the output buffer and adds a terminated ” at the end of the output Unicode string"(no '\0' added if outLength is less than or equal to 0, return 0)", and returns 0.

##### Parameters

*input* Ptr to an input UTF8 byte sequence. ” termanation is not neccesary.

*inLength* The length of the input UTF8 byte sequence, without counting terminated ”(if any).

*output* Ptr to an output buffer which output Unicode string is written in.

*outLength* The size of output buffer, also the maximum number of oscl\_wchar could be written in.

##### Returns

Length of output (excludes ”) : completely converts all input string and appends ” to output; 0 : insufficient buffer or error in conversion

- 6.4.4.65 **OSCL\_IMPORT\_REF int32 oscl\_vsnprintf (oscl\_wchar \*str, uint32 count, const oscl\_wchar \*fmt, va\_list args)**
- 6.4.4.66 **OSCL\_IMPORT\_REF int32 oscl\_vsnprintf (char \*str, uint32 count, const char \*fmt, va\_list args)**
- 6.4.4.67 **template<class Alloc > OSCL\_wHeapString< Alloc >::OSCL\_wHeapString (const OSCL\_wString & src) [inline, inherited]**

References OSCL\_wString::set\_rep().

- 6.4.4.68 **template<class Alloc > OSCL\_wHeapString< Alloc >::OSCL\_wHeapString (const OSCL\_wHeapString< Alloc > & src) [inline, inherited]**

References CHeapRep::assign(), and OSCL\_wString::set\_rep().

- 6.4.4.69 **template<class Alloc > OSCL\_wHeapString< Alloc >::OSCL\_wHeapString (const chartype \*buf, uint32 length) [inline, inherited]**
- 6.4.4.70 **template<class Alloc > OSCL\_wHeapString< Alloc >::OSCL\_wHeapString (const chartype \*cstr) [inline, inherited]**

References OSCL\_wString::set\_rep().

- 6.4.4.71 **template<class Alloc > OSCL\_wHeapString< Alloc >::OSCL\_wHeapString () [inline, inherited]**

References NULL, and OSCL\_wString::set\_rep().

- 6.4.4.72 **template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize >::OSCL\_wStackString (const OSCL\_wString & src) [inline, inherited]**

References OSCL\_wString::set\_rep().

- 6.4.4.73 **template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize >::OSCL\_wStackString (const OSCL\_wStackString< MaxBufSize > & src) [inline, inherited]**

References OSCL\_wString::set\_rep().

- 6.4.4.74 **template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize >::OSCL\_wStackString (const chartype \*buf, uint32 length) [inline, inherited]**

- 6.4.4.75 **template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize >::OSCL\_wStackString (const chartype \*cstr) [inline, inherited]**

References OSCL\_wString::set\_rep().

---

**6.4.4.76 template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize >::OSCL\_wStackString () [inline, inherited]**

References NULL, and OSCL\_wString::set\_rep().

**6.4.4.77 OSCL\_IMPORT\_REF bool PV\_atof (const char \* buf, int length, OsclFloat & value)**

**6.4.4.78 OSCL\_IMPORT\_REF bool PV\_atof (const char \* buf, OsclFloat & value)**

**6.4.4.79 OSCL\_IMPORT\_REF bool PV\_atoi (const char \* buf, const char new\_format, int length, uint64 & value)**

**6.4.4.80 OSCL\_IMPORT\_REF bool PV\_atoi (const char \* buf, const char new\_format, int length, uint32 & value)**

**6.4.4.81 OSCL\_IMPORT\_REF bool PV\_atoi (const char \* buf, const char new\_format, uint32 & value)**

**6.4.4.82 template<uint32 MaxBufSize> void OSCL\_wStackString< MaxBufSize >::set (const other\_chartype \* buf, uint32 length, optype op) [inline, inherited]**

References NULL, OSCL\_wString::setrep\_to\_wide\_char(), and CStackRep::size.

**6.4.4.83 template<uint32 MaxBufSize> void OSCL\_StackString< MaxBufSize >::set (const other\_chartype \* buf, uint32 length, optype op) [inline, inherited]**

Set the contents of this string to a new string or character array, with conversion operation.

#### Parameters

*buf*,: string or character array.

*length*,: number of characters to copy.

*op*,: conversion operation to apply

References NULL, OSCL\_String::setrep\_to\_char(), and CStackRep::size.

**6.4.4.84 template<uint32 MaxBufSize> void OSCL\_wStackString< MaxBufSize >::set (const other\_chartype \* buf, optype op) [inline, inherited]**

References NULL, oscl\_strlen(), OSCL\_wString::setrep\_to\_wide\_char(), and CStackRep::size.

**6.4.4.85 template<uint32 MaxBufSize> void OSCL\_StackString< MaxBufSize >::set (const other\_chartype \* buf, optype op) [inline, inherited]**

Set the contents of this string to a new string, with conversion operation.

#### Parameters

*buf*,: NULL-terminated wide string.

*op*,: conversion operation to apply

References NULL, oscl\_strlen(), OSCL\_String::setrep\_to\_char(), and CStackRep::size.

**6.4.4.86 template<uint32 MaxBufSize> void OSCL\_wStackString< MaxBufSize >::set (const chartype \* *buf*, uint32 *length*) [inline, inherited]**

References OSCL\_wStackString< MaxBufSize >::get\_cstr(), oscl\_strlen(), CStackRep::set(), and CStackRep::size.

**6.4.4.87 template<uint32 MaxBufSize> void OSCL\_StackString< MaxBufSize >::set (const chartype \* *buf*, uint32 *length*) [inline, inherited]**

Set the contents of this string to a new string or character array.

**Parameters**

*buf*,: string or character array.

*length*,: number of characters to copy.

References OSCL\_StackString< MaxBufSize >::get\_cstr(), oscl\_strlen(), CStackRep::set(), and CStackRep::size.

**6.4.4.88 template<class Alloc > void OSCL\_wHeapString< Alloc >::set (const other\_chartype \* *buf*, uint32 *length*, optype *op*) [inline, inherited]**

References OSCL\_wString::setrep\_to\_wide\_char(), and CHheapRep::size.

**6.4.4.89 template<class Alloc > void OSCL\_HeapString< Alloc >::set (const other\_chartype \* *buf*, uint32 *length*, optype *op*) [inline, inherited]**

Set the contents of this string to a new string or character array, with conversion operation.

**Parameters**

*buf*,: string or character array.

*length*,: number of characters to copy.

*op*,: conversion operation to apply

References OSCL\_String::setrep\_to\_char(), and CHheapRep::size.

**6.4.4.90 template<class Alloc > void OSCL\_wHeapString< Alloc >::set (const other\_chartype \* *buf*, optype *op*) [inline, inherited]**

References oscl\_strlen(), OSCL\_wString::setrep\_to\_wide\_char(), and CHheapRep::size.

**6.4.4.91 template<class Alloc > void OSCL\_HeapString< Alloc >::set (const other\_chartype \* *buf*, optype *op*) [inline, inherited]**

Set the contents of this string to a new string, with conversion operation.

**Parameters**

*buf*,: NULL-terminated wide string.

*op*,: conversion operation to apply

References oscl\_strlen(), OSCL\_String::setrep\_to\_char(), and CHeapRep::size.

**6.4.4.92 template<class Alloc > void OSCL\_wHeapString< Alloc >::set (const chartype \* buf, uint32 length) [inline, inherited]**

References OSCL\_wHeapString< Alloc >::get\_cstr(), oscl\_strlen(), OSCL\_wString::set\_rep(), and CHeapRep::size.

**6.4.4.93 template<class Alloc > void OSCL\_HeapString< Alloc >::set (const chartype \* buf, uint32 length) [inline, inherited]**

Set the contents of this string to a new string or character array.

**Parameters**

*buf*,: string or character array.

*length*,: number of characters to copy.

References OSCL\_HeapString< Alloc >::get\_cstr(), oscl\_strlen(), OSCL\_wString::set\_rep(), and CHeapRep::size.

**6.4.4.94 OSCL\_IMPORT\_REF const char\* skip\_to\_line\_term (const char \* start\_ptr, const char \* end\_ptr)**

**6.4.4.95 OSCL\_IMPORT\_REF const char\* skip\_to\_whitespace (const char \* start, const char \* end)**

**6.4.4.96 OSCL\_IMPORT\_REF const char\* skip\_whitespace (const char \* start, const char \* end)**

**6.4.4.97 OSCL\_IMPORT\_REF char\* skip\_whitespace (char \* ptr)**

**6.4.4.98 OSCL\_IMPORT\_REF const char\* skip\_whitespace (const char \* ptr)**

**6.4.4.99 OSCL\_IMPORT\_REF const char\* skip\_whitespace\_and\_line\_term (const char \* start, const char \* end)**

**6.4.4.100 template<class Alloc > OSCL\_HeapString< Alloc >::~OSCL\_HeapString () [inline, inherited]**

References CHeapRep::remove\_ref().

**6.4.4.101 template<uint32 MaxBufSize> OSCL\_StackString< MaxBufSize >::~OSCL\_StackString () [inline, inherited]**

**6.4.4.102 template<class Alloc > OSCL\_wHeapString< Alloc >::~OSCL\_wHeapString () [inline, inherited]**

References CHeapRep::remove\_ref().

**6.4.4.103 template<uint32 MaxBufSize> OSCL\_wStackString< MaxBufSize >::~OSCL\_wStackString () [inline, inherited]**

## 6.4.5 Variable Documentation

**6.4.5.1 const int32 APPEND\_MEDIA\_AT\_END = -1**

**6.4.5.2 const uint8 OSCL\_ASCII\_CASE\_MAGIC\_BIT = 0x20**

Referenced by WStrPtrLen::isCIEquivalentTo(), and StrPtrLen::isCIPrefixOf().

## 6.5 OSCL Error

### Data Structures

- class [OsclErrorTrap](#)
- class [OsclError](#)
- class [OsclSingletonRegistryEx](#)
- class [OsclSingletonEx< T, ID, Registry >](#)
- class [OsclTLSRegistryEx](#)
- class [OsclTLSEEx< T, ID, Registry >](#)
- class [OsclErrorAllocator](#)

*This class provides static methods to invoke the user defined memory allocation routines.*

- class [internalLeave](#)
- class [OsclJump](#)
- class [OsclTrapStackItem](#)
- class [OsclTrapStack](#)
- class [OsclErrorTrapImp](#)
- class [OsclException< LeaveCode >](#)

*oscl\_exception.h contains all the exception handling macros and classes*

- class [\\_OsclHeapBase](#)
- class [OsclTrapItem](#)
- class [OsclNameString< \\_\\_len >](#)

### Files

- file [oscl\\_errno.h](#)

*Defines functions to access additional information on errors where supported through an errno or similar service.*

- file [oscl\\_error.h](#)

*OSCL Error trap and cleanup include file.*

- file [oscl\\_error\\_allocator.h](#)

*Defines a memory allocation class used by the oscl error layer.*

- file [oscl\\_error\\_codes.h](#)

*Defines basic error and leave codes.*

- file [oscl\\_error\\_imp.h](#)

*Internal error implementation support.*

- file [oscl\\_error\\_imp\\_cppexceptions.h](#)

*Implementation File for Leave using C++ exceptions.*

- file [oscl\\_error\\_imp\\_fatalerror.h](#)

*Implementation File for Leave using system fatal error.*

- file [oscl\\_error\\_imp\\_jumps.h](#)

*Implementation of using Setjmp / Longjmp.*

- file [oscl\\_error\\_trapcleanup.h](#)  
*OSCL Error trap and cleanup implementation include file.*
- file [oscl\\_exception.h](#)  
*contains all the exception handling macros and classes*
- file [oscl\\_heapbase.h](#)  
*OSCL Heap Base include file.*
- file [oscl\\_namestring.h](#)  
*Name string class include file.*

## Defines

- #define [OSCL\\_TRAPSTACK\\_PUSH\(a\)](#) OsclError::PushL(a)
- #define [OSCL\\_TRAPSTACK\\_POP\(\)](#) OsclError::Pop()
- #define [OSCL\\_TRAPSTACK\\_POPDEALLOC\(\)](#) OsclError::PopDealloc()
- #define [OsclErrNone](#) 0
- #define [OsclErrGeneral](#) 100
- #define [OsclErrNoMemory](#) 101
- #define [OsclErrCancelled](#) 102
- #define [OsclErrNotSupported](#) 103
- #define [OsclErrArgument](#) 104
- #define [OsclErrBadHandle](#) 105
- #define [OsclErrAlreadyExists](#) 106
- #define [OsclErrBusy](#) 107
- #define [OsclErrNotReady](#) 108
- #define [OsclErrCorrupt](#) 109
- #define [OsclErrTimeout](#) 110
- #define [OsclErrOverflow](#) 111
- #define [OsclErrUnderflow](#) 112
- #define [OsclErrInvalidState](#) 113
- #define [OsclErrNoResources](#) 114
- #define [OsclErrNotInstalled](#) 115
- #define [OsclErrAlreadyInstalled](#) 116
- #define [OsclErrSystemCallFailed](#) 117
- #define [OsclErrNoHandler](#) 118
- #define [OsclErrThreadContextIncorrect](#) 119
- #define [OSCL\\_ERR\\_NONE](#) OsclErrNone
- #define [OSCL\\_BAD\\_ALLOC\\_EXCEPTION\\_CODE](#) OsclErrNoMemory
- #define [OsclSuccess](#) 0
- #define [OsclPending](#) 1
- #define [OsclFailure](#) -1
- #define [PVERROR\\_IMP\\_JUMPS](#)
- #define [PVERROR\\_DoLeave\(\)](#) internalLeave \_\_ilv;\_\_ilv.a=0;throw(\_\_ilv)
- #define [\\_PV\\_TRAP\(\\_\\_r, \\_\\_s\)](#)
- #define [\\_PV\\_TRAP\\_NO\\_TLS\(\\_\\_trapimp, \\_\\_r, \\_\\_s\)](#)

- #define `PVError_DoLeave()` \_OSCL\_Abort()
- #define `_PV_TRAP(__r, __s)`
- #define `_PV_TRAP_NO_TLS(__tr, __r, __s)`
- #define `OSCL_JUMP_MAX_JUMP_MARKS` OSCL\_MAX\_TRAP\_LEVELS
- #define `internalLeave (-1)`
- #define `PVError_DoLeave()` OsclJump::StaticJump(`internalLeave`)
- #define `_PV_TRAP(__r, __s)`
- #define `_PV_TRAP_NO_TLS(__trapimp, __r, __s)`
- #define `OSCL_MAX_TRAP_LEVELS` 20
- #define `PVERRORTRAP_REGISTRY_ID` OSCL\_TLS\_ID\_PVERRORTRAP
- #define `PVERRORTRAP_REGISTRY` OsclTLSRegistry
- #define `OSCL_LEAVE(_leave_status)` OsclError::Leave(\_leave\_status)

*Use this macro to cause a Leave. It terminates the execution of the current active function.*

- #define `OSCL_TRY(_leave_status, _statements)` `_PV_TRAP(_leave_status, _statements)`

*This macro will be used to set up a try block.*

- #define `OSCL_TRY_NO_TLS(__trapimp, _leave_status, _statements)` `_PV_TRAP_NO_TLS(__trapimp, _leave_status, _statements)`
- #define `OSCL_FIRST_CATCH_ANY(_leave_status, _statements)` if (\_leave\_status!=OsclErrNone) { \_statements; }

*This section defines the macros to be used in the catch block following the try block.*

- #define `OSCL_FIRST_CATCH(_leave_status, _catch_value, _statements)` if (\_leave\_status!=OsclErrNone && \_leave\_status == \_catch\_value){\_statements;}

*Use this macro to define a block of code that catches the first exception type thrown in the preceding try block.*

- #define `OSCL_CATCH(_leave_status, _catch_value, _statements)` else if (\_leave\_status!=OsclErrNone && \_leave\_status == \_catch\_value){\_statements;}

*Use this macro to define a block of code for catching additional exception types.*

- #define `OSCL_CATCH_ANY(_leave_status, _statements)` else if (\_leave\_status!=OsclErrNone){ \_statements; }

*Use this macro to call a function that will catch all remaining exception types.*

- #define `OSCL_LAST_CATCH(_leave_status)` else if (\_leave\_status!=OsclErrNone){OSCL\_LEAVE(\_leave\_status);}

*Use this macro if OSCL\_CATCH\_ANY has not been used. It will mark the end of the catch block.*

## TypeDefs

- typedef int32 `OsclLeaveCode`
- typedef int32 `OsclReturnCode`
- typedef void(\* `OsclTrapOperation`)(`OsclAny` \*)

## Functions

- OSCL\_IMPORT\_REF bool **OSCL\_IsErrnoSupported** ()
 

*oscl\_errno.h contains functions to access the global errno*
- OSCL\_IMPORT\_REF int **OSCL\_GetLastError** ()
 

*This function returns the value of the system's global error number variable.*
- OSCL\_IMPORT\_REF bool **OSCL\_SetLastError** (int newVal)
 

*This function sets the last error code for the system.*
- OSCL\_IMPORT\_REF char \* **OSCL\_StrError** (int errnum)
 

*This function maps an error number to an error-message string.*

### 6.5.1 Define Documentation

#### 6.5.1.1 #define \_PV\_TRAP(\_\_r, \_\_s)

**Value:**

```
__r=OsclErrNone; \
{ \
    OsclErrorTrapImp* __trap=OsclErrorTrapImp::Trap(); \
    if(!__trap){__s;}else{ \
        int __tr=setjmp(*(__trap->iJumpData->Top())); \
        if (__tr==0) \
            {__s;} \
        else if (__tr==internalLeave) \
            {__r=__trap->iLeave;} \
        __trap->UnTrap();} \
}
```

#### 6.5.1.2 #define \_PV\_TRAP(\_\_r, \_\_s)

**Value:**

```
__r=OsclErrNone; \
{__s;}
```

#### 6.5.1.3 #define \_PV\_TRAP(\_\_r, \_\_s)

**Value:**

```
__r=OsclErrNone; \
{ \
    OsclErrorTrapImp* __tr=OsclErrorTrapImp::Trap(); \
    if(!__tr){__s;}else{ \
        try{__s;} \
        catch(internalLeave __lv) \
            {__lv.a=__r=__tr->iLeave;} \
        __tr->UnTrap();} \
}
```

#### 6.5.1.4 #define \_PV\_TRAP\_NO\_TLS(\_trapimp, \_\_r, \_\_s)

**Value:**

```
__r=OsclErrNone; \
{ \
    OsclErrorTrapImp* __trap=OsclErrorTrapImp::TrapNoTls(_trapimp); \
    if(!__trap){__s;}else{ \
        int __tr=setjmp(*(__trap->iJumpData->Top())); \
        if (__tr==0)\ 
            {__s;} \
        else if (__tr==internalLeave)\ 
            {__r=__trap->iLeave;} \
        __trap->UnTrap();} \
}
```

#### 6.5.1.5 #define \_PV\_TRAP\_NO\_TLS(\_tr, \_\_r, \_\_s)

**Value:**

```
__r=OsclErrNone; \
{__s;}
```

#### 6.5.1.6 #define \_PV\_TRAP\_NO\_TLS(\_trapimp, \_\_r, \_\_s)

**Value:**

```
__r=OsclErrNone; \
{ \
    OsclErrorTrapImp* __tr=OsclErrorTrapImp::TrapNoTls(_trapimp); \
    if(!__tr){__s;}else{ \
        try{__s;} \
        catch(internalLeave __lv)\ 
            {__lv.a=__r=__tr->iLeave;} \
        __tr->UnTrap();} \
}
```

#### 6.5.1.7 #define internalLeave (-1)

#### 6.5.1.8 #define OSCL\_BAD\_ALLOC\_EXCEPTION\_CODE OsclErrNoMemory

#### 6.5.1.9 #define OSCL\_CATCH(\_leave\_status, \_catch\_value, \_statements) else if (\_leave\_status!=OsclErrNone && \_leave\_status == \_catch\_value){\_statements;}

Use this macro to define a block of code for catching additional exception types.

OSCL\_FIRST\_CATCH can be used to catch one exception type. Then the OSCL\_CATCH macro can be used to catch each subsequent type. The catch block must end with OSCL\_LAST\_CATCH or OSCL\_CATCH\_ANY

#### Parameters

*oscl\_leave\_status* is the result of any OSCL\_THROW

*exceptiontype* is the exception handled by this catch block

---

**6.5.1.10 #define OSCL\_CATCH\_ANY(\_leave\_status, \_statements) else if  
(\_leave\_status!=OsclErrNone){ \_statements;}**

Use this macro to call a function that will catch all remaining exception types.

#### Parameters

*\_leave\_status*

*\_statements* is a statement or block of statements to handle all remaining exception types. This macro ends the try block.

**6.5.1.11 #define OSCL\_ERR\_NONE OsclErrNone**

For backward compatibility with old definitions

**6.5.1.12 #define OSCL\_FIRST\_CATCH(\_leave\_status, \_catch\_value, \_statements) if  
(\_leave\_status!=OsclErrNone && \_leave\_status == \_catch\_value){\_statements;}**

Use this macro to define a block of code that catches the first exception type thrown in the preceding try block.

#### Parameters

*oscl\_leave\_status* is the leave code that was returned by OSCL\_THROW

*exceptiontype* is the exception handled by this catch block This macro MUST be used in conjunction with either OSCL\_LAST\_CATCH or OSCL\_CATCH\_ANY

**6.5.1.13 #define OSCL\_FIRST\_CATCH\_ANY(\_leave\_status, \_statements) if  
(\_leave\_status!=OsclErrNone) { \_statements; }**

This section defines the macros to be used in the catch block following the try block.

Use this macro to call a function that handles all exception types thrown in the preceding try block

#### Parameters

*\_leave\_status*

*\_statements* is a statement or block of statements that will catch all the exception types thrown by the preceding try block This is a standalone macro and should not be used with any of the macros above

**6.5.1.14 #define OSCL\_JUMP\_MAX\_JUMP\_MARKS OSCL\_MAX\_TRAP\_LEVELS**

**6.5.1.15 #define OSCL\_LAST\_CATCH(\_leave\_status) else if (\_leave\_-  
status!=OsclErrNone){OSCL\_LEAVE(\_leave\_status);}**

Use this macro if OSCL\_CATCH\_ANY has not been used. It will mark the end of the catch block.

#### Parameters

*\_leave\_status* will be propagated up the call stack This macro will do an OSCL\_LEAVE if the leave has not been handled by the calls above. This macro ends the try block.

**6.5.1.16 #define OSCL\_LEAVE(\_leave\_status) OsclError::Leave(\_leave\_status)**

Use this macro to cause a Leave. It terminates the execution of the current active function.

It also tries to cleanup the items on the cleanup stack.

**Parameters**

*oscl\_leave\_status* tells the cause for the Leave

Referenced by OsclTimer< Alloc >::OsclTimer().

**6.5.1.17 #define OSCL\_MAX\_TRAP\_LEVELS 20****6.5.1.18 #define OSCL\_TRAPSTACK\_POP() OsclError::Pop()****6.5.1.19 #define OSCL\_TRAPSTACK\_POPDEALLOC() OsclError::PopDealloc()****6.5.1.20 #define OSCL\_TRAPSTACK\_PUSH(a) OsclError::PushL(a)**

Cleanup Stack user macros

**6.5.1.21 #define OSCL\_TRY(\_leave\_status, \_statements) \_PV\_TRAP(\_leave\_status,\_statements)**

This macro will be used to set up a try block.

The try block identifies a block of code that might throw exceptions (or leave)

**Parameters**

*oscl\_leave\_status* oscl\_leave\_status will receive the result of any OSCL\_LEAVE (which will get called from a OSCL\_THROW) on systems that do not support exception handling. This is unused on systems that do support exception handling

*statements* is a statement or block of statements that could throw exceptions and will be executed in the try block

**6.5.1.22 #define OSCL\_TRY\_NO\_TLS(\_\_trapimp, \_leave\_status, \_statements) \_PV\_TRAP\_-  
NO\_TLS(\_\_trapimp,\_leave\_status,\_statements)****6.5.1.23 #define OsclErrAlreadyExists 106****6.5.1.24 #define OsclErrAlreadyInstalled 116****6.5.1.25 #define OsclErrArgument 104**

Referenced by OsclTimer< Alloc >::OsclTimer().

**6.5.1.26 #define OsclErrBadHandle 105**

**6.5.1.27 #define OsclErrBusy 107**

**6.5.1.28 #define OsclErrCancelled 102**

**6.5.1.29 #define OsclErrCorrupt 109**

**6.5.1.30 #define OsclErrGeneral 100**

Referenced by OsclSocketMethod::ConstructL(), and OsclDNSRequestAO::ConstructL().

**6.5.1.31 #define OsclErrInvalidState 113**

**6.5.1.32 #define OsclErrNoHandler 118**

**6.5.1.33 #define OsclErrNoMemory 101**

Referenced by OsclBuf::NewL().

**6.5.1.34 #define OsclErrNone 0**

**6.5.1.35 #define OsclErrNoResources 114**

**6.5.1.36 #define OsclErrNotInstalled 115**

**6.5.1.37 #define OsclErrNotReady 108**

**6.5.1.38 #define OsclErrNotSupported 103**

Referenced by OsclRegistryClientImpl::Connect(), OsclRegistryClientImpl::Register(), and OsclRegistryClientImpl::UnRegister().

**6.5.1.39 #define OsclErrOverflow 111**  
**6.5.1.40 #define OsclErrSystemCallFailed 117**  
**6.5.1.41 #define OsclErrThreadContextIncorrect 119**  
**6.5.1.42 #define OsclErrTimeout 110**  
**6.5.1.43 #define OsclErrUnderflow 112**  
**6.5.1.44 #define OsclFailure -1**  
**6.5.1.45 #define OsclPending 1**  
**6.5.1.46 #define OsclSuccess 0**  
**6.5.1.47 #define PVError\_DoLeave() OsclJump::StaticJump(internalLeave)**  
**6.5.1.48 #define PVError\_DoLeave() \_OSCL\_Abort()**  
**6.5.1.49 #define PVError\_DoLeave() internalLeave \_\_ilv;\_\_ilv.a=0;throw(\_\_ilv)**  
**6.5.1.50 #define PVERRORTRAP\_IMP\_JUMPS**

Internal leave/trap implementation.

**6.5.1.51 #define PVERRORTRAP\_REGISTRY OsclTLSRegistry**  
**6.5.1.52 #define PVERRORTRAP\_REGISTRY\_ID OSCL\_TLS\_ID\_PVERRORTRAP**

## 6.5.2 Typedef Documentation

**6.5.2.1 typedef int32 OsclLeaveCode**

Leave Codes

**6.5.2.2 typedef int32 OsclReturnCode**

Return Codes

**6.5.2.3 typedef void(\* OsclTrapOperation)(OsclAny \*)**

[OsclTrapItem](#) may be used in the cleanup stack when a custom cleanup operation is needed.

## 6.5.3 Function Documentation

**6.5.3.1 OSCL\_IMPORT\_REF int OSCL\_GetLastError ()**

This function returns the value of the system's global error number variable.

**Returns**

Returns 0 for systems that do not have this functionality. The value of the error number variable does not change until the user calls SetLastError or if another system call occurs that changes the value.  
Supported Platforms: Win32/wince, Unix  
Unsupported Platforms : Symbian

**6.5.3.2 OSCL\_IMPORT\_REF bool OSCL\_IsErrnoSupported ()**

[oscl\\_errno.h](#) contains functions to access the global errno

This function determines if a particular system saves the error number that occurs on a system call

**Returns**

This method returns false on systems that do not save the error number that occurs on a system call in a global variable. Returns true for systems that do save the error number

**6.5.3.3 OSCL\_IMPORT\_REF bool OSCL\_SetLastError (int newVal)**

This function sets the last error code for the system.

**Parameters**

*newVal* This value represents the new value for the global error number. This method can be used to reset the error number after having retrieved it using GetLastError. Supported Platforms: Win32/wince, Unix  
Unsupported Platforms : Symbian

**6.5.3.4 OSCL\_IMPORT\_REF char\* OSCL\_StrError (int errnum)**

This function maps an error number to an error-message string.

**Parameters**

*errnum* This value represents the error number to map

**Returns**

This method returns a pointer to a string containing the system error-message. It returns NULL for systems that do not have this functionality. Supported Platforms: Win32/wince, Unix  
Unsupported Platforms : Symbian

## 6.6 OSCL IO

### Data Structures

- class [OsclDNSObserver](#)
- class [OsclDNS](#)
- class [OsclFileCacheBuffer](#)
- class [OsclFileCache](#)
- struct [oscl\\_fstat](#)
- struct [oscl\\_stat\\_buf](#)
- class [Oscl\\_FileFind](#)
- class [OsclFileHandle](#)
- class [Oscl\\_File](#)
- class [OsclFileManager](#)
- class [OsclNativeFile](#)
- class [Oscl\\_FileServer](#)
- class [OsclFileStatsItem](#)
- class [OsclFileStats](#)
- class [OsclNativeFileParams](#)
- class [OsclSocketServ](#)
- class [OsclUDPSocket](#)
- class [OsclTCPSocket](#)

### Files

- file [oscl\\_dns.h](#)  
*The file [oscl\\_socket.h](#) defines the OSCL DNS APIs.*
- file [oscl\\_file\\_cache.h](#)  
*The file [oscl\\_file\\_cache.h](#) defines the class [OsclFileCache](#).*
- file [oscl\\_file\\_dir\\_utils.h](#)  
*The file [oscl\\_file\\_dir\\_utils.h](#) defines some unix-style directory ops.*
- file [oscl\\_file\\_find.h](#)  
*The file [oscl\\_file\\_find.h](#) defines the class [Oscl\\_FileFind](#).*
- file [oscl\\_file\\_handle.h](#)  
*The file [oscl\\_file\\_handle.h](#) defines the class [OsclFileHandle](#).*
- file [oscl\\_file\\_io.h](#)  
*The file [oscl\\_file\\_io.h](#) defines the class [Oscl\\_File](#). This is the public API to the basic file I/O operations.*
- file [oscl\\_file\\_manager.h](#)  
*File management class.*
- file [oscl\\_file\\_native.h](#)  
*The file [oscl\\_file\\_native.h](#) defines the class [OsclNativeFile](#). This is the porting layer for basic file I/O operations.*

- file `oscl_file_server.h`

*The file `oscl_file_server.h` defines the class `Oscl_FileServer`. This is the porting layer for file server implementations.*

- file `oscl_file_stats.h`

*File stats class.*

- file `oscl_file_types.h`

*The file `oscl_file_types.h` defines some constants and types for file I/O implementations. Anything that needs to be shared across implementation modules can go here.*

- file `oscl_socket.h`

*The file `oscl_socket.h` defines the OSCL Socket APIs.*

## Defines

- `#define TOsclFileOffsetInt32 int32`
- `#define OSCL_FILE_STATS_LOGGER_NODE "OsclFileStats"`
- `#define OSCL_IO_FILENAME_MAXLEN 512`
- `#define OSCL_IO_EXTENSION_MAXLEN 512`
- `#define OSCL_FILE_WCHAR_PATH_DELIMITER _STRLIT("/")`
- `#define OSCL_FILE_CHAR_PATH_DELIMITER _STRLIT_CHAR("/")`

## Typedefs

- `typedef struct oscl_fsstat OSCL_FSSTAT`
- `typedef struct oscl_stat_buf OSCL_STAT_BUF`
- `typedef FILE * TOsclFileHandle`

## Enumerations

- enum `TPVDNSFxn { EPVDNSGetHostByName }`
- enum `TPVDNSEvent { EPVDNSSuccess, EPVDNSPending, EPVDNSTimeout, EPVDNSFailure, EPVDNSCancel }`
- enum `OSCL_FILEMGMT_PERMS { OSCL_FILEMGMT_PERMS_READ = 0x1, OSCL_FILEMGMT_PERMS_WRITE = 0x2, OSCL_FILEMGMT_PERMS_EXECUTE = 0x4 }`
- enum `OSCL_FILEMGMT_MODES { OSCL_FILEMGMT_MODE_DIR = 0x1 }`
- enum `OSCL_FILEMGMT_ERR_TYPE { OSCL_FILEMGMT_E_OK = 0, OSCL_FILEMGMT_E_PATH_TOO_LONG, OSCL_FILEMGMT_E_PATH_NOT_FOUND, OSCL_FILEMGMT_E_ALREADY_EXISTS, OSCL_FILEMGMT_E_NOT_EMPTY, OSCL_FILEMGMT_E_PERMISSION_DENIED, OSCL_FILEMGMT_E_NO_MATCH, OSCL_FILEMGMT_E_UNKNOWN, OSCL_FILEMGMT_E_SYS_SPECIFIC, OSCL_FILEMGMT_E_NOT_IMPLEMENTED }`

- enum `TOsclFileOp` {
 `EOsclFileOp_Open`, `EOsclFileOp_Close`, `EOsclFileOp_Read`, `EOsclFileOp_Write`,  
`EOsclFileOp_Seek`, `EOsclFileOp_Tell`, `EOsclFileOp_Size`, `EOsclFileOp_Flush`,  
`EOsclFileOp_EndOfFile`, `EOsclFileOp_SetSize`, `EOsclFileOp_NativeOpen`, `EOsclFileOp_NativeClose`,  
`EOsclFileOp_NativeRead`, `EOsclFileOp_NativeWrite`, `EOsclFileOp_NativeSeek`, `EOsclFileOp_NativeTell`,  
`EOsclFileOp_NativeSize`, `EOsclFileOp_NativeFlush`, `EOsclFileOp_NativeEndOfFile`,  
`EOsclFileOp_NativeSetSize`,  
`EOsclFileOp_Last` }

## Functions

- virtual `OsclDNSObserver::~OsclDNSObserver()`
- `OSCL_IMPORT_REF OsclDNS::~OsclDNS()`
- `OSCL_IMPORT_REF TPVDNSEvent OsclDNS::GetHostByName (char *name, OsclNetworkAddress &addr, int32 aTimeoutMsec=-1, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > *aAddressList=NULL)`
- `OSCL_IMPORT_REF void OsclDNS::CancelGetHostByName()`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (oscl_wchar *path, uint32 size)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (char *path, uint32 size)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const oscl_wchar *path, OSCL_STAT_BUF *statbuf)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const char *path, OSCL_STAT_BUF *statbuf)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const oscl_wchar *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const oscl_wchar *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const oscl_wchar *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const oscl_wchar *oldpath, const oscl_wchar *newpath)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const char *oldpath, const char *newpath)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stats (OSCL_FSSTAT *stats, const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stats (OSCL_FSSTAT *stats, const oscl_wchar *path)`
- static `OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileSize (const oscl_wchar *aFileName, uint64 &aFileSize)`
- static `OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileSize (const char *aFileName, uint64 &aFileSize)`
- static `OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileCreationTime (const oscl_wchar *aFileName, uint64 &aFileCreationTime)`
- static `OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileCreationTime (const char *aFileName, uint64 &aFileCreationTime)`
- static `OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileLastAccessTime (const oscl_wchar *aFileName, uint64 &aFileLastAccessTime)`

- static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileLastAccessTime (const char \*aFileName, uint64 &aFileLastAccessTime)
- static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileLastWriteTime (const oscl\_wchar \*aFileName, uint64 &aFileLastWriteTime)
- static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileLastWriteTime (const char \*aFileName, uint64 &aFileLastWriteTime)
- static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileAttributes (const oscl\_wchar \*aFileName, uint32 &aFileAttributes)
- static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileAttributes (const char \*aFileName, uint32 &aFileAttributes)
- static OSCL\_IMPORT\_REF void OsclFileManager::OsclExtractFilenameFromFullPath (const char \*aPath, char \*&aFileName)
- static OSCL\_IMPORT\_REF void OsclFileManager::OsclExtractFilenameFromFullPath (const oscl\_wchar \*aPath, oscl\_wchar \*&aFileName)
- OSCL\_IMPORT\_REF OsclSocketServ::~OsclSocketServ ()
- OSCL\_IMPORT\_REF int32 OsclSocketServ::Connect (uint32 aMessageSlots=8, bool aShareSession=false)
- OSCL\_IMPORT\_REF void OsclSocketServ::Close (bool aCleanup=true)
- OSCL\_IMPORT\_REF OsclUDPSocket::~OsclUDPSocket ()
- OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::ThreadLogoff ()
- OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::ThreadLogon (OsclSocketServ &aServ, OsclSocketObserver \*aObserver)
- OSCL\_IMPORT\_REF int32 OsclUDPSocket::Close ()
- OSCL\_IMPORT\_REF int32 OsclUDPSocket::Bind (OsclNetworkAddress &aAddress)
- OSCL\_IMPORT\_REF int32 OsclUDPSocket::Join (OsclNetworkAddress &aAddress)
- OSCL\_IMPORT\_REF int32 OsclUDPSocket::JoinMulticastGroup (OsclIpMReq &aMReq)
- OSCL\_IMPORT\_REF int32 OsclUDPSocket::SetMulticastTTL (int32 aTTL)
- OSCL\_IMPORT\_REF int32 OsclUDPSocket::SetOptionToReuseAddress ()
- OSCL\_IMPORT\_REF int32 OsclUDPSocket::SetTOS (const OsclSocketTOS &aTOS)
- OSCL\_IMPORT\_REF int32 OsclUDPSocket::GetPeerName (OsclNetworkAddress &aPeerName)
- OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::BindAsync (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=(-1))
- OSCL\_IMPORT\_REF void OsclUDPSocket::CancelBind ()
- OSCL\_IMPORT\_REF uint8 \* OsclUDPSocket::GetRecvData (int32 \*aLength)
- OSCL\_IMPORT\_REF uint8 \* OsclUDPSocket::GetSendData (int32 \*aLength)
- OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::SendTo (const uint8 \*aPtr, uint32 aLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void OsclUDPSocket::CancelSendTo ()
- OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::RecvFrom (uint8 \*aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1, uint32 aMultiRecvLimit=0, Oscl\_Vector< uint32, OsclMemAllocator > \*aPacketLen=NULL, Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator > \*aPacketSource=NULL)
- OSCL\_IMPORT\_REF void OsclUDPSocket::CancelRecvFrom ()
- OSCL\_IMPORT\_REF int32 OsclUDPSocket::SetRecvBufferSize (uint32 size)
- OSCL\_IMPORT\_REF OsclTCPSocket::~OsclTCPSocket ()
- OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::ThreadLogoff ()
- OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::ThreadLogon (OsclSocketServ &aServ, OsclSocketObserver \*aObserver)
- OSCL\_IMPORT\_REF int32 OsclTCPSocket::Close ()
- OSCL\_IMPORT\_REF int32 OsclTCPSocket::Bind (OsclNetworkAddress &aAddress)

- OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::BindAsync (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=(-1))
- OSCL\_IMPORT\_REF void OsclTCPSocket::CancelBind ()
- OSCL\_IMPORT\_REF int32 OsclTCPSocket::SetOptionToReuseAddress ()
- OSCL\_IMPORT\_REF int32 OsclTCPSocket::SetTOS (const OsclSocketTOS &aTOS)
- OSCL\_IMPORT\_REF int32 OsclTCPSocket::GetPeerName (OsclNetworkAddress &aPeerName)
- OSCL\_IMPORT\_REF int32 OsclTCPSocket::Listen (int32 aQueueSize)
- OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::ListenAsync (int32 aQueueSize, int32 aTimeoutMsec=(-1))
- OSCL\_IMPORT\_REF void OsclTCPSocket::CancelListen ()
- OSCL\_IMPORT\_REF OsclTCPSocket \* OsclTCPSocket::GetAcceptedSocketL (uint32 aId)
- OSCL\_IMPORT\_REF uint8 \* OsclTCPSocket::GetRecvData (int32 \*aLength)
- OSCL\_IMPORT\_REF uint8 \* OsclTCPSocket::GetSendData (int32 \*aLength)
- OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Connect (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void OsclTCPSocket::CancelConnect ()
- OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Shutdown (TPVSocketShutdown aHow, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void OsclTCPSocket::CancelShutdown ()
- OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Accept (int32 aTimeout=-1)
- OSCL\_IMPORT\_REF void OsclTCPSocket::CancelAccept ()
- OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Send (const uint8 \*aPtr, uint32 aLen, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void OsclTCPSocket::CancelSend ()
- OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Recv (uint8 \*aPtr, uint32 aMaxLen, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void OsclTCPSocket::CancelRecv ()

## Friends

- class OsclDNS::OsclDNSRequestAO
- class OsclSocketServ::OsclTCPSocket
- class OsclSocketServ::OsclUDPSocket
- class OsclSocketServ::OsclDNS

### 6.6.1 Define Documentation

6.6.1.1 `#define OSCL_FILE_CHAR_PATH_DELIMITER _STRLIT_CHAR("/")`

6.6.1.2 `#define OSCL_FILE_STATS_LOGGER_NODE "OsclFileStats"`

6.6.1.3 `#define OSCL_FILE_WCHAR_PATH_DELIMITER _STRLIT("/")`

6.6.1.4 `#define OSCL_IO_EXTENSION_MAXLEN 512`

6.6.1.5 `#define OSCL_IO_FILENAME_MAXLEN 512`

6.6.1.6 `#define TOsclFileOffsetInt32 int32`

### 6.6.2 Typedef Documentation

6.6.2.1 `typedef struct oscl_fsstat OSCL_FSSTAT`

6.6.2.2 `typedef struct oscl_stat_buf OSCL_STAT_BUF`

6.6.2.3 `typedef FILE* TOsclFileHandle`

TOsclFileHandle is an OS-native file handle type. With a class-based file API such as Symbian, a class ref is used as a file handle. For most ANSI-style file APIs, a file pointer is used as a file handle.

### 6.6.3 Enumeration Type Documentation

6.6.3.1 `enum OSCL_FILEMGMT_ERR_TYPE`

Enumerator:

*OSCL\_FILEMGMT\_E\_OK*  
*OSCL\_FILEMGMT\_E\_PATH\_TOO\_LONG*  
*OSCL\_FILEMGMT\_E\_PATH\_NOT\_FOUND*  
*OSCL\_FILEMGMT\_E\_ALREADY\_EXISTS*  
*OSCL\_FILEMGMT\_E\_NOT\_EMPTY*  
*OSCL\_FILEMGMT\_E\_PERMISSION\_DENIED*  
*OSCL\_FILEMGMT\_E\_NO\_MATCH*  
*OSCL\_FILEMGMT\_E\_UNKNOWN*  
*OSCL\_FILEMGMT\_E\_SYS\_SPECIFIC*  
*OSCL\_FILEMGMT\_E\_NOT\_IMPLEMENTED*

6.6.3.2 `enum OSCL_FILEMGMT_MODES`

Enumerator:

*OSCL\_FILEMGMT\_MODE\_DIR*

### 6.6.3.3 enum OSCL\_FILEMGMT\_PERMS

Enumerator:

*OSCL\_FILEMGMT\_PERMS\_READ*  
*OSCL\_FILEMGMT\_PERMS\_WRITE*  
*OSCL\_FILEMGMT\_PERMS\_EXECUTE*

### 6.6.3.4 enum TOsclFileOp

Enumerator:

*EOsclFileOp\_Open*  
*EOsclFileOp\_Close*  
*EOsclFileOp\_Read*  
*EOsclFileOp\_Write*  
*EOsclFileOp\_Seek*  
*EOsclFileOp\_Tell*  
*EOsclFileOp\_Size*  
*EOsclFileOp\_Flush*  
*EOsclFileOp\_EndOfFile*  
*EOsclFileOp\_SetSize*  
*EOsclFileOp\_NativeOpen*  
*EOsclFileOp\_NativeClose*  
*EOsclFileOp\_NativeRead*  
*EOsclFileOp\_NativeWrite*  
*EOsclFileOp\_NativeSeek*  
*EOsclFileOp\_NativeTell*  
*EOsclFileOp\_NativeSize*  
*EOsclFileOp\_NativeFlush*  
*EOsclFileOp\_NativeEndOfFile*  
*EOsclFileOp\_NativeSetSize*  
*EOsclFileOp\_Last*

### 6.6.3.5 enum TPVDNSEvent

Enumerator:

*EPVDNSSuccess*  
*EPVDNSPending*  
*EPVDNSTimeout*  
*EPVDNSFailure*  
*EPVDNSCancel*

### 6.6.3.6 enum TPVDNSFxn

**Enumerator:**

*EPVDNSGetHostName*

## 6.6.4 Function Documentation

### 6.6.4.1 OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Accept (int32 *aTimeout* = -1) [inherited]

Accept incoming connections. This is an asynchronous method.

**Parameters**

*aTimeoutMsec*,: Timeout in milliseconds, or (-1) for infinite wait.

**Returns**

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

### 6.6.4.2 OSCL\_IMPORT\_REF int32 OsclTCPSocket::Bind (OsclNetworkAddress & *aAddress*) [inherited]

Bind a TCP socket to an address. This is a synchronous method.

**Parameters**

*aAddress*,: Bind address.

**Returns**

Returns OsclErrNone for success, or a platform-specific error code.

### 6.6.4.3 OSCL\_IMPORT\_REF int32 OsclUDPSocket::Bind (OsclNetworkAddress & *aAddress*) [inherited]

Bind a UDP socket to an address. This is a synchronous method.

**Parameters**

*aAddress*,: Bind address.

**Returns**

Returns OsclErrNone for success, or a platform-specific error code.

**6.6.4.4 OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::BindAsync  
(OsclNetworkAddress & *aAddress*, int32 *aTimeoutMsec* = (-1)) [inherited]**

Bind a TCP socket to an address. This is an asynchronous method.

**Parameters**

*aAddress*,: Bind address.

*aTimeoutMsec*,: Optional timeout. Use a negative value for infinite wait.

**Returns**

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

**6.6.4.5 OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::BindAsync  
(OsclNetworkAddress & *aAddress*, int32 *aTimeoutMsec* = (-1)) [inherited]**

Bind a UDP socket to an address. This is an asynchronous method.

**Parameters**

*aAddress*,: Bind address.

*aTimeoutMsec*,: Optional timeout. Use a negative value for infinite wait.

**Returns**

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

**6.6.4.6 OSCL\_IMPORT\_REF void OsclTCPSocket::CancelAccept () [inherited]**

Cancel Accept

This method will cancel any pending Accept operation on the current socket, causing the Accept to complete with error EPVSocketCancel. If there is no pending Accept operation, this method will have no effect.

**6.6.4.7 OSCL\_IMPORT\_REF void OsclTCPSocket::CancelBind () [inherited]**

Cancel Bind

This method will cancel any pending BindAsync operation on the current socket, causing the BindAsync to complete with error EPVSocketCancel. If there is no pending BindAsync operation, this method will have no effect.

**6.6.4.8 OSCL\_IMPORT\_REF void OsclUDPSocket::CancelBind () [inherited]**

Cancel Bind

This method will cancel any pending BindAsync operation on the current socket, causing the BindAsync to complete with error EPVSocketCancel. If there is no pending BindAsync operation, this method will have no effect.

#### **6.6.4.9 OSCL\_IMPORT\_REF void OsclTCPSocket::CancelConnect () [inherited]**

Cancel Connect

This method will cancel any pending Connect operation on the current socket, causing the Connect to complete with error EPVSocketCancel. If there is no pending Connect operation, this method will have no effect.

#### **6.6.4.10 OSCL\_IMPORT\_REF void OsclDNS::CancelGetHostName () [inherited]**

Cancel GetHostName

This method will cancel any pending GetHostName operation on the current object, causing the GetHostName to complete with error EPVDNSCancel. If there is no pending GetHostName operation, this method will have no effect.

#### **6.6.4.11 OSCL\_IMPORT\_REF void OsclTCPSocket::CancelListen () [inherited]**

Cancel Async Listen

This method will cancel any pending ListenAsync operation on the current socket, causing the Listen to complete with error EPVSocketCancel. If there is no pending Listen operation, this method will have no effect.

#### **6.6.4.12 OSCL\_IMPORT\_REF void OsclTCPSocket::CancelRecv () [inherited]**

Cancel Recv

This method will cancel any pending Recv operation on the current socket, causing the Recv to complete with error EPVSocketCancel. If there is no pending Recv operation, this method will have no effect.

#### **6.6.4.13 OSCL\_IMPORT\_REF void OsclUDPSocket::CancelRecvFrom () [inherited]**

Cancel RecvFrom

This method will cancel any pending RecvFrom operation on the current socket, causing the RecvFrom to complete with error EPVSocketCancel. If there is no pending RecvFrom operation, this method will have no effect.

#### **6.6.4.14 OSCL\_IMPORT\_REF void OsclTCPSocket::CancelSend () [inherited]**

Cancel Send

This method will cancel any pending Send operation on the current socket, causing the Send to complete with error EPVSocketCancel. If there is no pending Send operation, this method will have no effect.

**6.6.4.15 OSCL\_IMPORT\_REF void OsclUDPSocket::CancelSendTo () [inherited]**

Cancel SendTo

This method will cancel any pending SendTo operation on the current socket, causing the SendTo to complete with error EPVSocketCancel. If there is no pending SendTo operation, this method will have no effect.

**6.6.4.16 OSCL\_IMPORT\_REF void OsclTCPSocket::CancelShutdown () [inherited]**

Cancel Shutdown

This method will cancel any pending Shutdown operation on the current socket, causing the Shutdown to complete with error EPVSocketCancel. If there is no pending Shutdown operation, this method will have no effect.

**6.6.4.17 OSCL\_IMPORT\_REF int32 OsclTCPSocket::Close () [inherited]**

Close a TCP socket. This is a synchronous method.

Once it is closed a socket cannot be re-opened. Sockets are automatically closed when they are deleted. This method may be used to see any error code returned from the platform's socket close call.

**Returns**

Returns OsclErrNone for success, or a platform-specific error code.

**6.6.4.18 OSCL\_IMPORT\_REF int32 OsclUDPSocket::Close () [inherited]**

Close a UDP socket. This is a synchronous method.

Once it is closed a socket cannot be re-opened. Sockets are automatically closed when they are deleted. This method may be used to see any error code returned from the platform's socket close call.

**Returns**

Returns OsclErrNone for success, or a platform-specific error code.

**6.6.4.19 OSCL\_IMPORT\_REF void OsclSocketServ::Close (bool *aCleanup* = true) [inherited]**

Close socket server. This is a synchronous method.

**Parameters**

*aCleanup*,: cleanup the socket system? the socket cleanup should only be done when all parts of the application are done using sockets.

**6.6.4.20 OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Connect (OsclNetworkAddress & *aAddress*, int32 *aTimeoutMsec* = -1) [inherited]**

Connect to an address. This is an asynchronous method.

**Parameters**

*aAddress*,: a network address.

*aTimeoutMsec*,: Timeout in milliseconds, or (-1) for infinite wait.

**Returns**

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

**6.6.4.21 OSCL\_IMPORT\_REF int32 OsclSocketServ::Connect (uint32 *aMessageSlots* = 8, bool *aShareSession* = **false**) [inherited]**

Connect to socket server. This is a synchronous method.

**Parameters**

*Number* of message slots.

**Returns**

Returns OsclErrNone for success, or a platform-specific code.

**6.6.4.22 OSCL\_IMPORT\_REF OsclTCPSocket\* OsclTCPSocket::GetAcceptedSocketL (uint32 *aId*) [inherited]**

Retrieve the accept socket after a successful Accept operation. This is a synchronous method.

**Parameters**

*aId*,: Socket ID. The caller must assign an ID to each socket. The ID is used to identify the socket in observer callbacks.

**Returns**

Returns pointer to socket, or NULL if error. Note: The caller is responsible for deleting any accepted socket that it retrieves.

**6.6.4.23 OSCL\_IMPORT\_REF TPVDNSEvent OsclDNS::GetHostByName (char \* *name*, OsclNetworkAddress & *addr*, int32 *aTimeoutMsec* = -1, Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator > \* *aAddressList* = NULL) [inherited]**

GetHostByName. This is an asynchronous method.

**Parameters**

*name*,: Null-terminated string containing the host name.

*addr*,: The output address corresponding to the host. The ipAddr field will contain the network address of the host in dotted decimal notation.

*aTimeoutMsec*,: A timeout for the request in milliseconds, or (-1) to indicate infinite wait.

*aAddressList* : A list of addresses for the host.

#### Returns

: EPVDNSPending for success, EPVDNSFailure for failure.

### 6.6.4.24 OSCL\_IMPORT\_REF int32 OsclTCPSocket::GetPeerName (OsclNetworkAddress & *aPeerName*) [inherited]

Retrieves the peer address of the socket

#### Parameters

*aPeerName*,: This will store the peer address when API returns successfully.

#### Returns

Returns OsclErrNone for success, or a platform-specific error code. or PVSOCK\_ERR\_NOT\_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

### 6.6.4.25 OSCL\_IMPORT\_REF int32 OsclUDPSocket::GetPeerName (OsclNetworkAddress & *aPeerName*) [inherited]

Retrieves the peer address of the socket

#### Parameters

*aPeerName*,: This will store the peer address when API returns successfully.

#### Returns

Returns OsclErrNone for success, or a platform-specific error code. or PVSOCK\_ERR\_NOT\_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

### 6.6.4.26 OSCL\_IMPORT\_REF uint8\* OsclTCPSocket::GetRecvData (int32 \* *aLength*) [inherited]

Retrieve the received data after a successful Recv operation. This is a synchronous method.

#### Parameters

*aLength*,: (output) number of bytes of data received.

#### Returns

Returns pointer to received data, or NULL if none.

**6.6.4.27 OSCL\_IMPORT\_REF uint8\* OsclUDPSocket::GetRecvData (int32 \* *aLength*)  
[inherited]**

Retrieve the received data after a successful RecvFrom operation. This is a synchronous method.

**Parameters**

*aLength*,: (output) number of bytes of data received.

**Returns**

Returns pointer to received data, or NULL if none.

**6.6.4.28 OSCL\_IMPORT\_REF uint8\* OsclTCPSocket::GetSendData (int32 \* *aLength*)  
[inherited]**

Retrieve the sent data after a successful Send operation. This is a synchronous method.

**Parameters**

*aLength*,: (output) number of bytes of data sent.

**Returns**

Returns pointer to sent data, or NULL if none.

**6.6.4.29 OSCL\_IMPORT\_REF uint8\* OsclUDPSocket::GetSendData (int32 \* *aLength*)  
[inherited]**

Retrieve the sent data after a successful SendTo operation. This is a synchronous method.

**Parameters**

*aLength*,: (output) number of bytes of data sent.

**Returns**

Returns pointer to sent data, or NULL if none.

**6.6.4.30 OSCL\_IMPORT\_REF int32 OsclUDPSocket::Join (OsclNetworkAddress & *aAddress*)  
[inherited]**

Bind a UDP socket to an address and Join the multicast group. This is a synchronous method.

**Parameters**

*aAddress*,: Bind address.

**Returns**

Returns OsclErrNone for success, or a platform-specific error code. May throw an OsclErrNotSupported Exception

#### 6.6.4.31 OSCL\_IMPORT\_REF int32 OsclUDPSocket::JoinMulticastGroup (OsclIpMReq & *aMReq*) [inherited]

Join the multicast group.

##### Parameters

*aMReq*,: Multicast group information.

##### Returns

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK\_ERR\_NOT\_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK\_ERR\_BAD\_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK\_ERR\_NOT\_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

#### 6.6.4.32 OSCL\_IMPORT\_REF int32 OsclTCPSocket::Listen (int32 *aQueueSize*) [inherited]

Listen. This is a synchronous method.

##### Parameters

*aQueueSize*,: Queue size.

##### Returns

Returns OsclErrNone for success, or a platform-specific error code.

#### 6.6.4.33 OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::ListenAsync (int32 *aQueueSize*, int32 *aTimeoutMsec* = (-1)) [inherited]

ListenAsync This is an asynchronous method.

##### Parameters

*aQueueSize*,: Queue size.

*aTimeoutMsec*,: Optional timeout. Use a negative value for infinite wait.

##### Returns

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

#### 6.6.4.34 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_chdir (const char \* *path*)

oscl\_chdir changes the current directory to the path given

##### Parameters

*character* path the full path of the directory to change to.

##### Returns

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.35 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_chdir (const oscl\_wchar \* path)**

oscl\_chdir changes the current directory to the path given

**Parameters**

*wide* character path the full path of the directory to change to.

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.36 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_getcwd (char \* path, uint32 size)**

oscl\_getcwd function can be used to determine the full path name of the current directory.

**Parameters**

*pointer* to character buffer to receive the current directory

*size* size of buffer in characters

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.37 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_getcwd (oscl\_wchar \* path, uint32 size)**

oscl\_getcwd function can be used to determine the full path name of the current directory.

**Parameters**

*pointer* to wide character buffer to receive the current directory

*size* size of buffer in wide characters

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.38 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_mkdir (const char \* path)**

oscl\_mkdir function creates a directory in the path given

**Parameters**

*character* path the full path of the directory to create. if parts of the path do not exist the function will fail

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.39 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_mkdir (const oscl\_wchar \*path)**

oscl\_mkdir function creates a directory in the path given

**Parameters**

*wide* character path the full path of the directory to create. if parts of the path do not exist the function will fail

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.40 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_rename (const char \*oldpath, const char \*newpath)**

oscl\_rename removes an empty directory in the path given

**Parameters**

*character* path the full path of the directory to remove.

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.41 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_rename (const oscl\_wchar \*oldpath, const oscl\_wchar \*newpath)**

oscl\_rename function renames a file or directory

**Parameters**

*wide* character path the full path of the file or directory to rename.

*wide* character path the full path the new name for the directory

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.42 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_rmdir (const char \*path)**

oscl\_rmdir removes an empty directory in the path given

**Parameters**

*character* path the full path of the directory to remove.

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.43 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_rmdir (const oscl\_wchar \* path)**

oscl\_rmdir function removes an empty directory in the path given

**Parameters**

*wide* character path the full path of the directory to remove.

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.44 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_stat (const char \* path, OSCL\_STAT\_BUF \* statbuf)**

oscl\_stat function can be used to determine the attributes of a file in addition to whether the file exists or not

**Parameters**

*character* path the full path of the file to stat.

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.45 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_stat (const oscl\_wchar \* path, OSCL\_STAT\_BUF \* statbuf)**

oscl\_stat function can be used to determine the attributes of a file in addition to whether the file exists or not

**Parameters**

*wide* character path the full path of the file to stat.

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.46 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_stats (OSCL\_FSSTAT \* stats, const oscl\_wchar \* path)**

Oscl\_StatFS function populates a general structure describing free space available on a filesystem

**Parameters**

*stats* pointer to structure to hold information

*path* located in desired filesystem (utf8) Note: If the OS does not support a particular field in the structure, it is set to -1.

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

---

**6.6.4.47 OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_statfs (OSCL\_FSSTAT \*  
stats, const char \*path)**

Oscl\_StatFS function populates a general structure describing free space available on a filesystem

**Parameters**

*stats* pointer to structure to hold information

*path* located in desired filesystem (utf8) Note: If the OS does not support a particular field in the structure, it is set to -1.

**Returns**

OSCL\_FILEMGMT\_ERR\_TYPE, see enumeration for this type.

**6.6.4.48 static OSCL\_IMPORT\_REF void OsclFileManager::OsclExtractFilenameFromFullPath  
(const oscl\_wchar \*aPath, oscl\_wchar \*& aFileName) [static, inherited]**

**6.6.4.49 static OSCL\_IMPORT\_REF void OsclFileManager::OsclExtractFilenameFromFullPath  
(const char \*aPath, char \*& aFileName) [static, inherited]**

OsclExtractFilenameFromFullPath utility function provide the FileName From Path of a file.

**Parameters**

← *character* path; the full path of the file or directory

→ *character* File Name .It is assigned a pointer to file name in path itself.

**Returns**

void for all condition

**6.6.4.50 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileAttributes (const char \*  
aFileName, uint32 & aFileAttributes) [static, inherited]**

OsclGetFileAttributes utility function provides the various attributes of file (or directory) like if it is hidden, read only etc. The uint32 value is to be interpreted as per the enum OSCL\_FILE\_ATTRIBUTE\_TYPE defined in [oscl\\_file\\_manager.h](#)

**Parameters**

← *character* path; the full path of the file or directory

→ *file* attributes.

**Returns**

true if successful, otherwise false.

#### 6.6.4.51 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileAttributes (const oscl\_wchar \* aFileName, uint32 & aFileAttributes) [static, inherited]

OsclGetFileAttributes utility function provides the various attributes of file (or directory) like if it is hidden, read only etc. The uint32 value is to be interpreted as per the enum OSCL\_FILE\_ATTRIBUTE\_TYPE defined in [oscl\\_file\\_manager.h](#)

##### Parameters

- ← *wide* character path; the full path of the file or directory
- *file* attributes.

##### Returns

true if successful, otherwise false.

#### 6.6.4.52 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileCreationTime (const char \* aFileName, uint64 & aFileCreationTime) [static, inherited]

OsclGetFileCreationTime utility function provides the file (or directory) creation time

##### Note

On symbian platform, this api returns last modified time.

##### Parameters

- ← *character* path; the full path of the file or directory
- *creation* time in microseconds.

##### Returns

true if successful, otherwise false.

#### 6.6.4.53 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileCreationTime (const oscl\_wchar \* aFileName, uint64 & aFileCreationTime) [static, inherited]

OsclGetFileCreationTime utility function provides the file (or directory) creation time

##### Note

On symbian platform, this api returns last modified time.

##### Parameters

- ← *wide* character path; the full path of the file or directory
- *creation* time in microseconds

##### Returns

true if successful, otherwise false.

---

**6.6.4.54 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileLastAccessTime (const char \**aFileName*, uint64 & *aFileLastAccessTime*) [static, inherited]**

OsclGetFileLastAccessTime utility function provides the file (or directory) last access time, which might be different from last modified time.

#### Note

On symbian platform, this api returns last modified time.

#### Parameters

- ← *character* path; the full path of the file or directory
- *Last* access time in microseconds.

#### Returns

true if successful, otherwise false.

---

**6.6.4.55 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileLastAccessTime (const oscl\_wchar \**aFileName*, uint64 & *aFileLastAccessTime*) [static, inherited]**

OsclGetFileLastAccessTime utility function provides the file (or directory) last access time, which might be different from last modified time.

#### Note

On symbian platform, this api returns last modified time.

#### Parameters

- ← *wide* character path; the full path of the file or directory
- *Last* access time in microseconds

#### Returns

true if successful, otherwise false.

---

**6.6.4.56 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileLastWriteTime (const char \**aFileName*, uint64 & *aFileLastWriteTime*) [static, inherited]**

OsclGetFileLastWriteTime utility function provides the file (or directory) last modified time.

#### Parameters

- ← *character* path; the full path of the file or directory
- *last* modified time in microseconds

#### Returns

true if successful, otherwise false.

**6.6.4.57 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileLastWriteTime (const oscl\_wchar \* *aFileName*, uint64 & *aFileLastWriteTime*) [static, inherited]**

OsclGetFileLastWriteTime utility function provides the file (or directory) last modified time.

**Parameters**

- ← *wide* character path; the full path of the file or directory
- *last* modified time in microseconds

**Returns**

true if successful, otherwise false.

**6.6.4.58 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileSize (const char \* *aFileName*, uint64 & *aFileSize*) [static, inherited]**

OsclGetFileSize utility function provides the file size. For directory, this value is undefined.

**Parameters**

- ← *character* path; the full path of the file or directory
- *file* size in bytes.

**Returns**

true if successful, otherwise false.

**6.6.4.59 static OSCL\_IMPORT\_REF bool OsclFileManager::OsclGetFileSize (const oscl\_wchar \* *aFileName*, uint64 & *aFileSize*) [static, inherited]**

OsclGetFileSize utility function provides the file size. For directory, this value is undefined. creation time

**Parameters**

- ← *wide* character path; the full path of the file or directory
- *file* size in bytes

**Returns**

true if successful, otherwise false.

**6.6.4.60 OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Recv (uint8 \* *aPtr*, uint32 *aMaxLen*, int32 *aTimeoutMsec* = -1) [inherited]**

Receive Data. This is an asynchronous method.

**Parameters**

- aPtr*,: Buffer for received data.
- aMaxLen*,: Length of buffer.

*aTimeoutMsec*,: Timeout in milliseconds, or (-1) for infinite wait.

### Returns

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

**6.6.4.61 OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::RecvFrom (uint8 \* *aPtr*,  
*uint32 aMaxLen*, *OsclNetworkAddress & aAddress*, *int32 aTimeoutMsec = -1*, *uint32  
aMultiRecvLimit = 0*, *Oscl\_Vector< uint32, OsclMemAllocator > \* aPacketLen = NULL*,  
*Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator > \* aPacketSource = NULL*)  
[inherited]**

Receive Data. This is an asynchronous method.

### Parameters

*aPtr*,: Buffer to receive incoming data

*aMaxLen*,: Length of buffer.

*aAddress*,: (output) Source address.

*aTimeoutMsec*,: Timeout in milliseconds, or (-1) for infinite wait.

*aMultiRecvLimit* (optional input): Configures multiple packet receive mode. As long as there are packets queued at the socket and at least aMultiRecvLimit bytes are available in the buffer, recvfrom operations will continue. A value of zero disabled multiple packet mode. The individual packet lengths can be retrieved in the aPacketLen parameter; and the individual packet source addresses can be retrieved in the aPacketSource parameter.

*aPacketLen*,: (optional output) a vector of packet lengths, in case multiple packets were received.

*aPacketSource*,: (optional output) a vector of source addresses, in case multiple packets were received.

### Returns

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

**6.6.4.62 OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Send (const uint8 \* *aPtr*,  
*uint32 aLen*, *int32 aTimeoutMsec = -1*) [inherited]**

Send Data. This is an asynchronous method.

### Parameters

*aPtr*,: Data to send.

*aLen*,: Length of data to send.

*aTimeoutMsec*,: Timeout in milliseconds, or (-1) for infinite wait.

### Returns

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

---

**6.6.4.63 OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::SendTo (const uint8 \*  
aPtr, uint32 aLen, OsclNetworkAddress & aAddress, int32 aTimeoutMsec = -1)  
[inherited]**

Send Data. This is an asynchronous method.

#### Parameters

- aPtr*,: Data to send.
- aLen*,: Length of data to send.
- aAddress*,: Destination address.
- aTimeoutMsec*,: Timeout in milliseconds, or (-1) for infinite wait.

#### Returns

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

---

**6.6.4.64 OSCL\_IMPORT\_REF int32 OsclUDPSocket::SetMulticastTTL (int32 aTTL)  
[inherited]**

Controls the number of intermediate systems through which a multicast datagram can be forwarded.

#### Parameters

- aTTL*:*Specifies* the time-to-live value for multicast datagrams sent through this socket.

#### Returns

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK\_ERR\_NOT\_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK\_ERR\_BAD\_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK\_ERR\_NOT\_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

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**6.6.4.65 OSCL\_IMPORT\_REF int32 OsclTCPSocket::SetOptionToReuseAddress ()  
[inherited]**

Allows the server to bind to an address which is in a TIME\_WAIT state.

#### Returns

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK\_ERR\_NOT\_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK\_ERR\_BAD\_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK\_ERR\_NOT\_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

---

**6.6.4.66 OSCL\_IMPORT\_REF int32 OsclUDPSocket::SetOptionToReuseAddress ()  
[inherited]**

Allows the server to bind to an address which is in a TIME\_WAIT state.

**Returns**

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK\_ERR\_NOT\_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK\_ERR\_BAD\_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK\_ERR\_NOT\_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

**6.6.4.67 OSCL\_IMPORT\_REF int32 OsclUDPSocket::SetRecvBufferSize (uint32 *size*)  
[inherited]**

Set the buffer size of the socket This is a synchronous method.

**Parameters**

*size*,: buffer size

**Returns**

Returns OsclErrNone for success, or a platform-specific error code. May throw an OsclErrNotSupported Exception.

**6.6.4.68 OSCL\_IMPORT\_REF int32 OsclTCPSocket::SetTOS (const OsclSocketTOS & *aTOS*)  
[inherited]**

Sets the Type of Service field of each outgoing IP datagram.

**Parameters**

*aTOS*,: Specifies the type of service requested.

**Returns**

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK\_ERR\_NOT\_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK\_ERR\_BAD\_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK\_ERR\_NOT\_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

**6.6.4.69 OSCL\_IMPORT\_REF int32 OsclUDPSocket::SetTOS (const OsclSocketTOS & *aTOS*)  
[inherited]**

Sets the Type of Service field of each outgoing IP datagram.

**Parameters**

*aTOS*,: Specifies the type of service requested.

**Returns**

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK\_ERR\_NOT\_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK\_ERR\_BAD\_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK\_ERR\_NOT\_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

**6.6.4.70 OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::Shutdown  
[TPVSocketShutdown *aHow*, int32 *aTimeoutMsec* = -1] [inherited]**

Shutdown a socket. This is an asynchronous method.

**Parameters**

*aHow*,: type of shutdown

*aTimeoutMsec*,: Timeout in milliseconds, or (-1) for infinite wait.

**Returns**

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

**6.6.4.71 OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::ThreadLogoff ()  
[inherited]**

Thread logoff routine. This will prepare for transfer and use of the socket in another thread. All socket requests must be complete prior to calling this routine. If any requests are still active, it will return EPVSocketFailure;

**6.6.4.72 OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::ThreadLogoff ()  
[inherited]**

Thread logoff routine. This will prepare for transfer and use of the socket in another thread. All socket requests must be complete prior to calling this routine. If any requests are still active, it will return EPVSocketFailure;

**6.6.4.73 OSCL\_IMPORT\_REF TPVSocketEvent OsclTCPSocket::ThreadLogon (OsclSocketServ  
& *aServ*, OsclSocketObserver \* *aObserver*) [inherited]**

Thread logon routine. This will complete the transfer of a socket from another thread for use in the current thread. The ThreadLogoff API must be called in the original thread prior to calling ThreadLogon.

**6.6.4.74 OSCL\_IMPORT\_REF TPVSocketEvent OsclUDPSocket::ThreadLogon (OsclSocketServ  
& *aServ*, OsclSocketObserver \* *aObserver*) [inherited]**

Thread logon routine. This will complete the transfer of a socket from another thread for use in the current thread. The ThreadLogoff API must be called in the original thread prior to calling ThreadLogon.

**6.6.4.75 OSCL\_IMPORT\_REF OsclDNS::~OsclDNS () [inherited]**

Destructor.

Note: the application must de-allocate the DNS object using the same allocator that was passed in the NewL object creation call.

**6.6.4.76 virtual OsclDNSObserver::~OsclDNSObserver () [inline, virtual, inherited]**

**6.6.4.77 OSCL\_IMPORT\_REF OsclSocketServ::~OsclSocketServ () [inherited]**

Destructor. The server object must be deleted using the same allocator used in the NewL call.

**6.6.4.78 OSCL\_IMPORT\_REF OsclTCPSocket::~OsclTCPSocket () [inherited]**

Destructor. The object must be deleted using the same allocator used in the NewL call.

**6.6.4.79 OSCL\_IMPORT\_REF OsclUDPSocket::~OsclUDPSocket () [inherited]**

Destructor. The object must be deleted using the same allocator used in the NewL call.

## 6.6.5 Friends

**6.6.5.1 friend class OsclDNS [friend, inherited]**

**6.6.5.2 friend class OsclDNSRequestAO [friend, inherited]**

**6.6.5.3 friend class OsclTCPSocket [friend, inherited]**

**6.6.5.4 friend class OsclUDPSocket [friend, inherited]**

## 6.7 OSCL Proc

### Data Structures

- class [OsclAOStatus](#)
- class [OsclDoubleLink](#)
- class [OsclPriorityLink](#)
- class [OsclDoubleListBase](#)
- class [OsclDoubleList< T >](#)
- class [OsclPriorityList< T >](#)
- class [OsclDoubleRunner< T >](#)
- class [OsclScheduler](#)
- class [OsclSchedulerObserver](#)
- class [OsclExecSchedulerCommonBase](#)
- class [OsclExecScheduler](#)
- class [PVSchedulerStopper](#)
- class [OsclActiveObject](#)
- class [OsclTimerObject](#)
- class [PVActiveBase](#)
- class [OsclReadyAlloc](#)
- class [OsclReadyCompare](#)
- class [OsclTimerCompare](#)
- class [OsclReadyQ](#)
- class [OsclTimerQ](#)
- class [TReadyQueLink](#)
- class [PVThreadContext](#)
- class [OsclExecSchedulerBase](#)

### Files

- file [oscl\\_aostatus.h](#)

*Some basic types used with active objects.*
- file [oscl\\_double\\_list.h](#)

*Internal use types for scheduler.*
- file [oscl\\_scheduler\\_ao.h](#)

*Oscl Scheduler user execution object classes.*
- file [oscl\\_scheduler\\_aobase.h](#)

*Oscl Scheduler internal active object classes.*
- file [oscl\\_scheduler\\_readyq.h](#)

*ready q types for oscl scheduler*
- file [oscl\\_scheduler\\_threadcontext.h](#)

*Thread context functions needed by oscl scheduler.*
- file [oscl\\_scheduler\\_tuneables.h](#)

*Tunable settings for Oscl Scheduler.*

- file [oscl\\_scheduler\\_types.h](#)

*Scheduler common types include file.*

## Defines

- `#define QUE_ITER_BEGIN(_type, _qname)`
- `#define QUE_ITER_END(_qname)`
- `#define PVSCHEDNAMELEN 30`
- `#define OSCL_ZEROIZE(ptr, size) oscl_memset(ptr, 0, size)`
- `#define PVEXECNAMELEN 30`
- `#define PV_SCHED_ENABLE_LOOP_STATS 0`
- `#define PV_SCHED_ENABLE_PERF_LOGGING 1`
- `#define PV_SCHED_ENABLE_THREAD_CONTEXT_CHECKS 1`
- `#define PV_SCHED_LOG_Q 0`
- `#define PV_SCHED_CHECK_Q 0`
- `#define PV_SCHED_FAIR_SCHEDULING 1`
- `#define OSCL_PERF_SUMMARY_LOGGING 0`

## Typedefs

- `typedef PVActiveBase * TOsclReady`

## Enumerations

- `enum TPVThreadContext { EPVThreadContext_InThread, EPVThreadContext_OsclThread, EPVThreadContext_NonOsclThread, EPVThreadContext_Undetermined }`

## Functions

- `template<class T, class S> T * OsclPtrAdd (T *aPtr, S aVal)`
- `template<class T, class S> T * OsclPtrSub (T *aPtr, S aVal)`

## Variables

- `const int32 OSCL_REQUEST_ERR_NONE = 0`
- `const int32 OSCL_REQUEST_PENDING = (-0x7fffffff)`
- `const int32 OSCL_REQUEST_ERR_CANCEL = (-1)`
- `const int32 OSCL_REQUEST_ERR_GENERAL = (-2)`

## 6.7.1 Define Documentation

**6.7.1.1 #define OSCL\_PERF\_SUMMARY\_LOGGING 0**

**6.7.1.2 #define OSCL\_ZEROIZE(ptr, size) oscl\_memset(ptr, 0, size)**

This file defines the [PVActiveBase](#) class, which is a common base for All PV ExecObjs on all platforms.

**6.7.1.3 #define PV\_SCHED\_CHECK\_Q 0**

**6.7.1.4 #define PV\_SCHED\_ENABLE\_LOOP\_STATS 0**

**6.7.1.5 #define PV\_SCHED\_ENABLE\_PERF\_LOGGING 1**

**6.7.1.6 #define PV\_SCHED\_ENABLE\_THREAD\_CONTEXT\_CHECKS 1**

**6.7.1.7 #define PV\_SCHED\_FAIR\_SCHEDULING 1**

**6.7.1.8 #define PV\_SCHED\_LOG\_Q 0**

**6.7.1.9 #define PVEEXECNAMELEN 30**

**6.7.1.10 #define PVSCHEDNAMELEN 30**

PV Scheduler class

**6.7.1.11 #define QUE\_ITER\_BEGIN(\_type, \_qname)**

**Value:**

```
if (!_qname.IsEmpty()) \
{ \
    OsclDoubleRunner <_type> iter(_qname); \
    _type *item; \
    for (iter.SetToHead(); ; iter++) \
    { \
        item=iter; \
    }
```

**6.7.1.12 #define QUE\_ITER\_END(\_qname)**

**Value:**

```
if (_qname.IsTail(item)) \
    break; \
}
```

## 6.7.2 Typedef Documentation

### 6.7.2.1 `typedef PVActiveBase* TOsclReady`

## 6.7.3 Enumeration Type Documentation

### 6.7.3.1 `enum TPVThreadContext`

Thread context type

Enumerator:

*EPVThreadContext\_InThread*  
*EPVThreadContext\_OsclThread*  
*EPVThreadContext\_NonOsclThread*  
*EPVThreadContext\_Undetermined*

## 6.7.4 Function Documentation

### 6.7.4.1 `template<class T , class S > T* OsclPtrAdd (T * aPtr, S aVal) [inline]`

Referenced by `OsclDoubleRunner< T >::Set()`.

### 6.7.4.2 `template<class T , class S > T* OsclPtrSub (T * aPtr, S aVal) [inline]`

Referenced by `OsclDoubleRunner< T >::operator T *()`, and `OsclDoubleRunner< T >::operator++()`.

## 6.7.5 Variable Documentation

### 6.7.5.1 `const int32 OSCL_REQUEST_ERR_CANCEL = (-1)`

### 6.7.5.2 `const int32 OSCL_REQUEST_ERR_GENERAL = (-2)`

### 6.7.5.3 `const int32 OSCL_REQUEST_ERR_NONE = 0`

Referenced by `CallbackTimer< Alloc >::Run()`.

### 6.7.5.4 `const int32 OSCL_REQUEST_PENDING = (-0x7fffffff)`

## 6.8 OSCL Init

### Data Structures

- class [OsclSelect](#)
- class [OsclInit](#)

### Files

- file [oscl\\_init.h](#)  
*Global oscl initialization.*



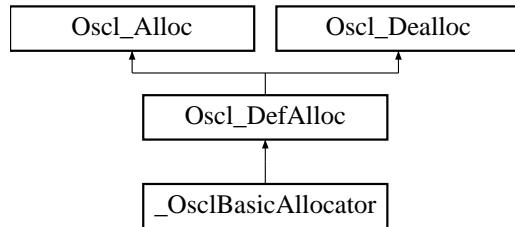
## Chapter 7

# Data Structure Documentation

### 7.1 \_OsclBasicAllocator Class Reference

```
#include <oscl_base_alloc.h>
```

Inheritance diagram for \_OsclBasicAllocator:



#### Public Member Functions

- `OsclAny * allocate (const uint32 size)`
- `void deallocate (OsclAny *p)`
- `virtual ~_OsclBasicAllocator ()`

#### 7.1.1 Detailed Description

A basic allocator that does not rely on other modules. There is no memory auditing or exception generation.

Note: this allocator is for internal use by Oscl code only. Higher level code should use `OsclMemAllocator` defined in "oscl\_mem.h".

## 7.1.2 Constructor & Destructor Documentation

7.1.2.1 `virtual _OsclBasicAllocator::~_OsclBasicAllocator () [inline, virtual]`

## 7.1.3 Member Function Documentation

7.1.3.1 `OsclAny* _OsclBasicAllocator::allocate (const uint32 size) [inline, virtual]`

Implements [Oscl\\_DefAlloc](#).

7.1.3.2 `void _OsclBasicAllocator::deallocate (OsclAny *p) [inline, virtual]`

Implements [Oscl\\_DefAlloc](#).

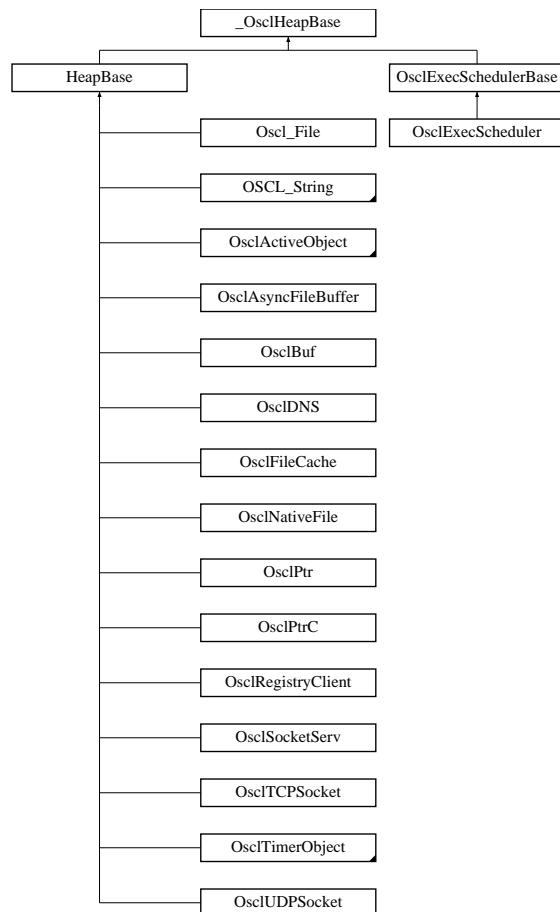
The documentation for this class was generated from the following file:

- [oscl\\_base\\_alloc.h](#)

## 7.2 \_OsclHeapBase Class Reference

```
#include <oscl_heapbase.h>
```

Inheritance diagram for \_OsclHeapBase:



### Public Member Functions

- virtual ~\_OsclHeapBase ()

### Protected Member Functions

- \_OsclHeapBase ()
- \_OsclHeapBase (const \_OsclHeapBase &)

### Friends

- class PVCleanupStack

### 7.2.1 Detailed Description

[\\_OsclHeapBase](#) is used as the base for cleanup stack items with virtual destructor.

### 7.2.2 Constructor & Destructor Documentation

7.2.2.1 `virtual _OsclHeapBase::~_OsclHeapBase () [inline, virtual]`

7.2.2.2 `_OsclHeapBase::_OsclHeapBase () [inline, protected]`

7.2.2.3 `_OsclHeapBase::_OsclHeapBase (const _OsclHeapBase &) [inline, protected]`

### 7.2.3 Friends And Related Function Documentation

7.2.3.1 `friend class PVCleanupStack [friend]`

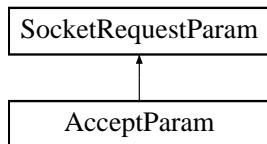
The documentation for this class was generated from the following file:

- [oscl\\_heapbase.h](#)

## 7.3 AcceptParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for AcceptParam:



### Public Member Functions

- [AcceptParam \(OsclSocketI &aBlankSocket\)](#)

### Data Fields

- [OsclSocketI \\* iBlankSocket](#)

#### 7.3.1 Constructor & Destructor Documentation

7.3.1.1 [AcceptParam::AcceptParam \(OsclSocketI & aBlankSocket\) \[inline\]](#)

#### 7.3.2 Field Documentation

7.3.2.1 [OsclSocketI\\* AcceptParam::iBlankSocket](#)

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.4 allocator Class Reference

```
#include <oscl_mem_mempool.h>
```

### 7.4.1 Detailed Description

A memory allocator class which allocates and deallocates from a fixed size memory pool; The memory pool is a multiple of fixed chunk size and does not grow. All allocation size must be the same as this chunk size.

A memory allocator class which allocates and deallocates from a fixed size memory pool; The memory pool is one block of memory and allocations are not fixed in size. The memory pool also has the capability of growing by allocating more block one at a time. This memory pool also provides the capability of returning the tail end of memory previously allocated from the memory pool

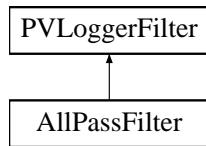
The documentation for this class was generated from the following file:

- [oscl\\_mem\\_mempool.h](#)

## 7.5 AllPassFilter Class Reference

```
#include <pvlogger_accessories.h>
```

Inheritance diagram for AllPassFilter:



### Public Types

- `typedef PVLoggerFilter::message_id_type message_id_type`
- `typedef PVLoggerFilter::log_level_type log_level_type`
- `typedef PVLoggerFilter::filter_status_type filter_status_type`

### Public Member Functions

- `AllPassFilter ()`
- `virtual ~AllPassFilter ()`
- `filter_status_type FilterString (char *tag, message_id_type msgID, log_level_type level)`
- `filter_status_type FilterOpaqueMessage (char *tag, message_id_type msgID, log_level_type level)`

#### 7.5.1 Detailed Description

Example filter that allows all messages to be logged.

#### 7.5.2 Member Typedef Documentation

##### 7.5.2.1 `typedef PVLoggerFilter::filter_status_type AllPassFilter::filter_status_type`

Reimplemented from [PVLoggerFilter](#).

##### 7.5.2.2 `typedef PVLoggerFilter::log_level_type AllPassFilter::log_level_type`

Reimplemented from [PVLoggerFilter](#).

##### 7.5.2.3 `typedef PVLoggerFilter::message_id_type AllPassFilter::message_id_type`

Reimplemented from [PVLoggerFilter](#).

### 7.5.3 Constructor & Destructor Documentation

7.5.3.1 `AllPassFilter::AllPassFilter () [inline]`

7.5.3.2 `virtual AllPassFilter::~AllPassFilter () [inline, virtual]`

### 7.5.4 Member Function Documentation

7.5.4.1 `filter_status_type AllPassFilter::FilterOpaqueMessge (char * tag, message_id_type msgID, log_level_type level) [inline, virtual]`

Implements [PVLoggerFilter](#).

References OSCL\_UNUSED\_ARG, and PVLOGGER\_FILTER\_ACCEPT.

7.5.4.2 `filter_status_type AllPassFilter::FilterString (char * tag, message_id_type msgID, log_level_type level) [inline, virtual]`

Implements [PVLoggerFilter](#).

References OSCL\_UNUSED\_ARG, and PVLOGGER\_FILTER\_ACCEPT.

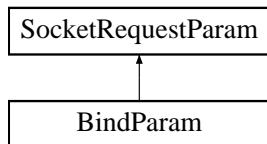
The documentation for this class was generated from the following file:

- [pvlogger\\_accessories.h](#)

## 7.6 BindParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for BindParam:



### Public Member Functions

- [BindParam \(OsclNetworkAddress &anAddr\)](#)

### Data Fields

- [OsclNetworkAddress iAddr](#)

#### 7.6.1 Constructor & Destructor Documentation

**7.6.1.1 BindParam::BindParam (OsclNetworkAddress & *anAddr*) [inline]**

#### 7.6.2 Field Documentation

**7.6.2.1 OsclNetworkAddress BindParam::iAddr**

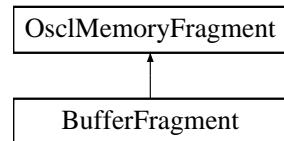
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.7 BufferFragment Class Reference

```
#include <oscl_media_data.h>
```

Inheritance diagram for BufferFragment:



The documentation for this class was generated from the following file:

- [oscl\\_media\\_data.h](#)

## 7.8 BufferMgr Class Reference

```
#include <oscl_media_data.h>
```

### Public Member Functions

- virtual void [BufferReleased](#) (void \*ptr, [BufferState](#) \*state=NULL)=0
- virtual [~BufferMgr](#) ()

#### 7.8.1 Constructor & Destructor Documentation

##### 7.8.1.1 [virtual BufferMgr::~BufferMgr \(\) \[inline, virtual\]](#)

#### 7.8.2 Member Function Documentation

##### 7.8.2.1 [virtual void BufferMgr::BufferReleased \(void \\*ptr, BufferState \\* state = NULL\) \[pure virtual\]](#)

Referenced by [BufferState::decrement\\_refcnt\(\)](#).

The documentation for this class was generated from the following file:

- [oscl\\_media\\_data.h](#)

## 7.9 BufferState Class Reference

```
#include <oscl_media_data.h>
```

### Public Member Functions

- `BufferState (BufferFreeFuncPtr the_free_function, void *bufptr=0)`
- `BufferState (BufferMgr *the_buf_mgr=0, void *bufptr=0)`
- `void increment_refcnt ()`
- `void decrement_refcnt ()`
- `void bind (void *in_ptr, BufferFreeFuncPtr in_free_function)`
- `void bind (void *in_ptr, BufferMgr *in_buf_mgr)`
- `void * get_ptr ()`
- `int32 get_refcount ()`
- `BufferFreeFuncPtr get_free_function ()`
- `BufferMgr * get_buf_mgr ()`
- `void reset ()`

#### 7.9.1 Constructor & Destructor Documentation

**7.9.1.1 `BufferState::BufferState (BufferFreeFuncPtr the_free_function, void * bufptr = 0) [inline]`**

**7.9.1.2 `BufferState::BufferState (BufferMgr * the_buf_mgr = 0, void * bufptr = 0) [inline]`**

#### 7.9.2 Member Function Documentation

**7.9.2.1 `void BufferState::bind (void * in_ptr, BufferMgr * in_buf_mgr) [inline]`**

**7.9.2.2 `void BufferState::bind (void * in_ptr, BufferFreeFuncPtr in_free_function) [inline]`**

**7.9.2.3 `void BufferState::decrement_refcnt () [inline]`**

References `BufferMgr::BufferReleased()`.

Referenced by `MediaData<ChainClass, max_frags, local_bufsize>::Clear()`, and `BufFragGroup<ChainClass, max_frags>::Clear()`.

**7.9.2.4 `BufferMgr* BufferState::get_buf_mgr () [inline]`**

**7.9.2.5 `BufferFreeFuncPtr BufferState::get_free_function () [inline]`**

**7.9.2.6 `void* BufferState::get_ptr () [inline]`**

**7.9.2.7 `int32 BufferState::get_refcount () [inline]`**

**7.9.2.8 `void BufferState::increment_refcnt () [inline]`**

Referenced by `BufFragGroup<ChainClass, max_frags>::AddFragment()`.

**7.9.2.9 void BufferState::reset () [inline]**

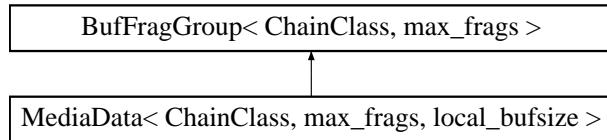
The documentation for this class was generated from the following file:

- [oscl\\_media\\_data.h](#)

## 7.10 BufFragGroup< ChainClass, max\_frags > Class Template Reference

```
#include <oscl_media_data.h>
```

Inheritance diagram for BufFragGroup< ChainClass, max\_frags >:



### Public Member Functions

- [BufFragGroup \(\)](#)
- virtual [~BufFragGroup \(\)](#)
- int32 [GetMaxFrags \(\) const](#)
- int32 [GetNumFrags \(\) const](#)
- uint32 [GetLength \(\) const](#)
- [BufferFragment \\* GetFragment \(const int32 idx\)](#)
- [BufferState \\* GetBufferState \(const int32 idx\)](#)
- void [AppendNext \(ChainClass \\*next\\_ptr\)](#)
- ChainClass \* [GetNext \(\) const](#)

### Protected Member Functions

- virtual void [Clear \(\)](#)
- [BufFragStatusClass::status\\_t AddFragment \(const BufferFragment &frag, BufferState \\*in\\_buffer\\_state, int32 location\\_offset=max\\_frags\)](#)

### Protected Attributes

- [BufferFragment fragments \[max\\_frags\]](#)
- [BufferState \\* buffer\\_states \[max\\_frags\]](#)
- [ChainClass \\* next](#)
- uint32 [num.fragments](#)
- uint32 [length](#)

```
template<class ChainClass, uint32 max_frags> class BufFragGroup< ChainClass, max_frags >
```

#### 7.10.1 Constructor & Destructor Documentation

```
7.10.1.1 template<class ChainClass , uint32 max_frags> BufFragGroup< ChainClass, max_frags >::BufFragGroup () [inline]
```

References BufFragGroup< ChainClass, max\_frags >::buffer\_states, BufFragGroup< ChainClass, max\_frags >::fragments, and oscl\_memset().

---

**7.10.1.2 template<class ChainClass , uint32 max\_frags> virtual BufFragGroup< ChainClass, max\_frags >::~BufFragGroup () [inline, virtual]**

## 7.10.2 Member Function Documentation

**7.10.2.1 template<class ChainClass , uint32 max\_frags> BufFragStatusClass::status\_t BufFragGroup< ChainClass, max\_frags >::AddFragment (const BufferFragment & *frag*, BufferState \* *in\_buffer\_state*, int32 *location\_offset* = **max\_frags**) [inline, protected]**

References BufFragStatusClass::BFG\_SUCCESS, BufFragGroup< ChainClass, max\_frags >::buffer\_states, BufFragStatusClass::EMPTY\_FRAGMENT, BufFragGroup< ChainClass, max\_frags >::fragments, BufferState::increment\_refcnt(), OsclMemoryFragment::len, BufFragGroup< ChainClass, max\_frags >::length, NULL, BufFragGroup< ChainClass, max\_frags >::num\_fragments, oscl\_memmove(), OsclMemoryFragment::ptr, and BufFragStatusClass::TOO\_MANY\_FRAGS.

**7.10.2.2 template<class ChainClass , uint32 max\_frags> void BufFragGroup< ChainClass, max\_frags >::AppendNext (ChainClass \* *next\_ptr*) [inline]**

References BufFragGroup< ChainClass, max\_frags >::next.

**7.10.2.3 template<class ChainClass , uint32 max\_frags> virtual void BufFragGroup< ChainClass, max\_frags >::Clear () [inline, protected, virtual]**

Reimplemented in [MediaData< ChainClass, max\\_frags, local\\_bufsize >](#).

References BufFragGroup< ChainClass, max\_frags >::buffer\_states, BufferState::decrement\_refcnt(), BufFragGroup< ChainClass, max\_frags >::fragments, BufFragGroup< ChainClass, max\_frags >::length, BufFragGroup< ChainClass, max\_frags >::num\_fragments, and oscl\_memset().

**7.10.2.4 template<class ChainClass , uint32 max\_frags> uint32 BufFragGroup< ChainClass, max\_frags >::GetLength () const [inline]**

References BufFragGroup< ChainClass, max\_frags >::length.

**7.10.2.5 template<class ChainClass , uint32 max\_frags> int32 BufFragGroup< ChainClass, max\_frags >::GetMaxFrags () const [inline]**

**7.10.2.6 template<class ChainClass , uint32 max\_frags> ChainClass\* BufFragGroup< ChainClass, max\_frags >::GetNext () const [inline]**

References BufFragGroup< ChainClass, max\_frags >::next.

**7.10.2.7 template<class ChainClass , uint32 max\_frags> int32 BufFragGroup< ChainClass, max\_frags >::GetNumFrags () const [inline]**

References BufFragGroup< ChainClass, max\_frags >::num\_fragments.

### 7.10.3 Field Documentation

#### 7.10.3.1 template<class ChainClass , uint32 max\_frags> BufferState\* BufFragGroup<ChainClass, max\_frags >::buffer\_states[max\_frags] [protected]

Referenced by BufFragGroup< ChainClass, max\_frags >::AddFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), BufFragGroup< ChainClass, max\_frags >::BufFragGroup(), MediaData< ChainClass, max\_frags, local\_bufsize >::Clear(), BufFragGroup< ChainClass, max\_frags >::Clear(), and BufFragGroup< ChainClass, max\_frags >::GetBufferState().

#### 7.10.3.2 template<class ChainClass , uint32 max\_frags> BufferFragment BufFragGroup<ChainClass, max\_frags >::fragments[max\_frags] [protected]

Referenced by BufFragGroup< ChainClass, max\_frags >::AddFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), BufFragGroup< ChainClass, max\_frags >::BufFragGroup(), MediaData< ChainClass, max\_frags, local\_bufsize >::Clear(), BufFragGroup< ChainClass, max\_frags >::Clear(), BufFragGroup< ChainClass, max\_frags >::GetFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::GetMediaFragment(), and MediaData< ChainClass, max\_frags, local\_bufsize >::GetMediaSize().

#### 7.10.3.3 template<class ChainClass , uint32 max\_frags> uint32 BufFragGroup< ChainClass, max\_frags >::length [protected]

Referenced by BufFragGroup< ChainClass, max\_frags >::AddFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::Clear(), BufFragGroup< ChainClass, max\_frags >::Clear(), BufFragGroup< ChainClass, max\_frags >::GetLength(), and MediaData< ChainClass, max\_frags, local\_bufsize >::GetMediaSize().

#### 7.10.3.4 template<class ChainClass , uint32 max\_frags> ChainClass\* BufFragGroup<ChainClass, max\_frags >::next [protected]

Referenced by BufFragGroup< ChainClass, max\_frags >::AppendNext(), and BufFragGroup< ChainClass, max\_frags >::GetNext().

#### 7.10.3.5 template<class ChainClass , uint32 max\_frags> uint32 BufFragGroup< ChainClass, max\_frags >::num.fragments [protected]

Referenced by BufFragGroup< ChainClass, max\_frags >::AddFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::Clear(), BufFragGroup< ChainClass, max\_frags >::Clear(), BufFragGroup< ChainClass, max\_frags >::GetBufferState(), BufFragGroup< ChainClass, max\_frags >::GetFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::GetMediaFragment(), BufFragGroup< ChainClass, max\_frags >::GetNumFrags(), and MediaData< ChainClass, max\_frags, local\_bufsize >::GetNumMediaFrags().

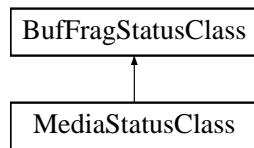
The documentation for this class was generated from the following file:

- [oscl\\_media\\_data.h](#)

## 7.11 BufFragStatusClass Class Reference

```
#include <oscl_media_status.h>
```

Inheritance diagram for BufFragStatusClass:



### Public Types

- enum `status_t` {  
    *BFG\_SUCCESS* = 0, *TOO\_MANY\_FRAGS* = 1, *NOT\_ENOUGH\_SPACE* = 2, *EMPTY\_FRAGMENT* = 3,  
    *NULL\_INPUT* = 4, *FIXED\_FRAG\_LOC\_FULL* = 5, *INTERNAL\_ERROR*, *INVALID\_ID* }

#### 7.11.1 Member Enumeration Documentation

##### 7.11.1.1 enum BufFragStatusClass::status\_t

Enumerator:

*BFG\_SUCCESS*  
*TOO\_MANY\_FRAGS*  
*NOT\_ENOUGH\_SPACE*  
*EMPTY\_FRAGMENT*  
*NULL\_INPUT*  
*FIXED\_FRAG\_LOC\_FULL*  
*INTERNAL\_ERROR*  
*INVALID\_ID*

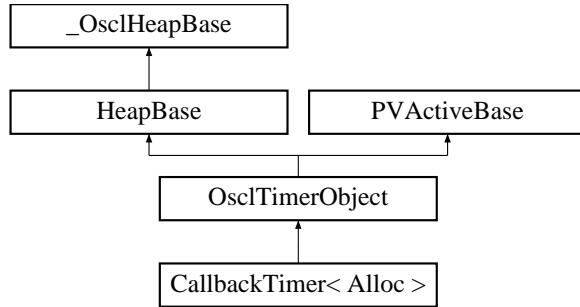
The documentation for this class was generated from the following file:

- `oscl_media_status.h`

## 7.12 CallbackTimer< Alloc > Class Template Reference

```
#include <oscl_timer.h>
```

Inheritance diagram for CallbackTimer< Alloc >:



### Public Member Functions

- [CallbackTimer \(CallbackTimerObserver &aContainer, const char \\*name, int32 aPriority=OsclActiveObject::EPriorityNominal\)](#)
- [~CallbackTimer \(\)](#)
- [void Run \(\)](#)

```
template<class Alloc> class CallbackTimer< Alloc >
```

#### 7.12.1 Constructor & Destructor Documentation

**7.12.1.1 template<class Alloc> CallbackTimer< Alloc >::CallbackTimer (CallbackTimerObserver & aContainer, const char \* name, int32 aPriority = OsclActiveObject::EPriorityNominal) [inline]**

References OsclTimerObject::AddToScheduler().

**7.12.1.2 template<class Alloc> CallbackTimer< Alloc >::~CallbackTimer () [inline]**

References OsclTimerObject::RemoveFromScheduler().

#### 7.12.2 Member Function Documentation

**7.12.2.1 template<class Alloc> void CallbackTimer< Alloc >::Run () [inline, virtual]**

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's WaitForAnyRequest() function completes.

Before calling this active object's [Run\(\)](#) function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request
2. marked this active object's request as complete (i.e. the request is no longer outstanding)

[Run\(\)](#) runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls [ExecError\(\)](#) to handle the leave.

Note that once the active scheduler's Start() function has been called, all user code is run under one of the program's active object's [Run\(\)](#) or [RunError\(\)](#) functions.

Implements [PVActiveBase](#).

References [OSCL\\_REQUEST\\_ERR\\_NONE](#), [OsclTimerObject::Status\(\)](#), and [CallbackTimerObserver::TimerBaseElapsed\(\)](#).

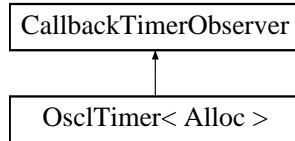
The documentation for this class was generated from the following file:

- [oscl\\_timer.h](#)

## 7.13 CallbackTimerObserver Class Reference

```
#include <oscl_timer.h>
```

Inheritance diagram for CallbackTimerObserver:



### Public Member Functions

- virtual void [TimerBaseElapsed \(\)=0](#)
- virtual [~CallbackTimerObserver \(\)](#)

#### 7.13.1 Constructor & Destructor Documentation

7.13.1.1 virtual [CallbackTimerObserver::~CallbackTimerObserver \(\) \[inline, virtual\]](#)

#### 7.13.2 Member Function Documentation

7.13.2.1 virtual void [CallbackTimerObserver::TimerBaseElapsed \(\) \[pure virtual\]](#)

Implemented in [OsclTimer< Alloc >](#).

Referenced by [CallbackTimer< Alloc >::Run\(\)](#).

The documentation for this class was generated from the following file:

- [oscl\\_timer.h](#)

## 7.14 CFastRep Class Reference

```
#include <oscl_string_rep.h>
```

### Public Member Functions

- [CFastRep \(\)](#)
- OSCL\_IMPORT\_REF void [set\\_w](#) (char \*cp, uint32 len, uint32 maxlen)
- OSCL\_IMPORT\_REF void [set\\_w](#) ([oscl\\_wchar](#) \*cp, uint32 len, uint32 maxlen)
- OSCL\_IMPORT\_REF void [set\\_r](#) (const char \*cp, uint32 len)
- OSCL\_IMPORT\_REF void [set\\_r](#) (const [oscl\\_wchar](#) \*cp, uint32 len)
- OSCL\_IMPORT\_REF void [append](#) (const char \*cp, uint32 len)
- OSCL\_IMPORT\_REF void [append](#) (const [oscl\\_wchar](#) \*cp, uint32 len)

### Data Fields

- uint32 [maxsize](#)
- uint32 [size](#)
- [OsclAny](#) \* [buffer](#)
- bool [writable](#)
- bool [overwrite](#)

### 7.14.1 Detailed Description

For internal use only-- fast string representation

## 7.14.2 Constructor & Destructor Documentation

7.14.2.1 **CFastRep::CFastRep () [inline]**

## 7.14.3 Member Function Documentation

7.14.3.1 **OSCL\_IMPORT\_REF void CFastRep::append (const oscl\_wchar \* *cp*, uint32 *len*)**

7.14.3.2 **OSCL\_IMPORT\_REF void CFastRep::append (const char \* *cp*, uint32 *len*)**

7.14.3.3 **OSCL\_IMPORT\_REF void CFastRep::set\_r (const oscl\_wchar \* *cp*, uint32 *len*)**

7.14.3.4 **OSCL\_IMPORT\_REF void CFastRep::set\_r (const char \* *cp*, uint32 *len*)**

7.14.3.5 **OSCL\_IMPORT\_REF void CFastRep::set\_w (oscl\_wchar \* *cp*, uint32 *len*, uint32 *maxlen*)**

7.14.3.6 **OSCL\_IMPORT\_REF void CFastRep::set\_w (char \* *cp*, uint32 *len*, uint32 *maxlen*)**

## 7.14.4 Field Documentation

7.14.4.1 **OsclAny\* CFastRep::buffer**

7.14.4.2 **uint32 CFastRep::maxsize**

7.14.4.3 **bool CFastRep::overwrite**

7.14.4.4 **uint32 CFastRep::size**

7.14.4.5 **bool CFastRep::writable**

The documentation for this class was generated from the following file:

- [oscl\\_string\\_rep.h](#)

## 7.15 CHeapRep Class Reference

```
#include <oscl_string_rep.h>
```

### Public Member Functions

- [CHearpRep \(\)](#)
- OSCL\_IMPORT\_REF bool [set](#) (uint32, const char \*, [Oscl\\_DefAlloc](#) &)
- OSCL\_IMPORT\_REF bool [set](#) (uint32, const [oscl\\_wchar](#) \*, [Oscl\\_DefAlloc](#) &)
- OSCL\_IMPORT\_REF bool [append](#) (uint32, const char \*, uint32, const char \*, [Oscl\\_DefAlloc](#) &)
- OSCL\_IMPORT\_REF bool [append](#) (uint32, const [oscl\\_wchar](#) \*, uint32, const [oscl\\_wchar](#) \*, [Oscl\\_DefAlloc](#) &)
- OSCL\_IMPORT\_REF void [add\\_ref](#) ()
- OSCL\_IMPORT\_REF void [remove\\_ref](#) ([Oscl\\_DefAlloc](#) &)

### Static Public Member Functions

- static OSCL\_IMPORT\_REF void [set\\_rep](#) ([CHearpRep](#) \*&, [Oscl\\_DefAlloc](#) &, const char \*, uint32)
- static OSCL\_IMPORT\_REF void [set\\_rep](#) ([CHearpRep](#) \*&, [Oscl\\_DefAlloc](#) &, const [oscl\\_wchar](#) \*, uint32)
- static OSCL\_IMPORT\_REF void [append\\_rep](#) ([CHearpRep](#) \*&, [Oscl\\_DefAlloc](#) &, const char \*, uint32)
- static OSCL\_IMPORT\_REF void [append\\_rep](#) ([CHearpRep](#) \*&, [Oscl\\_DefAlloc](#) &, const [oscl\\_wchar](#) \*, uint32)
- static OSCL\_IMPORT\_REF void [assign](#) ([CHearpRep](#) \*&, [CHearpRep](#) \*, [Oscl\\_DefAlloc](#) &)

### Data Fields

- uint32 [refcount](#)
- [OsclAny](#) \* [buffer](#)
- uint32 [maxsize](#)
- uint32 [size](#)

#### 7.15.1 Detailed Description

For internal use only-- heap string representation

## 7.15.2 Constructor & Destructor Documentation

7.15.2.1 **CHeapRep::CHearpRep () [inline]**

## 7.15.3 Member Function Documentation

7.15.3.1 **OSCL\_IMPORT\_REF void CHearpRep::add\_ref ()**

7.15.3.2 **OSCL\_IMPORT\_REF bool CHearpRep::append (uint32, const oscl\_wchar \*, uint32, const oscl\_wchar \*, Oscl\_DefAlloc &)**

7.15.3.3 **OSCL\_IMPORT\_REF bool CHearpRep::append (uint32, const char \*, uint32, const char \*, Oscl\_DefAlloc &)**

7.15.3.4 **static OSCL\_IMPORT\_REF void CHearpRep::append\_rep (CHearpRep \*&, Oscl\_DefAlloc &, const oscl\_wchar \*, uint32) [static]**

7.15.3.5 **static OSCL\_IMPORT\_REF void CHearpRep::append\_rep (CHearpRep \*&, Oscl\_DefAlloc &, const char \*, uint32) [static]**

7.15.3.6 **static OSCL\_IMPORT\_REF void CHearpRep::assign (CHearpRep \*&, CHearpRep \*, Oscl\_DefAlloc &) [static]**

Referenced by OSCL\_wHeapString< Alloc >::operator=(), OSCL\_HeapString< Alloc >::operator=(), OSCL\_HeapString< Alloc >::OSCL\_HeapString(), and OSCL\_wHeapString< Alloc >::OSCL\_wHeapString().

7.15.3.7 **OSCL\_IMPORT\_REF void CHearpRep::remove\_ref (Oscl\_DefAlloc &)**

Referenced by OSCL\_HeapString< Alloc >::~OSCL\_HeapString(), and OSCL\_wHeapString< Alloc >::~OSCL\_wHeapString().

7.15.3.8 **OSCL\_IMPORT\_REF bool CHearpRep::set (uint32, const oscl\_wchar \*, Oscl\_DefAlloc &)**

7.15.3.9 **OSCL\_IMPORT\_REF bool CHearpRep::set (uint32, const char \*, Oscl\_DefAlloc &)**

7.15.3.10 **static OSCL\_IMPORT\_REF void CHearpRep::set\_rep (CHearpRep \*&, Oscl\_DefAlloc &, const oscl\_wchar \*, uint32) [static]**

7.15.3.11 **static OSCL\_IMPORT\_REF void CHearpRep::set\_rep (CHearpRep \*&, Oscl\_DefAlloc &, const char \*, uint32) [static]**

## 7.15.4 Field Documentation

7.15.4.1 **OsclAny\* CHearpRep::buffer**

Referenced by OSCL\_wHeapString< Alloc >::get\_cstr(), OSCL\_HeapString< Alloc >::get\_cstr(), OSCL\_wHeapString< Alloc >::get\_str(), and OSCL\_HeapString< Alloc >::get\_str().

#### 7.15.4.2 uint32 CHeapRep::maxsize

Referenced by OSCL\_wHeapString< Alloc >::get\_maxsize(), and OSCL\_HeapString< Alloc >::get\_maxsize().

#### 7.15.4.3 uint32 CHeapRep::refcount

#### 7.15.4.4 uint32 CHeapRep::size

Referenced by OSCL\_wHeapString< Alloc >::get\_size(), OSCL\_HeapString< Alloc >::get\_size(), OSCL\_wHeapString< Alloc >::set(), and OSCL\_HeapString< Alloc >::set().

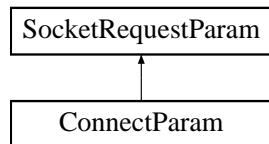
The documentation for this class was generated from the following file:

- [oscl\\_string\\_rep.h](#)

## 7.16 ConnectParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for ConnectParam:



### Public Member Functions

- [ConnectParam \(OsclNetworkAddress &anAddr\)](#)

### Data Fields

- [OsclNetworkAddress iAddr](#)

#### 7.16.1 Constructor & Destructor Documentation

**7.16.1.1 ConnectParam::ConnectParam (OsclNetworkAddress & *anAddr*) [inline]**

#### 7.16.2 Field Documentation

**7.16.2.1 OsclNetworkAddress ConnectParam::iAddr**

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.17 Oscl\_TagTree< T, Alloc >::const\_iterator Struct Reference

```
#include <oscl_tagtree.h>
```

### Public Types

- `typedef const node_type & reference`
- `typedef const node_type * pointer`
- `typedef map_type::const_iterator mapiter`
- `typedef const_iterator self`

### Public Member Functions

- `const_iterator()`
- `const_iterator(mapiter x)`
- `const_iterator(const const_iterator &it)`
- `reference operator*() const`
- `pointer operator->() const`
- `bool operator==(const self &x)`
- `bool operator!=(const self &x)`
- `self & operator++()`
- `self operator++(int)`
- `self & operator--()`
- `self operator--(int)`

### Data Fields

- `mapiter mapit`

---

`template<class T, class Alloc> struct Oscl_TagTree< T, Alloc >::const_iterator`

### 7.17.1 Member Typedef Documentation

- 7.17.1.1 `template<class T, class Alloc> typedef map_type::const_iterator Oscl_TagTree< T, Alloc >::const_iterator::mapiter`
- 7.17.1.2 `template<class T, class Alloc> typedef const node_type* Oscl_TagTree< T, Alloc >::const_iterator::pointer`
- 7.17.1.3 `template<class T, class Alloc> typedef const node_type& Oscl_TagTree< T, Alloc >::const_iterator::reference`
- 7.17.1.4 `template<class T, class Alloc> typedef const_iterator Oscl_TagTree< T, Alloc >::const_iterator::self`

### 7.17.2 Constructor & Destructor Documentation

- 7.17.2.1 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::const_iterator::const_iterator() [inline]`
- 7.17.2.2 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::const_iterator::const_iterator(mapiter x) [inline]`

References `Oscl_TagTree< T, Alloc >::const_iterator::mapit`.

- 7.17.2.3 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::const_iterator::const_iterator(const const_iterator & it) [inline]`

References `Oscl_TagTree< T, Alloc >::const_iterator::mapit`.

### 7.17.3 Member Function Documentation

- 7.17.3.1 `template<class T, class Alloc> bool Oscl_TagTree< T, Alloc >::const_iterator::operator!= (const self & x) [inline]`

References `Oscl_TagTree< T, Alloc >::const_iterator::mapit`.

- 7.17.3.2 `template<class T, class Alloc> reference Oscl_TagTree< T, Alloc >::const_iterator::operator* () const [inline]`

Referenced by `Oscl_TagTree< T, Alloc >::const_iterator::operator->()`.

- 7.17.3.3 `template<class T, class Alloc> self Oscl_TagTree< T, Alloc >::const_iterator::operator++ (int) [inline]`

- 7.17.3.4 `template<class T, class Alloc> self& Oscl_TagTree< T, Alloc >::const_iterator::operator++ () [inline]`

References `Oscl_TagTree< T, Alloc >::const_iterator::mapit`.

7.17.3.5 `template<class T, class Alloc> self Oscl_TagTree< T, Alloc >::const_iterator::operator--(int) [inline]`

7.17.3.6 `template<class T, class Alloc> self& Oscl_TagTree< T, Alloc >::const_iterator::operator--() [inline]`

References Oscl\_TagTree< T, Alloc >::const\_iterator::mapit.

7.17.3.7 `template<class T, class Alloc> pointer Oscl_TagTree< T, Alloc >::const_iterator::operator->() const [inline]`

References Oscl\_TagTree< T, Alloc >::const\_iterator::operator\*().

7.17.3.8 `template<class T, class Alloc> bool Oscl_TagTree< T, Alloc >::const_iterator::operator==(const self & x) [inline]`

References Oscl\_TagTree< T, Alloc >::const\_iterator::mapit.

## 7.17.4 Field Documentation

7.17.4.1 `template<class T, class Alloc> mapiter Oscl_TagTree< T, Alloc >::const_iterator::mapit`

Referenced by Oscl\_TagTree< T, Alloc >::const\_iterator::const\_iterator(), Oscl\_TagTree< T, Alloc >::const\_iterator::operator!=(), Oscl\_TagTree< T, Alloc >::const\_iterator::operator++(), Oscl\_TagTree< T, Alloc >::const\_iterator::operator--(), and Oscl\_TagTree< T, Alloc >::const\_iterator::operator==( ).

The documentation for this struct was generated from the following file:

- [oscl\\_tagtree.h](#)

## 7.18 CStackRep Class Reference

```
#include <oscl_string_rep.h>
```

### Public Member Functions

- [CStackRep \(\)](#)
- [OSCL\\_IMPORT\\_REF void set \(const char \\*cp, uint32 len\)](#)
- [OSCL\\_IMPORT\\_REF void set \(const oscl\\_wchar \\*cp, uint32 len\)](#)
- [OSCL\\_IMPORT\\_REF void append \(const char \\*cp, uint32 len\)](#)
- [OSCL\\_IMPORT\\_REF void append \(const oscl\\_wchar \\*cp, uint32 len\)](#)

### Data Fields

- [uint32 maxsize](#)
- [uint32 size](#)
- [OsclAny \\* buffer](#)

#### 7.18.1 Detailed Description

For internal use only-- stack string representation

#### 7.18.2 Constructor & Destructor Documentation

##### 7.18.2.1 CStackRep::CStackRep () [inline]

#### 7.18.3 Member Function Documentation

##### 7.18.3.1 OSCL\_IMPORT\_REF void CStackRep::append (const oscl\_wchar \* cp, uint32 len)

##### 7.18.3.2 OSCL\_IMPORT\_REF void CStackRep::append (const char \* cp, uint32 len)

##### 7.18.3.3 OSCL\_IMPORT\_REF void CStackRep::set (const oscl\_wchar \* cp, uint32 len)

##### 7.18.3.4 OSCL\_IMPORT\_REF void CStackRep::set (const char \* cp, uint32 len)

Referenced by [OSCL\\_wStackString< MaxBufSize >::set\(\)](#), and [OSCL\\_StackString< MaxBufSize >::set\(\)](#).

#### 7.18.4 Field Documentation

##### 7.18.4.1 OsclAny\* CStackRep::buffer

Referenced by [OSCL\\_wStackString< MaxBufSize >::get\\_cstr\(\)](#), [OSCL\\_StackString< MaxBufSize >::get\\_cstr\(\)](#), [OSCL\\_wStackString< MaxBufSize >::get\\_str\(\)](#), and [OSCL\\_StackString< MaxBufSize >::get\\_str\(\)](#).

#### 7.18.4.2 uint32 CStackRep::maxsize

Referenced by OSCL\_wStackString< MaxBufSize >::get\_maxsize(), and OSCL\_StackString< MaxBufSize >::get\_maxsize().

#### 7.18.4.3 uint32 CStackRep::size

Referenced by OSCL\_wStackString< MaxBufSize >::get\_size(), OSCL\_StackString< MaxBufSize >::get\_size(), OSCL\_wStackString< MaxBufSize >::set(), and OSCL\_StackString< MaxBufSize >::set().

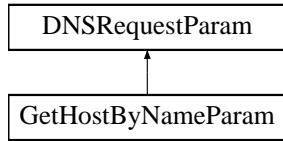
The documentation for this class was generated from the following file:

- [oscl\\_string\\_rep.h](#)

## 7.19 DNSRequestParam Class Reference

```
#include <oscl_dns_param.h>
```

Inheritance diagram for DNSRequestParam:



### Public Member Functions

- virtual [~DNSRequestParam \(\)](#)
- void [RemoveRef \(\)](#)
- virtual void [Destroy \(\)=0](#)

### Data Fields

- [TPVDNSFxN iFxn](#)
- [OsclDNSRequest \\* iDNSRequest](#)

### Protected Member Functions

- [DNSRequestParam \(TPVDNSFxN aFxn\)](#)

### Protected Attributes

- uint32 [iRefCount](#)

#### 7.19.1 Constructor & Destructor Documentation

**7.19.1.1** virtual [DNSRequestParam::~DNSRequestParam \(\) \[inline, virtual\]](#)

**7.19.1.2** [DNSRequestParam::DNSRequestParam \(TPVDNSFxN aFxn\) \[protected\]](#)

#### 7.19.2 Member Function Documentation

**7.19.2.1** virtual void [DNSRequestParam::Destroy \(\) \[pure virtual\]](#)

Implemented in [GetHostByNameParam](#).

**7.19.2.2 void DNSRequestParam::RemoveRef ()****7.19.3 Field Documentation****7.19.3.1 OsclDNSRequest\* DNSRequestParam::iDNSRequest****7.19.3.2 TPVDNSFxn DNSRequestParam::iFxn****7.19.3.3 uint32 DNSRequestParam::iRefCount [protected]**

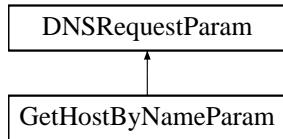
The documentation for this class was generated from the following file:

- [oscl\\_dns\\_param.h](#)

## 7.20 GetHostNameParam Class Reference

```
#include <oscl_dns_param.h>
```

Inheritance diagram for GetHostNameParam:



### Public Types

- enum { `addressListCapacity` = 10 }

### Public Member Functions

- void `Destroy` ()
- `~GetHostNameParam` ()
- void `PersistHostAddress` (const `OsclNetworkAddress` &`addr`)
- bool `canPersistMoreHostAddresses` ()

### Static Public Member Functions

- static `GetHostNameParam` \* `Create` (const char \*`name`, `OsclNetworkAddress` \*&`addr`, `Oscl_-Vector< OsclNetworkAddress, OsclMemAllocator >` \*`aAddressList`)

### Data Fields

- `char * iName`
- `OsclNetworkAddress * iAddr`
- `Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * iAddressList`

#### 7.20.1 Member Enumeration Documentation

##### 7.20.1.1 anonymous enum

Enumerator:

*addressListCapacity*

## 7.20.2 Constructor & Destructor Documentation

7.20.2.1 `GetHostNameParam::~GetHostNameParam ()`

## 7.20.3 Member Function Documentation

7.20.3.1 `bool GetHostNameParam::canPersistMoreHostAddresses () [inline]`

References `Oscl_Vector_Base::capacity()`, `iAddr`, `iAddressList`, `OsclNetworkAddress::ipAddr`, `OSCL_STATIC_CAST`, `oscl_strcmp()`, `Oscl_Vector_Base::size()`, and `OsclNameString<__len>::Str()`.

7.20.3.2 `static GetHostNameParam* GetHostNameParam::Create (const char * name, OsclNetworkAddress *& addr, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * aAddressList) [static]`

7.20.3.3 `void GetHostNameParam::Destroy () [virtual]`

Implements [DNSRequestParam](#).

7.20.3.4 `void GetHostNameParam::PersistHostAddress (const OsclNetworkAddress & addr) [inline]`

References `Oscl_Vector_Base::capacity()`, `iAddr`, `iAddressList`, `OsclNetworkAddress::ipAddr`, `OSCL_STATIC_CAST`, `oscl_strcmp()`, `Oscl_Vector< T, Alloc >::push_back()`, `OsclNameString<__len>::Set()`, `Oscl_Vector_Base::size()`, and `OsclNameString<__len>::Str()`.

## 7.20.4 Field Documentation

7.20.4.1 `OsclNetworkAddress* GetHostNameParam::iAddr`

Referenced by `canPersistMoreHostAddresses()`, and `PersistHostAddress()`.

7.20.4.2 `Oscl_Vector< OsclNetworkAddress, OsclMemAllocator >* GetHostNameParam::iAddressList`

Referenced by `canPersistMoreHostAddresses()`, and `PersistHostAddress()`.

7.20.4.3 `char* GetHostNameParam::iName`

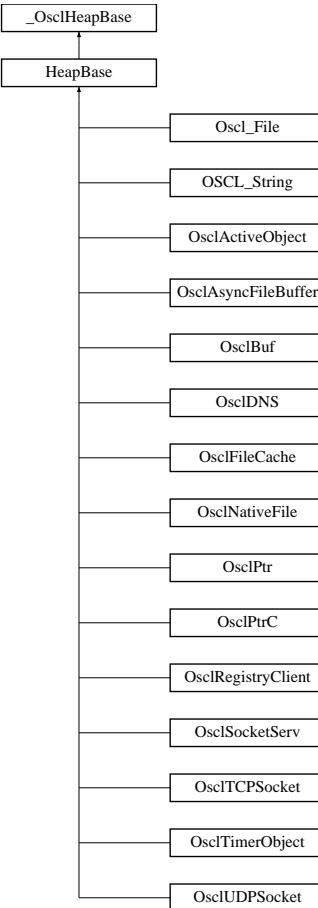
The documentation for this class was generated from the following file:

- [oscl\\_dns\\_param.h](#)

## 7.21 HeapBase Class Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for HeapBase:



### Public Member Functions

- [HeapBase \(\)](#)
- virtual [~HeapBase \(\)](#)

### Static Public Member Functions

- static void \* [operator new \(size\\_t aSize\)](#)
- static void \* [operator new\[\] \(size\\_t aSize\)](#)
- static void \* [operator new\[\] \(size\\_t aSize, const char \\*aFile=NULL, const int aLine=0\)](#)
- static void \* [operator new \(size\\_t aSize, void \\*aPtr\)](#)
- static void [operator delete \(void \\*aPtr\)](#)
- static void [operator delete\[\] \(void \\*aPtr\)](#)

### 7.21.1 Detailed Description

[HeapBase](#) is the base class for all classes that allocates memory.

[HeapBase](#) has overloaded new and delete operators.

Derived from [\\_OsclHeapBase](#) providing CBase\* alike pointer and virtual destructor for cleanupstack to Push and Pop for cleanup when leave occurs.

[HeapBase](#) has a virtual destructor which calls the destructor of all the derived classes.

### 7.21.2 Constructor & Destructor Documentation

**7.21.2.1 `HeapBase::HeapBase () [inline]`**

**7.21.2.2 `virtual HeapBase::~HeapBase () [inline, virtual]`**

### 7.21.3 Member Function Documentation

**7.21.3.1 `static void HeapBase::operator delete (void * aPtr) [inline, static]`**

References [\\_oscl\\_free\(\)](#).

**7.21.3.2 `static void HeapBase::operator delete[] (void * aPtr) [inline, static]`**

References [\\_oscl\\_free\(\)](#).

**7.21.3.3 `static void* HeapBase::operator new (size_t aSize, void * aPtr) [inline, static]`**

**7.21.3.4 `static void* HeapBase::operator new (size_t aSize) [inline, static]`**

References [\\_oscl\\_default\\_new\(\)](#).

**7.21.3.5 `static void* HeapBase::operator new[] (size_t aSize, const char * aFile = NULL, const int aLine = 0) [inline, static]`**

References [\\_oscl\\_default\\_new\(\)](#), and [OSCL\\_UNUSED\\_ARG](#).

**7.21.3.6 `static void* HeapBase::operator new[] (size_t aSize) [inline, static]`**

References [\\_oscl\\_default\\_new\(\)](#).

The documentation for this class was generated from the following file:

- [oscl\\_mem.h](#)

## 7.22 internalLeave Class Reference

```
#include <oscl_error_imp_cppexceptions.h>
```

### Data Fields

- int a

#### 7.22.1 Field Documentation

##### 7.22.1.1 int internalLeave::a

The documentation for this class was generated from the following file:

- [oscl\\_error\\_imp\\_cppexceptions.h](#)

## 7.23 Oscl\_TagTree< T, Alloc >::iterator Struct Reference

```
#include <oscl_tagtree.h>
```

### Public Types

- `typedef node_type & reference`
- `typedef node_type * pointer`
- `typedef map_type::iterator mapiter`
- `typedef iterator self`

### Public Member Functions

- `iterator ()`
- `iterator (mapiter x)`
- `iterator (const iterator &it)`
- `reference operator* () const`
- `pointer operator-> () const`
- `bool operator== (const self &x)`
- `bool operator!= (const self &x)`
- `self & operator++ ()`
- `self operator++ (int)`
- `self & operator-- ()`
- `self operator-- (int)`

### Data Fields

- `mapiter mapit`

---

`template<class T, class Alloc> struct Oscl_TagTree< T, Alloc >::iterator`

### 7.23.1 Member Typedef Documentation

- 7.23.1.1 `template<class T, class Alloc> typedef map_type::iterator Oscl_TagTree< T, Alloc >::iterator::mapiter`
- 7.23.1.2 `template<class T, class Alloc> typedef node_type* Oscl_TagTree< T, Alloc >::iterator::pointer`
- 7.23.1.3 `template<class T, class Alloc> typedef node_type& Oscl_TagTree< T, Alloc >::iterator::reference`
- 7.23.1.4 `template<class T, class Alloc> typedef iterator Oscl_TagTree< T, Alloc >::iterator::self`

### 7.23.2 Constructor & Destructor Documentation

- 7.23.2.1 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::iterator::iterator () [inline]`
- 7.23.2.2 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::iterator::iterator (mapiter x) [inline]`

References `Oscl_TagTree< T, Alloc >::iterator::mapit`.

- 7.23.2.3 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::iterator::iterator (const iterator & it) [inline]`

References `Oscl_TagTree< T, Alloc >::iterator::mapit`.

### 7.23.3 Member Function Documentation

- 7.23.3.1 `template<class T, class Alloc> bool Oscl_TagTree< T, Alloc >::iterator::operator!= (const self & x) [inline]`

References `Oscl_TagTree< T, Alloc >::iterator::mapit`.

- 7.23.3.2 `template<class T, class Alloc> reference Oscl_TagTree< T, Alloc >::iterator::operator* () const [inline]`

Referenced by `Oscl_TagTree< T, Alloc >::iterator::operator->()`.

- 7.23.3.3 `template<class T, class Alloc> self Oscl_TagTree< T, Alloc >::iterator::operator++ (int) [inline]`

- 7.23.3.4 `template<class T, class Alloc> self& Oscl_TagTree< T, Alloc >::iterator::operator++ 0 [inline]`

References `Oscl_TagTree< T, Alloc >::iterator::mapit`.

7.23.3.5 **template<class T, class Alloc> self Oscl\_TagTree< T, Alloc >::iterator::operator-- (int) [inline]**

7.23.3.6 **template<class T, class Alloc> self& Oscl\_TagTree< T, Alloc >::iterator::operator-- () [inline]**

References Oscl\_TagTree< T, Alloc >::iterator::mapit.

7.23.3.7 **template<class T, class Alloc> pointer Oscl\_TagTree< T, Alloc >::iterator::operator-> () const [inline]**

References Oscl\_TagTree< T, Alloc >::iterator::operator\*().

7.23.3.8 **template<class T, class Alloc> bool Oscl\_TagTree< T, Alloc >::iterator::operator==(const self & x) [inline]**

References Oscl\_TagTree< T, Alloc >::iterator::mapit.

## 7.23.4 Field Documentation

7.23.4.1 **template<class T, class Alloc> mapiter Oscl\_TagTree< T, Alloc >::iterator::mapit**

Referenced by Oscl\_TagTree< T, Alloc >::iterator::iterator(), Oscl\_TagTree< T, Alloc >::iterator::operator!=(), Oscl\_TagTree< T, Alloc >::iterator::operator++(), Oscl\_TagTree< T, Alloc >::iterator::operator--(), and Oscl\_TagTree< T, Alloc >::iterator::operator==( ).

The documentation for this struct was generated from the following file:

- [oscl\\_tagtree.h](#)

## 7.24 LinkedListElement< LLClass > Class Template Reference

```
#include <oscl_linked_list.h>
```

### Public Member Functions

- [LinkedListElement \(LLClass in\\_data\)](#)

### Data Fields

- [LinkedListElement< LLClass > \\* next](#)
- [LLClass data](#)

#### 7.24.1 Detailed Description

**template<class LLClass> class LinkedListElement< LLClass >**

Linked List Element Class

#### 7.24.2 Constructor & Destructor Documentation

**7.24.2.1 template<class LLClass> LinkedListElement< LLClass >::LinkedListElement (LLClass in\_data) [inline]**

References [LinkedListElement< LLClass >::data](#), [LinkedListElement< LLClass >::next](#), and [NULL](#).

#### 7.24.3 Field Documentation

**7.24.3.1 template<class LLClass> LLClass LinkedListElement< LLClass >::data**

Referenced by [LinkedListElement< LLClass >::LinkedListElement\(\)](#).

**7.24.3.2 template<class LLClass> LinkedListElement<LLClass>\*> LinkedElement< LLClass >::next**

Referenced by [LinkedListElement< LLClass >::LinkedListElement\(\)](#).

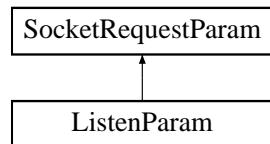
The documentation for this class was generated from the following file:

- [oscl\\_linked\\_list.h](#)

## 7.25 ListenParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for ListenParam:



### Public Member Functions

- [ListenParam \(uint32 aSize\)](#)

### Data Fields

- uint32 [iQSize](#)

#### 7.25.1 Constructor & Destructor Documentation

7.25.1.1 [ListenParam::ListenParam \(uint32 aSize\) \[inline\]](#)

#### 7.25.2 Field Documentation

7.25.2.1 [uint32 ListenParam::iQSize](#)

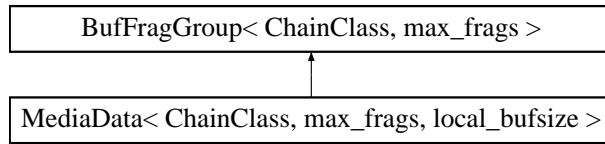
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.26 `MediaData< ChainClass, max_frags, local_bufsize >` Class Template Reference

```
#include <oscl_media_data.h>
```

Inheritance diagram for `MediaData< ChainClass, max_frags, local_bufsize >`:



### Public Member Functions

- `MediaData ()`
- virtual `~MediaData ()`
- `uint32 GetLocalBufsize () const`
- `MediaTimestamp GetTimestamp () const`
- `void SetTimestamp (MediaTimestamp in_timestamp)`
- `uint32 GetAvailableBufferSize () const`
- `MediaStatusClass::status_t GetLocalFragment (BufferFragment &fragment)`
- virtual void `Clear ()`
- `bool IsLocalData (const OsclMemoryFragment &frag) const`
- `int GetMediaSize () const`
- `BufferFragment * GetMediaFragment (const uint32 idx)`
- `uint32 GetNumMediaFrags (const uint32 idx) const`

### Protected Member Functions

- `MediaStatusClass::status_t AddLocalFragment (const BufferFragment &frag, int32 location_offset)`

### Protected Attributes

- `MediaTimestamp timestamp`
- `uint8 localbuf [local_bufsize]`
- `uint32 available_localbuf`
- `int num_reserved_fragments`

template<class ChainClass, uint32 max\_frags, uint32 local\_bufsize> class MediaData< ChainClass, max\_frags, local\_bufsize >

### 7.26.1 Constructor & Destructor Documentation

7.26.1.1 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> MediaData< ChainClass, max\_frags, local\_bufsize >::MediaData () [inline]

7.26.1.2 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> virtual MediaData< ChainClass, max\_frags, local\_bufsize >::~MediaData () [inline, virtual]

### 7.26.2 Member Function Documentation

7.26.2.1 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> MediaStatusClass::status\_t MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment (const BufferFragment &*frag*, int32 *location\_offset*) [inline, protected]

References MediaData< ChainClass, max\_frags, local\_bufsize >::available\_localbuf, BufFragStatusClass::BFG\_SUCCESS, BufFragGroup< ChainClass, max\_frags >::buffer\_states, BufFragStatusClass::EMPTY\_FRAGMENT, BufFragGroup< ChainClass, max\_frags >::fragments, OsclMemoryFragment::len, BufFragGroup< ChainClass, max\_frags >::length, MediaData< ChainClass, max\_frags, local\_bufsize >::localbuf, BufFragStatusClass::NOT\_ENOUGH\_SPACE, NULL, BufFragGroup< ChainClass, max\_frags >::num.fragments, oscl\_memcpy(), oscl\_memmove(), OsclMemoryFragment::ptr, and BufFragStatusClass::TOO\_MANY\_FRAGS.

7.26.2.2 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> virtual void MediaData< ChainClass, max\_frags, local\_bufsize >::Clear () [inline, virtual]

Reimplemented from [BufFragGroup< ChainClass, max\\_frags >](#).

References MediaData< ChainClass, max\_frags, local\_bufsize >::available\_localbuf, BufFragGroup< ChainClass, max\_frags >::buffer\_states, BufferState::decrement\_refcnt(), BufFragGroup< ChainClass, max\_frags >::fragments, BufFragGroup< ChainClass, max\_frags >::length, BufFragGroup< ChainClass, max\_frags >::num.fragments, and oscl\_memset().

7.26.2.3 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> uint32 MediaData< ChainClass, max\_frags, local\_bufsize >::GetAvailableBufferSize () const [inline]

References MediaData< ChainClass, max\_frags, local\_bufsize >::available\_localbuf.

7.26.2.4 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> uint32 MediaData< ChainClass, max\_frags, local\_bufsize >::GetLocalBufsize () const [inline]

7.26.2.5 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> MediaStatusClass::status\_t MediaData< ChainClass, max\_frags, local\_bufsize >::GetLocalFragment (BufferFragment &*fragment*) [inline]

References MediaData< ChainClass, max\_frags, local\_bufsize >::available\_localbuf, BufFragStatusClass::BFG\_SUCCESS, OsclMemoryFragment::len, MediaData< ChainClass, max\_frags,

local\_bufsize >::localbuf, BufFragStatusClass::NOT\_ENOUGH\_SPACE, NULL, and OsclMemoryFragment::ptr.

**7.26.2.6 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> BufferFragment\* MediaData< ChainClass, max\_frags, local\_bufsize >::GetMediaFragment (const uint32 *idx*) [inline]**

References BufFragGroup< ChainClass, max\_frags >::fragments, NULL, BufFragGroup< ChainClass, max\_frags >::num\_fragments, and MediaData< ChainClass, max\_frags, local\_bufsize >::num\_reserved\_fragments.

**7.26.2.7 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> int MediaData< ChainClass, max\_frags, local\_bufsize >::GetMediaSize () const [inline]**

References BufFragGroup< ChainClass, max\_frags >::fragments, BufFragGroup< ChainClass, max\_frags >::length, and MediaData< ChainClass, max\_frags, local\_bufsize >::num\_reserved\_fragments.

**7.26.2.8 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> uint32 MediaData< ChainClass, max\_frags, local\_bufsize >::GetNumMediaFrags (const uint32 *idx*) const [inline]**

References BufFragGroup< ChainClass, max\_frags >::num\_fragments, and MediaData< ChainClass, max\_frags, local\_bufsize >::num\_reserved\_fragments.

**7.26.2.9 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> MediaTimestamp MediaData< ChainClass, max\_frags, local\_bufsize >::GetTimestamp () const [inline]**

References MediaData< ChainClass, max\_frags, local\_bufsize >::timestamp.

**7.26.2.10 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> bool MediaData< ChainClass, max\_frags, local\_bufsize >::IsLocalData (const OsclMemoryFragment & *frag*) const [inline]**

References OsclMemoryFragment::len, MediaData< ChainClass, max\_frags, local\_bufsize >::localbuf, NULL, and OsclMemoryFragment::ptr.

**7.26.2.11 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> void MediaData< ChainClass, max\_frags, local\_bufsize >::SetTimestamp (MediaTimestamp *in\_timestamp*) [inline]**

References MediaData< ChainClass, max\_frags, local\_bufsize >::timestamp.

### 7.26.3 Field Documentation

#### 7.26.3.1 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> uint32 MediaData<ChainClass, max\_frags, local\_bufsize >::available\_localbuf [protected]

Referenced by MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::Clear(), MediaData< ChainClass, max\_frags, local\_bufsize >::GetAvailableBufferSize(), and MediaData< ChainClass, max\_frags, local\_bufsize >::GetLocalFragment().

#### 7.26.3.2 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> uint8 MediaData<ChainClass, max\_frags, local\_bufsize >::localbuf[local\_bufsize] [protected]

Referenced by MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::GetLocalFragment(), and MediaData< ChainClass, max\_frags, local\_bufsize >::IsLocalData().

#### 7.26.3.3 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> int MediaData<ChainClass, max\_frags, local\_bufsize >::num\_reserved.fragments [protected]

Referenced by MediaData< ChainClass, max\_frags, local\_bufsize >::GetMediaFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::GetMediaSize(), and MediaData< ChainClass, max\_frags, local\_bufsize >::GetNumMediaFrags().

#### 7.26.3.4 template<class ChainClass , uint32 max\_frags, uint32 local\_bufsize> MediaTimestamp MediaData< ChainClass, max\_frags, local\_bufsize >::timestamp [protected]

Referenced by MediaData< ChainClass, max\_frags, local\_bufsize >::GetTimestamp(), and MediaData< ChainClass, max\_frags, local\_bufsize >::SetTimestamp().

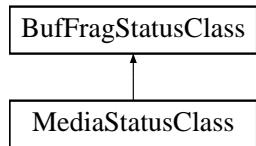
The documentation for this class was generated from the following file:

- [oscl\\_media\\_data.h](#)

## 7.27 MediaStatusClass Class Reference

```
#include <oscl_media_status.h>
```

Inheritance diagram for MediaStatusClass:



The documentation for this class was generated from the following file:

- [oscl\\_media\\_status.h](#)

## 7.28 MemAllocator< T > Class Template Reference

```
#include <oscl_media_data.h>
```

### Public Types

- `typedef T * pointer`

### Public Member Functions

- `virtual pointer allocate (void *hint=0, const int num_reserved_frags=1)=0`
- `virtual void deallocate (pointer p)=0`
- `virtual ~MemAllocator ()`

```
template<class T> class MemAllocator< T >
```

#### 7.28.1 Member Typedef Documentation

##### 7.28.1.1 template<class T > `typedef T* MemAllocator< T >::pointer`

#### 7.28.2 Constructor & Destructor Documentation

##### 7.28.2.1 template<class T > `virtual MemAllocator< T >::~MemAllocator () [inline, virtual]`

#### 7.28.3 Member Function Documentation

##### 7.28.3.1 template<class T > `virtual pointer MemAllocator< T >::allocate (void * hint = 0, const int num_reserved_frags = 1) [pure virtual]`

##### 7.28.3.2 template<class T > `virtual void MemAllocator< T >::deallocate (pointer p) [pure virtual]`

The documentation for this class was generated from the following file:

- `oscl_media_data.h`

## 7.29 OsclMemPoolResizableAllocator::MemPoolBlockInfo Struct Reference

```
#include <oscl_mem_mempool.h>
```

### Data Fields

- uint32 [iBlockPrefence](#)
- [MemPoolBlockInfo](#) \* [iNextFreeBlock](#)
- [MemPoolBlockInfo](#) \* [iPrevFreeBlock](#)
- uint32 [iBlockSize](#)
- uint8 \* [iBlockBuffer](#)
- [MemPoolBufferInfo](#) \* [iParentBuffer](#)
- uint32 [iBlockPostFence](#)

#### 7.29.1 Field Documentation

7.29.1.1 uint8\* [OsclMemPoolResizableAllocator::MemPoolBlockInfo::iBlockBuffer](#)

7.29.1.2 uint32 [OsclMemPoolResizableAllocator::MemPoolBlockInfo::iBlockPostFence](#)

7.29.1.3 uint32 [OsclMemPoolResizableAllocator::MemPoolBlockInfo::iBlockPrefence](#)

7.29.1.4 uint32 [OsclMemPoolResizableAllocator::MemPoolBlockInfo::iBlockSize](#)

7.29.1.5 [MemPoolBlockInfo](#)\* [OsclMemPoolResizableAllocator::MemPoolBlockInfo::iNextFreeBlock](#)

7.29.1.6 [MemPoolBufferInfo](#)\* [OsclMemPoolResizableAllocator::MemPoolBlockInfo::iParentBuffer](#)

7.29.1.7 [MemPoolBlockInfo](#)\* [OsclMemPoolResizableAllocator::MemPoolBlockInfo::iPrevFreeBlock](#)

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_mempool.h](#)

## 7.30 OsclMemPoolResizableAllocator::MemPoolBufferInfo Struct Reference

```
#include <oscl_mem_mempool.h>
```

### Data Fields

- uint32 [iBufferPreFence](#)
- [OsclAny](#) \* [iStartAddr](#)
- [OsclAny](#) \* [iEndAddr](#)
- uint32 [iBufferSize](#)
- uint32 [iNumOutstanding](#)
- [MemPoolBlockInfo](#) \* [iNextFreeBlock](#)
- uint32 [iAllocatedSz](#)
- uint32 [iBufferPostFence](#)

#### 7.30.1 Field Documentation

7.30.1.1 uint32 [OsclMemPoolResizableAllocator::MemPoolBufferInfo::iAllocatedSz](#)

7.30.1.2 uint32 [OsclMemPoolResizableAllocator::MemPoolBufferInfo::iBufferPostFence](#)

7.30.1.3 uint32 [OsclMemPoolResizableAllocator::MemPoolBufferInfo::iBufferPreFence](#)

7.30.1.4 uint32 [OsclMemPoolResizableAllocator::MemPoolBufferInfo::iBufferSize](#)

7.30.1.5 [OsclAny\\*](#) [OsclMemPoolResizableAllocator::MemPoolBufferInfo::iEndAddr](#)

7.30.1.6 [MemPoolBlockInfo\\*](#) [OsclMemPoolResizableAllocator::MemPoolBufferInfo::iNextFreeBlock](#)

7.30.1.7 uint32 [OsclMemPoolResizableAllocator::MemPoolBufferInfo::iNumOutstanding](#)

7.30.1.8 [OsclAny\\*](#) [OsclMemPoolResizableAllocator::MemPoolBufferInfo::iStartAddr](#)

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_mempool.h](#)

## 7.31 MM\_AllocBlockFence Struct Reference

```
#include <oscl_mem_audit_internals.h>
```

### Public Member Functions

- [MM\\_AllocBlockFence \(\)](#)
- [void fill\\_fence \(\)](#)
- [bool check\\_fence \(\)](#)

### Data Fields

- [uint8 pad \[COMPUTE\\_MEM\\_ALIGN\\_SIZE\(sizeof\(MM\\_AllocBlockHdr\), MIN\\_FENCE\\_SIZE, MEM\\_ALIGN\\_SIZE\)\]](#)

#### 7.31.1 Constructor & Destructor Documentation

##### 7.31.1.1 [MM\\_AllocBlockFence::MM\\_AllocBlockFence \(\) \[inline\]](#)

References [fill\\_fence\(\)](#).

#### 7.31.2 Member Function Documentation

##### 7.31.2.1 [bool MM\\_AllocBlockFence::check\\_fence \(\) \[inline\]](#)

References [FENCE\\_PATTERN](#), and [pad](#).

##### 7.31.2.2 [void MM\\_AllocBlockFence::fill\\_fence \(\) \[inline\]](#)

References [FENCE\\_PATTERN](#), [oscl\\_memset\(\)](#), and [pad](#).

Referenced by [MM\\_AllocBlockFence\(\)](#).

#### 7.31.3 Field Documentation

##### 7.31.3.1 [uint8 MM\\_AllocBlockFence::pad\[COMPUTE\\_MEM\\_ALIGN\\_SIZE\(sizeof\(MM\\_AllocBlockHdr\), MIN\\_FENCE\\_SIZE, MEM\\_ALIGN\\_SIZE\)\]](#)

Referenced by [check\\_fence\(\)](#), and [fill\\_fence\(\)](#).

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_audit\\_internals.h](#)

## 7.32 MM\_AllocBlockHdr Struct Reference

```
#include <oscl_mem_audit_internals.h>
```

### Public Member Functions

- `bool isAllocNodePtr ()`
- `void setAllocNodeFlag ()`
- `MM_AllocBlockHdr ()`
- `MM_AllocBlockHdr (void *ptr, uint32 inSize)`

### Data Fields

- `void * pNode`
- `uint32 size`
- `void * pRootNode`
- `uint32 pad`

### Static Public Attributes

- `static const uint32 ALLOC_NODE_FLAG = 0x80000000`

#### 7.32.1 Constructor & Destructor Documentation

**7.32.1.1 `MM_AllocBlockHdr::MM_AllocBlockHdr () [inline]`**

**7.32.1.2 `MM_AllocBlockHdr::MM_AllocBlockHdr (void *ptr, uint32 inSize) [inline]`**

#### 7.32.2 Member Function Documentation

**7.32.2.1 `bool MM_AllocBlockHdr::isAllocNodePtr () [inline]`**

References ALLOC\_NODE\_FLAG, and size.

**7.32.2.2 `void MM_AllocBlockHdr::setAllocNodeFlag () [inline]`**

References ALLOC\_NODE\_FLAG, and size.

#### 7.32.3 Field Documentation

**7.32.3.1 `uint32 MM_AllocBlockHdr::pad`**

**7.32.3.2 `void* MM_AllocBlockHdr::pNode`**

**7.32.3.3 `void* MM_AllocBlockHdr::pRootNode`**

**7.32.3.4 `uint32 MM_AllocBlockHdr::size`**

Referenced by `isAllocNodePtr()`, and `setAllocNodeFlag()`.

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_audit\\_internals.h](#)

## 7.33 MM\_AllocInfo Struct Reference

```
#include <oscl_mem_audit.h>
```

### Public Member Functions

- [MM\\_AllocInfo \(\)](#)
- [~MM\\_AllocInfo \(\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size, MM\\_AllocInfo \\*ptr\)](#)
- [void operator delete \(void \\*ptr\) throw \(\)](#)

### Data Fields

- [uint32 allocNum](#)
- [char \\* pFileName](#)
- [uint32 lineNo](#)
- [uint32 size](#)
- [void \\* pMemBlock](#)
- [OsclMemStatsNode \\* pStatsNode](#)
- [bool bSetFailure](#)

#### 7.33.1 Constructor & Destructor Documentation

##### 7.33.1.1 MM\_AllocInfo::MM\_AllocInfo () [inline]

References oscl\_memset().

##### 7.33.1.2 MM\_AllocInfo::~MM\_AllocInfo () [inline]

References Oscl\_TAlloc< T, Alloc >::deallocate(), and pFileName.

#### 7.33.2 Member Function Documentation

##### 7.33.2.1 void MM\_AllocInfo::operator delete (void \*ptr) throw () [inline]

References Oscl\_TAlloc< T, Alloc >::deallocate().

##### 7.33.2.2 void\* MM\_AllocInfo::operator new (oscl\_memsize\_t size, MM\_AllocInfo \*ptr) [inline]

References OSCL\_UNUSED\_ARG.

##### 7.33.2.3 void\* MM\_AllocInfo::operator new (oscl\_memsize\_t size) [inline]

References Oscl\_TAlloc< T, Alloc >::allocate(), and OSCL\_UNUSED\_ARG.

### 7.33.3 Field Documentation

7.33.3.1 **uint32 MM\_AllocInfo::allocNum**

7.33.3.2 **bool MM\_AllocInfo::bSetFailure**

7.33.3.3 **uint32 MM\_AllocInfo::lineNo**

7.33.3.4 **char\* MM\_AllocInfo::pFileName**

Referenced by ~MM\_AllocInfo().

7.33.3.5 **void\* MM\_AllocInfo::pMemBlock**

7.33.3.6 **OsclMemStatsNode\* MM\_AllocInfo::pStatsNode**

7.33.3.7 **uint32 MM\_AllocInfo::size**

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.34 MM\_AllocNode Struct Reference

```
#include <oscl_mem_audit.h>
```

### Public Member Functions

- `MM_AllocNode ()`
- `~MM_AllocNode ()`
- `void * operator new (oscl_memsize_t size)`
- `void * operator new (oscl_memsize_t size, MM_AllocNode *ptr)`
- `void operator delete (void *ptr) throw ()`

### Data Fields

- `MM_AllocInfo * pAllocInfo`
- `MM_AllocNode * pPrev`
- `MM_AllocNode * pNext`

#### 7.34.1 Constructor & Destructor Documentation

##### 7.34.1.1 MM\_AllocNode::MM\_AllocNode () [inline]

References `oscl_memset()`.

##### 7.34.1.2 MM\_AllocNode::~MM\_AllocNode () [inline]

References `OSCL_DELETE`, and `pAllocInfo`.

#### 7.34.2 Member Function Documentation

##### 7.34.2.1 void MM\_AllocNode::operator delete (void \*ptr) throw () [inline]

References `Oscl_TAlloc< T, Alloc >::deallocate()`.

##### 7.34.2.2 void\* MM\_AllocNode::operator new (oscl\_memsize\_t size, MM\_AllocNode \*ptr) [inline]

References `OSCL_UNUSED_ARG`.

##### 7.34.2.3 void\* MM\_AllocNode::operator new (oscl\_memsize\_t size) [inline]

References `Oscl_TAlloc< T, Alloc >::allocate()`, and `OSCL_UNUSED_ARG`.

### 7.34.3 Field Documentation

#### 7.34.3.1 MM\_AllocInfo\* MM\_AllocNode::pAllocInfo

Referenced by ~MM\_AllocNode().

#### 7.34.3.2 MM\_AllocNode\* MM\_AllocNode::pNext

#### 7.34.3.3 MM\_AllocNode\* MM\_AllocNode::pPrev

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.35 MM\_AllocQueryInfo Struct Reference

```
#include <oscl_mem_audit.h>
```

### Data Fields

- uint32 `allocNum`
- char `fileName` [MM\_ALLOC\_MAX\_QUERY\_FILENAME\_LEN]
- uint32 `lineNo`
- uint32 `size`
- const void \* `pMemBlock`
- char `tag` [MM\_ALLOC\_MAX\_QUERY\_TAG\_LEN]

#### 7.35.1 Field Documentation

7.35.1.1 uint32 MM\_AllocQueryInfo::allocNum

7.35.1.2 char MM\_AllocQueryInfo::fileName[MM\_ALLOC\_MAX\_QUERY\_FILENAME\_LEN]

7.35.1.3 uint32 MM\_AllocQueryInfo::lineNo

7.35.1.4 const void\* MM\_AllocQueryInfo::pMemBlock

7.35.1.5 uint32 MM\_AllocQueryInfo::size

7.35.1.6 char MM\_AllocQueryInfo::tag[MM\_ALLOC\_MAX\_QUERY\_TAG\_LEN]

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.36 MM\_Audit\_Imp Class Reference

```
#include <oscl_mem_audit.h>
```

The documentation for this class was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.37 MM\_AuditOverheadStats Struct Reference

```
#include <oscl_mem_audit.h>
```

### Data Fields

- uint32 [per\\_allocation\\_overhead](#)
- uint32 [stats\\_overhead](#)

#### 7.37.1 Field Documentation

##### 7.37.1.1 uint32 MM\_AuditOverheadStats::per\_allocation\_overhead

##### 7.37.1.2 uint32 MM\_AuditOverheadStats::stats\_overhead

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.38 MM\_FailInsertParam Struct Reference

```
#include <oscl_mem_audit.h>
```

### Public Member Functions

- [MM\\_FailInsertParam \(\)](#)
- [void reset \(\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size, MM\\_FailInsertParam \\*ptr\)](#)
- [void operator delete \(void \\*ptr\) throw \(\)](#)

### Data Fields

- [uint32 nAllocNum](#)
- [uint16 xsubi \[3\]](#)

#### 7.38.1 Constructor & Destructor Documentation

##### 7.38.1.1 MM\_FailInsertParam::MM\_FailInsertParam () [inline]

References oscl\_memset(), and xsubi.

#### 7.38.2 Member Function Documentation

##### 7.38.2.1 void MM\_FailInsertParam::operator delete (void \*ptr) throw () [inline]

References Oscl\_TAlloc< T, Alloc >::deallocate().

##### 7.38.2.2 void\* MM\_FailInsertParam::operator new (oscl\_memsize\_t size, MM\_FailInsertParam \*ptr) [inline]

References OSCL\_UNUSED\_ARG.

##### 7.38.2.3 void\* MM\_FailInsertParam::operator new (oscl\_memsize\_t size) [inline]

References Oscl\_TAlloc< T, Alloc >::allocate(), and OSCL\_UNUSED\_ARG.

##### 7.38.2.4 void MM\_FailInsertParam::reset () [inline]

References nAllocNum, oscl\_memset(), and xsubi.

Referenced by OsclMemStatsNode::reset().

### 7.38.3 Field Documentation

#### 7.38.3.1 uint32 MM\_FailInsertParam::nAllocNum

Referenced by `reset()`.

#### 7.38.3.2 uint16 MM\_FailInsertParam::xsubi[3]

Referenced by `MM_FailInsertParam()`, and `reset()`.

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.39 MM\_Stats\_CB Struct Reference

```
#include <oscl_mem_audit.h>
```

### Public Member Functions

- [MM\\_Stats\\_CB \(\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size, MM\\_Stats\\_CB \\*ptr\)](#)
- [void operator delete \(void \\*ptr\) throw \(\)](#)

### Data Fields

- [const char \\* tag](#)
- [const MM\\_Stats\\_t \\* pStats](#)
- [uint32 num\\_child\\_nodes](#)

#### 7.39.1 Constructor & Destructor Documentation

##### 7.39.1.1 MM\_Stats\_CB::MM\_Stats\_CB () [inline]

References oscl\_memset().

#### 7.39.2 Member Function Documentation

##### 7.39.2.1 void MM\_Stats\_CB::operator delete (void \*ptr) throw () [inline]

References Oscl\_TAlloc< T, Alloc >::deallocate().

##### 7.39.2.2 void\* MM\_Stats\_CB::operator new (oscl\_memsize\_t size, MM\_Stats\_CB \*ptr) [inline]

References OSCL\_UNUSED\_ARG.

##### 7.39.2.3 void\* MM\_Stats\_CB::operator new (oscl\_memsize\_t size) [inline]

References Oscl\_TAlloc< T, Alloc >::allocate(), and OSCL\_UNUSED\_ARG.

#### 7.39.3 Field Documentation

##### 7.39.3.1 uint32 MM\_Stats\_CB::num\_child\_nodes

##### 7.39.3.2 const MM\_Stats\_t\* MM\_Stats\_CB::pStats

##### 7.39.3.3 const char\* MM\_Stats\_CB::tag

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.40 MM\_Stats\_t Struct Reference

```
#include <oscl_mem_audit.h>
```

### Public Member Functions

- [MM\\_Stats\\_t \(\)](#)
- [MM\\_Stats\\_t \(uint32 sizeIn\)](#)
- [void reset \(\)](#)
- [void update \(const MM\\_Stats\\_t &delta, bool add\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size, MM\\_Stats\\_t \\*ptr\)](#)
- [void operator delete \(void \\*ptr\) throw \(\)](#)

### Data Fields

- [uint32 numBytes](#)
- [uint32 peakNumBytes](#)
- [uint32 numAllocs](#)
- [uint32 peakNumAllocs](#)
- [uint32 numAllocFails](#)
- [uint32 totalNumAllocs](#)
- [uint32 totalNumBytes](#)

#### 7.40.1 Constructor & Destructor Documentation

##### 7.40.1.1 MM\_Stats\_t::MM\_Stats\_t () [inline]

References [oscl\\_memset\(\)](#).

##### 7.40.1.2 MM\_Stats\_t::MM\_Stats\_t (uint32 sizeIn) [inline]

References [numAllocFails](#), [numAllocs](#), [numBytes](#), [peakNumAllocs](#), [peakNumBytes](#), [totalNumAllocs](#), and [totalNumBytes](#).

#### 7.40.2 Member Function Documentation

##### 7.40.2.1 void MM\_Stats\_t::operator delete (void \* ptr) throw () [inline]

References [Oscl\\_TAlloc< T, Alloc >::deallocate\(\)](#).

##### 7.40.2.2 void\* MM\_Stats\_t::operator new (oscl\_memsize\_t size, MM\_Stats\_t \* ptr) [inline]

References [OSCL\\_UNUSED\\_ARG](#).

##### 7.40.2.3 void\* MM\_Stats\_t::operator new (oscl\_memsize\_t size) [inline]

References [Oscl\\_TAlloc< T, Alloc >::allocate\(\)](#), and [OSCL\\_UNUSED\\_ARG](#).

**7.40.2.4 void MM\_Stats\_t::reset () [inline]**

References oscl\_memset().

Referenced by OsclMemStatsNode::reset().

**7.40.2.5 void MM\_Stats\_t::update (const MM\_Stats\_t & *delta*, bool *add*) [inline]**

References numAllocFails, numAllocs, numBytes, peakNumAllocs, peakNumBytes, totalNumAllocs, and totalNumBytes.

### 7.40.3 Field Documentation

**7.40.3.1 uint32 MM\_Stats\_t::numAllocFails**

Referenced by MM\_Stats\_t(), and update().

**7.40.3.2 uint32 MM\_Stats\_t::numAllocs**

Referenced by MM\_Stats\_t(), and update().

**7.40.3.3 uint32 MM\_Stats\_t::numBytes**

Referenced by MM\_Stats\_t(), and update().

**7.40.3.4 uint32 MM\_Stats\_t::peakNumAllocs**

Referenced by MM\_Stats\_t(), and update().

**7.40.3.5 uint32 MM\_Stats\_t::peakNumBytes**

Referenced by MM\_Stats\_t(), and update().

**7.40.3.6 uint32 MM\_Stats\_t::totalNumAllocs**

Referenced by MM\_Stats\_t(), and update().

**7.40.3.7 uint32 MM\_Stats\_t::totalNumBytes**

Referenced by MM\_Stats\_t(), and update().

The documentation for this struct was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.41 Oscl\_TagTree< T, Alloc >::Node Struct Reference

```
#include <oscl_tagtree.h>
```

### Public Types

- `typedef Oscl_Vector< Node *, Alloc > children_type`

### Public Member Functions

- `Node ()`
- `void sort_children ()`
- `tag_type::size_type depth ()`

### Data Fields

- `tag_type tag`
- `T value`
- `Node * parent`
- `children_type children`

```
template<class T, class Alloc> struct Oscl_TagTree< T, Alloc >::Node
```

#### 7.41.1 Member Typedef Documentation

7.41.1.1 `template<class T, class Alloc> typedef Oscl_Vector<Node*, Alloc> Oscl_TagTree< T, Alloc >::Node::children_type`

#### 7.41.2 Constructor & Destructor Documentation

7.41.2.1 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::Node::Node () [inline]`

#### 7.41.3 Member Function Documentation

7.41.3.1 `template<class T, class Alloc> tag_type::size_type Oscl_TagTree< T, Alloc >::Node::depth () [inline]`

References `Oscl_Tag< Alloc >::tag`, `Oscl_TagTree< T, Alloc >::Node::tag`, and `Oscl_Tag_Base::tag_depth()`.

7.41.3.2 `template<class T, class Alloc> void Oscl_TagTree< T, Alloc >::Node::sort_children () [inline]`

References `Oscl_Vector< T, Alloc >::begin()`, `Oscl_TagTree< T, Alloc >::Node::children`, `Oscl_Vector_Base::empty()`, and `Oscl_Vector< T, Alloc >::end()`.

## 7.41.4 Field Documentation

### 7.41.4.1 template<class T, class Alloc> children\_type Oscl\_TagTree< T, Alloc >::Node::children

Referenced by Oscl\_TagTree< T, Alloc >::Node::sort\_children().

### 7.41.4.2 template<class T, class Alloc> Node\* Oscl\_TagTree< T, Alloc >::Node::parent

### 7.41.4.3 template<class T, class Alloc> tag\_type Oscl\_TagTree< T, Alloc >::Node::tag

Referenced by Oscl\_TagTree< T, Alloc >::Node::depth().

### 7.41.4.4 template<class T, class Alloc> T Oscl\_TagTree< T, Alloc >::Node::value

The documentation for this struct was generated from the following file:

- [oscl\\_tagtree.h](#)

## 7.42 NTPTime Class Reference

The `NTPTime` class represents a time value as the number of seconds since 0h (UTC) Jan. 1, 1900.

```
#include <oscl_time.h>
```

### Public Member Functions

- `OSCL_COND_IMPORT_REF NTPTime ()`  
*The default constructor creates an `NTPTime` instance representing the current system time.*
- `OSCL_COND_IMPORT_REF NTPTime (const NTPTime &src)`  
*Copy constructor to create a new `NTPTime` from an existing one.*
- `OSCL_COND_IMPORT_REF NTPTime (const uint32 seconds)`  
*Construct an `NTPTime` from a uint32.*
- `OSCL_COND_IMPORT_REF NTPTime (const int32 seconds)`  
*Construct an `NTPTime` from a int.*
- `OSCL_COND_IMPORT_REF NTPTime (const TimeValue &t)`  
*Construct a `NTPTime` instance from a `TimeValue` instance.*
- `OSCL_COND_IMPORT_REF NTPTime (const uint64 value)`  
*Construct a `NTPTime` instance from a uint64 value.*
- `OSCL_COND_IMPORT_REF NTPTime & operator= (uint32 newval)`  
*The assignment operator for a 32 bit integer.*
- `OSCL_COND_IMPORT_REF NTPTime & operator= (uint64 newval)`  
*The assignment operator for a 64 bit integer.*
- `OSCL_COND_IMPORT_REF NTPTime & operator+= (uint64 val)`  
*The += operator is used to add a 64 bit 32.32 value to an existing `NTPTime` value.*
- `OSCL_COND_IMPORT_REF NTPTime operator- (const NTPTime &npt) const`  
*The - operator allows subtraction of one `NTPTime` value from another. This is useful to measure an interval.*
- `void set_from_system_time (const uint32 systemtime)`  
*This method converts a 32-bit system time to NTP time.*
- `OSCL_COND_IMPORT_REF uint32 get_middle32 () const`  
*Grab the middle 32 bits of the 64 bit 32.32 representation.*
- `OSCL_COND_IMPORT_REF uint32 get_upper32 () const`  
*This method returns the upper 32 bits of the 32.32 representation.*
- `OSCL_COND_IMPORT_REF uint32 get_lower32 () const`  
*This method returns the lower 32 bits of the 32.32 representation.*

- int32 `to_system_time () const`  
*This method converts the ntp time value to system time.*
- OSCL\_COND\_IMPORT\_REF `uint64 get_value () const`  
*This method returns the 32.32 ntp representation.*
- OSCL\_IMPORT\_REF int `set_to_current_time ()`  
*This method sets the 32.32 representation to the current system time value.*

### 7.42.1 Detailed Description

The `NTPTime` class represents a time value as the number of seconds since 0h (UTC) Jan. 1, 1900. The `NTPTime` class: Conversion to/from Unix (epoch at 0h Jan. 1, 1970) amount to addition/subtraction of 2208988800. A single 64 bit value is used to represent the time. This value represents the number of seconds since 0h (UTC) Jan. 1, 1900. There is an implied binary point between the upper 32 bits and lower 32 bits (this is referred to as a 32.32 fractional representation). For example a binary value of 00000000 00000000 00000011 10000000 00000000 00000000 00000000 represents 3.5 seconds since Jan 1, 1900.

### 7.42.2 Constructor & Destructor Documentation

#### 7.42.2.1 OSCL\_COND\_IMPORT\_REF NTPTime::NTPTime ()

The default constructor creates an `NTPTime` instance representing the current system time.

#### 7.42.2.2 OSCL\_COND\_IMPORT\_REF NTPTime::NTPTime (const NTPTime & src)

Copy constructor to create a new `NTPTime` from an existing one.

#### 7.42.2.3 OSCL\_COND\_IMPORT\_REF NTPTime::NTPTime (const uint32 seconds)

Construct an `NTPTime` from a uint32.

##### Parameters

`seconds` The uint32 input represents the number of seconds since Jan. 1, 1900.

#### 7.42.2.4 OSCL\_COND\_IMPORT\_REF NTPTime::NTPTime (const int32 seconds)

Construct an `NTPTime` from a int.

##### Parameters

`seconds` The int input represents the number of seconds since Jan. 1, 1900.

#### 7.42.2.5 OSCL\_COND\_IMPORT\_REF NTPTime::NTPTime (const TimeValue & *t*)

Construct a [NTPTime](#) instance from a [TimeValue](#) instance.

This constructor creates an [NTPTime](#) value representing the same absolute time as the [TimeValue](#) parameter.

##### Parameters

*t* A reference to a [TimeValue](#) object.

#### 7.42.2.6 OSCL\_COND\_IMPORT\_REF NTPTime::NTPTime (const uint64 *value*)

Construct a [NTPTime](#) instance from a uint64 value.

##### Parameters

*value* A 64 bit integer argument which is used as the ntp 32.32 fractional representation.

### 7.42.3 Member Function Documentation

#### 7.42.3.1 OSCL\_COND\_IMPORT\_REF uint32 NTPTime::get\_lower32 () const

This method returns the lower 32 bits of the 32.32 representation.

#### 7.42.3.2 OSCL\_COND\_IMPORT\_REF uint32 NTPTime::get\_middle32 () const

Grab the middle 32 bits of the 64 bit 32.32 representation.

#### 7.42.3.3 OSCL\_COND\_IMPORT\_REF uint32 NTPTime::get\_upper32 () const

This method returns the upper 32 bits of the 32.32 representation.

#### 7.42.3.4 OSCL\_COND\_IMPORT\_REF uint64 NTPTime::get\_value () const

This method returns the 32.32 ntp representation.

#### 7.42.3.5 OSCL\_COND\_IMPORT\_REF NTPTime& NTPTime::operator+= (uint64 *val*)

The += operator is used to add a 64 bit 32.32 value to an existing [NTPTime](#) value.

##### Parameters

*val* The 64 bit 32.32 value to add to this object's value.

#### 7.42.3.6 OSCL\_COND\_IMPORT\_REF NTPTime NTPTime::operator- (const NTPTime & *npt*) const

The - operator allows subtraction of one [NTPTime](#) value from another. This is useful to measure an interval.

**Parameters**

*ntp* A reference to the [NTPTime](#) object to be subtracted from this one.

**7.42.3.7 OSCL\_COND\_IMPORT\_REF NTPTime& NTPTime::operator= (uint64 newval)**

The assignment operator for a 64 bit integer.

**Parameters**

*newval* A 64 bit value which represents the 32.32 fractional representation of the ntp time.

**7.42.3.8 OSCL\_COND\_IMPORT\_REF NTPTime& NTPTime::operator= (uint32 newval)**

The assignment operator for a 32 bit integer.

**Parameters**

*newval* A 32 bit integer representing the upper 32 bits of the 32.32 NTP time (e.g. the number of whole seconds since Jan 1, 1900 UTC).

**7.42.3.9 void NTPTime::set\_from\_system\_time (const uint32 systemtime)**

This method converts a 32-bit system time to NTP time.

This method sets the value of the [NTPTime](#) instance to the absolute time represented by the 32 bit input argument.

**Parameters**

*systemtime* This 32-bit value is interpreted as the number of seconds since the unix epoch Jan. 1 1970.

**7.42.3.10 OSCL\_IMPORT\_REF int NTPTime::set\_to\_current\_time ()**

This method sets the 32.32 representation to the current system time value.

**7.42.3.11 int32 NTPTime::to\_system\_time () const**

This method converts the ntp time value to system time.

This method returns a 32 bit value representing the same absolute time as the NTP time value, but expressed as whole seconds since the unix epoch. The fractional part of the ntp value is discarded.

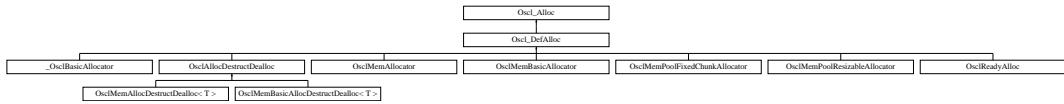
The documentation for this class was generated from the following file:

- [oscl\\_time.h](#)

## 7.43 Oscl\_Alloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for Oscl\_Alloc:



### Public Member Functions

- virtual [~Oscl\\_Alloc \(\)](#)
- virtual [OsclAny \\* allocate \(const uint32 size\)=0](#)
- virtual [OsclAny \\* allocate\\_fl \(const uint32 size, const char \\*file\\_name, const int line\\_num\)](#)

#### 7.43.1 Constructor & Destructor Documentation

**7.43.1.1 virtual Oscl\_Alloc::~Oscl\_Alloc () [inline, virtual]**

#### 7.43.2 Member Function Documentation

**7.43.2.1 virtual OsclAny\* Oscl\_Alloc::allocate (const uint32 size) [pure virtual]**

Implemented in [\\_OsclBasicAllocator](#), [Oscl\\_DefAlloc](#), [OsclMemAllocator](#), [OsclMemBasicAllocator](#), [OsclMemAllocDestructDealloc< T >](#), [OsclMemBasicAllocDestructDealloc< T >](#), [OsclMemPoolFixedChunkAllocator](#), [OsclMemPoolResizableAllocator](#), and [OsclReadyAlloc](#).

Referenced by [allocate\\_fl\(\)](#).

**7.43.2.2 virtual OsclAny\* Oscl\_Alloc::allocate\_fl (const uint32 size, const char \*file\_name, const int line\_num) [inline, virtual]**

Reimplemented in [Oscl\\_DefAlloc](#), and [OsclReadyAlloc](#).

References [allocate\(\)](#), and [OSCL\\_UNUSED\\_ARG](#).

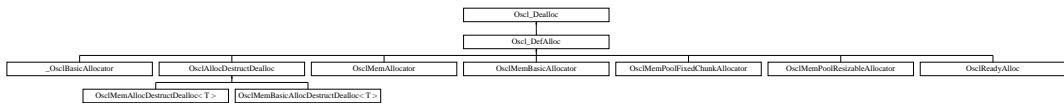
The documentation for this class was generated from the following file:

- [oscl\\_defalloc.h](#)

## 7.44 Oscl\_Dealloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for Oscl\_Dealloc:



### Public Member Functions

- virtual void [deallocate \(OsclAny \\*p\)=0](#)
- virtual [~Oscl\\_Dealloc \(\)](#)

#### 7.44.1 Constructor & Destructor Documentation

**7.44.1.1 virtual Oscl\_Dealloc::~Oscl\_Dealloc () [inline, virtual]**

#### 7.44.2 Member Function Documentation

**7.44.2.1 virtual void Oscl\_Dealloc::deallocate (OsclAny \*p) [pure virtual]**

Implemented in [\\_OsclBasicAllocator](#), [Oscl\\_DefAlloc](#), [OsclMemAllocator](#), [OsclMemBasicAllocator](#), [OsclMemAllocDestructDealloc< T >](#), [OsclMemBasicAllocDestructDealloc< T >](#), [OsclMemPoolFixedChunkAllocator](#), [OsclMemPoolResizableAllocator](#), and [OsclReadyAlloc](#).

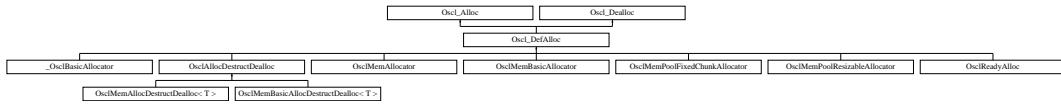
The documentation for this class was generated from the following file:

- [oscl\\_defalloc.h](#)

## 7.45 Oscl\_DefAlloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for Oscl\_DefAlloc:



### Public Member Functions

- virtual [OsclAny](#) \* [allocate](#) (const uint32 size)=0
- virtual [OsclAny](#) \* [allocate\\_fl](#) (const uint32 size, const char \*file\_name, const int line\_num)
- virtual void [deallocate](#) ([OsclAny](#) \*p)=0

#### 7.45.1 Member Function Documentation

##### 7.45.1.1 virtual [OsclAny](#)\* [Oscl\\_DefAlloc::allocate](#) (const uint32 size) [pure virtual]

Implements [Oscl\\_Alloc](#).

Implemented in [\\_OsclBasicAllocator](#), [OsclMemAllocator](#), [OsclMemBasicAllocator](#), [OsclMemAllocDestructDealloc< T >](#), [OsclMemBasicAllocDestructDealloc< T >](#), [OsclMemPoolFixedChunkAllocator](#), [OsclMemPoolResizableAllocator](#), and [OsclReadyAlloc](#).

Referenced by [allocate\\_fl\(\)](#).

##### 7.45.1.2 virtual [OsclAny](#)\* [Oscl\\_DefAlloc::allocate\\_fl](#) (const uint32 size, const char \*file\_name, const int line\_num) [inline, virtual]

Reimplemented from [Oscl\\_Alloc](#).

Reimplemented in [OsclReadyAlloc](#).

References [allocate\(\)](#), and [OSCL\\_UNUSED\\_ARG](#).

Referenced by [OsclMemBasicAllocDestructDealloc< T >](#)::[allocate\(\)](#), [OsclMemAllocDestructDealloc< T >](#)::[allocate\(\)](#), and [OsclMemAllocator](#)::[allocate\(\)](#).

##### 7.45.1.3 virtual void [Oscl\\_DefAlloc::deallocate](#) ([OsclAny](#) \*p) [pure virtual]

Implements [Oscl\\_Dealloc](#).

Implemented in [\\_OsclBasicAllocator](#), [OsclMemAllocator](#), [OsclMemBasicAllocator](#), [OsclMemAllocDestructDealloc< T >](#), [OsclMemBasicAllocDestructDealloc< T >](#), [OsclMemPoolFixedChunkAllocator](#), [OsclMemPoolResizableAllocator](#), and [OsclReadyAlloc](#).

Referenced by [OsclErrorAllocator](#)::[deallocate\(\)](#).

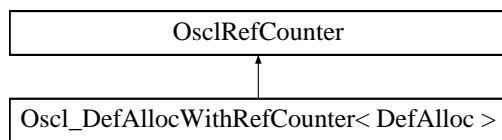
The documentation for this class was generated from the following file:

- [oscl\\_defalloc.h](#)

## 7.46 Oscl\_DefAllocWithRefCounter< DefAlloc > Class Template Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for Oscl\_DefAllocWithRefCounter< DefAlloc >:



### Public Member Functions

- void [Delete \(\)](#)
- void [addRef \(\)](#)
- void [removeRef \(\)](#)
- uint32 [getCount \(\)](#)

### Static Public Member Functions

- static [Oscl\\_DefAllocWithRefCounter \\* New \(\)](#)

#### 7.46.1 Detailed Description

**template<class DefAlloc> class Oscl\_DefAllocWithRefCounter< DefAlloc >**

Implementation of an [Oscl\\_DefAlloc](#) class with a built-in ref counter.

#### 7.46.2 Member Function Documentation

##### 7.46.2.1 template<class DefAlloc> void Oscl\_DefAllocWithRefCounter< DefAlloc >::addRef () [inline, virtual]

Add to the reference count

Implements [OsclRefCounter](#).

##### 7.46.2.2 template<class DefAlloc> void Oscl\_DefAllocWithRefCounter< DefAlloc >::Delete () [inline]

Delete object

References [Oscl\\_DefAllocWithRefCounter< DefAlloc >::removeRef\(\)](#).

**7.46.2.3 template<class DefAlloc > uint32 Oscl\_DefAllocWithRefCounter< DefAlloc >::getCount () [inline, virtual]**

Gets the current number of references

Implements [OsclRefCounter](#).

**7.46.2.4 template<class DefAlloc > static Oscl\_DefAllocWithRefCounter\* Oscl\_DefAllocWithRefCounter< DefAlloc >::New () [inline, static]**

Create object

**7.46.2.5 template<class DefAlloc > void Oscl\_DefAllocWithRefCounter< DefAlloc >::removeRef () [inline, virtual]**

Delete from reference count

Implements [OsclRefCounter](#).

Referenced by [Oscl\\_DefAllocWithRefCounter< DefAlloc >::Delete\(\)](#).

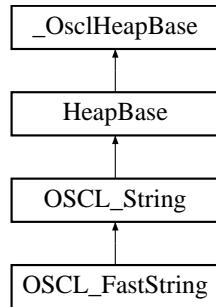
The documentation for this class was generated from the following file:

- [oscl\\_refcounter.h](#)

## 7.47 OSCL\_FastString Class Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL\_FastString:



### Public Types

- `typedef OSCL_String::chartype chartype`
- `typedef TOSCL_StringOp optype`
- `typedef OSCL_wString::chartype other_chartype`

### Public Member Functions

- `OSCL_IMPORT_REF OSCL_FastString()`
- `OSCL_IMPORT_REF OSCL_FastString(const OSCL_FastString &src)`
- `OSCL_IMPORT_REF OSCL_FastString(const chartype *cstr)`
- `OSCL_IMPORT_REF OSCL_FastString(chartype *buf, uint32 maxlen)`
- `OSCL_IMPORT_REF ~OSCL_FastString()`
- `OSCL_IMPORT_REF uint32 get_size() const`
- `OSCL_IMPORT_REF uint32 get_maxsize() const`
- `OSCL_IMPORT_REF const chartype * get_cstr() const`
- `OSCL_IMPORT_REF chartype * get_str() const`
- `OSCL_IMPORT_REF OSCL_FastString & operator=(const OSCL_FastString &src)`
- `OSCL_IMPORT_REF OSCL_FastString & operator=(const chartype *cstr)`
- `OSCL_IMPORT_REF void set(chartype *cstr, uint32 maxlen)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, uint32 numofbyte, optype op)`
- `OSCL_IMPORT_REF void set_length()`

### Friends

- `class OSCL_String`

#### 7.47.1 Detailed Description

`OSCL_FastString` is a simple string class, compatible with regular character array strings.

This class does not allocate internal memory for the string but acts as a container for a user-defined buffer. This means no copying of the string is done and provides a faster way of manipulating strings. Depending on initialization, this container provides either read-only or read-write access to the string.

Implementation assumes the input string is null-terminated.

#### Parameters

*C*,: type of character.

### 7.47.2 Member Typedef Documentation

#### 7.47.2.1 `typedef OSCL_String::chartype OSCL_FastString::chartype`

Reimplemented from [OSCL\\_String](#).

#### 7.47.2.2 `typedef TOSCL_StringOp OSCL_FastString::optype`

#### 7.47.2.3 `typedef OSCL_wString::chartype OSCL_FastString::other_chartype`

### 7.47.3 Constructor & Destructor Documentation

#### 7.47.3.1 `OSCL_IMPORT_REF OSCL_FastString::OSCL_FastString()`

Default constructor.

#### 7.47.3.2 `OSCL_IMPORT_REF OSCL_FastString::OSCL_FastString(const OSCL_FastString & src)`

Creates a fast string that contains a copy of the input string. The string inherits the writable-ness of the source string.

#### Parameters

*src*,: input string.

#### 7.47.3.3 `OSCL_IMPORT_REF OSCL_FastString::OSCL_FastString(const chartype * cstr)`

Create the string and initialize it to contain the input string. The string is not writable.

#### Parameters

null-terminated string.

#### 7.47.3.4 `OSCL_IMPORT_REF OSCL_FastString::OSCL_FastString(chartype * buf, uint32 maxlen)`

Create the string and initialize it to contain the input string. The string is writable.

#### Parameters

*cp*,: null-terminated string.

*maxlen*,: maximum size of storage at cp, not incl null terminator. If input string is not null-terminated, the function leaves.

#### 7.47.3.5 OSCL\_IMPORT\_REF OSCL\_FastString::~OSCL\_FastString ()

#### 7.47.4 Member Function Documentation

##### 7.47.4.1 OSCL\_IMPORT\_REF const chartype\* OSCL\_FastString::get\_cstr () const [virtual]

This function returns the C-style string for read access.

Implements [OSCL\\_String](#).

##### 7.47.4.2 OSCL\_IMPORT\_REF uint32 OSCL\_FastString::get\_maxsize () const [virtual]

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implements [OSCL\\_String](#).

##### 7.47.4.3 OSCL\_IMPORT\_REF uint32 OSCL\_FastString::get\_size () const [virtual]

Pure virtuals from [OSCL\\_String](#)

Implements [OSCL\\_String](#).

##### 7.47.4.4 OSCL\_IMPORT\_REF chartype\* OSCL\_FastString::get\_str () const [virtual]

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implements [OSCL\\_String](#).

##### 7.47.4.5 OSCL\_IMPORT\_REF OSCL\_FastString& OSCL\_FastString::operator= (const chartype \* *cstr*)

Assignment operator

##### Parameters

null-terminated string

Reimplemented from [OSCL\\_String](#).

##### 7.47.4.6 OSCL\_IMPORT\_REF OSCL\_FastString& OSCL\_FastString::operator= (const OSCL\_FastString & *src*)

Assignment operators

**7.47.4.7 OSCL\_IMPORT\_REF void OSCL\_FastString::set (const other\_chartype \* buf, uint32 numofbyte, optype op)**

Set the contents of this string to a new string or character array, with conversion operation.

**Parameters**

*buf*,: string or character array.

*numofbyte*,: number of bytes available in the buffer. There must be enough space available for the converted string including its NULL terminator. The converted string may be smaller or larger than the original string.

*op*,: conversion operation to apply If numofbyte is not large enough for conversion, the function leaves. If input string is not null-terminated, the function leaves.

**7.47.4.8 OSCL\_IMPORT\_REF void OSCL\_FastString::set (chartype \* cstr, uint32 maxlen)**

This function can be used to reassign the string to a new writable string. If input string is not null-terminated, the function leaves.

**7.47.4.9 OSCL\_IMPORT\_REF void OSCL\_FastString::set\_length ()**

This function can be used to refresh the string size in case the contents of the string buffer have been modified since the container was created.

**7.47.5 Friends And Related Function Documentation****7.47.5.1 friend class OSCL\_String [friend]**

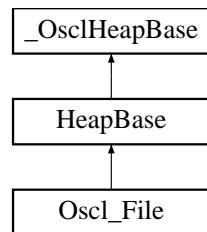
The documentation for this class was generated from the following file:

- [oscl\\_string\\_containers.h](#)

## 7.48 Oscl\_File Class Reference

```
#include <oscl_file_io.h>
```

Inheritance diagram for Oscl\_File:



### Data Structures

- class [OsclCacheObserver](#)
- class [OsclFixedCacheParam](#)

### Public Types

- enum `seek_type` { `SEEKSET`, `SEEKCUR`, `SEEKEND` }
- enum `mode_type` {
   
    `MODE_READ` = 0x0001, `MODE_READWRITE` = 0x0002, `MODE_APPEND` = 0x0004, `MODE_BINARY` = 0x0008,
   
    `MODE_TEXT` = 0x0010, `MODE_READ_PLUS` = 0x0020 }
- enum `TSymbianAccessMode` { `ESymbianAccessMode_Rfile` = 0, `ESymbianAccessMode_RfileBuf` = 1 }

### Public Member Functions

- `OSCL_IMPORT_REF Oscl_File()`
- `OSCL_IMPORT_REF Oscl_File(uint32 aCacheSize)`
- `OSCL_IMPORT_REF Oscl_File(uint32 aCacheSize, OsclFileHandle *aFileHandle)`
- `OSCL_IMPORT_REF ~Oscl_File()`
- `OSCL_IMPORT_REF void SetPVCacheSize(uint32 aSize)`
- `void AddFixedCache(const OsclFixedCacheParam &aParam)`
- `void RemoveFixedCache(const TOsclFileOffset &aPos)`
- `void SetCacheObserver(OsclCacheObserver *aObs)`
- `OSCL_IMPORT_REF void SetNativeAccessMode(uint32 aMode)`
- `OSCL_IMPORT_REF void SetNativeBufferSize(int32 aSize)`
- `OSCL_IMPORT_REF void SetAsyncReadBufferSize(uint32 aSize)`
- `OSCL_IMPORT_REF int32 SetFileHandle(OsclFileHandle *aHandle)`
- `OSCL_IMPORT_REF int32 Open(const char *filename, uint32 mode, Oscl_FileServer &fileserv)`
- `OSCL_IMPORT_REF int32 Open(const oscl_wchar *filename, uint32 mode, Oscl_FileServer &fileserv)`
- `OSCL_IMPORT_REF uint32 Read(OsclAny *buffer, uint32 size, uint32 numelements)`
- `OSCL_IMPORT_REF uint32 Write(const OsclAny *buffer, uint32 size, uint32 numelements)`

- OSCL\_IMPORT\_REF int32 [Seek](#) (TOsclFileOffset offset, [seek\\_type](#) origin)
- OSCL\_IMPORT\_REF TOsclFileOffset [Tell](#) ()
- OSCL\_IMPORT\_REF int32 [Close](#) ()
- OSCL\_IMPORT\_REF int32 [Flush](#) ()
- OSCL\_IMPORT\_REF int32 [SetSize](#) (uint32 size)
- OSCL\_IMPORT\_REF int32 [EndOfFile](#) ()
- OSCL\_IMPORT\_REF int32 [GetError](#) ()
- [OsclHandle \\* Handle](#) ()
- OSCL\_IMPORT\_REF TOsclFileOffset [Size](#) ()
- OSCL\_IMPORT\_REF void [SetLoggingEnable](#) (bool aEnable)
- OSCL\_IMPORT\_REF void [SetSummaryStatsLoggingEnable](#) (bool aEnable)

## Friends

- class [OsclFileCache](#)
- class [OsclFileCacheBuffer](#)
- class [asyncfilereadwrite\\_test](#)
- class [largeeasyasyncfilereadwrite\\_test](#)
- class [asyncfilereadcancel\\_test](#)

### 7.48.1 Member Enumeration Documentation

#### 7.48.1.1 enum Oscl\_File::mode\_type

**Enumerator:**

**MODE\_READ** Opens a file for reading. The file must exist.

**MODE\_READWRITE** Opens the file for reading and writing. If the file exists, its contents will be overwritten unless APPEND mode is specified. If the file does not exist, it will be created.

**MODE\_APPEND** Specifies all write operations to occur at the end of the file. The file pointer can be moved with the Seek command, but will always be moved to the end of the file for write commands.

**MODE\_BINARY** Opens the file in 'binary' mode. This is the default.

**MODE\_TEXT** Opens the file in 'text' mode. The default mode is 'binary'.

**MODE\_READ\_PLUS** Open a file for reading and writing. The file must exist. The default mode is 'binary'.

#### 7.48.1.2 enum Oscl\_File::seek\_type

**Enumerator:**

**SEEKSET** Beginning of file

**SEEKCUR** Current position of file pointer

**SEEKEND** End of file

#### 7.48.1.3 enum Oscl\_File::TSymbianAccessMode

Defines mode options for SetNativeAccessMode on Symbian.

**Enumerator:**

*ESymbianAccessMode\_Rfile*

*ESymbianAccessMode\_RfileBuf*

### 7.48.2 Constructor & Destructor Documentation

#### 7.48.2.1 OSCL\_IMPORT\_REF Oscl\_File::Oscl\_File()

Constructor

#### 7.48.2.2 OSCL\_IMPORT\_REF Oscl\_File::Oscl\_File (uint32 *aCacheSize*)

Deprecated Constructor, present for back-compatibility.

**Parameters**

*aCacheSize*,: sets native buffer size, and when pv cache is enabled, also sets pv cache size.

#### 7.48.2.3 OSCL\_IMPORT\_REF Oscl\_File::Oscl\_File (uint32 *aCacheSize*, OsclFileHandle \* *aFileHandle*)

Deprecated Constructor, present for back-compatibility.

**Parameters**

*aCacheSize*,: sets native buffer size, and when pv cache is enabled, also sets pv cache size.

*aFileHandle*,: open file handle.

#### 7.48.2.4 OSCL\_IMPORT\_REF Oscl\_File::~Oscl\_File()

Destructor

### 7.48.3 Member Function Documentation

#### 7.48.3.1 void Oscl\_File::AddFixedCache (const OsclFixedCacheParam & *aParam*) [inline]

AddFixedCache adds a fixed cache. The fixed cache will be used on the next opportunity. The fixed cache must not overlap with any other fixed cache.

**Parameters**

*aParam*,: Cache location and size.

References Oscl\_Vector< T, Alloc >::push\_back().

#### 7.48.3.2 OSCL\_IMPORT\_REF int32 Oscl\_File::Close ()

The File Close operation Closes the file after flushing any remaining data in the buffers.

Note: If the file object was opened with an external file handle, then Close will simply flush the file. The file will remain open.

##### Returns

returns 0 if successful, and a non-zero value otherwise

#### 7.48.3.3 OSCL\_IMPORT\_REF int32 Oscl\_File::EndOfFile ()

The File EOF(end of file) operation returns a nonzero value after the first read operation that attempts to read past the end of the file

##### Returns

#### 7.48.3.4 OSCL\_IMPORT\_REF int32 Oscl\_File::Flush ()

The File Flush operation On an output stream OSCL\_FileFlush causes any buffered but unwritten data to be written to the file. Flush is meant for writable files. The behavior when calling it on read-only files is OS-dependent.

##### Returns

returns 0 if successful, and a non-zero value otherwise

#### 7.48.3.5 OSCL\_IMPORT\_REF int32 Oscl\_File::GetError ()

The File Error operation If no error has occurred on stream, returns 0. Otherwise, it returns a nonzero value

##### Returns

#### 7.48.3.6 OsclFileHandle\* Oscl\_File::Handle () [inline]

Retrieve the file handle.

##### Returns

file handle

**7.48.3.7 OSCL\_IMPORT\_REF int32 Oscl\_File::Open (const oscl\_wchar \*filename, uint32 mode, Oscl\_FileServer &fileserv)**

Opens a file.

Note: when an external file handle is used, Open will attach to the file handle and initialize cacheing features, but will not do a native file open.

**Parameters**

*filename* name of file to open (Unicode)

*mode* combination of open mode flags

*fileserv* fileserv to use

**Returns**

returns 0 if successful and a non-zero value otherwise

**7.48.3.8 OSCL\_IMPORT\_REF int32 Oscl\_File::Open (const char \*filename, uint32 mode, Oscl\_FileServer &fileserv)**

Opens a file.

Note: when an external file handle is used, Open will attach to the file handle and initialize cacheing features, but will not do a native file open.

**Parameters**

*filename* name of file to open (Utf8)

*mode* combination of open mode flags

*fileserv* fileserv to use

**Returns**

returns 0 if successful and a non-zero value otherwise

**7.48.3.9 OSCL\_IMPORT\_REF uint32 Oscl\_File::Read (OsclAny \*buffer, uint32 size, uint32 numelements)**

The File Read operation Reads from the file into the buffer a maximum of 'numelements' of size 'size'.

**Parameters**

*buffer* pointer to buffer of type void

*size* element size in bytes

*numelements* max number of elements to read

**Returns**

returns the number of full elements actually read, which may be less than count if an error occurs or if the end of the file is encountered before reaching count. Use the CheckEndOfFile or GetError function to distinguish a read error from an end-of-file condition.

#### 7.48.3.10 void Oscl\_File::RemoveFixedCache (const TOsclFileOffset & *aPos*) [inline]

RemoveFixedCache removes a fixed cache.

##### Parameters

*aPos*,: Cache location and size.

References Oscl\_Vector< T, Alloc >::push\_back().

#### 7.48.3.11 OSCL\_IMPORT\_REF int32 Oscl\_File::Seek (TOsclFileOffset *offset*, seek\_type *origin*)

The File Seek operation Sets the position for file pointer

##### Parameters

*offset* offset from the specified origin.

*origin* starting point

##### Returns

returns 0 on success, and a non-zero value otherwise

#### 7.48.3.12 OSCL\_IMPORT\_REF void Oscl\_File::SetAsyncReadBufferSize (uint32 *aSize*)

SetAsyncReadBufferSize configures the asynchronous background read function. May not be available on all platforms.

This should be called before opening the file. If used when the file is open, the option will not take effect until the next Open.

Note: if asynchronous read is not available on the platform, this call will have no effect.

##### Parameters

*aSize*,: buffer size in bytes. Zero disables the feature.

#### 7.48.3.13 void Oscl\_File::SetCacheObserver (OsclCacheObserver \* *aObs*) [inline]

#### 7.48.3.14 OSCL\_IMPORT\_REF int32 Oscl\_File::SetFileHandle (OsclFileHandle \* *aHandle*)

SetFileHandle adds an open file handle to the [Oscl\\_File](#) object. The [Oscl\\_File](#) object will use that handle to access the file.

This call is not available when the [Oscl\\_File](#) object is already open.

Note: This feature is used in Symbian with the MMF framework. The MMF framework provides an open RFile handle to access content. When using RFileBuf access mode with an RFile handle, the RFileBuf will be attached to the open RFile handle.

To use the external file handle, the caller starts with a native file handle to an open file. The caller must wrap the native file handle in an [OsclFileHandle](#) object, pass the [OsclFileHandle](#) pointer to SetFileHandle, call [Oscl\\_File::Open](#), then proceed to use the [Oscl\\_File](#) object, finally calling [Oscl\\_File::Close](#). In this usage mode, [Oscl\\_File::Open](#) and [Oscl\\_File::Close](#) do not actually call native file open and close. It is assumed that the caller will close the original native file handle after usage is complete.

**Parameters**

*aHandle*,: container for an open file handle.

**Returns**

returns 0 if successful, non-zero if error.

**7.48.3.15 OSCL\_IMPORT\_REF void Oscl\_File::SetLoggingEnable (bool *aEnable*)**

SetLoggingEnable configures the [PVLogger](#) output for this file. This will enable full logging of each API entry and exit using the logger object "Oscl\_File", plus full logging of native operation entry & exit using logger object "OsclNativeFile".

**Parameters**

*aEnable*,: true to enable, false to disable logging.

**7.48.3.16 OSCL\_IMPORT\_REF void Oscl\_File::SetNativeAccessMode (uint32 *aMode*)**

SetNativeAccessMode allows switching between different native file access modes, when available.

Note: for Symbian, use the TSymbianAccessMode values to choose the mode. If multiple access modes are not available on the platform, this call will have no effect.

**Parameters**

*aMode*,: access mode.

**7.48.3.17 OSCL\_IMPORT\_REF void Oscl\_File::SetNativeBufferSize (int32 *aSize*)**

SetNativeBufferSize configures the native file buffering feature, when available.

This should be called before opening the file. If used when the file is open, the option will not take effect until the next Open.

Note: For Symbian, this sets the RFileBuf cache size. If native buffering is not available on the platform, this call will have no effect.

**Parameters**

*aSize*,: native buffer size in bytes. Zero disables the feature.

**7.48.3.18 OSCL\_IMPORT\_REF void Oscl\_File::SetPVCacheSize (uint32 *aSize*)**

SetPVCacheSize configures the read/write cache.

This should be called before opening the file. If used when the file is open, the option will not take effect until the next Open.

**Parameters**

*aSize*,: cache size in bytes. Zero disables the cache.

#### 7.48.3.19 OSCL\_IMPORT\_REF int32 Oscl\_File::SetSize (uint32 *size*)

The File SetSize operation If the file has been opened for writing this will set the size of the file. The file pointer position is undefined after calling SetSize. If file size is increased the contents of the new section are undefined.

##### Returns

returns 0 if successful, and a non-zero value otherwise

#### 7.48.3.20 OSCL\_IMPORT\_REF void Oscl\_File::SetSummaryStatsLoggingEnable (bool *aEnable*)

SetSummaryStatsLoggingEnable configures the [PVLogger](#) output for this file. This will enable summary statistics logging only, using the logger object "OsclFileStats".

##### Parameters

*aEnable*,: true to enable, false to disable stats logging.

#### 7.48.3.21 OSCL\_IMPORT\_REF TOsclFileOffset Oscl\_File::Size ()

Get the file size in bytes.

##### Returns

- The size of the file, or -1 on error.

#### 7.48.3.22 OSCL\_IMPORT\_REF TOsclFileOffset Oscl\_File::Tell ()

The File Tell operation Returns the current file position for file specified by fp

#### 7.48.3.23 OSCL\_IMPORT\_REF uint32 Oscl\_File::Write (const OsclAny \* *buffer*, uint32 *size*, uint32 *numelements*)

The File Write operation Writes from the buffer 'numelements' objects of size 'size'

##### Parameters

*buffer* pointer to buffer of type void

*size* element size in bytes

*numelements* number of elements to write

##### Returns

The number of elements written

#### 7.48.4 Friends And Related Function Documentation

7.48.4.1 friend class `asyncfilereadcancel_test` [friend]

7.48.4.2 friend class `asyncfilereadwrite_test` [friend]

7.48.4.3 friend class `largeasyncfilereadwrite_test` [friend]

7.48.4.4 friend class `OsclFileCache` [friend]

7.48.4.5 friend class `OsclFileCacheBuffer` [friend]

The documentation for this class was generated from the following file:

- [oscl\\_file\\_io.h](#)

## 7.49 Oscl\_FileFind Class Reference

```
#include <oscl_file_find.h>
```

### Public Types

- enum `error_type` {
 `E_OK` = 0, `E_INVALID_STATE`, `E_INVALID_ARG`, `E_PATH_TOO_LONG`,  
`E_PATH_NOT_FOUND`,      `E_NO_MATCH`,      `E_BUFFER_TOO_SMALL`,      `E_NOT_IMPLEMENTED`,  
`E_MEMORY_ERROR`, `E_OTHER` }
- enum `element_type` { `FILE_TYPE` = 0, `DIR_TYPE`, `INVALID_TYPE` }

### Public Member Functions

- OSCL\_IMPORT\_REF const char \* `FindFirst` (const char \*directory, const char \*pattern, char \*buf, uint32 buflen)
- OSCL\_IMPORT\_REF const `oscl_wchar` \* `FindFirst` (const `oscl_wchar` \*directory, const `oscl_wchar` \*pattern, `oscl_wchar` \*buf, uint32 buflen)
- OSCL\_IMPORT\_REF char \* `FindNext` (char \*buf, uint32 buflen)
- OSCL\_IMPORT\_REF `oscl_wchar` \* `FindNext` (`oscl_wchar` \*buf, uint32 buflen)
- OSCL\_IMPORT\_REF void `Close` ()
- OSCL\_IMPORT\_REF `element_type` `GetElementType` ()
- OSCL\_IMPORT\_REF `error_type` `GetLastError` ()
- OSCL\_IMPORT\_REF `Oscl_FileFind` ()
- OSCL\_IMPORT\_REF ~`Oscl_FileFind` ()

#### 7.49.1 Detailed Description

`Oscl_FileFind` class defines the generic way of finding filesystem elements that match a pattern within a directory

#### 7.49.2 Member Enumeration Documentation

##### 7.49.2.1 enum Oscl\_FileFind::element\_type

Enumerator:

*FILE\_TYPE*  
*DIR\_TYPE*  
*INVALID\_TYPE*

##### 7.49.2.2 enum Oscl\_FileFind::error\_type

Enumerator:

*E\_OK*

*E\_INVALID\_STATE*  
*E\_INVALID\_ARG*  
*E\_PATH\_TOO\_LONG*  
*E\_PATH\_NOT\_FOUND*  
*E\_NO\_MATCH*  
*E\_BUFFER\_TOO\_SMALL*  
*E\_NOT\_IMPLEMENTED*  
*E\_MEMORY\_ERROR*  
*E\_OTHER*

### 7.49.3 Constructor & Destructor Documentation

#### 7.49.3.1 OSCL\_IMPORT\_REF Oscl\_FileFind::Oscl\_FileFind ()

constructor.

##### Returns

none

#### 7.49.3.2 OSCL\_IMPORT\_REF Oscl\_FileFind::~Oscl\_FileFind ()

destructor. will deallocate open handles if necessary

##### Returns

none

### 7.49.4 Member Function Documentation

#### 7.49.4.1 OSCL\_IMPORT\_REF void Oscl\_FileFind::Close ()

closes the handle to directory.

##### Returns

none

#### 7.49.4.2 OSCL\_IMPORT\_REF const oscl\_wchar\* Oscl\_FileFind::FindFirst (const oscl\_wchar \* directory, const oscl\_wchar \* pattern, oscl\_wchar \* buf, uint32 buflen)

Opens a directory for reading.

##### Parameters

*directory* directory to search (utf16).

*pattern* wildcard pattern filter (utf16). passing NULL, results in a universal match.

*buf* buffer for returned pathname (utf16).

**buflen** size in wide characters of buf. If buf is not large enough to hold the returned string, NULL is returned, and GetLastError is set to E\_BUFFER\_TOO\_SMALL.

### Returns

returns a pointer to buffer supplied, which contains the pathname of the first found element, or NULL otherwise. On a NULL return value, [GetLastError\(\)](#) returns a more detailed error.

#### 7.49.4.3 OSCL\_IMPORT\_REF const char\* Oscl\_FileFind::FindFirst (const char \* *directory*, const char \* *pattern*, char \* *buf*, uint32 *buflen*)

Finds first element matching the pattern.

### Parameters

*directory* directory to search (utf8).

*pattern* wildcard pattern filter (utf8). passing NULL, results in a universal match.

*buf* buffer for returned pathname (utf8).

**buflen** size in wide characters of buf. If buf is not large enough to hold the returned string, NULL is returned, and GetLastError is set to E\_BUFFER\_TOO\_SMALL.

### Returns

returns a pointer to buffer supplied, which contains the pathname of the first found element, or NULL otherwise. On a NULL return value, [GetLastError\(\)](#) returns a more detailed error.

#### 7.49.4.4 OSCL\_IMPORT\_REF oscl\_wchar\* Oscl\_FileFind::FindNext (oscl\_wchar \* *buf*, uint32 *buflen*)

Reads the next element in a directory. Note: the pointer returned by this function is not persistent and should be stored. Its scope is limited to the lifetime of the class.

### Parameters

*buf* buffer to hold directory name(utf16)

**buflen** size in wide characters of buf. If buf is not large enough to hold the returned string, NULL is returned, and GetLastError is set to E\_BUFFER\_TOO\_SMALL.

### Returns

returns a pointer to buffer supplied, which contains the pathname of the next found element, or NULL otherwise. On a NULL return value, [GetLastError\(\)](#) returns a more detailed error.

#### 7.49.4.5 OSCL\_IMPORT\_REF char\* Oscl\_FileFind::FindNext (char \* *buf*, uint32 *buflen*)

Reads the next element in the directory. Note: the pointer returned by this function is not persistent and should be stored. Its scope is limited to the lifetime of the class.

### Parameters

*buf* buffer to hold directory name(utf8)

*buflen* size in wide characters of buf. If buf is not large enough to hold the returned string, NULL is returned, and GetLastError is set to E\_BUFFER\_TOO\_SMALL.

**Returns**

returns a pointer to buffer supplied, which contains the pathname of the next found element, or NULL otherwise. On a NULL return value, [GetLastError\(\)](#) returns a more detailed error.

**7.49.4.6 OSCL\_IMPORT\_REF element\_type Oscl\_FileFind::GetElementType ()**

Returns the element type for the last element returned

**Returns**

see enumeration above for more info.

**7.49.4.7 OSCL\_IMPORT\_REF error\_type Oscl\_FileFind::GetLastError ()**

Returns the error code for the last operation.

**Returns**

see enumeration above for more info.

The documentation for this class was generated from the following file:

- [oscl\\_file\\_find.h](#)

## 7.50 Oscl\_FileServer Class Reference

```
#include <oscl_file_server.h>
```

### Public Member Functions

- OSCL\_IMPORT\_REF [Oscl\\_FileServer \(\)](#)
- OSCL\_IMPORT\_REF [~Oscl\\_FileServer \(\)](#)
- OSCL\_IMPORT\_REF int32 [Connect \(bool aShareSession=false\)](#)
- OSCL\_IMPORT\_REF int32 [Close \(\)](#)
- OSCL\_IMPORT\_REF int32 [Oscl\\_DeleteFile \(const char \\*filename\)](#)
- OSCL\_IMPORT\_REF int32 [Oscl\\_DeleteFile \(const oscl\\_wchar \\*filename\)](#)

### Friends

- class [Oscl\\_File](#)
- class [OsclNativeFile](#)

#### 7.50.1 Constructor & Destructor Documentation

##### 7.50.1.1 OSCL\_IMPORT\_REF Oscl\_FileServer::Oscl\_FileServer ()

Constructor

##### 7.50.1.2 OSCL\_IMPORT\_REF Oscl\_FileServer::~Oscl\_FileServer ()

Destructor

#### 7.50.2 Member Function Documentation

##### 7.50.2.1 OSCL\_IMPORT\_REF int32 Oscl\_FileServer::Close ()

Closes a file server.

#### Returns

returns 0 on success and a non-zero value otherwise

##### 7.50.2.2 OSCL\_IMPORT\_REF int32 Oscl\_FileServer::Connect (bool *aShareSession = false*)

Connects the server. This must be called before a file server can be used.

#### Returns

returns 0 on success and a non-zero value otherwise

**7.50.2.3 OSCL\_IMPORT\_REF int32 Oscl\_FileServer::Oscl\_DeleteFile (const oscl\_wchar \*  
*filename*)**

Deletes a file from the filesystem

**Parameters**

*filename* name of the file to delete (Unicode)

**Returns**

returns 0 if successful, and a non-zero value otherwise.

**7.50.2.4 OSCL\_IMPORT\_REF int32 Oscl\_FileServer::Oscl\_DeleteFile (const char \**filename*)**

Deletes a file from the filesystem \*

**Parameters**

*filename* name of the file to delete (Utf8)

**Returns**

returns 0 if successful, and a non-zero value otherwise.

**7.50.3 Friends And Related Function Documentation****7.50.3.1 friend class Oscl\_File [friend]****7.50.3.2 friend class OsclNativeFile [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_file\\_server.h](#)

## 7.51 oscl\_fsstat Struct Reference

```
#include <oscl_file_dir_utils.h>
```

### Data Fields

- `uint64 freebytes`
- `uint64 totalbytes`

#### 7.51.1 Field Documentation

##### 7.51.1.1 `uint64 oscl_fsstat::freebytes`

##### 7.51.1.2 `uint64 oscl_fsstat::totalbytes`

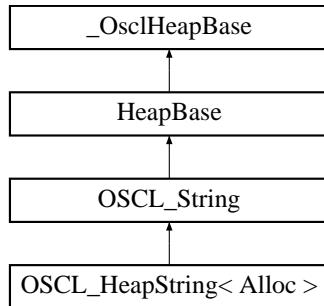
The documentation for this struct was generated from the following file:

- [oscl\\_file\\_dir\\_utils.h](#)

## 7.52 OSCL\_HeapString< Alloc > Class Template Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL\_HeapString< Alloc >:



### Public Types

- `typedef OSCL_String::chartype chartype`
- `typedef TOSCL_StringOp optype`
- `typedef OSCL_wString::chartype other_chartype`

### Public Member Functions

- `OSCL_HeapString()`
- `OSCL_HeapString(const OSCL_HeapString &src)`
- `OSCL_HeapString(const OSCL_String &src)`
- `OSCL_HeapString(const chartype *cstr)`
- `OSCL_HeapString(const chartype *buf, uint32 length)`
- `~OSCL_HeapString()`
- `uint32 get_size() const`
- `uint32 get_maxsize() const`
- `const chartype * get_cstr() const`
- `chartype * get_str() const`
- `OSCL_HeapString & operator=(const OSCL_HeapString &src)`
- `OSCL_HeapString & operator=(const OSCL_String &src)`
- `OSCL_HeapString & operator=(const chartype *cstr)`
- `void set(const chartype *buf, uint32 length)`
- `void set(const other_chartype *buf, optype op)`
- `void set(const other_chartype *buf, uint32 length, optype op)`

### Friends

- `class OSCL_String`

### 7.52.1 Detailed Description

**template<class Alloc> class OSCL\_HeapString< Alloc >**

[OSCL\\_HeapString](#) is a simple string class, compatible with regular character array strings.

The string array is variable length, is allocated from the heap, and is modifiable. A copy-on-write mechanism is used to minimize unnecessary copying when multiple instances of a string are created for reading. Allocated memory is automatically freed by the class destructor when the last string referencing the memory is destroyed.

The class HAS NO thread synchronization built-in, so it is NOT MT-SAFE. External locks should be used if the class is to be shared across threads.

#### Parameters

*Alloc*,: memory allocator, derived from [Oscl\\_DefAlloc](#).

### 7.52.2 Member Typedef Documentation

**7.52.2.1 template<class Alloc> typedef OSCL\_String::chartype OSCL\_HeapString< Alloc >::chartype**

Reimplemented from [OSCL\\_String](#).

**7.52.2.2 template<class Alloc> typedef TOSCL\_StringOp OSCL\_HeapString< Alloc >::optype**

**7.52.2.3 template<class Alloc> typedef OSCL\_wString::chartype OSCL\_HeapString< Alloc >::other\_chartype**

### 7.52.3 Friends And Related Function Documentation

**7.52.3.1 template<class Alloc> friend class OSCL\_String [friend]**

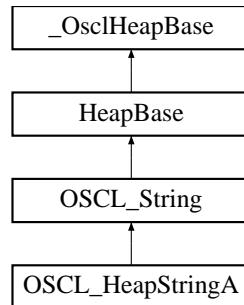
The documentation for this class was generated from the following file:

- [oscl\\_string\\_containers.h](#)

## 7.53 OSCL\_HeapStringA Class Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL\_HeapStringA:



### Public Types

- `typedef OSCL_String::chartype chartype`
- `typedef TOSCL_StringOp optype`
- `typedef OSCL_wString::chartype other_chartype`

### Public Member Functions

- `OSCL_IMPORT_REF OSCL_HeapStringA ()`
- `OSCL_IMPORT_REF OSCL_HeapStringA (Oscl_DefAlloc *alloc, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_HeapStringA (const OSCL_HeapStringA &src)`
- `OSCL_IMPORT_REF OSCL_HeapStringA (const OSCL_HeapStringA &src, Oscl_DefAlloc *alloc, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_HeapStringA (const OSCL_String &src, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_HeapStringA (const chartype *cstr, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_HeapStringA (const chartype *buf, uint32 length, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF ~OSCL_HeapStringA ()`
- `OSCL_IMPORT_REF uint32 get_size () const`
- `OSCL_IMPORT_REF uint32 get_maxsize () const`
- `OSCL_IMPORT_REF const chartype * get_cstr () const`
- `OSCL_IMPORT_REF chartype * get_str () const`
- `OSCL_IMPORT_REF OSCL_HeapStringA & operator= (const OSCL_HeapStringA &src)`
- `OSCL_IMPORT_REF OSCL_HeapStringA & operator= (const OSCL_String &src)`
- `OSCL_IMPORT_REF OSCL_HeapStringA & operator= (const chartype *cstr)`
- `OSCL_IMPORT_REF void set (const chartype *buf, uint32 length)`
- `OSCL_IMPORT_REF void set (const other_chartype *buf, optype op)`
- `OSCL_IMPORT_REF void set (const other_chartype *buf, uint32 length, optype op)`

### Friends

- `class OSCL_String`

### 7.53.1 Detailed Description

`OSCL_HeapStringA` is a simple string class, compatible with regular character array strings. It is similar to `OSCL_HeapString`, except that the allocator is passed at run-time instead of compile-time. The allocator pointer is passed in the constructor, and may be a reference-counted object. If the allocator is not a reference-counted object then it must persist over the lifetime of all `OSCL_HeapStringA` objects that use it. If no allocator is provided, then an `OsclMemAllocator` will be used.

The string array is variable length, is allocated from the heap, and is modifiable. A copy-on-write mechanism is used to minimize unnecessary copying when multiple instances of a string are created for reading. Allocated memory is automatically freed by the class destructor when the last string referencing the memory is destroyed.

The class HAS NO thread synchronization built-in, so it is NOT MT-SAFE. External locks should be used if the class is to be shared across threads.

### 7.53.2 Member Typedef Documentation

#### 7.53.2.1 `typedef OSCL_String::chartype OSCL_HeapStringA::chartype`

Reimplemented from `OSCL_String`.

#### 7.53.2.2 `typedef TOSCL_StringOp OSCL_HeapStringA::optype`

#### 7.53.2.3 `typedef OSCL_wString::chartype OSCL_HeapStringA::other_chartype`

### 7.53.3 Constructor & Destructor Documentation

#### 7.53.3.1 `OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA()`

The default constructor creates an empty string.

##### Parameters

(optional) allocator or reference-counted allocator.

(optional) reference counter associated with allocator object. If no allocator is provided, this object will use an `OsclMemAllocator`.

#### 7.53.3.2 `OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA(Oscl_DefAlloc *alloc, OsclRefCounter *ref = NULL)`

#### 7.53.3.3 `OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA(const OSCL_HeapStringA & src)`

Creates a heap string that contains a copy of the input string.

##### Parameters

`src`: input string.

(optional) allocator or reference-counted allocator.

(optional) reference counter associated with allocator object. If no allocator is provided, this object will use an `OsclMemAllocator`.

- 7.53.3.4 **OSCL\_IMPORT\_REF OSCL\_HeapStringA::OSCL\_HeapStringA (const OSCL\_HeapStringA & *src*, Oscl\_DefAlloc \* *alloc*, OsclRefCounter \* *ref* = NULL)**
- 7.53.3.5 **OSCL\_IMPORT\_REF OSCL\_HeapStringA::OSCL\_HeapStringA (const OSCL\_String & *src*, Oscl\_DefAlloc \* *alloc* = NULL, OsclRefCounter \* *ref* = NULL)**
- 7.53.3.6 **OSCL\_IMPORT\_REF OSCL\_HeapStringA::OSCL\_HeapStringA (const chartype \* *cstr*, Oscl\_DefAlloc \* *alloc* = NULL, OsclRefCounter \* *ref* = NULL)**

Creates a heap string that contains a copy of the input string.

#### Parameters

*cp*,: null-terminated string.  
(optional) allocator or reference-counted allocator.  
(optional) reference counter associated with allocator object. If no allocator is provided, this object will use an [OsclMemAllocator](#).

- 7.53.3.7 **OSCL\_IMPORT\_REF OSCL\_HeapStringA::OSCL\_HeapStringA (const chartype \* *buf*, uint32 *length*, Oscl\_DefAlloc \* *alloc* = NULL, OsclRefCounter \* *ref* = NULL)**

Creates a heap string that contains a copy of the input string or character array.

#### Parameters

*src*,: character array, not necessarily null-terminated.  
*length*,: number of characters to copy.  
(optional) allocator or reference-counted allocator.  
(optional) reference counter associated with allocator object. If no allocator is provided, this object will use an [OsclMemAllocator](#).

- 7.53.3.8 **OSCL\_IMPORT\_REF OSCL\_HeapStringA::~OSCL\_HeapStringA ()**

### 7.53.4 Member Function Documentation

- 7.53.4.1 **OSCL\_IMPORT\_REF const chartype\* OSCL\_HeapStringA::get\_cstr () const [virtual]**

This function returns the C-style string for read access.

Implements [OSCL\\_String](#).

- 7.53.4.2 **OSCL\_IMPORT\_REF uint32 OSCL\_HeapStringA::get\_maxsize () const [virtual]**

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implements [OSCL\\_String](#).

**7.53.4.3 OSCL\_IMPORT\_REF uint32 OSCL\_HeapStringA::get\_size () const [virtual]**

Pure virtuals from [OSCL\\_String](#)

Implements [OSCL\\_String](#).

**7.53.4.4 OSCL\_IMPORT\_REF chartype\* OSCL\_HeapStringA::get\_str () const [virtual]**

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implements [OSCL\\_String](#).

**7.53.4.5 OSCL\_IMPORT\_REF OSCL\_HeapStringA& OSCL\_HeapStringA::operator= (const chartype \* *cstr*)**

Assignment operator

**Parameters**

null-terminated string

Reimplemented from [OSCL\\_String](#).

**7.53.4.6 OSCL\_IMPORT\_REF OSCL\_HeapStringA& OSCL\_HeapStringA::operator= (const OSCL\_String & *src*)**

Assignment operator

Reimplemented from [OSCL\\_String](#).

**7.53.4.7 OSCL\_IMPORT\_REF OSCL\_HeapStringA& OSCL\_HeapStringA::operator= (const OSCL\_HeapStringA & *src*)**

Assignment operators

**7.53.4.8 OSCL\_IMPORT\_REF void OSCL\_HeapStringA::set (const other\_chartype \* *buf*, uint32 *length*, optype *op*)**

Set the contents of this string to a new string or character array, with conversion operation.

**Parameters**

*buf*,: string or character array.

*length*,: number of characters to copy.

*op*,: conversion operation to apply

**7.53.4.9 OSCL\_IMPORT\_REF void OSCL\_HeapStringA::set (const other\_chartype \* *buf*, optype *op*)**

Set the contents of this string to a new string, with conversion operation.

**Parameters**

*buf*,: NULL-terminated wide string.

*op*,: conversion operation to apply

**7.53.4.10 OSCL\_IMPORT\_REF void OSCL\_HeapStringA::set (const chartype \* *buf*, uint32 *length*)**

Set the contents of this string to a new string or character array.

**Parameters**

*buf*,: string or character array.

*length*,: number of characters to copy.

**7.53.5 Friends And Related Function Documentation****7.53.5.1 friend class OSCL\_String [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_string\\_containers.h](#)

## 7.54 Oscl\_Int64\_Utils Class Reference

The [Oscl\\_Int64\\_Utils](#) class provides a wrapper for commonly used int64/uint64 operations.

```
#include <oscl_int64_utils.h>
```

### Static Public Member Functions

- static OSCL\_IMPORT\_REF void [set\\_int64](#) (int64 &input\_value, const int32 upper, const uint32 lower)
- static OSCL\_IMPORT\_REF int32 [get\\_int64\\_upper32](#) (const int64 &input\_value)
- static OSCL\_IMPORT\_REF uint32 [get\\_int64\\_lower32](#) (const int64 &input\_value)
- static OSCL\_IMPORT\_REF uint32 [get\\_int64\\_middle32](#) (const int64 &input\_value)
- static OSCL\_IMPORT\_REF void [set\\_uint64](#) (uint64 &input\_value, const uint32 upper, const uint32 lower)
- static OSCL\_IMPORT\_REF uint32 [get\\_uint64\\_upper32](#) (const uint64 &input\_value)
- static OSCL\_IMPORT\_REF uint32 [get\\_uint64\\_lower32](#) (const uint64 &input\_value)
- static OSCL\_IMPORT\_REF uint32 [get\\_uint64\\_middle32](#) (const uint64 &input\_value)

### 7.54.1 Detailed Description

The [Oscl\\_Int64\\_Utils](#) class provides a wrapper for commonly used int64/uint64 operations. The [Oscl\\_Int64\\_Utils](#) class:

Provides a wrapper for commonly used operations to mask the differences between OSes that have an int64/uint64 class instead of a 64-bit integer.

### 7.54.2 Member Function Documentation

- 7.54.2.1 static OSCL\_IMPORT\_REF uint32 Oscl\_Int64\_Utils::get\_int64\_lower32 (const int64 & *input\_value*) [static]
- 7.54.2.2 static OSCL\_IMPORT\_REF uint32 Oscl\_Int64\_Utils::get\_int64\_middle32 (const int64 & *input\_value*) [static]
- 7.54.2.3 static OSCL\_IMPORT\_REF int32 Oscl\_Int64\_Utils::get\_int64\_upper32 (const int64 & *input\_value*) [static]
- 7.54.2.4 static OSCL\_IMPORT\_REF uint32 Oscl\_Int64\_Utils::get\_uint64\_lower32 (const uint64 & *input\_value*) [static]
- 7.54.2.5 static OSCL\_IMPORT\_REF uint32 Oscl\_Int64\_Utils::get\_uint64\_middle32 (const uint64 & *input\_value*) [static]
- 7.54.2.6 static OSCL\_IMPORT\_REF uint32 Oscl\_Int64\_Utils::get\_uint64\_upper32 (const uint64 & *input\_value*) [static]
- 7.54.2.7 static OSCL\_IMPORT\_REF void Oscl\_Int64\_Utils::set\_int64 (int64 & *input\_value*, const int32 *upper*, const uint32 *lower*) [static]
- 7.54.2.8 static OSCL\_IMPORT\_REF void Oscl\_Int64\_Utils::set\_uint64 (uint64 & *input\_value*, const uint32 *upper*, const uint32 *lower*) [static]

The documentation for this class was generated from the following file:

- [oscl\\_int64\\_utils.h](#)

## 7.55 Oscl\_Less< T > Struct Template Reference

```
#include <oscl_map.h>
```

### Public Member Functions

- bool [operator\(\)](#) (const T &x, const T &y) const

```
template<class T> struct Oscl_Less< T >
```

#### 7.55.1 Member Function Documentation

##### 7.55.1.1 template<class T > bool Oscl\_Less< T >::operator() (const T & x, const T & y) const [inline]

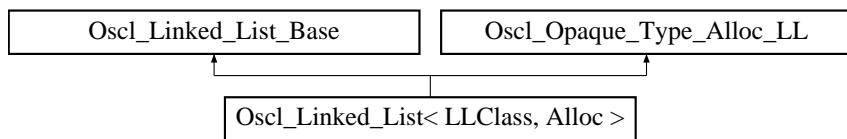
The documentation for this struct was generated from the following file:

- [oscl\\_map.h](#)

## 7.56 Oscl\_Linked\_List< LLClass, Alloc > Class Template Reference

```
#include <oscl_linked_list.h>
```

Inheritance diagram for Oscl\_Linked\_List< LLClass, Alloc >:



### Public Member Functions

- [Oscl\\_Linked\\_List \(\)](#)
- [~Oscl\\_Linked\\_List \(\)](#)
- void [clear \(\)](#)
- int32 [dequeue\\_element \(LLClass &element\)](#)
- int32 [get\\_first \(LLClass &ele\)](#)
- int32 [get\\_next \(LLClass &ele\)](#)
- int32 [check\\_list \(\)](#)
- int32 [get\\_num\\_elements \(\)](#)
- int32 [add\\_element \(LLClass &new\\_element\)](#)
- int32 [add\\_to\\_front \(const LLClass &new\\_element\)](#)
- int32 [insert\\_element \(const LLClass &new\\_element, int index\)](#)
- int32 [get\\_element \(int32 index, LLClass &element\)](#)
- int32 [remove\\_element \(const LLClass &data\\_to\\_remove\)](#)
- int32 [get\\_index \(const LLClass &data\)](#)
- int32 [remove\\_element \(const int32 index\\_to\\_remove\)](#)
- int32 [move\\_to\\_end \(const LLClass &data\\_to\\_move\)](#)
- int32 [move\\_to\\_front \(const LLClass &data\\_to\\_move\)](#)

#### 7.56.1 Detailed Description

**template<class LLClass, class Alloc> class Oscl\_Linked\_List< LLClass, Alloc >**

Oscl Linked List Class

#### 7.56.2 Constructor & Destructor Documentation

**7.56.2.1 template<class LLClass , class Alloc > Oscl\_Linked\_List< LLClass, Alloc >::Oscl\_Linked\_List () [inline]**

Initialized the protected variables of list.

References Oscl\_Linked\_List\_Base::construct(), and Oscl\_Linked\_List\_Base::sizeof\_T.

---

**7.56.2.2 template<class LLClass , class Alloc > Oscl\_Linked\_List< LLClass, Alloc >::~Oscl\_Linked\_List () [inline]**

The destructor.

References Oscl\_Linked\_List\_Base::destroy().

### 7.56.3 Member Function Documentation

**7.56.3.1 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::add\_element (LLClass & *new\_element*) [inline]**

Adds new element to the list.if list is already there then it adds element at end of list otherwise it create the list and add the element as first element of list.

**Parameters**

*new\_element* the element to be add in the list.

**Returns**

32-bit integer on the success returns 1.

**7.56.3.2 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::add\_to\_front (const LLClass & *new\_element*) [inline]**

Adds new element at the start of the list.if list is already exist then it adds element at start of list otherwise it create the list and add the element as first element of list.

**Parameters**

*new\_element* the element to be add in the list.

**Returns**

32-bit integer on the success returns 1.

**7.56.3.3 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::check\_list () [inline]**

Debug routine: Checks the list for elements.

**Returns**

32-bit integer, if node count is equal to number of node added to the list then returns 1 otherwise returns 0.

Reimplemented from [Oscl\\_Linked\\_List\\_Base](#).

**7.56.3.4 template<class LLClass , class Alloc > void Oscl\_Linked\_List< LLClass, Alloc >::clear () [inline]**

References Oscl\_Linked\_List\_Base::destroy().

**7.56.3.5 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::dequeue\_element (LLClass & *element*) [inline]**

References Oscl\_Linked\_List< LLClass, Alloc >::get\_element(), and Oscl\_Linked\_List< LLClass, Alloc >::remove\_element().

**7.56.3.6 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::get\_element (int32 *index*, LLClass & *element*) [inline]**

Search and returns the element in the list for passed index.

**Parameters**

*index,element* The index is the count for the node.

**Returns**

32-bit integer on success returns 1 otherwise returns 0.

Referenced by Oscl\_Linked\_List< LLClass, Alloc >::dequeue\_element().

**7.56.3.7 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::get\_first (LLClass & *ele*) [inline]**

Return the first element of list in passed parameter,

**Parameters**

*ele* return the value of first element of list in this parameter

**Returns**

32-bit interger,If first element found, it returns 1 otherwise it returns 0

**7.56.3.8 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::get\_index (const LLClass & *data*) [inline]**

Returns the index for requested element.

**Parameters**

*data* the element for which index to be return.

**Returns**

32-bit integer if data is found in the list it returns index otherwise it returns -1.

**7.56.3.9 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::get\_next (LLClass & *ele*) [inline]**

Return the next element of list in passed parameter,

**Parameters**

*ele* return the value of next element of list in this parameter

**Returns**

32-bit integer ,if next element is found in list,it returns 1 otherwise it returns 0

**7.56.3.10 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::get\_num\_elements () [inline]**

Get number of elements in the list.

**Returns**

32-bit integer, number of elements in list.

References Oscl\_Linked\_List\_Base::num\_elements.

**7.56.3.11 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::insert\_element (const LLClass & *new\_element*, int *index*) [inline]**

Inserts new element in the list. If the index is past the end of the list it creates the list and add the element as first element of list.

**Parameters**

*new\_element* the element to be add in the list.

**Returns**

32-bit integer on the success returns 1.

**7.56.3.12 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::move\_to\_end (const LLClass & *data\_to\_move*) [inline]**

Moves the element to end of the list

**Parameters**

*data\_to\_move*

**Returns**

On success returns 1 otherwise returns 0.

**7.56.3.13 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::move\_to\_front (const LLClass & *data\_to\_move*) [inline]**

Moves the element to front of the list

**Parameters**

*data\_to\_move*

**Returns**

On success returns 1 otherwise returns 0.

**7.56.3.14 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::remove\_element (const int32 *index\_to\_remove*) [inline]**

Removes the element for requested index.

**Parameters**

*index\_to\_remove*

**Returns**

on success return 1 otherwise return 0.

Reimplemented from [Oscl\\_Linked\\_List\\_Base](#).

References [Oscl\\_Linked\\_List< LLClass, Alloc >::remove\\_element\(\)](#).

**7.56.3.15 template<class LLClass , class Alloc > int32 Oscl\_Linked\_List< LLClass, Alloc >::remove\_element (const LLClass & *data\_to\_remove*) [inline]**

Removes the element from the list.

**Parameters**

*data\_to\_remove*

**Returns**

32-bit integer on if element fount in the list returns 1 otherwise returns 0.

Referenced by [Oscl\\_Linked\\_List< LLClass, Alloc >::dequeue\\_element\(\)](#), and [Oscl\\_Linked\\_List< LLClass, Alloc >::remove\\_element\(\)](#).

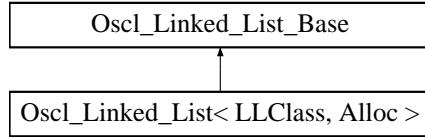
The documentation for this class was generated from the following file:

- [oscl\\_linked\\_list.h](#)

## 7.57 Oscl\_Linked\_List\_Base Class Reference

```
#include <oscl_linked_list.h>
```

Inheritance diagram for Oscl\_Linked\_List\_Base:



### Protected Member Functions

- virtual [~Oscl\\_Linked\\_List\\_Base \(\)](#)
- OSCL\_IMPORT\_REF void [construct \(Oscl\\_Opaque\\_Type\\_Alloc\\_LL \\*op\)](#)
- OSCL\_IMPORT\_REF void [destroy \(\)](#)
- OSCL\_IMPORT\_REF int32 [get\\_first \(OsclAny \\*ele\)](#)
- OSCL\_IMPORT\_REF int32 [get\\_next \(OsclAny \\*ele\)](#)
- OSCL\_IMPORT\_REF int32 [check\\_list \(\)](#)
- OSCL\_IMPORT\_REF int32 [add\\_element \(const OsclAny \\*new\\_element\)](#)
- OSCL\_IMPORT\_REF int32 [add\\_to\\_front \(const OsclAny \\*new\\_element\)](#)
- OSCL\_IMPORT\_REF int32 [insert\\_element \(const OsclAny \\*new\\_element, int index\)](#)
- OSCL\_IMPORT\_REF int32 [get\\_element \(int32 index, OsclAny \\*element\)](#)
- OSCL\_IMPORT\_REF int32 [remove\\_element \(const OsclAny \\*data\\_to\\_remove\)](#)
- OSCL\_IMPORT\_REF int32 [get\\_index \(const OsclAny \\*data\)](#)
- OSCL\_IMPORT\_REF int32 [remove\\_element \(const int32 index\\_to\\_remove\)](#)
- OSCL\_IMPORT\_REF int32 [move\\_to\\_end \(const OsclAny \\*data\\_to\\_move\)](#)
- OSCL\_IMPORT\_REF int32 [move\\_to\\_front \(const OsclAny \\*data\\_to\\_move\)](#)

### Protected Attributes

- [OsclAny \\* head](#)
- [OsclAny \\* tail](#)
- [OsclAny \\* iterator](#)
- int32 [num\\_elements](#)
- uint32 [sizeof\\_T](#)

#### 7.57.1 Detailed Description

Oscl Linked List Base Class. A non-templated base class is used to avoid large inline functions in the [Oscl\\_Linked\\_List](#) implementation.

### 7.57.2 Constructor & Destructor Documentation

**7.57.2.1 virtual Oscl\_Linked\_List\_Base::~Oscl\_Linked\_List\_Base () [inline, protected, virtual]**

### 7.57.3 Member Function Documentation

**7.57.3.1 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::add\_element (const OsclAny \* new\_element) [protected]**

Adds new element to the list.if list is already there then it adds element at end of list otherwise it create the list and add the element as first element of list.

#### Parameters

*new\_element* the element to be add in the list.

#### Returns

32-bit integer on the success returns 1.

**7.57.3.2 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::add\_to\_front (const OsclAny \* new\_element) [protected]**

Adds new element at the start of the list.if list is already exist then it adds element at start of list otherwise it create the list and add the element as first element of list.

#### Parameters

*new\_element* the element to be add in the list.

#### Returns

32-bit integer on the success returns 1.

**7.57.3.3 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::check\_list () [protected]**

Debug routine: Checks the list for elements.

#### Returns

32-bit integer, if node count is equal to number of node added to the list then returns 1 otherwise returns 0.

Reimplemented in [Oscl\\_Linked\\_List< LLClass, Alloc >](#).

**7.57.3.4 OSCL\_IMPORT\_REF void Oscl\_Linked\_List\_Base::construct (Oscl\_Opaque\_Type\_Alloc\_LL \* op) [protected]**

Referenced by [Oscl\\_Linked\\_List< LLClass, Alloc >::Oscl\\_Linked\\_List\(\)](#).

### 7.57.3.5 OSCL\_IMPORT\_REF void Oscl\_Linked\_List\_Base::destroy () [protected]

Referenced by Oscl\_Linked\_List< LLClass, Alloc >::clear(), and Oscl\_Linked\_List< LLClass, Alloc >::~Oscl\_Linked\_List().

### 7.57.3.6 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::get\_element (int32 *index*, OsclAny \* *element*) [protected]

Search and returns the element in the list for passed index.

#### Parameters

*index,element* The index is the count for the node.

#### Returns

32-bit integer on success returns 1 otherwise returns 0.

### 7.57.3.7 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::get\_first (OsclAny \* *ele*) [protected]

Return the first element of list in passed parameter,

#### Parameters

*ele* return the value of first element of list in this parameter

#### Returns

32-bit integer, If first element found, it returns 1 otherwise it returns 0

### 7.57.3.8 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::get\_index (const OsclAny \* *data*) [protected]

Returns the index for requested element.

#### Parameters

*data* the element for which index to be return.

#### Returns

32-bit integer if data is found in the list it returns index otherwise it returns -1.

### 7.57.3.9 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::get\_next (OsclAny \* *ele*) [protected]

Return the next element of list in passed parameter,

#### Parameters

*ele* return the value of next element of list in this parameter

#### Returns

32-bit integer ,if next element is found in list,it returns 1 otherwise it returns 0

**7.57.3.10 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::insert\_element (const OsclAny \* new\_element, int index) [protected]**

Inserts new element in the list. If the index is past the end of the list it creates the list and add the element as first element of list.

**Parameters**

*new\_element* the element to be add in the list.

**Returns**

32-bit integer on the success returns 1.

**7.57.3.11 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::move\_to\_end (const OsclAny \* data\_to\_move) [protected]**

Moves the element to end of the list

**Parameters**

*data\_to\_move*

**Returns**

On success returns 1 otherwise returns 0.

**7.57.3.12 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::move\_to\_front (const OsclAny \* data\_to\_move) [protected]**

Moves the element to front of the list

**Parameters**

*data\_to\_move*

**Returns**

On success returns 1 otherwise returns 0.

**7.57.3.13 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::remove\_element (const int32 index\_to\_remove) [protected]**

Removes the element for requested index.

**Parameters**

*index\_to\_remove*

**Returns**

on success return 1 otherwise return 0.

Reimplemented in [Oscl\\_Linked\\_List< LLClass, Alloc >](#).

**7.57.3.14 OSCL\_IMPORT\_REF int32 Oscl\_Linked\_List\_Base::remove\_element (const OsclAny \*  
data\_to\_remove) [protected]**

Removes the element from the list.

**Parameters**

*data\_to\_remove*

**Returns**

32-bit integer on if element fount in the list returns 1 otherwise returns 0.

**7.57.4 Field Documentation****7.57.4.1 OsclAny\* Oscl\_Linked\_List\_Base::head [protected]****7.57.4.2 OsclAny\* Oscl\_Linked\_List\_Base::iterator [protected]****7.57.4.3 int32 Oscl\_Linked\_List\_Base::num\_elements [protected]**

Referenced by Oscl\_Linked\_List< LLClass, Alloc >::get\_num\_elements().

**7.57.4.4 uint32 Oscl\_Linked\_List\_Base::sizeof\_T [protected]**

Referenced by Oscl\_Linked\_List< LLClass, Alloc >::Oscl\_Linked\_List().

**7.57.4.5 OsclAny\* Oscl\_Linked\_List\_Base::tail [protected]**

The documentation for this class was generated from the following file:

- [oscl\\_linked\\_list.h](#)

## 7.58 Oscl\_Map< Key, T, Alloc, Compare > Class Template Reference

```
#include <oscl_map.h>
```

### Data Structures

- class [value\\_compare](#)

### Public Types

- typedef Key [key\\_type](#)
- typedef Compare [key\\_compare](#)
- typedef [Oscl\\_Pair< const Key, T > value\\_type](#)
- typedef [Oscl\\_Map< Key, T, Alloc, Compare > self](#)
- typedef [rep\\_type::pointer pointer](#)
- typedef [rep\\_type::reference reference](#)
- typedef [rep\\_type::const\\_reference const\\_reference](#)
- typedef [rep\\_type::iterator iterator](#)
- typedef [rep\\_type::const\\_iterator const\\_iterator](#)
- typedef [rep\\_type::size\\_type size\\_type](#)
- typedef [Oscl\\_Pair< iterator, bool > pair\\_iterator\\_bool](#)
- typedef [Oscl\\_Pair< iterator, iterator > pair\\_iterator\\_iterator](#)
- typedef [Oscl\\_Pair< const\\_iterator, const\\_iterator > pair\\_criterator\\_criterator](#)

### Public Member Functions

- [Oscl\\_Map \(const Compare &comp=Compare\(\)\)](#)
- [Oscl\\_Map \(const self &x\)](#)
- [self & operator= \(const self &x\)](#)
- [key\\_compare key\\_comp \(\) const](#)
- [value\\_compare value\\_comp \(\) const](#)
- [iterator begin \(\)](#)
- [const\\_iterator begin \(\) const](#)
- [iterator end \(\)](#)
- [const\\_iterator end \(\) const](#)
- [bool empty \(\) const](#)
- [size\\_type size \(\) const](#)
- [size\\_type max\\_size \(\) const](#)
- [T & operator\[ \] \(const key\\_type &k\)](#)
- [pair\\_iterator\\_bool insert \(const value\\_type &x\)](#)
- [iterator insert \(iterator position, const value\\_type &x\)](#)
- [void insert \(const value\\_type \\*first, const value\\_type \\*last\)](#)
- [void erase \(iterator position\)](#)
- [size\\_type erase \(const key\\_type &x\)](#)
- [void erase \(iterator first, iterator last\)](#)
- [void clear \(\)](#)
- [iterator find \(const key\\_type &x\)](#)

- `const_iterator find (const key_type &x) const`
- `size_type count (const key_type &x) const`
- `iterator lower_bound (const key_type &x)`
- `const_iterator lower_bound (const key_type &x) const`
- `iterator upper_bound (const key_type &x)`
- `const_iterator upper_bound (const key_type &x) const`
- `pair_iterator_equal_range (const key_type &x)`
- `pair_citerator_citerator_equal_range (const key_type &x) const`

### 7.58.1 Detailed Description

`template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> class Oscl_Map< Key, T, Alloc, Compare >`

**Oscl\_Map** Class. A subset of STL::Map methods. **Oscl\_Map** is a sorted associative container that associates objects of type Key with objects of type T. It is also a unique associative container, meaning that no two elements have the same key. **Oscl\_Map** uses the key to speed lookup, insertion, and deletion of elements. It is often superior to all other containers when you need to lookup an element by key value. Due to the underlying tree structure, inserts and erases can be performed in logarithmic time, where a vector would take linear time in some cases.

## 7.58.2 Member Typedef Documentation

- 7.58.2.1 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::const_iterator Oscl_Map< Key, T, Alloc, Compare >::const_iterator`
- 7.58.2.2 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::const_reference Oscl_Map< Key, T, Alloc, Compare >::const_reference`
- 7.58.2.3 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::iterator Oscl_Map< Key, T, Alloc, Compare >::iterator`
- 7.58.2.4 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Compare Oscl_Map< Key, T, Alloc, Compare >::key_compare`
- 7.58.2.5 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Key Oscl_Map< Key, T, Alloc, Compare >::key_type`
- 7.58.2.6 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Pair<const_iterator, const_iterator> Oscl_Map< Key, T, Alloc, Compare >::pair_citerator_citerator`
- 7.58.2.7 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Pair<iterator, bool> Oscl_Map< Key, T, Alloc, Compare >::pair_iterator_bool`
- 7.58.2.8 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Pair<iterator, iterator> Oscl_Map< Key, T, Alloc, Compare >::pair_iterator_iterator`
- 7.58.2.9 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::pointer Oscl_Map< Key, T, Alloc, Compare >::pointer`
- 7.58.2.10 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::reference Oscl_Map< Key, T, Alloc, Compare >::reference`
- 7.58.2.11 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Map<Key, T, Alloc, Compare> Oscl_Map< Key, T, Alloc, Compare >::self`
- 7.58.2.12 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::size_type Oscl_Map< Key, T, Alloc, Compare >::size_type`
- 7.58.2.13 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Pair<const Key, T> Oscl_Map< Key, T, Alloc, Compare >::value_type`

## 7.58.3 Constructor & Destructor Documentation

- 7.58.3.1 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> Oscl_Map< Key, T, Alloc, Compare >::Oscl_Map (const Compare & comp = Compare ()) [inline]`

Creates an empty map using comp as the key compare object

---

**7.58.3.2 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> Oscl\_Map<Key, T, Alloc, Compare >::Oscl\_Map (const self & x) [inline]**

[Oscl\\_Map](#) copy constructor

#### 7.58.4 Member Function Documentation

**7.58.4.1 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> const\_iterator Oscl\_Map< Key, T, Alloc, Compare >::begin () const [inline]**

Returns a const iterator pointing to the beginning of the map

**7.58.4.2 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> iterator Oscl\_Map< Key, T, Alloc, Compare >::begin () [inline]**

Returns an iterator pointing to the beginning of the map

Referenced by [Oscl\\_TagTree< PVLogger \\*, alloc\\_type >::begin\(\)](#).

**7.58.4.3 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> void Oscl\_Map< Key, T, Alloc, Compare >::clear () [inline]**

Erases all elements

Referenced by [Oscl\\_TagTree< PVLogger \\*, alloc\\_type >::clear\(\)](#).

**7.58.4.4 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> size\_type Oscl\_Map< Key, T, Alloc, Compare >::count (const key\_type & x) const [inline]**

Returns the number of elements with key x. For map this will either be 0 or 1.

Referenced by [Oscl\\_TagTree< PVLogger \\*, alloc\\_type >::count\(\)](#).

**7.58.4.5 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> bool Oscl\_Map< Key, T, Alloc, Compare >::empty () const [inline]**

Returns true if map size is 0

Referenced by [Oscl\\_TagTree< PVLogger \\*, alloc\\_type >::empty\(\)](#).

**7.58.4.6 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> const\_iterator Oscl\_Map< Key, T, Alloc, Compare >::end () const [inline]**

Returns a const iterator pointing to the end of the map.

**7.58.4.7 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> iterator Oscl\_Map< Key, T, Alloc, Compare >::end () [inline]**

Returns an iterator pointing to the end of the map.

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::end(), and Oscl\_TagTree< PVLogger \*, alloc\_type >::insert().

**7.58.4.8 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>>  
pair\_citerator\_citerator Oscl\_Map< Key, T, Alloc, Compare >::equal\_range (const  
key\_type & x) const [inline]**

Finds a range containing all elements whose key is x

**7.58.4.9 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>>  
pair\_iterator\_iterator Oscl\_Map< Key, T, Alloc, Compare >::equal\_range (const  
key\_type & x) [inline]**

Finds a range containing all elements whose key is x

**7.58.4.10 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> void  
Oscl\_Map< Key, T, Alloc, Compare >::erase (iterator first, iterator last) [inline]**

Erases all elements in the range [first,last)

**7.58.4.11 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> size\_type  
Oscl\_Map< Key, T, Alloc, Compare >::erase (const key\_type & x) [inline]**

Erases the element with key x

**7.58.4.12 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> void  
Oscl\_Map< Key, T, Alloc, Compare >::erase (iterator position) [inline]**

Erases the element pointed to by position

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::erase().

**7.58.4.13 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>>  
const\_iterator Oscl\_Map< Key, T, Alloc, Compare >::find (const key\_type & x) const [inline]**

Finds an element whose key is x

**7.58.4.14 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> iterator  
Oscl\_Map< Key, T, Alloc, Compare >::find (const key\_type & x) [inline]**

Finds an element whose key is x

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::find(), and Oscl\_TagTree< PVLogger \*, alloc\_type >::insert().

---

**7.58.4.15 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> void Oscl\_Map< Key, T, Alloc, Compare >::insert (const value\_type \*first, const value\_type \*last) [inline]**

Inserts the range [first,last) into the map

**7.58.4.16 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> iterator Oscl\_Map< Key, T, Alloc, Compare >::insert (iterator position, const value\_type & x) [inline]**

Inserts x into the map using position as a hint as to where it should be inserted

**7.58.4.17 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> pair\_iterator\_bool Oscl\_Map< Key, T, Alloc, Compare >::insert (const value\_type & x) [inline]**

Inserts x into the map

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::insert(), Oscl\_Map< const tag\_base\_type, node\_ptr, alloc\_type, Oscl\_Tag\_Base >::operator[](), and Oscl\_TagTree< PVLogger \*, alloc\_type >::Oscl\_TagTree().

**7.58.4.18 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> key\_compare Oscl\_Map< Key, T, Alloc, Compare >::key\_comp () const [inline]**

Returns the key compare object used by the map

**7.58.4.19 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> const\_iterator Oscl\_Map< Key, T, Alloc, Compare >::lower\_bound (const key\_type & x) const [inline]**

Finds the first element whose key is not less than x

**7.58.4.20 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> iterator Oscl\_Map< Key, T, Alloc, Compare >::lower\_bound (const key\_type & x) [inline]**

Finds the first element whose key is not less than x

**7.58.4.21 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> size\_type Oscl\_Map< Key, T, Alloc, Compare >::max\_size () const [inline]**

Returns the maximum possible size of the map

**7.58.4.22 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> self& Oscl\_Map< Key, T, Alloc, Compare >::operator= (const self & x) [inline]**

Oscl\_Map assignment operator

**7.58.4.23 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> T& Oscl\_Map< Key, T, Alloc, Compare >::operator[ ] (const key\_type & k) [inline]**

Returns a reference to the object that is associated with a particular key. If the map does not already contain such an object, operator[] inserts the default object [value\\_type\(\)](#).

**7.58.4.24 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> size\_type Oscl\_Map< Key, T, Alloc, Compare >::size () const [inline]**

Returns the size of the map

Referenced by [Oscl\\_TagTree< PVLogger \\*, alloc\\_type >::size\(\)](#).

**7.58.4.25 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> const\_iterator Oscl\_Map< Key, T, Alloc, Compare >::upper\_bound (const key\_type & x) const [inline]**

Finds the first element whose key is not greater than x

**7.58.4.26 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> iterator Oscl\_Map< Key, T, Alloc, Compare >::upper\_bound (const key\_type & x) [inline]**

Finds the first element whose key is not greater than x

**7.58.4.27 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> value\_compare Oscl\_Map< Key, T, Alloc, Compare >::value\_comp () const [inline]**

Returns the value compare object used by the map

The documentation for this class was generated from the following file:

- [oscl\\_map.h](#)

## 7.59 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock > Class Template Reference

```
#include <oscl_linked_list.h>
```

### Public Member Functions

- [Oscl\\_MTLinked\\_List \(\)](#)
- [~Oscl\\_MTLinked\\_List \(\)](#)
- int32 [dequeue\\_element \(LLClass &element\)](#)
- int32 [add\\_element \(LLClass &new\\_element\)](#)
- int32 [add\\_to\\_front \(LLClass &new\\_element\)](#)
- uint32 [get\\_element \(int32 index, LLClass &element\)](#)
- int32 [remove\\_element \(const LLClass &data\\_to\\_remove\)](#)
- int32 [get\\_index \(const LLClass &data\)](#)
- int32 [remove\\_element \(const int32 index\\_to\\_remove\)](#)
- int32 [move\\_to\\_end \(const LLClass &data\\_to\\_move\)](#)
- int32 [move\\_to\\_front \(const LLClass &data\\_to\\_move\)](#)

### Protected Attributes

- [Oscl\\_Linked\\_List< LLClass, Alloc > the\\_list](#)

#### 7.59.1 Detailed Description

**template<class LLClass, class Alloc, class TheLock> class Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >**

[Oscl\\_MTLinked\\_List](#) is a multi-threaded version of the [LinkedList](#). It has mutex protection to allow access by different threads.

#### 7.59.2 Constructor & Destructor Documentation

##### 7.59.2.1 template<class LLClass , class Alloc , class TheLock > Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::Oscl\_MTLinked\_List () [inline]

Constructor for [Oscl\\_MTLinked\\_List](#)

##### 7.59.2.2 template<class LLClass , class Alloc , class TheLock > Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::~Oscl\_MTLinked\_List () [inline]

Destructor for [Oscl\\_MTLinked\\_List](#)

### 7.59.3 Member Function Documentation

#### 7.59.3.1 template<class LLClass , class Alloc , class TheLock > int32 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::add\_element (LLClass & new\_element) [inline]

Adds new element to the Multi Threaded Linked list.if list is already there then it adds element at end of list otherwise it create the list and add the element as first element of list.

##### Parameters

*new\_element* the element to be add in the list.

##### Returns

32-bit integer on the success returns 1.

References Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list.

#### 7.59.3.2 template<class LLClass , class Alloc , class TheLock > int32 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::add\_to\_front (LLClass & new\_element) [inline]

Adds new element at the start of the Multi Threaded Linked list. if list is already exist then it adds element at start of list otherwise it create the list and add the element as first element of list.

##### Parameters

*new\_element* the element to be add in the list.

##### Returns

32-bit integer on the success returns 1.

References Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list.

#### 7.59.3.3 template<class LLClass , class Alloc , class TheLock > int32 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::dequeue\_element (LLClass & element) [inline]

References Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list.

#### 7.59.3.4 template<class LLClass , class Alloc , class TheLock > uint32 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::get\_element (int32 index, LLClass & element) [inline]

Search and returns the element in the Multi Threaded Linked List for passed index.

##### Parameters

*index,element* The index is the count for the node.

##### Returns

32-bit integer on success returns 1 otherwise returns 0.

References Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list.

**7.59.3.5 template<class LLClass , class Alloc , class TheLock > int32 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::get\_index (const LLClass & *data*) [inline]**

Returns the index for requested element.

**Parameters**

*data* the element for which index to be return.

**Returns**

32-bit integer if data is found in the list it returns index otherwise it returns -1.

References Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list.

**7.59.3.6 template<class LLClass , class Alloc , class TheLock > int32 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::move\_to\_end (const LLClass & *data\_to\_move*) [inline]**

Moves the element to end of the list

**Parameters**

*data\_to\_move*

**Returns**

On success returns 1 otherwise returns 0.

References Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list.

**7.59.3.7 template<class LLClass , class Alloc , class TheLock > int32 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::move\_to\_front (const LLClass & *data\_to\_move*) [inline]**

Moves the element to front of the list

**Parameters**

*data\_to\_move*

**Returns**

On success returns 1 otherwise returns 0.

References Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list.

**7.59.3.8 template<class LLClass , class Alloc , class TheLock > int32 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::remove\_element (const int32 *index\_to\_remove*) [inline]**

Removes the element for requested index.

**Parameters**

*index\_to\_remove*

**Returns**

on success return 1 otherwise return 0.

References Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list.

**7.59.3.9 template<class LLClass , class Alloc , class TheLock > int32 Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::remove\_element (const LLClass & *data\_to\_remove*) [inline]**

Removes the element from the list.

#### Parameters

*data\_to\_remove*

#### Returns

32-bit integer on if element fount in the list returns 1 otherwise returns 0.

References Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list.

### 7.59.4 Field Documentation

**7.59.4.1 template<class LLClass , class Alloc , class TheLock > Oscl\_Linked\_List<LLClass, Alloc> Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::the\_list [protected]**

Referenced by Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::add\_element(), Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::add\_to\_front(), Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::dequeue\_element(), Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::get\_element(), Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::get\_index(), Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::move\_to\_end(), Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::move\_to\_front(), and Oscl\_MTLinked\_List< LLClass, Alloc, TheLock >::remove\_element().

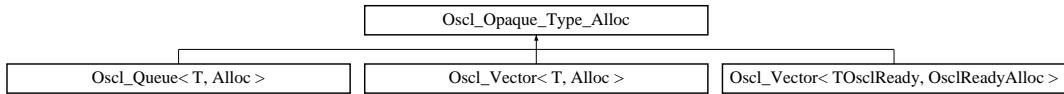
The documentation for this class was generated from the following file:

- [oscl\\_linked\\_list.h](#)

## 7.60 Oscl\_Opaque\_Type\_Alloc Class Reference

```
#include <oscl_opaque_type.h>
```

Inheritance diagram for Oscl\_Opaque\_Type\_Alloc:



### Public Member Functions

- virtual ~Oscl\_Opaque\_Type\_Alloc ()
- virtual void construct (OsclAny \*p, const OsclAny \*init\_val)=0
- virtual void destroy (OsclAny \*p)=0
- virtual OsclAny \* allocate (const uint32 size)=0
- virtual void deallocate (OsclAny \*p)=0

#### 7.60.1 Detailed Description

This class combines opaque type operations with memory allocation operations.

#### 7.60.2 Constructor & Destructor Documentation

**7.60.2.1 virtual Oscl\_Opaque\_Type\_Alloc::~Oscl\_Opaque\_Type\_Alloc () [inline, virtual]**

#### 7.60.3 Member Function Documentation

**7.60.3.1 virtual OsclAny\* Oscl\_Opaque\_Type\_Alloc::allocate (const uint32 size) [pure virtual]**

Allocate "size" bytes

**7.60.3.2 virtual void Oscl\_Opaque\_Type\_Alloc::construct (OsclAny \* p, const OsclAny \* init\_val) [pure virtual]**

Construct element at p using element at init\_val as the initial value. Both pointers must be non-NULL.

**7.60.3.3 virtual void Oscl\_Opaque\_Type\_Alloc::deallocate (OsclAny \* p) [pure virtual]**

Deallocate memory previously allocated with "allocate"

**7.60.3.4 virtual void Oscl\_Opaque\_Type\_Alloc::destroy (OsclAny \* p) [pure virtual]**

Destroy element at p.

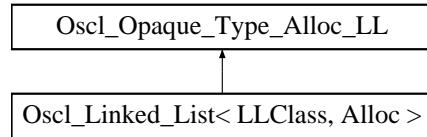
The documentation for this class was generated from the following file:

- [oscl\\_opaque\\_type.h](#)

## 7.61 Oscl\_Opaque\_Type\_Alloc\_LL Class Reference

```
#include <oscl_opaque_type.h>
```

Inheritance diagram for Oscl\_Opaque\_Type\_Alloc\_LL:



### Public Member Functions

- virtual ~Oscl\_Opaque\_Type\_Alloc\_LL()
- virtual void construct (OsclAny \*p, const OsclAny \*init\_val)=0
- virtual void destroy (OsclAny \*p)=0
- virtual OsclAny \* allocate (const uint32 size)=0
- virtual void deallocate (OsclAny \*p)=0
- virtual OsclAny \* get\_next (const OsclAny \*elem) const =0
- virtual void set\_next (OsclAny \*elem, const OsclAny \*nextelem)=0
- virtual void get\_data (OsclAny \*elem, OsclAny \*data\_val)=0
- virtual bool compare\_data (const OsclAny \*elem, const OsclAny \*data\_val) const =0

#### 7.61.1 Detailed Description

This class combines opaque type operations with memory allocation operations and linked list support

#### 7.61.2 Constructor & Destructor Documentation

**7.61.2.1 virtual Oscl\_Opaque\_Type\_Alloc\_LL::~Oscl\_Opaque\_Type\_Alloc\_LL () [inline, virtual]**

#### 7.61.3 Member Function Documentation

**7.61.3.1 virtual OsclAny\* Oscl\_Opaque\_Type\_Alloc\_LL::allocate (const uint32 size) [pure virtual]**

Allocate "size" bytes

**7.61.3.2 virtual bool Oscl\_Opaque\_Type\_Alloc\_LL::compare\_data (const OsclAny \* elem, const OsclAny \* data\_val) const [pure virtual]**

Compare data.

**7.61.3.3 virtual void Oscl\_Opaque\_Type\_Alloc\_LL::construct (OsclAny \* p, const OsclAny \* init\_val) [pure virtual]**

Construct element at p using element at init\_val as the initial value. Both pointers must be non-NULL.

**7.61.3.4 virtual void Oscl\_Opaque\_Type\_Alloc\_LL::deallocate (OsclAny \* *p*) [pure virtual]**

Deallocate memory previously allocated with "allocate"

**7.61.3.5 virtual void Oscl\_Opaque\_Type\_Alloc\_LL::destroy (OsclAny \* *p*) [pure virtual]**

Destroy element at p.

**7.61.3.6 virtual void Oscl\_Opaque\_Type\_Alloc\_LL::get\_data (OsclAny \* *elem*, OsclAny \* *data\_val*) [pure virtual]**

Get data

**7.61.3.7 virtual OsclAny\* Oscl\_Opaque\_Type\_Alloc\_LL::get\_next (const OsclAny \* *elem*) const [pure virtual]**

Get next element in linked list.

**7.61.3.8 virtual void Oscl\_Opaque\_Type\_Alloc\_LL::set\_next (OsclAny \* *elem*, const OsclAny \* *nextelem*) [pure virtual]**

Set next element in linked list.

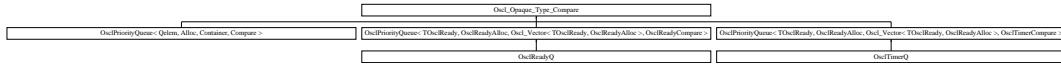
The documentation for this class was generated from the following file:

- [oscl\\_opaque\\_type.h](#)

## 7.62 Oscl\_Opaque\_Type\_Compare Class Reference

```
#include <oscl_opaque_type.h>
```

Inheritance diagram for Oscl\_Opaque\_Type\_Compare:



### Public Member Functions

- virtual ~Oscl\_Opaque\_Type\_Compare ()
- virtual void swap (OsclAny \*a, const OsclAny \*b)=0
- virtual int compare\_LT (OsclAny \*a, OsclAny \*b) const =0
- virtual int compare\_EQ (const OsclAny \*a, const OsclAny \*b) const =0

#### 7.62.1 Detailed Description

Opaque type operations with swap & comparisons.

#### 7.62.2 Constructor & Destructor Documentation

**7.62.2.1** virtual Oscl\_Opaque\_Type\_Compare::~Oscl\_Opaque\_Type\_Compare () [inline, virtual]

#### 7.62.3 Member Function Documentation

**7.62.3.1** virtual int Oscl\_Opaque\_Type\_Compare::compare\_EQ (const OsclAny \* a, const OsclAny \* b) const [pure virtual]

Return a==b.

Implemented in OsclPriorityQueue< Qelem, Alloc, Container, Compare >, OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclReadyCompare >, and OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >.

**7.62.3.2** virtual int Oscl\_Opaque\_Type\_Compare::compare\_LT (OsclAny \* a, OsclAny \* b) const [pure virtual]

Return a<b.

Implemented in OsclPriorityQueue< Qelem, Alloc, Container, Compare >, OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclReadyCompare >, and OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >.

**7.62.3.3 virtual void Oscl\_Opaque\_Type\_Compare::swap (OsclAny \* *a*, const OsclAny \* *b*)  
[pure virtual]**

Swap element at "a" with element at "b". Both pointers must be non-NULL.

Implemented in [OsclPriorityQueue< Qelem, Alloc, Container, Compare >](#), [OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\\_Vector< TOsclReady, OsclReadyAlloc >, OsclReadyCompare >](#), and [OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >](#).

The documentation for this class was generated from the following file:

- [oscl\\_opaque\\_type.h](#)

## 7.63 Oscl\_Pair< T1, T2 > Struct Template Reference

```
#include <oscl_tree.h>
```

### Public Member Functions

- [Oscl\\_Pair \(\)](#)
- [Oscl\\_Pair \(const T1 &a, const T2 &b\)](#)

### Data Fields

- T1 [first](#)
- T2 [second](#)

```
template<class T1, class T2> struct Oscl_Pair< T1, T2 >
```

#### 7.63.1 Constructor & Destructor Documentation

**7.63.1.1 template<class T1, class T2> Oscl\_Pair< T1, T2 >::Oscl\_Pair () [inline]**

**7.63.1.2 template<class T1, class T2> Oscl\_Pair< T1, T2 >::Oscl\_Pair (const T1 & a, const T2 & b) [inline]**

#### 7.63.2 Field Documentation

**7.63.2.1 template<class T1, class T2> T1 Oscl\_Pair< T1, T2 >::first**

Referenced by Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::count(), Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase(), Oscl\_TagTree< PVLogger \*, alloc\_type >::insert(), and Oscl\_Map< Key, T, Alloc, Compare >::value\_compare::operator()().

**7.63.2.2 template<class T1, class T2> T2 Oscl\_Pair< T1, T2 >::second**

Referenced by Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::count(), Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase(), and Oscl\_TagTree< PVLogger \*, alloc\_type >::insert().

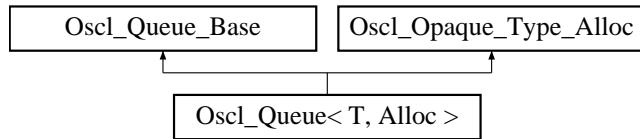
The documentation for this struct was generated from the following file:

- [oscl\\_tree.h](#)

## 7.64 Oscl\_Queue< T, Alloc > Class Template Reference

```
#include <oscl_queue.h>
```

Inheritance diagram for Oscl\_Queue< T, Alloc >:



### Public Types

- `typedef T value_type`
- `typedef T * pointer`
- `typedef T & reference`
- `typedef const T & const_reference`
- `typedef uint32 size_type`

### Public Member Functions

- `Oscl_Queue ()`
- `Oscl_Queue (uint32 n)`
- `virtual ~Oscl_Queue ()`
- `void push (const T &x)`
- `reference front ()`
- `const_reference front () const`
- `void pop ()`
- `reference back ()`
- `const_reference back () const`
- `void clear ()`

#### 7.64.1 Detailed Description

`template<class T, class Alloc> class Oscl_Queue< T, Alloc >`

**Oscl\_Queue** Class. A subset of STL::Queue methods. **Oscl\_Queue** supports constant time insertion (at the end) and removal of elements at the front of the queue. It does not support insertion or removal of elements at the other ends or middle of the queue, nor random access to elements. \* No iteration capability is [currently] supplied. \* No assignment or copy capability is [currently] supplied. The number of elements in a queue can vary dynamically, and memory management is performed automatically.

### 7.64.2 Member Typedef Documentation

- 7.64.2.1 `template<class T, class Alloc> typedef const T& Oscl_Queue< T, Alloc >::const_reference`
- 7.64.2.2 `template<class T, class Alloc> typedef T* Oscl_Queue< T, Alloc >::pointer`
- 7.64.2.3 `template<class T, class Alloc> typedef T& Oscl_Queue< T, Alloc >::reference`
- 7.64.2.4 `template<class T, class Alloc> typedef uint32 Oscl_Queue< T, Alloc >::size_type`
- 7.64.2.5 `template<class T, class Alloc> typedef T Oscl_Queue< T, Alloc >::value_type`

### 7.64.3 Constructor & Destructor Documentation

- 7.64.3.1 `template<class T, class Alloc> Oscl_Queue< T, Alloc >::Oscl_Queue () [inline]`

Creates an empty queue.

References `Oscl_Queue_Base::construct()`, and `Oscl_Queue_Base::sizeof_T`.

- 7.64.3.2 `template<class T, class Alloc> Oscl_Queue< T, Alloc >::Oscl_Queue (uint32 n) [inline]`

Creates an empty queue with capacity n.

#### Parameters

*n* creates a queue with n elements. The main reason for specifying n is efficiency. If you know the capacity to which your queue must grow, then it is more efficient to allocate the queue all at once rather than rely on the automatic reallocation scheme.

References `Oscl_Queue_Base::construct()`, and `Oscl_Queue_Base::sizeof_T`.

- 7.64.3.3 `template<class T, class Alloc> virtual Oscl_Queue< T, Alloc >::~Oscl_Queue () [inline, virtual]`

The destructor.

References `Oscl_Queue_Base::destroy()`.

### 7.64.4 Member Function Documentation

- 7.64.4.1 `template<class T, class Alloc> const_reference Oscl_Queue< T, Alloc >::back () const [inline]`

Returns the last element (const)

References `Oscl_Queue_Base::elems`, `Oscl_Queue_Base::empty()`, `Oscl_Queue_Base::irear`, and `OSCL_ASSERT`.

**7.64.4.2 template<class T, class Alloc> reference Oscl\_Queue< T, Alloc >::back () [inline]**

Returns the last element: "back" (generally not too useful, but some debugging aids might want to find out what was just added)

References Oscl\_Queue\_Base::elems, Oscl\_Queue\_Base::empty(), Oscl\_Queue\_Base::irear, and OSCL\_ASSERT.

**7.64.4.3 template<class T, class Alloc> void Oscl\_Queue< T, Alloc >::clear () [inline]**

Removes all elements.

Reimplemented from [Oscl\\_Queue\\_Base](#).

**7.64.4.4 template<class T, class Alloc> const\_reference Oscl\_Queue< T, Alloc >::front () const [inline]**

Returns the first element (const)

References Oscl\_Queue\_Base::elems, Oscl\_Queue\_Base::empty(), Oscl\_Queue\_Base::ifront, and OSCL\_ASSERT.

**7.64.4.5 template<class T, class Alloc> reference Oscl\_Queue< T, Alloc >::front () [inline]**

Returns the first element.

Reimplemented from [Oscl\\_Queue\\_Base](#).

References Oscl\_Queue\_Base::elems, Oscl\_Queue\_Base::empty(), Oscl\_Queue\_Base::ifront, and OSCL\_ASSERT.

**7.64.4.6 template<class T, class Alloc> void Oscl\_Queue< T, Alloc >::pop () [inline]**

Removes the first element

Reimplemented from [Oscl\\_Queue\\_Base](#).

**7.64.4.7 template<class T, class Alloc> void Oscl\_Queue< T, Alloc >::push (const T & x) [inline]**

Inserts a new element at the end. Queue will be grown if necessary. If allocation fails, an OSCL\_LEAVE will occur

**Parameters**

*x* new element

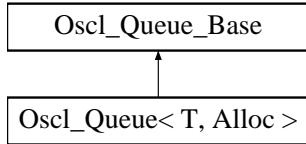
The documentation for this class was generated from the following file:

- [oscl\\_queue.h](#)

## 7.65 Oscl\_Queue\_Base Class Reference

```
#include <oscl_queue.h>
```

Inheritance diagram for Oscl\_Queue\_Base:



### Public Member Functions

- uint32 `size () const`
- uint32 `capacity () const`
- bool `empty () const`
- OSCL\_IMPORT\_REF void `reserve (uint32 n)`

### Protected Member Functions

- OSCL\_IMPORT\_REF void `construct (Oscl_Opaque_Type_Alloc *aType)`
- OSCL\_IMPORT\_REF void `construct (Oscl_Opaque_Type_Alloc *aType, uint32 n)`
- virtual `~Oscl_Queue_Base ()`
- OSCL\_IMPORT\_REF void `destroy ()`
- OSCL\_IMPORT\_REF void `push (const OsclAny *x)`
- OSCL\_IMPORT\_REF void `pop ()`
- OSCL\_IMPORT\_REF void `clear ()`

### Protected Attributes

- uint32 `numelems`
- uint32 `bufsize`
- `OsclAny * elems`
- uint32 `sizeof_T`
- uint32 `ifront`
- uint32 `irear`

#### 7.65.1 Detailed Description

`Oscl_Queue_Base` is a non-templatized base class for `Oscl_Queue`. The purpose of this base class is to avoid large inline routines in the `Oscl_Queue` implementation. This class is not intended for direct instantiation except by `Oscl_Queue`.

#### 7.65.2 Constructor & Destructor Documentation

##### 7.65.2.1 `virtual Oscl_Queue_Base::~Oscl_Queue_Base () [inline, protected, virtual]`

The destructor.

### 7.65.3 Member Function Documentation

#### 7.65.3.1 **uint32 Oscl\_Queue\_Base::capacity () const [inline]**

Returns the allocated memory of the queue.

References bufsize.

#### 7.65.3.2 **OSCL\_IMPORT\_REF void Oscl\_Queue\_Base::clear () [protected]**

Removes all elements.

Reimplemented in [Oscl\\_Queue< T, Alloc >](#).

#### 7.65.3.3 **OSCL\_IMPORT\_REF void Oscl\_Queue\_Base::construct (Oscl\_Opaque\_Type\_Alloc \* aType, uint32 n) [protected]**

#### 7.65.3.4 **OSCL\_IMPORT\_REF void Oscl\_Queue\_Base::construct (Oscl\_Opaque\_Type\_Alloc \* aType) [protected]**

Referenced by [Oscl\\_Queue< T, Alloc >::Oscl\\_Queue\(\)](#).

#### 7.65.3.5 **OSCL\_IMPORT\_REF void Oscl\_Queue\_Base::destroy () [protected]**

Like an explicit destructor call.

Referenced by [Oscl\\_Queue< T, Alloc >::~Oscl\\_Queue\(\)](#).

#### 7.65.3.6 **bool Oscl\_Queue\_Base::empty () const [inline]**

True if there are no elements in the queue

References numelems.

Referenced by [Oscl\\_Queue< T, Alloc >::back\(\)](#), and [Oscl\\_Queue< T, Alloc >::front\(\)](#).

#### 7.65.3.7 **OSCL\_IMPORT\_REF void Oscl\_Queue\_Base::pop () [protected]**

Removes the first element

Reimplemented in [Oscl\\_Queue< T, Alloc >](#).

#### 7.65.3.8 **OSCL\_IMPORT\_REF void Oscl\_Queue\_Base::push (const OsclAny \* x) [protected]**

Inserts a new element at the end. Queue will be grown if necessary. If allocation fails, an OSCL\_LEAVE will occur

##### Parameters

*x* new element

**7.65.3.9 OSCL\_IMPORT\_REF void Oscl\_Queue\_Base::reserve (uint32 *n*)**

Reallocates memory if necessary to a capacity of *n* elements. The main reason for reserve is efficiency. If you know the capacity to which your vector must grow, then it is more efficient to allocate the vector all at once rather than rely on the automatic reallocation scheme. This also helps control the invalidation of iterators.

**Parameters**

*n* size of vector

**7.65.3.10 uint32 Oscl\_Queue\_Base::size () const [inline]**

Returns the size of the queue.

References numelems.

**7.65.4 Field Documentation****7.65.4.1 uint32 Oscl\_Queue\_Base::bufsize [protected]**

Referenced by capacity().

**7.65.4.2 OsclAny\* Oscl\_Queue\_Base::elems [protected]**

Referenced by Oscl\_Queue< T, Alloc >::back(), and Oscl\_Queue< T, Alloc >::front().

**7.65.4.3 uint32 Oscl\_Queue\_Base::ifront [protected]**

Referenced by Oscl\_Queue< T, Alloc >::front().

**7.65.4.4 uint32 Oscl\_Queue\_Base::irear [protected]**

Referenced by Oscl\_Queue< T, Alloc >::back().

**7.65.4.5 uint32 Oscl\_Queue\_Base::numelems [protected]**

Referenced by empty(), and size().

**7.65.4.6 uint32 Oscl\_Queue\_Base::sizeof\_T [protected]**

Referenced by Oscl\_Queue< T, Alloc >::Oscl\_Queue().

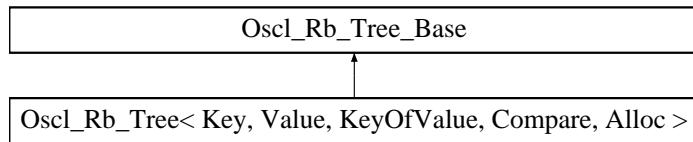
The documentation for this class was generated from the following file:

- [oscl\\_queue.h](#)

## 7.66 Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc > Class Template Reference

```
#include <oscl_tree.h>
```

Inheritance diagram for Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >:



### Public Types

- `typedef Key key_type`
- `typedef Value value_type`
- `typedef value_type * pointer`
- `typedef const value_type * const_pointer`
- `typedef value_type & reference`
- `typedef const value_type & const_reference`
- `typedef Oscl_Rb_Tree_Node< Value >::link_type link_type`
- `typedef Oscl_Rb_Tree_Iterator< value_type > iterator`
- `typedef Oscl_Rb_Tree_Const_Iterator< value_type > const_iterator`
- `typedef uint32 size_type`
- `typedef int32 difference_type`

### Public Member Functions

- `Oscl_Rb_Tree (const Compare &comp=Compare())`
- `Oscl_Rb_Tree (const Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > &x)`
- `~Oscl_Rb_Tree ()`
- `Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > & operator= (const Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > &x)`
- `iterator begin ()`
- `const_iterator begin () const`
- `iterator end ()`
- `const_iterator end () const`
- `bool empty () const`
- `size_type size () const`
- `size_type max_size () const`
- `Oscl_Pair< iterator, bool > insert_unique (const value_type &v)`
- `iterator insert_unique (iterator position, const value_type &v)`
- `void insert_unique (const iterator first, const iterator last)`
- `void insert_unique (const value_type *first, const value_type *last)`
- `void erase (iterator position)`
- `size_type erase (const key_type &x)`
- `void erase (iterator first, iterator last)`
- `void erase (const key_type *first, const key_type *last)`

- void `clear ()`
  - `iterator find (const Key &k)`
  - `const_iterator find (const Key &k) const`
  - `size_type count (const Key &k) const`
  - `iterator lower_bound (const Key &k)`
  - `const_iterator lower_bound (const Key &k) const`
  - `iterator upper_bound (const Key &k)`
  - `const_iterator upper_bound (const Key &k) const`
  - `Oscl_Pair< iterator, iterator > equal_range (const Key &k)`
  - `Oscl_Pair< const_iterator, const_iterator > equal_range (const Key &k) const`

```
template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> class Oscl_Rb_-Tree< Key, Value, KeyOfValue, Compare, Alloc >
```

### 7.66.1 Member Typedef Documentation

- 7.66.1.1 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Oscl\_Rb\_Tree\_Const\_Iterator<value\_type> Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::const\_iterator
- 7.66.1.2 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef const value\_type\* Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::const\_pointer
- 7.66.1.3 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef const value\_type& Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::const\_reference
- 7.66.1.4 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef int32 Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::difference\_type
- 7.66.1.5 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Oscl\_Rb\_Tree\_Iterator<value\_type> Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::iterator
- 7.66.1.6 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Key Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::key\_type
- 7.66.1.7 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Oscl\_Rb\_Tree\_Node<Value>::link\_type Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::link\_type
- 7.66.1.8 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef value\_type\* Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::pointer
- 7.66.1.9 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef value\_type& Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::reference
- 7.66.1.10 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef uint32 Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::size\_type
- 7.66.1.11 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Value Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::value\_type

### 7.66.2 Constructor & Destructor Documentation

- 7.66.2.1 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::Oscl\_Rb\_Tree (const Compare & *comp* = Compare()) [inline]
- 7.66.2.2 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::Oscl\_Rb\_Tree (const Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc > & *x*) [inline]

- OSCL API
- 7.66.2.3 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::Oscl\_Rb\_Tree() [inline]

### 7.66.3 Member Function Documentation

- 7.66.3.1 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> const\_iterator Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::begin() const

`>::erase(), and Oscl_Rb_Tree< key_type, value_type, Oscl_Select1st< value_type, key_type >, key_compare, alloc_type >::insert_unique().`

**7.66.3.3 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> void Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::clear () [inline]**

Referenced by Oscl\_Map< const tag\_base\_type, node\_ptr, alloc\_type, Oscl\_Tag\_Base >::clear(), Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase(), Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::operator=(), and Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::~Oscl\_Rb\_Tree().

**7.66.3.4 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> size\_type Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::count (const Key & k) const [inline]**

Referenced by Oscl\_Map< const tag\_base\_type, node\_ptr, alloc\_type, Oscl\_Tag\_Base >::count().

**7.66.3.5 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> bool Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::empty () const [inline]**

Referenced by Oscl\_Map< const tag\_base\_type, node\_ptr, alloc\_type, Oscl\_Tag\_Base >::empty().

**7.66.3.6 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> const\_iterator Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::end () const [inline]**

**7.66.3.7 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> iterator Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::end () [inline]**

Referenced by Oscl\_Map< const tag\_base\_type, node\_ptr, alloc\_type, Oscl\_Tag\_Base >::end(), Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase(), and Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::find().

**7.66.3.8 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> Oscl\_Pair<const\_iterator, const\_iterator> Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::equal\_range (const Key & k) const [inline]**

**7.66.3.9 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> Oscl\_Pair<iterator, iterator> Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::equal\_range (const Key & k) [inline]**

Referenced by Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::count(), Oscl\_Map< const tag\_base\_type, node\_ptr, alloc\_type, Oscl\_Tag\_Base >::equal\_range(), and Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase().

- 7.66.3.10 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> void Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::erase (const key\_type \* *first*, const key\_type \* *last*) [inline]**
- 7.66.3.11 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> void Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::erase (iterator *first*, iterator *last*) [inline]**
- 7.66.3.12 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> size\_type Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::erase (const key\_type & *x*) [inline]**
- 7.66.3.13 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> void Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::erase (iterator *position*) [inline]**

Referenced by Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase(), and Oscl\_Map< const tag\_base\_type, node\_ptr, alloc\_type, Oscl\_Tag\_Base >::erase().

- 7.66.3.14 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> const\_iterator Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::find (const Key & *k*) const [inline]**
- 7.66.3.15 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> iterator Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::find (const Key & *k*) [inline]**

Referenced by Oscl\_Map< const tag\_base\_type, node\_ptr, alloc\_type, Oscl\_Tag\_Base >::find().

- 7.66.3.16 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> void Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::insert\_unique (const value\_type \* *first*, const value\_type \* *last*) [inline]**
- 7.66.3.17 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> void Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::insert\_unique (const\_iterator *first*, const\_iterator *last*) [inline]**
- 7.66.3.18 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> iterator Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::insert\_unique (iterator *position*, const value\_type & *v*) [inline]**
- 7.66.3.19 **template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> Oscl\_Pair<iterator, bool> Oscl\_Rb\_Tree< Key, Value, KeyOfValue, Compare, Alloc >::insert\_unique (const value\_type & *v*) [inline]**

Referenced by Oscl\_Map< const tag\_base\_type, node\_ptr, alloc\_type, Oscl\_Tag\_Base >::insert(), and Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::insert\_unique().

- 7.66.3.20** `template<class Key, class Value, class KeyOfValue, class Compare, class Alloc>`  
`const_iterator Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc`  
`>::lower_bound (const Key & k) const [inline]`
- 7.66.3.21** `template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> iterator`  
`Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::lower_bound (const Key &`  
`k) [inline]`

Referenced by `Oscl_Rb_Tree< key_type, value_type, Oscl_Select1st< value_type, key_type >, key_compare, alloc_type >::equal_range()`, and `Oscl_Map< const tag_base_type, node_ptr, alloc_type, Oscl_Tag_Base >::lower_bound()`.

- 7.66.3.22** `template<class Key, class Value, class KeyOfValue, class Compare, class Alloc>`  
`size_type Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::max_size () const`  
`[inline]`

Referenced by `Oscl_Map< const tag_base_type, node_ptr, alloc_type, Oscl_Tag_Base >::max_size()`.

- 7.66.3.23** `template<class Key, class Value, class KeyOfValue, class Compare, class Alloc>`  
`Oscl_Rb_Tree<Key, Value, KeyOfValue, Compare, Alloc>& Oscl_Rb_Tree< Key,`  
`Value, KeyOfValue, Compare, Alloc >::operator= (const Oscl_Rb_Tree< Key, Value,`  
`KeyOfValue, Compare, Alloc > & x) [inline]`

- 7.66.3.24** `template<class Key, class Value, class KeyOfValue, class Compare, class Alloc>`  
`size_type Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::size () const`  
`[inline]`

Referenced by `Oscl_Rb_Tree< key_type, value_type, Oscl_Select1st< value_type, key_type >, key_compare, alloc_type >::insert_unique()`, and `Oscl_Map< const tag_base_type, node_ptr, alloc_type, Oscl_Tag_Base >::size()`.

- 7.66.3.25** `template<class Key, class Value, class KeyOfValue, class Compare, class Alloc>`  
`const_iterator Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc`  
`>::upper_bound (const Key & k) const [inline]`

- 7.66.3.26** `template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> iterator`  
`Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::upper_bound (const Key`  
`& k) [inline]`

Referenced by `Oscl_Rb_Tree< key_type, value_type, Oscl_Select1st< value_type, key_type >, key_compare, alloc_type >::equal_range()`, and `Oscl_Map< const tag_base_type, node_ptr, alloc_type, Oscl_Tag_Base >::upper_bound()`.

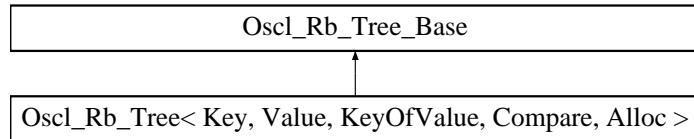
The documentation for this class was generated from the following file:

- [oscl\\_tree.h](#)

## 7.67 Oscl\_Rb\_Tree\_Base Class Reference

```
#include <oscl_tree.h>
```

Inheritance diagram for Oscl\_Rb\_Tree\_Base:



### Public Types

- `typedef Oscl_Rb_Tree_Node_Base::base_link_type base_link_type`

### Public Member Functions

- `OSCL_IMPORT_REF void rotate_left (base_link_type x, base_link_type &root)`
- `OSCL_IMPORT_REF void rotate_right (base_link_type x, base_link_type &root)`
- `OSCL_IMPORT_REF void rebalance (base_link_type x, base_link_type &root)`
- `OSCL_IMPORT_REF base_link_type rebalance_for_erase (base_link_type z, base_link_type &root, base_link_type &leftmost, base_link_type &rightmost)`

#### 7.67.1 Member Typedef Documentation

##### 7.67.1.1 `typedef Oscl_Rb_Tree_Node_Base::base_link_type Oscl_Rb_Tree_Base::base_link_type`

#### 7.67.2 Member Function Documentation

##### 7.67.2.1 `OSCL_IMPORT_REF void Oscl_Rb_Tree_Base::rebalance (base_link_type x, base_link_type & root)`

##### 7.67.2.2 `OSCL_IMPORT_REF base_link_type Oscl_Rb_Tree_Base::rebalance_for_erase (base_link_type z, base_link_type & root, base_link_type & leftmost, base_link_type & rightmost)`

Referenced by `Oscl_Rb_Tree< key_type, value_type, Oscl_Select1st< value_type, key_type >, key_compare, alloc_type >::erase()`.

##### 7.67.2.3 `OSCL_IMPORT_REF void Oscl_Rb_Tree_Base::rotate_left (base_link_type x, base_link_type & root)`

##### 7.67.2.4 `OSCL_IMPORT_REF void Oscl_Rb_Tree_Base::rotate_right (base_link_type x, base_link_type & root)`

The documentation for this class was generated from the following file:

- `oscl_tree.h`

## 7.68 Oscl\_Rb\_Tree\_Const\_Iterator< Value > Struct Template Reference

```
#include <oscl_tree.h>
```

### Public Types

- `typedef Value value_type`
- `typedef const value_type & reference`
- `typedef const value_type * pointer`
- `typedef Oscl_Rb_Tree_Const_Iterator< Value > const_iterator`
- `typedef Oscl_Rb_Tree_Const_Iterator< Value > self`
- `typedef Oscl_Rb_Tree_Node_Base * base_link_type`
- `typedef Oscl_Rb_Tree_Node< Value > * link_type`

### Public Member Functions

- `Oscl_Rb_Tree_Const_Iterator()`
- `Oscl_Rb_Tree_Const_Iterator(link_type x)`
- `Oscl_Rb_Tree_Const_Iterator(const const_iterator &it)`
- `reference operator*() const`
- `pointer operator->() const`
- `bool operator==(const self &x)`
- `bool operator!=(const self &x)`
- `self & operator++()`
- `self operator++(int)`
- `self & operator--()`
- `self operator--(int)`

### Data Fields

- `base_link_type node`

---

```
template<class Value> struct Oscl_Rb_Tree_Const_Iterator< Value >
```

### 7.68.1 Member Typedef Documentation

- 7.68.1.1 template<class Value > typedef Oscl\_Rb\_Tree\_Node\_Base\* Oscl\_Rb\_Tree\_Const\_Iterator< Value >::base\_link\_type
- 7.68.1.2 template<class Value > typedef Oscl\_Rb\_Tree\_Const\_Iterator<Value> Oscl\_Rb\_Tree\_Const\_Iterator< Value >::const\_iterator
- 7.68.1.3 template<class Value > typedef Oscl\_Rb\_Tree\_Node<Value>\* Oscl\_Rb\_Tree\_Const\_Iterator< Value >::link\_type
- 7.68.1.4 template<class Value > typedef const value\_type\* Oscl\_Rb\_Tree\_Const\_Iterator< Value >::pointer
- 7.68.1.5 template<class Value > typedef const value\_type& Oscl\_Rb\_Tree\_Const\_Iterator< Value >::reference
- 7.68.1.6 template<class Value > typedef Oscl\_Rb\_Tree\_Const\_Iterator<Value> Oscl\_Rb\_Tree\_Const\_Iterator< Value >::self
- 7.68.1.7 template<class Value > typedef Value Oscl\_Rb\_Tree\_Const\_Iterator< Value >::value\_type

### 7.68.2 Constructor & Destructor Documentation

- 7.68.2.1 template<class Value > Oscl\_Rb\_Tree\_Const\_Iterator< Value >::Oscl\_Rb\_Tree\_Const\_Iterator () [inline]
- 7.68.2.2 template<class Value > Oscl\_Rb\_Tree\_Const\_Iterator< Value >::Oscl\_Rb\_Tree\_Const\_Iterator (link\_type x) [inline]

References Oscl\_Rb\_Tree\_Const\_Iterator< Value >::node.

- 7.68.2.3 template<class Value > Oscl\_Rb\_Tree\_Const\_Iterator< Value >::Oscl\_Rb\_Tree\_Const\_Iterator (const const\_iterator & it) [inline]

References Oscl\_Rb\_Tree\_Const\_Iterator< Value >::node.

### 7.68.3 Member Function Documentation

- 7.68.3.1 template<class Value > bool Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator!= (const self & x) [inline]

References Oscl\_Rb\_Tree\_Const\_Iterator< Value >::node.

- 7.68.3.2 template<class Value > reference Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator\* () const [inline]

References Oscl\_Rb\_Tree\_Const\_Iterator< Value >::node.

Referenced by Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator->().

**7.68.3.3 template<class Value > self Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator++ (int) [inline]**

**7.68.3.4 template<class Value > self& Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator++ () [inline]**

References Oscl\_Rb\_Tree\_Node\_Base::left, Oscl\_Rb\_Tree\_Const\_Iterator< Value >::node, Oscl\_Rb\_Tree\_Node\_Base::parent, and Oscl\_Rb\_Tree\_Node\_Base::right.

**7.68.3.5 template<class Value > self Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator-- (int) [inline]**

**7.68.3.6 template<class Value > self& Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator-- () [inline]**

References Oscl\_Rb\_Tree\_Node\_Base::color, Oscl\_Rb\_Tree\_Node\_Base::left, Oscl\_Rb\_Tree\_Const\_Iterator< Value >::node, Oscl\_Rb\_Tree\_Node\_Base::parent, Oscl\_Rb\_Tree\_Node\_Base::red, and Oscl\_Rb\_Tree\_Node\_Base::right.

**7.68.3.7 template<class Value > pointer Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator-> () const [inline]**

References Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator\*().

**7.68.3.8 template<class Value > bool Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator==(const self & x) [inline]**

References Oscl\_Rb\_Tree\_Const\_Iterator< Value >::node.

## 7.68.4 Field Documentation

**7.68.4.1 template<class Value > base\_link\_type Oscl\_Rb\_Tree\_Const\_Iterator< Value >::node**

Referenced by Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::find(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator!=(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator\*(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator++(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator--(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator==( ), and Oscl\_Rb\_Tree\_Const\_Iterator< Value >::Oscl\_Rb\_Tree\_Const\_Iterator().

The documentation for this struct was generated from the following file:

- [oscl\\_tree.h](#)

## 7.69 Oscl\_Rb\_Tree\_Iterator< Value > Struct Template Reference

```
#include <oscl_tree.h>
```

### Public Types

- `typedef Value value_type`
- `typedef value_type & reference`
- `typedef value_type * pointer`
- `typedef Oscl_Rb_Tree_Iterator< Value > iterator`
- `typedef Oscl_Rb_Tree_Iterator< Value > self`
- `typedef Oscl_Rb_Tree_Node_Base * base_link_type`
- `typedef Oscl_Rb_Tree_Node< Value > * link_type`

### Public Member Functions

- `Oscl_Rb_Tree_Iterator ()`
- `Oscl_Rb_Tree_Iterator (link_type x)`
- `Oscl_Rb_Tree_Iterator (const iterator &it)`
- `reference operator* () const`
- `pointer operator-> () const`
- `bool operator== (const self &x)`
- `bool operator!= (const self &x)`
- `self & operator++ ()`
- `self operator++ (int)`
- `self & operator-- ()`
- `self operator-- (int)`

### Data Fields

- `base_link_type node`

---

```
template<class Value> struct Oscl_Rb_Tree_Iterator< Value >
```

### 7.69.1 Member Typedef Documentation

- 7.69.1.1 template<class Value > typedef Oscl\_Rb\_Tree\_Node\_Base\* Oscl\_Rb\_Tree\_Iterator< Value >::base\_link\_type
- 7.69.1.2 template<class Value > typedef Oscl\_Rb\_Tree\_Iterator<Value> Oscl\_Rb\_Tree\_Iterator< Value >::iterator
- 7.69.1.3 template<class Value > typedef Oscl\_Rb\_Tree\_Node<Value>\* Oscl\_Rb\_Tree\_Iterator< Value >::link\_type
- 7.69.1.4 template<class Value > typedef value\_type\* Oscl\_Rb\_Tree\_Iterator< Value >::pointer
- 7.69.1.5 template<class Value > typedef value\_type& Oscl\_Rb\_Tree\_Iterator< Value >::reference
- 7.69.1.6 template<class Value > typedef Oscl\_Rb\_Tree\_Iterator<Value> Oscl\_Rb\_Tree\_Iterator< Value >::self
- 7.69.1.7 template<class Value > typedef Value Oscl\_Rb\_Tree\_Iterator< Value >::value\_type

### 7.69.2 Constructor & Destructor Documentation

- 7.69.2.1 template<class Value > Oscl\_Rb\_Tree\_Iterator< Value >::Oscl\_Rb\_Tree\_Iterator () [inline]
- 7.69.2.2 template<class Value > Oscl\_Rb\_Tree\_Iterator< Value >::Oscl\_Rb\_Tree\_Iterator (link\_type *x*) [inline]

References Oscl\_Rb\_Tree\_Iterator< Value >::node.

- 7.69.2.3 template<class Value > Oscl\_Rb\_Tree\_Iterator< Value >::Oscl\_Rb\_Tree\_Iterator (const iterator & *it*) [inline]

References Oscl\_Rb\_Tree\_Iterator< Value >::node.

### 7.69.3 Member Function Documentation

- 7.69.3.1 template<class Value > bool Oscl\_Rb\_Tree\_Iterator< Value >::operator!= (const self & *x*) [inline]

References Oscl\_Rb\_Tree\_Iterator< Value >::node.

- 7.69.3.2 template<class Value > reference Oscl\_Rb\_Tree\_Iterator< Value >::operator\* () const [inline]

References Oscl\_Rb\_Tree\_Iterator< Value >::node.

Referenced by Oscl\_Rb\_Tree\_Iterator< Value >::operator->().

**7.69.3.3 template<class Value > self Oscl\_Rb\_Tree\_Iterator< Value >::operator++ (int) [inline]**

**7.69.3.4 template<class Value > self& Oscl\_Rb\_Tree\_Iterator< Value >::operator++ () [inline]**

References Oscl\_Rb\_Tree\_Node\_Base::left, Oscl\_Rb\_Tree\_Iterator< Value >::node, Oscl\_Rb\_Tree\_Node\_Base::parent, and Oscl\_Rb\_Tree\_Node\_Base::right.

**7.69.3.5 template<class Value > self Oscl\_Rb\_Tree\_Iterator< Value >::operator-- (int) [inline]**

**7.69.3.6 template<class Value > self& Oscl\_Rb\_Tree\_Iterator< Value >::operator-- () [inline]**

References Oscl\_Rb\_Tree\_Node\_Base::color, Oscl\_Rb\_Tree\_Node\_Base::left, Oscl\_Rb\_Tree\_Iterator< Value >::node, Oscl\_Rb\_Tree\_Node\_Base::parent, Oscl\_Rb\_Tree\_Node\_Base::red, and Oscl\_Rb\_Tree\_Node\_Base::right.

**7.69.3.7 template<class Value > pointer Oscl\_Rb\_Tree\_Iterator< Value >::operator-> () const [inline]**

References Oscl\_Rb\_Tree\_Iterator< Value >::operator\*().

**7.69.3.8 template<class Value > bool Oscl\_Rb\_Tree\_Iterator< Value >::operator==(const self & x) [inline]**

References Oscl\_Rb\_Tree\_Iterator< Value >::node.

## 7.69.4 Field Documentation

**7.69.4.1 template<class Value > base\_link\_type Oscl\_Rb\_Tree\_Iterator< Value >::node**

Referenced by Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase(), Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::find(), Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::insert\_unique(), Oscl\_Rb\_Tree\_Iterator< Value >::operator!=(), Oscl\_Rb\_Tree\_Iterator< Value >::operator\*(), Oscl\_Rb\_Tree\_Iterator< Value >::operator++(), Oscl\_Rb\_Tree\_Iterator< Value >::operator--(), Oscl\_Rb\_Tree\_Iterator< Value >::operator==(), and Oscl\_Rb\_Tree\_Iterator< Value >::Oscl\_Rb\_Tree\_Iterator().

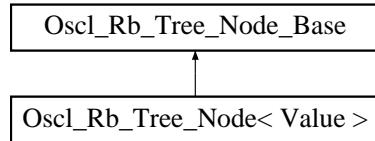
The documentation for this struct was generated from the following file:

- [oscl\\_tree.h](#)

## 7.70 Oscl\_Rb\_Tree\_Node< Value > Struct Template Reference

#include <oscl\_tree.h>

Inheritance diagram for Oscl\_Rb\_Tree\_Node< Value >:



### Public Types

- typedef Value [value\\_type](#)
- typedef [Oscl\\_Rb\\_Tree\\_Node< Value > \\*](#) [link\\_type](#)

### Data Fields

- [value\\_type value](#)

**template<class Value> struct Oscl\_Rb\_Tree\_Node< Value >**

#### 7.70.1 Member Typedef Documentation

**7.70.1.1 template<class Value> typedef Oscl\_Rb\_Tree\_Node<Value>\*> Oscl\_Rb\_Tree\_Node< Value >::link\_type**

**7.70.1.2 template<class Value> typedef Value Oscl\_Rb\_Tree\_Node< Value >::value\_type**

#### 7.70.2 Field Documentation

**7.70.2.1 template<class Value> value\_type Oscl\_Rb\_Tree\_Node< Value >::value**

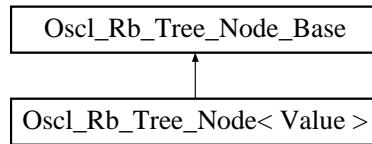
The documentation for this struct was generated from the following file:

- [oscl\\_tree.h](#)

## 7.71 Oscl\_Rb\_Tree\_Node\_Base Struct Reference

```
#include <oscl_tree.h>
```

Inheritance diagram for Oscl\_Rb\_Tree\_Node\_Base:



### Public Types

- enum RedBl { red, black }
- typedef Oscl\_Rb\_Tree\_Node\_Base \* base\_link\_type
- typedef enum Oscl\_Rb\_Tree\_Node\_Base::RedBl color\_type

### Static Public Member Functions

- static base\_link\_type minimum (base\_link\_type x)
- static base\_link\_type maximum (base\_link\_type x)

### Data Fields

- color\_type color
- base\_link\_type parent
- base\_link\_type left
- base\_link\_type right

#### 7.71.1 Member Typedef Documentation

7.71.1.1 `typedef Oscl_Rb_Tree_Node_Base* Oscl_Rb_Tree_Node_Base::base_link_type`

7.71.1.2 `typedef enum Oscl_Rb_Tree_Node_Base::RedBl Oscl_Rb_Tree_Node_Base::color_type`

#### 7.71.2 Member Enumeration Documentation

7.71.2.1 `enum Oscl_Rb_Tree_Node_Base::RedBl`

Enumerator:

*red*

*black*

### 7.71.3 Member Function Documentation

**7.71.3.1 static base\_link\_type Oscl\_Rb\_Tree\_Node\_Base::maximum (base\_link\_type x)**  
**[inline, static]**

References right.

**7.71.3.2 static base\_link\_type Oscl\_Rb\_Tree\_Node\_Base::minimum (base\_link\_type x)**  
**[inline, static]**

References left.

### 7.71.4 Field Documentation

**7.71.4.1 color\_type Oscl\_Rb\_Tree\_Node\_Base::color**

Referenced by Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator--(), Oscl\_Rb\_Tree\_Iterator< Value >::operator--(), and Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::Oscl\_Rb\_Tree().

**7.71.4.2 base\_link\_type Oscl\_Rb\_Tree\_Node\_Base::left**

Referenced by Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase(), Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::insert\_unique(), minimum(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator++(), Oscl\_Rb\_Tree\_Iterator< Value >::operator++(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator--(), and Oscl\_Rb\_Tree\_Iterator< Value >::operator--().

**7.71.4.3 base\_link\_type Oscl\_Rb\_Tree\_Node\_Base::parent**

Referenced by Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator++(), Oscl\_Rb\_Tree\_Iterator< Value >::operator++(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator--(), and Oscl\_Rb\_Tree\_Iterator< Value >::operator--().

**7.71.4.4 base\_link\_type Oscl\_Rb\_Tree\_Node\_Base::right**

Referenced by Oscl\_Rb\_Tree< key\_type, value\_type, Oscl\_Select1st< value\_type, key\_type >, key\_compare, alloc\_type >::erase(), maximum(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator++(), Oscl\_Rb\_Tree\_Iterator< Value >::operator++(), Oscl\_Rb\_Tree\_Const\_Iterator< Value >::operator--(), and Oscl\_Rb\_Tree\_Iterator< Value >::operator--().

The documentation for this struct was generated from the following file:

- [oscl\\_tree.h](#)

## 7.72 Oscl\_Select1st< V, U > Struct Template Reference

```
#include <oscl_map.h>
```

### Public Member Functions

- const U & **operator()** (const V &x) const

```
template<class V, class U> struct Oscl_Select1st< V, U >
```

#### 7.72.1 Member Function Documentation

```
7.72.1.1 template<class V , class U > const U& Oscl_Select1st< V, U >::operator() (const V & x)
      const [inline]
```

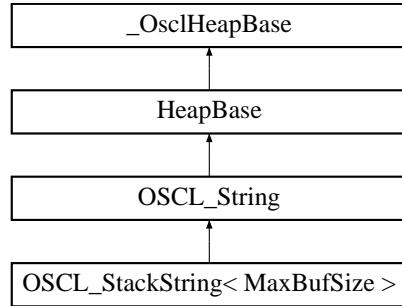
The documentation for this struct was generated from the following file:

- [oscl\\_map.h](#)

## 7.73 OSCL\_StackString< MaxBufSize > Class Template Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL\_StackString< MaxBufSize >:



### Public Types

- [typedef OSCL\\_String::chartype chartype](#)
- [typedef TOSCL\\_StringOp optype](#)
- [typedef OSCL\\_wString::chartype other\\_chartype](#)

### Public Member Functions

- [OSCL\\_StackString \(\)](#)
- [OSCL\\_StackString \(const OSCL\\_StackString &src\)](#)
- [OSCL\\_StackString \(const OSCL\\_String &src\)](#)
- [OSCL\\_StackString \(const chartype \\*cstr\)](#)
- [OSCL\\_StackString \(const chartype \\*buf, uint32 length\)](#)
- [~OSCL\\_StackString \(\)](#)
- [uint32 get\\_size \(\) const](#)
- [uint32 get\\_maxsize \(\) const](#)
- [const chartype \\* get\\_cstr \(\) const](#)
- [chartype \\* get\\_str \(\) const](#)
- [OSCL\\_StackString & operator= \(const OSCL\\_StackString &src\)](#)
- [OSCL\\_StackString & operator= \(const OSCL\\_String &src\)](#)
- [OSCL\\_StackString & operator= \(const chartype \\*cstr\)](#)
- [void set \(const chartype \\*buf, uint32 length\)](#)
- [void set \(const other\\_chartype \\*buf, optype op\)](#)
- [void set \(const other\\_chartype \\*buf, uint32 length, optype op\)](#)

### Friends

- [class OSCL\\_String](#)

### 7.73.1 Detailed Description

**template<uint32 MaxBufSize> class OSCL\_StackString< MaxBufSize >**

[OSCL\\_StackString](#) is a simple string class, compatible with regular character array strings.

The string array is fixed length, is allocated from the stack, and is modifiable. Operations that update the string will automatically truncate it to fit the fixed size storage. This is recommended for use for short strings (<255). Use [OSCL\\_HeapString](#) for very large strings to avoid stack overflow.

#### Parameters

*C*,: type of character.

*MaxBufSize*,: maximum string length not including null terminator.

### 7.73.2 Member Typedef Documentation

**7.73.2.1 template<uint32 MaxBufSize> typedef OSCL\_String::chartype OSCL\_StackString< MaxBufSize >::chartype**

Reimplemented from [OSCL\\_String](#).

**7.73.2.2 template<uint32 MaxBufSize> typedef TOSCL\_StringOp OSCL\_StackString< MaxBufSize >::optype**

**7.73.2.3 template<uint32 MaxBufSize> typedef OSCL\_wString::chartype OSCL\_StackString< MaxBufSize >::other\_chartype**

### 7.73.3 Friends And Related Function Documentation

**7.73.3.1 template<uint32 MaxBufSize> friend class OSCL\_String [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_string\\_containers.h](#)

## 7.74 oscl\_stat\_buf Struct Reference

```
#include <oscl_file_dir_utils.h>
```

### Data Fields

- uint32 [mode](#)
- uint32 [perms](#)

#### 7.74.1 Field Documentation

##### 7.74.1.1 uint32 oscl\_stat\_buf::mode

##### 7.74.1.2 uint32 oscl\_stat\_buf::perms

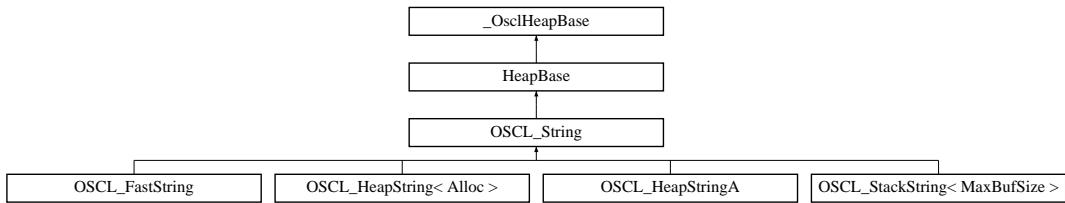
The documentation for this struct was generated from the following file:

- [oscl\\_file\\_dir\\_utils.h](#)

## 7.75 OSCL\_String Class Reference

```
#include <oscl_string.h>
```

Inheritance diagram for OSCL\_String:



### Public Types

- `typedef char chartype`

### Public Member Functions

- `virtual uint32 get_size () const =0`
- `virtual uint32 get_maxsize () const =0`
- `virtual const chartype * get_cstr () const =0`
- `virtual bool is_writable () const`
- `virtual chartype * get_str () const =0`
- `OSCL_String & operator=(const OSCL_String &src)`
- `OSCL_String & operator=(const chartype *cstr)`
- `OSCL_String & operator+=(const OSCL_String &src)`
- `OSCL_String & operator+=(const chartype *cstr)`
- `OSCL_String & operator+=(const chartype c)`
- `bool operator==(const OSCL_String &src) const`
- `bool operator!=(const OSCL_String &src) const`
- `bool operator<(const OSCL_String &src) const`
- `bool operator<=(const OSCL_String &src) const`
- `bool operator>(const OSCL_String &src) const`
- `bool operator>=(const OSCL_String &src) const`
- `bool operator==(const chartype *cstr) const`
- `chartype operator[ ](uint32 index) const`
- `virtual chartype read (uint32 index) const`
- `virtual uint32 setrep_to_char (const oscl_wchar *src, uint32 len, TOSCL_StringOp op, Oscl_DefAlloc *aAlloc)`
- `virtual int8 hash () const`
- `virtual void write (uint32 index, chartype c)`
- `virtual void write (uint32 offset, uint32 length, const chartype *buf)`

## Protected Member Functions

- `OSCL_String()`
- virtual `~OSCL_String()`
- virtual void `set_rep(const chartype *cstr)=0`
- virtual void `append_rep(const chartype *cstr)=0`
- virtual void `set_rep(const OSCL_String &src)=0`
- virtual void `append_rep(const OSCL_String &src)=0`
- virtual void `set_len(uint32 len)=0`

### 7.75.1 Detailed Description

A common base class for string classes with "char" character format

### 7.75.2 Member Typedef Documentation

#### 7.75.2.1 `typedef char OSCL_String::chartype`

Reimplemented in `OSCL_HeapString< Alloc >`, `OSCL_HeapStringA`, `OSCL_StackString< MaxBufSize >`, `OSCL_FastString`, and `OSCL_HeapString< OsclMemAllocator >`.

### 7.75.3 Constructor & Destructor Documentation

#### 7.75.3.1 `OSCL_String::OSCL_String()` [protected]

#### 7.75.3.2 `virtual OSCL_String::~OSCL_String()` [protected, virtual]

### 7.75.4 Member Function Documentation

#### 7.75.4.1 `virtual void OSCL_String::append_rep(const OSCL_String & src)` [protected, pure virtual]

Append the input string to the current string. The string may be truncated to fit the available storage.

#### 7.75.4.2 `virtual void OSCL_String::append_rep(const chartype * cstr)` [protected, pure virtual]

Append the input null-terminated string to the current string. The string may be truncated to fit the available storage.

#### 7.75.4.3 `virtual const chartype* OSCL_String::get_cstr() const` [pure virtual]

This function returns the C-style string for read access.

Implemented in `OSCL_HeapString< Alloc >`, `OSCL_HeapStringA`, `OSCL_StackString< MaxBufSize >`, `OSCL_FastString`, and `OSCL_HeapString< OsclMemAllocator >`.

**7.75.4.4 virtual uint32 OSCL\_String::get\_maxsize () const [pure virtual]**

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implemented in [OSCL\\_HeapString< Alloc >](#), [OSCL\\_HeapStringA](#), [OSCL\\_StackString< MaxBufSize >](#), [OSCL\\_FastString](#), and [OSCL\\_HeapString< OsclMemAllocator >](#).

**7.75.4.5 virtual uint32 OSCL\_String::get\_size () const [pure virtual]**

This function returns the string size not including the null-terminator.

Implemented in [OSCL\\_HeapString< Alloc >](#), [OSCL\\_HeapStringA](#), [OSCL\\_StackString< MaxBufSize >](#), [OSCL\\_FastString](#), and [OSCL\\_HeapString< OsclMemAllocator >](#).

**7.75.4.6 virtual chartype\* OSCL\_String::get\_str () const [pure virtual]**

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implemented in [OSCL\\_HeapString< Alloc >](#), [OSCL\\_HeapStringA](#), [OSCL\\_StackString< MaxBufSize >](#), [OSCL\\_FastString](#), and [OSCL\\_HeapString< OsclMemAllocator >](#).

**7.75.4.7 virtual int8 OSCL\_String::hash () const [virtual]**

This function performs a hash operation on the string. If the string is not writable, the function leaves.

**7.75.4.8 virtual bool OSCL\_String::is\_writable () const [virtual]**

This function returns true if the string is writable.

**7.75.4.9 bool OSCL\_String::operator!= (const OSCL\_String & src) const****7.75.4.10 OSCL\_String& OSCL\_String::operator+= (const chartype c)**

Append operator. This operator appends the input character to this object. The string may be truncated to fit available storage.

**7.75.4.11 OSCL\_String& OSCL\_String::operator+= (const chartype \* cstr)**

Append operator. This operator appends the input string to this object. The string may be truncated to fit available storage.

**Parameters**

null-terminated string

**7.75.4.12 OSCL\_String& OSCL\_String::operator+= (const OSCL\_String & src)**

Append operator. This operator appends the input string to this object. The string may be truncated to fit available storage.

**7.75.4.13 bool OSCL\_String::operator< (const OSCL\_String & src) const**

**7.75.4.14 bool OSCL\_String::operator<= (const OSCL\_String & src) const**

**7.75.4.15 OSCL\_String& OSCL\_String::operator= (const chartype \* cstr)**

Assignment operator

#### Parameters

null-terminated string

Reimplemented in [OSCL\\_HeapString< Alloc >](#), [OSCL\\_HeapStringA](#), [OSCL\\_StackString< MaxBufSize >](#), [OSCL\\_FastString](#), and [OSCL\\_HeapString< OsclMemAllocator >](#).

**7.75.4.16 OSCL\_String& OSCL\_String::operator= (const OSCL\_String & src)**

Assignment operator

Reimplemented in [OSCL\\_HeapString< Alloc >](#), [OSCL\\_HeapStringA](#), [OSCL\\_StackString< MaxBufSize >](#), and [OSCL\\_HeapString< OsclMemAllocator >](#).

**7.75.4.17 bool OSCL\_String::operator== (const chartype \* cstr) const**

Comparison operator

#### Parameters

null-terminated string

**7.75.4.18 bool OSCL\_String::operator== (const OSCL\_String & src) const**

Comparison operators

**7.75.4.19 bool OSCL\_String::operator> (const OSCL\_String & src) const**

**7.75.4.20 bool OSCL\_String::operator>= (const OSCL\_String & src) const**

**7.75.4.21 chartype OSCL\_String::operator[ ] (uint32 index) const**

This is subscript notation to access a character at the given position. If the index is outside the current size range then the function leaves.

**7.75.4.22 virtual chartype OSCL\_String::read (uint32 index) const [virtual]**

This function returns the character at the given position. If the index is outside the current size range then the function leaves.

**7.75.4.23 virtual void OSCL\_String::set\_len (uint32 len) [protected, pure virtual]**

Update the length of the string. This function will only be called when the string is writable.

**7.75.4.24 virtual void OSCL\_String::set\_rep (const OSCL\_String & src) [protected, pure virtual]**

Set string representation to input string.

**7.75.4.25 virtual void OSCL\_String::set\_rep (const chartype \* cstr) [protected, pure virtual]**

Each representation class must implement these pure virtuals. Set string representation to input null-terminated string.

**7.75.4.26 virtual uint32 OSCL\_String::setrep\_to\_char (const oscl\_wchar \* src, uint32 len, TOSCL\_StringOp op, Oscl\_DefAlloc \* aAlloc) [virtual]**

This function allocates a temp storage for performing one of the following operations based on TOSCL\_StringOp

- compress src string from oscl\_wchar to utf8.
- convert src string from oscl\_wchar to utf8. call parent [set\\_rep\(\)](#) to copy resulting string.

**Parameters**

*src*,: reference input string  
*len*,: length of string to operate on  
*op*,: type operation mentioned above  
*aAlloc*,: optional, memory allocator if available

**Returns**

length of compressed or converted string exclude terminated ”.

Referenced by OSCL\_StackString< MaxBufSize >::set(), and OSCL\_HeapString< Alloc >::set().

**7.75.4.27 virtual void OSCL\_String::write (uint32 offset, uint32 length, const chartype \* buf) [virtual]**

This function replaces characters at the specified offset within the current string. If the string is not writable, the function leaves. The characters may be truncated to fit the current storage.

**Parameters**

*offset*,: the offset into the existing string buffer  
*length*,: number of characters to copy.  
*ptr*,: character buffer, not necessarily null-terminated.

**7.75.4.28 virtual void OSCL\_String::write (uint32 index, chartype c) [virtual]**

This function stores a character at the specified position. If the string is not writable, the function leaves. If the index is outside the current size range then the function leaves.

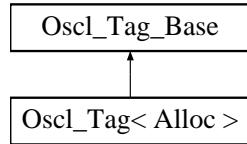
The documentation for this class was generated from the following file:

- [oscl\\_string.h](#)

## 7.76 Oscl\_Tag< Alloc > Struct Template Reference

```
#include <oscl_tagtree.h>
```

Inheritance diagram for Oscl\_Tag< Alloc >:



### Public Member Functions

- `Oscl_Tag (const Oscl_Tag< Alloc > &t)`
- `Oscl_Tag (const tag_base_type &t)`
- `~Oscl_Tag ()`
- `bool operator< (const Oscl_Tag< Alloc > &x) const`

### Data Fields

- `Oscl_TAlloc< tag_base_unit, Alloc > tagAllocator`
- `tag_base_type tag`

`template<class Alloc> struct Oscl_Tag< Alloc >`

#### 7.76.1 Constructor & Destructor Documentation

##### 7.76.1.1 `template<class Alloc> Oscl_Tag< Alloc >::Oscl_Tag (const Oscl_Tag< Alloc > & t) [inline]`

References `Oscl_Tag< Alloc >::tag`, `Oscl_Tag_Base::tag_copy()`, `Oscl_Tag_Base::tag_len()`, and `Oscl_Tag< Alloc >::tagAllocator`.

##### 7.76.1.2 `template<class Alloc> Oscl_Tag< Alloc >::Oscl_Tag (const tag_base_type & t) [inline]`

References `Oscl_Tag< Alloc >::tag`, `Oscl_Tag_Base::tag_copy()`, `Oscl_Tag_Base::tag_len()`, and `Oscl_Tag< Alloc >::tagAllocator`.

##### 7.76.1.3 `template<class Alloc> Oscl_Tag< Alloc >::~Oscl_Tag () [inline]`

References `Oscl_TAlloc< T, Alloc >::deallocate()`, `Oscl_Tag< Alloc >::tag`, and `Oscl_Tag< Alloc >::tagAllocator`.

## 7.76.2 Member Function Documentation

### 7.76.2.1 template<class Alloc> bool Oscl\_Tag< Alloc >::operator<(const Oscl\_Tag< Alloc > & x) const [inline]

References Oscl\_Tag< Alloc >::tag, and Oscl\_Tag\_Base::tag\_cmp().

## 7.76.3 Field Documentation

### 7.76.3.1 template<class Alloc> tag\_base\_type Oscl\_Tag< Alloc >::tag

Referenced by Oscl\_TagTree< T, Alloc >::Node::depth(), Oscl\_TagTree< PVLogger \*, alloc\_type >::insert(), Oscl\_Tag< Alloc >::operator<(), Oscl\_Tag< Alloc >::Oscl\_Tag(), and Oscl\_Tag< Alloc >::~Oscl\_Tag().

### 7.76.3.2 template<class Alloc> Oscl\_TAlloc<tag\_base\_unit, Alloc> Oscl\_Tag< Alloc >::tagAllocator

Referenced by Oscl\_Tag< Alloc >::Oscl\_Tag(), and Oscl\_Tag< Alloc >::~Oscl\_Tag().

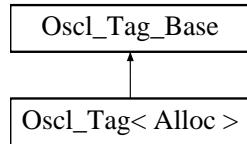
The documentation for this struct was generated from the following file:

- [oscl\\_tagtree.h](#)

## 7.77 Oscl\_Tag\_Base Struct Reference

```
#include <oscl_tagtree.h>
```

Inheritance diagram for Oscl\_Tag\_Base:



### Public Types

- `typedef char tag_base_unit`
- `typedef tag_base_unit * tag_base_type`
- `typedef uint32 size_type`

### Public Member Functions

- `bool operator() (const tag_base_type &x, const tag_base_type &y) const`
- `size_type tag_len (const tag_base_type &t) const`
- `tag_base_type tag_copy (tag_base_type &dest, const tag_base_type &src) const`
- `int32 tag_cmp (const tag_base_type &x, const tag_base_type &y) const`
- `OSCL_IMPORT_REF tag_base_type tag_ancestor (tag_base_type &dest, const tag_base_type &src) const`
- `OSCL_IMPORT_REF size_type tag_depth (const tag_base_type &t) const`

#### 7.77.1 Member Typedef Documentation

**7.77.1.1 `typedef uint32 Oscl_Tag_Base::size_type`**

**7.77.1.2 `typedef tag_base_unit* Oscl_Tag_Base::tag_base_type`**

**7.77.1.3 `typedef char Oscl_Tag_Base::tag_base_unit`**

#### 7.77.2 Member Function Documentation

**7.77.2.1 `bool Oscl_Tag_Base::operator() (const tag_base_type & x, const tag_base_type & y) const [inline]`**

References `tag_cmp()`.

**7.77.2.2 `OSCL_IMPORT_REF tag_base_type Oscl_Tag_Base::tag_ancestor (tag_base_type & dest, const tag_base_type & src) const`**

Referenced by `Oscl_TagTree< PVLogger *, alloc_type >::insert()`.

**7.77.2.3 int32 Oscl\_Tag\_Base::tag\_cmp (const tag\_base\_type & x, const tag\_base\_type & y) const [inline]**

References oscl\_strlen(), and oscl\_strncmp().

Referenced by operator()(), and Oscl\_Tag< Alloc >::operator<().

**7.77.2.4 tag\_base\_type Oscl\_Tag\_Base::tag\_copy (tag\_base\_type & dest, const tag\_base\_type & src) const [inline]**

References oscl\_strlen(), and oscl\_strncpy().

Referenced by Oscl\_Tag< Alloc >::Oscl\_Tag().

**7.77.2.5 OSCL\_IMPORT\_REF size\_type Oscl\_Tag\_Base::tag\_depth (const tag\_base\_type & t) const**

Referenced by Oscl\_TagTree< T, Alloc >::Node::depth(), and Oscl\_TagTree< PVLogger \*, alloc\_type >::insert().

**7.77.2.6 size\_type Oscl\_Tag\_Base::tag\_len (const tag\_base\_type & t) const [inline]**

References oscl\_strlen().

Referenced by Oscl\_Tag< Alloc >::Oscl\_Tag().

The documentation for this struct was generated from the following file:

- [oscl\\_tagtree.h](#)

## 7.78 Oscl\_TagTree< T, Alloc > Class Template Reference

```
#include <oscl_tagtree.h>
```

### Data Structures

- struct [const\\_iterator](#)
- struct [iterator](#)
- struct [Node](#)

### Public Types

- typedef [Oscl\\_Tag< Alloc > tag\\_type](#)
- typedef [tag\\_type::tag\\_base\\_type tag\\_base\\_type](#)
- typedef [Oscl\\_Vector< Node \\*, Alloc > children\\_type](#)
- typedef [Node node\\_type](#)
- typedef [node\\_type \\* node\\_ptr](#)
- typedef [Oscl\\_Map< const tag\\_base\\_type, node\\_ptr, Alloc, Oscl\\_Tag\\_Base > map\\_type](#)
- typedef [map\\_type::size\\_type size\\_type](#)
- typedef [map\\_type::value\\_type value\\_type](#)
- typedef [Oscl\\_Pair< iterator, bool > pair\\_iterator\\_bool](#)

### Public Member Functions

- [Oscl\\_TagTree \(size\\_type max\\_depth=0\)](#)
- [Oscl\\_TagTree \(const Oscl\\_TagTree< T, Alloc > &x\)](#)
- [Oscl\\_TagTree< T, Alloc > & operator= \(const Oscl\\_TagTree< T, Alloc > &x\)](#)
- [~Oscl\\_TagTree \(\)](#)
- [iterator begin \(\)](#)
- [const\\_iterator begin \(\) const](#)
- [iterator end \(\)](#)
- [const\\_iterator end \(\) const](#)
- [bool empty \(\) const](#)
- [size\\_type size \(\) const](#)
- [T & operator\[\] \(const tag\\_base\\_type &t\)](#)
- [pair\\_iterator\\_bool insert \(const tag\\_base\\_type &t, const T &x\)](#)
- [void erase \(iterator position\)](#)
- [size\\_type erase \(const tag\\_base\\_type &x\)](#)
- [void clear \(\)](#)
- [iterator find \(const tag\\_base\\_type &x\)](#)
- [size\\_type count \(const tag\\_base\\_type &x\) const](#)

#### 7.78.1 Detailed Description

**template<class T, class Alloc> class Oscl\_TagTree< T, Alloc >**

[Oscl\\_TagTree](#) Class.

### 7.78.2 Member Typedef Documentation

- 7.78.2.1 `template<class T, class Alloc> typedef Oscl_Vector<Node*, Alloc> Oscl_TagTree< T, Alloc >::children_type`
- 7.78.2.2 `template<class T, class Alloc> typedef Oscl_Map<const tag_base_type, node_ptr, Alloc, Oscl_Tag_Base> Oscl_TagTree< T, Alloc >::map_type`
- 7.78.2.3 `template<class T, class Alloc> typedef node_type* Oscl_TagTree< T, Alloc >::node_ptr`
- 7.78.2.4 `template<class T, class Alloc> typedef Node Oscl_TagTree< T, Alloc >::node_type`
- 7.78.2.5 `template<class T, class Alloc> typedef Oscl_Pair<iterator, bool> Oscl_TagTree< T, Alloc >::pair_iterator_bool`
- 7.78.2.6 `template<class T, class Alloc> typedef map_type::size_type Oscl_TagTree< T, Alloc >::size_type`
- 7.78.2.7 `template<class T, class Alloc> typedef tag_type::tag_base_type Oscl_TagTree< T, Alloc >::tag_base_type`
- 7.78.2.8 `template<class T, class Alloc> typedef Oscl_Tag<Alloc> Oscl_TagTree< T, Alloc >::tag_type`
- 7.78.2.9 `template<class T, class Alloc> typedef map_type::value_type Oscl_TagTree< T, Alloc >::value_type`

### 7.78.3 Constructor & Destructor Documentation

- 7.78.3.1 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::Oscl_TagTree (size_type max_depth = 0) [inline]`

Creates a tag tree with only a root node with tag ""

- 7.78.3.2 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::Oscl_TagTree (const Oscl_TagTree< T, Alloc > & x) [inline]`

Copy constructor

- 7.78.3.3 `template<class T, class Alloc> Oscl_TagTree< T, Alloc >::~Oscl_TagTree () [inline]`

Destructor

### 7.78.4 Member Function Documentation

- 7.78.4.1 `template<class T, class Alloc> const_iterator Oscl_TagTree< T, Alloc >::begin () const [inline]`

Returns an iterator pointing to the first node in the tree.

**7.78.4.2 template<class T, class Alloc> iterator Oscl\_TagTree< T, Alloc >::begin () [inline]**

Returns an iterator pointing to the first node in the tree.

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::clear(), Oscl\_TagTree< PVLogger \*, alloc\_type >::operator=(), Oscl\_TagTree< PVLogger \*, alloc\_type >::Oscl\_TagTree(), and Oscl\_TagTree< PVLogger \*, alloc\_type >::~Oscl\_TagTree().

**7.78.4.3 template<class T, class Alloc> void Oscl\_TagTree< T, Alloc >::clear () [inline]**

Erases the entire tag tree.

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::operator=().

**7.78.4.4 template<class T, class Alloc> size\_type Oscl\_TagTree< T, Alloc >::count (const tag\_base\_type & x) const [inline]**

Finds an element whose key is x Returns the number of elements with key x. This can only be 0 or 1..

**7.78.4.5 template<class T, class Alloc> bool Oscl\_TagTree< T, Alloc >::empty () const [inline]**

Returns true if tree size is 0

**7.78.4.6 template<class T, class Alloc> const\_iterator Oscl\_TagTree< T, Alloc >::end () const [inline]**

Returns a const iterator pointing to the end of the tree.

**7.78.4.7 template<class T, class Alloc> iterator Oscl\_TagTree< T, Alloc >::end () [inline]**

Returns an iterator pointing to the end of the tree.

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::clear(), Oscl\_TagTree< PVLogger \*, alloc\_type >::erase(), Oscl\_TagTree< PVLogger \*, alloc\_type >::insert(), Oscl\_TagTree< PVLogger \*, alloc\_type >::operator=(), Oscl\_TagTree< PVLogger \*, alloc\_type >::Oscl\_TagTree(), and Oscl\_TagTree< PVLogger \*, alloc\_type >::~Oscl\_TagTree().

**7.78.4.8 template<class T, class Alloc> size\_type Oscl\_TagTree< T, Alloc >::erase (const tag\_base\_type & x) [inline]**

Erases the node with tag x. If the node has children, then the node will not be erased from the tree. It will be replaced with the default node value

**Parameters**

*x* Tag of node to erase

**Returns**

Returns the number of nodes erased. Since one-to-one mapping between nodes and tags, this will be either 0 or 1

**7.78.4.9 template<class T, class Alloc> void Oscl\_TagTree< T, Alloc >::erase (iterator *position*) [inline]**

Erases the element pointed to by the iterator. If the node has children, then the node will not be erased from the tree. It will be replaced with the default node value.

**Parameters**

*position* Iterator pointing to the node to be erased

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::erase().

**7.78.4.10 template<class T, class Alloc> iterator Oscl\_TagTree< T, Alloc >::find (const tag\_base\_type & *x*) [inline]**

Finds an element whose key is x

**Returns**

returns an iterator to the element with key x. If no element is found, returns [end\(\)](#)

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::erase().

**7.78.4.11 template<class T, class Alloc> pair<iterator, bool> Oscl\_TagTree< T, Alloc >::insert (const tag\_base\_type & *t*, const T & *x*) [inline]**

Inserts x into the tree and associates it with tag t. If the tag already exists x will not be inserted, and an iterator pointing to the existing node with tag t is returned.

**Parameters**

*t* tag to use

*x* element to insert

**Returns**

Returns a pair of parameters, iterator and bool. The iterator points to the inserted node containing x. If the tag t already existed, then the iterator points to the node associated with tag t. The bool is true if x was inserted and false if it was not inserted due to an existing node with tag t.

Referenced by Oscl\_TagTree< PVLogger \*, alloc\_type >::operator=(), Oscl\_TagTree< PVLogger \*, alloc\_type >::operator[ ](), and Oscl\_TagTree< PVLogger \*, alloc\_type >::Oscl\_TagTree().

**7.78.4.12 template<class T, class Alloc> Oscl\_TagTree< T, Alloc >& Oscl\_TagTree< T, Alloc >::operator= (const Oscl\_TagTree< T, Alloc > & *x*) [inline]**

Assignment operator

**7.78.4.13 template<class T, class Alloc> T& Oscl\_TagTree< T, Alloc >::operator[ ] (const tag\_base\_type & *t*) [inline]**

Returns a reference to the object that is associated with a particular tag. If the map does not already contain such an object, operator[] inserts the default object T().

**7.78.4.14 template<class T, class Alloc> size\_type Oscl\_TagTree< T, Alloc >::size () const  
[inline]**

Returns the number of nodes stored in the tree

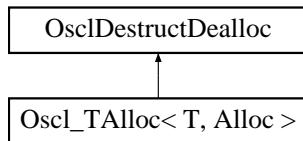
The documentation for this class was generated from the following file:

- [oscl\\_tagtree.h](#)

## 7.79 Oscl\_TAlloc< T, Alloc > Class Template Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for Oscl\_TAlloc< T, Alloc >:



## Data Structures

- struct [rebind](#)

## Public Types

- typedef T [value\\_type](#)
- typedef T \* [pointer](#)
- typedef const T \* [const\\_pointer](#)
- typedef uint32 [size\\_type](#)
- typedef T & [reference](#)
- typedef const T & [const\\_reference](#)

## Public Member Functions

- virtual [~Oscl\\_TAlloc \(\)](#)
- [pointer allocate\\_fl \(uint32 size, const char \\*file\\_name, const int line\\_num\)](#)
- [pointer allocate \(uint32 size\)](#)
- [pointer alloc\\_and\\_construct\\_fl \(const\\_reference val, const char \\*file\\_name, const int line\\_num\)](#)
- [pointer alloc\\_and\\_construct \(const\\_reference val\)](#)
- [void deallocate \(OsclAny \\*p\)](#)
- [void deallocate \(OsclAny \\*p, size\\_type n\)](#)
- [void destruct\\_and\\_dealloc \(OsclAny \\*p\)](#)
- [pointer address \(reference r\)](#)
- [const\\_pointer address \(const\\_reference r\) const](#)
- [void construct \(pointer p, const\\_reference val\)](#)
- [void destroy \(pointer p\)](#)

---

`template<class T, class Alloc> class Oscl_TAlloc< T, Alloc >`

### 7.79.1 Member Typedef Documentation

- 7.79.1.1 `template<class T, class Alloc> typedef const T* Oscl_TAlloc< T, Alloc >::const_pointer`
- 7.79.1.2 `template<class T, class Alloc> typedef const T& Oscl_TAlloc< T, Alloc >::const_reference`
- 7.79.1.3 `template<class T, class Alloc> typedef T* Oscl_TAlloc< T, Alloc >::pointer`
- 7.79.1.4 `template<class T, class Alloc> typedef T& Oscl_TAlloc< T, Alloc >::reference`
- 7.79.1.5 `template<class T, class Alloc> typedef uint32 Oscl_TAlloc< T, Alloc >::size_type`
- 7.79.1.6 `template<class T, class Alloc> typedef T Oscl_TAlloc< T, Alloc >::value_type`

### 7.79.2 Constructor & Destructor Documentation

- 7.79.2.1 `template<class T, class Alloc> virtual Oscl_TAlloc< T, Alloc >::~Oscl_TAlloc () [inline, virtual]`

### 7.79.3 Member Function Documentation

- 7.79.3.1 `template<class T, class Alloc> const_pointer Oscl_TAlloc< T, Alloc >::address (const_reference r) const [inline]`
- 7.79.3.2 `template<class T, class Alloc> pointer Oscl_TAlloc< T, Alloc >::address (reference r) [inline]`
- 7.79.3.3 `template<class T, class Alloc> pointer Oscl_TAlloc< T, Alloc >::alloc_and_construct (const_reference val) [inline]`
- 7.79.3.4 `template<class T, class Alloc> pointer Oscl_TAlloc< T, Alloc >::alloc_and_construct_fl (const_reference val, const char *file_name, const int line_num) [inline]`
- 7.79.3.5 `template<class T, class Alloc> pointer Oscl_TAlloc< T, Alloc >::allocate (uint32 size) [inline]`

Referenced by MM\_AllocNode::operator new(), MM\_AllocInfo::operator new(), MM\_Stats\_CB::operator new(), OsclMemStatsNode::operator new(), MM\_FailInsertParam::operator new(), and MM\_Stats\_t::operator new().

- 7.79.3.6 `template<class T, class Alloc> pointer Oscl_TAlloc< T, Alloc >::allocate_fl (uint32 size, const char *file_name, const int line_num) [inline]`
- 7.79.3.7 `template<class T, class Alloc> void Oscl_TAlloc< T, Alloc >::construct (pointer p, const_reference val) [inline]`

Referenced by Oscl\_TAlloc< node\_type, Alloc >::alloc\_and\_construct(), and Oscl\_TAlloc< node\_type, Alloc >::alloc\_and\_construct\_fl().

**7.79.3.8 template<class T, class Alloc> void Oscl\_TAlloc< T, Alloc >::deallocate (OsclAny \* *p*, size\_type *n*) [inline]**

**7.79.3.9 template<class T, class Alloc> void Oscl\_TAlloc< T, Alloc >::deallocate (OsclAny \* *p*) [inline]**

Referenced by OsclTimer< Alloc >::Cancel(), OsclTimer< Alloc >::Clear(), Oscl\_TAlloc< node\_type, Alloc >::destruct\_and\_dealloc(), MM\_AllocNode::operator delete(), MM\_AllocInfo::operator delete(), MM\_Stats\_CB::operator delete(), OsclMemStatsNode::operator delete(), MM\_FailInsertParam::operator delete(), MM\_Stats\_t::operator delete(), OsclTimer< Alloc >::TimerBaseElapsed(), MM\_AllocInfo::~MM\_AllocInfo(), Oscl\_Tag< Alloc >::~Oscl\_Tag(), OsclMemStatsNode::~OsclMemStatsNode(), OsclTimer< Alloc >::~OsclTimer(), and PVLogger::~PVLogger().

**7.79.3.10 template<class T, class Alloc> void Oscl\_TAlloc< T, Alloc >::destroy (pointer *p*) [inline]**

Referenced by Oscl\_TAlloc< node\_type, Alloc >::destruct\_and\_dealloc().

**7.79.3.11 template<class T, class Alloc> void Oscl\_TAlloc< T, Alloc >::destruct\_and\_dealloc (OsclAny \* *p*) [inline, virtual]**

Implements [OsclDestructDealloc](#).

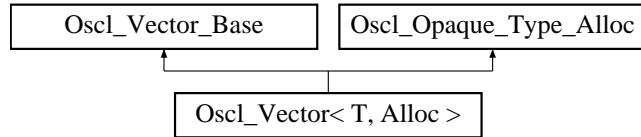
The documentation for this class was generated from the following file:

- [oscl\\_defalloc.h](#)

## 7.80 Oscl\_Vector< T, Alloc > Class Template Reference

```
#include <oscl_vector.h>
```

Inheritance diagram for Oscl\_Vector< T, Alloc >:



### Public Types

- `typedef T value_type`
- `typedef T * pointer`
- `typedef T & reference`
- `typedef const T & const_reference`
- `typedef T * iterator`
- `typedef const T * const_iterator`

### Public Member Functions

- `Oscl_Vector ()`
- `Oscl_Vector (uint32 n)`
- `Oscl_Vector (const Oscl_Vector< T, Alloc > &x)`
- `virtual ~Oscl_Vector ()`
- `Oscl_Vector< T, Alloc > & operator= (const Oscl_Vector< T, Alloc > &x)`
- `void push_back (const T &x)`
- `void push_front (const T &x)`
- `iterator insert (iterator pos, const T &x)`
- `T & operator[] (uint32 n)`
- `const T & operator[] (uint32 n) const`
- `T & front ()`
- `const T & front () const`
- `T & back ()`
- `const T & back () const`
- `void pop_back ()`
- `void clear ()`
- `void destroy ()`
- `iterator begin () const`
- `iterator end () const`
- `iterator erase (iterator pos)`
- `iterator erase (iterator first, iterator last)`

### 7.80.1 Detailed Description

**template<class T, class Alloc> class Oscl\_Vector< T, Alloc >**

**Oscl\_Vector** Class. A subset of STL::Vector methods. **Oscl\_Vector** supports random access to elements, constant time insertion and removal of elements at the end of the vector, and linear time insertion and removal of elements at the beginning or middle of the vector. The number of elements in a vector can vary dynamically, and memory management is performed automatically.

### 7.80.2 Member Typedef Documentation

**7.80.2.1 template<class T, class Alloc> typedef const T\* Oscl\_Vector< T, Alloc >::const\_iterator**

**7.80.2.2 template<class T, class Alloc> typedef const T& Oscl\_Vector< T, Alloc >::const\_reference**

**7.80.2.3 template<class T, class Alloc> typedef T\* Oscl\_Vector< T, Alloc >::iterator**

**7.80.2.4 template<class T, class Alloc> typedef T\* Oscl\_Vector< T, Alloc >::pointer**

**7.80.2.5 template<class T, class Alloc> typedef T& Oscl\_Vector< T, Alloc >::reference**

**7.80.2.6 template<class T, class Alloc> typedef T Oscl\_Vector< T, Alloc >::value\_type**

### 7.80.3 Constructor & Destructor Documentation

**7.80.3.1 template<class T, class Alloc> Oscl\_Vector< T, Alloc >::Oscl\_Vector () [inline]**

Creates an empty vector.

**7.80.3.2 template<class T, class Alloc> Oscl\_Vector< T, Alloc >::Oscl\_Vector (uint32 n) [inline]**

Creates an empty vector with capacity n.

#### Parameters

**n** creates a vector with n elements. The main reason for specifying n is efficiency. If you know the capacity to which your vector must grow, then it is more efficient to allocate the vector all at once rather than rely on the automatic reallocation scheme. This also helps control the invalidation of iterators.

**7.80.3.3 template<class T, class Alloc> Oscl\_Vector< T, Alloc >::Oscl\_Vector (const Oscl\_Vector< T, Alloc > & x) [inline]**

Copy Constructor.

#### Parameters

**x** vector class to copy.

---

**7.80.3.4 template<class T, class Alloc> virtual Oscl\_Vector< T, Alloc >::~Oscl\_Vector ()  
[inline, virtual]**

The destructor.

#### 7.80.4 Member Function Documentation

**7.80.4.1 template<class T, class Alloc> const T& Oscl\_Vector< T, Alloc >::back () const  
[inline]**

Returns the last element.

**7.80.4.2 template<class T, class Alloc> T& Oscl\_Vector< T, Alloc >::back () [inline]**

Returns the last element.

**7.80.4.3 template<class T, class Alloc> iterator Oscl\_Vector< T, Alloc >::begin () const  
[inline]**

Returns an iterator pointing to the beginning of the vector.

Reimplemented from [Oscl\\_Vector\\_Base](#).

Referenced by OsclTimer< Alloc >::Cancel(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::clear(), OsclTimer< Alloc >::Clear(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::front(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::operator[](), PVLogger::RemoveAppender(), Oscl\_TagTree< T, Alloc >::Node::sort\_children(), OsclTimer< Alloc >::TimerBaseElapsed(), and OsclTimer< Alloc >::~OsclTimer().

**7.80.4.4 template<class T, class Alloc> void Oscl\_Vector< T, Alloc >::clear () [inline]**

Removes all elements.

Referenced by OsclTimer< Alloc >::Clear(), and OsclTimer< Alloc >::TimerBaseElapsed().

**7.80.4.5 template<class T, class Alloc> void Oscl\_Vector< T, Alloc >::destroy () [inline]**

Destroy -- this is like an explicit destructor call.

Reimplemented from [Oscl\\_Vector\\_Base](#).

Referenced by Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::destroy(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::pop\_back(), and Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::~Oscl\_Vector().

**7.80.4.6 template<class T, class Alloc> iterator Oscl\_Vector< T, Alloc >::end () const  
[inline]**

Returns an iterator pointing to the end of the vector..

Reimplemented from [Oscl\\_Vector\\_Base](#).

Referenced by Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::back(), OsclTimer< Alloc >::Cancel(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::clear(), OsclTimer< Alloc >::Clear(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::pop\_back(), PVLogger::RemoveAppender(), Oscl\_TagTree< T, Alloc >::Node::sort\_children(), OsclTimer< Alloc >::TimerBaseElapsed(), and OsclTimer< Alloc >::~OsclTimer().

#### 7.80.4.7 template<class T, class Alloc> iterator Oscl\_Vector< T, Alloc >::erase (iterator *first*, iterator *last*) [inline]

Erases elements in range [*first*, *last*). Erasing an element invalidates all iterators pointing to elements following the deletion point.

##### Parameters

*first* starting position

*last* ending position, this position is not erased

#### 7.80.4.8 template<class T, class Alloc> iterator Oscl\_Vector< T, Alloc >::erase (iterator *pos*) [inline]

Erases the element pointed to by iterator *pos*. Erasing an element invalidates all iterators pointing to elements following the deletion point.

##### Parameters

*pos* iterator at erase position

Referenced by OsclTimer< Alloc >::Cancel(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::clear(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::erase(), PVLogger::RemoveAppender(), and OsclTimer< Alloc >::TimerBaseElapsed().

#### 7.80.4.9 template<class T, class Alloc> const T& Oscl\_Vector< T, Alloc >::front () const [inline]

Returns the first element.

#### 7.80.4.10 template<class T, class Alloc> T& Oscl\_Vector< T, Alloc >::front () [inline]

Returns the first element.

#### 7.80.4.11 template<class T, class Alloc> iterator Oscl\_Vector< T, Alloc >::insert (iterator *pos*, const T & *x*) [inline]

Inserts a new element before the one at *pos*.

##### Parameters

*pos* position at which to insert the new element.

*x* new element

Referenced by Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::insert().

---

**7.80.4.12 template<class T, class Alloc> Oscl\_Vector<T, Alloc>& Oscl\_Vector< T, Alloc >::operator= (const Oscl\_Vector< T, Alloc > &x) [inline]**

The assignment operator

**7.80.4.13 template<class T, class Alloc> const T& Oscl\_Vector< T, Alloc >::operator[ ] (uint32 n) const [inline]**

Returns the n'th element.

#### Parameters

*n* element position to return

**7.80.4.14 template<class T, class Alloc> T& Oscl\_Vector< T, Alloc >::operator[ ] (uint32 n) [inline]**

Returns the n'th element.

#### Parameters

*n* element position to return

**7.80.4.15 template<class T, class Alloc> void Oscl\_Vector< T, Alloc >::pop\_back () [inline]**

Removes the last element.

Reimplemented from [Oscl\\_Vector\\_Base](#).

**7.80.4.16 template<class T, class Alloc> void Oscl\_Vector< T, Alloc >::push\_back (const T &x) [inline]**

Inserts a new element at the end. Inserting an element invalidates all iterators if memory reallocation occurs as a result of the insertion.

#### Parameters

*x* new element

Referenced by PVLogger::AddAppender(), PVLogger::AddFilter(), Oscl\_File::AddFixedCache(), OsclTimer< Alloc >::Cancel(), GetHostNameParam::PersistHostAddress(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::push\_back(), Oscl\_File::RemoveFixedCache(), and OsclTimer< Alloc >::Request().

**7.80.4.17 template<class T, class Alloc> void Oscl\_Vector< T, Alloc >::push\_front (const T &x) [inline]**

Inserts a new element at the front. Inserting an element invalidates all iterators if memory reallocation occurs as a result of the insertion.

#### Parameters

*x* new element

Referenced by Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::push\_front().

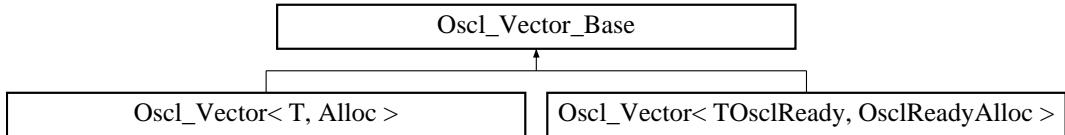
The documentation for this class was generated from the following file:

- [oscl\\_vector.h](#)

## 7.81 Oscl\_Vector\_Base Class Reference

```
#include <oscl_vector.h>
```

Inheritance diagram for Oscl\_Vector\_Base:



### Public Member Functions

- uint32 `size () const`
- uint32 `capacity () const`
- bool `empty () const`
- OSCL\_IMPORT\_REF void `reserve (uint32 n)`

### Protected Member Functions

- OSCL\_IMPORT\_REF void `construct (Oscl_Opaque_Type_Alloc *aType)`
- OSCL\_IMPORT\_REF void `construct (Oscl_Opaque_Type_Alloc *aType, uint32 n)`
- OSCL\_IMPORT\_REF void `construct (Oscl_Opaque_Type_Alloc *aType, const Oscl_Vector_Base &x)`
- virtual `~Oscl_Vector_Base ()`
- OSCL\_IMPORT\_REF void `push_back (const OsclAny *x)`
- OSCL\_IMPORT\_REF void `pop_back ()`
- OSCL\_IMPORT\_REF void `push_front (const OsclAny *x)`
- OSCL\_IMPORT\_REF `OsclAny * insert (OsclAny *pos, const OsclAny *x)`
- OSCL\_IMPORT\_REF `OsclAny * erase (OsclAny *pos)`
- OSCL\_IMPORT\_REF `OsclAny * erase (OsclAny *first, OsclAny *last)`
- OSCL\_IMPORT\_REF void `assign_vector (const Oscl_Vector_Base &x)`
- OSCL\_IMPORT\_REF void `destroy ()`

### Protected Attributes

- uint32 `numelems`
- uint32 `bufsize`
- `OsclAny * elems`
- uint32 `sizeof_T`

### Friends

- class `OsclPriorityQueueBase`

### 7.81.1 Detailed Description

`Oscl_Vector_Base` is a non-templatized base class for `Oscl_Vector`. The purpose of this base class is to avoid large inline routines in the `Oscl_Vector` implementation. This class is not intended for direct instantiation except by `Oscl_Vector`.

### 7.81.2 Constructor & Destructor Documentation

#### 7.81.2.1 `virtual Oscl_Vector_Base::~Oscl_Vector_Base () [inline, protected, virtual]`

The destructor.

### 7.81.3 Member Function Documentation

#### 7.81.3.1 `OSCL_IMPORT_REF void Oscl_Vector_Base::assign_vector (const Oscl_Vector_Base & x) [protected]`

Referenced by `Oscl_Vector< OsclNetworkAddress, OsclMemAllocator >::operator=()`.

#### 7.81.3.2 `uint32 Oscl_Vector_Base::capacity () const [inline]`

Returns the allocated memory of the vector in units of number of elements.

References bufsize.

Referenced by `GetHostNameParam::canPersistMoreHostAddresses()`, and `GetHostNameParam::PersistHostAddress()`.

#### 7.81.3.3 `OSCL_IMPORT_REF void Oscl_Vector_Base::construct (Oscl_Opaque_Type_Alloc * aType, const Oscl_Vector_Base & x) [protected]`

#### 7.81.3.4 `OSCL_IMPORT_REF void Oscl_Vector_Base::construct (Oscl_Opaque_Type_Alloc * aType, uint32 n) [protected]`

#### 7.81.3.5 `OSCL_IMPORT_REF void Oscl_Vector_Base::construct (Oscl_Opaque_Type_Alloc * aType) [protected]`

Referenced by `Oscl_Vector< OsclNetworkAddress, OsclMemAllocator >::Oscl_Vector()`.

#### 7.81.3.6 `OSCL_IMPORT_REF void Oscl_Vector_Base::destroy () [protected]`

Reimplemented in `Oscl_Vector< T, Alloc >`, `Oscl_Vector< OsclComponentRegistryElement, OsclMemAllocator >`, `Oscl_Vector< uint32, OsclMemAllocator >`, `Oscl_Vector< OsclSocketServRequestQElem, OsclMemAllocator >`, `Oscl_Vector< Node *, Alloc >`, `Oscl_Vector< OsclFixedCacheParam, OsclMemAllocator >`, `Oscl_Vector< OsclSocketRequest *, OsclMemAllocator >`, `Oscl_Vector< entry_type *, Alloc >`, `Oscl_Vector< OSCL_HeapString< OsclMemAllocator >, OsclMemAllocator >`, `Oscl_Vector< OsclAsyncFileBuffer *, OsclMemAllocator >`, `Oscl_Vector< TOsclFileOffset, OsclMemAllocator >`, `Oscl_Vector< MemPoolBufferInfo *, OsclMemAllocator >`, `Oscl_Vector< OsclSharedPtr< PVLoggerFilter >, alloc_type >`, `Oscl_Vector< TOsclReady, OsclReadyAlloc >`, `Oscl_Vector< OsclFileCacheBuffer, OsclMemAllocator >`, `Oscl_Vector< OsclSharedPtr< PVLoggerAppender`

`>, alloc_type >, Oscl_Vector< OsclAny *, OsclMemAllocator >, and Oscl_Vector< OsclNetworkAddress, OsclMemAllocator >.`

#### 7.81.3.7 `bool Oscl_Vector_Base::empty () const [inline]`

True if the vector's size is 0.

References numelems.

Referenced by `Oscl_TagTree< T, Alloc >::Node::sort_children()`, and `OsclTimer< Alloc >::TimerBaseElapsed()`.

#### 7.81.3.8 `OSCL_IMPORT_REF OsclAny* Oscl_Vector_Base::erase (OsclAny *first, OsclAny *last) [protected]`

Erases elements in range [first, last). Erasing an element invalidates all iterators pointing to elements following the deletion point.

##### Parameters

*first* starting position

*last* ending position, this position is not erased

#### 7.81.3.9 `OSCL_IMPORT_REF OsclAny* Oscl_Vector_Base::erase (OsclAny *pos) [protected]`

Erases the element pointed to by iterator pos. Erasing an element invalidates all iterators pointing to elements following the deletion point.

##### Parameters

*pos* iterator at erase position

#### 7.81.3.10 `OSCL_IMPORT_REF OsclAny* Oscl_Vector_Base::insert (OsclAny *pos, const OsclAny *x) [protected]`

Inserts a new element at a specific position.

##### Parameters

*pos* iterator at insert position.

*x* pointer to new element

#### 7.81.3.11 `OSCL_IMPORT_REF void Oscl_Vector_Base::pop_back () [protected]`

Removes the last element.

Reimplemented in `Oscl_Vector< T, Alloc >`, `Oscl_Vector< OsclComponentRegistryElement, OsclMemAllocator >`, `Oscl_Vector< uint32, OsclMemAllocator >`, `Oscl_Vector< OsclSocketServRequestQElem, OsclMemAllocator >`, `Oscl_Vector< Node *, Alloc >`, `Oscl_Vector< OsclFixedCacheParam, OsclMemAllocator >`, `Oscl_Vector< OsclSocketRequest *, OsclMemAllocator >`, `Oscl_Vector<`

`entry_type *, Alloc >, Oscl_Vector< OSCL_HeapString< OsclMemAllocator >, OsclMemAllocator >, Oscl_Vector< OsclAsyncFileBuffer *, OsclMemAllocator >, Oscl_Vector< TOsclFileOffset, OsclMemAllocator >, Oscl_Vector< MemPoolBufferInfo *, OsclMemAllocator >, Oscl_Vector< OsclSharedPtr< PVLoggerFilter >, alloc_type >, Oscl_Vector< TOsclReady, OsclReadyAlloc >, Oscl_Vector< OsclFileCacheBuffer, OsclMemAllocator >, Oscl_Vector< OsclSharedPtr< PVLoggerAppender >, alloc_type >, Oscl_Vector< OsclAny *, OsclMemAllocator >, and Oscl_Vector< OsclNetworkAddress, OsclMemAllocator >.`

#### 7.81.3.12 OSCL\_IMPORT\_REF void Oscl\_Vector\_Base::push\_back (const OsclAny \* *x*) [protected]

Inserts a new element at the end. Inserting an element invalidates all iterators if memory reallocation occurs as a result of the insertion.

##### Parameters

*x* pointer to the new element

#### 7.81.3.13 OSCL\_IMPORT\_REF void Oscl\_Vector\_Base::push\_front (const OsclAny \* *x*) [protected]

Inserts a new element at the front. Inserting an element invalidates all iterators if memory reallocation occurs as a result of the insertion.

##### Parameters

*x* pointer to new element

#### 7.81.3.14 OSCL\_IMPORT\_REF void Oscl\_Vector\_Base::reserve (uint32 *n*)

Reallocates memory if necessary to a capacity of *n* elements. The main reason for reserve is efficiency. If you know the capacity to which your vector must grow, then it is more efficient to allocate the vector all at once rather than rely on the automatic reallocation scheme. This also helps control the invalidation of iterators.

##### Parameters

*n* size of vector

#### 7.81.3.15 uint32 Oscl\_Vector\_Base::size () const [inline]

Returns the size of the vector in units of number of elements.

References numelems.

Referenced by GetHostByNameParam::canPersistMoreHostAddresses(), PVLogger::GetNumAppenders(), and GetHostByNameParam::PersistHostAddress().

## 7.81.4 Friends And Related Function Documentation

### 7.81.4.1 friend class OsclPriorityQueueBase [friend]

## 7.81.5 Field Documentation

### 7.81.5.1 uint32 Oscl\_Vector\_Base::bufsize [protected]

Referenced by capacity().

### 7.81.5.2 OsclAny\* Oscl\_Vector\_Base::elems [protected]

Referenced by Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::begin(), and Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::end().

### 7.81.5.3 uint32 Oscl\_Vector\_Base::numelems [protected]

Referenced by empty(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::end(), Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::pop\_back(), and size().

### 7.81.5.4 uint32 Oscl\_Vector\_Base::sizeof\_T [protected]

Referenced by Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator >::Oscl\_Vector().

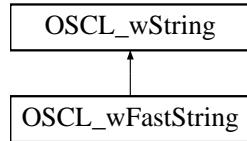
The documentation for this class was generated from the following file:

- [oscl\\_vector.h](#)

## 7.82 OSCL\_wFastString Class Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL\_wFastString:



### Public Types

- `typedef OSCL_wString::chartype chartype`
- `typedef TOSCL_wStringOp optype`
- `typedef OSCL_String::chartype other_chartype`

### Public Member Functions

- `OSCL_IMPORT_REF OSCL_wFastString()`
- `OSCL_IMPORT_REF OSCL_wFastString(const OSCL_wFastString &src)`
- `OSCL_IMPORT_REF OSCL_wFastString(const chartype *cstr)`
- `OSCL_IMPORT_REF OSCL_wFastString(chartype *buf, uint32 maxlen)`
- `OSCL_IMPORT_REF ~OSCL_wFastString()`
- `OSCL_IMPORT_REF uint32 get_size() const`
- `OSCL_IMPORT_REF uint32 get_maxsize() const`
- `OSCL_IMPORT_REF const chartype * get_cstr() const`
- `OSCL_IMPORT_REF chartype * get_str() const`
- `OSCL_IMPORT_REF OSCL_wFastString & operator=(const OSCL_wFastString &src)`
- `OSCL_IMPORT_REF OSCL_wFastString & operator=(const chartype *cstr)`
- `OSCL_IMPORT_REF void set(chartype *cstr, uint32 maxlen)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, uint32 numofbyte, optype op)`
- `OSCL_IMPORT_REF void set_length()`

### Friends

- class `OSCL_wString`

#### 7.82.1 Detailed Description

`OSCL_wFastString` is identical to `OSCL_FastString` except that it uses wide-character format. For descriptions, see `OSCL_FastString`.

#### 7.82.2 Member Typedef Documentation

##### 7.82.2.1 `typedef OSCL_wString::chartype OSCL_wFastString::chartype`

Reimplemented from `OSCL_wString`.

7.82.2.2 **typedef TOSCL\_wStringOp OSCL\_wFastString::optype**

7.82.2.3 **typedef OSCL\_String::chartype OSCL\_wFastString::other\_chartype**

### 7.82.3 Constructor & Destructor Documentation

7.82.3.1 **OSCL\_IMPORT\_REF OSCL\_wFastString::OSCL\_wFastString()**

7.82.3.2 **OSCL\_IMPORT\_REF OSCL\_wFastString::OSCL\_wFastString(const OSCL\_wFastString & src)**

7.82.3.3 **OSCL\_IMPORT\_REF OSCL\_wFastString::OSCL\_wFastString(const chartype \* cstr)**

7.82.3.4 **OSCL\_IMPORT\_REF OSCL\_wFastString::OSCL\_wFastString(chartype \* buf, uint32 maxlen)**

7.82.3.5 **OSCL\_IMPORT\_REF OSCL\_wFastString::~OSCL\_wFastString()**

### 7.82.4 Member Function Documentation

7.82.4.1 **OSCL\_IMPORT\_REF const chartype\* OSCL\_wFastString::get\_cstr() const [virtual]**

Implements [OSCL\\_wString](#).

7.82.4.2 **OSCL\_IMPORT\_REF uint32 OSCL\_wFastString::get\_maxsize() const [virtual]**

Implements [OSCL\\_wString](#).

7.82.4.3 **OSCL\_IMPORT\_REF uint32 OSCL\_wFastString::get\_size() const [virtual]**

Implements [OSCL\\_wString](#).

7.82.4.4 **OSCL\_IMPORT\_REF chartype\* OSCL\_wFastString::get\_str() const [virtual]**

Implements [OSCL\\_wString](#).

7.82.4.5 **OSCL\_IMPORT\_REF OSCL\_wFastString& OSCL\_wFastString::operator=(const chartype \* cstr)**

Reimplemented from [OSCL\\_wString](#).

- 7.82.4.6 **OSCL\_IMPORT\_REF OSCL\_wFastString& OSCL\_wFastString::operator= (const OSCL\_wFastString & src)**
- 7.82.4.7 **OSCL\_IMPORT\_REF void OSCL\_wFastString::set (const other\_chartype \* buf, uint32 numofbyte, optype op)**
- 7.82.4.8 **OSCL\_IMPORT\_REF void OSCL\_wFastString::set (chartype \* cstr, uint32 maxlen)**
- 7.82.4.9 **OSCL\_IMPORT\_REF void OSCL\_wFastString::set\_length ()**

## 7.82.5 Friends And Related Function Documentation

- 7.82.5.1 **friend class OSCL\_wString [friend]**

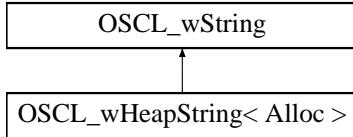
The documentation for this class was generated from the following file:

- [oscl\\_string\\_containers.h](#)

## 7.83 OSCL\_wHeapString< Alloc > Class Template Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL\_wHeapString< Alloc >:



### Public Types

- `typedef OSCL_wString::chartype chartype`
- `typedef TOSCL_wStringOp optype`
- `typedef OSCL_String::chartype other_chartype`

### Public Member Functions

- `OSCL_wHeapString()`
- `OSCL_wHeapString(const OSCL_wHeapString &src)`
- `OSCL_wHeapString(const OSCL_wString &src)`
- `OSCL_wHeapString(const chartype *cstr)`
- `OSCL_wHeapString(const chartype *buf, uint32 length)`
- `~OSCL_wHeapString()`
- `uint32 get_size() const`
- `uint32 get_maxsize() const`
- `const chartype * get_cstr() const`
- `chartype * get_str() const`
- `OSCL_wHeapString & operator=(const OSCL_wHeapString &src)`
- `OSCL_wHeapString & operator=(const OSCL_wString &src)`
- `OSCL_wHeapString & operator=(const chartype *cstr)`
- `void set(const chartype *buf, uint32 length)`
- `void set(const other_chartype *buf, optype op)`
- `void set(const other_chartype *buf, uint32 length, optype op)`

### Friends

- class `OSCL_wString`

#### 7.83.1 Detailed Description

`template<class Alloc> class OSCL_wHeapString< Alloc >`

`OSCL_wHeapString` is identical to `OSCL_HeapString` except that it uses wide-character format. For descriptions, see `OSCL_HeapString`.

### 7.83.2 Member Typedef Documentation

**7.83.2.1 template<class Alloc> typedef OSCL\_wString::chartype OSCL\_wHeapString< Alloc >::chartype**

Reimplemented from [OSCL\\_wString](#).

**7.83.2.2 template<class Alloc> typedef TOSCL\_wStringOp OSCL\_wHeapString< Alloc >::optype**

**7.83.2.3 template<class Alloc> typedef OSCL\_String::chartype OSCL\_wHeapString< Alloc >::other\_chartype**

### 7.83.3 Friends And Related Function Documentation

**7.83.3.1 template<class Alloc> friend class OSCL\_wString [friend]**

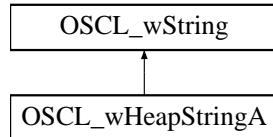
The documentation for this class was generated from the following file:

- [oscl\\_string\\_containers.h](#)

## 7.84 OSCL\_wHeapStringA Class Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL\_wHeapStringA:



### Public Types

- `typedef OSCL_wString::chartype chartype`
- `typedef TOSCL_wStringOp optype`
- `typedef OSCL_String::chartype other_chartype`

### Public Member Functions

- `OSCL_IMPORT_REF OSCL_wHeapStringA()`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(Oscl_DefAlloc *alloc, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const OSCL_wHeapStringA &src)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const OSCL_wHeapStringA &src, Oscl_DefAlloc *alloc, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const OSCL_wString &src, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const chartype *cstr, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const chartype *buf, uint32 length, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF ~OSCL_wHeapStringA()`
- `OSCL_IMPORT_REF uint32 get_size() const`
- `OSCL_IMPORT_REF uint32 get_maxsize() const`
- `OSCL_IMPORT_REF const chartype * get_cstr() const`
- `OSCL_IMPORT_REF chartype * get_str() const`
- `OSCL_IMPORT_REF OSCL_wHeapStringA & operator=(const OSCL_wHeapStringA &src)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA & operator=(const OSCL_wString &src)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA & operator=(const chartype *cstr)`
- `OSCL_IMPORT_REF void set(const chartype *buf, uint32 length)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, optype op)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, uint32 length, optype op)`

### Friends

- class `OSCL_wString`

### 7.84.1 Detailed Description

`OSCL_wHeapStringA` is identical to `OSCL_HeapStringA` except that it uses wide-character format. For descriptions, see `OSCL_HeapStringA`.

### 7.84.2 Member Typedef Documentation

#### 7.84.2.1 `typedef OSCL_wString::chartype OSCL_wHeapStringA::chartype`

Reimplemented from `OSCL_wString`.

#### 7.84.2.2 `typedef TOSCL_wStringOp OSCL_wHeapStringA::optype`

#### 7.84.2.3 `typedef OSCL_String::chartype OSCL_wHeapStringA::other_chartype`

### 7.84.3 Constructor & Destructor Documentation

#### 7.84.3.1 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA ()`

#### 7.84.3.2 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA (Oscl_DefAlloc * alloc, OsclRefCounter * ref = NULL)`

#### 7.84.3.3 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA (const OSCL_wHeapStringA & src)`

#### 7.84.3.4 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA (const OSCL_wHeapStringA & src, Oscl_DefAlloc * alloc, OsclRefCounter * ref = NULL)`

#### 7.84.3.5 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA (const OSCL_wString & src, Oscl_DefAlloc * alloc = NULL, OsclRefCounter * ref = NULL)`

#### 7.84.3.6 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA (const chartype * cstr, Oscl_DefAlloc * alloc = NULL, OsclRefCounter * ref = NULL)`

#### 7.84.3.7 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA (const chartype * buf, uint32 length, Oscl_DefAlloc * alloc = NULL, OsclRefCounter * ref = NULL)`

#### 7.84.3.8 `OSCL_IMPORT_REF OSCL_wHeapStringA::~OSCL_wHeapStringA ()`

### 7.84.4 Member Function Documentation

#### 7.84.4.1 `OSCL_IMPORT_REF const chartype* OSCL_wHeapStringA::get_cstr () const [virtual]`

Implements `OSCL_wString`.

#### 7.84.4.2 `OSCL_IMPORT_REF uint32 OSCL_wHeapStringA::get_maxsize () const [virtual]`

Implements `OSCL_wString`.

**7.84.4.3 OSCL\_IMPORT\_REF uint32 OSCL\_wHeapStringA::get\_size () const [virtual]**

Implements [OSCL\\_wString](#).

**7.84.4.4 OSCL\_IMPORT\_REF chartype\* OSCL\_wHeapStringA::get\_str () const [virtual]**

Implements [OSCL\\_wString](#).

**7.84.4.5 OSCL\_IMPORT\_REF OSCL\_wHeapStringA& OSCL\_wHeapStringA::operator= (const chartype \* *cstr*)**

Reimplemented from [OSCL\\_wString](#).

**7.84.4.6 OSCL\_IMPORT\_REF OSCL\_wHeapStringA& OSCL\_wHeapStringA::operator= (const OSCL\_wString & *src*)**

Reimplemented from [OSCL\\_wString](#).

**7.84.4.7 OSCL\_IMPORT\_REF OSCL\_wHeapStringA& OSCL\_wHeapStringA::operator= (const OSCL\_wHeapStringA & *src*)****7.84.4.8 OSCL\_IMPORT\_REF void OSCL\_wHeapStringA::set (const other\_chartype \* *buf*, uint32 *length*, optype *op*)****7.84.4.9 OSCL\_IMPORT\_REF void OSCL\_wHeapStringA::set (const other\_chartype \* *buf*, optype *op*)****7.84.4.10 OSCL\_IMPORT\_REF void OSCL\_wHeapStringA::set (const chartype \* *buf*, uint32 *length*)**

## 7.84.5 Friends And Related Function Documentation

**7.84.5.1 friend class OSCL\_wString [friend]**

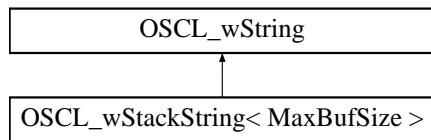
The documentation for this class was generated from the following file:

- [oscl\\_string\\_containers.h](#)

## 7.85 OSCL\_wStackString< MaxBufSize > Class Template Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL\_wStackString< MaxBufSize >:



### Public Types

- `typedef OSCL_wString::chartype chartype`
- `typedef TOSCL_wStringOp optype`
- `typedef OSCL_String::chartype other_chartype`

### Public Member Functions

- `OSCL_wStackString()`
- `OSCL_wStackString(const OSCL_wStackString &src)`
- `OSCL_wStackString(const OSCL_wString &src)`
- `OSCL_wStackString(const chartype *cstr)`
- `OSCL_wStackString(const chartype *buf, uint32 length)`
- `~OSCL_wStackString()`
- `uint32 get_size() const`
- `uint32 get_maxsize() const`
- `const chartype * get_cstr() const`
- `chartype * get_str() const`
- `OSCL_wStackString & operator=(const OSCL_wStackString &src)`
- `OSCL_wStackString & operator=(const OSCL_wString &src)`
- `OSCL_wStackString & operator=(const chartype *cstr)`
- `void set(const chartype *buf, uint32 length)`
- `void set(const other_chartype *buf, optype op)`
- `void set(const other_chartype *buf, uint32 length, optype op)`

### Friends

- class `OSCL_wString`

#### 7.85.1 Detailed Description

`template<uint32 MaxBufSize> class OSCL_wStackString< MaxBufSize >`

`OSCL_wStackString` is identical to `OSCL_StackString` except that it uses wide-character format. For descriptions, see `OSCL_StackString`.

## 7.85.2 Member Typedef Documentation

7.85.2.1 **template<uint32 MaxBufSize> typedef OSCL\_wString::chartype OSCL\_wStackString<MaxBufSize >::chartype**

Reimplemented from [OSCL\\_wString](#).

7.85.2.2 **template<uint32 MaxBufSize> typedef TOSCL\_wStringOp OSCL\_wStackString<MaxBufSize >::optype**

7.85.2.3 **template<uint32 MaxBufSize> typedef OSCL\_String::chartype OSCL\_wStackString<MaxBufSize >::other\_chartype**

## 7.85.3 Friends And Related Function Documentation

7.85.3.1 **template<uint32 MaxBufSize> friend class OSCL\_wString [friend]**

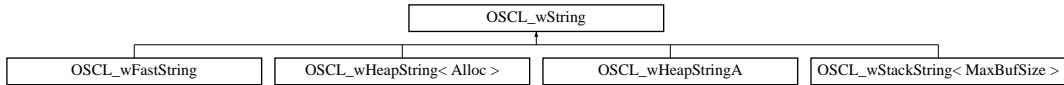
The documentation for this class was generated from the following file:

- [oscl\\_string\\_containers.h](#)

## 7.86 OSCL\_wString Class Reference

```
#include <oscl_string.h>
```

Inheritance diagram for OSCL\_wString:



### Public Types

- `typedef oscl_wchar chartype`

### Public Member Functions

- `virtual uint32 get_size () const =0`
- `virtual uint32 get_maxsize () const =0`
- `virtual const chartype * get_cstr () const =0`
- `virtual bool is_writable () const`
- `virtual chartype * get_str () const =0`
- `OSCL_wString & operator= (const OSCL_wString &src)`
- `OSCL_wString & operator= (const chartype *cstr)`
- `OSCL_wString & operator+= (const OSCL_wString &src)`
- `OSCL_wString & operator+= (const chartype *cstr)`
- `OSCL_wString & operator+= (const chartype c)`
- `bool operator== (const OSCL_wString &src) const`
- `bool operator!= (const OSCL_wString &src) const`
- `bool operator< (const OSCL_wString &src) const`
- `bool operator<= (const OSCL_wString &src) const`
- `bool operator> (const OSCL_wString &src) const`
- `bool operator>= (const OSCL_wString &src) const`
- `bool operator== (const chartype *cstr) const`
- `chartype operator[ ] (uint32 index) const`
- `virtual chartype read (uint32 index) const`
- `virtual uint32 setrep_to_wide_char (const char *src, uint32 len, TOSCL_wStringOp op, Oscl_DefAlloc *aAlloc)`
- `virtual int8 hash () const`
- `virtual void write (uint32 index, chartype c)`
- `virtual void write (uint32 offset, uint32 length, const chartype *buf)`

### Protected Member Functions

- `OSCL_wString ()`
- `virtual ~OSCL_wString ()`
- `virtual void set_rep (const chartype *cstr)=0`
- `virtual void append_rep (const chartype *cstr)=0`
- `virtual void set_rep (const OSCL_wString &src)=0`
- `virtual void append_rep (const OSCL_wString &src)=0`
- `virtual void set_len (uint32 len)=0`

### 7.86.1 Detailed Description

A common base class for string classes with wide character (oscl\_wchar) format. [OSCL\\_wString](#) and [OSCL\\_String](#) are identical except for the character format. For descriptions, see [OSCL\\_String](#).

### 7.86.2 Member Typedef Documentation

#### 7.86.2.1 `typedef oscl_wchar OSCL_wString::chartype`

Reimplemented in [OSCL\\_wHeapString< Alloc >](#), [OSCL\\_wHeapStringA](#), [OSCL\\_wStackString< MaxBufSize >](#), and [OSCL\\_wFastString](#).

### 7.86.3 Constructor & Destructor Documentation

#### 7.86.3.1 `OSCL_wString::OSCL_wString () [protected]`

#### 7.86.3.2 `virtual OSCL_wString::~OSCL_wString () [protected, virtual]`

### 7.86.4 Member Function Documentation

#### 7.86.4.1 `virtual void OSCL_wString::append_rep (const OSCL_wString & src) [protected, pure virtual]`

#### 7.86.4.2 `virtual void OSCL_wString::append_rep (const chartype * cstr) [protected, pure virtual]`

#### 7.86.4.3 `virtual const chartype* OSCL_wString::get_cstr () const [pure virtual]`

Implemented in [OSCL\\_wHeapString< Alloc >](#), [OSCL\\_wHeapStringA](#), [OSCL\\_wStackString< MaxBufSize >](#), and [OSCL\\_wFastString](#).

#### 7.86.4.4 `virtual uint32 OSCL_wString::get_maxsize () const [pure virtual]`

Implemented in [OSCL\\_wHeapString< Alloc >](#), [OSCL\\_wHeapStringA](#), [OSCL\\_wStackString< MaxBufSize >](#), and [OSCL\\_wFastString](#).

#### 7.86.4.5 `virtual uint32 OSCL_wString::get_size () const [pure virtual]`

Implemented in [OSCL\\_wHeapString< Alloc >](#), [OSCL\\_wHeapStringA](#), [OSCL\\_wStackString< MaxBufSize >](#), and [OSCL\\_wFastString](#).

#### 7.86.4.6 `virtual chartype* OSCL_wString::get_str () const [pure virtual]`

Implemented in [OSCL\\_wHeapString< Alloc >](#), [OSCL\\_wHeapStringA](#), [OSCL\\_wStackString< MaxBufSize >](#), and [OSCL\\_wFastString](#).

- 7.86.4.7 **virtual int8 OSCL\_wString::hash () const [virtual]**
- 7.86.4.8 **virtual bool OSCL\_wString::is\_writable () const [virtual]**
- 7.86.4.9 **bool OSCL\_wString::operator!= (const OSCL\_wString & src) const**
- 7.86.4.10 **OSCL\_wString& OSCL\_wString::operator+= (const chartype c)**
- 7.86.4.11 **OSCL\_wString& OSCL\_wString::operator+= (const chartype \* cstr)**
- 7.86.4.12 **OSCL\_wString& OSCL\_wString::operator+= (const OSCL\_wString & src)**
- 7.86.4.13 **bool OSCL\_wString::operator< (const OSCL\_wString & src) const**
- 7.86.4.14 **bool OSCL\_wString::operator<= (const OSCL\_wString & src) const**
- 7.86.4.15 **OSCL\_wString& OSCL\_wString::operator= (const chartype \* cstr)**

Reimplemented in [OSCL\\_wHeapString< Alloc >](#), [OSCL\\_wHeapStringA](#), [OSCL\\_wStackString< MaxBufSize >](#), and [OSCL\\_wFastString](#).

- 7.86.4.16 **OSCL\_wString& OSCL\_wString::operator= (const OSCL\_wString & src)**

Reimplemented in [OSCL\\_wHeapString< Alloc >](#), [OSCL\\_wHeapStringA](#), and [OSCL\\_wStackString< MaxBufSize >](#).

- 7.86.4.17 **bool OSCL\_wString::operator== (const chartype \* cstr) const**
- 7.86.4.18 **bool OSCL\_wString::operator== (const OSCL\_wString & src) const**
- 7.86.4.19 **bool OSCL\_wString::operator> (const OSCL\_wString & src) const**
- 7.86.4.20 **bool OSCL\_wString::operator>= (const OSCL\_wString & src) const**
- 7.86.4.21 **chartype OSCL\_wString::operator[] (uint32 index) const**
- 7.86.4.22 **virtual chartype OSCL\_wString::read (uint32 index) const [virtual]**
- 7.86.4.23 **virtual void OSCL\_wString::set\_len (uint32 len) [protected, pure virtual]**
- 7.86.4.24 **virtual void OSCL\_wString::set\_rep (const OSCL\_wString & src) [protected, pure virtual]**
- 7.86.4.25 **virtual void OSCL\_wString::set\_rep (const chartype \* cstr) [protected, pure virtual]**

Referenced by [OSCL\\_wStackString< MaxBufSize >::operator=\(\)](#), [OSCL\\_StackString< MaxBufSize >::operator=\(\)](#), [OSCL\\_wHeapString< Alloc >::operator=\(\)](#), [OSCL\\_HeapString< Alloc >::operator=\(\)](#), [OSCL\\_HeapString< Alloc >::OSCL\\_HeapString\(\)](#), [OSCL\\_StackString< MaxBufSize >::OSCL\\_StackString\(\)](#), [OSCL\\_wHeapString< Alloc >::OSCL\\_wHeapString\(\)](#), [OSCL\\_wStackString< MaxBufSize >::OSCL\\_wStackString\(\)](#), [OSCL\\_wHeapString< Alloc >::set\(\)](#), and [OSCL\\_HeapString< Alloc >::set\(\)](#).

**7.86.4.26 virtual uint32 OSCL\_wString::setrep\_to\_wide\_char (const char \* *src*, uint32 *len*, TOSCL\_wStringOp *op*, Oscl\_DefAlloc \* *aAlloc*) [virtual]**

Referenced by OSCL\_wStackString< MaxBufSize >::set(), and OSCL\_wHeapString< Alloc >::set().

**7.86.4.27 virtual void OSCL\_wString::write (uint32 *offset*, uint32 *length*, const chartype \* *buf*) [virtual]**

**7.86.4.28 virtual void OSCL\_wString::write (uint32 *index*, chartype *c*) [virtual]**

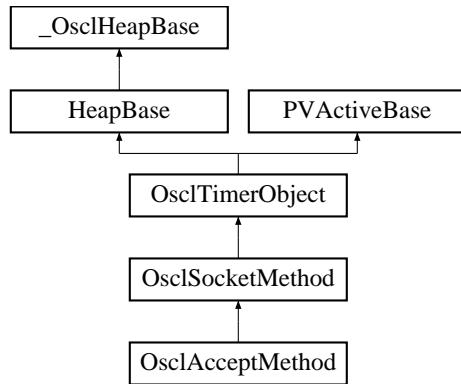
The documentation for this class was generated from the following file:

- [oscl\\_string.h](#)

## 7.87 OsclAcceptMethod Class Reference

```
#include <oscl_socket_accept.h>
```

Inheritance diagram for OsclAcceptMethod:



### Public Member Functions

- `~OsclAcceptMethod ()`
- `TPVSocketEvent Accept (int32 aTimeout)`
- `void DiscardAcceptedSocket ()`
- `OsclSocketI * GetAcceptedSocket ()`
- `OsclAcceptRequest * AcceptRequest ()`

### Static Public Member Functions

- static `OsclAcceptMethod * NewL (OsclIPSocketI &c)`

#### 7.87.1 Constructor & Destructor Documentation

##### 7.87.1.1 OsclAcceptMethod::~OsclAcceptMethod ()

#### 7.87.2 Member Function Documentation

##### 7.87.2.1 TPVSocketEvent OsclAcceptMethod::Accept (int32 aTimeout)

Referenced by `OsclTCPSocketI::Accept()`.

##### 7.87.2.2 OsclAcceptRequest\* OsclAcceptMethod::AcceptRequest () [inline]

References `OsclSocketMethod::iSocketRequestAO`.

**7.87.2.3 void OsclAcceptMethod::DiscardAcceptedSocket ()**

**7.87.2.4 OsclSocketI\* OsclAcceptMethod::GetAcceptedSocket ()**

**7.87.2.5 static OsclAcceptMethod\* OsclAcceptMethod::NewL (OsclIPSocketI & c) [static]**

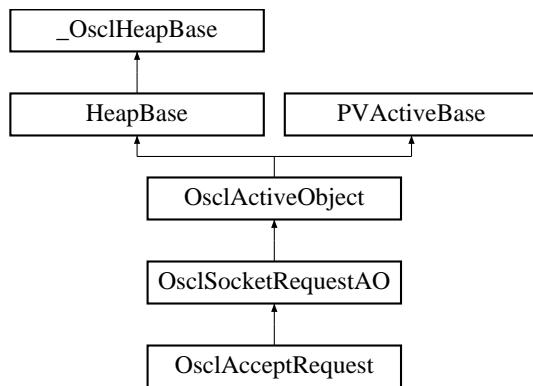
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_accept.h](#)

## 7.88 OsclAcceptRequest Class Reference

```
#include <oscl_socket_accept.h>
```

Inheritance diagram for OsclAcceptRequest:



### Public Member Functions

- [OsclAcceptRequest \(OsclSocketMethod &c\)](#)
- [void Accept \(OsclSocketI &aSocket\)](#)

#### 7.88.1 Constructor & Destructor Documentation

**7.88.1.1 OsclAcceptRequest::OsclAcceptRequest (OsclSocketMethod & c) [inline]**

#### 7.88.2 Member Function Documentation

**7.88.2.1 void OsclAcceptRequest::Accept (OsclSocketI & aSocket)**

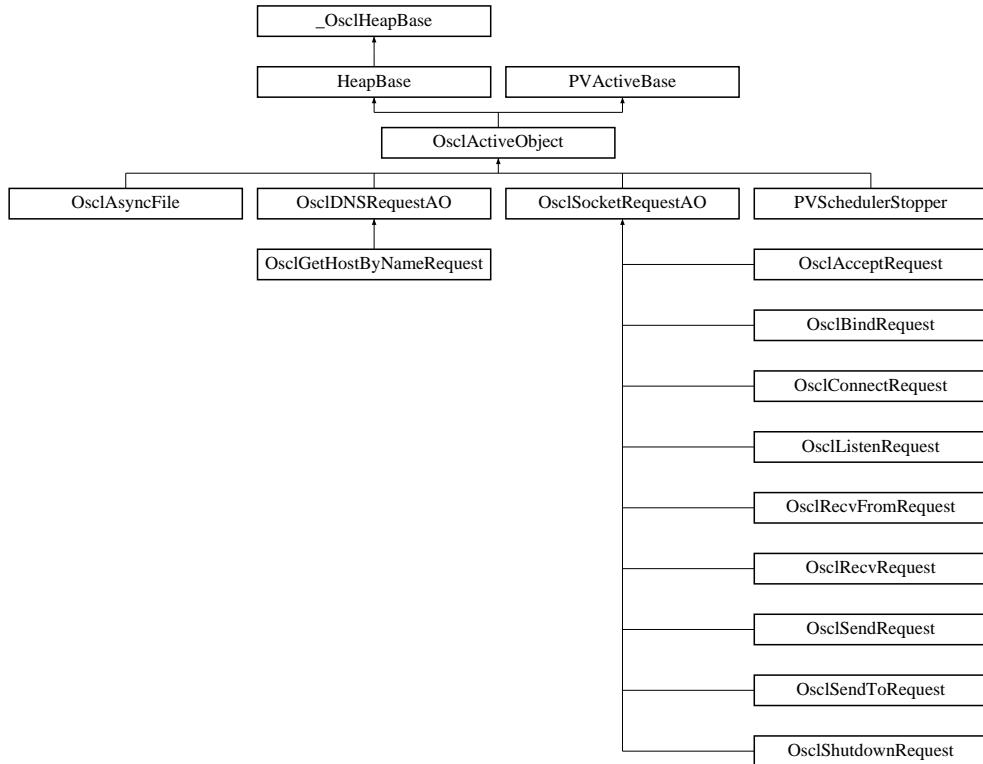
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_accept.h](#)

## 7.89 OsclActiveObject Class Reference

```
#include <oscl_scheduler_ao.h>
```

Inheritance diagram for OsclActiveObject:



### Public Types

- enum [OsclActivePriority](#) {
   
    [EPriorityIdle](#) = -100, [EPriorityLow](#) = -20, [EPriorityNominal](#) = 0, [EPriorityHigh](#) = 10,
   
    [EPriorityHighest](#) = 20 }

### Public Member Functions

- [OSCL\\_IMPORT\\_REF OsclActiveObject](#) (int32 aPriority, const char name[ ])
- virtual [OSCL\\_IMPORT\\_REF ~OsclActiveObject](#) ()
- [OSCL\\_IMPORT\\_REF void SetBusy](#) ()
- [OSCL\\_IMPORT\\_REF bool IsBusy](#) () const
- [OSCL\\_IMPORT\\_REF void PendForExec](#) ()
- [OSCL\\_IMPORT\\_REF void PendComplete](#) (int32 aStatus)
- [OSCL\\_IMPORT\\_REF void AddToScheduler](#) ()
- [OSCL\\_IMPORT\\_REF void RemoveFromScheduler](#) ()
- [OSCL\\_IMPORT\\_REF void RunIfNotReady](#) ()
- [OSCL\\_IMPORT\\_REF void Cancel](#) ()
- [OSCL\\_IMPORT\\_REF int32 Priority](#) () const

- OSCL\_IMPORT\_REF int32 `Status` () const
- OSCL\_IMPORT\_REF void `SetStatus` (int32)
- OSCL\_IMPORT\_REF `OsclAOStatus & StatusRef` ()

## Protected Member Functions

- virtual OSCL\_IMPORT\_REF void `DoCancel` ()
- virtual OSCL\_IMPORT\_REF int32 `RunError` (int32 aError)

### 7.89.1 Detailed Description

User base class for execution objects. `OsclActiveObject` defines an execution object without any timer. This AO can be used across threads, i.e. the request can be activated in one thread and completed in another.

### 7.89.2 Member Enumeration Documentation

#### 7.89.2.1 enum OsclActiveObject::OsclActivePriority

Scheduling priorities.

##### Enumerator:

- EPriorityIdle*** A low priority, useful for execution objects representing background processing.
- EPriorityLow*** A priority higher than EPriorityIdle but lower than EPriorityNominal.
- EPriorityNominal*** Most exec objects will have this priority.
- EPriorityHigh*** A priority higher than EPriorityNominal; useful for execution objects handling user input.
- EPriorityHighest*** A priority higher than EPriorityHighest.

### 7.89.3 Constructor & Destructor Documentation

#### 7.89.3.1 OSCL\_IMPORT\_REF OsclActiveObject::OsclActiveObject (int32 *aPriority*, const char *name*[ ])

Constructor.

##### Parameters

- aPriority*** (input param): scheduling priority
- name*** (input param): optional name for this AO.

#### 7.89.3.2 virtual OSCL\_IMPORT\_REF OsclActiveObject::~OsclActiveObject () [virtual]

Destructor.

## 7.89.4 Member Function Documentation

### 7.89.4.1 OSCL\_IMPORT\_REF void OsclActiveObject::AddToScheduler ()

Add this exec object to the current thread's scheduler.

Reimplemented from [PVActiveBase](#).

### 7.89.4.2 OSCL\_IMPORT\_REF void OsclActiveObject::Cancel ()

Cancel any pending request. If the request is readied, this will call the DoCancel routine, wait for the request to cancel, then set the request idle. The AO will not run. If the request is not readied, it does nothing. Request must be canceled from the same thread in which it is scheduled.

Reimplemented from [PVActiveBase](#).

Referenced by [OsclSocketRequestAO::Abort\(\)](#), and [OsclDNSRequestAO::Abort\(\)](#).

### 7.89.4.3 virtual OSCL\_IMPORT\_REF void OsclActiveObject::DoCancel () [protected, virtual]

Cancel request handler. This gets called by scheduler when the request is cancelled. The default routine will complete the request. If any additional action is needed, the derived class may override this. If the derived class does override DoCancel, it must complete the request.

Implements [PVActiveBase](#).

Reimplemented in [OsclDNSRequestAO](#), and [OsclSocketRequestAO](#).

### 7.89.4.4 OSCL\_IMPORT\_REF bool OsclActiveObject::IsBusy () const

Return true if this AO is pending, false otherwise.

### 7.89.4.5 OSCL\_IMPORT\_REF void OsclActiveObject::PendComplete (int32 *aStatus*)

Complete the active request for the AO. This API is thread-safe. If the request is not pending, this call will leave.

#### Parameters

*aStatus*,: request completion status.

### 7.89.4.6 OSCL\_IMPORT\_REF void OsclActiveObject::PendForExec ()

Set request active for this AO and set the status to pending. PendForExec is identical to SetActive, but it additionally sets the request status to OSCL\_REQUEST\_PENDING.

### 7.89.4.7 OSCL\_IMPORT\_REF int32 OsclActiveObject::Priority () const

Return scheduling priority of this exec object.

**7.89.4.8 OSCL\_IMPORT\_REF void OsclActiveObject::RemoveFromScheduler ()**

Remove this AO from its scheduler. Will leave if the calling thread context does not match the scheduling thread. Cancels any readied request before removing.

Reimplemented from [PVActiveBase](#).

Referenced by [OsclDNSRequestAO::Abort\(\)](#).

**7.89.4.9 virtual OSCL\_IMPORT\_REF int32 OsclActiveObject::RunError (int32 *aError*)  
[protected, virtual]**

Run Error handler. This gets called by scheduler when the Run routine leaves. The default implementation simply returns the leave code. If the derived class wants to handle errors from Run, it may override this. The RunError should return OsclErrNone if it handles the error, otherwise it should return the input error code.

**Parameters**

*aError*,: the leave code generated by the Run.

Implements [PVActiveBase](#).

**7.89.4.10 OSCL\_IMPORT\_REF void OsclActiveObject::RunIfNotReady ()**

Complete this AO's request immediately. If the AO is already active, this will do nothing. Will leave if the AO is not added to any scheduler, or if the calling thread context does not match the scheduling thread.

**7.89.4.11 OSCL\_IMPORT\_REF void OsclActiveObject::SetBusy ()**

Set object ready for this AO, additionally sets the request status to OSCL\_REQUEST\_PENDING. Will leave if the request is already readied, or the execution object is not added to any scheduler, or the calling thread context does not match the scheduler thread.

**7.89.4.12 OSCL\_IMPORT\_REF void OsclActiveObject::SetStatus (int32)****7.89.4.13 OSCL\_IMPORT\_REF int32 OsclActiveObject::Status () const**

Request status access

**7.89.4.14 OSCL\_IMPORT\_REF OsclAOStatus& OsclActiveObject::StatusRef ()**

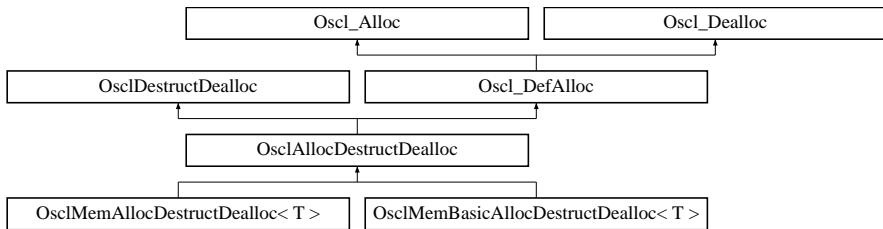
The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_ao.h](#)

## 7.90 OsclAllocDestructDealloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for OsclAllocDestructDealloc:



### Public Member Functions

- virtual [~OsclAllocDestructDealloc \(\)](#)

#### 7.90.1 Constructor & Destructor Documentation

##### 7.90.1.1 virtual OsclAllocDestructDealloc::~OsclAllocDestructDealloc () [inline, virtual]

The documentation for this class was generated from the following file:

- [oscl\\_defalloc.h](#)

## 7.91 OsclAOStatus Class Reference

```
#include <oscl_aostatus.h>
```

### Public Member Functions

- OSCL\_INLINE OsclAOStatus ()
- OSCL\_INLINE OsclAOStatus (int32 aStatus)
- OSCL\_INLINE int32 operator= (int32 aStatus)
- OSCL\_INLINE int32 operator== (int32 aStatus) const
- OSCL\_INLINE int32 operator!= (int32 aStatus) const
- OSCL\_INLINE int32 operator>= (int32 aStatus) const
- OSCL\_INLINE int32 operator<= (int32 aStatus) const
- OSCL\_INLINE int32 operator> (int32 aStatus) const
- OSCL\_INLINE int32 operator< (int32 aStatus) const
- OSCL\_INLINE int32 Value () const

#### 7.91.1 Constructor & Destructor Documentation

7.91.1.1 OSCL\_INLINE OsclAOStatus::OsclAOStatus ()

7.91.1.2 OSCL\_INLINE OsclAOStatus::OsclAOStatus (int32 *aStatus*)

#### 7.91.2 Member Function Documentation

7.91.2.1 OSCL\_INLINE int32 OsclAOStatus::operator!= (int32 *aStatus*) const

7.91.2.2 OSCL\_INLINE int32 OsclAOStatus::operator< (int32 *aStatus*) const

7.91.2.3 OSCL\_INLINE int32 OsclAOStatus::operator<= (int32 *aStatus*) const

7.91.2.4 OSCL\_INLINE int32 OsclAOStatus::operator= (int32 *aStatus*)

7.91.2.5 OSCL\_INLINE int32 OsclAOStatus::operator== (int32 *aStatus*) const

7.91.2.6 OSCL\_INLINE int32 OsclAOStatus::operator> (int32 *aStatus*) const

7.91.2.7 OSCL\_INLINE int32 OsclAOStatus::operator>= (int32 *aStatus*) const

7.91.2.8 OSCL\_INLINE int32 OsclAOStatus::Value () const

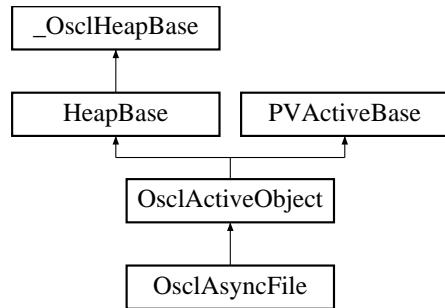
The documentation for this class was generated from the following file:

- [oscl\\_aostatus.h](#)

## 7.92 OsclAsyncFile Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclAsyncFile:



### Public Member Functions

- [~OsclAsyncFile \(\)](#)
- [int32 Open \(const oscl\\_wchar \\*filename, uint32 mode, const OsclNativeFileParams &params, Oscl\\_FileServer &fileserv\)](#)
- [int32 Open \(const char \\*filename, uint32 mode, const OsclNativeFileParams &params, Oscl\\_FileServer &fileserv\)](#)
- [int32 Seek \(TOsclFileOffset offset, Oscl\\_File::seek\\_type origin\)](#)
- [TOsclFileOffset Tell \(\)](#)
- [uint32 Read \(OsclAny \\*aBuffer1, uint32 aDataSize, uint32 aNumElements\)](#)
- [int32 EndOfFile \(\)](#)
- [TOsclFileOffset Size \(\)](#)
- [int32 Close \(\)](#)
- [uint32 Write \(const OsclAny \\*aBuffer1, uint32 aDataSize, uint32 aNumElements\)](#)
- [uint32 Flush \(\)](#)

### Static Public Member Functions

- [static OsclAsyncFile \\* NewL \(OsclNativeFile &aAsyncFile, int32 aCacheSize, PVLogger \\*\)](#)
- [static void Delete \(OsclAsyncFile \\*\)](#)

### Data Fields

- [uint32 iNumOfRun](#)
- [uint32 iNumOfRunErr](#)

#### 7.92.1 Detailed Description

[OsclAsyncFile](#)

## 7.92.2 Constructor & Destructor Documentation

### 7.92.2.1 OsclAsyncFile::~OsclAsyncFile ()

Destructor.

## 7.92.3 Member Function Documentation

### 7.92.3.1 int32 OsclAsyncFile::Close ()

### 7.92.3.2 static void OsclAsyncFile::Delete (OsclAsyncFile \*) [static]

### 7.92.3.3 int32 OsclAsyncFile::EndOfFile ()

### 7.92.3.4 uint32 OsclAsyncFile::Flush () [inline]

### 7.92.3.5 static OsclAsyncFile\* OsclAsyncFile::NewL (OsclNativeFile & aSyncFile, int32 aCacheSize, PVLogger \*) [static]

Two-phased constructor.

#### Parameters

*aSyncFile*,: open handle for async file read. Note: it is the caller's job to open/close this file handle.

*aSyncFile*,: duplicate open handle for sync file read. Note: it is the caller's job to open this file handle, but this class will close the handle.

*aCacheSize*,: size of one of the individual cache buffers. The total cached data size will be larger, since multiple buffers are used.

*aStartAsyncRead*,: When true, async file read will start immediately. When false, read will not begin until StartAsyncRead is called.

### 7.92.3.6 int32 OsclAsyncFile::Open (const char \*filename, uint32 mode, const OsclNativeFileParams & params, Oscl\_FileServer & fileserv)

### 7.92.3.7 int32 OsclAsyncFile::Open (const oscl\_wchar \*filename, uint32 mode, const OsclNativeFileParams & params, Oscl\_FileServer & fileserv)

### 7.92.3.8 uint32 OsclAsyncFile::Read (OsclAny \*aBuffer1, uint32 aDataSize, uint32 aNumElements)

### 7.92.3.9 int32 OsclAsyncFile::Seek (TOsclFileOffset offset, Oscl\_File::seek\_type origin)

### 7.92.3.10 TOsclFileOffset OsclAsyncFile::Size ()

### 7.92.3.11 TOsclFileOffset OsclAsyncFile::Tell ()

### 7.92.3.12 uint32 OsclAsyncFile::Write (const OsclAny \*aBuffer1, uint32 aDataSize, uint32 aNumElements) [inline]

References OSCL\_UNUSED\_ARG.

## 7.92.4 Field Documentation

### 7.92.4.1 uint32 OsclAsyncFile::iNumOfRun

### 7.92.4.2 uint32 OsclAsyncFile::iNumOfRunErr

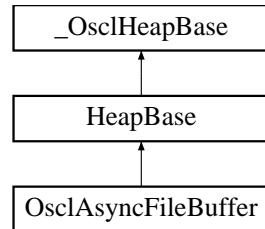
The documentation for this class was generated from the following file:

- [oscl\\_file\\_async\\_read.h](#)

## 7.93 OsclAsyncFileBuffer Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclAsyncFileBuffer:



### Public Member Functions

- [`~OsclAsyncFileBuffer \(\)`](#)
- [`void CleanInUse \(\)`](#)
- [`void SetInUse \(\)`](#)
- [`bool IsInUse \(\)`](#)
- [`bool IsValid \(\)`](#)
- [`TOsclFileOffset Offset \(\)`](#)
- [`void SetOffset \(TOsclFileOffset aOffset\)`](#)
- [`int32 Length \(\)`](#)
- [`bool HasThisOffset \(TOsclFileOffset aOffset\)`](#)
- [`int32 Id \(\)`](#)
- [`OsclBuf \* Buffer \(\)`](#)
- [`void UpdateData \(\)`](#)
- [`void StartAsyncRead \(bool aStartAsyncRead\)`](#)

### Static Public Member Functions

- [`static OsclAsyncFileBuffer \* NewL \(int32 aBufferSize, int32 aId\)`](#)

#### 7.93.1 Detailed Description

Buffer class used with async read. We keep an array of these, covering consecutive areas of the file. This allows for some seeking without requiring a full flush & refill each time.

### 7.93.2 Constructor & Destructor Documentation

7.93.2.1 OsclAsyncFileBuffer::~OsclAsyncFileBuffer ()

### 7.93.3 Member Function Documentation

7.93.3.1 OsclBuf\* OsclAsyncFileBuffer::Buffer ()

7.93.3.2 void OsclAsyncFileBuffer::CleanInUse () [inline]

7.93.3.3 bool OsclAsyncFileBuffer::HasThisOffset (TOsclFileOffset *aOffset*)

7.93.3.4 int32 OsclAsyncFileBuffer::Id () [inline]

7.93.3.5 bool OsclAsyncFileBuffer::IsInUse () [inline]

7.93.3.6 bool OsclAsyncFileBuffer::IsValid () [inline]

7.93.3.7 int32 OsclAsyncFileBuffer::Length () [inline]

7.93.3.8 static OsclAsyncFileBuffer\* OsclAsyncFileBuffer::NewL (int32 *aBufferSize*, int32 *aId*)  
[static]

7.93.3.9 TOsclFileOffset OsclAsyncFileBuffer::Offset () [inline]

7.93.3.10 void OsclAsyncFileBuffer::SetInUse () [inline]

7.93.3.11 void OsclAsyncFileBuffer::SetOffset (TOsclFileOffset *aOffset*) [inline]

7.93.3.12 void OsclAsyncFileBuffer::StartAsyncRead (bool *aStartAsyncRead*)

7.93.3.13 void OsclAsyncFileBuffer::UpdateData ()

The documentation for this class was generated from the following file:

- [oscl\\_file\\_async\\_read.h](#)

## 7.94 OsclAuditCB Class Reference

```
#include <oscl_mem.h>
```

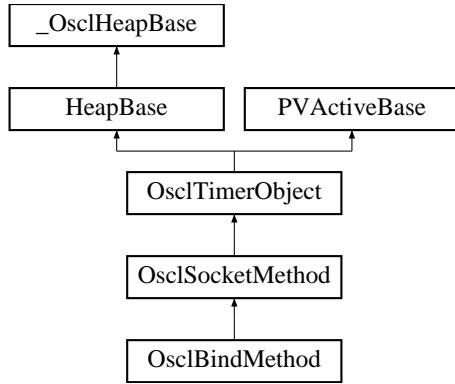
The documentation for this class was generated from the following file:

- [oscl\\_mem.h](#)

## 7.95 OsclBindMethod Class Reference

```
#include <oscl_socket_bind.h>
```

Inheritance diagram for OsclBindMethod:



### Public Member Functions

- [~OsclBindMethod \(\)](#)
- [TPVSocketEvent Bind \(OsclNetworkAddress &aAddress, int32 aTimeout\)](#)
- [OsclBindRequest \\* BindRequest \(\)](#)

### Static Public Member Functions

- static [OsclBindMethod \\* NewL \(OsclIPSocketI &c\)](#)

#### 7.95.1 Constructor & Destructor Documentation

##### 7.95.1.1 OsclBindMethod::~OsclBindMethod ()

#### 7.95.2 Member Function Documentation

##### 7.95.2.1 TPVSocketEvent OsclBindMethod::Bind (OsclNetworkAddress & aAddress, int32 aTimeout)

Referenced by OsclUDPSocketI::BindAsync(), and OsclTCPSocketI::BindAsync().

##### 7.95.2.2 OsclBindRequest\* OsclBindMethod::BindRequest () [inline]

References OsclSocketMethod::iSocketRequestAO.

##### 7.95.2.3 static OsclBindMethod\* OsclBindMethod::NewL (OsclIPSocketI &c) [static]

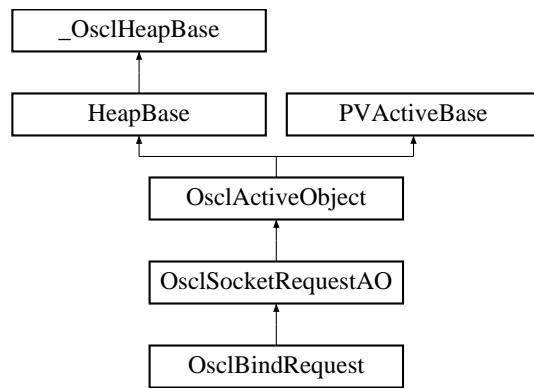
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_bind.h](#)

## 7.96 OsclBindRequest Class Reference

```
#include <oscl_socket_bind.h>
```

Inheritance diagram for OsclBindRequest:



### Public Member Functions

- [OsclBindRequest \(OsclSocketMethod &c\)](#)
- [void Bind \(OsclNetworkAddress &aAddress\)](#)

#### 7.96.1 Detailed Description

This is the AO that interacts with the socket server

#### 7.96.2 Constructor & Destructor Documentation

**7.96.2.1 OsclBindRequest::OsclBindRequest (OsclSocketMethod & c) [inline]**

#### 7.96.3 Member Function Documentation

**7.96.3.1 void OsclBindRequest::Bind (OsclNetworkAddress & aAddress)**

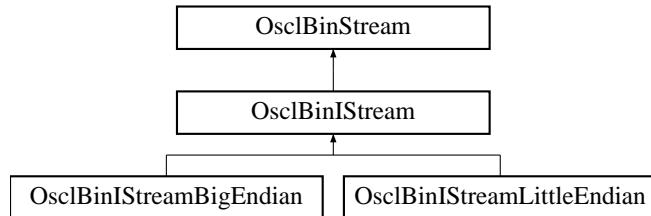
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_bind.h](#)

## 7.97 OsclBinIStream Class Reference

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinIStream:



### Public Member Functions

- [OsclBinIStream \(\)](#)
- [~OsclBinIStream \(\)](#)
- [uint8 Read\\_uint8 \(\)](#)

*This method reads an unsigned short from the stream.*

- [OsclBinIStream & get \(int8 \\*data, int32 size\)](#)

*This method reads 'length' number of bytes from the stream and places them in 'data'.*

#### 7.97.1 Constructor & Destructor Documentation

[7.97.1.1 OsclBinIStream::OsclBinIStream \(\) \[inline\]](#)

[7.97.1.2 OsclBinIStream::~OsclBinIStream \(\) \[inline\]](#)

#### 7.97.2 Member Function Documentation

[7.97.2.1 OsclBinIStream& OsclBinIStream::get \(int8 \\* data, int32 size\)](#)

This method reads 'length' number of bytes from the stream and places them in 'data'.

##### Parameters

*data* is a pointer to the place to store the bytes read

*size* is the number of bytes to read

[7.97.2.2 uint8 OsclBinIStream::Read\\_uint8 \(\)](#)

This method reads an unsigned short from the stream.

##### Returns

Unsigned short read from the stream.

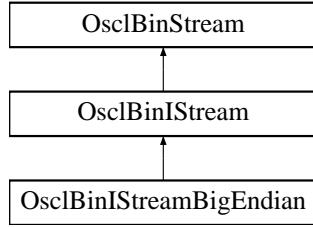
The documentation for this class was generated from the following file:

- [oscl\\_bin\\_stream.h](#)

## 7.98 OsclBinIStreamBigEndian Class Reference

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinIStreamBigEndian:



### Public Member Functions

- [OsclBinIStreamBigEndian \(\)](#)
- [void Read \(int8 &data\)](#)
- [void Read \(uint8 &data\)](#)
- [void Read \(int16 &data\)](#)
- [void Read \(uint16 &data\)](#)
- [void Read \(int32 &data\)](#)
- [void Read \(uint32 &data\)](#)
- [OsclBinIStreamBigEndian & operator>> \(int8 &data\)](#)

*This method reads a int8 from the stream and stores it in 'data'.*

- [OsclBinIStream & operator>> \(uint8 &data\)](#)

*This method reads a uint8 from the stream and stores it in 'data'.*

- [OsclBinIStreamBigEndian & operator>> \(int16 &data\)](#)

*This method reads a int16 from the stream and stores it in 'data'.*

- [OsclBinIStreamBigEndian & operator>> \(uint16 &data\)](#)

*This method reads a uint16 from the stream and stores it in 'data'.*

- [OsclBinIStreamBigEndian & operator>> \(int32 &data\)](#)

*This method reads a int32 from the stream and stores it in 'data'.*

- [OsclBinIStreamBigEndian & operator>> \(uint32 &data\)](#)

*This method reads a uint32 from the stream and stores it in 'data'.*

- [uint16 Read\\_uint16 \(\)](#)

*This method reads an unsigned short from the stream.*

- [uint32 Read\\_uint32 \(\)](#)

*This method reads an unsigned long from the stream.*

### 7.98.1 Constructor & Destructor Documentation

**7.98.1.1 OsclBinIStreamBigEndian::OsclBinIStreamBigEndian () [inline]**

### 7.98.2 Member Function Documentation

**7.98.2.1 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (uint32 & data)**

This method reads a uint32 from the stream and stores it in 'data'.

**7.98.2.2 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (int32 & data)**

This method reads a int32 from the stream and stores it in 'data'.

**7.98.2.3 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (uint16 & data)**

This method reads a uint16 from the stream and stores it in 'data'.

**7.98.2.4 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (int16 & data)**

This method reads a int16 from the stream and stores it in 'data'.

**7.98.2.5 OsclBinIStream& OsclBinIStreamBigEndian::operator>> (uint8 & data)**

This method reads a uint8 from the stream and stores it in 'data'.

**7.98.2.6 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (int8 & data)**

This method reads a int8 from the stream and stores it in 'data'.

**7.98.2.7 void OsclBinIStreamBigEndian::Read (uint32 & data)**

**7.98.2.8 void OsclBinIStreamBigEndian::Read (int32 & data)**

**7.98.2.9 void OsclBinIStreamBigEndian::Read (uint16 & data)**

**7.98.2.10 void OsclBinIStreamBigEndian::Read (int16 & data)**

**7.98.2.11 void OsclBinIStreamBigEndian::Read (uint8 & data)**

**7.98.2.12 void OsclBinIStreamBigEndian::Read (int8 & data)**

**7.98.2.13 uint16 OsclBinIStreamBigEndian::Read\_uint16 ()**

This method reads an unsigned short from the stream.

#### Returns

Unsigned short read from the stream.

### 7.98.2.14 uint32 OsclBinIStreamBigEndian::Read\_uint32 ()

This method reads an unsigned long from the stream.

#### Returns

unsigned long read from the stream.

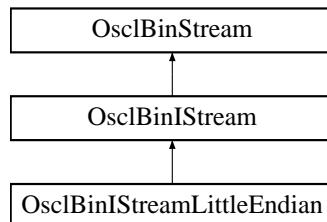
The documentation for this class was generated from the following file:

- [oscl\\_bin\\_stream.h](#)

## 7.99 OsclBinIStreamLittleEndian Class Reference

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinIStreamLittleEndian:



### Public Member Functions

- [OsclBinIStreamLittleEndian \(\)](#)
- [OsclBinIStreamLittleEndian & operator>> \(int8 &data\)](#)

*This method reads a int8 from the stream and stores it in 'data'.*

- [OsclBinIStreamLittleEndian & operator>> \(uint8 &data\)](#)

*This method reads a uint8 from the stream and stores it in 'data'.*

- [OsclBinIStreamLittleEndian & operator>> \(int16 &data\)](#)

*This method reads a int16 from the stream and stores it in 'data'.*

- [OsclBinIStreamLittleEndian & operator>> \(uint16 &data\)](#)

*This method reads a uint16 from the stream and stores it in 'data'.*

- [OsclBinIStreamLittleEndian & operator>> \(int32 &data\)](#)

*This method reads a int32 from the stream and stores it in 'data'.*

- [OsclBinIStreamLittleEndian & operator>> \(uint32 &data\)](#)

*This method reads a uint32 from the stream and stores it in 'data'.*

### Protected Member Functions

- uint16 [Read\\_uint16 \(\)](#)
- uint32 [Read\\_uint32 \(\)](#)

### 7.99.1 Constructor & Destructor Documentation

**7.99.1.1 OsclBinIStreamLittleEndian::OsclBinIStreamLittleEndian () [inline]**

### 7.99.2 Member Function Documentation

**7.99.2.1 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (uint32 & data)**

This method reads a uint32 from the stream and stores it in 'data'.

**7.99.2.2 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (int32 & data)**

This method reads a int32 from the stream and stores it in 'data'.

**7.99.2.3 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (uint16 & data)**

This method reads a uint16 from the stream and stores it in 'data'.

**7.99.2.4 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (int16 & data)**

This method reads a int16 from the stream and stores it in 'data'.

**7.99.2.5 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (uint8 & data)**

This method reads a uint8 from the stream and stores it in 'data'.

**7.99.2.6 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (int8 & data)**

This method reads a int8 from the stream and stores it in 'data'.

**7.99.2.7 uint16 OsclBinIStreamLittleEndian::Read\_uint16 () [protected]**

**7.99.2.8 uint32 OsclBinIStreamLittleEndian::Read\_uint32 () [protected]**

The documentation for this class was generated from the following file:

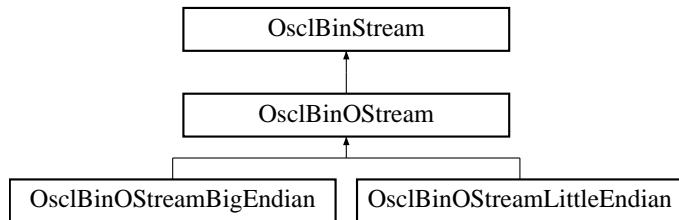
- [oscl\\_bin\\_stream.h](#)

## 7.100 OsclBinOStream Class Reference

Class [OsclBinOStream](#) implements the basic stream functions for an output stream.

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinOStream:



### Public Member Functions

- [OsclBinOStream \(\)](#)
- virtual [~OsclBinOStream \(\)](#)
- [OsclBinOStream & write \(const int8 \\*data, int32 size\)](#)

*This method writes 'length' number of bytes stored in 'data' to the stream.*

#### 7.100.1 Detailed Description

Class [OsclBinOStream](#) implements the basic stream functions for an output stream.

#### 7.100.2 Constructor & Destructor Documentation

**7.100.2.1 [OsclBinOStream::OsclBinOStream \(\) \[inline\]](#)**

**7.100.2.2 [virtual OsclBinOStream::~OsclBinOStream \(\) \[inline, virtual\]](#)**

#### 7.100.3 Member Function Documentation

**7.100.3.1 [OsclBinOStream& OsclBinOStream::write \(const int8 \\* data, int32 size\)](#)**

This method writes 'length' number of bytes stored in 'data' to the stream.

The documentation for this class was generated from the following file:

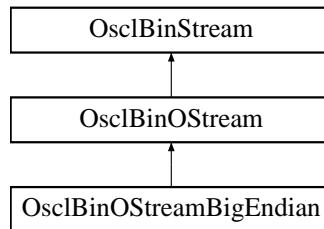
- [oscl\\_bin\\_stream.h](#)

## 7.101 OsclBinOStreamBigEndian Class Reference

Class [OsclBinOStreamBigEndian](#) implements a binary output stream using big endian byte ordering.

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinOStreamBigEndian:



### Public Member Functions

- [OsclBinOStreamBigEndian \(\)](#)
- [OsclBinOStreamBigEndian & operator<< \(const int8 &data\)](#)  
*This method writes a int8 from 'data' to the stream.*
- [OsclBinOStreamBigEndian & operator<< \(const uint8 &data\)](#)  
*This method writes a uint8 from 'data' to the stream.*
- [OsclBinOStreamBigEndian & operator<< \(const int16 &data\)](#)  
*This method writes a int16 from 'data' to the stream.*
- [OsclBinOStreamBigEndian & operator<< \(const uint16 &data\)](#)  
*This method writes a uint16 from 'data' to the stream.*
- [OsclBinOStreamBigEndian & operator<< \(const int32 &data\)](#)  
*This method writes a int32 from 'data' to the stream.*
- [OsclBinOStreamBigEndian & operator<< \(const uint32 &data\)](#)  
*This method writes a uint32 from 'data' to the stream.*

### Protected Member Functions

- void [WriteUnsignedShort \(const uint16 data\)](#)
- void [WriteUnsignedLong \(const uint32 data\)](#)

#### 7.101.1 Detailed Description

Class [OsclBinOStreamBigEndian](#) implements a binary output stream using big endian byte ordering.

### 7.101.2 Constructor & Destructor Documentation

**7.101.2.1 OsclBinOStreamBigEndian::OsclBinOStreamBigEndian () [inline]**

### 7.101.3 Member Function Documentation

**7.101.3.1 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const uint32 & data)**

This method writes a uint32 from 'data' to the stream.

**7.101.3.2 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const int32 & data)**

This method writes a int32 from 'data' to the stream.

**7.101.3.3 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const uint16 & data)**

This method writes a uint16 from 'data' to the stream.

**7.101.3.4 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const int16 & data)**

This method writes a int16 from 'data' to the stream.

**7.101.3.5 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const uint8 & data)**

This method writes a uint8 from 'data' to the stream.

**7.101.3.6 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const int8 & data)**

This method writes a int8 from 'data' to the stream.

**7.101.3.7 void OsclBinOStreamBigEndian::WriteUnsignedLong (const uint32 data) [protected]**

**7.101.3.8 void OsclBinOStreamBigEndian::WriteUnsignedShort (const uint16 data) [protected]**

The documentation for this class was generated from the following file:

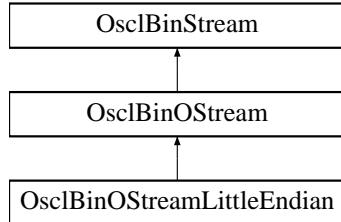
- [oscl\\_bin\\_stream.h](#)

## 7.102 OsclBinOStreamLittleEndian Class Reference

Class [OsclBinOStreamLittleEndian](#) implements a binary output stream using little endian byte ordering.

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinOStreamLittleEndian:



### Public Member Functions

- [OsclBinOStreamLittleEndian \(\)](#)
- [OsclBinOStreamLittleEndian & operator<< \(const int8 &data\)](#)  
*This method writes a int8 from 'data' to the stream.*
- [OsclBinOStreamLittleEndian & operator<< \(const uint8 &data\)](#)  
*This method writes a uint8 from 'data' to the stream.*
- [OsclBinOStreamLittleEndian & operator<< \(const int16 &data\)](#)  
*This method writes a int16 from 'data' to the stream.*
- [OsclBinOStreamLittleEndian & operator<< \(const uint16 &data\)](#)  
*This method writes a uint16 from 'data' to the stream.*
- [OsclBinOStreamLittleEndian & operator<< \(const int32 &data\)](#)  
*This method writes a int32 from 'data' to the stream.*
- [OsclBinOStreamLittleEndian & operator<< \(const uint32 &data\)](#)  
*This method writes a uint32 from 'data' to the stream.*

### Protected Member Functions

- void [WriteUnsignedShort \(const uint16 data\)](#)  
*This method writes 'data' (unsigned short) to the stream.*
- void [WriteUnsignedLong \(const uint32 data\)](#)  
*This method writes 'data' (unsigned long) to the stream.*

#### 7.102.1 Detailed Description

Class [OsclBinOStreamLittleEndian](#) implements a binary output stream using little endian byte ordering.

### 7.102.2 Constructor & Destructor Documentation

**7.102.2.1 OsclBinOStreamLittleEndian::OsclBinOStreamLittleEndian () [inline]**

### 7.102.3 Member Function Documentation

**7.102.3.1 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const uint32 & data)**

This method writes a uint32 from 'data' to the stream.

**7.102.3.2 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const int32 & data)**

This method writes a int32 from 'data' to the stream.

**7.102.3.3 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const uint16 & data)**

This method writes a uint16 from 'data' to the stream.

**7.102.3.4 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const int16 & data)**

This method writes a int16 from 'data' to the stream.

**7.102.3.5 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const uint8 & data)**

This method writes a uint8 from 'data' to the stream.

**7.102.3.6 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const int8 & data)**

This method writes a int8 from 'data' to the stream.

**7.102.3.7 void OsclBinOStreamLittleEndian::WriteUnsignedLong (const uint32 data) [protected]**

This method writes 'data' (unsigned long) to the stream.

**7.102.3.8 void OsclBinOStreamLittleEndian::WriteUnsignedShort (const uint16 data) [protected]**

This method writes 'data' (unsigned short) to the stream.

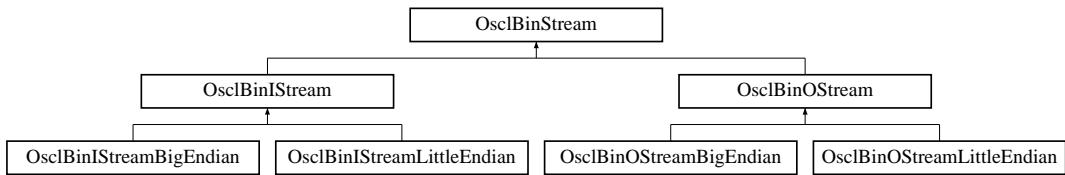
The documentation for this class was generated from the following file:

- [oscl\\_bin\\_stream.h](#)

## 7.103 OsclBinStream Class Reference

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinStream:



### Public Member Functions

- [OsclBinStream \(\)](#)
- [bool good \(\)](#)

*This method determines if the stream is ok.*

- [bool eof \(\)](#)

*This method determines if end of stream has been reached.*

- [bool fail \(\)](#)

*This method determines if an error has occurred in the stream.*

- [void Attach \(void \\*buffer, uint32 l\\_length\)](#)

*This method specifies the data buffer to attach to the stream.*

- [void Attach \(const uint32 numFragments, const OsclMemoryFragment \\*fragPtr\)](#)

*This method specifies the memory fragment array to use for input.*

- [uint32 tellg \(\)](#)

*This method returns the current stream position.*

- [void Seek \(uint32 absPosition\)](#)

*This method seeks to the specified stream position.*

- [uint32 PositionInBlock \(\)](#)

*This method returns the current stream position.*

- [void seekFromCurrentPosition \(int32 offset\)](#)

*This method seeks to the specified offset from the current location.*

### Protected Types

- enum [state\\_t](#) { [GOOD\\_STATE](#), [EOF\\_STATE](#), [FAIL\\_STATE](#) }

## Protected Member Functions

- bool [ReserveSpace](#) (uint32 size)
- bool [HaveRoomInCurrentBlock](#) (uint32 size)

## Protected Attributes

- [state\\_t state](#)
- uint8 \* [pBasePosition](#)
- uint8 \* [pPosition](#)
- uint32 [length](#)
- const [OsclMemoryFragment](#) \* [nextFragPtr](#)
- int [fragsLeft](#)
- const [OsclMemoryFragment](#) \* [firstFragPtr](#)
- int [numFrags](#)
- [OsclMemoryFragment](#) [specialFragBuffer](#)

### 7.103.1 Member Enumeration Documentation

#### 7.103.1.1 enum OsclBinStream::state\_t [protected]

Enumerator:

*GOOD\_STATE*  
*EOF\_STATE*  
*FAIL\_STATE*

### 7.103.2 Constructor & Destructor Documentation

#### 7.103.2.1 OsclBinStream::OsclBinStream () [inline]

### 7.103.3 Member Function Documentation

#### 7.103.3.1 void OsclBinStream::Attach (const uint32 *numFragments*, const OsclMemoryFragment \**fragPtr*)

This method specifies the memory fragment array to use for input.

This array should remain static while the stream refers to it.

#### Parameters

*numFragments* is the number of elements in the array

*fragPtr* is the pointer to the MemoryFragment array

#### 7.103.3.2 void OsclBinStream::Attach (void \**buffer*, uint32 *l\_length*)

This methods specifies the data buffer to attach to the stream.

**Parameters**

*buffer* will provide the input  
*length* of the buffer

**7.103.3.3 bool OsclBinStream::eof ()**

This method determines if end of stream has been reached.

**Returns**

true if end of stream has been reached.

**7.103.3.4 bool OsclBinStream::fail ()**

This method determines if an error has occurred in the stream.

**Returns**

true if an error occurred in the stream.

**7.103.3.5 bool OsclBinStream::good ()**

This method determines if the stream is ok.

**Returns**

true if stream is ok.

**7.103.3.6 bool OsclBinStream::HaveRoomInCurrentBlock (uint32 *size*) [protected]****7.103.3.7 uint32 OsclBinStream::PositionInBlock ()**

This method returns the current stream position.

**Returns**

stream position.

**7.103.3.8 bool OsclBinStream::ReserveSpace (uint32 *size*) [protected]****7.103.3.9 void OsclBinStream::Seek (uint32 *absPosition*)**

This method seeks to the specified stream position.

**Returns**

Stream position.

**7.103.3.10 void OsclBinStream::seekFromCurrentPosition (int32 *offset*)**

This method seeks to the specified offset from the current location.

**Parameters**

*offset* from current stream location

**7.103.3.11 uint32 OsclBinStream::tellg ()**

This method returns the current stream position.

This method is to be used if the input stream is a pointer to the MemoryFragment array

**Returns**

Stream position.

**7.103.4 Field Documentation****7.103.4.1 const OsclMemoryFragment\* OsclBinStream::firstFragPtr [protected]****7.103.4.2 int OsclBinStream::fragsLeft [protected]****7.103.4.3 uint32 OsclBinStream::length [protected]****7.103.4.4 const OsclMemoryFragment\* OsclBinStream::nextFragPtr [protected]****7.103.4.5 int OsclBinStream::numFrags [protected]****7.103.4.6 uint8\* OsclBinStream::pBasePosition [protected]****7.103.4.7 uint8\* OsclBinStream::pPosition [protected]****7.103.4.8 OsclMemoryFragment OsclBinStream::specialFragBuffer [protected]****7.103.4.9 state\_t OsclBinStream::state [protected]**

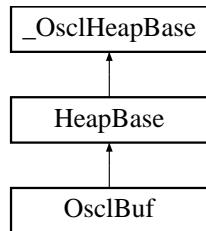
The documentation for this class was generated from the following file:

- [oscl\\_bin\\_stream.h](#)

## 7.104 OsclBuf Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclBuf:



### Public Member Functions

- [OsclBuf](#) (int32 size)
- int32 [Length](#) ()
- [OsclPtr Des](#) ()
- [OsclPtrC DesC](#) ()

### Static Public Member Functions

- static [OsclBuf \\* NewL](#) (int32 size)
- static void [Delete](#) ([OsclBuf](#) \*a)

### Data Fields

- uint8 \* [iBuffer](#)
- int32 [iMaxLength](#)
- int32 [iLength](#)

#### 7.104.1 Constructor & Destructor Documentation

**7.104.1.1 [OsclBuf::OsclBuf](#) (int32 size) [inline]**

#### 7.104.2 Member Function Documentation

**7.104.2.1 static void [OsclBuf::Delete](#) ([OsclBuf](#) \*a) [inline, static]**

References [iBuffer](#), [OSCL\\_DELETE](#), and [OSCL\\_FREE](#).

**7.104.2.2 [OsclPtr OsclBuf::Des](#) () [inline]**

References [iBuffer](#), [iLength](#), and [iMaxLength](#).

**7.104.2.3 OsclPtrC OsclBuf::DesC () [inline]**

References iBuffer, iLength, and iMaxLength.

**7.104.2.4 int32 OsclBuf::Length () [inline]**

References iLength.

**7.104.2.5 static OsclBuf\* OsclBuf::NewL (int32 size) [inline, static]**

References OsclError::Leave(), OSCL\_DELETE, OSCL\_MALLOC, OSCL\_NEW, and OsclErrNoMemory.

### 7.104.3 Field Documentation

**7.104.3.1 uint8\* OsclBuf::iBuffer**

Referenced by Delete(), Des(), and DesC().

**7.104.3.2 int32 OsclBuf::iLength**

Referenced by Des(), DesC(), and Length().

**7.104.3.3 int32 OsclBuf::iMaxLength**

Referenced by Des(), and DesC().

The documentation for this class was generated from the following file:

- [oscl\\_file\\_async\\_read.h](#)

## 7.105 Oscl\_File::OsclCacheObserver Class Reference

```
#include <oscl_file_io.h>
```

### Public Member Functions

- virtual [~OsclCacheObserver \(\)](#)
- virtual [OsclFileCacheBuffer \\* ChooseCurCache \(OsclFileCache &aContext, TOsclFileOffset aPos\)=0](#)

#### 7.105.1 Detailed Description

For defining a cache observer. Cache observer can implement customized cache schemes by replacing the SetCachePosition routine.

#### 7.105.2 Constructor & Destructor Documentation

**7.105.2.1 virtual Oscl\_File::OsclCacheObserver::~OsclCacheObserver () [inline, virtual]**

#### 7.105.3 Member Function Documentation

**7.105.3.1 virtual OsclFileCacheBuffer\* Oscl\_File::OsclCacheObserver::ChooseCurCache (OsclFileCache & aContext, TOsclFileOffset aPos) [pure virtual]**

The documentation for this class was generated from the following file:

- [oscl\\_file\\_io.h](#)

## 7.106 OsclCompareLess< T > Class Template Reference

```
#include <oscl_priqueue.h>
```

### Public Member Functions

- int [compare](#) (T &a, T &b) const

```
template<class T> class OsclCompareLess< T >
```

#### 7.106.1 Member Function Documentation

**7.106.1.1 template<class T > int OsclCompareLess< T >::compare (T & a, T & b) const [inline]**

The documentation for this class was generated from the following file:

- [oscl\\_priqueue.h](#)

## 7.107 OsclComponentRegistry Class Reference

```
#include <oscl_registry_serv_impl.h>
```

### Public Member Functions

- [OsclComponentRegistry \(\)](#)
- [~OsclComponentRegistry \(\)](#)
- int32 [Register \(uint32 &alid, OSCL\\_String &, OsclComponentFactory\)](#)
- int32 [Unregister \(OSCL\\_String &\)](#)
- int32 [Unregister \(uint32\)](#)
- [OsclComponentFactory FindExact \(OSCL\\_String &\)](#)
- void [FindHierarchical \(OSCL\\_String &, Oscl\\_Vector< OsclRegistryAccessElement, OsclMemAllocator > &\)](#)
- void [OpenSession \(\)](#)
- void [CloseSession \(\)](#)

### Data Fields

- [OsclComponentRegistryData iData](#)
- [OsclMutex iMutex](#)
- uint32 [iComponentIdCounter](#)
- uint32 [iNumSessions](#)

### 7.107.1 Detailed Description

Thread-safe singleton registry object.

## 7.107.2 Constructor & Destructor Documentation

7.107.2.1 `OsclComponentRegistry::OsclComponentRegistry ()`

7.107.2.2 `OsclComponentRegistry::~OsclComponentRegistry ()`

## 7.107.3 Member Function Documentation

7.107.3.1 `void OsclComponentRegistry::CloseSession ()`

7.107.3.2 `OsclComponentFactory OsclComponentRegistry::FindExact (OSCL_String &)`

7.107.3.3 `void OsclComponentRegistry::FindHierarchical (OSCL_String &, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > &)`

7.107.3.4 `void OsclComponentRegistry::OpenSession ()`

7.107.3.5 `int32 OsclComponentRegistry::Register (uint32 & aId, OSCL_String &, OsclComponentFactory)`

7.107.3.6 `int32 OsclComponentRegistry::Unregister (uint32)`

7.107.3.7 `int32 OsclComponentRegistry::Unregister (OSCL_String &)`

## 7.107.4 Field Documentation

7.107.4.1 `uint32 OsclComponentRegistry::iComponentIdCounter`

7.107.4.2 `OsclComponentRegistryData OsclComponentRegistry::iData`

7.107.4.3 `OsclMutex OsclComponentRegistry::iMutex`

7.107.4.4 `uint32 OsclComponentRegistry::iNumSessions`

The documentation for this class was generated from the following file:

- [oscl\\_registry\\_serv\\_impl.h](#)

## 7.108 OsclComponentRegistryData Class Reference

```
#include <oscl_registry_serv_impl.h>
```

### Public Member Functions

- `OsclComponentRegistryElement * Find (OSCL_String &, bool aExact)`

### Data Fields

- `Oscl_Vector< OsclComponentRegistryElement, OsclMemAllocator > iVec`

#### 7.108.1 Detailed Description

Registry

#### 7.108.2 Member Function Documentation

7.108.2.1 `OsclComponentRegistryElement* OsclComponentRegistryData::Find (OSCL_String &, bool aExact)`

#### 7.108.3 Field Documentation

7.108.3.1 `Oscl_Vector<OsclComponentRegistryElement, OsclMemAllocator> OsclComponentRegistryData::iVec`

The documentation for this class was generated from the following file:

- `oscl_registry_serv_impl.h`

## 7.109 OsclComponentRegistryElement Class Reference

```
#include <oscl_registry_serv_impl.h>
```

### Public Member Functions

- `OsclComponentRegistryElement (OSCL_String &, OsclComponentFactory)`
- `OsclComponentRegistryElement (const OsclComponentRegistryElement &)`
- `OsclComponentRegistryElement & operator= (const OsclComponentRegistryElement &src)`
- `~OsclComponentRegistryElement ()`
- `bool Match (OSCL_String &aStr, bool aExact)`

### Data Fields

- `OSCL_String * iId`
- `OsclComponentFactory iFactory`
- `uint32 iComponentId`

#### 7.109.1 Detailed Description

OS-independent declarations.

Data for each registered component.

#### 7.109.2 Constructor & Destructor Documentation

**7.109.2.1 OsclComponentRegistryElement::OsclComponentRegistryElement (OSCL\_String &, OsclComponentFactory)**

**7.109.2.2 OsclComponentRegistryElement::OsclComponentRegistryElement (const OsclComponentRegistryElement &)**

**7.109.2.3 OsclComponentRegistryElement::~OsclComponentRegistryElement ()**

#### 7.109.3 Member Function Documentation

**7.109.3.1 bool OsclComponentRegistryElement::Match (OSCL\_String & aStr, bool aExact)**

**7.109.3.2 OsclComponentRegistryElement& OsclComponentRegistryElement::operator= (const OsclComponentRegistryElement & src)**

#### 7.109.4 Field Documentation

**7.109.4.1 uint32 OsclComponentRegistryElement::iComponentId**

**7.109.4.2 OsclComponentFactory OsclComponentRegistryElement::iFactory**

**7.109.4.3 OSCL\_String\* OsclComponentRegistryElement::iId**

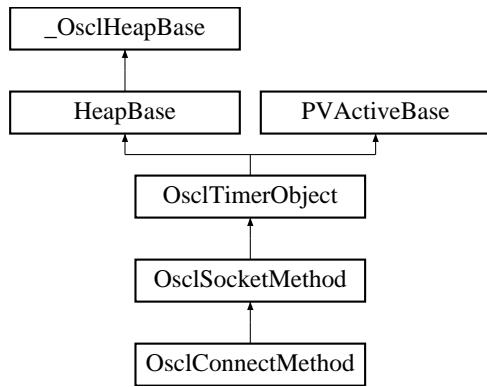
The documentation for this class was generated from the following file:

- [oscl\\_registry\\_serv\\_impl.h](#)

## 7.110 OsclConnectMethod Class Reference

```
#include <oscl_socket_connect.h>
```

Inheritance diagram for OsclConnectMethod:



### Public Member Functions

- `~OsclConnectMethod ()`
- `TPVSocketEvent Connect (OsclNetworkAddress &aAddress, int32 aTimeout)`
- `OsclConnectRequest * ConnectRequest ()`

### Static Public Member Functions

- static `OsclConnectMethod * NewL (OsclIPSocketI &c)`

#### 7.110.1 Constructor & Destructor Documentation

##### 7.110.1.1 OsclConnectMethod::~OsclConnectMethod ()

#### 7.110.2 Member Function Documentation

##### 7.110.2.1 TPVSocketEvent OsclConnectMethod::Connect (OsclNetworkAddress & aAddress, int32 aTimeout)

Referenced by `OsclTCPSocketI::Connect()`.

##### 7.110.2.2 OsclConnectRequest\* OsclConnectMethod::ConnectRequest () [inline]

References `OsclSocketMethod::iSocketRequestAO`.

##### 7.110.2.3 static OsclConnectMethod\* OsclConnectMethod::NewL (OsclIPSocketI & c) [static]

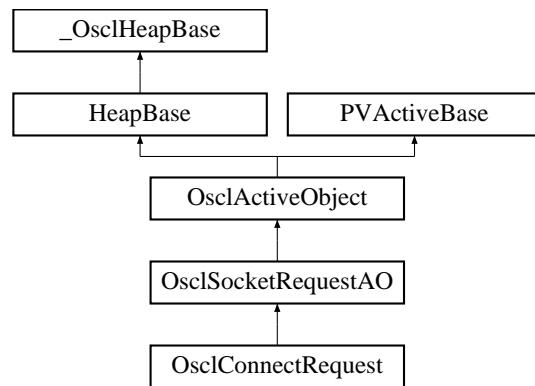
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_connect.h](#)

## 7.111 OsclConnectRequest Class Reference

```
#include <oscl_socket_connect.h>
```

Inheritance diagram for OsclConnectRequest:



### Public Member Functions

- [OsclConnectRequest \(OsclSocketMethod &c\)](#)
- void [Connect \(OsclNetworkAddress &aAddress\)](#)

#### 7.111.1 Detailed Description

This is the AO that interacts with the socket server

#### 7.111.2 Constructor & Destructor Documentation

**7.111.2.1 OsclConnectRequest::OsclConnectRequest (OsclSocketMethod & c) [inline]**

#### 7.111.3 Member Function Documentation

**7.111.3.1 void OsclConnectRequest::Connect (OsclNetworkAddress & aAddress)**

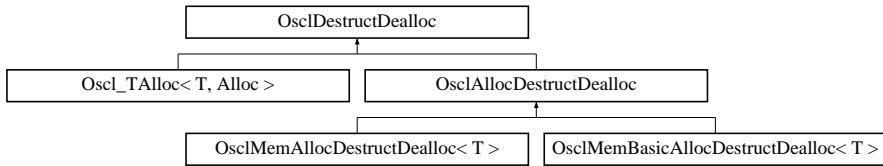
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_connect.h](#)

## 7.112 OsclDestructDealloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for OsclDestructDealloc:



### Public Member Functions

- virtual [~OsclDestructDealloc \(\)](#)
- virtual void [destruct\\_and\\_dealloc \(OsclAny \\*ptr\)=0](#)

#### 7.112.1 Constructor & Destructor Documentation

**7.112.1.1 virtual OsclDestructDealloc::~OsclDestructDealloc () [inline, virtual]**

#### 7.112.2 Member Function Documentation

**7.112.2.1 virtual void OsclDestructDealloc::destruct\_and\_dealloc (OsclAny \*ptr) [pure virtual]**

Implemented in [Oscl\\_TAlloc< T, Alloc >](#), [OsclMemAllocDestructDealloc< T >](#), [OsclMemBasicAllocDestructDealloc< T >](#), [Oscl\\_TAlloc< entry\\_type, Alloc >](#), [Oscl\\_TAlloc< node\\_type, alloc\\_type >](#), [Oscl\\_TAlloc< char, alloc\\_type >](#), [Oscl\\_TAlloc< tag\\_base\\_unit, Alloc >](#), [Oscl\\_TAlloc< PVLogger, alloc\\_type >](#), and [Oscl\\_TAlloc< node\\_type, Alloc >](#).

Referenced by [OsclRefCounterMTDA< LockType >::removeRef\(\)](#), and [OsclRefCounterDA::removeRef\(\)](#).

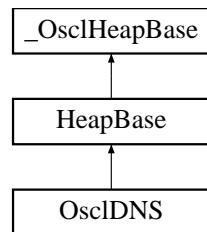
The documentation for this class was generated from the following file:

- [oscl\\_defalloc.h](#)

## 7.113 OsclDNS Class Reference

```
#include <oscl_dns.h>
```

Inheritance diagram for OsclDNS:



### Public Member Functions

- OSCL\_IMPORT\_REF ~OsclDNS ()
- OSCL\_IMPORT\_REF TPVDNSEvent GetHostByName (char \*name, OsclNetworkAddress &addr, int32 aTimeoutMsec=-1, Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator > \*aAddressList=NULL)
- OSCL\_IMPORT\_REF void CancelGetHostByName ()

### Static Public Member Functions

- static OSCL\_IMPORT\_REF OsclDNS \* NewL (Oscl\_DefAlloc &alloc, OsclSocketServ &aServ, OsclDNSObserver &aObserver, uint32 aId)

### Friends

- class OsclDNSRequestAO

#### 7.113.1 Detailed Description

The DNS class

#### 7.113.2 Member Function Documentation

**7.113.2.1 static OSCL\_IMPORT\_REF OsclDNS\* OsclDNS::NewL (Oscl\_DefAlloc & alloc, OsclSocketServ & aServ, OsclDNSObserver & aObserver, uint32 aId) [static]**

DNS object creation.

##### Parameters

- alloc*,: Memory allocator
- aServ*,: Socket server.
- aObserver*,: DNS Event observer

*aId*,: Unique ID for this DNS object. This ID will be included in all callbacks associated with this DNS object.

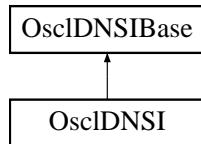
The documentation for this class was generated from the following file:

- [oscl\\_dns.h](#)

## 7.114 OsclDNSI Class Reference

```
#include <oscl_dns_imp_pv.h>
```

Inheritance diagram for OsclDNSI:



### Public Member Functions

- [`~OsclDNSI \(\)`](#)
- [`int32 Open \(OsclSocketServI &aServer\)`](#)
- [`int32 Close \(\)`](#)
- [`void GetHostByName \(GetHostByNameParam &, OsclDNSRequestAO &\)`](#)
- [`void GetHostByNameSuccess \(GetHostByNameParam &\)`](#)
- [`void GetNextHost \(OsclDNSRequestAO &\)`](#)
- [`void GetNextHostSuccess \(GetHostByNameParam &\)`](#)
- [`bool GetHostByNameResponseContainsAliasInfo \(\)`](#)

### Static Public Member Functions

- [`static OsclDNSI \* NewL \(Oscl\_DefAlloc &a\)`](#)

### Friends

- class [OsclDNSRequest](#)
- class [OsclGetHostByNameRequest](#)
- class [DNSRequestParam](#)

### 7.114.1 Detailed Description

[OsclDNSI](#), non-Symbian implementation

### 7.114.2 Constructor & Destructor Documentation

#### 7.114.2.1 [OsclDNSI::~OsclDNSI \(\)](#)

### 7.114.3 Member Function Documentation

#### 7.114.3.1 [int32 OsclDNSI::Close \(\) \[virtual\]](#)

Implements [OsclDNSIBase](#).

**7.114.3.2 void OsclDNSI::GetHostByName (GetHostNameParam &, OsclDNSRequestAO &) [virtual]**

Implements [OsclDNSIBase](#).

**7.114.3.3 bool OsclDNSI::GetHostByNameResponseContainsAliasInfo () [virtual]**

Implements [OsclDNSIBase](#).

**7.114.3.4 void OsclDNSI::GetHostByNameSuccess (GetHostNameParam &) [virtual]**

Implements [OsclDNSIBase](#).

**7.114.3.5 void OsclDNSI::GetNextHost (OsclDNSRequestAO &) [virtual]**

Implements [OsclDNSIBase](#).

**7.114.3.6 void OsclDNSI::GetNextHostSuccess (GetHostNameParam &) [virtual]**

Implements [OsclDNSIBase](#).

**7.114.3.7 static OsclDNSI\* OsclDNSI::NewL (Oscl\_DefAlloc & a) [static]**

**7.114.3.8 int32 OsclDNSI::Open (OsclSocketServI & aServer) [virtual]**

Implements [OsclDNSIBase](#).

## 7.114.4 Friends And Related Function Documentation

**7.114.4.1 friend class DNSRequestParam [friend]**

**7.114.4.2 friend class OsclDNSRequest [friend]**

Reimplemented from [OsclDNSIBase](#).

**7.114.4.3 friend class OsclGetHostByNameRequest [friend]**

Reimplemented from [OsclDNSIBase](#).

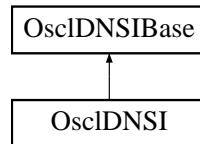
The documentation for this class was generated from the following file:

- [oscl\\_dns\\_imp\\_pv.h](#)

## 7.115 OsclDNSIBase Class Reference

```
#include <oscl_dns_imp_base.h>
```

Inheritance diagram for OsclDNSIBase:



### Public Member Functions

- virtual ~OsclDNSIBase ()
- virtual int32 Open (OsclSocketServI &aServer)=0
- virtual int32 Close ()=0
- virtual void GetHostByName (GetHostByNameParam &, OsclDNSRequestAO &)=0
- virtual void GetHostByNameSuccess (GetHostByNameParam &)=0
- virtual bool GetHostByNameResponseContainsAliasInfo ()=0
- virtual void GetNextHost (OsclDNSRequestAO &)=0
- virtual void GetNextHostSuccess (GetHostByNameParam &)=0
- void CancelFxn (TPVDNSFxn)

### Protected Member Functions

- OsclDNSIBase (Oscl\_DefAlloc &a)
- virtual bool IsReady (OsclDNSRequestAO &aObject)=0
- virtual void CancelGetHostByName ()=0

### Protected Attributes

- Oscl\_DefAlloc & iAlloc
- OsclSocketServI \* iSocketServ

### Friends

- class OsclDNSRequest
- class OsclGetHostByNameRequest

#### 7.115.1 Detailed Description

[OsclDNSIBase](#) is a common base class for all implementations.

### 7.115.2 Constructor & Destructor Documentation

7.115.2.1 `virtual OsclDNSIBase::~OsclDNSIBase () [virtual]`

7.115.2.2 `OsclDNSIBase::OsclDNSIBase (Oscl_DefAlloc & a) [protected]`

### 7.115.3 Member Function Documentation

7.115.3.1 `void OsclDNSIBase::CancelFxn (TPVDNSFxn)`

7.115.3.2 `virtual void OsclDNSIBase::CancelGetHostName () [protected, pure virtual]`

7.115.3.3 `virtual int32 OsclDNSIBase::Close () [pure virtual]`

Implemented in [OsclDNSI](#).

7.115.3.4 `virtual void OsclDNSIBase::GetHostName (GetHostNameParam &, OsclDNSRequestAO &) [pure virtual]`

Implemented in [OsclDNSI](#).

7.115.3.5 `virtual bool OsclDNSIBase::GetHostNameResponseContainsAliasInfo () [pure virtual]`

Implemented in [OsclDNSI](#).

7.115.3.6 `virtual void OsclDNSIBase::GetHostNameSuccess (GetHostNameParam &) [pure virtual]`

Implemented in [OsclDNSI](#).

7.115.3.7 `virtual void OsclDNSIBase::GetNextHost (OsclDNSRequestAO &) [pure virtual]`

Implemented in [OsclDNSI](#).

7.115.3.8 `virtual void OsclDNSIBase::GetNextHostSuccess (GetHostNameParam &) [pure virtual]`

Implemented in [OsclDNSI](#).

7.115.3.9 `virtual bool OsclDNSIBase::IsReady (OsclDNSRequestAO & aObject) [protected, pure virtual]`

7.115.3.10 `virtual int32 OsclDNSIBase::Open (OsclSocketServI & aServer) [pure virtual]`

Implemented in [OsclDNSI](#).

## 7.115.4 Friends And Related Function Documentation

### 7.115.4.1 friend class OsclDNSRequest [friend]

Reimplemented in [OsclDNSI](#).

### 7.115.4.2 friend class OsclGetHostByNameRequest [friend]

Reimplemented in [OsclDNSI](#).

## 7.115.5 Field Documentation

### 7.115.5.1 Oscl\_DefAlloc& OsclDNSIBase::iAlloc [protected]

### 7.115.5.2 OsclSocketServI\* OsclDNSIBase::iSocketServ [protected]

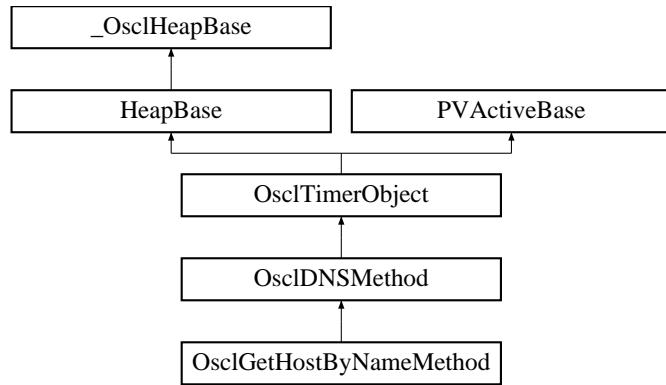
The documentation for this class was generated from the following file:

- [oscl\\_dns\\_imp\\_base.h](#)

## 7.116 OsclDNSMethod Class Reference

```
#include <oscl_dns_method.h>
```

Inheritance diagram for OsclDNSMethod:



### Public Member Functions

- [OsclDNSMethod \(Oscl\\_DefAlloc &a, const char \\*name, TPVDNSFxn fxn\)](#)
- void [Abort \(\)](#)
- void [AbortAll \(\)](#)
- void [CancelMethod \(\)](#)
- void [Run \(\)](#)

### Data Fields

- [OsclDNSObserver \\* iDNSObserver](#)
- uint32 [iId](#)
- [Oscl\\_DefAlloc & iAlloc](#)
- [TPVDNSFxn iDNSFxn](#)
- [PVLogger \\* iLogger](#)

### Protected Member Functions

- void [ConstructL \(OsclDNSObserver \\*aObserver, OsclDNSRequestAO \\*aAO, uint32 aId\)](#)
- bool [StartMethod \(int32 aTimeoutMsec\)](#)
- void [MethodDone \(\)](#)

### Protected Attributes

- [OsclDNSRequestAO \\* iDNSRequestAO](#)

#### 7.116.1 Detailed Description

This is the base class for all socket methods. It provides the timeout on socket requests.

## 7.116.2 Constructor & Destructor Documentation

**7.116.2.1 OsclDNSMethod::OsclDNSMethod (Oscl\_DefAlloc & *a*, const char \* *name*, TPVDNSFxn *fxn*) [inline]**

References PVLogger::GetLoggerObject(), and iLogger.

## 7.116.3 Member Function Documentation

**7.116.3.1 void OsclDNSMethod::Abort ()**

**7.116.3.2 void OsclDNSMethod::AbortAll ()**

**7.116.3.3 void OsclDNSMethod::CancelMethod ()**

**7.116.3.4 void OsclDNSMethod::ConstructL (OsclDNSObserver \* *aObserver*, OsclDNSRequestAO \* *aAO*, uint32 *aId*) [protected]**

**7.116.3.5 void OsclDNSMethod::MethodDone () [protected]**

**7.116.3.6 void OsclDNSMethod::Run () [virtual]**

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's WaitForAnyRequest() function completes.

Before calling this active object's [Run\(\)](#) function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request
2. marked this active object's request as complete (i.e. the request is no longer outstanding)

[Run\(\)](#) runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls ExecError() to handle the leave.

Note that once the active scheduler's Start() function has been called, all user code is run under one of the program's active object's [Run\(\)](#) or [RunError\(\)](#) functions.

Implements [PVActiveBase](#).

**7.116.3.7 bool OsclDNSMethod::StartMethod (int32 *aTimeoutMsec*) [protected]**

## 7.116.4 Field Documentation

**7.116.4.1 Oscl\_DefAlloc& OsclDNSMethod::iAlloc**

**7.116.4.2 TPVDNSFx OsclDNSMethod::iDNSFx**

**7.116.4.3 OsclDNSObserver\* OsclDNSMethod::iDNSObserver**

**7.116.4.4 OsclDNSRequestAO\* OsclDNSMethod::iDNSRequestAO [protected]**

**7.116.4.5 uint32 OsclDNSMethod::iId**

**7.116.4.6 PVLogger\* OsclDNSMethod::iLogger**

Referenced by OsclDNSRequestAO::ConstructL(), and OsclDNSMethod().

The documentation for this class was generated from the following file:

- [oscl\\_dns\\_method.h](#)

## 7.117 OsclDNSObserver Class Reference

```
#include <oscl_dns.h>
```

### Public Member Functions

- virtual OSCL\_IMPORT\_REF void [HandleDNSEvent](#) (int32 aId, [TPVDNSFxn](#) aFxn, [TPVDNSEvent](#) aEvent, int32 aError)=0
- virtual [~OsclDNSObserver](#) ()

#### 7.117.1 Detailed Description

DNS event observer. The client implements this to get asynchronous command completion.

#### 7.117.2 Member Function Documentation

##### 7.117.2.1 virtual OSCL\_IMPORT\_REF void OsclDNSObserver::HandleDNSEvent (int32 *aId*, *TPVDNSFxn* *aFxn*, *TPVDNSEvent* *aEvent*, int32 *aError*) [pure virtual]

DNS Event callback.

###### Parameters

- aId*:** The ID that was supplied when the DNS object was created.
- aEvent*:** Function completion event. Will be EPVDNSSuccess, EPVDNSTimeout, or EPVDNSFailure.
- aError*:** When the event is EPVDNSFailure, this may contain a platform-specific error code, or zero if none is available.

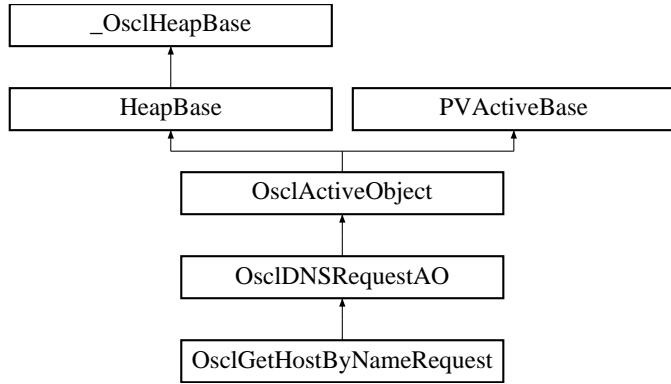
The documentation for this class was generated from the following file:

- [oscl\\_dns.h](#)

## 7.118 OsclDNSRequestAO Class Reference

```
#include <oscl_dns_method.h>
```

Inheritance diagram for OsclDNSRequestAO:



### Protected Member Functions

- `OsclDNSRequestAO` (const char \*name)
- void `ConstructL` (`OsclDNSI` \*aDNS, `OsclDNSMethod` \*aMethod)
- void `Abort` ()
- void `NewRequest` ()
- void `RequestDone` ()
- int `GetSocketError` ()
- `OsclSocketServI` \* `Serv` ()
- void `DoCancel` ()
- void `Run` ()
- virtual void `Success` ()
- virtual void `Failure` ()
- virtual void `Cancelled` ()

### Protected Attributes

- `OsclDNSI` \* `iDNSI`
- `OsclDNSMethod` \* `iDNSMethod`
- int32 `iSocketError`
- `PVLogger` \* `iLogger`

### Friends

- class `OsclDNSI`
- class `OsclDNSMethod`
- class `OsclDNSRequest`
- class `GetHostNameParam`

### 7.118.1 Detailed Description

This is the base class for all requests to the socket server.

### 7.118.2 Constructor & Destructor Documentation

**7.118.2.1 OsclDNSRequestAO::OsclDNSRequestAO (const char \* *name*) [inline, protected]**

### 7.118.3 Member Function Documentation

**7.118.3.1 void OsclDNSRequestAO::Abort () [inline, protected]**

References OsclActiveObject::Cancel(), and OsclActiveObject::RemoveFromScheduler().

**7.118.3.2 virtual void OsclDNSRequestAO::Cancelled () [inline, protected, virtual]**

**7.118.3.3 void OsclDNSRequestAO::ConstructL (OsclDNSI \* *aDNS*, OsclDNSMethod \* *aMethod*) [inline, protected]**

References iDNSI, iDNSMethod, OsclDNSMethod::iLogger, iLogger, OsclError::Leave(), and OsclErrorGeneral.

**7.118.3.4 void OsclDNSRequestAO::DoCancel () [protected, virtual]**

Cancel request handler. This gets called by scheduler when the request is cancelled. The default routine will complete the request. If any additional action is needed, the derived class may override this. If the derived class does override DoCancel, it must complete the request.

Reimplemented from [OsclActiveObject](#).

**7.118.3.5 virtual void OsclDNSRequestAO::Failure () [inline, protected, virtual]**

**7.118.3.6 int OsclDNSRequestAO::GetSocketError () [protected]**

**7.118.3.7 void OsclDNSRequestAO::NewRequest () [protected]**

**7.118.3.8 void OsclDNSRequestAO::RequestDone () [protected]**

**7.118.3.9 void OsclDNSRequestAO::Run () [protected, virtual]**

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's WaitForAnyRequest() function completes.

Before calling this active object's [Run\(\)](#) function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request

2. marked this active object's request as complete (i.e. the request is no longer outstanding)

[Run\(\)](#) runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls [ExecError\(\)](#) to handle the leave.

Note that once the active scheduler's Start() function has been called, all user code is run under one of the program's active object's [Run\(\)](#) or [RunError\(\)](#) functions.

Implements [PVActiveBase](#).

**7.118.3.10 OsclSocketServI\* OsclDNSRequestAO::Serv () [protected]**

**7.118.3.11 virtual void OsclDNSRequestAO::Success () [inline, protected, virtual]**

## 7.118.4 Friends And Related Function Documentation

**7.118.4.1 friend class GetHostNameParam [friend]**

**7.118.4.2 friend class OsclDNSI [friend]**

**7.118.4.3 friend class OsclDNSMethod [friend]**

**7.118.4.4 friend class OsclDNSRequest [friend]**

## 7.118.5 Field Documentation

**7.118.5.1 OsclDNSI\* OsclDNSRequestAO::iDNSI [protected]**

Referenced by [ConstructL\(\)](#).

**7.118.5.2 OsclDNSMethod\* OsclDNSRequestAO::iDNSMethod [protected]**

Referenced by [ConstructL\(\)](#).

**7.118.5.3 PVLogger\* OsclDNSRequestAO::iLogger [protected]**

Referenced by [ConstructL\(\)](#).

**7.118.5.4 int32 OsclDNSRequestAO::iSocketError [protected]**

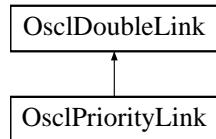
The documentation for this class was generated from the following file:

- [oscl\\_dns\\_method.h](#)

## 7.119 OsclDoubleLink Class Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclDoubleLink:



### Public Member Functions

- [OsclDoubleLink \(\)](#)
- [void Remove \(\)](#)
- [void InsertAfter \(OsclDoubleLink \\*aLink\)](#)
- [void InsertBefore \(OsclDoubleLink \\*aLink\)](#)

### Data Fields

- [OsclDoubleLink \\* iNext](#)
- [OsclDoubleLink \\* iPrev](#)

#### 7.119.1 Constructor & Destructor Documentation

##### 7.119.1.1 [OsclDoubleLink::OsclDoubleLink \(\) \[inline\]](#)

#### 7.119.2 Member Function Documentation

##### 7.119.2.1 [void OsclDoubleLink::InsertAfter \(OsclDoubleLink \\* aLink\)](#)

##### 7.119.2.2 [void OsclDoubleLink::InsertBefore \(OsclDoubleLink \\* aLink\)](#)

##### 7.119.2.3 [void OsclDoubleLink::Remove \(\)](#)

#### 7.119.3 Field Documentation

##### 7.119.3.1 [OsclDoubleLink\\* OsclDoubleLink::iNext](#)

Referenced by [OsclDoubleRunner< T >::operator++\(\)](#), and [OsclDoubleRunner< T >::SetToHead\(\)](#).

##### 7.119.3.2 [OsclDoubleLink\\* OsclDoubleLink::iPrev](#)

Referenced by [OsclDoubleRunner< T >::SetToTail\(\)](#).

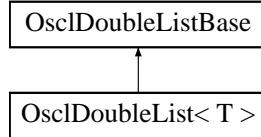
The documentation for this class was generated from the following file:

- [oscl\\_double\\_list.h](#)

## 7.120 OsclDoubleList< T > Class Template Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclDoubleList< T >:



### Public Member Functions

- OSCL\_INLINE [OsclDoubleList\(\)](#)
- OSCL\_INLINE [OsclDoubleList\(int32 anOffset\)](#)
- OSCL\_INLINE void [InsertHead\(T &aRef\)](#)
- OSCL\_INLINE void [InsertTail\(T &aRef\)](#)
- OSCL\_INLINE bool [IsHead\(const T \\*aPtr\) const](#)
- OSCL\_INLINE bool [IsTail\(const T \\*aPtr\) const](#)
- OSCL\_INLINE T \* [Head\(\) const](#)
- OSCL\_INLINE T \* [Tail\(\) const](#)

```
template<class T> class OsclDoubleList< T >
```

#### 7.120.1 Constructor & Destructor Documentation

**7.120.1.1 template<class T > OSCL\_INLINE OsclDoubleList< T >::OsclDoubleList ()**

**7.120.1.2 template<class T > OSCL\_INLINE OsclDoubleList< T >::OsclDoubleList (int32  
anOffset)**

#### 7.120.2 Member Function Documentation

**7.120.2.1 template<class T > OSCL\_INLINE T\* OsclDoubleList< T >::Head () const**

**7.120.2.2 template<class T > OSCL\_INLINE void OsclDoubleList< T >::InsertHead (T & aRef)**

**7.120.2.3 template<class T > OSCL\_INLINE void OsclDoubleList< T >::InsertTail (T & aRef)**

**7.120.2.4 template<class T > OSCL\_INLINE bool OsclDoubleList< T >::IsHead (const T \* aPtr)  
const**

**7.120.2.5 template<class T > OSCL\_INLINE bool OsclDoubleList< T >::IsTail (const T \* aPtr)  
const**

**7.120.2.6 template<class T > OSCL\_INLINE T\* OsclDoubleList< T >::Tail () const**

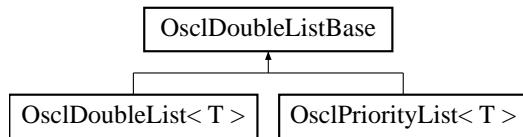
The documentation for this class was generated from the following file:

- [oscl\\_double\\_list.h](#)

## 7.121 OsclDoubleListBase Class Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclDoubleListBase:



### Public Member Functions

- bool [IsEmpty \(\) const](#)
- void [SetOffset \(int32 anOffset\)](#)
- void [Reset \(\)](#)
- [OsclDoubleLink \\* getHead \(\)](#)
- int32 [getOffset \(\)](#)

### Protected Member Functions

- [OsclDoubleListBase \(\)](#)
- [OsclDoubleListBase \(int32 anOffset\)](#)
- void [InsertHead \(OsclAny \\*aPtr\)](#)
- void [InsertTail \(OsclAny \\*aPtr\)](#)
- void [Insert \(OsclAny \\*aPtr\)](#)

### Protected Attributes

- [OsclDoubleLink iHead](#)
- int32 [iOffset](#)

#### 7.121.1 Constructor & Destructor Documentation

**7.121.1.1 OsclDoubleListBase::OsclDoubleListBase () [protected]**

**7.121.1.2 OsclDoubleListBase::OsclDoubleListBase (int32 *anOffset*) [protected]**

#### 7.121.2 Member Function Documentation

**7.121.2.1 OsclDoubleLink\* OsclDoubleListBase::getHead () [inline]**

References iHead.

Referenced by OsclDoubleRunner< T >::OsclDoubleRunner().

**7.121.2.2 int32 OsclDoubleListBase::getOffset () [inline]**

References iOffset.

Referenced by OsclDoubleRunner< T >::OsclDoubleRunner().

**7.121.2.3 void OsclDoubleListBase::Insert (OsclAny \* aPtr) [protected]****7.121.2.4 void OsclDoubleListBase::InsertHead (OsclAny \* aPtr) [protected]****7.121.2.5 void OsclDoubleListBase::InsertTail (OsclAny \* aPtr) [protected]****7.121.2.6 bool OsclDoubleListBase::IsEmpty () const****7.121.2.7 void OsclDoubleListBase::Reset ()****7.121.2.8 void OsclDoubleListBase::SetOffset (int32 anOffset)**

### 7.121.3 Field Documentation

**7.121.3.1 OsclDoubleLink OsclDoubleListBase::iHead [protected]**

Referenced by getHead().

**7.121.3.2 int32 OsclDoubleListBase::iOffset [protected]**

Referenced by getOffset().

The documentation for this class was generated from the following file:

- [oscl\\_double\\_list.h](#)

## 7.122 OsclDoubleRunner< T > Class Template Reference

```
#include <oscl_double_list.h>
```

### Public Member Functions

- [OsclDoubleRunner \(OsclDoubleListBase &aQue\)](#)
- void [Set \(T &aLink\)](#)
- [operator T \\* \(\)](#)
- T \* [operator++ \(int\)](#)
- T \* [operator-- \(int\)](#)
- void [SetToHead \(\)](#)
- void [SetToTail \(\)](#)

### Protected Attributes

- int32 [iOffset](#)
- [OsclDoubleLink \\* iHead](#)
- [OsclDoubleLink \\* iNext](#)

**template<class T> class OsclDoubleRunner< T >**

#### 7.122.1 Constructor & Destructor Documentation

##### 7.122.1.1 template<class T> OsclDoubleRunner< T >::OsclDoubleRunner (OsclDoubleListBase & aQue) [inline]

References OsclDoubleListBase::getHead(), OsclDoubleListBase::getOffset(), OsclDoubleRunner< T >::iHead, OsclDoubleRunner< T >::iNext, OsclDoubleRunner< T >::iOffset, and NULL.

#### 7.122.2 Member Function Documentation

##### 7.122.2.1 template<class T> OsclDoubleRunner< T >::operator T \* () [inline]

References OsclDoubleRunner< T >::iNext, OsclDoubleRunner< T >::iOffset, NULL, and OsclPtrSub().

##### 7.122.2.2 template<class T> T\* OsclDoubleRunner< T >::operator++ (int) [inline]

References OsclDoubleLink::iNext, OsclDoubleRunner< T >::iNext, OsclDoubleRunner< T >::iOffset, NULL, and OsclPtrSub().

##### 7.122.2.3 template<class T> T\* OsclDoubleRunner< T >::operator-- (int)

##### 7.122.2.4 template<class T> void OsclDoubleRunner< T >::Set (T & aLink) [inline]

References OsclDoubleRunner< T >::iNext, OsclDoubleRunner< T >::iOffset, and OsclPtrAdd().

**7.122.2.5 template<class T> void OsclDoubleRunner< T >::SetToHead () [inline]**

References OsclDoubleRunner< T >::iHead, OsclDoubleLink::iNext, and OsclDoubleRunner< T >::iNext.

**7.122.2.6 template<class T> void OsclDoubleRunner< T >::SetToTail () [inline]**

References OsclDoubleRunner< T >::iHead, OsclDoubleRunner< T >::iNext, and OsclDoubleLink::iPrev.

### 7.122.3 Field Documentation

**7.122.3.1 template<class T> OsclDoubleLink\* OsclDoubleRunner< T >::iHead [protected]**

Referenced by OsclDoubleRunner< T >::OsclDoubleRunner(), OsclDoubleRunner< T >::SetToHead(), and OsclDoubleRunner< T >::SetToTail().

**7.122.3.2 template<class T> OsclDoubleLink\* OsclDoubleRunner< T >::iNext [protected]**

Referenced by OsclDoubleRunner< T >::operator T \*(), OsclDoubleRunner< T >::operator++(), OsclDoubleRunner< T >::OsclDoubleRunner(), OsclDoubleRunner< T >::Set(), OsclDoubleRunner< T >::SetToHead(), and OsclDoubleRunner< T >::SetToTail().

**7.122.3.3 template<class T> int32 OsclDoubleRunner< T >::iOffset [protected]**

Referenced by OsclDoubleRunner< T >::operator T \*(), OsclDoubleRunner< T >::operator++(), OsclDoubleRunner< T >::OsclDoubleRunner(), and OsclDoubleRunner< T >::Set().

The documentation for this class was generated from the following file:

- [oscl\\_double\\_list.h](#)

## 7.123 OsclError Class Reference

```
#include <oscl_error.h>
```

### Static Public Member Functions

- static OSCL\_IMPORT\_REF void **PushL** (*\_OsclHeapBase* \*aPtr)
- static OSCL\_IMPORT\_REF void **PushL** (*OsclAny* \*aPtr)
- static OSCL\_IMPORT\_REF void **PushL** (*OsclTrapItem* anItem)
- static OSCL\_IMPORT\_REF void **Pop** ()
- static OSCL\_IMPORT\_REF void **Pop** (int32 aCount)
- static OSCL\_IMPORT\_REF void **PopDealloc** ()
- static OSCL\_IMPORT\_REF void **PopDealloc** (int32 aCount)
- static OSCL\_IMPORT\_REF void **Leave** (int32 aReason)
- static OSCL\_IMPORT\_REF void **LeaveIfNull** (*OsclAny* \*a)
- static OSCL\_IMPORT\_REF void **LeaveIfError** (int32 aReason)

### 7.123.1 Detailed Description

User Error class

### 7.123.2 Member Function Documentation

#### 7.123.2.1 static OSCL\_IMPORT\_REF void OsclError::Leave (int32 *aReason*) [static]

Do a Leave error, with the given reason code. When a leave occurs, all items on the cleanup stack for the current trap level will be destroyed, and execution will jump to the trap handler.

Referenced by OsclSocketMethod::ConstructL(), OsclDNSRequestAO::ConstructL(), OsclTLSRegistryEx::getInstance(), OsclSingletonRegistryEx::getInstance(), OsclSingletonRegistryEx::lockAndGetInstance(), OsclBuf::NewL(), OsclTLSRegistryEx::registerInstance(), OsclSingletonRegistryEx::registerInstance(), and OsclSingletonRegistryEx::registerInstanceAndUnlock().

#### 7.123.2.2 static OSCL\_IMPORT\_REF void OsclError::LeaveIfError (int32 *aReason*) [static]

Evaluate the input parameter, and if it is an error code (non-zero), then do a Leave with the provided reason code.

#### 7.123.2.3 static OSCL\_IMPORT\_REF void OsclError::LeaveIfNull (*OsclAny* \* *a*) [static]

Evaluate the input parameter, and if it is null, do a Leave with OsclErrNoMemory reason code.

Referenced by OsclMemBasicAllocator::allocate(), and OsclMemAllocator::allocate().

#### 7.123.2.4 static OSCL\_IMPORT\_REF void OsclError::Pop (int32 *aCount*) [static]

Pop the cleanup stack N times

**7.123.2.5 static OSCL\_IMPORT\_REF void OsclError::Pop () [static]**

Pop the cleanup stack

**7.123.2.6 static OSCL\_IMPORT\_REF void OsclError::PopDealloc (int32 aCount) [static]**

PopDealloc N times

**7.123.2.7 static OSCL\_IMPORT\_REF void OsclError::PopDealloc () [static]**

Destroy the item on the top of the cleanup stack and pop it

**7.123.2.8 static OSCL\_IMPORT\_REF void OsclError::PushL (OsclTrapItem anItem) [static]**

Push an [OsclTrapItem](#) onto the cleanup stack

**7.123.2.9 static OSCL\_IMPORT\_REF void OsclError::PushL (OsclAny \* aPtr) [static]**

Push an OsclAny item onto the cleanup stack.

**7.123.2.10 static OSCL\_IMPORT\_REF void OsclError::PushL (\_OsclHeapBase \* aPtr) [static]**

Cleanup stack operations. Push an [\\_OsclHeapBase](#) item onto the cleanup stack.

The documentation for this class was generated from the following file:

- [oscl\\_error.h](#)

## 7.124 OsclErrorAllocator Class Reference

This class provides static methods to invoke the user defined memory allocation routines.

```
#include <oscl_error_allocator.h>
```

### Public Member Functions

- **OsclErrorAllocator (Oscl\_DefAlloc \*allocator)**  
*constructor method*
- **void \* operator new (uint32 size, OsclAny \*aPtr)**  
*placement new operator that allocates memory using the user defined methods*
- **void operator delete (OsclAny \*aPtr, OsclAny \*aPtr2)**  
*delete operator that doesn't do anything, user has to deallocate manually*

### Static Public Member Functions

- static **OsclAny \* allocate (uint32 aSize)**  
*static method to allocate a block of memory on heap*
- static **OsclAny deallocate (OsclAny \*aPointer)**  
*static method to deallocate a block of memory on heap*

#### 7.124.1 Detailed Description

This class provides static methods to invoke the user defined memory allocation routines. This class must be instantiated before the static methods are called, else asserts will happen

#### 7.124.2 Constructor & Destructor Documentation

##### 7.124.2.1 OsclErrorAllocator::OsclErrorAllocator (Oscl\_DefAlloc \* allocator) [inline]

constructor method

###### Parameters

*allocator* - a pointer to the concrete object that provides the allocator/deallocator

#### 7.124.3 Member Function Documentation

##### 7.124.3.1 static OsclAny\* OsclErrorAllocator::allocate (uint32 aSize) [inline, static]

static method to allocate a block of memory on heap

**Parameters**

*aSize* - number of bytes to allocate

References NULL, and OSCL\_ASSERT.

**7.124.3.2 static OsclAny OsclErrorAllocator::deallocate (OsclAny \* *aPointer*) [inline, static]**

static method to deallocate a block of memory on heap

**Parameters**

*aPointer* - pointer to block of memory to be deallocated

References Oscl\_DefAlloc::deallocate(), NULL, and OSCL\_ASSERT.

**7.124.3.3 void OsclErrorAllocator::operator delete (OsclAny \* *aPtr*, OsclAny \* *aPtr2*) [inline]**

delete operator that doesn't do anything, user has to deallocate manually

References OSCL\_UNUSED\_ARG.

**7.124.3.4 void\* OsclErrorAllocator::operator new (uint32 *size*, OsclAny \* *aPtr*) [inline]**

placement new operator that allocates memory using the user defined methods

References OSCL\_UNUSED\_ARG.

The documentation for this class was generated from the following file:

- [oscl\\_error\\_allocator.h](#)

## 7.125 OsclErrorTrap Class Reference

```
#include <oscl_error.h>
```

### Static Public Member Functions

- static OSCL\_IMPORT\_REF int32 [Init \(Oscl\\_DefAlloc \\*aAlloc=NULL\)](#)
- static OSCL\_IMPORT\_REF int32 [Cleanup \(\)](#)
- static OSCL\_IMPORT\_REF [OsclErrorTrapImp \\* GetErrorTrapImp \(\)](#)

#### 7.125.1 Member Function Documentation

##### 7.125.1.1 static OSCL\_IMPORT\_REF int32 OsclErrorTrap::Cleanup () [static]

Cleanup and destroy error trap for the calling thread.

###### Returns

0 for success, or an error

##### 7.125.1.2 static OSCL\_IMPORT\_REF OsclErrorTrapImp\* OsclErrorTrap::GetErrorTrapImp () [static]

Get the ErrorTrapImp for the current thread. Leaves on error.

##### 7.125.1.3 static OSCL\_IMPORT\_REF int32 OsclErrorTrap::Init (Oscl\_DefAlloc \* *aAlloc* = NULL) [static]

Allocate and initialize error trap for the calling thread.

###### Parameters

*aAlloc*,: optional, allocator to use for the internal implementation.

###### Returns

0 for success, or an error

The documentation for this class was generated from the following file:

- [oscl\\_error.h](#)

## 7.126 OsclErrorTrapImp Class Reference

```
#include <oscl_error_trapcleanup.h>
```

### Public Member Functions

- OSCL\_IMPORT\_REF void [UnTrap \(\)](#)

### Static Public Member Functions

- static OSCL\_IMPORT\_REF [OsclErrorTrapImp \\* Trap \(\)](#)
- static OSCL\_IMPORT\_REF [OsclErrorTrapImp \\* TrapNoTls \(OsclErrorTrapImp \\*\)](#)

### Data Fields

- [OsclJump \\* iJumpData](#)
- int32 [iLeave](#)
- [OsclTrapStack \\* iTrapStack](#)

### Friends

- class [OsclErrorTrap](#)
- class [OsclError](#)
- class [OsclExecScheduler](#)
- class [OsclExecSchedulerCommonBase](#)
- class [OsclJump](#)
- class [OsclJumpMark](#)
- class [OsclTrapStack](#)
- class [CPVInterfaceProxy](#)
- class [OsclScheduler](#)

### 7.126.1 Detailed Description

A per-thread cleanup stack with nested trap support.

### 7.126.2 Member Function Documentation

#### 7.126.2.1 static OSCL\_IMPORT\_REF OsclErrorTrapImp\* OsclErrorTrapImp::Trap () [static]

PV trap cleanup. Public for use in macros only.

#### 7.126.2.2 static OSCL\_IMPORT\_REF OsclErrorTrapImp\* OsclErrorTrapImp::TrapNoTls (OsclErrorTrapImp \*) [static]

#### 7.126.2.3 OSCL\_IMPORT\_REF void OsclErrorTrapImp::UnTrap ()

these are used in public macros, but aren't intended as public methods or members.

### 7.126.3 Friends And Related Function Documentation

- 7.126.3.1 **friend class CPVInterfaceProxy [friend]**
- 7.126.3.2 **friend class OsclError [friend]**
- 7.126.3.3 **friend class OsclErrorTrap [friend]**
- 7.126.3.4 **friend class OsclExecScheduler [friend]**
- 7.126.3.5 **friend class OsclExecSchedulerCommonBase [friend]**
- 7.126.3.6 **friend class OsclJump [friend]**
- 7.126.3.7 **friend class OsclJumpMark [friend]**
- 7.126.3.8 **friend class OsclScheduler [friend]**
- 7.126.3.9 **friend class OsclTrapStack [friend]**

### 7.126.4 Field Documentation

- 7.126.4.1 **OsclJump\* OsclErrorTrapImp::iJumpData**
- 7.126.4.2 **int32 OsclErrorTrapImp::iLeave**
- 7.126.4.3 **OsclTrapStack\* OsclErrorTrapImp::iTrapStack**

The documentation for this class was generated from the following file:

- [oscl\\_error\\_trapcleanup.h](#)

## 7.127 OsclException< LeaveCode > Class Template Reference

[oscl\\_exception.h](#) contains all the exception handling macros and classes

```
#include <oscl_exception.h>
```

### Public Member Functions

- [OsclException \(\)](#)

### Static Public Member Functions

- static int [getLeaveCode \(\)](#)

#### 7.127.1 Detailed Description

**template<int LeaveCode> class OsclException< LeaveCode >**

[oscl\\_exception.h](#) contains all the exception handling macros and classes This template class provides the base exception class that all exceptions derive from

All PacketVideo exception classes will be derived from the [OsclException](#) class. Each derived class will have a static function where the leave code can be obtained. This avoids the issue of having static members in a DLL. The function needs to be static so it can be called without an instance of the class

#### 7.127.2 Constructor & Destructor Documentation

7.127.2.1 **template<int LeaveCode> OsclException< LeaveCode >::OsclException () [inline]**

#### 7.127.3 Member Function Documentation

7.127.3.1 **template<int LeaveCode> static int OsclException< LeaveCode >::getLeaveCode () [inline, static]**

The documentation for this class was generated from the following file:

- [oscl\\_exception.h](#)

## 7.128 OsclExclusiveArrayPtr< T > Class Template Reference

The [OsclExclusiveArrayPtr](#) class is a template class that defines an array pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the [OsclExclusiveArrayPtr](#) expires, its destructor uses delete to free the memory.

```
#include <oscl_exclusive_ptr.h>
```

### Public Member Functions

- [OsclExclusiveArrayPtr \(T \\*inPtr=0\)](#)  
*Default constructor Initializes the pointer and takes ownership.*
- [OsclExclusiveArrayPtr \(OsclExclusiveArrayPtr< T > &\\_Y\)](#)  
*Copy constructor.*
- [OsclExclusiveArrayPtr< T > & operator= \(OsclExclusiveArrayPtr< T > &\\_Y\)](#)  
*Assignment operator from an another [OsclExclusiveArrayPtr](#).*
- virtual [~OsclExclusiveArrayPtr \(\)](#)  
*Destructor.*
- [T & operator\\* \(\) const](#)  
*The indirection operator (\*) accesses a value indirectly, through a pointer.*
- [T \\* operator-> \(\) const](#)  
*The indirection operator (->) accesses a value indirectly, through a pointer.*
- [T \\* get \(\) const](#)  
*get() method returns the pointer, currently owned by the class.*
- [T \\* release \(\)](#)  
*release() method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.*
- [bool set \(T \\*ptr\)](#)  
*set() method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.*

### Protected Attributes

- [T \\* \\_Ptr](#)

#### 7.128.1 Detailed Description

**template<class T> class OsclExclusiveArrayPtr< T >**

The [OsclExclusiveArrayPtr](#) class is a template class that defines an array pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the [OsclExclusiveArrayPtr](#) expires,

its destructor uses delete to free the memory. The purpose of this class is to provide a way to prevent accidental memory leaks in a class or a method, due to "not remembering to delete" variables allocated on the heap. Thus if you assign an address returned by new to an `OsclExclusivePtr` object, you don't have to remember to free the memory later, it will be freed automatically when the object goes out of scope. The `OsclExclusivePtr` is an example of a smart pointer, an object that acts like a pointer, but with additional features. The class is defined so that it acts like a regular pointer in most respects

### 7.128.2 Constructor & Destructor Documentation

**7.128.2.1 template<class T> OsclExclusiveArrayPtr< T >::OsclExclusiveArrayPtr (T \* *inPtr* = 0) [inline, explicit]**

Default constructor Initializes the pointer and takes ownership.

**7.128.2.2 template<class T> OsclExclusiveArrayPtr< T >::OsclExclusiveArrayPtr (OsclExclusiveArrayPtr< T > & *\_Y*) [inline]**

Copy constructor.

Initializes the pointer and takes ownership from another `OsclExclusiveArrayPtr`. Note that the other class does NOT own the pointer any longer, and hence it is NOT its responsibility to free it.

**7.128.2.3 template<class T> virtual OsclExclusiveArrayPtr< T >::~OsclExclusiveArrayPtr () [inline, virtual]**

Destructor.

The pointer is deleted in case this class still has ownership

References `OsclExclusiveArrayPtr< T >::_Ptr`.

### 7.128.3 Member Function Documentation

**7.128.3.1 template<class T> T\* OsclExclusiveArrayPtr< T >::get () const [inline]**

`get()` method returns the pointer, currently owned by the class.

References `OsclExclusiveArrayPtr< T >::_Ptr`.

Referenced by `OsclExclusiveArrayPtr< T >::operator=()`.

**7.128.3.2 template<class T> T& OsclExclusiveArrayPtr< T >::operator\* () const [inline]**

The indirection operator (\*) accesses a value indirectly, through a pointer.

This operator ensures that the `OsclExclusiveArrayPtr` can be used like the regular pointer that it was initialized with.

**7.128.3.3 template<class T> T\* OsclExclusiveArrayPtr< T >::operator-> () const [inline]**

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclExclusiveArrayPtr](#) can be used like the regular pointer that it was initialized with.

#### **7.128.3.4 template<class T> OsclExclusiveArrayPtr<T>& OsclExclusiveArrayPtr< T >::operator= (OsclExclusiveArrayPtr< T > & \_Y) [inline]**

Assignment operator from another [OsclExclusiveArrayPtr](#).

##### **Parameters**

*\_Y* The value parameter should be another [OsclExclusiveArrayPtr](#)

##### **Returns**

Returns a reference to this [OsclExclusiveArrayPtr](#) instance with pointer initialized.

##### **Precondition**

The input class should be non-null and should point to a valid pointer.

This assignment operator initializes the class to the contents of the [OsclExclusiveArrayPtr](#) given as the input parameter. The ownership of the pointer is transferred.

References [OsclExclusiveArrayPtr< T >::\\_Ptr](#), [OsclExclusiveArrayPtr< T >::get\(\)](#), and [OsclExclusiveArrayPtr< T >::release\(\)](#).

#### **7.128.3.5 template<class T> T\* OsclExclusiveArrayPtr< T >::release () [inline]**

[release\(\)](#) method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.

References [OsclExclusiveArrayPtr< T >::\\_Ptr](#), and [NULL](#).

Referenced by [OsclExclusiveArrayPtr< T >::operator=\(\)](#).

#### **7.128.3.6 template<class T> bool OsclExclusiveArrayPtr< T >::set (T \* ptr) [inline]**

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

References [OsclExclusiveArrayPtr< T >::\\_Ptr](#), and [NULL](#).

### **7.128.4 Field Documentation**

#### **7.128.4.1 template<class T> T\* OsclExclusiveArrayPtr< T >::\_Ptr [protected]**

Referenced by [OsclExclusiveArrayPtr< T >::get\(\)](#), [OsclExclusiveArrayPtr< T >::operator=\(\)](#), [OsclExclusiveArrayPtr< T >::release\(\)](#), [OsclExclusiveArrayPtr< T >::set\(\)](#), and [OsclExclusiveArrayPtr< T >::~OsclExclusiveArrayPtr\(\)](#).

The documentation for this class was generated from the following file:

- [oscl\\_exclusive\\_ptr.h](#)

## 7.129 OsclExclusivePtr< T > Class Template Reference

The [OsclExclusivePtr](#) class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the [OsclExclusivePtr](#) expires, its destructor uses delete to free the memory.

```
#include <oscl_exclusive_ptr.h>
```

### Public Member Functions

- [OsclExclusivePtr \(T \\*inPtr=0\)](#)  
*Default constructor Initializes the pointer and takes ownership.*
- [OsclExclusivePtr \(OsclExclusivePtr< T > &\\_Y\)](#)  
*Copy constructor.*
- [OsclExclusivePtr< T > & operator= \(OsclExclusivePtr< T > &\\_Y\)](#)  
*Assignment operator from an another [OsclExclusivePtr](#).*
- virtual [~OsclExclusivePtr \(\)](#)  
*Destructor.*
- [T & operator\\* \(\) const](#)  
*The indirection operator (\*) accesses a value indirectly, through a pointer.*
- [T \\* operator-> \(\) const](#)  
*The indirection operator (->) accesses a value indirectly, through a pointer.*
- [T \\* get \(\) const](#)  
*[get\(\)](#) method returns the pointer, currently owned by the class.*
- [T \\* release \(\)](#)  
*[release\(\)](#) method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.*
- [bool set \(T \\*ptr\)](#)  
*[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.*

### Protected Attributes

- [T \\* \\_Ptr](#)

#### 7.129.1 Detailed Description

**template<class T> class OsclExclusivePtr< T >**

The [OsclExclusivePtr](#) class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the [OsclExclusivePtr](#) expires, its destructor

uses delete to free the memory. The purpose of this class is to provide a way to prevent accidental memory leaks in a class or a method, due to "not remembering to delete" variables allocated on the heap. Thus if you assign an address returned by new to an [OsclExclusivePtr](#) object, you don't have to remember to free the memory later, it will be freed automatically when the object goes out of scope. The [OsclExclusivePtr](#) is an example of a smart pointer, an object that acts like a pointer, but with additional features. The class is defined so that it acts like a regular pointer in most respects

## 7.129.2 Constructor & Destructor Documentation

**7.129.2.1 template<class T> OsclExclusivePtr< T >::OsclExclusivePtr (T \* *inPtr* = 0) [inline, explicit]**

Default constructor Initializes the pointer and takes ownership.

**7.129.2.2 template<class T> OsclExclusivePtr< T >::OsclExclusivePtr (OsclExclusivePtr< T > & *\_Y*) [inline]**

Copy constructor.

Initializes the pointer and takes ownership from another [OsclExclusivePtr](#). Note that the other class does NOT own the pointer any longer, and hence it is NOT its responsibility to free it.

**7.129.2.3 template<class T> virtual OsclExclusivePtr< T >::~OsclExclusivePtr () [inline, virtual]**

Destructor.

The pointer is deleted in case this class still has ownership

References [OsclExclusivePtr< T >::\\_Ptr](#).

## 7.129.3 Member Function Documentation

**7.129.3.1 template<class T> T\* OsclExclusivePtr< T >::get () const [inline]**

[get\(\)](#) method returns the pointer, currently owned by the class.

References [OsclExclusivePtr< T >::\\_Ptr](#).

Referenced by [OsclExclusivePtr< T >::operator=\(\)](#).

**7.129.3.2 template<class T> T& OsclExclusivePtr< T >::operator\* () const [inline]**

The indirection operator (\*) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclExclusivePtr](#) can be used like the regular pointer that it was initialized with.

**7.129.3.3 template<class T> T\* OsclExclusivePtr< T >::operator-> () const [inline]**

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the `OsclExclusivePtr` can be used like the regular pointer that it was initialized with.

#### **7.129.3.4 template<class T> OsclExclusivePtr<T>& OsclExclusivePtr< T >::operator= (OsclExclusivePtr< T > & \_Y) [inline]**

Assignment operator from another `OsclExclusivePtr`.

##### **Parameters**

`_Y` The value parameter should be another `OsclExclusivePtr`

##### **Returns**

Returns a reference to this `OsclExclusivePtr` instance with pointer initialized.

##### **Precondition**

The input class should be non-null and should point to a valid pointer.

This assignment operator initializes the class to the contents of the `OsclExclusivePtr` given as the input parameter. The ownership of the pointer is transferred.

References `OsclExclusivePtr< T >::_Ptr`, `OsclExclusivePtr< T >::get()`, and `OsclExclusivePtr< T >::release()`.

#### **7.129.3.5 template<class T> T\* OsclExclusivePtr< T >::release () [inline]**

`release()` method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.

References `OsclExclusivePtr< T >::_Ptr`, and `NULL`.

Referenced by `OsclExclusivePtr< T >::operator=()`.

#### **7.129.3.6 template<class T> bool OsclExclusivePtr< T >::set (T \*ptr) [inline]**

`set()` method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

References `OsclExclusivePtr< T >::_Ptr`, and `NULL`.

### **7.129.4 Field Documentation**

#### **7.129.4.1 template<class T> T\* OsclExclusivePtr< T >::\_Ptr [protected]**

Referenced by `OsclExclusivePtr< T >::get()`, `OsclExclusivePtr< T >::operator=()`, `OsclExclusivePtr< T >::release()`, `OsclExclusivePtr< T >::set()`, and `OsclExclusivePtr< T >::~OsclExclusivePtr()`.

The documentation for this class was generated from the following file:

- `oscl_exclusive_ptr.h`

## 7.130 OsclExclusivePtrA< T, Alloc > Class Template Reference

The [OsclExclusivePtrA](#) class is a template class that defines any pointer like object intended to be assigned an address obtained (directly or indirectly) through Alloc. When the [OsclExclusivePtrA](#) expires, Alloc is used to free the memory.

```
#include <oscl_exclusive_ptr.h>
```

### Public Member Functions

- [OsclExclusivePtrA](#) (T \*inPtr=0)  
*Default constructor Initializes the pointer and takes ownership.*
- [OsclExclusivePtrA](#) ([OsclExclusivePtrA](#)< T, Alloc > &\_Y)  
*Copy constructor.*
- [OsclExclusivePtrA](#)< T, Alloc > & [operator=](#) ([OsclExclusivePtrA](#)< T, Alloc > &\_Y)  
*Assignment operator from an another [OsclExclusiveArrayPtr](#).*
- virtual [~OsclExclusivePtrA](#) ()  
*Destructor.*
- T & [operator\\*](#) () const  
*The indirection operator (\*) accesses a value indirectly, through a pointer.*
- T \* [operator->](#) () const  
*The indirection operator (->) accesses a value indirectly, through a pointer.*
- T \* [get](#) () const  
*[get\(\)](#) method returns the pointer, currently owned by the class.*
- T \* [release](#) ()  
*[release\(\)](#) method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.*
- bool [set](#) (T \*ptr)  
*[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.*

### Protected Attributes

- T \* [\\_Ptr](#)

#### 7.130.1 Detailed Description

**template<class T, class Alloc> class OsclExclusivePtrA< T, Alloc >**

The [OsclExclusivePtrA](#) class is a template class that defines any pointer like object intended to be assigned an address obtained (directly or indirectly) through Alloc. When the [OsclExclusivePtrA](#) expires, Alloc

is used to free the memory. The purpose of this class is to provide a way to prevent accidental memory leaks in a class or a method, due to "not remembering to delete" variables allocated on the heap. Thus if you assign an address returned by new to an [OsclExclusivePtr](#) object, you don't have to remember to free the memory later, it will be freed automatically when the object goes out of scope. The [OsclExclusivePtr](#) is an example of a smart pointer, an object that acts like a pointer, but with additional features. The class is defined so that it acts like a regular pointer in most respects

### 7.130.2 Constructor & Destructor Documentation

**7.130.2.1 template<class T, class Alloc> OsclExclusivePtrA< T, Alloc >::OsclExclusivePtrA (T \*  
inPtr = 0) [inline, explicit]**

Default constructor Initializes the pointer and takes ownership.

**7.130.2.2 template<class T, class Alloc> OsclExclusivePtrA< T, Alloc >::OsclExclusivePtrA  
(OsclExclusivePtrA< T, Alloc > & \_Y) [inline]**

Copy constructor.

Initializes the pointer and takes ownership from another [OsclExclusiveArrayPtr](#). Note that the other class does NOT own the pointer any longer, and hence it is NOT its responsibility to free it.

**7.130.2.3 template<class T, class Alloc> virtual OsclExclusivePtrA< T, Alloc  
>::~OsclExclusivePtrA () [inline, virtual]**

Destructor.

The pointer is deleted in case this class still has ownership

References [OsclExclusivePtrA< T, Alloc >::\\_Ptr](#).

### 7.130.3 Member Function Documentation

**7.130.3.1 template<class T, class Alloc> T\* OsclExclusivePtrA< T, Alloc >::get () const  
[inline]**

[get\(\)](#) method returns the pointer, currently owned by the class.

References [OsclExclusivePtrA< T, Alloc >::\\_Ptr](#).

Referenced by [OsclExclusivePtrA< T, Alloc >::operator=\(\)](#).

**7.130.3.2 template<class T, class Alloc> T& OsclExclusivePtrA< T, Alloc >::operator\* () const  
[inline]**

The indirection operator (\*) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclExclusiveArrayPtr](#) can be used like the regular pointer that it was initialized with.

### 7.130.3.3 template<class T, class Alloc> T\* OsclExclusivePtrA< T, Alloc >::operator-> () const [inline]

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclExclusiveArrayPtr](#) can be used like the regular pointer that it was initialized with.

### 7.130.3.4 template<class T, class Alloc> OsclExclusivePtrA< T, Alloc >& OsclExclusivePtrA< T, Alloc >::operator= (OsclExclusivePtrA< T, Alloc > & \_Y) [inline]

Assignment operator from another [OsclExclusiveArrayPtr](#).

#### Parameters

*\_Y* The value parameter should be another [OsclExclusiveArrayPtr](#)

#### Returns

Returns a reference to this [OsclExclusiveArrayPtr](#) instance with pointer initialized.

#### Precondition

The input class should be non-null and should point to a valid pointer.

This assignment operator initializes the class to the contents of the [OsclExclusiveArrayPtr](#) given as the input parameter. The ownership of the pointer is transferred.

References [OsclExclusivePtrA< T, Alloc >::\\_Ptr](#), [OsclExclusivePtrA< T, Alloc >::get\(\)](#), and [OsclExclusivePtrA< T, Alloc >::release\(\)](#).

### 7.130.3.5 template<class T, class Alloc> T\* OsclExclusivePtrA< T, Alloc >::release () [inline]

[release\(\)](#) method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.

References [OsclExclusivePtrA< T, Alloc >::\\_Ptr](#), and [NULL](#).

Referenced by [OsclExclusivePtrA< T, Alloc >::operator=\(\)](#).

### 7.130.3.6 template<class T, class Alloc> bool OsclExclusivePtrA< T, Alloc >::set (T \* ptr) [inline]

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

References [OsclExclusivePtrA< T, Alloc >::\\_Ptr](#), and [NULL](#).

## 7.130.4 Field Documentation

### 7.130.4.1 template<class T, class Alloc> T\* OsclExclusivePtrA< T, Alloc >::\_Ptr [protected]

Referenced by [OsclExclusivePtrA< T, Alloc >::get\(\)](#), [OsclExclusivePtrA< T, Alloc >::operator=\(\)](#), [OsclExclusivePtrA< T, Alloc >::release\(\)](#), [OsclExclusivePtrA< T, Alloc >::set\(\)](#), and

`OsclExclusivePtrA< T, Alloc >::~OsclExclusivePtrA()`.

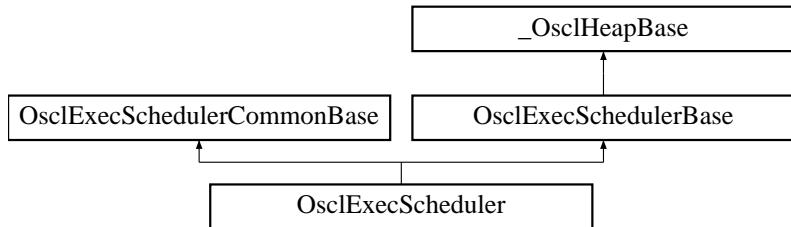
The documentation for this class was generated from the following file:

- [oscl\\_exclusive\\_ptr.h](#)

## 7.131 OsclExecScheduler Class Reference

```
#include <oscl_scheduler.h>
```

Inheritance diagram for OsclExecScheduler:



### Public Member Functions

- OSCL\_IMPORT\_REF void [RunSchedulerNonBlocking](#) (int32 aTargetCount, int32 &aReady, uint32 &aDelayMsec)
- OSCL\_IMPORT\_REF void [RegisterForCallback](#) (OsclSchedulerObserver \*aCallback, [OsclAny](#) \*aCallbackContext)

### Static Public Member Functions

- static OSCL\_IMPORT\_REF [OsclExecScheduler](#) \* [Current](#) ()

### Friends

- class [OsclScheduler](#)

#### 7.131.1 Member Function Documentation

**7.131.1.1 static OSCL\_IMPORT\_REF OsclExecScheduler\* OsclExecScheduler::Current () [static]**

Get currently installed scheduler for calling thread, or NULL if no scheduler is installed.

**7.131.1.2 OSCL\_IMPORT\_REF void OsclExecScheduler::RegisterForCallback (OsclSchedulerObserver \* aCallback, OsclAny \* aCallbackContext)**

Register for a notification when non-blocking scheduler needs to run again.

Note: On Symbian, non-blocking mode is not supported and this call will leave.

**7.131.1.3 OSCL\_IMPORT\_REF void OsclExecScheduler::RunSchedulerNonBlocking (int32 aTargetCount, int32 & aReady, uint32 & aDelayMsec)**

Non-Blocking scheduler APIs. Run PV scheduler in non-blocking mode. This call returns when the desired number of Run calls have been made, or when there are no more active objects that are ready to run.

### Parameters

*aTargetCount*,: (input param) the maximum number of Run calls to make.

*aReady*,: (output param) tells the number of active objects that are currently ready to run.

*aDelayMsec*,: (output param) If no active objects are ready to run, but one or more active objects are waiting on timers, this parameter will tell the time interval from the current time until the first of the pending timer objects will be ready to run, in milliseconds.

Note: On Symbian, non-blocking mode is not supported and this call will leave.

## 7.131.2 Friends And Related Function Documentation

### 7.131.2.1 friend class OsclScheduler [friend]

Reimplemented from [OsclExecSchedulerCommonBase](#).

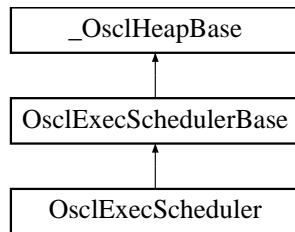
The documentation for this class was generated from the following file:

- [oscl\\_scheduler.h](#)

## 7.132 OsclExecSchedulerBase Class Reference

```
#include <oscl_scheduler_types.h>
```

Inheritance diagram for OsclExecSchedulerBase:



### Friends

- class [OsclExecScheduler](#)
- class [OsclCoeActiveScheduler](#)
- class [PVActiveBase](#)

### 7.132.1 Detailed Description

This file defines the OsclExecBase, OsclTimerBase, and [OsclExecSchedulerBase](#) classes. These are the base classes for PV AOs and PV Scheduler. We want the PV exec objects to be usable with either a PV scheduler or a non-PV native Symbian scheduler. We also want the PV scheduler to be usable with non-PV exec objects. Therefore, the PV scheduler and AO classes derived from Symbian classes on Symbian platforms. On non-Symbian platforms, the PV classes derive from classes with a similar API to the Symbian classes. OsclActiveSchedulerBase is the base for [OsclExecScheduler](#). The non-Symbian OsclActiveSchedulerBase class is functionally similar to a subset of Symbian CActiveScheduler class.

### 7.132.2 Friends And Related Function Documentation

**7.132.2.1 friend class OsclCoeActiveScheduler [friend]**

**7.132.2.2 friend class OsclExecScheduler [friend]**

**7.132.2.3 friend class PVActiveBase [friend]**

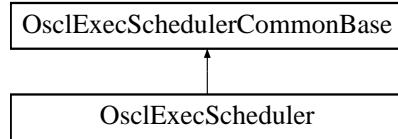
The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_types.h](#)

## 7.133 OsclExecSchedulerCommonBase Class Reference

```
#include <oscl_scheduler.h>
```

Inheritance diagram for OsclExecSchedulerCommonBase:



### Public Member Functions

- OSCL\_IMPORT\_REF void [StartScheduler](#) (OsclSemaphore \*sem=NULL)
- OSCL\_IMPORT\_REF void [StopScheduler](#) ()
- OSCL\_IMPORT\_REF void [SuspendScheduler](#) ()
- OSCL\_IMPORT\_REF void [ResumeScheduler](#) ()
- OSCL\_IMPORT\_REF void [StartNativeScheduler](#) ()

### Static Public Member Functions

- static OSCL\_IMPORT\_REF [OsclNameString< PVSCHEDNAMELEN > \\*](#) [GetName](#) ()
- static OSCL\_IMPORT\_REF uint32 [GetId](#) ()

### Protected Member Functions

- virtual ~[OsclExecSchedulerCommonBase](#) ()
- void [InstallScheduler](#) ()
- void [UninstallScheduler](#) ()
- void [Error](#) (int32 anError) const
- [OsclExecSchedulerCommonBase](#) ([Oscl\\_DefAlloc](#) \*)
- virtual void [ConstructL](#) (const char \*name, int)
- void [BeginScheduling](#) (bool blocking, bool native)
- void [EndScheduling](#) ()
- void [BlockingLoopL](#) ()
- bool [IsStarted](#) ()
- bool [IsInstalled](#) ()
- void [AddToExecTimerQ](#) ([PVActiveBase](#) \*active, uint32)
- void [PendComplete](#) ([PVActiveBase](#) \*, int32 aReason, [TPVThreadContext](#) aContext)
- void [RequestCanceled](#) ([PVActiveBase](#) \*)
- [PVActiveBase](#) \* [UpdateTimers](#) (uint32 &aDelay)
- [PVActiveBase](#) \* [UpdateTimersMsec](#) (uint32 &aDelay)
- [PVActiveBase](#) \* [WaitForReadyAO](#) ()
- void [CallRunExec](#) ([PVActiveBase](#) \*)
- [PVActiveBase](#) \* [FindPVB](#) ([PVActiveBase](#) \*active, [OsclDoubleList< PVActiveBase >](#) &)
- void [CleanupExecQ](#) ()
- void [InitExecQ](#) (int)
- void [ResetLogPerf](#) ()
- void [IncLogPerf](#) (uint32)

## Static Protected Member Functions

- static [OsclExecSchedulerCommonBase \\* GetScheduler \(\)](#)
- static [OsclExecSchedulerCommonBase \\* SetScheduler \(OsclExecSchedulerCommonBase \\*\)](#)

## Protected Attributes

- bool [iBlockingMode](#)
- bool [iNativeMode](#)
- [PVSchedulerStopper \\* iStopper](#)
- [OsclNoYieldMutex iStopperCrit](#)
- [PVThreadContext iThreadContext](#)
- [OsclNameString< PVSCHEDNAMELEN > iName](#)
- bool [iDoStop](#)
- bool [iDoSuspend](#)
- bool [iSuspended](#)
- [OsclSemaphore iResumeSem](#)
- [OsclErrorTrapImp \\* iErrorTrapImp](#)
- [OsclReadyQ iReadyQ](#)
- [OsclTimerQ iExecTimerQ](#)
- uint32 [iNumAOAdded](#)
- [PVLogger \\* iLogger](#)
- [PVLogger \\* iDebugLogger](#)
- char \* [iLogPerfIndentStr](#)
- int32 [iLogPerfIndentStrLen](#)
- uint32 [iLogPerfTotal](#)
- [Oscl\\_DefAlloc \\* iAlloc](#)
- [OsclMemAllocator iDefAlloc](#)

## Static Protected Attributes

- static const uint32 [iTTimeCompareThreshold](#)

## Friends

- class [OsclScheduler](#)
- class [PVThreadContext](#)
- class [OsclCoeActiveScheduler](#)
- class [OsclTimerCompare](#)
- class [OsclReadyQ](#)
- class [OsclError](#)
- class [OsclActiveObject](#)
- class [OsclTimerObject](#)
- class [PVActiveBase](#)
- class [PVSchedulerStopper](#)
- class [OsclExecScheduler](#)

### 7.133.1 Constructor & Destructor Documentation

- 7.133.1.1 `virtual OsclExecSchedulerCommonBase::~OsclExecSchedulerCommonBase ()`  
`[protected, virtual]`
- 7.133.1.2 `OsclExecSchedulerCommonBase::OsclExecSchedulerCommonBase (Oscl_DefAlloc *)`  
`[protected]`

### 7.133.2 Member Function Documentation

- 7.133.2.1 `void OsclExecSchedulerCommonBase::AddToExecTimerQ (PVActiveBase * active, uint32) [protected]`
- 7.133.2.2 `void OsclExecSchedulerCommonBase::BeginScheduling (bool blocking, bool native) [protected]`
- 7.133.2.3 `void OsclExecSchedulerCommonBase::BlockingLoopL () [protected]`
- 7.133.2.4 `void OsclExecSchedulerCommonBase::CallRunExec (PVActiveBase *) [protected]`
- 7.133.2.5 `void OsclExecSchedulerCommonBase::CleanupExecQ () [protected]`
- 7.133.2.6 `virtual void OsclExecSchedulerCommonBase::ConstructL (const char * name, int) [protected, virtual]`
- 7.133.2.7 `void OsclExecSchedulerCommonBase::EndScheduling () [protected]`
- 7.133.2.8 `void OsclExecSchedulerCommonBase::Error (int32 anError) const [protected]`
- 7.133.2.9 `PVActiveBase* OsclExecSchedulerCommonBase::FindPVBase (PVActiveBase * active, OsclDoubleList< PVActiveBase > &) [protected]`
- 7.133.2.10 `static OSCL_IMPORT_REF uint32 OsclExecSchedulerCommonBase::GetId () [static]`

Get numeric ID of current thread.

- 7.133.2.11 `static OSCL_IMPORT_REF OsclNameString< PVSCHEDNAMELEN >* OsclExecSchedulerCommonBase::GetName () [static]`

Get name of scheduler for current thread.

- 7.133.2.12 **static OsclExecSchedulerCommonBase\* OsclExecSchedulerCommonBase::GetScheduler () [static, protected]**
- 7.133.2.13 **void OsclExecSchedulerCommonBase::IncLogPerf (uint32) [protected]**
- 7.133.2.14 **void OsclExecSchedulerCommonBase::InitExecQ (int) [protected]**
- 7.133.2.15 **void OsclExecSchedulerCommonBase::InstallScheduler () [protected]**
- 7.133.2.16 **bool OsclExecSchedulerCommonBase::IsInstalled () [inline, protected]**
- 7.133.2.17 **bool OsclExecSchedulerCommonBase::IsStarted () [protected]**
- 7.133.2.18 **void OsclExecSchedulerCommonBase::PendComplete (PVActiveBase \*, int32 *aReason*, TPVThreadContext *aContext*) [protected]**
- 7.133.2.19 **void OsclExecSchedulerCommonBase::RequestCanceled (PVActiveBase \*) [protected]**
- 7.133.2.20 **void OsclExecSchedulerCommonBase::ResetLogPerf () [protected]**
- 7.133.2.21 **OSCL\_IMPORT\_REF void OsclExecSchedulerCommonBase::ResumeScheduler ()**

Resume scheduling immediately. This API only applies to a blocking loop scheduler.

- 7.133.2.22 **static OsclExecSchedulerCommonBase\* OsclExecSchedulerCommonBase::SetScheduler (OsclExecSchedulerCommonBase \*) [static, protected]**
- 7.133.2.23 **OSCL\_IMPORT\_REF void OsclExecSchedulerCommonBase::StartNativeScheduler ()**

Start the OS native scheduling loop. This is an alternative to the PV scheduling loop. To stop the native scheduler, use the StopScheduler API.

- 7.133.2.24 **OSCL\_IMPORT\_REF void OsclExecSchedulerCommonBase::StartScheduler (OsclSemaphore \* *sem* = NULL)**

Start scheduling. This call blocks until scheduler is stopped or an error occurs.

#### Parameters

*sem*: optional startup semaphore. If provided, the scheduler will signal this semaphore when the startup has progressed to the point that it's safe to call StopScheduler or SuspendScheduler from another thread.

- 7.133.2.25 **OSCL\_IMPORT\_REF void OsclExecSchedulerCommonBase::StopScheduler ()**

Stop scheduling. This API may be called from the scheduling thread or some other thread.

**7.133.2.26 OSCL\_IMPORT\_REF void OsclExecSchedulerCommonBase::SuspendScheduler ()**

Suspend scheduling when the current Run is complete. This API only applies to a blocking loop scheduler.

**7.133.2.27 void OsclExecSchedulerCommonBase::UninstallScheduler () [protected]****7.133.2.28 PVActiveBase\* OsclExecSchedulerCommonBase::UpdateTimers (uint32 & aDelay) [protected]****7.133.2.29 PVActiveBase\* OsclExecSchedulerCommonBase::UpdateTimersMsec (uint32 & aDelay) [protected]****7.133.2.30 PVActiveBase\* OsclExecSchedulerCommonBase::WaitForReadyAO () [protected]****7.133.3 Friends And Related Function Documentation****7.133.3.1 friend class OsclActiveObject [friend]****7.133.3.2 friend class OsclCoeActiveScheduler [friend]****7.133.3.3 friend class OsclError [friend]****7.133.3.4 friend class OsclExecScheduler [friend]****7.133.3.5 friend class OsclReadyQ [friend]****7.133.3.6 friend class OsclScheduler [friend]**

Reimplemented in [OsclExecScheduler](#).



- 7.133.3.7 friend class OsclTimerCompare [friend]
- 7.133.3.8 friend class OsclTimerObject [friend]
- 7.133.3.9 friend class PVActiveBase [friend]
- 7.133.3.10 friend class PVSchedulerStopper [friend]
- 7.133.3.11 friend class PVThreadContext [friend]

#### 7.133.4 Field Documentation

- 7.133.4.1 Oscl\_DefAlloc\* OsclExecSchedulerCommonBase::iAlloc [protected]
- 7.133.4.2 bool OsclExecSchedulerCommonBase::iBlockingMode [protected]
- 7.133.4.3 PVLogger\* OsclExecSchedulerCommonBase::iDebugLogger [protected]
- 7.133.4.4 OsclMemAllocator OsclExecSchedulerCommonBase::iDefAlloc [protected]
- 7.133.4.5 bool OsclExecSchedulerCommonBase::iDoStop [protected]
- 7.133.4.6 bool OsclExecSchedulerCommonBase::iDoSuspend [protected]
- 7.133.4.7 OsclErrorTrapImp\* OsclExecSchedulerCommonBase::iErrorTrapImp [protected]
- 7.133.4.8 OsclTimerQ OsclExecSchedulerCommonBase::iExecTimerQ [protected]
- 7.133.4.9 PVLogger\* OsclExecSchedulerCommonBase::iLogger [protected]
- 7.133.4.10 char\* OsclExecSchedulerCommonBase::iLogPerfIndentStr [protected]
- 7.133.4.11 int32 OsclExecSchedulerCommonBase::iLogPerfIndentStrLen [protected]
- 7.133.4.12 uint32 OsclExecSchedulerCommonBase::iLogPerfTotal [protected]
- 7.133.4.13 OsclNameString<PVSCEDNAMELEN> OsclExecSchedulerCommonBase::iName [protected]
- 7.133.4.14 bool OsclExecSchedulerCommonBase::iNativeMode [protected]
- 7.133.4.15 uint32 OsclExecSchedulerCommonBase::iNumAOAdded [protected]
- 7.133.4.16 OsclReadyQ OsclExecSchedulerCommonBase::iReadyQ [protected]
- 7.133.4.17 OsclSemaphore OsclExecSchedulerCommonBase::iResumeSem [protected]
- 7.133.4.18 PVSchedulerStopper\* OsclExecSchedulerCommonBase::iStopper [protected]
- 7.133.4.19 OsclNoYieldMutex OsclExecSchedulerCommonBase::iStopperCrit [protected]
- 7.133.4.20 bool OsclExecSchedulerCommonBase::iSuspended [protected]
- 7.133.4.21 PVThreadContext OsclExecSchedulerCommonBase::iThreadContext [protected]
- 7.133.4.22 const uint32 OsclExecSchedulerCommonBase::iTimeCompareThreshold [static, protected]

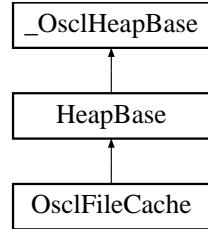
The documentation for this class was generated from the following file:

- [oscl\\_scheduler.h](#)

## 7.134 OsclFileCache Class Reference

```
#include <oscl_file_cache.h>
```

Inheritance diagram for OsclFileCache:



### Public Member Functions

- [OsclFileCache \(Oscl\\_File &aContainer\)](#)
- [~OsclFileCache \(\)](#)
- int32 [Open \(uint32 mode, uint32 cache\\_size\)](#)
- void [Close \(\)](#)
- uint32 [Read \(void \\*outputBuffer, uint32 size, uint32 numelements\)](#)
- uint32 [Write \(const void \\*inputBuffer, uint32 size, uint32 numelements\)](#)
- [TOsclFileOffset FileSize \(\)](#)
- int32 [Seek \(TOsclFileOffset offset, Oscl\\_File::seek\\_type origin\)](#)
- [TOsclFileOffset Tell \(\)](#)
- int32 [Flush \(\)](#)
- int32 [EndOfFile \(\)](#)
- OSCL\_IMPORT\_REF [OsclFileCacheBuffer \\* AddFixedCache \(const Oscl\\_File::OsclFixedCacheParam &\)](#)

### Data Fields

- [OsclFileCacheBuffer \\_movableCache](#)
- [Oscl\\_Vector< OsclFileCacheBuffer, OsclMemAllocator > \\_fixedCaches](#)

### Friends

- class [OsclFileCacheBuffer](#)

### 7.134.1 Constructor & Destructor Documentation

**7.134.1.1 OsclFileCache::OsclFileCache (Oscl\_File & *aContainer*)**

**7.134.1.2 OsclFileCache::~OsclFileCache ()**

### 7.134.2 Member Function Documentation

**7.134.2.1 OSCL\_IMPORT\_REF OsclFileCacheBuffer\* OsclFileCache::AddFixedCache (const Oscl\_File::OsclFixedCacheParam &)**

**7.134.2.2 void OsclFileCache::Close ()**

**7.134.2.3 int32 OsclFileCache::EndOfFile () [inline]**

References FileSize(), and Tell().

**7.134.2.4 TOsclFileOffset OsclFileCache::FileSize () [inline]**

Referenced by EndOfFile().

**7.134.2.5 int32 OsclFileCache::Flush ()**

**7.134.2.6 int32 OsclFileCache::Open (uint32 *mode*, uint32 *cache\_size*)**

**7.134.2.7 uint32 OsclFileCache::Read (void \* *outputBuffer*, uint32 *size*, uint32 *numelements*)**

**7.134.2.8 int32 OsclFileCache::Seek (TOsclFileOffset *offset*, Oscl\_File::seek\_type *origin*)**

**7.134.2.9 TOsclFileOffset OsclFileCache::Tell () [inline]**

References OsclFileCacheBuffer::currentPos, and OsclFileCacheBuffer::filePosition.

Referenced by EndOfFile().

**7.134.2.10 uint32 OsclFileCache::Write (const void \* *inputBuffer*, uint32 *size*, uint32 *numelements*)**

### 7.134.3 Friends And Related Function Documentation

**7.134.3.1 friend class OsclFileCacheBuffer [friend]**

### 7.134.4 Field Documentation

**7.134.4.1 Oscl\_Vector<OsclFileCacheBuffer, OsclMemAllocator> OsclFileCache::\_fixedCaches**

**7.134.4.2 OsclFileCacheBuffer OsclFileCache::\_movableCache**

The documentation for this class was generated from the following file:

- [oscl\\_file\\_cache.h](#)

## 7.135 OsclFileCacheBuffer Class Reference

```
#include <oscl_file_cache.h>
```

### Public Member Functions

- [OsclFileCacheBuffer \(\)](#)
- [int32 SetPosition \(TOsclFileOffset pos\)](#)
- [int32 PrepRead \(\)](#)
- [int32 PrepWrite \(\)](#)
- [int32 WriteUpdatesToFile \(\)](#)
- [int32 FillFromFile \(uint32, uint32\)](#)
- [bool IsUpdated \(\)](#)
- [bool Contains \(TOsclFileOffset pos\)](#)
- [bool Preceeds \(TOsclFileOffset pos\)](#)

### Data Fields

- [OsclFileCache \\* iContainer](#)
- [bool isFixed](#)
- [uint32 capacity](#)
- [uint32 usableSize](#)
- [uint8 \\* pBuffer](#)
- [TOsclFileOffset filePosition](#)
- [uint32 currentPos](#)
- [uint32 endPos](#)
- [uint32 updateStart](#)
- [uint32 updateEnd](#)

#### 7.135.1 Constructor & Destructor Documentation

7.135.1.1 [OsclFileCacheBuffer::OsclFileCacheBuffer \(\) \[inline\]](#)

#### 7.135.2 Member Function Documentation

7.135.2.1 [bool OsclFileCacheBuffer::Contains \(TOsclFileOffset pos\) \[inline\]](#)

References filePosition, and usableSize.

7.135.2.2 [int32 OsclFileCacheBuffer::FillFromFile \(uint32, uint32\)](#)

7.135.2.3 [bool OsclFileCacheBuffer::IsUpdated \(\) \[inline\]](#)

References updateEnd, and updateStart.

7.135.2.4 [bool OsclFileCacheBuffer::Preceeds \(TOsclFileOffset pos\) \[inline\]](#)

References filePosition, and usableSize.

**7.135.2.5 int32 OsclFileCacheBuffer::PrepRead ()**

**7.135.2.6 int32 OsclFileCacheBuffer::PrepWrite ()**

**7.135.2.7 int32 OsclFileCacheBuffer::SetPosition (TOsclFileOffset *pos*)**

**7.135.2.8 int32 OsclFileCacheBuffer::WriteUpdatesToFile ()**

### **7.135.3 Field Documentation**

**7.135.3.1 uint32 OsclFileCacheBuffer::capacity**

**7.135.3.2 uint32 OsclFileCacheBuffer::currentPos**

Referenced by OsclFileCache::Tell().

**7.135.3.3 uint32 OsclFileCacheBuffer::endPos**

**7.135.3.4 TOsclFileOffset OsclFileCacheBuffer::filePosition**

Referenced by Contains(), Preceeds(), and OsclFileCache::Tell().

**7.135.3.5 OsclFileCache\* OsclFileCacheBuffer::iContainer**

**7.135.3.6 bool OsclFileCacheBuffer::isFixed**

**7.135.3.7 uint8\* OsclFileCacheBuffer::pBuffer**

**7.135.3.8 uint32 OsclFileCacheBuffer::updateEnd**

Referenced by IsUpdated().

**7.135.3.9 uint32 OsclFileCacheBuffer::updateStart**

Referenced by IsUpdated().

**7.135.3.10 uint32 OsclFileCacheBuffer::usableSize**

Referenced by Contains(), and Preceeds().

The documentation for this class was generated from the following file:

- [oscl\\_file\\_cache.h](#)

## 7.136 OsclFileHandle Class Reference

```
#include <oscl_file_handle.h>
```

### Public Member Functions

- [OsclFileHandle \(TOsclFileHandle aHandle\)](#)
- [OsclFileHandle \(const OsclFileHandle &aHandle\)](#)
- [TOsclFileHandle Handle \(\) const](#)

### Friends

- class [Oscl\\_File](#)

### 7.136.1 Detailed Description

[OsclFileHandle](#) is a container for a handle to a previously-opened file.

### 7.136.2 Constructor & Destructor Documentation

**7.136.2.1 OsclFileHandle::OsclFileHandle (TOsclFileHandle *aHandle*) [inline]**

**7.136.2.2 OsclFileHandle::OsclFileHandle (const OsclFileHandle & *aHandle*) [inline]**

### 7.136.3 Member Function Documentation

**7.136.3.1 TOsclFileHandle OsclFileHandle::Handle () const [inline]**

### 7.136.4 Friends And Related Function Documentation

**7.136.4.1 friend class Oscl\_File [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_file\\_handle.h](#)

## 7.137 OsclFileManager Class Reference

```
#include <oscl_file_manager.h>
```

### Public Types

- enum `OSCL_FILE_ATTRIBUTE_TYPE` {
   
`OSCL_FILE_ATTRIBUTE_READONLY` = 0x00000001, `OSCL_FILE_ATTRIBUTE_HIDDEN` = 0x00000002, `OSCL_FILE_ATTRIBUTE_SYSTEM` = 0x00000004, `OSCL_FILE_ATTRIBUTE_DIRECTORY` = 0x00000010,
   
`OSCL_FILE_ATTRIBUTE_ARCHIVE` = 0x00000020, `OSCL_FILE_ATTRIBUTE_NORMAL` = 0x00000080 }

### Static Public Member Functions

- static `OSCL_IMPORT_REF` bool `OsclGetFileSize` (const `oscl_wchar` \*aFileName, `uint64` &aFileSize)
- static `OSCL_IMPORT_REF` bool `OsclGetFileSize` (const char \*aFileName, `uint64` &aFileSize)
- static `OSCL_IMPORT_REF` bool `OsclGetFileCreationTime` (const `oscl_wchar` \*aFileName, `uint64` &aFileCreationTime)
- static `OSCL_IMPORT_REF` bool `OsclGetFileCreationTime` (const char \*aFileName, `uint64` &aFileCreationTime)
- static `OSCL_IMPORT_REF` bool `OsclGetFileLastAccessTime` (const `oscl_wchar` \*aFileName, `uint64` &aFileLastAccessTime)
- static `OSCL_IMPORT_REF` bool `OsclGetFileLastAccessTime` (const char \*aFileName, `uint64` &aFileLastAccessTime)
- static `OSCL_IMPORT_REF` bool `OsclGetFileLastWriteTime` (const `oscl_wchar` \*aFileName, `uint64` &aFileLastWriteTime)
- static `OSCL_IMPORT_REF` bool `OsclGetFileLastWriteTime` (const char \*aFileName, `uint64` &aFileLastWriteTime)
- static `OSCL_IMPORT_REF` bool `OsclGetFileAttributes` (const `oscl_wchar` \*aFileName, `uint32` &aFileAttributes)
- static `OSCL_IMPORT_REF` bool `OsclGetFileAttributes` (const char \*aFileName, `uint32` &aFileAttributes)
- static `OSCL_IMPORT_REF` void `OsclExtractFilenameFromFullPath` (const char \*aPath, char \*&aFileName)
- static `OSCL_IMPORT_REF` void `OsclExtractFilenameFromFullPath` (const `oscl_wchar` \*aPath, `oscl_wchar` \*&aFileName)

### 7.137.1 Member Enumeration Documentation

#### 7.137.1.1 enum OsclFileManager::OSCL\_FILE\_ATTRIBUTE\_TYPE

Enumerator:

`OSCL_FILE_ATTRIBUTE_READONLY`  
`OSCL_FILE_ATTRIBUTE_HIDDEN`  
`OSCL_FILE_ATTRIBUTE_SYSTEM`  
`OSCL_FILE_ATTRIBUTE_DIRECTORY`

*OSCL\_FILE\_ATTRIBUTE\_ARCHIVE*  
*OSCL\_FILE\_ATTRIBUTE\_NORMAL*

The documentation for this class was generated from the following file:

- [oscl\\_file\\_manager.h](#)

## 7.138 OsclFileStats Class Reference

```
#include <oscl_file_stats.h>
```

### Public Member Functions

- [OsclFileStats \(Oscl\\_File \\*c\)](#)
- void [Start \(uint32 &aTicks\)](#)
- void [End \(TOsclFileOp aOp, uint32 aStart, uint32 aParam=0, TOsclFileOffset aParam2=0\)](#)
- void [Log \(TOsclFileOp, PVLogger \\*, uint32\)](#)
- void [LogAll \(PVLogger \\*, uint32\)](#)

#### 7.138.1 Constructor & Destructor Documentation

7.138.1.1 [OsclFileStats::OsclFileStats \(Oscl\\_File \\* c\)](#)

#### 7.138.2 Member Function Documentation

7.138.2.1 [void OsclFileStats::End \(TOsclFileOp aOp, uint32 aStart, uint32 aParam = 0, TOsclFileOffset aParam2 = 0\)](#)

7.138.2.2 [void OsclFileStats::Log \(TOsclFileOp, PVLogger \\*, uint32\)](#)

7.138.2.3 [void OsclFileStats::LogAll \(PVLogger \\*, uint32\)](#)

7.138.2.4 [void OsclFileStats::Start \(uint32 & aTicks\)](#)

The documentation for this class was generated from the following file:

- [oscl\\_file\\_stats.h](#)

## 7.139 OsclFileStatsItem Class Reference

```
#include <oscl_file_stats.h>
```

### Data Fields

- uint32 [iOpCount](#)
- uint64 [iParam](#)
- TOsclFileOffset [iParam2](#)
- uint32 [iStartTick](#)
- uint32 [iTTotalTicks](#)

### 7.139.1 Field Documentation

**7.139.1.1 uint32 OsclFileStatsItem::iOpCount**

**7.139.1.2 uint64 OsclFileStatsItem::iParam**

**7.139.1.3 TOsclFileOffset OsclFileStatsItem::iParam2**

**7.139.1.4 uint32 OsclFileStatsItem::iStartTick**

**7.139.1.5 uint32 OsclFileStatsItem::iTTotalTicks**

The documentation for this class was generated from the following file:

- [oscl\\_file\\_stats.h](#)

## 7.140 Oscl\_File::OsclFixedCacheParam Class Reference

```
#include <oscl_file_io.h>
```

### Public Member Functions

- bool [Contains \(TOsclFileOffset pos\) const](#)

### Data Fields

- TOsclFileOffset [iFilePosition](#)
- uint32 [iSize](#)

#### 7.140.1 Detailed Description

Parameters for defining a fixed cache

#### 7.140.2 Member Function Documentation

##### 7.140.2.1 bool Oscl\_File::OsclFixedCacheParam::Contains (TOsclFileOffset *pos*) const [inline]

References iFilePosition, and iSize.

#### 7.140.3 Field Documentation

##### 7.140.3.1 TOsclFileOffset Oscl\_File::OsclFixedCacheParam::iFilePosition

Referenced by Contains().

##### 7.140.3.2 uint32 Oscl\_File::OsclFixedCacheParam::iSize

Referenced by Contains().

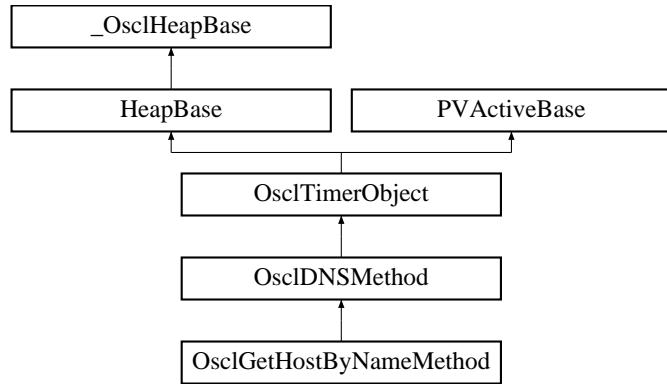
The documentation for this class was generated from the following file:

- [oscl\\_file\\_io.h](#)

## 7.141 OsclGetHostByNameMethod Class Reference

```
#include <oscl_dns_gethostbyname.h>
```

Inheritance diagram for OsclGetHostByNameMethod:



### Public Member Functions

- `~OsclGetHostByNameMethod ()`
- `TPVDNSEvent GetHostByName (char *name, OsclNetworkAddress *addr, int32 aTimeout, Oscl_-Vector< OsclNetworkAddress, OsclMemAllocator > *aAddressList)`

### Static Public Member Functions

- static `OsclGetHostByNameMethod * NewL (Oscl_DefAlloc &a, OsclDNSI *aDNS, OsclDNSObserver *aObserver, uint32 aId)`

#### 7.141.1 Constructor & Destructor Documentation

##### 7.141.1.1 OsclGetHostByNameMethod::~OsclGetHostByNameMethod ()

#### 7.141.2 Member Function Documentation

##### 7.141.2.1 TPVDNSEvent OsclGetHostByNameMethod::GetHostByName (char \* name, OsclNetworkAddress \* addr, int32 aTimeout, Oscl\_-Vector< OsclNetworkAddress, OsclMemAllocator > \* aAddressList)

##### 7.141.2.2 static OsclGetHostByNameMethod\* OsclGetHostByNameMethod::NewL (Oscl\_DefAlloc &a, OsclDNSI \*aDNS, OsclDNSObserver \*aObserver, uint32 aId) [static]

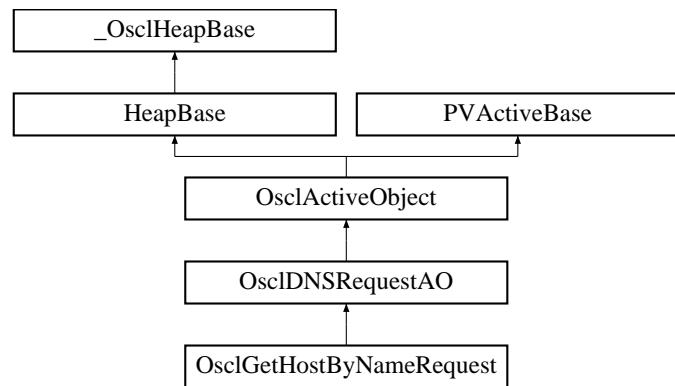
The documentation for this class was generated from the following file:

- `oscl_dns_gethostbyname.h`

## 7.142 OsclGetHostByNameRequest Class Reference

```
#include <oscl_dns_gethostbyname.h>
```

Inheritance diagram for OsclGetHostByNameRequest:



### Friends

- class [OsclGetHostByNameMethod](#)

#### 7.142.1 Friends And Related Function Documentation

##### 7.142.1.1 friend class OsclGetHostByNameMethod [friend]

The documentation for this class was generated from the following file:

- [oscl\\_dns\\_gethostbyname.h](#)

## 7.143 OsclInit Class Reference

```
#include <oscl_init.h>
```

### Static Public Member Functions

- static OSCL\_IMPORT\_REF void [Init](#) (int32 &aError, const [OsclSelect](#) \*aSelect=NULL)
- static OSCL\_IMPORT\_REF void [Cleanup](#) (int32 &aError, const [OsclSelect](#) \*aSelect=NULL)

#### 7.143.1 Detailed Description

Per-thread oscl initialization and cleanup.

#### 7.143.2 Member Function Documentation

##### 7.143.2.1 static OSCL\_IMPORT\_REF void OsclInit::Cleanup (int32 & aError, const OsclSelect \* aSelect = NULL) [static]

This routine cleans up the Oscl modules in the calling thread.

###### Parameters

*err*,: (output) error code of any leave that occurs in initialization.

*config*,: (input param) optional set of initialization parameters. If null, then full initialization with default parameters will be performed. For proper cleanup, the parameters should match the ones used during the Init call.

##### 7.143.2.2 static OSCL\_IMPORT\_REF void OsclInit::Init (int32 & aError, const OsclSelect \* aSelect = NULL) [static]

This routine initializes the Oscl modules in the calling thread.

###### Parameters

*err*,: (output) error code of any leave that occurs in initialization.

*config*,: (input param) optional set of initialization parameters. If null, then full initialization with default parameters will be performed.

The documentation for this class was generated from the following file:

- [oscl\\_init.h](#)

## 7.144 OsclInteger64Transport Struct Reference

```
#include <oscl_int64_utils.h>
```

### Data Fields

- uint32 **iHigh**
- uint32 **iLow**

#### 7.144.1 Detailed Description

##### [OsclInteger64Transport](#) Structure

Structure to only transport 64-bit integer values uint64 and int64 could be classes so needed for cases where having a class will not work.

#### 7.144.2 Field Documentation

##### 7.144.2.1 uint32 [OsclInteger64Transport::iHigh](#)

##### 7.144.2.2 uint32 [OsclInteger64Transport::iLow](#)

The documentation for this struct was generated from the following file:

- [oscl\\_int64\\_utils.h](#)

## 7.145 OsclIpMReq Class Reference

```
#include <oscl_socket_types.h>
```

### Public Member Functions

- [OsclIpMReq \(const char \\*intrfcAddr, const char \\*multcstAddr\)](#)

### Data Fields

- [OsclNameString< PVNETWORKADDRESS\\_LEN > interfaceAddr](#)
- [OsclNameString< PVNETWORKADDRESS\\_LEN > multicastAddr](#)

#### 7.145.1 Constructor & Destructor Documentation

**7.145.1.1 OsclIpMReq::OsclIpMReq (const char \* *intrfcAddr*, const char \* *multcstAddr*)**  
[[inline](#)]

#### 7.145.2 Field Documentation

**7.145.2.1 OsclNameString<PVNETWORKADDRESS\_LEN> OsclIpMReq::interfaceAddr**

**7.145.2.2 OsclNameString<PVNETWORKADDRESS\_LEN> OsclIpMReq::multicastAddr**

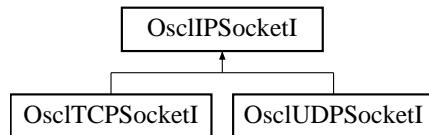
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_types.h](#)

## 7.146 OsclIPSocketI Class Reference

```
#include <oscl_ip_socket.h>
```

Inheritance diagram for OsclIPSocketI:



### Public Member Functions

- int32 [Bind \(OsclNetworkAddress &aAddress\)](#)
- int32 [Join \(OsclNetworkAddress &aAddress\)](#)
- int32 [SetRecvBufferSize \(uint32 size\)](#)
- int32 [SetOptionToReuseAddress \(\)](#)
- int32 [SetTOS \(const OsclSocketTOS &aTOS\)](#)
- int32 [GetPeerName \(OsclNetworkAddress &peerName\)](#)
- virtual int32 [Close \(\)=0](#)
- virtual uint8 \* [GetRecvData \(int32 \\*aLength\)=0](#)
- virtual uint8 \* [GetSendData \(int32 \\*aLength\)=0](#)
- virtual [~OsclIPSocketI \(\)](#)
- void [ThreadLogoff \(\)](#)
- void [ThreadLogon \(OsclSocketObserver \\*aObs, OsclSocketServI \\*aServ\)](#)
- [OsclSocketServI \\* SocketServ \(\)](#)
- [Oscl\\_DefAlloc & Alloc \(\)](#)

### Protected Member Functions

- [OsclIPSocketI \(Oscl\\_DefAlloc &a\)](#)
- void [ConstructL \(OsclSocketObserver \\*aObs, OsclSocketI \\*aSock, OsclSocketServI \\*aServ, uint32 aId\)](#)

### Protected Attributes

- [Oscl\\_DefAlloc & iAlloc](#)
- [OsclNetworkAddress iAddress](#)
- uint32 [iId](#)
- [OsclSocketObserver \\* iObserver](#)
- [OsclSocketI \\* iSocket](#)
- [OsclSocketServI \\* iSocketServ](#)
- [PVLogger \\* iLogger](#)

### Friends

- class [OsclSocketRequestAO](#)
- class [OsclSocketMethod](#)

### 7.146.1 Constructor & Destructor Documentation

7.146.1.1 `virtual OsclIPSocketI::~OsclIPSocketI () [inline, virtual]`

7.146.1.2 `OsclIPSocketI::OsclIPSocketI (Oscl_DefAlloc & a) [inline, protected]`

### 7.146.2 Member Function Documentation

7.146.2.1 `Oscl_DefAlloc& OsclIPSocketI::Alloc () [inline]`

References iAlloc.

Referenced by OsclSocketRequestAO::Alloc(), and OsclSocketMethod::Alloc().

7.146.2.2 `int32 OsclIPSocketI::Bind (OsclNetworkAddress & aAddress)`

7.146.2.3 `virtual int32 OsclIPSocketI::Close () [pure virtual]`

Implemented in [OsclTCPSocketI](#), and [OsclUDPSocketI](#).

7.146.2.4 `void OsclIPSocketI::ConstructL (OsclSocketObserver * aObs, OsclSocketI * aSock, OsclSocketServI * aServ, uint32 aId) [protected]`

7.146.2.5 `int32 OsclIPSocketI::GetPeerName (OsclNetworkAddress & peerName)`

7.146.2.6 `virtual uint8* OsclIPSocketI::GetRecvData (int32 * aLength) [pure virtual]`

Implemented in [OsclTCPSocketI](#), and [OsclUDPSocketI](#).

7.146.2.7 `virtual uint8* OsclIPSocketI::GetSendData (int32 * aLength) [pure virtual]`

Implemented in [OsclTCPSocketI](#), and [OsclUDPSocketI](#).

7.146.2.8 `int32 OsclIPSocketI::Join (OsclNetworkAddress & aAddress)`

7.146.2.9 `int32 OsclIPSocketI::SetOptionToReuseAddress ()`

7.146.2.10 `int32 OsclIPSocketI::SetRecvBufferSize (uint32 size)`

7.146.2.11 `int32 OsclIPSocketI::SetTOS (const OsclSocketTOS & aTOS)`

7.146.2.12 `OsclSocketServI* OsclIPSocketI::SocketServ () [inline]`

References iSocketServ.

7.146.2.13 `void OsclIPSocketI::ThreadLogoff ()`

Reimplemented in [OsclTCPSocketI](#), and [OsclUDPSocketI](#).

**7.146.2.14 void OsclIPSocketI::ThreadLogon (OsclSocketObserver \* *aObs*, OsclSocketServI \* *aServ*)**

### 7.146.3 Friends And Related Function Documentation

**7.146.3.1 friend class OsclSocketMethod [friend]**

**7.146.3.2 friend class OsclSocketRequestAO [friend]**

### 7.146.4 Field Documentation

**7.146.4.1 OsclNetworkAddress OsclIPSocketI::iAddress [protected]**

Referenced by OsclUDPSocketI::BindAsync(), and OsclTCPSocketI::BindAsync().

**7.146.4.2 Oscl\_DefAlloc& OsclIPSocketI::iAlloc [protected]**

Referenced by Alloc().

**7.146.4.3 uint32 OsclIPSocketI::iId [protected]**

Referenced by OsclSocketRequestAO::Id().

**7.146.4.4 PVLogger\* OsclIPSocketI::iLogger [protected]**

**7.146.4.5 OsclSocketObserver\* OsclIPSocketI::iObserver [protected]**

Referenced by OsclTCPSocketI::Accept(), OsclUDPSocketI::BindAsync(), OsclTCPSocketI::BindAsync(), OsclTCPSocketI::Connect(), OsclTCPSocketI::ListenAsync(), OsclTCPSocketI::Recv(), OsclUDPSocketI::RecvFrom(), OsclTCPSocketI::Send(), OsclUDPSocketI::SendTo(), OsclTCPSocketI::Shutdown(), and OsclSocketRequestAO::SocketObserver().

**7.146.4.6 OsclSocketI\* OsclIPSocketI::iSocket [protected]**

Referenced by OsclTCPSocketI::Listen(), and OsclSocketRequestAO::SocketI().

**7.146.4.7 OsclSocketServI\* OsclIPSocketI::iSocketServ [protected]**

Referenced by SocketServ().

The documentation for this class was generated from the following file:

- [oscl\\_ip\\_socket.h](#)

## 7.147 OsclJump Class Reference

```
#include <oscl_error_imp_jumps.h>
```

### Public Member Functions

- void [Jump](#) (int a)
- jmp\_buf \* [Top](#) ()
- [~OsclJump](#) ()

### Static Public Member Functions

- static OSCL\_IMPORT\_REF void [StaticJump](#) (int a)

### Friends

- class [OsclErrorTrapImp](#)

#### 7.147.1 Constructor & Destructor Documentation

##### 7.147.1.1 [OsclJump::~OsclJump \(\)](#) [inline]

References OSCL\_ASSERT.

#### 7.147.2 Member Function Documentation

##### 7.147.2.1 [void OsclJump::Jump \(int a\)](#) [inline]

References \_OSCL\_Abort(), OSCL\_ASSERT, and Top().

##### 7.147.2.2 [static OSCL\\_IMPORT\\_REF void OsclJump::StaticJump \(int a\)](#) [static]

##### 7.147.2.3 [jmp\\_buf\\* OsclJump::Top \(\)](#) [inline]

References OSCL\_ASSERT.

Referenced by [Jump\(\)](#).

#### 7.147.3 Friends And Related Function Documentation

##### 7.147.3.1 [friend class OsclErrorTrapImp](#) [friend]

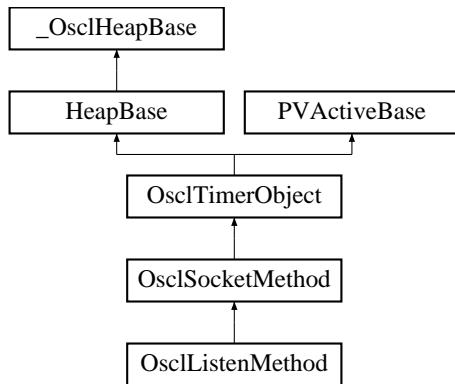
The documentation for this class was generated from the following file:

- [oscl\\_error\\_imp\\_jumps.h](#)

## 7.148 OsclListenMethod Class Reference

```
#include <oscl_socket_listen.h>
```

Inheritance diagram for OsclListenMethod:



### Public Member Functions

- [~OsclListenMethod \(\)](#)
- [TPVSocketEvent Listen \(uint32 qsize, int32 aTimeout\)](#)
- [OsclListenRequest \\* ListenRequest \(\)](#)

### Static Public Member Functions

- static [OsclListenMethod \\* NewL \(OsclIPSocketI &c\)](#)

#### 7.148.1 Constructor & Destructor Documentation

##### 7.148.1.1 OsclListenMethod::~OsclListenMethod ()

#### 7.148.2 Member Function Documentation

##### 7.148.2.1 TPVSocketEvent OsclListenMethod::Listen (uint32 *qsize*, int32 *aTimeout*)

Referenced by OsclTCPSocketI::ListenAsync().

##### 7.148.2.2 OsclListenRequest\* OsclListenMethod::ListenRequest () [inline]

References OsclSocketMethod::iSocketRequestAO.

##### 7.148.2.3 static OsclListenMethod\* OsclListenMethod::NewL (OsclIPSocketI & *c*) [static]

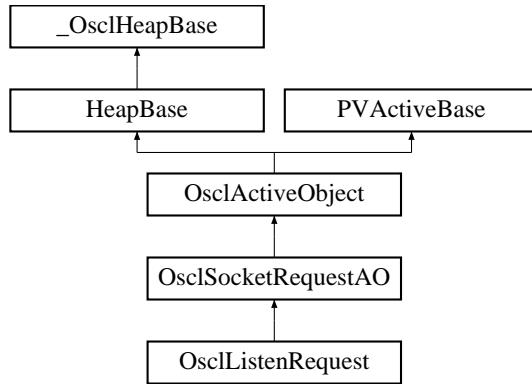
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_listen.h](#)

## 7.149 OsclListenRequest Class Reference

```
#include <oscl_socket_listen.h>
```

Inheritance diagram for OsclListenRequest:



### Public Member Functions

- [OsclListenRequest \(OsclSocketMethod &c\)](#)
- void [Listen \(uint32 qsize\)](#)

#### 7.149.1 Detailed Description

This is the AO that interacts with the socket server

#### 7.149.2 Constructor & Destructor Documentation

**7.149.2.1 OsclListenRequest::OsclListenRequest (OsclSocketMethod & c) [inline]**

#### 7.149.3 Member Function Documentation

**7.149.3.1 void OsclListenRequest::Listen (uint32 qsize)**

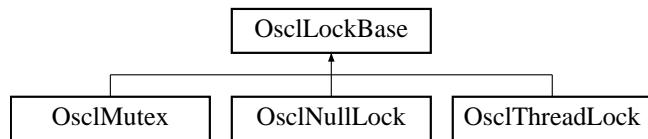
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_listen.h](#)

## 7.150 OsclLockBase Class Reference

```
#include <oscl_lock_base.h>
```

Inheritance diagram for OsclLockBase:



### Public Member Functions

- virtual void [Lock \(\)=0](#)
- virtual void [Unlock \(\)=0](#)
- virtual [~OsclLockBase \(\)](#)

#### 7.150.1 Constructor & Destructor Documentation

7.150.1.1 virtual OsclLockBase::[~OsclLockBase \(\)](#) [inline, [virtual](#)]

#### 7.150.2 Member Function Documentation

7.150.2.1 virtual void OsclLockBase::[Lock \(\)](#) [[pure virtual](#)]

Implemented in [OsclNullLock](#), [OsclMutex](#), and [OsclThreadLock](#).

7.150.2.2 virtual void OsclLockBase::[Unlock \(\)](#) [[pure virtual](#)]

Implemented in [OsclNullLock](#), [OsclMutex](#), and [OsclThreadLock](#).

The documentation for this class was generated from the following file:

- [oscl\\_lock\\_base.h](#)

## 7.151 OsclMem Class Reference

```
#include <oscl_mem.h>
```

### Static Public Member Functions

- static OSCL\_IMPORT\_REF void [Init \(\)](#)
- static OSCL\_IMPORT\_REF void [Cleanup \(\)](#)

#### 7.151.1 Member Function Documentation

##### 7.151.1.1 static OSCL\_IMPORT\_REF void OsclMem::Cleanup () [static]

Per-thread cleanup of Oscl Memory

###### Exceptions

Leaves on error;

##### 7.151.1.2 static OSCL\_IMPORT\_REF void OsclMem::Init () [static]

Per-thread initialization of Oscl Memory

###### Parameters

*lock*,: A lock class for use with multi-threaded applications. The lock is needed in use cases where memory may be allocated in one thread and freed in another. In this case, there must be a single lock object, and its pointer must be passed to the [OsclMem::Init](#) call in each thread. If no lock is provided, the memory manager will not be thread-safe.

###### Exceptions

Leaves on error

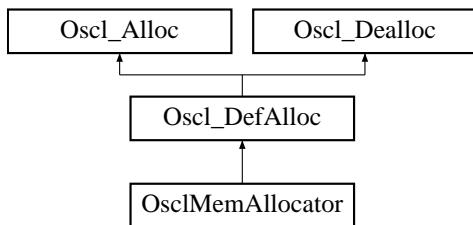
The documentation for this class was generated from the following file:

- [oscl\\_mem.h](#)

## 7.152 OsclMemAllocator Class Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for OsclMemAllocator:



### Public Member Functions

- [OsclAny \\* allocate \(const uint32 n\)](#)
- [void deallocate \(OsclAny \\*p\)](#)

#### 7.152.1 Detailed Description

A simple allocator class. Configurable as to whether this goes through the memory manager or not.

#### 7.152.2 Member Function Documentation

##### 7.152.2.1 OsclAny\* OsclMemAllocator::allocate (const uint32 n) [inline, virtual]

This API throws an exception when malloc returns NULL. n must be greater than 0.

#### Returns

pointer (or Leave with OsclErrNoMemory )

Implements [Oscl\\_DefAlloc](#).

References `_oscl_malloc()`, `Oscl_DefAlloc::allocate_f()`, `OsclError::LeaveIfNull()`, `NULL`, and `oscl_memset()`.

Referenced by `OsclMemAllocDestructDealloc< T >::allocate()`.

##### 7.152.2.2 void OsclMemAllocator::deallocate (OsclAny \*p) [inline, virtual]

Implements [Oscl\\_DefAlloc](#).

References `OSCL_FREE`.

Referenced by `OsclMemAllocDestructDealloc< T >::deallocate()`.

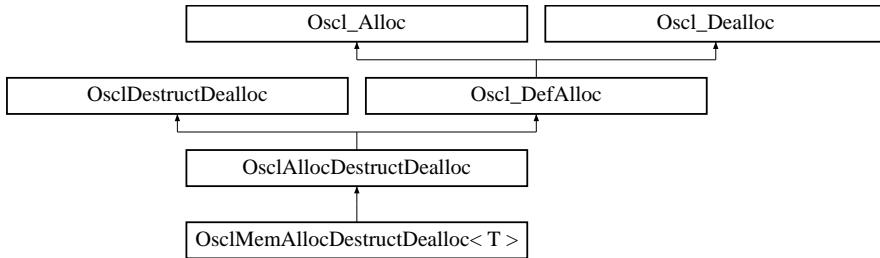
The documentation for this class was generated from the following file:

- [oscl\\_mem.h](#)

## 7.153 OsclMemAllocDestructDealloc< T > Class Template Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for OsclMemAllocDestructDealloc< T >:



### Public Member Functions

- [OsclAny \\* allocate \(const uint32 size\)](#)
- void [deallocate \(OsclAny \\*p\)](#)
- void [destruct\\_and\\_dealloc \(OsclAny \\*p\)](#)

#### 7.153.1 Detailed Description

**template<class T> class OsclMemAllocDestructDealloc< T >**

An [OsclAllocDestructDealloc](#) class that uses [OsclMemAllocator](#).

#### 7.153.2 Member Function Documentation

**7.153.2.1 template<class T > OsclAny\* OsclMemAllocDestructDealloc< T >::allocate (const uint32 size) [inline, virtual]**

Implements [Oscl\\_DefAlloc](#).

References [OsclMemAllocator::allocate\(\)](#), [Oscl\\_DefAlloc::allocate\\_fl\(\)](#), and [NULL](#).

**7.153.2.2 template<class T > void OsclMemAllocDestructDealloc< T >::deallocate (OsclAny \*p) [inline, virtual]**

Implements [Oscl\\_DefAlloc](#).

References [OsclMemAllocator::deallocate\(\)](#).

Referenced by [OsclMemAllocDestructDealloc< T >::destruct\\_and\\_dealloc\(\)](#).

**7.153.2.3 template<class T > void OsclMemAllocDestructDealloc< T >::destruct\_and\_dealloc (OsclAny \*p) [inline, virtual]**

Implements [OsclDestructDealloc](#).

References OsclMemAllocDestructDealloc< T >::deallocate(), and OSCL\_UNUSED\_ARG.

The documentation for this class was generated from the following file:

- [oscl\\_mem.h](#)

## 7.154 OsclMemAudit Class Reference

```
#include <oscl_mem_audit.h>
```

The documentation for this class was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.155 OSCLMemAutoPtr< T, \_Allocator > Class Template Reference

The oscl\_auto\_ptr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the oscl\_auto\_ptr expires, its destructor uses delete to free the memory.

```
#include <oscl_mem_auto_ptr.h>
```

### Public Member Functions

- **OSCLMemAutoPtr** (T \*inPtr=0)
 

*Default constructor. Initializes the pointer and takes ownership.*
- **OSCLMemAutoPtr** (const **OSCLMemAutoPtr**< T > &\_Y)
 

*Copy constructor.*
- **OSCLMemAutoPtr**< T, \_Allocator > & **operator=** (const **OSCLMemAutoPtr**< T, \_Allocator > &\_Y)
 

*Assignment operator from an another oscl\_auto\_ptr.*
- **~OSCLMemAutoPtr** ()
 

*Destructor.*
- T & **operator\*** () const
 

*The indirection operator (\*) accesses a value indirectly, through a pointer.*
- T \* **operator->** () const
 

*The indirection operator (->) accesses a value indirectly, through a pointer.*
- void **takeOwnership** (T \*ptr)
 

*The takeOwnership function assigns the value with ownership.*
- void **allocate** (oscl\_memsize\_t size)
 • void **setWithoutOwnership** (T \*ptr)
 

*The takeOwnership function assigns the value with ownership.*
- T \* **get** () const
 

*get() method returns the pointer, currently owned by the class.*
- T \* **release** () const
 

*release() method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.*

### Static Public Member Functions

- static void **deallocate** (T \*ptr)

## Data Fields

- bool [\\_Ownership](#)

### 7.155.1 Detailed Description

```
template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> class
OSCLMemAutoPtr< T, _Allocator >
```

The oscl\_auto\_ptr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the oscl\_auto\_ptr expires, its destructor uses delete to free the memory. The purpose of this class is to provide a way to prevent accidental memory leaks in a class or a method, due to "not remembering to delete" variables allocated on the heap. Thus if you assign an address returned by new to an oscl\_auto\_ptr object, you don't have to remember to free the memory later, it will be freed automatically when the object goes out of scope. The oscl\_auto\_ptr is an example of a smart pointer, an object that acts like a pointer, but with additional features. The class is defined so that it acts like a regular pointer in most respects

### 7.155.2 Constructor & Destructor Documentation

**7.155.2.1 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>>
OSCLMemAutoPtr< T, \_Allocator >::OSCLMemAutoPtr (T \* *inPtr* = 0) [inline,
explicit]**

Default constructor Initializes the pointer and takes ownership.

**7.155.2.2 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>>
OSCLMemAutoPtr< T, \_Allocator >::OSCLMemAutoPtr (const OSCLMemAutoPtr<
T > & *Y*) [inline]**

Copy constructor.

Initializes the pointer and takes ownership from another oscl\_auto\_ptr. Note that the other class does NOT own the pointer any longer, and hence it is NOT its responsibility to free it.

**7.155.2.3 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>>
OSCLMemAutoPtr< T, \_Allocator >::~OSCLMemAutoPtr () [inline]**

Destructor.

The pointer is deleted in case this class still has ownership

References OSCLMemAutoPtr< T, \_Allocator >::\_Ownership.

### 7.155.3 Member Function Documentation

**7.155.3.1 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> void
OSCLMemAutoPtr< T, \_Allocator >::allocate (oscl\_memsize\_t *size*) [inline]**

References OSCLMemAutoPtr< T, \_Allocator >::\_Ownership.

**7.155.3.2 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> static void OSCLMemAutoPtr< T, \_Allocator >::deallocate (T \*ptr) [inline, static]**

**7.155.3.3 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> T\* OSCLMemAutoPtr< T, \_Allocator >::get () const [inline]**

[get\(\)](#) method returns the pointer, currently owned by the class.

Referenced by `OSCLMemAutoPtr< T, _Allocator >::operator=()`.

**7.155.3.4 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> T& OSCLMemAutoPtr< T, \_Allocator >::operator\* () const [inline]**

The indirection operator (\*) accesses a value indirectly, through a pointer.

This operator ensures that the `OSCLMemAutoPtr` can be used like the regular pointer that it was initialized with.

**7.155.3.5 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> T\* OSCLMemAutoPtr< T, \_Allocator >::operator-> () const [inline]**

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the `OSCLMemAutoPtr` can be used like the regular pointer that it was initialized with.

**7.155.3.6 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> OSCLMemAutoPtr<T, \_Allocator>& OSCLMemAutoPtr< T, \_Allocator >::operator=(const OSCLMemAutoPtr< T, \_Allocator > & \_Y) [inline]**

Assignment operator from another `oscl_auto_ptr`.

#### Parameters

`_Y` The value parameter should be another `oscl_auto_ptr`

#### Returns

Returns a reference to this `oscl_auto_ptr` instance with pointer initialized.

#### Precondition

The input class should be non-null and should point to a valid pointer.

This assignment operator initializes the class to the contents of the `oscl_auto_ptr` given as the input parameter. The ownership of the pointer is transferred.

References `OSCLMemAutoPtr< T, _Allocator >::_Ownership`, `OSCLMemAutoPtr< T, _Allocator >::get()`, and `OSCLMemAutoPtr< T, _Allocator >::release()`.

**7.155.3.7 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> T\* OSCLMemAutoPtr< T, \_Allocator >::release () const [inline]**

[release\(\)](#) method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.

Referenced by OSCLMemAutoPtr< T, \_Allocator >::operator=().

**7.155.3.8 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> void OSCLMemAutoPtr< T, \_Allocator >::setWithoutOwnership (T \*ptr) [inline]**

The takeOwnership function assigns the value with ownership.

References OSCLMemAutoPtr< T, \_Allocator >::\_Ownership.

**7.155.3.9 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> void OSCLMemAutoPtr< T, \_Allocator >::takeOwnership (T \*ptr) [inline]**

The takeOwnership function assigns the value with ownership.

References OSCLMemAutoPtr< T, \_Allocator >::\_Ownership.

## 7.155.4 Field Documentation

**7.155.4.1 template<class T, class \_Allocator = Oscl\_TAlloc<T, OsclMemAllocator>> bool OSCLMemAutoPtr< T, \_Allocator >::\_Ownership**

Referenced by OSCLMemAutoPtr< T, \_Allocator >::allocate(), OSCLMemAutoPtr< T, \_Allocator >::operator=(), OSCLMemAutoPtr< T, \_Allocator >::setWithoutOwnership(), OSCLMemAutoPtr< T, \_Allocator >::takeOwnership(), and OSCLMemAutoPtr< T, \_Allocator >::~OSCLMemAutoPtr().

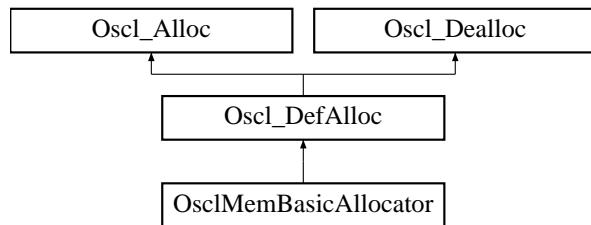
The documentation for this class was generated from the following file:

- [oscl\\_mem\\_auto\\_ptr.h](#)

## 7.156 OsclMemBasicAllocator Class Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for OsclMemBasicAllocator:



### Public Member Functions

- [OsclAny \\* allocate \(const uint32 n\)](#)
- [void deallocate \(OsclAny \\*p\)](#)

#### 7.156.1 Detailed Description

A simple allocator class that does not use the memory management.

Note: this allocator is for internal use by Oscl only. Higher level code should use [OsclMemAllocator](#).

#### 7.156.2 Member Function Documentation

##### 7.156.2.1 [OsclAny\\* OsclMemBasicAllocator::allocate \(const uint32 n\) \[inline, virtual\]](#)

This API throws an exception when malloc returns NULL. n must be greater than 0.

###### Returns

pointer (or Leave with OsclErrNoMemory )

Implements [Oscl\\_DefAlloc](#).

References [\\_oscl\\_malloc\(\)](#), [OsclError::LeaveIfNull\(\)](#), and [oscl\\_memset\(\)](#).

Referenced by [OsclMemBasicAllocDestructDealloc< T >::allocate\(\)](#).

##### 7.156.2.2 [void OsclMemBasicAllocator::deallocate \(OsclAny \\*p\) \[inline, virtual\]](#)

Implements [Oscl\\_DefAlloc](#).

References [\\_oscl\\_free\(\)](#).

Referenced by [OsclMemBasicAllocDestructDealloc< T >::deallocate\(\)](#).

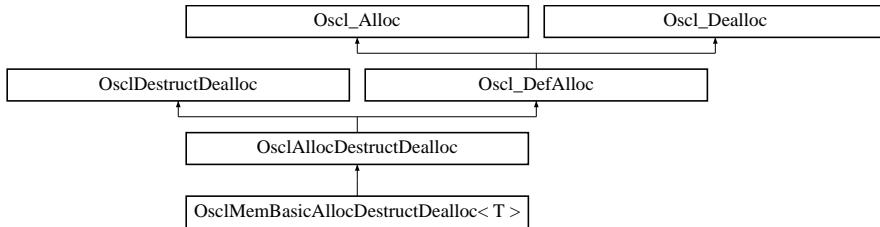
The documentation for this class was generated from the following file:

- [oscl\\_mem.h](#)

## 7.157 OsclMemBasicAllocDestructDealloc< T > Class Template Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for OsclMemBasicAllocDestructDealloc< T >:



### Public Member Functions

- [OsclAny \\* allocate \(const uint32 size\)](#)
- [void deallocate \(OsclAny \\*p\)](#)
- [void destruct\\_and\\_dealloc \(OsclAny \\*p\)](#)

#### 7.157.1 Detailed Description

**template<class T> class OsclMemBasicAllocDestructDealloc< T >**

An [OsclAllocDestructDealloc](#) class that uses [OsclMemBasicAllocator](#).

#### 7.157.2 Member Function Documentation

**7.157.2.1 template<class T > OsclAny\* OsclMemBasicAllocDestructDealloc< T >::allocate (const uint32 size) [inline, virtual]**

Implements [Oscl\\_DefAlloc](#).

References [OsclMemBasicAllocator::allocate\(\)](#), [Oscl\\_DefAlloc::allocate\\_fl\(\)](#), and [NULL](#).

**7.157.2.2 template<class T > void OsclMemBasicAllocDestructDealloc< T >::deallocate (OsclAny \*p) [inline, virtual]**

Implements [Oscl\\_DefAlloc](#).

References [OsclMemBasicAllocator::deallocate\(\)](#).

Referenced by [OsclMemBasicAllocDestructDealloc< T >::destruct\\_and\\_dealloc\(\)](#).

**7.157.2.3 template<class T > void OsclMemBasicAllocDestructDealloc< T >::destruct\_and\_dealloc (OsclAny \*p) [inline, virtual]**

Implements [OsclDestructDealloc](#).

References OsclMemBasicAllocDestructDealloc< T >::deallocate(), and OSCL\_UNUSED\_ARG.

The documentation for this class was generated from the following file:

- [oscl\\_mem.h](#)

## 7.158 OsclMemGlobalAuditObject Class Reference

```
#include <oscl_mem.h>
```

### Public Types

- `typedef OsclMemAudit audit_type`

### Static Public Member Functions

- `static OSCL_IMPORT_REF audit_type * getGlobalMemAuditObject ()`

### Friends

- class `OsclMem`

#### 7.158.1 Member Typedef Documentation

##### 7.158.1.1 `typedef OsclMemAudit OsclMemGlobalAuditObject::audit_type`

#### 7.158.2 Member Function Documentation

##### 7.158.2.1 `static OSCL_IMPORT_REF audit_type* OsclMemGlobalAuditObject::getGlobalMemAuditObject () [static]`

returns the global audit object. For use in macros only-- not a public API.

#### 7.158.3 Friends And Related Function Documentation

##### 7.158.3.1 `friend class OsclMem [friend]`

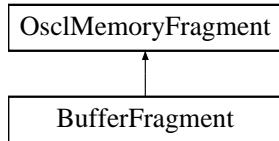
The documentation for this class was generated from the following file:

- `oscl_mem.h`

## 7.159 OsclMemoryFragment Struct Reference

```
#include <oscl_types.h>
```

Inheritance diagram for OsclMemoryFragment:



### Data Fields

- uint32 [len](#)
- void \* [ptr](#)

#### 7.159.1 Field Documentation

##### 7.159.1.1 uint32 OsclMemoryFragment::len

Referenced by BufFragGroup< ChainClass, max\_frags >::AddFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::GetLocalFragment(), and MediaData< ChainClass, max\_frags, local\_bufsize >::IsLocalData().

##### 7.159.1.2 void\* OsclMemoryFragment::ptr

Referenced by BufFragGroup< ChainClass, max\_frags >::AddFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::AddLocalFragment(), MediaData< ChainClass, max\_frags, local\_bufsize >::GetLocalFragment(), and MediaData< ChainClass, max\_frags, local\_bufsize >::IsLocalData().

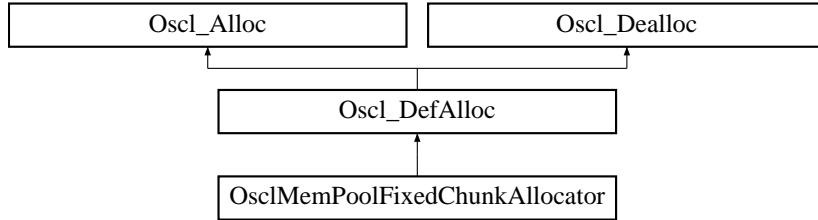
The documentation for this struct was generated from the following file:

- [oscl\\_types.h](#)

## 7.160 OsclMemPoolFixedChunkAllocator Class Reference

```
#include <oscl_mem_mempool.h>
```

Inheritance diagram for OsclMemPoolFixedChunkAllocator:



### Public Member Functions

- OSCL\_IMPORT\_REF OsclMemPoolFixedChunkAllocator (const uint32 numchunk=1, const uint32 chunksize=0, Oscl\_DefAlloc \*gen\_alloc=NULL, const uint32 chunkalignment=0)
- virtual OSCL\_IMPORT\_REF void enablenullpointerreturn ()
- virtual OSCL\_IMPORT\_REF ~OsclMemPoolFixedChunkAllocator ()
- virtual OSCL\_IMPORT\_REF OsclAny \* allocate (const uint32 n)
- virtual OSCL\_IMPORT\_REF void deallocate (OsclAny \*p)
- virtual OSCL\_IMPORT\_REF void notifyfreechunkavailable (OsclMemPoolFixedChunkAllocatorObserver &obs, OsclAny \*aContextData=NULL)
- virtual OSCL\_IMPORT\_REF void CancelFreeChunkAvailableCallback ()
- OSCL\_IMPORT\_REF void addRef ()
- OSCL\_IMPORT\_REF void removeRef ()

### Protected Member Functions

- virtual OSCL\_IMPORT\_REF void createmempool ()
- virtual OSCL\_IMPORT\_REF void destroymempool ()

### Protected Attributes

- uint32 iNumChunk
- uint32 iChunkSize
- uint32 iChunkSizeMemAligned
- uint32 iChunkAlignment
- Oscl\_DefAlloc \* iMemPoolAllocator
- OsclAny \* iMemPool
- OsclAny \* iMemPoolAligned
- Oscl\_Vector< OsclAny \*, OsclMemAllocator > iFreeMemChunkList
- bool iCheckNextAvailableFreeChunk
- OsclMemPoolFixedChunkAllocatorObserver \* iObserver
- OsclAny \* iNextAvailableContextData
- int32 iRefCount
- bool iEnableNullPtrReturn

## 7.160.1 Constructor & Destructor Documentation

**7.160.1.1 OSCL\_IMPORT\_REF OsclMemPoolFixedChunkAllocator::OsclMemPoolFixedChunkAllocator (const uint32 numchunk = 1, const uint32 chunkszie = 0, Oscl\_DefAlloc \*gen\_alloc = NULL, const uint32 chunkalignment = 0)**

This API throws an exception when the memory allocation for pool fails If numchunk and chunkszie parameters are not set, memory pool of 1 chunk will be created in the first call to allocate. The chunk size will be set to the n passed in for [allocate\(\)](#). If numchunk parameter is set to 0, the memory pool will use 1 for numchunk. If chunkalignment is set to 0, memory pool will use default allocator alignment (8-byte) If chunkalignment is > 0, memory pool will align all buffers in the mempool to the specified alignment. Alignment should be a power of 2

### Returns

void

**7.160.1.2 virtual OSCL\_IMPORT\_REF OsclMemPoolFixedChunkAllocator::~OsclMemPoolFixedChunkAllocator () [virtual]**

The destructor for the memory pool

## 7.160.2 Member Function Documentation

**7.160.2.1 OSCL\_IMPORT\_REF void OsclMemPoolFixedChunkAllocator::addRef ()**

Increments the reference count for this memory pool allocator

### Returns

void

**7.160.2.2 virtual OSCL\_IMPORT\_REF OsclAny\* OsclMemPoolFixedChunkAllocator::allocate (const uint32 n) [virtual]**

This API throws an exception when n is greater than the fixed chunk size or there are no free chunk available in the pool, if "enablenullpointerreturn" has not been called. If the memory pool hasn't been created yet, the pool will be created with chunk size equal to n so n must be greater than 0. Exception will be thrown if memory allocation for the memory pool fails.

### Returns

pointer to available chunk from memory pool

Implements [Oscl\\_DefAlloc](#).

**7.160.2.3 virtual OSCL\_IMPORT\_REF void OsclMemPoolFixedChunkAllocator::CancelFreeChunkAvailableCallback () [virtual]**

This API will cancel any past callback requests..

**Returns**

void

**7.160.2.4 virtual OSCL\_IMPORT\_REF void OsclMemPoolFixedChunkAllocator::createmempool()** [protected, virtual]

**7.160.2.5 virtual OSCL\_IMPORT\_REF void OsclMemPoolFixedChunkAllocator::deallocate(OsclAny \*p)** [virtual]

This API throws an exception when the pointer p passed in is not part of the memory pool. Exception will be thrown if the memory pool is not set up yet.

**Returns**

void

Implements [Oscl\\_DefAlloc](#).

**7.160.2.6 virtual OSCL\_IMPORT\_REF void OsclMemPoolFixedChunkAllocator::destroymempool()** [protected, virtual]

**7.160.2.7 virtual OSCL\_IMPORT\_REF void OsclMemPoolFixedChunkAllocator::enablenullpointerreturn()** [virtual]

This API will disable exceptions in case the memory pool runs out of memory Instead of doing "OSCL\_LEAVE(OsclErrNoResources)" allocate API will return NULL.

**Returns**

void

**7.160.2.8 virtual OSCL\_IMPORT\_REF void OsclMemPoolFixedChunkAllocator::notifyfreechunkavailable(OsclMemPoolFixedChunkAllocatorObserver & obs, OsclAny \* aContextData = NULL)** [virtual]

This API will set the flag to send a callback via specified observer object when the next memory chunk is deallocated by [deallocate\(\)](#) call..

**Returns**

void

**7.160.2.9 OSCL\_IMPORT\_REF void OsclMemPoolFixedChunkAllocator::removeRef()**

Decrements the reference count for this memory pool allocator When the reference count goes to 0, this instance of the memory pool object is deleted

**Returns**

void

### 7.160.3 Field Documentation

- 7.160.3.1 `bool OsclMemPoolFixedChunkAllocator::iCheckNextAvailableFreeChunk [protected]`
- 7.160.3.2 `uint32 OsclMemPoolFixedChunkAllocator::iChunkAlignment [protected]`
- 7.160.3.3 `uint32 OsclMemPoolFixedChunkAllocator::iChunkSize [protected]`
- 7.160.3.4 `uint32 OsclMemPoolFixedChunkAllocator::iChunkSizeMemAligned [protected]`
- 7.160.3.5 `bool OsclMemPoolFixedChunkAllocator::iEnableNullPtrReturn [protected]`
- 7.160.3.6 `Oscl_Vector<OsclAny*, OsclMemAllocator> OsclMemPoolFixedChunkAllocator::iFreeMemChunkList [protected]`
- 7.160.3.7 `OsclAny* OsclMemPoolFixedChunkAllocator::iMemPool [protected]`
- 7.160.3.8 `OsclAny* OsclMemPoolFixedChunkAllocator::iMemPoolAligned [protected]`
- 7.160.3.9 `Oscl_DefAlloc* OsclMemPoolFixedChunkAllocator::iMemPoolAllocator [protected]`
- 7.160.3.10 `OsclAny* OsclMemPoolFixedChunkAllocator::iNextAvailableContextData [protected]`
- 7.160.3.11 `uint32 OsclMemPoolFixedChunkAllocator::iNumChunk [protected]`
- 7.160.3.12 `OsclMemPoolFixedChunkAllocatorObserver* OsclMemPoolFixedChunkAllocator::iObserver [protected]`
- 7.160.3.13 `int32 OsclMemPoolFixedChunkAllocator::iRefCount [protected]`

The documentation for this class was generated from the following file:

- [oscl\\_mem\\_mempool.h](#)

## 7.161 OsclMemPoolFixedChunkAllocatorObserver Class Reference

```
#include <oscl_mem_mempool.h>
```

### Public Member Functions

- virtual void [freechunkavailable \(OsclAny \\*aContextData\)=0](#)
- virtual [~OsclMemPoolFixedChunkAllocatorObserver \(\)](#)

#### 7.161.1 Constructor & Destructor Documentation

##### 7.161.1.1 virtual

```
OsclMemPoolFixedChunkAllocatorObserver::~OsclMemPoolFixedChunkAllocatorObserver  
() [inline, virtual]
```

#### 7.161.2 Member Function Documentation

##### 7.161.2.1 virtual void OsclMemPoolFixedChunkAllocatorObserver::freechunkavailable (OsclAny \* *aContextData*) [pure virtual]

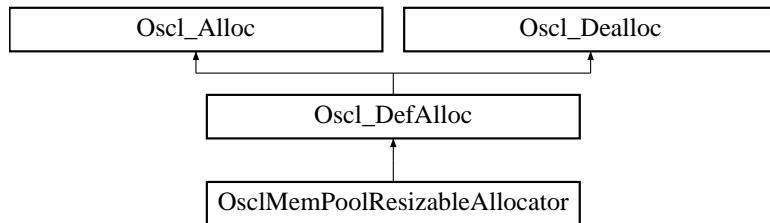
The documentation for this class was generated from the following file:

- [oscl\\_mem\\_mempool.h](#)

## 7.162 OsclMemPoolResizableAllocator Class Reference

```
#include <oscl_mem_mempool.h>
```

Inheritance diagram for OsclMemPoolResizableAllocator:



### Data Structures

- struct [MemPoolBlockInfo](#)
- struct [MemPoolBufferInfo](#)

### Public Member Functions

- OSCL\_IMPORT\_REF [OsclMemPoolResizableAllocator](#) (uint32 aMemPoolBufferSize, uint32 aMemPoolBufferNumLimit=0, uint32 aExpectedNumBlocksPerBuffer=0, [Oscl\\_DefAlloc](#) \*gen\_alloc=NULL)
- virtual OSCL\_IMPORT\_REF void [enablenullpointerreturn](#) ()
- virtual OSCL\_IMPORT\_REF [OsclAny](#) \* [allocate](#) (const uint32 aNumBytes)
- virtual OSCL\_IMPORT\_REF void [deallocate](#) ([OsclAny](#) \*aPtr)
- virtual OSCL\_IMPORT\_REF bool [trim](#) ([OsclAny](#) \*aPtr, uint32 aBytesToFree)
- OSCL\_IMPORT\_REF uint32 [getBufferSize](#) () const
- virtual OSCL\_IMPORT\_REF uint32 [getAllocatedSize](#) () const
- virtual OSCL\_IMPORT\_REF uint32 [getAvailableSize](#) () const
- virtual OSCL\_IMPORT\_REF uint32 [getLargestContiguousFreeBlockSize](#) () const
- virtual OSCL\_IMPORT\_REF bool [setMaxSzForNewMemPoolBuffer](#) (uint32 aMaxNewMemPoolBufferSz)
- virtual OSCL\_IMPORT\_REF void [notifyfreeblockavailable](#) ([OsclMemPoolResizableAllocatorObserver](#) &aObserver, uint32 aRequestedSize=0, [OsclAny](#) \*aContextData=NULL)
- virtual OSCL\_IMPORT\_REF void [CancelFreeChunkAvailableCallback](#) ()
- virtual OSCL\_IMPORT\_REF void [notifyfreememoryavailable](#) ([OsclMemPoolResizableAllocatorMemoryObserver](#) &aObserver, uint32 aRequestedSize=0, [OsclAny](#) \*aContextData=NULL)
- OSCL\_IMPORT\_REF void [CancelFreeMemoryAvailableCallback](#) ()
- OSCL\_IMPORT\_REF void [addRef](#) ()
- OSCL\_IMPORT\_REF void [removeRef](#) ()

### Protected Member Functions

- virtual ~[OsclMemPoolResizableAllocator](#) ()
- [MemPoolBufferInfo](#) \* [addnewmempoolbuffer](#) (uint32 aBufferSize)
- void [destroyallmempoolbuffers](#) ()
- [MemPoolBlockInfo](#) \* [findfreeblock](#) (uint32 aBlockSize)

- `OsclAny * allocateblock (MemPoolBlockInfo &aBlockPtr, uint32 aNumBytes)`
- `void deallocateblock (MemPoolBlockInfo &aBlockPtr)`
- `bool validateblock (OsclAny *aBlockBufPtr)`
- `uint32 getMemPoolBufferSize (MemPoolBufferInfo *aBufferInfo) const`
- `uint32 getMemPoolBufferAllocatedSize (MemPoolBufferInfo *aBufferInfo) const`
- `uint32 memoryPoolBufferMgmtOverhead () const`

## Protected Attributes

- `uint32 iMemPoolBufferSize`
- `uint32 iMemPoolBufferNumLimit`
- `uint32 iExpectedNumBlocksPerBuffer`
- `uint32 iMaxNewMemPoolBufferSz`
- `Oscl_DefAlloc * iMemPoolBufferAllocator`
- `Oscl_Vector< MemPoolBufferInfo *, OsclMemAllocator > iMemPoolBufferList`
- `uint32 iBufferInfoAlignedSize`
- `uint32 iBlockInfoAlignedSize`
- `bool iCheckNextAvailable`
- `uint32 iRequestedNextAvailableSize`
- `OsclAny * iNextAvailableContextData`
- `OsclMemPoolResizableAllocatorObserver * iObserver`
- `bool iCheckFreeMemoryAvailable`
- `uint32 iRequestedAvailableFreeMemSize`
- `OsclAny * iFreeMemContextData`
- `OsclMemPoolResizableAllocatorMemoryObserver * iFreeMemPoolObserver`
- `int32 iRefCount`
- `bool iEnableNullPtrReturn`

### 7.162.1 Constructor & Destructor Documentation

#### 7.162.1.1 OSCL\_IMPORT\_REF OsclMemPoolResizableAllocator::OsclMemPoolResizableAllocator (uint32 aMemPoolBufferSize, uint32 aMemPoolBufferNumLimit = 0, uint32 aExpectedNumBlocksPerBuffer = 0, Oscl\_DefAlloc \* gen\_alloc = NULL)

Create the memory pool allocator with resizing functionality. The size of the memory pool buffer needs to be passed-in. The maximum number of memory pool buffers, expected number of blocks in a memory pool buffer, and outside allocator are optional. This API throws an exception when the memory allocation for the pool buffer fails. If memory pool buffer number limit parameter is not set, the assumption is that there is no limit and memory pool will grow as needed. If the expected number of blocks is not set or not known, the memory pool will use a default value to 10 to allocate extra memory for the block info header.

#### Returns

`void`

#### 7.162.1.2 virtual OsclMemPoolResizableAllocator::~OsclMemPoolResizableAllocator () [inline, protected, virtual]

The destructor for the memory pool. Should not be called directly. Use `removeRef()` instead.

References `destroyallmempoolbuffers()`.

## 7.162.2 Member Function Documentation

**7.162.2.1 MemPoolBufferInfo\* OsclMemPoolResizableAllocator::addnewmempoolbuffer (uint32 aBufferSize) [protected]**

**7.162.2.2 OSCL\_IMPORT\_REF void OsclMemPoolResizableAllocator::addRef ()**

Increments the reference count for this memory pool allocator

### Returns

void

**7.162.2.3 virtual OSCL\_IMPORT\_REF OsclAny\* OsclMemPoolResizableAllocator::allocate (const uint32 aNumBytes) [virtual]**

Allocates a block from the memory pool that is at least in size requested This API throws an exception if there isn't enough memory (if "enablenullpointerreturn" has not been called) for the requested amount in the pool or if the extra pool buffer cannot be allocated.

### Returns

Pointer to memory buffer from memory pool

Implements [Oscl\\_DefAlloc](#).

**7.162.2.4 OsclAny\* OsclMemPoolResizableAllocator::allocateblock (MemPoolBlockInfo & aBlockPtr, uint32 aNumBytes) [protected]**

**7.162.2.5 virtual OSCL\_IMPORT\_REF void OsclMemPoolResizableAllocator::CancelFreeChunkAvailableCallback () [virtual]**

This API will cancel any past callback requests..

### Returns

void

**7.162.2.6 OSCL\_IMPORT\_REF void OsclMemPoolResizableAllocator::CancelFreeMemoryAvailableCallback ()**

**7.162.2.7 virtual OSCL\_IMPORT\_REF void OsclMemPoolResizableAllocator::deallocate (OsclAny \* aPtr) [virtual]**

Deallocates and returns a block back to the memory pool This API throws an exception if the pointer passed in is not part of the memory pool, aligned, or has corrupted block header.

### Returns

void

Implements [Oscl\\_DefAlloc](#).

---

**7.162.2.8 void OsclMemPoolResizableAllocator::deallocateblock (MemPoolBlockInfo & aBlockPtr) [protected]**

**7.162.2.9 void OsclMemPoolResizableAllocator::destroyallmempoolbuffers () [protected]**

Referenced by ~OsclMemPoolResizableAllocator().

**7.162.2.10 virtual OSCL\_IMPORT\_REF void OsclMemPoolResizableAllocator::enablenullpointerreturn () [virtual]**

This API will disable exceptions in case the memory pool runs out of memory Instead of doing "OSCL\_LEAVE(OsclErrNoResources)" allocate API will return NULL.

#### Returns

void

**7.162.2.11 MemPoolBlockInfo\* OsclMemPoolResizableAllocator::findfreeblock (uint32 aBlockSize) [protected]**

**7.162.2.12 virtual OSCL\_IMPORT\_REF uint32 OsclMemPoolResizableAllocator::getAllocatedSize () const [virtual]**

Returns the number of bytes allocated from the buffer<including the="" overhead="" bytes="" that="" may="" be="" allocated="" by="" the="" allocator="" to="" keep="" track="" of="" the="" chunks="" allocated>="">

**7.162.2.13 virtual OSCL\_IMPORT\_REF uint32 OsclMemPoolResizableAllocator::getAvailableSize () const [virtual]**

Returns the number of bytes available with the buffer

**7.162.2.14 OSCL\_IMPORT\_REF uint32 OsclMemPoolResizableAllocator::getBufferSize () const**

Returns the size of the buffer <including the="" overhead="" bytes="" that="" may="" be="" allocated="" by="" the="" allocator>="">

**7.162.2.15 virtual OSCL\_IMPORT\_REF uint32 OsclMemPoolResizableAllocator::getLargestContiguousFreeBlockSize () const [virtual]**

Returns the size of the largest available chunk in the memory.

- 7.162.2.16** `uint32 OsclMemPoolResizableAllocator::getMemPoolBufferAllocatedSize (MemPoolBufferInfo * aBufferInfo) const [protected]`
- 7.162.2.17** `uint32 OsclMemPoolResizableAllocator::getMemPoolBufferSize (MemPoolBufferInfo * aBufferInfo) const [protected]`
- 7.162.2.18** `uint32 OsclMemPoolResizableAllocator::memoryPoolBufferMgmtOverhead () const [protected]`
- 7.162.2.19** `virtual OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::notifyfreeblockavailable (OsclMemPoolResizableAllocatorObserver & aObserver, uint32 aRequestedSize = 0, OsclAny * aContextData = NULL) [virtual]`

This API will set the flag to send a callback via specified observer object when the next memory block is deallocated by `deallocate()` call. If the optional requested size parameter is set, the callback is sent when a free memory space of requested size becomes available. The optional context data is returned with the callback and can be used by the user to differentiate between different instances of memory pool objects. This memory pool only allows one notify to be queued. Another call to this function will just overwrite the previous call.

#### Returns

`void`

- 7.162.2.20** `virtual OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::notifyfreememoryavailable (OsclMemPoolResizableAllocatorMemoryObserver & aObserver, uint32 aRequestedSize = 0, OsclAny * aContextData = NULL) [virtual]`

- 7.162.2.21** `OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::removeRef ()`

Decrements the reference count for this memory pool allocator. When the reference count goes to 0, this instance of the memory pool object is deleted.

#### Returns

`void`

- 7.162.2.22** `virtual OSCL_IMPORT_REF bool OsclMemPoolResizableAllocator::setMaxSzForNewMemPoolBuffer (uint32 aMaxNewMemPoolBufferSz) [virtual]`

- 7.162.2.23** `virtual OSCL_IMPORT_REF bool OsclMemPoolResizableAllocator::trim (OsclAny * aPtr, uint32 aBytesToFree) [virtual]`

Returns a tail segment of a previously allocated memory block back to the memory pool. The passed-in pointer to the memory buffer is still valid after the call completes but the buffer size is smaller by the specified amount that was freed. This function allows the user to allocate a larger size block initially when the amount needed is unknown and then return the unused portion of the block when the amount becomes known. This API throws an exception if the pointer passed in is not part of the memory pool or the size to return is bigger than the size of the passed-in block. Exception will be thrown if the memory pool is not set up yet.

**Returns**

bool True if trim operation successful. False if the block wasn't trimmed

7.162.2.24 bool OsclMemPoolResizableAllocator::validateblock (OsclAny \* *aBlockBufPtr*)  
[protected]

### 7.162.3 Field Documentation

7.162.3.1 uint32 OsclMemPoolResizableAllocator::iBlockInfoAlignedSize [protected]

7.162.3.2 uint32 OsclMemPoolResizableAllocator::iBufferInfoAlignedSize [protected]

7.162.3.3 bool OsclMemPoolResizableAllocator::iCheckFreeMemoryAvailable [protected]

7.162.3.4 bool OsclMemPoolResizableAllocator::iCheckNextAvailable [protected]

7.162.3.5 bool OsclMemPoolResizableAllocator::iEnableNullPtrReturn [protected]

7.162.3.6 uint32 OsclMemPoolResizableAllocator::iExpectedNumBlocksPerBuffer  
[protected]

7.162.3.7 OsclAny\* OsclMemPoolResizableAllocator::iFreeMemContextData [protected]

7.162.3.8 OsclMemPoolResizableAllocatorMemoryObserver\* OsclMemPoolResizableAllocator::iFreeMemPoolObserver [protected]

7.162.3.9 uint32 OsclMemPoolResizableAllocator::iMaxNewMemPoolBufferSz [protected]

7.162.3.10 Oscl\_DefAlloc\* OsclMemPoolResizableAllocator::iMemPoolBufferAllocator  
[protected]

7.162.3.11 Oscl\_Vector<MemPoolBufferInfo\*, OsclMemAllocator>  
OsclMemPoolResizableAllocator::iMemPoolBufferList [protected]

7.162.3.12 uint32 OsclMemPoolResizableAllocator::iMemPoolBufferNumLimit [protected]

7.162.3.13 uint32 OsclMemPoolResizableAllocator::iMemPoolBufferSize [protected]

7.162.3.14 OsclAny\* OsclMemPoolResizableAllocator::iNextAvailableContextData  
[protected]

7.162.3.15 OsclMemPoolResizableAllocatorObserver\* OsclMemPoolResizableAllocator::iObserver [protected]

7.162.3.16 int32 OsclMemPoolResizableAllocator::iRefCount [protected]

7.162.3.17 uint32 OsclMemPoolResizableAllocator::iRequestedAvailableFreeMemSize  
[protected]

7.162.3.18 uint32 OsclMemPoolResizableAllocator::iRequestedNextAvailableSize  
[protected]

The documentation for this class was generated from the following file:

- [oscl\\_mem\\_mempool.h](#)

## 7.163 OsclMemPoolResizableAllocatorMemoryObserver Class Reference

```
#include <oscl_mem_mempool.h>
```

### Public Member Functions

- virtual void `freememoryavailable (OsclAny *aContextData)=0`
- virtual `~OsclMemPoolResizableAllocatorMemoryObserver ()`

#### 7.163.1 Constructor & Destructor Documentation

7.163.1.1 virtual  
OsclMemPoolResizableAllocatorMemoryObserver::~OsclMemPoolResizableAllocatorMemoryObserver  
(**[inline, virtual]**)

#### 7.163.2 Member Function Documentation

7.163.2.1 virtual void OsclMemPoolResizableAllocatorMemoryObserver::freememoryavailable  
(OsclAny \* *aContextData*) [**pure virtual**]

The documentation for this class was generated from the following file:

- `oscl_mem_mempool.h`

## 7.164 OsclMemPoolResizableAllocatorObserver Class Reference

```
#include <oscl_mem_mempool.h>
```

### Public Member Functions

- virtual void [freeblockavailable \(OsclAny \\*aContextData\)=0](#)
- virtual [~OsclMemPoolResizableAllocatorObserver \(\)](#)

#### 7.164.1 Constructor & Destructor Documentation

##### 7.164.1.1 virtual

```
OsclMemPoolResizableAllocatorObserver::~OsclMemPoolResizableAllocatorObserver  
() [inline, virtual]
```

#### 7.164.2 Member Function Documentation

##### 7.164.2.1 virtual void OsclMemPoolResizableAllocatorObserver::freeblockavailable (OsclAny \* *aContextData*) [pure virtual]

The documentation for this class was generated from the following file:

- [oscl\\_mem\\_mempool.h](#)

## 7.165 OsclMemStatsNode Class Reference

```
#include <oscl_mem_audit.h>
```

### Public Member Functions

- [OsclMemStatsNode \(\)](#)
- [void reset \(\)](#)
- [~OsclMemStatsNode \(\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size\)](#)
- [void \\* operator new \(oscl\\_memsize\\_t size, OsclMemStatsNode \\*ptr\)](#)
- [void operator delete \(void \\*ptr\) throw \(\)](#)

### Data Fields

- [MM\\_Stats\\_t \\* pMMStats](#)
- [MM\\_FailInsertParam \\* pMMFIParam](#)
- [char \\* tag](#)

#### 7.165.1 Constructor & Destructor Documentation

##### 7.165.1.1 OsclMemStatsNode::OsclMemStatsNode () [inline]

References NULL, pMMFIParam, pMMStats, and tag.

##### 7.165.1.2 OsclMemStatsNode::~OsclMemStatsNode () [inline]

References Oscl\_TAlloc< T, Alloc >::deallocate(), OSCL\_DELETE, pMMFIParam, pMMStats, and tag.

#### 7.165.2 Member Function Documentation

##### 7.165.2.1 void OsclMemStatsNode::operator delete (void \*ptr) throw () [inline]

References Oscl\_TAlloc< T, Alloc >::deallocate().

##### 7.165.2.2 void\* OsclMemStatsNode::operator new (oscl\_memsize\_t size, OsclMemStatsNode \*ptr) [inline]

References OSCL\_UNUSED\_ARG.

##### 7.165.2.3 void\* OsclMemStatsNode::operator new (oscl\_memsize\_t size) [inline]

References Oscl\_TAlloc< T, Alloc >::allocate(), and OSCL\_UNUSED\_ARG.

##### 7.165.2.4 void OsclMemStatsNode::reset () [inline]

References pMMFIParam, pMMStats, MM\_FailInsertParam::reset(), and MM\_Stats\_t::reset().

### 7.165.3 Field Documentation

#### 7.165.3.1 MM\_FailInsertParam\* OsclMemStatsNode::pMMFIParam

Referenced by OsclMemStatsNode(), reset(), and ~OsclMemStatsNode().

#### 7.165.3.2 MM\_Stats\_t\* OsclMemStatsNode::pMMStats

Referenced by OsclMemStatsNode(), reset(), and ~OsclMemStatsNode().

#### 7.165.3.3 char\* OsclMemStatsNode::tag

Referenced by OsclMemStatsNode(), and ~OsclMemStatsNode().

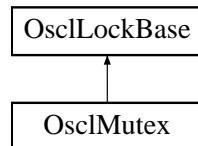
The documentation for this class was generated from the following file:

- [oscl\\_mem\\_audit.h](#)

## 7.166 OsclMutex Class Reference

```
#include <oscl_mutex.h>
```

Inheritance diagram for OsclMutex:



### Public Member Functions

- OSCL\_IMPORT\_REF OsclMutex ()
- virtual OSCL\_IMPORT\_REF ~OsclMutex ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Create (void)
- OSCL\_IMPORT\_REF void Lock ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError TryLock ()
- OSCL\_IMPORT\_REF void Unlock ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Close (void)

#### 7.166.1 Detailed Description

Class [OsclMutex](#)

#### 7.166.2 Constructor & Destructor Documentation

##### 7.166.2.1 OSCL\_IMPORT\_REF OsclMutex::OsclMutex ()

Class constructor

##### 7.166.2.2 virtual OSCL\_IMPORT\_REF OsclMutex::~OsclMutex () [virtual]

Class destructor

#### 7.166.3 Member Function Documentation

##### 7.166.3.1 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclMutex::Close (void)

Closes the Mutex

#### Parameters

*It* wont take any parameters

#### Returns

Returns the Error whether it is success or failure. Incase of failure it will return what is the specific error

**7.166.3.2 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclMutex::Create (void)**

Creates the Mutex

**Parameters**

*No* input arguments

**Returns**

Returns the Error whether it is success or failure. Incase of failure it will return what is the specific error

**7.166.3.3 OSCL\_IMPORT\_REF void OsclMutex::Lock () [virtual]**

Locks the Mutex

**Parameters**

*It* wont take any parameters

**Returns**

Returns nothing

Implements [OsclLockBase](#).

**7.166.3.4 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclMutex::TryLock ()**

Try to lock the mutex,if the Mutex is already locked calling thread immediately returns with out blocking

**Parameters**

*It* wont take any parameters

**Returns**

Returns SUCCESS\_ERROR if the mutex was acquired, MUTEX\_LOCKED\_ERROR if the mutex cannot be acquired without waiting, or an error code if the operation failed. Note: this function may not be supported on all platforms, and may return NOT\_IMPLEMENTED.

**7.166.3.5 OSCL\_IMPORT\_REF void OsclMutex::Unlock () [virtual]**

Releases the Mutex

**Parameters**

*It* wont take any parameters

**Returns**

Returns nothing

Implements [OsclLockBase](#).

The documentation for this class was generated from the following file:

- [oscl\\_mutex.h](#)

## 7.167 OsclNameString< \_\_len > Class Template Reference

```
#include <oscl_namestring.h>
```

### Public Member Functions

- [OsclNameString \(\)](#)
- [OsclNameString \(const char a\[ \]\)](#)
- [OsclNameString \(uint8 \\*a\)](#)
- void [Set \(uint8 \\*a\)](#)
- void [Set \(const char a\[ \]\)](#)
- uint8 \* [Str \(\) const](#)
- int32 [MaxLen \(\) const](#)

### 7.167.1 Detailed Description

**template<int \_\_len> class OsclNameString< \_\_len >**

Name string class appropriate for passing short constant ASCII strings around. All strings are automatically truncated and null-terminated.

### 7.167.2 Constructor & Destructor Documentation

**7.167.2.1 template<int \_\_len> OsclNameString< \_\_len >::OsclNameString () [inline]**

**7.167.2.2 template<int \_\_len> OsclNameString< \_\_len >::OsclNameString (const char a[ ]) [inline]**

**7.167.2.3 template<int \_\_len> OsclNameString< \_\_len >::OsclNameString (uint8 \* a) [inline]**

### 7.167.3 Member Function Documentation

**7.167.3.1 template<int \_\_len> int32 OsclNameString< \_\_len >::MaxLen () const [inline]**

**7.167.3.2 template<int \_\_len> void OsclNameString< \_\_len >::Set (const char a[ ]) [inline]**

**7.167.3.3 template<int \_\_len> void OsclNameString< \_\_len >::Set (uint8 \* a) [inline]**

Set the string to the input value. The string will be truncated to fit the storage class and automatically null-terminated.

#### Parameters

*a* (input param): null-terminated character string.

Referenced by OsclUDPSocketI::BindAsync(), OsclTCPSocketI::BindAsync(), OsclNameString< PVNETWORKADDRESS\_LEN >::OsclNameString(), GetHostByNameParam::PersistHostAddress(), and OsclNameString< PVNETWORKADDRESS\_LEN >::Set().

**7.167.3.4 template<int \_\_len> uint8\* OsclNameString< \_\_len >::Str () const [inline]**

Referenced by OsclUDPSocketI::BindAsync(), OsclTCPSocketI::BindAsync(), GetHostByNameParam::canPersistMoreHostAddresses(), OsclNetworkAddress::operator==(), and GetHostByNameParam::PersistHostAddress().

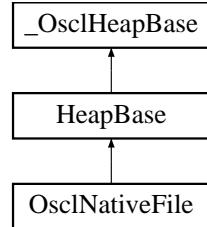
The documentation for this class was generated from the following file:

- [oscl\\_namestring.h](#)

## 7.168 OsclNativeFile Class Reference

```
#include <oscl_file_native.h>
```

Inheritance diagram for OsclNativeFile:



### Public Member Functions

- [OsclNativeFile \(\)](#)
- [~OsclNativeFile \(\)](#)
- [int32 Open \(const OsclFileHandle &, uint32 mode, const OsclNativeFileParams &params, Oscl\\_FileServer &fileserv\)](#)
- [int32 Open \(const oscl\\_wchar \\*filename, uint32 mode, const OsclNativeFileParams &params, Oscl\\_FileServer &fileserv\)](#)
- [int32 Open \(const char \\*filename, uint32 mode, const OsclNativeFileParams &params, Oscl\\_FileServer &fileserv\)](#)
- [uint32 Read \(OsclAny \\*buffer, uint32 size, uint32 numelements\)](#)
- [uint32 Write \(const OsclAny \\*buffer, uint32 size, uint32 numelements\)](#)
- [int32 Seek \(TOsclFileOffset offset, Oscl\\_File::seek\\_type origin\)](#)
- [TOsclFileOffset Tell \(\)](#)
- [int32 Flush \(\)](#)
- [int32 EndOfFile \(\)](#)
- [TOsclFileOffset Size \(\)](#)
- [int32 Close \(\)](#)
- [int32 SetSize \(uint32 size\)](#)
- [uint32 Mode \(\)](#)
- [int32 GetError \(\)](#)
- [int32 ReadAsync \(OsclAny \\*buffer, uint32 size, uint32 numelements, OsclAOStatus &status\)](#)
- [uint32 GetReadAsyncNumElements \(\)](#)
- [bool HasAsyncRead \(\)](#)
- [void ReadAsyncCancel \(\)](#)

### 7.168.1 Constructor & Destructor Documentation

**7.168.1.1 OsclNativeFile::OsclNativeFile ()**

**7.168.1.2 OsclNativeFile::~OsclNativeFile ()**

### 7.168.2 Member Function Documentation

**7.168.2.1 int32 OsclNativeFile::Close ()**

**7.168.2.2 int32 OsclNativeFile::EndOfFile ()**

**7.168.2.3 int32 OsclNativeFile::Flush ()**

**7.168.2.4 int32 OsclNativeFile::GetError ()**

**7.168.2.5 uint32 OsclNativeFile::GetReadAsyncNumElements ()**

Get the number of elements read in the last call to ReadAsync.

#### Returns

: number of elements read.

**7.168.2.6 bool OsclNativeFile::HasAsyncRead ()**

#### Returns

: true if async read is supported natively.

**7.168.2.7 uint32 OsclNativeFile::Mode () [inline]**

**7.168.2.8 int32 OsclNativeFile::Open (const char \*filename, uint32 mode, const OsclNativeFileParams &params, Oscl\_FileServer &fileserv)**

**7.168.2.9 int32 OsclNativeFile::Open (const oscl\_wchar \*filename, uint32 mode, const OsclNativeFileParams &params, Oscl\_FileServer &fileserv)**

**7.168.2.10 int32 OsclNativeFile::Open (const OsclFileHandle &, uint32 mode, const OsclNativeFileParams &params, Oscl\_FileServer &fileserv)**

**7.168.2.11 uint32 OsclNativeFile::Read (OsclAny \*buffer, uint32 size, uint32 numelements)**

**7.168.2.12 int32 OsclNativeFile::ReadAsync (OsclAny \*buffer, uint32 size, uint32 numelements, OsclAOStatus &status)**

Asynchronous read.

#### Parameters

*buffer*,: data buffer, must be at least size\*numelements bytes

*size*,: size of elements

*numelements*,: number of elements to read  
*status*,: Request status for asynchronous completion

#### Returns

: 0 for success.

#### 7.168.2.13 void OsclNativeFile::ReadAsyncCancel ()

Cancel any pending async read.

#### 7.168.2.14 int32 OsclNativeFile::Seek (TOsclFileOffset *offset*, Oscl\_File::seek\_type *origin*)

#### 7.168.2.15 int32 OsclNativeFile::SetSize (uint32 *size*)

#### 7.168.2.16 TOsclFileOffset OsclNativeFile::Size ()

#### 7.168.2.17 TOsclFileOffset OsclNativeFile::Tell ()

#### 7.168.2.18 uint32 OsclNativeFile::Write (const OsclAny \* *buffer*, uint32 *size*, uint32 *numelements*)

The documentation for this class was generated from the following file:

- [oscl\\_file\\_native.h](#)

## 7.169 OsclNativeFileParams Class Reference

```
#include <oscl_file_types.h>
```

### Public Member Functions

- [OsclNativeFileParams](#) (uint32 mode=0, uint32 bufsize=0, uint32 asyncsize=0)

### Data Fields

- uint32 [iNativeAccessMode](#)
- uint32 [iNativeBufferSize](#)
- uint32 [iAsyncReadBufferSize](#)

#### 7.169.1 Constructor & Destructor Documentation

7.169.1.1 [OsclNativeFileParams::OsclNativeFileParams \(uint32 mode = 0, uint32 bufsize = 0, uint32 asyncsize = 0\) \[inline\]](#)

#### 7.169.2 Field Documentation

7.169.2.1 [uint32 OsclNativeFileParams::iAsyncReadBufferSize](#)

7.169.2.2 [uint32 OsclNativeFileParams::iNativeAccessMode](#)

7.169.2.3 [uint32 OsclNativeFileParams::iNativeBufferSize](#)

The documentation for this class was generated from the following file:

- [oscl\\_file\\_types.h](#)

## 7.170 OsclNetworkAddress Class Reference

```
#include <oscl_socket_types.h>
```

### Public Member Functions

- [OsclNetworkAddress \(\)](#)
- [OsclNetworkAddress \(const char \\*addr, int p\)](#)
- [bool operator== \(const OsclNetworkAddress &rhs\) const](#)

### Data Fields

- [OsclNameString< PVNETWORKADDRESS\\_LEN > ipAddr](#)
- [int port](#)

#### 7.170.1 Constructor & Destructor Documentation

**7.170.1.1 OsclNetworkAddress::OsclNetworkAddress () [inline]**

**7.170.1.2 OsclNetworkAddress::OsclNetworkAddress (const char \*addr, int p) [inline]**

#### 7.170.2 Member Function Documentation

**7.170.2.1 bool OsclNetworkAddress::operator== (const OsclNetworkAddress &rhs) const [inline]**

References ipAddr, oscl\_strcmp(), port, and OsclNameString< \_\_len >::Str().

#### 7.170.3 Field Documentation

**7.170.3.1 OsclNameString<PVNETWORKADDRESS\_LEN> OsclNetworkAddress::ipAddr**

Referenced by OsclUDPSocketI::BindAsync(), OsclTCPSocketI::BindAsync(), GetHostByNameParam::canPersistMoreHostAddresses(), operator==(), and GetHostByNameParam::PersistHostAddress().

**7.170.3.2 int OsclNetworkAddress::port**

Referenced by OsclUDPSocketI::BindAsync(), OsclTCPSocketI::BindAsync(), and operator==().

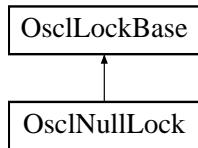
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_types.h](#)

## 7.171 OsclNullLock Class Reference

```
#include <oscl_lock_base.h>
```

Inheritance diagram for OsclNullLock:



### Public Member Functions

- virtual void [Lock \(\)](#)
- virtual void [Unlock \(\)](#)
- virtual [~OsclNullLock \(\)](#)

#### 7.171.1 Constructor & Destructor Documentation

**7.171.1.1** virtual OsclNullLock:[~OsclNullLock \(\)](#) [[inline](#), [virtual](#)]

#### 7.171.2 Member Function Documentation

**7.171.2.1** virtual void OsclNullLock:[::Lock \(\)](#) [[inline](#), [virtual](#)]

Implements [OsclLockBase](#).

**7.171.2.2** virtual void OsclNullLock:[::Unlock \(\)](#) [[inline](#), [virtual](#)]

Implements [OsclLockBase](#).

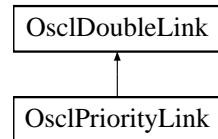
The documentation for this class was generated from the following file:

- [oscl\\_lock\\_base.h](#)

## 7.172 OsclPriorityLink Class Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclPriorityLink:



### Data Fields

- int32 [iPriority](#)

#### 7.172.1 Field Documentation

##### 7.172.1.1 int32 OsclPriorityLink::iPriority

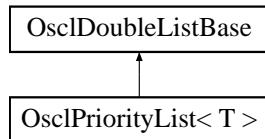
The documentation for this class was generated from the following file:

- [oscl\\_double\\_list.h](#)

## 7.173 OsclPriorityList< T > Class Template Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclPriorityList< T >:



### Public Member Functions

- OSCL\_INLINE OsclPriorityList()
- OSCL\_INLINE OsclPriorityList(int32 anOffset)
- OSCL\_INLINE void Insert(T &aRef)
- OSCL\_INLINE bool IsHead(const T \*aPtr) const
- OSCL\_INLINE bool IsTail(const T \*aPtr) const
- OSCL\_INLINE T \* Head() const
- OSCL\_INLINE T \* Tail() const

**template<class T> class OsclPriorityList< T >**

#### 7.173.1 Constructor & Destructor Documentation

**7.173.1.1 template<class T > OSCL\_INLINE OsclPriorityList< T >::OsclPriorityList()**

**7.173.1.2 template<class T > OSCL\_INLINE OsclPriorityList< T >::OsclPriorityList(int32  
anOffset)**

#### 7.173.2 Member Function Documentation

**7.173.2.1 template<class T > OSCL\_INLINE T\* OsclPriorityList< T >::Head() const**

**7.173.2.2 template<class T > OSCL\_INLINE void OsclPriorityList< T >::Insert(T &aRef)**

**7.173.2.3 template<class T > OSCL\_INLINE bool OsclPriorityList< T >::IsHead(const T \*  
aPtr) const**

**7.173.2.4 template<class T > OSCL\_INLINE bool OsclPriorityList< T >::IsTail(const T \*aPtr)  
const**

**7.173.2.5 template<class T > OSCL\_INLINE T\* OsclPriorityList< T >::Tail() const**

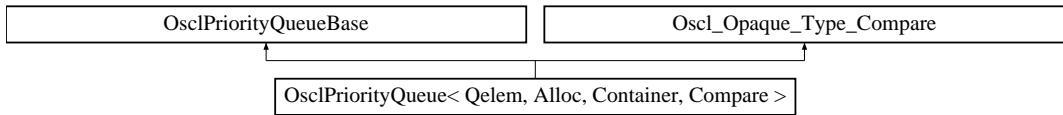
The documentation for this class was generated from the following file:

- [oscl\\_double\\_list.h](#)

## 7.174 OsclPriorityQueue< Qelem, Alloc, Container, Compare > Class Template Reference

```
#include <oscl_priqueue.h>
```

Inheritance diagram for OsclPriorityQueue< Qelem, Alloc, Container, Compare >:



### Public Types

- `typedef Container::value_type value_type`
- `typedef Container container_type`
- `typedef Container::iterator iterator`
- `typedef Container::const_reference const_reference`

### Public Member Functions

- `bool empty () const`
- `uint32 size () const`
- `void reserve (uint32 n)`
- `const_reference top () const`
- `const Container & vec ()`
- `void push (const value_type &input)`
- `void pop ()`
- `int remove (const value_type &input)`
- `OsclPriorityQueue ()`
- `virtual ~OsclPriorityQueue ()`

### Protected Member Functions

- `void push_heap (iterator first, iterator last)`
- `void pop_heap (iterator first, iterator last)`
- `iterator find_heap (const value_type &input, iterator first, iterator last)`
- `int validate ()`
- `void swap (OsclAny *dest, const OsclAny *src)`
- `int compare_LT (OsclAny *a, OsclAny *b) const`
- `int compare_EQ (const OsclAny *a, const OsclAny *b) const`

### Protected Attributes

- `Container c`
- `Compare comp`

## Friends

- class [oscl\\_priqueue\\_test](#)

```
template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> class OsclPriorityQueue< Qelem, Alloc, Container, Compare >
```

### 7.174.1 Member Typedef Documentation

- 7.174.1.1 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> typedef Container::const_reference OsclPriorityQueue< Qelem, Alloc, Container, Compare >::const_reference`
- 7.174.1.2 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> typedef Container OsclPriorityQueue< Qelem, Alloc, Container, Compare >::container_type`
- 7.174.1.3 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> typedef Container::iterator OsclPriorityQueue< Qelem, Alloc, Container, Compare >::iterator`
- 7.174.1.4 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> typedef Container::value_type OsclPriorityQueue< Qelem, Alloc, Container, Compare >::value_type`

### 7.174.2 Constructor & Destructor Documentation

- 7.174.2.1 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> OsclPriorityQueue< Qelem, Alloc, Container, Compare >::OsclPriorityQueue () [inline]`
- 7.174.2.2 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> virtual OsclPriorityQueue< Qelem, Alloc, Container, Compare >::~OsclPriorityQueue () [inline, virtual]`

### 7.174.3 Member Function Documentation

- 7.174.3.1 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> int OsclPriorityQueue< Qelem, Alloc, Container, Compare >::compare_EQ (const OsclAny * a, const OsclAny * b) const [inline, protected, virtual]`

Return a==b.

Implements [Oscl\\_Opaque\\_Type\\_Compare](#).

- 7.174.3.2 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> int OsclPriorityQueue< Qelem, Alloc, Container, Compare >::compare_LT (OsclAny * a, OsclAny * b) const [inline, protected, virtual]`

Return a<b.

Implements [Oscl\\_Opaque\\_Type\\_Compare](#).

**7.174.3.3** `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> bool OsclPriorityQueue< Qelem, Alloc, Container, Compare >::empty () const [inline]`

**7.174.3.4** `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> iterator OsclPriorityQueue< Qelem, Alloc, Container, Compare >::find_heap (const value_type & input, iterator first, iterator last) [inline, protected]`

Referenced by `OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::find_heap()`.

**7.174.3.5** `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::pop () [inline]`

**7.174.3.6** `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::pop_heap (iterator first, iterator last) [inline, protected]`

Referenced by `OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::pop()`, and `OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::pop_heap()`.

**7.174.3.7** `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::push (const value_type & input) [inline]`

**7.174.3.8** `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::push_heap (iterator first, iterator last) [inline, protected]`

Referenced by `OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::push()`, and `OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::push_heap()`.

**7.174.3.9** `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> int OsclPriorityQueue< Qelem, Alloc, Container, Compare >::remove (const value_type & input) [inline]`

Referenced by `OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::remove()`.

**7.174.3.10** template<class Qelem, class Alloc, class Container = Oscl\_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::reserve (uint32 *n*) [inline]

**7.174.3.11** template<class Qelem, class Alloc, class Container = Oscl\_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> uint32 OsclPriorityQueue< Qelem, Alloc, Container, Compare >::size () const [inline]

**7.174.3.12** template<class Qelem, class Alloc, class Container = Oscl\_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::swap (OsclAny \* *a*, const OsclAny \* *b*) [inline, protected, virtual]

Swap element at "a" with element at "b". Both pointers must be non-NUL.

Implements [Oscl\\_Opaque\\_Type\\_Compare](#).

**7.174.3.13** template<class Qelem, class Alloc, class Container = Oscl\_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> const\_reference OsclPriorityQueue< Qelem, Alloc, Container, Compare >::top () const [inline]

**7.174.3.14** template<class Qelem, class Alloc, class Container = Oscl\_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> int OsclPriorityQueue< Qelem, Alloc, Container, Compare >::validate () [inline, protected]

**7.174.3.15** template<class Qelem, class Alloc, class Container = Oscl\_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> const Container& OsclPriorityQueue< Qelem, Alloc, Container, Compare >::vec () [inline]

## 7.174.4 Friends And Related Function Documentation

**7.174.4.1** template<class Qelem, class Alloc, class Container = Oscl\_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> friend class oscl\_priqueue\_test [friend]

## 7.174.5 Field Documentation

**7.174.5.1** template<class Qelem, class Alloc, class Container = Oscl\_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> Container OsclPriorityQueue< Qelem, Alloc, Container, Compare >::c [protected]

Referenced by OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::empty(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::OsclPriorityQueue(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::pop(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::push(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::reserve(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::size(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::top(), OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::validate(), and OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::vec().

**7.174.5.2 template<class Qelem, class Alloc, class Container = Oscl\_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> Compare OsclPriorityQueue< Qelem, Alloc, Container, Compare >::comp [protected]**

Referenced by OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::compare\_LT(), and OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::validate().

The documentation for this class was generated from the following file:

- [oscl\\_priqueue.h](#)

## 7.175 OsclPriorityQueueBase Class Reference

```
#include <oscl_priqueue.h>
```

Inheritance diagram for OsclPriorityQueueBase:



### Protected Member Functions

- virtual ~OsclPriorityQueueBase ()
- OSCL\_IMPORT\_REF void push\_heap (OsclAny \*first, OsclAny \*last)
- OSCL\_IMPORT\_REF void pop\_heap (OsclAny \*first, OsclAny \*last)
- OSCL\_IMPORT\_REF OsclAny \* find\_heap (const OsclAny \*input, OsclAny \*first, OsclAny \*last)
- OSCL\_IMPORT\_REF int remove (const OsclAny \*input)
- void construct (Oscl\_Opaque\_Type\_Compare \*ot, Oscl\_Vector\_Base \*vec)

#### 7.175.1 Detailed Description

`OsclPriorityQueueBase` is a non-templatized base class for `OsclPriorityQueue`. The purpose of this base class is to avoid large inline routines in the `OsclPriorityQueue` implementation. This class is not intended for direct instantiation except by `OsclPriorityQueue`.

#### 7.175.2 Constructor & Destructor Documentation

7.175.2.1 virtual OsclPriorityQueueBase::~OsclPriorityQueueBase () [inline, protected, virtual]

#### 7.175.3 Member Function Documentation

7.175.3.1 void OsclPriorityQueueBase::construct (Oscl\_Opaque\_Type\_Compare \* ot, Oscl\_Vector\_Base \* vec) [inline, protected]

Referenced by `OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >::OsclPriorityQueue()`.

7.175.3.2 OSCL\_IMPORT\_REF OsclAny\* OsclPriorityQueueBase::find\_heap (const OsclAny \* input, OsclAny \* first, OsclAny \* last) [protected]

7.175.3.3 OSCL\_IMPORT\_REF void OsclPriorityQueueBase::pop\_heap (OsclAny \* first, OsclAny \* last) [protected]

7.175.3.4 OSCL\_IMPORT\_REF void OsclPriorityQueueBase::push\_heap (OsclAny \* first, OsclAny \* last) [protected]

7.175.3.5 OSCL\_IMPORT\_REF int OsclPriorityQueueBase::remove (const OsclAny \* input) [protected]

The documentation for this class was generated from the following file:

- [oscl\\_priqueue.h](#)

## 7.176 OsclProcStatus Class Reference

```
#include <oscl_procstatus.h>
```

### Public Types

- enum `eOsclProcError` {  
    *SUCCESS\_ERROR* = 0, *OTHER\_ERROR*, *TOO\_MANY\_THREADS\_ERROR*, *BAD\_THREADID\_ADDR\_ERROR*,  
    *MAX\_THRDS\_REACHED\_ERROR*, *INVALID\_THREAD\_ID\_ERROR*, *NOT\_ENOUGH\_MEMORY\_ERROR*,  
    *OUTOFMEMORY\_ERROR*,  
    *NOT\_ENOUGH\_RESOURCES\_ERROR*, *THREAD\_1\_INACTIVE\_ERROR*, *ALREADY\_SUSPENDED\_ERROR*,  
    *NOT\_SUSPENDED\_ERROR*,  
    *INVALID\_THREAD\_ERROR*, *INVALID\_PARAM\_ERROR*, *NO\_PERMISSION\_ERROR*,  
    *INVALID\_PRIORITY\_ERROR*,  
    *PSHARED\_NOT\_ZERO\_ERROR*, *EXCEED\_MAX\_COUNT\_VARIABLE\_ERROR*, *THREAD\_BLOCK\_ERROR*,  
    *EXCEED\_MAX\_SEM\_COUNT\_ERROR*,  
    *INVALID\_HANDLE\_ERROR*, *INVALID\_OPERATION\_ERROR*, *INVALID\_FUNCTION\_ERROR*,  
    *INVALID\_ACCESS\_ERROR*,  
    *INVALID\_ARGUMENT\_ERROR*, *SYSTEM\_RESOURCES\_UNAVAILABLE\_ERROR*,  
    *INVALID\_POINTER\_ERROR*, *RELOCK\_MUTEX\_ERROR*,  
    *THREAD\_NOT\_OWN\_MUTEX\_ERROR*, *MUTEX\_LOCKED\_ERROR*, *WAIT\_ABANDONED\_ERROR*,  
    *WAIT\_TIMEOUT\_ERROR*,  
    *SEM\_NOT\_SIGNALED\_ERROR*, *PSHARED\_ATTRIBUTE\_SETTING\_ERROR*, *NOT\_IMPLEMENTED* }

### 7.176.1 Detailed Description

Class `OsclProcStatus`

### 7.176.2 Member Enumeration Documentation

#### 7.176.2.1 enum OsclProcStatus::eOsclProcError

List of enums which contain error codes

**Enumerator:**

*SUCCESS\_ERROR*  
*OTHER\_ERROR*  
*TOO\_MANY\_THREADS\_ERROR*  
*BAD\_THREADID\_ADDR\_ERROR*  
*MAX\_THRDS\_REACHED\_ERROR*  
*INVALID\_THREAD\_ID\_ERROR*  
*NOT\_ENOUGH\_MEMORY\_ERROR*  
*OUTOFMEMORY\_ERROR*

*NOT\_ENOUGH\_RESOURCES\_ERROR  
THREAD\_1\_INACTIVE\_ERROR  
ALREADY\_SUSPENDED\_ERROR  
NOT\_SUSPENDED\_ERROR  
INVALID\_THREAD\_ERROR  
INVALID\_PARAM\_ERROR  
NO\_PERMISSION\_ERROR  
INVALID\_PRIORITY\_ERROR  
PSHARED\_NOT\_ZERO\_ERROR  
EXCEED\_MAX\_COUNT\_VARIABLE\_ERROR  
THREAD\_BLOCK\_ERROR  
EXCEED\_MAX\_SEM\_COUNT\_ERROR  
INVALID\_HANDLE\_ERROR  
INVALID\_OPERATION\_ERROR  
INVALID\_FUNCTION\_ERROR  
INVALID\_ACCESS\_ERROR  
INVALID\_ARGUMENT\_ERROR  
SYSTEM\_RESOURCES\_UNAVAILABLE\_ERROR  
INVALID\_POINTER\_ERROR  
RELOCK\_MUTEX\_ERROR  
THREAD\_NOT\_OWN\_MUTEX\_ERROR  
MUTEX\_LOCKED\_ERROR  
WAIT\_ABANDONED\_ERROR  
WAIT\_TIMEOUT\_ERROR  
SEM\_NOT\_SIGNALLED\_ERROR  
PSHARED\_ATTRIBUTE\_SETTING\_ERROR  
NOT\_IMPLEMENTED*

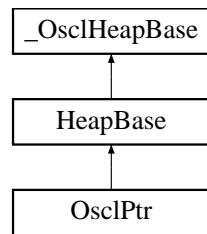
The documentation for this class was generated from the following file:

- [oscl\\_procstatus.h](#)

## 7.177 OsclPtr Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclPtr:



### Public Member Functions

- [OsclPtr \(uint8 \\*ptr, int32 &len, int32 max\)](#)
- [OsclPtr \(const OsclPtr &d\)](#)
- [uint8 \\* Ptr \(\)](#)
- [void SetLength \(int32 l\)](#)
- [int32 Length \(\)](#)
- [void Zero \(\)](#)
- [void Set \(OsclPtr &v\)](#)
- [void Set \(uint8 \\*ptr, int32 len, int32 max\)](#)
- [void Append \(OsclPtrC &v\)](#)

#### 7.177.1 Constructor & Destructor Documentation

**7.177.1.1 OsclPtr::OsclPtr (uint8 \*ptr, int32 &len, int32 max) [inline]**

**7.177.1.2 OsclPtr::OsclPtr (const OsclPtr &d) [inline]**

#### 7.177.2 Member Function Documentation

**7.177.2.1 void OsclPtr::Append (OsclPtrC &v) [inline]**

References OsclPtrC::Length(), OSCL\_ASSERT, oscl\_memmove(), and OsclPtrC::Ptr().

**7.177.2.2 int32 OsclPtr::Length () [inline]**

**7.177.2.3 uint8\* OsclPtr::Ptr () [inline]**

**7.177.2.4 void OsclPtr::Set (uint8 \*ptr, int32 len, int32 max) [inline]**

**7.177.2.5 void OsclPtr::Set (OsclPtr &v) [inline]**

**7.177.2.6 void OsclPtr::SetLength (int32 l) [inline]**

References OSCL\_ASSERT.

**7.177.2.7 void OsclPtr::Zero () [inline]**

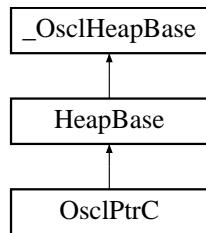
The documentation for this class was generated from the following file:

- [oscl\\_file\\_async\\_read.h](#)

## 7.178 OsclPtrC Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclPtrC:



### Public Member Functions

- [OsclPtrC](#) (const uint8 \*ptr, int32 len, int32 max)
- [OsclPtrC](#) (const [OsclPtrC](#) &d)
- const uint8 \* [Ptr](#) ()
- void [SetLength](#) (int32 l)
- int32 [Length](#) ()
- void [Zero](#) ()
- void [Set](#) ([OsclPtrC](#) \*v)
- void [Set](#) (uint8 \*ptr, int32 len, int32 max)
- [OsclPtrC Right](#) (int32 size)
- [OsclPtrC Left](#) (int32 size)

#### 7.178.1 Constructor & Destructor Documentation

**7.178.1.1 [OsclPtrC::OsclPtrC](#) (const uint8 \*ptr, int32 len, int32 max) [inline]**

**7.178.1.2 [OsclPtrC::OsclPtrC](#) (const OsclPtrC & d) [inline]**

#### 7.178.2 Member Function Documentation

**7.178.2.1 [OsclPtrC OsclPtrC::Left](#) (int32 size) [inline]**

References OSCL\_ASSERT.

**7.178.2.2 [int32 OsclPtrC::Length](#) () [inline]**

Referenced by [OsclPtr::Append\(\)](#).

**7.178.2.3 [const uint8\\* OsclPtrC::Ptr](#) () [inline]**

Referenced by [OsclPtr::Append\(\)](#).

**7.178.2.4 OsclPtrC OsclPtrC::Right (int32 *size*) [inline]**

References OSCL\_ASSERT.

**7.178.2.5 void OsclPtrC::Set (uint8 \* *ptr*, int32 *len*, int32 *max*) [inline]****7.178.2.6 void OsclPtrC::Set (OsclPtrC \* *v*) [inline]****7.178.2.7 void OsclPtrC::SetLength (int32 *l*) [inline]**

References OSCL\_ASSERT.

**7.178.2.8 void OsclPtrC::Zero () [inline]**

The documentation for this class was generated from the following file:

- [oscl\\_file\\_async\\_read.h](#)

## 7.179 OsclRand Class Reference

```
#include <oscl_rand.h>
```

### Public Member Functions

- OSCL\_COND\_IMPORT\_REF void [Seed](#) (int32 seed)
- OSCL\_COND\_IMPORT\_REF int32 [Rand](#) ()

#### 7.179.1 Member Function Documentation

##### 7.179.1.1 OSCL\_COND\_IMPORT\_REF int32 OsclRand::Rand ()

##### 7.179.1.2 OSCL\_COND\_IMPORT\_REF void OsclRand::Seed (int32 *seed*)

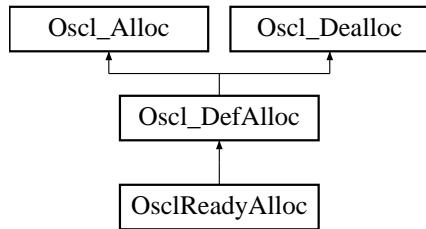
The documentation for this class was generated from the following file:

- [oscl\\_rand.h](#)

## 7.180 OsclReadyAlloc Class Reference

```
#include <oscl_scheduler_readyq.h>
```

Inheritance diagram for OsclReadyAlloc:



### Public Member Functions

- [OsclAny \\* allocate \(const uint32 size\)](#)
- [OsclAny \\* allocate\\_fl \(const uint32 size, const char \\*file\\_name, const int line\\_num\)](#)
- [void deallocate \(OsclAny \\*p\)](#)

#### 7.180.1 Member Function Documentation

##### 7.180.1.1 [OsclAny\\* OsclReadyAlloc::allocate \(const uint32 size\) \[virtual\]](#)

Implements [Oscl\\_DefAlloc](#).

##### 7.180.1.2 [OsclAny\\* OsclReadyAlloc::allocate\\_fl \(const uint32 size, const char \\*file\\_name, const int line\\_num\) \[virtual\]](#)

Reimplemented from [Oscl\\_DefAlloc](#).

##### 7.180.1.3 [void OsclReadyAlloc::deallocate \(OsclAny \\*p\) \[virtual\]](#)

Implements [Oscl\\_DefAlloc](#).

The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_readyq.h](#)

## 7.181 OsclReadyCompare Class Reference

```
#include <oscl_scheduler_readyq.h>
```

### Static Public Member Functions

- static int `compare (TOsclReady &a, TOsclReady &b)`

#### 7.181.1 Member Function Documentation

##### 7.181.1.1 static int OsclReadyCompare::compare (TOsclReady & *a*, TOsclReady & *b*) [static]

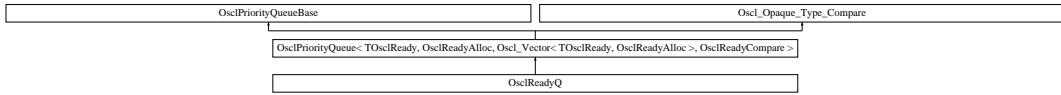
The documentation for this class was generated from the following file:

- `oscl_scheduler_readyq.h`

## 7.182 OsclReadyQ Class Reference

```
#include <oscl_scheduler_readyq.h>
```

Inheritance diagram for OsclReadyQ:



### Public Member Functions

- void [Construct](#) (int)
- void [ThreadLogon](#) ()
- void [ThreadLogoff](#) ()
- void [Remove](#) (TOsclReady)
- bool [IsIn](#) (TOsclReady)
- uint32 [Depth](#) ()
- TOsclReady [PopTop](#) ()
- TOsclReady [Top](#) ()
- TOsclReady [WaitAndPopTop](#) ()
- TOsclReady [WaitAndPopTop](#) (uint32)
- int32 [PendComplete](#) (PVActiveBase \*pvbase, int32 aReason)
- int32 [WaitForRequestComplete](#) (PVActiveBase \*)
- void [RegisterForCallback](#) (OsclSchedulerObserver \*aCallback, OsclAny \*aCallbackContext)
- void [TimerCallback](#) (uint32 aDelayMicrosec)
- OsclSchedulerObserver \* [Callback](#) ()

#### 7.182.1 Member Function Documentation

**7.182.1.1 OsclSchedulerObserver\* OsclReadyQ::Callback () [inline]**

**7.182.1.2 void OsclReadyQ::Construct (int)**

**7.182.1.3 uint32 OsclReadyQ::Depth () [inline]**

References OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl\_Vector< TOsclReady, OsclReadyAlloc >, OsclReadyCompare >::size().

- 7.182.1.4 `bool OsclReadyQ::IsIn (TOsclReady)`
- 7.182.1.5 `int32 OsclReadyQ::PendComplete (PVActiveBase * pibase, int32 aReason)`
- 7.182.1.6 `TOsclReady OsclReadyQ::PopTop ()`
- 7.182.1.7 `void OsclReadyQ::RegisterForCallback (OsclSchedulerObserver * aCallback, OsclAny * aCallbackContext)`
- 7.182.1.8 `void OsclReadyQ::Remove (TOsclReady)`
- 7.182.1.9 `void OsclReadyQ::ThreadLogoff ()`
- 7.182.1.10 `void OsclReadyQ::ThreadLogon ()`
- 7.182.1.11 `void OsclReadyQ::TimerCallback (uint32 aDelayMicrosec)`
- 7.182.1.12 `TOsclReady OsclReadyQ::Top ()`
- 7.182.1.13 `TOsclReady OsclReadyQ::WaitAndPopTop (uint32)`
- 7.182.1.14 `TOsclReady OsclReadyQ::WaitAndPopTop ()`
- 7.182.1.15 `int32 OsclReadyQ::WaitForRequestComplete (PVActiveBase *)`

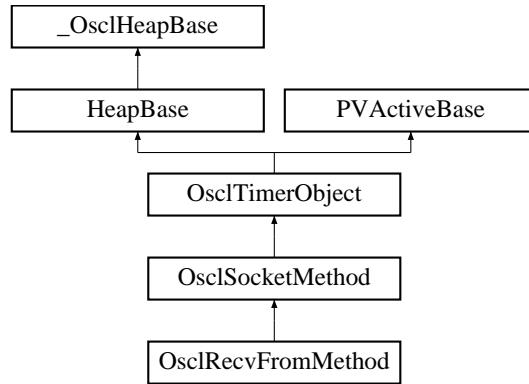
The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_readyq.h](#)

## 7.183 OsclRecvFromMethod Class Reference

```
#include <oscl_socket_recv_from.h>
```

Inheritance diagram for OsclRecvFromMethod:



### Public Member Functions

- [`~OsclRecvFromMethod \(\)`](#)
- [`TPVSocketEvent RecvFrom \(uint8 \*&aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, int32 aTimeout, uint32 aMultiMax, Oscl\_Vector< uint32, OsclMemAllocator > \*aPacketLen, Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator > \*aPacketSource\)`](#)
- [`uint8 \* GetRecvData \(int32 \*aLength\)`](#)
- [`OsclRecvFromRequest \* RecvFromRequest \(\)`](#)

### Static Public Member Functions

- static [`OsclRecvFromMethod \* NewL \(OsclIPSocketI &c\)`](#)

#### 7.183.1 Constructor & Destructor Documentation

##### 7.183.1.1 OsclRecvFromMethod::~OsclRecvFromMethod ()

#### 7.183.2 Member Function Documentation

##### 7.183.2.1 uint8\* OsclRecvFromMethod::GetRecvData (int32 \* aLength)

Referenced by OsclUDPSocketI::GetRecvData().

**7.183.2.2 static OsclRecvFromMethod\* OsclRecvFromMethod::NewL (OsclIPSocketI & c)  
[static]**

**7.183.2.3 TPVSocketEvent OsclRecvFromMethod::RecvFrom (uint8 \*& aPtr, uint32 aMaxLen,  
OsclNetworkAddress & aAddress, int32 aTimeout, uint32 aMultiMax, Oscl\_Vector<  
uint32, OsclMemAllocator > \* aPacketLen, Oscl\_Vector< OsclNetworkAddress,  
OsclMemAllocator > \* aPacketSource)**

Referenced by OsclUDPSocketI::RecvFrom().

**7.183.2.4 OsclRecvFromRequest\* OsclRecvFromMethod::RecvFromRequest () [inline]**

References OsclSocketMethod::iSocketRequestAO.

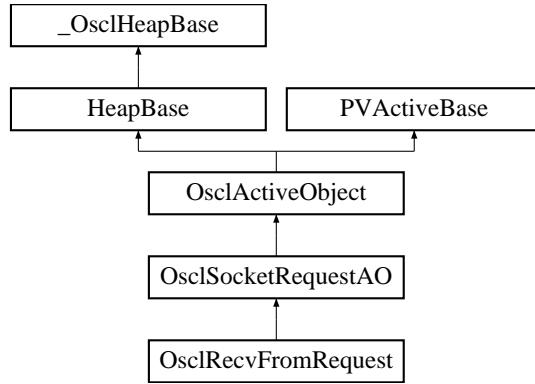
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_recv\\_from.h](#)

## 7.184 OsclRecvFromRequest Class Reference

```
#include <oscl_socket_recv_from.h>
```

Inheritance diagram for OsclRecvFromRequest:



### Public Member Functions

- `uint8 * GetRecvData (int32 *aLength)`
- `OsclRecvFromRequest (OsclSocketMethod &c)`
- `void RecvFrom (uint8 *&aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, uint32 aMultiMax, Oscl_Vector< uint32, OsclMemAllocator > *aPacketLen, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > *aPacketSource)`
- `void Success ()`

#### 7.184.1 Detailed Description

This is the AO that interacts with the socket server

#### 7.184.2 Constructor & Destructor Documentation

**7.184.2.1 OsclRecvFromRequest::OsclRecvFromRequest (OsclSocketMethod & c) [inline]**

#### 7.184.3 Member Function Documentation

**7.184.3.1 uint8\* OsclRecvFromRequest::GetRecvData (int32 \* aLength)**

**7.184.3.2 void OsclRecvFromRequest::RecvFrom (uint8 \*& aPtr, uint32 aMaxLen, OsclNetworkAddress & aAddress, uint32 aMultiMax, Oscl\_Vector< uint32, OsclMemAllocator > \* aPacketLen, Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator > \* aPacketSource)**

**7.184.3.3 void OsclRecvFromRequest::Success () [virtual]**

Reimplemented from [OsclSocketRequestAO](#).

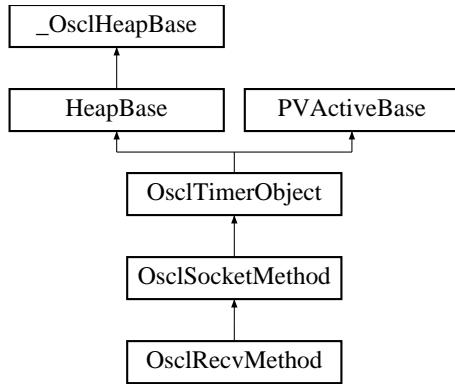
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_recv\\_from.h](#)

## 7.185 OsclRecvMethod Class Reference

```
#include <oscl_socket_recv.h>
```

Inheritance diagram for OsclRecvMethod:



### Public Member Functions

- `~OsclRecvMethod ()`
- `TPVSocketEvent Recv (uint8 *&aPtr, uint32 aMaxLen, int32 aTimeout)`
- `uint8 * GetRecvData (int32 *aLength)`
- `OsclRecvRequest * RecvRequest ()`

### Static Public Member Functions

- static `OsclRecvMethod * NewL (OsclIPSocketI &c)`

#### 7.185.1 Constructor & Destructor Documentation

##### 7.185.1.1 OsclRecvMethod::~OsclRecvMethod ()

#### 7.185.2 Member Function Documentation

##### 7.185.2.1 uint8\* OsclRecvMethod::GetRecvData (int32 \* aLength)

Referenced by `OsclTCPSocketI::GetRecvData()`.

##### 7.185.2.2 static OsclRecvMethod\* OsclRecvMethod::NewL (OsclIPSocketI & c) [static]

##### 7.185.2.3 TPVSocketEvent OsclRecvMethod::Recv (uint8 \*& aPtr, uint32 aMaxLen, int32 aTimeout)

Referenced by `OsclTCPSocketI::Recv()`.

**7.185.2.4 OsclRecvRequest\* OsclRecvMethod::RecvRequest () [inline]**

References OsclSocketMethod::iSocketRequestAO.

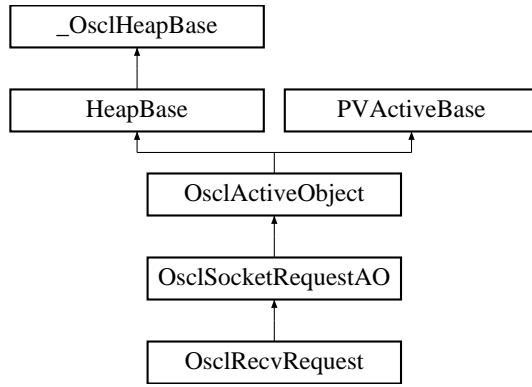
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_recv.h](#)

## 7.186 OsclRecvRequest Class Reference

```
#include <oscl_socket_recv.h>
```

Inheritance diagram for OsclRecvRequest:



### Public Member Functions

- `uint8 * GetRecvData (int32 *aLength)`
- `OsclRecvRequest (OsclSocketMethod &c)`
- `void Recv (uint8 *&aPtr, uint32 aMaxLen)`
- `void Success ()`

#### 7.186.1 Detailed Description

This is the AO that interacts with the socket server

#### 7.186.2 Constructor & Destructor Documentation

**7.186.2.1 OsclRecvRequest::OsclRecvRequest (OsclSocketMethod & c) [inline]**

#### 7.186.3 Member Function Documentation

**7.186.3.1 `uint8* OsclRecvRequest::GetRecvData (int32 * aLength)`**

**7.186.3.2 `void OsclRecvRequest::Recv (uint8 *& aPtr, uint32 aMaxLen)`**

**7.186.3.3 `void OsclRecvRequest::Success () [virtual]`**

Reimplemented from [OsclSocketRequestAO](#).

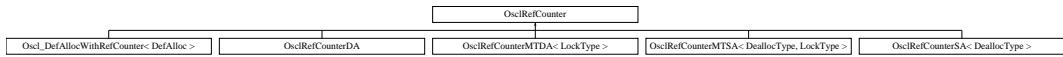
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_recv.h](#)

## 7.187 OsclRefCounter Class Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounter:



### Public Member Functions

- virtual void `addRef ()=0`
- virtual void `removeRef ()=0`
- virtual uint32 `getCount ()=0`
- virtual `~OsclRefCounter ()`

#### 7.187.1 Detailed Description

Interface class for [OsclRefCounter](#) implementations

#### 7.187.2 Constructor & Destructor Documentation

**7.187.2.1 virtual OsclRefCounter::~OsclRefCounter () [inline, virtual]**

#### 7.187.3 Member Function Documentation

**7.187.3.1 virtual void OsclRefCounter::addRef () [pure virtual]**

Add to the reference count

Implemented in [OsclRefCounterDA](#), [OsclRefCounterSA< DeallocType >](#), [OsclRefCounterMTDA< LockType >](#), [OsclRefCounterMTSA< DeallocType, LockType >](#), and [Oscl\\_DefAllocWithRefCounter< DefAlloc >](#).

Referenced by [OsclSharedPtr< TheClass >::Bind\(\)](#), [OsclRefCounterMemFrag::OsclRefCounterMemFrag\(\)](#), and [OsclSharedPtr< TheClass >::OsclSharedPtr\(\)](#).

**7.187.3.2 virtual uint32 OsclRefCounter::getCount () [pure virtual]**

Gets the current number of references

Implemented in [OsclRefCounterDA](#), [OsclRefCounterSA< DeallocType >](#), [OsclRefCounterMTDA< LockType >](#), [OsclRefCounterMTSA< DeallocType, LockType >](#), and [Oscl\\_DefAllocWithRefCounter< DefAlloc >](#).

Referenced by [OsclSharedPtr< TheClass >::get\\_count\(\)](#).

**7.187.3.3 virtual void OsclRefCounter::removeRef () [pure virtual]**

Delete from reference count

Implemented in [OsclRefCounterDA](#), [OsclRefCounterSA< DeallocType >](#), [OsclRefCounterMTDA< LockType >](#), [OsclRefCounterMTSA< DeallocType, LockType >](#), and [Oscl\\_DefAllocWithRefCounter< DefAlloc >](#).

Referenced by `OsclSharedPtr< TheClass >::Bind()`, and `OsclSharedPtr< TheClass >::~OsclSharedPtr()`.

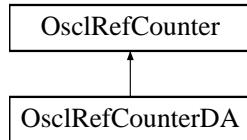
The documentation for this class was generated from the following file:

- [oscl\\_refcounter.h](#)

## 7.188 OsclRefCounterDA Class Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounterDA:



### Public Member Functions

- [OsclRefCounterDA \(OsclAny \\*p, OsclDestructDealloc \\*dealloc\)](#)
- virtual [~OsclRefCounterDA \(\)](#)
- void [addRef \(\)](#)
- void [removeRef \(\)](#)
- uint32 [getCount \(\)](#)

#### 7.188.1 Detailed Description

Implementation of an [OsclRefCounter](#) that uses a dynamically created deallocator.

#### 7.188.2 Constructor & Destructor Documentation

##### 7.188.2.1 OsclRefCounterDA::OsclRefCounterDA (OsclAny \* *p*, OsclDestructDealloc \* *dealloc*) [inline]

Constructor Takes a pointer to the buffer to track, and a pointer to the deallocator object which will be used to delete the buffer.

When the reference count reaches zero, the buffer will be deleted by the deallocator. Also, the [OsclRefCounter](#) object (this) will self-destruct when the reference count is zero. In some cases the [OsclRefCounter](#) object will be part of the buffer being deleted. For such cases, the object pointer must be equal to the buffer pointer given at construction. If the object is not part of the buffer being deleted, it will self-destruct with a call to `delete()`.

#### Parameters

*p* pointer to the buffer to track

*dealloc* pointer to the deallocator to use when deleting the buffer

References NULL, and OSCL\_ASSERT.

##### 7.188.2.2 virtual OsclRefCounterDA::~OsclRefCounterDA () [inline, virtual]

Destructor empty

### 7.188.3 Member Function Documentation

#### 7.188.3.1 void OsclRefCounterDA::addRef () [inline, virtual]

Add to the reference count

Implements [OsclRefCounter](#).

#### 7.188.3.2 uint32 OsclRefCounterDA::getCount () [inline, virtual]

Gets the current number of references

Implements [OsclRefCounter](#).

#### 7.188.3.3 void OsclRefCounterDA::removeRef () [inline, virtual]

Remove from the reference count

Implements [OsclRefCounter](#).

References OsclDestructDealloc::destruct\_and\_dealloc().

The documentation for this class was generated from the following file:

- [oscl\\_refcounter.h](#)

## 7.189 OsclRefCounterMemFrag Class Reference

```
#include <oscl_refcounter_memfrag.h>
```

### Public Member Functions

- `OsclRefCounterMemFrag (OsclMemoryFragment &m, OsclRefCounter *r, uint32 in_capacity)`
- `OsclRefCounterMemFrag (const OsclRefCounterMemFrag &x)`
- `OsclRefCounterMemFrag ()`
- `OsclRefCounterMemFrag & operator= (const OsclRefCounterMemFrag &x)`
- `~OsclRefCounterMemFrag ()`
- `OsclRefCounter * getRefCounter ()`
- `OsclMemoryFragment & getMemFrag ()`
- `OsclAny * getMemFragPtr ()`
- `uint32 getMemFragSize ()`
- `uint32 getCapacity ()`
- `uint32 getCount ()`

### 7.189.1 Detailed Description

Class to contain a memory fragment with it's associated reference counter.

### 7.189.2 Constructor & Destructor Documentation

#### 7.189.2.1 OsclRefCounterMemFrag::OsclRefCounterMemFrag (OsclMemoryFragment & m, OsclRefCounter \* r, uint32 in\_capacity) [inline]

Constructor. A valid memory fragment and reference counter are required as input. The memory fragment structure will be copied locally.

##### Parameters

- `m` reference to memory fragment
- `r` pointer to the reference counter associated with the memory fragment.

#### 7.189.2.2 OsclRefCounterMemFrag::OsclRefCounterMemFrag (const OsclRefCounterMemFrag & x) [inline]

Copy constructor.

#### 7.189.2.3 OsclRefCounterMemFrag::OsclRefCounterMemFrag () [inline]

Default constructor.

References `OsclRefCounter::addRef()`.

**7.189.2.4 OsclRefCounterMemFrag::~OsclRefCounterMemFrag () [inline]**

Destructor. Removes this object's reference from the reference counter. The reference counter will not be deleted. The reference counter is designed to self-delete when it's reference count reaches 0.

**7.189.3 Member Function Documentation****7.189.3.1 uint32 OsclRefCounterMemFrag::getCapacity () [inline]**

Returns the capacity of the memory fragment

**Returns****7.189.3.2 uint32 OsclRefCounterMemFrag::getCount () [inline]**

Returns the reference counter's current count.

**7.189.3.3 OsclMemoryFragment& OsclRefCounterMemFrag::getMemFrag () [inline]**

Returns a reference to the contained memory fragment structure.

**7.189.3.4 OsclAny\* OsclRefCounterMemFrag::getMemFragPtr () [inline]**

Returns a pointer to the memory fragment data.

**7.189.3.5 uint32 OsclRefCounterMemFrag::getMemFragSize () [inline]**

Returns the size of the memory fragment data which equals its filled size.

**Returns****7.189.3.6 OsclRefCounter\* OsclRefCounterMemFrag::getRefCounter () [inline]**

Returns a pointer to the contained reference counter object

**7.189.3.7 OsclRefCounterMemFrag& OsclRefCounterMemFrag::operator= (const OsclRefCounterMemFrag & x) [inline]**

Assignment Operator

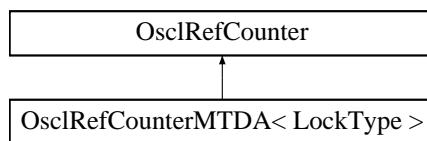
The documentation for this class was generated from the following file:

- [oscl\\_refcounter\\_memfrag.h](#)

## 7.190 OsclRefCounterMTDA< LockType > Class Template Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounterMTDA< LockType >:



### Public Member Functions

- [OsclRefCounterMTDA \(OsclAny \\*p, OsclDestructDealloc \\*dealloc\)](#)
- virtual [~OsclRefCounterMTDA \(\)](#)
- void [addRef \(\)](#)
- void [removeRef \(\)](#)
- uint32 [getCount \(\)](#)

#### 7.190.1 Detailed Description

**template<class LockType> class OsclRefCounterMTDA< LockType >**

Implementation of [OsclRefCounterDA](#) for multi-threaded use. A templated lock class must be specified.

#### 7.190.2 Constructor & Destructor Documentation

**7.190.2.1 template<class LockType> OsclRefCounterMTDA< LockType >::OsclRefCounterMTDA (OsclAny \* *p*, OsclDestructDealloc \* *dealloc*) [inline]**

Constructor Takes a pointer to the buffer to track, and a pointer to the deallocator object which will be used to delete the buffer.

When the reference count reaches zero, the buffer will be deleted by the deallocator. Also, the [OsclRefCounter](#) object (this) will self-destruct when the reference count is zero. In some cases the [OsclRefCounter](#) object will be part of the buffer being deleted. For such cases, the object pointer must be equal to the buffer pointer given at construction. If the object is not part of the buffer being deleted, it will self-destruct with a call to `delete()`.

#### Parameters

*p* pointer to the buffer to track

*dealloc* pointer to the deallocator to use when deleting the buffer

References NULL, and OSCL\_ASSERT.

**7.190.2.2 template<class LockType> virtual OsclRefCounterMTDA< LockType >::~OsclRefCounterMTDA () [inline, virtual]**

Destructor empty

### 7.190.3 Member Function Documentation

**7.190.3.1 template<class LockType> void OsclRefCounterMTDA< LockType >::addRef () [inline, virtual]**

Add to the reference count

Implements [OsclRefCounter](#).

**7.190.3.2 template<class LockType> uint32 OsclRefCounterMTDA< LockType >::getCount () [inline, virtual]**

Gets the current number of references

Implements [OsclRefCounter](#).

**7.190.3.3 template<class LockType> void OsclRefCounterMTDA< LockType >::removeRef () [inline, virtual]**

Remove from the reference count

Implements [OsclRefCounter](#).

References [OsclDestructDealloc::destruct\\_and\\_dealloc\(\)](#).

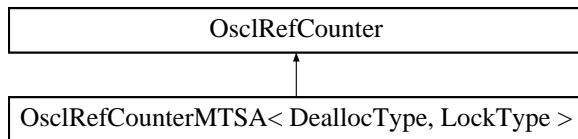
The documentation for this class was generated from the following file:

- [oscl\\_refcounter.h](#)

## 7.191 OsclRefCounterMTSA< DeallocType, LockType > Class Template Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounterMTSA< DeallocType, LockType >:



### Public Member Functions

- [OsclRefCounterMTSA \(OsclAny \\*p\)](#)
- virtual [~OsclRefCounterMTSA \(\)](#)
- void [addRef \(\)](#)
- void [removeRef \(\)](#)
- uint32 [getCount \(\)](#)

#### 7.191.1 Detailed Description

`template<class DeallocType, class LockType> class OsclRefCounterMTSA< DeallocType, LockType >`

Implementation of [OsclRefCounterSA](#) for multi-threaded use. A templated lock class must be specified.

#### 7.191.2 Constructor & Destructor Documentation

##### 7.191.2.1 `template<class DeallocType, class LockType> OsclRefCounterMTSA< DeallocType, LockType >::OsclRefCounterMTSA (OsclAny * p) [inline]`

Constructor Takes a pointer to the buffer to track.

When the reference count reaches zero, the buffer will be deleted by the deallocator. Also, the [OsclRefCounter](#) object (this) will self-destruct when the reference count is zero. In some cases the [OsclRefCounter](#) object will be part of the buffer being deleted. For such cases, the object pointer must be equal to the buffer pointer given at construction. If the object is not part of the buffer being deleted, it will self-destruct with a call to `delete()`.

#### Parameters

*p* pointer to the buffer to track

References NULL, and OSCL\_ASSERT.

##### 7.191.2.2 `template<class DeallocType, class LockType> virtual OsclRefCounterMTSA< DeallocType, LockType >::~OsclRefCounterMTSA () [inline, virtual]`

Destructor empty

### 7.191.3 Member Function Documentation

**7.191.3.1 template<class DeallocType, class LockType> void OsclRefCounterMTSA<DeallocType, LockType >::addRef () [inline, virtual]**

Add to the reference count

Implements [OsclRefCounter](#).

**7.191.3.2 template<class DeallocType, class LockType> uint32 OsclRefCounterMTSA<DeallocType, LockType >::getCount () [inline, virtual]**

Gets the current number of references

Implements [OsclRefCounter](#).

**7.191.3.3 template<class DeallocType, class LockType> void OsclRefCounterMTSA<DeallocType, LockType >::removeRef () [inline, virtual]**

Remove from the reference count

Implements [OsclRefCounter](#).

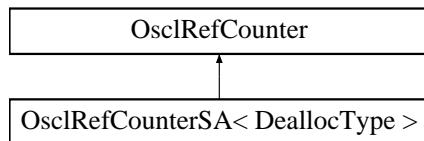
The documentation for this class was generated from the following file:

- [oscl\\_refcounter.h](#)

## 7.192 OsclRefCounterSA< DeallocType > Class Template Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounterSA< DeallocType >:



### Public Member Functions

- [OsclRefCounterSA \(OsclAny \\*p\)](#)
- virtual [~OsclRefCounterSA \(\)](#)
- void [addRef \(\)](#)
- void [removeRef \(\)](#)
- uint32 [getCount \(\)](#)

#### 7.192.1 Detailed Description

**template<class DeallocType> class OsclRefCounterSA< DeallocType >**

Implementation of an [OsclRefCounter](#) that uses a statically created deallocator.

#### 7.192.2 Constructor & Destructor Documentation

**7.192.2.1 template<class DeallocType> OsclRefCounterSA< DeallocType >::OsclRefCounterSA (OsclAny \**p*) [inline]**

Constructor Takes a pointer to the buffer to track.

When the reference count reaches zero, the buffer will be deleted by the deallocator. Also, the [OsclRefCounter](#) object (this) will self-destruct when the reference count is zero. In some cases the [OsclRefCounter](#) object will be part of the buffer being deleted. For such cases, the object pointer must be equal to the buffer pointer given at construction. If the object is not part of the buffer being deleted, it will self-destruct with a call to [delete\(\)](#).

##### Parameters

*p* pointer to the buffer to track

References NULL, and OSCL\_ASSERT.

**7.192.2.2 template<class DeallocType> virtual OsclRefCounterSA< DeallocType >::~OsclRefCounterSA () [inline, virtual]**

Destructor empty

### 7.192.3 Member Function Documentation

**7.192.3.1 template<class DeallocType> void OsclRefCounterSA< DeallocType >::addRef ()  
[inline, virtual]**

Add to the reference count

Implements [OsclRefCounter](#).

**7.192.3.2 template<class DeallocType> uint32 OsclRefCounterSA< DeallocType >::getCount ()  
[inline, virtual]**

Gets the current number of references

Implements [OsclRefCounter](#).

**7.192.3.3 template<class DeallocType> void OsclRefCounterSA< DeallocType >::removeRef ()  
[inline, virtual]**

Remove from the reference count

Implements [OsclRefCounter](#).

The documentation for this class was generated from the following file:

- [oscl\\_refcounter.h](#)

## 7.193 OsclRegistryAccessClient Class Reference

```
#include <oscl_registry_access_client.h>
```

### Public Member Functions

- OSCL\_IMPORT\_REF OsclRegistryAccessClient ()
- OSCL\_IMPORT\_REF ~OsclRegistryAccessClient ()
- OSCL\_IMPORT\_REF int32 Connect ()
- OSCL\_IMPORT\_REF OsclComponentFactory GetFactory (OSCL\_String &aComponent)
- OSCL\_IMPORT\_REF void GetFactories (OSCL\_String &aRegistry, Oscl\_Vector< OsclRegistryAccessElement, OsclMemAllocator > &aVec)
- OSCL\_IMPORT\_REF void Close ()

#### 7.193.1 Constructor & Destructor Documentation

**7.193.1.1 OSCL\_IMPORT\_REF OsclRegistryAccessClient::OsclRegistryAccessClient ()**

**7.193.1.2 OSCL\_IMPORT\_REF OsclRegistryAccessClient::~OsclRegistryAccessClient ()**

#### 7.193.2 Member Function Documentation

**7.193.2.1 OSCL\_IMPORT\_REF void OsclRegistryAccessClient::Close ()**

Close and cleanup session.

**7.193.2.2 OSCL\_IMPORT\_REF int32 OsclRegistryAccessClient::Connect ()**

Create a session.

#### Returns

OsclErrNone on success.

**7.193.2.3 OSCL\_IMPORT\_REF void OsclRegistryAccessClient::GetFactories (OSCL\_String &*aRegistry*, Oscl\_Vector< OsclRegistryAccessElement, OsclMemAllocator > &*aVec*)**

Get all factories for a given registry type.

#### Parameters

*aRegistry*,: registry MIME type

*aVec*,: output component factory + mimestring vector.

**7.193.2.4 OSCL\_IMPORT\_REF OsclComponentFactory OsclRegistryAccessClient::GetFactory (OSCL\_String &*aComponent*)**

Lookup a factory by registry and component mime type.

**Parameters**

*aComponent*,: registry+component MIME type

**Returns**

Factory. Factory will be NULL if not found.

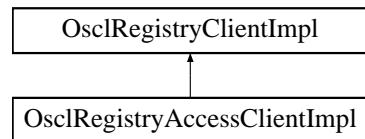
The documentation for this class was generated from the following file:

- [oscl\\_registry\\_access\\_client.h](#)

## 7.194 OsclRegistryAccessClientImpl Class Reference

```
#include <oscl_registry_client_impl.h>
```

Inheritance diagram for OsclRegistryAccessClientImpl:



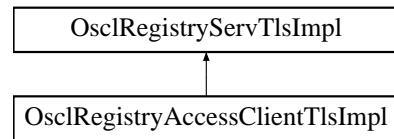
The documentation for this class was generated from the following file:

- [oscl\\_registry\\_client\\_impl.h](#)

## 7.195 OsclRegistryAccessClientTlsImpl Class Reference

```
#include <oscl_registry_client_impl.h>
```

Inheritance diagram for OsclRegistryAccessClientTlsImpl:



The documentation for this class was generated from the following file:

- [oscl\\_registry\\_client\\_impl.h](#)

## 7.196 OsclRegistryAccessElement Class Reference

```
#include <oscl_registry_types.h>
```

### Data Fields

- [OsclComponentFactory iFactory](#)
- [OSCL\\_HeapString< OsclMemAllocator > iMimeType](#)

#### 7.196.1 Detailed Description

A class used to access the registry data

#### 7.196.2 Field Documentation

##### 7.196.2.1 OsclComponentFactory OsclRegistryAccessElement::iFactory

##### 7.196.2.2 OSCL\_HeapString<OsclMemAllocator> OsclRegistryAccessElement::iMimeType

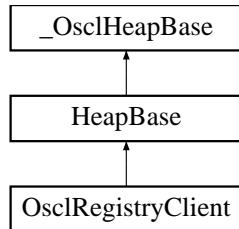
The documentation for this class was generated from the following file:

- [oscl\\_registry\\_types.h](#)

## 7.197 OsclRegistryClient Class Reference

```
#include <oscl_registry_client.h>
```

Inheritance diagram for OsclRegistryClient:



### Public Member Functions

- OSCL\_IMPORT\_REF OsclRegistryClient ()
- OSCL\_IMPORT\_REF ~OsclRegistryClient ()
- OSCL\_IMPORT\_REF int32 Connect (bool aPerThread=false)
- OSCL\_IMPORT\_REF int32 Register (OSCL\_String &aComponentID, OsclComponentFactory aFactory)
- OSCL\_IMPORT\_REF int32 UnRegister (OSCL\_String &aComponentID)
- OSCL\_IMPORT\_REF void Close ()

#### 7.197.1 Constructor & Destructor Documentation

**7.197.1.1 OSCL\_IMPORT\_REF OsclRegistryClient::OsclRegistryClient ()**

**7.197.1.2 OSCL\_IMPORT\_REF OsclRegistryClient::~OsclRegistryClient ()**

#### 7.197.2 Member Function Documentation

**7.197.2.1 OSCL\_IMPORT\_REF void OsclRegistryClient::Close ()**

Close and cleanup. All components registered in this session are automatically unregistered.

**7.197.2.2 OSCL\_IMPORT\_REF int32 OsclRegistryClient::Connect (bool *aPerThread = false*)**

Create a session.

##### Parameters

*aPerThread*,: Select per-thread registry instead of global registry.

##### Returns

OsclErrNone on success.

**7.197.2.3 OSCL\_IMPORT\_REF int32 OsclRegistryClient::Register (OSCL\_String & *aComponentID*, OsclComponentFactory *aFactory*)**

Register a component factory by registry ID and component ID.

**Parameters**

*aComponentID*,: registry + component mime-string.

*aFactory*,: factory function pointer.

*aParam*,: component Create param.

**Returns**

OsclErrNone on success.

**7.197.2.4 OSCL\_IMPORT\_REF int32 OsclRegistryClient::UnRegister (OSCL\_String & *aComponentID*)**

Unregister a previously registered component.

**Returns**

OsclErrNone on success.

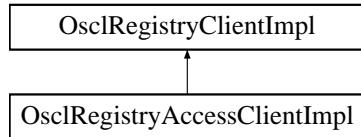
The documentation for this class was generated from the following file:

- [oscl\\_registry\\_client.h](#)

## 7.198 OsclRegistryClientImpl Class Reference

```
#include <oscl_registry_client_impl.h>
```

Inheritance diagram for OsclRegistryClientImpl:



### Protected Member Functions

- int32 [Connect \(\)](#)
- void [Close \(\)](#)
- int32 [Register \(OSCL\\_String &, OsclComponentFactory\)](#)
- int32 [UnRegister \(OSCL\\_String &\)](#)
- [OsclComponentFactory GetFactory \(OSCL\\_String &\)](#)
- void [GetFactories \(OSCL\\_String &, Oscl\\_Vector< OsclRegistryAccessElement, OsclMemAllocator > &\)](#)

### Friends

- class [OsclRegistryClient](#)
- class [OsclRegistryAccessClient](#)

#### 7.198.1 Member Function Documentation

**7.198.1.1 void OsclRegistryClientImpl::Close (void) [inline, protected]**

**7.198.1.2 int32 OsclRegistryClientImpl::Connect () [inline, protected]**

References OsclErrNotSupported.

**7.198.1.3 void OsclRegistryClientImpl::GetFactories (OSCL\_String &, Oscl\_Vector< OsclRegistryAccessElement, OsclMemAllocator > &) [inline, protected]**

**7.198.1.4 OsclComponentFactory OsclRegistryClientImpl::GetFactory (OSCL\_String &) [inline, protected]**

References NULL.

**7.198.1.5 int32 OsclRegistryClientImpl::Register (OSCL\_String &, OsclComponentFactory) [inline, protected]**

References OsclErrNotSupported.

**7.198.1.6 int32 OsclRegistryClientImpl::UnRegister (OSCL\_String &) [inline, protected]**

References OsclErrNotSupported.

**7.198.2 Friends And Related Function Documentation****7.198.2.1 friend class OsclRegistryAccessClient [friend]****7.198.2.2 friend class OsclRegistryClient [friend]**

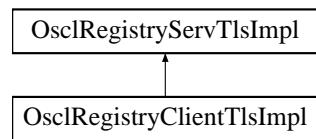
The documentation for this class was generated from the following file:

- [oscl\\_registry\\_client\\_impl.h](#)

## 7.199 OsclRegistryClientTlsImpl Class Reference

```
#include <oscl_registry_client_impl.h>
```

Inheritance diagram for OsclRegistryClientTlsImpl:



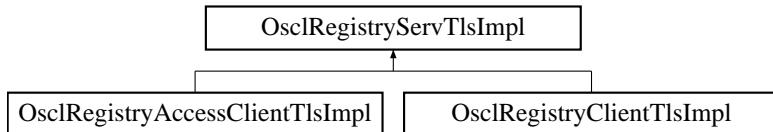
The documentation for this class was generated from the following file:

- [oscl\\_registry\\_client\\_impl.h](#)

## 7.200 OsclRegistryServTlsImpl Class Reference

```
#include <oscl_registry_serv_impl_tls.h>
```

Inheritance diagram for OsclRegistryServTlsImpl:



### Protected Member Functions

- [OsclRegistryServTlsImpl \(\)](#)
- virtual [~OsclRegistryServTlsImpl \(\)](#)
- int32 [Connect \(\)](#)
- void [Close \(\)](#)
- int32 [Register \(OSCL\\_String &aComponentID, OsclComponentFactory aFactory\)](#)
- int32 [UnRegister \(OSCL\\_String &aComponentID\)](#)
- [OsclComponentFactory GetFactory \(OSCL\\_String &aComponent\)](#)
- void [GetFactories \(OSCL\\_String &aRegistry, Oscl\\_Vector< OsclRegistryAccessElement, OsclMemAllocator > &aVec\)](#)

### Friends

- class [OsclRegistryClient](#)
- class [OsclRegistryAccessClient](#)

### 7.200.1 Constructor & Destructor Documentation

7.200.1.1 `OsclRegistryServTlsImpl::OsclRegistryServTlsImpl () [protected]`

7.200.1.2 `virtual OsclRegistryServTlsImpl::~OsclRegistryServTlsImpl () [protected, virtual]`

### 7.200.2 Member Function Documentation

7.200.2.1 `void OsclRegistryServTlsImpl::Close () [protected]`

7.200.2.2 `int32 OsclRegistryServTlsImpl::Connect () [protected]`

7.200.2.3 `void OsclRegistryServTlsImpl::GetFactories (OSCL_String & aRegistry, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > & aVec) [protected]`

7.200.2.4 `OsclComponentFactory OsclRegistryServTlsImpl::GetFactory (OSCL_String & aComponent) [protected]`

7.200.2.5 `int32 OsclRegistryServTlsImpl::Register (OSCL_String & aComponentID, OsclComponentFactory aFactory) [protected]`

7.200.2.6 `int32 OsclRegistryServTlsImpl::UnRegister (OSCL_String & aComponentID) [protected]`

### 7.200.3 Friends And Related Function Documentation

7.200.3.1 `friend class OsclRegistryAccessClient [friend]`

7.200.3.2 `friend class OsclRegistryClient [friend]`

The documentation for this class was generated from the following file:

- [oscl\\_registry\\_serv\\_impl\\_tls.h](#)

## 7.201 OsclScheduler Class Reference

```
#include <oscl_scheduler.h>
```

### Static Public Member Functions

- static OSCL\_IMPORT\_REF void [Init](#) (const char \*name, [Oscl\\_DefAlloc](#) \*alloc=NULL, int nreserve=20)
- static OSCL\_IMPORT\_REF void [Cleanup](#) ()

#### 7.201.1 Detailed Description

Per-thread scheduler initialization and cleanup.

#### 7.201.2 Member Function Documentation

##### 7.201.2.1 static OSCL\_IMPORT\_REF void OsclScheduler::Cleanup () [static]

This routine uninstalls and destroys Oscl scheduler for the calling thread.

##### 7.201.2.2 static OSCL\_IMPORT\_REF void OsclScheduler::Init (const char \* *name*, *Oscl\_DefAlloc* \* *alloc* = NULL, int *nreserve* = 20) [static]

This routine creates and installs a scheduler in the calling thread.

#### Parameters

- name*,: (input param) scheduler name.  
*alloc*,: (input param) optional allocator to use for the internal implementation.  
*nreserve*,: (input param) optional value for ready queue reserve size.

The documentation for this class was generated from the following file:

- [oscl\\_scheduler.h](#)

## 7.202 OsclSchedulerObserver Class Reference

```
#include <oscl_scheduler.h>
```

### Public Member Functions

- virtual void [OsclSchedulerTimerCallback](#) ([OsclAny](#) \*aContext, uint32 aDelayMsec)=0
- virtual void [OsclSchedulerReadyCallback](#) ([OsclAny](#) \*aContext)=0
- virtual ~[OsclSchedulerObserver](#) ()

### 7.202.1 Detailed Description

[OsclSchedulerObserver](#) is an observer class for use when running scheduler in non-blocking mode. The scheduler observer can register for callbacks so it will be notified when it is necessary to run scheduler again. Note: non-blocking mode and scheduler callbacks are not supported on Symbian.

### 7.202.2 Constructor & Destructor Documentation

7.202.2.1 virtual [OsclSchedulerObserver](#)::~[OsclSchedulerObserver](#) () [inline, virtual]

### 7.202.3 Member Function Documentation

7.202.3.1 virtual void [OsclSchedulerObserver::OsclSchedulerReadyCallback](#) ([OsclAny](#) \* *aContext*) [pure virtual]

[OsclSchedulerReadyCallback](#) is called when the ready queue is updated, meaning an AO is ready to run. Scheduler needs to be run ASAP. Calling context may be any thread, so be careful!

The current observer is cleared before making the callback, so the observer must call RegisterForCallback again if it wants further notifications.

7.202.3.2 virtual void [OsclSchedulerObserver::OsclSchedulerTimerCallback](#) ([OsclAny](#) \* *aContext*, uint32 *aDelayMsec*) [pure virtual]

[OsclSchedulerTimerCallback](#) is called when the front of the timer queue is updated. This means the minimum delay has changed and scheduler needs to be run again after *aDelayMsec*. Calling context is in-thread.

The current observer is cleared before making the callback, so the observer must call RegisterForCallback again if it wants further notifications.

The documentation for this class was generated from the following file:

- [oscl\\_scheduler.h](#)

## 7.203 OsclScopedLock< LockClass > Class Template Reference

The [OsclScopedLock](#) class is a template class that handles unlocking an abstract class on destruction. This is very useful for ensuring that the lock is released when the [OsclScopedLock](#) goes out of scope.

```
#include <oscl_lock_base.h>
```

### Public Member Functions

- [OsclScopedLock](#) (LockClass &*inLock*)  
*Default constructor Initializes the pointer and takes ownership.*
- [~OsclScopedLock](#) ()  
*Destructor.*

### 7.203.1 Detailed Description

**template<class LockClass> class OsclScopedLock< LockClass >**

The [OsclScopedLock](#) class is a template class that handles unlocking an abstract class on destruction. This is very useful for ensuring that the lock is released when the [OsclScopedLock](#) goes out of scope. The purpose of this class is to provide a way to prevent accidental resource leaks in a class or a method, due to "not remembering to unlock" variables which might lead to deadlock conditions.

### 7.203.2 Constructor & Destructor Documentation

#### 7.203.2.1 **template<class LockClass > OsclScopedLock< LockClass >::OsclScopedLock (LockClass & *inLock*) [inline, explicit]**

Default constructor Initializes the pointer and takes ownership.

#### 7.203.2.2 **template<class LockClass > OsclScopedLock< LockClass >::~OsclScopedLock () [inline]**

Destructor.

The pointer is deleted in case this class still has ownership

The documentation for this class was generated from the following file:

- [oscl\\_lock\\_base.h](#)

## 7.204 OsclSelect Class Reference

```
#include <oscl_init.h>
```

### Public Member Functions

- [OsclSelect \(\)](#)
- [OsclSelect \(Oscl\\_DefAlloc \\*erralloc, Oscl\\_DefAlloc \\*schedalloc, const char \\*name, int32 reserve=10, bool heapcheck=false, FILE \\*output=NULL\)](#)

### Data Fields

- bool [iOsclBase](#)
- bool [iOsclMemory](#)
- bool [iOsclErrorTrap](#)
- bool [iOsclLogger](#)
- bool [iOsclScheduler](#)
- Oscl\_DefAlloc \* [iErrAlloc](#)
- Oscl\_DefAlloc \* [iSchedulerAlloc](#)
- const char \* [iSchedulerName](#)
- int32 [iSchedulerReserve](#)
- bool [iHeapCheck](#)
- FILE \* [iOutputFile](#)

### 7.204.1 Detailed Description

Oscl Module selection and Init/Cleanup options.

## 7.204.2 Constructor & Destructor Documentation

7.204.2.1 **OsclSelect::OsclSelect () [inline]**

7.204.2.2 **OsclSelect::OsclSelect (Oscl\_DefAlloc \* *erralloc*, Oscl\_DefAlloc \* *schedalloc*, const char \* *name*, int32 *reserve* = 10, bool *heapcheck* = **false**, FILE \* *output* = **NULL**) [inline]**

## 7.204.3 Field Documentation

7.204.3.1 **Oscl\_DefAlloc\* OsclSelect::iErrAlloc**

7.204.3.2 **bool OsclSelect::iHeapCheck**

7.204.3.3 **bool OsclSelect::iOsclBase**

7.204.3.4 **bool OsclSelect::iOsclErrorTrap**

7.204.3.5 **bool OsclSelect::iOsclLogger**

7.204.3.6 **bool OsclSelect::iOsclMemory**

7.204.3.7 **bool OsclSelect::iOsclScheduler**

7.204.3.8 **FILE\* OsclSelect::iOutputFile**

7.204.3.9 **Oscl\_DefAlloc\* OsclSelect::iSchedulerAlloc**

7.204.3.10 **const char\* OsclSelect::iSchedulerName**

7.204.3.11 **int32 OsclSelect::iSchedulerReserve**

The documentation for this class was generated from the following file:

- [oscl\\_init.h](#)

## 7.205 OsclSemaphore Class Reference

```
#include <oscl_semaphore.h>
```

### Public Member Functions

- OSCL\_IMPORT\_REF OsclSemaphore ()
- OSCL\_IMPORT\_REF ~OsclSemaphore ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Create (uint32 initVal=0)
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Close ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Wait ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Wait (uint32 timeout\_msec)
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError TryWait ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Signal ()

### 7.205.1 Detailed Description

Class Semaphore

### 7.205.2 Constructor & Destructor Documentation

#### 7.205.2.1 OSCL\_IMPORT\_REF OsclSemaphore::OsclSemaphore ()

Class constructor

#### 7.205.2.2 OSCL\_IMPORT\_REF OsclSemaphore::~OsclSemaphore ()

Class destructor

### 7.205.3 Member Function Documentation

#### 7.205.3.1 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclSemaphore::Close ()

Closes the Semaphore

##### Parameters

*It* wont take any parameters

##### Returns

Returns the Error whether it is success or failure incase of failure it will return what is the specific error

#### 7.205.3.2 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclSemaphore::Create (uint32 initVal = 0)

Creates the Semaphore

**Parameters**

*Initialcount*

**Returns**

Returns the Error whether it is success or failure incase of failure it will return what is the specific error

**7.205.3.3 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclSemaphore::Signal ()**

Signals that the thread is finished with the Semaphore

**Parameters**

*It* wont take any parameters

**Returns**

Returns the Error whether it is success or failure incase of failure it will return what is the specific error

**7.205.3.4 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclSemaphore::TryWait ()**

Try to acquire semaphore ,if the semaphore is already acquired by another thread, calling thread immediately returns with out blocking

**Parameters**

*It* wont take any parameters

**Returns**

Returns SUCCESS\_ERROR if the semaphore was acquired, SEM\_LOCKED\_ERROR if the semaphore cannot be acquired without waiting, or an error code if the operation failed. Note: this function may not be supported on all platforms, and may return NOT\_IMPLEMENTED.

**7.205.3.5 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclSemaphore::Wait (uint32 timeout\_msec)**

Makes the thread to wait on the Semaphore, with a timeout.

**Parameters**

*timeout* in milliseconds.

**Returns**

Returns SUCCESS\_ERROR if the semaphore was aquired, WAIT\_TIMEOUT\_ERROR if the timeout expired without acquiring the semaphore, or an error code if the operation failed. Note: this function may not be supported on all platforms, and may return NOT\_IMPLEMENTED.

**7.205.3.6 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclSemaphore::Wait ()**

Makes the thread to wait on the Semaphore

**Parameters**

*It* wont take any parameters

**Returns**

Returns the Error whether it is success or failure incase of failure it will return what is the specific error

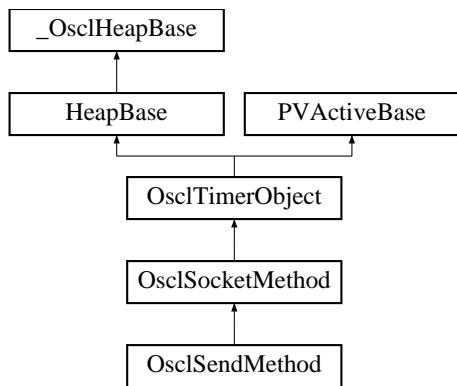
The documentation for this class was generated from the following file:

- [oscl\\_semaphore.h](#)

## 7.206 OsclSendMethod Class Reference

```
#include <oscl_socket_send.h>
```

Inheritance diagram for OsclSendMethod:



### Public Member Functions

- `~OsclSendMethod ()`
- `TPVSocketEvent Send (const uint8 *&aPtr, uint32 aLen, int32 aTimeout)`
- `uint8 * GetSendData (int32 *aLength)`
- `OsclSendRequest * SendRequest ()`

### Static Public Member Functions

- static `OsclSendMethod * NewL (OsclIPSocketI &c)`

#### 7.206.1 Constructor & Destructor Documentation

##### 7.206.1.1 OsclSendMethod::~OsclSendMethod ()

#### 7.206.2 Member Function Documentation

##### 7.206.2.1 uint8\* OsclSendMethod::GetSendData (int32 \* aLength)

Referenced by `OsclTCPSocketI::GetSendData()`.

##### 7.206.2.2 static OsclSendMethod\* OsclSendMethod::NewL (OsclIPSocketI & c) [static]

##### 7.206.2.3 TPVSocketEvent OsclSendMethod::Send (const uint8 \*& aPtr, uint32 aLen, int32 aTimeout)

Referenced by `OsclTCPSocketI::Send()`.

**7.206.2.4 OsclSendRequest\* OsclSendMethod::SendRequest () [inline]**

References OsclSocketMethod::iSocketRequestAO.

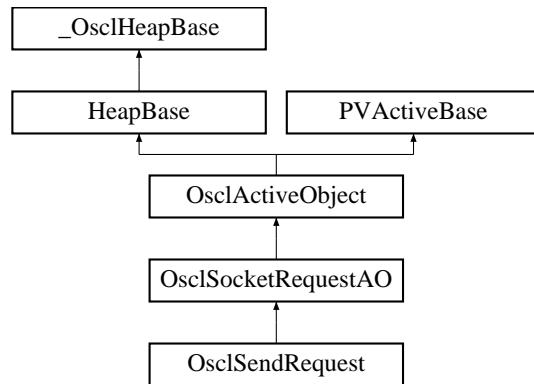
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_send.h](#)

## 7.207 OsclSendRequest Class Reference

```
#include <oscl_socket_send.h>
```

Inheritance diagram for OsclSendRequest:



### Public Member Functions

- [OsclSendRequest \(OsclSocketMethod &c\)](#)
- void [Send \(const uint8 \\*&aPtr, uint32 aLen\)](#)
- void [Success \(\)](#)
- uint8 \* [GetSendData \(int32 \\*aLength\)](#)

#### 7.207.1 Constructor & Destructor Documentation

[7.207.1.1 OsclSendRequest::OsclSendRequest \(OsclSocketMethod & c\) \[inline\]](#)

#### 7.207.2 Member Function Documentation

[7.207.2.1 uint8\\* OsclSendRequest::GetSendData \(int32 \\* aLength\)](#)

[7.207.2.2 void OsclSendRequest::Send \(const uint8 \\*& aPtr, uint32 aLen\)](#)

[7.207.2.3 void OsclSendRequest::Success \(\) \[virtual\]](#)

Reimplemented from [OsclSocketRequestAO](#).

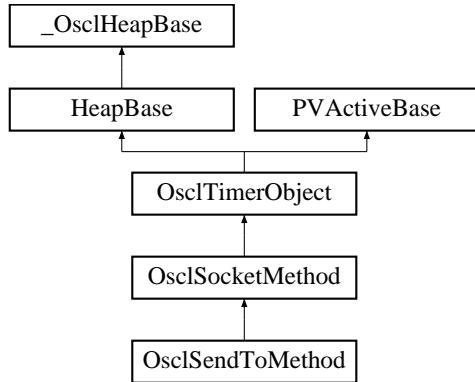
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_send.h](#)

## 7.208 OsclSendToMethod Class Reference

```
#include <oscl_socket_send_to.h>
```

Inheritance diagram for OsclSendToMethod:



### Public Member Functions

- [~OsclSendToMethod \(\)](#)
- [TPVSocketEvent SendTo \(const uint8 \\*&aPtr, uint32 aLen, OsclNetworkAddress &aAddress, int32 aTimeout\)](#)
- [uint8 \\* GetSendData \(int32 \\*aLength\)](#)
- [OsclSendToRequest \\* SendToRequest \(\)](#)

### Static Public Member Functions

- static [OsclSendToMethod \\* NewL \(OsclIPSocketI &c\)](#)

#### 7.208.1 Constructor & Destructor Documentation

##### 7.208.1.1 OsclSendToMethod::~OsclSendToMethod ()

#### 7.208.2 Member Function Documentation

##### 7.208.2.1 uint8\* OsclSendToMethod::GetSendData (int32 \* aLength)

Referenced by OsclUDPSocketI::GetSendData().

##### 7.208.2.2 static OsclSendToMethod\* OsclSendToMethod::NewL (OsclIPSocketI &c) [static]

##### 7.208.2.3 TPVSocketEvent OsclSendToMethod::SendTo (const uint8 \*& aPtr, uint32 aLen, OsclNetworkAddress & aAddress, int32 aTimeout)

Referenced by OsclUDPSocketI::SendTo().

**7.208.2.4 OsclSendToRequest\* OsclSendToMethod::SendToRequest () [inline]**

References OsclSocketMethod::iSocketRequestAO.

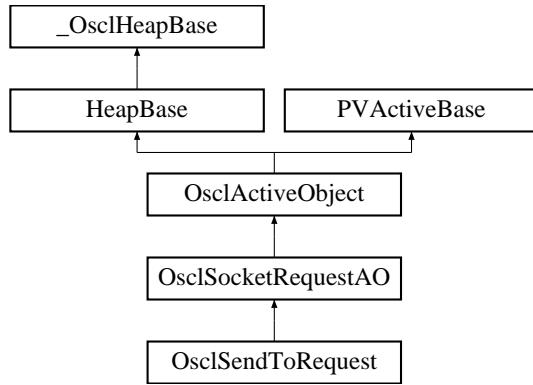
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_send\\_to.h](#)

## 7.209 OsclSendToRequest Class Reference

```
#include <oscl_socket_send_to.h>
```

Inheritance diagram for OsclSendToRequest:



### Public Member Functions

- [OsclSendToRequest \(OsclSocketMethod &c\)](#)
- void [SendTo \(const uint8 \\*&aPtr, uint32 aLen, OsclNetworkAddress &aAddress\)](#)
- void [Success \(\)](#)
- uint8 \* [GetSendData \(int32 \\*aLength\)](#)

#### 7.209.1 Detailed Description

This is the AO that interacts with the socket server

#### 7.209.2 Constructor & Destructor Documentation

**7.209.2.1 OsclSendToRequest::OsclSendToRequest (OsclSocketMethod & c) [inline]**

#### 7.209.3 Member Function Documentation

**7.209.3.1 uint8\* OsclSendToRequest::GetSendData (int32 \* aLength)**

**7.209.3.2 void OsclSendToRequest::SendTo (const uint8 \*& aPtr, uint32 aLen, OsclNetworkAddress & aAddress)**

**7.209.3.3 void OsclSendToRequest::Success () [virtual]**

Reimplemented from [OsclSocketRequestAO](#).

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_send\\_to.h](#)

## 7.210 OsclSharedPtr< TheClass > Class Template Reference

A parameterized smart pointer class.

```
#include <oscl_shared_ptr.h>
```

### Public Member Functions

- `OsclSharedPtr ()`  
*Constructor.*
- `OsclSharedPtr (TheClass *inClassPtr, OsclRefCounter *in_refcnt)`  
*Constructor.*
- `OsclSharedPtr (const OsclSharedPtr &inSharedPtr)`  
*Copy constructor.*
- `virtual ~OsclSharedPtr ()`  
*Destructor.*
- `TheClass * operator-> ()`  
• `TheClass & operator* ()`  
*The indirection operator returns a reference to an object of the parameterized type.*
- `operator TheClass * ()`  
*Casting operator.*
- `TheClass * GetRep ()`  
*Use this function to get a pointer to the wrapped object.*
- `OsclRefCounter * GetRefCounter ()`  
*Get the refcount pointer. This should primarily be used for conversion operations.*
- `int get_count ()`  
*Get a count of how many references to the object exist.*
- `void Bind (const OsclSharedPtr &inHandle)`  
*Use this function to bind an existing `OsclSharedPtr` to a already-wrapped object.*
- `void Bind (TheClass *ptr, OsclRefCounter *in_refcnt)`  
*Use this function to bind an existing `OsclSharedPtr` to a new (unwrapped) object.*
- `void Unbind ()`  
*Use this function of unbind an existing `OsclSharedPtr`.*
- `OsclSharedPtr & operator= (const OsclSharedPtr &inSharedPtr)`  
*Assignment operator.*
- `bool operator== (const OsclSharedPtr &b) const`  
*Test for equality to see if two PVHandles wrap the same object.*

### 7.210.1 Detailed Description

**template<class TheClass> class OsclSharedPtr< TheClass >**

A parameterized smart pointer class.

### 7.210.2 Constructor & Destructor Documentation

#### 7.210.2.1 template<class TheClass> OsclSharedPtr< TheClass >::OsclSharedPtr () [inline]

Constructor.

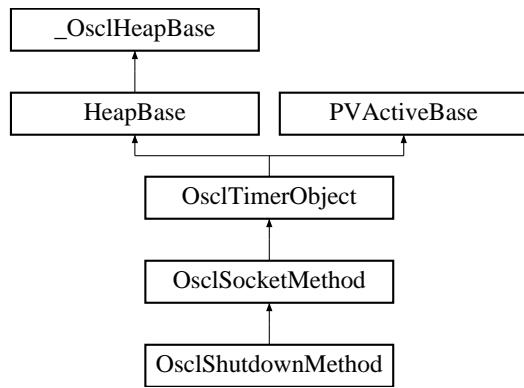
The documentation for this class was generated from the following file:

- [oscl\\_shared\\_ptr.h](#)

## 7.211 OsclShutdownMethod Class Reference

```
#include <oscl_socket_shutdown.h>
```

Inheritance diagram for OsclShutdownMethod:



### Public Member Functions

- [`~OsclShutdownMethod \(\)`](#)
- [`TPVSocketEvent Shutdown \(TPVSocketShutdown aHow, int32 aTimeout\)`](#)
- [`OsclShutdownRequest \* ShutdownRequest \(\)`](#)

### Static Public Member Functions

- static [`OsclShutdownMethod \* NewL \(OsclIPSocketI &c\)`](#)

#### 7.211.1 Constructor & Destructor Documentation

##### 7.211.1.1 OsclShutdownMethod::~OsclShutdownMethod ()

#### 7.211.2 Member Function Documentation

##### 7.211.2.1 static OsclShutdownMethod\* OsclShutdownMethod::NewL (OsclIPSocketI &c) [static]

##### 7.211.2.2 TPVSocketEvent OsclShutdownMethod::Shutdown (TPVSocketShutdown aHow, int32 aTimeout)

Referenced by [OsclTCPSocketI::Shutdown\(\)](#).

##### 7.211.2.3 OsclShutdownRequest\* OsclShutdownMethod::ShutdownRequest () [inline]

References [OsclSocketMethod::iSocketRequestAO](#).

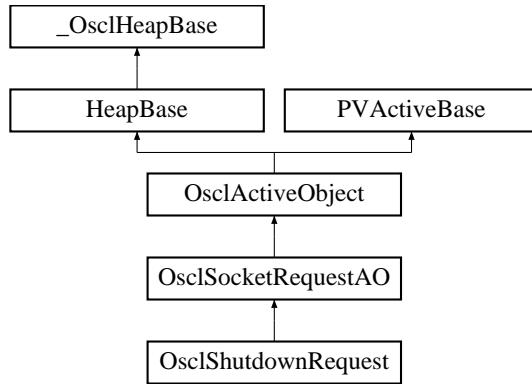
The documentation for this class was generated from the following file:

- [`oscl\_socket\_shutdown.h`](#)

## 7.212 OsclShutdownRequest Class Reference

```
#include <oscl_socket_shutdown.h>
```

Inheritance diagram for OsclShutdownRequest:



### Public Member Functions

- [OsclShutdownRequest \(OsclSocketMethod &c\)](#)
- void [Shutdown \(TPVSocketShutdown aHow\)](#)

#### 7.212.1 Detailed Description

This is the AO that interacts with the socket server

#### 7.212.2 Constructor & Destructor Documentation

7.212.2.1 [OsclShutdownRequest::OsclShutdownRequest \(OsclSocketMethod & c\) \[inline\]](#)

#### 7.212.3 Member Function Documentation

7.212.3.1 [void OsclShutdownRequest::Shutdown \(TPVSocketShutdown aHow\)](#)

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_shutdown.h](#)

## 7.213 OsclSingletonEx< T, ID, Registry > Class Template Reference

```
#include <oscl_error.h>
```

### Public Member Functions

- [OsclSingletonEx \(\)](#)
- [~OsclSingletonEx \(\)](#)
- [T & operator\\* \(\) const](#)

*The indirection operator (\*) accesses a value indirectly, through a pointer.*

- [T \\* operator-> \(\) const](#)

*The indirection operator (->) accesses a value indirectly, through a pointer.*

- [bool set \(\)](#)

*set() method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.*

### Protected Attributes

- [T \\* \\_Ptr](#)

```
template<class T, uint32 ID, class Registry = OsclSingletonRegistryEx> class OsclSingletonEx< T, ID, Registry >
```

#### 7.213.1 Constructor & Destructor Documentation

**7.213.1.1 template<class T , uint32 ID, class Registry = OsclSingletonRegistryEx> OsclSingletonEx< T, ID, Registry >::OsclSingletonEx () [inline]**

**7.213.1.2 template<class T , uint32 ID, class Registry = OsclSingletonRegistryEx> OsclSingletonEx< T, ID, Registry >::~OsclSingletonEx () [inline]**

#### 7.213.2 Member Function Documentation

**7.213.2.1 template<class T , uint32 ID, class Registry = OsclSingletonRegistryEx> T& OsclSingletonEx< T, ID, Registry >::operator\* () const [inline]**

The indirection operator (\*) accesses a value indirectly, through a pointer.

This operator ensures that the OsclSingleton can be used like the regular pointer that it was initialized with.

References OsclSingletonEx< T, ID, Registry >::\_Ptr.

**7.213.2.2 template<class T , uint32 ID, class Registry = OsclSingletonRegistryEx> T\* OsclSingletonEx< T, ID, Registry >::operator-> () const [inline]**

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the OsclSingleton can be used like the regular pointer that it was initialized with.

References OsclSingletonEx< T, ID, Registry >::\_Ptr.

**7.213.2.3 template<class T , uint32 ID, class Registry = OsclSingletonRegistryEx> bool OsclSingletonEx< T, ID, Registry >::set () [inline]**

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

References OsclSingletonEx< T, ID, Registry >::\_Ptr, and OSCL\_STATIC\_CAST.

### 7.213.3 Field Documentation

**7.213.3.1 template<class T , uint32 ID, class Registry = OsclSingletonRegistryEx> T\* OsclSingletonEx< T, ID, Registry >::\_Ptr [protected]**

Referenced by OsclSingletonEx< T, ID, Registry >::operator\*(), OsclSingletonEx< T, ID, Registry >::operator->(), and OsclSingletonEx< T, ID, Registry >::set().

The documentation for this class was generated from the following file:

- [oscl\\_error.h](#)

## 7.214 OsclSingletonRegistryEx Class Reference

```
#include <oscl_error.h>
```

### Static Public Member Functions

- static `OsclAny * getInstance (uint32 ID)`
- static void `registerInstance (OsclAny *ptr, uint32 ID)`
- static `OsclAny * lockAndGetInstance (uint32 ID)`
- static void `registerInstanceAndUnlock (OsclAny *ptr, uint32 ID)`

#### 7.214.1 Member Function Documentation

**7.214.1.1 static OsclAny\* OsclSingletonRegistryEx::getInstance (uint32 *ID*) [inline, static]**

References OsclError::Leave(), and OSCL\_ASSERT.

**7.214.1.2 static OsclAny\* OsclSingletonRegistryEx::lockAndGetInstance (uint32 *ID*) [inline, static]**

References OsclError::Leave(), and OSCL\_ASSERT.

**7.214.1.3 static void OsclSingletonRegistryEx::registerInstance (OsclAny \* *ptr*, uint32 *ID*) [inline, static]**

References OsclError::Leave(), and OSCL\_ASSERT.

**7.214.1.4 static void OsclSingletonRegistryEx::registerInstanceAndUnlock (OsclAny \* *ptr*, uint32 *ID*) [inline, static]**

References OsclError::Leave(), and OSCL\_ASSERT.

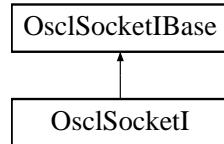
The documentation for this class was generated from the following file:

- `oscl_error.h`

## 7.215 OsclSocketI Class Reference

```
#include <oscl_socket_imp_pv.h>
```

Inheritance diagram for OsclSocketI:



### Public Member Functions

- `~OsclSocketI ()`
- `int32 Open (OsclSocketServI &aServer, uint32 addrFamily, uint32 sockType, uint32 protocol)`
- `int32 Open (OsclSocketServI &aServer)`
- `int32 Bind (OsclNetworkAddress &anAddr)`
- `int32 SetSockOpt (TPVSocketOptionLevel aOptionLevel, TPVSocketOptionName aOptionName, OsclAny *aOptionValue, int32 aOptionLen)`
- `int32 GetPeerName (OsclNetworkAddress &peerName)`
- `int32 Join (OsclNetworkAddress &anAddr)`
- `int32 Close ()`
- `int32 Listen (uint32 qSize)`
- `int32 SetRecvBufferSize (uint32 size)`
- `TPVSocketEvent ThreadLogoff ()`
- `TPVSocketEvent ThreadLogon (OsclSocketServI *aServ)`
- `void Connect (ConnectParam &, OsclSocketRequestAO &)`
- `void Accept (AcceptParam &, OsclSocketRequestAO &)`
- `void Shutdown (ShutdownParam &, OsclSocketRequestAO &)`
- `void Send (SendParam &, OsclSocketRequestAO &)`
- `void SendSuccess (SendParam &)`
- `void SendTo (SendToParam &, OsclSocketRequestAO &)`
- `void SendToSuccess (SendToParam &)`
- `void Recv (RecvParam &, OsclSocketRequestAO &)`
- `void RecvSuccess (RecvParam &)`
- `void RecvFrom (RecvFromParam &, OsclSocketRequestAO &)`
- `void RecvFromSuccess (RecvFromParam &)`
- `TOsclSocket Socket ()`
- `void ProcessConnect (OsclSocketServRequestQElem *)`
- `void ProcessShutdown (OsclSocketServRequestQElem *)`
- `void ProcessAccept (OsclSocketServRequestQElem *)`
- `void ProcessSendTo (OsclSocketServRequestQElem *)`
- `void ProcessRecvFrom (OsclSocketServRequestQElem *)`
- `void ProcessSend (OsclSocketServRequestQElem *)`
- `void ProcessRecv (OsclSocketServRequestQElem *)`
- `PVLogger * Logger ()`

## Static Public Member Functions

- static [OsclSocketI \\* NewL \(Oscl\\_DefAlloc &a\)](#)
- static bool [MakeAddr \(OsclNetworkAddress &in, TOsclSockAddr &addr\)](#)
- static void [MakeAddr \(TOsclSockAddr &in, OsclNetworkAddress &addr\)](#)
- static bool [MakeMulticastGroupInformation \(OsclIpMReq &in, TIpMReq &addr\)](#)
- static void [MakeMulticastGroupInformation \(TIpMReq &in, OsclIpMReq &addr\)](#)

## Friends

- class [OsclAcceptRequest](#)
- class [OsclConnectRequest](#)
- class [OsclRecvRequest](#)
- class [OsclRecvFromRequest](#)
- class [OsclSendRequest](#)
- class [OsclSendToRequest](#)
- class [OsclShutdownRequest](#)
- class [OsclUDPSocket](#)
- class [OsclTCPSocket](#)

### 7.215.1 Detailed Description

Socket implementation class

### 7.215.2 Constructor & Destructor Documentation

#### 7.215.2.1 [OsclSocketI::~OsclSocketI \(\)](#)

### 7.215.3 Member Function Documentation

#### 7.215.3.1 [void OsclSocketI::Accept \(AcceptParam &, OsclSocketRequestAO &\) \[virtual\]](#)

Implements [OsclSocketIBase](#).

#### 7.215.3.2 [int32 OsclSocketI::Bind \(OsclNetworkAddress & anAddr\) \[virtual\]](#)

Implements [OsclSocketIBase](#).

#### 7.215.3.3 [int32 OsclSocketI::Close \(\) \[virtual\]](#)

Implements [OsclSocketIBase](#).

#### 7.215.3.4 [void OsclSocketI::Connect \(ConnectParam &, OsclSocketRequestAO &\) \[virtual\]](#)

Implements [OsclSocketIBase](#).

**7.215.3.5 int32 OsclSocketI::GetPeerName (OsclNetworkAddress & *peerName*)**

**7.215.3.6 int32 OsclSocketI::Join (OsclNetworkAddress & *anAddr*) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.7 int32 OsclSocketI::Listen (uint32 *qSize*) [virtual]**

Implements [OsclSocketIBase](#).

Referenced by [OsclTCPSocketI::Listen\(\)](#).

**7.215.3.8 PVLogger\* OsclSocketI::Logger () [inline]**

**7.215.3.9 static void OsclSocketI::MakeAddr (TOsclSockAddr & *in*, OsclNetworkAddress & *addr*) [static]**

**7.215.3.10 static bool OsclSocketI::MakeAddr (OsclNetworkAddress & *in*, TOsclSockAddr & *addr*) [static]**

**7.215.3.11 static void OsclSocketI::MakeMulticastGroupInformation (TIpMReq & *in*, OsclIpMReq & *addr*) [static]**

**7.215.3.12 static bool OsclSocketI::MakeMulticastGroupInformation (OsclIpMReq & *in*, TIpMReq & *addr*) [static]**

**7.215.3.13 static OsclSocketI\* OsclSocketI::NewL (Oscl\_DefAlloc & *a*) [static]**

**7.215.3.14 int32 OsclSocketI::Open (OsclSocketServI & *aServer*) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.15 int32 OsclSocketI::Open (OsclSocketServI & *aServer*, uint32 *addrFamily*, uint32 *sockType*, uint32 *protocol*) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.16 void OsclSocketI::ProcessAccept (OsclSocketServRequestQElem \*)**

**7.215.3.17 void OsclSocketI::ProcessConnect (OsclSocketServRequestQElem \*)**

**7.215.3.18 void OsclSocketI::ProcessRecv (OsclSocketServRequestQElem \*)**

**7.215.3.19 void OsclSocketI::ProcessRecvFrom (OsclSocketServRequestQElem \*)**

**7.215.3.20 void OsclSocketI::ProcessSend (OsclSocketServRequestQElem \*)**

**7.215.3.21 void OsclSocketI::ProcessSendTo (OsclSocketServRequestQElem \*)**

**7.215.3.22 void OsclSocketI::ProcessShutdown (OsclSocketServRequestQElem \*)**

**7.215.3.23 void OsclSocketI::Recv (RecvParam &, OsclSocketRequestAO &) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.24 void OsclSocketI::RecvFrom (RecvFromParam &, OsclSocketRequestAO &) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.25 void OsclSocketI::RecvFromSuccess (RecvFromParam &) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.26 void OsclSocketI::RecvSuccess (RecvParam &) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.27 void OsclSocketI::Send (SendParam &, OsclSocketRequestAO &) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.28 void OsclSocketI::SendSuccess (SendParam &) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.29 void OsclSocketI::SendTo (SendToParam &, OsclSocketRequestAO &) [virtual]**

Implements [OsclSocketIBase](#).

**7.215.3.30 void OsclSocketI::SendToSuccess (SendToParam &) [virtual]**

Implements [OsclSocketIBase](#).

7.215.3.31 **int32 OsclSocketI::SetRecvBufferSize (uint32 *size*)**

7.215.3.32 **int32 OsclSocketI::SetSockOpt (TPVSocketOptionLevel *aOptionLevel*, TPVSocketOptionName *aOptionName*, OsclAny \* *aOptionValue*, int32 *aOptionLen*)**

7.215.3.33 **void OsclSocketI::Shutdown (ShutdownParam &, OsclSocketRequestAO &)**  
[**virtual**]

Implements [OsclSocketIBase](#).

7.215.3.34 **TOsclSocket OsclSocketI::Socket () [inline]**

7.215.3.35 **TPVSocketEvent OsclSocketI::ThreadLogoff ()**

7.215.3.36 **TPVSocketEvent OsclSocketI::ThreadLogon (OsclSocketServI \* *aServ*)**

## 7.215.4 Friends And Related Function Documentation

7.215.4.1 **friend class OsclAcceptRequest [friend]**

7.215.4.2 **friend class OsclConnectRequest [friend]**

7.215.4.3 **friend class OsclRecvFromRequest [friend]**

7.215.4.4 **friend class OsclRecvRequest [friend]**

7.215.4.5 **friend class OsclSendRequest [friend]**

7.215.4.6 **friend class OsclSendToRequest [friend]**

7.215.4.7 **friend class OsclShutdownRequest [friend]**

7.215.4.8 **friend class OsclTCPSocket [friend]**

Reimplemented from [OsclSocketIBase](#).

7.215.4.9 **friend class OsclUDPSocket [friend]**

Reimplemented from [OsclSocketIBase](#).

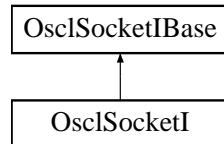
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_imp\\_pv.h](#)

## 7.216 OsclSocketIBase Class Reference

```
#include <oscl_socket_imp_base.h>
```

Inheritance diagram for OsclSocketIBase:



### Public Member Functions

- virtual ~OsclSocketIBase ()
- virtual int32 Open (OsclSocketServI &aServer, uint32 addrFamily, uint32 sockType, uint32 proto-  
col)=0
- virtual int32 Open (OsclSocketServI &aServer)=0
- virtual int32 Bind (OsclNetworkAddress &anAddr)=0
- virtual int32 Join (OsclNetworkAddress &anAddr)=0
- virtual int32 Close ()=0
- virtual int32 Listen (uint32 qSize)=0
- virtual void Connect (ConnectParam &, OsclSocketRequestAO &)=0
- virtual void Accept (AcceptParam &, OsclSocketRequestAO &)=0
- virtual void Shutdown (ShutdownParam &, OsclSocketRequestAO &)=0
- virtual void Send (SendParam &, OsclSocketRequestAO &)=0
- virtual void SendSuccess (SendParam &)=0
- virtual void SendTo (SendToParam &, OsclSocketRequestAO &)=0
- virtual void SendToSuccess (SendToParam &)=0
- virtual void Recv (RecvParam &, OsclSocketRequestAO &)=0
- virtual void RecvSuccess (RecvParam &)=0
- virtual void RecvFrom (RecvFromParam &, OsclSocketRequestAO &)=0
- virtual void RecvFromSuccess (RecvFromParam &)=0
- virtual void BindAsync (BindParam &, OsclSocketRequestAO &)
- virtual void ListenAsync (ListenParam &, OsclSocketRequestAO &)
- void CancelFxn (TPVSocketFxn)

### Static Public Member Functions

- static bool HasAsyncBind ()
- static bool HasAsyncListen ()

### Protected Member Functions

- OsclSocketIBase (Oscl\_DefAlloc &a)
- virtual void CancelConnect ()=0
- virtual void CancelAccept ()=0
- virtual void CancelShutdown ()=0
- virtual void CancelSend ()=0

- virtual void [CancelSendTo \(\)=0](#)
- virtual void [CancelRecv \(\)=0](#)
- virtual void [CancelRecvFrom \(\)=0](#)
- virtual void [CancelBind \(\)](#)
- virtual void [CancelListen \(\)](#)
- virtual bool [IsOpen \(\)=0](#)

## Static Protected Member Functions

- static int [GetShutdown \(TPVSocketShutdown aOsclVal\)](#)

## Protected Attributes

- [Oscl\\_DefAlloc & iAlloc](#)
- [OsclSocketServI \\* iSocketServ](#)

## Friends

- class [OsclSocketRequest](#)
- class [OsclSocketMethod](#)
- class [OsclSocketRequestAO](#)
- class [OsclUDPSocket](#)
- class [OsclTCPSocket](#)

### 7.216.1 Detailed Description

Socket implementation base class

### 7.216.2 Constructor & Destructor Documentation

**7.216.2.1** `virtual OsclSocketIBase::~OsclSocketIBase () [virtual]`

**7.216.2.2** `OsclSocketIBase::OsclSocketIBase (Oscl_DefAlloc & a) [protected]`

### 7.216.3 Member Function Documentation

**7.216.3.1** `virtual void OsclSocketIBase::Accept (AcceptParam &, OsclSocketRequestAO &) [pure virtual]`

Implemented in [OsclSocketI](#).

**7.216.3.2** `virtual int32 OsclSocketIBase::Bind (OsclNetworkAddress & anAddr) [pure virtual]`

Implemented in [OsclSocketI](#).

**7.216.3.3 virtual void OsclSocketIBase::BindAsync (BindParam &, OsclSocketRequestAO &)**  
[**inline, virtual**]

**7.216.3.4 virtual void OsclSocketIBase::CancelAccept ()** [**protected, pure virtual**]

**7.216.3.5 virtual void OsclSocketIBase::CancelBind ()** [**inline, protected, virtual**]

**7.216.3.6 virtual void OsclSocketIBase::CancelConnect ()** [**protected, pure virtual**]

**7.216.3.7 void OsclSocketIBase::CancelFxn (TPVSocketFxn)**

Referenced by OsclSocketRequestAO::DoCancel().

**7.216.3.8 virtual void OsclSocketIBase::CancelListen ()** [**inline, protected, virtual**]

**7.216.3.9 virtual void OsclSocketIBase::CancelRecv ()** [**protected, pure virtual**]

**7.216.3.10 virtual void OsclSocketIBase::CancelRecvFrom ()** [**protected, pure virtual**]

**7.216.3.11 virtual void OsclSocketIBase::CancelSend ()** [**protected, pure virtual**]

**7.216.3.12 virtual void OsclSocketIBase::CancelSendTo ()** [**protected, pure virtual**]

**7.216.3.13 virtual void OsclSocketIBase::CancelShutdown ()** [**protected, pure virtual**]

**7.216.3.14 virtual int32 OsclSocketIBase::Close ()** [**pure virtual**]

Implemented in [OsclSocketI](#).

**7.216.3.15 virtual void OsclSocketIBase::Connect (ConnectParam &, OsclSocketRequestAO &)**  
[**pure virtual**]

Implemented in [OsclSocketI](#).

**7.216.3.16 static int OsclSocketIBase::GetShutdown (TPVSocketShutdown aOsclVal)** [**static, protected**]

**7.216.3.17 static bool OsclSocketIBase::HasAsyncBind ()** [**static**]

Referenced by OsclUDPSocketI::BindAsync(), and OsclTCPSocketI::BindAsync().

**7.216.3.18 static bool OsclSocketIBase::HasAsyncListen ()** [**static**]

Referenced by OsclTCPSocketI::ListenAsync().

**7.216.3.19 virtual bool OsclSocketIBase::IsOpen () [protected, pure virtual]**

**7.216.3.20 virtual int32 OsclSocketIBase::Join (OsclNetworkAddress & *anAddr*) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.21 virtual int32 OsclSocketIBase::Listen (uint32 *qSize*) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.22 virtual void OsclSocketIBase::ListenAsync (ListenParam &, OsclSocketRequestAO & [inline, virtual])**

**7.216.3.23 virtual int32 OsclSocketIBase::Open (OsclSocketServI & *aServer*) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.24 virtual int32 OsclSocketIBase::Open (OsclSocketServI & *aServer*, uint32 *addrFamily*, uint32 *sockType*, uint32 *protocol*) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.25 virtual void OsclSocketIBase::Recv (RecvParam &, OsclSocketRequestAO & [pure virtual])**

Implemented in [OsclSocketI](#).

**7.216.3.26 virtual void OsclSocketIBase::RecvFrom (RecvFromParam &, OsclSocketRequestAO &) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.27 virtual void OsclSocketIBase::RecvFromSuccess (RecvFromParam &) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.28 virtual void OsclSocketIBase::RecvSuccess (RecvParam &) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.29 virtual void OsclSocketIBase::Send (SendParam &, OsclSocketRequestAO & [pure virtual])**

Implemented in [OsclSocketI](#).

**7.216.3.30 virtual void OsclSocketIBase::SendSuccess (SendParam &) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.31 virtual void OsclSocketIBase::SendTo (SendToParam &, OsclSocketRequestAO &) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.32 virtual void OsclSocketIBase::SendToSuccess (SendToParam &) [pure virtual]**

Implemented in [OsclSocketI](#).

**7.216.3.33 virtual void OsclSocketIBase::Shutdown (ShutdownParam &, OsclSocketRequestAO &) [pure virtual]**

Implemented in [OsclSocketI](#).

## 7.216.4 Friends And Related Function Documentation

**7.216.4.1 friend class OsclSocketMethod [friend]**

**7.216.4.2 friend class OsclSocketRequest [friend]**

**7.216.4.3 friend class OsclSocketRequestAO [friend]**

**7.216.4.4 friend class OsclTCPSocket [friend]**

Reimplemented in [OsclSocketI](#).

**7.216.4.5 friend class OsclUDPSocket [friend]**

Reimplemented in [OsclSocketI](#).

## 7.216.5 Field Documentation

**7.216.5.1 Oscl\_DefAlloc& OsclSocketIBase::iAlloc [protected]**

**7.216.5.2 OsclSocketServI\* OsclSocketIBase::iSocketServ [protected]**

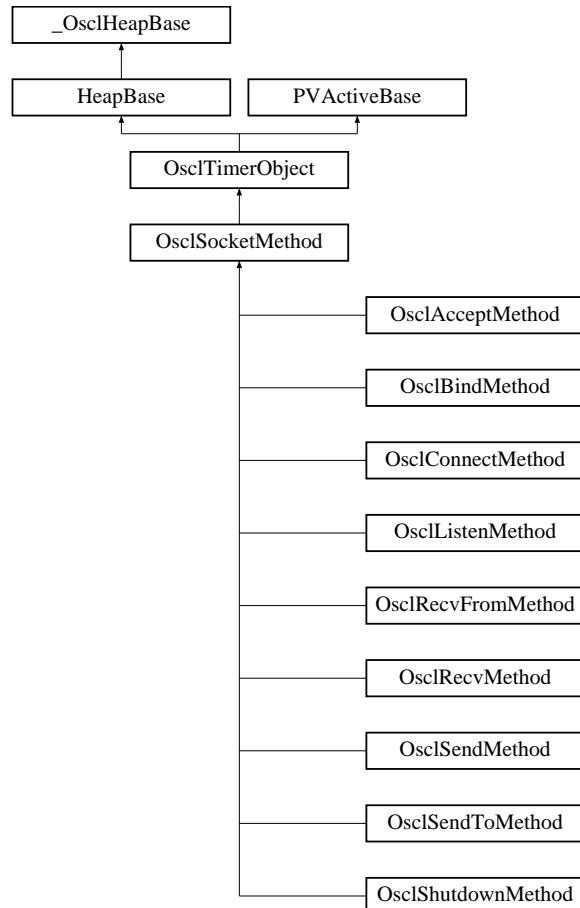
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_imp\\_base.h](#)

## 7.217 OsclSocketMethod Class Reference

```
#include <oscl_socket_method.h>
```

Inheritance diagram for OsclSocketMethod:



### Public Member Functions

- [OsclSocketMethod \(OsclIPSocketI &aContainer, const char \\*name, TPVSocketFxn fxn\)](#)
- virtual [~OsclSocketMethod \(\)](#)
- void [Abort \(\)](#)
- void [AbortAll \(\)](#)
- void [CancelMethod \(\)](#)
- [Oscl\\_DefAlloc & Alloc \(\)](#)
- [TPVSocketEvent ThreadLogon \(\)](#)
- [TPVSocketEvent ThreadLogoff \(\)](#)

### Data Fields

- [OsclIPSocketI & iContainer](#)
- [TPVSocketFxn iSocketFxn](#)

## Protected Member Functions

- void [ConstructL \(OsclSocketRequestAO \\*aAO\)](#)
- bool [StartMethod \(int32 aTimeoutMsec\)](#)
- void [MethodDone \(\)](#)
- void [Run \(\)](#)

## Protected Attributes

- [OsclSocketRequestAO \\* iSocketRequestAO](#)

### 7.217.1 Detailed Description

`OsclSocketMethod` is the base class for all socket methods. Two AOs are required for each socket operation-- one to provide a timeout, and one to detect request completion. The `OsclSocketMethod` class implements the timeout and contains the request completion AO.

### 7.217.2 Constructor & Destructor Documentation

**7.217.2.1 `OsclSocketMethod::OsclSocketMethod (OsclIPSocketI & aContainer, const char * name, TPVSocketFxn f xn) [inline]`**

**7.217.2.2 `virtual OsclSocketMethod::~OsclSocketMethod () [inline, virtual]`**

### 7.217.3 Member Function Documentation

**7.217.3.1 `void OsclSocketMethod::Abort () [inline]`**

References `OsclTimerObject::Cancel()`.

Referenced by `AbortAll()`, `CancelMethod()`, and `OsclSocketRequestAO::RequestDone()`.

**7.217.3.2 `void OsclSocketMethod::AbortAll () [inline]`**

References `OsclSocketRequestAO::Abort()`, `Abort()`, and `iSocketRequestAO`.

**7.217.3.3 `Oscl_DefAlloc& OsclSocketMethod::Alloc () [inline]`**

References `OsclIPSocketI::Alloc()`, and `iContainer`.

**7.217.3.4 `void OsclSocketMethod::CancelMethod () [inline]`**

References `Abort()`, `OsclSocketRequestAO::DoCancel()`, and `iSocketRequestAO`.

Referenced by `OsclTCPSocketI::CancelAccept()`, `OsclUDPSocketI::CancelBind()`, `OsclTCPSocketI::CancelBind()`, `OsclTCPSocketI::CancelConnect()`, `OsclTCPSocketI::CancelListen()`, `OsclTCPSocketI::CancelRecv()`, `OsclUDPSocketI::CancelRecvFrom()`, `OsclTCPSocketI::CancelSend()`, `OsclUDPSocketI::CancelSendTo()`, and `OsclTCPSocketI::CancelShutdown()`.

---

**7.217.3.5 void OsclSocketMethod::ConstructL (OsclSocketRequestAO \* aAO) [inline, protected]**

References iSocketRequestAO, OsclError::Leave(), and OsclErrGeneral.

**7.217.3.6 void OsclSocketMethod::MethodDone () [inline, protected]**

References OsclSocketRequestAO::Abort(), and iSocketRequestAO.

**7.217.3.7 void OsclSocketMethod::Run () [protected, virtual]**

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's WaitForAnyRequest() function completes.

Before calling this active object's [Run\(\)](#) function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request
2. marked this active object's request as complete (i.e. the request is no longer outstanding)

[Run\(\)](#) runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls ExecError() to handle the leave.

Note that once the active scheduler's Start() function has been called, all user code is run under one of the program's active object's [Run\(\)](#) or [RunError\(\)](#) functions.

Implements [PVActiveBase](#).

**7.217.3.8 bool OsclSocketMethod::StartMethod (int32 aTimeoutMsec) [protected]**
**7.217.3.9 TPVSocketEvent OsclSocketMethod::ThreadLogoff ()**
**7.217.3.10 TPVSocketEvent OsclSocketMethod::ThreadLogon ()**

## 7.217.4 Field Documentation

**7.217.4.1 OsclIPSocketI& OsclSocketMethod::iContainer**

Referenced by OsclSocketRequestAO::Alloc(), Alloc(), OsclSocketRequestAO::Id(), OsclSocketRequestAO::SocketI(), and OsclSocketRequestAO::SocketObserver().

**7.217.4.2 TPVSocketFxn OsclSocketMethod::iSocketFxn**

Referenced by OsclSocketRequestAO::DoCancel().

**7.217.4.3 OsclSocketRequestAO\* OsclSocketMethod::iSocketRequestAO [protected]**

Referenced by AbortAll(), OsclAcceptMethod::AcceptRequest(), OsclBindMethod::BindRequest(), CancelMethod(), OsclConnectMethod::ConnectRequest(), ConstructL(), OsclListenMethod::ListenRequest(),

MethodDone(), OsclRecvFromMethod::RecvFromRequest(), OsclRecvMethod::RecvRequest(), OsclSendMethod::SendRequest(), OsclSendToMethod::SendToRequest(), and OsclShutdownMethod::ShutdownRequest().

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_method.h](#)

## 7.218 OsclSocketObserver Class Reference

```
#include <oscl_socket_types.h>
```

### Public Member Functions

- virtual OSCL\_IMPORT\_REF void [HandleSocketEvent](#) (int32 aId, [TPVSocketFxn](#) aFxn, [TPVSocketEvent](#) aEvent, int32 aError)=0
- virtual [~OsclSocketObserver](#) ()

#### 7.218.1 Detailed Description

Socket event observer. The client implements this to get asynchronous command completion.

#### 7.218.2 Constructor & Destructor Documentation

7.218.2.1 virtual [OsclSocketObserver::~OsclSocketObserver](#) () [inline, virtual]

#### 7.218.3 Member Function Documentation

7.218.3.1 virtual OSCL\_IMPORT\_REF void [OsclSocketObserver::HandleSocketEvent](#) (int32 *aId*, [TPVSocketFxn](#) *aFxn*, [TPVSocketEvent](#) *aEvent*, int32 *aError*) [pure virtual]

Socket Event callback.

##### Parameters

*aId*,: The ID that was supplied when the socket was created.

*aFxn*,: Type of socket function call.

*aEvent*,: Function completion event. Will be EPVSocketSuccess, EPVSocketTimeout, or EPVSocketFailure.

*aError*,: When the event is EPVSocketFailure, this may contain a platform-specific error code, or zero if none is available.

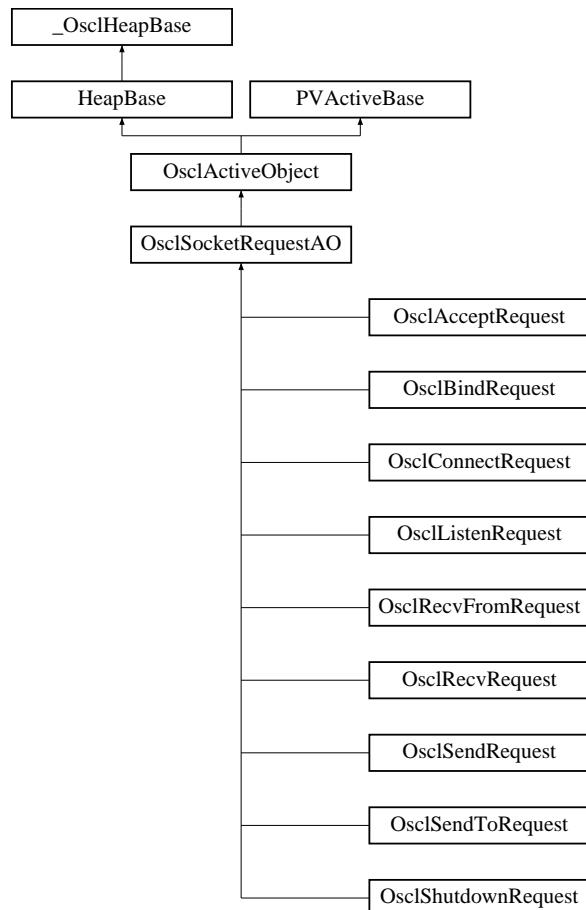
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_types.h](#)

## 7.219 OsclSocketRequestAO Class Reference

```
#include <oscl_socket_method.h>
```

Inheritance diagram for OsclSocketRequestAO:



### Public Member Functions

- void [ConstructL \(\)](#)

### Protected Member Functions

- [OsclSocketRequestAO \(OsclSocketMethod &aContainer, const char \\*name\)](#)
- virtual [~OsclSocketRequestAO \(\)](#)
- [OsclAny \\* NewRequest \(const uint32 size\)](#)
- void [CleanupParam \(bool deallocate=false\)](#)
- void [Abort \(\)](#)
- void [RequestDone \(\)](#)
- int [GetSocketError \(\)](#)
- void [DoCancel \(\)](#)
- void [Run \(\)](#)

- virtual void [Success](#) ()
- [OsclSocketI \\* SocketI](#) ()
- [OsclSocketObserver \\* SocketObserver](#) ()
- uint32 [Id](#) ()
- [Oscl\\_DefAlloc & Alloc](#) ()

## Protected Attributes

- [OsclSocketMethod & iContainer](#)
- int32 [iSocketError](#)
- [SocketRequestParam \\* iParam](#)
- uint32 [iParamSize](#)

## Friends

- class [OsclSocketI](#)
- class [OsclSocketMethod](#)
- class [OsclSocketRequest](#)

### 7.219.1 Detailed Description

This is the base class for all the AOs that interact with the socket server. This object is contained within an [OsclSocketMethod](#) object

### 7.219.2 Constructor & Destructor Documentation

**7.219.2.1 [OsclSocketRequestAO::OsclSocketRequestAO \(OsclSocketMethod & \*aContainer\*, const char \\* \*name\*\) \[inline, protected\]](#)**

**7.219.2.2 [virtual OsclSocketRequestAO::~OsclSocketRequestAO \(\) \[inline, protected, virtual\]](#)**

References [CleanupParam\(\)](#).

### 7.219.3 Member Function Documentation

**7.219.3.1 [void OsclSocketRequestAO::Abort \(\) \[inline, protected\]](#)**

References [OsclActiveObject::Cancel\(\)](#).

Referenced by [OsclSocketMethod::AbortAll\(\)](#), and [OsclSocketMethod::MethodDone\(\)](#).

**7.219.3.2 [Oscl\\_DefAlloc& OsclSocketRequestAO::Alloc \(\) \[inline, protected\]](#)**

References [OsclIPSocketI::Alloc\(\)](#), [OsclSocketMethod::iContainer](#), and [iContainer](#).

**7.219.3.3 [void OsclSocketRequestAO::CleanupParam \(bool \*deallocate = false\*\) \[protected\]](#)**

Referenced by [~OsclSocketRequestAO\(\)](#).

**7.219.3.4 void OsclSocketRequestAO::ConstructL () [inline]****7.219.3.5 void OsclSocketRequestAO::DoCancel () [inline, protected, virtual]**

Cancel request handler. This gets called by scheduler when the request is cancelled. The default routine will complete the request. If any additional action is needed, the derived class may override this. If the derived class does override DoCancel, it must complete the request.

Reimplemented from [OsclActiveObject](#).

References OsclSocketIBase::CancelFxn(), iContainer, OsclSocketMethod::iSocketFxn, and SocketI().

Referenced by OsclSocketMethod::CancelMethod().

**7.219.3.6 int OsclSocketRequestAO::GetSocketError () [inline, protected]****7.219.3.7 uint32 OsclSocketRequestAO::Id () [inline, protected]**

References OsclSocketMethod::iContainer, iContainer, and OsclIPSocketI::iId.

**7.219.3.8 OsclAny\* OsclSocketRequestAO::NewRequest (const uint32 size) [protected]****7.219.3.9 void OsclSocketRequestAO::RequestDone () [inline, protected]**

References OsclSocketMethod::Abort(), and iContainer.

**7.219.3.10 void OsclSocketRequestAO::Run () [protected, virtual]**

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's WaitForAnyRequest() function completes.

Before calling this active object's [Run\(\)](#) function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request
2. marked this active object's request as complete (i.e. the request is no longer outstanding)

[Run\(\)](#) runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls ExecError() to handle the leave.

Note that once the active scheduler's Start() function has been called, all user code is run under one of the program's active object's [Run\(\)](#) or [RunError\(\)](#) functions.

Implements [PVActiveBase](#).

**7.219.3.11 OsclSocketI\* OsclSocketRequestAO::SocketI () [inline, protected]**

References OsclSocketMethod::iContainer, iContainer, and OsclIPSocketI::iSocket.

Referenced by DoCancel().

**7.219.3.12 OsclSocketObserver\* OsclSocketRequestAO::SocketObserver () [inline, protected]**

References OsclSocketMethod::iContainer, iContainer, and OsclIPSocketI::iObserver.

**7.219.3.13 virtual void OsclSocketRequestAO::Success () [inline, protected, virtual]**

Reimplemented in [OsclRecvRequest](#), [OsclRecvFromRequest](#), [OsclSendRequest](#), and [OsclSendToRequest](#).

## 7.219.4 Friends And Related Function Documentation

**7.219.4.1 friend class OsclSocketI [friend]**

**7.219.4.2 friend class OsclSocketMethod [friend]**

**7.219.4.3 friend class OsclSocketRequest [friend]**

## 7.219.5 Field Documentation

**7.219.5.1 OsclSocketMethod& OsclSocketRequestAO::iContainer [protected]**

Referenced by Alloc(), DoCancel(), Id(), RequestDone(), SocketI(), and SocketObserver().

**7.219.5.2 SocketRequestParam\* OsclSocketRequestAO::iParam [protected]**

**7.219.5.3 uint32 OsclSocketRequestAO::iParamSize [protected]**

**7.219.5.4 int32 OsclSocketRequestAO::iSocketError [protected]**

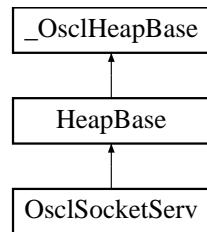
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_method.h](#)

## 7.220 OsclSocketServ Class Reference

```
#include <oscl_socket.h>
```

Inheritance diagram for OsclSocketServ:



### Public Member Functions

- OSCL\_IMPORT\_REF ~OsclSocketServ ()
- OSCL\_IMPORT\_REF int32 Connect (uint32 aMessageSlots=8, bool aShareSession=false)
- OSCL\_IMPORT\_REF void Close (bool aCleanup=true)

### Static Public Member Functions

- static OSCL\_IMPORT\_REF OsclSocketServ \* NewL (Oscl\_DefAlloc &alloc)

### Friends

- class OsclTCPSocket
- class OsclUDPSocket
- class OsclDNS

#### 7.220.1 Member Function Documentation

##### 7.220.1.1 static OSCL\_IMPORT\_REF OsclSocketServ\* OsclSocketServ::NewL (Oscl\_DefAlloc &alloc) [static]

Create a socket server. May leave if failure.

#### Parameters

*alloc*,: Memory allocator.

#### Returns

Returns pointer to socket server

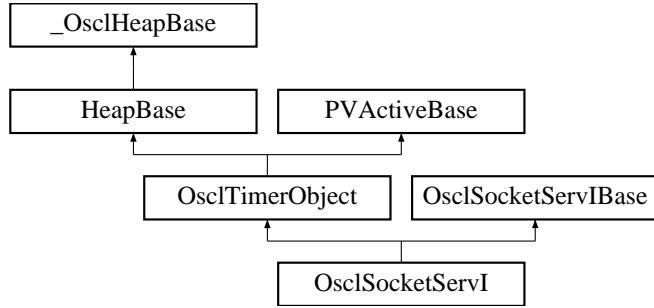
The documentation for this class was generated from the following file:

- [oscl\\_socket.h](#)

## 7.221 OsclSocketServI Class Reference

```
#include <oscl_socket_serv_imp_pv.h>
```

Inheritance diagram for OsclSocketServI:



### Public Member Functions

- int32 [Connect](#) (uint32 aMessageSlots, bool aShareSession)
- void [Close](#) (bool)
- bool [IsServerThread](#) ()

### Static Public Member Functions

- static [OsclSocketServI \\* NewL](#) ([Oscl\\_DefAlloc](#) &a)

### Friends

- class [OsclSocketServRequestList](#)
- class [LoopbackSocket](#)
- class [OsclTCPSocketI](#)
- class [OsclUDPSocketI](#)
- class [OsclSocketI](#)
- class [OsclDNSI](#)
- class [OsclSocketRequest](#)
- class [OsclSocketServ](#)

### 7.221.1 Detailed Description

PV socket server implementation

### 7.221.2 Member Function Documentation

#### 7.221.2.1 void OsclSocketServI::Close (bool) [virtual]

Implements [OsclSocketServIBase](#).

**7.221.2.2 int32 OsclSocketServI::Connect (uint32 *aMessageSlots*, bool *aShareSession*) [virtual]**

Implements [OsclSocketServIBase](#).

**7.221.2.3 bool OsclSocketServI::IsServerThread ()**

**7.221.2.4 static OsclSocketServI\* OsclSocketServI::NewL (Oscl\_DefAlloc & *a*) [static]**

### 7.221.3 Friends And Related Function Documentation

**7.221.3.1 friend class LoopbackSocket [friend]**

**7.221.3.2 friend class OsclDNSI [friend]**

**7.221.3.3 friend class OsclSocketI [friend]**

**7.221.3.4 friend class OsclSocketRequest [friend]**

**7.221.3.5 friend class OsclSocketServ [friend]**

**7.221.3.6 friend class OsclSocketServRequestList [friend]**

**7.221.3.7 friend class OsclTCPSocketI [friend]**

**7.221.3.8 friend class OsclUDPSocketI [friend]**

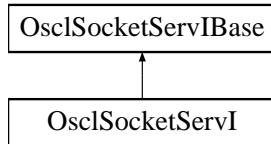
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_serv\\_imp\\_pv.h](#)

## 7.222 OsclSocketServIBase Class Reference

```
#include <oscl_socket_serv_imp_base.h>
```

Inheritance diagram for OsclSocketServIBase:



### Public Member Functions

- virtual ~OsclSocketServIBase ()
- virtual int32 Connect (uint32 aMessageSlots, bool aShareSession)=0
- virtual void Close (bool)=0

### Data Fields

- PVLogger \* iLogger

### Protected Types

- enum TSocketServState { ESocketServ\_Idle, ESocketServ\_Connected, ESocketServ\_Error }

### Protected Member Functions

- OsclSocketServIBase (Oscl\_DefAlloc &a)
- TSocketServState State () const
- bool IsServConnected () const

### Protected Attributes

- Oscl\_DefAlloc & iAlloc
- TSocketServState iServState
- int iServError

#### 7.222.1 Detailed Description

Socket Server implementation Base class common to all implementations

#### 7.222.2 Member Enumeration Documentation

##### 7.222.2.1 enum OsclSocketServIBase::TSocketServState [protected]

Enumerator:

*ESocketServ\_Idle*

*ESocketServ\_Connected*  
*ESocketServ\_Error*

### 7.222.3 Constructor & Destructor Documentation

7.222.3.1 **virtual OsclSocketServIBase::~OsclSocketServIBase () [inline, virtual]**

7.222.3.2 **OsclSocketServIBase::OsclSocketServIBase (Oscl\_DefAlloc & a) [inline, protected]**

References ESocketServ\_Idle, iLogger, iServError, iServState, and NULL.

### 7.222.4 Member Function Documentation

7.222.4.1 **virtual void OsclSocketServIBase::Close (bool) [pure virtual]**

Implemented in [OsclSocketServI](#).

7.222.4.2 **virtual int32 OsclSocketServIBase::Connect (uint32 aMessageSlots, bool aShareSession) [pure virtual]**

Implemented in [OsclSocketServI](#).

7.222.4.3 **bool OsclSocketServIBase::IsServConnected () const [inline, protected]**

References ESocketServ\_Connected, and iServState.

7.222.4.4 **TSocketServState OsclSocketServIBase::State () const [inline, protected]**

References iServState.

### 7.222.5 Field Documentation

7.222.5.1 **Oscl\_DefAlloc& OsclSocketServIBase::iAlloc [protected]**

7.222.5.2 **PVLogger\* OsclSocketServIBase::iLogger**

Referenced by OsclSocketServIBase().

7.222.5.3 **int OsclSocketServIBase::iServError [protected]**

Referenced by OsclSocketServIBase().

7.222.5.4 **TSocketServState OsclSocketServIBase::iServState [protected]**

Referenced by IsServConnected(), OsclSocketServIBase(), and State().

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_serv\\_imp\\_base.h](#)

## 7.223 OsclSocketServRequestList Class Reference

```
#include <oscl_socket_serv_imp_reqlist.h>
```

### Public Member Functions

- [OsclSocketServRequestList \(\)](#)
- void [Add \(OsclSocketRequest \\*\)](#)
- void [StartCancel \(OsclSocketRequest \\*\)](#)
- void [Open \(OsclSocketServI \\*s\)](#)
- void [Close \(\)](#)
- void [Wakeup \(\)](#)
- void [WaitOnRequests \(\)](#)
- void [Remove \(OsclSocketServRequestQElem \\*aElem\)](#)

### Friends

- class [OsclSocketServI](#)

### 7.223.1 Detailed Description

PV socket server request queue

### 7.223.2 Constructor & Destructor Documentation

#### 7.223.2.1 OsclSocketServRequestList::OsclSocketServRequestList ()

### 7.223.3 Member Function Documentation

#### 7.223.3.1 void OsclSocketServRequestList::Add (OsclSocketRequest \*)

#### 7.223.3.2 void OsclSocketServRequestList::Close ()

#### 7.223.3.3 void OsclSocketServRequestList::Open (OsclSocketServI \* s)

#### 7.223.3.4 void OsclSocketServRequestList::Remove (OsclSocketServRequestQElem \* aElem) [[inline](#)]

References [OsclSocketServRequestQElem::iSocketRequest](#), and [NULL](#).

**7.223.3.5 void OsclSocketServRequestList::StartCancel (OsclSocketRequest \*)**

**7.223.3.6 void OsclSocketServRequestList::WaitOnRequests ()**

**7.223.3.7 void OsclSocketServRequestList::Wakeup ()**

## **7.223.4 Friends And Related Function Documentation**

**7.223.4.1 friend class OsclSocketServI [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_serv\\_imp\\_reqlist.h](#)

## 7.224 OsclSocketServRequestQElem Class Reference

```
#include <oscl_socket_serv_imp_reqlist.h>
```

### Public Member Functions

- [OsclSocketServRequestQElem \(OsclSocketRequest \\*r\)](#)

### Data Fields

- OsclSocketRequest \* [iSocketRequest](#)
- uint8 [iSelect](#)
- bool [iCancel](#)

#### 7.224.1 Constructor & Destructor Documentation

7.224.1.1 **OsclSocketServRequestQElem::OsclSocketServRequestQElem (OsclSocketRequest \* r)**  
[[inline](#)]

#### 7.224.2 Field Documentation

7.224.2.1 **bool OsclSocketServRequestQElem::iCancel**

7.224.2.2 **uint8 OsclSocketServRequestQElem::iSelect**

7.224.2.3 **OsclSocketRequest\* OsclSocketServRequestQElem::iSocketRequest**

Referenced by [OsclSocketServRequestList::Remove\(\)](#).

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_serv\\_imp\\_reqlist.h](#)

## 7.225 OsclSocketTOS Class Reference

```
#include <oscl_socket_types.h>
```

### Public Types

- enum [TPVServicePrecedence](#) {
   
    [EPVRoutine](#) = 0, [EPVPriority](#) = 1, [EPVImmediate](#) = 2, [EPVFlash](#) = 3,
   
    [EPVOverrideFlash](#) = 4, [EPVCritic\\_Ecp](#) = 5, [EPVInetControl](#) = 6, [EPVNetControl](#) = 7 }
- enum [TPVServicePriority](#) { [EPVNoTOS](#) = 0x0, [EPVLDelay](#) = (1 << 4), [EPVHiThrpt](#) = (1 << 3),
 [EPVHiRel](#) = (1 << 2) }

### Public Member Functions

- [OsclSocketTOS](#) ()
- void [SetPrecedence](#) ([TPVServicePrecedence](#) aPrecedence)
- void [SetPriority](#) (bool aMinimizeDelay, bool aMaximizeThroughput, bool MaximizeReliability)
- void [ClearTOS](#) ()
- uint8 [GetTOS](#) () const

#### 7.225.1 Member Enumeration Documentation

##### 7.225.1.1 enum OsclSocketTOS::TPVServicePrecedence

Enumerator:

*EPVRoutine*  
*EPVPriority*  
*EPVImmediate*  
*EPVFlash*  
*EPVOverrideFlash*  
*EPVCritic\_Ecp*  
*EPVInetControl*  
*EPVNetControl*

##### 7.225.1.2 enum OsclSocketTOS::TPVServicePriority

Enumerator:

*EPVNoTOS*  
*EPVLDelay*  
*EPVHiThrpt*  
*EPVHiRel*

## 7.225.2 Constructor & Destructor Documentation

### 7.225.2.1 OsclSocketTOS::OsclSocketTOS () [inline]

References ClearTOS().

## 7.225.3 Member Function Documentation

### 7.225.3.1 void OsclSocketTOS::ClearTOS () [inline]

References EPVNoTOS, and EPVRoutine.

Referenced by OsclSocketTOS().

### 7.225.3.2 uint8 OsclSocketTOS::GetTOS () const [inline]

Format of Ip Header's TOS field as specified in RFC 791  
0 1 2 3 4 5 6 7 +-----+-----+-----+-----+  
+-----+-----+ | PRECEDENCE | D | T | R | 0 | 0 | +-----+-----+-----+-----+-----+-----+

### 7.225.3.3 void OsclSocketTOS::SetPrecedence (TPVServicePrecedence *aPrecedence*) [inline]

### 7.225.3.4 void OsclSocketTOS::SetPriority (bool *aMinimizeDelay*, bool *aMaximizeThroughput*, bool *MaximizeReliability*) [inline]

References EPVHiRel, EPVHiThrpt, EPVLDelay, and EPVNoTOS.

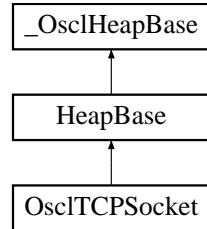
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_types.h](#)

## 7.226 OsclTCPSocket Class Reference

```
#include <oscl_socket.h>
```

Inheritance diagram for OsclTCPSocket:



### Public Member Functions

- OSCL\_IMPORT\_REF ~OsclTCPSocket ()
- OSCL\_IMPORT\_REF TPVSocketEvent ThreadLogoff ()
- OSCL\_IMPORT\_REF TPVSocketEvent ThreadLogon (OsclSocketServ &aServ, OsclSocketObserver \*aObserver)
- OSCL\_IMPORT\_REF int32 Close ()
- OSCL\_IMPORT\_REF int32 Bind (OsclNetworkAddress &aAddress)
- OSCL\_IMPORT\_REF TPVSocketEvent BindAsync (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=(-1))
- OSCL\_IMPORT\_REF void CancelBind ()
- OSCL\_IMPORT\_REF int32 SetOptionToReuseAddress ()
- OSCL\_IMPORT\_REF int32 SetTOS (const OsclSocketTOS &aTOS)
- OSCL\_IMPORT\_REF int32 GetPeerName (OsclNetworkAddress &aPeerName)
- OSCL\_IMPORT\_REF int32 Listen (int32 aQueueSize)
- OSCL\_IMPORT\_REF TPVSocketEvent ListenAsync (int32 aQueueSize, int32 aTimeoutMsec=(-1))
- OSCL\_IMPORT\_REF void CancelListen ()
- OSCL\_IMPORT\_REF OsclTCPSocket \* GetAcceptedSocketL (uint32 aId)
- OSCL\_IMPORT\_REF uint8 \* GetRecvData (int32 \*aLength)
- OSCL\_IMPORT\_REF uint8 \* GetSendData (int32 \*aLength)
- OSCL\_IMPORT\_REF TPVSocketEvent Connect (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void CancelConnect ()
- OSCL\_IMPORT\_REF TPVSocketEvent Shutdown (TPVSocketShutdown aHow, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void CancelShutdown ()
- OSCL\_IMPORT\_REF TPVSocketEvent Accept (int32 aTimeout=-1)
- OSCL\_IMPORT\_REF void CancelAccept ()
- OSCL\_IMPORT\_REF TPVSocketEvent Send (const uint8 \*aPtr, uint32 aLen, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void CancelSend ()
- OSCL\_IMPORT\_REF TPVSocketEvent Recv (uint8 \*aPtr, uint32 aMaxLen, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void CancelRecv ()

## Static Public Member Functions

- static OSCL\_IMPORT\_REF OsclTCPSocket \* NewL (Oscl\_DefAlloc &alloc, OsclSocketServ &aServ, OsclSocketObserver \*aObserver, uint32 aId)

### 7.226.1 Detailed Description

The TCP Socket class

### 7.226.2 Member Function Documentation

#### 7.226.2.1 static OSCL\_IMPORT\_REF OsclTCPSocket\* OsclTCPSocket::NewL (Oscl\_DefAlloc & alloc, OsclSocketServ & aServ, OsclSocketObserver \* aObserver, uint32 aId) [static]

Create a TCP Socket. May leave if failure.

#### Parameters

- alloc*,: Memory allocator.
- aServ*,: Socket server. Must be connected.
- aObserver*,: Socket observer.
- aId*,: Socket ID. The caller must assign an ID to each socket. The ID is used to identify the socket in observer callbacks.

#### Returns

Returns pointer to socket.

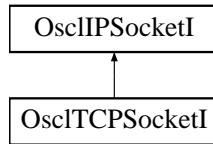
The documentation for this class was generated from the following file:

- [oscl\\_socket.h](#)

## 7.227 OsclTCPSocketI Class Reference

```
#include <oscl_tcp_socket.h>
```

Inheritance diagram for OsclTCPSocketI:



### Public Member Functions

- virtual ~OsclTCPSocketI ()
- TPVSocketEvent ThreadLogoff ()
- TPVSocketEvent ThreadLogon (OsclSocketServI \*aServ, OsclSocketObserver \*aObserver)
- int32 Close ()
- int32 Listen (int aQueueSize)
- OsclTCPSocketI \* GetAcceptedSocketL (uint32 aId)
- uint8 \* GetRecvData (int32 \*aLength)
- uint8 \* GetSendData (int32 \*aLength)
- TPVSocketEvent BindAsync (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1)
- void CancelBind ()
- TPVSocketEvent ListenAsync (uint32 qsize, int32 aTimeoutMsec=-1)
- void CancelListen ()
- TPVSocketEvent Connect (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1)
- void CancelConnect ()
- TPVSocketEvent Shutdown (TPVSocketShutdown aHow, int32 aTimeoutMsec=-1)
- void CancelShutdown ()
- TPVSocketEvent Accept (int32 aTimeout=-1)
- void CancelAccept ()
- TPVSocketEvent Send (const uint8 \*&aPtr, uint32 aLen, int32 aTimeoutMsec=-1)
- void CancelSend ()
- TPVSocketEvent Recv (uint8 \*&aPtr, uint32 aMaxLen, int32 aTimeoutMsec=-1)
- void CancelRecv ()

### Static Public Member Functions

- static OsclTCPSocketI \* NewL (Oscl\_DefAlloc &a, OsclSocketServI \*aServ, OsclSocketObserver \*aObserver, uint32 aId)

#### 7.227.1 Detailed Description

Internal implementation class for [OsclTCPSocket](#)

## 7.227.2 Constructor & Destructor Documentation

**7.227.2.1 virtual OsclTCPSocketI::~OsclTCPSocketI () [virtual]**

## 7.227.3 Member Function Documentation

**7.227.3.1 TPVSocketEvent OsclTCPSocketI::Accept (int32 *aTimeout* = -1) [inline]**

References OsclAcceptMethod::Accept(), EPVSocketFailure, and OsclIPSocketI::iObserver.

**7.227.3.2 TPVSocketEvent OsclTCPSocketI::BindAsync (OsclNetworkAddress & *aAddress*, int32 *aTimeoutMsec* = -1) [inline]**

References OsclBindMethod::Bind(), EPVSocketFailure, EPVSocketNotImplemented, OsclSocketIBase::HasAsyncBind(), OsclIPSocketI::iAddress, OsclIPSocketI::iObserver, OsclNetworkAddress::ipAddr, OsclNetworkAddress::port, OsclNameString< \_\_len >::Set(), and OsclNameString< \_\_len >::Str().

**7.227.3.3 void OsclTCPSocketI::CancelAccept () [inline]**

References OsclSocketMethod::CancelMethod().

**7.227.3.4 void OsclTCPSocketI::CancelBind () [inline]**

References OsclSocketMethod::CancelMethod().

**7.227.3.5 void OsclTCPSocketI::CancelConnect () [inline]**

References OsclSocketMethod::CancelMethod().

**7.227.3.6 void OsclTCPSocketI::CancelListen () [inline]**

References OsclSocketMethod::CancelMethod().

**7.227.3.7 void OsclTCPSocketI::CancelRecv () [inline]**

References OsclSocketMethod::CancelMethod().

**7.227.3.8 void OsclTCPSocketI::CancelSend () [inline]**

References OsclSocketMethod::CancelMethod().

**7.227.3.9 void OsclTCPSocketI::CancelShutdown () [inline]**

References OsclSocketMethod::CancelMethod().

**7.227.3.10 int32 OsclTCPSocketI::Close () [virtual]**

Implements [OsclIPSocketI](#).

**7.227.3.11 TPVSocketEvent OsclTCPSocketI::Connect (OsclNetworkAddress & aAddress, int32 aTimeoutMsec = -1) [inline]**

References [OsclConnectMethod::Connect\(\)](#), [EPVSocketFailure](#), and [OsclIPSocketI::iObserver](#).

**7.227.3.12 OsclTCPSocketI\* OsclTCPSocketI::GetAcceptedSocketL (uint32 aId)**

**7.227.3.13 uint8 \* OsclTCPSocketI::GetRecvData (int32 \* aLength) [inline, virtual]**

Implements [OsclIPSocketI](#).

References [OsclRecvMethod::GetRecvData\(\)](#).

**7.227.3.14 uint8 \* OsclTCPSocketI::GetSendData (int32 \* aLength) [inline, virtual]**

Implements [OsclIPSocketI](#).

References [OsclSendMethod::GetSendData\(\)](#).

**7.227.3.15 int32 OsclTCPSocketI::Listen (int aQueueSize) [inline]**

References [OsclIPSocketI::iSocket](#), and [OsclSocketI::Listen\(\)](#).

**7.227.3.16 TPVSocketEvent OsclTCPSocketI::ListenAsync (uint32 qsize, int32 aTimeoutMsec = -1) [inline]**

References [EPVSocketFailure](#), [EPVSocketNotImplemented](#), [OsclSocketIBase::HasAsyncListen\(\)](#), [OsclIPSocketI::iObserver](#), and [OsclListenMethod::Listen\(\)](#).

**7.227.3.17 static OsclTCPSocketI\* OsclTCPSocketI::NewL (Oscl\_DefAlloc & a, OsclSocketServI \* aServ, OsclSocketObserver \* aObserver, uint32 aId) [static]**

**7.227.3.18 TPVSocketEvent OsclTCPSocketI::Recv (uint8 \*& aPtr, uint32 aMaxLen, int32 aTimeoutMsec = -1) [inline]**

References [EPVSocketFailure](#), [OsclIPSocketI::iObserver](#), and [OsclRecvMethod::Recv\(\)](#).

**7.227.3.19 TPVSocketEvent OsclTCPSocketI::Send (const uint8 \*& aPtr, uint32 aLen, int32 aTimeoutMsec = -1) [inline]**

References [EPVSocketFailure](#), [OsclIPSocketI::iObserver](#), and [OsclSendMethod::Send\(\)](#).

**7.227.3.20 TPVSocketEvent OsclTCPSocketI::Shutdown (TPVSocketShutdown *aHow*, int32 *aTimeoutMsec* = -1) [inline]**

References EPVSocketFailure, OsclIPSocketI::iObserver, and OsclShutdownMethod::Shutdown().

**7.227.3.21 TPVSocketEvent OsclTCPSocketI::ThreadLogoff ()**

Reimplemented from [OsclIPSocketI](#).

**7.227.3.22 TPVSocketEvent OsclTCPSocketI::ThreadLogon (OsclSocketServI \* *aServ*, OsclSocketObserver \* *aObserver*)**

The documentation for this class was generated from the following file:

- [oscl\\_tcp\\_socket.h](#)

## 7.228 OsclThread Class Reference

```
#include <oscl_thread.h>
```

### Public Member Functions

- OSCL\_IMPORT\_REF OsclThread ()
- OSCL\_IMPORT\_REF ~OsclThread ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Create (TOsclThreadFuncPtr func, int32 stack\_size, TOsclThreadFuncArg argument, OsclThread\_State state=Start\_on\_creation, bool oIsJoinable=false)
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError GetPriority (OsclThreadPriority &refThreadPriority)
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError SetPriority (OsclThreadPriority ePriority)
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Suspend ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Resume ()
- OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError Terminate (OsclAny \*exitcode)
- OSCL\_IMPORT\_REF TOsclThreadTerminate CanTerminate ()

### Static Public Member Functions

- static OSCL\_IMPORT\_REF void Exit (OsclAny \*exitcode)
- static OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError GetId (TOsclThreadId &refThreadId)
- static OSCL\_IMPORT\_REF bool CompareId (TOsclThreadId &t1, TOsclThreadId &t2)
- static OSCL\_IMPORT\_REF void SleepMillisec (const int32 msec)

### 7.228.1 Detailed Description

Thread Class. A subset of Thread APIs. It implements platform independent APIs for thread creation, exiting, suspend, resume, priority and termination. With the use of proper defines it implements the basic thread features. It provides an opaque layer through which user doesn't need to worry about OS specific data.

### 7.228.2 Constructor & Destructor Documentation

#### 7.228.2.1 OSCL\_IMPORT\_REF OsclThread::OsclThread ()

Class constructor

#### 7.228.2.2 OSCL\_IMPORT\_REF OsclThread::~OsclThread ()

Class destructor

### 7.228.3 Member Function Documentation

#### 7.228.3.1 OSCL\_IMPORT\_REF TOsclThreadTerminate OsclThread::CanTerminate ()

Tell if thread terminate will do join, immediate hard kill, or NOP.

**Returns**

Terminate behavior.

**7.228.3.2 static OSCL\_IMPORT\_REF bool OsclThread::CompareId (TOsclThreadId & *t1*, TOsclThreadId & *t2*) [static]**

Static routine to compare whether two thread ID's are equal.

**Parameters**

*t1,t2*: thread ID passed by the application

**Returns**

true if equal.

**7.228.3.3 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclThread::Create (TOsclThreadFuncPtr *func*, int32 *stack\_size*, TOsclThreadFuncArg *argument*, OsclThread\_State *state* = Start\_on\_creation, bool *oIsJoinable* = false)**

This routine will create a thread. The thread may be launched immediately or may be created in a suspended state and launched with a Resume call.

**Parameters**

*func* = Name of the thread Function  
*stack\_size* = Size of the thread stack. If zero, then the platform-specific default stack size will be used.  
*argument* = Argument to be passed to thread function  
*state* = Enumeration which specifies the state of the thread on creation with values Running and Suspend. Note: the Suspend option may not be available on all platforms. If it is not supported, the Create call will return INVALID\_PARAM\_ERROR.  
*oIsJoinable* = A boolean, which when set to true, creates a Joinable thread. The default value for this is false, which creates a Detached thread.  
Note 1: When a joinable thread is created, it is imperative to call thread Terminate. Otherwise, it would cause a memory leak.  
Note 2: This is currently available only for platforms that have support for pthreads.

**Returns**

eOsclProcError

**7.228.3.4 static OSCL\_IMPORT\_REF void OsclThread::Exit (OsclAny \* *exitcode*) [static]**

Exit is a static function which is used to end the current thread. When called it just ends the execution of the current thread. Note: on some platforms this may be a NOP.

**Parameters**

*exitcode* = Exitcode of the thread. This can be used by other threads to know the exit status of this thread.

**Returns**

None

**7.228.3.5 static OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclThread::GetId  
(TOsclThreadId & refThreadId) [static]**

Static routine to retrieve ID of calling thread.

**Parameters**

*Thread* ID passed by the application

**Returns**

Error code

**7.228.3.6 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclThread::GetPriority  
(OsclThreadPriority & refThreadPriority)**

GetThreadPriority gets the priority of the thread. It takes reference of the input argument and assigns priority to it from one of the already defined priorities.

**Parameters**

*int16&* refThreadPriority : Output Priority value

**Returns**

Error code

**7.228.3.7 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclThread::Resume ()**

ResumeThread resumes the suspended thread and brings it into execution.

**Parameters**

*None*

**Returns**

Error code Note: this function may not be supported on all platforms, and may return NOT\_IMPLEMENTED.

**7.228.3.8 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclThread::SetPriority  
(OsclThreadPriority *ePriority*)**

SetThreadPriority sets the priority of the thread. It takes priority as the input argument and assigns it to the thread referred.

**Parameters**

*ePriorityLevel* : Input Priority value

**Returns**

Error code Note: this function may not be supported on all platforms, and may return NOT\_IMPLEMENTED.

**7.228.3.9 static OSCL\_IMPORT\_REF void OsclThread::SleepMillisec (const int32 msec)  
[static]**

Suspend current thread execution for specified time.

**Parameters**

*msec*,*t2*,: sleep time in milliseconds.

**7.228.3.10 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclThread::Suspend ()**

This API suspends the thread being referred. The thread can later be brought into execution by calling OSCL\_ResumeThread() on it.

**Parameters**

*None*

**Returns**

Error code Note: this function may not be supported on all platforms, and may return NOT\_IMPLEMENTED.

**7.228.3.11 OSCL\_IMPORT\_REF OsclProcStatus::eOsclProcError OsclThread::Terminate  
(OsclAny \* *exitcode*)**

Terminate a thread other than the calling thread.

This API may have multiple behaviors. It may do a hard kill, a "join" operation, or a do-nothing. Caller can use CanTerminate option to tell the behavior in advance.

**Parameters**

*exitcode* = Exitcode of the thread.

**Returns**

Error code

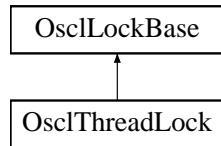
The documentation for this class was generated from the following file:

- [oscl\\_thread.h](#)

## 7.229 OsclThreadLock Class Reference

```
#include <oscl_mutex.h>
```

Inheritance diagram for OsclThreadLock:



### Public Member Functions

- OSCL\_IMPORT\_REF OsclThreadLock ()
- virtual OSCL\_IMPORT\_REF ~OsclThreadLock ()
- OSCL\_IMPORT\_REF void Lock ()
- OSCL\_IMPORT\_REF void Unlock ()

#### 7.229.1 Detailed Description

An implementation of [OsclLockBase](#) using a mutex

#### 7.229.2 Constructor & Destructor Documentation

**7.229.2.1 OSCL\_IMPORT\_REF OsclThreadLock::OsclThreadLock ()**

**7.229.2.2 virtual OSCL\_IMPORT\_REF OsclThreadLock::~OsclThreadLock () [virtual]**

#### 7.229.3 Member Function Documentation

**7.229.3.1 OSCL\_IMPORT\_REF void OsclThreadLock::Lock () [virtual]**

Implements [OsclLockBase](#).

**7.229.3.2 OSCL\_IMPORT\_REF void OsclThreadLock::Unlock () [virtual]**

Implements [OsclLockBase](#).

The documentation for this class was generated from the following file:

- [oscl\\_mutex.h](#)

## 7.230 OsclTickCount Class Reference

```
#include <oscl_tickcount.h>
```

### Static Public Member Functions

- static uint32 [TickCount \(\)](#)
- static uint32 [TickCountFrequency \(\)](#)
- static uint32 [TickCountPeriod \(\)](#)
- static uint32 [TicksToMsec \(uint32 ticks\)](#)
- static uint32 [MsecToTicks \(uint32 msec\)](#)

### 7.230.1 Detailed Description

[OsclTickCount](#) class is used to retrieve the system tick count and the tick counter's frequency.

The maximum tick count value is equivalent to the maximum uint32 value.

### 7.230.2 Member Function Documentation

#### 7.230.2.1 static uint32 OsclTickCount::MsecToTicks (uint32 *msec*) [static]

This function converts milliseconds to ticks

##### Returns

ticks

#### 7.230.2.2 static uint32 OsclTickCount::TickCount () [static]

This function returns the current system tick count

##### Returns

returns the tick count

Referenced by [OsclTimer< Alloc >::Request\(\)](#), and [OsclTimer< Alloc >::TimerBaseElapsed\(\)](#).

#### 7.230.2.3 static uint32 OsclTickCount::TickCountFrequency () [static]

This function returns the tick frequency in ticks per second

##### Returns

ticks per second

**7.230.2.4 static uint32 OsclTickCount::TickCountPeriod () [static]**

This function returns the tick period in microseconds per tick

**Returns**

microseconds per tick

Referenced by OsclTimer< Alloc >::SetExactFrequency(), and OsclTimer< Alloc >::SetFrequency().

**7.230.2.5 static uint32 OsclTickCount::TicksToMsec (uint32 *ticks*) [static]**

This function converts ticks to milliseconds

**Returns**

milliseconds

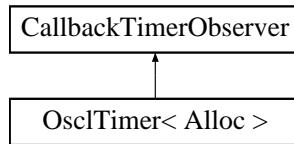
The documentation for this class was generated from the following file:

- [oscl\\_tickcount.h](#)

## 7.231 OsclTimer< Alloc > Class Template Reference

```
#include <oscl_timer.h>
```

Inheritance diagram for OsclTimer< Alloc >:



### Data Structures

- struct `_TimerEntry`

### Public Types

- typedef `CallbackTimer< Alloc > callback_timer_type`

### Public Member Functions

- `OsclTimer (const char *name, uint32 frequency=1, int32 priority=OsclActiveObject::EPriorityNominal)`
- virtual `~OsclTimer ()`
- void `SetObserver (OsclTimerObserver *obs)`
- void `SetFrequency (uint32 frequency)`
- void `SetExactFrequency (uint32 frequency)`
- void `Request (int32 timerID, int32 timeoutInfo, int32 cycles, OsclTimerObserver *obs=0, bool recurring=0)`
- void `Cancel (int32 timerID, int32 timeoutInfo=-1)`
- void `Clear ()`

### Protected Member Functions

- void `TimerBaseElapsed ()`

### Friends

- class `CallbackTimer< Alloc >`

---

**template<class Alloc> class OsclTimer< Alloc >**

### 7.231.1 Member Typedef Documentation

**7.231.1.1 template<class Alloc > typedef CallbackTimer<Alloc> OsclTimer< Alloc >::callback\_timer\_type**

### 7.231.2 Constructor & Destructor Documentation

**7.231.2.1 template<class Alloc > OsclTimer< Alloc >::OsclTimer (const char \* *name*, uint32 *frequency* = 1, int32 *priority* = OsclActiveObject::EPriorityNominal) [inline]**

Constructor

#### Parameters

***frequency*** The frequency of the timer in cycles/second. A value of 1 means the timer will cycle in 1 second intervals.

References OSCL\_LEAVE, OSCL\_PLACEMENT\_NEW, OsclErrArgument, and OsclTimer< Alloc >::SetFrequency().

**7.231.2.2 template<class Alloc > OsclTimer< Alloc >::~OsclTimer () [inline, virtual]**

References Oscl\_Vector< T, Alloc >::begin(), OsclTimerObject::Cancel(), Oscl\_TAlloc< T, Alloc >::deallocate(), Oscl\_Vector< T, Alloc >::end(), and NULL.

### 7.231.3 Member Function Documentation

**7.231.3.1 template<class Alloc > void OsclTimer< Alloc >::Cancel (int32 *timerID*, int32 *timeoutInfo* = -1) [inline]**

Cancel a timer

#### Parameters

***timerID*** used to identify the timer to cancel.

***timeoutInfo*** if not set to -1, this value will be used as additional matching criteria to cancel a timer.

References Oscl\_Vector< T, Alloc >::begin(), Oscl\_TAlloc< T, Alloc >::deallocate(), Oscl\_Vector< T, Alloc >::end(), Oscl\_Vector< T, Alloc >::erase(), and Oscl\_Vector< T, Alloc >::push\_back().

Referenced by OsclTimer< Alloc >::TimerBaseElapsed().

**7.231.3.2 template<class Alloc > void OsclTimer< Alloc >::Clear () [inline]**

Cancel all pending timers.

References Oscl\_Vector< T, Alloc >::begin(), Oscl\_Vector< T, Alloc >::clear(), Oscl\_TAlloc< T, Alloc >::deallocate(), and Oscl\_Vector< T, Alloc >::end().

---

**7.231.3.3 template<class Alloc > void OsclTimer< Alloc >::Request (int32 *timerID*, int32 *timeoutInfo*, int32 *cycles*, OsclTimerObserver \* *obs* = 0, bool *recurring* = 0) [inline]**

Request a timer

#### Parameters

*timerID* used to identify the timer for cancellation. This value will be returned as part of the timeout event.

*timeoutInfo* for user info. Returned to the observer on a timeout event

*cycles* the number of cycles to wait before a timeout event. If the timer frequency is 1 and the cycles are set to 2, then the timeout event will occur in 2 seconds.

*obs* a local observer object to be called on a timeout event. This observer overrides the global observer if set.

References Oscl\_Vector< T, Alloc >::push\_back(), OsclTimerObject::RunIfNotReady(), and OsclTickCount::TickCount().

Referenced by OsclTimer< Alloc >::TimerBaseElapsed().

**7.231.3.4 template<class Alloc > void OsclTimer< Alloc >::SetExactFrequency (uint32 *frequency*) [inline]**

Set the exact frequency of the timer in microsecond.

#### Parameters

*frequency* A value of 1 means the timer will cycle in one microsecond intervals, 1000 means millisecond intervals, etc.

References OsclTickCount::TickCountPeriod().

**7.231.3.5 template<class Alloc > void OsclTimer< Alloc >::SetFrequency (uint32 *frequency*) [inline]**

Set the frequency of the timer in cycles/second.

#### Parameters

*frequency* A value of 1 means the timer will cycle in one second intervals, 1000 means millisecond intervals, etc.

References OsclTickCount::TickCountPeriod().

Referenced by OsclTimer< Alloc >::OsclTimer().

**7.231.3.6 template<class Alloc > void OsclTimer< Alloc >::SetObserver (OsclTimerObserver \* *obs*) [inline]**

Set the global observer. Each timer can request a local observer, which if set overrides the global observer.

#### Parameters

*obs* observer object.

**7.231.3.7 template<class Alloc > void OsclTimer< Alloc >::TimerBaseElapsed () [inline, protected, virtual]**

Implements [CallbackTimerObserver](#).

References `Oscl_Vector< T, Alloc >::begin()`, `OsclTimer< Alloc >::Cancel()`, `Oscl_Vector< T, Alloc >::clear()`, `Oscl_TAlloc< T, Alloc >::deallocate()`, `Oscl_Vector_Base::empty()`, `Oscl_Vector< T, Alloc >::end()`, `Oscl_Vector< T, Alloc >::erase()`, `OSCL_ABS`, `OSCL_MAX`, `OsclTimer< Alloc >::Request()`, `OsclTimerObject::RunIfNotReady()`, `OsclTickCount::TickCount()`, and `OsclTimerObserver::TimeoutOccurred()`.

## 7.231.4 Friends And Related Function Documentation

**7.231.4.1 template<class Alloc > friend class CallbackTimer< Alloc > [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_timer.h](#)

## 7.232 OsclTimerCompare Class Reference

```
#include <oscl_scheduler_readyq.h>
```

### Static Public Member Functions

- static int [compare \(TOsclReady &a, TOsclReady &b\)](#)

#### 7.232.1 Member Function Documentation

##### 7.232.1.1 static int OsclTimerCompare::compare (TOsclReady & a, TOsclReady & b) [static]

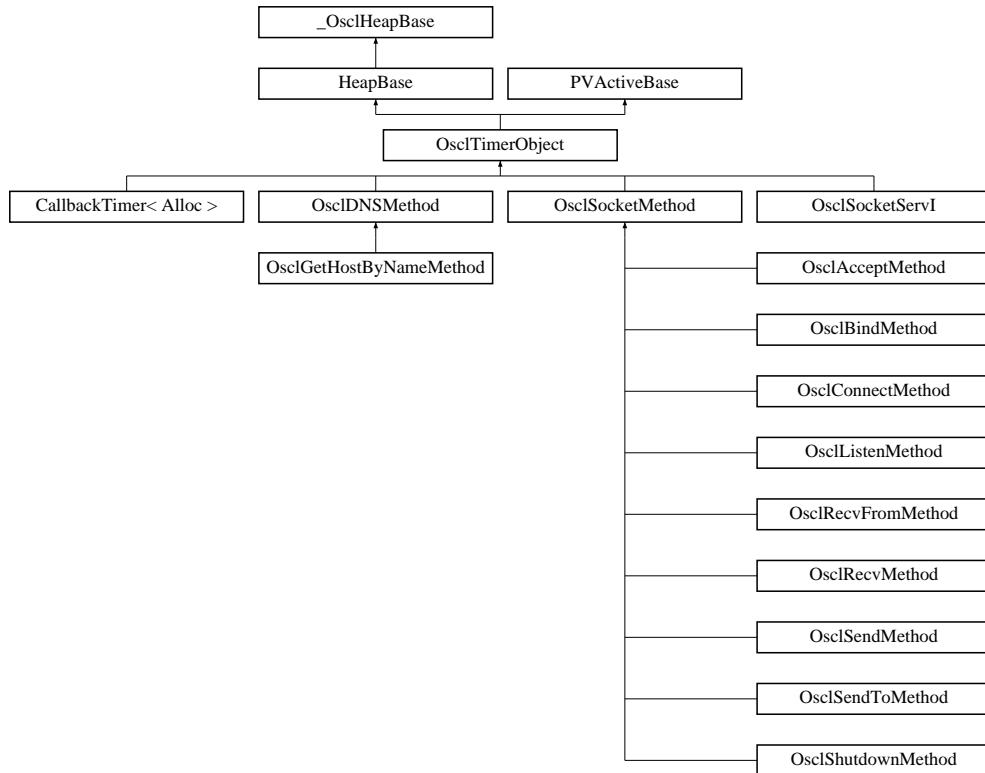
The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_readyq.h](#)

## 7.233 OsclTimerObject Class Reference

```
#include <oscl_scheduler_ao.h>
```

Inheritance diagram for OsclTimerObject:



### Public Member Functions

- `OSCL_IMPORT_REF OsclTimerObject (int32 aPriority, const char name[ ])`
- `virtual OSCL_IMPORT_REF ~OsclTimerObject ()`
- `OSCL_IMPORT_REF void AddToScheduler ()`
- `OSCL_IMPORT_REF void RemoveFromScheduler ()`
- `OSCL_IMPORT_REF void After (int32 aDelayMicrosec)`
- `OSCL_IMPORT_REF void RunIfNotReady (uint32 aDelayMicrosec=0)`
- `OSCL_IMPORT_REF void SetBusy ()`
- `OSCL_IMPORT_REF bool IsBusy () const`
- `OSCL_IMPORT_REF void Cancel ()`
- `OSCL_IMPORT_REF int32 Priority () const`
- `OSCL_IMPORT_REF int32 Status () const`
- `OSCL_IMPORT_REF void SetStatus (int32)`
- `OSCL_IMPORT_REF OsclAOStatus & StatusRef ()`

### Protected Member Functions

- `virtual OSCL_IMPORT_REF void DoCancel ()`
- `virtual OSCL_IMPORT_REF int32 RunError (int32 aError)`

### 7.233.1 Detailed Description

User base class for execution objects. [OsclTimerObject](#) defines an exec object with a timer.

### 7.233.2 Constructor & Destructor Documentation

#### 7.233.2.1 OSCL\_IMPORT\_REF OsclTimerObject::OsclTimerObject (int32 *aPriority*, const char *name*[ ])

Constructor.

##### Parameters

*aPriority* (input param): scheduling priority

*name* (input param): optional name for this AO.

#### 7.233.2.2 virtual OSCL\_IMPORT\_REF OsclTimerObject::~OsclTimerObject () [virtual]

Destructor.

### 7.233.3 Member Function Documentation

#### 7.233.3.1 OSCL\_IMPORT\_REF void OsclTimerObject::AddToScheduler ()

Add this AO to the current thread's scheduler.

Reimplemented from [PVActiveBase](#).

Referenced by [CallbackTimer< Alloc >::CallbackTimer\(\)](#).

#### 7.233.3.2 OSCL\_IMPORT\_REF void OsclTimerObject::After (int32 *aDelayMicrosec*)

'After' sets the request ready, with request status OSCL\_REQUEST\_STATUS\_PENDING, and starts a timer. When the timer expires, the request will complete with status OSCL\_REQUEST\_ERR\_NONE. Must be called from the same thread in which the active object is scheduled. Will leave if the request is already readied, the object is not added to any scheduler, or the calling thread does not match the scheduling thread.

##### Parameters

*anInterval*,: timeout interval in microseconds.

#### 7.233.3.3 OSCL\_IMPORT\_REF void OsclTimerObject::Cancel ()

Cancel any active request. If the request is pending, this will call the DoCancel routine, wait for the request to cancel, then set the request idle. The AO will not run. If the request is not active, it does nothing. Request must be canceled from the same thread in which it is scheduled.

Reimplemented from [PVActiveBase](#).

Referenced by [OsclSocketMethod::Abort\(\)](#), and [OsclTimer< Alloc >::~OsclTimer\(\)](#).

---

**7.233.3.4 OSCL\_IMPORT\_REF void OsclTimerObject::DoCancel () [protected, virtual]**

Cancel request handler. This gets called by scheduler when the request is cancelled. The default routine will cancel the timer. If any additional action is needed, the derived class may override this. If the derived class does override this, it should explicitly call [OsclTimerObject::DoCancel](#) in its own DoCancel routine.

Implements [PVActiveBase](#).

**7.233.3.5 OSCL\_IMPORT\_REF bool OsclTimerObject::IsBusy () const**

Return true if this AO is active, false otherwise.

**7.233.3.6 OSCL\_IMPORT\_REF int32 OsclTimerObject::Priority () const**

Return scheduling priority of this exec object.

**7.233.3.7 OSCL\_IMPORT\_REF void OsclTimerObject::RemoveFromScheduler ()**

Remove this AO from its scheduler. Will leave if the calling thread context does not match the scheduling thread. Cancels any pending request before removing.

Reimplemented from [PVActiveBase](#).

Referenced by [CallbackTimer< Alloc >::~CallbackTimer\(\)](#).

**7.233.3.8 virtual OSCL\_IMPORT\_REF int32 OsclTimerObject::RunError (int32 *aError*) [protected, virtual]**

Run Leave handler. This gets called by scheduler when the Run routine leaves. The default implementation simply returns the leave code. If the derived class wants to handle errors from Run, it may override this. The ExecError should return OsclErrNone if it handles the error, otherwise it should return the input error code.

#### Parameters

*aError*: the leave code generated by the Run.

Implements [PVActiveBase](#).

**7.233.3.9 OSCL\_IMPORT\_REF void OsclTimerObject::RunIfNotReady (uint32 *aDelayMicrosec* = 0)**

Complete the request after a time interval. RunIfNotReady is identical to [After\(\)](#) except that it first checks the request status, and if it is already readied, it does nothing.

#### Parameters

*aDelayMicrosec* (input param): delay in microseconds.

Referenced by [OsclTimer< Alloc >::Request\(\)](#), and [OsclTimer< Alloc >::TimerBaseElapsed\(\)](#).

**7.233.3.10 OSCL\_IMPORT\_REF void OsclTimerObject::SetBusy ()**

Set request ready for this AO. Will leave if the request is already readied, or the exec object is not added to any scheduler, or the calling thread context does not match the scheduler thread.

**7.233.3.11 OSCL\_IMPORT\_REF void OsclTimerObject::SetStatus (int32)****7.233.3.12 OSCL\_IMPORT\_REF int32 OsclTimerObject::Status () const**

Request status access

Referenced by `CallbackTimer< Alloc >::Run()`.

**7.233.3.13 OSCL\_IMPORT\_REF OsclAOStatus& OsclTimerObject::StatusRef ()**

The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_ao.h](#)

## 7.234 OsclTimerObserver Class Reference

```
#include <oscl_timer.h>
```

### Public Member Functions

- virtual void [TimeoutOccurred](#) (int32 timerID, int32 timeoutInfo)=0
- virtual [~OsclTimerObserver](#) ()

#### 7.234.1 Detailed Description

The observer class to receive timeout callbacks

#### 7.234.2 Constructor & Destructor Documentation

7.234.2.1 virtual OsclTimerObserver::[~OsclTimerObserver](#) () [inline, virtual]

#### 7.234.3 Member Function Documentation

7.234.3.1 virtual void OsclTimerObserver::[TimeoutOccurred](#) (int32 *timerID*, int32 *timeoutInfo*) [pure virtual]

This function will be called when the timer associated with this observer is executed

##### Parameters

*timerID* The ID given at timer request.

*timeoutInfo* Any extra info given at timer request.

Referenced by OsclTimer< Alloc >::TimerBaseElapsed().

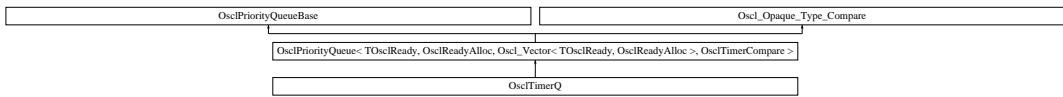
The documentation for this class was generated from the following file:

- [oscl\\_timer.h](#)

## 7.235 OsclTimerQ Class Reference

```
#include <oscl_scheduler_readyq.h>
```

Inheritance diagram for OsclTimerQ:



### Public Member Functions

- void [Construct](#) (int)
- void [Add](#) ([TOsclReady](#))
- void [Remove](#) ([TOsclReady](#))
- [TOsclReady](#) [PopTop](#) ()
- [TOsclReady](#) [Top](#) ()
- void [Pop](#) ([TOsclReady](#))
- bool [IsIn](#) ([TOsclReady](#))

#### 7.235.1 Member Function Documentation

**7.235.1.1 void OsclTimerQ::Add (TOsclReady)**

**7.235.1.2 void OsclTimerQ::Construct (int)**

**7.235.1.3 bool OsclTimerQ::IsIn (TOsclReady)**

**7.235.1.4 void OsclTimerQ::Pop (TOsclReady)**

**7.235.1.5 TOsclReady OsclTimerQ::PopTop ()**

**7.235.1.6 void OsclTimerQ::Remove (TOsclReady)**

**7.235.1.7 TOsclReady OsclTimerQ::Top ()**

The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_readyq.h](#)

## 7.236 OsclTLS< T, ID, Registry > Class Template Reference

```
#include <oscl_tls.h>
```

### Public Member Functions

- [OsclTLS \(\)](#)
- [~OsclTLS \(\)](#)
- [T & operator\\* \(\) const](#)

*The indirection operator (\*) accesses a value indirectly, through a pointer.*

- [T \\* operator-> \(\) const](#)

*The indirection operator (->) accesses a value indirectly, through a pointer.*

- [bool set \(\)](#)

*set() method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.*

### Protected Attributes

- [T \\* \\_Ptr](#)

**template<class T, uint32 ID, class Registry = OsclTLSRegistry> class OsclTLS< T, ID, Registry >**

#### 7.236.1 Constructor & Destructor Documentation

**7.236.1.1 template<class T , uint32 ID, class Registry = OsclTLSRegistry> OsclTLS< T, ID, Registry >::OsclTLS () [inline]**

References OsclTLS< T, ID, Registry >::\_Ptr, and OSCL\_STATIC\_CAST.

**7.236.1.2 template<class T , uint32 ID, class Registry = OsclTLSRegistry> OsclTLS< T, ID, Registry >::~OsclTLS () [inline]**

#### 7.236.2 Member Function Documentation

**7.236.2.1 template<class T , uint32 ID, class Registry = OsclTLSRegistry> T& OsclTLS< T, ID, Registry >::operator\* () const [inline]**

The indirection operator (\*) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclTLS](#) can be used like the regular pointer that it was initialized with.

References OsclTLS< T, ID, Registry >::\_Ptr.

**7.236.2.2 template<class T , uint32 ID, class Registry = OsclTLSRegistry> T\* OsclTLS< T, ID, Registry >::operator-> () const [inline]**

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclTLS](#) can be used like the regular pointer that it was initialized with.  
References [OsclTLS< T, ID, Registry >::\\_Ptr](#).

#### 7.236.2.3 template<class T , uint32 ID, class Registry = OsclTLSRegistry> bool OsclTLS< T, ID, Registry >::set () [inline]

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

References [OsclTLS< T, ID, Registry >::\\_Ptr](#), and [OSCL\\_STATIC\\_CAST](#).

### 7.236.3 Field Documentation

#### 7.236.3.1 template<class T , uint32 ID, class Registry = OsclTLSRegistry> T\* OsclTLS< T, ID, Registry >::\_Ptr [protected]

Referenced by [OsclTLS< T, ID, Registry >::operator\\*\(\)](#), [OsclTLS< T, ID, Registry >::operator->\(\)](#), [OsclTLS< T, ID, Registry >::OsclTLS\(\)](#), and [OsclTLS< T, ID, Registry >::set\(\)](#).

The documentation for this class was generated from the following file:

- [oscl\\_tls.h](#)

## 7.237 OsclTLSEEx< T, ID, Registry > Class Template Reference

```
#include <oscl_error.h>
```

### Public Member Functions

- [OsclTLSEEx \(\)](#)
- [~OsclTLSEEx \(\)](#)
- [T & operator\\* \(\) const](#)

*The indirection operator (\*) accesses a value indirectly, through a pointer.*

- [T \\* operator-> \(\) const](#)

*The indirection operator (->) accesses a value indirectly, through a pointer.*

- [bool set \(\)](#)

*set() method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.*

### Protected Attributes

- [T \\* \\_Ptr](#)

```
template<class T, uint32 ID, class Registry = OsclTLSRegistryEx> class OsclTLSEEx< T, ID, Registry >
```

#### 7.237.1 Constructor & Destructor Documentation

7.237.1.1 [template<class T , uint32 ID, class Registry = OsclTLSRegistryEx> OsclTLSEEx< T, ID, Registry >::OsclTLSEEx \(\) \[inline\]](#)

7.237.1.2 [template<class T , uint32 ID, class Registry = OsclTLSRegistryEx> OsclTLSEEx< T, ID, Registry >::~OsclTLSEEx \(\) \[inline\]](#)

#### 7.237.2 Member Function Documentation

7.237.2.1 [template<class T , uint32 ID, class Registry = OsclTLSRegistryEx> T& OsclTLSEEx< T, ID, Registry >::operator\\* \(\) const \[inline\]](#)

The indirection operator (\*) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclTLS](#) can be used like the regular pointer that it was initialized with.

References [OsclTLSEEx< T, ID, Registry >::\\_Ptr](#).

7.237.2.2 [template<class T , uint32 ID, class Registry = OsclTLSRegistryEx> T\\* OsclTLSEEx< T, ID, Registry >::operator-> \(\) const \[inline\]](#)

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclTLS](#) can be used like the regular pointer that it was initialized with.

References OsclTLSEEx< T, ID, Registry >::\_Ptr.

#### 7.237.2.3 template<class T , uint32 ID, class Registry = OsclTLSRegistryEx> bool OsclTLSEEx< T, ID, Registry >::set () [inline]

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

References OsclTLSEEx< T, ID, Registry >::\_Ptr, and OSCL\_STATIC\_CAST.

### 7.237.3 Field Documentation

#### 7.237.3.1 template<class T , uint32 ID, class Registry = OsclTLSRegistryEx> T\* OsclTLSEEx< T, ID, Registry >::\_Ptr [protected]

Referenced by OsclTLSEEx< T, ID, Registry >::operator\*(), OsclTLSEEx< T, ID, Registry >::operator->(), and OsclTLSEEx< T, ID, Registry >::set().

The documentation for this class was generated from the following file:

- [oscl\\_error.h](#)

## 7.238 OsclTLSRegistry Class Reference

```
#include <oscl_tls.h>
```

### Static Public Member Functions

- static OSCL\_IMPORT\_REF [OsclAny](#) \* [getInstance](#) (uint32 ID, int32 &error)
- static OSCL\_IMPORT\_REF void [registerInstance](#) ([OsclAny](#) \*ptr, uint32 ID, int32 &error)

### Friends

- class [OsclBase](#)

### 7.238.1 Member Function Documentation

**7.238.1.1 static OSCL\_IMPORT\_REF OsclAny\* OsclTLSRegistry::getInstance (uint32 *ID*, int32 &*error*) [static]**

**7.238.1.2 static OSCL\_IMPORT\_REF void OsclTLSRegistry::registerInstance (OsclAny \**ptr*, uint32 *ID*, int32 &*error*) [static]**

### 7.238.2 Friends And Related Function Documentation

**7.238.2.1 friend class OsclBase [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_tls.h](#)

## 7.239 OsclTLSRegistryEx Class Reference

```
#include <oscl_error.h>
```

### Static Public Member Functions

- static [OsclAny \\* getInstance \(uint32 ID\)](#)
- static void [registerInstance \(OsclAny \\*ptr, uint32 ID\)](#)

#### 7.239.1 Member Function Documentation

##### 7.239.1.1 static OsclAny\* OsclTLSRegistryEx::getInstance (uint32 ID) [inline, static]

References OsclError::Leave(), and OSCL\_ASSERT.

##### 7.239.1.2 static void OsclTLSRegistryEx::registerInstance (OsclAny \* ptr, uint32 ID) [inline, static]

References OsclError::Leave(), and OSCL\_ASSERT.

The documentation for this class was generated from the following file:

- [oscl\\_error.h](#)

## 7.240 OsclTrapItem Class Reference

```
#include <oscl_heapbase.h>
```

### Public Member Functions

- OSCL\_INLINE OsclTrapItem (OsclTrapOperation anOperation)
- OSCL\_INLINE OsclTrapItem (OsclTrapOperation anOperation, OsclAny \*aPtr)

### Friends

- class OsclTrapStackItem
- class OsclTrapStack

#### 7.240.1 Constructor & Destructor Documentation

7.240.1.1 OSCL\_INLINE OsclTrapItem::OsclTrapItem (OsclTrapOperation *anOperation*)

7.240.1.2 OSCL\_INLINE OsclTrapItem::OsclTrapItem (OsclTrapOperation *anOperation*, OsclAny \* *aPtr*)

#### 7.240.2 Friends And Related Function Documentation

7.240.2.1 friend class OsclTrapStack [friend]

7.240.2.2 friend class OsclTrapStackItem [friend]

The documentation for this class was generated from the following file:

- oscl\_heapbase.h

## 7.241 OsclTrapStack Class Reference

```
#include <oscl_error_trapcleanup.h>
```

### Friends

- class [OsclError](#)
- class [OsclErrorTrap](#)
- class [OsclErrorTrapImp](#)

### 7.241.1 Detailed Description

A common type for cleanup stack and trap mark stack. for internal use only.

### 7.241.2 Friends And Related Function Documentation

**7.241.2.1 friend class OsclError [friend]**

**7.241.2.2 friend class OsclErrorTrap [friend]**

**7.241.2.3 friend class OsclErrorTrapImp [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_error\\_trapcleanup.h](#)

## 7.242 OsclTrapStackItem Class Reference

```
#include <oscl_error_trapcleanup.h>
```

### Public Member Functions

- [OsclTrapStackItem \(\)](#)
- [OsclTrapStackItem \(\\_OsclHeapBase \\*aCBase\)](#)
- [OsclTrapStackItem \(OsclAny \\*aTAny\)](#)
- [OsclTrapStackItem \(OsclTrapItem aItem\)](#)

### Data Fields

- [\\_OsclHeapBase \\* iCBase](#)
- [OsclAny \\* iTAny](#)
- [OsclTrapOperation iTrapOperation](#)
- [OsclTrapStackItem \\* iNext](#)

#### 7.242.1 Detailed Description

Internal cleanup stack item type.

#### 7.242.2 Constructor & Destructor Documentation

##### 7.242.2.1 OsclTrapStackItem::OsclTrapStackItem () [inline]

##### 7.242.2.2 OsclTrapStackItem::OsclTrapStackItem (\_OsclHeapBase \* aCBase) [inline]

References iCBase, iNext, iTAny, iTrapOperation, and NULL.

##### 7.242.2.3 OsclTrapStackItem::OsclTrapStackItem (OsclAny \* aTAny) [inline]

References iCBase, iNext, iTAny, iTrapOperation, and NULL.

##### 7.242.2.4 OsclTrapStackItem::OsclTrapStackItem (OsclTrapItem aItem) [inline]

References iCBase, iNext, iTAny, iTrapOperation, and NULL.

#### 7.242.3 Field Documentation

##### 7.242.3.1 \_OsclHeapBase\* OsclTrapStackItem::iCBase

Referenced by OsclTrapStackItem().

##### 7.242.3.2 OsclTrapStackItem\* OsclTrapStackItem::iNext

Referenced by OsclTrapStackItem().

**7.242.3.3 OsclAny\* OsclTrapStackItem::iTAny**

Referenced by OsclTrapStackItem().

**7.242.3.4 OsclTrapOperation OsclTrapStackItem::iTrapOperation**

Referenced by OsclTrapStackItem().

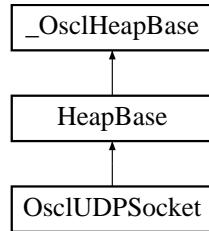
The documentation for this class was generated from the following file:

- [oscl\\_error\\_trapcleanup.h](#)

## 7.243 OsclUDPSocket Class Reference

```
#include <oscl_socket.h>
```

Inheritance diagram for OsclUDPSocket:



### Public Member Functions

- OSCL\_IMPORT\_REF ~OsclUDPSocket ()
- OSCL\_IMPORT\_REF TPVSocketEvent ThreadLogoff ()
- OSCL\_IMPORT\_REF TPVSocketEvent ThreadLogon (OsclSocketServ &aServ, OsclSocketObserver \*aObserver)
- OSCL\_IMPORT\_REF int32 Close ()
- OSCL\_IMPORT\_REF int32 Bind (OsclNetworkAddress &aAddress)
- OSCL\_IMPORT\_REF int32 Join (OsclNetworkAddress &aAddress)
- OSCL\_IMPORT\_REF int32 JoinMulticastGroup (OsclIpMReq &aMReq)
- OSCL\_IMPORT\_REF int32 SetMulticastTTL (int32 aTTL)
- OSCL\_IMPORT\_REF int32 SetOptionToReuseAddress ()
- OSCL\_IMPORT\_REF int32 SetTOS (const OsclSocketTOS &aTOS)
- OSCL\_IMPORT\_REF int32 GetPeerName (OsclNetworkAddress &aPeerName)
- OSCL\_IMPORT\_REF TPVSocketEvent BindAsync (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=(-1))
- OSCL\_IMPORT\_REF void CancelBind ()
- OSCL\_IMPORT\_REF uint8 \* GetRecvData (int32 \*aLength)
- OSCL\_IMPORT\_REF uint8 \* GetSendData (int32 \*aLength)
- OSCL\_IMPORT\_REF TPVSocketEvent SendTo (const uint8 \*aPtr, uint32 aLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1)
- OSCL\_IMPORT\_REF void CancelSendTo ()
- OSCL\_IMPORT\_REF TPVSocketEvent RecvFrom (uint8 \*aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1, uint32 aMultiRecvLimit=0, Oscl\_Vector< uint32, OsclMemAllocator > \*aPacketLen=NULL, Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator > \*aPacketSource=NULL)
- OSCL\_IMPORT\_REF void CancelRecvFrom ()
- OSCL\_IMPORT\_REF int32 SetRecvBufferSize (uint32 size)

### Static Public Member Functions

- static OSCL\_IMPORT\_REF OsclUDPSocket \* NewL (Oscl\_DefAlloc &alloc, OsclSocketServ &aServ, OsclSocketObserver \*aObserver, uint32 aId)

### 7.243.1 Detailed Description

The UDP Socket class

### 7.243.2 Member Function Documentation

**7.243.2.1 static OSCL\_IMPORT\_REF OsclUDPSocket\* OsclUDPSocket::NewL (Oscl\_DefAlloc & *alloc*, OsclSocketServ & *aServ*, OsclSocketObserver \* *aObserver*, uint32 *aId*) [static]**

Create a UDP Socket. May leave if failure.

#### Parameters

*alloc*,: Memory allocator.

*aServ*,: Socket server. Must be connected.

*aObserver*,: Socket observer.

*aId*,: Socket ID. The caller must assign an ID to each socket. The ID is used to identify the socket in observer callbacks.

#### Returns

Returns pointer to socket.

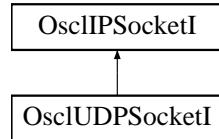
The documentation for this class was generated from the following file:

- [oscl\\_socket.h](#)

## 7.244 OsclUDPSocketI Class Reference

```
#include <oscl_udp_socket.h>
```

Inheritance diagram for OsclUDPSocketI:



### Public Member Functions

- virtual ~OsclUDPSocketI ()
- int32 [Close \(\)](#)
- int32 [JoinMulticastGroup \(OsclIpMReq &aMReq\)](#)
- int32 [SetMulticastTTL \(int32 aTTL\)](#)
- uint8 \* [GetRecvData \(int32 \\*aLength\)](#)
- uint8 \* [GetSendData \(int32 \\*aLength\)](#)
- [TPVSocketEvent ThreadLogoff \(\)](#)
- [TPVSocketEvent ThreadLogon \(OsclSocketServI \\*aServ, OsclSocketObserver \\*aObserver\)](#)
- [TPVSocketEvent BindAsync \(OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1\)](#)
- void [CancelBind \(\)](#)
- [TPVSocketEvent SendTo \(const uint8 \\*&aPtr, uint32 aLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1\)](#)
- void [CancelSendTo \(\)](#)
- [TPVSocketEvent RecvFrom \(uint8 \\*&aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1, uint32 aMultiMaxLen=0, Oscl\\_Vector< uint32, OsclMemAllocator > \\*aPacketLen=NULL, Oscl\\_Vector< OsclNetworkAddress, OsclMemAllocator > \\*aPacketSource=NULL\)](#)
- void [CancelRecvFrom \(\)](#)

### Static Public Member Functions

- static OsclUDPSocketI \* [NewL \(Oscl\\_DefAlloc &a, OsclSocketServI \\*aServ, OsclSocketObserver \\*aObserver, uint32 aId\)](#)

#### 7.244.1 Detailed Description

Internal implementation class for [OsclUDPSocket](#)

## 7.244.2 Constructor & Destructor Documentation

7.244.2.1 **virtual OsclUDPSocketI::~OsclUDPSocketI () [virtual]**

## 7.244.3 Member Function Documentation

7.244.3.1 **TPVSocketEvent OsclUDPSocketI::BindAsync (OsclNetworkAddress & aAddress, int32 aTimeoutMsec = -1) [inline]**

References OsclBindMethod::Bind(), EPVSocketFailure, EPVSocketNotImplemented, OsclSocketIBase::HasAsyncBind(), OsclIPSocketI::iAddress, OsclIPSocketI::iObserver, OsclNetworkAddress::ipAddr, OsclNetworkAddress::port, OsclNameString< \_\_len >::Set(), and OsclNameString< \_\_len >::Str().

7.244.3.2 **void OsclUDPSocketI::CancelBind () [inline]**

References OsclSocketMethod::CancelMethod().

7.244.3.3 **void OsclUDPSocketI::CancelRecvFrom () [inline]**

References OsclSocketMethod::CancelMethod().

7.244.3.4 **void OsclUDPSocketI::CancelSendTo () [inline]**

References OsclSocketMethod::CancelMethod().

7.244.3.5 **int32 OsclUDPSocketI::Close () [virtual]**

Implements [OsclIPSocketI](#).

7.244.3.6 **uint8 \* OsclUDPSocketI::GetRecvData (int32 \* aLength) [inline, virtual]**

Implements [OsclIPSocketI](#).

References OsclRecvFromMethod::GetRecvData().

7.244.3.7 **uint8 \* OsclUDPSocketI::GetSendData (int32 \* aLength) [inline, virtual]**

Implements [OsclIPSocketI](#).

References OsclSendToMethod::GetSendData().

**7.244.3.8 int32 OsclUDPSocketI::JoinMulticastGroup (OsclIpMReq & aMReq)**

**7.244.3.9 static OsclUDPSocketI\* OsclUDPSocketI::NewL (Oscl\_DefAlloc & a, OsclSocketServI \* aServ, OsclSocketObserver \* aObserver, uint32 aId) [static]**

**7.244.3.10 TPVSocketEvent OsclUDPSocketI::RecvFrom (uint8 \*& aPtr, uint32 aMaxLen, OsclNetworkAddress & aAddress, int32 aTimeoutMsec = -1, uint32 aMultiMaxLen = 0, Oscl\_Vector< uint32, OsclMemAllocator > \* aPacketLen = NULL, Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator > \* aPacketSource = NULL) [inline]**

References EPVSocketFailure, OsclIPSocketI::iObserver, and OsclRecvFromMethod::RecvFrom().

**7.244.3.11 TPVSocketEvent OsclUDPSocketI::SendTo (const uint8 \*& aPtr, uint32 aLen, OsclNetworkAddress & aAddress, int32 aTimeoutMsec = -1) [inline]**

References EPVSocketFailure, OsclIPSocketI::iObserver, and OsclSendToMethod::SendTo().

**7.244.3.12 int32 OsclUDPSocketI::SetMulticastTTL (int32 aTTL)**

**7.244.3.13 TPVSocketEvent OsclUDPSocketI::ThreadLogoff ()**

Reimplemented from [OsclIPSocketI](#).

**7.244.3.14 TPVSocketEvent OsclUDPSocketI::ThreadLogon (OsclSocketServI \* aServ, OsclSocketObserver \* aObserver)**

The documentation for this class was generated from the following file:

- [oscl\\_udp\\_socket.h](#)

## 7.245 OsclUuid Struct Reference

```
#include <oscl_uuid.h>
```

### Public Member Functions

- [OsclUuid \(\)](#)
- [OsclUuid \(uint32 l, uint16 w1, uint16 w2, uint8 b1, uint8 b2, uint8 b3, uint8 b4, uint8 b5, uint8 b6, uint8 b7, uint8 b8\)](#)
- [OsclUuid \(const OsclUuid &uuid\)](#)
- [OsclUuid & operator= \(const OsclUuid &src\)](#)
- [bool operator== \(const OsclUuid &src\) const](#)
- [bool operator!= \(const OsclUuid &src\) const](#)

### Data Fields

- [uint32 data1](#)
- [uint16 data2](#)
- [uint16 data3](#)
- [uint8 data4 \[BYTES\\_IN\\_UUID\\_ARRAY\]](#)

#### 7.245.1 Detailed Description

OSCL UUID structure used for unique identification of modules and interfaces.

#### 7.245.2 Constructor & Destructor Documentation

##### 7.245.2.1 OsclUuid::OsclUuid () [inline]

References oscl\_memset().

##### 7.245.2.2 OsclUuid::OsclUuid (uint32 l, uint16 w1, uint16 w2, uint8 b1, uint8 b2, uint8 b3, uint8 b4, uint8 b5, uint8 b6, uint8 b7, uint8 b8) [inline]

References data1, data2, data3, and data4.

##### 7.245.2.3 OsclUuid::OsclUuid (const OsclUuid & uuid) [inline]

References oscl\_memcpy().

#### 7.245.3 Member Function Documentation

##### 7.245.3.1 bool OsclUuid::operator!= (const OsclUuid & src) const [inline]

##### 7.245.3.2 OsclUuid& OsclUuid::operator= (const OsclUuid & src) [inline]

References oscl\_memcpy().

**7.245.3.3 bool OsclUuid::operator==(const OsclUuid & src) const [inline]**

References data1, data2, data3, and data4.

**7.245.4 Field Documentation****7.245.4.1 uint32 OsclUuid::data1**

Referenced by operator==( ), and OsclUuid( ).

**7.245.4.2 uint16 OsclUuid::data2**

Referenced by operator==( ), and OsclUuid( ).

**7.245.4.3 uint16 OsclUuid::data3**

Referenced by operator==( ), and OsclUuid( ).

**7.245.4.4 uint8 OsclUuid::data4[BYTES\_IN\_UUID\_ARRAY]**

Referenced by operator==( ), and OsclUuid( ).

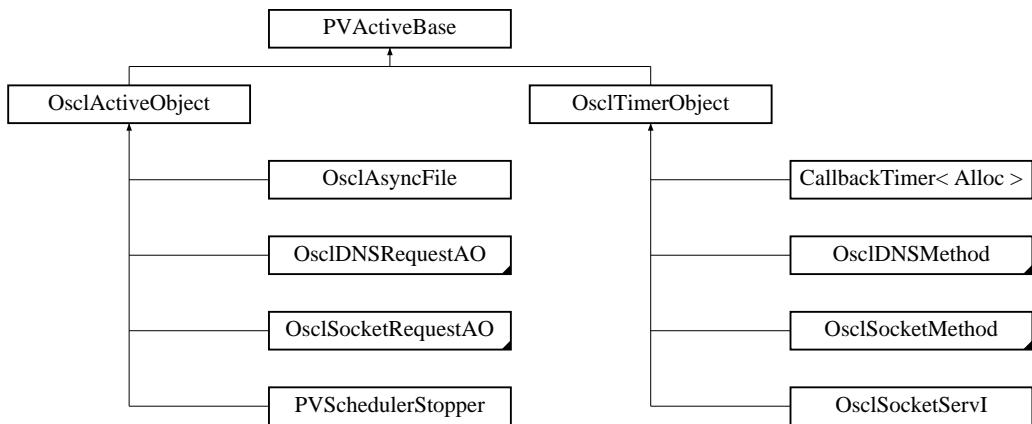
The documentation for this struct was generated from the following file:

- [oscl\\_uuid.h](#)

## 7.246 PVActiveBase Class Reference

```
#include <oscl_scheduler_aobase.h>
```

Inheritance diagram for PVActiveBase:



### Public Member Functions

- [PVActiveBase](#) (const char name[ ], int32 pri)
- virtual [~PVActiveBase](#) ()
- bool [IsInAnyQ](#) ()
- virtual int32 [RunError](#) (int32 aError)=0
- virtual void [Run](#) ()=0
- virtual void [DoCancel](#) ()=0
- void [AddToScheduler](#) ()
- void [RemoveFromScheduler](#) ()
- void [Destroy](#) ()
- void [Activate](#) ()
- OSCL\_IMPORT\_REF bool [IsAdded](#) () const
- void [Cancel](#) ()

### Data Fields

- uint32 [iAddedNum](#)
- [OsclNameString< PVEXECNAMELEN >](#) [iName](#)
- [PVThreadContext](#) [iThreadContext](#)
- [TReadyQueLink](#) [iPVReadyQLink](#)
- bool [iBusy](#)
- [OsclAOStatus](#) [iStatus](#)

### Friends

- class [OsclSchedulerCommonBase](#)
- class [OsclActiveObject](#)
- class [OsclTimerObject](#)

- class [OsclReadyQ](#)
- class [OsclReadyCompare](#)
- class [OsclReadySetPosition](#)
- class [OsclExecScheduler](#)

## 7.246.1 Detailed Description

PV Scheduler internal AO base class. Both [OsclActiveObject](#) and [OsclTimerObject](#) derive from this class. For Symbian, this just container has the desired additions to the basic CTimer or OsclActiveObj functionality. For non-Symbian, this class contains the entire AO implementation.

## 7.246.2 Constructor & Destructor Documentation

**7.246.2.1 `PVActiveBase::PVActiveBase (const char name[], int32 pri)`**

**7.246.2.2 `virtual PVActiveBase::~PVActiveBase () [virtual]`**

## 7.246.3 Member Function Documentation

**7.246.3.1 `void PVActiveBase::Activate ()`**

**7.246.3.2 `void PVActiveBase::AddToScheduler ()`**

Reimplemented in [OsclActiveObject](#), and [OsclTimerObject](#).

**7.246.3.3 `void PVActiveBase::Cancel ()`**

Reimplemented in [OsclActiveObject](#), and [OsclTimerObject](#).

**7.246.3.4 `void PVActiveBase::Destroy ()`**

**7.246.3.5 `virtual void PVActiveBase::DoCancel () [pure virtual]`**

Implements cancellation of an outstanding request.

This function is called as part of the active object's [Cancel\(\)](#).

It must call the appropriate cancel function offered by the active object's asynchronous service provider. The asynchronous service provider's cancel is expected to act immediately.

[DoCancel\(\)](#) must not wait for event completion; this is handled by [Cancel\(\)](#).

Implemented in [OsclDNSRequestAO](#), [OsclSocketRequestAO](#), [OsclActiveObject](#), and [OsclTimerObject](#).

**7.246.3.6 `OSCL_IMPORT_REF bool PVActiveBase::IsAdded () const`**

**7.246.3.7 `bool PVActiveBase::IsInAnyQ () [inline]`**

References [TReadyQueLink::iIsIn](#), [iPVReadyQLink](#), and [NULL](#).

**7.246.3.8 void PVActiveBase::RemoveFromScheduler ()**

Reimplemented in [OsclActiveObject](#), and [OsclTimerObject](#).

**7.246.3.9 virtual void PVActiveBase::Run () [pure virtual]**

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's `WaitForAnyRequest()` function completes.

Before calling this active object's `Run()` function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request
2. marked this active object's request as complete (i.e. the request is no longer outstanding)

`Run()` runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls `ExecError()` to handle the leave.

Note that once the active scheduler's `Start()` function has been called, all user code is run under one of the program's active object's `Run()` or `RunError()` functions.

Implemented in [OsclDNSMethod](#), [OsclDNSRequestAO](#), [OsclSocketMethod](#), [OsclSocketRequestAO](#), and [CallbackTimer< Alloc >](#).

**7.246.3.10 virtual int32 PVActiveBase::RunError (int32 *aError*) [pure virtual]**

Virtual routine that gets called if the active object's Run routine leaves.

**Parameters**

*aError*,: the leave code generated by the Run.

**Returns**

:returns `OsclErrNone` if the error was handled, or returns the input *aError* value if not handled.

Implemented in [OsclActiveObject](#), and [OsclTimerObject](#).

## 7.246.4 Friends And Related Function Documentation

- 7.246.4.1 **friend class OsclActiveObject [friend]**
- 7.246.4.2 **friend class OsclExecScheduler [friend]**
- 7.246.4.3 **friend class OsclReadyCompare [friend]**
- 7.246.4.4 **friend class OsclReadyQ [friend]**
- 7.246.4.5 **friend class OsclReadySetPosition [friend]**
- 7.246.4.6 **friend class OsclSchedulerCommonBase [friend]**
- 7.246.4.7 **friend class OsclTimerObject [friend]**

## 7.246.5 Field Documentation

- 7.246.5.1 **uint32 PVActiveBase::iAddedNum**
- 7.246.5.2 **bool PVActiveBase::iBusy**
- 7.246.5.3 **OsclNameString<PVEXECNAMELEN> PVActiveBase::iName**
- 7.246.5.4 **TReadyQueLink PVActiveBase::iPVReadyQLink**

Referenced by IsInAnyQ().

### 7.246.5.5 OsclAOStatus PVActiveBase::iStatus

The request status associated with an asynchronous request.

This is passed as a parameter to all asynchronous service providers.

The active scheduler uses this to check whether the active object's request has completed.

The function can use the completion code to judge the success or otherwise of the request.

Request status contains one of the values OSCL\_REQUEST\_ERR\_NONE: request completed with no error, or request is not active. OSCL\_REQUEST\_PENDING: request is active & pending OSCL\_REQUEST\_ERR\_CANCEL: request was canceled before completion. or any user-defined value.

### 7.246.5.6 PVThreadContext PVActiveBase::iThreadContext

The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_aobase.h](#)

## 7.247 PVLogger Class Reference

```
#include <pvlogger.h>
```

### Public Types

- `typedef int32 log_level_type`
- `typedef int32 message_id_type`
- `typedef int32 filter_status_type`
- `typedef _OsclBasicAllocator alloc_type`

### Public Member Functions

- `void SetLogLevel (log_level_type level)`
- `OSCL_IMPORT_REF void SetLogLevelAndPropagate (log_level_type level)`
- `log_level_type GetLogLevel ()`
- `void DisableAppenderInheritance ()`
- `void AddAppender (OsclSharedPtr< PVLoggerAppender > &appender)`
- `void RemoveAppender (OsclSharedPtr< PVLoggerAppender > &appender)`
- `void AddFilter (OsclSharedPtr< PVLoggerFilter > &filter)`
- `uint32 GetNumAppenders ()`
- `OSCL_IMPORT_REF bool IsActive (log_level_type level)`
- `OSCL_IMPORT_REF void LogMsgStringV (message_id_type msgID, const char *fmt, va_list arguments)`
- `OSCL_IMPORT_REF void LogMsgBuffersV (message_id_type msgID, int32 numPairs, va_list arguments)`
- `OSCL_IMPORT_REF void LogMsgString (message_id_type msgID, const char *fmt,...)`
- `OSCL_IMPORT_REF void LogMsgBuffers (message_id_type msgID, int32 numPairs,...)`
- `OSCL_IMPORT_REF PVLogger (const char *inputTag, log_level_type level, bool oAppenderInheritance)`
- `virtual ~PVLogger ()`

### Static Public Member Functions

- `static OSCL_IMPORT_REF void Init ()`
- `static OSCL_IMPORT_REF void Cleanup ()`
- `static OSCL_IMPORT_REF PVLogger * GetLoggerObject (const char *inputTag)`

### Protected Member Functions

- `void SetParent (PVLogger *parentLogger)`
- `PVLogger * GetParent ()`

### Friends

- `class PVLoggerRegistry`

### 7.247.1 Member Typedef Documentation

7.247.1.1 `typedef _OsclBasicAllocator PVLogger::alloc_type`

7.247.1.2 `typedef int32 PVLogger::filter_status_type`

7.247.1.3 `typedef int32 PVLogger::log_level_type`

7.247.1.4 `typedef int32 PVLogger::message_id_type`

### 7.247.2 Constructor & Destructor Documentation

7.247.2.1 `OSCL_IMPORT_REF PVLogger::PVLogger (const char * inputTag, log_level_type level, bool oAppenderInheritance)`

Logger Constructor

#### Parameters

*tag* Logger tag, unique to a logging control point

*level* Active Log level of the logger

*oAppenderInheritance*

#### Returns

NONE

7.247.2.2 `virtual PVLogger::~PVLogger () [inline, virtual]`

References `Oscl_TAlloc< T, Alloc >::deallocate()`.

### 7.247.3 Member Function Documentation

7.247.3.1 `void PVLogger::AddAppender (OsclSharedPtr< PVLoggerAppender > & appender) [inline]`

This method adds an appender to the logging control point. Each logger maintains a list of appenders. Any msg to a logger if deemed active is logged to all the appenders.

#### Parameters

*appender* pointer to the appender to add

#### Returns

NONE

#### Exceptions

*leaves* if out of memory

References `OSCL_UNUSED_ARG`, and `Oscl_Vector< T, Alloc >::push_back()`.

**7.247.3.2 void PVLogger::AddFilter (OsclSharedPtr< PVLoggerFilter > &*filter*) [inline]**

This method adds a message filter to the logging control point. Each logger maintains a list of filters. Any msg to a logger if deemed active is passed through the msg filters prior to logging.

**Parameters**

*msgFilter* pointer to the filter to add

**Returns**

NONE

**Exceptions**

*leaves* if out of memory

References OSCL\_UNUSED\_ARG, and Oscl\_Vector< T, Alloc >::push\_back().

**7.247.3.3 static OSCL\_IMPORT\_REF void PVLogger::Cleanup () [static]**

Frees the [PVLogger](#) singleton used by the current thread. This must be called before thread exit. No messages can be logged after cleanup.

**Returns****7.247.3.4 void PVLogger::DisableAppenderInheritance () [inline]**

This method disables appender inheritance for the logging control point

**7.247.3.5 static OSCL\_IMPORT\_REF PVLogger\* PVLogger::GetLoggerObject (const char \* *inputTag*) [static]**

This is a factory method to create a log control point, with a certain input tag. There is a central registry of all the loggers, with their corresponding tags, called PV Logger Registry. In case the logger with the specified tag exists in the global registry, it is returned, else a new one is created and a pointer to the same is returned.

**Parameters**

*inputTag* logger tag, viz. "x.y.z"

*level* log level associated with the logging control point (All messages with log levels less than equal to the log level of the control point would be logged)

*oAppenderInheritance*

**Returns**

PVLogger\* Pointer to the logging control point

**Exceptions**

*leaves* if out of memory

Referenced by OsclDNSMethod::OsclDNSMethod().

**7.247.3.6 `log_level_type PVLogger::GetLogLevel () [inline]`**

This method returns the log level of a control point. This could either have been set explicitly by the user (at the time of creation or later) or could have been inherited from one of its ancestors.

**Returns**

`log level associated with the logging control point`

**7.247.3.7 `uint32 PVLogger::GetNumAppenders () [inline]`**

This method returns the number of appenders attached to the logging control point.

References `Oscl_Vector_Base::size()`.

**7.247.3.8 `PVLogger* PVLogger::GetParent () [inline, protected]`****7.247.3.9 `static OSCL_IMPORT_REF void PVLogger::Init () [static]`**

`PVLogger` needs to be initialized once per thread. This creates the `PVLogger` singleton that is used throughout the duration of the thread. Initialization must occur before the first message is logged.

**Exceptions**

`leaves` if out of memory

**7.247.3.10 `OSCL_IMPORT_REF bool PVLogger::IsActive (log_level_type level)`**

This method determines if a msg passed to the logging control point is active or not. Only messages that are deemed active are logged. Messages are considered not active if any of the following criteria are met:

- All logging is disabled at this logging control point
- If all the log levels, leading upto the root log point are uninitialized
- If the log level of the incoming message is LESS THAN that of the active log level of the logging control point.

**Returns**

`BOOL`

**7.247.3.11 `OSCL_IMPORT_REF void PVLogger::LogMsgBuffers (message_id_type msgID, int32 numPairs, ...)`**

This method logs opaque data buffers to all the appenders, after running through the message filters. After logging the message to the appenders attached to the current control point, the message is passed up to the parent node, only if appender inheritance is enabled.

**Parameters**

`msgID` Message ID, that is unique to a message

*numPairs* Number of (ptr\_len, ptr) pairs

*arguments* Variable list of arguments

#### Returns

NONE

### 7.247.3.12 OSCL\_IMPORT\_REF void PVLogger::LogMsgBuffersV (message\_id\_type *msgID*, int32 *numPairs*, va\_list *arguments*)

This method logs opaque data buffers to all the appenders, after running through the message filters. After logging the message to the appenders attached to the current control point, the message is passed up to the parent node, only if appender inheritance is enabled.

#### Parameters

*msgID* Message ID, that is unique to a message

*numPairs* Number of (ptr\_len, ptr) pairs

*arguments* Variable list of arguments

#### Returns

NONE

### 7.247.3.13 OSCL\_IMPORT\_REF void PVLogger::LogMsgString (message\_id\_type *msgID*, const char \**fmt*, ...)

This method logs formatted text msg to all the appenders, after running through the message filters. After logging the message to the appenders attached to the current control point, the message is passed up to the parent node, only if appender inheritance is enabled.

#### Parameters

*msgID* Message ID, that is unique to a message

*fmt* format string, similar to one taken by printf

*arguments* Variable list of arguments

#### Returns

NONE

### 7.247.3.14 OSCL\_IMPORT\_REF void PVLogger::LogMsgStringV (message\_id\_type *msgID*, const char \**fmt*, va\_list *arguments*)

This method logs formatted text msg to all the appenders, after running through the message filters. After logging the message to the appenders attached to the current control point, the message is passed up to the parent node, only if appender inheritance is enabled.

#### Parameters

*msgID* Message ID, that is unique to a message

*fmt* format string, similar to one taken by printf  
*arguments* Variable list of arguments

#### Returns

NONE

### 7.247.3.15 void PVLogger::RemoveAppender (OsclSharedPtr< PVLoggerAppender > & appender) [inline]

This method removes an appender from the logging control point. Each logger maintains a list of appenders. Any msg to a logger if deemed active is logged to all the appenders.

#### Parameters

*appender* pointer to the appender to delete

#### Returns

NONE

References Oscl\_Vector< T, Alloc >::begin(), Oscl\_Vector< T, Alloc >::end(), Oscl\_Vector< T, Alloc >::erase(), OsclSharedPtr< TheClass >::GetRep(), and OSCL\_UNUSED\_ARG.

### 7.247.3.16 void PVLogger::SetLogLevel (log\_level\_type *level*) [inline]

This method is used to set the log level of a control point.

#### Parameters

*level* log level associated with the logging control point

#### Returns

NONE

References OSCL\_UNUSED\_ARG.

### 7.247.3.17 OSCL\_IMPORT\_REF void PVLogger::SetLogLevelAndPropagate (log\_level\_type *level*)

This method is used to set the log level of a control point, as well as to propagate the level to all the descendants of this control point.

#### Parameters

*level* log level associated with the logging control point

#### Returns

NONE

**7.247.3.18 void PVLogger::SetParent (PVLogger \**parentLogger*) [inline, protected]**

## 7.247.4 Friends And Related Function Documentation

### 7.247.4.1 friend class PVLoggerRegistry [friend]

The documentation for this class was generated from the following file:

- [pvlogger.h](#)

## 7.248 PVLoggerAppender Class Reference

```
#include <pvlogger_accessories.h>
```

### Public Types

- `typedef PVLogger::message_id_type message_id_type`

### Public Member Functions

- `virtual ~PVLoggerAppender ()`
- `virtual void AppendString (message_id_type msgID, const char *fmt, va_list va)=0`
- `virtual void AppendBuffers (message_id_type msgID, int32 numPairs, va_list va)=0`

#### 7.248.1 Detailed Description

Base class for all message appenders. This class defines the interface to the message appenders. There are two kinds of msg appender APIs, one to append text messages, and other to append opaque message buffers.

#### 7.248.2 Member Typedef Documentation

##### 7.248.2.1 `typedef PVLogger::message_id_type PVLoggerAppender::message_id_type`

#### 7.248.3 Constructor & Destructor Documentation

##### 7.248.3.1 `virtual PVLoggerAppender::~PVLoggerAppender () [inline, virtual]`

#### 7.248.4 Member Function Documentation

##### 7.248.4.1 `virtual void PVLoggerAppender::AppendBuffers (message_id_type msgID, int32 numPairs, va_list va) [pure virtual]`

##### 7.248.4.2 `virtual void PVLoggerAppender::AppendString (message_id_type msgID, const char *fmt, va_list va) [pure virtual]`

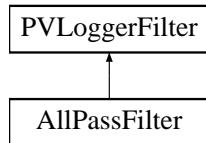
The documentation for this class was generated from the following file:

- `pvlogger_accessories.h`

## 7.249 PVLoggerFilter Class Reference

```
#include <pvlogger_accessories.h>
```

Inheritance diagram for PVLoggerFilter:



### Public Types

- `typedef PVLogger::message_id_type message_id_type`
- `typedef PVLogger::log_level_type log_level_type`
- `typedef PVLogger::filter_status_type filter_status_type`

### Public Member Functions

- `virtual ~PVLoggerFilter ()`
- `virtual filter_status_type FilterString (char *tag, message_id_type msgID, log_level_type level)=0`
- `virtual filter_status_type FilterOpaqueMessage (char *tag, message_id_type msgID, log_level_type level)=0`

#### 7.249.1 Detailed Description

Base class for all message filters. This class defines the interface to the message filters. There are two kinds of msg filtering APIs, one to filter text messages, and other to filter opaque message buffers.

#### 7.249.2 Member Typedef Documentation

##### 7.249.2.1 `typedef PVLogger::filter_status_type PVLoggerFilter::filter_status_type`

Reimplemented in [AllPassFilter](#).

##### 7.249.2.2 `typedef PVLogger::log_level_type PVLoggerFilter::log_level_type`

Reimplemented in [AllPassFilter](#).

##### 7.249.2.3 `typedef PVLogger::message_id_type PVLoggerFilter::message_id_type`

Reimplemented in [AllPassFilter](#).

### 7.249.3 Constructor & Destructor Documentation

7.249.3.1 `virtual PVLoggerFilter::~PVLoggerFilter () [inline, virtual]`

### 7.249.4 Member Function Documentation

7.249.4.1 `virtual filter_status_type PVLoggerFilter::FilterOpaqueMessge (char * tag, message_id_type msgID, log_level_type level) [pure virtual]`

Implemented in [AllPassFilter](#).

7.249.4.2 `virtual filter_status_type PVLoggerFilter::FilterString (char * tag, message_id_type msgID, log_level_type level) [pure virtual]`

Implemented in [AllPassFilter](#).

The documentation for this class was generated from the following file:

- [pvlogger\\_accessories.h](#)

## 7.250 PVLoggerLayout Class Reference

```
#include <pvlogger_accessories.h>
```

### Public Types

- `typedef PVLogger::message_id_type message_id_type`

### Public Member Functions

- `virtual ~PVLoggerLayout()`
- `virtual int32 FormatString (char *formatBuf, int32 formatBufSize, message_id_type msgID, const char *fmt, va_list va)=0`
- `virtual int32 FormatOpaqueMessage (char *formatBuf, int32 formatBufSize, message_id_type msgID, int32 numPairs, va_list va)=0`

#### 7.250.1 Detailed Description

Base class for all message formatters. This class defines the interface to the message formatter. There are two kinds of msg formatting APIs, one to format text messages, and other to format opaque message buffers.

#### 7.250.2 Member Typedef Documentation

##### 7.250.2.1 `typedef PVLogger::message_id_type PVLoggerLayout::message_id_type`

#### 7.250.3 Constructor & Destructor Documentation

##### 7.250.3.1 `virtual PVLoggerLayout::~PVLoggerLayout () [inline, virtual]`

#### 7.250.4 Member Function Documentation

##### 7.250.4.1 `virtual int32 PVLoggerLayout::FormatOpaqueMessage (char *formatBuf, int32 formatBufSize, message_id_type msgID, int32 numPairs, va_list va) [pure virtual]`

Formats the data and copies it to the given buffer.

#### Returns

The length of the buffer used.

##### 7.250.4.2 `virtual int32 PVLoggerLayout::FormatString (char *formatBuf, int32 formatBufSize, message_id_type msgID, const char *fmt, va_list va) [pure virtual]`

Formats the string and copies it to the given buffer.

#### Returns

The length of the string not including the trailing ”

The documentation for this class was generated from the following file:

- [pvlogger\\_accessories.h](#)

## 7.251 PVLoggerRegistry Class Reference

```
#include <pvlogger_registry.h>
```

### Public Types

- `typedef PVLogger::log_level_type log_level_type`
- `typedef PVLogger::alloc_type alloc_type`

### Public Member Functions

- `OSCL_IMPORT_REF PVLoggerRegistry()`
- `virtual OSCL_IMPORT_REF ~PVLoggerRegistry()`
- `OSCL_IMPORT_REF PVLogger * GetPVLoggerObject (const char *tagIn)`
- `OSCL_IMPORT_REF PVLogger * CreatePVLogger (const char *tagIn, log_level_type level, bool oAppenderInheritance)`
- `OSCL_IMPORT_REF bool SetNodeLogLevelExplicit (char *tagIn, log_level_type level)`
- `OSCL_IMPORT_REF void SetNodeLogLevelExplicit (Oscl_TagTree< PVLogger *, alloc_type >::node_type *node, log_level_type level)`

### Static Public Member Functions

- `static OSCL_IMPORT_REF PVLoggerRegistry * GetPVLoggerRegistry()`

#### 7.251.1 Detailed Description

Class: `PVLoggerRegistry`

`PVLoggerRegistry` class, maintains a repository of all the loggers, along with their associated tags, in a tag tree. Any request for a log control point is serviced by this class.

Memory Ownership: Creates log control points for each tag, and holds these pointers in the tag tree. `PVLogger` registry is responsible for calling the destructor on each of these loggers.

#### 7.251.2 Member Typedef Documentation

##### 7.251.2.1 `typedef PVLogger::alloc_type PVLoggerRegistry::alloc_type`

##### 7.251.2.2 `typedef PVLogger::log_level_type PVLoggerRegistry::log_level_type`

#### 7.251.3 Constructor & Destructor Documentation

##### 7.251.3.1 `OSCL_IMPORT_REF PVLoggerRegistry::PVLoggerRegistry()`

`PVLoggerRegistry` Constructor

##### 7.251.3.2 `virtual OSCL_IMPORT_REF PVLoggerRegistry::~PVLoggerRegistry () [virtual]`

`PVLoggerRegistry` Destructor

## 7.251.4 Member Function Documentation

### 7.251.4.1 OSCL\_IMPORT\_REF PVLogger\* PVLoggerRegistry::CreatePVLogger (const char \* *tagIn*, log\_level\_type *level*, bool *oAppenderInheritance*)

This method creates a log control point, with specified tag, and level

#### Parameters

*inputTag* logger tag, viz. "x.y.z"  
*level* log level associated with the logging control point  
*oAppenderInheritance*

#### Returns

PVLogger<alloc\_type, TheLock>\* Pointer to the logging control point

### 7.251.4.2 OSCL\_IMPORT\_REF PVLogger\* PVLoggerRegistry::GetPVLoggerObject (const char \* *tagIn*)

[PVLoggerRegistry](#) method to get access to a logging control point, associated with a tag. In case the logger for this tag does not exist, it is created afresh, else pointer to the existing one is returned.

#### Parameters

*inputTag* logger tag, viz. "x.y.z"  
*level* log level associated with the logging control point  
*oAppenderInheritance*

#### Returns

PVLogger<Alloc, TheLock>\* Pointer to the logging control point

### 7.251.4.3 static OSCL\_IMPORT\_REF PVLoggerRegistry\* PVLoggerRegistry::GetPVLoggerRegistry () [static]

Get the logger registry. There is only one logger registry instance per thread.

### 7.251.4.4 OSCL\_IMPORT\_REF void PVLoggerRegistry::SetNodeLogLevelExplicit (Oscl\_TagTree< PVLogger \*, alloc\_type >::node\_type \* *node*, log\_level\_type *level*)

This method recursively propagates the log level to all the descendants, of a node.

#### Parameters

*node* Node ptr, associated with a logger, from the tag tree.  
*level* log level associated with the logging control point

#### Returns

NONE

**7.251.4.5 OSCL\_IMPORT\_REF bool PVLoggerRegistry::SetNodeLogLevelExplicit (char \* *tagIn*,  
log\_level\_type *level*)**

This method propagates the log level to all the descendants of the node, with a specified tag.

**Parameters**

*tagIn* logger tag, viz. "x.y.z"

*level* log level associated with the logging control point

**Returns**

true on success, else false.

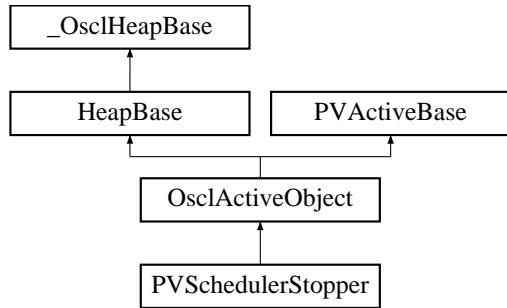
The documentation for this class was generated from the following file:

- [pvlogger\\_registry.h](#)

## 7.252 PVSchedulerStopper Class Reference

```
#include <oscl_scheduler.h>
```

Inheritance diagram for PVSchedulerStopper:



### Public Member Functions

- [PVSchedulerStopper \(\)](#)
- [~PVSchedulerStopper \(\)](#)

#### 7.252.1 Detailed Description

Scheduler stopper AO class, for internal use by scheduler.

#### 7.252.2 Constructor & Destructor Documentation

##### 7.252.2.1 PVSchedulerStopper::PVSchedulerStopper ()

##### 7.252.2.2 PVSchedulerStopper::~PVSchedulerStopper ()

The documentation for this class was generated from the following file:

- [oscl\\_scheduler.h](#)

## 7.253 PVSockBufRecv Class Reference

```
#include <oscl_socket_request.h>
```

### Public Member Functions

- [PVSockBufRecv \(\)](#)
- [PVSockBufRecv \(uint8 \\*aPtr, uint32 aLen, uint32 aMax\)](#)
- [PVSockBufRecv \(const PVSockBufRecv &a\)](#)

### Data Fields

- [uint8 \\* iPtr](#)
- [uint32 iLen](#)
- [uint32 iMaxLen](#)

#### 7.253.1 Constructor & Destructor Documentation

7.253.1.1 [PVSockBufRecv::PVSockBufRecv \(\) \[inline\]](#)

7.253.1.2 [PVSockBufRecv::PVSockBufRecv \(uint8 \\* aPtr, uint32 aLen, uint32 aMax\) \[inline\]](#)

7.253.1.3 [PVSockBufRecv::PVSockBufRecv \(const PVSockBufRecv & a\) \[inline\]](#)

#### 7.253.2 Field Documentation

7.253.2.1 [uint32 PVSockBufRecv::iLen](#)

7.253.2.2 [uint32 PVSockBufRecv::iMaxLen](#)

7.253.2.3 [uint8\\* PVSockBufRecv::iPtr](#)

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.254 PVSockBufSend Class Reference

```
#include <oscl_socket_request.h>
```

### Public Member Functions

- [PVSockBufSend \(\)](#)
- [PVSockBufSend \(const uint8 \\*aPtr, uint32 aLen\)](#)
- [PVSockBufSend \(const PVSockBufSend &a\)](#)

### Data Fields

- [const uint8 \\* iPtr](#)
- [uint32 iLen](#)

#### 7.254.1 Constructor & Destructor Documentation

7.254.1.1 [PVSockBufSend::PVSockBufSend \(\) \[inline\]](#)

7.254.1.2 [PVSockBufSend::PVSockBufSend \(const uint8 \\* aPtr, uint32 aLen\) \[inline\]](#)

7.254.1.3 [PVSockBufSend::PVSockBufSend \(const PVSockBufSend & a\) \[inline\]](#)

#### 7.254.2 Field Documentation

7.254.2.1 [uint32 PVSockBufSend::iLen](#)

7.254.2.2 [const uint8\\* PVSockBufSend::iPtr](#)

The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.255 PVThreadContext Class Reference

```
#include <oscl_scheduler_threadcontext.h>
```

### Public Member Functions

- OSCL\_IMPORT\_REF PVThreadContext()
- OSCL\_IMPORT\_REF ~PVThreadContext()
- OSCL\_IMPORT\_REF bool IsSameThreadContext()
- OSCL\_IMPORT\_REF void EnterThreadContext()
- OSCL\_IMPORT\_REF void ExitThreadContext()

### Static Public Member Functions

- static OSCL\_IMPORT\_REF uint32 Id()
- static OSCL\_IMPORT\_REF bool ThreadHasScheduler()

### Friends

- class PVActiveBase
- class OsclActiveObject
- class OsclTimerObject
- class OsclExecScheduler
- class OsclCoeActiveScheduler
- class OsclExecSchedulerCommonBase
- class OsclExecSchedulerBase
- class OsclCoeActiveSchedulerBase

#### 7.255.1 Constructor & Destructor Documentation

**7.255.1.1 OSCL\_IMPORT\_REF PVThreadContext::PVThreadContext()**

**7.255.1.2 OSCL\_IMPORT\_REF PVThreadContext::~PVThreadContext()**

#### 7.255.2 Member Function Documentation

**7.255.2.1 OSCL\_IMPORT\_REF void PVThreadContext::EnterThreadContext()**

enter and exit thread context.

**7.255.2.2 OSCL\_IMPORT\_REF void PVThreadContext::ExitThreadContext()**

**7.255.2.3 static OSCL\_IMPORT\_REF uint32 PVThreadContext::Id () [static]**

static routine to get a unique thread ID for caller's thread context.

**7.255.2.4 OSCL\_IMPORT\_REF bool PVThreadContext::IsSameThreadContext ()**

compare caller's thread context to this one.

**7.255.2.5 static OSCL\_IMPORT\_REF bool PVThreadContext::ThreadHasScheduler ()  
[static]**

a static utility to tell whether the calling thread has any scheduler-- either Oscl scheduler or native scheduler.

**7.255.3 Friends And Related Function Documentation****7.255.3.1 friend class OsclActiveObject [friend]****7.255.3.2 friend class OsclCoeActiveScheduler [friend]****7.255.3.3 friend class OsclCoeActiveSchedulerBase [friend]****7.255.3.4 friend class OsclExecScheduler [friend]****7.255.3.5 friend class OsclExecSchedulerBase [friend]****7.255.3.6 friend class OsclExecSchedulerCommonBase [friend]****7.255.3.7 friend class OsclTimerObject [friend]****7.255.3.8 friend class PVActiveBase [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_threadcontext.h](#)

## 7.256 Oscl\_TAlloc< T, Alloc >::rebind< U, V > Struct Template Reference

```
#include <oscl_defalloc.h>
```

### Public Types

- **typedef Oscl\_TAlloc< U, V > other**

```
template<class T, class Alloc>template<class U, class V> struct Oscl_TAlloc< T, Alloc >::rebind< U, V >
```

#### 7.256.1 Member Typedef Documentation

```
7.256.1.1 template<class T, class Alloc> template<class U , class V > typedef Oscl_TAlloc<U, V> Oscl_TAlloc< T, Alloc >::rebind< U, V >::other
```

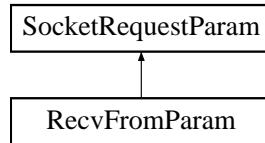
The documentation for this struct was generated from the following file:

- [oscl\\_defalloc.h](#)

## 7.257 RecvFromParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for RecvFromParam:



### Public Member Functions

- `RecvFromParam (uint8 *aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, uint32 flags, uint32 aMultiMax, Oscl_Vector< uint32, OsclMemAllocator > *aPacketLen, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > *aPacketSource)`

### Data Fields

- `PVSockBufRecv iBufRecv`
- `uint32 iFlags`
- `OsclNetworkAddress & iAddr`
- `uint32 iMultiMaxLen`
- `Oscl_Vector< uint32, OsclMemAllocator > * iPacketLen`
- `Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * iPacketSource`

#### 7.257.1 Constructor & Destructor Documentation

**7.257.1.1 RecvFromParam::RecvFromParam (uint8 \*& aPtr, uint32 aMaxLen, OsclNetworkAddress & aAddress, uint32 flags, uint32 aMultiMax, Oscl\_Vector< uint32, OsclMemAllocator > \* aPacketLen, Oscl\_Vector< OsclNetworkAddress, OsclMemAllocator > \* aPacketSource) [inline]**

#### 7.257.2 Field Documentation

**7.257.2.1 OsclNetworkAddress& RecvFromParam::iAddr**

**7.257.2.2 PVSockBufRecv RecvFromParam::iBufRecv**

**7.257.2.3 uint32 RecvFromParam::iFlags**

**7.257.2.4 uint32 RecvFromParam::iMultiMaxLen**

**7.257.2.5 Oscl\_Vector<uint32, OsclMemAllocator>\* RecvFromParam::iPacketLen**

**7.257.2.6 Oscl\_Vector<OsclNetworkAddress, OsclMemAllocator>\* RecvFromParam::iPacketSource**

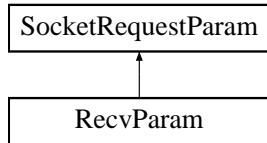
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.258 RecvParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for RecvParam:



### Public Member Functions

- [RecvParam \(uint8 \\*&aPtr, uint32 aMaxLen, uint32 flags\)](#)

### Data Fields

- [PVSockBufRecv iBufRecv](#)
- [uint32 iFlags](#)

#### 7.258.1 Constructor & Destructor Documentation

7.258.1.1 [RecvParam::RecvParam \(uint8 \\*& aPtr, uint32 aMaxLen, uint32 flags\) \[inline\]](#)

#### 7.258.2 Field Documentation

7.258.2.1 [PVSockBufRecv RecvParam::iBufRecv](#)

7.258.2.2 [uint32 RecvParam::iFlags](#)

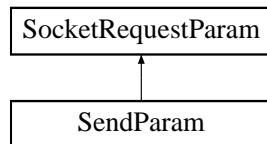
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.259 SendParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for SendParam:



### Public Member Functions

- [SendParam \(const uint8 \\*aPtr, uint32 aLen, uint32 aFlags\)](#)

### Data Fields

- [PVSockBufSend iBufSend](#)
- [uint32 iFlags](#)
- [uint32 iXferLen](#)

#### 7.259.1 Detailed Description

Socket method parameter sets

#### 7.259.2 Constructor & Destructor Documentation

7.259.2.1 [SendParam::SendParam \(const uint8 \\*aPtr, uint32 aLen, uint32 aFlags\) \[inline\]](#)

#### 7.259.3 Field Documentation

7.259.3.1 [PVSockBufSend SendParam::iBufSend](#)

7.259.3.2 [uint32 SendParam::iFlags](#)

7.259.3.3 [uint32 SendParam::iXferLen](#)

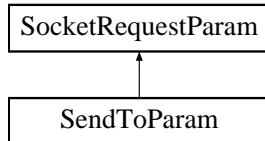
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.260 SendToParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for SendToParam:



### Public Member Functions

- [SendToParam \(const uint8 \\*&aPtr, uint32 aLen, OsclNetworkAddress &anAddr, uint32 flags\)](#)
- [~SendToParam \(\)](#)

### Data Fields

- [PVSockBufSend iBufSend](#)
- [uint32 iFlags](#)
- [OsclNetworkAddress iAddr](#)
- [uint32 iXferLen](#)

#### 7.260.1 Constructor & Destructor Documentation

**7.260.1.1 SendToParam::SendToParam (const uint8 \*& aPtr, uint32 aLen, OsclNetworkAddress & anAddr, uint32 flags) [inline]**

**7.260.1.2 SendToParam::~SendToParam () [inline]**

#### 7.260.2 Field Documentation

**7.260.2.1 OsclNetworkAddress SendToParam::iAddr**

**7.260.2.2 PVSockBufSend SendToParam::iBufSend**

**7.260.2.3 uint32 SendToParam::iFlags**

**7.260.2.4 uint32 SendToParam::iXferLen**

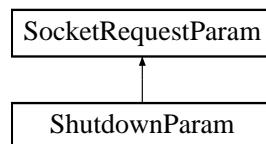
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.261 ShutdownParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for ShutdownParam:



### Public Member Functions

- [ShutdownParam \(TPVSocketShutdown aHow\)](#)

### Data Fields

- [TPVSocketShutdown iHow](#)

#### 7.261.1 Constructor & Destructor Documentation

7.261.1.1 [ShutdownParam::ShutdownParam \(TPVSocketShutdown \*aHow\*\) \[inline\]](#)

#### 7.261.2 Field Documentation

7.261.2.1 [TPVSocketShutdown ShutdownParam::iHow](#)

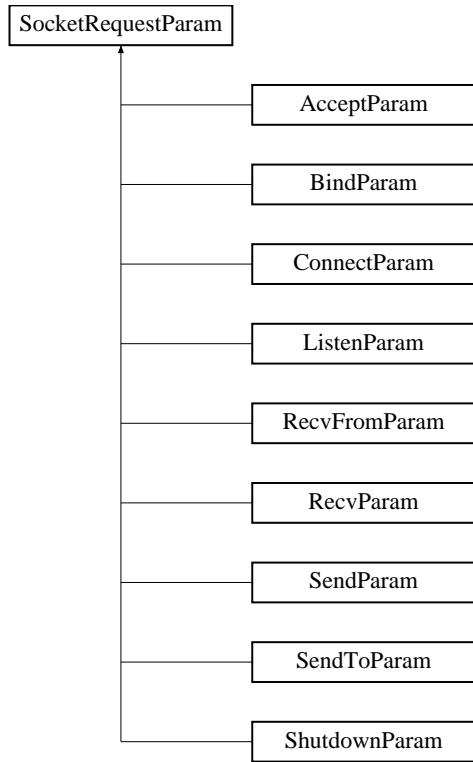
The documentation for this class was generated from the following file:

- [oscl\\_socket\\_request.h](#)

## 7.262 SocketRequestParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for SocketRequestParam:



### Public Member Functions

- [SocketRequestParam \(TPVSocketFxn aFxn\)](#)

### Data Fields

- [TPVSocketFxn iFxn](#)

#### 7.262.1 Detailed Description

Base class for all socket method parameter sets

## 7.262.2 Constructor & Destructor Documentation

### 7.262.2.1 SocketRequestParam::SocketRequestParam (TPVSocketFxn *aFxn*) [inline]

## 7.262.3 Field Documentation

### 7.262.3.1 TPVSocketFxn SocketRequestParam::iFxn

The documentation for this class was generated from the following file:

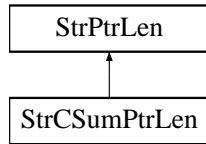
- [oscl\\_socket\\_request.h](#)

## 7.263 StrCSumPtrLen Struct Reference

same as [StrPtrLen](#), but includes checksum field and method to speed up querying

```
#include <oscl_str_ptr_len.h>
```

Inheritance diagram for StrCSumPtrLen:



### Public Types

- `typedef int16 CheckSumType`

### Public Member Functions

- `void setPtrLen (const char *newPtr, uint32 newLen)`
- `CheckSumType getCheckSum () const`
- `OSCL_IMPORT_REF void setCheckSum ()`
- `StrCSumPtrLen ()`
- `StrCSumPtrLen (const char *newPtr)`
- `StrCSumPtrLen (const char *newPtr, uint32 newLen)`
- `StrCSumPtrLen (const StrCSumPtrLen &rhs)`
- `StrCSumPtrLen (const StrPtrLen &rhs)`
- `c_bool isCIEquivalentTo (const StrCSumPtrLen &rhs) const`
- `c_bool operator== (const StrCSumPtrLen &rhs) const`
- `c_bool operator!= (const StrCSumPtrLen &rhs) const`
- `StrCSumPtrLen & operator= (const StrCSumPtrLen &rhs)`
- `StrCSumPtrLen & operator= (const StrPtrLen &rhs)`
- `StrCSumPtrLen & operator= (const char *rhs)`

### Protected Attributes

- `CheckSumType checkSum`

#### 7.263.1 Detailed Description

same as [StrPtrLen](#), but includes checksum field and method to speed up querying

### 7.263.2 Member Typedef Documentation

7.263.2.1 `typedef int16 StrCSumPtrLen::CheckSumType`

### 7.263.3 Constructor & Destructor Documentation

7.263.3.1 `StrCSumPtrLen::StrCSumPtrLen () [inline]`

7.263.3.2 `StrCSumPtrLen::StrCSumPtrLen (const char * newPtr) [inline]`

References `setCheckSum()`.

7.263.3.3 `StrCSumPtrLen::StrCSumPtrLen (const char * newPtr, uint32 newLen) [inline]`

References `setCheckSum()`.

7.263.3.4 `StrCSumPtrLen::StrCSumPtrLen (const StrCSumPtrLen & rhs) [inline]`

7.263.3.5 `StrCSumPtrLen::StrCSumPtrLen (const StrPtrLen & rhs) [inline]`

References `setCheckSum()`.

### 7.263.4 Member Function Documentation

7.263.4.1 `CheckSumType StrCSumPtrLen::getCheckSum () const [inline]`

References `checkSum`.

Referenced by `isCIEquivalentTo()`, and `operator==()`.

7.263.4.2 `c_bool StrCSumPtrLen::isCIEquivalentTo (const StrCSumPtrLen & rhs) const [inline]`

References `getCheckSum()`.

7.263.4.3 `c_bool StrCSumPtrLen::operator!= (const StrCSumPtrLen & rhs) const [inline]`

7.263.4.4 `StrCSumPtrLen& StrCSumPtrLen::operator= (const char * rhs) [inline]`

Reimplemented from `StrPtrLen`.

References `operator=()`, and `setCheckSum()`.

7.263.4.5 `StrCSumPtrLen& StrCSumPtrLen::operator= (const StrPtrLen & rhs) [inline]`

Reimplemented from `StrPtrLen`.

References `operator=()`, and `setCheckSum()`.

**7.263.4.6 StrCSumPtrLen& StrCSumPtrLen::operator= (const StrCSumPtrLen & *rhs*) [inline]**

References checkSum.

Referenced by operator=().

**7.263.4.7 c\_bool StrCSumPtrLen::operator== (const StrCSumPtrLen & *rhs*) const [inline]**

References getCheckSum().

**7.263.4.8 OSCL\_IMPORT\_REF void StrCSumPtrLen::setCheckSum ()**

Referenced by operator=(), setPtrLen(), and StrCSumPtrLen().

**7.263.4.9 void StrCSumPtrLen::setPtrLen (const char \* *newPtr*, uint32 *newLen*) [inline]**

Reimplemented from [StrPtrLen](#).

References setCheckSum().

## 7.263.5 Field Documentation

**7.263.5.1 CheckSumType StrCSumPtrLen::checkSum [protected]**

Referenced by getCheckSum(), and operator=().

The documentation for this struct was generated from the following file:

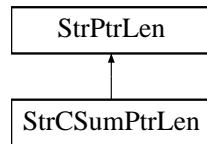
- [oscl\\_str\\_ptr\\_len.h](#)

## 7.264 StrPtrLen Struct Reference

This data structure encapsulates a set of functions used to perform.

```
#include <oscl_str_ptr_len.h>
```

Inheritance diagram for StrPtrLen:



### Public Member Functions

- [StrPtrLen \(const char \\*newPtr\)](#)
- [StrPtrLen \(const char \\*newPtr, uint32 newLen\)](#)
- [StrPtrLen \(\)](#)
- [StrPtrLen \(const StrPtrLen &rhs\)](#)
- const char \* [c\\_str \(\) const](#)
- int32 [length \(\) const](#)
- int32 [size \(\) const](#)
- void [setPtrLen \(const char \\*newPtr, uint32 newLen\)](#)
- [c\\_bool isCIEquivalentTo \(const StrPtrLen &rhs\) const](#)
- [c\\_bool isCIPrefixOf \(const StrPtrLen &rhs\) const](#)
- int32 [operator== \(const StrPtrLen &rhs\) const](#)
- int32 [operator!= \(const StrPtrLen &rhs\) const](#)
- [StrPtrLen & operator= \(const StrPtrLen &rhs\)](#)
- [StrPtrLen & operator= \(const char \\*rhs\)](#)

### Protected Member Functions

- bool [isLetter \(const char c\) const](#)

### Protected Attributes

- const char \* [ptr](#)
- int32 [len](#)

#### 7.264.1 Detailed Description

This data structure encapsulates a set of functions used to perform standard string operations. It should be used for null-terminated constant (non-modifiable) strings of char type.

#### 7.264.2 Constructor & Destructor Documentation

##### 7.264.2.1 StrPtrLen::StrPtrLen (const char \* *newPtr*) [inline]

References len, and oscl\_strlen().

**7.264.2.2 StrPtrLen::StrPtrLen (const char \* *newPtr*, uint32 *newLen*) [inline]**

**7.264.2.3 StrPtrLen::StrPtrLen () [inline]**

**7.264.2.4 StrPtrLen::StrPtrLen (const StrPtrLen & *rhs*) [inline]**

### **7.264.3 Member Function Documentation**

**7.264.3.1 const char\* StrPtrLen::c\_str () const [inline]**

References ptr.

**7.264.3.2 c\_bool StrPtrLen::isCIEquivalentTo (const StrPtrLen & *rhs*) const [inline]**

References isCIPrefixOf(), and len.

**7.264.3.3 c\_bool StrPtrLen::isCIPrefixOf (const StrPtrLen & *rhs*) const [inline]**

References isLetter(), len, OSCL\_ASCII\_CASE\_MAGIC\_BIT, and ptr.

Referenced by isCIEquivalentTo().

**7.264.3.4 bool StrPtrLen::isLetter (const char *c*) const [inline, protected]**

Referenced by isCIPrefixOf().

**7.264.3.5 int32 StrPtrLen::length () const [inline]**

References len.

**7.264.3.6 int32 StrPtrLen::operator!= (const StrPtrLen & *rhs*) const [inline]**

**7.264.3.7 StrPtrLen& StrPtrLen::operator= (const char \* *rhs*) [inline]**

Reimplemented in [StrCSumPtrLen](#).

References len, oscl\_strlen(), and ptr.

**7.264.3.8 StrPtrLen& StrPtrLen::operator= (const StrPtrLen & *rhs*) [inline]**

Reimplemented in [StrCSumPtrLen](#).

References len, and ptr.

**7.264.3.9 int32 StrPtrLen::operator== (const StrPtrLen & *rhs*) const [inline]**

References len, oscl\_strcmp(), and ptr.

**7.264.3.10 void StrPtrLen::setPtrLen (const char \* *newPtr*, uint32 *newLen*) [inline]**

Reimplemented in [StrCSumPtrLen](#).

References len, and ptr.

**7.264.3.11 int32 StrPtrLen::size () const [inline]**

References len.

## 7.264.4 Field Documentation

**7.264.4.1 int32 StrPtrLen::len [protected]**

Referenced by [isCIEquivalentTo\(\)](#), [isCIPrefixOf\(\)](#), [length\(\)](#), [operator=\(\)](#), [operator==\(\)](#), [setPtrLen\(\)](#), [size\(\)](#), and [StrPtrLen\(\)](#).

**7.264.4.2 const char\* StrPtrLen::ptr [protected]**

Referenced by [c\\_str\(\)](#), [isCIPrefixOf\(\)](#), [operator=\(\)](#), [operator==\(\)](#), and [setPtrLen\(\)](#).

The documentation for this struct was generated from the following file:

- [oscl\\_str\\_ptr\\_len.h](#)

## 7.265 TimeValue Class Reference

The [TimeValue](#) class represents a time value in a format native to the system.

```
#include <oscl_time.h>
```

### Public Member Functions

- **OSCL\_COND\_IMPORT\_REF TimeValue ()**  
*Create a [TimeValue](#) representing the current time.*
- **OSCL\_COND\_IMPORT\_REF TimeValue (const TimeValue &Tv)**  
*Copy constructor.*
- **OSCL\_COND\_IMPORT\_REF TimeValue (long tv, TimeUnits units)**  
*Create a [TimeValue](#) representing an interval of tv units.*
- **OSCL\_COND\_IMPORT\_REF TimeValue (const OsclBasicTimeStruct &in\_tv)**  
*Create a [TimeValue](#) representing the absolute time specified by the BasicTimeStruct.*
- **OSCL\_COND\_IMPORT\_REF TimeValue (const ISO8601timeStrBuf time\_strbuf)**
- **OSCL\_COND\_IMPORT\_REF TimeValue (uint16 aYear, uint16 aMonth, uint16 aDay, uint16 aHour, uint16 aMinute, uint16 aSecond, uint16 aMilliseconds)**
- **OSCL\_COND\_IMPORT\_REF TimeValue (OsclBasicDateTimeStruct in\_ts)**  
*Create a [TimeValue](#) representing the absolute time specified by the BasicDateTimeStruct.*
- **OSCL\_COND\_IMPORT\_REF int32 get\_local\_time ()**  
*Get the local time after having adjusted for daylight saving.*
- **OSCL\_COND\_IMPORT\_REF void set\_to\_zero ()**  
*Set the time value to zero (represents a zero interval).*
- **OSCL\_COND\_IMPORT\_REF void set\_to\_current\_time ()**  
*Set the time value to the current system time.*
- **OSCL\_COND\_IMPORT\_REF void set\_from\_ntp\_time (const uint32 ntp\_offset)**  
*This method converts a 32-bit NTP offset to system time.*
- **OSCL\_COND\_IMPORT\_REF uint32 get\_sec () const**  
*Get a 32 bit value representing the seconds since the (system dependent) epoch.*
- **OSCL\_COND\_IMPORT\_REF int32 to\_msec () const**
- **OSCL\_COND\_IMPORT\_REF uint32 get\_usec () const**  
*Get a 32 bit value representing the number of microseconds in the time value.*
- **OSCL\_COND\_IMPORT\_REF uint64 get\_timevalue\_in\_usec () const**  
*Get a 64 bit value representing the time value converted to microseconds.*
- **OSCL\_IMPORT\_REF char \* get\_str\_ctime (CtimeStrBuf ctime\_strbuf)**  
*Get a string containing a text representation of this [TimeValue](#) object.*

- OSCL\_IMPORT\_REF int [get\\_pv8601\\_str\\_time](#) (PV8601timeStrBuf time\_strbuf)  
*Get a PV extended text representation of the Time based on the PV 8601 format.*
- OSCL\_IMPORT\_REF int [get\\_ISO8601\\_str\\_time](#) (ISO8601timeStrBuf time\_strbuf)  
*Get a PV extended text representation of the Time based on the ISO 8601 format.*
- OSCL\_IMPORT\_REF char \* [get\\_rfc822\\_gmtime\\_str](#) (int max\_time\_strlen, char \*time\_str)  
*Get a text representation of the time in the GMT timezone based on the RFC 822 / RFC 1123 (also described in the HTTP spec RFC 2068 and RFC 2616).*
- OSCL\_COND\_IMPORT\_REF bool [is\\_zero](#) ()  
*Determine if the time value is zero.*
- OSCL\_COND\_IMPORT\_REF bool [is\\_zulu](#) () const  
*Manipulate internal flags to mark the time value as being in "zulu" (GMT) time.*
- OSCL\_COND\_IMPORT\_REF void [set\\_zulu](#) (bool is\_zulu)
- OSCL\_COND\_IMPORT\_REF [TimeValue & operator=](#) (const [TimeValue &a](#))  
*Assignment operator.*
- OSCL\_COND\_IMPORT\_REF [TimeValue & operator+=](#) (const [TimeValue &a](#))  
*+ = operator*
- OSCL\_COND\_IMPORT\_REF [TimeValue & operator-=](#) (const [TimeValue &a](#))  
*- = operator*
- OSCL\_COND\_IMPORT\_REF [TimeValue & operator\\*=](#) (const int scale)  
*This operator scales the time value by a constant.*
- OSCL\_COND\_IMPORT\_REF [OsclBasicTimeStruct \\* get\\_timeval\\_ptr](#) ()
- OSCL\_COND\_IMPORT\_REF [TimeValue & operator+=](#) (const int32 aSeconds)
- OSCL\_COND\_IMPORT\_REF [TimeValue & operator-=](#) (const int32 aSeconds)

## Friends

- class [NTPTime](#)
- OSCL\_COND\_IMPORT\_REF friend bool [operator==](#) (const [TimeValue &a](#), const [TimeValue &b](#))
- OSCL\_COND\_IMPORT\_REF friend bool [operator!=](#) (const [TimeValue &a](#), const [TimeValue &b](#))
- OSCL\_COND\_IMPORT\_REF friend bool [operator<=](#) (const [TimeValue &a](#), const [TimeValue &b](#))
- OSCL\_COND\_IMPORT\_REF friend bool [operator>=](#) (const [TimeValue &a](#), const [TimeValue &b](#))
- OSCL\_COND\_IMPORT\_REF friend bool [operator<](#) (const [TimeValue &a](#), const [TimeValue &b](#))
- OSCL\_COND\_IMPORT\_REF friend bool [operator>](#) (const [TimeValue &a](#), const [TimeValue &b](#))

### 7.265.1 Detailed Description

The [TimeValue](#) class represents a time value in a format native to the system. This class provides common time functions independent of any OS. The actual representation used is native to the system that the class is compiled on to increase efficiency. Macros used in this class:

- OSCL\_HAS\_ANSI\_STRING\_SUPPORT:

Definitions to determine the type of basic time structure used to store the time

- OSCL\_HAS\_UNIX\_TIME\_FUNCS
- OSCL\_HAS\_SYMBIAN\_SUPPORT
- OSCL\_HAS\_MSWIN\_SUPPORT

### 7.265.2 Constructor & Destructor Documentation

#### 7.265.2.1 OSCL\_COND\_IMPORT\_REF TimeValue::TimeValue ()

Create a [TimeValue](#) representing the current time.

#### 7.265.2.2 OSCL\_COND\_IMPORT\_REF TimeValue::TimeValue (const TimeValue & *Tv*)

Copy constructor.

#### 7.265.2.3 OSCL\_COND\_IMPORT\_REF TimeValue::TimeValue (long *tv*, TimeUnits *units*)

Create a [TimeValue](#) representing an interval of tv units.

##### Parameters

*tv* The number of units in the interval to be represented by this [TimeValue](#).

*units* The units of the tv argument. Must be in the enumeration TimeUnits.

#### 7.265.2.4 OSCL\_COND\_IMPORT\_REF TimeValue::TimeValue (const OsclBasicTimeStruct & *in\_tv*)

Create a [TimeValue](#) representing the absolute time specified by the BasicTimeStruct.

##### Parameters

*in\_tv* OsclBasicTimeStruct as defined for each platform.

#### 7.265.2.5 OSCL\_COND\_IMPORT\_REF TimeValue::TimeValue (const ISO8601timeStrBuf *time\_strbuf*)

#### 7.265.2.6 OSCL\_COND\_IMPORT\_REF TimeValue::TimeValue (uint16 *aYear*, uint16 *aMonth*, uint16 *aDay*, uint16 *aHour*, uint16 *aMinute*, uint16 *aSecond*, uint16 *aMilliseconds*)

Create a [TimeValue](#) representing the absolute time specified by the year/month/day/hours/minutes/seconds/microseconds values passed as argument.

[TimeValue](#) constructor that sets time according to following input parameter for a specific date time. Please note that no argument is check for its validity (range etc) It might assert incase wrong argument are passed by user of this api.

#### Parameters

- ← **uint16** wYear;
- ← **uint16** wMonth; Jan = 1 to Dec = 12
- ← **uint16** wDay; 1-28/29/30/31
- ← **uint16** wHour; 0 to 23
- ← **uint16** wMinute; 0 to 59
- ← **uint16** wSecond; 0 to 59
- ← **uint16** wMilliseconds; 0 to 999

### 7.265.2.7 OSCL\_COND\_IMPORT\_REF TimeValue::TimeValue (OsclBasicDateTimeStruct *in\_ts*)

Create a [TimeValue](#) representing the absolute time specified by the BasicDateTimeStruct.

#### Parameters

*in\_ts* OsclBasicDateTimeStruct as defined for each platform provides the date in a readable format (i.e. day, date , week etc.) Notes: Implementation incomplete (= not done) on Win32, Wince, Symbian

## 7.265.3 Member Function Documentation

### 7.265.3.1 OSCL\_IMPORT\_REF int TimeValue::get\_ISO8601\_str\_time (ISO8601timeStrBuf *time\_strbuf*)

Get a PV extended text representation of the Time based on the ISO 8601 format.

#### Parameters

*time\_strbuf* A ISO8601timeStrBuf object to which the text representation will be written,

#### Returns

The number of characters copied to the buffer, not including the terminating null. The returned string is of the form "1985-04-12 10:15:30Z".

### 7.265.3.2 OSCL\_COND\_IMPORT\_REF int32 TimeValue::get\_local\_time ()

Get the local time after having adjusted for daylight saving.

Notes: Implementation incomplete (= not done) on Win32, Wince, Symbian

### 7.265.3.3 OSCL\_IMPORT\_REF int TimeValue::get\_pv8601\_str\_time (PV8601timeStrBuf *time\_strbuf*)

Get a PV extended text representation of the Time based on the PV 8601 format.

**Parameters**

*time\_strbuf* A PV8601timeStrBuf object to which the text representation will be written,

**Returns**

The number of characters copied to the buffer, not including the terminating null. The returned string is of the form "19850412T101530.047Z".

#### 7.265.3.4 OSCL\_IMPORT\_REF char\* TimeValue::get\_rfc822\_gmtime\_str (int *max\_time\_strlen*, char \* *time\_str*)

Get a text representation of the time in the GMT timezone based on the RFC 822 / RFC 1123 (also described in the HTTP spec RFC 2068 and RFC 2616).

**Parameters**

*max\_time\_strlen* The maximum number of characters that can be written to the buffer.

*time\_str* A pointer to the buffer to which the characters will be written.

**Returns**

Returns a pointer to the buffer (same as *time\_str*) containing a null terminated (c-style) string of the form "Wed, 30 Jun 1993 21:49:08 GMT".

#### 7.265.3.5 OSCL\_COND\_IMPORT\_REF uint32 TimeValue::get\_sec () const

Get a 32 bit value representing the seconds since the (system dependent) epoch.

**Returns**

This call returns a 32 bit value representing the number of seconds since the epoch. On unix systems this represents the number of seconds since the unix epoch Jan 1 1970. On Win32 this represents the number of seconds since Jan 1, 1601. This is intended to be used for intervals rather than for absolute time. (On Win32 for example, a 32 bit value would be too small to represent the number of seconds from the epoch until the current time.)

#### 7.265.3.6 OSCL\_IMPORT\_REF char\* TimeValue::get\_str\_ctime (CtimeStrBuf *ctime\_strbuf*)

Get a string containing a text representation of this [TimeValue](#) object.

**Parameters**

*ctime\_strbuf* A CtimeStrBuf object to which the text representation will be written,

**Returns**

A pointer to the input CtimeStrBuf is returned. This string is null terminated of the form "Wed Jun 30 21:49:08 1993".

**7.265.3.7 OSCL\_COND\_IMPORT\_REF OsclBasicTimeStruct\* TimeValue::get\_timeval\_ptr ()****7.265.3.8 OSCL\_COND\_IMPORT\_REF uint64 TimeValue::get\_timevalue\_in\_usec () const**

Get a 64 bit value representing the time value converted to microseconds.

**Returns**

Returns a uint64 value representing the time value in terms of microseconds. The time origin is dependent on platform for which OSCL is compiled. For example for symbian it is midnight, January 1st, 0 AD for windows it is January 1, 1601 (UTC)

**7.265.3.9 OSCL\_COND\_IMPORT\_REF uint32 TimeValue::get\_usec () const**

Get a 32 bit value representing the number of microseconds in the time value.

**Returns**

Returns a uint32 value representing the number of microseconds in the time value after subtracting off the whole seconds.

**7.265.3.10 OSCL\_COND\_IMPORT\_REF bool TimeValue::is\_zero ()**

Determine if the time value is zero.

**7.265.3.11 OSCL\_COND\_IMPORT\_REF bool TimeValue::is\_zulu () const**

Manipulate internal flags to mark the time value as being in "zulu" (GMT) time.

**7.265.3.12 OSCL\_COND\_IMPORT\_REF TimeValue& TimeValue::operator\*= (const int *scale*)**

This operator scales the time value by a constant.

**7.265.3.13 OSCL\_COND\_IMPORT\_REF TimeValue& TimeValue::operator+= (const int32 *aSeconds*)****7.265.3.14 OSCL\_COND\_IMPORT\_REF TimeValue& TimeValue::operator+= (const TimeValue & *a*)**

*+=* operator

**7.265.3.15 OSCL\_COND\_IMPORT\_REF TimeValue& TimeValue::operator-= (const int32 *aSeconds*)****7.265.3.16 OSCL\_COND\_IMPORT\_REF TimeValue& TimeValue::operator-= (const TimeValue & *a*)**

*-=* operator

---

**7.265.3.17 OSCL\_COND\_IMPORT\_REF TimeValue& TimeValue::operator= (const TimeValue & a)**

Assignment operator.

**7.265.3.18 OSCL\_COND\_IMPORT\_REF void TimeValue::set\_from\_ntp\_time (const uint32 ntp\_offset)**

This method converts a 32-bit NTP offset to system time.

This method takes a 32-bit ntp offset which is the number of seconds from 0 h Jan 1, 1900 and converts it to the system time

**7.265.3.19 OSCL\_COND\_IMPORT\_REF void TimeValue::set\_to\_current\_time ()**

Set the time value to the current system time.

**7.265.3.20 OSCL\_COND\_IMPORT\_REF void TimeValue::set\_to\_zero ()**

Set the time value to zero (represents a zero interval).

**7.265.3.21 OSCL\_COND\_IMPORT\_REF void TimeValue::set\_zulu (bool is\_zulu)**

**7.265.3.22 OSCL\_COND\_IMPORT\_REF int32 TimeValue::to\_msec () const**

## 7.265.4 Friends And Related Function Documentation

**7.265.4.1 friend class NTPTime [friend]**

**7.265.4.2 OSCL\_COND\_IMPORT\_REF friend bool operator!= (const TimeValue & a, const TimeValue & b) [friend]**

**7.265.4.3 OSCL\_COND\_IMPORT\_REF friend bool operator< (const TimeValue & a, const TimeValue & b) [friend]**

**7.265.4.4 OSCL\_COND\_IMPORT\_REF friend bool operator<= (const TimeValue & a, const TimeValue & b) [friend]**

**7.265.4.5 OSCL\_COND\_IMPORT\_REF friend bool operator== (const TimeValue & a, const TimeValue & b) [friend]**

**7.265.4.6 OSCL\_COND\_IMPORT\_REF friend bool operator> (const TimeValue & a, const TimeValue & b) [friend]**

**7.265.4.7 OSCL\_COND\_IMPORT\_REF friend bool operator>= (const TimeValue & a, const TimeValue & b) [friend]**

The documentation for this class was generated from the following file:

- [oscl\\_time.h](#)

## 7.266 TLSStorageOps Class Reference

```
#include <oscl_tls.h>
```

### Static Public Member Functions

- static OSCL\_IMPORT\_REF void [save\\_registry \(TOsclTlsKey \\*key, OsclAny \\*ptr, int32 &\)](#)
- static OSCL\_IMPORT\_REF [OsclAny \\* get\\_registry \(TOsclTlsKey \\*key\)](#)

#### 7.266.1 Member Function Documentation

**7.266.1.1 static OSCL\_IMPORT\_REF OsclAny\* TLSStorageOps::get\_registry (TOsclTlsKey \**key*) [static]**

**7.266.1.2 static OSCL\_IMPORT\_REF void TLSStorageOps::save\_registry (TOsclTlsKey \* *key*, OsclAny \* *ptr*, int32 &) [static]**

The documentation for this class was generated from the following file:

- [oscl\\_tls.h](#)

## 7.267 TReadyQueLink Class Reference

```
#include <oscl_scheduler_readyq.h>
```

### Public Member Functions

- [TReadyQueLink \(\)](#)

### Data Fields

- int32 [iAOPriority](#)
- uint32 [iTimeToRunTicks](#)
- uint32 [iTimeQueuedTicks](#)
- uint32 [iSeqNum](#)
- [OsclAny \\* iIsIn](#)

#### 7.267.1 Detailed Description

This class defines the queue link, which is common to both ready Q and timer Q. Each AO contains its own queue link object.

#### 7.267.2 Constructor & Destructor Documentation

##### 7.267.2.1 [TReadyQueLink::TReadyQueLink \(\) \[inline\]](#)

References [iAOPriority](#), [iIsIn](#), [iSeqNum](#), [iTimeToRunTicks](#), and [NULL](#).

#### 7.267.3 Field Documentation

##### 7.267.3.1 [int32 TReadyQueLink::iAOPriority](#)

Referenced by [TReadyQueLink\(\)](#).

##### 7.267.3.2 [OsclAny\\* TReadyQueLink::iIsIn](#)

Referenced by [PVActiveBase::IsInAnyQ\(\)](#), and [TReadyQueLink\(\)](#).

##### 7.267.3.3 [uint32 TReadyQueLink::iSeqNum](#)

Referenced by [TReadyQueLink\(\)](#).

##### 7.267.3.4 [uint32 TReadyQueLink::iTimeQueuedTicks](#)

##### 7.267.3.5 [uint32 TReadyQueLink::iTimeToRunTicks](#)

Referenced by [TReadyQueLink\(\)](#).

The documentation for this class was generated from the following file:

- [oscl\\_scheduler\\_readyq.h](#)

## 7.268 Oscl\_Map< Key, T, Alloc, Compare >::value\_compare Class Reference

```
#include <oscl_map.h>
```

### Public Member Functions

- bool [operator\(\)](#) (const value\_type &x, const value\_type &y) const

### Protected Member Functions

- [value\\_compare](#) (Compare c)

### Protected Attributes

- Compare [comp](#)

### Friends

- class [Oscl\\_Map< Key, T, Alloc, Compare >](#)

**template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> class Oscl\_Map< Key, T, Alloc, Compare >::value\_compare**

#### 7.268.1 Constructor & Destructor Documentation

**7.268.1.1 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>>  
Oscl\_Map< Key, T, Alloc, Compare >::value\_compare::value\_compare (Compare c)  
[[inline](#), [protected](#)]**

#### 7.268.2 Member Function Documentation

**7.268.2.1 template<class Key, class T, class Alloc, class Compare = Oscl\_Less<Key>> bool  
Oscl\_Map< Key, T, Alloc, Compare >::value\_compare::operator() (const value\_type &  
x, const value\_type & y) const [[inline](#)]**

References [Oscl\\_Map< Key, T, Alloc, Compare >::value\\_compare::comp](#), and [Oscl\\_Pair< T1, T2 >::first](#).

### 7.268.3 Friends And Related Function Documentation

7.268.3.1 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> friend class Oscl_Map< Key, T, Alloc, Compare > [friend]`

### 7.268.4 Field Documentation

7.268.4.1 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> Compare Oscl_Map< Key, T, Alloc, Compare >::value_compare::comp [protected]`

Referenced by `Oscl_Map< Key, T, Alloc, Compare >::value_compare::operator()()`.

The documentation for this class was generated from the following file:

- [oscl\\_map.h](#)

## 7.269 WStrPtrLen Struct Reference

This data structure encapsulates a set of functions used to perform.

```
#include <oscl_str_ptr_len.h>
```

### Public Member Functions

- `WStrPtrLen (const oscl_wchar *newPtr)`
- `WStrPtrLen (const oscl_wchar *newPtr, uint32 newLen)`
- `WStrPtrLen ()`
- `WStrPtrLen (const WStrPtrLen &rhs)`
- `const oscl_wchar * c_str () const`
- `int32 length () const`
- `int32 size () const`
- `void setPtrLen (const oscl_wchar *newPtr, uint32 newLen)`
- `c_bool isCIEquivalentTo (const WStrPtrLen &rhs) const`
- `int32 operator== (const WStrPtrLen &rhs) const`
- `int32 operator!= (const WStrPtrLen &rhs) const`
- `WStrPtrLen & operator= (const WStrPtrLen &rhs)`
- `WStrPtrLen & operator= (const oscl_wchar *rhs)`

### Protected Attributes

- `const oscl_wchar * ptr`
- `int32 len`

#### 7.269.1 Detailed Description

This data structure encapsulates a set of functions used to perform standard string operations. It should be used for null-terminated constant strings (non-modifiable) of wchar type.

#### 7.269.2 Constructor & Destructor Documentation

##### 7.269.2.1 WStrPtrLen::WStrPtrLen (const oscl\_wchar \* *newPtr*) [inline]

References len, and oscl\_strlen().

##### 7.269.2.2 WStrPtrLen::WStrPtrLen (const oscl\_wchar \* *newPtr*, uint32 *newLen*) [inline]

##### 7.269.2.3 WStrPtrLen::WStrPtrLen () [inline]

##### 7.269.2.4 WStrPtrLen::WStrPtrLen (const WStrPtrLen & *rhs*) [inline]

#### 7.269.3 Member Function Documentation

##### 7.269.3.1 const oscl\_wchar\* WStrPtrLen::c\_str () const [inline]

References ptr.

**7.269.3.2 c\_bool WStrPtrLen::isCIEquivalentTo (const WStrPtrLen & rhs) const [inline]**

References len, OSCL\_ASCII\_CASE\_MAGIC\_BIT, and ptr.

**7.269.3.3 int32 WStrPtrLen::length () const [inline]**

References len.

**7.269.3.4 int32 WStrPtrLen::operator!= (const WStrPtrLen & rhs) const [inline]****7.269.3.5 WStrPtrLen& WStrPtrLen::operator= (const oscl\_wchar \* rhs) [inline]**

References len, oscl\_strlen(), and ptr.

**7.269.3.6 WStrPtrLen& WStrPtrLen::operator= (const WStrPtrLen & rhs) [inline]**

References len, and ptr.

**7.269.3.7 int32 WStrPtrLen::operator== (const WStrPtrLen & rhs) const [inline]**

References len, oscl\_strncmp(), and ptr.

**7.269.3.8 void WStrPtrLen::setPtrLen (const oscl\_wchar \* newPtr, uint32 newLen) [inline]**

References len, and ptr.

**7.269.3.9 int32 WStrPtrLen::size () const [inline]**

References len.

## 7.269.4 Field Documentation

**7.269.4.1 int32 WStrPtrLen::len [protected]**

Referenced by isCIEquivalentTo(), length(), operator=(), operator==( ), setPtrLen(), size(), and WStrP-trLen().

**7.269.4.2 const oscl\_wchar\* WStrPtrLen::ptr [protected]**

Referenced by c\_str(), isCIEquivalentTo(), operator=(), operator==( ), and setPtrLen().

The documentation for this struct was generated from the following file:

- [oscl\\_str\\_ptr\\_len.h](#)



# Chapter 8

## File Documentation

### 8.1 oscl\_aostatus.h File Reference

Some basic types used with active objects.

```
#include "osclconfig_proc.h"
#include "oscl_base.h"
#include "oscl_aostatus.inl"
```

#### Data Structures

- class [OsclAOStatus](#)

#### Variables

- const int32 [OSCL\\_REQUEST\\_ERR\\_NONE](#) = 0
- const int32 [OSCL\\_REQUEST\\_PENDING](#) = (-0x7fffffff)
- const int32 [OSCL\\_REQUEST\\_ERR\\_CANCEL](#) = (-1)
- const int32 [OSCL\\_REQUEST\\_ERR\\_GENERAL](#) = (-2)

#### 8.1.1 Detailed Description

Some basic types used with active objects.

## 8.2 oscl\_assert.h File Reference

The file [oscl\\_assert.h](#) provides an OSCL\_ASSERT macro to document assumptions and test them during development.

```
#include "oscl_base.h"
#include "osclconfig.h"
#include "osclconfig_check.h"
#include "pv_config.h"
```

### Defines

- #define [OSCL\\_ASSERT](#)(\_expr) ((\_expr)?((void)0):OSCL\_Assert(# \_expr,\_\_FILE\_\_,\_\_LINE\_\_))

### Functions

- OSCL\_COND\_IMPORT\_REF void [\\_OSCL\\_Abort](#) ()  
*This function terminates the current process abnormally.*
- OSCL\_IMPORT\_REF void [OSCL\\_Assert](#) (const char \*expr, const char \*filename, int line\_number)  
*OSCL\_ASSERT macro evaluates an expression and when the result is false, prints a diagnostic message and aborts the program.*

### 8.2.1 Detailed Description

The file [oscl\\_assert.h](#) provides an OSCL\_ASSERT macro to document assumptions and test them during development.

## 8.3 oscl\_base.h File Reference

The file `oscl_base.h` is the public header that should be included to pick up the platform configuration, basic type definitions, and common macros.

```
#include "osclconfig.h"
#include "oscl_base_macros.h"
#include "oscl_types.h"
#include "osclconfig_check.h"
#include "pv_config.h"
```

### Defines

- `#define OSCL_HAS_SINGLETON_SUPPORT 1`

### Functions

- `void PVOsclBase_Init ()`
- `void PVOsclBase_Cleanup ()`

#### 8.3.1 Detailed Description

The file `oscl_base.h` is the public header that should be included to pick up the platform configuration, basic type definitions, and common macros.

## 8.4 oscl\_base\_alloc.h File Reference

A basic allocator that does not rely on other modules.

```
#include "osclconfig.h"  
#include "oscl_defalloc.h"  
#include "oscl_base.h"  
#include "osclconfig_compiler_warnings.h"  
#include "osclconfig_memory.h"
```

### Data Structures

- class [\\_OsclBasicAllocator](#)

#### 8.4.1 Detailed Description

A basic allocator that does not rely on other modules.

## 8.5 oscl\_base\_macros.h File Reference

This file defines common macros and constants for basic compilation support.

```
#include "osclconfig.h"
```

### Defines

- `#define NULL (0)`  
*The NULL\_TERM\_CHAR is used to terminate c-style strings.*
- `#define OSCL_INLINE inline`
- `#define OSCL_COND_EXPORT_REF`
- `#define OSCL_COND_IMPORT_REF`
- `#define OSCL_CONST_CAST(type, exp) ((type)(exp))`  
*Type casting macros.*
- `#define OSCL_STATIC_CAST(type, exp) ((type)(exp))`
- `#define OSCL_REINTERPRET_CAST(type, exp) ((type)(exp))`
- `#define OSCL_DYNAMIC_CAST(type, exp) ((type)(exp))`
- `#define OSCL_VIRTUAL_BASE(type) type`
- `#define OSCL_UNUSED_ARG(vbl) (void)(vbl)`
- `#define OSCL_UNUSED_RETURN(value) return value`
- `#define OSCL_MIN(a, b) ((a) < (b) ? (a) : (b))`
- `#define OSCL_MAX(a, b) ((a) > (b) ? (a) : (b))`
- `#define OSCL_ABS(a) ((a) > (0) ? (a) : -(a))`
- `#define EPV_ARM_GNUC 1`
- `#define EPV_ARM_RVCT 2`
- `#define EPV_ARM_MSEVC 3`

### 8.5.1 Detailed Description

This file defines common macros and constants for basic compilation support.

## 8.6 oscl\_bin\_stream.h File Reference

Defines a set of binary stream classes which handle portable input / output of binary data regardless of the native byte order.

```
#include "oscl_base.h"
#include "oscl_bin_stream.inl"
#include "oscl_mem_basic_functions.h"
```

### Data Structures

- class [OsclBinStream](#)
- class [OsclBinIStream](#)
- class [OsclBinIStreamLittleEndian](#)
- class [OsclBinIStreamBigEndian](#)
- class [OsclBinOStream](#)

*Class [OsclBinOStream](#) implements the basic stream functions for an output stream.*

- class [OsclBinOStreamLittleEndian](#)

*Class [OsclBinOStreamLittleEndian](#) implements a binary output stream using little endian byte ordering.*

- class [OsclBinOStreamBigEndian](#)

*Class [OsclBinOStreamBigEndian](#) implements a binary output stream using big endian byte ordering.*

### 8.6.1 Detailed Description

Defines a set of binary stream classes which handle portable input / output of binary data regardless of the native byte order.

## 8.7 oscl\_byte\_order.h File Reference

This file defines functions providing byte ordering utility (e.g., switching between big and little endian orders).

```
#include "oscl_base.h"  
#include "oscl_byte_order.inl"
```

### Functions

- void [little\\_endian\\_to\\_host](#) (char \*data, uint32 size)  
*Convert little endian to host format.*
- void [host\\_to\\_little\\_endian](#) (char \*data, unsigned int size)  
*Convert host to little endian format.*
- void [big\\_endian\\_to\\_host](#) (char \*data, unsigned int size)  
*Convert big endian to host format.*
- void [host\\_to\\_big\\_endian](#) (char \*data, unsigned int size)  
*Convert host to big endian format.*

### 8.7.1 Detailed Description

This file defines functions providing byte ordering utility (e.g., switching between big and little endian orders).

## 8.8 oscl\_defalloc.h File Reference

The file defines simple default memory allocator classes. These allocators are used by the [Oscl\\_Vector](#) and [Oscl\\_Map](#) class, etc.

```
#include "oscl_base.h"
#include "osclconfig_compiler_warnings.h"
#include "oscl_mem_inst.h"
```

### Data Structures

- class [Oscl\\_Alloc](#)
- class [Oscl\\_Dalloc](#)
- class [Oscl\\_DefAlloc](#)
- class [OsclDestructDalloc](#)
- class [OsclAllocDestructDalloc](#)
- class [Oscl\\_TAlloc< T, Alloc >](#)
- struct [Oscl\\_TAlloc< T, Alloc >::rebind< U, V >](#)

### Defines

- #define [OSCL\\_DISABLE\\_WARNING\\_TRUNCATE\\_DEBUG\\_MESSAGE](#)
- #define [ALLOCATE\(n\)](#) allocate(n)
- #define [ALLOC\\_AND\\_CONSTRUCT\(n\)](#) alloc\_and\_construct(n)

### 8.8.1 Detailed Description

The file defines simple default memory allocator classes. These allocators are used by the [Oscl\\_Vector](#) and [Oscl\\_Map](#) class, etc.

## 8.9 oscl\_dll.h File Reference

Defines a DLL entry point.

```
#include "osclconfig.h"
```

### Defines

- #define **OSCL\_DLL\_ENTRY\_POINT()** void oscl\_dll\_entry\_point() {}
- #define **OSCL\_DLL\_ENTRY\_POINT\_DEFAULT()**

### 8.9.1 Detailed Description

Defines a DLL entry point.

## 8.10 oscl\_dns.h File Reference

The file [oscl\\_socket.h](#) defines the OSCL DNS APIs.

```
#include "osclconfig_io.h"
#include "oscl_socket_types.h"
#include "oscl_types.h"
#include "oscl_scheduler_types.h"
#include "oscl_namestring.h"
#include "oscl_stdstring.h"
#include "oscl_defalloc.h"
#include "oscl_socket_types.h"
#include "oscl_heapbase.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
```

### Data Structures

- class [OsclDNSObserver](#)
- class [OsclDNS](#)

### Enumerations

- enum [TPVDNSFxn](#) { [EPVDNSGetHostByName](#) }
- enum [TPVDNSEvent](#) {  
    [EPVDNSSuccess](#), [EPVDNSPending](#), [EPVDNSTimeout](#), [EPVDNSFailure](#),  
    [EPVDNSCancel](#) }

### 8.10.1 Detailed Description

The file [oscl\\_socket.h](#) defines the OSCL DNS APIs.

## 8.11 oscl\_dns\_gethostbyname.h File Reference

```
#include "oscl_dns_method.h"
#include "osclconfig_io.h"
#include "oscl_socket_types.h"
#include "oscl_scheduler_ao.h"
#include "oscl_defalloc.h"
#include "oscl_socket.h"
#include "pvlogger.h"
#include "oscl_dns.h"
```

### Data Structures

- class [OsclGetHostByNameMethod](#)
- class [OsclGetHostByNameRequest](#)

## 8.12 oscl\_dns\_imp.h File Reference

```
#include "oscl_dns_tuneables.h"
#include "osclconfig_io.h"
#include "osclconfig_proc.h"
```

## 8.13 oscl\_dns\_imp\_base.h File Reference

```
#include "oscl_socket_imp.h"
#include "osclconfig_io.h"
#include "osclconfig_proc.h"
#include "oscl_socket_types.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_socket_tuneables.h"
#include "oscl_defalloc.h"
#include "oscl_mutex.h"
#include "oscl_base.h"
#include "oscl_dns_tuneables.h"
#include "oscl_dns.h"
```

### Data Structures

- class [OsclDNSIBase](#)

## 8.14 oscl\_dns\_imp\_pv.h File Reference

```
#include "oscl_socket_imp_base.h"
#include "oscl_dns_request.h"
#include "oscl_dns_imp_base.h"
#include "oscl_socket_imp.h"
#include "oscl_dns.h"
```

### Data Structures

- class [OsclDNSI](#)

## 8.15 oscl\_dns\_method.h File Reference

```
#include "osclconfig_io.h"
#include "oscl_socket_types.h"
#include "oscl_scheduler_ao.h"
#include "oscl_dns.h"
#include "pvlogger.h"
```

### Data Structures

- class [OsclDNSMethod](#)
- class [OsclDNSRequestAO](#)

## 8.16 oscl\_dns\_param.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_dns_tuneables.h"
#include "oscl_namestring.h"
#include "oscl_dns.h"
#include "oscl_mutex.h"
#include "oscl_semaphore.h"
```

### Data Structures

- class [DNSRequestParam](#)
- class [GetHostByNameParam](#)

### Typedefs

- typedef [OsclMemAllocator TDNSRequestParamAllocator](#)

#### 8.16.1 Typedef Documentation

##### 8.16.1.1 typedef OsclMemAllocator TDNSRequestParamAllocator

## 8.17 oscl\_dns\_request.h File Reference

```
#include "oscl_dns_tuneables.h"
```

## 8.18 oscl\_dns\_tuneables.h File Reference

```
#include "osclconfig_io.h"  
#include "osclconfig_proc.h"
```

## 8.19 oscl\_double\_list.h File Reference

Internal use types for scheduler.

```
#include "osclconfig_proc.h"
#include "oscl_base.h"
#include "oscl_assert.h"
#include "oscl_double_list.inl"
```

### Data Structures

- class [OsclDoubleLink](#)
- class [OsclPriorityLink](#)
- class [OsclDoubleListBase](#)
- class [OsclDoubleList< T >](#)
- class [OsclPriorityList< T >](#)
- class [OsclDoubleRunner< T >](#)

### Defines

- #define [QUE\\_ITER\\_BEGIN](#)(\_type, \_qname)
- #define [QUE\\_ITER\\_END](#)(\_qname)

### Functions

- template<class T , class S >  
T \* [OsclPtrAdd](#) (T \*aPtr, S aVal)
- template<class T , class S >  
T \* [OsclPtrSub](#) (T \*aPtr, S aVal)

#### 8.19.1 Detailed Description

Internal use types for scheduler.

## 8.20 oscl\_errno.h File Reference

Defines functions to access additional information on errors where supported through an errno or similar service.

```
#include "oscl_base.h"
#include "osclconfig_error.h"
#include "oscl_errno.inl"
```

### Functions

- OSCL\_IMPORT\_REF bool **OSCL\_IsErrnoSupported** ()  
*oscl\_errno.h contains functions to access the global errno*
- OSCL\_IMPORT\_REF int **OSCL\_GetLastError** ()  
*This function returns the value of the system's global error number variable.*
- OSCL\_IMPORT\_REF bool **OSCL\_SetLastError** (int newVal)  
*This function sets the last error code for the system.*
- OSCL\_IMPORT\_REF char \* **OSCL\_StrError** (int errnum)  
*This function maps an error number to an error-message string.*

### 8.20.1 Detailed Description

Defines functions to access additional information on errors where supported through an errno or similar service.

## 8.21 oscl\_error.h File Reference

OSCL Error trap and cleanup include file.

```
#include "oscl_heapbase.h"
#include "osclconfig_error.h"
#include "oscl_base.h"
#include "oscl_defalloc.h"
#include "oscl_singleton.h"
#include "oscl_assert.h"
#include "oscl_tls.h"
```

### Data Structures

- class [OsclErrorTrap](#)
- class [OsclError](#)
- class [OsclSingletonRegistryEx](#)
- class [OsclSingletonEx< T, ID, Registry >](#)
- class [OsclTLSRegistryEx](#)
- class [OsclTLSEEx< T, ID, Registry >](#)

### Defines

- #define [OSCL\\_TRAPSTACK\\_PUSH\(a\)](#) OsclError::PushL(a)
- #define [OSCL\\_TRAPSTACK\\_POP\(\)](#) OsclError::Pop()
- #define [OSCL\\_TRAPSTACK\\_POPDEALLOC\(\)](#) OsclError::PopDealloc()

#### 8.21.1 Detailed Description

OSCL Error trap and cleanup include file.

## 8.22 oscl\_error\_allocator.h File Reference

Defines a memory allocation class used by the oscl error layer.

```
#include "oscl_base.h"
#include "oscl_base_macros.h"
#include "osclconfig_error.h"
#include "oscl_assert.h"
#include "oscl_defalloc.h"
```

### Data Structures

- class [OsclErrorAllocator](#)

*This class provides static methods to invoke the user defined memory allocation routines.*

#### 8.22.1 Detailed Description

Defines a memory allocation class used by the oscl error layer.

## 8.23 oscl\_error\_codes.h File Reference

Defines basic error and leave codes.

### Defines

- #define `OsclErrNone` 0
- #define `OsclErrGeneral` 100
- #define `OsclErrNoMemory` 101
- #define `OsclErrCancelled` 102
- #define `OsclErrNotSupported` 103
- #define `OsclErrArgument` 104
- #define `OsclErrBadHandle` 105
- #define `OsclErrAlreadyExists` 106
- #define `OsclErrBusy` 107
- #define `OsclErrNotReady` 108
- #define `OsclErrCorrupt` 109
- #define `OsclErrTimeout` 110
- #define `OsclErrOverflow` 111
- #define `OsclErrUnderflow` 112
- #define `OsclErrInvalidState` 113
- #define `OsclErrNoResources` 114
- #define `OsclErrNotInstalled` 115
- #define `OsclErrAlreadyInstalled` 116
- #define `OsclErrSystemCallFailed` 117
- #define `OsclErrNoHandler` 118
- #define `OsclErrThreadContextIncorrect` 119
- #define `OSCL_ERR_NONE` `OsclErrNone`
- #define `OSCL_BAD_ALLOC_EXCEPTION_CODE` `OsclErrNoMemory`
- #define `OsclSuccess` 0
- #define `OsclPending` 1
- #define `OsclFailure` -1

### Typedefs

- typedef int32 `OsclLeaveCode`
- typedef int32 `OsclReturnCode`

### 8.23.1 Detailed Description

Defines basic error and leave codes.

## 8.24 oscl\_error\_imp.h File Reference

Internal error implementation support.

```
#include "osclconfig_error.h"
#include "oscl_error_imp_jumps.h"
#include "oscl_heapbase.h"
#include "oscl_defalloc.h"
#include "oscl_assert.h"
#include "oscl_error_codes.h"
#include "oscl_singleton.h"
#include "oscl_tls.h"
#include "oscl_base_alloc.h"
#include "oscl_error_trapcleanup.h"
#include "oscl_error.h"
```

### Defines

- #define PVERROR\_IMP\_JUMPS

#### 8.24.1 Detailed Description

Internal error implementation support.

## 8.25 oscl\_error\_imp\_cppexceptions.h File Reference

Implementation File for Leave using C++ exceptions.

```
#include "oscl_error_trapcleanup.h"
```

### Data Structures

- class [internalLeave](#)

### Defines

- #define [PVError\\_DoLeave\(\)](#) [internalLeave](#) \_\_ilv;\_\_ilv.a=0;throw(\_\_ilv)
- #define [\\_PV\\_TRAP\(](#)[\\_r](#), [\\_s](#))
- #define [\\_PV\\_TRAP\\_NO\\_TLS\(](#)[\\_trapimp](#), [\\_r](#), [\\_s](#))

### 8.25.1 Detailed Description

Implementation File for Leave using C++ exceptions.

## 8.26 oscl\_error\_imp\_fatalerror.h File Reference

Implementation File for Leave using system fatal error.

```
#include "oscl_assert.h"
```

### Defines

- #define [PVError\\_DoLeave\(\)](#) \_OSCL\_Abort()
- #define [\\_PV\\_TRAP\(\\_\\_r, \\_\\_s\)](#)
- #define [\\_PV\\_TRAP\\_NO\\_TLS\(\\_\\_tr, \\_\\_r, \\_\\_s\)](#)

### 8.26.1 Detailed Description

Implementation File for Leave using system fatal error.

## 8.27 oscl\_error\_imp\_jumps.h File Reference

Implementation of using Setjmp / Longjmp.

```
#include "oscl_error_trapcleanup.h"
#include "oscl_assert.h"
#include "osclconfig_error.h"
#include "oscl_defalloc.h"
#include "oscl_error.h"
```

### Data Structures

- class [OsclJump](#)

### Defines

- #define OSCL\_JUMP\_MAX\_JUMP\_MARKS OSCL\_MAX\_TRAP\_LEVELS
- #define internalLeave (-1)
- #define PVError\_DoLeave() OsclJump::StaticJump(internalLeave)
- #define \_PV\_TRAP(\_\_r, \_\_s)
- #define \_PV\_TRAP\_NO\_TLS(\_\_trapimp, \_\_r, \_\_s)

### 8.27.1 Detailed Description

Implementation of using Setjmp / Longjmp.

## 8.28 oscl\_error\_trapcleanup.h File Reference

OSCL Error trap and cleanup implementation include file.

```
#include "osclconfig_error.h"
#include "oscl_heapbase.h"
#include "oscl_error_imp.h"
#include "oscl_defalloc.h"
#include "oscl_assert.h"
#include "oscl_error.h"
#include "oscl_base_alloc.h"
#include "oscl_tls.h"
#include "oscl_singleton.h"
```

### Data Structures

- class [OsclTrapStackItem](#)
- class [OsclTrapStack](#)
- class [OsclErrorTrapImp](#)

### Defines

- #define [OSCL\\_MAX\\_TRAP\\_LEVELS](#) 20
- #define [PVERRORTRAP\\_REGISTRY\\_ID](#) [OSCL\\_TLS\\_ID\\_PVERRORTRAP](#)
- #define [PVERRORTRAP\\_REGISTRY](#) [OsclTLSRegistry](#)

### 8.28.1 Detailed Description

OSCL Error trap and cleanup implementation include file.

## 8.29 oscl\_exception.h File Reference

contains all the exception handling macros and classes

```
#include "oscl_error.h"
#include "oscl_error_imp.h"
```

### Data Structures

- class [OsclException< LeaveCode >](#)

*oscl\_exception.h contains all the exception handling macros and classes*

### Defines

- `#define OSCL_LEAVE(_leave_status) OsclError::Leave(_leave_status)`

*Use this macro to cause a Leave. It terminates the execution of the current active function.*

- `#define OSCL_TRY(_leave_status, _statements) _PV_TRAP(_leave_status,_statements)`

*This macro will be used to set up a try block.*

- `#define OSCL_TRY_NO_TLS(_trapimp, _leave_status, _statements) _PV_TRAP_NO_TLS(_-trapimp,_leave_status,_statements)`

- `#define OSCL_FIRST_CATCH_ANY(_leave_status, _statements) if (_leave_status!=OsclErrNone) { _statements; }`

*This section defines the macros to be used in the catch block following the try block.*

- `#define OSCL_FIRST_CATCH(_leave_status, _catch_value, _statements) if (_leave_-status!=OsclErrNone && _leave_status == _catch_value){_statements;}`

*Use this macro to define a block of code that catches the first exception type thrown in the preceding try block.*

- `#define OSCL_CATCH(_leave_status, _catch_value, _statements) else if (_leave_-status!=OsclErrNone && _leave_status == _catch_value){_statements;}`

*Use this macro to define a block of code for catching additional exception types.*

- `#define OSCL_CATCH_ANY(_leave_status, _statements) else if (_leave_status!=OsclErrNone){ _-statements;}`

*Use this macro to call a function that will catch all remaining exception types.*

- `#define OSCL_LAST_CATCH(_leave_status) else if (_leave_status!=OsclErrNone){OSCL_-LEAVE(_leave_status);}`

*Use this macro if OSCL\_CATCH\_ANY has not been used. It will mark the end of the catch block.*

### 8.29.1 Detailed Description

contains all the exception handling macros and classes

## 8.30 oscl\_exclusive\_ptr.h File Reference

This file defines the [OsclExclusivePtr](#) template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

```
#include "oscl_defalloc.h"
#include "oscl_base.h"
```

### Data Structures

- class [OsclExclusivePtr< T >](#)

*The OsclExclusivePtr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the OsclExclusivePtr expires, its destructor uses delete to free the memory.*

- class [OsclExclusiveArrayPtr< T >](#)

*The OsclExclusiveArrayPtr class is a template class that defines an array pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the OsclExclusiveArrayPtr expires, its destructor uses delete to free the memory.*

- class [OsclExclusivePtrA< T, Alloc >](#)

*The OsclExclusivePtrA class is a template class that defines any pointer like object intended to be assigned an address obtained (directly or or indirectly) through Alloc. When the OsclExclusivePtrA expires, Alloc is used to free the memory.*

### 8.30.1 Detailed Description

This file defines the [OsclExclusivePtr](#) template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

## 8.31 oscl\_file\_async\_read.h File Reference

```
#include "oscl_base.h"
#include "osclconfig_io.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_scheduler_ao.h"
#include "oscl_file_io.h"
#include "oscl_string_containers.h"
#include "oscl_semaphore.h"
```

### Data Structures

- class [OsclPtrC](#)
- class [OsclPtr](#)
- class [OsclBuf](#)
- class [OsclAsyncFileBuffer](#)
- class [OsclAsyncFile](#)

## 8.32 oscl\_file\_cache.h File Reference

The file [oscl\\_file\\_cache.h](#) defines the class [OsclFileCache](#).

```
#include "osclconfig_io.h"  
#include "oscl_base.h"  
#include "oscl_file_io.h"
```

### Data Structures

- class [OsclFileCacheBuffer](#)
- class [OsclFileCache](#)

#### 8.32.1 Detailed Description

The file [oscl\\_file\\_cache.h](#) defines the class [OsclFileCache](#).

## 8.33 oscl\_file\_dir\_utils.h File Reference

The file `oscl_file_dir_utils.h` defines some unix-style directory ops.

```
#include "osclconfig_io.h"
#include "oscl_base.h"
```

### Data Structures

- struct `oscl_fsstat`
- struct `oscl_stat_buf`

### Typedefs

- typedef struct `oscl_fsstat` `OSCL_FSSTAT`
- typedef struct `oscl_stat_buf` `OSCL_STAT_BUF`

### Enumerations

- enum `OSCL_FILEMGMT_PERMS` { `OSCL_FILEMGMT_PERMS_READ` = 0x1, `OSCL_FILEMGMT_PERMS_WRITE` = 0x2, `OSCL_FILEMGMT_PERMS_EXECUTE` = 0x4 }
- enum `OSCL_FILEMGMT_MODES` { `OSCL_FILEMGMT_MODE_DIR` = 0x1 }
- enum `OSCL_FILEMGMT_ERR_TYPE` {
 `OSCL_FILEMGMT_E_OK` = 0, `OSCL_FILEMGMT_E_PATH_TOO_LONG`, `OSCL_FILEMGMT_E_PATH_NOT_FOUND`, `OSCL_FILEMGMT_E_ALREADY_EXISTS`,
 `OSCL_FILEMGMT_E_NOT_EMPTY`, `OSCL_FILEMGMT_E_PERMISSION_DENIED`,
 `OSCL_FILEMGMT_E_NO_MATCH`, `OSCL_FILEMGMT_E_UNKNOWN`,
 `OSCL_FILEMGMT_E_SYS_SPECIFIC`, `OSCL_FILEMGMT_E_NOT_IMPLEMENTED` }

### Functions

- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (oscl_wchar *path, uint32 size)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (char *path, uint32 size)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const oscl_wchar *path, OSCL_STAT_BUF *statbuf)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const char *path, OSCL_STAT_BUF *statbuf)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const oscl_wchar *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const oscl_wchar *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const oscl_wchar *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const oscl_wchar *oldpath, const oscl_wchar *newpath)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const char *oldpath, const char *newpath)`

- OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_stats (OSCL\_FSSTAT \*stats, const char \*path)
- OSCL\_IMPORT\_REF OSCL\_FILEMGMT\_ERR\_TYPE oscl\_stats (OSCL\_FSSTAT \*stats, const oscl\_wchar \*path)

### 8.33.1 Detailed Description

The file [oscl\\_file\\_dir\\_utils.h](#) defines some unix-style directory ops.

## 8.34 oscl\_file\_find.h File Reference

The file [oscl\\_file\\_find.h](#) defines the class [Oscl\\_FileFind](#).

```
#include "osclconfig_io.h"
#include "oscl_base.h"
#include "oscl_mem.h"
#include "oscl_vector.h"
#include "oscl_string_containers.h"
#include "oscl_file_types.h"
```

### Data Structures

- class [Oscl\\_FileFind](#)

#### 8.34.1 Detailed Description

The file [oscl\\_file\\_find.h](#) defines the class [Oscl\\_FileFind](#).

## 8.35 oscl\_file\_handle.h File Reference

The file [oscl\\_file\\_handle.h](#) defines the class [OsclFileHandle](#).

```
#include "osclconfig_io.h"
#include "oscl_base.h"
```

### Data Structures

- class [OsclFileHandle](#)

### TypeDefs

- typedef FILE \* [TOsclFileHandle](#)

#### 8.35.1 Detailed Description

The file [oscl\\_file\\_handle.h](#) defines the class [OsclFileHandle](#).

## 8.36 oscl\_file\_io.h File Reference

The file [oscl\\_file\\_io.h](#) defines the class [Oscl\\_File](#). This is the public API to the basic file I/O operations.

```
#include "osclconfig_io.h"
#include "oscl_base.h"
#include "oscl_mem.h"
#include "oscl_vector.h"
#include "oscl_file_server.h"
#include "oscl_file_find.h"
#include "oscl_file_dir_utils.h"
#include "oscl_file_handle.h"
```

### Data Structures

- class [Oscl\\_File](#)
- class [Oscl\\_File::OsclFixedCacheParam](#)
- class [Oscl\\_File::OsclCacheObserver](#)

### Defines

- #define [TOsclFileOffsetInt32](#) int32

#### 8.36.1 Detailed Description

The file [oscl\\_file\\_io.h](#) defines the class [Oscl\\_File](#). This is the public API to the basic file I/O operations.

## 8.37 oscl\_file\_manager.h File Reference

File management class.

```
#include "oscl_base.h"
```

### Data Structures

- class [OsclFileManager](#)

#### 8.37.1 Detailed Description

File management class.

## 8.38 oscl\_file\_native.h File Reference

The file [oscl\\_file\\_native.h](#) defines the class [OsclNativeFile](#). This is the porting layer for basic file I/O operations.

```
#include "osclconfig_io.h"
#include "oscl_base.h"
#include "oscl_aostatus.h"
#include "oscl_file_io.h"
#include "oscl_file_types.h"
```

### Data Structures

- class [OsclNativeFile](#)

#### 8.38.1 Detailed Description

The file [oscl\\_file\\_native.h](#) defines the class [OsclNativeFile](#). This is the porting layer for basic file I/O operations.

## 8.39 oscl\_file\_server.h File Reference

The file [oscl\\_file\\_server.h](#) defines the class [Oscl\\_FileServer](#). This is the porting layer for file server implementations.

```
#include "osclconfig_io.h"
#include "oscl_base.h"
```

### Data Structures

- class [Oscl\\_FileServer](#)

#### 8.39.1 Detailed Description

The file [oscl\\_file\\_server.h](#) defines the class [Oscl\\_FileServer](#). This is the porting layer for file server implementations.

## 8.40 oscl\_file\_stats.h File Reference

File stats class.

```
#include "oscl_base.h"
#include "osclconfig_io.h"
```

### Data Structures

- class [OsclFileStatsItem](#)
- class [OsclFileStats](#)

### Defines

- #define [OSCL\\_FILE\\_STATS\\_LOGGER\\_NODE](#) "OsclFileStats"

### Enumerations

- enum [TOsclFileOp](#) {  
    [EOsclFileOp\\_Open](#), [EOsclFileOp\\_Close](#), [EOsclFileOp\\_Read](#), [EOsclFileOp\\_Write](#),  
    [EOsclFileOp\\_Seek](#), [EOsclFileOp\\_Tell](#), [EOsclFileOp\\_Size](#), [EOsclFileOp\\_Flush](#),  
    [EOsclFileOp\\_EndOfFile](#),   [EOsclFileOp\\_SetSize](#),   [EOsclFileOp\\_NativeOpen](#),   [EOsclFileOp\\_NativeClose](#),  
    [EOsclFileOp\\_NativeRead](#), [EOsclFileOp\\_NativeWrite](#), [EOsclFileOp\\_NativeSeek](#), [EOsclFileOp\\_NativeTell](#),  
    [EOsclFileOp\\_NativeSize](#),       [EOsclFileOp\\_NativeFlush](#),       [EOsclFileOp\\_NativeEndOfFile](#),  
    [EOsclFileOp\\_NativeSetSize](#),  
    [EOsclFileOp\\_Last](#) }

### 8.40.1 Detailed Description

File stats class.

## 8.41 oscl\_file\_types.h File Reference

The file [oscl\\_file\\_types.h](#) defines some constants and types for file I/O implementations. Anything that needs to be shared across implementation modules can go here.

### Data Structures

- class [OsclNativeFileParams](#)

### Defines

- #define [OSCL\\_IO\\_FILENAME\\_MAXLEN](#) 512
- #define [OSCL\\_IO\\_EXTENSION\\_MAXLEN](#) 512
- #define [OSCL\\_FILE\\_WCHAR\\_PATH\\_DELIMITER](#) \_STRLIT("/")
- #define [OSCL\\_FILE\\_CHAR\\_PATH\\_DELIMITER](#) \_STRLIT\_CHAR("/")

### 8.41.1 Detailed Description

The file [oscl\\_file\\_types.h](#) defines some constants and types for file I/O implementations. Anything that needs to be shared across implementation modules can go here.

## 8.42 oscl\_heapbase.h File Reference

OSCL Heap Base include file.

```
#include "osclconfig_error.h"
#include "oscl_base.h"
#include "oscl_heapbase.inl"
```

### Data Structures

- class [\\_OsclHeapBase](#)
- class [OsclTrapItem](#)

### Typedefs

- `typedef void(* OsclTrapOperation )(OsclAny *)`

#### 8.42.1 Detailed Description

OSCL Heap Base include file.

## 8.43 oscl\_init.h File Reference

Global oscl initialization.

```
#include "oscl_base.h"  
#include <stdio.h>
```

### Data Structures

- class [OsclSelect](#)
- class [OsclInit](#)

#### 8.43.1 Detailed Description

Global oscl initialization.

## 8.44 oscl\_int64\_utils.h File Reference

```
#include "oscl_base.h"
```

### Data Structures

- class [Oscl\\_Int64\\_Utils](#)  
*The Oscl\_Int64\_Utils class provides a wrapper for commonly used int64/uint64 operations.*
- struct [OsclInteger64Transport](#)

### Typedefs

- typedef struct [OsclInteger64Transport \\_OsclInteger64Transport](#)

#### 8.44.1 Typedef Documentation

##### 8.44.1.1 typedef struct OsclInteger64Transport \_OsclInteger64Transport

[OsclInteger64Transport](#) Structure

Structure to only transport 64-bit integer values uint64 and int64 could be classes so needed for cases where having a class will not work.

## 8.45 oscl\_ip\_socket.h File Reference

```
#include "oscl_socket_types.h"  
#include "oscl_vector.h"  
#include "oscl_mem.h"
```

### Data Structures

- class [OsclIPSocketI](#)

## 8.46 oscl\_linked\_list.h File Reference

The file [oscl\\_linked\\_list.h](#) defines the template class [Oscl\\_Linked\\_List](#) which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_base.h"
#include "oscl_defalloc.h"
#include "oscl_opaque_type.h"
#include "oscl_assert.inl"
```

### Data Structures

- class [LinkedListElement< LLClass >](#)
- class [Oscl\\_Linked\\_List\\_Base](#)
- class [Oscl\\_Linked\\_List< LLClass, Alloc >](#)
- class [Oscl\\_MTLinked\\_List< LLClass, Alloc, TheLock >](#)

#### 8.46.1 Detailed Description

The file [oscl\\_linked\\_list.h](#) defines the template class [Oscl\\_Linked\\_List](#) which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

## 8.47 oscl\_lock\_base.h File Reference

This file defines an abstract lock class, [OsclLockBase](#), that is used for APIs potentially requiring multi-thread safety. A null-lock implementation, [OsclNullLock](#), is also provided for single-thread configurations (basically a noop for lock/unlock). Also provides the [OsclScopedLock](#) class which is template class takes care of freeing the lock when the class goes out of scope.

### Data Structures

- class [OsclLockBase](#)
- class [OsclNullLock](#)
- class [OsclScopedLock< LockClass >](#)

*The [OsclScopedLock](#) class is a template class that handles unlocking an abstract class on destruction. This is very useful for ensuring that the lock is released when the [OsclScopedLock](#) goes out of scope.*

### 8.47.1 Detailed Description

This file defines an abstract lock class, [OsclLockBase](#), that is used for APIs potentially requiring multi-thread safety. A null-lock implementation, [OsclNullLock](#), is also provided for single-thread configurations (basically a noop for lock/unlock). Also provides the [OsclScopedLock](#) class which is template class takes care of freeing the lock when the class goes out of scope.

## 8.48 oscl\_map.h File Reference

The file `oscl_map.h` defines the template class `Oscl_Map` which has a very similar API as the STL Map class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_base.h"
#include "oscl_tree.h"
#include "oscl_defalloc.h"
#include "osclconfig_compiler_warnings.h"
```

### Data Structures

- struct `Oscl_Less< T >`
- struct `Oscl_Select1st< V, U >`
- class `Oscl_Map< Key, T, Alloc, Compare >`
- class `Oscl_Map< Key, T, Alloc, Compare >::value_compare`

### Defines

- #define `OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE`

#### 8.48.1 Detailed Description

The file `oscl_map.h` defines the template class `Oscl_Map` which has a very similar API as the STL Map class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

## 8.49 oscl\_math.h File Reference

Provides math functions.

```
#include "osclconfig_util.h"  
#include "oscl_base.h"  
#include "oscl_math.inl"
```

### Functions

- OSCL\_COND\_IMPORT\_REF double [oscl\\_log](#) (double value)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_log10](#) (double value)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_sqrt](#) (double value)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_pow](#) (double x, double y)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_exp](#) (double value)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_sin](#) (double value)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_cos](#) (double value)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_tan](#) (double value)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_asin](#) (double value)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_atan](#) (double value)
- OSCL\_COND\_IMPORT\_REF double [oscl\\_floor](#) (double value)

### 8.49.1 Detailed Description

Provides math functions.

## 8.50 oscl\_media\_data.h File Reference

Defines a container class for media data made up of a collection of memory fragments.

```
#include "oscl_base.h"
#include "oscl_mem_basic_functions.h"
#include "oscl_media_status.h"
```

### Data Structures

- class [MemAllocator< T >](#)
- class [BufferMgr](#)
- class [BufferState](#)
- class [BufferFragment](#)
- class [BuffFragGroup< ChainClass, max\\_frags >](#)
- class [MediaData< ChainClass, max\\_frags, local\\_bufsize >](#)

### Typedefs

- typedef void(\* [BufferFreeFuncPtr](#) )(void \*)
- typedef uint32 [MediaTimestamp](#)

#### 8.50.1 Detailed Description

Defines a container class for media data made up of a collection of memory fragments.

## 8.51 oscl\_media\_status.h File Reference

Defines a status values for the [MediaData](#) containers.

### Data Structures

- class [BuffFragStatusClass](#)
- class [MediaStatusClass](#)

### Variables

- const int32 [APPEND\\_MEDIA\\_AT\\_END](#) = -1

#### 8.51.1 Detailed Description

Defines a status values for the [MediaData](#) containers.

## 8.52 oscl\_mem.h File Reference

This file contains basic memory definitions for common use across platforms.

```
#include "osclconfig_memory.h"
#include "oscl_base.h"
#include "oscl_types.h"
#include "oscl_assert.h"
#include "oscl_mem_basic_functions.h"
#include "oscl_lock_base.h"
#include "osclconfig_compiler_warnings.h"
#include "oscl_mem_inst.h"
#include "oscl_heapbase.h"
#include "oscl_defalloc.h"
#include "oscl_refcounter.h"
#include "oscl_error.h"
#include "oscl_exception.h"
#include "oscl_mem.inl"
```

### Data Structures

- class [OsclMem](#)
- class [OsclAuditCB](#)
- class [OsclMemAllocator](#)
- class [OsclMemBasicAllocator](#)
- class [OsclMemAllocDestructDealloc< T >](#)
- class [OsclMemBasicAllocDestructDealloc< T >](#)
- class [OsclMemGlobalAuditObject](#)
- class [HeapBase](#)

### Defines

- #define [OSCL\\_DISABLE\\_WARNING\\_TRUNCATE\\_DEBUG\\_MESSAGE](#)
- #define [OSCL\\_CLEANUP\\_BASE\\_CLASS\(T\)](#) \_OSCL\_CLEANUP\_BASE\_CLASS(T)
- #define [OSCL\\_ALLOC\\_NEW\(T\\_allocator, T, params\)](#) new(T\_allocator.allocate(1)) T params
- #define [OSCL\\_TRAP\\_ALLOC\\_NEW\(T\\_ptr, T\\_allocator, T, params\)](#) \_OSCL\_TRAP\_NEW(T\_allocator.allocate(1),T\_allocator.deallocate,T\_ptr,T,params)
- #define [OSCL\\_ALLOC\\_DELETE\(ptr, T\\_allocator, T\)](#)
- #define [OSCL\\_MALLOC\(count\)](#) \_oscl\_malloc(count)
- #define [oscl\\_malloc\(a\)](#) OSCL\_MALLOC(a)
- #define [OSCL\\_DEFAULT\\_MALLOC\(x\)](#) OSCL\_MALLOC(x)
- #define [OSCL\\_AUDIT\\_MALLOC\(auditCB, count\)](#) \_oscl\_malloc(count)
- #define [OSCL\\_CALLOC\(num, size\)](#) \_oscl\_calloc(num,size)
- #define [oscl\\_calloc\(a, b\)](#) OSCL\_CALLOC(a,b)
- #define [OSCL\\_AUDIT\\_CALLOC\(auditCB, num, size\)](#) \_oscl\_calloc(num,size)

- #define OSCL\_REALLOC(ptr, new\_size) \_oscl\_realloc(ptr,new\_size)
- #define oscl\_realloc(a, b) OSCL\_REALLOC(a,b)
- #define OSCL\_AUDIT\_REALLOC(auditCB, ptr, new\_size) \_oscl\_realloc(ptr,new\_size)
- #define OSCL\_FREE(ptr) \_oscl\_free(ptr)
- #define oscl\_free(x) OSCL\_FREE(x)
- #define OSCL\_DEFAULT\_FREE(x) OSCL\_FREE(x)
- #define OSCL\_NEW(T, params) new T params
- #define OSCL\_PLACEMENT\_NEW(ptr, constructor) new(ptr) constructor
- #define OSCL\_TRAP\_NEW(T\_ptr, T, params) \_OSCL\_TRAP\_NEW(\_oscl\_default\_new(sizeof(T)),\_oscl\_free,T\_ptr,T,params)
- #define OSCL\_AUDIT\_NEW(auditCB, T, params) new(\_oscl\_default\_new(sizeof(T))) T params
- #define OSCL\_TRAP\_AUDIT\_NEW(T\_ptr, auditCB, T, params) \_OSCL\_TRAP\_NEW(\_oscl\_default\_new(sizeof(T)),\_oscl\_free,T\_ptr,T,params)
- #define OSCL\_DELETE(ptr)
- #define OSCL\_AUDIT\_ARRAY\_NEW(auditCB, T, count) new(\_oscl\_default\_new(sizeof(T)\*(count))) T
- #define OSCL\_ARRAY\_NEW(T, count) new T[count]
- #define OSCL\_ARRAY\_DELETE(ptr) delete [] ptr
- #define OSCL\_DISABLE\_WARNING\_TRUNCATE\_DEBUG\_MESSAGE
- #define \_OSCL\_TRAP\_NEW(exp, freeFunc, T\_ptr, T, params)
- #define \_OSCL\_CLEANUP\_BASE\_CLASS(T) this->T::~T()

## Functions

- OSCL\_COND\_IMPORT\_REF uint oscl\_mem\_aligned\_size (uint size)
- OSCL\_IMPORT\_REF void OsclMemInit (OsclAuditCB &auditCB)
- OSCL\_IMPORT\_REF void \* \_oscl\_default\_new (size\_t nBytes)
- void \* operator new (size\_t aSize)
- void operator delete (void \*aPtr)
- void \* operator new[ ] (size\_t aSize)
- void operator delete[ ] (void \*aPtr)

### 8.52.1 Detailed Description

This file contains basic memory definitions for common use across platforms. This is the main entry point header file for the OSCL memory library. It should be the only one users directly include. Basic memory copy, compare, and move functions are defined here as well as the allocation functions.

## 8.53 oscl\_mem\_audit.h File Reference

This file contains the definition and partial implementation of MM\_Audit class.

```
#include "oscl_lock_base.h"
#include "oscl_base_alloc.h"
#include "oscl_tagtree.h"
#include "oscl_mem.h"
#include "osclconfig_memory.h"
#include "oscl_base.h"
#include "oscl_types.h"
#include "oscl_assert.h"
#include "oscl_mem_basic_functions.h"
#include "osclconfig_compiler_warnings.h"
#include "oscl_mem_inst.h"
#include "oscl_heapbase.h"
#include "oscl_defalloc.h"
#include "oscl_refcounter.h"
#include "oscl_error.h"
#include "oscl_exception.h"
#include "oscl_mem.inl"
#include "oscl_mem.h"
```

### Data Structures

- struct [MM\\_Stats\\_t](#)
- struct [MM\\_FailInsertParam](#)
- class [OsclMemStatsNode](#)
- struct [MM\\_Stats\\_CB](#)
- struct [MM\\_AllocQueryInfo](#)
- struct [MM\\_AllocInfo](#)
- struct [MM\\_AllocNode](#)
- struct [MM\\_AuditOverheadStats](#)
- class [MM\\_Audit\\_Imp](#)
- class [OsclMemAudit](#)

### Defines

- #define [OSCL\\_DISABLE\\_WARNING\\_TRUNCATE\\_DEBUG\\_MESSAGE](#)
- #define [MM\\_ALLOC\\_MAX\\_QUERY\\_FILENAME\\_LEN](#) 128
- #define [MM\\_ALLOC\\_MAX\\_QUERY\\_TAG\\_LEN](#) 64
- #define [MM\\_AUDIT\\_VALIDATE\\_BLOCK](#) 1
- #define [MM\\_AUDIT\\_PREFILL\\_FLAG](#) 0x1

- #define MM\_AUDIT\_POSTFILL\_FLAG 0x2
- #define MM\_AUDIT\_VALIDATE\_ALL\_HEAP\_FLAG 0x4
- #define MM\_AUDIT\_VALIDATE\_ON\_FREE\_FLAG 0x8
- #define MM\_AUDIT\_ALLOC\_NODE\_ENABLE\_FLAG 0x10
- #define MM\_AUDIT\_SUPPRESS\_FILENAME\_FLAG 0x20
- #define DEFAULT\_MM\_AUDIT\_MODE 0

## Typedefs

- typedef OSCLMemAutoPtr< char, Oscl\_TAlloc< char, OsclMemBasicAllocator > > MMAuditCharAutoPtr
- typedef OSCLMemAutoPtr< uint8, Oscl\_TAlloc< uint8, \_OsclBasicAllocator > > MMAuditUInt8AutoPtr
- typedef OSCLMemAutoPtr< MM\_AllocNode, Oscl\_TAlloc< MM\_AllocNode, OsclMemBasicAllocator > > MM\_AllocNodeAutoPtr
- typedef OSCLMemAutoPtr< OsclMemStatsNode, Oscl\_TAlloc< OsclMemStatsNode, OsclMemBasicAllocator > > MM\_StatsNodeTagTreeType
- typedef OSCLMemAutoPtr< OsclMemStatsNode, Oscl\_TAlloc< OsclMemStatsNode, OsclMemBasicAllocator > > OsclMemStatsNodeAutoPtr
- typedef Oscl\_TAlloc< MM\_StatsNodeTagTreeType, OsclMemBasicAllocator > TagTree\_Allocator
- typedef Oscl\_TagTree< MM\_StatsNodeTagTreeType, TagTree\_Allocator > OsclTagTreeType

### 8.53.1 Detailed Description

This file contains the definition and partial implementation of MM\_Audit class.

## 8.54 oscl\_mem\_audit\_internals.h File Reference

This file contains the internal definitions for the mem audit library.

```
#include "oscl_base.h"
#include "oscl_mem_audit.h"
#include "oscl_lock_base.h"
#include "oscl_base_alloc.h"
#include "oscl_tagtree.h"
#include "oscl_mem.h"
#include "oscl_mem_auto_ptr.h"
#include "osclconfig_compiler_warnings.h"
#include "oscl_mem_inst.h"
```

### Data Structures

- struct [MM\\_AllocBlockHdr](#)
- struct [MM\\_AllocBlockFence](#)

### Defines

- #define [OSCL\\_DISABLE\\_WARNING\\_TRUNCATE\\_DEBUG\\_MESSAGE](#)
- #define [MM\\_AUDIT\\_ALLOC\\_NODE\\_SUPPORT](#) 1
- #define [MM\\_AUDIT\\_FENCE\\_SUPPORT](#) 0
- #define [MM\\_AUDIT\\_INCLUDE\\_ALL\\_HEAP\\_VALIDATION](#) 1
- #define [MM\\_AUDIT\\_FILL\\_SUPPORT](#) 0
- #define [MM\\_AUDIT\\_FAILURE\\_SIMULATION\\_SUPPORT](#) 1
- #define [FENCE\\_PATTERN](#) 0xAA
- #define [MIN\\_FENCE\\_SIZE](#) 4
- #define [MEM\\_ALIGN\\_SIZE](#) 8
- #define [COMPUTE\\_MEM\\_ALIGN\\_SIZE](#)(x, y, z) (y+(((x+y)%z) ? (z - (x+y)%z) : 0))
- #define [DEFAULT\\_PREFILL\\_PATTERN](#) 0x96
- #define [DEFAULT\\_POSTFILL\\_PATTERN](#) 0x5A

### 8.54.1 Detailed Description

This file contains the internal definitions for the mem audit library.

## 8.55 oscl\_mem\_auto\_ptr.h File Reference

This file defines the oscl\_mem\_auto\_ptr template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

```
#include "osclconfig_memory.h"
#include "oscl_mem.h"
#include "osclconfig_compiler_warnings.h"
```

### Data Structures

- class [OSCLMemAutoPtr< T, \\_Allocator >](#)

*The oscl\_auto\_ptr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the oscl\_auto\_ptr expires, its destructor uses delete to free the memory.*

### Defines

- #define [OSCL\\_DISABLE\\_WARNING\\_TRUNCATE\\_DEBUG\\_MESSAGE](#)
- #define [OSCL\\_DISABLE\\_WARNING\\_RETURN\\_TYPE\\_NOT\\_UDT](#)

### 8.55.1 Detailed Description

This file defines the oscl\_mem\_auto\_ptr template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

## 8.56 oscl\_mem\_basic\_functions.h File Reference

This file contains prototypes for the basic memory functions.

```
#include "oscl_base_macros.h"
#include "oscl_mem_basic_functions.inl"
#include "osclconfig_memory.h"
#include "osclconfig_compiler_warnings.h"
```

### Functions

- OSCL\_COND\_IMPORT\_REF void \* [\\_oscl\\_malloc](#) (int32 count)
- OSCL\_COND\_IMPORT\_REF void \* [\\_oscl\\_calloc](#) (int32 nelems, int32 size)
- OSCL\_COND\_IMPORT\_REF void \* [\\_oscl\\_realloc](#) (void \*src, int32 count)
- OSCL\_COND\_IMPORT\_REF void [\\_oscl\\_free](#) (void \*src)
- OSCL\_COND\_IMPORT\_REF void \* [oscl\\_memcpy](#) (void \*dest, const void \*src, uint32 count)
- OSCL\_COND\_IMPORT\_REF void \* [oscl\\_memmove](#) (void \*dest, const void \*src, uint32 count)
- OSCL\_COND\_IMPORT\_REF void \* [oscl\\_memmove32](#) (void \*dest, const void \*src, uint32 count)
- OSCL\_COND\_IMPORT\_REF void \* [oscl\\_memset](#) (void \*dest, uint8 val, uint32 count)
- OSCL\_COND\_IMPORT\_REF int [oscl\\_memcmp](#) (const void \*buf1, const void \*buf2, uint32 count)

### 8.56.1 Detailed Description

This file contains prototypes for the basic memory functions.

## 8.57 oscl\_mem\_inst.h File Reference

The file defines default memory instrumentation level.

```
#include "osclconfig_memory.h"
```

### Defines

- #define PVMEM\_INST\_LEVEL 0

#### 8.57.1 Detailed Description

The file defines default memory instrumentation level.

## 8.58 oscl\_mem\_mempool.h File Reference

This file contains the definition of memory pool allocators.

```
#include "oscl_mem.h"  
#include "oscl_defalloc.h"  
#include "oscl_vector.h"
```

### Data Structures

- class [OsclMemPoolFixedChunkAllocatorObserver](#)
- class [OsclMemPoolFixedChunkAllocator](#)
- class [OsclMemPoolResizableAllocatorObserver](#)
- class [OsclMemPoolResizableAllocatorMemoryObserver](#)
- class [OsclMemPoolResizableAllocator](#)
- struct [OsclMemPoolResizableAllocator::MemPoolBufferInfo](#)
- struct [OsclMemPoolResizableAllocator::MemPoolBlockInfo](#)

#### 8.58.1 Detailed Description

This file contains the definition of memory pool allocators.

## 8.59 oscl\_mutex.h File Reference

This file provides implementation of mutex.

```
#include "osclconfig_proc.h"
#include "oscl_types.h"
#include "oscl_base.h"
#include "oscl_thread.h"
#include "oscl_lock_base.h"
```

### Data Structures

- class [OsclMutex](#)
- class [OsclThreadLock](#)

### Typedefs

- typedef [OsclMutex OsclNoYieldMutex](#)

#### 8.59.1 Detailed Description

This file provides implementation of mutex.

#### 8.59.2 Typedef Documentation

##### 8.59.2.1 typedef OsclMutex OsclNoYieldMutex

Class OsclNoYieldMutex can be used in use cases where there will be no CPU-yielding operation done while the Mutex is locked.

CPU-yielding operations include [OsclMutex::Lock](#), [OsclSemaphore::Wait](#), [OsclThread::Sleep](#), and [OsclBrewThreadUtil::BThreadYield](#).

The behavior of OsclNoYieldMutex depends on whether the threading model is pre-emptive or not. When threading is pre-emptive, it is identical to [OsclMutex](#). When threading is non-pre-emptive, it is a NO-OP.

An example of this type of use case is for simple data protection.

## 8.60 oscl\_namestring.h File Reference

Name string class include file.

```
#include "oscl_base.h"
```

### Data Structures

- class [OsclNameString<\\_\\_len>](#)

#### 8.60.1 Detailed Description

Name string class include file.

## 8.61 oscl\_opaque\_type.h File Reference

The file [oscl\\_opaque\\_type.h](#) defines pure virtual classes for working with opaque types.

```
#include "oscl_base.h"
```

### Data Structures

- class [Oscl\\_Opaque\\_Type\\_Alloc](#)
- class [Oscl\\_Opaque\\_Type\\_Compare](#)
- class [Oscl\\_Opaque\\_Type\\_Alloc\\_LL](#)

#### 8.61.1 Detailed Description

The file [oscl\\_opaque\\_type.h](#) defines pure virtual classes for working with opaque types.

## 8.62 oscl\_priqueue.h File Reference

Implements a priority queue data structure similar to STL.

```
#include "oscl_base.h"
#include "oscl_vector.h"
```

### Data Structures

- class [OsclPriorityQueueBase](#)
- class [OsclCompareLess< T >](#)
- class [OsclPriorityQueue< Qelem, Alloc, Container, Compare >](#)

#### 8.62.1 Detailed Description

Implements a priority queue data structure similar to STL. Implements a priority queue data structure similar to the STL class. The properties of the class include O(Log\_2(N)) insertion and deletion complexity and O(1) complexity to access the top priority item.

## 8.63 oscl\_procstatus.h File Reference

### Data Structures

- class [OsclProcStatus](#)

## 8.64 oscl\_queue.h File Reference

The file [oscl\\_queue.h](#) defines the template class [Oscl\\_Queue](#). It is similar to the STL::queue class, with some differences:

- less complete
- based on array rather than a deque
- some interfaces modeled on oscl\_vector, for ease of transition Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_base.h"
#include "oscl_mem_basic_functions.h"
#include "oscl_assert.h"
#include "oscl_opaque_type.h"
```

### Data Structures

- class [Oscl\\_Queue\\_Base](#)
- class [Oscl\\_Queue< T, Alloc >](#)

#### 8.64.1 Detailed Description

The file [oscl\\_queue.h](#) defines the template class [Oscl\\_Queue](#). It is similar to the STL::queue class, with some differences:

- less complete
- based on array rather than a deque
- some interfaces modeled on oscl\_vector, for ease of transition Memory allocation is abstracted through the use of an allocator template parameter.

## 8.65 oscl\_rand.h File Reference

Provides pseudo-random number generation.

```
#include "osclconfig_util.h"
#include "oscl_base.h"
#include "oscl_mem_basic_functions.h"
#include "oscl_rand.inl"
```

### Data Structures

- class [OsclRand](#)

#### 8.65.1 Detailed Description

Provides pseudo-random number generation.

## 8.66 oscl\_refcounter.h File Reference

A general purpose reference counter to object lifetimes.

```
#include "oscl_assert.h"  
#include "oscl_defalloc.h"
```

### Data Structures

- class [OsclRefCounter](#)
- class [OsclRefCounterDA](#)
- class [OsclRefCounterSA< DeallocType >](#)
- class [OsclRefCounterMTDA< LockType >](#)
- class [OsclRefCounterMTSA< DeallocType, LockType >](#)
- class [Oscl\\_DefAllocWithRefCounter< DefAlloc >](#)

#### 8.66.1 Detailed Description

A general purpose reference counter to object lifetimes.

## 8.67 oscl\_refcounter\_memfrag.h File Reference

This file provides the definition of reference counted memory fragment, which provides access to a buffer and helps manage its lifetime through the refcount.

```
#include "oscl_base.h"
#include "oscl_refcounter.h"
#include "oscl_assert.h"
#include "oscl_defalloc.h"
```

### Data Structures

- class [OsclRefCounterMemFrag](#)

#### 8.67.1 Detailed Description

This file provides the definition of reference counted memory fragment, which provides access to a buffer and helps manage its lifetime through the refcount.

## 8.68 oscl\_registry\_access\_client.h File Reference

Client-side implementation Registry Access implementation.

```
#include "oscl_registry_types.h"  
#include "oscl_types.h"  
#include "oscl_string_containers.h"  
#include "oscl_vector.h"  
#include "oscl_mem.h"
```

### Data Structures

- class [OsclRegistryAccessClient](#)

#### 8.68.1 Detailed Description

Client-side implementation Registry Access implementation.

## 8.69 oscl\_registry\_client.h File Reference

Client-side implementation of OsclRegistry.

```
#include "oscl_registry_types.h"  
#include "oscl_mem.h"  
#include "oscl_string.h"
```

### Data Structures

- class [OsclRegistryClient](#)

#### 8.69.1 Detailed Description

Client-side implementation of OsclRegistry.

## 8.70 oscl\_registry\_client\_impl.h File Reference

Client-side implementation of OsclRegistryInterface.

```
#include "oscl_base.h"
#include "osclconfig_proc.h"
#include "oscl_vector.h"
#include "oscl_string.h"
#include "oscl_registry_types.h"
#include "oscl_registry_serv_impl_tls.h"
```

### Data Structures

- class [OsclRegistryClientImpl](#)
- class [OsclRegistryAccessClientImpl](#)
- class [OsclRegistryClientTlsImpl](#)
- class [OsclRegistryAccessClientTlsImpl](#)

#### 8.70.1 Detailed Description

Client-side implementation of OsclRegistryInterface.

## 8.71 oscl\_registry\_serv\_impl.h File Reference

Server-side implementation of OsclRegistry interfaces.

```
#include "oscl_base.h"
#include "osclconfig_proc.h"
#include "oscl_registry_types.h"
#include "oscl_string.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_mutex.h"
```

### Data Structures

- class [OsclComponentRegistryElement](#)
- class [OsclComponentRegistryData](#)
- class [OsclComponentRegistry](#)

#### 8.71.1 Detailed Description

Server-side implementation of OsclRegistry interfaces.

## 8.72 oscl\_registry\_serv\_impl\_global.h File Reference

```
#include "osclconfig_proc.h"  
#include "oscl_base.h"
```

## 8.73 oscl\_registry\_serv\_impl\_tls.h File Reference

```
#include "osclconfig_proc.h"
#include "oscl_registry_serv_impl.h"
#include "oscl_base.h"
#include "oscl_registry_types.h"
#include "oscl_string.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_mutex.h"
```

### Data Structures

- class [OsclRegistryServTlsImpl](#)

## 8.74 oscl\_registry\_types.h File Reference

Common types used in Oscl registry interfaces.

```
#include "oscl_types.h"
#include "oscl_string_containers.h"
```

### Data Structures

- class [OsclRegistryAccessElement](#)

### Typedefs

- typedef [OsclAny](#) \* [OsclComponentFactory](#)

#### 8.74.1 Detailed Description

Common types used in Oscl registry interfaces.

## 8.75 oscl\_scheduler.h File Reference

```
#include "oscl_scheduler_types.h"
#include "osclconfig_proc.h"
#include "oscl_base.h"
#include "oscl_aostatus.inl"
#include "oscl_heapbase.h"
#include "oscl_scheduler_types.h"
#include "oscl_namestring.h"
#include "oscl_aostatus.h"
#include "oscl_assert.h"
#include "oscl_double_list.inl"
#include "oscl_types.h"
#include "oscl_thread.h"
#include "oscl_lock_base.h"
#include "oscl_priqueue.h"
#include "oscl_base_alloc.h"
#include "oscl_mem.h"
#include "oscl_mutex.h"
#include "oscl_string_containers.h"
#include "oscl_scheduler_threadcontext.h"
#include "oscl_semaphore.h"
#include "oscl_scheduler_readyq.h"
#include "oscl_defalloc.h"
```

### Data Structures

- class [OsclScheduler](#)
- class [OsclSchedulerObserver](#)
- class [OsclExecSchedulerCommonBase](#)
- class [OsclExecScheduler](#)
- class [PVSchedulerStopper](#)

### Defines

- #define [PVSCHEDNAMELEN](#) 30

## 8.76 oscl\_scheduler\_ao.h File Reference

Oscl Scheduler user execution object classes.

```
#include "oscl_scheduler_types.h"
#include "oscl_scheduler_aobase.h"
#include "oscl_mem.h"
```

### Data Structures

- class [OsclActiveObject](#)
- class [OsclTimerObject](#)

#### 8.76.1 Detailed Description

Oscl Scheduler user execution object classes.

## 8.77 oscl\_scheduler\_aobase.h File Reference

Oscl Scheduler internal active object classes.

```
#include "oscl_scheduler_types.h"
#include "oscl_namestring.h"
#include "oscl_scheduler_threadcontext.h"
#include "oscl_scheduler_readyq.h"
#include "oscl_string_containers.h"
```

### Data Structures

- class [PVActiveBase](#)

### Defines

- #define [OSCL\\_ZEROIZE](#)(ptr, size) oscl\_memset(ptr, 0, size)
- #define [PVEEXECNAMELEN](#) 30

### 8.77.1 Detailed Description

Oscl Scheduler internal active object classes.

## 8.78 oscl\_scheduler\_readyq.h File Reference

ready q types for oscl scheduler

```
#include "oscl_scheduler_types.h"
#include "oscl_scheduler_tuneables.h"
#include "oscl_priqueue.h"
#include "oscl_base_alloc.h"
#include "oscl_semaphore.h"
#include "oscl_mem.h"
#include "oscl_mutex.h"
#include "oscl_string_containers.h"
```

### Data Structures

- class [OsclReadyAlloc](#)
- class [OsclReadyCompare](#)
- class [OsclTimerCompare](#)
- class [OsclReadyQ](#)
- class [OsclTimerQ](#)
- class [TReadyQueLink](#)

### Typedefs

- typedef [PVActiveBase](#) \* TOsclReady

#### 8.78.1 Detailed Description

ready q types for oscl scheduler

## 8.79 oscl\_scheduler\_threadcontext.h File Reference

Thread context functions needed by oscl scheduler.

```
#include "oscl_aostatus.h"  
#include "oscl_double_list.h"  
#include "oscl_mutex.h"
```

### Data Structures

- class [PVThreadContext](#)

### Enumerations

- enum [TPVThreadContext](#) { [EPVThreadContext\\_InThread](#), [EPVThreadContext\\_OsclThread](#), [EPVThreadContext\\_NonOsclThread](#), [EPVThreadContext\\_Undetermined](#) }

### 8.79.1 Detailed Description

Thread context functions needed by oscl scheduler.

## 8.80 oscl\_scheduler\_tuneables.h File Reference

Tunable settings for Oscl Scheduler.

```
#include "osclconfig_proc.h"
```

### Defines

- #define PV\_SCHED\_ENABLE\_LOOP\_STATS 0
- #define PV\_SCHED\_ENABLE\_PERF\_LOGGING 1
- #define PV\_SCHED\_ENABLE\_THREAD\_CONTEXT\_CHECKS 1
- #define PV\_SCHED\_LOG\_Q 0
- #define PV\_SCHED\_CHECK\_Q 0
- #define PV\_SCHED\_FAIR\_SCHEDULING 1
- #define OSCL\_PERF\_SUMMARY\_LOGGING 0

### 8.80.1 Detailed Description

Tunable settings for Oscl Scheduler.

## 8.81 oscl\_scheduler\_types.h File Reference

Scheduler common types include file.

```
#include "osclconfig_proc.h"  
#include "oscl_aostatus.h"  
#include "oscl_heapbase.h"
```

### Data Structures

- class [OsclExecSchedulerBase](#)

#### 8.81.1 Detailed Description

Scheduler common types include file.

## 8.82 oscl\_semaphore.h File Reference

This file provides implementation of mutex.

```
#include "osclconfig_proc.h"
#include "oscl_thread.h"
```

### Data Structures

- class [OsclSemaphore](#)

#### 8.82.1 Detailed Description

This file provides implementation of mutex.

## 8.83 oscl\_shared\_ptr.h File Reference

This file defines a template class [OsclSharedPtr](#) which is a "smart pointer" to the parameterized type.

```
#include "oscl_base.h"
#include "oscl_refcounter.h"
#include "osclconfig_compiler_warnings.h"
```

### Data Structures

- class [OsclSharedPtr< TheClass >](#)  
*A parameterized smart pointer class.*

### Defines

- #define [OSCL\\_DISABLE\\_WARNING\\_RETURN\\_TYPE\\_NOT\\_UDT](#)

#### 8.83.1 Detailed Description

This file defines a template class [OsclSharedPtr](#) which is a "smart pointer" to the parameterized type.

## 8.84 oscl\_singleton.h File Reference

This file defines the OsclSingleton class. This class provides a container which used to give access to a set of process-level singleton objects. Each object is indexed by an integer ID, listed below. There can only be one instance of each object per process at a given time.

```
#include "oscl_base.h"  
#include "oscl_defalloc.h"
```

### 8.84.1 Detailed Description

This file defines the OsclSingleton class. This class provides a container which used to give access to a set of process-level singleton objects. Each object is indexed by an integer ID, listed below. There can only be one instance of each object per process at a given time. OsclSingleton is initialized in OsclBase::Init.

## 8.85 oscl\_snprintf.h File Reference

Provides a portable implementation of snprintf.

```
#include "oscl_base.h"  
#include "osclconfig_util.h"
```

### Functions

- OSCL\_IMPORT\_REF int32 [oscl\\_snprintf](#) (char \*str, uint32 count, const char \*fmt,...)
- OSCL\_IMPORT\_REF int32 [oscl\\_snprintf](#) ([oscl\\_wchar](#) \*str, uint32 count, const [oscl\\_wchar](#) \*fmt,...)
- OSCL\_IMPORT\_REF int32 [oscl\\_vsnprintf](#) (char \*str, uint32 count, const char \*fmt, va\_list args)
- OSCL\_IMPORT\_REF int32 [oscl\\_vsnprintf](#) ([oscl\\_wchar](#) \*str, uint32 count, const [oscl\\_wchar](#) \*fmt, va\_list args)

### 8.85.1 Detailed Description

Provides a portable implementation of snprintf.

## 8.86 oscl\_socket.h File Reference

The file [oscl\\_socket.h](#) defines the OSCL Socket APIs.

```
#include "osclconfig_io.h"
#include "oscl_socket_types.h"
#include "oscl_heapbase.h"
#include "oscl_defalloc.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
```

### Data Structures

- class [OsclSocketServ](#)
- class [OsclUDPSocket](#)
- class [OsclTCPSocket](#)

#### 8.86.1 Detailed Description

The file [oscl\\_socket.h](#) defines the OSCL Socket APIs.

## 8.87 oscl\_socket\_accept.h File Reference

```
#include "oscl_socket_imp.h"
#include "oscl_socket_serv_imp.h"
#include "osclconfig_io.h"
#include "oscl_socket_tuneables.h"
#include "oscl_socket_types.h"
#include "oscl_scheduler_ao.h"
#include "oscl_socket_request.h"
#include "pvlogger.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
```

### Data Structures

- class [OsclAcceptMethod](#)
- class [OsclAcceptRequest](#)

## 8.88 oscl\_socket\_bind.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

### Data Structures

- class [OsclBindMethod](#)
- class [OsclBindRequest](#)

## 8.89 oscl\_socket\_connect.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

### Data Structures

- class [OsclConnectMethod](#)
- class [OsclConnectRequest](#)

## 8.90 oscl\_socket\_imp.h File Reference

```
#include "oscl_socket_tuneables.h"
```

## 8.91 oscl\_socket\_imp\_base.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_request.h"
#include "oscl_defalloc.h"
#include "oscl_mutex.h"
#include "oscl_socket_stats.h"
#include "oscl_base.h"
```

### Data Structures

- class [OsclSocketIBase](#)

## 8.92 oscl\_socket\_imp\_pv.h File Reference

```
#include "oscl_socket_imp_base.h"
```

### Data Structures

- class [OsclSocketI](#)

### Defines

- #define [PVSOCK\\_ERR\\_BAD\\_PARAM](#) (-1)
- #define [PVSOCK\\_ERR SOCK\\_NOT\\_OPEN](#) (-2)
- #define [PVSOCK\\_ERR SOCK\\_NO\\_SERV](#) (-3)
- #define [PVSOCK\\_ERR SERV\\_NOT\\_CONNECTED](#) (-4)
- #define [PVSOCK\\_ERR SOCK\\_NOT\\_CONNECTED](#) (-5)
- #define [PVSOCK\\_ERR NOT\\_IMPLEMENTED](#) (-6)
- #define [PVSOCK\\_ERR NOT\\_SUPPORTED](#) (-7)

### 8.92.1 Define Documentation

#### 8.92.1.1 #define PVSOCK\_ERR\_BAD\_PARAM (-1)

Socket implementation for PV socket server some error codes for request completion these are negative so they won't conflict with errors from the OS socket layer.

#### 8.92.1.2 #define PVSOCK\_ERR\_NOT\_IMPLEMENTED (-6)

#### 8.92.1.3 #define PVSOCK\_ERR\_NOT\_SUPPORTED (-7)

#### 8.92.1.4 #define PVSOCK\_ERR\_SERV\_NOT\_CONNECTED (-4)

#### 8.92.1.5 #define PVSOCK\_ERR SOCK\_NO\_SERV (-3)

#### 8.92.1.6 #define PVSOCK\_ERR SOCK\_NOT\_CONNECTED (-5)

#### 8.92.1.7 #define PVSOCK\_ERR SOCK\_NOT\_OPEN (-2)

## 8.93 oscl\_socket\_listen.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

### Data Structures

- class [OsclListenMethod](#)
- class [OsclListenRequest](#)

### Defines

- #define [OSCL\\_SOCKET\\_LISTEN\\_H\\_INCLUDEDd](#)

#### 8.93.1 Define Documentation

##### 8.93.1.1 #define OSCL\_SOCKET\_LISTEN\_H\_INCLUDEDd

## 8.94 oscl\_socket\_method.h File Reference

```
#include "osclconfig_io.h"
#include "oscl_socket_types.h"
#include "oscl_scheduler_ao.h"
#include "oscl_socket_request.h"
#include "pvlogger.h"
#include "oscl_socket_tuneables.h"
#include "oscl_ip_socket.h"
#include "oscl_socket_imp.h"
```

### Data Structures

- class [OsclSocketMethod](#)
- class [OsclSocketRequestAO](#)

### Defines

- #define [MSEC\\_TO\\_MICROSEC](#) 1000

#### 8.94.1 Define Documentation

##### 8.94.1.1 #define MSEC\_TO\_MICROSEC 1000

## 8.95 oscl\_socket\_recv.h File Reference

```
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

### Data Structures

- class [OsclRecvMethod](#)
- class [OsclRecvRequest](#)

## 8.96 oscl\_socket\_recv\_from.h File Reference

```
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

### Data Structures

- class [OsclRecvFromMethod](#)
- class [OsclRecvFromRequest](#)

## 8.97 oscl\_socket\_request.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_socket_tuneables.h"
```

### Data Structures

- class [PVSockBufSend](#)
- class [PVSockBufRecv](#)
- class [SocketRequestParam](#)
- class [SendParam](#)
- class [SendToParam](#)
- class [RecvParam](#)
- class [RecvFromParam](#)
- class [BindParam](#)
- class [ListenParam](#)
- class [ConnectParam](#)
- class [AcceptParam](#)
- class [ShutdownParam](#)

## 8.98 oscl\_socket\_send.h File Reference

```
#include "oscl_socket_types.h"  
#include "oscl_socket_method.h"
```

### Data Structures

- class [OsclSendMethod](#)
- class [OsclSendRequest](#)

## 8.99 oscl\_socket\_send\_to.h File Reference

```
#include "oscl_socket_types.h"  
#include "oscl_socket_imp.h"  
#include "oscl_socket_method.h"
```

### Data Structures

- class [OsclSendToMethod](#)
- class [OsclSendToRequest](#)

## 8.100 oscl\_socket\_serv\_imp.h File Reference

```
#include "osclconfig_io.h"
#include "oscl_socket_tuneables.h"
```

## 8.101 oscl\_socket\_serv\_imp\_base.h File Reference

```
#include "oscl_base.h"
#include "oscl_socket_stats.h"
```

### Data Structures

- class [OsclSocketServIBase](#)

## 8.102 oscl\_socket\_serv\_imp\_pv.h File Reference

```
#include "oscl_socket_serv_imp_base.h"
#include "oscl_base.h"
#include "oscl_socket_stats.h"
#include "oscl_socket_tuneables.h"
#include "oscl_defalloc.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_scheduler_ao.h"
```

### Data Structures

- class [OsclSocketServI](#)

### Defines

- #define [OSCL\\_READSET\\_FLAG](#) 0x04
- #define [OSCL\\_WRITESET\\_FLAG](#) 0x02
- #define [OSCL\\_EXCEPTSET\\_FLAG](#) 0x01

#### 8.102.1 Define Documentation

##### 8.102.1.1 #define OSCL\_EXCEPTSET\_FLAG 0x01

##### 8.102.1.2 #define OSCL\_READSET\_FLAG 0x04

A bitmask for socket select operations

##### 8.102.1.3 #define OSCL\_WRITESET\_FLAG 0x02

## 8.103 oscl\_socket\_serv\_imp\_reqlist.h File Reference

```
#include "oscl_socket_tuneables.h"
#include "oscl_defalloc.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
```

### Data Structures

- class [OsclSocketServRequestQElem](#)
- class [OsclSocketServRequestList](#)

## 8.104 oscl\_socket\_shutdown.h File Reference

```
#include "oscl_socket_types.h"  
#include "oscl_socket_method.h"
```

### Data Structures

- class [OsclShutdownMethod](#)
- class [OsclShutdownRequest](#)

## 8.105 oscl\_socket\_stats.h File Reference

```
#include "oscl_base.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_mutex.h"
#include "oscl_socket_tuneables.h"
```

### Enumerations

- enum **TOsclSocketStatEvent** {
 EOscSocket\_RequestAO\_Success, EOscSocket\_RequestAO\_Canceled, EOscSocket\_RequestAO\_Error, EOscSocket\_RequestAO\_Timeout,
 EOscSocket\_ServRequestIssued, EOscSocket\_ServPoll, EOscSocket\_OS, EOscSocket\_Readable,
 EOscSocket\_Writable, EOscSocket\_Except, EOscSocket\_DataRecv, EOscSocket\_DataSent,
 EOscSocket\_ServRequestComplete, EOscSocket\_ServRequestCancelIssued, EOscSocketServ\_LoopsockOk, EOscSocketServ\_LoopsockError
 }
- enum **TOsclSocketServStatEvent** {
 EOscSocketServ\_SelectNoActivity = 0, EOscSocketServ\_SelectActivity, EOscSocketServ\_SelectRescheduleAsap, EOscSocketServ\_SelectReschedulePoll,
 EOscSocketServ\_LastEvent }

#### 8.105.1 Enumeration Type Documentation

##### 8.105.1.1 enum TOsclSocketServStatEvent

Enumerator:

*EOscSocketServ\_SelectNoActivity*  
*EOscSocketServ\_SelectActivity*  
*EOscSocketServ\_SelectRescheduleAsap*  
*EOscSocketServ\_SelectReschedulePoll*  
*EOscSocketServ\_LastEvent*

##### 8.105.1.2 enum TOsclSocketStatEvent

Socket diagnostics.

Enumerator:

*EOscSocket\_RequestAO\_Success*  
*EOscSocket\_RequestAO\_Canceled*  
*EOscSocket\_RequestAO\_Error*  
*EOscSocket\_RequestAO\_Timeout*

*EOsclSocket\_ServRequestIssued*  
*EOsclSocket\_ServPoll*  
*EOsclSocket\_OS*  
*EOsclSocket\_Readable*  
*EOsclSocket\_Writable*  
*EOsclSocket\_Except*  
*EOsclSocket\_DataRecv*  
*EOsclSocket\_DataSent*  
*EOsclSocket\_ServRequestComplete*  
*EOsclSocket\_ServRequestCancelIssued*  
*EOsclSocketServ\_LoopsockOk*  
*EOsclSocketServ\_LoopsockError*

## 8.106 oscl\_socket\_tuneables.h File Reference

```
#include "osclconfig_io.h"
#include "osclconfig_proc.h"
```

### Defines

- #define PV\_OSCL\_SOCKET\_STATS\_LOGGING 0
- #define PV\_SOCKET\_SERVER 1

#### 8.106.1 Define Documentation

##### 8.106.1.1 #define PV\_OSCL\_SOCKET\_STATS\_LOGGING 0

This file contains default definitions of all the the tuning parameters for the Oscl sockets.

If parameters are defined in [osclconfig\\_io.h](#), those definitions will take precedence over the ones in this file.

PV\_SOCKET\_REQUEST\_AO\_PRIORITY sets the priority of the socket request completion AOs.

Set this to 0 or 1 to enable/disable socket stats logging with "OsclSocketStats" node. This feature is fairly costly so should be off in production code.

##### 8.106.1.2 #define PV\_SOCKET\_SERVER 1

Enable/disable the PV socket server here.

## 8.107 oscl\_socket\_types.h File Reference

```
#include "osclconfig_io.h"
#include "oscl_types.h"
#include "oscl_scheduler_types.h"
#include "oscl_namestring.h"
#include "oscl_stdstring.h"
```

### Data Structures

- class OsclSocketTOS
- class OsclNetworkAddress
- class OsclIpMReq
- class OsclSocketObserver

### Defines

- #define PVNETWORKADDRESS\_LEN 50

### Enumerations

- enum TPVSocketFxn {
 EPVSocketSend = 0, EPVSocketSendTo, EPVSocketRecv, EPVSocketRecvFrom,
 EPVSocketConnect, EPVSocketAccept, EPVSocketShutdown, EPVSocketBind,
 EPVSocketListen, EPVSocket\_Last }
- enum TPVSocketEvent {
 EPVSocketSuccess, EPVSocketPending, EPVSocketTimeout, EPVSocketFailure,
 EPVSocketCancel, EPVSocketNotImplemented }
- enum TPVSocketShutdown { EPVSocketSendShutdown, EPVSocketRecvShutdown, EPVSocketBothShutdown }
- enum TPVSocketOptionName { EPVIMulticastTTL, EPVIPAddMembership, EPVIPTOS, EPV-SockReuseAddr }
- enum TPVSocketOptionLevel { EPVIPProtoIP, EPVIPProtoTCP, EPVSocket }

#### 8.107.1 Define Documentation

##### 8.107.1.1 #define PVNETWORKADDRESS\_LEN 50

#### 8.107.2 Enumeration Type Documentation

##### 8.107.2.1 enum TPVSocketEvent

Return codes for asynchronous APIs

###### Enumerator:

*EPVSocketSuccess*

*EPVSocketPending*  
*EPVSocketTimeout*  
*EPVSocketFailure*  
*EPVSocketCancel*  
*EPVSocketNotImplemented*

#### 8.107.2.2 enum TPVSocketFxn

Enumerator:

*EPVSocketSend*  
*EPVSocketSendTo*  
*EPVSocketRecv*  
*EPVSocketRecvFrom*  
*EPVSocketConnect*  
*EPVSocketAccept*  
*EPVSocketShutdown*  
*EPVSocketBind*  
*EPVSocketListen*  
*EPVSocket\_Last*

#### 8.107.2.3 enum TPVSocketOptionLevel

Enumerator:

*EPVIPProtoIP*  
*EPVIPProtoTCP*  
*EPVSocket*

#### 8.107.2.4 enum TPVSocketOptionName

Enumerator:

*EPVIMulticastTTL*  
*EPVIPAddMembership*  
*EPVIPTOS*  
*EPVSockReuseAddr*

#### 8.107.2.5 enum TPVSocketShutdown

Enumerator:

*EPVSocketSendShutdown*  
*EPVSocketRecvShutdown*  
*EPVSocketBothShutdown*

## 8.108 oscl\_stdstring.h File Reference

This file provides standard string operations such as strlen, strcpy, etc. ANSI defines undefined behavior when the destination pointer is null for operations such as strcpy, strcat, etc. But, we chose to define one. In such cases, we return the destination as null.

```
#include "oscl_base.h"
```

### Functions

- OSCL\_IMPORT\_REF uint32 `oscl_strlen` (const char \*str)
- OSCL\_IMPORT\_REF uint32 `oscl_strlen` (const `oscl_wchar` \*str)
- OSCL\_IMPORT\_REF char \* `oscl_strncpy` (char \*dest, const char \*src, uint32 count)
- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_strncpy` (`oscl_wchar` \*dest, const `oscl_wchar` \*src, uint32 count)
- OSCL\_IMPORT\_REF int32 `oscl_strcmp` (const char \*str1, const char \*str2)
- OSCL\_IMPORT\_REF int32 `oscl_strcmp` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2)
- OSCL\_IMPORT\_REF int32 `oscl_strncmp` (const char \*str1, const char \*str2, uint32 count)
- OSCL\_IMPORT\_REF int32 `oscl_strncmp` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2, uint32 count)
- OSCL\_IMPORT\_REF char \* `oscl_strncat` (char \*dest, const char \*src, uint32 count)
- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_strncat` (`oscl_wchar` \*dest, const `oscl_wchar` \*src, uint32 count)
- OSCL\_IMPORT\_REF const char \* `oscl_strchr` (const char \*str, int32 c)
- OSCL\_IMPORT\_REF char \* `oscl_strchr` (char \*str, int32 c)
- OSCL\_IMPORT\_REF const `oscl_wchar` \* `oscl_strchr` (const `oscl_wchar` \*str, int32 c)
- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_strchr` (`oscl_wchar` \*str, int32 c)
- OSCL\_IMPORT\_REF const char \* `oscl strrchr` (const char \*str, int32 c)
- OSCL\_IMPORT\_REF char \* `oscl strrchr` (char \*str, int32 c)
- OSCL\_IMPORT\_REF const `oscl_wchar` \* `oscl strrchr` (const `oscl_wchar` \*str, int32 c)
- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl strrchr` (`oscl_wchar` \*str, int32 c)
- OSCL\_IMPORT\_REF char \* `oscl_strset` (char \*dest, char val, uint32 count)
- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_strset` (`oscl_wchar` \*dest, `oscl_wchar` val, uint32 count)
- OSCL\_IMPORT\_REF int32 `oscl_Clstrcmp` (const char \*str1, const char \*str2)
- OSCL\_IMPORT\_REF int32 `oscl_Clstrcmp` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2)
- OSCL\_IMPORT\_REF int32 `oscl_Clstrncmp` (const char \*str1, const char \*str2, uint32 count)
- OSCL\_IMPORT\_REF int32 `oscl_Clstrncmp` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2, uint32 count)
- OSCL\_IMPORT\_REF char `oscl_tolower` (const char car)
- OSCL\_IMPORT\_REF `oscl_wchar` `oscl_tolower` (const `oscl_wchar` car)
- OSCL\_IMPORT\_REF bool `oscl_isLetter` (const char car)
- OSCL\_IMPORT\_REF const char \* `oscl strstr` (const char \*str1, const char \*str2)
- OSCL\_IMPORT\_REF char \* `oscl strstr` (char \*str1, const char \*str2)
- OSCL\_IMPORT\_REF const `oscl_wchar` \* `oscl strstr` (const `oscl_wchar` \*str1, const `oscl_wchar` \*str2)
- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl strstr` (`oscl_wchar` \*str1, const `oscl_wchar` \*str2)
- OSCL\_IMPORT\_REF char \* `oscl_streat` (char \*dest, const char \*src)
- OSCL\_IMPORT\_REF `oscl_wchar` \* `oscl_streat` (`oscl_wchar` \*dest, const `oscl_wchar` \*src)

### 8.108.1 Detailed Description

This file provides standard string operations such as strlen, strncpy, etc. ANSI defines undefined behavior when the destination pointer is null for operations such as strncpy, strncat, etc. But, we chose to define one. In such cases, we return the destination as null.

## 8.109 oscl\_str\_ptr\_len.h File Reference

Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.

```
#include "oscl_base.h"
#include "oscl_stdstring.h"
```

### Data Structures

- struct [StrPtrLen](#)  
*This data structure encapsulates a set of functions used to perform.*
- struct [WStrPtrLen](#)  
*This data structure encapsulates a set of functions used to perform.*
- struct [StrCSumPtrLen](#)  
*same as [StrPtrLen](#), but includes checksum field and method to speed up querying*

### Typedefs

- typedef struct [StrPtrLen](#) [StrPtrLen](#)  
*This data structure encapsulates a set of functions used to perform.*
- typedef struct [WStrPtrLen](#) [WStrPtrLen](#)  
*This data structure encapsulates a set of functions used to perform.*
- typedef [StrCSumPtrLen](#) [StrCSumPtrLen](#)  
*same as [StrPtrLen](#), but includes checksum field and method to speed up querying*
- typedef [WStrPtrLen](#) [OSCL\\_TStrPtrLen](#)

### Variables

- const uint8 [OSCL\\_ASCII\\_CASE\\_MAGIC\\_BIT](#) = 0x20

#### 8.109.1 Detailed Description

Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.

## 8.110 oscl\_string.h File Reference

Provides a standardized set of string containers that can be used in place of character arrays.

```
#include "oscl_base.h"
#include "oscl_mem.h"
```

### Data Structures

- class [OSCL\\_String](#)
- class [OSCL\\_wString](#)

### Enumerations

- enum [TOSCL\\_StringOp](#) { [EOSCL\\_StringOp\\_CompressASCII](#), [EOSCL\\_StringOp\\_UTF16ToUTF8](#) }
- enum [TOSCL\\_wStringOp](#) { [EOSCL\\_wStringOp\\_ExpandASCII](#), [EOSCL\\_wStringOp\\_UTF8ToUTF16](#) }

#### 8.110.1 Detailed Description

Provides a standardized set of string containers that can be used in place of character arrays.

## 8.111 oscl\_string\_containers.h File Reference

Provides a standardized set of string containers that can be used in place of character arrays.

```
#include "oscl_string.h"
#include "oscl_base.h"
#include "oscl_mem.h"
#include "oscl_defalloc.h"
#include "oscl_refcounter.h"
#include "oscl_error.h"
#include "oscl_stdstring.h"
```

### Data Structures

- class [OSCL\\_HeapString< Alloc >](#)
- class [OSCL\\_wHeapString< Alloc >](#)
- class [OSCL\\_HeapStringA](#)
- class [OSCL\\_wHeapStringA](#)
- class [OSCL\\_StackString< MaxBufSize >](#)
- class [OSCL\\_wStackString< MaxBufSize >](#)
- class [OSCL\\_FastString](#)
- class [OSCL\\_wFastString](#)

#### 8.111.1 Detailed Description

Provides a standardized set of string containers that can be used in place of character arrays.

## 8.112 oscl\_string\_rep.h File Reference

Contains some internal implementation for string containers.

```
#include "oscl_defalloc.h"
```

### Data Structures

- class [CHheapRep](#)
- class [CStackRep](#)
- class [CFastRep](#)

#### 8.112.1 Detailed Description

Contains some internal implementation for string containers.

## 8.113 oscl\_string\_uri.h File Reference

Utilities to unescape URIs.

```
#include "oscl_base.h"  
#include "oscl_string.h"
```

### Functions

- OSCL\_IMPORT\_REF bool [oscl\\_str\\_unescape\\_uri](#) (const char \*str\_buf\_in, char \*str\_buf\_out, uint32 max\_out\_buf\_bytes, uint32 max\_bytes, uint32 &out\_buf\_len)  
*unescape any of the special escape sequence in the uri string*
- OSCL\_IMPORT\_REF bool [oscl\\_str\\_unescape\\_uri](#) (const [OSCL\\_String](#) &oscl\_str\_in, [OSCL\\_String](#) &oscl\_str\_out, uint32 &out\_buf\_len)  
*unescape any of the special escape sequence in the uri string*

### 8.113.1 Detailed Description

Utilities to unescape URIs.

## 8.114 oscl\_string\_utf8.h File Reference

Utilities to validate and truncate UTF-8 encoded strings.

```
#include "oscl_base.h"
```

### Functions

- OSCL\_IMPORT\_REF bool `oscl_str_is_valid_utf8` (const uint8 \*str\_buf, uint32 &num\_valid\_characters, uint32 max\_bytes=0, uint32 max\_char\_2\_valid=0, uint32 \*num\_byte\_4\_char=NULL)

*Check if the input string contains any illegal UTF-8 character. The function scans the string and validate that each character is a valid utf-8. It stops at the first NULL character, invalid character or the max\_byte value. The string is valid if and only if every character is a valid utf-8 character and the scanning stopped on a character boundary.*

- OSCL\_IMPORT\_REF int32 `oscl_str_truncate_utf8` (uint8 \*str\_buf, uint32 max\_char, uint32 max\_bytes=0)

*Truncates the UTF-8 string upto the required size.*

### 8.114.1 Detailed Description

Utilities to validate and truncate UTF-8 encoded strings.

## 8.115 oscl\_string\_utils.h File Reference

Utilities to parse and convert strings.

```
#include "oscl_base.h"
```

### Defines

- #define `oscl_isdigit(c)` ((c) >= '0' && (c) <= '9')

### Functions

- OSCL\_IMPORT\_REF const char \* `skip_whitespace` (const char \*ptr)
- OSCL\_IMPORT\_REF char \* `skip_whitespace` (char \*ptr)
- OSCL\_IMPORT\_REF const char \* `skip_whitespace` (const char \*start, const char \*end)
- OSCL\_IMPORT\_REF const char \* `skip_to_whitespace` (const char \*start, const char \*end)
- OSCL\_IMPORT\_REF const char \* `skip_to_line_term` (const char \*start\_ptr, const char \*end\_ptr)
- OSCL\_IMPORT\_REF const char \* `skip_whitespace_and_line_term` (const char \*start, const char \*end)
- OSCL\_IMPORT\_REF int `extract_string` (const char \*in\_ptr, char \*outstring, int maxsize)
- OSCL\_IMPORT\_REF int `extract_string` (const char \*start, const char \*end, char \*outstring, int maxsize)
- OSCL\_IMPORT\_REF bool `PV_atoi` (const char \*buf, const char new\_format, uint32 &value)
- OSCL\_IMPORT\_REF bool `PV_atoi` (const char \*buf, const char new\_format, int length, uint32 &value)
- OSCL\_IMPORT\_REF bool `PV_atoi` (const char \*buf, const char new\_format, int length, `uint64` &value)
- OSCL\_IMPORT\_REF bool `PV_atof` (const char \*buf, `OsclFloat` &value)
- OSCL\_IMPORT\_REF bool `PV_atof` (const char \*buf, int length, `OsclFloat` &value)
- OSCL\_IMPORT\_REF int `oscl_abs` (int aVal)

### 8.115.1 Detailed Description

Utilities to parse and convert strings.

## 8.116 oscl\_string\_xml.h File Reference

Utilities to escape special characters in XML strings.

```
#include "oscl_base.h"
```

### Functions

- OSCL\_IMPORT\_REF bool [oscl\\_str\\_need\\_escape\\_xml](#) (const char \*str\_buf, uint32 &num\_escape\_bytes, uint32 max\_bytes=0)

*Check if the input string contains any special ASCII character like &, <, >, ', ". The function scans the string and check if each character is a special character. It stops at the first NULL character (if max\_bytes = 0), or the max\_byte value.*

- OSCL\_IMPORT\_REF int32 [oscl\\_str\\_escape\\_xml](#) (const char \*str\_buf\_in, char \*str\_buf\_out, uint32 max\_out\_buf\_bytes, uint32 max\_bytes=0, uint32 \*num\_bytes\_written=NULL)

*Escape any of the following special characters in the string Special ASCII characters: &, <, >, ', ".*

### 8.116.1 Detailed Description

Utilities to escape special characters in XML strings.

## 8.117 oscl\_tagtree.h File Reference

The file [oscl\\_tagtree.h](#) ...

```
#include "oscl_base.h"
#include "oscl_map.h"
#include "oscl_tree.h"
#include "osclconfig_compiler_warnings.h"
#include "oscl_mem_basic_functions.h"
#include "oscl_assert.h"
#include "oscl_opaque_type.h"
#include "oscl_defalloc.h"
```

### Data Structures

- struct [Oscl\\_Tag\\_Base](#)
- struct [Oscl\\_Tag< Alloc >](#)
- class [Oscl\\_TagTree< T, Alloc >](#)
- struct [Oscl\\_TagTree< T, Alloc >::Node](#)
- struct [Oscl\\_TagTree< T, Alloc >::iterator](#)
- struct [Oscl\\_TagTree< T, Alloc >::const\\_iterator](#)

### Defines

- #define [OSCL\\_DISABLE\\_WARNING\\_TRUNCATE\\_DEBUG\\_MESSAGE](#)

### 8.117.1 Detailed Description

The file [oscl\\_tagtree.h](#) ...

## 8.118 oscl\_tcp\_socket.h File Reference

```
#include "oscl_ip_socket.h"
#include "oscl_defalloc.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_socket_listen.h"
#include "oscl_socket_types.h"
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

### Data Structures

- class [OsclTCPSocketI](#)

## 8.119 oscl\_thread.h File Reference

```
#include "osclconfig_proc.h"
#include "oscl_procstatus.h"
#include "oscl_base.h"
```

### Data Structures

- class [OsclThread](#)

### Typedefs

- typedef [TOsclThreadFuncRet\(OSCL\\_THREAD DECL \\* TOsclThreadFuncPtr \)\(TOsclThreadFuncArg\)](#)

### Enumerations

- enum [OsclThread\\_State](#) { [Start\\_on\\_creation](#), [Suspend\\_on\\_creation](#) }
- enum [OsclThreadPriority](#) {
 [ThreadPriorityLowest](#), [ThreadPriorityLow](#), [ThreadPriorityBelowNormal](#), [ThreadPriorityNormal](#),
 [ThreadPriorityAboveNormal](#), [ThreadPriorityHighest](#), [ThreadPriorityTimeCritical](#) }
- enum [TOsclThreadTerminate](#) { [EOsclThreadTerminate\\_Join](#), [EOsclThreadTerminate\\_Kill](#),
[EOsclThreadTerminate\\_NOP](#) }

### 8.119.1 Detailed Description

.This file provides THREAD implementation that can be ported  
to three OS LINUX, SYMBIAN, WIN32

### 8.119.2 Typedef Documentation

#### 8.119.2.1 [typedef TOsclThreadFuncRet\(OSCL\\_THREAD DECL \\* TOsclThreadFuncPtr \)\(TOsclThreadFuncArg\)](#)

### 8.119.3 Enumeration Type Documentation

#### 8.119.3.1 enum [OsclThread\\_State](#)

**Enumerator:**

*Start\_on\_creation*

*Suspend\_on\_creation*

### 8.119.3.2 enum OsclThreadPriority

Enumerator:

*ThreadPriorityLowest*  
*ThreadPriorityLow*  
*ThreadPriorityBelowNormal*  
*ThreadPriorityNormal*  
*ThreadPriorityAboveNormal*  
*ThreadPriorityHighest*  
*ThreadPriorityTimeCritical*

### 8.119.3.3 enum TOsclThreadTerminate

Enumerator:

*EOsclThreadTerminate\_Join*  
*EOsclThreadTerminate\_Kill*  
*EOsclThreadTerminate\_NOP*

## 8.120 oscl\_tickcount.h File Reference

Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.

```
#include "oscl_base.h"
#include "oscl_tickcount.inl"
#include "osclconfig.h"
#include "oscl_singleton.h"
#include "osclconfig_time.h"
```

### Data Structures

- class [OsclTickCount](#)

### Defines

- #define [OSCLTICKCOUNT\\_MAX\\_TICKS](#) 0xffffffff

### 8.120.1 Detailed Description

Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.

## 8.121 oscl\_time.h File Reference

The file `oscl_time.h` defines two classes `NTPTime` and `TimeValue` for getting, manipulating, and formatting time values. The `TimeValue` class is based on the native system time format while `NTPTime` is used for the standard Network Time Protocol format.

```
#include "oscl_base.h"
#include "osclconfig_time.h"
#include "oscl_int64_utils.h"
#include "oscl_int64_utils.h"
#include "oscl_assert.h"
#include "oscl_stdstring.h"
#include "oscl_mem_basic_functions.h"
```

### Data Structures

- class `NTPTime`

*The `NTPTime` class represents a time value as the number of seconds since 0h (UTC) Jan. 1, 1900.*

- class `TimeValue`

*The `TimeValue` class represents a time value in a format native to the system.*

### Typedefs

- `typedef char CtimeStrBuf [CTIME_BUFFER_SIZE]`
- `typedef char PV8601timeStrBuf [PV8601TIME_BUFFER_SIZE]`
- `typedef char ISO8601timeStrBuf [ISO8601TIME_BUFFER_SIZE]`

### Enumerations

- enum `TimeUnits` { `SECONDS` = 0, `MILLISECONDS` = 1, `MICROSECONDS` = 2 }

*The `TimeUnits` enum can be used when constructing a `TimeValue` class.*

### Functions

- `OSCL_IMPORT_REF void PV8601ToRFC822 (PV8601timeStrBuf pv8601_buffer, CtimeStrBuf ctime_buffer)`
- `OSCL_IMPORT_REF void ISO8601ToRFC822 (ISO8601timeStrBuf iso8601_buffer, CtimeStrBuf ctime_buffer)`
- `OSCL_IMPORT_REF void RFC822ToPV8601 (CtimeStrBuf ctime_buffer, PV8601timeStrBuf)`
- `OSCL_COND_IMPORT_REF TimeValue operator- (const TimeValue &a, const TimeValue &b)`
- `OSCL_COND_IMPORT_REF TimeValue operator+ (const TimeValue &a, const int32 bSeconds)`
- `OSCL_COND_IMPORT_REF TimeValue operator+ (const int32 aSeconds, const TimeValue &b)`
- `OSCL_COND_IMPORT_REF TimeValue operator- (const TimeValue &a, const int32 bSeconds)`
- `OSCL_COND_IMPORT_REF TimeValue operator- (const int32 aSeconds, const TimeValue &b)`

## Variables

- const int `CTIME_BUFFER_SIZE` = 26
- const int `PV8601TIME_BUFFER_SIZE` = 21
- const int `ISO8601TIME_BUFFER_SIZE` = 21
- const long `USEC_PER_SEC` = 1000000
- const long `MSEC_PER_SEC` = 1000
- const uint32 `unix_ntp_offset` = 2208988800U

### 8.121.1 Detailed Description

The file `oscl_time.h` defines two classes `NTPTime` and `TimeValue` for getting, manipulating, and formatting time values. The `TimeValue` class is based on the native system time format while `NTPTime` is used for the standard Network Time Protocol format.

## 8.122 oscl\_timer.h File Reference

```
#include "oscl_base.h"
#include "osclconfig_util.h"
#include "oscl_vector.h"
#include "oscl_tickcount.h"
#include "oscl_rand.h"
#include "oscl_scheduler_ao.h"
```

### Data Structures

- class [OsclTimerObserver](#)
- class [CallbackTimerObserver](#)
- class [CallbackTimer< Alloc >](#)
- class [OsclTimer< Alloc >](#)
- struct [OsclTimer< Alloc >::\\_TimerEntry](#)

## 8.123 oscl\_tls.h File Reference

```
#include "oscl_base.h"
#include "oscl_defalloc.h"
```

### Data Structures

- class [TLSStorageOps](#)
- class [OsclTLSRegistry](#)
- class [OsclTLS< T, ID, Registry >](#)

### Defines

- #define [OSCL\\_TLS\\_BASE\\_SLOTS](#) OSCL\_TLS\_ID\_BASE\_LAST +1
- #define [OSCL\\_TLS\\_MAX\\_SLOTS](#) ( OSCL\_TLS\_BASE\_SLOTS + OSCL\_TLS\_EXTERNAL\_SLOTS )

### Typedefs

- typedef [OsclAny](#) TOsclTlsKey

### Variables

- const uint32 [OSCL\\_TLS\\_ID\\_MAGICNUM](#) = 0
- const uint32 [OSCL\\_TLS\\_ID\\_ERRORHOOK](#) = 1
- const uint32 [OSCL\\_TLS\\_ID\\_PVLOGGER](#) = 2
- const uint32 [OSCL\\_TLS\\_ID\\_TEST](#) = 3
- const uint32 [OSCL\\_TLS\\_ID\\_PVSCHEDULER](#) = 4
- const uint32 [OSCL\\_TLS\\_ID\\_PVERRORTRAP](#) = 5
- const uint32 [OSCL\\_TLS\\_ID\\_SDPMEDIAPARSER](#) = 6
- const uint32 [OSCL\\_TLS\\_ID\\_PAYLOADPARSER](#) = 7
- const uint32 [OSCL\\_TLS\\_ID\\_PVMFRECOGNIZER](#) = 8
- const uint32 [OSCL\\_TLS\\_ID\\_WMDRM](#) = 9
- const uint32 [OSCL\\_TLS\\_ID\\_OSCLREGISTRY](#) = 10
- const uint32 [OSCL\\_TLS\\_ID\\_SQLITE3](#) = 11
- const uint32 [OSCL\\_TLS\\_ID\\_BASE\\_LAST](#) = 11

## 8.124 oscl\_tree.h File Reference

The file `oscl_tree.h` defines the template class `Oscl_Rb_Tree` which has a very similar API as the STL Tree class. It is an implementation of a Red-Black Tree for use by the `Oscl_Map` class. Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_defalloc.h"
#include "oscl_base.h"
#include "osclconfig_compiler_warnings.h"
```

### Data Structures

- struct `Oscl_Pair< T1, T2 >`
- struct `Oscl_Rb_Tree_Node_Base`
- struct `Oscl_Rb_Tree_Node< Value >`
- struct `Oscl_Rb_Tree_Iterator< Value >`
- struct `Oscl_Rb_Tree_Const_Iterator< Value >`
- class `Oscl_Rb_Tree_Base`
- class `Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >`

### Defines

- #define `OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE`

### 8.124.1 Detailed Description

The file `oscl_tree.h` defines the template class `Oscl_Rb_Tree` which has a very similar API as the STL Tree class. It is an implementation of a Red-Black Tree for use by the `Oscl_Map` class. Memory allocation is abstracted through the use of an allocator template parameter.

## 8.125 oscl\_types.h File Reference

This file contains basic type definitions for common use across platforms.

```
#include "osclconfig.h"
```

### Data Structures

- struct [OsclMemoryFragment](#)

### TypeDefs

- typedef int [c\\_bool](#)

*The c\_bool type is mapped to an integer to provide a bool type for C interfaces.*

- typedef void [OsclAny](#)

*The OsclAny is meant to be used the context of a generic pointer (i.e., no specific type).*

- typedef char [mbchar](#)

*mbchar is multi-byte char (e.g., UTF-8) with null termination.*

- typedef unsigned int [uint](#)

*The uint type is a convenient abbreviation for unsigned int.*

- typedef uint8 [octet](#)

*The octet type is meant to be used for referring to a byte or collection bytes without suggesting anything about the underlying meaning of the bytes.*

- typedef float [OsclFloat](#)

*The Float type defined as OsclFloat.*

- typedef OSCL\_NATIVE\_INT64\_TYPE [int64](#)

- typedef OSCL\_NATIVE\_UINT64\_TYPE [uint64](#)

- typedef OSCL\_NATIVE\_WCHAR\_TYPE [oscl\\_wchar](#)

- typedef [oscl\\_wchar](#) [OSCL\\_TCHAR](#)

*define OSCL\_TCHAR*

### 8.125.1 Detailed Description

This file contains basic type definitions for common use across platforms.

## 8.126 oscl\_udp\_socket.h File Reference

```
#include "oscl_ip_socket.h"
#include "oscl_defalloc.h"
#include "oscl_socket_recv_from.h"
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
#include "oscl_socket_types.h"
#include "oscl_socket_bind.h"
```

### Data Structures

- class [OsclUDPSocketI](#)

## 8.127 oscl\_utf8conv.h File Reference

Utilities to convert unicode to utf8 and vice versa.

```
#include "oscl_base.h"
```

### Defines

- #define MAX\_NUMBER\_OF\_BYTE\_PER\_UTF8 3

### Functions

- OSCL\_IMPORT\_REF int32 **oscl\_UTF8ToUnicode** (const char \*input, int32 inLength, **oscl\_wchar** \*output, int32 outLength)  
*Convert UTF8 byte sequence to Unicode string.*
- OSCL\_IMPORT\_REF int32 **oscl\_UnicodeToUTF8** (const **oscl\_wchar** \*input, int32 inLength, char \*output, int32 outLength)  
*Convert Unicode string to UTF8 byte sequence.*

### 8.127.1 Detailed Description

Utilities to convert unicode to utf8 and vice versa.

## 8.128 oscl\_uuid.h File Reference

This file defines the OSCL UUID structure used for unique identifiers as well as the short (32-bit) identifiers OsclUid32.

```
#include "oscl_base_macros.h"
#include "oscl_mem_basic_functions.h"
```

### Data Structures

- struct [OsclUuid](#)

### Defines

- #define [EMPTY\\_UUID](#) PVUuid(0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0)
- #define [BYTES\\_IN\\_UUID\\_ARRAY](#) 8

### Typedefs

- typedef uint32 [OsclUid32](#)

#### 8.128.1 Detailed Description

This file defines the OSCL UUID structure used for unique identifiers as well as the short (32-bit) identifiers OsclUid32.

#### 8.128.2 Define Documentation

- 8.128.2.1 #define [BYTES\\_IN\\_UUID\\_ARRAY](#) 8
- 8.128.2.2 #define [EMPTY\\_UUID](#) PVUuid(0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0)

#### 8.128.3 Typedef Documentation

- 8.128.3.1 typedef uint32 [OsclUid32](#)

## 8.129 oscl\_uuid\_utils.h File Reference

```
#include "oscl_string_utils.h"  
#include "oscl_stdstring.h"
```

### Variables

- const char **PV\_CHAR\_CLOSE\_BRACKET** = ')
- const char **PV\_CHAR\_COMMA** = ','

#### 8.129.1 Detailed Description

#### 8.129.2 Variable Documentation

**8.129.2.1 const char PV\_CHAR\_CLOSE\_BRACKET = ')**

**8.129.2.2 const char PV\_CHAR\_COMMA = ','**

## 8.130 oscl\_vector.h File Reference

The file [oscl\\_vector.h](#) defines the template class [Oscl\\_Vector](#) which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_base.h"
#include "oscl_mem_basic_functions.h"
#include "oscl_assert.h"
#include "oscl_opaque_type.h"
#include "oscl_defalloc.h"
```

### Data Structures

- class [Oscl\\_Vector\\_Base](#)
- class [Oscl\\_Vector< T, Alloc >](#)

#### 8.130.1 Detailed Description

The file [oscl\\_vector.h](#) defines the template class [Oscl\\_Vector](#) which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

## 8.131 osclconfig.h File Reference

This file contains configuration information for the linux platform.

```
#include <dirent.h>
#include <dlfcn.h>
#include "osclconfig_limits_typedefs.h"
#include "osclconfig_unix_android.h"
#include <stdlib.h>
#include <stdarg.h>
#include <sys/types.h>
#include <stdio.h>
#include <string.h>
#include <unistd.h>
#include <pthread.h>
#include <ctype.h>
#include <math.h>
#include "osclconfig_ix86.h"
#include "osclconfig_check.h"
```

### Defines

- #define OSCL\_HAS\_ANDROID\_SUPPORT 1
- #define OSCL\_HAS\_ANDROID\_FILE\_IO\_SUPPORT 1
- #define OSCL\_EXPORT\_REF \_\_attribute\_\_ ((visibility("default")))
- #define OSCL\_IMPORT\_REF \_\_attribute\_\_ ((visibility("default"))))
- #define OSCL\_RELEASE\_BUILD 0
- #define OSCL\_UNSIGNED\_CONST(x) x##u
- #define OSCL\_NATIVE\_UINT64\_TYPE u\_int64\_t
- #define OSCL\_TEMPLATED\_DESTRUCTOR\_CALL(type, simple\_type) ~type()
- #define \_\_TFS\_\_ <>
- #define OSCL\_HAS\_PRAGMA\_PACK 0
- #define OSCL\_HAS\_PACKED\_STRUCT 1
- #define OSCL\_PACKED\_VAR(x) x \_\_attribute\_\_((packed))
- #define OSCL\_PACKED\_STRUCT\_BEGIN
- #define OSCL\_PACKED\_STRUCT\_END \_\_attribute\_\_((packed))
- #define OSCL\_ASSERT\_ALWAYS 0

### 8.131.1 Detailed Description

This file contains configuration information for the linux platform.

### 8.131.2 Define Documentation

- 8.131.2.1 `#define __TFS__ <>`
- 8.131.2.2 `#define OSCL_ASSERT_ALWAYS 0`
- 8.131.2.3 `#define OSCL_EXPORT_REF __attribute__ ((visibility("default")))`
- 8.131.2.4 `#define OSCL_HAS_ANDROID_FILE_IO_SUPPORT 1`
- 8.131.2.5 `#define OSCL_HAS_ANDROID_SUPPORT 1`
- 8.131.2.6 `#define OSCL_HAS_PACKED_STRUCT 1`
- 8.131.2.7 `#define OSCL_HAS_PRAGMA_PACK 0`
- 8.131.2.8 `#define OSCL_IMPORT_REF __attribute__ ((visibility("default")))`
- 8.131.2.9 `#define OSCL_NATIVE_UINT64_TYPE u_int64_t`
- 8.131.2.10 `#define OSCL_PACKED_STRUCT_BEGIN`
- 8.131.2.11 `#define OSCL_PACKED_STRUCT_END __attribute__((packed))`
- 8.131.2.12 `#define OSCL_PACKED_VAR(x) x __attribute__((packed))`
- 8.131.2.13 `#define OSCL_RELEASE_BUILD 0`
- 8.131.2.14 `#define OSCL_TEMPLATED_DESTRUCTOR_CALL(type, simple_type) ~type()`
- 8.131.2.15 `#define OSCL_UNSIGNED_CONST(x) x##u`

## 8.132 osclconfig\_ansi\_memory.h File Reference

This file contains common typedefs based on the ANSI C limits.h header.

```
#include <memory.h>
```

### Defines

- #define OSCL\_HAS\_ANSI\_MEMORY\_FUNCS 1

### Typedefs

- typedef size\_t oscl\_memsize\_t

#### 8.132.1 Detailed Description

This file contains common typedefs based on the ANSI C limits.h header. This header file should work for any ANSI C compiler to determine the proper native C types to use for OSCL integer types.

#### 8.132.2 Define Documentation

8.132.2.1 #define OSCL\_HAS\_ANSI\_MEMORY\_FUNCS 1

#### 8.132.3 Typedef Documentation

8.132.3.1 typedef size\_t oscl\_memsize\_t

## 8.133 osclconfig\_check.h File Reference

### Typedefs

- `typedef int8 __int8__check__`
- `typedef uint8 __uint8__check__`
- `typedef int16 __int16__check__`
- `typedef uint16 __uint16__check__`
- `typedef int32 __int32__check__`
- `typedef uint32 __uint32__check__`

## 8.134 osclconfig\_compiler\_warnings.h File Reference

This file contains the ability to turn off/on compiler warnings.

### Defines

- #define OSCL\_FUNCTION\_PTR(x) (&x)

#### 8.134.1 Detailed Description

This file contains the ability to turn off/on compiler warnings.

#### 8.134.2 Define Documentation

##### 8.134.2.1 #define OSCL\_FUNCTION\_PTR(x) (&x)

## 8.135 osclconfig\_error.h File Reference

This file contains the common typedefs and header files needed to compile osclerror.

```
#include "osclconfig.h"
#include <dirent.h>
#include <dlfcn.h>
#include "osclconfig_limits_typedefs.h"
#include "osclconfig_unix_android.h"
#include "osclconfig_ix86.h"
#include "osclconfig_check.h"
#include <setjmp.h>
#include <errno.h>
#include "osclconfig_error_check.h"
```

### Defines

- #define OSCL\_HAS\_EXCEPTIONS 1
- #define OSCL\_HAS\_ERRNO\_H 1
- #define OSCL\_HAS\_SYMBIAN\_ERRORTRAP 0
- #define OSCL\_HAS\_SETJMP\_H 1

### 8.135.1 Detailed Description

This file contains the common typedefs and header files needed to compile osclerror.

### 8.135.2 Define Documentation

**8.135.2.1 #define OSCL\_HAS\_ERRNO\_H 1**

**8.135.2.2 #define OSCL\_HAS\_EXCEPTIONS 1**

**8.135.2.3 #define OSCL\_HAS\_SETJMP\_H 1**

**8.135.2.4 #define OSCL\_HAS\_SYMBIAN\_ERRORTRAP 0**

## 8.136 osclconfig\_error\_check.h File Reference

## 8.137 osclconfig\_global\_new\_delete.h File Reference

### Functions

- void \* [operator new](#) (size\_t)
- void [operator delete](#) (void \*)

## 8.138 osclconfig\_global\_placement\_new.h File Reference

### Functions

- void \* [operator new](#) (size\_t, void \*ptr)

#### 8.138.1 Function Documentation

##### 8.138.1.1 void\* operator new (size\_t, void \*ptr) [inline]

## 8.139 osclconfig\_io.h File Reference

This file contains common typedefs based on the ANSI C limits.h header.

```
#include "osclconfig.h"
#include <stdio.h>
#include <stdlib.h>
#include <stdarg.h>
#include <sys/socket.h>
#include <netinet/in.h>
#include <arpa/inet.h>
#include <fcntl.h>
#include <signal.h>
#include <netdb.h>
#include <sys/mman.h>
#include <sys/types.h>
#include <errno.h>
#include <sys/vfs.h>
#include <dirent.h>
#include "osclconfig_io_check.h"
```

### Defines

- #define OSCL\_HAS\_GLOB 0
- #define OSCL\_HAS\_ANSI\_FILE\_IO\_SUPPORT 1
- #define OSCL\_HAS\_ANSI\_64BIT\_FILE\_IO\_SUPPORT 0
- #define OSCL\_HAS\_MSWIN\_FILE\_IO\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_COMPATIBLE\_IO\_FUNCTION 0
- #define OSCL\_HAS\_NATIVE\_FILE\_CACHE\_ENABLE 1
- #define OSCL\_FILE\_BUFFER\_MAX\_SIZE 32768
- #define OSCL\_HAS\_PV\_FILE\_CACHE 0
- #define OSCL\_HAS\_LARGE\_FILE\_SUPPORT 1
- #define OSCL\_HAS\_SYMBIAN\_SOCKET\_SERVER 0
- #define OSCL\_HAS\_SYMBIAN\_DNS\_SERVER 0
- #define OSCL\_HAS\_BERKELEY\_SOCKETS 1
- #define OSCL\_HAS\_SOCKET\_SUPPORT 1
- #define OsclValidInetAddr(addr) (inet\_addr(addr)!=INADDR\_NONE)
- #define OsclMakeSockAddr(sockaddr, port, addrstr, ok)
- #define OsclUnMakeSockAddr(sockaddr, addrstr) addrstr=inet\_ntoa(sockaddr.sin\_addr);
- #define OsclMakeInAddr(in\_addr, addrstr, ok)
- #define OsclUnMakeInAddr(in\_addr, addrstr) addrstr=inet\_ntoa(in\_addr);
- #define OsclSetRecvBufferSize(s, val, ok, err)
- #define OsclBind(s, addr, ok, err)
- #define OsclSetSockOpt(s, optLevel, optName, optVal, optLen, ok, err)

- #define `OsclJoin`(s, addr, ok, err)
- #define `OsclListen`(s, size, ok, err)
- #define `OsclAccept`(s, accept\_s, ok, err, wouldblock)
- #define `OsclSetNonBlocking`(s, ok, err)
- #define `OsclShutdown`(s, how, ok, err)
- #define `OsclSocket`(s, fam, type, prot, ok, err)
- #define `OsclSendTo`(s, buf, len, addr, ok, err, nbytes, wouldblock)
- #define `OsclSend`(s, buf, len, ok, err, nbytes, wouldblock)
- #define `OsclCloseSocket`(s, ok, err)
- #define `OsclConnect`(s, addr, ok, err, wouldblock)
- #define `OsclGetPeerName`(s, name, namelen, ok, err)
- #define `OsclGetAsyncSockErr`(s, ok, err)
- #define `OsclPipe`(x) pipe(x)
- #define `OsclReadFD`(fd, buf, cnt) read(fd,buf,cnt)
- #define `OsclWriteFD`(fd, buf, cnt) write(fd,buf,cnt)
- #define `OsclConnectComplete`(s, wset, eset, success, fail, ok, err)
- #define `OsclRecv`(s, buf, len, ok, err, nbytes, wouldblock)
- #define `OsclRecvFrom`(s, buf, len, paddr, paddrlen, ok, err, nbytes, wouldblock)
- #define `OsclSocketSelect`(nfds, rd, wr, ex, timeout, ok, err, nhandles)
- #define `OsclSocketStartup`(ok)
- #define `OsclSocketCleanup`(ok)
- #define `OsclGethostbyname`(name, hostent, ok, err)
- #define `OsclGetDottedAddr`(hostent, dottedaddr, ok)
- #define `OsclGetDottedAddrVector`(hostent, dottedaddr, dottedaddrvect, ok)
- #define `OSCL_SD_RECEIVE` SHUT\_RD
- #define `OSCL_SD_SEND` SHUT\_WR
- #define `OSCL_SD_BOTH` SHUT\_RDWR
- #define `OSCL_AF_INET` AF\_INET
- #define `OSCL SOCK_STREAM` SOCK\_STREAM
- #define `OSCL SOCK_DGRAM` SOCK\_DGRAM
- #define `OSCL IPPROTO_IP` IPPROTO\_IP
- #define `OSCL IPPROTO_TCP` IPPROTO\_TCP
- #define `OSCL IPPROTO_UDP` IPPROTO\_UDP
- #define `OSCL SOL_SOCKET` SOL\_SOCKET
- #define `OSCL SOL_IP` IPPROTO\_IP
- #define `OSCL SOL_TCP` IPPROTO\_TCP
- #define `OSCL SOL_UDP` IPPROTO\_UDP
- #define `OSCL_SOCKOPT_IP_MULTICAST_TTL` IP\_MULTICAST\_TTL
- #define `OSCL_SOCKOPT_IP_ADDMEMBERSHIP` IP\_ADD\_MEMBERSHIP
- #define `OSCL_SOCKOPT_IP_TOS` IP\_TOS
- #define `OSCL_SOCKOPT_SOL_REUSEADDR` SO\_REUSEADDR

## Typedefs

- typedef int `TOsclSocket`
- typedef struct sockaddr\_in `TOsclSockAddr`
- typedef socklen\_t `TOsclSockAddrLen`
- typedef struct ip\_mreq `TIpMReq`
- typedef struct hostent `TOsclHostent`
- typedef off64\_t `TOsclFileOffset`

### 8.139.1 Detailed Description

This file contains common typedefs based on the ANSI C limits.h header. This header file should work for any ANSI C compiler to determine the proper native C types to use for OSCL integer types.



### 8.139.2 Define Documentation

- 8.139.2.1 `#define OSCL_AF_INET AF_INET`
- 8.139.2.2 `#define OSCL_FILE_BUFFER_MAX_SIZE 32768`
- 8.139.2.3 `#define OSCL_HAS_ANSI_64BIT_FILE_IO_SUPPORT 0`
- 8.139.2.4 `#define OSCL_HAS_ANSI_FILE_IO_SUPPORT 1`
- 8.139.2.5 `#define OSCL_HAS_BERKELEY_SOCKETS 1`
- 8.139.2.6 `#define OSCL_HAS_GLOB 0`
- 8.139.2.7 `#define OSCL_HAS_LARGE_FILE_SUPPORT 1`
- 8.139.2.8 `#define OSCL_HAS_MSWIN_FILE_IO_SUPPORT 0`
- 8.139.2.9 `#define OSCL_HAS_NATIVE_FILE_CACHE_ENABLE 1`
- 8.139.2.10 `#define OSCL_HAS_PV_FILE_CACHE 0`
- 8.139.2.11 `#define OSCL_HAS_SOCKET_SUPPORT 1`
- 8.139.2.12 `#define OSCL_HAS_SYMBIAN_COMPATIBLE_IO_FUNCTION 0`
- 8.139.2.13 `#define OSCL_HAS_SYMBIAN_DNS_SERVER 0`
- 8.139.2.14 `#define OSCL_HAS_SYMBIAN_SOCKET_SERVER 0`
- 8.139.2.15 `#define OSCL IPPROTO_IP IPPROTO_IP`
- 8.139.2.16 `#define OSCL IPPROTO_TCP IPPROTO_TCP`
- 8.139.2.17 `#define OSCL IPPROTO_UDP IPPROTO_UDP`
- 8.139.2.18 `#define OSCL_SD_BOTH SHUT_RDWR`
- 8.139.2.19 `#define OSCL_SD_RECEIVE SHUT_RD`
- 8.139.2.20 `#define OSCL_SD_SEND SHUT_WR`
- 8.139.2.21 `#define OSCL_SOCK_DGRAM SOCK_DGRAM`
- 8.139.2.22 `#define OSCL_SOCK_STREAM SOCK_STREAM`
- 8.139.2.23 `#define OSCL_SOCKOPT_IP_ADDMEMBERSHIP IP_ADD_MEMBERSHIP`
- 8.139.2.24 `#define OSCL_SOCKOPT_IP_MULTICAST_TTL IP_MULTICAST_TTL`
- 8.139.2.25 `#define OSCL_SOCKOPT_IP_TOS IP_TOS`
- 8.139.2.26 `#define OSCL_SOCKOPT_SOL_REUSEADDR SO_REUSEADDR`
- 8.139.2.27 `#define OSCL_SOL_IP IPPROTO_IP`
- 8.139.2.28 `#define OSCL_SOL_SOCKET SOL_SOCKET`
- 8.139.2.29 `#define OSCL_SOL_TCP IPPROTO_TCP`
- 8.139.2.30 `#define OSCL_SOL_UDP IPPROTO_UDP`

```
accept_s=accept(s,NULL,NULL); \
ok=(accept_s!=(-1)); \
if (!ok){err=errno;wouldblock=(err==EAGAIN||err==EWOULDBLOCK);}
```

**8.139.2.32 #define OsclBind(s, addr, ok, err)****Value:**

```
TOsclSockAddr* tmpadr = &addr; \
sockaddr* sadr = OSCL_STATIC_CAST(sockaddr*, tmpadr); \
ok=(bind(s,sadr,sizeof(addr))!=(-1)); \
if (!ok)err=errno
```

**8.139.2.33 #define OsclCloseSocket(s, ok, err)****Value:**

```
ok=(close(s)!=(-1)); \
if (!ok)err=errno
```

**8.139.2.34 #define OsclConnect(s, addr, ok, err, wouldblock)****Value:**

```
TOsclSockAddr* tmpadr = &addr; \
sockaddr* sadr = OSCL_STATIC_CAST(sockaddr*, tmpadr); \
ok=(connect(s,sadr,sizeof(addr))!=(-1)); \
if (!ok){err=errno;wouldblock=(err==EINPROGRESS);}
```

**8.139.2.35 #define OsclConnectComplete(s, wset, eset, success, fail, ok, err)****Value:**

```
success=fail=false; \
if (FD_ISSET(s,&eset)) \
{fail=true;OsclGetAsyncSockErr(s,ok,err);} \
else if (FD_ISSET(s,&wset)) \
{OsclGetAsyncSockErr(s,ok,err);if (ok && err==0)success=true;else fail=true;}
```

**8.139.2.36 #define OsclGetAsyncSockErr(s, ok, err)****Value:**

```
int opterr;socklen_t optlen(sizeof(opterr)); \
ok=(getsockopt(s,SOL_SOCKET,SO_ERROR,(void *)&opterr,&optlen)!=(-1)); \
if(ok)err=opterr;else err=errno;
```

**8.139.2.37 #define OsclGetDottedAddr(hostent, dottedaddr, ok)****Value:**

```
long *_hostaddr=(long*)hostent->h_addr_list[0];\
    struct in_addr _inaddr; \
    _inaddr.s_addr=_hostaddr; \
    dottedaddr=inet_ntoa(_inaddr); \
    ok=(dottedaddr!=NULL);
```

**8.139.2.38 #define OsclGetDottedAddrVector(hostent, dottedaddr, dottedaddrvect, ok)****Value:**

```
if(dottedaddrvect) \
{ \
    long **_addrlist=(long**)hostent->h_addr_list; \
    for(int i = 0; _addrlist[i] != NULL; i++) { \
        struct in_addr _inaddr; \
        _inaddr.s_addr=*_addrlist[i]; \
        OsclNetworkAddress addr(inet_ntoa(_inaddr), 0); \
        dottedaddrvect->push_back(addr); \
    } \
    if (!dottedaddrvect->empty()) \
        {dottedaddr->port = dottedaddrvect->front().port; dottedaddr->ipAddr.Set( \
            dottedaddrvect->front().ipAddr.Str());} \
    ok=(!dottedaddrvect->empty() && (((*dottedaddrvect)[0]).ipAddr.Str() != NULL) \
        ); \
    } \
    else \
{ \
    char *add; \
    OsclGetDottedAddr(hostent, add, ok); \
    if(ok) dottedaddr->ipAddr.Set(add); \
}
```

**8.139.2.39 #define OsclGethostbyname(name, hostent, ok, err)****Value:**

```
hostent=gethostbyname((const char*)name); \
ok=(hostent!=NULL); \
if (!ok)err=errno;
```

**8.139.2.40 #define OsclGetPeerName(s, name, namelen, ok, err)****Value:**

```
ok=(getpeername(s, (sockaddr*)&name, (socklen_t*)&namelen) != (-1)); \
if (!ok)err=errno
```

**8.139.2.41 #define OsclJoin(s, addr, ok, err)****Value:**

```
\\
    struct ip_mreq mreq; \
    void* p = &addr; \
ok=(bind(s,(sockaddr*)p,sizeof(addr))!=(-1)); \
mreq.imr_multiaddr.s_addr = addr.sin_addr.s_addr ; \
mreq.imr_interface.s_addr = htonl(INADDR_ANY); \
ok=(setsockopt(s, IPPROTO_IP, IP_ADD_MEMBERSHIP, &mreq, sizeof(struct ip_ \
mreq))!=(-1)); \
    if (!ok)err=errno; \
}
```

**8.139.2.42 #define OsclListen(s, size, ok, err)****Value:**

```
ok=(listen(iSocket,qSize)!=(-1)); \
    if (!ok)err=errno
```

**8.139.2.43 #define OsclMakeInAddr(in\_addr, addrstr, ok)****Value:**

```
int32 result = inet_aton((const char*)addrstr, &in_addr); \
ok=(result!=0);
```

**8.139.2.44 #define OsclMakeSockAddr(sockaddr, port, addrstr, ok)****Value:**

```
sockaddr.sin_family=OSCL_AF_INET; \
    sockaddr.sin_port=htons(port); \
    int32 result=inet_aton((const char*)addrstr,&sockaddr.sin_addr); \
ok=(result!=0);
```

**8.139.2.45 #define OsclPipe(x) pipe(x)****8.139.2.46 #define OsclReadFD(fd, buf, cnt) read(fd,buf,cnt)****8.139.2.47 #define OsclRecv(s, buf, len, ok, err, nbytes, wouldblock)****Value:**

```
nbytes=recv(s,(void *)(buf),(size_t)(len),0); \
ok=(nbytes!=(-1)); \
if (!ok){err=errno;wouldblock=(err==EAGAIN);}
```

**8.139.2.48 #define OsclRecvFrom(s, buf, len, paddr, paddrlen, ok, err, nbytes, wouldblock)****Value:**

```
\\
void* p=paddr; \
nbytes=recvfrom(s,(void*)(buf),(size_t)(len),0,(struct sockaddr*)p,paddrlen); \
ok=(nbytes!=(-1)); \
if (!ok){err=errno;wouldblock=(err==EAGAIN);}\
```

**8.139.2.49 #define OsclSend(s, buf, len, ok, err, nbytes, wouldblock)****Value:**

```
nbytes=send(s, (const void*) (buf), (size_t) (len), 0); \
ok=(nbytes!=(-1)); \
if (!ok){err=errno;wouldblock=(err==EAGAIN||err==EWOULDBLOCK);}
```

**8.139.2.50 #define OsclSendTo(s, buf, len, addr, ok, err, nbytes, wouldblock)****Value:**

```
TOsclSockAddr* tmpadr = &addr; \
sockaddr* sadr = OSCL_STATIC_CAST(sockaddr*, tmpadr); \
nbytes=sendto(s, (const void*) (buf), (size_t) (len), 0, sadr, (socklen_t) sizeof(addr)); \
ok=(nbytes!=(-1)); \
if (!ok){err=errno;wouldblock=(err==EAGAIN||err==EWOULDBLOCK);}
```

**8.139.2.51 #define OsclSetNonBlocking(s, ok, err)****Value:**

```
ok=(fcntl(s,F_SETFL,O_NONBLOCK)!=(-1)); \
if (!ok)err=errno
```

**8.139.2.52 #define OsclSetRecvBufferSize(s, val, ok, err)****Value:**

```
ok=(setsockopt(s,SOL_SOCKET,SO_RCVBUF,(char*)&val, sizeof(int)) !=-1); \
if (!ok)err=errno
```

**8.139.2.53 #define OsclSetSockOpt(s, optLevel, optName, optVal, optLen, ok, err)****Value:**

```
ok=(setsockopt(s,optLevel,optName,OSCL_STATIC_CAST(const char*,optVal),optLen) !=(-1)); \
if (!ok)err=errno
```

**8.139.2.54 #define OsclShutdown(s, how, ok, err)****Value:**

```
ok=(shutdown(iSocket,how)!=(-1)); \
if (!ok)err=errno
```

**8.139.2.55 #define OsclSocket(s, fam, type, prot, ok, err)****Value:**

```
s=socket(fam,type,prot);\
ok=(s!=(-1));\
if (!ok)err=errno
```

**8.139.2.56 #define OsclSocketCleanup(ok)****Value:**

```
signal(SIGPIPE,SIG_DFL);\
ok=true
```

**8.139.2.57 #define OsclSocketSelect(nfds, rd, wr, ex, timeout, ok, err, nhandles)****Value:**

```
nhandles=select(nfds,&rd,&wr,&ex,&timeout);\
ok=(nhandles!=(-1));\
if (!ok)err=errno
```

**8.139.2.58 #define OsclSocketStartup(ok)****Value:**

```
signal(SIGPIPE,SIG_IGN);\
ok=true
```

**8.139.2.59 #define OsclUnMakeInAddr(in\_addr, addrstr) addrstr=inet\_ntoa(in\_addr);****8.139.2.60 #define OsclUnMakeSockAddr(sockaddr, addrstr) addrstr=inet\_ntoa(sockaddr.sin\_addr);****8.139.2.61 #define OsclValidInetAddr(addr) (inet\_addr(addr)!=INADDR\_NONE)****8.139.2.62 #define OsclWriteFD(fd, buf, cnt) write(fd,buf,cnt)**

## 8.139.3 Typedef Documentation

**8.139.3.1 typedef struct ip\_mreq TIpMReq****8.139.3.2 typedef off64\_t TOsclFileOffset****8.139.3.3 typedef struct hostent TOsclHostent****8.139.3.4 typedef struct sockaddr\_in TOsclSockAddr****8.139.3.5 typedef socklen\_t TOsclSockAddrLen****8.139.3.6 typedef int TOsclSocket**

## 8.140 osclconfig\_io\_check.h File Reference

### Typedefs

- `typedef TOsclFileOffset __verify__TOsclFileOffset__defined__`

#### 8.140.1 Typedef Documentation

##### 8.140.1.1 `typedef TOsclFileOffset __verify__TOsclFileOffset__defined__`

OSCL\_HAS\_ANSI\_FILE\_IO\_SUPPORT macro should be set to 1 if the target platform supports the ANSI C file I/O functions (`fopen`, `fread`, etc). Otherwise it should be set to 0. OSCL\_HAS\_ANSI\_64BIT\_FILE\_IO\_SUPPORT macro should be set to 1 if the target platform supports the 64-bit ANSI C file I/O functions (`fopen`, `fread`, etc). Otherwise it should be set to 0. OSCL\_HAS\_MSWIN\_FILE\_IO\_SUPPORT macro should be set to 1 if the target platform supports the ANSI C file I/O functions (`fopen`, `fread`, etc). Otherwise it should be set to 0. OSCL\_HAS\_SYMBIAN\_COMPATIBLE\_IO\_FUNCTION macro should be set to 1 if the target platform supports the Symbian file I/O functions (`RFile`, `RFs`). Otherwise it should be set to 0. On Symbian platforms only: OSCL\_HAS\_NATIVE\_DUPLICATE\_FILE\_HANDLE macro should be set to 1 if the target platform supports the Symbian file I/O function `RFile::Duplicate`. Otherwise it should be set to 0. OSCL\_HAS\_NATIVE\_FILE\_CACHE\_ENABLE macro should be set to 1 if the target platform includes native file cache capability. Otherwise it should be set to 0. OSCL\_HAS\_PV\_FILE\_CACHE macro should be set to 1 if the target platform includes PV file cache capability. Otherwise it should be set to 0. OSCL\_HAS\_LARGE\_FILE\_SUPPORT macro should be set to 1 if the target platform supports more than 32bit file I/O capability. Otherwise it should be set to 0. type `TOsclFileOffset` should be defined as the type used for file size and offsets on the target platform. Example: `typedef size_t TOsclFileOffset;`

## 8.141 osclconfig\_ix86.h File Reference

This file contains configuration information for the ix86 processor family.

### Defines

- #define OSCL\_INTEGERS\_WORD\_ALIGNED 1
- #define OSCL\_BYTE\_ORDER\_BIG\_ENDIAN 0
- #define OSCL\_BYTE\_ORDER\_LITTLE\_ENDIAN 1

### 8.141.1 Detailed Description

This file contains configuration information for the ix86 processor family.

### 8.141.2 Define Documentation

8.141.2.1 #define OSCL\_BYTE\_ORDER\_BIG\_ENDIAN 0

8.141.2.2 #define OSCL\_BYTE\_ORDER\_LITTLE\_ENDIAN 1

8.141.2.3 #define OSCL\_INTEGERS\_WORD\_ALIGNED 1

## 8.142 osclconfig\_lib.h File Reference

This file contains configuration information for the ANSI build.

```
#include "osclconfig_lib_check.h"
```

### Defines

- #define OSCL\_HAS\_RUNTIME\_LIB\_LOADING\_SUPPORT 1
- #define PV\_RUNTIME\_LIB\_FILENAME\_EXTENSION "so"
- #define PV\_DYNAMIC\_LOADING\_CONFIG\_FILE\_PATH "./"

### 8.142.1 Detailed Description

This file contains configuration information for the ANSI build.

### 8.142.2 Define Documentation

8.142.2.1 #define OSCL\_HAS\_RUNTIME\_LIB\_LOADING\_SUPPORT 1

8.142.2.2 #define PV\_DYNAMIC\_LOADING\_CONFIG\_FILE\_PATH "./"

8.142.2.3 #define PV\_RUNTIME\_LIB\_FILENAME\_EXTENSION "so"

## **8.143 osclconfig\_lib\_check.h File Reference**

## 8.144 osclconfig\_limits\_typedefs.h File Reference

This file contains common typedefs based on the ANSI C limits.h header.

```
#include <limits.h>
```

### Defines

- #define OSCL\_CHAR\_IS\_UNSIGNED 1
- #define OSCL\_CHAR\_IS\_SIGNED 0

#### 8.144.1 Detailed Description

This file contains common typedefs based on the ANSI C limits.h header. This header file should work for any ANSI C compiler to determine the proper native C types to use for OSCL integer types.

#### 8.144.2 Define Documentation

**8.144.2.1 #define OSCL\_CHAR\_IS\_SIGNED 0**

**8.144.2.2 #define OSCL\_CHAR\_IS\_UNSIGNED 1**

## 8.145 osclconfig\_memory.h File Reference

```
#include "osclconfig.h"
#include "osclconfig_ansi_memory.h"
#include "osclconfig_memory_check.h"
```

### Defines

- #define OSCL\_BYPASS\_MEMMGT 1
- #define OSCL\_HAS\_GLOBAL\_NEW\_DELETE 1
- #define PVMEM\_INST\_LEVEL 1
- #define OSCL\_HAS\_HEAP\_BASE\_SUPPORT 1
- #define OSCL\_HAS\_SYMBIAN\_MEMORY\_FUNCS 0

#### 8.145.1 Define Documentation

8.145.1.1 #define OSCL\_BYPASS\_MEMMGT 1

8.145.1.2 #define OSCL\_HAS\_GLOBAL\_NEW\_DELETE 1

8.145.1.3 #define OSCL\_HAS\_HEAP\_BASE\_SUPPORT 1

8.145.1.4 #define OSCL\_HAS\_SYMBIAN\_MEMORY\_FUNCS 0

8.145.1.5 #define PVMEM\_INST\_LEVEL 1

## 8.146 osclconfig\_memory\_check.h File Reference

## 8.147 osclconfig\_no\_os.h File Reference

### Defines

- #define OSCL\_HAS\_UNIX\_SUPPORT 0
- #define OSCL\_HAS\_MSWIN\_SUPPORT 0
- #define OSCL\_HAS\_MSWIN\_PARTIAL\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_SUPPORT 0
- #define OSCL\_HAS\_SAVAJE\_SUPPORT 0
- #define OSCL\_HAS\_PV\_C\_OS\_SUPPORT 0
- #define OSCL\_HAS\_ANDROID\_SUPPORT 0
- #define OSCL\_HAS\_IPHONE\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_ERRORTRAP 0
- #define OSCL\_HAS\_SYMBIAN\_MEMORY\_FUNCS 0
- #define OSCL\_HAS\_PV\_C\_OS\_API\_MEMORY\_FUNCS 0
- #define OSCL\_HAS\_PV\_C\_OS\_TIME\_FUNCS 0
- #define OSCL\_HAS\_UNIX\_TIME\_FUNCS 0
- #define OSCL\_HAS\_SYMBIAN\_TIMERS 0
- #define OSCL\_HAS\_SYMBIAN\_MATH 0
- #define OSCL\_HAS\_SYMBIAN\_SCHEDULER 0
- #define OSCL\_HAS\_SEM\_TIMEDWAIT\_SUPPORT 0
- #define OSCL\_HAS\_PTHREAD\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_COMPATIBLE\_IO\_FUNCTION 0
- #define OSCL\_HAS\_SAVAJE\_IO\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_SOCKET\_SERVER 0
- #define OSCL\_HAS\_SYMBIAN\_DNS\_SERVER 0
- #define OSCL\_HAS\_BERKELEY\_SOCKETS 0

## 8.148 osclconfig\_proc.h File Reference

This file contains configuration information for the linux platform.

```
#include "osclconfig.h"  
#include "osclconfig_proc_unix_android.h"  
#include <pthread.h>  
#include <errno.h>  
#include <signal.h>  
#include "osclconfig_proc_check.h"
```

### 8.148.1 Detailed Description

This file contains configuration information for the linux platform.

## 8.149 osclconfig\_proc\_check.h File Reference

### Typedefs

- `typedef TOsclThreadId __verify__TOsclThreadId_defined__`
- `typedef TOsclThreadFuncRet __verify__TOsclThreadFuncRet_defined__`
- `typedef TOsclThreadFuncArg __verify__TOsclThreadFuncArg_defined__`
- `typedef TOsclThreadObject __verify__TOsclThreadObject_defined__`
- `typedef TOsclMutexObject __verify__TOsclMutexObject_defined__`
- `typedef TOsclSemaphoreObject __verify__TOsclSemaphoreObject_defined__`
- `typedef TOsclConditionObject __verify__TOsclConditionObject_defined__`

### 8.149.1 Typedef Documentation

#### 8.149.1.1 `typedef TOsclConditionObject __verify__TOsclConditionObject_defined__`

type `TOsclConditionObject` should be defined as the type used as a condition variable on the target platform.  
Example: `typedef pthread_cond_t TOsclConditionObject;`

Note: Condition variables are only used with certain semaphore implementations. If the semaphore implementation does not require a condition variable, then this type can be defined as 'int' as follows: `typedef int TOsclConditionObject; //not used`

#### 8.149.1.2 `typedef TOsclMutexObject __verify__TOsclMutexObject_defined__`

type `TOsclMutexObject` should be defined as the type used as a mutex object or handle on the target platform. Example: `typedef pthread_mutex_t TOsclMutexObject;`

#### 8.149.1.3 `typedef TOsclSemaphoreObject __verify__TOsclSemaphoreObject_defined__`

type `TOsclSemaphoreObject` should be defined as the type used as a mutex object or handle on the target platform. Example: `typedef sem_t TOsclSemaphoreObject;`

#### 8.149.1.4 `typedef TOsclThreadFuncArg __verify__TOsclThreadFuncArg_defined__`

type `TOsclThreadFuncArg` should be defined as the type used as a thread function argument on the target platform. Example: `typedef LPVOID TOsclThreadFuncArg;`

#### 8.149.1.5 `typedef TOsclThreadFuncRet __verify__TOsclThreadFuncRet_defined__`

type `TOsclThreadFuncRet` should be defined as the type used as a thread function return value on the target platform. Example: `typedef DWORD TOsclThreadFuncRet;`

#### 8.149.1.6 `typedef TOsclThreadId __verify__TOsclThreadId_defined__`

`OSCL_HAS_THREAD_SUPPORT` macro should be set to 1 if the target platform supports threads. Otherwise it should be set to 0. `OSCL_HAS_NON_PREEMPTIVE_THREAD_SUPPORT` macro should be set to 1 if the target platform supports non-pre-emptive threads. Otherwise it should be set to 0. `OSCL_HAS_SYMBIAN_SCHEDULER` macro should be set to 1 if the target platform supports Symbian active object

scheduler. Otherwise it should be set to 0. OSCL\_HAS\_SEM\_TIMEDWAIT\_SUPPORT macro should be set to 1 if the target platform supports POSIX-compliant semaphores (semaphore.h) with advanced realtime features including sem\_timedwait. Otherwise it should be set to 0. OSCL\_HAS\_PTHREAD\_SUPPORT macro should be set to 1 if the target platform supports POSIX-compliant pthreads (pthread.h). Otherwise it should be set to 0. type TOsclThreadId should be defined as the type used as a thread ID on the target platform. Example: `typedef DWORD TOsclThreadId;`

#### **8.149.1.7 `typedef TOsclThreadObject __verify__TOsclThreadObject__defined__`**

OSCL\_THREAD\_DECL macro should be defined to the necessary function declaration modifiers for thread routines, or a null macro if no modifiers are needed. Example: define OSCL\_THREAD\_DECL WINAPI Example of a declaration of a thread routine called MyThreadMain using the Oscl definitions:

`static TOsclThreadFuncRet OSCL_THREAD_DECL MyThreadMain(TOsclThreadFuncArg arg);` type TOsclThreadObject should be defined as the type used as a thread object or handle on the target platform. Example: `typedef pthread_t TOsclThreadObject;`

## 8.150 osclconfig\_proc\_unix\_android.h File Reference

```
#include <pthread.h>
#include <errno.h>
#include <signal.h>
```

### Defines

- #define OSCL\_HAS\_SYMBIAN\_SCHEDULER 0
- #define OSCL\_HAS\_THREAD\_SUPPORT 1
- #define OSCL\_HAS\_NON\_PREEMPTIVE\_THREAD\_SUPPORT 0
- #define OSCL\_HAS\_SEM\_TIMEDWAIT\_SUPPORT 0
- #define OSCL\_HAS\_PTHREAD\_SUPPORT 1
- #define OSCL\_THREAD\_DECL

### Typedefs

- typedef pthread\_t TOsclThreadId
- typedef void \* TOsclThreadFuncArg
- typedef void \* TOsclThreadFuncRet
- typedef pthread\_t TOsclThreadObject
- typedef pthread\_mutex\_t TOsclMutexObject
- typedef int TOsclSemaphoreObject
- typedef pthread\_cond\_t TOsclConditionObject

### 8.150.1 Define Documentation

8.150.1.1 `#define OSCL_HAS_NON_PREEMPTIVE_THREAD_SUPPORT 0`

8.150.1.2 `#define OSCL_HAS_PTHREAD_SUPPORT 1`

8.150.1.3 `#define OSCL_HAS_SEM_TIMEDWAIT_SUPPORT 0`

8.150.1.4 `#define OSCL_HAS_SYMBIAN_SCHEDULER 0`

8.150.1.5 `#define OSCL_HAS_THREAD_SUPPORT 1`

8.150.1.6 `#define OSCL_THREAD_DECL`

### 8.150.2 Typedef Documentation

8.150.2.1 `typedef pthread_cond_t TOsclConditionObject`

8.150.2.2 `typedef pthread_mutex_t TOsclMutexObject`

8.150.2.3 `typedef int TOsclSemaphoreObject`

8.150.2.4 `typedef void* TOsclThreadFuncArg`

8.150.2.5 `typedef void* TOsclThreadFuncRet`

8.150.2.6 `typedef pthread_t TOsclThreadId`

8.150.2.7 `typedef pthread_t TOsclThreadObject`

## 8.151 osclconfig\_proc\_unix\_common.h File Reference

```
#include <time.h>
#include <semaphore.h>
#include <pthread.h>
#include <errno.h>
```

### Defines

- #define OSCL\_HAS\_SYMBIAN\_SCHEDULER 0
- #define OSCL\_HAS\_THREAD\_SUPPORT 1
- #define OSCL\_HAS\_NON\_PREEMPTIVE\_THREAD\_SUPPORT 0
- #define OSCL\_HAS\_SEM\_TIMEDWAIT\_SUPPORT 1
- #define OSCL\_HAS\_PTHREAD\_SUPPORT 1
- #define OSCL\_THREAD\_DECL

### Typedefs

- typedef pthread\_t TOsclThreadId
- typedef void \* TOsclThreadFuncArg
- typedef void \* TOsclThreadFuncRet
- typedef pthread\_t TOsclThreadObject
- typedef pthread\_mutex\_t TOsclMutexObject
- typedef sem\_t TOsclSemaphoreObject
- typedef pthread\_cond\_t TOsclConditionObject

### 8.151.1 Define Documentation

8.151.1.1 `#define OSCL_HAS_NON_PREEMPTIVE_THREAD_SUPPORT 0`

8.151.1.2 `#define OSCL_HAS_PTHREAD_SUPPORT 1`

8.151.1.3 `#define OSCL_HAS_SEM_TIMEDWAIT_SUPPORT 1`

8.151.1.4 `#define OSCL_HAS_SYMBIAN_SCHEDULER 0`

8.151.1.5 `#define OSCL_HAS_THREAD_SUPPORT 1`

8.151.1.6 `#define OSCL_THREAD_DECL`

### 8.151.2 Typedef Documentation

8.151.2.1 `typedef pthread_cond_t TOsclConditionObject`

8.151.2.2 `typedef pthread_mutex_t TOsclMutexObject`

8.151.2.3 `typedef sem_t TOsclSemaphoreObject`

8.151.2.4 `typedef void* TOsclThreadFuncArg`

8.151.2.5 `typedef void* TOsclThreadFuncRet`

8.151.2.6 `typedef pthread_t TOsclThreadId`

8.151.2.7 `typedef pthread_t TOsclThreadObject`

## 8.152 osclconfig\_time.h File Reference

```
#include "osclconfig.h"
#include <time.h>
#include <sys/time.h>
#include <unistd.h>
#include "osclconfig_time_check.h"
```

### Defines

- #define OSCL\_HAS\_UNIX\_TIME\_FUNCS 1

### TypeDefs

- typedef struct timeval OsclBasicTimeStruct
- typedef tm OsclBasicDateTimeStruct

#### 8.152.1 Define Documentation

##### 8.152.1.1 #define OSCL\_HAS\_UNIX\_TIME\_FUNCS 1

#### 8.152.2 Typedef Documentation

##### 8.152.2.1 typedef tm OsclBasicDateTimeStruct

##### 8.152.2.2 typedef struct timeval OsclBasicTimeStruct

## 8.153 osclconfig\_time\_check.h File Reference

### Typedefs

- `typedef OsclBasicTimeStruct __Validate__BasicTimeStruct__`
- `typedef OsclBasicDateTimeStruct __Validate__BasicTimeDateStruct__`

#### 8.153.1 Typedef Documentation

##### 8.153.1.1 `typedef OsclBasicDateTimeStruct __Validate__BasicTimeDateStruct__`

`OsclBasicDateTimeStruct` type should be defined to the platform-specific date + time type.

##### 8.153.1.2 `typedef OsclBasicTimeStruct __Validate__BasicTimeStruct__`

`OSCL_HAS_UNIX_TIME_FUNCS` macro should be set to 1 if the target platform supports unix time of day functions. Otherwise it should be set to 0. `OsclBasicTimeStruct` type should be defined to the platform-specific time of day type.

## 8.154 osclconfig\_unix\_android.h File Reference

```
#include <stdlib.h>
#include <stdarg.h>
#include <sys/types.h>
#include <stdio.h>
#include <string.h>
#include <unistd.h>
#include <pthread.h>
#include <ctype.h>
#include <math.h>
```

### Defines

- #define OSCL\_DISABLE\_INLINES 0
- #define OSCL\_HAS\_ANSI\_STDLIB\_SUPPORT 1
- #define OSCL\_HAS\_ANSI\_MATH\_SUPPORT 1
- #define OSCL\_HAS\_GLOBAL\_VARIABLE\_SUPPORT 1
- #define OSCL\_HAS\_ANSI\_STRING\_SUPPORT 1
- #define OSCL\_HAS\_ANSI\_WIDE\_STRING\_SUPPORT 0
- #define OSCL\_HAS\_ANSI\_STDIO\_SUPPORT 1
- #define OSCL\_MEMFRAG\_PTR\_BEFORE\_LEN 1
- #define OSCL\_HAS\_UNIX\_SUPPORT 1
- #define OSCL\_HAS\_MSWIN\_SUPPORT 0
- #define OSCL\_HAS\_MSWIN\_PARTIAL\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_SUPPORT 0
- #define OSCL\_HAS\_IPHONE\_SUPPORT 0
- #define OSCL\_NATIVE\_INT64\_TYPE int64\_t
- #define OSCL\_NATIVE\_UINT64\_TYPE uint64\_t
- #define INT64(x) x##LL
- #define UINT64(x) x##ULL
- #define INT64\_HILO(high, low) (((high##LL)<<32)|low)
- #define UINT64\_HILO(high, low) (((high##ULL)<<32)|low)
- #define OSCL\_HAS\_UNICODE\_SUPPORT 1
- #define OSCL\_NATIVE\_WCHAR\_TYPE wchar\_t
- #define \_STRLIT(x) x
- #define \_STRLIT\_CHAR(x) x
- #define \_STRLIT\_WCHAR(x) L ## x
- #define OSCL\_HAS\_TLS\_SUPPORT 1
- #define OSCL\_TLS\_IS\_KEYED 1
- #define OSCL\_TLS\_KEY\_CREATE\_FUNC(key) (pthread\_key\_create(&key,NULL)==0)
- #define OSCL\_TLS\_KEY\_DELETE\_FUNC(key) pthread\_key\_delete(key)
- #define OSCL\_TLS\_STORE\_FUNC(key, ptr) (pthread\_setspecific(key,(const void\*)ptr)==0)
- #define OSCL\_TLS\_GET\_FUNC(key) pthread\_getspecific(key)
- #define OSCL\_HAS\_BASIC\_LOCK 1

## Typedefs

- `typedef pthread_key_t TOsclTlsKey`
  
- `typedef pthread_mutex_t TOsclBasicLockObject`



### 8.154.1 Define Documentation

8.154.1.1 `#define _STRLIT(x) x`

8.154.1.2 `#define _STRLIT_CHAR(x) x`

8.154.1.3 `#define _STRLIT_WCHAR(x) L ## x`

8.154.1.4 `#define INT64(x) x##LL`

8.154.1.5 `#define INT64_HILO(high, low) (((high##LL))<<32)|low)`

8.154.1.6 `#define OSCL_DISABLE_INLINES 0`

8.154.1.7 `#define OSCL_HAS_ANSI_MATH_SUPPORT 1`

8.154.1.8 `#define OSCL_HAS_ANSI_STDIO_SUPPORT 1`

8.154.1.9 `#define OSCL_HAS_ANSI_STDLIB_SUPPORT 1`

8.154.1.10 `#define OSCL_HAS_ANSI_STRING_SUPPORT 1`

8.154.1.11 `#define OSCL_HAS_ANSI_WIDE_STRING_SUPPORT 0`

8.154.1.12 `#define OSCL_HAS_BASIC_LOCK 1`

8.154.1.13 `#define OSCL_HAS_GLOBAL_VARIABLE_SUPPORT 1`

8.154.1.14 `#define OSCL_HAS_IPHONE_SUPPORT 0`

8.154.1.15 `#define OSCL_HAS_MSWIN_PARTIAL_SUPPORT 0`

8.154.1.16 `#define OSCL_HAS_MSWIN_SUPPORT 0`

8.154.1.17 `#define OSCL_HAS_SYMBIAN_SUPPORT 0`

8.154.1.18 `#define OSCL_HAS_TLS_SUPPORT 1`

8.154.1.19 `#define OSCL_HAS_UNICODE_SUPPORT 1`

8.154.1.20 `#define OSCL_HAS_UNIX_SUPPORT 1`

8.154.1.21 `#define OSCL_MEMFRAG_PTR_BEFORE_LEN 1`

8.154.1.22 `#define OSCL_NATIVE_INT64_TYPE int64_t`

8.154.1.23 `#define OSCL_NATIVE_UINT64_TYPE uint64_t`

8.154.1.24 `#define OSCL_NATIVE_WCHAR_TYPE wchar_t`

8.154.1.25 `#define OSCL_TLS_GET_FUNC(key) pthread_getspecific(key)`

8.154.1.26 `#define OSCL_TLS_IS_KEYED 1`

8.154.1.27 `#define OSCL_TLS_KEY_CREATE_FUNC(key) (pthread_key_create(&key,NULL)==0)` OSCL API

8.154.1.28 `#define OSCL_TLS_KEY_DELETE_FUNC(key) pthread_key_delete(key)`

8.154.1.29 `#define OSCL_TLS_STORE_FUNC(key, ptr) (pthread_setspecific(key,(const void*)ptr)==0)`

## 8.155 osclconfig\_unix\_common.h File Reference

```
#include <stdlib.h>
#include <stdarg.h>
#include <sys/types.h>
#include <stdio.h>
#include <wchar.h>
#include <string.h>
#include <unistd.h>
#include <pthread.h>
#include <ctype.h>
#include <math.h>
```

### Defines

- #define OSCL\_DISABLE\_INLINES 0
- #define OSCL\_HAS\_ANSI\_STDLIB\_SUPPORT 1
- #define OSCL\_HAS\_ANSI\_MATH\_SUPPORT 1
- #define OSCL\_HAS\_GLOBAL\_VARIABLE\_SUPPORT 1
- #define OSCL\_HAS\_ANSI\_STRING\_SUPPORT 1
- #define OSCL\_HAS\_ANSI\_WIDE\_STRING\_SUPPORT 1
- #define OSCL\_HAS\_ANSI\_STDIO\_SUPPORT 1
- #define OSCL\_MEMFRAG\_PTR\_BEFORE\_LEN 1
- #define OSCL\_HAS\_UNIX\_SUPPORT 1
- #define OSCL\_HAS\_MSWIN\_SUPPORT 0
- #define OSCL\_HAS\_MSWIN\_PARTIAL\_SUPPORT 0
- #define OSCL\_HAS\_SYMBIAN\_SUPPORT 0
- #define OSCL\_NATIVE\_INT64\_TYPE int64\_t
- #define OSCL\_NATIVE\_UINT64\_TYPE uint64\_t
- #define INT64(x) x##LL
- #define UINT64(x) x##ULL
- #define INT64\_HILO(high, low) (((high##LL))<<32)|low)
- #define UINT64\_HILO(high, low) (((high##ULL))<<32)|low)
- #define OSCL\_HAS\_UNICODE\_SUPPORT 1
- #define OSCL\_NATIVE\_WCHAR\_TYPE wchar\_t
- #define \_STRLIT(x) L ## x
- #define \_STRLIT\_CHAR(x) x
- #define \_STRLIT\_WCHAR(x) L ## x
- #define OSCL\_HAS\_TLS\_SUPPORT 1
- #define OSCL\_TLS\_IS\_KEYED 1
- #define OSCL\_TLS\_KEY\_CREATE\_FUNC(key) (pthread\_key\_create(&key,NULL)==0)
- #define OSCL\_TLS\_KEY\_DELETE\_FUNC(key) pthread\_key\_delete(key)
- #define OSCL\_TLS\_STORE\_FUNC(key, ptr) (pthread\_setspecific(key,(const void\*)ptr)==0)
- #define OSCL\_TLS\_GET\_FUNC(key) pthread\_getspecific(key)
- #define OSCL\_HAS\_BASIC\_LOCK 1

## Typedefs

- `typedef pthread_key_t TOsclTlsKey`
  
- `typedef pthread_mutex_t TOsclBasicLockObject`



### 8.155.1 Define Documentation

```

8.155.1.1 #define _STRLIT(x) L ## x
8.155.1.2 #define _STRLIT_CHAR(x) x
8.155.1.3 #define _STRLIT_WCHAR(x) L ## x
8.155.1.4 #define INT64(x) x##LL
8.155.1.5 #define INT64_HILO(high, low) (((high##LL))<<32)|low)
8.155.1.6 #define OSCL_DISABLE_INLINES 0
8.155.1.7 #define OSCL_HAS_ANSI_MATH_SUPPORT 1
8.155.1.8 #define OSCL_HAS_ANSI_STDIO_SUPPORT 1
8.155.1.9 #define OSCL_HAS_ANSI_STDLIB_SUPPORT 1
8.155.1.10 #define OSCL_HAS_ANSI_STRING_SUPPORT 1
8.155.1.11 #define OSCL_HAS_ANSI_WIDE_STRING_SUPPORT 1
8.155.1.12 #define OSCL_HAS_BASIC_LOCK 1
8.155.1.13 #define OSCL_HAS_GLOBAL_VARIABLE_SUPPORT 1
8.155.1.14 #define OSCL_HAS_MSWIN_PARTIAL_SUPPORT 0
8.155.1.15 #define OSCL_HAS_MSWIN_SUPPORT 0
8.155.1.16 #define OSCL_HAS_SYMBIAN_SUPPORT 0
8.155.1.17 #define OSCL_HAS_TLS_SUPPORT 1
8.155.1.18 #define OSCL_HAS_UNICODE_SUPPORT 1
8.155.1.19 #define OSCL_HAS_UNIX_SUPPORT 1
8.155.1.20 #define OSCL_MEMFRAG_PTR_BEFORE_LEN 1
8.155.1.21 #define OSCL_NATIVE_INT64_TYPE int64_t
8.155.1.22 #define OSCL_NATIVE_UINT64_TYPE uint64_t
8.155.1.23 #define OSCL_NATIVE_WCHAR_TYPE wchar_t
8.155.1.24 #define OSCL_TLS_GET_FUNC(key) pthread_getspecific(key)
8.155.1.25 #define OSCL_TLS_IS_KEYED 1
8.155.1.26 #define OSCL_TLS_KEY_CREATE_FUNC(key) (pthread_key_create(&key,NULL)==0)
8.155.1.27 #define OSCL_TLS_KEY_DELETE_FUNC(key) pthread_key_delete(key)
8.155.1.28 #define OSCL_TLS_STORE_FUNC(key, ptr) (pthread_setspecific(key,(const void*)ptr)==0)
8.155.1.29 #define UINT64(x) x##ULL

```

## 8.156 osclconfig\_util.h File Reference

```
#include "osclconfig.h"
#include <stdio.h>
#include <time.h>
#include <sys/time.h>
#include <unistd.h>
#include "osclconfig_util_check.h"
```

### Defines

- #define OSCL\_CLOCK\_HAS\_DRIFT\_CORRECTION 0
- #define OSCL\_HAS\_SYMBIAN\_TIMERS 0
- #define OSCL\_HAS\_SYMBIAN\_MATH 0
- #define OSCL RAND\_MAX RAND\_MAX
- #define SLEEP\_ONE\_SEC sleep(1)

### 8.156.1 Define Documentation

8.156.1.1 #define OSCL\_CLOCK\_HAS\_DRIFT\_CORRECTION 0

8.156.1.2 #define OSCL\_HAS\_SYMBIAN\_MATH 0

8.156.1.3 #define OSCL\_HAS\_SYMBIAN\_TIMERS 0

8.156.1.4 #define OSCL RAND\_MAX RAND\_MAX

8.156.1.5 #define SLEEP\_ONE\_SEC sleep(1)

## 8.157 osclconfig\_util\_check.h File Reference

## 8.158 pvlogger.h File Reference

This file contains basic logger interfaces for common use across platforms.

```
#include "oscl_base.h"
#include "oscl_vector.h"
#include "oscl_defalloc.h"
#include "oscl_shared_ptr.h"
#include "oscl_refcounter.h"
#include "osclconfig_compiler_warnings.h"
#include "osclconfig.h"
#include "osclconfig_memory.h"
```

### Data Structures

- class [PVLogger](#)

### Defines

- #define PVLOGMSG\_INST\_REL 0
- #define PVLOGMSG\_INST\_PROF 1
- #define PVLOGMSG\_INST\_HLDBG 2
- #define PVLOGMSG\_INST\_MLDBG 3
- #define PVLOGMSG\_INST\_LLDBG 4
- #define PVLOGGER\_INST\_LEVEL 5
- #define \_PVLOGGER\_LOGMSG(LOGGER, LEVEL, MESSAGE)
- #define \_PVLOGGER\_LOGMSG\_V(LOGGER, LEVEL, MESSAGE)
- #define \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- #define \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- #define PVLOGGER\_INST\_LEVEL\_SUPPORT 1
- #define PVLOGGER\_LOGMSG\_PVLOGMSG\_INST\_REL(LOGGER, LEVEL, MESSAGE) \_-  
PVLOGGER\_LOGMSG(LOGGER, LEVEL, MESSAGE)
- #define PVLOGGER\_LOGMSG\_V\_PVLOGMSG\_INST\_REL(LOGGER, LEVEL, MESSAGE) \_-  
PVLOGGER\_LOGMSG\_V(LOGGER, LEVEL, MESSAGE)
- #define PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_REL(LOGGER, LEVEL, MESSAGE) \_-  
PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- #define PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_INST\_REL(LOGGER, LEVEL, MESSAGE) \_-  
PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- #define PVLOGGER\_LOGMSG\_PVLOGMSG\_INST\_PROF(LOGGER, LEVEL, MESSAGE) \_-  
PVLOGGER\_LOGMSG(LOGGER, LEVEL, MESSAGE)
- #define PVLOGGER\_LOGMSG\_V\_PVLOGMSG\_INST\_PROF(LOGGER, LEVEL, MESSAGE) \_-  
PVLOGGER\_LOGMSG\_V(LOGGER, LEVEL, MESSAGE)
- #define PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_PROF(LOGGER, LEVEL, MESSAGE) \_-  
PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- #define PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_INST\_PROF(LOGGER, LEVEL, MESSAGE) \_-  
PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- #define PVLOGGER\_LOGMSG\_PVLOGMSG\_INST\_HLDBG(LOGGER, LEVEL, MESSAGE) \_-  
PVLOGGER\_LOGMSG(LOGGER, LEVEL, MESSAGE)

- #define **PVLOGGER\_LOGMSG\_V\_PVLOGMSG\_INST\_HLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGMSG\_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_HLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_INST\_HLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGMSG\_PVLOGMSG\_INST\_MLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGMSG(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGMSG\_V\_PVLOGMSG\_INST\_MLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGMSG\_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_MLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_V\_INST\_MLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGMSG\_PVLOGMSG\_INST\_LLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGMSG(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGMSG\_V\_PVLOGMSG\_INST\_LLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGMSG\_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_LLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_INST\_LLDBG**(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGMSG(IL, LOGGER, LEVEL, MESSAGE)** PVLOGGER\_LOGMSG\_##IL(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGMSG\_V(IL, LOGGER, LEVEL, MESSAGE)** PVLOGGER\_LOGMSG\_V\_##IL(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGBIN(IL, LOGGER, LEVEL, MESSAGE)** PVLOGGER\_LOGBIN\_##IL(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOGBIN\_V(IL, LOGGER, LEVEL, MESSAGE)** PVLOGGER\_LOGBIN\_V\_##IL(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER\_LOG\_USE\_ONLY(x)** x
- #define **PVLOGGER\_ENABLE** 1

## Variables

- const int32 **PVLOGGER\_LEVEL\_UNINITIALIZED** = -1
- const **PVLogger::log\_level\_type PVLOGMSG\_EMERG** = 0
- const **PVLogger::log\_level\_type PVLOGMSG\_ALERT** = 1
- const **PVLogger::log\_level\_type PVLOGMSG\_CRIT** = 2
- const **PVLogger::log\_level\_type PVLOGMSG\_ERR** = 3
- const **PVLogger::log\_level\_type PVLOGMSG\_WARNING** = 4
- const **PVLogger::log\_level\_type PVLOGMSG\_NOTICE** = 5
- const **PVLogger::log\_level\_type PVLOGMSG\_INFO** = 6
- const **PVLogger::log\_level\_type PVLOGMSG\_STACK\_TRACE** = 7
- const **PVLogger::log\_level\_type PVLOGMSG\_DEBUG** = 8
- const **PVLogger::log\_level\_type PVLOGMSG\_FATAL\_ERROR** = **PVLOGMSG\_EMERG**
- const **PVLogger::log\_level\_type PVLOGMSG\_NONFATAL\_ERROR** = **PVLOGMSG\_ERR**
- const **PVLogger::log\_level\_type PVLOGMSG\_STATISTIC** = **PVLOGMSG\_INFO**
- const **PVLogger::log\_level\_type PVLOGMSG\_VERBOSE** = **PVLOGMSG\_DEBUG**

### 8.158.1 Detailed Description

This file contains basic logger interfaces for common use across platforms. This is the main entry point header file for the logger library. It should be the only one users directly include.

### 8.158.2 Define Documentation

#### 8.158.2.1 #define \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)

**Value:**

```
{\
    if (LOGGER) \
{\
    if (LOGGER->IsActive(LEVEL)) \
{\
    LOGGER->LogMsgBuffers MESSAGE; \
}\
}\
}
```

#### 8.158.2.2 #define \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)

**Value:**

```
{\
    if (LOGGER) \
{\
    if (LOGGER->IsActive(LEVEL)) \
{\
    LOGGER->LogMsgBuffersV MESSAGE; \
}\
}\
}
```

#### 8.158.2.3 #define \_PVLOGGER\_LOGMSG(LOGGER, LEVEL, MESSAGE)

**Value:**

```
{\
    if (LOGGER) \
{\
    if (LOGGER->IsActive(LEVEL)) \
{\
    LOGGER->LogMsgString MESSAGE; \
}\
}\
}
```

#### 8.158.2.4 #define \_PVLOGGER\_LOGMSG\_V(LOGGER, LEVEL, MESSAGE)

**Value:**

```
{\
    if (LOGGER) \

```

```

{ \
    if (LOGGER->IsActive(LEVEL)) \
    { \
        LOGGER->LogMsgStringV MESSAGE; \
    } \
}

```

#### 8.158.2.5 #define PVLOGGER\_ENABLE 1

In case logging is compiled out, there is no need to compile the logger runtime code either.

#### 8.158.2.6 #define PVLOGGER\_INST\_LEVEL 5

#### 8.158.2.7 #define PVLOGGER\_INST\_LEVEL\_SUPPORT 1

#### 8.158.2.8 #define PVLOGGER\_LOG\_USE\_ONLY(x) x

Used to compile in/out lines of code that are used only for [PVLogger](#) macros.

This code will be removed at compile time when [PVLogger](#) is disabled, i.e. Release mode. So do not put in any code that is necessary for correct functionality of the module

#### 8.158.2.9 #define PVLOGGER\_LOGBIN(IL, LOGGER, LEVEL, MESSAGE) PVLOGGER\_LOGBIN\_## IL (LOGGER, LEVEL, MESSAGE)

This is a binary API to log messages

##### Parameters

**IL** Instrumentation level.

**LOGGER** Pointer to the logger object, that acts as the logging control/interface point

**LEVEL** Log level of the message

**MESSAGE** Log Message which includes the message id, and message buffers that need to be logged.

Example Usage: PVLOGGER\_LOGBIN (PVLOGMSG\_INST\_LLDBG, logger\_1, PVLOGMSG\_WARNING, (10, 3, msgBuf1Size, msgBuf1, msgBuf2Size, msgBuf2, msgBuf3Size, msgBuf3));

-This message contains THREE (ptr\_len, ptr) pairs. Log level of this msg is PVLOGMSG\_WARNING, message id is 10.

- 8.158.2.10 #define PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_HLDBG(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.11 #define PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_LLDBG(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.12 #define PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_MLDBG(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.13 #define PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_PROF(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.14 #define PVLOGGER\_LOGBIN\_PVLOGMSG\_INST\_REL(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.15 #define PVLOGGER\_LOGBIN\_V(IL, LOGGER, LEVEL, MESSAGE) PVLOGGER\_LOGBIN\_V\_ ## IL (LOGGER, LEVEL, MESSAGE)
- 8.158.2.16 #define PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_INST\_HLDBG(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.17 #define PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_INST\_LLDBG(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.18 #define PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_INST\_PROF(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.19 #define PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_INST\_REL(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.20 #define PVLOGGER\_LOGBIN\_V\_PVLOGMSG\_V\_INST\_MLDBG(LOGGER, LEVEL, MESSAGE) \_PVLOGGER\_LOGBIN\_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.21 #define PVLOGGER\_LOGMSG(IL, LOGGER, LEVEL, MESSAGE) PVLOGGER\_LOGMSG\_ ## IL (LOGGER, LEVEL, MESSAGE)

This is the text based API to log messages

### Parameters

**IL** Instrumentation level.

**LOGGER** Pointer to the logger object, that acts as the logging control/interface point

**LEVEL** Log level of the message

**MESSAGE** Log Message which includes the message id, and any kind of formatting information

Example Usage: PVLOGGER\_LOGMSG(PVLOGMSG\_INST\_LLDBG, logger\_1, PVLOGMSG\_WARNING, (13, "Test Messsage to Node 1\n")); -This message of log level PVLOGMSG\_WARNING, and has a message id of 13

- 8.158.2.22 `#define PVLOGGER_LOGMSG_PVLOGMSG_INST_HLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.23 `#define PVLOGGER_LOGMSG_PVLOGMSG_INST_LLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.24 `#define PVLOGGER_LOGMSG_PVLOGMSG_INST_MLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.25 `#define PVLOGGER_LOGMSG_PVLOGMSG_INST_PROF(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.26 `#define PVLOGGER_LOGMSG_PVLOGMSG_INST_REL(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.27 `#define PVLOGGER_LOGMSG_V(IL, LOGGER, LEVEL, MESSAGE) PVLOGGER_LOGMSG_V_## IL (LOGGER, LEVEL, MESSAGE)`
- 8.158.2.28 `#define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_HLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.29 `#define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_LLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.30 `#define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_MLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.31 `#define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_PROF(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.32 `#define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_REL(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)`
- 8.158.2.33 `#define PVLOGMSG_INST_HLDBG 2`

#### High Level Debug Layer

This layer should contain messages that have very minimal impact on performance, but are at lower level (i.e., provide more information) than would be appropriate in a shipping product. The messages are probably used to gather information and validate proper functionality at a high level as might be appropriate for IOT, stress testing, or QA testing.

#### 8.158.2.34 `#define PVLOGMSG_INST_LLDBG 4`

#### Low Level Debug Layer

This layer should contain messages for early functional testing. The messages are typically at a very low-level and allow testing the functionality of individual modules and components. Messages at this layer will typically have a performance impact (sometimes significant) due to the fact that they are at such a low level.

**8.158.2.35 #define PVLOGMSG\_INST\_MLDBG 3**

Mid Level Debug Layer

This layer should contain messages that are useful in the middle stages of the development cycle where major components are being integrated. The components themselves should already be well-tested so the emphasis is on interfaces between these components and integration testing. Messages at this layer may have some performance impact.

**8.158.2.36 #define PVLOGMSG\_INST\_PROF 1**

Profile Layer

The profile layer is used for messages and information related to measuring and reporting performance-related information.

**8.158.2.37 #define PVLOGMSG\_INST\_REL 0**

Release Layer

The release layer should only be used for messages that should remain in the final release. In certain cases all messaging may be disabled depending on customer requirements. However, when allowed the release layer should contain information that will be useful diagnosing problems in a released product (perhaps after entering a diagnostic mode), but with absolutely minimal performance impact when disabled at runtime.

**8.158.3 Variable Documentation****8.158.3.1 const int32 PVLOGGER\_LEVEL\_UNINITIALIZED = -1****8.158.3.2 const PVLogger::log\_level\_type PVLOGMSG\_ALERT = 1**

action must be taken immediately

**8.158.3.3 const PVLogger::log\_level\_type PVLOGMSG\_CRIT = 2**

critical conditions

**8.158.3.4 const PVLogger::log\_level\_type PVLOGMSG\_DEBUG = 8**

debug-level messages

**8.158.3.5 const PVLogger::log\_level\_type PVLOGMSG\_EMERG = 0**

system is unusable

**8.158.3.6 const PVLogger::log\_level\_type PVLOGMSG\_ERR = 3**

error conditions

**8.158.3.7 const PVLogger::log\_level\_type PVLOGMSG\_FATAL\_ERROR =  
PVLOGMSG\_EMERG**

**8.158.3.8 const PVLogger::log\_level\_type PVLOGMSG\_INFO = 6**

informational

**8.158.3.9 const PVLogger::log\_level\_type PVLOGMSG\_NONFATAL\_ERROR =  
PVLOGMSG\_ERR**

**8.158.3.10 const PVLogger::log\_level\_type PVLOGMSG\_NOTICE = 5**

normal but significant condition

**8.158.3.11 const PVLogger::log\_level\_type PVLOGMSG\_STACK\_TRACE = 7**

function enter and exit

**8.158.3.12 const PVLogger::log\_level\_type PVLOGMSG\_STATISTIC = PVLOGMSG\_INFO**

**8.158.3.13 const PVLogger::log\_level\_type PVLOGMSG\_VERBOSE = PVLOGMSG\_DEBUG**

**8.158.3.14 const PVLogger::log\_level\_type PVLOGMSG\_WARNING = 4**

warning conditions

## 8.159 pvlogger\_accessories.h File Reference

```
#include "oscl_base.h"
#include "pvlogger.h"
#include "oscl_vector.h"
#include "oscl_defalloc.h"
#include "oscl_shared_ptr.h"
#include "oscl_base_alloc.h"
```

### Data Structures

- class [PVLoggerLayout](#)
- class [PVLoggerFilter](#)
- class [AllPassFilter](#)
- class [PVLoggerAppender](#)

### Variables

- const [PVLoggerFilter::filter\\_status\\_type PVLOGGER\\_FILTER\\_ACCEPT = 1](#)
- const [PVLoggerFilter::filter\\_status\\_type PVLOGGER\\_FILTER\\_REJECT = 2](#)
- const [PVLoggerFilter::filter\\_status\\_type PVLOGGER\\_FILTER\\_NEUTRAL = 3](#)

### 8.159.1 Variable Documentation

#### 8.159.1.1 const PVLoggerFilter::filter\_status\_type PVLOGGER\_FILTER\_ACCEPT = 1

Referenced by AllPassFilter::FilterOpaqueMessage(), and AllPassFilter::FilterString().

#### 8.159.1.2 const PVLoggerFilter::filter\_status\_type PVLOGGER\_FILTER\_NEUTRAL = 3

#### 8.159.1.3 const PVLoggerFilter::filter\_status\_type PVLOGGER\_FILTER\_REJECT = 2

## 8.160 pvlogger\_c.h File Reference

This file contains basic logger interfaces for common use across platforms. C-callable version.

```
#include "osclconfig.h"
```

### Defines

- #define PVLOGGER\_C\_INST\_LEVEL 5
- #define PVLOGMSG\_C\_INST\_REL 0
- #define PVLOGMSG\_C\_INST\_PROF 1
- #define PVLOGMSG\_C\_INST\_HLDBG 2
- #define PVLOGMSG\_C\_INST\_MLDBG 3
- #define PVLOGMSG\_C\_INST\_LLDBG 4
- #define PVLOGMSG\_C\_EMERG 0
- #define PVLOGMSG\_C\_ALERT 1
- #define PVLOGMSG\_C\_CRIT 2
- #define PVLOGMSG\_C\_ERR 3
- #define PVLOGMSG\_C\_WARNING 4
- #define PVLOGMSG\_C\_NOTICE 5
- #define PVLOGMSG\_C\_INFO 6
- #define PVLOGMSG\_C\_STACK\_TRACE 7
- #define PVLOGMSG\_C\_STACK\_DEBUG 8

### Functions

- OSCL\_IMPORT\_REF void \* [pvLogger\\_GetLoggerObject](#) (const char \*tag)
- OSCL\_IMPORT\_REF int [pvLogger\\_IsActive](#) (void \*logger, int log\_level)
- OSCL\_IMPORT\_REF void [pvLogger\\_LogMsgString](#) (void \*logger, int msgID, const char \*fmt,...)

### 8.160.1 Detailed Description

This file contains basic logger interfaces for common use across platforms. C-callable version. This is the main entry point header file for the logger library. It should be the only one users directly include.

### 8.160.2 Define Documentation

- 8.160.2.1 `#define PVLOGGER_C_INST_LEVEL 5`
- 8.160.2.2 `#define PVLOGMSG_C_ALERT 1`
- 8.160.2.3 `#define PVLOGMSG_C_CRIT 2`
- 8.160.2.4 `#define PVLOGMSG_C_EMERG 0`
- 8.160.2.5 `#define PVLOGMSG_C_ERR 3`
- 8.160.2.6 `#define PVLOGMSG_C_INFO 6`
- 8.160.2.7 `#define PVLOGMSG_C_INST_HLDBG 2`
- 8.160.2.8 `#define PVLOGMSG_C_INST_LLDBG 4`
- 8.160.2.9 `#define PVLOGMSG_C_INST_MLDBG 3`
- 8.160.2.10 `#define PVLOGMSG_C_INST_PROF 1`
- 8.160.2.11 `#define PVLOGMSG_C_INST_REL 0`
- 8.160.2.12 `#define PVLOGMSG_C_NOTICE 5`
- 8.160.2.13 `#define PVLOGMSG_C_STACK_DEBUG 8`
- 8.160.2.14 `#define PVLOGMSG_C_STACK_TRACE 7`
- 8.160.2.15 `#define PVLOGMSG_C_WARNING 4`

### 8.160.3 Function Documentation

- 8.160.3.1 `OSCL_IMPORT_REF void* pvLogger_GetLoggerObject (const char * tag)`
- 8.160.3.2 `OSCL_IMPORT_REF int pvLogger_IsActive (void * logger, int log_level)`
- 8.160.3.3 `OSCL_IMPORT_REF void pvLogger_LogMsgString (void * logger, int msgID, const char * fmt, ...)`

## 8.161 pvlogger\_registry.h File Reference

```
#include "pvlogger.h"
#include "oscl_tagtree.h"
#include "oscl_base.h"
#include "oscl_map.h"
#include "oscl_vector.h"
#include "oscl_stdstring.h"
#include "osclconfig_compiler_warnings.h"
```

### Data Structures

- class [PVLoggerRegistry](#)

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